Photo 73 – Northeast Quadrant, Wetland A: Facing south along the east side of SR 159 toward the southern limits of Wetland A. A large patch of *Bidens frondose* (devil's-pitchfork, FACW) is located to the left.

Photo 74 – Northeast Quadrant, Data Point 3-OUT: Facing north toward data point 3-OUT and along the woodline where the topography is slightly elevated compared to Wetland A. Great ragweed and horseweed were present.

Photo 75 – Northeast Quadrant, Data Point 3-OUT: Facing south toward data point 3-OUT. The location passed the Dominance Test for hydrophytic vegetation.

Photo 76 – Northeast Quadrant, Data Point 3-OUT: Soil sample from data point 3-OUT exhibited the hydric soil indicator for Depleted Matrix. The sample was very dry and does not show coloration without

Photo 77 – Northeast Quadrant, Data Point 3-OUT: Test pit at data point 3-OUT was dry. While the FAC-Neutral Test was observed, no other hydrology indicators were present.

Photo 78 – Northeast Quadrant, Wetland A: Facing north along the elevated eastern border of Wetland A. The wetland is delineated by topography and by a transition toward more upland plant species.

Photo 79 – Northeast Quadrant, Wetland A: Facing south along the eastern border of Wetland A. Area contains plants with mixed indicator statuses, but still includes some obligate species (common boneset in bottom left corer).

Photo 80 – Northeast Quadrant: Facing west from within the forested area in the northwest quadrant of the AOI. No indications of surface water features were observed.

Photo 81 – Northeast Quadrant: Facing southwest from within the forested area in the northwest quadrant of the AOI. No indications of surface water features were observed.

Photo 82 – Northeast Quadrant, Data Point A-IN: Facing south toward data point A-IN from within Wetland A and along RSD-3. Large barnyard grass was the only dominant species present, but all other species were FACW or OBL.

Photo 83 – Northeast Quadrant, Data Point A-IN: Facing east toward data point A-IN and across Wetland A. Note the rise in topography further back that helps to delineate the wetland.

Photo 84 – Northeast Quadrant, Wetland A: Facing north along the eastern limits of Wetland A. Note the higher topography along the woodline of the right-of-way.

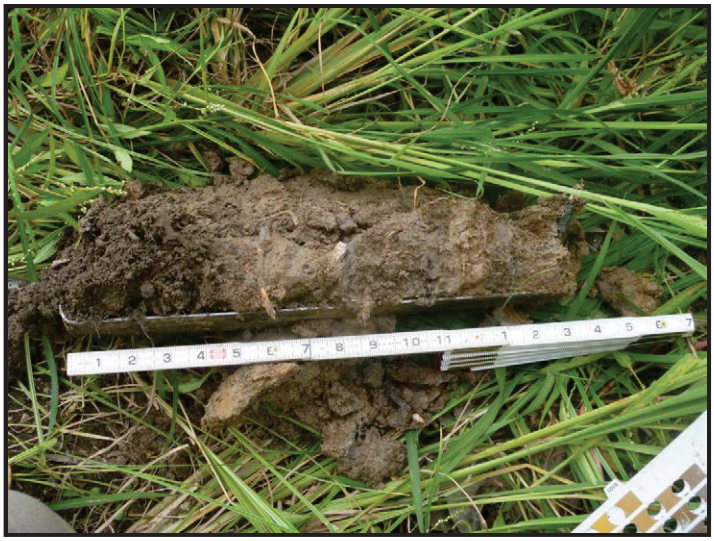

Photo 85 – Northeast Quadrant, Data Point A-IN: The soil sample at data point A-IN exhibited two indicators of hydric soils, including Depleted Below Dark Surface and Depleted Matrix.

Photo 86 – Northeast Quadrant, Data Point A-IN: Test pit at data point A-IN contained moist soils and became nearly saturated at the bottom. Geomorphic Position and FAC-Neutral Test indicators were present.

