

APPENDIX F

Ecological and Water Resources

**Waters of the U.S. Determination
U.S. 31 Limited Access Corridor Study
Hamilton and Tipton County, Indiana
Des. No. 1900096**

Juliana Clayton
Approved 3.1.21

Prepared by: Julie Evans and Brooke Fox, RQAW Corporation
Completed Date: March 1, 2021

Dates of Waters Field Investigation:

A field investigation was conducted on July 15-16, 29, August 6-7, 19, 27, September 1-4, 10-11, 14, 16, October 27, and November 2, 2020 by RQAW Corporation to evaluate the presence of *Waters of the United States* for U.S. 31 Limited Access Corridor Study in Hamilton and Tipton Counties, Indiana. Photos from all dates of field work are included in this report.

Location:

US 31

Townships 20-22 North, Range 3 East, Sections: 36, 25, 24, 13, 12, 1

Townships 20-22 North, Range 4 East, Sections: 31, 30, 19, 18, 7, 6

Township 19 North, Range 3 East, Sections: 12, 1

Township 19 North, Range 4 East, Sections: 7, 6

Kempton, Kokomo West, Sheridan, and Westfield U.S. Geological Survey (USGS) Quadrangles

Hamilton and Tipton Counties, Indiana

Project Termini:

North

South

Latitude: 40.38911 °N

Latitude: 40.08876 °N

Longitude: -86.12715 °W

Longitude: -86.12778 °W

National Wetlands Inventory (NWI) Wetlands:

According to the U.S. Fish and Wildlife (USFWS) National Wetlands Inventory (NWI) data available through IndianaMap (<http://www.indianamap.org/>), there are 79 NWI polygons located within the 0.5 mile radius of the survey area. There are 26 NWI polygons within the project area: 10 PFO1A (Palustrine Forested Broad-Leaved Deciduous Temporarily Flooded), 9 PUBGx (Palustrine Unconsolidated Bottom Intermittently Exposed Excavated), 1 PUBF (Palustrine Unconsolidated Bottom Semi-permanently Flooded), 2 PEM1C (Palustrine Emergent Persistent Seasonally Flooded), 4 PEM1A (Palustrine Emergent Persistent Temporarily Flooded). Maps showing a half mile radius with the NWI layer turned on is provided in the attachments (pages A89 – A98).

According to the USFWS Wetlands Mapper (<https://www.fws.gov/wetlands/data/Mapper.html>) 12 of the 17 streams delineated within the project area were classified under the Cowardin Classification System. One (1) stream (Kelly West Ditch) is classified as a riverine, unknown perennial unconsolidated bottom semi-permanently flooded excavated (R5UBFx). Seven (7) streams (Mud Creek, UNT to Mud Creek, Turkey Creek, Buck Creek, Bennett Ditch, Baker Ditch and Hinkle Creek) are classified as riverine lower perennial streambed permanently flooded (R4SBC). Two (2) streams (Dixon Creek and Prairie Creek) are classified under the Cowardin Classification system as riverine, lower perennial, unconsolidated bottom, permanently flooded (R2UBH). Two (2) streams, Cicero Creek and Lindley Ditch are classified as riverine unknown perennial unconsolidated bottom permanently flooded (R5UBH). Six (6) streams (UNT to Dixon Creek, UNT to Prairie Creek, UNT to Bennett Ditch, UNT to Baker Ditch, Raymond Briles Drain, and UNT to Jones Ditch) are not classified under the Cowardin Classification System.

According to the United States National Geological Survey (USGS) National Hydrography Dataset (NHD), there are 110 NHD lines within project area. Of these, 22 lines are classified as canal ditch, 20 lines are classified as connectors, 6 lines are classified as intermittent, and 62 lines are classified as perennial. Maps showing the NHD layer turned on is provided in the attachments (Pages A68 – A77).

Soils:

According to the Soil Survey Geographic (SSURGO) Database for Hamilton and Tipton Counties, Indiana, the survey area contains soil areas with nationally listed hydric soils.

<u>Map Abbreviation</u>	<u>Soil Name</u>	<u>Hydric Component Range</u>	<u>Classification</u>
Br	Brookston silty clay loam, 0 to 2% slopes	66 to 99%	Hydric
CrA	Crosby silt loam, 0 to 2% slopes	1 to 32%	Hydric
DeA	Del Rey, sandy substratum-Crosby silt loams, 0 to 2 percent slopes	1 to 32%	Hydric
FnA	Fox loam, 0 to 2 percent slopes	1 to 32%	Hydric
FnB2	Fox loam, 2 to 6 percent slopes, eroded	1 to 32%	Hydric
FxC3	Fox clay loam, 8 to 18 percent slopes, severely eroded	0%	Not Hydric
HeF	Hennepin loam, 18 to 50 percent slopes	0%	Not Hydric
Ho	Houghton muck	100%	Hydric
MmA	Miami silt loam, 0 to 2% slopes	1 to 32%	Hydric
MmB2	Miami silt loam, 2 to 6% slopes	1 to 32%	Hydric
MmC2	Miami silt loam, 6 to 12 percent slopes, eroded	1 to 32%	Hydric
MmD2	Miami silt loam, 12 to 18% slopes	0%	Not Hydric
MoC3	Miami clay loam, 6 to 12 percent slopes, severely eroded	0%	Not Hydric
MoD3	Miami clay loam, 12 to 18 percent slopes, severely eroded	0%	Not Hydric
OcA	Ockley silt loam, 0 to 2 percent slopes	0%	Not Hydric
OcB2	Ockley silt loam, 2 to 6 percent slopes, eroded	1 to 32%	Hydric
Or	Orthents	0%	Not Hydric
Pa	Palms muck	100%	Hydric
Pc	Palms muck, undrained	100%	Hydric
Pn	Patton silty clay loam, 0 to 2 percent slopes	66 to 99%	Hydric
Ps	Pella, sandy substratum-Drummer, till substratum, silty clay loams	100%	Hydric
Pt	Pits	0%	Not Hydric
Sh	Shoals silt loam, 0 to 2 percent slopes	1 to 32%	Hydric
St	Sleeth loam	1 to 32%	Hydric
Sx	Sloan silty clay loam, sandy substratum	100%	Hydric
TuB2	Tuscola, till substratum-Strawn complex, 1 to 6 percent slopes, eroded	1 to 32%	Hydric
Ud	Udorthents, loamy	0%	Not Hydric
We	Westland silty clay loam, 0 to 2 percent slopes	66 to 99%	Hydric
Wh	Whitaker loam	1 to 32%	Hydric
WkB	Williamstown silt loam, 2 to 6 percent slopes, eroded	1 to 32%	Hydric

12 Digit HUC:

Hinkle Creek to Cicero Creek HUC 051202010609

Little Cicero Creek to Cicero Creek HUC 051202010608

Teter Branch – Little Cicero Creek to Cicero Creek 051202010607

Prairie Creek to Cicero Creek HUC 051202010601

Cox Ditch to Cicero Creek HUC 051202010602

Dixon Creek – Cicero Creek to Cicero Creek HUC 051202010603

Buck Creek-Cicero Creek to Cicero Creek HUC 051202010604

Headwaters Turkey Creek to Kokomo Creek – Wildcat Creek HUC 051201070101

North Creek – Mud Creek to Kokomo Creek – Wildcat Creek HUC 051201070102

West Fork – Little Wildcat Creek to Wildcat Creek HUC 051201070401

Attachments:

Project Location Maps.....	A1 – A8
Natural Resources Conservation Service (NRCS) Soil Survey Map & Soils Report.....	A9 – A31
StreamStats, Floodway Maps, NWI & NHD Maps, Water Resource Maps.....	A32 – A100
Photograph Location Maps & Photographs.....	A101 – A1220
Wetland Determination Forms.....	A1221 – A1793
QHEI Data Sheets.....	A1794 – A1835
U.S. 31/276 th St. Intersection Improvement Waters Report.....	A1836 – A2061

Project Description:

The proposed project (Lead Des No. 1900096) extends from State Road (SR) 38 in Hamilton County to SR 931 in Tipton County. This 20.3 mile stretch of U.S. 31 is situated between two segments of U.S. 31 that have already been converted to limited-access highway. The primary purpose of this project is to reduce traffic accidents along U.S. 31 between SR 38 and SR 931 while maintaining local access by providing interchanges and overpasses at select locations. The need for the project derives from the high rate of accidents near intersections along this stretch of U.S. 31. Projects under the lead Des No. 1900096 include: the U.S. 31 Limited Access Conversion from SR 38 to 236th Street (Des. No. 1900097), and right-of way acquisition (Des. No. 2001122). Other projects associated with the 20.3 mile U.S. 31 Limited Access Corridor conversion include: the 276th Street Interchange (Des. No. 1901797) and the 236th Street interchange (Des. No. 1702149). A summary of project activities is listed in the table below:

Summary of Proposed Project Construction Activities for U.S. 31 Limited Access Corridor Between SR 38 and SR 931 in Hamilton and Tipton Counties.

Project Type	County	Road Name	Des No.
Interchange	Hamilton	236 th Street	1702149
		276 th Street	1901797
	Tipton	Division Road*	1900096
Overpass	Hamilton	226 th Street, 266 th Street, 296 th Street/County Line Rd.	1900096
	Tipton	W. County Road 300 N., W. County Road 450 N.	1900096
Cul-de-sac	Hamilton	216 th St., 226 th St., 241 st St., 246 th St., 256 th St., 281 st St., 286 th St.	1900096
	Tipton	W. CR 450 S., W. CR 350 S., W. CR 250 S., W. CR 50 S., W. CR 100 N., W. CR 200 N., W. CR 375 N., W. CR 550 N.	1900096
*Division Road may be constructed as either an overpass or intersection. The design has yet to be determined. Shaded Roads were excluded from the U.S. 31 Limited Access Corridor survey area (Des. 1900096)			

226th Street Overpass (Des. No. 1900096)

The 226th Street overpass portion of the project will include the construction of a new bridge to carry 226th Street over US 31, construction of a private access drive south of 226th Street and east of US 31 to serve commercial businesses in that area, and construction of a new public access drive, constructed approximately 0.25 mile east of US 31, that will extend from 226th Street to a point approximately 0.5 mile north of 226th Street (to tie into construction of the independent 236th Street Interchange project (Des No. 1702149)).

All existing cross streets to US 31 along the corridor have been analyzed for conversion to either cul-de-sacs, overpasses, or interchanges. In general, the cul-de-sacs will have an approximately 50-foot radius and will be oriented north, center, or south relative to the existing roads to minimize impacts to existing properties. All areas where existing pavement is removed will be reseeded. Median cable barrier will be installed in select stretches of the median. Roadway signage along the project area will be evaluated and replaced, if needed.

The remaining portions of the project are conceptual at this time and, therefore, detailed project descriptions are not available.

Field Reconnaissance:

The investigation area includes approximately 20.7 miles of U.S. 31 from the SR 38 intersection to 0.2 mile south of the SR 931 intersection. The survey area is located in a mostly rural setting, dominated primarily by agricultural fields and scattered woodlots. Land use in the southern portion of the survey area (SR 38 to approximately 296th Street) is residential with some light industry. Land use in the northern portion of the survey area (296th Street to the SR 931 interchange) is primarily agricultural with residential properties. The entire survey area was investigated for potential stream and wetland features using U.S.G.S. Topo and NWI maps. The survey area included the median and approximately 50 feet on either side of the roadway (extending 200 feet from U.S 31 center line). Intersections that will be impacted by project activities were also investigated (see project summary table in Project Description Section—page 3). Most cross streets were investigated a minimum of 1000 feet (east to west) from the U.S 31 centerline, with approximately 50 feet from the edge of the pavement. The Division Road Intersection/Overpass and SR 226th Street intersection survey areas were larger (see Project Location Maps on pages A1-A8).

The 226th Street Overpass includes a proposed access road on the east side of the project area. The access road extends approximately 0.5 mile north. This access road will connect with access road being constructed as part of the 236th Street interchange (Des No. 1702149). The east-west access road that would connect from U.S. 31 to this road is also part of the 236th Street interchange. None of the roads shown proposed in the 236th Street Intersection are included in this report.

Four (4) intersections were not included in the survey area: the 276th Street Interchange (Des No. 1901797), the 236th Street interchange (Des. No. 1702149), SR 28 Interchange, and the Norfolk Southern Railroad Crossing/CR 100 S. The 236th Street interchange, and 276th Street interchange project area were investigated by others, so were not surveyed. However, there was some overlap with the 276th Street Interchange project area and the U.S. 31 Limited Access Corridor project, so the approved waters report is included as an attachment in this report (please see pages A1836 – A2061). The Norfolk Southern Railroad Crossing/ W. CR 100 S. and SR 28 interchange have already been constructed and are considered separate (independent utility) from the U.S. 31 Limited Access Corridor project (Des 1900096).

The 276th Street Interchange (Des No. 1901797) study area intersects with the U.S. 31 Limited Access Corridor Study area (Des No. 1900096). Wetlands (Wetlands: NZ, NAA, NAE, NAG, and SAU) and streams (Little Cicero Creek, UNT 1 to Little Cicero Creek, and UNT 2 to Little Cicero Creek) occurring in both study areas have been removed from this report and are documented in the 276th Street Interchange (Des No. 1901797) Waters of the U.S. report. The approved 276th Street Interchange Waters of the U.S. report is included in this document as an appendix (please see pages A1836 – A2061). Information on these streams and wetlands can be found in the approved 276th Street Interchange report.

Streams:

According to the hydrology data available through IndianaMap (<http://www.indianamap.org/>) and the Hamilton and Tipton USGS topographic maps (1:24,000 scale), there are 11 blueline streams mapped within the survey area: Kelly West Ditch, Mud Creek, Unnamed tributary (UNT) to Mud Creek, Turkey Creek, Buck Creek, Dixon Creek, Prairie Creek, Bennett Ditch, Baker Ditch, Hinkle Creek, and Lindley Ditch were confirmed. Seventeen (17) streams were field verified including the afore mentioned 11 mapped blue line streams and 6 unmapped (on the Tipton and Hamilton County USGS topo maps) streams. The 6 unmapped streams include: UNT to Dixon Creek, UNT to Prairie Creek, UNT to Bennett Ditch, UNT to Baker Ditch, Raymond Briles Drain, and UNT to Jones Ditch. Acres of stream within the survey area are based on the largest ordinary high water mark (OHWM) width measurements and total linear feet of stream within the project area. For streams crossing the survey area in more than one location (UNT to Mud Creek and Bennett Ditch), acreage and linear feet of stream at each crossing is determined and then added together. A discussion of each stream is provided below. Characteristics for each stream are also summarized in Table 1.

Please note that Little Cicero Creek and UNT to Little Cicero Creek are not discussed in this section. They are discussed in the attached 276th St. and U.S. 31 Intersection Improvement (Des 1901797) Waters Report (Please see pages A1836 – A2061).

Kelly West Ditch is located at the intersection of US 31 and CR W 450 N, in Tipton County. Within the project area, the stream is also known as Van Hook legal drain, per the Tipton County Surveyor's Office. According to the Kokomo West quadrangle USGS topo map, the Kelly West Ditch is a mapped intermittent blueline stream. The stream flows west through the project area and was flowing at the time of the field investigation. According to the USGS StreamStats report, this stream has a drainage area of 0.202 square miles and a gradient of 5.01 feet per mile. Kelly West Ditch is buried upstream (west) of U.S. 31 and outlets on the east side. Therefore, the only available OHWM measurements available were downstream (east) of structure carrying Kelly West Ditch under U.S. 31. The OHWM measurements are 12.4 feet wide and 1.5 feet in depth. Approximately 730 linear feet (0.20 acre) is located within the survey area. This stream exhibited poor quality due to disturbance from the roadway, lacked riffles and pools, and exhibited a straightened, modified channel. The QHEI score for this stream was 29 (very poor condition). The stream's substrate consisted predominately of gravel and silt. This stream flows east under U.S. 31, then flows east and flows into East Fork of Little Wildcat Creek, which drains into Wildcat Creek, which flows into the Wabash River, a Traditionally Navigable Waterway (TNW). Based on its contribution of intermittent surface flow into a TNW, Kelly West Ditch is likely to be considered a *Waters of the United States*.

Mud Creek is located 0.35 mile south of W 375 N and U.S. 31 intersection, in Tipton County. Per the Tipton County Surveyors Office, the stream is also known as Bennett Ditch. According to the Kempton quadrangle USGS topo map, the stream is a mapped perennial blue line stream. The stream is named as "Mud Creek" on the USGS topo map but is also named "Broad Creek" on the NHD Layer. The stream flows southeast through the project and flow in an eastward direction outside the project area. The stream was flowing at the time of the field investigation. According to the USGS StreamStats report, this stream has a drainage area of 10.125 square miles and a gradient of 4.17 feet per mile. Mud Creek exhibited upstream OHWM characteristics of 12 feet in width and 5 feet in depth. Upstream of the bridge carrying U.S. 31 over Mud Creek, the stream is relatively poor quality with steep banks and no overhanging vegetation. Scour is present immediately up and downstream of the structure. Upstream (west of U.S. 31), the surrounding landscape is agricultural. Downstream (east of U.S. 31) the surrounding landscape is residential with a forested riparian zone. The downstream OHWM measurements are 15.3 feet wide and 4.3 feet deep. Downstream of the structure, stream exhibited fair quality due to the presence of riffle and pool complexes, overhanging vegetation, and a more sinuous channel. Approximately 450 linear feet (0.15 acre) of Mud Creek is within the survey area. The QHEI score for this stream was 45.5 (fair condition). The stream's substrate consisted predominately of gravel and sand. Immediately up and downstream of the bridge carrying U.S. 31 over Mud Creek, reed canary grass (*Phalaris arundinacea*) was present within the stream as an instream wetland feature. This stream drains into Wildcat Creek, which flows into the Wabash River, a TNW. Based on its contribution of perennial surface flow into a TNW, Mud Creek is likely to be considered a *Waters of the United States*.

UNT to Mud Creek is mapped as an intermittent blue line stream per the Kempton USGS topo map. The stream is also known as M. Bennett Legal Drain per the Tipton County Surveyor's Office. The stream flows north through the project area and flows into Mud Creek, which drains into Wildcat Creek, which flows into the Wabash River, a TNW. Based on its contribution of intermittent surface flow into a TNW, UNT to Mud Creek is likely to be considered a Waters of the United States. The stream crosses the survey area in three locations. In total, 2035 linear feet and 0.9 acre of UNT to Mud Creek is located within the survey area. Much of the stream has been modified which has reduced its sinuosity in most locations within the project area. Reed canary grass (*Phalaris arundinacea*) is present along crossings one and two and could be considered an instream wetland feature. Characteristics of UNT to Mud Creek at each crossing are discussed below:

The First Crossing is located adjacent to U.S. 31 and flows north into Mud Creek. The stream is riprap lined and currently functioning as a roadside ditch at this location. An OHWM was taken approximately 50 yards upstream of where UNT to Mud Creek flows into Mud Creek, outside of the influence of the structure carrying U.S. 31 over Mud Creek. The area immediately upstream (including UNT to Mud Creek) has been eroded. The OHWM was 12 feet wide and 5.6 feet deep. According to the USGS StreamStats report, at this location the stream has a drainage area of 1.35 square miles and a gradient of 13.7 feet per mile. This stream exhibited poor quality due to an absence of riffles and pools, overhanging vegetation, and a straightened, modified channel. Reed canary grass (*Phalaris arundinacea*) is present but confined within the channel. The QHEI score for this stream was 25.5 (very poor condition). The stream's substrate consisted predominately of silt.

The Second Crossing is located under CR W 375 N, 0.1 mile west of the CR W 375 N and U.S. 31 intersection. UNT to Mud Creek is conducted under CR W 375 N by a corrugated metal pipe. OHWM measurements were taken up and downstream of the structure outside of its influence. UNT to Mud Creek exhibited upstream OHWM characteristics of 15.5 feet in width and 5 feet in depth. Downstream OHWM characteristics were 13.1 feet wide and 7 feet deep. The stream was flowing at the time of the field investigation. According to the USGS StreamStats report, at this location the stream has a drainage area of 0.576 square miles and a gradient of 9.57 feet per mile.

