Wetlands and Other Waters of the United States Delineation Report

Riverpointe Public Infrastructure Project
St. Charles, St. Charles County, Missouri

CMT Job Number: 19043402-00

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1.0 SUMMARY

This water resource report has been prepared at the request of the City of St. Charles. The purpose of this report is to describe the wetlands and other regulated surface water resources located within the study area for the proposed Riverpoint Public Infrastructure Project in St. Charles, Missouri.

The Clean Water Act defines wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils." Thus, in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and the Midwest Regional Supplement, for an area to be considered a wetland, it must meet all of the following criteria, under normal circumstances: wetland hydrology, a dominance of hydrophytic vegetation and hydric soils.

As summarized in the table below, a total of four (4) streams, an approximately 76-acre forested wetland, and four (4) ponds were identified within the study area. These resources may be subject to regulation under the Clean Water Act and, therefore, impacts to these resources may require 404 authorization from the US Army Corps of Engineers and a 401 water quality certification from the Missouri Department of Natural Resources.

AQUATIC RESOURCES				
RESOURCE	**TYPE**	**EXISTING CONDITION**	**PRELIMINARY JURISDICTIONAL STATUS**	**WITHIN STUDY AREA**
Crystal Springs Creek	Perennial	Moderately Functional	Federally Jurisdictional (a)(2)	2,368 linear feet, 3.54 acres
Stream 2	Perennial	Moderately Functional	Federally Jurisdictional (a)(2)	3845 linear feet, 3.41 acres
Stream 3	Intermittent	Functionally Impaired	Federally Jurisdictional (a)(2)	408 linear feet, 0.13 acre
Stream 4	Ephemeral	Functionally Impaired	Non-Jurisdictional (b)(3)	551 linear feet
Wetland	Forested	Type A; wooded wetland	Federally Jurisdictional (a)(4)	76.3 acres
Pond 1	Man-made impoundment of former river channel	--	Non-Jurisdictional (b)(8)	1.39 acres
Pond 2	Man-made impoundment of former river channel	--	Non-Jurisdictional (b)(8)	5.65 acres
Pond 3	Man-made stormwater pond	--	Non-Jurisdictional (b)(10)	0.44 acre
Pond 4	Ephemeral Pond	--	Non-Jurisdictional (b)(3)	0.60 acre

2.0 METHODOLOGY

2.1 WETLANDS

The on-site evaluation of the approximately 195-acre study area was conducted during site visits on May 20-21, and June 26, 2020. When evaluating for the presence of wetlands, CMT personnel used the routine method for areas greater than 5 acres in size presented in the 1987 Corps of Engineers Wetlands Delineation Manual and the Midwest Regional Supplement. Routine Wetland Determination Data Forms were completed at points along the established transects at changes in inundation depth and/or vegetation community (Appendix A, Exhibit I). Additional data forms were completed in areas off the transects to classify areas of similar inundations depths. Consultant HDR prepared mapping documenting inundation depths for a typical year within the study area (Appendix A, Exhibit J). The mapped inundation is based on the median value from annual USGS gage 06935965 data. Inundation depths for a typical year are separated into six classes: 0-2, 2-5, 5-10, 10-15, 15-20, and >20 feet; the changes in inundation depths were used to inform decisions on where to complete the wetland data form.

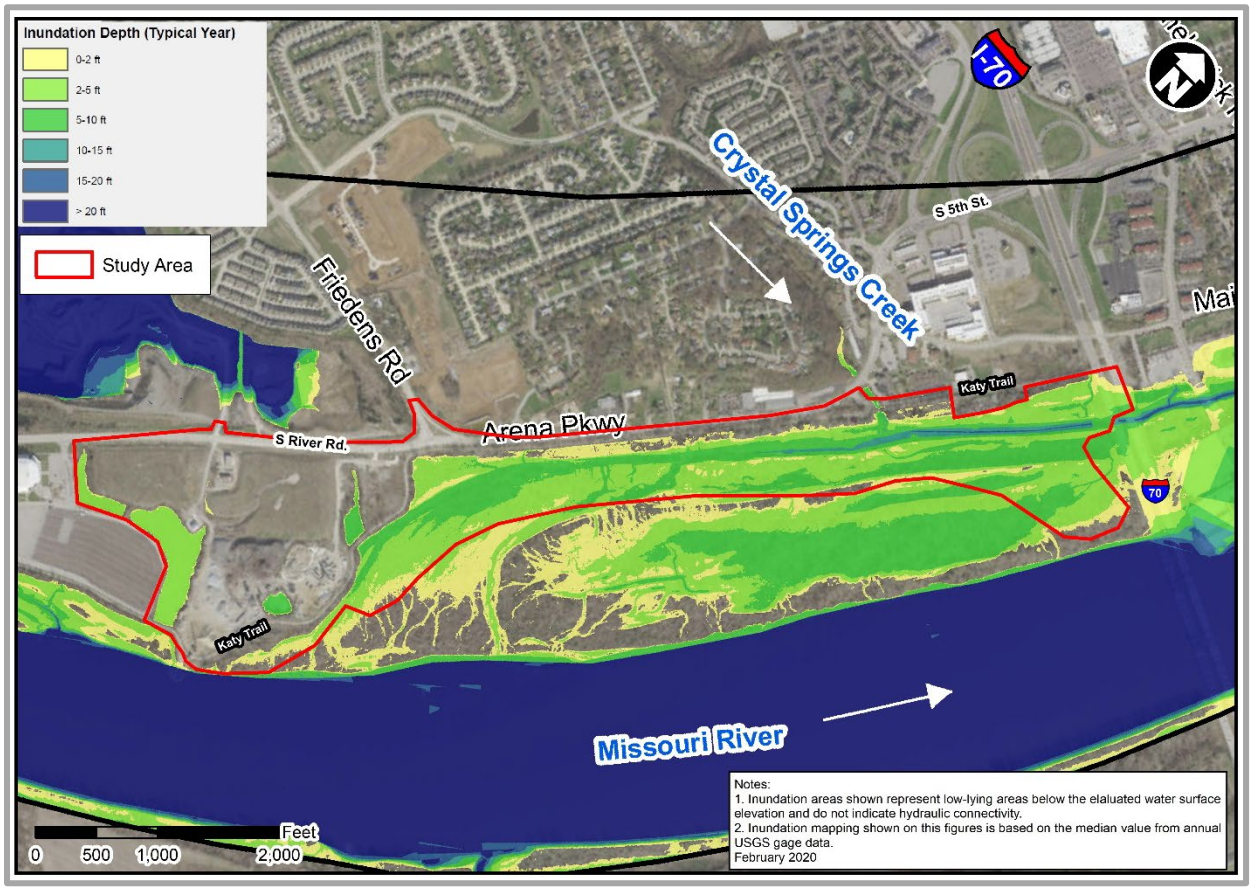

FIGURE 1 – INUNDATION DEPTH TYPICAL YEAR

In order for an area to be classified as a jurisdictional wetland, the area has to have a dominance of hydrophytic vegetation, hydric soils, and wetland hydrology and be an adjacent wetland as defined by the 2020 Navigable Waters Protection Rule. The specific indicators used

for each of the three parameters are noted in the following paragraphs. The completed Routine Wetland Determination Data Forms are included in Appendix B.

2.1.1 HYDROPHYTIC VEGETATION

According to Tiner (2012), a hydrophyte is a vascular plant that grows in water or on a substrate that is saturated at a frequency and duration during the growing period sufficient to affect plant occurrence. Using this definition, the U.S. Fish and Wildlife Service released the National Wetland Plant List. This list categorizes species according to their probability of occurrence in wetlands based on the ecological region. The list identifies five general plant indicator status categories:

- Obligate (OBL): almost always is a hydrophyte, rarely in uplands
- Facultative Wetland (FACW): Usually is a hydrophyte but occasionally found in uplands
- Facultative (FAC): Commonly occurs as either a hydrophyte or non-hydrophyte
- Facultative Upland (FACU): Occasionally is a hydrophyte but usually occurs in uplands
- Obligate Upland (UPL): Rarely is a hydrophyte, almost always in uplands

In order to satisfy the hydrophytic vegetation criteria required for a jurisdictional wetland, the area had to be dominated (over 50 percent) by obligate wetland plants, facultative wetland plants, and facultative plants.

The method used during this survey for determining vegetation dominance was the 50/20 method. Using this method, plant species in each stratum are ranked according to their percent aerial cover and then cumulatively summed until 50 percent of the total dominance measure is exceeded. All species contributing to that cumulative total plus any additional species that have at least 20 percent of the total dominance measure are considered dominants in their respective stratum.

2.1.2 HYDRIC SOIL

Hydric soil is soil formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part. The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Hydric soil indicators include the presence of histosols, histic epipedons, reducing conditions, gleyed or low chroma soil colors and high organic content or organic streaking in sandy soil. An additional hydric soil indicator used was if the mapped and confirmed soil type appears on the local or national hydric soils list.