Photo 87 – Northeast Quadrant, Wetland A and RSD-3: Facing southeast toward Wetland A and RSD-3 from SR 159. RSD-3 did not exhibit an OHWM or defined bed and bank.

Photo 88 – Northeast Quadrant, Wetland A and RSD-3: Facing northeast toward Wetland A and RSD-3 from SR 159.

Photo 89 – Northeast Quadrant, Wetland A and RSD-3: Facing southeast toward Wetland A and RSD-3 from SR 159. Photo shows the change in topography of where Wetland A expands beyond the roadside ditch (right).

Photo 90 – Northeast Quadrant, Wetland A and RSD-3: Facing south along Wetland A and RSD-3 from the northern terminus of the AOI. The northern segment of Wetland A is confined to RSD-3.

Photo 91 – Northeast Quadrant: Facing south along the vegetated right-of-way between RSD-3 and the treeline. The area is elevated, confining Wetland A to the roadside ditch.

Photo 92 – Northeast Quadrant, RSD-3: Facing north along RSD-3, beyond the northern limits of the AOI. RSD-3 did not exhibit an OHWM or defined bed and bank.

Photo 93 – Northeast Quadrant: Facing east toward a gravel access drive over RSD-3 at the northern terminus of the AOI. Wetland A starts immediately south of the drive.

Photo 94 – Northeast Quadrant, Beyond AOI: Facing northeast beyond the northern limits of the AOI toward a rural residential property.

Photo 95 – North Project Setting, Toward AOI: Facing south along SR 159 from the northern limits of the AOI. Topography north of the subject culvert is flat. Land use is forested and agricultural.

Photo 96 – North Project Setting, Beyond AOI: Facing north beyond the northern limits of the AOI. Topography is flat. Land use is agricultural and rural residential.

Climatological Data for FARMERSBURG TV-2, IN - August 2022

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2022-08-01	86	68	77.0	0.6	0	12	0.14	0.0	0
2022-08-02	80	69	74.5	-1.9	0	10	0.01	0.0	0
2022-08-03	90	71	80.5	4.1	0	16	0.02	0.0	0
2022-08-04	85	70	77.5	1.2	0	13	0.91	0.0	0
2022-08-05	87	71	79.0	2.8	0	14	0.00	0.0	0
2022-08-06	91	72	81.5	5.3	0	17	0.00	0.0	0
2022-08-07	90	73	81.5	5.4	0	17	0.00	0.0	0
2022-08-08	92	74	83.0	7.0	0	18	0.22	0.0	0
2022-08-09	77	70	73.5	-2.4	0	9	0.12	0.0	0
2022-08-10	82	67	74.5	-1.4	0	10	0.00	0.0	0
2022-08-11	84	61	72.5	-3.3	0	8	0.11	0.0	0
2022-08-12	78	60	69.0	-6.7	0	4	0.00	0.0	0
2022-08-13	79	59	69.0	-6.6	0	4	0.00	0.0	0
2022-08-14	81	66	73.5	-2.0	0	9	0.28	0.0	0
2022-08-15	78	68	73.0	-2.4	0	8	0.00	0.0	0
2022-08-16	82	63	72.5	-2.7	0	8	0.00	0.0	0
2022-08-17	82	60	71.0	-4.1	0	6	0.00	0.0	0
2022-08-18	84	59	71.5	-3.5	0	7	0.00	0.0	0
2022-08-19	85	61	73.0	-1.8	0	8	0.00	0.0	0
2022-08-20	83	64	73.5	-1.2	0	9	0.00	0.0	0
2022-08-21	85	61	73.0	-1.5	0	8	1.78	0.0	0
2022-08-22	81	63	72.0	-2.4	0	7	0.00	0.0	0
2022-08-23	83	61	72.0	-2.2	0	7	0.00	0.0	0
2022-08-24	85	60	72.5	-1.6	0	8	0.00	0.0	0
2022-08-25	83	61	72.0	-1.9	0	7	0.00	0.0	0
2022-08-26	85	67	76.0	2.3	0	11	0.00	0.0	0
2022-08-27	85	66	75.5	2.0	0	11	0.00	0.0	0
2022-08-28	90	70	80.0	6.7	0	15	0.46	0.0	0
2022-08-29	90	71	80.5	7.4	0	16	0.35	0.0	0
2022-08-30	82	65	73.5	0.6	0	9	0.21	0.0	0
2022-08-31	81	56	68.5	-4.2	0	4	0.00	0.0	0
Sum	2606	2027	-	-	0	310	4.61	0.0	-
Average	84.1	65.4	74.7	-0.3	-	-	-	-	0.0
Normal	85.4	64.6	75.0	-	2	311	3.06	0.0	-

Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).
Max Temperature : midnight
Min Temperature : midnight
Precipitation : midnight
Snowfall : unknown
Snow Depth : midnight

Date of field investigation: 8/25/2022

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Des. 2002197: SR 159 UNT to Splunge Creek City/County: Vigo County Sampling Date: 8/25/2022

Applicant/Owner: INDOT, Crawfordsville District State: IN Sampling Point: 1-OUT

Investigator(s): Brock Ervin & Ben Neild, INDOT Crawfordsville DE Section, Township, Range: Section 23, T 10 N, R 8 W

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

Slope (%): < 2% Lat: 39.296926° Long: -87.259186° Datum: NAD 1983

Soil Map Unit Name: AvB2 - Ava silt loam, 2 to 6 percent slopes, eroded NWI classification: No (See Remarks)

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

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

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:
Data point taken in southwest quadrant of crossing at SR 159 and UNT to Splunge Creek, about 20 feet from creek and 50 feet from the road. Point is located on the border of an NWI-mapped polygon classified as PFO1A, but its linear shape and location along the NWI line appear to reference the stream and is mislocated. AvB2 Soil Unit Description: No Flooding, Moderately Well Drained, 0% Hydric Rating.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus palustris (Pin Oak)*	20	Y	FACW
2. *Celtis occidentalis Common Hackberry FAC*	20	Y	FAC
3. *Carya laciniosa (Shell-Bark Hickory)*	15	Y	FACW
4. *Juglans nigra (Black Walnut)*	10	N	FACU
5. *Acer negundo Ash-Leaf Maple FAC*	5	N	FAC
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Parthenocissus quinquefolia (Virginia-Creeper)*	10	Y	FACU
2. *Toxicodendron radicans (Eastern Poison Ivy)*	10	Y	FAC
3. *Sanicula odorata (Clustered Black-Snakeroot)*	5	N	FACU
4. *Ageratina altissima (White Snakeroot)*	5	N	FACU
5. *Persicaria virginiana Jumpseed FAC*	2	N	FAC
6. *Rosa multiflora Rambler Rose FACU*	2	N	FACU
7.			
8.			
9.			
10.			
	34	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft. radius)			
1. *Parthenocissus quinquefolia (Virginia-Creeper)*	2		FACU
2. *Toxicodendron radicans (Eastern Poison Ivy)*	1		FAC
	3	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	38	x 3 =	114
FACU species	34	x 4 =	136
UPL species	0	x 5 =	0
Column Totals:	107 (A)		320 (B)

Prevalence Index = B/A = 2.99

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: 1-OUT

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 4/3	100					St Cl	
4 - 20	10YR 5/4	100					St Cl	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Very fine, dry sediment, dusty.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Pit very dry to bottom. FAC-Neutral Test = 2 of 3 = 33%.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Des. 2002197: SR 159 UNT to Splunge Creek City/County: Vigo County Sampling Date: 8/25/2022

