









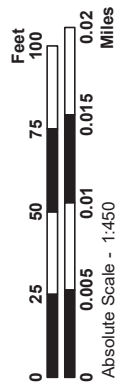


Des. No. 2002197
SR 159 at UNT to Splunge Creek
 Small Structure Project
 4.15 Miles North of SR 246
 Vigo County

Photo Orientation Map - North

-  Area of Investigation
-  Photo Orientation Arrow
-  Downward Photo
-  Downward Photo (Data Point)
-  Likely Jurisdictional Streams
-  Other Concentrated Flows
-  Wetland Data Point
-  Non-Wetland Data Point
-  Wetlands
-  OHWM Measurement Point



Sources:
Non Orthophotography Data -
 Obtained from the State of Indiana
 Geographical Information Office Library
Orthophotography - Obtained from Indiana
 Map Framework Data (www.indianamap.org)
 Map Projection: UTM Zone 16 N
 Map Datum: NAD83

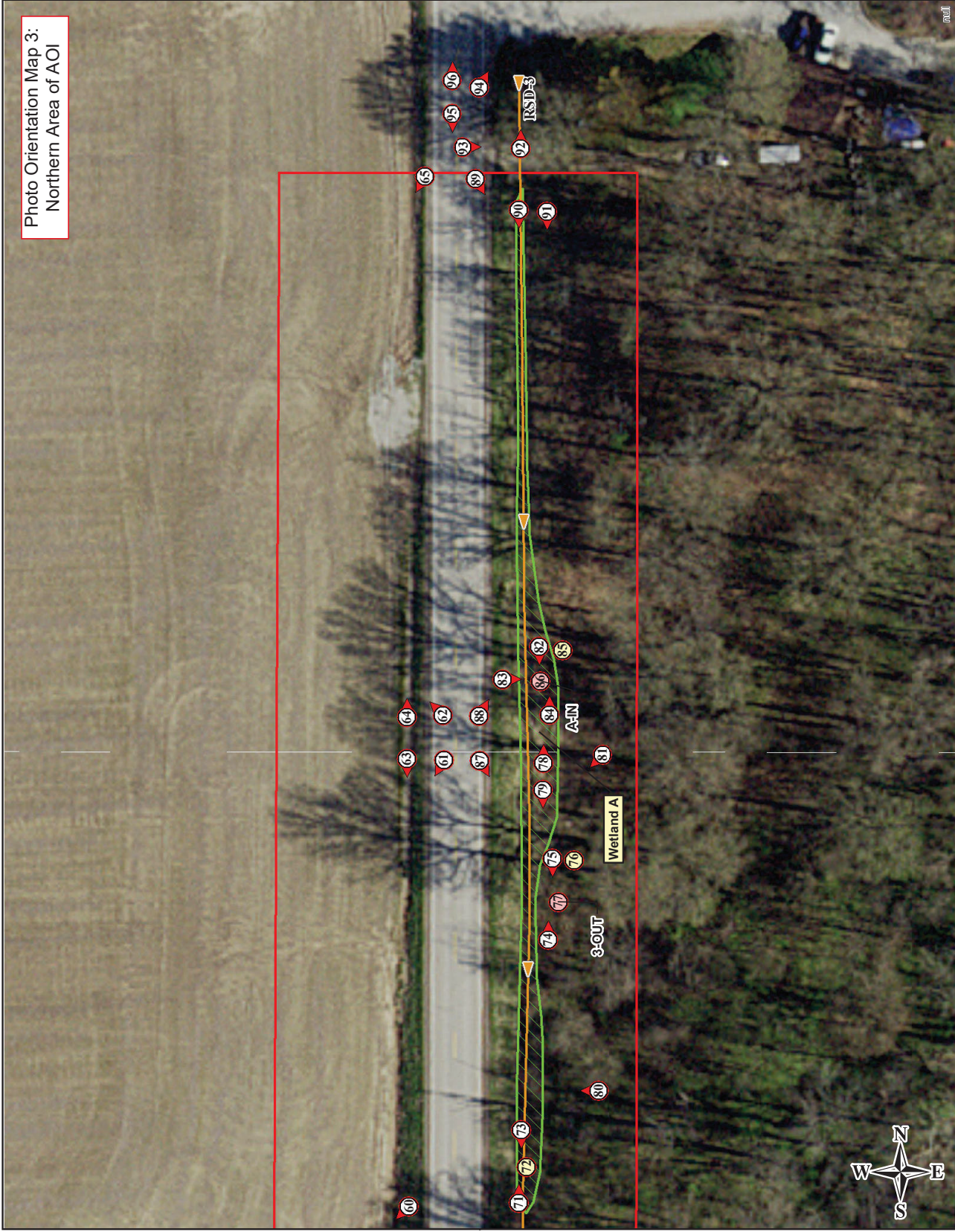




Photo 1 – UNT to Splunge Creek, Upstream from SR 159: Facing upstream to the southwest along UNT to Splunge Creek at the western limits of the AOI. The OHWM in this area measured 14 ft. wide by 30 in. deep.



Photo 2 – UNT to Splunge Creek, Upstream from SR 159: Facing downstream to the northeast toward a scour hole at a small drop in the streambed.



Photo 3 – UNT to Splunge Creek, Upstream from SR 159t: Facing upstream to the southwest along UNT to Splunge Creek toward the scour hole shown in Photo 2.



Photo 4 – UNT to Splunge Creek, Upstream from SR 159: Facing downstream to the northeast toward the scoured area at the inlet of the SR 159 small structure.