2.1.3 WETLAND HYDROLOGY

Wetland hydrology is defined as an area that is inundated or saturated at or near the surface for at least five percent of the growing season in most years. This can include areas that are ponded, flooded or those areas that have a water table at or near the surface. Indications of wetland hydrology included surface water, saturation, evidence of drift deposits, iron deposits or drainage patterns, and inundation. Water-stained leaves, oxidized root channels within 12

inches below ground surface on living plants, the FAC neutral test and local soil survey data were also used to indicate wetland hydrology.

2.1.4 WETLAND LOCATION

The wetland boundary was determined using the draft map of inundation depths for a typical year produced by consultant HDR. The wetland or upland determinations at the field-collected data points informed the wetland or upland determination of the similar inundation areas within the study area. The wetland boundary with the field-collected data point locations are found on the wetland delineation map in Appendix A. All additional wetland mapping and physical data is also provided in Appendix A.

2.1.5 WETLAND QUALITATIVE ASSESSMENT

The wetland plant community was evaluated using the Floristic Quality Index (FQI).

The FQI is an index derived from floristic inventory data and is calculated from the number of species that occur in the plant community, as well as the species coefficient of conservatism (C) values. C-values are assigned to individual plant species. The higher the C-value is, the more likely a plant is from a minimally altered landscape. Low C-values are assigned to weeds, or species that can exist in a wide range of conditions. An area of high natural quality would include conservative native plants that are adapted to a specialized community context and would have a mean C-value of 5 or greater. The aggregate conservatism of all the plants inhabiting a site is used to determine its FQI.

The general classifications of the vegetative communities are made based on the FQI scores.

FQI	Classification
0-5	severely degraded
5-10	degraded
10-20	moderately degraded
20 +	high quality

2.2 STREAMS

Streams were evaluated for their jurisdictional status based on the 2020 Navigable Waters Protection Rule definition of waters of the United States, which requires the presence of an ordinary high water mark (OHWM) and be a perennial or intermittent tributary with ultimate connection to downstream Section 10 Traditional Navigable Waters (TNW).

The following USACE definitions for the three streams types were used:

> **Ephemeral streams** have flowing water only during and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.
>
> **Intermittent streams** have flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.
>
> **Perennial Streams** have flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

The determination of stream designation is based on an evaluation of the size of the watershed for each stream, the presence of flow during the on-site evaluation and the evidence observed of the frequency of flow, and the presence of aquatic life. In addition to flow regime, streams were also classified according to existing conditions and rated either functional, moderately functional, or functionally impaired, based on the definitions in the State of Missouri Stream Mitigation Method (MSMM).

3.0 BACKGROUND INFORMATION

3.1 PROJECT DESCRIPTION

The City of St. Charles is proposing a new, multi-phase riverfront development project along South River Road located south of Interstate 70 (I-70) to the Family Arena within the City of St. Charles. The project consists of three phases of development along Bangert Island and the Missouri River.

Phase 1 of the project consists of an approximately 22-acre mixed-use development located adjacent to I-70 and South Main Street. Phase 2 of the project consists of an approximately 80-acre mixed-use and office space development near the Family Arena. Phase 3 of the project consists of an approximately 20-acre development along South River Road connecting Phases 1 and 2.

The development will provide recreational, employment, entertainment, and retail opportunities along approximately 1.6 miles of riverfront.

Portions of the project are currently in the preliminary design phase. Phased construction is anticipated to begin in Fall 2020 and be completed in Fall 2022.

FIGURE 2 – STUDY AREA

3.2 PROJECT LOCATION

The proposed project is located along South River Road between I-70 and the Family Arena within the City of St. Charles in St. Charles County, Missouri. The project is within Sections 5 and 8, Township 46 North, Range 5 East of the U.S. Geological Survey (USGS) St. Charles, Kampville, Chesterfield, and Creve Coeur, Missouri Quadrangles. The project location is in a relatively developed area with Bangert Island and the Missouri River to the east, I-70 to the north, and residential and commercial development to the west and south.

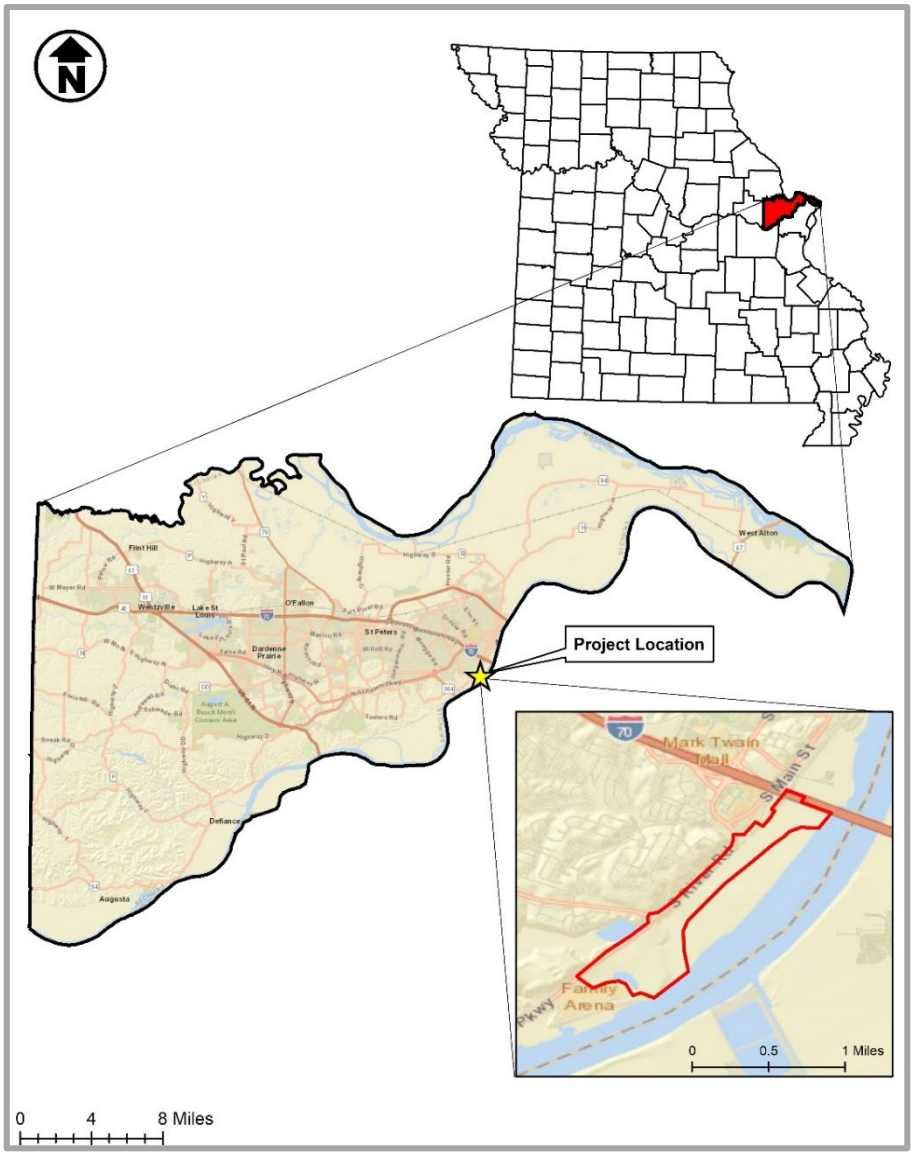

FIGURE 3 – COUNTY LOCATION MAP

The study area includes portions of Bangert Island, which was once an island separated from the bluff at St. Charles by a side channel. However, river channel structures built on the Missouri River in the 1930s and 1940s have gradually silted in the channel separating Bangert Island from the shoreline. The deposition chocked the original side channel entrance at the Missouri River to the point of closure by 1980 and effectively reattached Bangert Island to the bluff.

Bangert Island, which was purchased by St. Charles County from the Missouri Department of Natural Resources in 2014, is currently being utilized as a park and recreation area. Within the park, there are approximately four miles of natural surfaced trails utilized for hiking, biking, bird watching, etc. The remainder of the land is maintained as a natural area comprised of habitats that primarily consist of bottomland hardwood forest. The Katy Trail State Park is located

adjacent to the northwest boundary of the project and crosses through the southern portion of the study area.

3.3 HISTORICAL OR PUBLISHED INFORMATION

The study area is located within the Cowmire Creek-Missouri River (12 digit HUC 103002000801) and Duckett Creek-Missouri River (12 digit HUC 103002000704) watershed of the Lower Missouri watershed (8 digit HUC 10300200). The reach of the Missouri River located adjacent to the study area is listed on Missouri's 2018 303(d) listed waters as impaired for E. coli. The Missouri River is classified as a TNW.

