Waters of the U.S. Determination Addendum

North Split Project

1. PROJECT INFORMATION

Date(s) of Field Reconnaissance: 10/3/2017, 10/4/2017, 10/12/2018, 4/10/2019, and 6/26/2019

Des. Nos.: 1592385 & 1600808

A Waters of the U.S. Report was completed for this project in October 2017 and was approved by Indiana Department of Transportation (INDOT) Ecology Waterway and Permitting Office (EWPO) on February 1, 2018. Subsequent to the completion of this report, the project area was expanded and additional field investigations for the expanded project area were completed. This is an addendum to the originally approved Waters of the U.S. Report. An Overall Setting Map (Attachments, page 1) as well as an Additional Water Resources Map (Attachments, page 4) are attached.

There are no mapped National Wetlands Inventory (NWI) wetlands or waterways within the additional project areas and soils were identified as Urban land-complex soils which are generally non-hydric. The Additional Water Resources Map (Attachments, page 4) illustrates where three wetlands were delineated within the roadside ditches of I-70. In this location, four Urban land complex soils are mapped.

According to the Soil Survey Geographic (SSURGO) Database for Marion County, Indiana, the following mapped soils series are within the additional project area (Attachments, Pages 5-9).

- Urban land-Crosby-treaty complex, 0 to 2 percent slopes (UC): very deep, somewhat poorly drained soils that are moderately
 deep to dense till. Formed in as much as 56 cm of loess or other silty material and in the underlying loamy till. These soils are
 not considered hydric; however, hydric inclusions of Treaty-Drained are known within depressions. This soil type has a hydric
 rating of 15%.
- Urban land-Miami complex, 0 to 6 percent slopes (UmB): very deep, moderately well drained soils that are moderately deep to dense till. Miami soils formed in as much as 46 cm of loess or silty material and in the underlying loamy till. They are on till plains. This soil series is not considered hydric. It has a hydric rating of 0%.
- Urban land-Miami complex, 6 to 12 percent slopes (UmC): very deep, moderately well drained soils that are moderately deep to dense till. Miami soils formed in as much as 46 cm of loess or silty material and in the underlying loamy till. They are on till plains. This soil series is not considered hydric. It has a hydric rating of 0%.
- Urban land-Westland complex, 0 to 1 percent slopes (Uw): very deep, very poorly drained soils that are deep to calcareous, stratified gravelly and sandy outwash. Formed in loamy material that can be capped with as much as 51 cm of loess or silty material. Urban-land soils are not considered hydric; however, hydric inclusions of Westland are known within depressions on outwash plains. This soil type has a hydric rating of 30%.

Attachments page 2 and 3 show the section of additional area that was surveyed along I-70 EB/WB for this addendum, this is the only additional area in which wetlands were delineated. The remaining additional area to be surveyed (referred to as "New Project Limits" in the attachments) was surveyed, however they did not contain additional water resources, as they are primarily roadway and other transportation use. The additional survey area along I-70 is located within the Pogue's Run — White River Watershed (12-HUC 051202011201). It is also not within a 100-year floodplain or regulatory floodway.

2. Additional Water Resources

During the April 10, 2019 and June 26, 2019 field investigation, representatives of HNTB visited the expanded project area of the North Split Project and assessed the area for water resources, three wetlands were delineated within the roadside ditches of I-70, north of the interstate via six data points. One non-wetland data point was also taken to illustrate non-wetland condition within a roadside - cattail dominated - ditch (Attachments, page 4).

Wetlands W, X, and Y are palustrine, emergent (PEM) wetlands of poor quality. These wetlands appear to be incidental features that have formed as a result of stormwater ponding in roadside ditches. Additionally, these incidental features appear to have artificial hydrology resultant from the failure of stormwater drainage infrastructure; insufficient drainage from drop inlets in the roadside ditches create ponding and the recruitment of wetland hydrophytes. Wetland characteristics are summarized in Table 1, below.

3. REGULATORY STATEMENTS

The April 10, 2019 and the June 26, 2019 field reviews of the North Split project identified three wetlands within the investigated area: Wetland W, Wetland X, and Wetland Y.

Wetland W, Wetland X, and Wetland Y are likely Waters of the State. Historic aerial photography from 1936, 1941, 1950, 1956, and 1962 and the Indianapolis West 7.5 Minute USGS Topographic Quadrangle map from 1959 were reviewed to determine if historic drainage patterns were present prior to construction of I-70. I-70 is not evident on any of the historic aerials or the 1959 Indianapolis West 7.5 Minute USGS Topographic Quadrangle map. No streams or wetlands were noted within the expanded project area on the aerial photography prior to or after the interstate construction. As part of the I-70 construction, roadside drainage including concrete channels and drains were constructed in upland soils. Wetland W, Wetland X, and Wetland Y are incidental wetlands that formed as a result of ponding in manmade drainage conveyance infrastructure (stormwater ditches) and do not have a connection to a traditional navigable waterway. As such, these resources are identified as isolated incidental features and are exempt from federal regulations.

Reference Point 9 (RP-9) (Attachments, page 4) was taken in the roadside ditch at Valley Avenue. The area was dominated by narrow leaf cattail (*Typha angustifolia*) and reed canary grass (*Phalaris arundinacea*). Hydrology available to recruit these hydrophytes is temporary in nature and sourced from the numerous underdrain outlets upslope of the ditch. Hydrophytes extend from these stormwater outlets downslope on top of riprap, draining to Valley Avenue. A soil pit was not taken as soils were not accessible due to the depth of riprap. This area was not identified as a wetland due to lack of wetland hydrology or wetland soils.

Small drainage swales were noted at the toe of slopes on the south side of I-70. Multiple stormwater drainage inlets and underdrains were located along the ditch, creating drainage patterns in the area. Soil pits were not excavated due to a lack of wetland hydrology and hydrophytic vegetation in the area. Photos 22-24 demonstrate the topography and vegetation typical to the roadside south of I-70. These areas did not contain hydrophytes nor were there indicators of relatively permanent waters. Obvious positive drainage appears to drain the roadside effectively to adjacent storm sewers along Valley Ave to the east, and Roosevelt Ave to the west.

If construction exceeds the limits of the survey review area illustrated in this document, further field investigation will be needed. This addendum is this office's best judgment of water resources that are likely to be under federal jurisdiction, based on the guidelines set forth by the U.S. Army Corps of Engineers (USACE). The final determination of jurisdictional waters is ultimately the responsibility of the USACE. The INDOT Office of Environmental Services should be contacted immediately if impacts occur.

This waters determination has been prepared based on the best available information, interpreted in the light of the investigator's training, experience and professional judgement in conformance with the 1987 Corps of Engineers Wetlands Delineation Manual, the appropriate regional supplement, the USACE Jurisdictional Determination Form Instructional Guidebook, and other appropriate agency guidelines.

Kate Lucier, PWS Science Project Manager

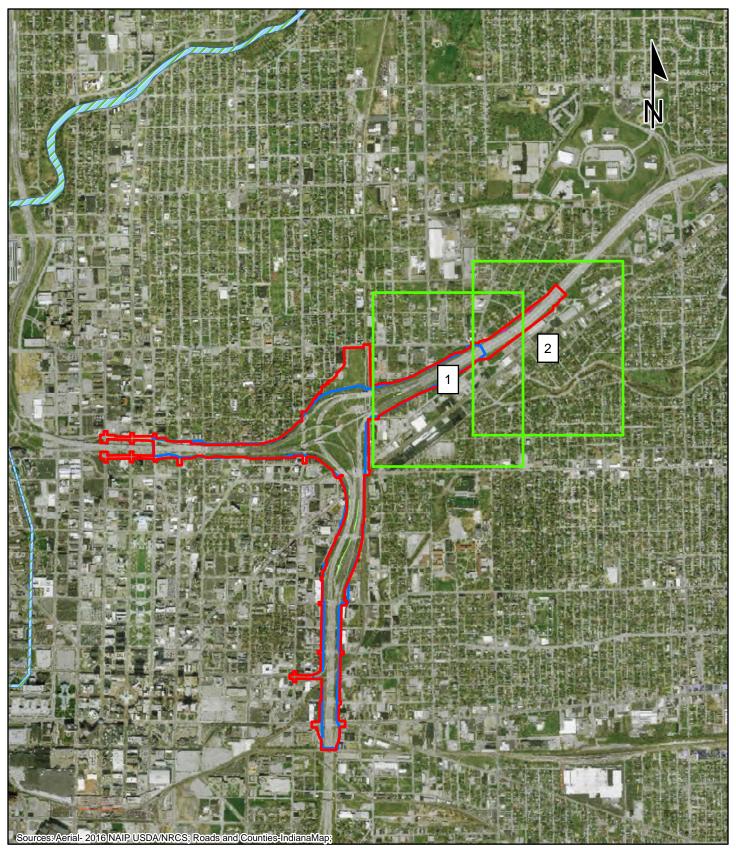
Table 1: Wetland Summary Table

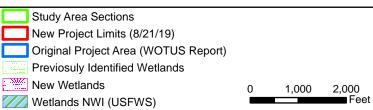


Wetland	Latitude	Longitude	Data Points	Photos	Cowardin Classification	Area (Acres)	Quality	Water of the U.S?	Class
W	39.788678	-86.131395	DP-W-IN, DP-W-OUT	1-4	PEM1A	0.02	Poor	No	Isolated, Class I Likely Exempt
Х	39.789305	-86.129785	DP-X-IN, DP- X-OUT	5-9	PEM1A	0.04	Poor	No	Isolated, Class I Likely Exempt
Υ	39.790232	-86.128159	DP-Y-IN, DP- Y-OUT	10-13	PEM1A	0.09	Poor	No	Isolated, Class I Likely Exempt

Table 2: Wetland Data Point Summary

Data Point ID	Wetland Hydrology	Wetland Vegetation?	Wetland Soil Indicators?	Within a Wetland?
DP-W-IN	Yes	Yes	Yes	Yes, Wetland W
DP-W-OUT	No	No	No	No
DP-X-IN	Yes	Yes	Yes	Yes, Wetland X
DP-X-OUT	No	No	No	No
DP-Y-IN	Yes	Yes	Yes	Yes, Wetland Y
DP-Y-OUT	No	No	Yes	No
RP 9	No	Yes	No	No



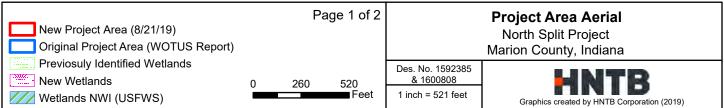


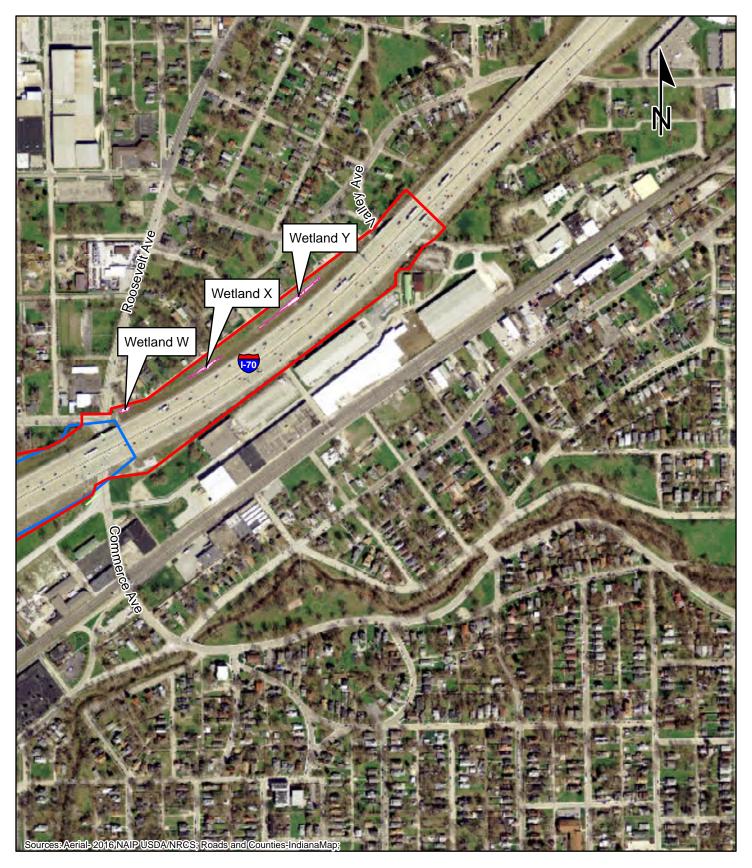
Project Area Aerial-Map Index North Split Project Marion County, Indiana