Approximately 278 linear feet (0.36 acre) of UNT to Mud Creek (first crossing) is within the survey area. This stream exhibited poor quality due to an absence of riffles and pools, overhanging vegetation, and a straightened, modified channel. The QHEI score for this stream was 36 (poor condition). The stream's substrate consisted predominately of silt and sand.

The Third Crossing is located 0.2 mile south of the intersection of CR W 375 N and U.S. 31. This portion of UNT to Mud Creek has been captured and currently functions as a roadside ditch. No structures were observed within the stream. UNT to Mud Creek exhibited upstream OHWM characteristics of 15.0 feet in width and 5 feet in depth. Downstream OHWM characteristics were 13.1 feet wide and 4.5 feet deep. The stream was flowing at the time of the field investigation. According to the USGS StreamStats report, at this location the stream has a drainage area of 0.084 square miles and a gradient of 14.5 feet per mile. Approximately 932 linear feet (0.32 acre) of UNT to Mud Creek (third crossing) is within the survey area. The stream had a QHEI score of 38 (poor). The stream substrate is silt.

Turkey Creek is located approximately 0.1 mile north of the U.S. 31/ CR W 100 N intersection, in Tipton County. Turkey Creek flows east under U.S. 31. According to the Kempton USGS topo map, the stream is a mapped perennial blue line stream. Per the Tipton County Surveyor's Office, this portion of Turkey Creek is not a legal drain. The stream flows east through the survey area and was flowing at the time of the field investigation. According to the USGS StreamStats report, this stream has a drainage area of 3.233 square miles and a gradient of 6.96 feet per mile. Turkey Creek exhibited upstream OHWM characteristics of 3.2 feet in width and 1.3 feet in depth. The downstream OHWM measurements are 5.6 feet wide and 3.2 feet deep. Approximately 450 linear feet (0.05 acre) of Turkey Creek is within the survey area. This stream exhibited poor quality due to an absence of riffles and pools and a straightened, modified channel. The QHEI score for this stream was 17.5 (very poor condition). The stream's substrate predominately consisted of silt. This stream drains into Mud Creek, which drains into Wildcat Creek, which flows into the Wabash River, a TNW. Based on its contribution of perennial surface flow into a TNW, Turkey Creek is likely to be considered a *Waters of the United States*.

Buck Creek is located approximately 0.4 mile north of the U.S. 31/ Division Road intersection. Buck Creek flows east under U.S. 31. According to the Kempton USGS topo map, the stream is a mapped intermittent blue line stream. Per the Tipton County Surveyor's Office, this portion of Turkey Creek is not a legal drain. The stream flows east/northeast through the survey area and was flowing at the time of the field investigation. According to the USGS StreamStats report, this stream has a drainage area of 1.727 square miles and a gradient of 6.79 feet per mile. Buck Creek exhibited upstream OHWM characteristics of 10 feet in width and 3.5 feet in depth. The downstream OHWM measurements are 20 feet wide and 3 feet deep. Approximately 480 linear feet (0.22 acre) of Buck Creek is within the survey area. This stream exhibited poor quality due to an absence of riffles and pools and a straightened, modified channel. The QHEI score for this stream was 21 (very poor condition). The stream's substrate predominately consisted of silt and muck. This stream drains into Cicero Creek, which flows into the White River, a TNW. Based on its contribution of intermittent surface flow into a TNW, Buck Creek is likely to be considered a *Waters of the United States*.

UNT to Dixon Creek flows south adjacent to U.S. 31 into Dixon Creek. The stream was flowing at the time of the investigation, but this was likely due to the rain event earlier in the day. The stream would likely be considered an ephemeral stream. Per the Tipton County Surveyor's Office, UNT to Dixon Creek is not a legal drain. The stream was not listed on the USGS StreamStats website, so it can be assumed that the stream has a drainage area less than 1 mile. UNT to Dixon Creek does not flow through a structure, so only one OHWM measurement was taken. The OHWM measurement for the stream 4.9 feet wide and 3.2 feet deep. Approximately 575 linear feet (0.06 acre) of UNT to Dixon Creek is within the survey area. This stream exhibited poor quality due to a straightened stream channel, an absence of overhanging vegetation, and an absence of riffle and pool complexes. The QHEI score for this stream was 21.5 (very poor condition). The stream's substrate predominately consisted of silt. This stream drains into Dixon Creek, which flows into Cicero Creek. Cicero Creek drains into the White River, a TNW. Since UNT to Dixon Creek does

not contribute intermittent or perennial surface flow into a TNW, it is likely to not be considered a *Waters of the United States*.

Dixon Creek is located approximately 0.2 mile south of the SR 28/ U.S. 31 interchange, in Tipton County. Dixon Creek flows east under U.S. 31. According to the Sheridan USGS topo map, the stream is a mapped perennial stream. Per the Tipton County Surveyor's Office, this reach of Dixon Creek is not a legal drain. The stream flows southeast through the survey area and was flowing at the time of the field investigation. According to the USGS StreamStats report, this stream has a drainage area of 12.585 square miles and a gradient of 2.93 feet per mile. Dixon Creek exhibited upstream OHWM characteristics of 18.3 feet in width and 12 feet in depth. The downstream OHWM measurements are 30.5 feet wide and 6 feet deep. Approximately 1000 linear feet (0.70 acre) of Dixon Creek is within the survey area. This stream exhibited poor quality due to an absence of overhanging vegetation, and riffle and pool complexes. Approximately 100 feet west of the bridge carrying U.S. 31 over Dixon Creek, the ground has been regraded and flattened to accommodate farm equipment crossing through Dixon Creek. This crossing has resulted in a downstream channel with an OHWM nearly twice the width of the upstream channel's OHWM. The QHEI score for this stream was 18 (very poor condition). The stream's substrate predominately consisted of silt. This stream drains into Cicero Creek, which drains into the White River, a TNW. Based on its contribution of intermittent surface flow into a TNW, Dixon Creek is likely to be considered a *Waters of the United States*.

Cicero Creek is located approximately 0.9 mile south of the U.S. 31/CR W 350 S intersection, in Tipton County. Cicero Creek flows east under U.S. 31. According to the Sheridan USGS topo map, the stream is a mapped perennial blue line stream. Per the Tipton County Surveyor's Office, this reach of Cicero Creek is not a legal drain. The stream flows east/southeast through the survey area and was flowing at the time of the field investigation. According to the USGS StreamStats report, this stream has a drainage area of 13.402 square miles and a gradient of 5.21 feet per mile. Cicero Creek exhibited upstream OHWM characteristics of 33.9 feet in width and 2.9 feet in depth. The downstream OHWM measurements are 34.9 feet wide and 3 feet deep. The stream would be considered fair quality due overhanging vegetation and riffle and pool complexes. The QHEI score for this stream was 63 (good condition). Approximately 515 linear feet (0.41 acre) of Cicero Creek is within the survey area. The stream's substrate consisted predominately of sand and gravel. This stream drains into the White River, a TNW. Based on its contribution of perennial surface flow into a TNW, Cicero Creek is likely to be considered a *Waters of the United States*.

Prairie Creek east under U.S. 31 and is located approximately 0.2 mile south of the U.S. 31/ CR W 500 S, Tipton County. Per the Tipton County Surveyor's Office, this reach of Prairie Creek is not a legal drain. According to the Sheridan USGS topo map, Prairie Creek is a mapped perennial blueline stream. The stream flows east/northeast through the survey area and was flowing at the time of the field investigation. According to the USGS StreamStats report, this stream has a drainage area of 19.974 square miles and a gradient of 5.64 feet per mile. The upstream OHWM measurements are 20 feet wide and 4.1 feet deep. The downstream OHWM measurements are 19 feet wide and 2.8 feet deep. Approximately 530 linear feet (0.24 acre) of Prairie Creek is within the survey area. The QHEI score for this stream was 49.5 (fair condition), likely due to the overhanging vegetation and the presence of riffle and pool complexes. The stream's substrate consisted predominately of sand and silt. This stream drains into Cicero Creek, which drains into the White River, a TNW. Based on its contribution of perennial surface flow into a TNW, Prairie Creek is likely to be considered a *Waters of the United States*.

UNT to Prairie Creek flows north into Prairie Creek. According to the Sheridan USGS topo map, the stream is not a mapped blue-line. Per the Tipton County Surveyor's Office, this reach of Prairie Creek is not a legal drain. The stream was not flowing at the time of the field investigation. The stream would likely be classified as an ephemeral stream because it lacked instream riffle and pool complexes. According to the USGS StreamStats report, this stream has a drainage area of 0.088 square miles and a gradient of 35.6 feet per mile. The upstream OHWM measurements are 5 feet wide and 2.5 feet deep. The downstream OHWM measurements are 5 feet wide and 1.5 feet deep. Approximately 600 linear feet (0.06 acre) of UNT to Prairie Creek is within the survey area. The stream would be considered poor quality due to a lack of sinuosity, a lack of riffles and pools and no overhanging vegetation. The QHEI score for this stream was 20 (very poor condition). The stream's substrate consisted predominately of silt. This stream drains into Prairie Creek, which flows into Cicero Creek, which drains into the White River, a TNW. Since the stream does not contribute perennial or intermittent surface flow into a TNW, UNT to Prairie Creek is not likely to be considered a *Waters of the United States*.

Little Cicero Creek and UNT to Little Cicero Creek are located within the U.S. 31 limited access study area corridor. These two streams are discussed within the attached 276th Street Waters Report (Please see pages A1836 – A2061).

UNT to Bennett Ditch flows east into Bennett Ditch. According to the Sheridan USGS topo map, the stream is not a mapped blue line stream. The stream is classified as a legal drain (William P. Bennett Drain) per the Hamilton County Assessor website (<http://gis1.hamiltoncounty.in.gov/GeneralViewer/>). The stream was not flowing at the time of the field investigation. It would likely be considered an ephemeral stream due to a lack of instream riffle and pool complexes. According to the USGS StreamStats report, this stream has a drainage area of 1.175 square miles and a gradient of 10.4 feet per mile. The QHEI score for this stream was 22.5 (very poor condition). The stream would likely be considered poor quality because it did not exhibit riffles and pools or overhanging vegetation. The stream's substrate predominately consisted of silt. UNT to Bennett Ditch exhibited upstream OHWM characteristics of 3.5 feet in width and 0.5 feet in depth. The downstream OHWM measurements are 7.5 feet wide and 3.0 feet deep. Approximately 702 linear feet (1.2 acres) of UNT to Bennett Ditch is within the survey area. This stream drains into Cicero Creek, which drains into the White River, a TNW. Since UNT to Bennett Ditch does not contribute intermittent or perennial surface flow into a TNW, UNT to Bennett Ditch is not likely to be considered a *Waters of the United States*.

Bennett Ditch is located at the intersection of U.S. 31 at the intersection of U.S. 31 and 266th Street. Bennett Ditch is mapped as an intermittent blue line stream per the Sheridan USGS Topo Map. The stream is also classified as William P. Bennett Drain, according to the Hamilton County Assessor Website. The stream flows north/northeast through the survey area and was flowing at the time of the field investigation and would likely be considered intermittent. This stream drains into Cicero Creek, which drains into the White River, a TNW. Based on its contribution of intermittent surface flow into a TNW, Bennett Ditch is likely to be considered a Waters of the United States. Approximately 1886 linear feet of stream (1.13 acre) is located within the project area. The stream crosses the survey area in two locations. Reed canary grass (*Phalaris arundinacea*) is present at each crossing but did not extend outside the stream channel at either location; it would likely be considered an instream wetland feature. At each location, OHWM measurements were taken. Stream characteristics at each location are discussed below:

The first crossing is approximately 0.2 mile east of the intersection of U.S. 31 and 266th street, where Bennett Ditch is conducted under 266th Street via a corrugated metal pipe. OHWM measurements were taken up and downstream of this structure (outside the influence of the structure). Bennett Ditch exhibited upstream OHWM characteristics of 20.5 feet in width and 5.1 feet in depth. The downstream OHWM measurements are 12.0 feet wide and 5.1 feet deep. Approximately 294 linear feet (0.73 acres) of Bennett Ditch (First Crossing) is within the survey area. According to the USGS StreamStats report, this stream has a drainage area of 0.875 square miles and a gradient of 7.97 feet per mile. This stream exhibited poor quality due to disturbance from the roadway and lack of overhanging vegetation. The QHEI score for this stream was 16 (very poor). The stream's substrate consisted predominately of silt.

The second crossing is located at the intersection of U.S. 31 and 266th Street where Bennett Ditch is conducted under U.S. 31 via a reinforced concrete box culvert. OHWM measurements were taken up and downstream of this structure (outside the influence of the structure). At this location, Bennett Ditch (Second Crossing) exhibited upstream OHWM of 9.0 feet in width and 2.0 feet in depth. The downstream OHWM measurements are 11.0 feet wide and 2.0 feet deep. Approximately 1592 linear feet (0.4 acre) of Bennett Ditch (Second Crossing) is within the survey area. According to the USGS StreamStats report, this stream has a drainage area of 0.042 square miles and a gradient of 41 feet per mile. The QHEI score for this stream was 18 (very poor). The stream's substrate consisted predominately of silt.

Baker Ditch flows east/southeast under U.S. 31. According to the Sheridan USGS topo map, the stream is a mapped intermittent blue line stream. Within the project area, the stream is also known as J.B. Baker and Dillman Jones Drain per the Hamilton County Assessor Website. This stream was flowing at the time of the field investigation. According to the USGS StreamStats Report, this stream has a drainage area of 1.851 square miles and a gradient of 14.4 feet per mile. Baker Ditch exhibited upstream OHWM characteristics of 10.7 feet in width and 3.0 feet in depth. The downstream OHWM measurements are 7.1 feet wide and 4.0 feet deep. Approximately 1500 linear feet (3.7 acres) of Baker Ditch is within the survey area. This stream exhibited poor quality due to disturbance from the roadway and a lack of ripples and pools. The QHEI score for this stream was 30 (poor). The stream's substrate consisted predominately of silt. This stream drains into Hinkle Creek, which flows into Cicero Creek, which drains into the

White River, a TNW. Based on its contribution of intermittent surface flow into a TNW, Baker Ditch is likely to be considered a *Waters of the United States*.

UNT to Baker Ditch flows southeast under U.S. 31. According to the Sheridan USGS topo map, the stream is not a mapped blue line stream. The stream would likely be classified as an intermittent stream as it was flowing at the time of the field investigation and exhibited instream riffles and pools. An upstream OHWM measurement was not taken because the stream originates at the outlet of a stormwater pipe where a storm sewer grate is present. The OHWM was taken outside the influence of the structure. UNT to Baker Ditch exhibited OHWM characteristics of 7.4 feet in width and 4.0 feet in depth. Approximately 255 linear feet (0.76 acres) of UNT to Baker Ditch is within the survey area. The predominant substrate is gravel and sand. According to the USGS StreamStats report, this stream has a drainage area of 0.068 square miles and a gradient of 57.1 feet per mile. This stream drains into Baker Ditch, which flows into Hinkle Creek, which flows into Cicero Creek, which drains into the White River, a TNW. Based on its contribution of intermittent surface flow into a TNW, UNT to Baker Ditch is likely to be considered a *Waters of the United States*. The QHEI score for this stream was 58 (fair).

Hinkle Creek flows northeast under U.S. 31. The stream is a mapped intermittent blue line stream. This stream flows in a northeast to southwest direction under U.S. 31. The stream was flowing at the time of the field investigation. This stream is classified as a legal drain (William Baker Drain) per the Hamilton County Assessor website. Hinkle Creek exhibited upstream OHWM characteristics of 15.0 feet in width and 3.4 feet in depth. The downstream OHWM measurements are 11.6 feet wide and 3.2 feet deep. Approximately 640 linear feet (2.2 acre) of Hinkle Creek is within the survey area. According to the USGS StreamStats report, this stream has a drainage area of 2.665 square miles and a gradient of 13.9 feet per mile. The Qualitative Habitat Evaluation Index (QHEI) score for this stream was 49 (fair condition). The stream's substrate consisted predominately of silt and sand. This stream drains into Cicero Creek, which drains into the White River, a TNW. Based on its contribution of intermittent surface flow into a TNW, Hinkle Creek is likely to be considered a *Waters of the United States*.

Raymond Briles Drain flows east/northeast under U.S. 31. The stream is not a mapped blue line stream. This stream was not flowing at the time of the field investigation and would therefore likely be classified as ephemeral. This stream is classified as a legal drain per the Hamilton County Assessor website. The stream does not have an upstream OHWM because it is buried and only exhibits surface flow at this location. Raymond Briles Drain exhibited OHWM characteristics 5.0 feet wide and 2.5 feet deep. Approximately 839 linear feet (0.96 acres) of Raymond Briles Drain is within the survey area. According to the USGS StreamStats report, this stream has a drainage area of 0.001 square miles and a gradient of 17.7 feet per mile. The QHEI score for this stream was 21.5 (very poor). The stream's substrate consisted predominately of silt. The stream is likely considered poor quality because it lacks riffles and pools and has a modified stream channel (straightened). This stream drains into Hinkle Creek, which flows into Cicero Creek, which drains into the White River, a TNW. Since Raymond Briles Drain does not contribute intermittent or perennial surface flow into a TNW, Raymond Briles Drain is unlikely to be considered a *Waters of the United States*.

UNT to Jones Ditch flows east into Jones Ditch. According to the Westfield USGS topo map, the stream is not a mapped blue line stream. This stream is classified as a legal drain (Arm of Raymond Briles Drain) per the Hamilton County Assessor website. Since the stream was not flowing at the time of the field investigation and it is not a mapped blue line stream, it would likely be classified as ephemeral. There is no structure within the stream, so only one OHWM was taken. The OHWM measurements are 5.6 feet wide and 3.2 feet deep. Approximately 1058 linear feet (3.16 acres) of UNT to Jones Ditch is within the survey area. According to the USGS StreamStats report, this stream has a drainage area of 0.036 square miles and a gradient of 21.7 feet per mile. This stream exhibited poor quality due to disturbance from the roadway and a lack of riffles and pools. The QHEI score for this stream was 25 (very poor condition). The stream's substrate consisted predominately consisted of silt and sand. This stream drains into Cicero Creek, which drains into the White River, a TNW. Since UNT to Jones Ditch does not contribution intermittent or perennial surface flow into a TNW, UNT to Jones Ditch is not likely to be considered a *Waters of the United States*.

Lindley Ditch is located 2.5 miles south of Hinkle Creek. The stream is a mapped intermittent stream. This stream is classified as a legal drain (Thomas B. Lindley Legal Drain) per the Hamilton County Assessor website. This stream flows southeast within the survey area and was flowing at the time of the field investigation. Lindley Ditch exhibited upstream OHWM characteristics of 20.8 feet in width and 5.3 feet in depth. The downstream OHWM measurements are 7.4 feet wide and 5.0 feet deep. Approximately 715 linear feet (0.34 acre) of Lindley Ditch is within the survey

area. According to the USGS StreamStats report, this stream has a drainage area of 2.645 square miles and a gradient of 21.8 feet per mile. This stream exhibited poor quality due to disturbance from the roadway. The QHEI score for this stream was 29 (very poor condition). The stream's substrate consisted predominantly of silt. This stream drains into Jones Ditch, which drains into Hinkle Creek, which drains into the White River, a TNW. Based on its contribution of intermittent surface flow into a TNW, Lindley Ditch is likely to be considered a *Waters of the United States*.

Wetlands

Wetland boundaries were determined based on the vegetation present and landscape (i.e. flat versus sloped terrain). The boundaries were recorded via a GIS unit. Wetland type was determined by the dominant plant species. For wetlands within roadside ditches where the vegetation did not immediately transition to upland species, a data point was taken at the end of the wetland to determine where the wetland ends. Wetlands within roadside ditches were considered to extend outside the ditch and up the roadway embankment if an underdrain, field tile, or culvert was clogged and provided enough moisture for wetland conditions to persist, this occurred most commonly with reed canary grass.