Photo 5 – SR 159 Culverts at UNT to Splunge Creek: Facing northeast toward inlet of SR 159 small structure, Str. No. CV 159-084-23.30, a set of twin, elliptical 47-foot-long steel pipes, each 8.5 feet wide and 6 feet high. The structure is proposed for replacement.



Photo 6 – Erosional Feature at UNT to Splunge Creek: Facing northwest toward the outfall of an erosional feature (EF-1) that carries field drainage into UNT to Splunge Creek.



Photo 7 – SR 159 Crossing of UNT to Splunge Creek: Facing upstream to the southwest along UNT to Splunge Creek from the top of the SR 159 small structure.



Photo 8 – SR 159 Crossing of UNT to Splunge Creek: Facing southwest toward the southwest quadrant at the SR 159 crossing of UNT to Splunge Creek. An access crosses UNT-2 immediately south of the creek.



Photo 9 – SR 159 Crossing of UNT to Splunge Creek: Facing northwest toward the northwest quadrant at the SR 159 crossing of UNT to Splunge Creek. A field entrance is immediately north of the creek.



Photo 10 – SR 159 Crossing of UNT to Splunge Creek: Facing north along SR 159 from the top of the small structure at Splunge Creek. Topography is flat and land use is forested, agricultural, and rural residential.



Photo 11 – SR 159 Crossing of UNT to Splunge Creek: Facing downstream to the east along UNT to Splunge Creek from the top of the SR 159 small structure. The left pipe flows freely, but the right pipe outfalls into a scour hole.

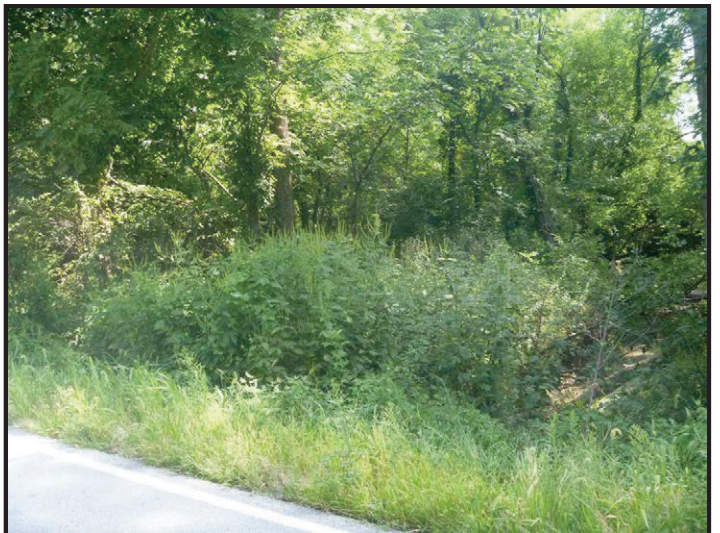


Photo 12 – SR 159 Crossing of UNT to Splunge Creek: Facing northeast toward the northeast quadrant at the SR 159 crossing of UNT to Splunge Creek.