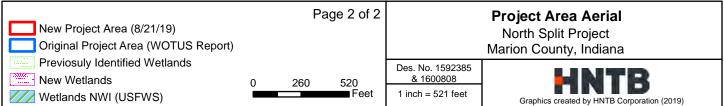
Des. No. 1592385 & 1600808 1 inch = 2,000 feet

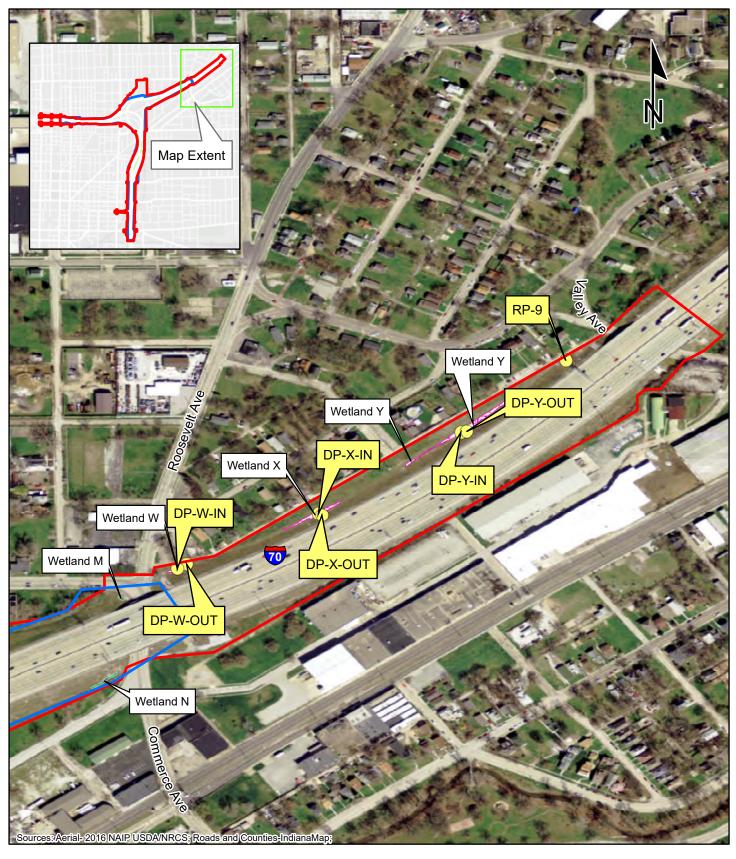


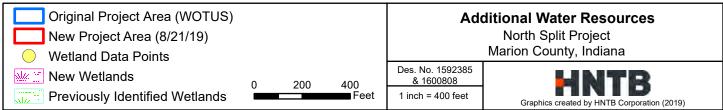


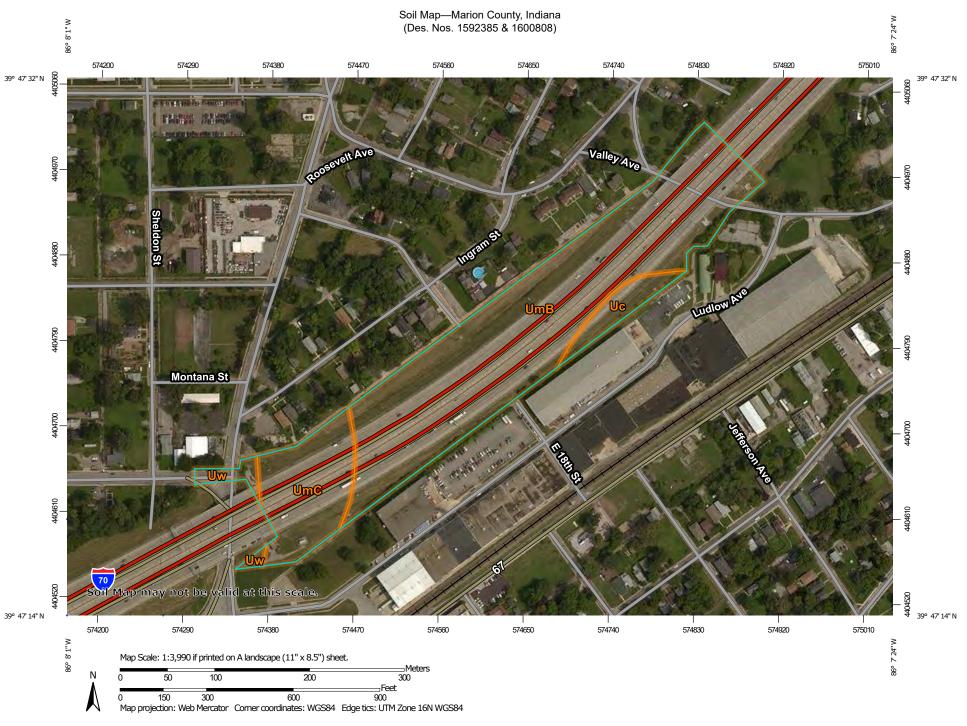












MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Lines



Soil Map Unit Points

Special Point Features

Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow Marsh or swamp





Mine or Quarry Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot





Very Stony Spot



Wet Spot Other

Stony Spot



Special Line Features

Water Features

Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15.800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Marion County, Indiana Survey Area Data: Version 23, Sep 7, 2018

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Jun 27, 2014—Aug 28. 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Uc	Urban land-Crosby-Treaty complex, fine loamy subsoil, 0 to 2 percent slopes	0.8	4.9%
UmB	Urban land-Miami complex, 0 to 6 percent slopes	11.5	74.5%
UmC	Urban land-Miami complex, 6 to 12 percent slopes	2.8	18.0%
Uw	Urban land-Westland complex	0.4	2.6%
Totals for Area of Interest		15.5	100.0%

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Uc	Urban land-Crosby- Treaty complex, fine loamy subsoil, 0 to 2 percent slopes	15	0.8	4.9%
UmB	Urban land-Miami complex, 0 to 6 percent slopes	0	11.5	74.5%
UmC	Urban land-Miami complex, 6 to 12 percent slopes	0	2.8	18.0%
Uw	Urban land-Westland complex	30	0.4	2.6%
Totals for Area of Inter	rest	15.5	100.0%	

Report—Hydric Soil List - All Components

Hydric Soil List - All Components–IN097-Marion County, Indiana										
Map symbol and map unit name	Component/Local Phase	Comp. pct.	Landform	Hydric status	Hydric criteria met (code)					
Uc: Urban land-Crosby-Treaty complex, fine loamy subsoil, 0 to 2 percent slopes	Urban land	55-85	_	Unranked	_					
	Treaty-Drained	5-20	Swales,water-lain moraines,depressio ns	Yes	2,3					
	Crosby	10-25	Ground moraines,recessioni al moraines,water- lain moraines	No	_					
UmB: Urban land-Miami complex, 0 to 6 percent slopes	Urban land	50	Till plains	No	_					
	Miami	30	Till plains	No	_					
UmC: Urban land-Miami complex, 6 to 12 percent slopes	Urban land	50	Till plains	No	_					
	Miami	30	Till plains	No	_					
Uw: Urban land-Westland complex	Urban land	50	Outwash plains	No	_					
	Westland	30	Depressions on outwash plains	Yes	2,3					

Data Source Information

Soil Survey Area: Marion County, Indiana Survey Area Data: Version 23, Sep 7, 2018

Project/Site: I-65/I-70 North Split Project, Des. No. 1592	2385 & 15008	308 City/Cour	nty: Indiana	polis	Sampling Date:	6/26/2019
Applicant/Owner: INDOT			_ 	State: IN	Sampling Point:	DP-W-IN
Investigator(s): K. Lucier, C. Tegeler		Section, T	Township, Ra	ange: 31, 16N, 4E		
Landform (hillside, terrace, etc.): drainage swale		!	Local relief (concave, convex, none):	concave	
Slope (%): 0-2 Lat: 39.788678		Long: -	86.131395		Datum: NAD83	
Soil Map Unit Name: Udorthents				NWI classi	fication: N/A	
Are climatic / hydrologic conditions on the site typical f	or this time c	of year?	Yes x	No (If no, exp	olain in Remarks.)	
Are Vegetation, Soil, or Hydrologys		-	لــــــــــــــــــــــــــــــــــــ		•	0
Are Vegetation, Soil, or Hydrology				xplain any answers in Re		
SUMMARY OF FINDINGS – Attach site ma			ıg point lo	ocations, transects	, important fea	ıtures, etc.
Hydrophytic Vegetation Present? Yes X No	0	Is the	Sampled A	rea		
	0		n a Wetland		No	
Wetland Hydrology Present? Yes X No	o			<u>-</u>		
Remarks:						
This wetland developed within a constructed drainage	swale due t	o blockage of	a drop inlet.	This is not a natural wet	land.	
VEGETATION – Use scientific names of pla				1		
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	rksheet:	
1	70 00101	Ороског.	Olulus	Number of Dominant		
2.				Are OBL, FACW, or F	•	2 (A)
3.				Total Number of Dom		
4.				Across All Strata:	·	2 (B)
5				Percent of Dominant	•	
		=Total Cover		Are OBL, FACW, or F	AC: <u>10</u>	0.0% (A/B)
Sapling/Shrub Stratum (Plot size:)					
1. Lonicera tatarica	2	No No	FACU	Prevalence Index wo		
2. Rosa multiflora	1	No	FACU	Total % Cover of		
3. 4.				OBL species 10 FACW species 0		100 0
5.				FAC species (0
J	3	=Total Cover				52
Herb Stratum (Plot size: 5)		10101 0011		UPL species (0
1. Typha latifolia	60	Yes	OBL	Column Totals: 11		152 (B)
Typha angustifolia	40	Yes	OBL	Prevalence Index	``	`` ′
3. Schedonorus arundinaceus	10	No	FACU			
4.				Hydrophytic Vegetat	ion Indicators:	
5.				1 - Rapid Test for	Hydrophytic Veget	ation
6.				X 2 - Dominance Te		
7.				X 3 - Prevalence In		
8				· · ·	Adaptations ¹ (Prov	0
9					ks or on a separate	-
10				l —	ophytic Vegetation ¹	, , ,
	110	=Total Cover		¹ Indicators of hydric s		
Woody Vine Stratum (Plot size:)			be present, unless dis	turbed or problema	atic.
1. 2.				Hydrophytic		
2		=Total Cover		Vegetation Present? Yes	X No	
	-	- Tutai Guvei		Fresent: 100		
Remarks: (Include photo numbers here or on a separ	rate sheet.)					