Wetlands were determined to be either palustrine emergent (PEM), palustrine scrub shrub (SSC), or palustrine forested (PFO) based on dominant plant species. PEM wetlands were dominated by herbaceous vegetation, mostly reed canary grass (*Phalaris arundinacea*) and cattail (*Typha* spp.). SSC wetlands were dominated primarily by woody species less than 3 inches in diameter at breast height. Dominant species included green ash (*Fraxinus pennsylvanica*), and black walnut (*Juglans nigra*). PFO wetlands were dominated by woody plant species 3 inches in diameter at breast height. PFO wetlands were dominated primarily by eastern cottonwood (*Populus deltoides*) and common hackberry (*Celtis occidentalis*).

Within the project area, 140 wetlands (Wetlands NA through SBN) were field verified. Of these wetlands, 12 (Wetlands NZ, NAA-NAI, SAT and SAU) are discussed in the attached 276th Street and U.S. 31 Intersection Improvement Waters of the U.S. Report (Please see pages A1836 – A2061). The afore mentioned wetlands total 1.109 acre. Wetland NAI is 0.29 acre in size. Of that total, 0.04 acre is within the 276th Street project area (it is known as Wetland C). Only the 0.25 acre within the U.S. 31 Limited Access Study will count towards the total wetland acres. These wetlands are excluded in the tables, maps, data sheets and wetland totals in this report. Total wetland acres (excluding the afore mentioned wetlands) total 250.573 acre.

Wetlands included in the attached tables and maps total 129 wetlands (250.573 acre). Of these, 5 wetlands were considered likely to be *Waters of the U.S.*, because they abut a stream likely to be a *Waters of the U.S.* One hundred twenty four (124) wetlands were considered likely to be Waters of the State of Indiana (state regulated wetlands) because they were not adjacent to an (a)(1-2) water as defined by the Clean Water Act (CWA) effective June 22, 2020. A discussion of the delineated wetlands continues below:

Waters of the U.S.

Within the project area 5 wetlands (2.13 acres) would likely be considered Waters of the United States (Wetlands NAT, NAU, SE, SY, and SAW. Three (3) of these wetlands (totaling 0.45 acre) would be considered palustrine emergent wetlands (PEM). These include Wetlands: SE, SY, SAW. Two (2) wetlands, Wetland NAT, and Wetland NAU (totaling 1.68 acres in size), would be considered PFO wetlands. No likely scrub shrub wetlands (SSC) were delineated within the project area.

State Regulated Wetlands

Within the project area, there are 124 wetlands (248.443 acres) that are likely state regulated wetlands. These wetlands include the following: NA-NY, NAI-NAS, NAV-NBM, MA-MG, SA-SE, SF-SX, SZ-SAS, SAV, SAX-SBN. These wetlands are not directly abutting a section (a)(1-2) water and are not inundated by flooding in a typical year (as defined by the CWA). Therefore, they are likely not a Waters of the U.S. but may be considered a water of the State and would likely be under the jurisdiction of the Indiana Department of Environmental Management (IDEM). These wetlands would likely be considered Class 1 under 327 IAC 17-1-3, primarily due to their low species diversity, and at least 50% of each wetland has been disturbed by the roadway, which has affected hydrology. Wetlands NAS, NBH, SAZ, SBA, and SBK would likely be considered average quality due to high species diversity and the number of quality species throughout each wetland. However, these wetlands would still likely be classified as Class 1 wetlands because their hydrology has been significantly disturbed by human activity (primarily U.S. 31's roadway).

Out of the total 124 likely Class 1 isolated wetlands, it is likely that at least 45 of these wetlands could be exempt per 327 IAC 17-1-7. This conclusion was reached by adding up the acreages of each Class 1 wetland that is equal than or less than 0.5 acre in size, which totaled 99 wetlands (ND-NY, NAI-NAK, NAM-NAS, NAV-NBG, NBK, NBM, MA-MG, SC,SD, SG-SS, SU-SX, SZ-SAS, SAX, SAY, SBB, SBC, SBE-SBH). Then the total acreage (9.124 acres) of these 99 wetlands was divided by 50% to determine the cumulative wetland acreage for the individual Class 1 isolated wetlands that are allowed to be exempt. The total cumulative acreage allowed for the exemption equaled 4.562 acres. Cumulatively wetlands (ND NG-NJ, NS, NT, NY, NAI, NAK, NAM, NAQ, NAS, NAV, NAX-NAZ, NBB, NBC,NBF, NBG, MA-MG, SG, SH, SQ, SR, SAC-SAE, SAK-SAP, SAS, SAX, SAY, and SBC) equals 4.55 acre, which does not exceed the allowed 4.562 wetland acre exemption.

Wetlands that were less than 0.5 acre were selected based on their location within the project area. Wetlands located within cross streets that would be impacted by the construction including the Division Road Interchange/Overpass, the 226th Street Interchange, 296th Street Overpass, 266th Street Overpass, and W. CR 300 N. Overpass. All median wetlands that were less than 0.5 acre were also included. Please see Table 4 for a list of isolated wetlands and their locations.

Wetlands SAZ and SBA have both PFO and PEM components. Wetland SAZ has a total size of 2.83 acres. Of that total, 1.87 acre is dominated by herbaceous species and 0.96 acre is dominated by woody species greater than 3 inches in diameter. Wetland SBA has a total size of 1.54 acre. Of that total, 0.72 acre is dominated by herbaceous vegetation and 0.82 acre is dominated woody species greater than 3 inches in diameter. These wetlands will appear in both the PEM and PFO wetland totals.

One hundred sixteen (116) of these wetlands (totaling 244.348 acres) would likely be considered Class 1 isolated PEM wetlands. The predominant wetland species were reed canary grass (*Phalaris arundinacea*) and cattail (*Typha* spp.). PEM wetlands include Wetlands: NA-NX, NAI-NAR, NAV-NBB, NBD-NBM, MA-MG, SA-SD, SF-SW, SX, SZ-SAO, SAQ-SAV, SAX-SBH, SBJ, SBL-SBN. Two (2) wetlands (totaling 0.115 acre) would likely be considered Class 1 isolated SSC wetlands: Wetland NY and Wetland NBC. Six (6) wetlands (totaling 3.98 acres), Wetlands NAS, SAP, SAZ, SBA, SBI and SBK, would likely be considered Class 1 isolated PFO wetlands.

Open Water:

Two (2) open water features, Pond A and Pond B were observed during the field investigation (see Table 5). A discussion of these features is below:

Pond A is located approximately 500 feet north of Mud Creek (0.15 acre within the survey area). The pond is not shown on the Kempton USGS Topo map and appears to be excavated in upland soils for the purpose of containing stormwater, therefore Pond A is unlikely a *Waters of the U.S.*

Pond B is located less than 500 feet south of W. CR 300 N (0.63 acre within the survey area). The pond is not shown on the Kempton USGS Topo map and appears to be excavated in upland soils for the purpose of containing stormwater, therefore Pond B is unlikely a *Waters of the U.S.*

Roadside Ditches:

Roadside ditches were observed throughout the study area and were reviewed for potential water resources. All roadside ditches lacked an OHWM and wetland characteristics and were therefore considered to be non-jurisdictional features.

Conclusions:

A field investigation was conducted on July 15-16, 29, August 6-7, 19, 27, September 1-4,10-11,14,16, October 27, and November 2, 2020 by RQAW Corporation to evaluate the presence of *Waters of the United States* for the U.S. 31 in Hamilton and Tipton Counties, Indiana. Field observations identified streams and wetlands within the survey area.

Five (5) perennial streams (Mud Creek, Turkey Creek, Dixon Creek, Cicero Creek, and Prairie Creek), 7 intermittent streams (Kelley West Ditch, UNT to Mud Creek, Buck Creek, Bennett Ditch, Baker Ditch, UNT to Baker Ditch, Hinkle Creek and Lindley Ditch) would likely be considered *Waters of the United States* since they contribute surface water flow to the Wabash River or the White River, which are both TNWs, in a typical year. Five (5) wetlands (Wetlands

NAT, NAU, SE, SY, and SAW) are likely *Waters of the United States*, because they are directly abutting one of the afore mentioned likely *Waters of the U.S.*

Six (6) ephemeral streams (UNT to Mud Creek, UNT to Dixon Creek, UNT to Prairie Creek, UNT to Bennett Ditch, Raymond Briles Drain, and UNT to Jones Ditch) would likely not be considered *Waters of the U.S.*, because they do not contribute intermittent or perennial surface water flow to a TNW.

One hundred twenty four (124) wetlands (Wetlands NA-NY, NAI-NAS, NAV-NBM, MA-MG, SA-SE, SF-SX, SZ-SAS, SAV, SAX-SBN) would likely be considered Class 1 isolated wetlands (*Waters of the State*) and likely under the jurisdiction IDEM per 327 IAC 17-1-3(3). INDOT is requesting 45 of these wetlands (ND NG-NJ, NS, NT, NY, NAI, NAK, NAM, NAQ, NAS, NAV, NAX-NAZ, NBB, NBC,NBF, NBG, MA-MG, SG, SH, SQ, SR, SAC-SAE, SAK-SAP, SAS, SAX, SAY, and SBC) be considered exempt under 327 IAC 17-1-3(7).

Every effort should be taken to avoid and minimize impacts to these waterways. If impacts are necessary, then mitigation may be required. The INDOT Ecology and Waterway Permitting Section should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the U.S. Army Corps of Engineers. This report is our best judgement based on the guidelines set forth by the Corps.

Acknowledgement:

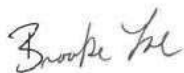
This waters determination has been prepared based on the best available information, interpreted in the light of the investigator's training, experience and professional judgement in conformance with the 1987 Corps of Engineers Wetlands Delineation Manual, the appropriate regional supplement, the USACE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

Prepared by:



3/1/2021

Julie Evans
Environmental Scientist
RQAW | Environmental Department
jevans@RQAW.com



3/1/2021

Brooke Fox
Environmental Scientist
RQAW | Environmental Department
bfox@RQAW.com

Table 1: Stream Summary
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton Counties, Indiana

Stream Name	Lat/Long	Photo Number	OHWM Width (feet)	OHWM Depth (feet)	USGS Blue-line?	Riffles/ Pools?	Substrate	Stream Type	QHEI Score/ Quality	Likely Water of U.S.?
Kelly West Ditch	40.38309° N -86.12698° W	42-50	12.4	1.5	Yes	No	Gravel/Silt	Intermittent	29 (Very Poor)	Yes
Mud Creek	40.36309° N -86.12715° W	130-143	15.3	5.0	Yes	Yes	Gravel/Sand	Perennial	45.5 (Fair)	Yes
UNT to Mud Creek (First Crossing)	40.3616° N -86.12754° W	133, 132	12	5.6	Yes	No	Silt	Intermittent	25.5 (Very Poor)	Yes
UNT to Mud Creek (Second Crossing)	40.35742° N -86.12926° W	156-171, 175- 176, 179	15.5	5.5	Yes	Yes	Silt/Sand	Intermittent	36 (Poor)	Yes
UNT to Mud Creek (Third Crossing)	40.35371° N -86.12744° W	197-201, 203- 214	15	5	No	No	Silt	Intermittent	38 (Poor)	Yes
Turkey Creek	40.31899° N -86.12691° W	484-497	5.6	3.2	Yes	No	Silt	Perennial	17.5 (Very Poor)	Yes
Buck Creek	40.30852° N -86.12691° W	572-577, 580- 583	20	3.5	Yes	No	Silt/Muck	Intermittent	21 (Very Poor)	Yes
UNT to Dixon Creek	40.27123° N -86.12683° W	811, 820-823	4.9	3.2	No	Yes	Silt	Ephemeral	21.5 (Very Poor)	No
Dixon Creek	40.27096° N -86.12703° W	813-819, 822- 825	30.5	12	Yes	No	Silt	Perennial	18 (Very Poor)	Yes
Cicero Creek	40.25374° N -86.12804° W	885, 887-894, 897-900, 906	34.9	3.0	Yes	Yes	Sand/Gravel	Perennial	63 (Good)	Yes
Prairie Creek	40.22883° N -86.12801° W	1047-1060	20.0	4.1	Yes	Yes	Silt/Sand	Perennial	49.5 (Fair)	Yes

Stream Name	Lat/Long	Photo Number	OHWL Width (feet)	OHWL Depth (feet)	USGS Blue-line?	Riffles/ Pools?	Substrate	Stream Type	QHEI Score/ Quality	Likely Water of U.S.?
UNT to Prairie Creek	40.22779° N -86.12834° W	1061-1064, 1073-1074, 1076	5	2.5	No	No	Silt	Ephemeral	20 (Very Poor)	No
~~UNT to Little Cicero Creek~~	Within 276 th Street/US 31 Waters Report (see page A1836 – A2061)									
~~Little Cicero Creek~~	Within 276 th Street/US 31 Waters Report (see page A1836 – A2061)									
UNT to Bennett Ditch	40.1756° N -86.12704° W	1242-1246, 1277-1280	7.5	3.0	No	No	Silt	Ephemeral	22.5 (Very Poor)	No
Bennett Ditch (First Crossing)	40.17569° N -86.12465° W	1281-1286, 1288-1292,	20.5	5.1	Yes	Yes	Silt	Intermittent	16 (Very Poor)	Yes
Bennett Ditch (Second Crossing)	40.13588° N -86.12726° W	1261-1676	11.0	2.0	Yes	Yes	Silt	Intermittent	18 (Very Poor)	Yes
Baker Ditch	40.13795° N -86.12797° W	1521-1529, 1559	10.7	4.0	Yes	No	Silt	Intermittent	30 (Poor)	Yes
UNT to Baker Ditch	40.13593° N -86.12759° W	1568-1572	7.4	4.0	No	Yes	Gravel/Sand	Intermittent	58 (Fair)	Yes
Hinkle Creek	40.13039° N -86.12817° W	1609-1612, 1614-1615, 1617-1620	15.0	3.4	Yes	Yes	Silt/Sand	Intermittent	49 (Fair)	Yes
Raymond Briles Drain	40.11417° N -86.12758° W	1799-1800, 1809-1810, 1814-1815	5.0	2.5	Yes	No	Silt	Ephemeral	21.5 (Very Poor)	No
UNT to Jones Ditch	40.11084° N -86.12602° W	1790-1798, 1845-1846	5.6	3.2	No	No	Silt/Sand	Ephemeral	25 (Very Poor)	No
Lindley Ditch	40.09458° N -86.12794° W	1997-2002	20.8	7.4	Yes	Yes	Silt	Intermittent	29 (Very Poor)	Yes

Streams within Hamilton County Study Area

Found in 236th Street Interchange Project Area

Table 2: Wetland Summary
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton Counties, Indiana

Name	Lat/Long	RSD Length (lf)	Area (ac)	Photo #	Dominant Vegetation	Hydric Soil Indicator(s)	Hydrology Indicator(s)	Type	Wetland Quality	Likely Waters of the U.S.?	Comments
NA	40.38689, -86.12688	432.13	11.220	6, 22-31	<i>Typha angustifolia</i>	F3	A1, A3, B6, C8, D5	PEM	Poor	No	Wetland extends north beyond investigation area. Wetland formed within a roadside ditch adjacent to US 31.
NB	40.3769, -86.12696	1,208.33	7.090	59-71	<i>Phalaris arundinacea</i>	F3	A3, B6	PEM	Poor	No	Separated from Wetland NC by a Farm Access Drive
NC	40.37528, -86.12693	238.28	1.290	71-86	<i>Phalaris arundinacea</i>	A11, F3	A3, B4, B6	PEM	Poor	No	Separated from Wetland NB by a Farm Access Drive
ND	40.34693, -86.12609	127.41	0.270	261-271	<i>Rumex crispus</i>	F1, F3	A1, A3, D1	PEM	Poor	No	Vegetation significantly disturbed (Farmed Wetland).
NE	40.33875, -86.12682	552.20	0.028	331-334	<i>Typha angustifolia</i>	F3	A3, B3, B6, D5	PEM	Poor	No	Formed at the end of an equalizer pipe. Wetland SL is on the west side of the same pipe.
NF	40.32601, -86.12673	63.40	0.022	438-444	<i>Phalaris arundinacea</i>	A11, F3	A3, B3, B4	PEM	Poor	No	Formed at the end of an equalizer pipe. Wetland ST is on the west side of the same pipe.
NG	40.30304, -86.12659	41.49	0.014	625-631	<i>Typha angustifolia</i> , <i>Persicaria pensylvanica</i> , <i>Echinochloa crus-galli</i>	A11, F3, F6	A3, B3, B9, B6	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NH	40.30215, -86.12642	91.67	0.470	638, 640, 647-660	<i>Typha angustifolia</i>	A11, F3, F6	A3, D5	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NI	40.29416, -86.12672	287.21	0.079	721-729	<i>Phragmites australis</i> , <i>Phalaris arundinacea</i>	A10	A1, A2, A3	PEM	Poor	No	Wetland formed in a depression. It is possible that it was a retaining pond that silted in.
NJ	40.28039, -86.12678	357.34	0.180	799-807	<i>Cyperus esculentus</i>	A11, F3, F6	A1, A2, A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NK	40.25343, -86.12722	78.34	0.030	901-907	<i>Fraxinus pennsylvanica</i> , <i>Elaeagnus umbellata</i> , <i>Acer negundo</i> , <i>Phalaris arundinacea</i> , <i>Scirpus pendulus</i>	F6	A3, D5	PEM	Poor	No	The wetland would likely not be considered a Waters of the U.S. because the wetland is perched above Cicero Creek's bank and is fed by flow from a roadside ditch.
NL	40.25257, -86.1272	107.29	0.091	908-917	<i>Fraxinus pennsylvanica</i> , <i>Juglans nigra</i> , <i>Phalaris arundinacea</i>	F3	A3	PFO	Poor	No	The wetland began at the outlet of an underdrain and continued beyond the ROW fence and into the adjacent wooded area.
NM	40.25182, -86.12721	235.77	0.036	918-922	<i>Typha X glauca</i> , <i>Scirpus pendulus</i>	F3	A3, B4, D5	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NN	40.25134, -86.12723	0.18	38.660	931-938	<i>Typha angustifolia</i>	A11, F3	A3, B3, D5	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NO	40.25006, -86.12726	66.50	0.016	939-945	<i>Cyperus esculentus</i> , <i>Typha X glauca</i>	F3	A3, B6, C8, D5	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NP	40.24933, -86.12729	496.72	0.046	946-952	<i>Typha X glauca</i>	F3	A3, B4, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NQ	40.2476, -86.12733	562.65	0.160	953-962	<i>Typha X glauca</i> , <i>Cyperus esculentus</i>	A11, F3, F6	A3, B4, B6, C8, D5	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NR	40.2412, -86.12752	97.70	0.019	969-974	<i>Echinochloa crus-galli</i> , <i>Persicaria pensylvanica</i>	F3	A3, B6	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NS	40.2323, -86.12769	422.13	0.190	1006-1015	<i>Phalaris arundinacea</i>	A11, F3	A3, D5	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NT	40.23039, -86.12772	1,058.55	0.450	1031-1043	<i>Typha angustifolia</i> , <i>Typha X glauca</i>	F3	A3	PEM	Poor	No	Wetland NT is separated from Prairie Creek by a concrete lined roadside ditch, so it would likely not be considered abutting a Waters of the U.S. (See Photo 1044-1045).
NU	40.21471, -86.12782	496.11	0.150	1115-1127	<i>Echinochloa muricata</i> , <i>Typha angustifolia</i>	F3	A3, B4, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31

