



ENVIRONMENTAL ASSESSMENT

APPENDIX F: WATER RESOURCES

Waters of the U.S. Report

I-65/I-70 North Split Interchange Reconstruction

Marion County, Indiana

Designation No. 1592385 (Lead), Contract No. 36910



Prepared for the Indiana Department of Transportation

October 27, 2017

Table of Contents

Waters of the U.S. Report

Narrative:

I. Project Information.....	1
Fieldwork Dates	1
Contributors	1
Project Location	1
Project Description	1
II. Office Evaluation	2
Methodology	2
Aerial Photography	2
USGS Mapping.....	2
NWI and Floodplain Mapping.....	2
Mapped Soil Units	2
III. Field Reconnaissance	3
Methodology	3
Streams.....	3
Wetlands	3
Additional Data Points.....	11
Underdrains	12
Erosional Features	13
Stormwater Features.....	13
Roadside Ditches	13
IV. Conclusions	13
V. References	14

Tables:

Table 1: Wetland Summary Table	15
Table 2: Bridge Summary Table	16

Exhibits

Project Location Map	18
USGS Topographic Maps	19
NWI, Waters, Soils and Floodplain Maps.....	34
Storm Water Drainage System Map	37
1937 Historic Aerial Maps (Indianapolis)	38
Wetland Overview Map	40
Photo Orientation and Field-Identified Water Resources Maps.....	41
Project Area Photographs	56
Wetland Determination Data Forms	93
Approved Jurisdictional Determination Form	195

Exhibit maps, photos, and wetland determination data forms were removed to reduce the file size of the document. Locations of jurisdictional wetlands are shown on maps in Appendix B of the Environmental Assessment. The full Waters of the U.S. Report is available at <https://northsplit.com/project-documents/>.

WATERS OF THE U.S. REPORT
I-65/I-70 North Split Interchange Reconstruction
Marion County, Indiana
INDOT Designation (Des.) No. 1592385 (Lead), Contract No. 36910
Prepared By: Gregory R. Moushon, Senior Environmental Planner
October 27, 2017

I: Project Information

Fieldwork Dates:

Fieldwork for this report was conducted on October 29-30, 2015 and April 25-27, May 24, and October 3-5, 2016.

Contributors:

Brock Ervin, Senior Environmental Planner
 Juliet Port, Senior Environmental Planner
 Hannah Marriott, Associate Environmental Planner
 Wade Kimmon, Associate GIS Specialist

Project Location:

Indianapolis West Quadrangle
 Sections 31 and 36 of Township 16 North, Range 3 East, &
 Sections 1, 12, and 13 of Township 15 North, Range 3 East
 Marion County, Indiana

Project Description:

The Indiana Department of Transportation (INDOT) is planning an Interchange Reconstruction Project at the I-65/I-70 interchange northeast of downtown Indianapolis, referred to as the North Split, which includes bridge rehabilitation/replacement, pavement reconstruction throughout the project area, pavement widening for an added travel lane, and traffic signal modifications in Marion County, Indiana. Des. No. 1592385 is the Lead Des. No. for this project (Contract No. 36910), which includes multiple Des. Nos. associated with individual bridge projects as part of this project. Refer to Table 2, page 17 of this report for the Bridge Summary Table.

As of October 2016, when the field investigations were concluded for this report, the scope of the project included reconstructing the North Split, rehabilitating or replacing 28 bridges, resurfacing existing pavement, and widening the roadway and bridges to accommodate an additional lane in the future. Two of the 28 bridges were located within the I-65/I-70 interchange southeast of downtown Indianapolis, referred to as the South Split. The limits of the study area for this Waters of the U.S. Report match the original scope of the project, and include the existing and apparent right-of-way from Pennsylvania Street to the west along I-65 (Mile 113.0), the entire North Split interchange, Commerce Street to the east along I-70 (Mile 83.6), and Washington Street to the south along I-65/I-70 (Mile 111.0). The two additional areas associated with bridges within the South Split interchange at Morris Street (Mile 80.8 and Mile 110.2) were also included. The study area was approximately 1.4 miles in length west to east and 1.5 miles south to north.

As of the time of this report (October 2017), the scope of the project has increased, and the project limits have been expanded. Additional investigations will be required for areas outside of the study area reviewed for this report. The project limits now include the North Split Interchange south along I-65/I-70 to the Washington Street interchange in downtown Indianapolis; including the portion of I-65 west of the North Split interchange to approximately Meridian Street and the portion of I-70 east of the North Split interchange to approximately the bridge over Valley Avenue (west of the Keystone Avenue/Rural Street interchange) in Marion County, Indiana. The two bridge locations in the South Split are still included in the scope of work. The Project Location Map on page 18 shows the original study area and the additional project area as of the date of this report. Specifically, this project is located within Center Township, Indianapolis United States Geological Survey (USGS) Topographic Quadrangle, in Section 36, Township 16N, Range 3E; Sections 1 and 12, Township 15N, Range 3E; and Section 31, Township 16N, Range 4E.

The revised project scope includes reconstruction of the North Split interchange, which now includes reconfiguration of the I-65 exit/entrance ramps along 11th and 12th Streets. Thirty-two bridges within the project area will now be rehabilitated or replaced. The additional four bridges are noted in red at the end of the Bridge Summary Table (page 17). Pavement throughout the project area will now be reconstructed instead of resurfaced. The pavement and bridges will be widened, and an additional through lane will now be added as part of the project. Per the findings in INDOT's Project Intent Report,

an additional mainline through lane within the interchange is required to meet the operational needs of the design year (2040); and, traffic signal modifications along I-65 westbound at 12th Street and Pennsylvania Street; I-65 westbound at 12th Street and Illinois Street; I-65 eastbound at 11th Street and Delaware Street; I-65/I-70 at Pine Street and Michigan Street; and I-65/I-70 at Ohio Street and College Avenue.

There are two to three travel lanes for I-70 eastbound, two travel lanes for I-70 westbound, and two travel lanes for I-65 north and southbound in the North Split interchange. There are two travel lanes in all through-directions of the South Split interchange. There are three travel lanes in both directions for I-65 and I-70 between the North and South Split. East of the North Split, there are three travel lanes in each direction for I-70. West of the North Split, there are three travel lanes in both directions on I-65. Much of the roadway and ramps are elevated above the ground surface.

The project right-of-way requirements have not yet been determined. The Maintenance of Traffic (MOT) plan is currently under development.

II: Office Evaluation

Methodology:

The study area was established for desktop and field review. This area included all the existing and apparent right-of-way from the North Split to Washington Street and areas around the affected bridges in the South Split (page 17). A desktop review of the study area was conducted to identify potential waterways (streams, wetlands, ponds, etc.). This included a review of historic and recent aerial photography for any areas with a water signature or a sharp change in vegetation. Any such areas were flagged for field follow-up. National Wetlands Inventory (NWI) mapping, floodplain mapping, United States Geological Survey (USGS) topographic mapping, and mapped soil units were also reviewed. Any noted items were flagged for field review.

Aerial Photography:

During review of current and historical aerial photography, numerous areas were identified within the study area that displayed potential wetland signatures associated with ponded water, darkened soils, and/or shifts in vegetation (pages 38 to 52). As previously stated, these areas were marked and investigated during field reconnaissance.

USGS Mapping:

During review of USGS 7.5-minute series topographic mapping, no streams were identified within the study area (pages 18 to 32). Pogues Run is noted as a perennial (solid blue-line) stream east of the study area, before becoming encapsulated within a double box culvert for two miles. Pogues Run crosses under I-65 (within the study area) near Ohio Street. Pleasant Run is noted as a perennial (solid blue-line) stream southeast of the study area.

NWI and Floodplain Mapping:

During review of the NWI dataset, no NWI mapped wetland polygons, wetland lines, or streams were identified within the study area (pages 33 to 35). Two streams, Pogues Run and Pleasant Run, and associated NWI lines-riverine, R3UBHs, are noted east and southeast, respectively, of the study area and are shown on the NWI map set included in this report. None of the project area lies within a floodplain. The closest floodplain is associated with Pogues Run located approximately 500 feet east of the study area. Pleasant Run is located approximately 2,500 feet southeast of the study area.

Mapped Soil Units:

The Natural Resources Conservation Service (NRCS) classifies soil types as follows: hydric (100%), predominantly hydric (66-99%), partially hydric (33-65%), predominantly non-hydric (1-32%), and not hydric (0%). According to the Soil Survey Geographic (SSURGO) Database for Marion County, Indiana, most of the study area is not hydric soils. Nearly all of the North Split is classified as not hydric soils (Urban land-Fox Complex (UfA)). A small portion of I-70 near Commerce Street is classified as predominantly non-hydric soils (Urban land-Westland Complex (UW)), and a smaller portion is classified as not hydric soils (Urban land-Miami Complex (UmC)). A small portion of I-65/I-70 near Washington Street is classified as not hydric soils (Urban land-Genesee Complex (Ug)), and a smaller portion is classified as not hydric soils (Urban land-Miami Complex (UmC)). The soils in the South Split are classified as not hydric soils (Urban land-Miami Complex (UmB)). SSURGO mapping is provided for reference (pages 33 to 35).

Soil Name	Hydric Classification
Urban land-Fox Complex (UfA)	Not hydric (0%)
Urban land-Genesee Complex (Ug)	Not hydric (0%)
Urban land-Miami Complex (UmB and UmC)	Not hydric (0%)
Urban land-Westland Complex (Uw)	Predominantly non-hydric (1-32%)

III: Field Reconnaissance

Methodology:

Parsons conducted field investigations on October 29-30, 2015 and April 25-27, May 24, and October 3-5, 2016 to determine the presence of waterways, including streams, lakes, ponds and wetlands within the study area. The entire study area, as well as its immediate surroundings, were reviewed for resources via a walking survey. All areas flagged during desktop review were assessed and documented. When observed, features located adjacent to, but outside of the study area were noted. Resource maps showing all identified features are attached for reference (pages 38 to 52).

Vegetation, soil, and hydrology data were collected using the routine delineation method as described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (USACE 2010). Wetland indicator statuses for plants were obtained from the National Wetland Plant List (Lichvar et al. 2016). Data forms for each wetland are included in this report for reference (pages 90 to 193). A hand-held GPS unit (Trimble Geo 7 Series) was used to collect the boundary of each identified wetland, as well as all data points. This data was used to calculate each wetland's size and length, which was measured along the center line of each wetland. A qualitative assessment of each wetland's quality was conducted, which included grading them (poor, average, or excellent) based on ecological function, size, species diversity, presence of invasive species, and amount of disturbance.

Photographs were taken throughout the study area. This included photographs of each feature identified within the study area (pages 53 to 89). Photo orientation maps are included for additional reference (pages 38 to 52).

Streams:

Field investigations did not identify any features that exhibit an ordinary high water mark (OHWM) or stream characteristics.