US Army Corps of Engineers

SOIL Sampling Point: DP-W-IN

Depth	Matrix		Redo	x Featur				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 4/2	60	10YR 4/6	5	С	PL/M	Loamy/Clayey	Prominent redox concentration
			10YR 3/1	35	D	M		
5-7	10YR 3/1	90	10YR 3/6	10	C	M	Loamy/Clayey	Prominent redox concentration
7-12	2.5YR 4/1	95	10YR 3/6	5	С	PL/M	Sandy	Prominent redox concentration
		- — ·						
Type: C=C	oncentration, D=De	pletion, RM	 I=Reduced Matrix, N	√S=Mas	ked San	d Grains		on: PL=Pore Lining, M=Matrix.
•	Indicators:							ors for Problematic Hydric Soils ³ :
Histosol			Sandy Gle	•	٠,			ast Prairie Redox (A16)
	oipedon (A2)		Sandy Red	` '				n-Manganese Masses (F12)
	stic (A3)		Stripped M	`	5)			d Parent Material (F21)
_ ` `	n Sulfide (A4)		Dark Surfa	` '	L (- 4)			ry Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu	-			Oti	ner (Explain in Remarks)
_	ick (A10)	- (044)	Loamy Gle	-				
	d Below Dark Surface	:е (АТТ)	X Depleted N	-			31	and afficient to the constant of the second
_	ark Surface (A12)		Redox Da		` '	`		ors of hydrophytic vegetation and
_ ′	fucky Mineral (S1)	10)	Depleted [` ')		tland hydrology must be present,
	ıcky Peat or Peat (S	•	Redox De	pression	S (FO)		uni	ess disturbed or problematic.
Restrictive	Layer (if observed):						
_	-							
Type:	Roadsid	de fill						
Depth (i	Roadsid	de fill 12	due to roadside fill.				Hydric Soil Prese	nt? Yes <u>x</u> No_
Depth (i	Roadsidenches): fusal encountered a	de fill 12	due to roadside fill.				Hydric Soil Prese	nt? Yes <u>x</u> No_
Depth (in Page 1997) Remarks: Shovel resident of the Page 1997 (in Page 1997) Shovel resident of the Page 1997 (in Page 1997) Shovel resident of the Page 1997 (in Page 1997) Shovel resident of the Page 1997 (in Page 1997) Shovel resident of the Page 1997 (in Page 1997) Shovel resident of the Page 1997 (in Page 1997) Shovel resident of the Page 1997 (in Page 1997) Shovel resident of the Page 1997 (in Page 1997) Shovel resident of the Page 1997 (in Page 1997) Shovel resident of the Page 1997 (in Page 1997) Shovel resident of the Page 1997 (in Page 1997) Shovel resident of the Page 1997 (in Page 1997) Shovel resident of the Page 1997 (in Page 1997) Show 1997 (in Pag	Roadsidenches): fusal encountered a	de fill 12 t 12 inches	due to roadside fill.				Hydric Soil Prese	nt? Yes <u>x</u> No_
Depth (ii Remarks: Shovel rei YDROLO Vetland Hy	Roadsidenches): fusal encountered a OGY drology Indicators	t 12 inches						
Depth (in page 2) Remarks: Shovel resident YDROLO Vetland Hy Primary Indi	Roadside name of Roadsi	t 12 inches	uired; check all that		(0.0)		<u>Second</u>	lary Indicators (minimum of two requi
Depth (ii Remarks: Shovel ref YDROLC Vetland Hy Primary Indi Surface	Roadside name of Roadsi	t 12 inches	uired; check all that Water-Sta	ined Lea	` '		Second	lary Indicators (minimum of two requi face Soil Cracks (B6)
Depth (in the content of the content	Roadside name of Roadsi	t 12 inches	uired; check all that Water-Sta Aquatic Fa	ined Lea auna (B1	3) ` ´		<u>Secono</u> Su Dra	lary Indicators (minimum of two requi face Soil Cracks (B6) ninage Patterns (B10)
Depth (in the content of the content	Roadside name of Water (A1) ater Table (A2) on (A3)	t 12 inches	uired; check all that Water-Sta Aquatic Fa	ined Lea auna (B1 atic Plant	3) s (B14)		Second Su Drg	lary Indicators (minimum of two requi face Soil Cracks (B6) ninage Patterns (B10) r-Season Water Table (C2)
Depth (ii Remarks: Shovel rei YDROLO Vetland Hy Primary Indi Surface High Wa X Saturatic Water M	Roadside name of the property	t 12 inches	uired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen	ined Lea auna (B1 atic Plant Sulfide (3) s (B14) Odor (C1)	Second Su Dra Dry	lary Indicators (minimum of two requi face Soil Cracks (B6) ninage Patterns (B10) Y-Season Water Table (C2) nyfish Burrows (C8)
Pepth (ii Remarks: Shovel rei YDROLO Vetland Hy Primary Indi Surface High Wa X Saturatio Water M X Sedimen	Roadside name of the proposition (A3) larks (B1) name of the proposition (B2)	t 12 inches	uired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized F	ined Lea auna (B1 atic Plant Sulfide (Rhizosph	3) s (B14) Odor (C1 eres on) Living Ro	SecondSuDrsCrsSa	lary Indicators (minimum of two requi face Soil Cracks (B6) ninage Patterns (B10) r-Season Water Table (C2) nyfish Burrows (C8) curation Visible on Aerial Imagery (C9
Pepth (in Remarks: Shovel research YDROLO Vetland Hy Primary Indi Surface High Water Water Water Water Water Water Water Depth Company Compa	Roadside name of the property	t 12 inches	uired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized F	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1 eres on led) Living Ro (C4)	Second Su Dra Dra Cra coots (C3) Sa Stu	lary Indicators (minimum of two requi face Soil Cracks (B6) ninage Patterns (B10) r-Season Water Table (C2) nyfish Burrows (C8) curation Visible on Aerial Imagery (C9 nted or Stressed Plants (D1)
Pepth (in Remarks: Shovel research YDROLO Vetland Hy Primary Indi Surface High Wax X Saturati Water M X Sedimen X Drift Dep Algal Ma	Roadside naches): fusal encountered a grade a	t 12 inches	uired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized F Presence Recent Iro	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc	3) s (B14) Odor (C1 eres on led Iron etion in Ti) Living Ro (C4)	Second Su Dra Dra Cra Cra Dots (C3) Sa Stu St (C6) Ge	lary Indicators (minimum of two requirace Soil Cracks (B6) ainage Patterns (B10) a-Season Water Table (C2) ayfish Burrows (C8) curation Visible on Aerial Imagery (C9) anted or Stressed Plants (D1) comorphic Position (D2)
Pepth (in Remarks: Shovel research YDROLO Vetland Hy Primary Indi Surface High Wax X Saturativ Water M X Sedimen X Drift Dep Algal Ma Iron Dep	Roadside naches): fusal encountered a grade fusion and fusion and fusion and fusion and fusion and fusion and fusion fusion (A3) and (B4) and (B4) and (B4) and (B4) are fusion (B4) and fusion (B4) and fusion	t 12 inches	uired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface	3) s (B14) Odor (C1 eres on lead Iron etion in Ties (C7)) Living Ro (C4)	Second Su Dra Dra Cra Cra Dots (C3) Sa Stu St (C6) Ge	lary Indicators (minimum of two requi face Soil Cracks (B6) ninage Patterns (B10) r-Season Water Table (C2) nyfish Burrows (C8) curation Visible on Aerial Imagery (C9 nted or Stressed Plants (D1)
Pepth (interpretation of the perturbation of t	Roadside naches): fusal encountered a grade fusion and fusion and fusion and fusion f	t 12 inches : one is requ	wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence Recent Iro Thin Muck 70 Gauge or	ined Lea auna (B1 Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on lead from the ced from the ce) Living Ro (C4) illed Soil	Second Su Dra Dra Cra Cra Dots (C3) Sa Stu St (C6) Ge	lary Indicators (minimum of two requirace Soil Cracks (B6) ainage Patterns (B10) a-Season Water Table (C2) ayfish Burrows (C8) curation Visible on Aerial Imagery (C9) anted or Stressed Plants (D1) comorphic Position (D2)
Pepth (in Remarks: Shovel research YDROLO Vetland Hy Primary Indi Surface High Water W x Saturativ Water W x Sedimen x Drift Dep Algal Ma Iron Dep Inundati Sparsely	Roadside name of the property	t 12 inches : one is requ	wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence Recent Iro Thin Muck 70 Gauge or	ined Lea auna (B1 Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on lead from the ced from the ce) Living Ro (C4) illed Soil	Second Su Dra Dra Cra Cra Dots (C3) Sa Stu St (C6) Ge	lary Indicators (minimum of two requirace Soil Cracks (B6) ainage Patterns (B10) a-Season Water Table (C2) ayfish Burrows (C8) curation Visible on Aerial Imagery (C9) anted or Stressed Plants (D1) comorphic Position (D2)
Pepth (ii Remarks: Shovel rei YDROLO Vetland Hy Primary Indi Surface High Water M x Saturatie Water M x Sedimer x Drift Der Algal Ma Iron Der Inundati Sparsely	Roadside naches): fusal encountered a gradient of the second of the sec	t 12 inches t 12 inches one is requ Imagery (B	wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized F Presence Recent Iro Thin Muck Gauge or 1 State Content of the content o	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat Dlain in R	3) s (B14) Ddor (C1 eres on led Iron ced Iron tition in Tit c (C7) a (D9)) Living Ro (C4) illed Soil	Second Su Dra Dra Cra Cra Dots (C3) Sa Stu St (C6) Ge	lary Indicators (minimum of two requirace Soil Cracks (B6) ainage Patterns (B10) a-Season Water Table (C2) ayfish Burrows (C8) curation Visible on Aerial Imagery (C9) anted or Stressed Plants (D1) comorphic Position (D2)
Primary Indi Surface High Wax Saturatie Water M X Sedimer X Drift Der Algal Ma Iron Der Inundati Sparsely Field Obser	Roadside naches): fusal encountered a grade fusion	t 12 inches : one is requ	uired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized F Presence Recent Iro Thin Muck 17) Gauge or 1 (B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc s Surface Well Dat blain in R	3) s (B14) Ddor (C1 eres on led Iron ced Iron (C7) a (D9) Remarks)) Living Ro (C4) illed Soil	Second Su Dra Dra Cra Cra Dots (C3) Sa Stu St (C6) Ge	lary Indicators (minimum of two requirace Soil Cracks (B6) ainage Patterns (B10) a-Season Water Table (C2) ayfish Burrows (C8) curation Visible on Aerial Imagery (C9) anted or Stressed Plants (D1) comorphic Position (D2)
Primary Indi Saturation Water M X Saturation Water M X Sedimen X Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obset Gurface Water Table	Roadside naches): fusal encountered a grade fusion	t 12 inches t 12 inches cone is requ Imagery (B ge Surface (wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence Recent Iro Thin Muck 70 Gauge or 1 B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc on Reduc on Surface Well Dat Depth (ii Depth (ii	3) s (B14) Ddor (C1 eres on led Iron et (C7) a (D9) Remarks) nches):nches):) Living Ro (C4) illed Soil	Second Su	lary Indicators (minimum of two requi face Soil Cracks (B6) ninage Patterns (B10) r-Season Water Table (C2) nyfish Burrows (C8) curation Visible on Aerial Imagery (C9 nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
Primary Indi Surface High Water M X Sedimel X Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Water Table Saturation F	Roadside naches): fusal encountered a grade fusion	t 12 inches t 12 inches one is requ Imagery (B	wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence Recent Iro Thin Muck 70 Gauge or 1 B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc s Surface Well Dat blain in R	3) s (B14) Ddor (C1 eres on led Iron et (C7) a (D9) Remarks) nches):nches):) Living Ro (C4) illed Soil	Second Su Dra Dra Cra Cra Dots (C3) Sa Stu St (C6) Ge	lary Indicators (minimum of two requinates Soil Cracks (B6) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) suration Visible on Aerial Imagery (C9) inted or Stressed Plants (D1) comorphic Position (D2) C-Neutral Test (D5)
Pepth (in Remarks: Shovel research Shovel rese	Roadside niches): fusal encountered a gradient of the second of the sec	t 12 inches t 12 inches t 12 inches t 12 inches t 2 inches t 3 inches t 4 inches t 4 inches t 5 inches t 6 inches t 7 inches t 7 inches t 7 inches t 8 inches t 9 inches t 9 inch	wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence Recent Iro Thin Muck 70 Gauge or 1 B8) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat Delain in R Depth (ii Depth (ii	3) s (B14) Ddor (C1 eres on led Iron et (C7) a (D9) Remarks) nches): _ nches): _ nches): _) Living Ro (C4) illed Soil	Second Su Dra Dry Cra soots (C3) Sa Stu St (C6) X FA	lary Indicators (minimum of two requi face Soil Cracks (B6) ninage Patterns (B10) r-Season Water Table (C2) nyfish Burrows (C8) curation Visible on Aerial Imagery (C9 nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
Depth (in Remarks: Shovel residence Saturation Period Observation Peri	Roadside niches): fusal encountered a gradient of the second of the sec	t 12 inches t 12 inches t 12 inches t 12 inches t 2 inches t 3 inches t 4 inches t 4 inches t 5 inches t 6 inches t 7 inches t 7 inches t 7 inches t 8 inches t 9 inches t 9 inch	wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence Recent Iro Thin Muck (37) Gauge or 1 (38) Other (Exp	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat Delain in R Depth (ii Depth (ii	3) s (B14) Ddor (C1 eres on led Iron et (C7) a (D9) Remarks) nches): _ nches): _ nches): _) Living Ro (C4) illed Soil	Second Su Dra Dry Cra soots (C3) Sa Stu St (C6) X FA	lary Indicators (minimum of two requirace Soil Cracks (B6) ninage Patterns (B10) r-Season Water Table (C2) nyfish Burrows (C8) ruration Visible on Aerial Imagery (C9 nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
Depth (ii Remarks: Shovel rei YDROLO Vetland Hy Primary Indi Surface High Wax X Saturatic Water M X Sedimer X Drift Dep Algal Ma Iron Dep Inundati Sparsely Vater Table Surface Water Table Saturation Perincludes can Describe Re	Roadside naches): fusal encountered a grade fusal encountered	t 12 inches t 12	wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized F Presence Recent Iro Thin Muck Gauge or V No x	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (ii	3) s (B14) Ddor (C1 eres on led Iron of the (C7) a (D9) Pemarks) nches): nches): , previou) Living Re (C4) illed Soil	Second Su Dra Dry Cra Dry Cra Stu Stu St (C6) X FA Wetland Hydrol tions), if available:	lary Indicators (minimum of two requirace Soil Cracks (B6) ninage Patterns (B10) r-Season Water Table (C2) nyfish Burrows (C8) ruration Visible on Aerial Imagery (C9 nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)