The St. Charles County Soil Survey indicates the following soils are present within the study area.

- 60003 – Menfro silt loam, 9 to 14 percent slopes, eroded
- 60125 – Harvester-Urban land complex, 9 to 14 percent slopes
- 66092 – Fishpot-Urban land complex, 0 to 5 percent slopes, rarely flooded
- 66126* – Haynie-Treloar-Blake complex, 0 to 2 percent slopes, frequently flooded
- 99000 – Pits, quarry
- 99001 – Water

According to the St. Charles County Hydric Soils List, the soils marked with an asterisk are hydric.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the study area is located within FEMA Flood Zone AE, which corresponds to 1% annual chance of a flood hazard and the regulatory floodway of the Missouri River and Crystal Springs Creek.

The National Wetlands Inventory (NWI) map indicates that forested wetlands are located throughout the study area; riverine and emergent wetlands are also located within the study area.

According to the National Hydrography Dataset (NHD), NWI, and USGS topographic maps, streams are located within the study area.

Copies of the USGS topographic map, NWI map, NHD map, FEMA flood zone map, NRCS soils map, and the relevant portions of the St. Charles County Soil Survey are included in Appendix A (Exhibits C-H).

Biologists from the Kansas City District U.S. Army Corp of Engineers performed an initial wetlands field review of Bangert Island and portions of the study area in February 2016. The Initial Field Wetland/Habitat Summary for Bangert Island is provided in Appendix D.

4.0 RESULTS

A total of four (4) streams, an approximately 76-acre forested wetland, and four (4) ponds were identified in the study area during the onsite investigations on May 20-21 and June 26, 2020. The Water Resources Maps provided in Appendix A depict the locations of these resources on an aerial photograph and the inundation depths for a typical year. Data forms and the Floristic Quality Index (FQI) result are provided in Appendix B. Representative photographs of the identified features are provided in Appendix C.

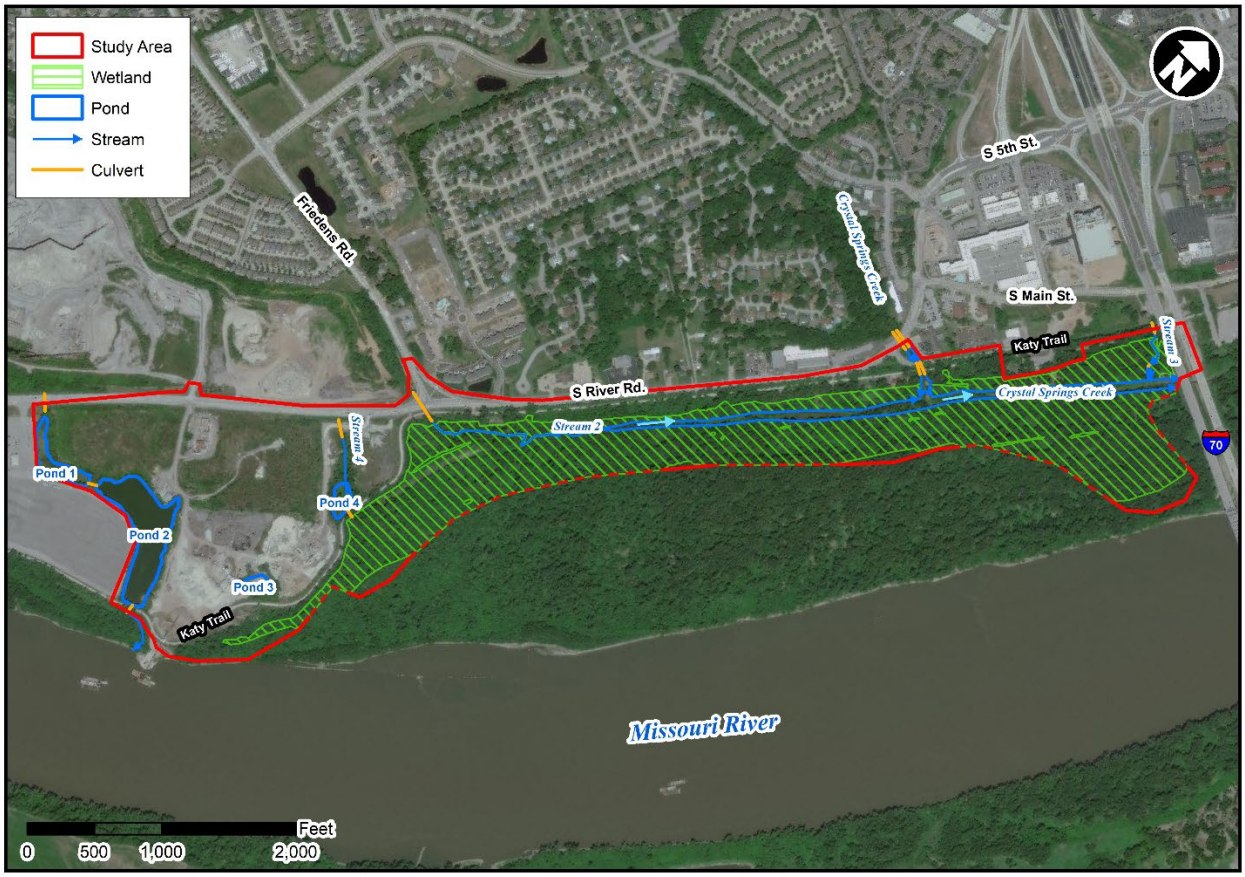

FIGURE 4 – WATER RESOURCES MAP

4.1 WETLANDS

Thirty-two (32) data points were assessed in the study area; twenty (20) data points were identified as exhibiting all three wetland characteristics. A summary of the wetland data points is provided in the table below. Based on the results of the data points within inundation depths of 2-5 feet and greater, these areas met the three parameters of a wetland and were delineated as a wetland. Approximately half of the data points collected within inundation depths of 0-2 feet met the three parameters of a wetland; therefore, these areas within the study area have been classified as transitional areas between wetlands and uplands and approximately half of the area has been delineated as a wetland.

DELINEATION DATA POINT SUMMARY					
DATA POINT	WETLAND INDICATOR PRESENT?			SAMPLED AREA WITHIN WETLAND?	INUNDATION DEPTH (TYPICAL YEAR), feet
	HYDROPHYTIC VEGETATION	HYDRIC SOIL	HYDROLOGY		
A	yes	yes	yes	yes	2-5
B	yes	no	yes	no	0-2
C	yes	yes	yes	yes	2-5
D	yes	yes	yes	yes	2-5 / 5-10
E	yes	no	yes	no	0-2
F	yes	yes	yes	yes	0-2
G	no	no	yes	no	none
H	yes	yes	yes	yes	2-5
I	yes	yes	no	no	none
J	yes	yes	yes	yes	0-2
K	yes	yes	yes	yes	5-10
L	yes	no	no	no	0-2
M	yes	yes	no	no	none / 0-2
N	yes	yes	yes	yes	2-5
O	yes	no	yes	no	0-2
P	yes	yes	yes	yes	2-5 / 5-10
Q	yes	no	yes	no	0-2
R	yes	yes	yes	yes	2-5
S	yes	yes	yes	yes	0-2
T	yes	yes	yes	yes	2-5
U	yes	yes	yes	yes	2-5
V	yes	no	yes	no	0-2
W	yes	no	yes	no	none
X	yes	yes	yes	yes	2-5
Y	yes	yes	yes	yes	0-2
Z	yes	no	yes	no	none
AA	yes	yes	yes	yes	0-2
BB	yes	yes	yes	yes	2-5
CC	yes	yes	yes	yes	2-5
DD	yes	yes	yes	yes	0-2
EE	yes	yes	yes	yes	0-2
FF	yes	no	yes	no	5-10

The study area contains approximately 76 acres of continuous forested wetlands. The wetland area abuts and is inundated by flooding from Crystal Springs Creek and Stream 2, which are perennial tributaries to the Missouri River, a TNW, and is likely federally jurisdictional as defined by (a)(4) of the 2020 Navigable Waters Rule. The wetland area is also inundated by flooding from the Missouri River during a typical year.

Based on the Missouri Wetland Mitigation Method (MWMM), the wetland area is aquatic resource type A: wooded wetland with canopy height greater than 6 meters. A Floristic Quality Index (FQI) was completed for the continuous wetland area. The native mean C-value is 2.6, indicating that the plant community is considered low quality. The native FQI is 10.4, indicating that the plant community is moderately degraded.