Wetlands:

Sampling locations were determined by the presence or absence of hydrophytic vegetation and hydrology indicators. Twenty-two temporarily flooded, palustrine, emergent wetlands (Cowardin et al. 1979) totaling 0.505 acre (2,929 linear feet) were identified within the study area. All wetlands were located within maintained right-of-way and exhibited low species diversity; therefore, were determined to be low quality. The entire study area was disturbed approximately 40 years ago, and any previously existing wetlands have likely been filled. All existing wetlands within the study area have likely formed in that time and are not likely historical. Each appears to receive hydrological input from surface water runoff or sporadic roadway underdrains. All wetlands lacked apparent hydrologic connectivity to a likely water of the U.S., and would therefore likely be considered isolated. INDOT will seek concurrence on the jurisdiction of these wetlands from the U.S. Army Corps of Engineers (USACE) under the Clean Water Act and the Rivers and Harbors Act. An Approved Jurisdictional Determination (JD) form is attached for reference. Isolated wetlands were classified as Class I, II, or III per guidance from the Indiana Department of Environmental Management (IDEM). All twenty-two wetlands identified within the study area were determined to likely be Class I wetlands. The Wetland Summary Table (Table 1, page 15) summarizes the data collected on these features.

Wetland A

The area associated with Data Point A IN (DP-A-IN, pages 93 to 94) was evaluated because it exhibited hydrophytic vegetation. DP-A-IN was taken on a roadside embankment. The herbaceous stratum was dominated by *Phragmites australis* (Common Reed, FACW, 70%) and *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 30%). This point met the hydrophytic vegetation criterion because it passed the prevalence test. The soil profile met the hydric soil criterion because it exhibited the Depleted Below Dark Surface (A11) and Depleted Matrix (F3) indicators. Three primary indicators of hydrology (Surface Water [A1], High Water Table [A2], and Saturation [A3]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-A-IN, this area was identified as Wetland A.

Data Point A OUT (DP-A-OUT, pages 95 to 96) was taken upslope of DP-A-IN. This location was dominated by *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 100%) in the herbaceous stratum. DP-A-OUT did not meet the hydrophytic vegetation criterion. No hydric soil or hydrology indicators were observed. Since all three of the wetland indicators were not met at DP-A-OUT, this area was determined to be upland. DP-A-OUT helped establish the boundary of Wetland A, which was determined based on a change in vegetation.

Wetland A is a *Phragmites australis* (Common Reed) and *Schedonorus arundinaceus* (Tall False Rye Grass) dominated, slope wetland approximately 0.008 acre (67 linear feet) in size. The wetland is located near the top of the roadside embankment at an underdrain outlet and continues down the roadside embankment to the lower in-field area. Wetland A is within the North Split interchange, north of eastbound I-65 and west of College Avenue (page 49).

Wetland B

The area associated with Data Point B IN (DP-B-IN, pages 97 to 98) was evaluated because it exhibited hydrophytic vegetation. DP-B-IN was taken on a roadside embankment. The herbaceous stratum was dominated by *Schoenoplectus tabernaemontani* (Soft-Stem Club Rush, OBL, 30%). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. One primary indicator of hydrology (Surface Water [A1]) and one secondary indicator of hydrology (FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-B-IN, this area was identified as Wetland B.

Data Point B OUT (DP-B-OUT, pages 99 to 100) was taken on a roadside embankment east of DP-B-IN. This location was dominated by *Poa pratensis* (Kentucky Blue Grass, FAC, 50%) and *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 50%) in the herbaceous stratum. DP-B-OUT did not meet the hydrophytic vegetation criterion. No hydric soil or hydrology indicators were observed. Since all three of the wetland indicators were not met at DP-B-OUT, this area was determined to be upland. DP-B-OUT helped establish the boundary of Wetland B, which was determined based on a change in vegetation.

Wetland B is a *Schoenoplectus tabernaemontani* (Soft-Stem Club Rush) dominated, slope wetland approximately 0.014 acre (69 linear feet) in size. The wetland is located near the top of the roadside embankment at an underdrain outlet (stake observed) and continues partially down the roadside embankment. Wetland B is located in the in-field area of the North Split interchange, north of westbound I-65 and east of College Avenue (page 45).

Wetland C

The area associated with Data Point C IN (DP-C-IN, pages 101 to 102) was evaluated because it exhibited hydrophytic vegetation. DP-C-IN was taken on a roadside embankment. The herbaceous stratum was dominated by *Typha sp.* (Cattails, OBL, 10%). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. One primary indicator of hydrology (Surface Water [A1]) and one secondary indicator of hydrology (FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-C-IN, this area was identified as Wetland C.

Data Point C OUT (DP-C-OUT, pages 103 to 104) was taken on a roadside embankment east of DP-C-IN. This location was dominated by *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 30%) and *Poa pratensis* (Kentucky Blue Grass, FAC, 20%) in the herbaceous stratum. DP-C-OUT did not meet the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion because it exhibited the Redox Dark Surface (F6) indicator. No hydrology indicators were observed. Since two of the three wetland indicators were not met at DP-C-OUT, this area was determined to be upland. DP-C-OUT helped establish the boundary of Wetland C, which was determined based on a change in vegetation.

Wetland C is a *Typha sp.* (Cattails) dominated, slope wetland approximately 0.001 acre (18 linear feet) in size. The wetland is located near the middle of the roadside embankment at an underdrain outlet (stake observed) and continues partially down the roadside embankment. Wetland C is within the in-field area of the North Split interchange, north of eastbound I-65 and east of College Avenue (page 45). It is not contained within a roadside ditch.

Wetland D

The area associated with Data Point D IN (DP-D-IN, pages 105 to 106) was evaluated because it exhibited hydrophytic vegetation. DP-D-IN was taken on a roadside embankment. The herbaceous stratum was dominated by *Typha sp.* (Cattails, OBL, 10% [Note the previous year's growth covered 60%]). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. One primary indicator of hydrology (Surface Water [A1]) was observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-D-IN, this area was identified as Wetland D.

Data Point D OUT (DP-D-OUT, pages 107 to 108) was taken on a roadside embankment north of DP-D-IN. This location was dominated by *Setaria pumila* (Yellow Bristle Grass, FAC, 5%) in the herbaceous stratum (Note: Last year's growth covered much of the ground (likely *Panicum virgatum* [Switchgrass, FAC] Also present was last year's *Dipsacus fullonum* [Fuller's teasel, FACU]). This point met the hydrophytic vegetation criterion because it passed the dominance test. No hydric soil or hydrology indicators were observed. Since two of the three wetland indicators were not met at DP-D-OUT, this area was determined to be upland. DP-D-OUT helped establish the boundary of Wetland D, which was determined based on changes in vegetation.

Wetland D is a *Typha sp.* (Cattails) dominated, slope wetland approximately 0.006 acre (37 linear feet) in size. The wetland is located near the top of the roadside embankment at an underdrain outlet (stake observed) and continues down the

roadside embankment to the lower in-field area. Wetland D is within the North Split interchange, south of eastbound I-70, northeast of westbound I-65, and west of the Monon Trail (page 46).

Wetland E

The area associated with Data Point E IN (DP-E-IN, pages 109 to 110) was evaluated because it exhibited hydrophytic vegetation. DP-E-IN was taken near a drainage outlet. The herbaceous stratum was dominated by *Eleocharis obtusa* (Blunt Spike-Rush, OBL, 30%). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. Two primary indicators of hydrology (Surface Water [A1] and Saturation [A3]) and two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-E-IN, this area was identified as Wetland E.

Data Point EF OUT (DP-EF-OUT, pages 111 to 112) was taken east of DP-E-IN. This is a shared “OUT” data point with Wetland F. The data point was recorded at this location because this was the only area near the “IN” data point that was not covered in riprap or concrete. This location was dominated by *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 70%) in the herbaceous stratum. DP-EF-OUT did not meet the hydrophytic vegetation criterion. No hydric soil or hydrology indicators were observed. Since all three of the wetland indicators were not met at DP-EF-OUT, this area was determined to be upland. DP-EF-OUT helped establish the boundary of Wetland E, which was determined based on a change in vegetation.

Wetland E is an *Eleocharis obtusa* (Blunt Spike-Rush) dominated, triangular-shaped, depressional wetland approximately 0.009 acre (51 linear feet) in size. The wetland is located at the toe-of-slope of the roadside embankment at a concrete drainage outlet. Wetland E is within the lower in-field area of the North Split interchange, south of eastbound I-70, northeast of westbound I-65, and west of the Monon Trail (page 46). It is not contained within a roadside ditch.

Wetland F

The area associated with Data Point F IN (DP-F-IN, pages 113 to 114) was evaluated because it exhibited hydrophytic vegetation. DP-F-IN was taken at a toe-of-slope between the I-70 East on-ramp and the Monon Trail (page 46). The herbaceous stratum was dominated by *Typha* sp. (Cattails, OBL, 5%) and *Rumex crispus* (Curly Dock, FAC, 2%). This point met the hydrophytic vegetation criterion because it passed the dominance and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. Two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-F-IN, this area was identified as Wetland F.

Data Point EF OUT (DP-EF-OUT, pages 111 to 112) was taken east of DP-E-IN. This is a shared “OUT” data point with Wetland E. The data point was recorded at this location, because this was the only area near the “IN” data point that was not covered in riprap or concrete. This location was dominated by *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 70%) in the herbaceous stratum. DP-EF-OUT did not meet the hydrophytic vegetation criterion. No hydric soil or hydrology indicators were observed. Since all three of the wetland indicators were not met at DP-EF-OUT, this area was determined to be upland. DP-EF-OUT helped establish the boundary of Wetland E, which was determined based on a change in vegetation.

Wetland F is a *Typha* sp. (Cattails) and *Rumex crispus* (Curly Dock) dominated, rectangular-shaped, depressional wetland approximately 0.010 acre (89 linear feet) in size. The wetland is located at the toe-of-slope of the concrete-lined roadside embankment, adjacent to the Monon Trail. Wetland F is within the North Split interchange, south of eastbound I-70 and northeast of westbound I-65 (page 46). It is not contained within a roadside ditch.

Wetland G

The area associated with Data Point G IN (DP-G-IN, pages 115 to 116) was evaluated because it exhibited hydrophytic vegetation. DP-G-IN was taken at the toe-of-slope of an embankment. The herbaceous stratum was dominated by *Typha* sp. (Cattails, OBL, 10%. [Note last year's growth covered 60%]). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Loamy Gleyed Matrix (F2) and Depleted Matrix (F3) indicators. Two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-G-IN, this area was identified as Wetland G.

Data Point G OUT (DP-G-OUT, pages 117 to 118) was taken south of DP-G-IN. This location was dominated by *Elymus repens* (Creeping Wild-Rye, FACU, 40%) and *Securigera varia* (Crownvetch, UPL, 15%) in the herbaceous stratum. DP-G-OUT did not meet the hydrophytic vegetation criterion. No hydric soil or hydrology indicators were observed. Since all three

of the wetland indicators were not met at DP-G-OUT, this area was determined to be upland. DP-G-OUT helped establish the boundary of Wetland G, which was determined based on a change in vegetation.