US Army Corps of Engineers

Project/Site: I-65/I-70 North Split project		City/Cou	nty: Indiana	polis	Samplin	ng Date:	04/10)/2019
Applicant/Owner: INDOT Des. No. 1592	385 & 15008	08		State: II	N Samplin	g Point:	DP-W	V-OUT
Investigator(s): K. Lucier, C. Tegeler		Section, T	ownship, Ra	nge: 31, 16N	, 4E			
Landform (hillside, terrace, etc.): drainage swale			Local relief (c	concave, convex, n	one): concave			
Slope (%): 2-4 Lat: 39.788729		Long: -	86.131289		Datum: N	AD 83		
Soil Map Unit Name: Udorthents				NWI	classification:	N/A	4	
Are climatic / hydrologic conditions on the site typical	for this time o	f year?	Yes x	No (If r	no, explain in Re	marks.)		
Are Vegetation, Soil, or Hydrology	significantly of	disturbed? A	Are "Normal C	Circumstances" pre	sent? Yes_	x No	o	_
Are Vegetation, Soil, or Hydrology	naturally prob	olematic? (If needed, ex	plain any answers	in Remarks.)			-
SUMMARY OF FINDINGS – Attach site m			g point lo	cations, trans	ects, importa	ant feat	tures,	etc.
Hydrophytic Vegetation Present? Yes N	o X	Is the	Sampled A	·ea				
	o X		n a Wetland?		No	X		
	ο Х			-				
Remarks:								
upland data point paired with wetland data point 3W1 %.	. Located wit	hin the draina	ge swale, but	t along a section of	steeper slope ra	anging fro	om 2-6	
VEGETATION – Use scientific names of pla	ants.							
Tara Objetima (Distriction	Absolute	Dominant	Indicator	D T.	-4			
Tree Stratum (Plot size:) 1.	% Cover	Species?	Status	Dominance Te				
2.				Are OBL, FACV	ninant Species T V. or FAC:	nat	1	(A)
3.					f Dominant Spec	cies		_ ` ′
4.				Across All Strat	•		3	(B)
5.				Percent of Dom	inant Species Th	nat		-
		=Total Cover		Are OBL, FACV	V, or FAC:	33	3.3%	(A/B)
Sapling/Shrub Stratum (Plot size:)							
1.				Prevalence Ind		N.A IAi l.		
2. 3.				Total % Co		Multiply 1 =	/ by: 0	-
				FACW species		2 =	0	-
5.				FAC species			105	-
		=Total Cover		FACU species	-		180	=
Herb Stratum (Plot size: 10 x 30)				UPL species	30 x	5 = 1	150	-
1. Dipsacus fullonum	30	Yes	FACU	Column Totals:	110 (A)		435	(B)
2. Daucus carota	30	Yes	UPL	Prevalence I	ndex = B/A =	3.95	5	_
3. Apocynum cannabinum	25	Yes	FAC					
4. Toxicodendron radicans	10	No	FAC		egetation Indica			
5. <u>Festuca rubra</u>	10	<u>No</u>	FACU		est for Hydrophy	_	ation	
6. Asclepias syriaca	5	No	FACU		nce Test is >50%			
7					nce Index is ≤3.0			
8. 9.					ogical Adaptation demarks or on a			
9. 10.					: Hydrophytic Ve	•	,	
10	110	=Total Cover			dric soil and we	•		,
Woody Vine Stratum (Plot size:)				ess disturbed or			must
1.				Hydrophytic				
2				Vegetation				
		=Total Cover		Present?	Yes	No X		
Remarks: (Include photo numbers here or on a sepa	rate sheet.)							

SOIL Sampling Point: DP-W-OUT

Profile Description: (Describe to the depth needed to document the indicator Depth Matrix Redox Features							confirm the abs	sence of indicators.)	
•						. 2	- .			
(inches)	Color (moist)	<u>%</u> (Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-10	10YR 5/3	100					Loamy/Clay	yey		
							-			
	oncentration, D=Dep	letion, RM=Re	educed Matrix, N	1S=Mas	ked Sand	Grains.		ocation: PL=Pore Lir		
Hydric Soil							Inc	dicators for Problen	-	
Histosol			Sandy Gle	-			<u></u>	_Coast Prairie Redo	` '	
	ipedon (A2)		Sandy Red					_Iron-Manganese M		
Black His			Stripped M		3)			_Red Parent Materia	` '	
	n Sulfide (A4)		Dark Surfa	, ,				_Very Shallow Dark	· ·	
	Layers (A5)		Loamy Mu	-				Other (Explain in R	emarks)	
2 cm Mu			Loamy Gle	•	, ,					
	Below Dark Surface	e (A11)	Depleted N	•	•		3.			
	rk Surface (A12)		Redox Dar		, ,		³ln	dicators of hydrophy	-	
	lucky Mineral (S1)		Depleted D					wetland hydrology		
5 cm Mu	cky Peat or Peat (S3	3)	Redox Dep	ression	s (F8)			unless disturbed or	problematic.	
Restrictive I	Layer (if observed):									
Type:			-							
Depth (ir	nches):		_				Hydric Soil P	resent?	Yes No	Χ
Remarks:										
Shovel refus	al encountered at ap	proximately 1	0 inches. Soil c	onsists (of fill mate	erial with	n an abundance	of small gravel.		
HYDROLO	ic.									
-	drology Indicators:						_			
-	cators (minimum of o	one is required	•		/=- >		<u>Se</u>		minimum of two requi	ired)
	Water (A1)		Water-Stai		, ,			_Surface Soil Crack	` '	
	ter Table (A2)		Aquatic Fa	•	•			_ Drainage Patterns		
Saturatio			True Aqua					_Dry-Season Water		
	arks (B1)		Hydrogen					_ Crayfish Burrows (0	•	
	t Deposits (B2)		Oxidized R			_			on Aerial Imagery (C9	"
	osits (B3)		Presence of					Stunted or Stresser Geomorphic Position		
	t or Crust (B4) osits (B5)		Recent Iro Thin Muck			ileu Soli:	s (C0)	FAC-Neutral Test (, ,	
	on Visible on Aerial I	magery (R7)	Gauge or \					_ rac-neutral rest (D3)	
	Vegetated Concave		Other (Exp							
_		Guriace (DO)	Other (Exp	iaiii iii i	(Ciliai K3)					
Field Obser			No. v	Donth (i	nahaa\.					
Surface Wat				Depth (i						
Water Table Saturation P				Depth (i Depth (i			Watland H	/drology Present?	Yes No	Y
		<u> </u>	NO X	Deptii (i			vvetianu ny	diology Fresent:	lesNO	X
(includes cap	corded Data (stream	dalide monit	oring well perio	l nhotos	nrevious	e inenee	tions) if availab	nle:		
Describe V6	oorded Data (Stiediii	gauge, mont	oning wen, aena	i priotos	, previous	s mapec	nonej, n avanan	no.		
Remarks:										
	ainage swale constr	ucted for conv	eyance of storm	ıwater rı	unoff from	n multiple	e stormwater ou	utfall pipes downslop	e to a drop inlet.	
	<u> </u>		,					, ,	,	