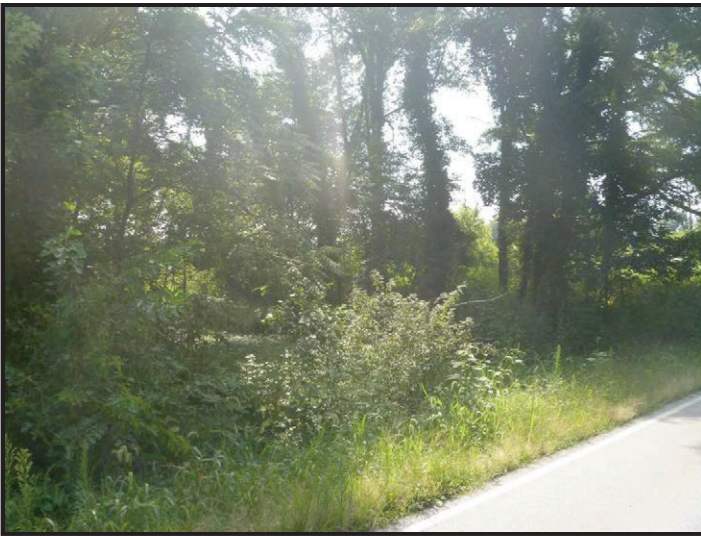


Photo 13 – SR 159 Crossing of UNT to Splunge Creek: Facing south-east toward the southeast quadrant at the SR 159 crossing of UNT to Splunge Creek. An access crossing UNT-1 is immediately south of the creek.



Photo 14 – SR 159 Crossing of UNT to Splunge Creek: Facing south along SR 159 from the top of the small structure at Splunge Creek. Topography is flat and land use is forested, and rural residential.



Photo 15 – SR 159 Culverts at UNT to Splunge Creek: Facing upstream to the west toward the outlet of Str. No. CV 159-084-23.30, from east of SR 159.



Photo 16 – UNT to Splunge Creek, Downstream from SR 159: Facing downstream to the east along UNT to Splunge Creek. The creek is heavily obstructed by fallen trees.



Photo 17 – UNT to Splunge Creek, Downstream from SR 159: Facing upstream to the west along UNT to Splunge Creek. The creek was ten feet wide in this area.



Photo 18 – UNT to Splunge Creek, Downstream from SR 159: Facing upstream to the southwest along UNT to Splunge Creek toward the structure outlet, from the north bank of the creek.



Photo 19 – UNT to Splunge Creek, Downstream from SR 159: Facing downstream to the east along UNT to Splunge Creek.



Photo 20 – South Project Setting, Toward AOI: Facing north along SR 159 from the southern limits of the AOI. Topography south of the culvert is generally flat. Land use is forested and rural residential (buildings razed).



Photo 21 – South Project Setting, Beyond AOI: Facing south beyond the southern limits of the AOI. Topography south of the culvert is generally flat. Land use south of the AOI is agricultural.