Wetland G is a *Typha sp.* (Cattails) dominated, depressional wetland approximately 0.001 acre (16 linear feet) in size. The wetland is located at the toe-of-slope of the riprap-lined roadside embankment and adjacent to the Monon Trail. Wetland G is within the North Split interchange, south of eastbound I-70 and northeast of westbound I-65 (page 46). It is not entirely contained within a roadside ditch.

Wetland H

The area associated with Data Point H IN (DP-H-IN, pages 119 to 120) was evaluated because it exhibited hydrophytic vegetation and geomorphic position. DP-H-IN was taken within a roadside ditch. The herbaceous stratum was dominated by *Typha sp.* (Cattails, OBL, 60%). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Below Dark Surface (A11) and Redox Dark Surface (F6) indicators. Two primary indicators of hydrology (High Water Table [A2] and Saturation [A3]) and two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-H-IN, this area was identified as Wetland H.

Data Point H OUT (DP-H-OUT, pages 121 to 122) was taken west of DP-H-IN. This location was dominated by *Securigera varia* (Crown vetch, UPL, 98%). DP-H-OUT did not meet the hydrophytic vegetation criterion. No hydric soil or hydrology indicators were observed. Since none of the three wetland criteria were met, DP-H-OUT was determined to be upland. DP-H-OUT helped establish the boundary of Wetland H, which was determined based on a change in vegetation.

Wetland H is a *Typha sp.* (Cattails) dominated, depressional wetland approximately 0.007 acre (51 linear feet) in size. The wetland is located at the toe-of-slope of the roadside embankment and adjacent to the Monon Trail. Wetland H is within the North Split interchange, south of eastbound I-70 and east of northbound I-65/I-70 (page 46). It is entirely contained within a roadside ditch.

Wetland I

The area associated with Data Point I IN (DP-I-IN, pages 123 to 124) was evaluated because it exhibited hydrophytic vegetation. DP-I-IN was taken at the toe-of-slope within a roadside ditch. The herbaceous stratum was dominated by *Typha sp.* (Cattails, OBL, 70%). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Problematic Hydric Soil indicator. The Problematic Hydric Soil Indicator was chosen because the chroma of the 3-14-inch layer was very close to meeting the Depleted Matrix indicator (F3), the adjacent out point met hydric soils, and hydrology was present at this location. Therefore, soils were considered hydric. Three primary indicators of hydrology (Surface Water [A1], High Water Table [A2], and Saturation [A3]) and two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-I-IN, this area was identified as Wetland I.

Data Point I OUT (DP-I-OUT, pages 125 to 126) was taken west of DP-I-IN. This location was dominated by *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 90%) in the herbaceous stratum. DP-I-OUT did not meet the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. One secondary indicator of hydrology (Geomorphic Position [D2]) was observed. Therefore, the hydrology criterion was not met. Since two of the three wetland indicators were not met at DP-I-OUT, this area was determined to be upland. DP-I-OUT helped establish the boundary of Wetland I, which was determined based on a change in vegetation.

Wetland I is a *Typha sp.* (Cattails) dominated, depressional wetland approximately 0.013 acre (99 linear feet) in size. The wetland is located at the toe-of-slope of the roadside embankment and adjacent to the Monon Trail. Wetland I is within the North Split interchange, south of eastbound I-70 and east of north bound I-65/I-70 (page 50). It is entirely contained within a roadside ditch.

Wetland J

The area associated with Data Point J IN (DP-J-IN, pages 127 to 128) was evaluated because it exhibited hydrophytic vegetation. DP-J-IN was taken on a roadside embankment. The herbaceous stratum was dominated by *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 40%) and *Typha sp.* (Cattails, OBL, 30%). This point met the hydrophytic vegetation criterion because it passed the prevalence test. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. One primary indicator of hydrology (Saturation [A3]) was observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-J-IN, this area was identified as Wetland J.

Data Point J OUT (DP-J-OUT, pages 129 to 130) was taken northeast of DP-J-IN. The location of DP-J-OUT was chosen due to restrictions caused by the fence and riprap at the base of the slope. This location was dominated by *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 80%) in the herbaceous stratum. DP-J-OUT did not meet the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion because it exhibited the Redox Dark Surface (F6) indicator. No indicators of hydrology were observed. Since two of the three wetland indicators were not met at DP-J-OUT, this area was determined to be upland. DP-J-OUT helped establish the boundary of Wetland J, which was determined based on a change in vegetation.

Wetland J is a *Schedonorus arundinaceus* (Tall False Rye Grass) and *Typha sp.* (Cattails) dominated, depressional wetland approximately 0.004 acre (35 linear feet) in size. The wetland is located at the toe-of-slope of the riprap-slope roadside embankment and adjacent to East 13th Street. Wetland J is within the North Split interchange, south of eastbound I-70 and east of the Monon Trail (page 46).

Wetland K

The area associated with Data Point K IN (DP-K-IN, pages 131 to 132) was evaluated because it exhibited hydrophytic vegetation. DP-K-IN was taken within a roadside ditch. The herbaceous stratum was dominated by *Typha sp.* (Cattails, OBL, 40%) and *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 20%). This point met the hydrophytic vegetation criterion because it passed the prevalence test. The soil profile met the hydric soil criterion because it exhibited the Redox Dark Surface (F6) indicator. Two primary indicators of hydrology (Surface Water [A1] and High Water Table [A2]) and one secondary indicator (Geomorphic Position [D2]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-K-IN, this area was identified as Wetland K.

Data Point K OUT (DP-K-OUT, pages 133 to 134) was taken north of DP-K-IN. This location was dominated by *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 100%) in the herbaceous stratum. DP-K-OUT did not meet the hydrophytic vegetation criterion. No hydric soil or hydrology indicators were observed. Since none of the three wetland criteria were met, DP-K-OUT was determined to be upland. DP-K-OUT helped establish the boundary of Wetland K, which was determined based on a change in vegetation and topography.

Wetland K is a *Typha sp.* (Cattails) and *Schedonorus arundinaceus* (Tall False Rye Grass) dominated, depressional wetland approximately 0.003 acre (27 linear feet) in size. The wetland is located east of the North Split interchange, north of eastbound I-70, and south of westbound I-70 (page 47). Wetland K is adjacent to Wetland L and entirely contained within a roadside ditch.

Wetland L

The area associated with Data Point L IN (DP-L-IN, pages 135 to 136) was evaluated because it exhibited hydrophytic vegetation and geomorphic position. DP-L-IN was taken within a roadside ditch. The herbaceous stratum was dominated by *Typha sp.* (Cattails, OBL, 50%). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Below Dark Surface (A11), Depleted Matrix (F3), and Redox Dark Surface (F6) indicators. Three primary indicators of hydrology (Surface Water [A1], High Water Table [A2], and Oxidized Rhizospheres on Living Roots [C3]) and two secondary indicators (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-L-IN, this area was identified as Wetland L.

Data Point L OUT (DP-L-OUT, pages 137 to 138) was taken northwest of DP-L-IN. This location was dominated by *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 80%) in the herbaceous stratum. DP-L-OUT did not meet the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion because it exhibited the Depleted Below Dark Surface (A11) and Depleted Matrix (F3) indicators. No indicators of hydrology were observed. Since two of the three wetland indicators were not met at DP-L-OUT, this area was determined to be upland. DP-L-OUT helped establish the boundary of Wetland L, which was determined based on a change in vegetation and topography.

Wetland L is a *Typha sp.* (Cattails) dominated, depressional wetland approximately 0.030 acre (148 linear feet) in size. The wetland is located east of the North Split interchange, north of eastbound I-70, and south of westbound I-70 (page 47). Wetland L is adjacent to Wetland K and is entirely contained within a roadside ditch.

Wetland M

The area associated with Data Point M IN (DP-M-IN, pages 139 to 140) was evaluated because it exhibited hydrophytic vegetation. DP-M-IN was taken near the toe-of-slope. The herbaceous stratum was dominated by *Typha sp.* (Cattails, OBL,

40%) and *Eleocharis mamillata* (Soft-Stem Spike-Rush, OBL, 40%). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. Three primary indicators of hydrology (High Water Table [A2], Saturation [A3], and Oxidized Rhizospheres on Living Roots [C3]) and two secondary indicators (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-M-IN, this area was identified as Wetland M.

Data Point M OUT (DP-M-OUT, pages 141 to 142) was taken northwest of DP-M-IN, at a location where there was a vegetation shift from DP-M-IN. This location was dominated by *Lonicera maackii* (Amur honeysuckle, UPL, 10%) in the sapling/shrub stratum. This location was also dominated by *Phalaris arundinacea* (Reed Canary Grass, FACW, 100%) in the herbaceous stratum. DP-M-OUT did not meet the hydrophytic vegetation criterion tests. The soil profile met the hydric soil criterion because it exhibited the Thick Dark Surface (A12) indicator. One secondary indicator of hydrology (FAC-Neutral Test [D5]) was observed. Since only two of the three wetland indicators were met at DP-M-OUT, this area was determined to be upland. DP-M-OUT helped establish the boundary of Wetland M, which was determined based on a change in vegetation.

Wetland M is a *Typha sp.* (Cattails) and *Eleocharis mamillata* (Soft-Stem Spike-Rush) dominated wetland approximately 0.006 acre (23 linear feet) in size. The wetland is located on the roadside embankment, east of the North Split interchange, north of westbound I-70, west of Commerce Avenue, and south of East 16th Street (page 48). Wetland M is not contained within a roadside ditch.

Wetland N

The area associated with Data Point N IN (DP-N-IN, pages 143 to 144) was evaluated because it exhibited hydrophytic vegetation. DP-N-IN was taken within a roadside ditch. The herbaceous stratum was dominated by *Echinochloa crus-galli* (Large Barnyard Grass, FACW, 50%). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Thick Dark Surface (A12) indicator. A depleted layer was not observed below the thick dark surface; however, the bottom layer contained inclusions of depleted matrix with redox. Thick dark surface was assumed to be present. Two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-N-IN, this area was identified as Wetland N.

Data Point N OUT (DP-N-OUT, pages 145 to 146) was taken northeast of DP-N-IN on the roadside embankment, at a location where there was a vegetation shift from DP-N-IN. This location was dominated by *Phragmites australis* (Common Reed, FACW, 100%) in the herbaceous stratum. This point met the hydrophytic vegetation criterion because it passed the rapid and dominance tests. No indicators of hydric soil were observed. One secondary indicator of hydrology (FAC-Neutral Test [D5]) was observed. Since two of the three wetland indicators were not met at DP-N-OUT, this area was determined to be upland. DP-N-OUT helped establish the boundary of Wetland N, which was determined based on a change in topography.

Wetland N is an *Echinochloa crus-galli* (Large Barnyard Grass) dominated, rectangular-shaped, depressional wetland approximately 0.020 acre (103 linear feet) in size. The wetland is located at the toe-of-slope of the roadside embankment, below an underdrain, east of the North Split interchange, south of eastbound I-70, west of Commerce Avenue, and north of Roosevelt Avenue (page 48). Wetland N is entirely contained within a roadside ditch.