Project/Site: I-65/I-70 North Split Project, Des. Nos. 159:	2385 & 15008	08 City/Cou	nty: <u>Indiana</u>	polis	Sampli	ing Date:	4/10/	2019
Applicant/Owner: INDOT				State: IN	I Sampli	ng Point:	DP	-X-IN
Investigator(s): K. Lucier, C. Tegeler		Section, 1	Γownship, Ra	ange: 31, 16N, 4E				
Landform (hillside, terrace, etc.): drainage swale			Local relief (concave, convex, no	one): concave			
Slope (%): 0-2 Lat: 39.789305		Long: -	86.129785		Datum: N	NAD83		
Soil Map Unit Name: Udorthents				NWI c	lassification: N	N/A		
Are climatic / hydrologic conditions on the site typical	for this time o	of year?	Yes x	No (If no	o, explain in R	emarks.)		
Are Vegetation , Soil , or Hydrology							0	
Are Vegetation , Soil , or Hydrology				κplain any answers i	_			_
SUMMARY OF FINDINGS – Attach site m				,	,	tant fea	atures	s, etc.
<u> </u>	° <u></u>		e Sampled A n a Wetland		Y No			
Wetland Hydrology Present? Yes X N		Within	ii a vvetialiu	? Yes_	X No_			
Remarks:	<u> </u>							
This is a wetland that has been artificially created by				ed drainage swale.	Sediment depo	osition fro	m storm	ndrains
is masking the soil indicators and blocking drainage t	o create the	wetland condi	tions.					
VEGETATION – Use scientific names of pla	ants.							
Tara Otratama (Diataira)	Absolute	Dominant	Indicator	Di	4 l l 4-			
Tree Stratum (Plot size:) 1.	% Cover	Species?	Status	Dominance Tes		. . ,		
2.				Number of Domi Are OBL, FACW		Inat	1	(A)
3.				Total Number of		ecies		_ ` ′
4.				Across All Strata			1	(B)
5				Percent of Domi				
		=Total Cover		Are OBL, FACW	, or FAC:	10	00.0%	_(A/B)
Sapling/Shrub Stratum (Plot size:				Prevalence Inde	av warkahaati			
1 2.				Total % Cov		: Multiply	v bv:	
3.				OBL species		(1 =	80	-
4.				FACW species		2 =	40	-
5.				FAC species		3 =	0	_
		=Total Cover		FACU species	0 >	4 =	0	_
Herb Stratum (Plot size: 5)				UPL species		5 =	0	_
Typha angustifolia	70	Yes	OBL	Column Totals:	100 (A)		120	_(B)
2. Typha angustifolia	10	No	OBL	Prevalence In	dex = B/A = _	1.2	<u>)</u>	-
Cyperus esculentus Echinochloa crus-galli	10	No No	FACW FACW	Hydrophytic Ve	actation India	atore		
		INU	FACW		st for Hydroph		tation	
6.				X 2 - Dominan	-	-	tation	
7.				X 3 - Prevalen	ce Index is ≤3.	.0 ¹		
8.				4 - Morpholo	gical Adaptati	ons¹ (Prov	vide sup	porting
9.				data in Re	emarks or on a	separate	sheet)	
10				Problematic	Hydrophytic V	egetation	¹ (Expla	ain)
	100	=Total Cover		¹ Indicators of hyd				must
Woody Vine Stratum (Plot size:)			be present, unles	ss disturbed or	problema	atic.	
1 2.				Hydrophytic				
<u></u>		=Total Cover		Vegetation Present?	Yes X	No		
Remarks: (Include photo numbers here or on a sepa								
	4.0 011001.)							

US Army Corps of Engineers

SOIL Sampling Point: DP-X-IN

		to the dep				ator or c	onfirm the absence	of indicators.)
Depth	Matrix			k Featur		. 2		
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-1	10YR 2/2	100					Loamy/Clayey	
1-3	10YR 6/2	100					Sandy	
3-6	10YR 4/2	90	10YR 4/6	10	С	M	Loamy/Clayey	Prominent redox concentrations
6-12	10YR 4/2	90	10YR 4/4	10	С	М	Loamy/Clayey	Distinct redox concentrations
	-							
1 _{Type: C=C}	Concentration, D=Dep	oletion RM-	-Reduced Matrix M	 2cM-2t	ked Sand		² l ocation	: PL=Pore Lining, M=Matrix.
	Indicators:	Jiction, Itivi-	-reduced Matrix, N	IO-IVIA3	ica Gari	oranis.		rs for Problematic Hydric Soils ³ :
Histosol			Sandy Gle	ved Mat	rix (S4)			st Prairie Redox (A16)
	pipedon (A2)		Sandy Red					Manganese Masses (F12)
	istic (A3)		Stripped M					Parent Material (F21)
	en Sulfide (A4)		Dark Surfa		,			Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu	cky Mine	eral (F1)			r (Explain in Remarks)
2 cm Mu	uck (A10)		Loamy Gle	yed Ma	trix (F2)			
X Depleted	d Below Dark Surfac	e (A11)	X Depleted N	/latrix (F	3)			
Thick Da	ark Surface (A12)		Redox Dar	k Surfac	e (F6)		³ Indicator	s of hydrophytic vegetation and
Sandy N	Mucky Mineral (S1)		Depleted D	ark Sur	face (F7)	1	wetla	and hydrology must be present,
5 cm Mu	ucky Peat or Peat (S	3)	Redox Dep	ression	s (F8)		ss disturbed or problematic.	
Restrictive	Layer (if observed)	:						
Type:	Roadside	Fill						
Depth (i	nches):	12					Hydric Soil Present	t? Yes X No
receives sec		m the storm						curs in a man-made drainage swale that amy and sandy material are likely the
HYDROLO	OGY							
	drology Indicators	1						
_	icators (minimum of		red: check all that a	(vlage			Seconda	ry Indicators (minimum of two required)
-	Water (A1)	,	Water-Stai		ives (B9)			ace Soil Cracks (B6)
	ater Table (A2)		Aquatic Fa		, ,			nage Patterns (B10)
Saturation	on (A3)		True Aqua	tic Plant	s (B14)			Season Water Table (C2)
Water M	/larks (B1)		Hydrogen	Sulfide (Odor (C1)	Cray	fish Burrows (C8)
x Sedimer	nt Deposits (B2)		x Oxidized R	hizosph	eres on l	iving Ro	oots (C3) Satu	ration Visible on Aerial Imagery (C9)
x Drift Dep	` ` '		Presence of					ted or Stressed Plants (D1)
	at or Crust (B4)		Recent Iron			lled Soils		norphic Position (D2)
	posits (B5)		Thin Muck		. ,		X FAC-	Neutral Test (D5)
	on Visible on Aerial				, ,			
	y Vegetated Concav	e Surface (E	38) Other (Exp	iain in F	(emarks		1	
Field Obser				D " "				
		es			nches): _			
Water Table Saturation P		es			nches):		Watland Hydrolo	my Present? Voc. V No.
	pillary fringe)	es	No <u>x</u>	Depth (i			Wetland Hydrolog	gy Present? Yes X No
	ecorded Data (strean	n gauge, mo	onitoring well. aeria	l photos	, previou	s inspec	tions), if available:	
Remarks:								
This wetland	d only exists because	e the draina	ge swale is not ma	intained	=			

US Army Corps of Engineers

Project/Site: I-65/I-70 North Split Project. Des. Nos. 1592	385 & 15008	308 City/Cour	nty: <u>Indiana</u>	polis	Sampling Date:	4/10/2019
Applicant/Owner: INDOT				State: IN	Sampling Point:	DP-X-OUT
Investigator(s): K. Lucier, C. Tegeler		Section, T	 「ownship, Ra	ange: 31, 16 N, 4E		
Landform (hillside, terrace, etc.): Hillslope drainage sw	ale	!	Local relief (d	concave, convex, none):	concave	
Slope (%): <u>0-5</u> Lat: <u>39.789305</u>		Long: -	86.129785		Datum: NAD 83	
Soil Map Unit Name: Udorthents				NWI classif	fication: N/A	
Are climatic / hydrologic conditions on the site typical for	or this time	of year?	Yes x	No (If no, exp	olain in Remarks.)	
Are Vegetation, Soil, or Hydrologys	significantly	disturbed? A	ار المحافظة	Circumstances" present?		lo
Are Vegetation , Soil , or Hydrology r			If needed, ex	xplain any answers in Re	marks.)	
SUMMARY OF FINDINGS – Attach site ma			ıg point lo	ocations, transects	, important fe	atures, etc.
Hydrophytic Vegetation Present? Yes No	> X	Is the	Sampled A	rea		
	X		n a Wetland		No X	
	<u> </u>					
Remarks:						
Data point was taken just above grade from wetland 2	in ditchline	. Obvious vege	etation gradia	ant change.		
VEGETATION – Use scientific names of pla				•		
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	rksheet:	
1.	70 00.00	орос.сс.	Otalis	Number of Dominant		
2.				Are OBL, FACW, or F	•	1 (A)
3.				Total Number of Dom	inant Species	
4.				Across All Strata:	·	2 (B)
5				Percent of Dominant S	•	
5 " (2) 1 2: 1 (D) 4 (D)		=Total Cover		Are OBL, FACW, or F	AC: <u>5</u>	60.0% (A/B)
Sapling/Shrub Stratum (Plot size:)				Dravelance Index we		
1 2.				Prevalence Index wo Total % Cover of		u hu
3				OBL species 0		<u>y by.</u> 0
4				FACW species 0		0
5.				FAC species 30		90
		=Total Cover		FACU species 20		80
Herb Stratum (Plot size: 5)		ı		UPL species 2	2 x 5 =	10
Poa pratensis	30	Yes	FAC	Column Totals: 52	2 (A)	180 (B)
2. Schedonorus arundinaceus	15	Yes	FACU	Prevalence Index :	= B/A = 3.4	6
3. Cirsium arvense	5	No	FACU			
4. Euphorbia peplus	2	No	UPL	Hydrophytic Vegetat		
5					Hydrophytic Vege	tation
6.				2 - Dominance Te		
7. 8.				3 - Prevalence Inc	dex is ≤3.0° Adaptations¹ (Pro	vide supporting
					ks or on a separate	
10.					ophytic Vegetation	
10	52	=Total Cover		¹ Indicators of hydric se		` ' '
Woody Vine Stratum (Plot size:	,	ı		be present, unless dis		
1				Hydrophytic		,
2.				Vegetation		
		=Total Cover		Present? Yes	No X	_
Remarks: (Include photo numbers here or on a separ	ate sheet.)			J		

US Army Corps of Engineers

SOIL Sampling Point: DP-X-OUT

Profile Des	cription: (Describ	e to the depth	needed to doc	ument t	he indica	ator or	confirm the abse	ence of indicators	.)	
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-4	10YR 3/2	99	10YR 3/3	1	C	M		Faint r	edox concent	rations
4-13	10YR 4/3	90	10YR 5/4	10	С	M		— — Faint r	edox concent	rations
4-10	1011(4/0		10111 3/4			101	-	T dilit i	Cuox concent	rations
	·									
								. ,		
¹ Type: C=C	Concentration, D=D	enletion RM=F	Reduced Matrix N	MS=Mas	ked Sand	Grains	21.00	cation: PL=Pore Li	ning M=Matri	x
	Indicators:							cators for Probler	_	
Histosol			Sandy Gle	ved Mat	rix (S4)			Coast Prairie Redo	-	
	pipedon (A2)		Sandy Re					Iron-Manganese M		
	istic (A3)		Stripped M	, ,				Red Parent Materia	, ,	
	en Sulfide (A4)		Dark Surfa	,	3)			Very Shallow Dark	, ,	·)
	d Layers (A5)		Loamy Mu	. ,	eral (F1)			Other (Explain in F	•	.,
	uck (A10)		Loamy Gle	•	, ,			Other (Explain in I	tomantoj	
	d Below Dark Surfa	ace (Δ11)	Depleted I							
l —	ark Surface (A12)	100 (7111)	Redox Da	•	•		³ Indi	icators of hydrophy	rtic vegetation	and
	Mucky Mineral (S1)		Depleted I		, ,	ı			_	
· —	ucky Peat or Peat (S3)	Redox De		, ,		wetland hydrology must be present, unless disturbed or problematic.			
		,			- ()	1			. p	
	Layer (if observe	a):								
Type:	inches):		_				Uvdria Cail Dr	#2	Vaa	No V
Depth (i	inches).		_				Hydric Soil Pre	esent?	Yes	No <u>X</u>
Remarks:		40 '								
Shovel refus	sal encountered at	13 inches due	to roadside fill							
HYDROLO	OGY									
Wetland Hy	drology Indicator	s:								
Primary Indi	<u>icators (minimum c</u>	f one is require	ed; check all that	apply)			<u>Sec</u>	ondary Indicators (minimum of to	wo required)
Surface	Water (A1)		Water-Sta	ined Lea	ives (B9)			Surface Soil Crack	(s (B6)	
High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)			Drainage Patterns	(B10)	
Saturati	on (A3)		True Aqua	ıtic Plant	s (B14)			Dry-Season Water	Table (C2)	
Water N	/larks (B1)		Hydrogen	Sulfide (Odor (C1)		Crayfish Burrows (C8)	
Sedime	nt Deposits (B2)		Oxidized F	Rhizosph	eres on l	iving R	oots (C3)	Saturation Visible	on Aerial Ima	gery (C9)
Drift De	posits (B3)		Presence	of Redu	ced Iron (C4)		Stunted or Stresse	ed Plants (D1)	
Algal Ma	at or Crust (B4)		Recent Iro	n Reduc	tion in Ti	lled Soi	ls (C6)	Geomorphic Positi	on (D2)	
Iron Dep	posits (B5)		Thin Muck	Surface	e (C7)			FAC-Neutral Test	(D5)	
Inundati	ion Visible on Aeria	I Imagery (B7)	Gauge or	Well Dat	a (D9)					
Sparsel	y Vegetated Conca	ve Surface (B8	3)Other (Exp	olain in F	Remarks)					
Field Obser	rvations:									
Surface Wa	ter Present?	Yes	No	Depth (i	nches):					
Water Table	e Present?	Yes	No	Depth (i	nches):					
Saturation F	Present?	Yes	No	Depth (i	nches):		Wetland Hyd	Irology Present?	Yes	No X
(includes ca	pillary fringe)									
Describe Re	ecorded Data (strea	ım gauge, mon	itoring well, aeria	l photos	, previou	s insped	ctions), if available	e:		
Remarks:										