Name	Lat/Long	RSD Length (lf)	Area (ac)	Photo #	Dominant Vegetation	Hydric Soil Indicator(s)	Hydrology Indicator(s)	Type	Wetland Quality	Likely Waters of the U.S.?	Comments
NV	40.21401, -86.12785	29.17	0.008	1127, 1138-1144	<i>Poa pratensis, Typha X glauca</i>	F6	A1, A3	PEM	Poor	No	Wetland formed around structure inlet.
NW	40.20908, -86.12778	523.75	0.180	1164-1182	<i>Populus deltoides, Salix nigra, Typha angustifolia, Echinochloa muricata</i>	F3	A3, B3, B4, B14, C8	PEM	Poor	No	The wetland formed on the Jacob Eiman Legal Drain (installed in 2015 per Hamilton County Surveyor Website). No stream characteristics were observed as the drain is enclosed (buried).
NX	40.20791, -86.12782	577.14	0.190	1183-1188	<i>Echinochloa muricata, Typha X glauca</i>	F3	A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NY	40.2012, -86.12781	233.34	0.110	1211-1218	<i>Persicaria pensylvanica, Echinochloa crus-galli</i>	F3	A2, A3	SCC	Poor	No	Wetland formed around structure inlet.
NZ	40.19837, -86.12781	119.44	0.035	N/A	<i>Phalaris arundinacea</i>	Restrictive layer	A1, A3	PEM	Poor	No	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland NZ
NAA	40.19712, -86.12712	154.90	0.042	N/A	<i>Echinochloa crus-galli</i>	F3	A2, A3, B4, B6	PEM	Poor	No	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland NAA
NAB	40.19529, -86.12779	213.10	0.048	N/A	<i>Typha angustifolia, Phalaris arundinacea, Juncus torreyi</i>	F3	A1, A2, A3	PEM	Poor	No	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland G
NAC	40.19359, -86.12779	226.58	0.001	N/A	<i>Juglans nigra, Phalaris arundinacea</i>	F3	A1, A2, A3, C8	PEM	Poor	No	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland E
NAD	40.19225, -86.12782	465.10	0.230	N/A	<i>Typha X glauca, Phalaris arundinacea</i>	F3	A1, A2 D5	PEM	Poor	No	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland F
NAE	40.1889, -86.12772	244.87	0.170	N/A	<i>Echinochloa crus-galli</i>	F3	A1, A2, A3	PEM	Poor	No	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland NAE
NAF	40.18928, -86.12775	17.67	0.320	N/A	<i>Typha angustifolia, Echinochloa crus-galli</i>	F3	A1, A3, D5	PEM	Poor	No	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland D
NAG	40.18802, -86.12783	14.15	0.019	N/A	<i>Phalaris arundinacea</i>	F6	A3	PEM	Poor	No	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Not Identified
NAH	40.17941, -86.12776	434.50	0.160	N/A	<i>Phalaris arundinacea</i>	F6	A1, A3, B4	PEM	Poor	No	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland C.
NAI	40.17613, -86.12774	1,421.48	0.25	1232-1241	<i>Phalaris arundinacea, Typha angustifolia</i>	F3	A1, A2, A3	PEM	Poor	No	The wetland would likely not be considered a waters of the U.S because it abuts an ephemeral stream (UNT to Bennett Ditch). The total acreage is 0.29 acre, of that 0.04 acre is within the 276 th Street Intersection Waters Report survey area (Wetland C). This acreage (0.04 acre) is excluded from the total.
NAJ	40.16643, -86.12776	1,655.83	0.390	1304-1313	<i>Typha latifolia, Phalaris arundinacea</i>	F6, F12, F3	A1, A3, B4, B6, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NAK	40.16055, -86.1277	294.35	0.072	1385-1391	<i>Leersia oryzoides, Typha angustifolia</i>	F3	A1, A2, A3, B4, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NAL	40.15977, -86.12747	N/A	0.570	1408-1413	<i>Echinochloa crus-galli</i>	F6	A3, B4, B6, D1	PEM	Poor	No	Wetland NAL is a problematic farmed wetland.
NAM	40.15956, -86.12776	443.97	0.240	1398-1407	<i>Phalaris arundinacea</i>	F3	A1, A2, A3, B4, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NAN	40.15424, -86.12771	610.76	0.150	1429-1435	<i>Echinochloa crus-galli, Poa pratensis</i>	F3	A1, A3, B4, D1	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NAO	40.15037, -86.12772	335.94	0.204	1442-1449	<i>Typha angustifolia, Scirpus atrovirens</i>	F3	A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NAP	40.14917, -86.1277	7.64	0.006	1450-1454	<i>Typha latifolia, Cyperus esculentus</i>	F3	A3, B4	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NAQ	40.14635, -86.12766	74.20	0.024	1463-1472	<i>Typha angustifolia</i>	A11, F3	A1, A2, A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NAR	40.14421, -86.12762	N/A	0.087	1485-1493	Problematic Hydrophytic Vegetation	F3	A1, A2, A3, B4, B13, D1	PEM	Poor	No	Wetland NAR is a problematic farmed wetland

Name	Lat/Long	RSD Length (lf)	Area (ac)	Photo #	Dominant Vegetation	Hydric Soil Indicator(s)	Hydrology Indicator(s)	Type	Wetland Quality	Likely Waters of the U.S.?	Comments
NAS	40.13716, -86.12771	121.54	0.260	1550-1557	<i>Celtis occidentalis, Cercis canadensis, Cornus drummondii, Phalaris arundinacea, Carex lacustris</i>	F3	A2, A3	PFO	Average	No	The wetland is a forested wetland west of Baker Ditch
NAT	40.13647, -86.12765	376.30	1.400	1558, 1560-1567	<i>Ulmus rubra, Celtis occidentalis, Cornus drummondii, Phalaris arundinacea</i>	F3	B8, B9	PFO	Average	Yes	The wetland is a forested wetland west of Baker Ditch
NAU	40.13576, -86.12771	98.96	0.280	1573-1582	<i>Celtis occidentalis, Ulmus rubra, Cornus racemosa, Fraxinus pennsylvanica, Phalaris arundinacea</i>	F3	A3, B8	PFO	Average	Yes	The wetland is a forested wetland west of Baker Ditch
NAV	40.1333, -86.12784	216.54	0.130	1594-1600	<i>Typha X glauca, Poa pratensis</i>	F3	A1, A2, A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NAW	40.12961, -86.12786	396.99	0.166	1620-1626	<i>Phalaris arundinacea</i>	F3	A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NAX	40.12362, -86.12786	186.36	0.089	1665-1672	<i>Scirpus pendulus</i>	F3	A3, B6	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NAY	40.12315, -86.12786	99.51	0.018	1673-1678	<i>Scirpus pendulus</i>	F3	A3, C8		Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NAZ	40.12308, -86.12339	N/A	0.091	1717-1726	<i>Echinochloa crus-gall</i>	F6	A3, B4, B6	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NBA	40.11996, -86.12772	N/A	0.480	1688-1695	<i>Echinochloa crus-galli, Calystegia sepium</i>	F3	D1, D5	PEM	Poor	No	Wetland NAZ is a problematic agricultural wetland
NBB	40.11812, -86.12369	N/A	0.190	1733-1742	<i>Echinochloa crus-gall</i>	F6	A3, B3, B4, B6	PEM	Poor	No	Wetland NBA is a problematic agricultural wetland.
NBC	40.1159, -86.12562	N/A	0.005	1754-1758	<i>Fraxinus pennsylvanica, Populus deltoides, Salix interior, Morus alba, Phytolacca americana, Typha latifolia, Persicaria pensylvanica</i>	N/A	A3, B4	SSC	Poor	No	Wetland NBC formed in a depression around a structure outlet. All appropriate areas to take an outpost sample were covered with asphalt (wetland exists within a scrapyard).
NBD	40.1142, -86.12777	N/A	0.011	1803-1807	<i>Typha angustifolia</i>	F3	A3	PEM	Poor	No	The wetland would likely not be considered a waters of the U.S because it abuts an ephemeral stream (Raymond Briles Drain).
NBE	40.11419, -86.12757	N/A	0.041	1811-1818	<i>Juncus torreyi, Typha angustifolia</i>	F3	A1, A2, A3, C8	PEM	Poor	No	The wetland would likely not be considered a waters of the U.S because it abuts an ephemeral stream (Raymond Briles Drain). Wetland extends east beyond investigation area.
NBF	40.110971, -86.12780	201.32	0.096	1835-1844	<i>Typha angustifolia, Leersia oryzoides</i>	F3	A2, A3	PEM	Poor	No	The wetland would likely not be considered a waters of the U.S because it abuts an ephemeral stream (UNT to Jones Ditch).
NBG	40.11065, -86.12779	467.81	0.230	1848-1853	<i>Typha latifolia, Leersia oryzoides</i>	F3	A2, A3	PEM	Poor	No	The wetland would likely not be considered a waters of the U.S because it abuts an ephemeral stream (UNT to Jones Ditch).
NBH	40.10729, -86.12779	1,117.88	4.240	1873-1879	<i>Typha angustifolia, Salix nigra</i>	F3	A3, A2, A1	PEM	Poor	No	Wetland NBH is an average quality forested wetland. However, it would likely still be considered a Class 1 wetland since its hydrology has been disturbed by US 31. Part of the wetland is designated as an NWI polygon.
NBI	40.10421, -86.12762	N/A	0.945	1908-1920	Problematic Hydrophytic Vegetation	F3	B6, D1	PEM	Poor	No	Wetland NAL is a problematic farmed wetland.
NBJ	40.10232, -86.12763	N/A	1.690	1930-1945	Problematic Hydrophytic Vegetation	F6	A1, A2, A3, B6, D1	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
NBK	40.09883, -86.12765	715.05	0.330	1986-1994	<i>Typha angustifolia</i>	F3	A2, A3	PEM	Poor	No	Wetland NAL is a problematic farmed wetland.
NBL	40.09137, -86.12708	N/A	0.844	2011, 2013-2017, 2020-2032	<i>Typha X glauca</i>	F3	A3, B3, B6	PEM	Poor	No	Wetland formed within a dry detention basin at the SR 38 and US 31 interchange.

Name	Lat/Long	RSD Length (lf)	Area (ac)	Photo #	Dominant Vegetation	Hydric Soil Indicator(s)	Hydrology Indicator(s)	Type	Wetland Quality	Likely Waters of the U.S.?	Comments
NBM	40.08962, -86.12751	193.12	0.340	2034, 2036-2044	<i>Typha angustifolia</i>	A11, F3	A1, A3, B4, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
MA	40.29621, -86.12706	148.32	0.063	701-710	<i>Typha angustifolia</i> , <i>Carex vulpinoidea</i>	F3	A1, A2, A3	PEM	Poor	No	Wetland formed within a roadside ditch within the US 31 median.
MB	40.28779, -86.12704	21.05	0.004	759-765	<i>Typha angustifolia</i> , <i>Echinochloa muricata</i>	F3	A1, A3	PEM	Poor	No	Wetland formed within a roadside ditch within the US 31 median.
MC	40.22733, -86.12808	79.10	0.025	1065-1071	<i>Typha angustifolia</i> , <i>Echinochloa muricata</i>	F3	A1, A3, B4	PEM	Poor	No	Wetland formed within a roadside ditch within the US 31 median.
MD	40.12603, -86.12811	405.50	0.110	1645-1652	<i>Scirpus atrovirens</i> , <i>Carex frankii</i> , <i>Cyperus esculentus</i>	F3	A1, A2, A3	PEM	Poor	No	Wetland formed within a roadside ditch within the US 31 median.
ME	40.12556, -86.12816	66.37	0.016	1653-1660	<i>Typha X glauca</i> , <i>Echinochloa muricata</i>	F3	A1, A3, B13	PEM	Poor	No	Wetland formed within a roadside ditch within the US 31 median.
MF	40.10304, -86.12797	57.55	0.023	1923-1929	<i>Echinochloa muricata</i> , <i>Setaria pumila</i>	F6	A3, B9	PEM	Poor	No	Wetland formed within a roadside ditch within the US 31 median.
MG	40.09203, -86.12792	32.01	0.011	2003-2008	<i>Typha X glauca</i> , <i>Cyperus esculentus</i> , <i>Persicaria pensylvanica</i>	F7	A3	PEM	Poor	No	Wetland formed within a roadside ditch within the US 31 median.
SA	40.3863, -86.1276	1,148.56	28.400	1, 4, 7-18	<i>Typha X glauca</i> , <i>Carex vulpinoidea</i>	F3	A3, B4, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SB	40.3755, -86.12752	664.93	129.000	72-80	<i>Carex bebbii</i>	F7	A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SC	40.3663, -86.12746	105.22	0.033	120-129	<i>Echinochloa muricata</i> , <i>Typha X glauca</i>	F6	A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SD	40.36105, -86.12753	70.66	0.033	144-151	<i>Scirpus atrovirens</i> , <i>Phalaris arundinacea</i> , <i>Carex vulpinoidea</i>	F6	A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SE	40.35732, -86.12889	N/A	0.166	166, 170-179	<i>Phalaris arundinacea</i>	A11, F3	A1, A2, A3, B3	PEM	Poor	Yes	Wetland SE abuts UNT to Mud Creek (at the second crossing).
SF	40.34957, -86.1274	1,944.46	0.780	219, 224-236	<i>Typha X glauca</i>	F3	A3, B4, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SG	40.34704, -86.12743	302.25	0.081	242-247	<i>Carex frankii</i> , <i>Phalaris arundinacea</i>	F7	A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SH	40.34584, -86.1274	594.81	0.136	254-259	<i>Typha angustifolia</i> , <i>Cyperus esculentus</i>	F2, F3	A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SI	40.34101, -86.12738	83.11	0.008	286-296	<i>Typha angustifolia</i> , <i>Cyperus esculentus</i> , <i>Phalaris arundinacea</i> , <i>Setaria pumila</i>	F6	B6, B10	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SJ	40.34051, -86.12738	137.19	0.016	297-308	<i>Phalaris arundinacea</i>	F6	B6, B10	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SK	40.33992, -86.12738	265.90	0.043	309-318	<i>Schoenoplectus tabernaemontani</i> , <i>Phalaris arundinacea</i>	F6	B10, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SL	40.33808, -86.12735	1,232.65	0.114	318-330	<i>Schoenoplectus tabernaemontani</i> , <i>Spartina pectinata</i> , <i>Phalaris arundinaceae</i>	F6	B6, B10	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SM	40.33582, -86.12732	96.37	0.007	339-347	<i>Phalaris arundinacea</i>	F6	B6, B10, C8	PEM	Poor	No	The wetland was located adjacent to a concrete box culvert. However, no stream or legal drain is mapped within this portion of the project area.
SN	40.33415, -86.12735	44.80	0.003	351-359	<i>Phalaris arundinacea</i>	F6	B6, B10	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SO	40.33388, -86.12735	153.10	0.012	359-365	<i>Phalaris arundinacea</i>	F6	B6, B10	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SP	40.33295, -86.12736	524.12	0.073	366-376	<i>Typha angustifolia</i>	F6	B6, B10, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31

Name	Lat/Long	RSD Length (lf)	Area (ac)	Photo #	Dominant Vegetation	Hydric Soil Indicator(s)	Hydrology Indicator(s)	Type	Wetland Quality	Likely Waters of the U.S.?	Comments
SQ	40.33229, -86.12731	109.03	0.017	377-383	<i>Typha angustifolia</i>	F6	B6, B10	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SR	40.33185, -86.1273	21.52	0.002	393-399	<i>Typha angustifolia</i>	F6	B6, B10, D2	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SS	40.32894, -86.12729	723.05	0.164	416-424	<i>Eriophorum angustifolium</i> , <i>Phalaris arundinacea</i>	F6	A3, B6, C8, D2	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
ST	40.32644, -86.12732	1,564.10	0.700	425-430, 432-433, 445-448	<i>Phalaris arundinacea</i>	F6	B6, B10	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31. Flow is fed by an equalizer pipe under a residential drive.
SU	40.3242, -86.12729	99.28	0.026	454-458	<i>Leersia oryzoides</i> , <i>Eriophorum angustifolium</i>	F6	B2, B6, B10	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31.
SV	40.32321, -86.12727	368.91	0.034	459-464	<i>Phalaris arundinacea</i>	F6	B6, B10	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31.
SW	40.3207, -86.12731	34.02	0.008	469-473	<i>Phalaris arundinacea</i>	F6	B10, D2	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31. Flow is fed by an equalizer pipe under US 31.
SX	40.32001, -86.12732	32.17	0.002	476-481	<i>Phalaris arundinacea</i> , <i>Typha angustifolia</i>	F6	B10, D2	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31.
SY	40.31824, -86.12734	679.67	0.094	492, 498-506	<i>Phalaris arundinacea</i> , <i>Carex cristatella</i>	F6	B10, D2	PEM	Poor	Yes	Wetland formed within a roadside ditch adjacent to US 31.
SZ	40.31272, -86.12729	1,075.19	0.074	536-543	<i>Echinochloa crus-galli</i> , <i>Phalaris arundinacea</i>	F6	B6, B10	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31.
SAA	40.31099, -86.12725	230.11	0.021	551-558	<i>Phalaris arundinacea</i>	F6	B6, B10, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31.
SAB	40.30984, -86.12728	277.18	0.026	559-567	<i>Typha angustifolia</i>	F6	B6, B10, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31.
SAC	40.30207, -86.12725	19.30	0.003	661-667	<i>Typha angustifolia</i> , <i>Elymus virginicus</i>	F6	B6, B10, D2	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31.
SAD	40.3014, -86.12727	162.84	0.008	668-675	<i>Typha angustifolia</i> , <i>Eriophorum angustifolium</i>	F6	B6, B10, D5	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31.
SAE	40.30092, -86.12726	11.52	0.002	676-682	<i>Typha angustifolia</i> , <i>Echinochloa crus-galli</i>	F6	B10, D2	PEM	Poor	No	Wetland formed at the outlet of an equalizer pipe.
SAF	40.29376, -86.12747	1,597.16	0.240	711-717, 720, 730-733	<i>Typha angustifolia</i> , <i>Setaria pumila</i>	F2	A3, B6, D2	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31.
SAG	40.2913, -86.12743	0.24	0.035	738-746	<i>Typha angustifolia</i> , <i>Echinochloa crus-galli</i>	F6	B6, B10	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31.
SAH	40.28743, -86.12733	10.77	0.002	766-773	<i>Typha angustifolia</i> , <i>Setaria pumila</i> , <i>Echinochloa crus-galli</i>	F6	B6, B10, D2, D5	PEM	Poor	No	Wetland formed at the outlet of an equalizer pipe.
SAI	40.28027, -86.1274	488.59	0.097	790-798	<i>Echinochloa crus-galli</i> , <i>Typha angustifolia</i>	F6	B6, B10, D2	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SAJ	40.27046, -86.12745	558.12	0.052	826-834	<i>Phalaris arundinacea</i>	F6	B10, D2	PEM	Poor	Yes	The wetland is likely not a Waters of the U.S. because it is separated from Dixon Creek by a concrete lined roadside ditch.
SAK	40.26866, -86.12746	643.70	0.089	835-843	<i>Cornus alba</i> , <i>Phalaris arundinacea</i>	F6	B10, D2	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SAL	40.26745, -86.12575	319.34	0.063	854-860	<i>Leersia oryzoides</i> , <i>Typha angustifolia</i>	F6	B10, D2	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SAM	40.25153, -86.12782	68.81	0.012	923-930	<i>Typha angustifolia</i>	F2	A3, B2, B10	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SAN	40.23921, -86.12811	50.14	0.006	975-981	<i>Echinochloa crus-galli</i> , <i>Typha angustifolia</i>	F2	A3, B2, B10, D2	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SAO	40.23157, -86.12832	32.33	0.008	1024-1030	<i>Echinochloa crus-galli</i>	F6	B4, C8, D2	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SAP	40.21733, -86.12879	135.44	0.270	1099-1105, 1107	<i>Acer saccharinum</i> , <i>Phalaris arundinacea</i>	F3	A3	PFO	Poor	No	Wetland formed in a depression in the northwest corner of the US 31 and 296 th Street intersection.