Wetland O

The area associated with Data Point O IN (DP-O-IN, pages 147 to 148) was evaluated because it exhibited hydrophytic vegetation and geomorphic position. DP-O-IN was taken within a roadside ditch. The herbaceous stratum was dominated by *Typha sp.* (Cattails, OBL, 15% [Bote last year's growth covered 75%]). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Below Dark Surface (A11) and Depleted Matrix (F3) indicators. One primary indicator of hydrology (Surface Water [A1]) and two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-O-IN, this area was identified as Wetland O.

Data Point O OUT (DP-O-OUT, pages 149 to 150) was taken east of DP-O-IN on a roadside embankment. This location was dominated by *Poa pratensis* (Kentucky Blue Grass, FAC, 60%) and *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 40%) in the herbaceous stratum. DP-O-OUT did not meet the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. No hydrology indicators were observed. Since two of the three wetland criteria were not met, DP-O-OUT was determined to be upland. DP-O-OUT helped establish the boundary of Wetland O, which was determined based on a change in vegetation and topography.

Wetland O is a *Typha sp.* (Cattails) dominated, depressional wetland approximately 0.025 acre (121 linear feet) in size. The wetland is located at the toe-of-slope of the roadside embankment, below an underdrain, southeast of the North Split interchange, west of southbound I-65/I-70, and south of East 10th Street (page 50). Wetland O is adjacent to Wetland P and entirely contained within a roadside ditch.

Wetland P

The area associated with Data Point P IN (DP-P-IN, pages 151 to 152) was evaluated because it exhibited hydrophytic vegetation and geomorphic position. DP-P-IN was taken within a roadside ditch. The herbaceous stratum was dominated by *Phalaris arundinacea* (Reed Canary Grass, FACW, 100%). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Below Dark Surface (A11) and Depleted Matrix (F3) indicators. A quarter-inch dark layer was encountered at 9.7 inches and appears to be burnt vegetation or some form of similar irregularity. This layer was not considered prominent enough to be a break in the depleted column, and A11 and F3 were considered applicable. Two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-P-IN, this area was identified as Wetland P.

Data Point P OUT (DP-P-OUT, pages 153 to 154) was taken east of DP-P-IN at the toe-of-slope. This location was dominated by *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 80%) in the herbaceous stratum. DP-P-OUT did not meet the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. No indicators of hydrology were observed. Since two of the three wetland indicators were not met at DP-P-OUT, this area was determined to be upland. DP-P-OUT helped establish the boundary of Wetland P, which was determined based on a change in vegetation and topography.

Wetland P is a *Phalaris arundinacea* (Reed Canary Grass) dominated, depressional wetland approximately 0.021 acre (117 linear feet) in size. The wetland is located at the toe-of-slope of the roadside embankment, southeast of the North Split interchange, west of southbound I-65/I-70, and south of East 10th Street (page 50). Wetland P is adjacent to Wetland O and is entirely contained within a roadside ditch.

Wetland Q

The area associated with Data Point Q IN (DP-Q-IN, pages 155 to 156) was evaluated because it exhibited hydrophytic vegetation and geomorphic position. DP-Q-IN was taken within a roadside ditch. The herbaceous stratum was dominated by *Eleocharis palustris* (Common Spike-Rush, OBL, 40%) and *Typha sp.* (Cattails, OBL, 25%). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. One primary indicator of hydrology (Algal Mat or Crust [B4]) and two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-Q-IN, this area was identified as Wetland Q.

Data Point Q OUT (DP-Q-OUT, pages 157 to 158) was taken east of DP-Q-IN at the toe slope. This location was dominated by *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 90%) in the herbaceous stratum. DP-Q-OUT did not meet the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. One secondary indicator of hydrology (Geomorphic Position [D2]) was observed. Since two of the three wetland indicators were not met at DP-Q-OUT, this area was determined to be upland. DP-Q-OUT helped establish the boundary of Wetland Q, which was determined based on a change in vegetation.

Wetland Q is an *Eleocharis palustris* (Common Spike-Rush) and *Typha sp.* (Cattails) dominated, depressional wetland approximately 0.029 acre (227 linear feet) in size. The wetland is located at the toe-of-slope of the roadside embankment, south of the North Split interchange, west of southbound I-65/I-70, and south of East 10th Street (page 51). Wetland Q is adjacent to Wetland P and is entirely contained within a roadside ditch.

Wetland R

The area associated with Data Point R IN (DP-R-IN, pages 159 to 160) was evaluated because it exhibited hydrophytic vegetation and geomorphic position. DP-R-IN was taken within a roadside ditch. The herbaceous stratum was dominated by *Typha sp.* (Cattails, OBL, 10% [note last year's growth covered 80%]). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Below Dark Surface (A11) and Depleted Matrix (F3) indicators. One primary indicator of hydrology (Surface Water [A1]) and two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were

observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-R-IN, this area was identified as Wetland R.

Data Point R OUT (DP-R-OUT, pages 161 to 162) was taken west of DP-R-IN on a roadside embankment. This location was dominated by *Poa pratensis* (Kentucky Blue Grass, FAC, 60%) in the herbaceous stratum. This point met the hydrophytic vegetation criterion because it passed the dominance test. The soil profile met the hydric soil criterion because it exhibited the Depleted Below Dark Surface (A11) and Depleted Matrix (F3) indicators. No indicators of hydrology were observed. Since one of the three wetland indicators were not met at DP-R-OUT, this area was determined to be upland. DP-R-OUT helped establish the boundary of Wetland R, which was determined based on a change in vegetation and topography.

Wetland R is an *Typha sp.* (Cattails) dominated, depressional wetland approximately 0.107 acre (658 linear feet) in size. The wetland is located at the toe-of-slope of the roadside embankment within the center median, south of the North Split interchange, and north of East St. Clair Street (page 51). Wetland R is entirely contained within a roadside ditch.

Wetland S

The area associated with Data Point S IN (DP-S-IN, pages 163 to 164) was evaluated because it exhibited hydrophytic vegetation and geomorphic position. DP-S-IN was taken within a roadside ditch. The herbaceous stratum was dominated by *Typha sp.* (Cattails, OBL, 25%). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Below Dark Surface (A11) and Depleted Matrix (F3) indicators. One primary indicator of hydrology (High Water Table [A2]) and two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-S-IN, this area was identified as Wetland S.

Data Point S OUT (DP-S-OUT, pages 165 to 166) was taken west of DP-S-IN on a roadside embankment. This location was dominated by *Securigera varia* (Crown vetch, UPL 80%) in the herbaceous stratum. No hydrophytic vegetation was present at this location. DP-S-OUT did not meet the hydrophytic vegetation criterion. No hydric soil or hydrology indicators were observed. Since none of the three wetland criteria were met, DP-S-OUT was determined to be upland. DP-S-OUT helped establish the boundary of Wetland S, which was determined based on a change in vegetation and topography.

Wetland S is an *Typha sp.* (Cattails) dominated, depressional wetland approximately 0.018 acre (91 linear feet) in size. The wetland is located at the toe-of-slope of the roadside embankment, south of the North Split interchange, east of northbound I-65/I-70, and north of East St. Clair Street (page 51). Wetland S is entirely contained within the median roadside ditch.

Wetland T

The area associated with Data Point T IN (DP-T-IN, pages 167 to 168) was evaluated because it exhibited hydrophytic vegetation and geomorphic position. DP-T-IN was taken within a roadside ditch. The herbaceous stratum was dominated by *Typha sp.* (Cattails, OBL, 20% [note last year's growth covered 40%]). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. Two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-T-IN, this area was identified as Wetland T.

Data Point T OUT (DP-T-OUT, pages 169 to 170) was taken east of DP-T-IN on a roadside embankment. This location was dominated by *Poa pratensis* (Kentucky Blue Grass, FAC, 40%) and *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 30%) in the herbaceous stratum. DP-T-OUT did not meet the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. No indicators of hydrology were observed. Since two of the three wetland indicators were not met at DP-T-OUT, this area was determined to be upland. DP-T-OUT helped establish the boundary of Wetland T, which was determined based on a change in vegetation and topography.

Wetland T is an *Typha sp.* (Cattails) dominated, depressional wetland approximately 0.165 acre (802 linear feet) in size. The wetland is located at the toe-of-slope of the roadside embankment within the center median, south of the North Split interchange, and south of East St. Clair Street (page 51). Scour/erosion features were observed adjacent to and above Wetland T on the roadside embankment. The scour features are likely caused by surface water runoff from the pavement or roadway underdrain culvert outlets. These features likely provide hydrology to Wetland T. Wetland T has excessive runoff onto St. Clair Street during rain events. Wetland T is entirely contained within the median roadside ditch.

Wetland U

The area associated with Data Point U IN (DP-U-IN, pages 171 to 172) was evaluated because it exhibited hydrophytic vegetation. DP-U-IN was taken near the toe-of-slope. The herbaceous stratum was dominated by *Cyperus esculentus* (Chufa, FACW, 80%) and *Phragmites australis* (Common Reed, FACW, 20%). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Below Dark Surface (A11), Depleted Matrix (F3), and Redox Dark Surface (F6) indicators. One primary indicator of hydrology (Surface Water [A1]) and two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-U-IN, this area was identified as Wetland U.

Data Point U OUT (DP-U-OUT, pages 173 to 174) was taken west of DP-U-IN. This location was dominated by *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 75%) in the herbaceous stratum. DP-U-OUT did not meet the hydrophytic vegetation criterion. No hydric soil or hydrology indicators were observed. Since none of the three wetland criteria were met, DP-U-OUT was determined to be upland. DP-U-OUT helped establish the boundary of Wetland U, which was determined based on a change in vegetation.

Wetland U is a *Cyperus esculentus* (Chufa) and *Phragmites australis* (Common Reed) dominated, crescent-shaped, depressional wetland approximately 0.004 acre (46 linear feet) in size. The wetland is located at the toe-of-slope of the roadside embankment, south of the North Split interchange, west of southbound I-65/I-70, and north of East Michigan Street (page 52). Wetland U is not contained within a roadside ditch.

Wetland V

The area associated with Data Point V IN (DP-V-IN, pages 175 to 176) was evaluated because it exhibited hydrophytic vegetation. DP-V-IN was taken near the toe-of-slope. The herbaceous stratum was dominated by *Typha sp.* (Cattails, OBL, 10% [note last year's growth covered 80%]). This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) and Redox Dark Surface (F6) indicators. Two primary indicators of hydrology (Surface Water [A1] and High Water Table [A2]) and two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Therefore, the hydrology criterion was met. Since all three wetland criteria were met at DP-V-IN, this area was identified as Wetland V.

Data Point V OUT (DP-V-OUT, pages 177 to 178) was taken northwest of DP-V-IN on a roadside embankment. This location was dominated by *Poa pratensis* (Kentucky Blue Grass, FAC, 70%) and *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 20%) in the herbaceous stratum. DP-V-OUT did not meet the hydrophytic vegetation criterion. No hydric soil or hydrology indicators were observed. Since none of the three wetland criteria were met, DP-V-OUT was determined to be upland. DP-V-OUT helped establish the boundary of Wetland V, which was determined based on a change in vegetation and topography.