Throughout the study area, the wetland vegetation was dominated by ash-leaf maple (*Acer negundo*, FAC), silver maple (*Acer saccharinum*, FACW), Eastern cottonwood (*Populus deltoides*, FAC), and American sycamore (*Platanus occidentalis*, FACW) in the tree layer, ash-leaf maple (*Acer negundo*, FAC), silver maple (*Acer saccharinum*, FACW) and common hackberry (*Celtis occidentalis*, FAC) in the sapling/shrub layer, and cress-leaf groundsel (*Packera glabella*, FACW), spotted touch-me-not (*Impatiens capensis*, FACW), Eastern poison ivy (*Toxicodendron radicans*, FAC), in the herbaceous layer. The wetland soils typically met the redox dark surface or depleted matrix hydric soil indicators. The primary hydrology indicators saturation, water marks, drift deposits, sparsely vegetation concave surface, and water-stained leaves, and the secondary hydrology indicators surface soil cracks, drainage patterns, geomorphic position, and FAC-neutral test were typically present throughout the wetland data points.

Details on the soil, hydrology and dominant vegetation for at each data point are provided on the Routine Wetland Determination Data Forms included in Appendix B. Photographs at each data point are provided in Appendix C.

4.2 STREAMS

A total of four (4) streams were identified within the study area. A summary of these streams is provided in the table below.

STREAM SUMMARY								
STREAM NAME	**RECEIVING WATERS**	**PRELIMINARY USACE JURISDICTIONAL STATUS**	**STREAM TYPE**	**DRAINAGE AREA (SQ MI)***	**PRIORITY WATERS**	**EXISTING CONDITION**	**LINEAR FEET WITHIN STUDY AREA**	**ACRES WITHIN STUDY AREA**
Crystal Springs Creek (Stream 1)	Missouri River	Jurisdictional (a)(2)	Perennial	2.23	Secondary Priority	Moderately Functional	2,337	3.54
Stream 2	Crystal Springs Creek > Missouri River	Jurisdictional (a)(2)	Perennial	0.36	Secondary Priority	Moderately Functional	3,859	3.41
Stream 3	Crystal Springs Creek > Missouri River	Jurisdictional (a)(2)	Intermittent	0.06	Secondary Priority	Functionally Impaired	419	0.13
Stream 4	Pond 4 > culvert > undefined channel/swale > Stream 2 > Crystal Springs Creek > Missouri River	Non-Jurisdictional (b)(3)	Ephemeral	0.32	Tertiary Priority	Functionally Impaired	551	--

* As calculated by USGS Stream Stats at most downstream location within the study area.

As indicated in the table, Crystal Springs Creek, Stream 2, and Stream 3 are perennial or intermittent tributaries to the Missouri River, a TNW, and are likely federally jurisdictional as defined by (a)(2) of the 2020 Navigable Waters Rule.

The Water Resources Maps in Appendix A show the locations of these streams in the study area. The Stream Stats reports for each stream are in Appendix B. Representative photographs of each stream are provided in Appendix C.

4.3 LAKES/PONDS

Within the study area, a total of four (4) ponds were identified during the onsite investigation. The Water Resources Map in Appendix A shows the location of these ponds within the study area. Photographs of the ponds are provided in Appendix C. Based on historical imagery, Ponds 1 and 2 were once directly connected to the Missouri River as side channels; as development and upland were constructed around the ponds, they were cut off from the Missouri River in the early 1970s and appear to currently function as stormwater collection basins for the surrounding developments and upland areas. Pond 4 appears to be created from the backing up of Stream 4 at partially blocked culverts located under the Katy Trail.

POND SUMMARY					
POND NAME	**CONNECTION TO DOWNSTREAM TNW**	**TYPE**	**PRELIMINARY USACE JURISDICTIONAL STATUS**	**AQUATIC RESOURCE TYPE***	**ACRES WITHIN STUDY AREA**
Pond 1	culvert > Pond 2 > culvert > unnamed tributary > Missouri River	Man-made impoundment of former river channel	Non-Jurisdictional (b)(8)	Type C	1.39
Pond 2	culvert > unnamed tributary > Missouri River	Man-made impoundment of former river channel	Non-Jurisdictional (b)(8)	Type C	5.65
Pond 3	None - Isolated	Man-made stormwater pond	Non-Jurisdictional (b)(10)	Type C	0.44
Pond 4	culvert > undefined channel > Stream 2 > Crystal Springs Creek > Missouri River	Ephemeral pond	Non-Jurisdictional (b)(3)	Type C	0.60
				TOTAL	**8.08**

*Based on MWMM

5.0 REFERENCES

The following references were consulted during the investigation:

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- 10 CSR 20-7.031 Tables D and E: Outstanding State and National Resource Waters
- Priority Watershed Listing at: http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/nationwidepermits/2017/PriorityWatersheds.pdf

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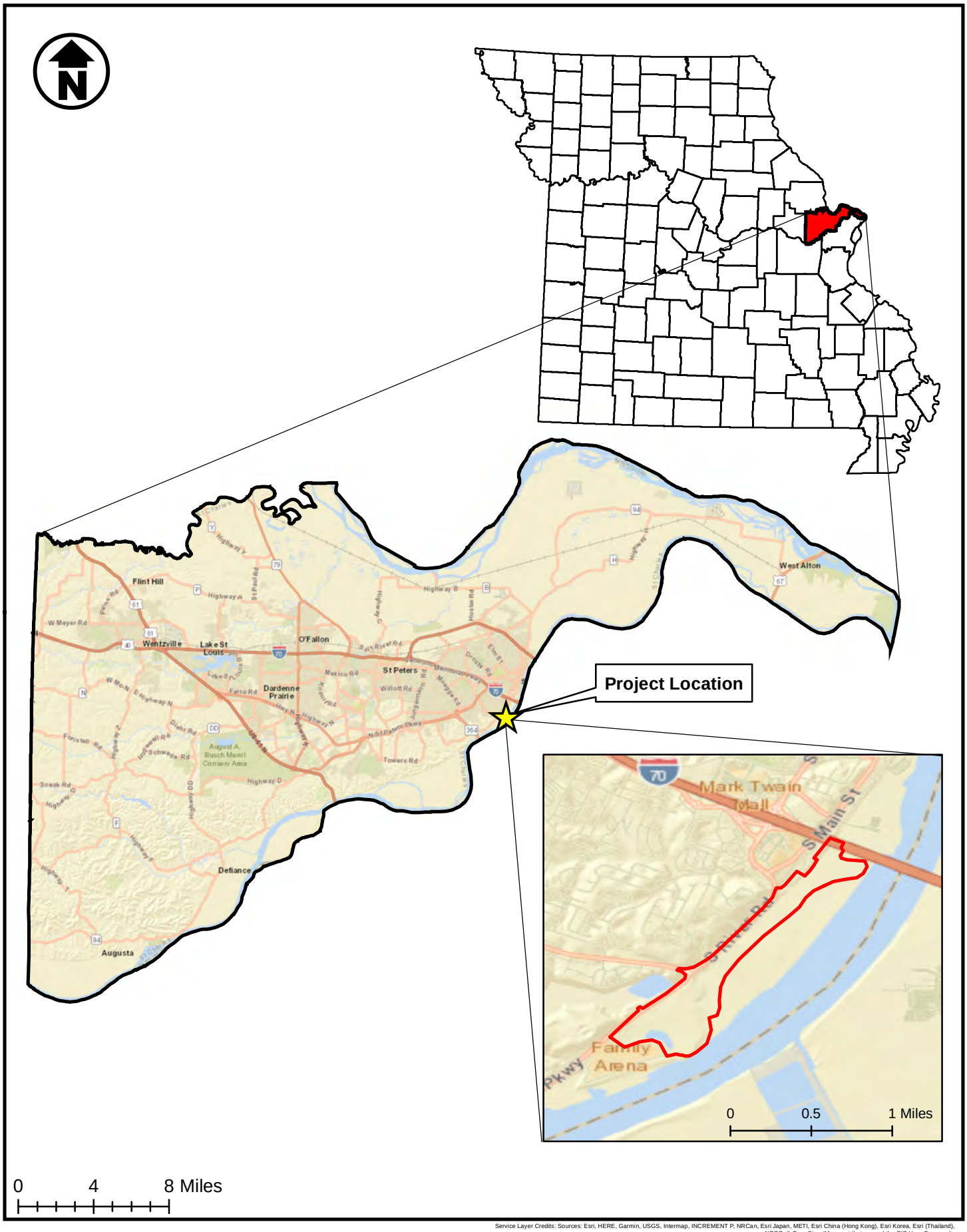
APPENDIX A: PROJECT MAPPING