Name	Lat/Long	RSD Length (lf)	Area (ac)	Photo #	Dominant Vegetation	Hydric Soil Indicator(s)	Hydrology Indicator(s)	Type	Wetland Quality	Likely Waters of the U.S.?	Comments
SAQ	40.21454, -86.12837	293.74	0.027	1128-1136	<i>Schoenoplectus tabernaemontani</i> , <i>Andropogon gerardi</i> , <i>Poa pratensis</i>	F6	B10, D2, D5	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SAR	40.20879, -86.12838	174.92	0.016	1151-1159	<i>Andropogon gerardi</i> , <i>Poa pratensis</i>	F6	B6, B10, D5	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SAS	40.20116, -86.1284	60.50	0.037	1221-1225	<i>Phalaris arundinacea</i>	F6	B10, D2	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SAT	40.1901, -86.12835	242.41	0.022	N/A	~~<i>Echinochloa crus-galli</i>~~	~~F3~~	~~A3, B10, D2, D5~~	~~PEM~~	~~Poor~~	~~No~~	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland B
SAU	40.17892, -86.12827	309.40	0.022	N/A	~~<i>Schoenoplectus tabernaemontani</i>, <i>Andropogon gerardi</i>~~	~~F6~~	~~B10, D2~~	~~PEM~~	~~Poor~~	~~No~~	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland SAU
SAV	40.17633, -86.12827	1,344.82	0.670	1247-1252	<i>Phalaris arundinacea</i>	F6	B10, D2	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SAW	40.16989, -86.12829	1,663.41	0.190	1293-1297	<i>Phalaris arundinacea</i> , <i>Typha angustifolia</i>	F6	A3, B2, B10, D2	PEM	Poor	Yes	Wetland formed within a roadside ditch adjacent to US 31. Wetland SAW is less than 50 feet south of Bennett Ditch (See Photo Orientation Map 60).
SAX	40.16343, -86.12822	186.51	0.018	1322-1328	<i>Typha angustifolia</i>	A11, F3	A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SAY	40.163, -86.12822	64.15	0.009	1328-1333	<i>Phalaris arundinacea</i>	A11, F3	A3, B6	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SAZ	40.1604, -86.1303	752.21	1.870	1336-1346	<i>Phalaris arundinacea</i>	A11, F3, F6	A3	PEM	Poor	No	Wetland SAZ has both PFO and PEM components. The PEM component of this wetland would likely be considered a problematic farmed wetland.
			0.960					PFO	Average	No	
SBA	40.15996, -86.13026	1,119.46	0.720	1348-1371	<i>Fraxinus pennsylvanica</i> , <i>Populus deltoids</i> , <i>Amaranthus palmeri</i> , <i>Cyperus esculentus</i>	F6	A3, B1, B3, B4, B6	PEM	Poor	No	Wetland SBA has both PFO and PEM components. The PEM components (east and west of the forested block/PFO Wetland area) of this wetland would likely be considered a problematic farmed wetland.
			0.820					PFO	Average	No	
SBB	40.16037, -86.12828	119.68	0.039	1373-1379	<i>Eleocharis palustris</i> , <i>Leersia oryzoides</i>	A11, F3	A3, B4, B6, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SBC	40.16011, -86.12827	158.04	0.040	1380-1384	<i>Echinochloa crus-galli</i> , <i>Scirpus atrovirens</i> , <i>Ludwigia palustris</i>	A11, F3	A3, B4, B6, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SBD	40.15529, -86.12842	563.41	1.490	1422-1428	<i>Phalaris arundinacea</i> , <i>Scirpus atrovirens</i>	F3	A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SBE	40.14731, -86.12821	120.57	0.022	1455-1462	<i>Cercis canadensis</i> , <i>Toxicodendron radicans</i> , <i>Lonicera japonica</i> , <i>Phalaris arundinacea</i>	A11, F3	A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SBF	40.13852, -86.12828	208.79	0.140	1514-1521	<i>Phalaris arundinacea</i>	F3	A3	PEM	Poor	No	Likely would not be considered a Waters of the U.S. because the wetland is perched above Baker Ditch's bank and is fed by flow from a roadside ditch (See photo 1521).
SBG	40.13758, -86.12819	205.31	0.019	1530-1538	<i>Phalaris arundinacea</i> , <i>Schoenoplectus tabernaemontani</i>	Other	A1, A3	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SBH	40.13713, -86.12819	78.22	0.007	1539-1545	<i>Lonicera japonica</i> , <i>Phalaris arundinacea</i> , <i>Scirpus atrovirens</i>	F3	A1, A3, D5	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SBI	40.12928, -86.12836	513.00	0.360	1627-1634	<i>Fraxinus pennsylvanica</i> , <i>Lonicera japonica</i> , <i>Phalaris arundinacea</i>	F6	A3, D5	PFO	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SBJ	40.11081, -86.12844	641.03	0.910	1825-1832	<i>Typha angustifolia</i>	F6	A3, B6, C8, D5	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31. The wetland extended beyond the right-of-way fence. It is west of Wetland NBF, NBG and UNT to Jones Ditch.
SBK	40.1071, -86.12849	354.18	1.310	1856-1870	<i>Acer rubrum</i> , <i>Fraxinus pennsylvanica</i> , <i>Cephalanthus occidentalis</i> , <i>Typha latifolia</i> , <i>Phalaris arundinacea</i>	F1, F3	A3, B1, B3, B4, B9, B6, C8, D5	PFO	Average	No	Wetland SBK is an average quality forested wetland. However, it would likely still be considered a Class 1 wetland since its hydrology has been disturbed by US 31.

Name	Lat/Long	RSD Length (lf)	Area (ac)	Photo #	Dominant Vegetation	Hydric Soil Indicator(s)	Hydrology Indicator(s)	Type	Wetland Quality	Likely Waters of the U.S.?	Comments
SBL	40.10169, -86.12917	N/A	4.610	1946-1955	<i>Typha X glauca, Carex lupulina, Phalaris arundinacea</i>	A11, F3	A3, B6	PEM	Poor	No	Wetland SBL is a poor quality wetland due to a predominance of hybrid cattail. A portion of the wetland is shown as an NW1 polygon.
SBM	40.10108, -86.12822	240.77	0.030	1963-1971	<i>Echinochloa crus-galli, Phalaris arundinacea</i>	A11, F3	A3, B4, B6, C8	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
SBN	40.09815, -86.12838	1,302.50	0.180	1974-1983	<i>Typha latifolia, Cyperus esculentus</i>	F1, F3	A1, A2, A3, B3, B4	PEM	Poor	No	Wetland formed within a roadside ditch adjacent to US 31
Total		45,073.83	250.573								

Table 3: Wetland Data Point Summary
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton Counties, Indiana

Median Data Points	Vegetation?	Hydric Soil?	Wetland Hydrology?	Wetland?
MA1	YES	YES	YES	YES
MA2	NO	YES	NO	NO
MB1	YES	YES	YES	YES
MB2	NO	NO	NO	NO
MC1	YES	YES	YES	YES
MC2	NO	YES	NO	NO
MD1	YES	YES	YES	YES
MD2	NO	YES	NO	NO
ME1	YES	YES	YES	YES
ME2	NO	NO	NO	NO
MF1	YES	YES	YES	YES
MF2	NO	NO	NO	NO
MG1	YES	YES	YES	YES
MG2	NO	NO	NO	NO

Northbound Data Points	Vegetation?	Hydric Soil?	Wetland Hydrology?	Wetland?
NA1	YES	YES	YES	YES
NA2	NO	YES	NO	NO
NB1	YES	YES	YES	YES
NB2	NO	NO	NO	NO
NC1	YES	YES	YES	YES
NC2	NO	NO	NO	NO
ND1	YES	YES	YES	YES
ND2	NO	NO	NO	NO
NE1	YES	YES	YES	YES
NE2	NO	NO	NO	NO
NF1	YES	YES	YES	YES
NF2	NO	NO	NO	NO
NG1	YES	YES	YES	YES
NG2	NO	NO	NO	NO
NH1	YES	YES	YES	YES
NH2	YES	NO	NO	NO
NI1	YES	YES	YES	YES
NI2	YES	NO	NO	NO
NJ1	YES	YES	YES	YES
NJ2	NO	YES	NO	NO
NK1	YES	YES	YES	YES
NK2	NO	NO	NO	NO
NL1	YES	YES	YES	YES

Northbound Data Points	Vegetation?	Hydric Soil?	Wetland Hydrology?	Wetland?
NL2	NO	NO	NO	NO
NM1	YES	YES	YES	YES
NM2	YES	NO	NO	NO
NN1	YES	YES	YES	YES
NN2	NO	NO	NO	NO
NO1	YES	YES	YES	YES
NO2	NO	NO	NO	NO
NP1	YES	YES	YES	YES
NP2	YES	NO	NO	NO
NQ1	YES	YES	YES	YES
NQ2	YES	NO	NO	NO
NR1	YES	YES	YES	YES
NR2	NO	NO	NO	NO
NS1	YES	YES	YES	YES
NS2	NO	YES	NO	NO
NT1	YES	YES	YES	YES
NT2	NO	NO	NO	NO
NU1	YES	YES	YES	YES
NU2	NO	YES	NO	NO
NV1	YES	YES	YES	YES
NV2	NO	NO	NO	NO
NW1	YES	YES	YES	YES
NW2	NO	YES	NO	NO
NW3	NO	YES	NO	NO
NX1	YES	YES	YES	YES
NX2	NO	YES	NO	NO
NY1	YES	YES	YES	YES
NY2	NO	YES	NO	NO
NZ1	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland NZ			
NZ2				
NAA1	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland NAA			
NAA2				
NAB1	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland G			
NAB2				
NAC1	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland E			
NAC2				
NAD1	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland F			
NAD2				
NAE1	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland NAE			
NAE2				
NAF1	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland D			
NAF2				
NAG1	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland C. Wetland C is comprised of 2 parts separated by a farm access drive.			
NAG2				
NAH1	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland C. Wetland C is comprised of 2 parts separated by a farm access drive. Part of Wetland NAH is within the U.S. 31 Limited Access Corridor Study Area.			
NAH2				

Northbound Data Points	Vegetation?	Hydric Soil?	Wetland Hydrology?	Wetland?
NAI1	YES	YES	YES	YES
NAI2	NO	YES	NO	NO
NAJ1	YES	YES	YES	YES
NAJ2	NO	YES	NO	NO
NAJ3	YES	YES	YES	YES
NAJ4	NO	NO	NO	NO
NAK1	YES	YES	YES	YES
NAK2	NO	YES	NO	NO
NAL1	YES	YES	YES	YES
NAL2	NO	NO	NO	NO
NAM1	YES	YES	YES	YES
NAM2	NO	NO	NO	NO
NAN1	YES	YES	YES	YES
NAN2	NO	YES	NO	NO
NAO1	YES	YES	YES	YES
NAO2	NO	YES	NO	NO
NAP1	YES	YES	YES	YES
NAP2	NO	NO	NO	NO
NAQ1	YES	YES	YES	YES
NAQ2	NO	YES	YES	NO
NAR1	YES	YES	YES	YES
NAR2	NO	NO	NO	NO
NAS1	YES	YES	YES	YES
NAS2	NO	YES	NO	NO
NAT1	YES	YES	YES	YES
NAT2	YES	YES	NO	NO
NAU1	YES	YES	YES	YES
NAU2	NO	NO	NO	NO
NAV1	YES	YES	YES	YES
NAV2	YES	NO	NO	NO
NAW1	YES	YES	YES	YES
NAW2	NO	NO	NO	NO
NAX1	YES	YES	YES	YES
NAX2	NO	YES	NO	NO
NAY1	YES	YES	YES	YES
NAY2	NO	YES	NO	NO
NAZ1	YES	YES	YES	YES
NAZ2	NO	NO	NO	NO
NBA1	YES	YES	YES	YES
NBA2	NO	NO	NO	NO
NBB1	YES	YES	YES	YES
NBB2	NO	YES	NO	NO
NBC1	YES	YES	YES	YES
NBC2	NO	NO	NO	NO
NBD1	YES	YES	YES	YES
NBD2	NO	NO	NO	NO
NBE1	YES	YES	YES	YES

Northbound Data Points	Vegetation?	Hydric Soil?	Wetland Hydrology?	Wetland?
NBE2	NO	YES	NO	NO
NBF1	YES	YES	YES	YES
NBF2	NO	NO	NO	NO
NBG1	YES	YES	YES	YES
NBG2	NO	NO	NO	NO
NBH1	YES	YES	YES	YES
NBH2	NO	NO	NO	NO
NBI1	YES	YES	YES	YES
NBI2	NO	NO	NO	NO
NBJ1	YES	YES	YES	YES
NBJ2	NO	NO	NO	NO
NBK1	YES	YES	YES	YES
NBK2	NO	NO	NO	NO
NBL1	YES	YES	YES	YES
NBL2	YES	NO	NO	NO
NBM1	YES	YES	YES	YES
NBM2	NO	NO	NO	NO

Southbound Data Points	Vegetation?	Hydric Soil?	Wetland Hydrology?	Wetland?
SA1	YES	YES	YES	YES
SA2	NO	YES	NO	NO
SB1	YES	YES	YES	YES
SB2	NO	YES	NO	NO
SC1	YES	YES	YES	YES
SC2	NO	NO	NO	NO
SD1	YES	YES	YES	YES
SD2	NO	NO	NO	NO
SE1	YES	YES	YES	YES
SE2	NO	NO	NO	NO
SF1	YES	YES	YES	YES
SF2	NO	NO	NO	NO
SG1	YES	YES	YES	YES
SG2	NO	NO	NO	NO
SH1	YES	YES	YES	YES
SH2	NO	NO	NO	NO
SI1	YES	YES	YES	YES
SI2	NO	NO	NO	NO
SJ1	YES	YES	YES	YES
SJ2	NO	NO	NO	NO
SK1	YES	YES	YES	YES
SK2	NO	NO	NO	NO
SL1	YES	YES	YES	YES
SL2	NO	YES	NO	NO
SM1	YES	YES	YES	YES
SM2	NO	NO	NO	NO
SN1	YES	YES	YES	YES

Southbound Data Points	Vegetation?	Hydric Soil?	Wetland Hydrology?	Wetland?
SN2	NO	NO	NO	NO
SO1	YES	YES	YES	YES
SO2	NO	NO	NO	NO
SP1	YES	YES	YES	YES
SP2	NO	NO	NO	NO
SQ1	YES	YES	YES	YES
SQ2	NO	YES	NO	NO
SR1	YES	YES	YES	YES
SR2	NO	NO	NO	NO
SS1	YES	YES	YES	YES
SS2	YES	NO	NO	NO
ST1	YES	YES	YES	YES
ST2	NO	NO	NO	NO
SU1	YES	YES	YES	YES
SU2	NO	YES	NO	NO
SV1	YES	YES	YES	YES
SV2	NO	NO	NO	NO
SW1	YES	YES	YES	YES
SW2	NO	NO	NO	NO
SX1	YES	YES	YES	YES
SX2	YES	NO	NO	NO
SY1	YES	YES	YES	YES
SY2	YES	NO	NO	NO
SZ1	YES	YES	YES	YES
SZ2	NO	YES	NO	NO
SAA1	YES	YES	YES	YES
SAA2	YES	NO	NO	NO
SAB1	YES	YES	YES	YES
SAB2	NO	NO	NO	NO
SAC1	YES	YES	YES	YES
SAC2	YES	NO	NO	NO
SAD1	YES	YES	YES	YES
SAD2	NO	NO	NO	NO
SAE1	YES	YES	YES	YES
SAE2	YES	NO	NO	NO
SAF1	YES	YES	YES	YES
SAF2	YES	NO	NO	NO
SAG1	YES	YES	YES	YES
SAG2	YES	NO	NO	NO
SAH1	YES	YES	YES	YES
SAH2	NO	NO	NO	NO
SAI1	YES	YES	YES	YES
SAI2	YES	NO	NO	NO
SAJ1	YES	YES	YES	YES
SAJ2	NO	NO	NO	NO
SAK1	YES	YES	YES	YES
SAK2	YES	NO	NO	NO

Southbound Data Points	Vegetation?	Hydric Soil?	Wetland Hydrology?	Wetland?
SAL1	YES	YES	YES	YES
SAL2	YES	YES	NO	NO
SAM1	YES	YES	YES	YES
SAM2	YES	YES	NO	NO
SAN1	YES	YES	YES	YES
SAN2	YES	NO	NO	NO
SAO1	YES	YES	YES	YES
SAO2	YES	NO	NO	NO
SAP1	YES	YES	YES	YES
SAP2	NO	YES	NO	NO
SAQ1	YES	YES	YES	YES
SAQ2	YES	YES	NO	NO
SAR1	YES	YES	YES	YES
SAR2	YES	NO	NO	NO
SAS1	YES	YES	YES	YES
SAS2	NO	NO	NO	NO
SAT1	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland B			
SAT2				
SAU1	See 276th Street Intersection Waters Report (Des. No. 1901797) Pages A1836-A2061: Wetland SAU			
SAU2				
SAV1	YES	YES	YES	YES
SAV2	YES	YES	NO	NO
SAW1	YES	YES	YES	YES
SAW2	YES	YES	NO	NO
SAX1	YES	YES	YES	YES
SAX2	YES	NO	NO	NO
SAY1	YES	YES	YES	YES
SAY2	NO	YES	NO	NO
SAZ1	YES	YES	YES	YES
SAZ2	NO	NO	NO	NO
SBA1	YES	YES	YES	YES
SBA2	NO	NO	NO	NO
SBB1	YES	YES	YES	YES
SBB2	YES	NO	NO	NO
SBC1	YES	YES	YES	YES
SBC2	NO	NO	NO	NO
SBD1	YES	YES	YES	YES
SBD2	NO	NO	NO	NO
SBE1	YES	YES	YES	YES
SBE2	NO	NO	NO	NO
SBF1	YES	YES	YES	YES
SBF2	NO	NO	NO	NO
SBG1	YES	YES	YES	YES
SBG2	NO	NO	NO	NO
SBH1	YES	YES	YES	YES
SBH2	YES	NO	NO	NO
SBI1	YES	YES	YES	YES

Southbound Data Points	Vegetation?	Hydric Soil?	Wetland Hydrology?	Wetland?
SBI2	NO	YES	NO	NO
SBJ1	YES	YES	YES	YES
SBJ2	NO	NO	NO	NO
SBK1	YES	YES	YES	YES
SBK2	NO	YES	NO	NO
SBL1	YES	YES	YES	YES
SBL2	NO	NO	NO	NO
SBM1	YES	YES	YES	YES
SBM2	NO	NO	NO	NO
SBN1	YES	YES	YES	YES
SBN2	NO	NO	NO	NO
UP1	NO	NO	NO	NO
UP2	YES	NO	YES	NO
UP3	YES	NO	YES	NO
UP4	YES	NO	YES	NO
UP5	YES	NO	YES	NO
UP6	YES	NO	YES	NO
UP7	NO	NO	NO	NO
UP8	NO	NO	YES	NO

Table 4. Waters of the State Exemption Status
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton Counties, Indiana