Wetland V is a *Typha sp.* (Cattails) dominated, depressional wetland approximately 0.004 acre (34 linear feet) in size. The wetland is located at the toe-of-slope of the roadside embankment, south of the North Split interchange, west of southbound I-65/I-70, and north of East New York Street (page 53). Wetland V is not contained within a roadside ditch.

Additional Data Points:

Several determination points were taken that did not result in the identification of wetlands. These points are identified as "reference points" or "RP" and are numbered 1 through 8.

Reference Point 1 (RP-1, pages 179 to 180) was taken within an infield drainage area of the North Split interchange (page 49). This location was dominated by *Phalaris arundinacea* (Reed Canary Grass, OBL, 40%) in the herbaceous stratum. This point met the hydrophytic vegetation criterion because it passed the rapid and dominance tests. No indicators of hydric soil were observed. Two secondary indicators of hydrology (Geomorphic Position [D2] and FAC-Neutral Test [D5]) were observed. Since one of the three wetland criteria was not met, RP-1 was determined to be upland.

Reference Point 2 (RP-2, pages 181 to 182) was taken on a roadside embankment east of the North Split interchange (page 50). This location was dominated by *Schedonorus arundinaceus* (Tall False Rye Grass, FACU, 90%) in the herbaceous stratum. This point did not meet the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion because it exhibited the Loamy Gleyed Matrix (F2) and Depleted Matrix (F3) indicators. One primary indicator of hydrology (Saturation [A3]) was observed. Since one of the three wetland criteria was not met, RP-2 was determined to be upland.

Reference Point 3 (RP-3, pages 183 to 184) was taken in a roadside ditch east of the North Split interchange (page 47). No vegetation was present at this location. *Lonicera maackii* (Amur honeysuckle, UPL) dominates the backslope and overshadows the ditch; both void of herbaceous species. The lack of vegetation is attributed to allelopathic property of honeysuckle; inhibits germination. This point did not meet the hydrophytic vegetation criterion. Problematic vegetation indicators were not evaluated since both soils and hydrology have to be met to consider them. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. One secondary indicator of hydrology (Geomorphic Position [D2]) was observed. Sparsely Vegetated Concave Surface indicator (B8) was not considered present, as the lack of herbaceous vegetation extends into the honeysuckle, and is likely caused by allelopathic chemicals from honeysuckle leaf decomposition. Therefore, wetland hydrology was not present. Since two of the three wetland criteria were not met, RP-3 was determined to be upland.

Reference Point 4 (RP-4, pages 185 to 186) was taken within a roadside ditch northwest of I-70 (page 46). Only dead vegetation was present at this location. The area between the feature and fence appears to have been cleared or disturbed. It does not appear to be unvegetated due to ponding. The area may possibly be a site of an accident/fuel spill. This point did not meet the hydrophytic vegetation criterion. No hydric soil indicators were observed. One secondary indicator of hydrology (Geomorphic Position [D2]) was observed. The area was devegetated, but indicator B8 (Sparsely Vegetated Concave Surface) does not appear to be the cause, as no indications of surface or ground water were present during two visits. The area appeared to be disturbed, and the lack of vegetation may be the result of a fuel spill or similar incident. Since all three of the wetland criteria were not met, RP-4 was determined to be upland.

Reference Point 5 (RP-5, pages 187 to 188) was taken within a roadside ditch northwest of I-70 (page 46). This location was dominated by *Schoenoplectus tabernaemontani* (Soft-Stem Club Rush, OBL, 10%) and *Elymus repens* (Creeping Wild Rye, FACU, 4%) in the herbaceous stratum. This point did not meet the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion because it exhibited the Depleted Below Dark Surface (A11) and Depleted Matrix (F3) indicators. One secondary indicator of hydrology (Geomorphic Position [D2]) was observed. Since two of the three wetland criteria were not met, RP-5 was determined to be upland.

Reference Point 6 (RP-6, pages 189 to 190) was taken within a roadside ditch northwest of I-70 (page 47). No vegetation was present at this location. *Lonicera maackii* (Amur honeysuckle, UPL) dominates the backslope and overshadows the ditch; both void of herbaceous species. This is attributed to allelopathic property of honeysuckle; inhibits germination. This point did not meet the hydrophytic vegetation criterion. The soil profile met the hydric soil criterion because it exhibited the Depleted Matrix (F3) indicator. One secondary indicator of hydrology (Geomorphic Position [D2]) was observed. Sparsely Vegetated Concave Surface indicator (B8) was not considered present, as the lack of herbaceous vegetation extends into the honeysuckle, and is likely caused by allelopathic chemicals from honeysuckle leaf decomposition. Since two of the three wetland criteria were not met, RP-6 was determined to be upland.

Reference Point 7 (RP-7, pages 191 to 192) was taken within a roadside ditch along the west side of I-65/I-70 and south of the North Split (page 51). This location was dominated by *Rumex crispus* (Curly Dock, UPL, 2%) and *Elymus sp.* (2%) in the herbaceous stratum. No hydrophytic vegetation was present at this location. This point did not meet the hydrophytic vegetation criterion. No hydric soil indicators were observed. One secondary indicator of hydrology (Geomorphic Position [D2]) was observed. Since all three of the wetland criteria were not met, RP-7 was determined to be upland.

Reference Point 8 (RP-8, pages 193 to 194) was taken within a steep, paved roadside ditch along the west side of I-65/I-70 and north of Ohio Street (page 53). This location was dominated by *Typha sp.* (Cattails, OBL, 95%) in the herbaceous stratum. This point met the hydrophytic vegetation criterion because it passed the rapid, dominance, and prevalence tests. No indicators of hydric soil were observed. One secondary indicator of hydrology (FAC-Neutral Test [D5]) was observed. Geomorphic Position is not applicable at this location because this indicator is not applicable in areas with functioning drainage systems. Since two of the three wetland criteria were not met, RP-8 was determined to be upland.

Underdrains:

This section of interstate was constructed with a system of underdrains to direct water away from the pavement. The underdrains typically outlet along the roadway embankments where drainage then flows downhill into the roadside ditches. Numerous underdrain outlets were observed within the study area. Outlets that exhibited a dominant amount of hydrophytic vegetation and passed the FAC-Neutral Test were further reviewed for the presence of wetlands. Those that passed are included in the Wetlands section. At some locations, hydrophytic species were identified, but were not dominant, surrounded by non-hydrophytic vegetation, and would have failed to meet the hydrophytic vegetation criterion. Therefore, when a visual assessment did not identify sufficient hydrophytic vegetation to pass the vegetation criterion and pass the FAC-Neutral Test, no further review was conducted.

Erosional Features:

Erosional features were observed along the roadway embankments at some locations within the study area. These features were in the form of rills or sheet erosion, and they are likely caused by surface water runoff along areas containing unstable, erodible soils or areas with poorly established vegetative root mass. While these areas indicate the presence of flowing water and may contribute hydrology to downhill wetlands, they did not exhibit an OHWM or contain vegetative or hydrologic indicators of wetlands and were not reviewed further.

Stormwater Features:

Field investigations resulted in the identification of two likely non-jurisdictional concrete storm water conveyance and retention structures, Stormwater Feature 1 (SWF-1) and 2 (SWF-2) to Pogues Run, totaling 204 linear feet (0.041 acre) within the study area. Both structures exhibited a nearly absent riparian corridor along their artificial banks and are surrounded by an urban transportation corridor. Their substrates are primarily concrete with some silt and gravel sediment deposits. No continuous OHWM, riffles or pools were observed. Based on these observations, SWF-1 and SWF-2 were classified as having poor quality.

Within the study area, neither SWF-1 or SWF-2 are shown as a stream on the USGS 7.5-minute series topographic map (page 19). Per the Storm Water Drainage System Map, both structures flow through a series of drainage pipes, and ultimately discharge into Pogues Run (page 37). Despite their confluence with Pogues Run and the observation of flowing water within each structure, historical data was reviewed that did not indicate that there was ever a waterway in this area that was buried or relocated (pages 38-39). Therefore, SWF-1 and SWF-2 would likely be classified as non-jurisdictional storm water conveyance and retention structures. Photos of these stormwater features are provided in the photos, pages 60 to 61.

SWF-1 to Pogues Run

SWF-1 is located within the North Split (page 45) and northwest of Wetland C. This feature is a concrete storm water structure flowing east to west within the study area for a total of 158 linear feet (0.039 acre). The feature begins at the outlet of a storm water pipe culvert under the interstate. The east portion (71 feet, 0.003 acre) of SWF-1 exists as a concrete-lined, open channel. The west portion (87 feet, 0.036 acre) of this structure exists as a concrete-lined, open basin. The west end of the basin is covered with a metal grate choked with debris and is where SWF-1 disappears into an underground storm water drainage system.

SWF-2 to Pogues Run

SWF-2 is located within the North Split (page 45) and northwest of Wetland C. This structure is a concrete-lined, open channel, roadside ditch flowing north to south within the study area for a total of 46 linear feet (0.002 acre). The structure begins at the outlet of a storm water pipe culvert under the interstate and outlets into the concrete-lined, open basin of SWF-1.

Roadside Ditches:

Roadside ditches throughout the study area were investigated for waters of the U.S. and waters of the State. Unless otherwise noted in this report, the roadside ditches failed to exhibit an OHWM or wetland characteristics. Representative photos of roadside ditches without an identified water resource observed within the study area are provided in the photos, pages 62, 69, 75, and 76.

IV: Conclusions

Based on the field review, this project has features that are likely waters of the U.S. and isolated waters of the State within the study area.

Twenty-two temporarily flooded, palustrine, emergent wetlands, totaling 0.505 acre (2,929 linear feet), were identified within the study area and are likely isolated waters of the State. Two stormwater features to Pogues Run (SWF-1 and SWF-2) totaling 204 linear feet were identified in the study area, as well. Historical data does not indicate that these features are associated with a previous waterway that was buried or relocated. Furthermore, they convey storm water and act as retention basins; and therefore, are likely isolated waters of the State. No other water resources were identified. Every effort should be taken to avoid impacts to the resources outlined in this report. If impacts will occur, waterway permits will be required and mitigation may be required. Impacts must be minimized before mitigation can be considered. INDOT's Ecology and Waterway Permitting Office (EWPO) staff should be contacted immediately if impacts will occur.

The conclusions presented in this report are the best judgment of Parsons and based on the guidelines set forth by USACE. The final determination of jurisdictional waters, however, is ultimately made by this agency.

An Approved JD form is attached to the end of this report.

V. References

Cowardin, L.M, V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Department of the Interior, Fish and Wildlife Service, Washington DC.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 Wetland Ratings*. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X

United States Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)*. U.S. Army Engineer Research and Development Center, Washington DC.