Exhibit A



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

Riverpointe Public Infrastructure Project

Location Map - St. Charles County, MO

Crawford, Murphy & Tilly

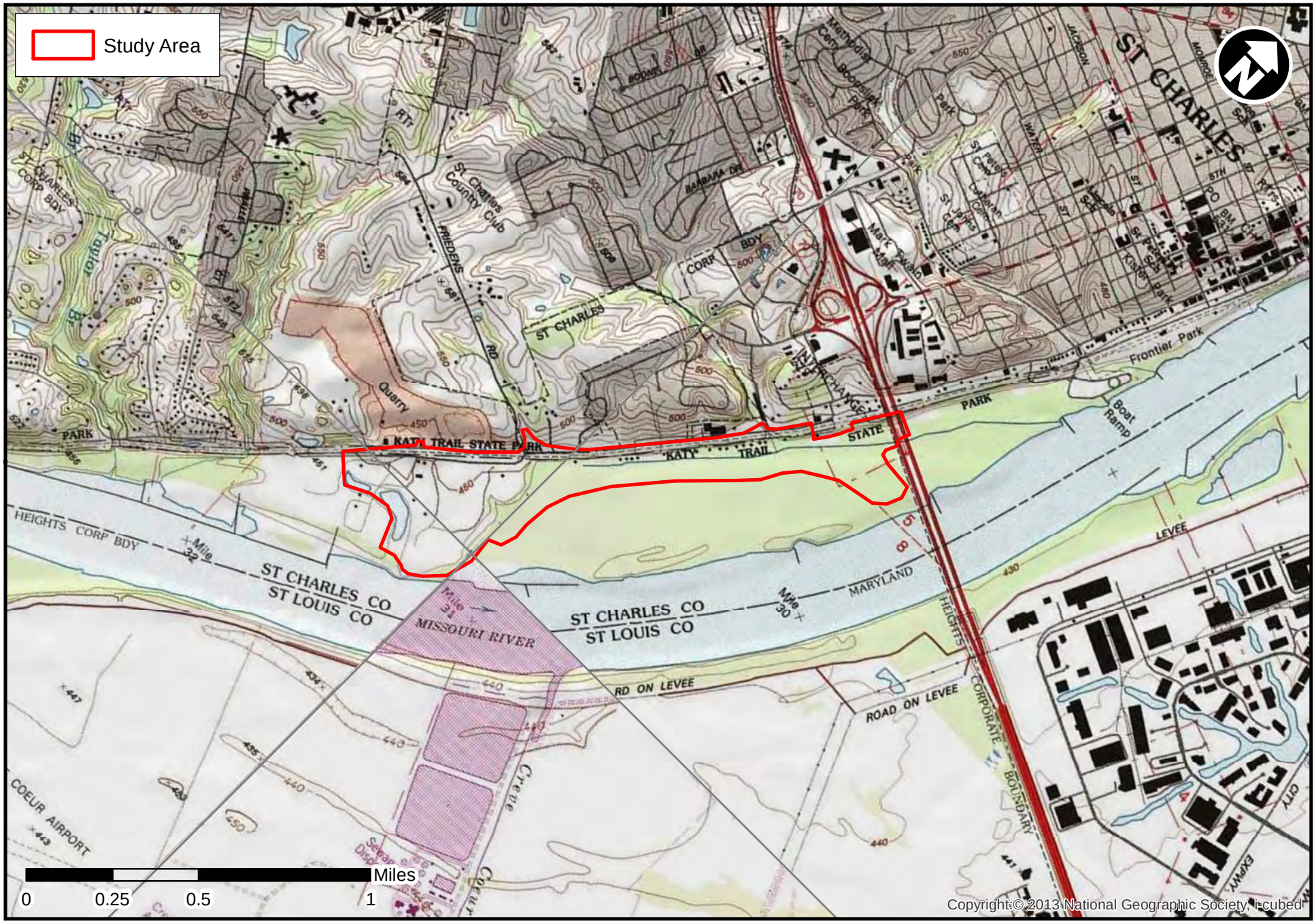
Exhibit B

Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

Aerial

CMT
Crawford, Murphy & Tilly

Exhibit C

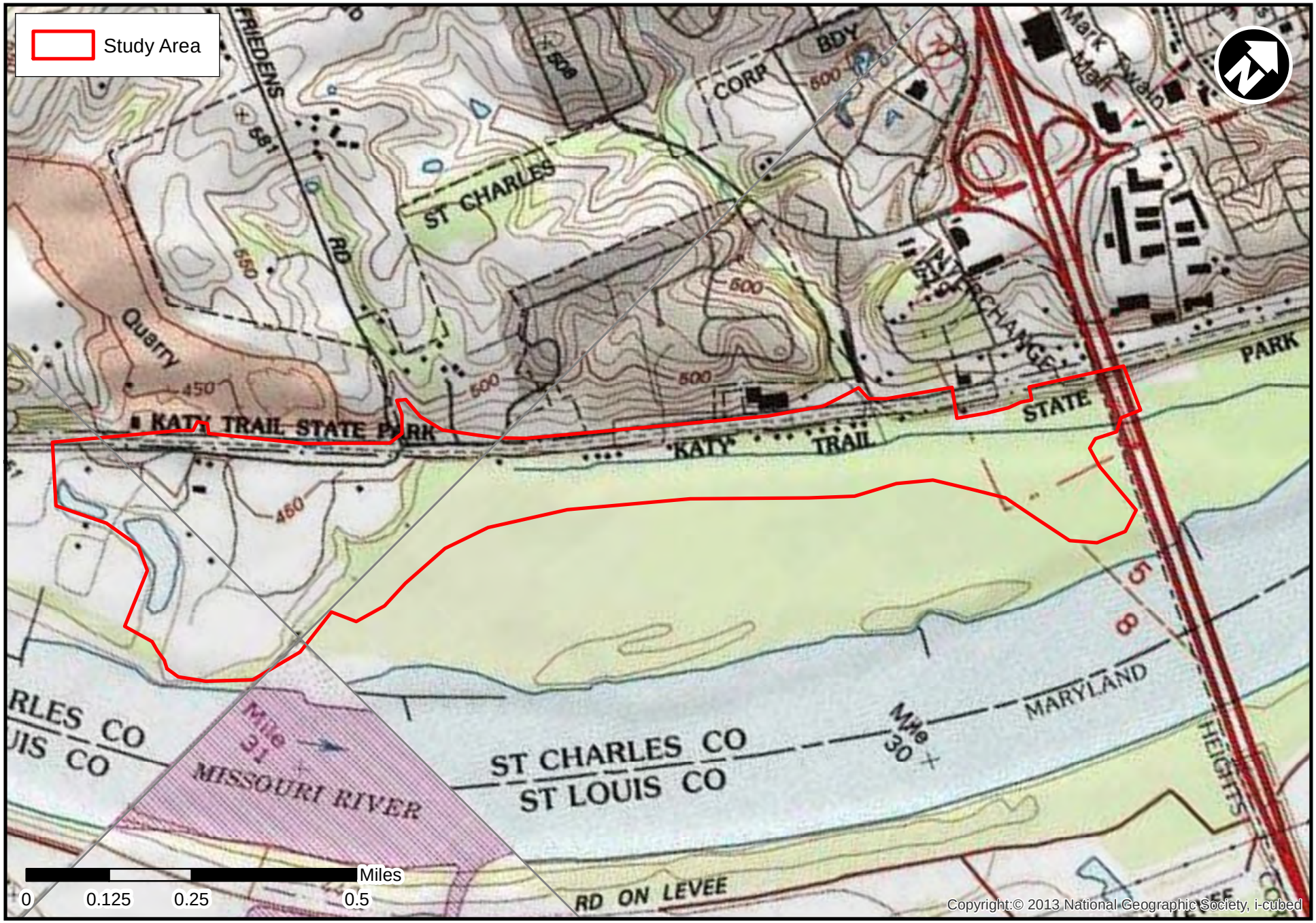


Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

USGS Topographic Map - St. Charles, Kampville, Chesterfield, and Creve Coeur, MO Quadrangles