Project/Site: I-65/I-70 North Split Project, Des. Nos. 1592	2385 <u>& 15008(</u>)8 City/Cou	nty: Indiana	polis	Sampling Date	e: <u>4/10/2019</u>
Applicant/Owner: INDOT			·	State: IN	Sampling Point	t: DP-Y-IN
Investigator(s): K. Lucier, C. Tegeler		Section, 7	 Гownship, Ra	inge: 31, 16N, 4E		
Landform (hillside, terrace, etc.): drainage swale			Local relief (c	concave, convex, none):	concave	
Slope (%): 0-2 Lat: 39.790232		Long: -	86.128159		Datum: NAD83	
Soil Map Unit Name: Udorthents				NWI classif	ication: N/A	
Are climatic / hydrologic conditions on the site typical f	or this time of	f year?	Yes x	No (If no, exp	lain in Remarks.)
Are Vegetation, Soil, or Hydrology		-				
Are Vegetation , Soil , or Hydrology				xplain any answers in Rer		
SUMMARY OF FINDINGS – Attach site m						eatures, etc
	0		e Sampled Ar n a Wetland?		No	
Wetland Hydrology Present? Yes X No	o					
Remarks: This wetland was artificially created due to a lack of n the drop inlets.		of the constru	ıcted drainage	e swale that conveys stor	rmwater from the	outfall pipes to
VEGETATION – Use scientific names of pla		Developer	l. dission			
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:	
1				Number of Dominant S Are OBL, FACW, or FA	Species That	1 (A)
3.				Total Number of Domi Across All Strata:		1 (B)
5.		Total Cover		Percent of Dominant S	•	` ,
Sapling/Shrub Stratum (Plot size:		· lotal Cover		Are OBL, FACW, or F.	AC:	100.0% (A/B)
1.	,			Prevalence Index wo	rksheet:	
2.				Total % Cover of:		oly by:
3.				OBL species 70	x 1 =	70
4.				FACW species 0	x 2 =	0
5				FAC species 0		0
(Distained F	=	Total Cover		FACU species 5		20
Herb Stratum (Plot size: 5)	60	Yes	OBL	UPL species 0 Column Totals: 75		0 90 (B)
Typha angustifolia Schoenoplectus tabernaemontani	10	No Yes	OBL	Prevalence Index =	``	(b) 20
Schedonorus arundinaceus	5	No	FACU	i iovaionoe mae.	- DIA	20
4.			.,,,,,	Hydrophytic Vegetati	ion Indicators:	
5.				1 - Rapid Test for	Hydrophytic Veg	jetation
6.				X 2 - Dominance Te	st is >50%	
7.				X 3 - Prevalence Inc		
8.				4 - Morphological		
9					s or on a separat	*
10				Problematic Hydro		` ' '
		Total Cover		¹ Indicators of hydric so		
Woody Vine Stratum (Plot size:)			be present, unless dis	turbed or problen	natic.
1 2.				Hydrophytic		
2.	=	Total Cover		Vegetation Present? Yes	X No	
Remarks: (Include photo numbers here or on a sepa						_
Remarks. (molude photo mambers here of on a sopa	idle sileet.					

US Army Corps of Engineers

SOIL Sampling Point: DP-Y-IN

Depth	Matrix		Redo	x Featur						
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-4	10YR 4/2	95	10YR 4/6	5	С	PL/M	Loamy/Clayey	Prominent redox concentrations		
4-8	10YR 4/2	90	10YR 4/4	10	С	PL/M	Loamy/Clayey	Distinct redox concentrations		
8-16	10YR 4/2	98	10YR 4/4	2	С	M	Sandy	Distinct redox concentrations		
		· · · · · · · · · · · · · · · · · · ·								
		· · · · · · · · · · · · · · · · · · ·								
Гуре: С=С	oncentration, D=Dep	etion, RM	=Reduced Matrix, N	√S=Mas	ked San	d Grains.	² Location	n: PL=Pore Lining, M=Matrix.		
lydric Soil I	Indicators:						Indicato	rs for Problematic Hydric Soils ³ :		
Histosol	(A1)		Sandy Gle	yed Mat	rix (S4)		Coa	st Prairie Redox (A16)		
Histic Ep	pipedon (A2)		Sandy Red	dox (S5)			Iron-	Manganese Masses (F12)		
Black His	stic (A3)		Stripped M	1atrix (S6	6)		Red	Parent Material (F21)		
Hydroge	n Sulfide (A4)		Dark Surfa	ace (S7)			Very	Shallow Dark Surface (F22)		
Stratified	I Layers (A5)		Loamy Mu	cky Mine	eral (F1)		Othe	er (Explain in Remarks)		
2 cm Mu	ck (A10)		Loamy Gle	eyed Mat	rix (F2)					
Depleted	l Below Dark Surface	(A11)	X Depleted N	Matrix (F	3)					
Thick Da	rk Surface (A12)		Redox Dar	rk Surfac	e (F6)		³ Indicato	rs of hydrophytic vegetation and		
Sandy M	lucky Mineral (S1)		Depleted [Dark Sur	face (F7)	wetla	and hydrology must be present,		
5 cm Mu	cky Peat or Peat (S3	.)	Redox Dep	pression	s (F8)		unless disturbed or problematic.			
estrictive l	Layer (if observed):									
Type:										
Depth (ir	nches): natural. This area is		cted drainage swale	e along t	he base	of roadwa	Hydric Soil Presen	t? Yes <u>x</u> No_		
Depth (ir	natural. This area is		cted drainage swal	e along t	he base	of roadwa		t? Yes <u>x</u> No_		
Depth (in lemarks: soils are not	natural. This area is		cted drainage swal	e along t	he base	of roadwa		t? Yes <u>x</u> No_		
Depth (ir Remarks: Soils are not YDROLO Vetland Hyd	natural. This area is OGY drology Indicators:	a constru			he base	of roadwa	ay embankments.			
Depth (in Depth	natural. This area is OGY drology Indicators: cators (minimum of o	a constru	uired; check all that	apply)			ay embankments.	ry Indicators (minimum of two requir		
Depth (ir demarks: oils are not YDROLO Vetland Hydrimary Indic Surface V	natural. This area is OGY drology Indicators: cators (minimum of o	a constru	uired; check all thatWater-Sta	apply) ined Lea	ves (B9)		ay embankments. Seconda Surf	ry Indicators (minimum of two requirace Soil Cracks (B6)		
Depth (ir demarks: oils are not YDROLO Vetland Hydrimary India Surface V High Wa	natural. This area is OGY drology Indicators: cators (minimum of o	a constru	uired; check all that Water-Sta Aquatic Fa	apply) ined Lea auna (B1	ves (B9)		ay embankments. Seconda Surf. Drai	ry Indicators (minimum of two requir ace Soil Cracks (B6) nage Patterns (B10)		
Depth (ir Depth (ir Demarks: Oils are not YDROLO Vetland Hyd Trimary India Surface V High Wa K Saturation	natural. This area is OGY drology Indicators: eators (minimum of o Water (A1) ter Table (A2) on (A3)	a constru	uired; check all that Water-Sta Aquatic Fa	apply) ined Lea auna (B1 tic Plant	ves (B9) 3) s (B14))	ay embankments. Seconda Surf. Drai	ry Indicators (minimum of two requir ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)		
Depth (ir Remarks: Roils are not YDROLO Vetland Hydrimary Indic Surface V High Wa X Saturatic Water M	natural. This area is OGY drology Indicators: cators (minimum of	a constru	uired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen	apply) ined Lea auna (B1 tic Plant Sulfide (ves (B9) 3) s (B14) Ddor (C1)	ay embankments. Seconda Surf. Draii Dry- Cray	ry Indicators (minimum of two requirence Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8)		
Depth (ir demarks: soils are not YDROLO Vetland Hydrimary India Surface V High Wa X Saturatio Water M x Sedimen	natural. This area is OGY drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2)	a constru	uired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized F	apply) ined Lea auna (B1 tiic Plant Sulfide (Rhizosph	ves (B9) 3) s (B14) Ddor (C1 eres on) Living Ro	Seconda Surfi Drai Dry- Cray ots (C3) Satu	ry Indicators (minimum of two requir ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9		
Popth (in Depth	natural. This area is OGY drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3)	a constru	uired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized F	apply) ined Lea auna (B1 titc Plant Sulfide (Rhizosph of Reduc	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron) Living Ro (C4)	Seconda Surf Drai Dry- Cray ots (C3) Satu	ry Indicators (minimum of two requir ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1)		
Primary Indic Surface Water M X Saturatic Water M X Sedimen X Drift Dep Algal Ma	natural. This area is OGY drology Indicators: cators (minimum of	a constru	uired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized Fa Presence	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron tion in T) Living Ro (C4)	Seconda Surf. Drai. Dry. Cray. ots (C3) Satu Stur.	ry Indicators (minimum of two requirence Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)		
PDEPTH (in Itemarks: oils are not Itemarks: o	natural. This area is OGY drology Indicators: cators (minimum of	a constru	uired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized F Presence of Recent Iro Thin Muck	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron tion in T) Living Ro (C4)	Seconda Surf. Drai. Dry. Cray. ots (C3) Satu Stun	ry Indicators (minimum of two requirace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1)		
Popth (ir lemarks: soils are not lemarks: sedimen lemarks: lemar	natural. This area is OGY drology Indicators: cators (minimum of	a constru	wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen X Oxidized F Presence of Recent Iro Thin Muck Gauge or V	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron tion in T (C7) a (D9)) Living Ro (C4) illed Soils	Seconda Surf. Drai. Dry. Cray. ots (C3) Satu Stun	ry Indicators (minimum of two requirence Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)		
Primary India X Saturatic Water M. X Sedimen X Drift Dep Algal Ma Iron Dep Inundatic Sparsely	natural. This area is PGY drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) on (B2) on (B3) arks (B3) ot Or Crust (B4) osits (B5) on Visible on Aerial In Vegetated Concave	a constru	wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence of Recent Iro Thin Muck Gauge or N	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron tion in T (C7) a (D9)) Living Ro (C4) illed Soils	Seconda Surf. Drai. Dry. Cray. ots (C3) Satu Stun	ry Indicators (minimum of two requirence Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)		
Primary India X Saturatic Water M X Sedimen X Sedimen X Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Obser	natural. This area is PGY drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) ot Deposits (B2) osits (B3) at or Crust (B4) osits (B5) on Visible on Aerial In Vegetated Concave vations:	a constru ne is requ magery (B Surface (wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence of Recent Iro Thin Muck Thin Muck Gauge or Nother (Exp	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron tion in T (C7) a (D9)) Living Ro (C4) illed Soils	Seconda Surf. Drai. Dry. Cray. ots (C3) Satu Stun	ry Indicators (minimum of two requirence Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)		
Primary India X Saturatia Water M X Sedimen X Drift Dep Algal Ma Iron Dep Inundatia Sparsely Field Obser Surface Water Water	natural. This area is PGY drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) on Deposits (B2) osits (B3) ot or Crust (B4) osits (B5) on Visible on Aerial In Vegetated Concave vations: er Present? Ye	a constru ne is requ magery (B Surface (wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence of Recent Iro Thin Muck Thin Muck Gauge or No (B8) Other (Exp	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R	ves (B9) 3) s (B14) Odor (C1 eres on ted Iron tion in T (C7) a (D9) temarks)) Living Ro (C4) illed Soils	Seconda Surf. Drai. Dry. Cray. ots (C3) Satu Stun	ry Indicators (minimum of two requirence Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)		
Primary India X Saturatic Water M. X Sedimen X Drift Dep Algal Ma Iron Dep Inundatic Sparsely	natural. This area is OGY drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) ot or Crust (B4) osits (B5) on Visible on Aerial Ir vegetated Concave vations: er Present? Ye Present? Ye	a constru ne is requ magery (B Surface (wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence of Recent Iro Thin Muck To Gauge or No B8) Other (Exp	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc n Reduc Surface Well Dat blain in R	ves (B9) 3) s (B14) Odor (C1 eres on ted Iron tion in T r (C7) a (D9) temarks) nches):nches):) Living Ro (C4) illed Soils	Seconda Surf. Drai Dry- Cray ots (C3) Satu Sturn Geo X FAC	ry Indicators (minimum of two requirace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)		
Popth (in Remarks: Soils are not Soils are soils soils are soils soils are soils soils are not Soils are soils soils are not Soils are soils soils are not S	natural. This area is OGY drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) ot or Crust (B4) osits (B5) on Visible on Aerial Ir vegetated Concave vations: er Present? Ye Present? Ye	a constru ne is requ magery (B Surface (wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence of Recent Iro Thin Muck To Gauge or No B8) Other (Exp	apply) ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R	ves (B9) 3) s (B14) Odor (C1 eres on ted Iron tion in T r (C7) a (D9) temarks) nches):nches):) Living Ro (C4) illed Soils	Seconda Surf. Drai. Dry. Cray. ots (C3) Satu Stun	ry Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)		
Popth (in Remarks: Soils are not soils are soils soils are not soils are soils soils are soils soils are not soils s	natural. This area is OGY drology Indicators: cators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerial In Vegetated Concave vations: er Present? Ye Present? Ye resent? Ye	ne is requested a construction of the construc	wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence on the control of the control Gauge or the control No x No x No x No x	apply) ined Lea auna (B1 titic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R Depth (i Depth (i	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron tion in T (C7) a (D9) demarks) nches): nches):) Living Ro (C4) illed Soils	Seconda Surfi Draii Dry- Cray ots (C3) Satu Sturn Geo X FAC	ry Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)		
Popth (in Remarks: Soils are not soils are soils soils are not soils are soils soils are soils soils are not soils s	natural. This area is OGY drology Indicators: cators (minimum of	ne is requested a construction of the construc	wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence on the control of the control Gauge or the control No x No x No x No x	apply) ined Lea auna (B1 titic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R Depth (i Depth (i	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron tion in T (C7) a (D9) demarks) nches): nches):) Living Ro (C4) illed Soils	Seconda Surfi Draii Dry- Cray ots (C3) Satu Sturn Geo X FAC	ry Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)		
Depth (in lemarks: oils are not lemarks: oils are not lemarks: oils are lemarks: oils are lemarks: oils are lemarks: oils are not lemarks: oils are not lemarks: oils are lemarks: oils are not lemarks: oils are lemarks: oils are not lemarks: oils are le	natural. This area is OGY drology Indicators: cators (minimum of	ne is required in a constru	wired; check all that Water-Sta Aquatic Fa True Aqua Hydrogen x Oxidized Fa Presence on the control of the control Gauge or the control No x No x No x No x	apply) ined Lea auna (B1 titic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R Depth (i Depth (i	ves (B9) 3) s (B14) Odor (C1 eres on ced Iron tion in T (C7) a (D9) demarks) nches): nches):) Living Ro (C4) illed Soils	Seconda Surfi Draii Dry- Cray ots (C3) Satu Sturn Geo X FAC	ry Indicators (minimum of two requi ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)		