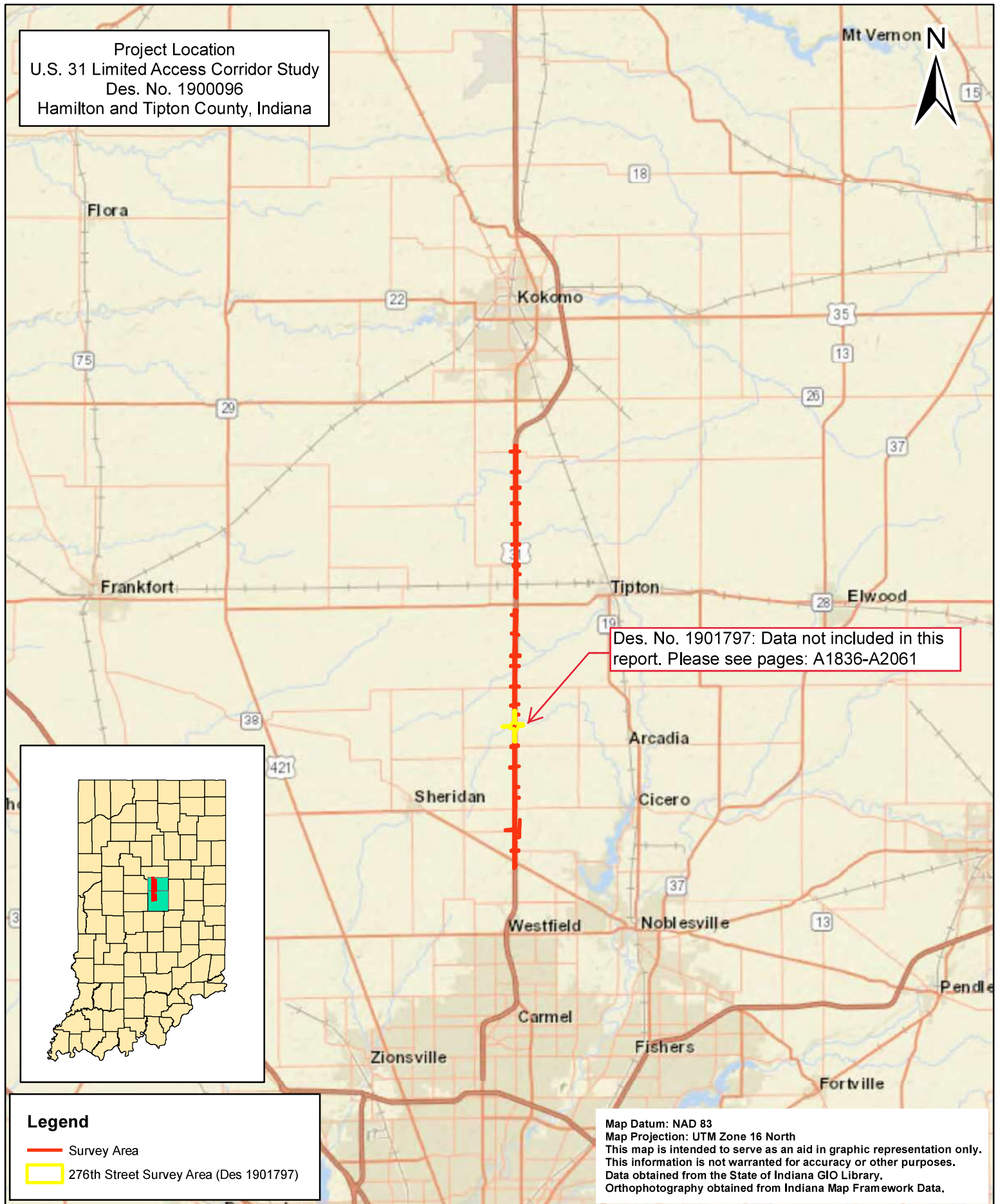
Name	Likely State Status	Notes
ND	Isolated, exempt Class 1	Proposed W CR 300 N Overpass
NG	Isolated, exempt Class 1	Proposed Division Road Intersection/Overpass
NH	Isolated, exempt Class 1	Position within a RSD, periodically mowed
NI	Isolated, exempt Class 1	Position within a RSD, periodically mowed
NJ	Isolated, exempt Class 1	Position within a RSD, periodically mowed
NS	Isolated, exempt Class 1	Proposed W. CR 500 S cul-de-sac
NT	Isolated, exempt Class 1	Proposed W. CR 500 S cul-de-sac
NY	Isolated, exempt Class 1	Position adjacent to an equalizer pipe inlet, periodically mowed
NAI	Isolated, exempt Class 1	Proposed 266th Street Overpass
NAK	Isolated, exempt Class 1	Proposed 246th Street cul-de-sac
NAM	Isolated, exempt Class 1	Proposed 256th Street cul-de-sac
NAQ	Isolated, exempt Class 1	Proposed 256th Street cul-de-sac
NAS	Isolated, exempt Class 1	Position within a RSD, periodically mowed
NAV	Isolated, exempt Class 1	Position within a RSD, periodically mowed
NAX	Isolated, exempt Class 1	Position within a RSD, periodically mowed
NAY	Isolated, exempt Class 1	Position within a RSD, periodically mowed
NAZ	Isolated, exempt Class 1	Proposed 226th Street Intersection
NBB	Isolated, exempt Class 1	Proposed 226th Street Intersection
NBC	Isolated, exempt Class 1	Proposed 226th Street Intersection
NBF	Isolated, exempt Class 1	Proposed 226th Street Intersection
NBG	Isolated, exempt Class 1	Proposed 226th Street Intersection
MA	Isolated, exempt Class 1	Position within a median RSD, periodically mowed
MB	Isolated, exempt Class 1	Position within a median RSD, periodically mowed
MC	Isolated, exempt Class 1	Position within a median RSD, periodically mowed
MD	Isolated, exempt Class 1	Position within a median RSD, periodically mowed
ME	Isolated, exempt Class 1	Position within a median RSD, periodically mowed
MF	Isolated, exempt Class 1	Position within a median RSD, periodically mowed
MG	Isolated, exempt Class 1	Position within a median RSD, periodically mowed
SG	Isolated, exempt Class 1	Proposed W CR 300 N Overpass
SH	Isolated, exempt Class 1	Proposed W CR 300 N Overpass
SQ	Isolated, exempt Class 1	Proposed W CR 200 N cul-de-sac
SR	Isolated, exempt Class 1	Proposed W CR 200 N cul-de-sac
SAC	Isolated, exempt Class 1	Proposed Division Road Intersection/Overpass
SAD	Isolated, exempt Class 1	Proposed Division Road Intersection/Overpass
SAE	Isolated, exempt Class 1	Proposed Division Road Intersection/Overpass
SAK	Isolated, exempt Class 1	Proposed W CR 250 S cul-de-sac
SAL	Isolated, exempt Class 1	Proposed W CR 250 S cul-de-sac
SAM	Isolated, exempt Class 1	Position within a RSD, periodically mowed
SAN	Isolated, exempt Class 1	Proposed W CR 500 S cul-de-sac

Name	Likely State Status	Notes
SAO	Isolated, exempt Class 1	Proposed W CR 450 S cul-de-sac
SAP	Isolated, exempt Class 1	Proposed 296th Street Overpass
SAS	Isolated, exempt Class 1	Position within a RSD, periodically mowed
SAX	Isolated, exempt Class 1	Position within a RSD, periodically mowed
SAY	Isolated, exempt Class 1	Position within a RSD, periodically mowed
SBC	Isolated, exempt Class 1	Proposed 256th Street cul-de-sac
SAP	Isolated, exempt Class 1	Proposed 296th Street Overpass

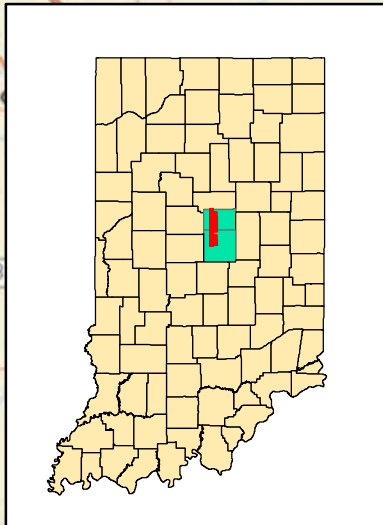
Table 5: Open Water Summary
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton Counties, Indiana

Open Water Name	Photos	Lat/Long	Total Area (Acres)	Likely Waters of the U.S. ?
Pond A	138	40.36328, -86.12656	0.15	No
Pond B	276	40.34616, -86.125	0.63	No
		Total	0.78	

Project Location
 U.S. 31 Limited Access Corridor Study
 Des. No. 1900096
 Hamilton and Tipton County, Indiana



Des. No. 1901797: Data not included in this report. Please see pages: A1836-A2061



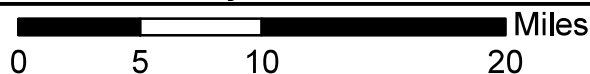
Legend

- Survey Area
- 276th Street Survey Area (Des 1901797)

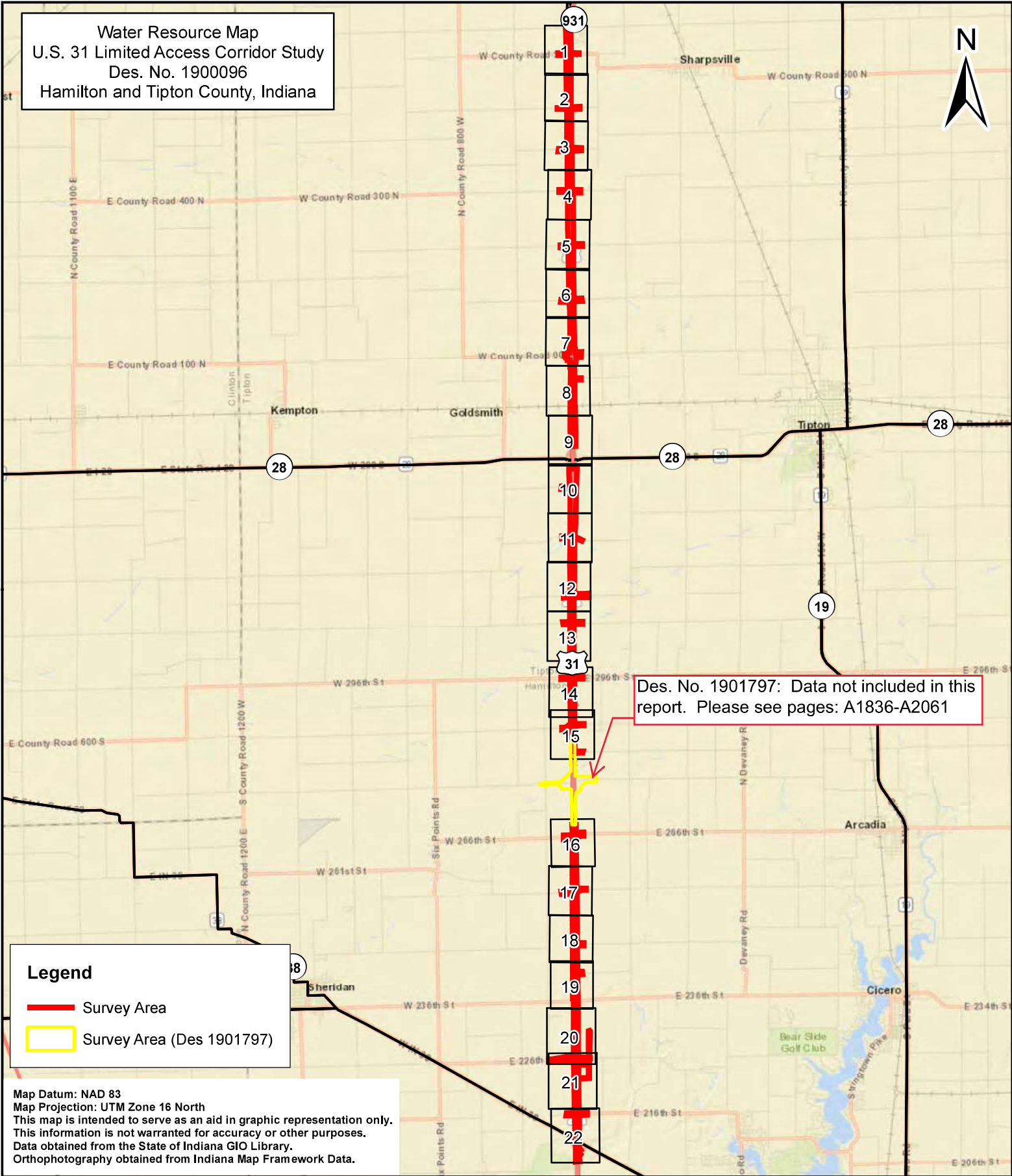
Map Datum: NAD 83
 Map Projection: UTM Zone 16 North
 This map is intended to serve as an aid in graphic representation only.
 This information is not warranted for accuracy or other purposes.
 Data obtained from the State of Indiana GIO Library.
 Orthophotography obtained from Indiana Map Framework Data.



Project Location

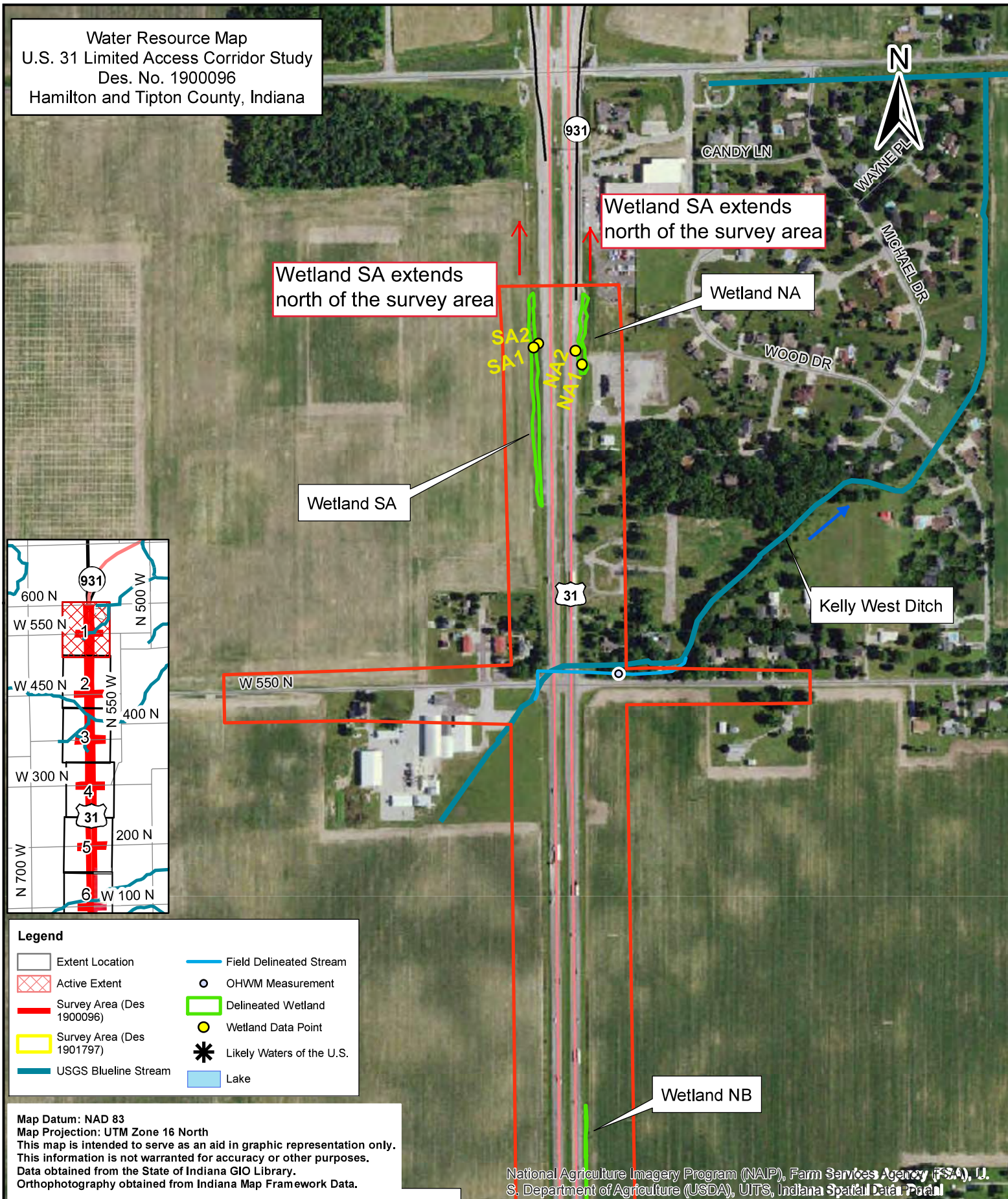


Location: U.S. 31
 Township: Prairie, Liberty, Washington
 Adams, Jefferson, Jackson, & Cicero
 County: Tipton & Hamilton
 Date: December 10, 2020



	Water Resource Index Map	Location: U.S. 31 Township: Adams, Jackson, and Washington County: Hamilton and Tipton Date: August 31, 2020
	 0 10,000 20,000 40,000 Feet	

Water Resource Map
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton County, Indiana



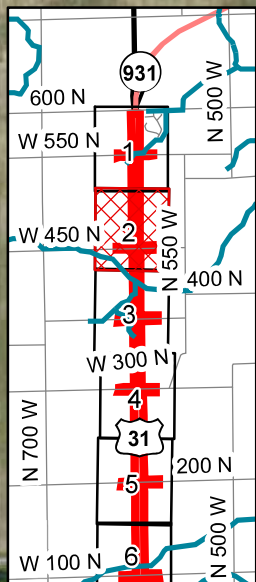
Water Resource Map
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton County, Indiana

Wetland SB



NB2
NB1
SB1
SB2
NC2

Wetland NC



- Legend**
- Extent Location
 - Active Extent
 - Survey Area (Des 1900096)
 - Survey Area (Des 1901797)
 - USGS Blueline Stream
 - Field Delineated Stream
 - OHWM Measurement
 - Delineated Wetland
 - Wetland Data Point
 - ✱ Likely Waters of the U.S.
 - Lake

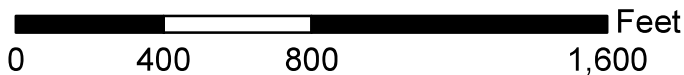
Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

Wetland SC

National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U.S. Department of Agriculture (USDA), UITS, Indiana Spatial Data Portal

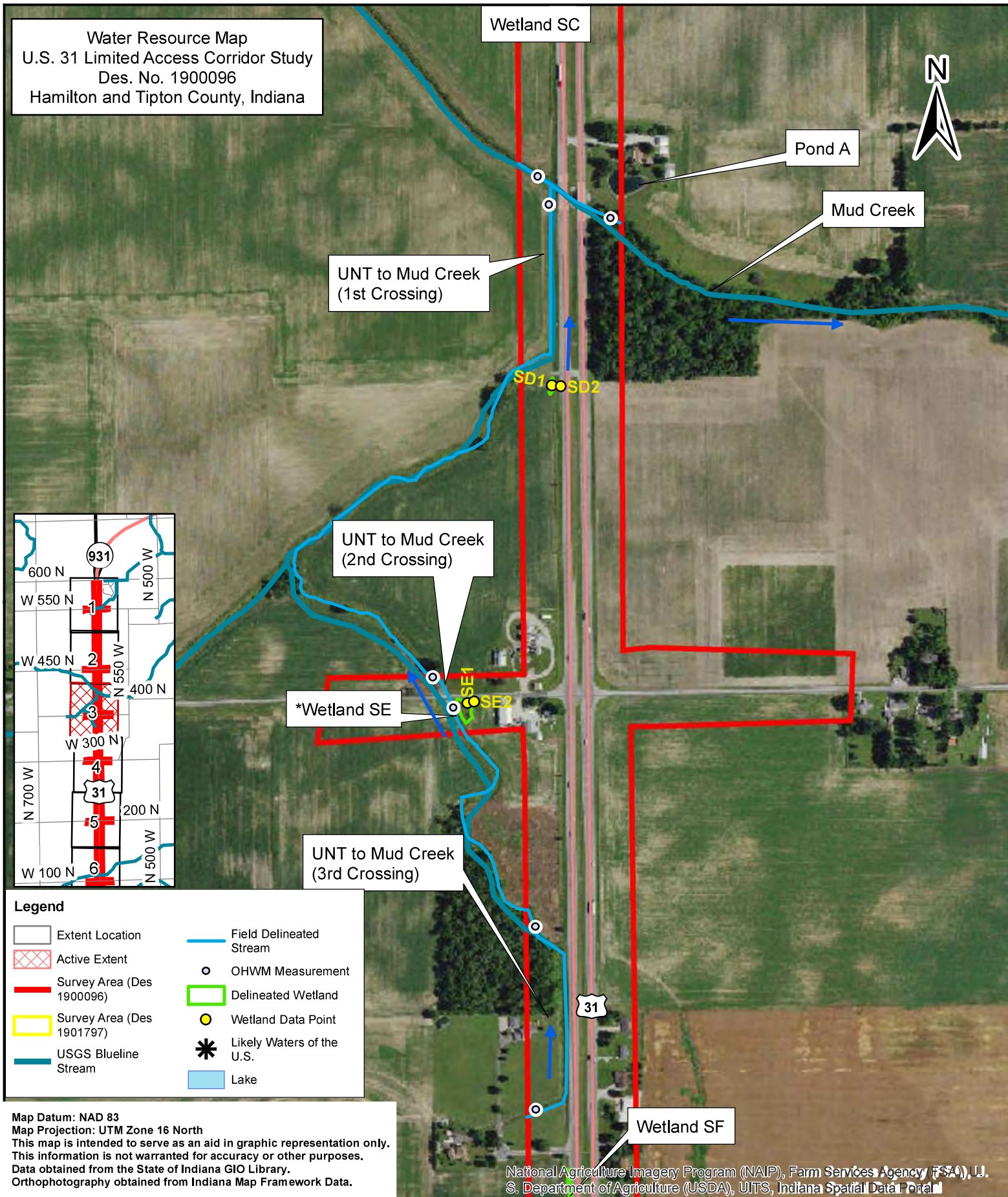


Water Resource Map 2

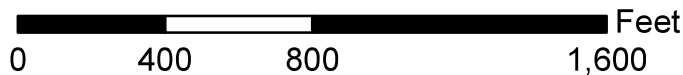


Location: U.S. 31
Township: Prairie & Liberty
County: Tipton
Date: August 31, 2020