CMT
Crawford, Murphy & Tilly

Exhibit D

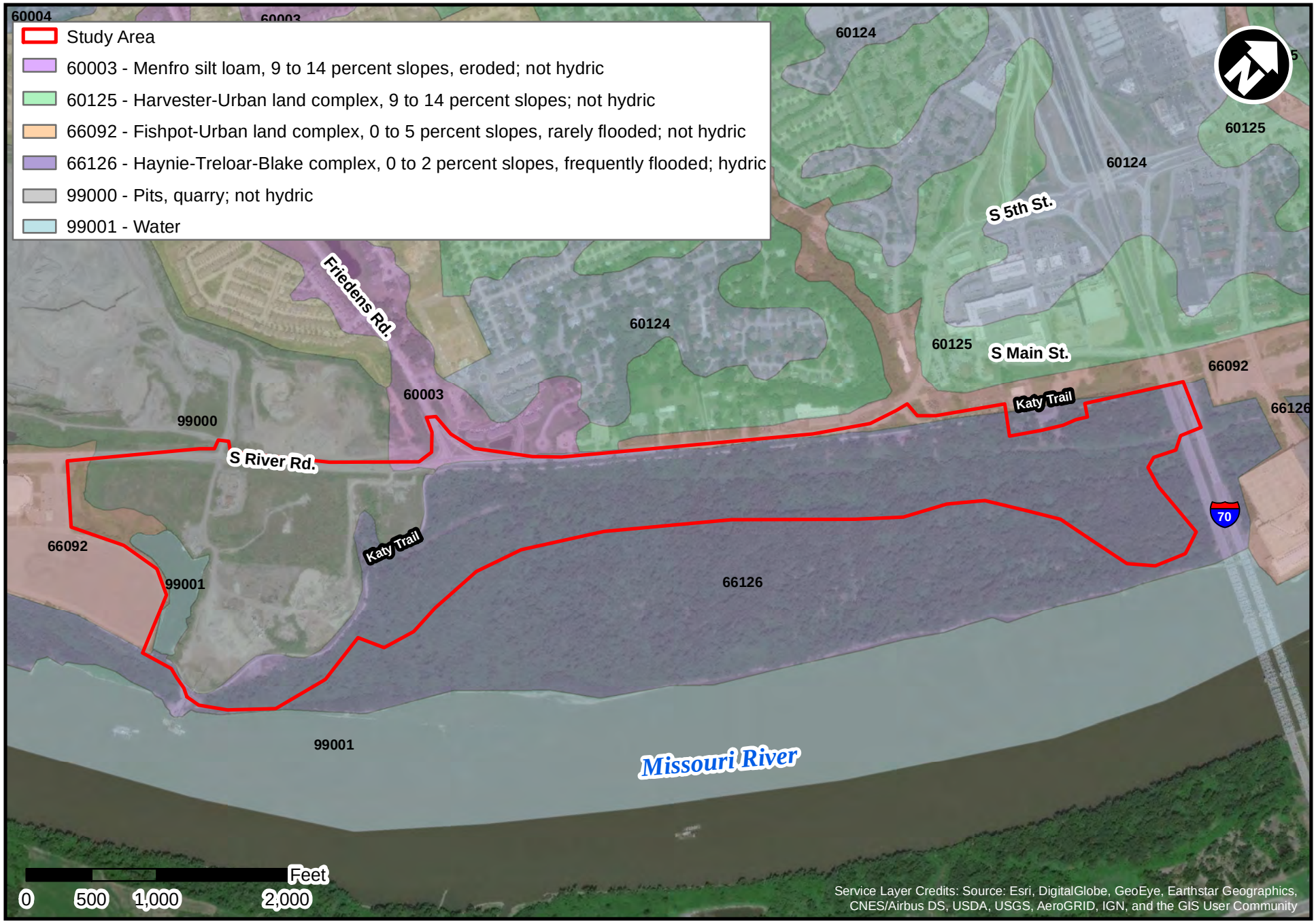


Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

USGS Topographic Map - St. Charles, Kampville, Chesterfield, and Creve Coeur, MO Quadrangles

CMT
Crawford, Murphy & Tilly

Exhibit E



Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

NRCS Soil Survey Map

CMT
Crawford, Murphy & Tilly

Map Unit Description (Brief, Generated)

St. Charles County, Missouri

[Minor map unit components are excluded from this report]

Map unit: 60003 - Menfro silt loam, 9 to 14 percent slopes, eroded

Component: Menfro (85%)

The Menfro component makes up 85 percent of the map unit. Slopes are 9 to 14 percent. This component is on hills, hillslopes. The parent material consists of loess. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. This component is in the F115BY001MO Deep Loess Upland Woodland ecological site. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Map unit: 60125 - Harvester-Urban land complex, 9 to 14 percent slopes

Component: Harvester (70%)

The Harvester component makes up 70 percent of the map unit. Slopes are 9 to 14 percent. This component is on hills, hillslopes. The parent material consists of loess. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 34 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 0 percent. This component is in the F115BY001MO Deep Loess Upland Woodland ecological site. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Component: Urban land (20%)

Generated brief soil descriptions are created for major soil components. The Urban land is a miscellaneous area.

Map unit: 66092 - Fishpot-Urban land complex, 0 to 5 percent slopes, rarely flooded

Component: Fishpot (50%)

The Fishpot component makes up 50 percent of the map unit. Slopes are 0 to 5 percent. This component is on stream terraces, river valleys. The parent material consists of mine spoil or earthy fill. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is rarely flooded. It is not ponded. A seasonal zone of water saturation is at 20 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

Component: Urban land (40%)

Generated brief soil descriptions are created for major soil components. The Urban land is a miscellaneous area.

Map Unit Description (Brief, Generated)

St. Charles County, Missouri

Map unit: 66126 - Haynie-Treloar-Blake complex, 0 to 2 percent slopes, frequently flooded

Component: Haynie (45%)

The Haynie component makes up 45 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains, river valleys. The parent material consists of alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. This component is in the F115BY015MO Sandy/loamy Floodplain Forest ecological site. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 5 percent.

Component: Treloar (25%)

The Treloar component makes up 25 percent of the map unit. Slopes are 0 to 2 percent. This component is on river valleys, flood-plain steps. The parent material consists of sandy alluvium over loamy alluvium. Depth to a root restrictive layer, strongly contrasting textural stratification, is 16 to 39 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 28 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 1 percent. This component is in the F115BY015MO Sandy/loamy Floodplain Forest ecological site. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent.

Component: Blake (20%)

The Blake component makes up 20 percent of the map unit. Slopes are 0 to 2 percent. This component is on river valleys, flood plains. The parent material consists of alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 14 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 3 percent. This component is in the F115BY031MO Loamy Floodplain Forest ecological site. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 5 percent.

Map unit: 99000 - Pits, quarry

Component: Pits (100%)

Generated brief soil descriptions are created for major soil components. The Pits is a miscellaneous area.

Map unit: 99001 - Water

Component: Water (100%)

Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.

Hydric Soils

St. Charles County, Missouri

[This report lists only those map unit components that are rated as hydric. Dashes (---) in any column indicate that the data were not included in the database. Definitions of hydric criteria codes are included at the end of the report]

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
66126:					
Haynie-Treloar-Blake complex, 0 to 2 percent slopes, frequently flooded	Haynie	45	Flood plains	Yes	4
	Treloar	25	Flood-plain steps	Yes	4
	Blake	20	Flood plains	Yes	4
	SansDessein	5	Flood-plain steps	Yes	2, 4
	Sarpy	5	Flood-plain steps	Yes	4

Hydric Soils

This table lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2003) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 2002).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2B3). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
   B. are poorly drained or very poorly drained and have either:
      1) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
      2) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
      3) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

References:

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
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Hurt, G.W., P.M. Whited, and R.F. Pringle, editors. Version 5.0, 2002. Field indicators of hydric soils in the United States.
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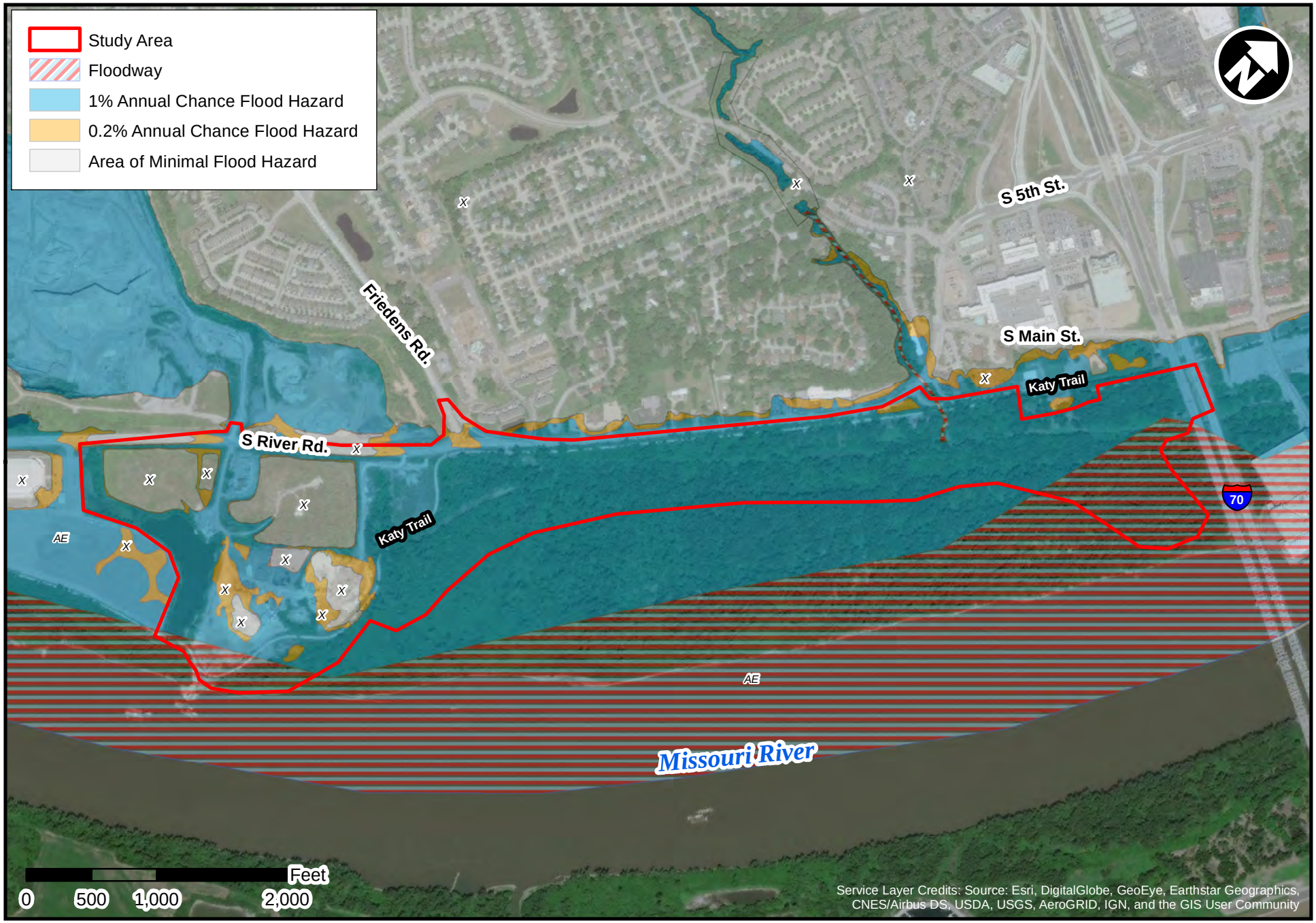
Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