Project/Site: I-65/I-70 North Split Project Des. No. 1592385 &	1500808 City/County: Indianap	oolis S	Sampling Date: 6/26/2019
Applicant/Owner: INDOT		State: IN S	Sampling Point: <u>DP-Y-OUT</u>
Investigator(s): K. Lucier, C. Tegeler	Section, Township, Rar	nge: 31, 16N, 4E	
Landform (hillside, terrace, etc.): Hillsope drainageway	Local relief (c	oncave, convex, none): con	ıcave
Slope (%): 0-2 Lat: 39.790232	Long: -86.128159	Dat	tum: NAD 83
Soil Map Unit Name: Udorthents		NWI classificat	tion: N/A
Are climatic / hydrologic conditions on the site typical for this	time of year? Yes x	No (If no, explair	ı in Remarks.)
Are Vegetation, Soil, or Hydrologysignific	antly disturbed? Are "Normal C	Circumstances" present?	Yes x No
Are Vegetation, Soil, or Hydrologynaturall		plain any answers in Remar	rks.)
SUMMARY OF FINDINGS – Attach site map sh		cations, transects, in	nportant features, etc.
Hydrophytic Vegetation Present? Yes No x	Is the Sampled Ar	ea	
Hydric Soil Present? Yes X No	within a Wetland?		No <u>x</u>
Wetland Hydrology Present? Yes No x			
Remarks:	<u>. </u>		
VEGETATION – Use scientific names of plants.			
Abso			
Tree Stratum (Plot size:) % Co	over Species? Status	Dominance Test worksh	
1	<u> </u>	Number of Dominant Spe	
		Are OBL, FACW, or FAC	
4.	— — — I	Total Number of Dominar Across All Strata:	nt Species 2 (B)
5.		Percent of Dominant Spe	
	=Total Cover	Are OBL, FACW, or FAC	
Sapling/Shrub Stratum (Plot size:)			
1		Prevalence Index works	
2		Total % Cover of:	Multiply by:
3		OBL species 0	x 1 = 0
4		FACW species 0	x 2 =0
5	-Tetal Cover	FACULARISIS 0	x 3 = 0
Herb Stratum (Plot size: 5)	=Total Cover	FACU species 37 UPL species 0	x 4 = <u>148</u> x 5 = 0
1. Schedonorus arundinaceus 2:	5 Yes FACU	Column Totals: 37	x = 0 (A) 148 (B)
	0 Yes FACU	Prevalence Index = B/	
	No FACU		
4.		Hydrophytic Vegetation	Indicators:
5.		1 - Rapid Test for Hy	drophytic Vegetation
6.		2 - Dominance Test i	s >50%
7		3 - Prevalence Index	
8.			aptations ¹ (Provide supporting
9			or on a separate sheet)
10			ytic Vegetation ¹ (Explain)
Woody Vino Stratum (Plot size:	7 =Total Cover		and wetland hydrology must
Woody Vine Stratum (Plot size:) 1.	}	be present, unless disturb	ped or problematic.
2.		Hydrophytic	
	=Total Cover	Vegetation Present? Yes	No x
Developed the state of the stat			
Remarks: (Include photo numbers here or on a separate sh	eet.)		

US Army Corps of Engineers

SOIL Sampling Point: DP-Y-OUT

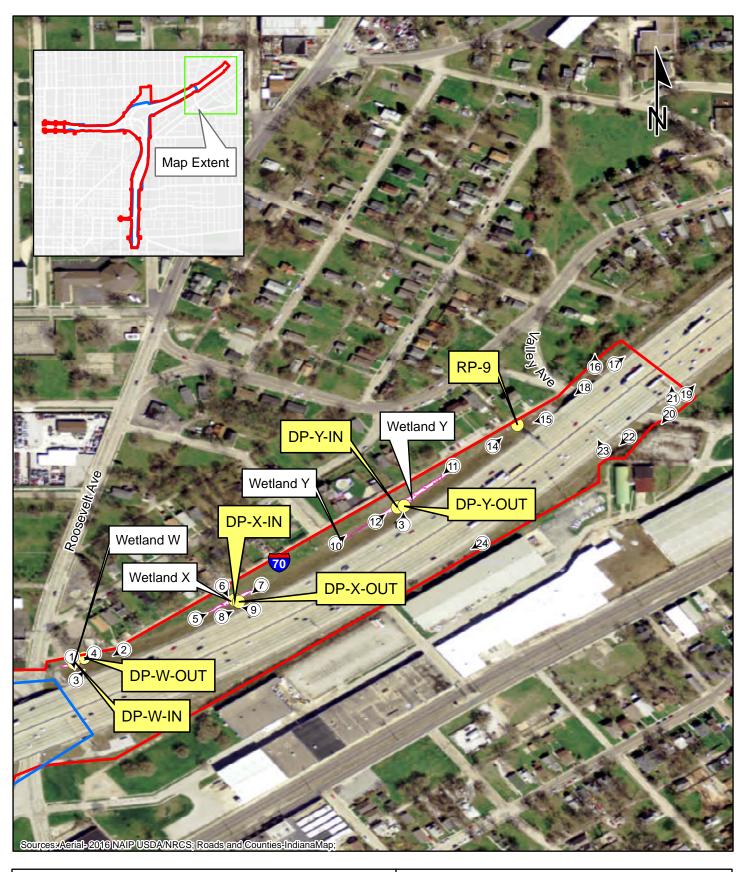
Profile Des Depth	cription: (Describ Matrix	e to the de		ument t x Featur		itor or c	confirm the absence	e of indicators.)			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-5	10YR 3/2	100	, ,				Loamy/Clayey				
5-13	10YR 5/2	75	10YR 5/6	25	C	M	Loamy/Clayey	Prominent redox concentrations			
	10111 3/2		10111 0/0				Loamy/Olayey	1 Torrinierit Tedex concentrations			
	· 										
	<u> </u>						-				
							-				
¹ Type: C=C	Concentration, D=De	pletion, RM	=Reduced Matrix, N	∕IS=Mas	ked Sand	d Grains	. ² Locatio	n: PL=Pore Lining, M=Matrix.			
Hydric Soil	Indicators:						Indicate	ors for Problematic Hydric Soils ³ :			
Histoso	I (A1)		Sandy Gle	-				ast Prairie Redox (A16)			
	pipedon (A2)		Sandy Re	, ,				-Manganese Masses (F12)			
	listic (A3)		Stripped N		3)			d Parent Material (F21)			
	en Sulfide (A4)		Dark Surfa	` '				y Shallow Dark Surface (F22)			
	d Layers (A5)		Loamy Mu	-			Oth	er (Explain in Remarks)			
	uck (A10)	(8.4.4)	Loamy Gle								
	d Below Dark Surfa	ce (A11)	X Depleted I				31				
	ark Surface (A12)		Redox Da		` '			ors of hydrophytic vegetation and			
	Mucky Mineral (S1) ucky Peat or Peat (ទ	23)	Depleted [Redox De				wetland hydrology must be present, unless disturbed or problematic.				
		-	Nedox De	piession	5 (10)	-	unit	ess disturbed or problematic.			
	Layer (if observed):									
Type: Depth (i	inahaa).						Undria Cail Dragg	nt2 Yea Y No			
Remarks:	inches).						Hydric Soil Prese	nt? Yes X No			
Onovar rera	sal was encountered	at 10 mon	so due to the prese	noc or gi	uvoi						
LIVEROL	20V										
HYDROLO											
_	drology Indicators						0 1				
	icators (minimum of	one is requ	•		(50)			ary Indicators (minimum of two required			
	Water (A1)		Water-Sta		` '			face Soil Cracks (B6)			
Saturati	ater Table (A2)		Aquatic Fa		-			inage Patterns (B10) -Season Water Table (C2)			
	Marks (B1)		Hydrogen		, ,	١		yfish Burrows (C8)			
	nt Deposits (B2)		Oxidized F		`			uration Visible on Aerial Imagery (C9)			
	posits (B3)		Presence			U		nted or Stressed Plants (D1)			
	at or Crust (B4)		Recent Iro					omorphic Position (D2)			
	posits (B5)		Thin Muck	Surface	e (C7)			C-Neutral Test (D5)			
Inundat	ion Visible on Aerial	Imagery (E	7) Gauge or	Well Dat	ta (D9)						
Sparsel	y Vegetated Concav	e Surface (B8) Other (Exp	olain in F	Remarks)						
Field Obse	rvations:										
Surface Wa	iter Present?	'es	No	Depth (i	nches):						
Water Table		'es	No	Depth (i	nches):						
Saturation F	Present?	'es	No	Depth (i	nches):		Wetland Hydrol	ogy Present? Yes No _x			
(includes ca	apillary fringe)										
Describe Re	ecorded Data (strea	m gauge, m	onitoring well, aeria	l photos	, previou	s inspec	tions), if available:				
Remarks:											