United States Department of Interior, U.S. Geological Survey. 2016. *StreamStats Version 3.0: Indiana*.
https://streamstatsags.cr.usgs.gov/v3_beta/viewer.htm?stabbr=IN

MapIndy.gov Historical Aerial Maps 2017
<http://maps.indy.gov/MapIndy/index.html>

Table 1: Wetland Summary Table

Name	Photograph Number	Latitude/ Longitude	Wetland Type	Area (acre) (linear- foot length)	Quality	Likely Water of the U.S. (Y/N)*	Isolated (Y/N) and Class I, II or III	Likely Exempt Isolated Wetland (Y/N)
Wetland A	109-111	39.782979 -86.145073	Palustrine Emergent	0.008 (67)	Poor	N	Y, Class I,	Y
Wetland B	20-21,23	39.784332 -86.144116	Palustrine Emergent	0.014 (69)	Poor	N	Y, Class I,	Y
Wetland C	35,38	39.783298 -86.143946	Palustrine Emergent	0.001 (18)	Poor	N	Y, Class I,	Y
Wetland D	73-74	39.783258 -86.140997	Palustrine Emergent	0.006 (37)	Poor	N	Y, Class I,	Y
Wetland E	63-64	39.784378 -86.140398	Palustrine Emergent	0.009 (51)	Poor	N	Y, Class I,	Y
Wetland F	65-66	39.784012 -86.14015	Palustrine Emergent	0.010 (89)	Poor	N	Y, Class I	Y
Wetland G	67-68	39.783665 -86.140184	Palustrine Emergent	0.001 (16)	Poor	N	Y, Class I	Y
Wetland H	76-77,79	39.782984 -86.140228	Palustrine Emergent	0.007 (51)	Poor	N	Y, Class I	Y
Wetland I	127-128	39.782071 -86.140245	Palustrine Emergent	0.013 (99)	Poor	N	Y, Class I	Y
Wetland J	58-59	39.784495 -86.139289	Palustrine Emergent	0.004 (35)	Poor	N	Y, Class I	Y
Wetland K	47,93	39.785632 -86.138237	Palustrine Emergent	0.003 (27)	Poor	N	Y, Class I	Y
Wetland L	87-88	39.785786 -86.137739	Palustrine Emergent	0.030 (148)	Poor	N	Y, Class I	Y
Wetland M	99-100	39.788339 -86.132036	Palustrine Emergent	0.006 (23)	Poor	N	Y, Class I	Y
Wetland N	104-106	39.787397 -86.132229	Palustrine Emergent	0.020 (103)	Poor	N	Y, Class I	Y
Wetland O	133-134,137	39.780158 -86.141568	Palustrine Emergent	0.025 (121)	Poor	N	Y, Class I	Y
Wetland P	138-139	39.779604 -86.14154	Palustrine Emergent	0.021 (117)	Poor	N	Y, Class I	Y
Wetland Q	143-145	39.778842 -86.141651	Palustrine Emergent	0.029 (227)	Poor	N	Y, Class I	Y
Wetland R	143-145	39.778821 -86.14103	Palustrine Emergent	0.107 (658)	Poor	N	Y, Class I	Y
Wetland S	148,150, 152	39.778549 -86.140374	Palustrine Emergent	0.018 (91)	Poor	N	Y, Class I	Y
Wetland T	154,156	39.776778 -86.141847	Palustrine Emergent	0.165 (802)	Poor	N	Y, Class I	Y
Wetland U	160,162-163,169	39.773995 -86.143185	Palustrine Emergent	0.004 (46)	Poor	N	Y, Class I	Y
Wetland V	174-175	39.771531 -86.14333	Palustrine Emergent	0.004 (34)	Poor	N	Y, Class I	Y
Totals				0.505 acre (2,929)			0.505 acre (2,929)	

Table 2: Bridge Summary Table

Des. No.	NBI No.	Bridge No.	Road	Feature(s) Intersects	Location	Reference Post	Year Built	Year Reconstructed
1296927	42380	I70-79-02434 DWBL	I-70 WB	LEWIS STR, MONON TRAIL	0.25 Mile East of I-65	83+24	1974	2003
1296620	36430	I65-112-05725 A	I-65 and Ramp 5W-S	WASHINGTON ST/OLD US 40	0.92 Mile North of I-70	111+22	1974	2003
1298282	42310	I70-77-05716 CEBL	I-70 EB	I-65 SB	0.15 Mile West of I-65	80+81	1973	1990
1298649	36320	I65-111-05713 ANBL	I-65 NB	MORRIS ST, PROSPECT ST	0.13 Mile South of I-70	110+17	1973	1993
1298285	42370	I70-79-05751 DWBL	I-70 WB Ramp	PROPOSED RAMP	0.32 Mile East of I-65	82+93	1974	2003
1296590	36640	I65-113-05750 B	I-65 Ramp	PROPOSED RAMP	2.26 Miles North of I-70	112+55	1974	2003
1592305	42345	I70-79-02432 CEBL	I-70 EB	LEWIS ST, MONON GREENWAY	0.61 Mile East of I-65	83+24	1974	2003
1296580	36630	I65-113-05749 A	I-65 Ramp	COLLEGE AVENUE	2.26 Miles North of I-70	112+55	1969	1989
1298284	42350	(I70)I65-113-05741 BEBL	I-70 EB	I-65 NB	0.47 Mile East of I-65	82+59	1974	2003
1298270	36560	I65-113-05742 BNBL	I-65 NB	PROPOSED RAMP	2.12 Miles North of I-70	112+41	1974	2003
1298273	36590	I65-113-05747 BNBL	I-65 NB	I-70 WB, RAMP	2.21 Miles North of I-70	112+50	1974	2003
1296648	36620	I65-113-05748 ANBL	I-65 NB	COLLEGE AVENUE	2.26 Miles North of I-70	112+55	1969	1989
1298272	36580	I65-113-05744 BSBL	I-65 SB	I-70 WB, I-65 RAMP	2.21 Miles North of I-70	112+50	1974	2003
1298271	36570	I65-113-05743 B	I-65 Ramp	I-70 WB, CD	2.12 Miles North of I-70	112+41	1974	2003
1298276	36600	I65-113-05745 A	I-65 and Ramp	COLLEGE AVENUE	2.26 Miles North of I-70	112+55	1969	1989
1298278	36650	I65-114-05666 A	I-65	CENTRAL AVENUE	2.52 Miles North of I-70	112+81	1969	1989
1298277	36610	I65-113-05746 A	I-65 Ramp	COLLEGE AVENUE	2.26 Miles North of I-70	112+55	1969	1989
1383301	42340	I70-79-05739 BWBL	I-70 WB	EAST 10TH STREET	0.52 Mile East of I-65	82+95	1974	2003
1298283	42330	(I65)I70-79-05737 ANBL	I-65 NB and I-70 EB	EAST TENTH STREET	1.92 Miles North of I-70	112+03	1974	2003
1298269	36540	I65-112-05736 ASBL	I-65 SB	ST CLAIR STREET	1.65 Miles North of I-70	111+95	1974	2003
1298268	36530	I65-112-05735 ANBL	I-65 NB	ST CLAIR STREET	1.65 Miles North of I-70	111+95	1974	2003
1298267	36520	I65-112-05734 ANBL	I-65 NB	I-65 RAMP NB	1.43 Miles North of I-70	111+73	1974	2003
1298265	36510	I65-112-05733 ASBL	I-65 SB	MICHIGAN STREET	1.39 Miles North of I-70	111+69	1974	2003
1298264	36500	I65-112-05732 BNBL	I-65 NB	MICHIGAN STREET	1.39 Miles North of I-70	111+69	1974	2003
1500165	36490	I65-112-05731 B	I-65 and CD	VERMONT STREET	1.29 Miles North of I-70	111+59	1974	2003
1298262	36480	I65-112-05730 B	I-65 and CD	NEW YORK STREET	1.19 Miles North of I-70	111+49	1974	2003
1296613	36470	I65-112-02431 A	I-65 and CD	CSX RR, OHIO STREET	1.10 Miles North of I-70	111+40	1974	2003
1298261	36460	I65-112-05728 A	I-65 and CD	MARKET STREET	1.00 Mile North of I-70	111+30	1974	2003

1296944	36550	I-65-112-05738 BSBL	I-65 SB	EAST 10TH STREET	1.92 Miles North of I-70	112+03	1974	2003
TBD	42420	I70-80-05701 DWBL	I-70 WB	ROOSEVELT AV @ COMMERCE AV	5.74 Miles West of I-465	83+30	1974	2007
TBD	42410	I70-80-05701 DEBL	I-70 EB	ROOSEVELT AV @ COMMERCE AV	5.74 Miles West of I-465	83+30	1974	2007
TBD	42440	I70-80-05702 CWBL	I-70	VALLEY AVENUE	5.34 Miles West of I-465	83+95	1974	2007

**The bridges listed in red are were added after field work was conducted for this report and are included in the current scope of work.*

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Indiana County/parish/borough: Marion City: Indianapolis
Center coordinates of site (lat/long in degree decimal format): Lat. 39.770894° N, Long. 86.142878° W.
Universal Transverse Mercator: Zone 16

Name of nearest waterbody: Pogues Run

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:

Name of watershed or Hydrologic Unit Code (HUC): 05120201 (HUC 8)

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- ☐ TNWs, including territorial seas
- ☐ Wetlands adjacent to TNWs
- ☐ Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- ☐ Non-RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- ☐ Impoundments of jurisdictional waters
- ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: Pick List

Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):³

- ☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: **Twenty-two palustrine, emergent wetlands totaling 0.505 acre were delineated. These are discussed in the attached Waters of the U.S. Report. All lacked connectivity to a water of the U.S..**

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**

Identify TNW: _____.

Summarize rationale supporting determination: _____.

2. **Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is “adjacent”: _____.

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

(i) **General Area Conditions:**

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: _____ inches

Average annual snowfall: _____ inches

(ii) **Physical Characteristics:**

(a) **Relationship with TNW:**

☐ Tributary flows directly into TNW.

☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: _____.

Identify flow route to TNW⁵: _____.

Tributary stream order, if known: _____.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):

Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

<input type="checkbox"/> Silts	<input type="checkbox"/> Sands	<input type="checkbox"/> Concrete
<input type="checkbox"/> Cobbles	<input type="checkbox"/> Gravel	<input type="checkbox"/> Muck
<input type="checkbox"/> Bedrock	<input type="checkbox"/> Vegetation. Type/% cover:	
<input type="checkbox"/> Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .

Presence of run/riffle/pool complexes. Explain: .

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime: .

Other information on duration and volume: .

Surface flow is: **Pick List**. Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

<input type="checkbox"/> Bed and banks	
<input type="checkbox"/> OHWM ⁶ (check all indicators that apply):	
<input type="checkbox"/> clear, natural line impressed on the bank	<input type="checkbox"/> the presence of litter and debris
<input type="checkbox"/> changes in the character of soil	<input type="checkbox"/> destruction of terrestrial vegetation
<input type="checkbox"/> shelving	<input type="checkbox"/> the presence of wrack line
<input type="checkbox"/> vegetation matted down, bent, or absent	<input type="checkbox"/> sediment sorting
<input type="checkbox"/> leaf litter disturbed or washed away	<input type="checkbox"/> scour
<input type="checkbox"/> sediment deposition	<input type="checkbox"/> multiple observed or predicted flow events
<input type="checkbox"/> water staining	<input type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> other (list):	
<input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: .	