Water Resource Map
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton County, Indiana

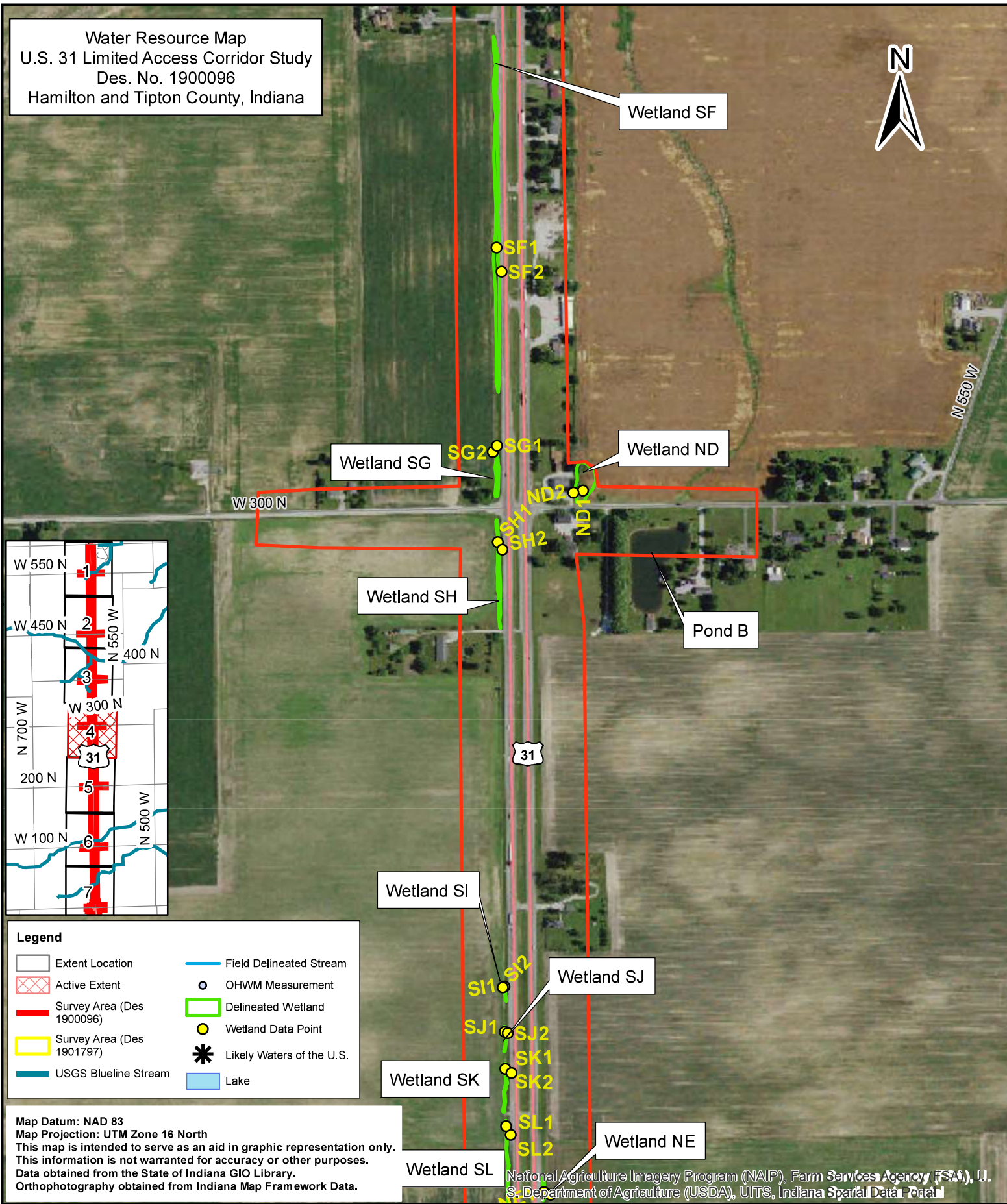


Water Resource Map 3



Location: U.S. 31
Township: Prairie & Liberty
County: Tipton
Date: August 31, 2020

Water Resource Map
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton County, Indiana



- Legend**
- Extent Location
 - Active Extent
 - Survey Area (Des 1900096)
 - Survey Area (Des 1901797)
 - USGS Blueline Stream
 - Field Delineated Stream
 - OHWM Measurement
 - Delineated Wetland
 - Wetland Data Point
 - Likely Waters of the U.S.
 - Lake

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U.S. Department of Agriculture (USDA), UITS, Indiana Spatial Data Portal

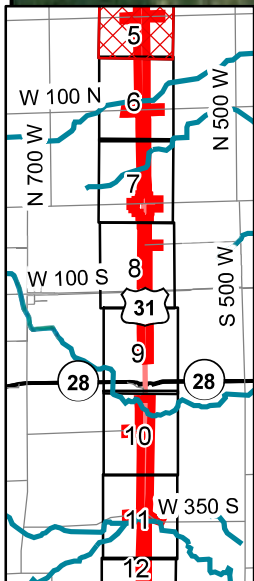


Water Resource Map 4

0 400 800 1,600 Feet

Location: U.S. 31
Township: Prairie & Liberty
County: Hamilton
Date: August 31, 2020

Water Resource Map
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton County, Indiana



Legend

- | | |
|---------------------------|---------------------------|
| Extent Location | Field Delineated Stream |
| Active Extent | OHWM Measurement |
| Survey Area (Des 1900096) | Delineated Wetland |
| Survey Area (Des 1901797) | Wetland Data Point |
| USGS BlueLine Stream | Likely Waters of the U.S. |
| Lake | |

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

Wetland SM

Wetland SN

Wetland SO

Wetland SP

Wetland SQ

Wetland SR

Wetland SS

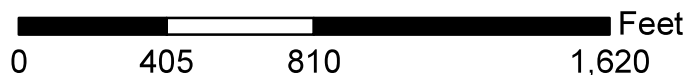
Wetland ST

Wetland NF

National Agriculture Imagery Program (NAIP), Farm Service Agency (FSA), U.S. Department of Agriculture (USDA), UITS, Indiana Spatial Data Portal

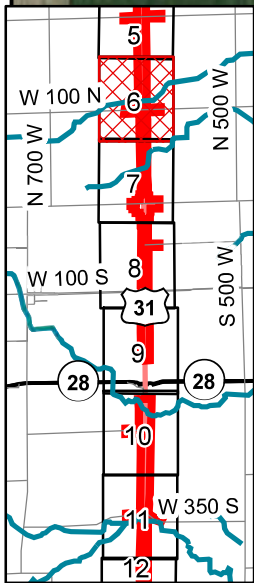


Water Resource Map 5



Location: U.S. 31
Township: Prairie & Cicero
County: Tipton
Date: August 31, 2020

Water Resource Map
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton County, Indiana



Legend

- | | |
|---------------------------|---------------------------|
| Extent Location | Field Delineated Stream |
| Active Extent | OHWM Measurement |
| Survey Area (Des 1900096) | Delineated Wetland |
| Survey Area (Des 1901797) | Wetland Data Point |
| USGS Blueline Stream | Likely Waters of the U.S. |
| Lake | |

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

Wetland SU

Wetland SV

Wetland SW

Wetland SX

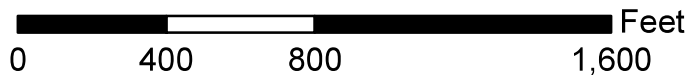
*Wetland SY

Turkey Creek

Wetland SU
Wetland SV
Wetland SW
Wetland SX
Wetland SY
Wetland SZ
Wetland TA
Wetland TB
Wetland TC
Wetland TD
Wetland TE
Wetland TF
Wetland TG
Wetland TH
Wetland TI
Wetland TJ
Wetland TK
Wetland TL
Wetland TM
Wetland TN
Wetland TO
Wetland TP
Wetland TQ
Wetland TR
Wetland TS
Wetland TT
Wetland TU
Wetland TV
Wetland TW
Wetland TX
Wetland TY
Wetland TZ
Wetland UA
Wetland UB
Wetland UC
Wetland UD
Wetland UE
Wetland UF
Wetland UG
Wetland UH
Wetland UI
Wetland UJ
Wetland UK
Wetland UL
Wetland UM
Wetland UN
Wetland UO
Wetland UP
Wetland UQ
Wetland UR
Wetland US
Wetland UT
Wetland UV
Wetland UW
Wetland UX
Wetland UY
Wetland UZ
Wetland VA
Wetland VB
Wetland VC
Wetland VD
Wetland VE
Wetland VF
Wetland VG
Wetland VH
Wetland VI
Wetland VJ
Wetland VK
Wetland VL
Wetland VM
Wetland VN
Wetland VO
Wetland VP
Wetland VQ
Wetland VR
Wetland VS
Wetland VT
Wetland VU
Wetland VV
Wetland VW
Wetland VX
Wetland VY
Wetland VZ
Wetland WA
Wetland WB
Wetland WC
Wetland WD
Wetland WE
Wetland WF
Wetland WG
Wetland WH
Wetland WI
Wetland WJ
Wetland WK
Wetland WL
Wetland WM
Wetland WN
Wetland WO
Wetland WP
Wetland WQ
Wetland WR
Wetland WS
Wetland WT
Wetland WU
Wetland WV
Wetland WW
Wetland WX
Wetland WY
Wetland WZ
Wetland XA
Wetland XB
Wetland XC
Wetland XD
Wetland XE
Wetland XF
Wetland XG
Wetland XH
Wetland XI
Wetland XJ
Wetland XK
Wetland XL
Wetland XM
Wetland XN
Wetland XO
Wetland XP
Wetland XQ
Wetland XR
Wetland XS
Wetland XT
Wetland XU
Wetland XV
Wetland XW
Wetland XX
Wetland XY
Wetland XZ
Wetland YA
Wetland YB
Wetland YC
Wetland YD
Wetland YE
Wetland YF
Wetland YG
Wetland YH
Wetland YI
Wetland YJ
Wetland YK
Wetland YL
Wetland YM
Wetland YN
Wetland YO
Wetland YP
Wetland YQ
Wetland YR
Wetland YS
Wetland YT
Wetland YU
Wetland YV
Wetland YW
Wetland YX
Wetland YY
Wetland YZ
Wetland ZA
Wetland ZB
Wetland ZC
Wetland ZD
Wetland ZE
Wetland ZF
Wetland ZG
Wetland ZH
Wetland ZI
Wetland ZJ
Wetland ZK
Wetland ZL
Wetland ZM
Wetland ZN
Wetland ZO
Wetland ZP
Wetland ZQ
Wetland ZR
Wetland ZS
Wetland ZT
Wetland ZU
Wetland ZV
Wetland ZW
Wetland ZX
Wetland ZY
Wetland ZZ

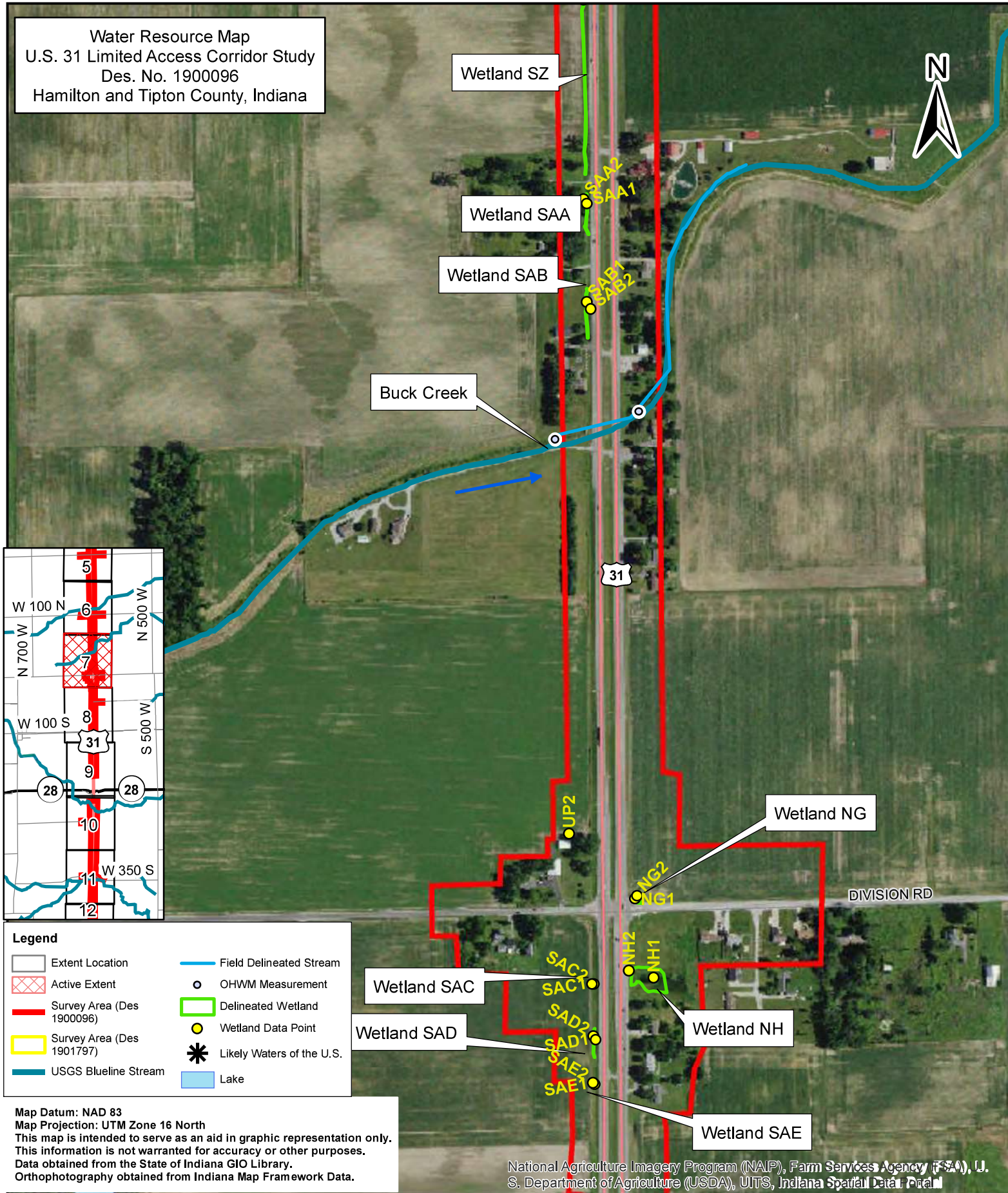


Water Resource Map 6



Location: U.S. 31
Township: Prairie & Cicero
County: Tipton
Date: August 31, 2020

Water Resource Map
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton County, Indiana

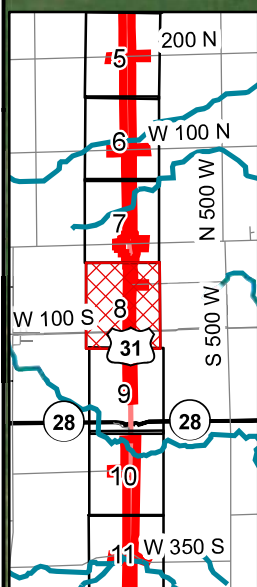


Water Resource Map 7

0 400 800 1,600 Feet

Location: U.S. 31
Township: Cicero & Jefferson
County: Tipton
Date: August 31, 2020

Water Resource Map
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton County, Indiana



Legend

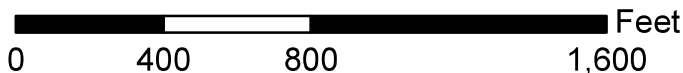
- | | |
|---------------------------|---------------------------|
| Extent Location | Field Delineated Stream |
| Active Extent | OHWM Measurement |
| Survey Area (Des 1900096) | Delineated Wetland |
| Survey Area (Des 1901797) | Wetland Data Point |
| USGS BlueLine Stream | Likely Waters of the U.S. |
| | Lake |

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

National Agriculture Imagery Program (NAIP), Farm Service Agency (FSA), U.S. Department of Agriculture (USDA), UITS, Indiana Spatial Data Portal

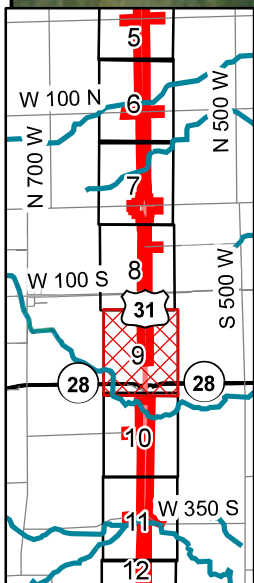


Water Resource Map 8



Location: U.S. 31
Township: Cicero & Jefferson
County: Tipton
Date: August 31, 2020

Water Resource Map
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton County, Indiana