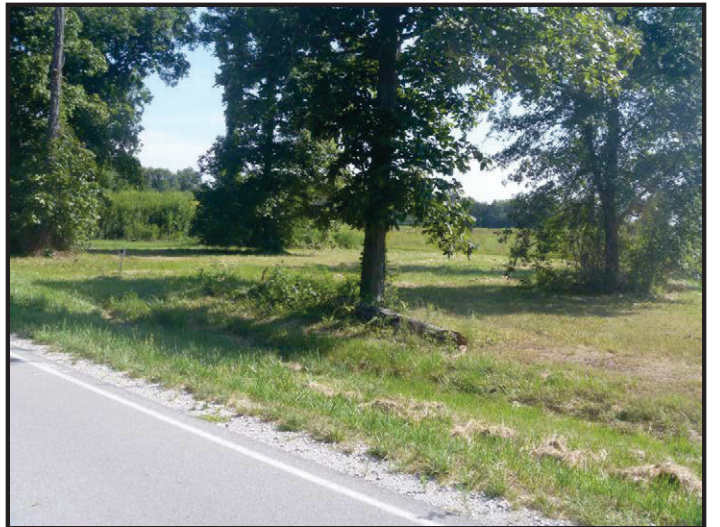


Photo 22 – Southeast Quadrant, RSD-1: Facing northeast from the southern limits of the AOI where RSD-1 begins. Beyond the ditch, the area is maintained lawn with no indications of surface water features.



Photo 23 – Southeast Quadrant, RSD-1: Facing downgrade to the north along RSD-1 from the southern limits of the AOI. RSD-1 did not exhibit an OHWM or defined bed and bank.



Photo 24 – Southeast Quadrant, Beyond AOI: Facing southeast from the southern limits of the AOI.



Photo 25 – Southeast Quadrant: Facing south along the east side of SR 159 along the vegetated right-of-way beyond the southern terminus of RSD-1.



Photo 26 – Southeast Quadrant, RSD-1: Facing southeast from SR 159 toward the southern limits of the AOI. RSD-1 is in the foreground. Beyond it, there were no indications of surface water features.



Photo 27 – Southeast Quadrant, RSD-1: Facing northeast from SR 159 from south of the subject small structure. RSD-1 is in the foreground. No other indications of surface water features were observed.



Photo 28 – Project Setting, South of Culvert: Facing north toward the project area. RSD-1 is to the right and RSD-2 is to the left.



Photo 29 – Southeast Quadrant: Facing east toward a residential driveway and the location of a razed building, which is still shown on the included aerial imagery.



Photo 30 – Southeast Quadrant, RSD-1: Facing upgrade to the south along RSD-1 on the east side of SR 159 and south of the subject small structure.



Photo 31 – Southeast Quadrant, RSD-1: Facing downgrade to the north along RSD-1. The ditch becomes poorly defined along the remaining segment toward its outfall into UNT to Splunge Creek.



Photo 32 – Southeast Quadrant, RSD-1: Facing southeast toward the northern part of the residential lawn along the east side of SR 159. No indications of surface water features were observed.



Photo 33 – Southeast Quadrant: Facing northeast toward the wooded area in the southeast quadrant of the SR 159 crossing of UNT to Splunge Creek.



Photo 34 – Southeast Quadrant: Facing east into a cleared area within the woods in the southeast quadrant near the crossing.



Photo 35 – Southeast Quadrant: Facing west from within the clearing in the wooded area to the southeast of the subject SR 159 small structure. No indications of surface water features were observed.



Photo 36 – Southeast Quadrant: Facing east from within the clearing in the wooded area to the southeast of the subject SR 159 small structure. No indications of surface water features were observed.



Photo 37 – Southeast Quadrant, RSD-1: Facing north toward the outfall of RSD-1 into UNT to Splunge Creek. Beyond the access into the wooded clearing, RSD-1 becomes deeply eroded (obscured by vegetation and roots).



Photo 38 – Southeast Quadrant, RSD-1: Looking down at a plastic corrugated pipe, about six to eight inches in diameter within RSD-1.



Photo 39 – Southwest Quadrant: Facing northwest from the southern limits of the AOI toward the southwest quadrant of the project area. No indications of surface water features were observed.



Photo 40 – Southwest Quadrant: Facing north along the vegetated right-of-way along the west side of SR 159 from the southern limits of the AOI.



Photo 41 – Southwest Quadrant, Beyond AOI: Facing southwest from the southern limits of the AOI.



Photo 42 – Southwest Quadrant, Beyond AOI: Facing south along the vegetated right-of-way on the west side of SR 159 and beyond the AOI.