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

<input checked="" type="checkbox"/> High Tide Line indicated by:	<input checked="" type="checkbox"/> Mean High Water Mark indicated by:
<input type="checkbox"/> oil or scum line along shore objects	<input type="checkbox"/> survey to available datum;
<input type="checkbox"/> fine shell or debris deposits (foreshore)	<input type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list):	

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: .

Identify specific pollutants, if known: .

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☐ Not directly abutting

☐ Discrete wetland hydrologic connection. Explain: .

☐ Ecological connection. Explain: .

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- ☐ TNWs: linear feet width (ft), Or, acres.
- ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
- ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
☐ Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from “waters of the U.S.,” or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
- Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - ☐ Prior to the Jan 2001 Supreme Court decision in “*SWANCC*,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
- ☒ Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain: **No streams or floodplains near any of the 22 delineated isolated wetlands. The only stream within the study area (Pogues Run) is encapsulated under the interstate. No floodplains are mapped within the study area.**
- ☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☒ Wetlands: 0.505 acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - ☐ Office concurs with data sheets/delineation report.
 - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters’ study: .
- ☐ U.S. Geological Survey Hydrologic Atlas: .
 - ☐ USGS NHD data.
 - ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: 7.5 minute series, Indianapolis West Quadrangle.
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic (SSURGO) Database, Marion County.
- ☒ National wetlands inventory map(s). Cite name: USFWS NWI GIS Database.
- ☐ State/Local wetland inventory map(s): .
- ☒ FEMA/FIRM maps: Digital Flood Insurance Rate Map (DFIRM).
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): Ortho 2011.
 - or ☒ Other (Name & Date): Ground-level : October 29-30, 2015 and April 25-27, May 24, and October 3-5, 2016.
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

From: [Evans, Julie \(INDOT\)](#)
To: [Warrner, Thomas](#)
Cc: [Rehder, Crystal](#); [Bowman, Sandra A](#); [Miller, Daniel J](#); [Shi, Runfa](#); [Carmanygeorge, Karstin M](#); [Moushon, Gregory](#); [Kia Gillette](#)
Subject: WOTUS APPROVED 2.1.2018: DES 1592385
Date: Thursday, February 1, 2018 10:03:27 AM
Attachments: [image001.png](#)

Good morning,

Thank you for submitting the waters report for the I-65/I-70 North Split Interchange Reconstruction in Marion County (Des 1592385 (L)). The approved report can be found on ProjectWise through this [link](#). The size of the waters report is too large to send as an attachment. Please let me know if you cannot access the report through ProjectWise and would like a copy. Send me your mailing address and I will send a copy on a CD.

It is the responsibility of the Project Manager to forward a copy of this report to the Project Designer.

The information in this report should be used by the Project Designer to determine if waters of the U.S. will be impacted by the project. Avoidance and minimization of impacts must occur *before* mitigation will be considered. If mitigation is required, the Project Manager or Project Designer must coordinate with the Ecology and Waterway Permitting Office to discuss how adequate compensatory mitigation will be provided.

The Project Manager should notify the Ecology and Waterway Permitting Office if there is any change to the project footprint presented in this report. Such changes may require additional fieldwork and submittal of an updated waters report covering areas not previously investigated. *This report is only valid for a period of five years from the date of earliest fieldwork.* If the report expires prior to waterway permit application submittal, additional fieldwork and a revised waters report will be required.

It will not be sent to the United States Army Corps of Engineers (USACE) or the Indiana Department of Environmental Management (IDEM) until the waterways permit applications are submitted to these agencies.

Thank you,

Julie Evans, MES
Environmental Manager II,
Ecology and Waterway Permitting Office
100 N. Senate Ave., N 642
Indianapolis, IN 46204-2216
Phone: 317-234-8223
Email: JulEvans@indot.IN.gov



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
X	39.789305	-86.129785	DP-X-IN, DP-X-OUT	5-9	PEM1A	0.04	Poor	No	Isolated, Class I Likely Exempt
Y	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

Exhibit maps, photos, and wetland determination data forms were removed to reduce the file size of the document. Locations of jurisdictional wetlands are shown on maps in Appendix B of the Environmental Assessment. The full Waters of the U.S. Determination Addendum is available at <https://northsplit.com/project-documents/>.

From: Clayton, Juliana
To: [Kate Lucier](#)
Cc: [Kia Gillette](#); [Shi, Runfa](#)
Subject: RE: North Split Waters Report Addendum_Des. No. 1592385 & 1600808
Date: Thursday, September 5, 2019 3:14:18 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Hello,

Thank you for submitting the waters report addendum for the I-65 interchange modification in Marion County, Des. numbers 1592385 and 1600808. The approved report can be found in ProjectWise ([1592385 North Split Waters Report Addendum Approved 9.5.19.pdf](#)). *It is the responsibility of the Project Manager to forward a copy of this report to the Project Designer.*

The information in this report should be used by the Project Designer to determine if waters of the U.S. will be impacted by the project. Avoidance and minimization of impacts must occur *before* mitigation will be considered. If mitigation is required, the Project Manager or Project Designer must coordinate with the Ecology and Waterway Permitting Office to discuss how adequate compensatory mitigation will be provided.

The Project Manager should notify the Ecology and Waterway Permitting Office if there is any change to the project footprint presented in this report. Such changes may require additional fieldwork and submittal of an updated waters report covering areas not previously investigated. *This report is only valid for a period of five years from the date of earliest fieldwork.* If the report expires prior to waterway permit application submittal, additional fieldwork and a revised waters report will be required.

It will not be sent to the United States Army Corps of Engineers (USACE) or the Indiana Department of Environmental Management (IDEM) until the waterways permit applications are submitted to these agencies.

Thanks,
Juliana Clayton
Ecology and Waterway Permitting Specialist
100 N Senate Ave N 642
Indianapolis, IN 46204-2216
Phone: 317-232-0240
Email: jclayton@indot.in.gov



From: Kate Lucier [<mailto:klucier@HNTB.com>]
Sent: Tuesday, August 27, 2019 4:14 PM
To: Clayton, Juliana <JClayton@indot.IN.gov>

From: Clayton, Juliana
To: [Kia Gillette](#)
Cc: [Shi, Runfa](#); [Kate Lucier](#)
Subject: RE: North Split Waters Report Addendum_Des. No. 1592385 & 1600808
Date: Tuesday, September 17, 2019 12:40:29 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Kia,

I have reviewed the information and based on this the following permits are needed for **Des. numbers 1592385 and 1600808** (the designer should confirm all schedules with the Project Manager):

- **Rule 5** based on >1 ac land disturbance. **Please submit application to ES as soon as possible.**
- **401 IP/ 404 RGP** (use State Form 51821) based on permanent impacts greater than 0.1 acres and impacts to Waters of the State. **Please submit application to ES as soon as possible.**

*We are providing **preliminary** permit determinations based on the information presented at the time of the request. **If scope and plans change the designer should contact us for a revised determination.** A final permit determination will be done at the time of permit application submittal and/or any changes to the scope of the project.*

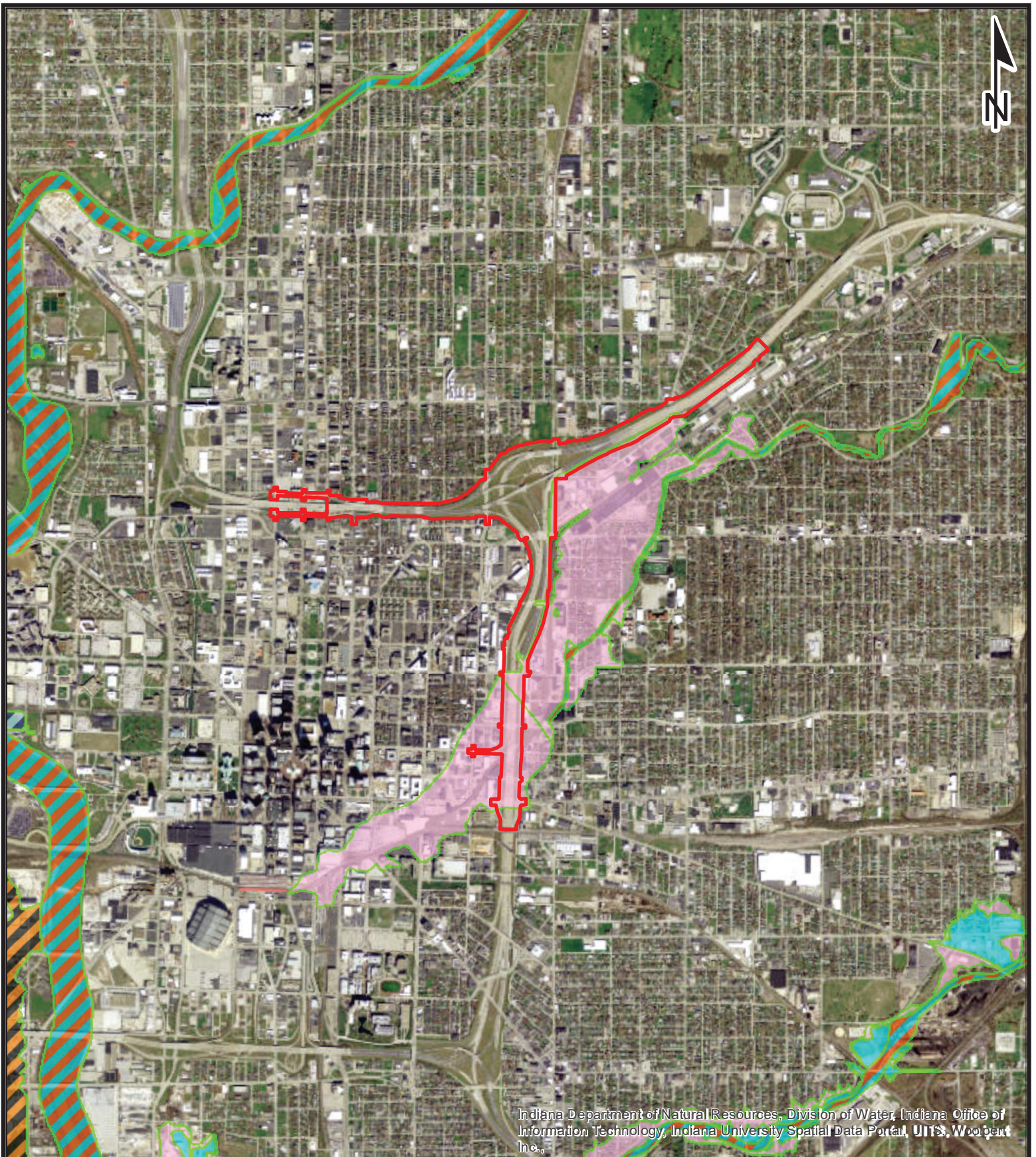
I am sending the original waters report and addendum to the USACE and IDEM for an Approved JD. In the meantime, I can review the application since this project is on a tight timeline. If you have questions please feel free to contact me.