Applicant/Owner: INDOT, Crawfordsville District State: IN Sampling Point: 2-OUT

Investigator(s): Brock Ervin & Ben Neild, INDOT Crawfordsville DE Section, Township, Range: Section 24, T 10 N, R 8 W

Landform (hillslope, terrace, etc.): Wooded Roadside Right-of-Way Local relief (concave, convex, none): None

Slope (%): < 5% Lat: 39.297272° Long: -87.258829° Datum: NAD 1983

Soil Map Unit Name: IvA- Iva silt loam, 0 to 2 percent slopes NWI classification: Non-Wetland

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

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

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Located in the woods in the northeast quadrant at SR 159 and UNT to Splunge Creek, about 30 feet from creek bank. IvA Soil Unit Description: No Flooding, Somewhat Poorly Drained, 5% Hydric Rating.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juglans nigra (Black Walnut)*	30	Y	FACU
2. *Quercus imbricaria (Shingle Oak)*	30	Y	FACU
3. *Carya laciniosa (Shell-Bark Hickory)*	15	N	FACW
4. *Ulmus rubra (Slippery Elm)*	5	N	FAC
5.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Quercus palustris (Pin Oak)*	2	N	FACW
2. *Fraxinus pennsylvanica (Green Ash)*	2	N	FACW
3.			
4.			
5.			
	4	= Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Sanicula odorata (Clustered Black-Snakeroot)*	15	Y	FAC
2. *Elymus virginicus (Virginia Wild Rye)*	10	Y	FACW
3. *Lonicera mackii (Amur Honeysuckle) Upl*	3	N	UPL
4. *Lactuca floridana (Woodland Lettuce)*	2	N	FACU
5. *Ambrosia trifida (Great Ragweed)*	2	N	FAC
6. *Ageratina altissima (White Snakeroot)*	2	N	FACU
7. *Parthenocissus quinquefolia (Virginia-Creeper)*	2	N	FACU
8. *Symphyotrichum lateriflorum (Farewell-Summer)*	2	N	FACW
9. *Smilax hispida (Chinaroot)*	1	N	FAC
10.			
	39	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft. radius)			
1. *Parthenocissus quinquefolia (Virginia-Creeper)*	3	N	FACU
2.			
	3	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	31	x 2 =	62
FAC species	23	x 3 =	69
FACU species	69	x 4 =	276
UPL species	3	x 5 =	15
Column Totals:	126 (A)		422 (B)

Prevalence Index = B/A = 3.35

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

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

SOIL

Sampling Point: 2-OUT

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 3	10YR 4/3	100					St Cl	
3 - 20	10YR 5/4	100					St Cl	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Very fine, dry sediment, dusty.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Pit very dry to bottom. FAC-Neutral Test = 1 of 4 = 25%.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Des. 2002197: SR 159 UNT to Splunge Creek City/County: Vigo County Sampling Date: 8/25/2022

Applicant/Owner: INDOT, Crawfordsville District State: IN Sampling Point: 3-OUT

Investigator(s): Brock Ervin & Ben Neild, INDOT Crawfordsville DE Section, Township, Range: Section 24, T 10 N, R 8 W

Landform (hillslope, terrace, etc.): Vegetated Right-of-Way Local relief (concave, convex, none): None

Slope (%): < 5% Lat: 39.297721° Long: -87.258830° Datum: NAD 1983

Soil Map Unit Name: IvA - Iva silt loam, 0 to 2 percent slopes NWI classification: Non-Wetland