Photo 43 – Southwest Quadrant, RSD-2: Facing upgrade to the south from the beginning of RSD-2 along the west side of SR 159. RSD-2 does not exhibit an OHWM or defined bed and bank.



Photo 44 – Southwest Quadrant: Facing north from within the forested area in the southwest quadrant of the AOI. No indications of surface water features were observed.



Photo 45 – Southwest Quadrant: Facing southwest from within the forested area in the southwest quadrant of the AOI. No indications of surface water features were observed.



Photo 46 – Southwest Quadrant, RSD-2: Facing southwest toward the forested area in the southwest quadrant of the AOI, south of the subject small structure. RSD-2 is in the foreground, obstructed by vegetation.

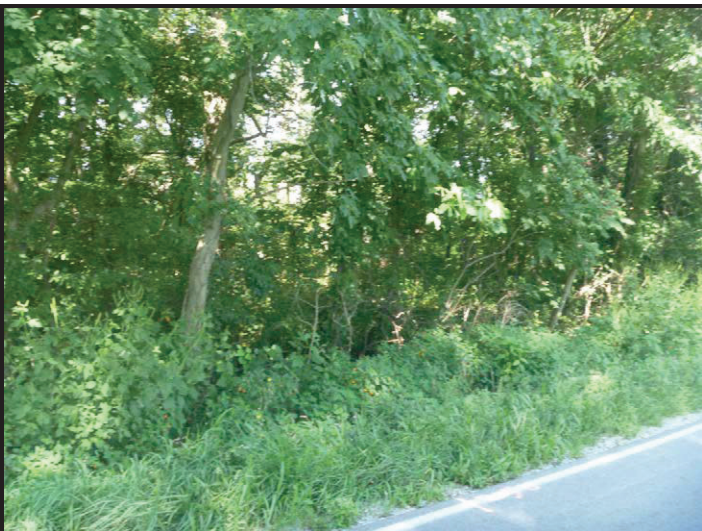


Photo 47 – Southwest Quadrant, RSD-2: Facing northwest toward the forested area in the southwest quadrant of the AOI. RSD-2 is in the foreground obstructed by vegetation.



Photo 48 – Southwest Quadrant, RSD-2: Facing upgrade to the south along RSD-2 along the west side of SR 159. RSD-2 did not exhibit an OHWM or defined bed and bank.



Photo 49 – Southwest Quadrant, RSD-2: Facing downgrade to the north along RSD-2 along the west side of SR 159.



Photo 50 – Southwest Quadrant: Facing north within the forested area in the southwest quadrant of the AOI. No indications of surface water features were observed.



Photo 51 – Southwest Quadrant: Facing east within the forested area in the southwest quadrant of the AOI. No indications of surface water features were observed.



Photo 52 – Southwest Quadrant: Facing south within the forested area in the southwest quadrant of the AOI. No indications of surface water features were observed.



Photo 53 – Southwest Quadrant, RSD-2: Facing upgrade to the south along RSD-2 along the west side of SR 159. RSD-2 did not exhibit an OHWM or defined bed and bank.



Photo 54 – Southwest Quadrant, Data Point 1-OUT: Facing north toward data point 1-OUT. Dominant emergent plants included Virginia creeper and poison ivy.



Photo 55 – Southwest Quadrant, Data Point 1-OUT: Facing southeast toward data point 1-OUT. Dominant trees included pin oak, hackberry, and shell-bark hickory. The Dominance Test indicator was observed.



Photo 56 – Southwest Quadrant, Data Point 1-OUT: Facing southwest toward the test pit for data point 1-OUT. While the FAC-Neutral Test was observed, no other hydrology indicators were present.



Photo 57 – Southwest Quadrant, Data Point 1-OUT: Soil sample from data point 1-OUT did not exhibit any hydric soil indicators.



Photo 58 – Project Setting at Culvert: Facing south along SR 159 from immediately north of the subject small structure and toward the primary part of the project area.