Thanks,
Juliana Clayton
Ecology and Waterway Permitting Specialist
100 N Senate Ave N 642
Indianapolis, IN 46204-2216
Phone: 317-232-0240
Email: jclayton@indot.in.gov



From: Kia Gillette [<mailto:kgillette@HNTB.com>]
Sent: Sunday, September 15, 2019 12:58 PM
To: Clayton, Juliana <JClayton@indot.IN.gov>
Cc: Shi, Runfa <rshi@indot.IN.gov>; Kate Lucier <klucier@HNTB.com>
Subject: North Split Waters Report Addendum_Des. No. 1592385 & 1600808

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or



IDNR Floodplain Map

Des No:1592385 & 1600808
Project: North Split Project

0 1,250 2,500 Feet



 Project Limits

Best Available Flood Hazard Layer

FEMA Zone AE Floodway

DNR Detailed Floodway

DNR Approximate Floodway

FEMA Zone A

FEMA Zone AE

DNR Detailed Fringe

DNR Approximate Fringe

Additional Floodplain Area


FEMA Protected by Levee

FEMA Floodplain - Ponding (Depth)

FEMA Floodplain - Sheet Flow (Depth)

Not Mapped



 <p>Section 401 and State Regulated Wetlands Program Wetlands and Stormwater Section Office of Water Quality Indiana Department of Environmental Management</p>	<h1 style="text-align: center;">Inspection Report</h1>
Date Distributed: October 22, 2019	Purpose: Summarize meeting discussion and decisions.
Certified Mail Number:	Authority: <i>This inspection was conducted pursuant to Indiana Code (IC) 13-14-2-2 and is consistent with the requirements of IC 13-14-5.</i>

Responsible Party and Location Information	
Landowner: INDOT	Site Name: I-65 I-70 North Split
IDEM Identification Number:	County: Marion
Incident No:	Date of Site Visit: October 22, 2019
Project Location/Address <i>(Use for sites without ID Number):</i> I-65 / I-70 from College Avenue in the west to Commerce Avenue in the east to New York Street in the south.	Contact Information <i>(Use for sites without ID Number)</i> JClayton@INDOT.IN.Gov 317-232-0240

Inspected				
<input type="checkbox"/> Stream/River(s)	<input checked="" type="checkbox"/> Wetland(s)	<input type="checkbox"/> Open Water	<input type="checkbox"/> Mitigation	<input type="checkbox"/> Other:

Observations/Comments *(Description of activities, impacts, violations, corrective action, dates):*

- (1) Twenty two wetlands were inspected. All wetlands except for Wetland N and Wetland M are located within mapped non-hydric soil units and appear to receive their hydrology from redirected surface water from I-65/I70. If the USACE determine wetlands other than Wetland N and Wetland M to be isolated or otherwise not regulated by the USACE, then those wetlands will be considered to be incidental exempt isolated wetlands by IDEM. Wetlands N and M are likely waters of the state. A size exemption could be used to claim an exemption on either Wetland N or Wetland M.
- (2) The activities proposed at the site may result in land-disturbing activities of one (1) acre or more. Indiana Administrative Code, 327 IAC 15-5 requires permit coverage for all activities disturbing one (1) acre or more of land. 327 IAC 15-5 is a state regulation that governs the discharge of pollutants, principally sediment that is associated with run-off from construction activities.
- (3) Timely implementation and maintenance of stormwater quality measures is important in minimizing the discharge of sediment and other pollutants that are associated with land-disturbing activities. It is critical that appropriate stormwater quality measures are installed, monitored, and maintained. These measures must be implemented immediately and throughout active construction/land disturbance to reduce the discharge of sediment and other pollutants in stormwater run-off.

Inspection Distribution and Contact Information	
Questions/Inquiries Concerning this Report Should be Directed to the Inspector at: <div style="display: flex; justify-content: space-between;"> <div> James Turner IDEM Wetlands Project Manager 100 North Senate Avenue Indianapolis, Indiana 46204 </div> <div> Phone: 317-234-6352 Toll Free: 1-800-451-6027 </div> <div> E-Mail: JTurner2@idem.In.gov </div> </div>	
Present at Site: IDEM: James Turner; USACE: Deborah Duda Snyder; INDOT: Crystal Rehder, Juliana Clayton	
Copies Provided to: INDOT: Juliana Clayton	



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, LOUISVILLE DISTRICT
INDIANAPOLIS REGULATORY OFFICE
8902 OTIS AVENUE, SUITE S106B
INDIANAPOLIS, IN 46216

February 3, 2020

Regulatory Division
North Branch
ID No. LRL-2019-1003-dds

Ms. Juliana Clayton
Indiana Department of Transportation
100 North Senate Avenue, Room N642
Indianapolis, Indiana 46204

Dear Ms. Clayton:

This is in regard to the Waters of the U.S. Report for I465 Reconfiguration dated January 31, 2018, and Addendum dated June 26, 2019. INDOT has requested a jurisdictional determination for non-jurisdictional features in the right-of-way along the interchange of I70 and I65 on the north side of Indianapolis, Marion County, Indiana (Des. No. 1592385 and 1600808). More specifically, the site is located at Latitude: 39.782979° N, Longitude 86.145073° W. We have reviewed the submitted data and completed a jurisdictional determination relative to Section 404 of the Clean Water Act.

The U.S. Army Corps of Engineers exercises regulatory authority under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344), for certain activities in "waters of the United States (U.S.)." These waters include all waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce.

We have reviewed the submitted wetland delineation reports. Based on the information provided and site inspections by Corps staff on October 22, 2019, we have verified that eighteen roadside ditches, identified as Wetlands A, F, I, J, K, L, N, O, P, Q, R, S, T, U, V, W, X, and Y are man-made features constructed in uplands and are not regulated under the Clean Water Act.

This jurisdictional determination is valid for a 5-year period from the date of this letter unless new information warrants revision of the determination before the expiration date. Our comments on this project are limited to only those effects, which may fall within our area of jurisdiction, and thus does not obviate the need to obtain other permits from State or Local agencies. Lack of comments on other environmental aspects should not be construed as either concurrence or nonconcurrence with stated environmental effects.

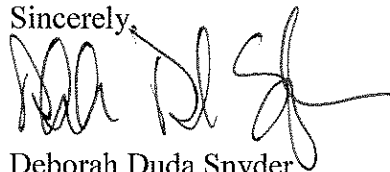
This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination, you must submit a completed RFA form to the Lakes and Rivers Division Office at the following address.

U.S. Army Corps of Engineers
ATTN: Jacob Siegrist
Appeal Review Officer CELRD-PD-REG
550 Main Street, Room 10524
Cincinnati, OH 45202-3222

In order for a RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit a RFA form, it must be received at the above address by **April 2, 2020**. It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter.

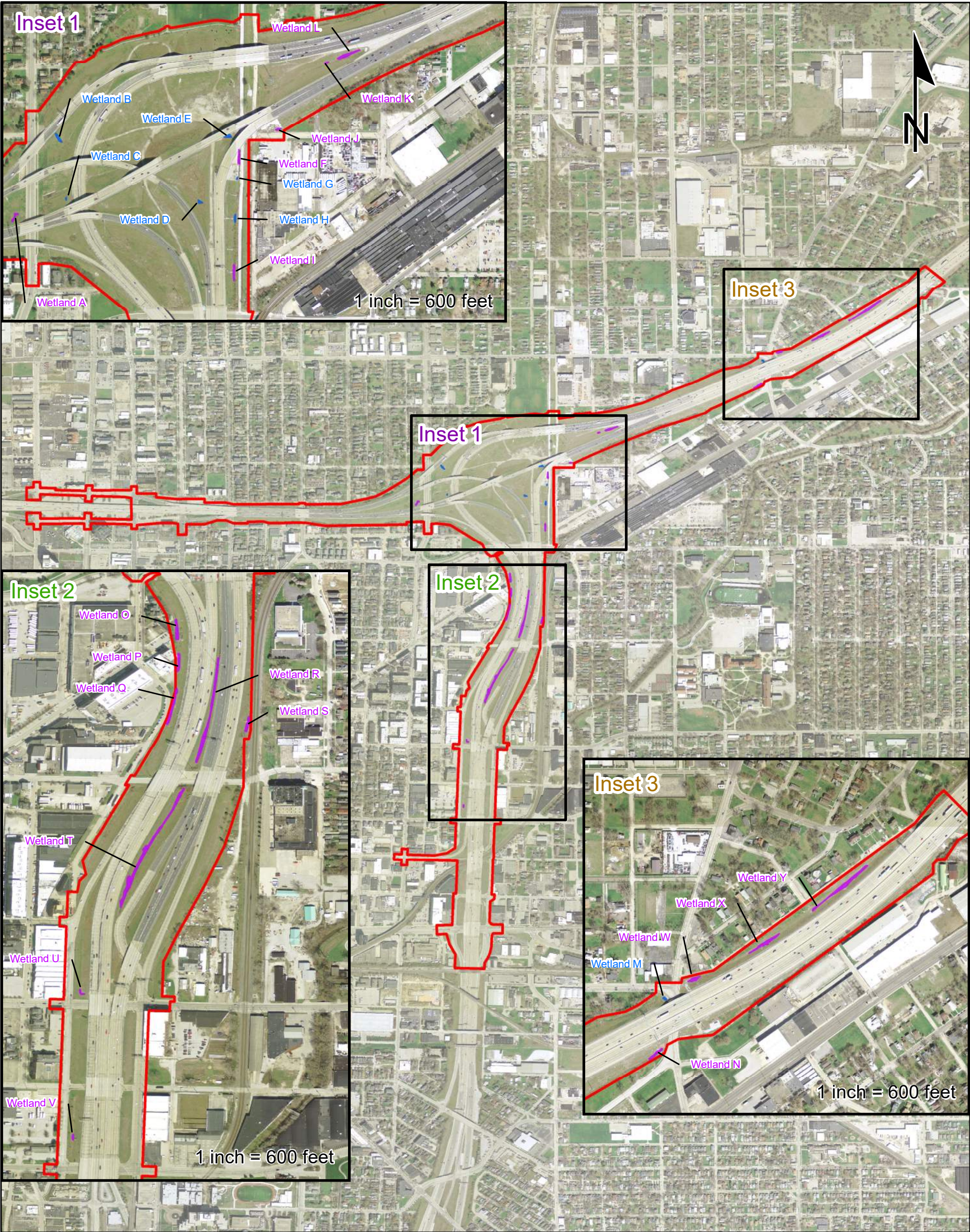
If we can be of any further assistance, please contact me by writing to the letterhead address, or by calling (317)-543-9424. Any correspondence on this matter should reference our Identification Number LRL-2019-1003-dds.

Sincerely,

A handwritten signature in black ink, appearing to read 'Duda Snyder', with a stylized flourish at the end.

Deborah Duda Snyder
Project Manager
Indianapolis Regulatory Office

Enclosures
Copy Furnished: IDEM (Turner)



Legend Review Area	Wetland Jurisdictional Determination Map Des. Nos. 1592385 & 1600808 Project: North Split Project	
	1 in = 0.25 miles 0 0.25 0.5 Miles	NORTH SPLIT UPGRADES DRIVING PROGRESS Created by HNTB Indiana (2020)