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

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

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Located about 15 feet east of ditch line in area with species with mixed wetland indicator statuses and near area with dominant upland vegetation (tall goldenrod and horseweed). IvA Soil Unit Description: No Flooding, Somewhat Poorly Drained, 5% Hydric Rating.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carya ovata (Shag-Bark Hickory)*	20	Y	FACU
2. *Quercus palustris (Pin Oak)*	10	Y	FACW
3.			
4.			
5.			
	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Morus rubra (Red Mulberry)*	3	N	FACU
2.			
3.			
4.			
5.			
	3	= Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Leersia virginica (White Grass)*	30	Y	FACW
2. *Panicum dichotomiflorum (Fall Panic Grass)*	30	Y	FACW
3. *Symphyotrichum lateriflorum (Farewell-Summer)*	30	Y	FACW
4. *Lonicera japonica (Japanese Honeysuckle)*	10	N	FACU
5. *Toxicodendron radicans (Eastern Poison Ivy)*	10	N	FAC
6. *Quercus palustris (Pin Oak)*	10	N	FACW
7. *Lactuca floridana (Woodland Lettuce)*	5	N	FACU
8. *Rosa carolina (Carolina Rose)*	5	N	FACU
9. *Solidago altissima (Tall Goldenrod)*	5	N	FACU
10. *Lycopus americanus (Cut-Leaf Water-Horehound)*	3	N	OBL
	138	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft. radius)			
1. *Parthenocissus quinquefolia (Virginia-Creeper)*	1	N	FACU
2. *Toxicodendron radicans (Eastern Poison Ivy)*	1	N	FAC
	2	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	3	x 1 =	3
FACW species	110	x 2 =	220
FAC species	11	x 3 =	33
FACU species	49	x 4 =	196
UPL species	0	x 5 =	0
Column Totals:	173 (A)		452 (B)

Prevalence Index = B/A = 2.61

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Immediately north of area containing predominantly Solidago altissima (tall goldenrod, FACU) and Erigeron canadensis (Canadian horseweed, FACU).

SOIL

Sampling Point: 3-OUT

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5	10YR 6/2	95	7.5YR 4/4	5	C	M	St Cl	
5 - 9	10YR 7/3	100					St Cl	
9 - 20	10YR 5/2	95	7.5YR 4/4	5	C	M	St Cl	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X **No** _____

Remarks:

Very fine, dry sediment, dusty.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

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

Wetland Hydrology Present? Yes _____ **No** X

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

Remarks:

Pit very dry to bottom. FAC-Neutral Test = 3 of 5 = 60%. Slightly higher elevation indicates wetland may be defined by small changes in topography.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Des. 2002197: SR 159 UNT to Splunge Creek City/County: Vigo County Sampling Date: 8/25/2022

Applicant/Owner: INDOT, Crawfordsville District State: IN Sampling Point: A-IN

Investigator(s): Brock Ervin & Ben Neild, INDOT Crawfordsville DE Section, Township, Range: Section 24, T 10 N, R 8 W

Landform (hillslope, terrace, etc.): Roadside Ditch Embankment Local relief (concave, convex, none): Open Concave Along Ditch

Slope (%): < 5% Lat: 39.297968° Long: -87.258858° Datum: NAD 1983

Soil Map Unit Name: IvA - Iva silt loam, 0 to 2 percent slopes NWI classification: Non-Wetland

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

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

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:
Data Point A-IN was located about 300 feet north of the culvert and along the back slope of the roadside ditch, where wetland vegetation appeared to bulge outside of the roadside ditch, which was otherwise confined to the ditch. IvA Soil Unit Description: No Flooding, Somewhat Poorly Drained, 5% Hydric Rating.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: N/A)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: N/A)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft. radius)			
1. *Echinochloa crus-galli (Large Barnyard Grass)*	40	Y	FACW
2. *Panicum dichotomiflorum (Fall Panic Grass)*	15	N	FACW
3. *Persicaria hydropiper (Mild Water-Pepper)*	15	N	OBL
4. *Bidens frondosa (Devil's-Pitchfork)*	5	N	FACW
5. *Cyperus esculentus (Chufa)*	2	N	FACW
6.			
7.			
8.			
9.			
10.			
	77 = Total Cover		
Woody Vine Stratum (Plot size: N/A)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	62	x 2 =	124
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	77 (A)		139 (B)

Prevalence Index = B/A = 1.81

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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