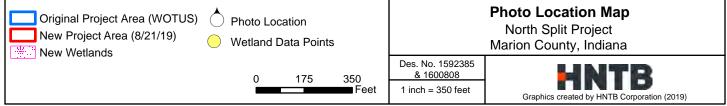
Project/Site: I-65/I-70 North Split Project, Des. Nos. 1592	2385 & 15008	308 City/Cour	nty: <u>Indiana</u>	polis	Sampling Date:	6/26/2019
Applicant/Owner: INDOT				State: IN	Sampling Point:	RP-9
Investigator(s): K. Lucier, C. Tegeler		Section, T	ownship, Ra	ange: 31, 16N, 4F		
Landform (hillside, terrace, etc.): Hillsope drainage sw	vale	I	Local relief (d	concave, convex, none):	concave	
Slope (%): 0-2 Lat: 39.789768		Long:{	86.129077		Datum: NAD 83	
Soil Map Unit Name: Udorthents				NWI classi	fication: N/A	
Are climatic / hydrologic conditions on the site typical f	for this time (of year?	Yes x	No (If no, exp	plain in Remarks.)	
Are Vegetation, Soil, or Hydrology	significantly	disturbed? A	Are "Normal (•	٥
Are Vegetation, Soil, or Hydrology				κplain any answers in Re	<u> </u>	
SUMMARY OF FINDINGS – Attach site m	=		g point lo	ocations, transects	, important fea	ıtures, etc.
Hydrophytic Vegetation Present? Yes X N	lo	Is the	Sampled A	rea		
	lo X		n a Wetland		No X	
	lo X					
Remarks:						
VEGETATION – Use scientific names of pla	ants.					_
	Absolute	Dominant	Indicator	_ <u>_</u> ,		
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test wo		
1.				Number of Dominant	•	2 (4)
2.				Are OBL, FACW, or F		2 (A)
3				Total Number of Dom Across All Strata:	inant Species	2 (B)
4 5.						2 (B)
J		=Total Cover		Percent of Dominant Are OBL, FACW, or F	•	0.0% (A/B)
Sapling/Shrub Stratum (Plot size:		-10101 0010.		AIO ODE, 171011, 5	<u></u>	0.070 (142)
1.	,			Prevalence Index wo	orksheet:	
2.				Total % Cover of		/ by:
3.						50
4.				FACW species 2	5 x 2 =	50
5.				FAC species 2	2 x 3 =	6
		=Total Cover		FACU species 2	5 x 4 =	100
Herb Stratum (Plot size: 5)				UPL species (x 5 =	0
Phalaris arundinacea	50	Yes	OBL			206 (B)
2. Typha angustifolia	25	Yes	FACW	Prevalence Index	= B/A = 2.02	2
3. Festuca rubra	15	No No	FACU			
4. Solidago altissima	10	No No	FACU	Hydrophytic Vegetat		
5. Rumex crispus	2	No	FAC		r Hydrophytic Veget	ation
6.				X 2 - Dominance Te		
7. 8.				l 	dex is ≤3.0 I Adaptations¹ (Prov	ride sunnortina
<u> </u>					ks or on a separate	
10.					ophytic Vegetation	•
10	102	=Total Cover		¹ Indicators of hydric s	. , .	` ' '
Woody Vine Stratum (Plot size:)			be present, unless dis		
1.	,					
2.				Hydrophytic Vegetation		
		=Total Cover		_	X No	
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			<u> </u>		
(, and an					

US Army Corps of Engineers

SOIL Sampling Point: RP-9

Profile Desc	cription: (Descr	ibe to the dept	h needed to doc	ument t	he indica	ator or c	onfirm the absence	ce of indicators.)	
Depth	Matr	ix	Redo	x Featur	es					
(inches)	Color (moist	:) %	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
								_		
¹ Type: C=C	oncentration D=	Depletion RM=F	Reduced Matrix, N	MS=Mas	ked Sand	Grains	² l ocati	ion: PL=Pore Lir	ning M=Matri	x
Hydric Soil		Dopiction, rtivi 1	toddood Matrix, i	vic ivido	itou ourit	a Oranio		tors for Problem		•
Histosol			Sandy Gle	ved Mat	rix (S4)			oast Prairie Redo	-	
	oipedon (A2)		Sandy Re					n-Manganese M		
	stic (A3)		Stripped M	, ,				ed Parent Materia	, ,	
	en Sulfide (A4)		Dark Surfa	,	-,			ery Shallow Dark		1
	d Layers (A5)		Loamy Mu		eral (F1)			her (Explain in R	-	,
	uck (A10)		Loamy Gle	-			<u> </u>	inor (Explain in re	omano,	
	d Below Dark Sur	face (A11)	Depleted I	-						
	ark Surface (A12)		Redox Da				³ Indica	itors of hydrophy	tic vegetation	and
	/ucky Mineral (S1		Depleted [` '	1		etland hydrology	-	
	icky Peat or Peat	•	Redox De			'		less disturbed or	•	
		. ,	TREGOX BE	pression	3 (1 0)		un	iless distalbed of	problematic.	
	Layer (if observe	ed):								
Type:			_						.,	
Depth (ir	nches):		_				Hydric Soil Prese	ent?	Yes	No x
Remarks:										
Shovel test v	was not avilable o	due to the abunc	dance of gravel ar	nd sedim	entation	at the su	urface.			
HYDROLC	OGY									
Wetland Hy	drology Indicate	ors:								
Primary Indi	cators (minimum	of one is require	ed; check all that	apply)			Secon	<u>dary Indicators (r</u>	minimum of ty	vo required)
Surface	Water (A1)		Water-Sta	ined Lea	ives (B9)		Su	ırface Soil Crack	s (B6)	
High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)		Dr	ainage Patterns	(B10)	
Saturation	on (A3)		True Aqua	ıtic Plant	s (B14)		Dr	y-Season Water	Table (C2)	
Water M	larks (B1)		Hydrogen	Sulfide (Odor (C1)	Cr	ayfish Burrows (C8)	
Sedimer	nt Deposits (B2)		Oxidized F	Rhizosph	eres on l	_iving Ro	oots (C3) Sa	aturation Visible o	on Aerial Imaç	gery (C9)
Drift Dep	posits (B3)		Presence	of Redu	ced Iron ((C4)	St	unted or Stresse	d Plants (D1)	
Algal Ma	at or Crust (B4)		Recent Iro	n Reduc	tion in Ti	lled Soil	s (C6) Ge	eomorphic Position	on (D2)	
Iron Dep	oosits (B5)		Thin Muck	Surface	(C7)		_X_FA	AC-Neutral Test (D5)	
Inundation	on Visible on Aer	ial Imagery (B7)	Gauge or	Well Dat	a (D9)					
Sparsely	Vegetated Cond	cave Surface (B	8)Other (Exp	olain in F	Remarks)					
Field Obser	vations:									
Surface Wat	ter Present?	Yes	No	Depth (i	nches):					
Water Table	Present?	Yes		Depth (i	_					
Saturation P	resent?	Yes		Depth (i	_		Wetland Hydro	logy Present?	Yes	No x
(includes ca	pillary fringe)				_					
Describe Re	corded Data (stre	eam gauge, mor	nitoring well, aeria	l photos	, previou	s inspec	tions), if available:			
Remarks:	<u> </u>									
Hydrology is	constantly draine	ed by slope to V	alley Avenue.							







1. Facing south towards Wetland W and underdrain (4/10/2019)



2. Facing southwest towards Wetland W (4/10/2019)

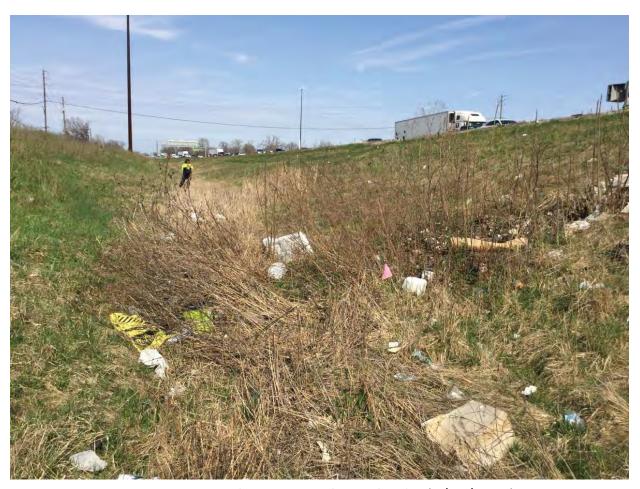
Des. No. 1592385 & 1500808 Attachments, Page 28 of 39



3. Soil profile at DP-W-IN (6/26/2019)



4. Soil profile at DP-W-OUT (6/26/2019)



5. Facing northeast towards Wetland X (4/10/2019)



6. Looking southeast to underdrain across Wetland X (4/10/2019)

Des. No. 1592385 & 1500808 Attachments, Page 30 of 39



7. Looking southwest towards Wetland X (4/10/2019)



8. Soil profile at DP-X-IN (6/26/2019)



9. Soil profile at DP-X-OUT (6/26/2019)



10. Looking northeast towards Wetland Y (4/10/2019)



11. Looking southwest towards Wetland Y (4/10/2019)



12. Soil profile at data point DP-Y-IN (6/26/2019)



13. Soil profile at data point DP-Y-OUT (6/26/2019)



14. Facing northeast towards ditch by Valley Avenue (4/10/2019)



15. Soil profile at data point RP-9 (4/10/2019)



16. Looking north to drainage area within right of way (6/26/2019)



17. Looking northeast towards interstate right of way (6/26/2019)



18. Looking southwest to Valley Avenue (6/26/2019)



19. Looking east within right of way (6/26/2019)



20. Looking southwest to Valley Avenue (6/26/2019)



21. Looking north to drainage inlet (6/26/2019)



22. Looking southwest within interstate right of way (4/10/2019)



23. Looking northwest to under drain (4/10/2019)



24. Looking southwest towards roadside drainage feature (4/10/2019)