Legend

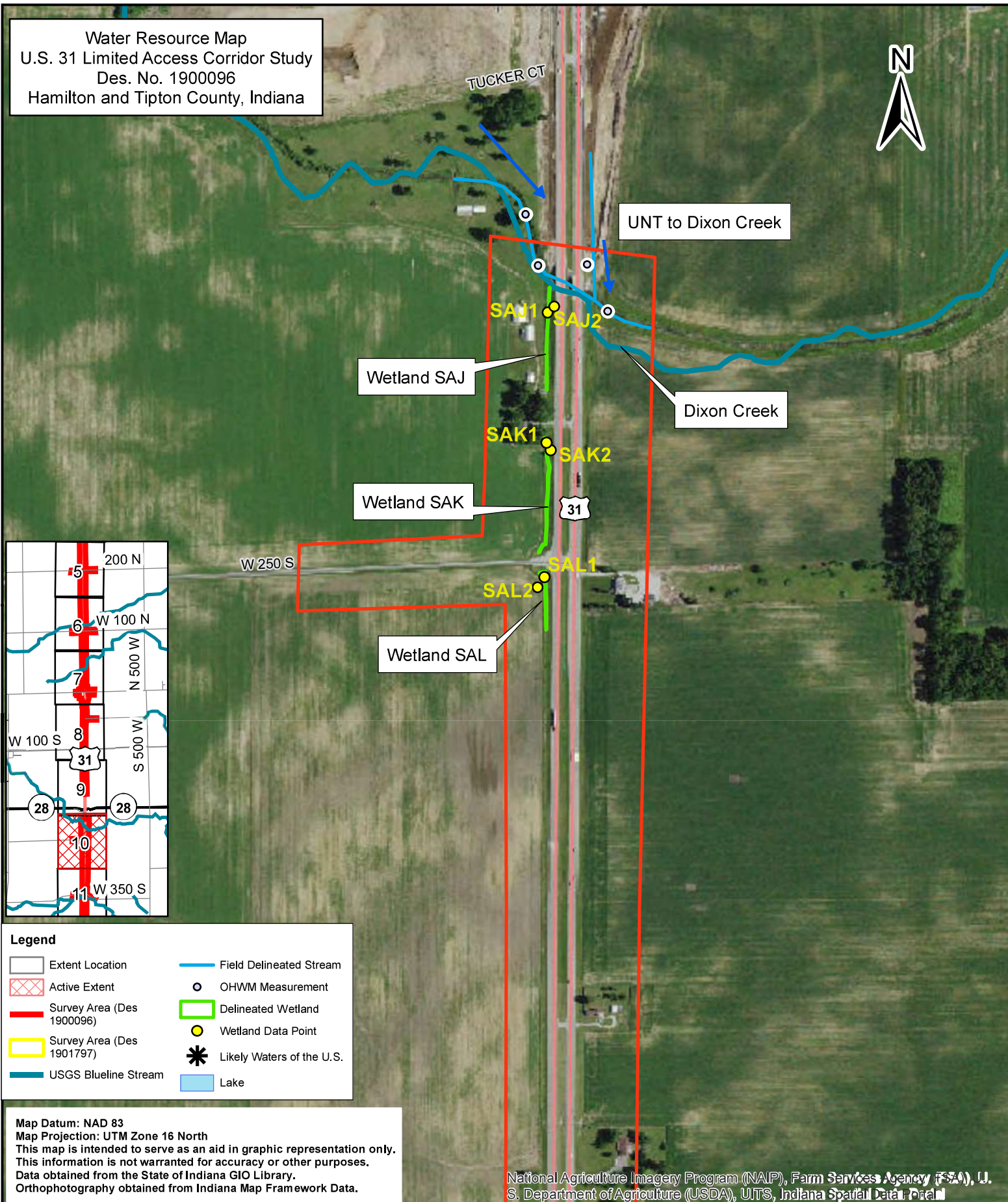
- | | |
|---------------------------|---------------------------|
| Extent Location | Field Delineated Stream |
| Active Extent | OHWM Measurement |
| Survey Area (Des 1900096) | Delineated Wetland |
| Survey Area (Des 1901797) | Wetland Data Point |
| USGS Blueline Stream | Likely Waters of the U.S. |
| Lake | |

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

National Agriculture Imagery Program (NAIP), Farm Service Agency (FSA), U.S. Department of Agriculture (USDA), UITS, Indiana Spatial Data Portal

	Water Resource Map 9	Location: U.S. 31 Township: Cicero & Jefferson County: Tipton Date: August 31, 2020

Water Resource Map
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton County, Indiana



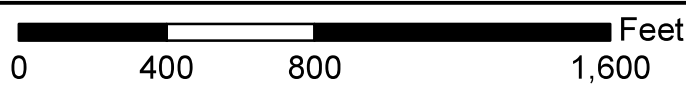
- Legend**
- Extent Location
 - Active Extent
 - Survey Area (Des 1900096)
 - Survey Area (Des 1901797)
 - USGS BlueLine Stream
 - Field Delineated Stream
 - o OHWM Measurement
 - Delineated Wetland
 - Wetland Data Point
 - ✱ Likely Waters of the U.S.
 - Lake

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

National Agriculture Imagery Program (NAIP), Farm Service Agency (FSA), U.S. Department of Agriculture (USDA), UITS, Indiana Spatial Data Portal

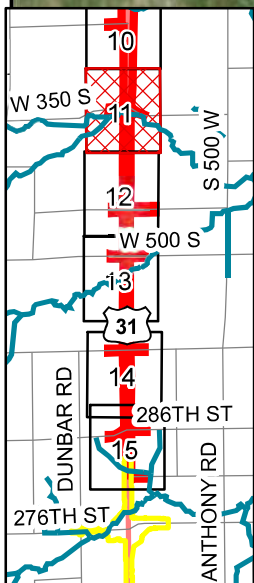


Water Resource Map 10



Location: U.S. 31
Township: Cicero & Jefferson
County: Hamilton
Date: August 31, 2020

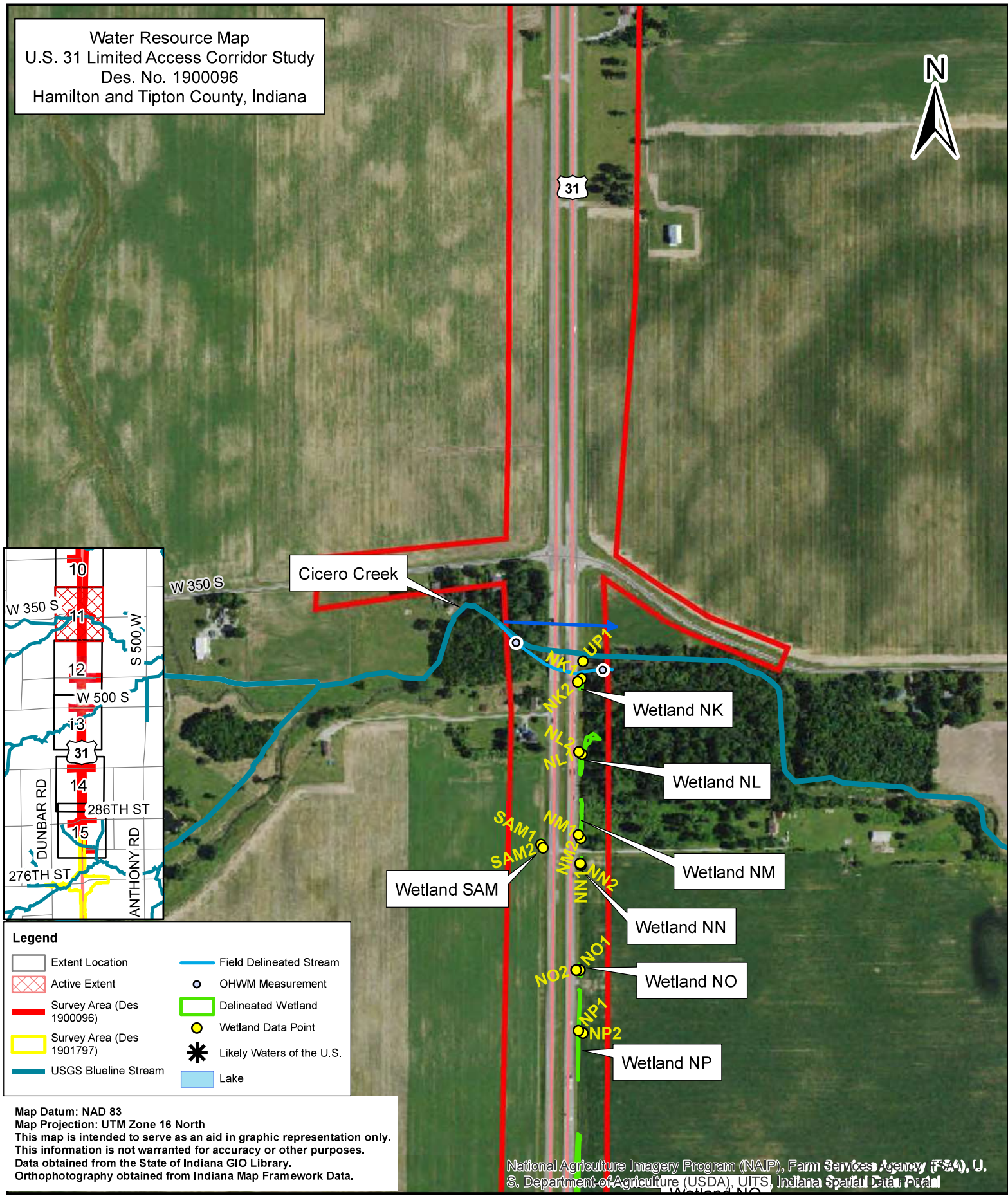
Water Resource Map
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton County, Indiana



Legend

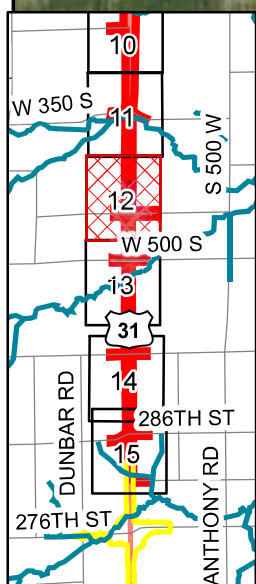
Extent Location	Field Delineated Stream
Active Extent	OHWM Measurement
Survey Area (Des 1900096)	Delineated Wetland
Survey Area (Des 1901797)	Wetland Data Point
USGS BlueLine Stream	Likely Waters of the U.S.
Lake	

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.



National Agriculture Imagery Program (NAIP), Farm Service Agency (FSA), U.S. Department of Agriculture (USDA), U.S. Geological Survey (USGS), Indiana Spatial Data Portal

	Water Resource Map 11	Location: U.S. 31 Township: Cicero & Jefferson County: Tipton Date: August 31, 2020



- | | | | |
|---|---------------------------|---|---------------------------|
|  | Extent Location |  | Field Delineated Stream |
|  | Active Extent |  | OHWM Measurement |
|  | Survey Area (Des 1900096) |  | Delineated Wetland |
|  | Survey Area (Des 1901797) |  | Wetland Data Point |
|  | USGS BlueLine Stream |  | Likely Waters of the U.S. |
| | |  | Lake |

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

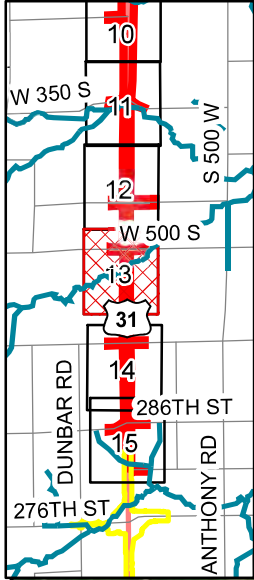
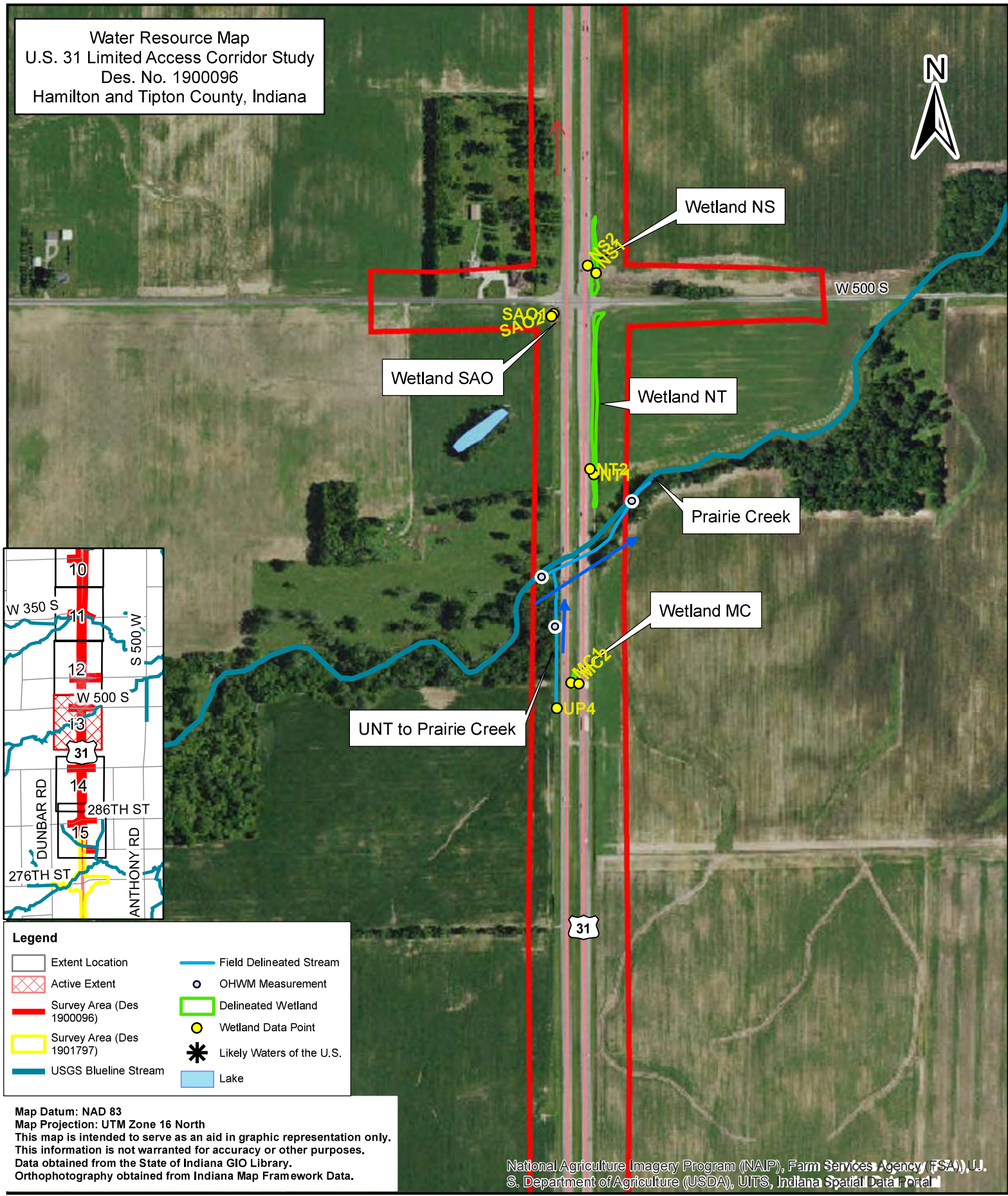
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U.S. Department of Agriculture (USDA), UITS, Indiana Spatial Data Portal



A horizontal number line representing distance in feet. The line is marked with 0, 400, 800, and 1,600. The segment between 400 and 800 is highlighted in white, while the rest of the line is black.

Location: U.S. 31
Township: Cicero & Jefferson
County: Tipton
Date: August 31, 2020

Water Resource Map
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton County, Indiana

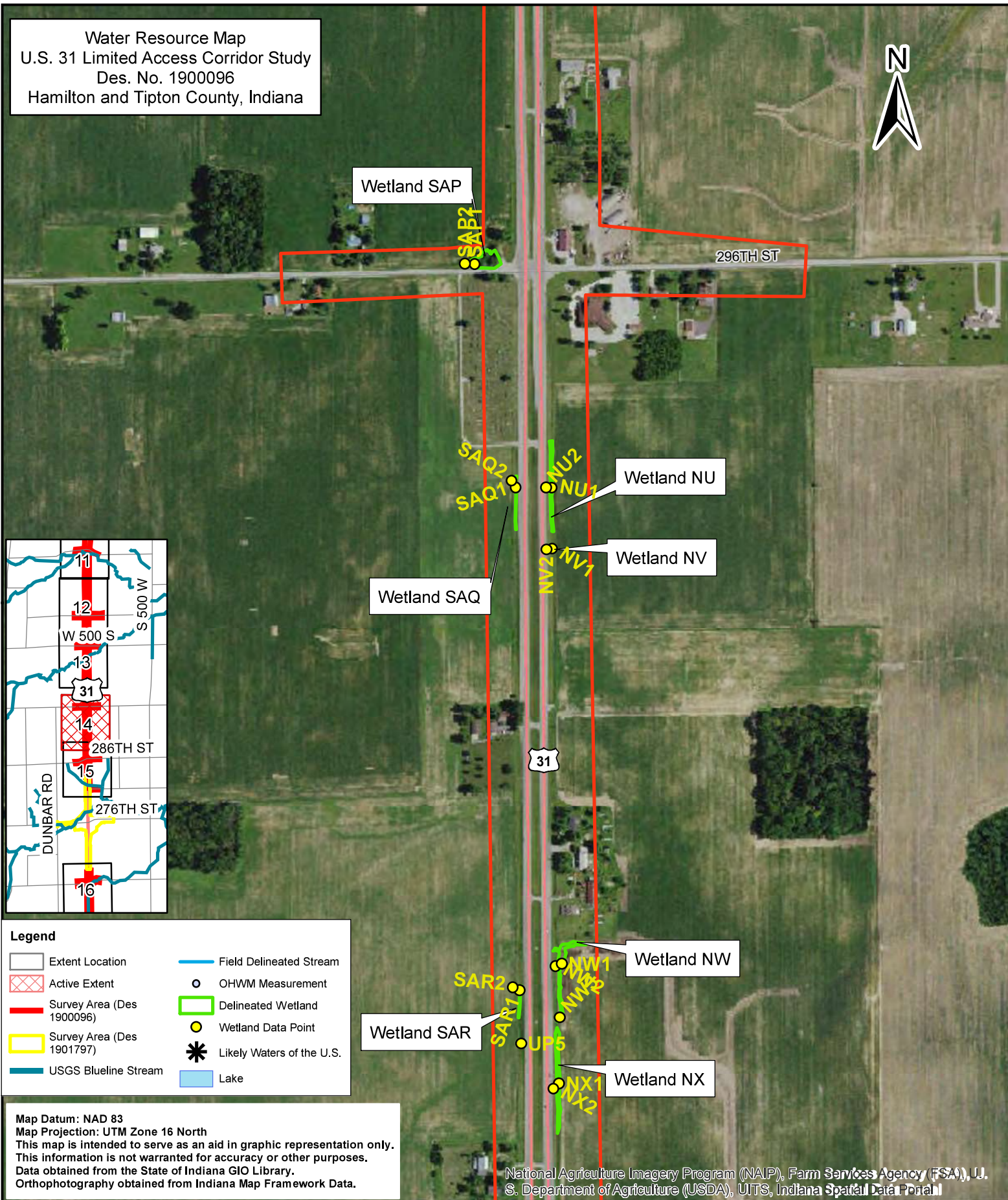


Legend	
	Extent Location
	Active Extent
	Survey Area (Des 1900096)
	Survey Area (Des 1901797)
	USGS Blue line Stream
	Field Delineated Stream
	OHWM Measurement
	Delineated Wetland
	Wetland Data Point
	Likely Waters of the U.S.
	Lake

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U.S. Department of Agriculture (USDA), UITS, Indiana Spatial Data Portal

	Water Resource Map 13	Location: U.S. 31 Township: Cicero & Jefferson County: Tipton Date: August 31, 2020



Water Resource Map 14

0 400 800 1,600 Feet

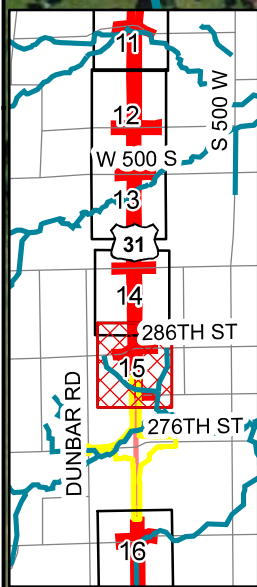
Location: U.S. 31
Township: Cicero, Jefferson,
Adams & Jackson
County: Hamilton & Tipton
Date: August 31, 2020

Water Resource Map
U.S. 31 Limited Access Corridor Study
Des. No. 1900096
Hamilton and Tipton County, Indiana

Wetland SAR

Wetland NW

Wetland NX



Wetland SAS

Wetland NY

Legend

- | | |
|---------------------------|---------------------------|
| Extent Location | Field Delineated Stream |
| Active Extent | OHWM Measurement |
| Survey Area (Des 1900096) | Delineated Wetland |
| Survey Area (Des 1901797) | Wetland Data Point |
| USGS BlueLine Stream | Likely Waters of the U.S. |
| | Lake |

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

Des. No. 1901797: Data not included
in this report. Please see pages:
A1836-A2061

National Agriculture Imagery Program (NAIP), Farm Service Agency (FSA), U.S. Department of Agriculture (USDA), UITS, Indiana Spatial Data Portal



Water Resource Map 15

0 400 800 1,600 Feet

Location: U.S. 31
Township: Adams & Jackson
County: Hamilton
Date: August 31, 2020