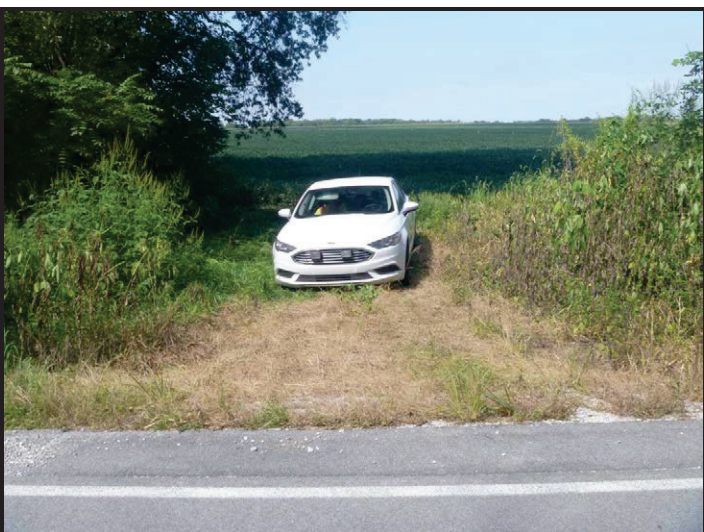


Photo 59 – Northwest Quadrant: Facing west toward an agricultural access drive along the west side of SR 159 and immediately north of UNT to Splunge Creek.



Photo 60 – Northwest Quadrant: Facing southwest toward the northwest quadrant of the SR 159 crossing of UNT to Splunge Creek. The forested riparian along the creek is abutted by ag fields.



Photo 61 – Northwest Quadrant: Facing southwest toward the northwest quadrant of the AOI. No indications of surface water resources were observed.



Photo 62 – Northwest Quadrant: Facing northwest toward the northwest quadrant of the AOI. No indications of surface water resources were observed.



Photo 63 – Northwest Quadrant: Facing south along the vegetated right-of-way along the west side of SR 159. No indications of surface water resources were present.



Photo 64 – Northwest Quadrant: Facing north along the vegetated right-of-way along the west side of SR 159. No indications of surface water resources were present.



Photo 65 – Northwest Quadrant: Facing southwest from the northern limits of the AOI. No indications of surface water resources were observed.



Photo 66 – Northeast Quadrant, RSD-3: Facing north along the vegetated right-of-way and RSD-3 (obscured) in the northeast quadrant of the SR 159 crossing, immediately north of UNT to Splunge Creek.



Photo 67 – Northeast Quadrant, Data Point 2-OUT: Facing east toward data point 2-OUT. Dominant herbaceous plants included clustered black-snakeroot and Virginia wild rye.



Photo 68 – Northeast Quadrant, Data Point 2-OUT: Facing south toward data point 2-OUT. Dominant trees included black walnut and shingle oak. No wetland vegetation indicators were observed.



Photo 69 – Northeast Quadrant, Data Point 2-OUT: Soil sample from data point 2-OUT did not exhibit any hydric soil indicators.



Photo 70 – Northeast Quadrant, Data Point 2-OUT: Test pit at data point 2-OUT was dry and the area did not exhibit any wetland hydrology indicators.



Photo 71 – Northeast Quadrant, Wetland A and RSD-3: Facing north along the east side of SR 159 from the southern limits of Wetland A.



Photo 72 – Northeast Quadrant, Wetland A: Surface water and saturated soils were present at the southern limits of Wetland A.

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 No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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.

<u>Tree Stratum</u> (Plot size: <u>N/A</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>N/A</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>5 ft. radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Echinochloa crus-galli (Large Barnyard Grass)</u>	40	Y	FACW	
2. <u>Panicum dichotomiflorum (Fall Panic Grass)</u>	15	N	FACW	
3. <u>Persicaria hydropiper (Mild Water-Pepper)</u>	15	N	OBL	
4. <u>Bidens frondosa (Devil's-Pitchfork)</u>	5	N	FACW	
5. <u>Cyperus esculentus (Chufa)</u>	2	N	FACW	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
77 = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: <u>N/A</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
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:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

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