Exhibit F



Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

FEMA National Flood Hazard Map

CMT
Crawford, Murphy & Tilly

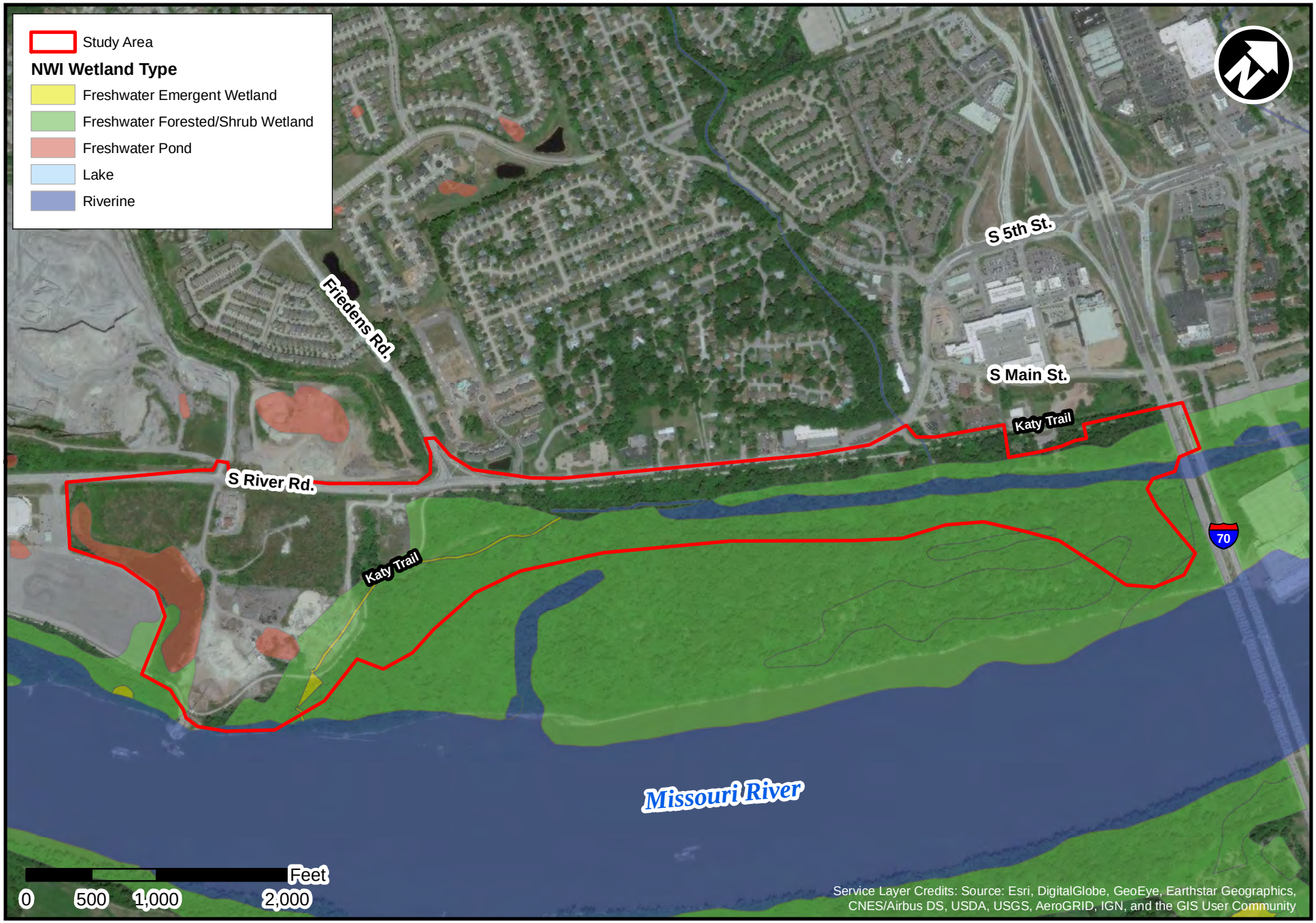
Exhibit G

Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

National Hydrography Dataset Map

CMT
Crawford, Murphy & Tilly

Exhibit H

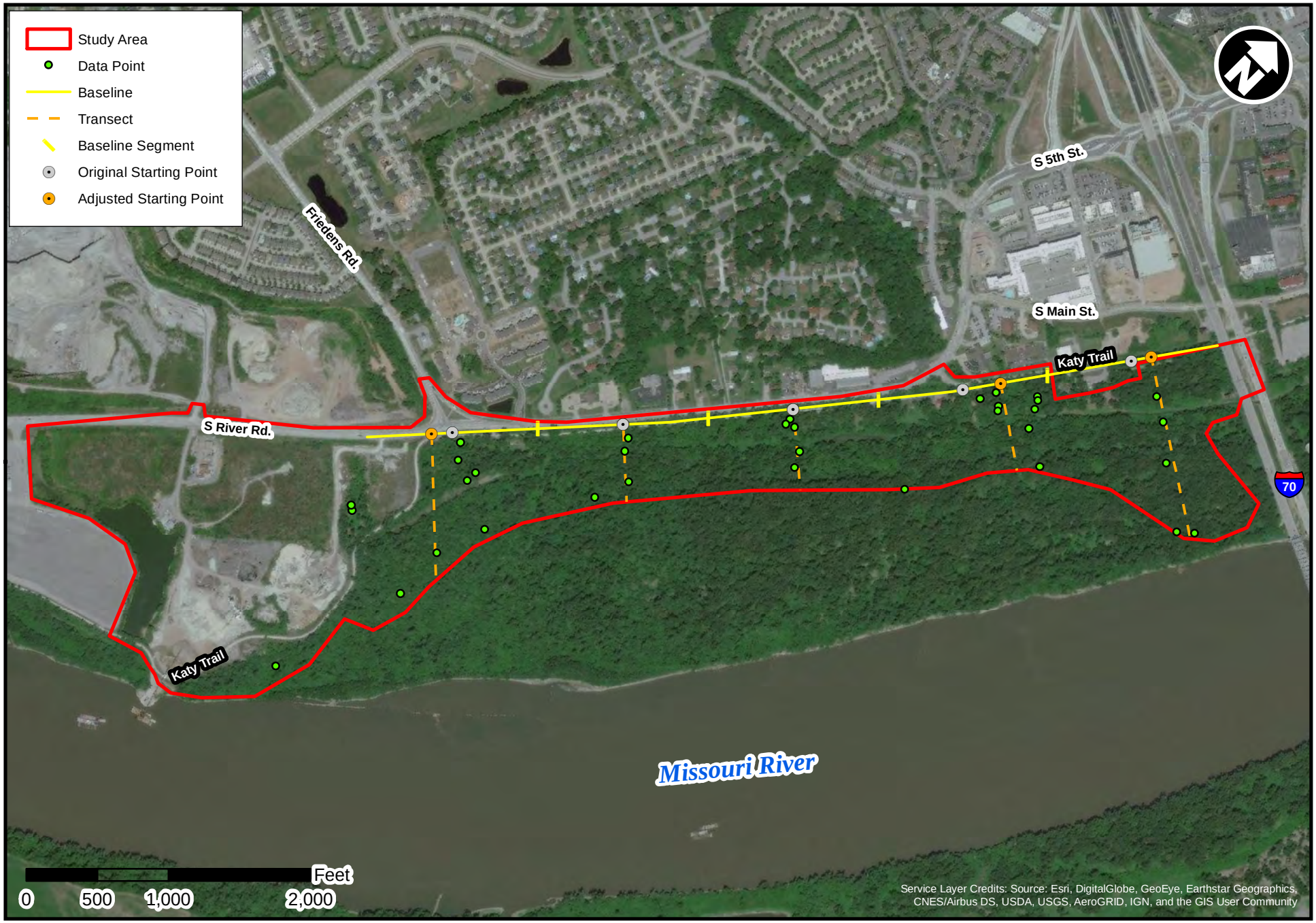


Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

National Wetland Inventory Map

CMT
Crawford, Murphy & Tilly

Exhibit I

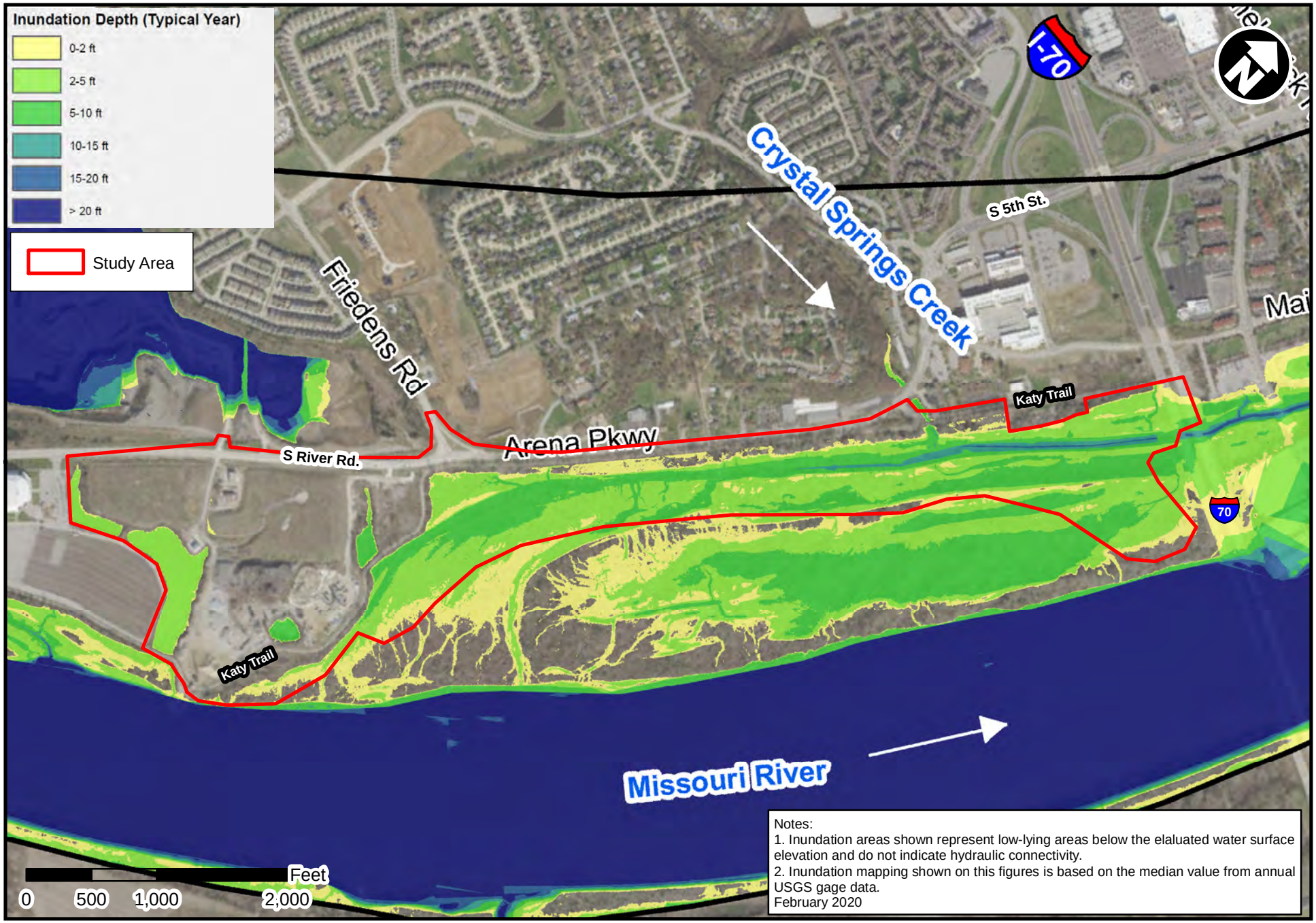


Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

Wetland Delineation Protocol

CMT
Crawford, Murphy & Tilly

Exhibit J

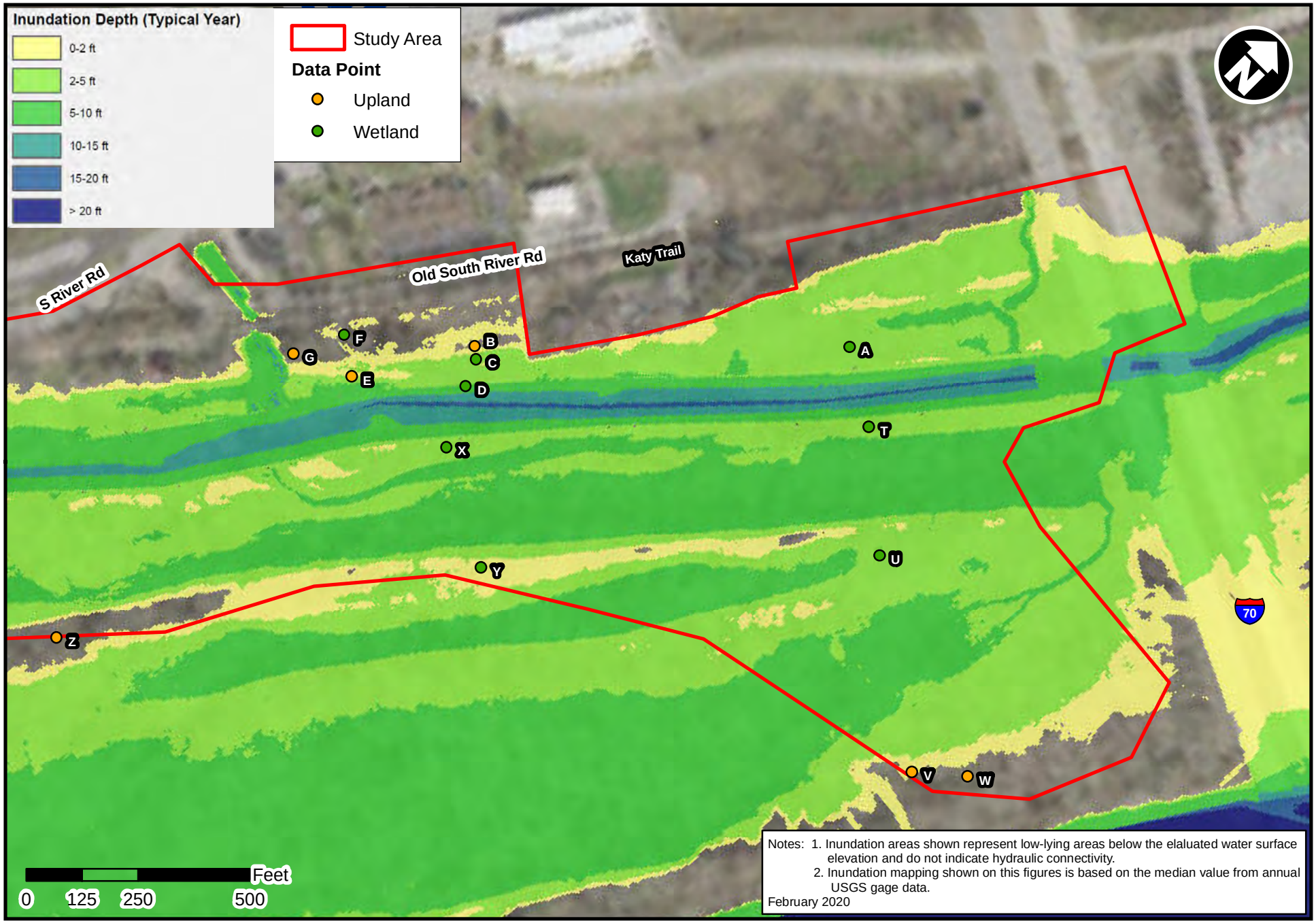


Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

Inundation Depth Typical Year

CMT
Crawford, Murphy & Tilly

Exhibit K



Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

Inundation Depth Typical Year - North

CMT
Crawford, Murphy & Tilly

Exhibit L

Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

Water Resources Map - North

CMT
Crawford, Murphy & Tilly

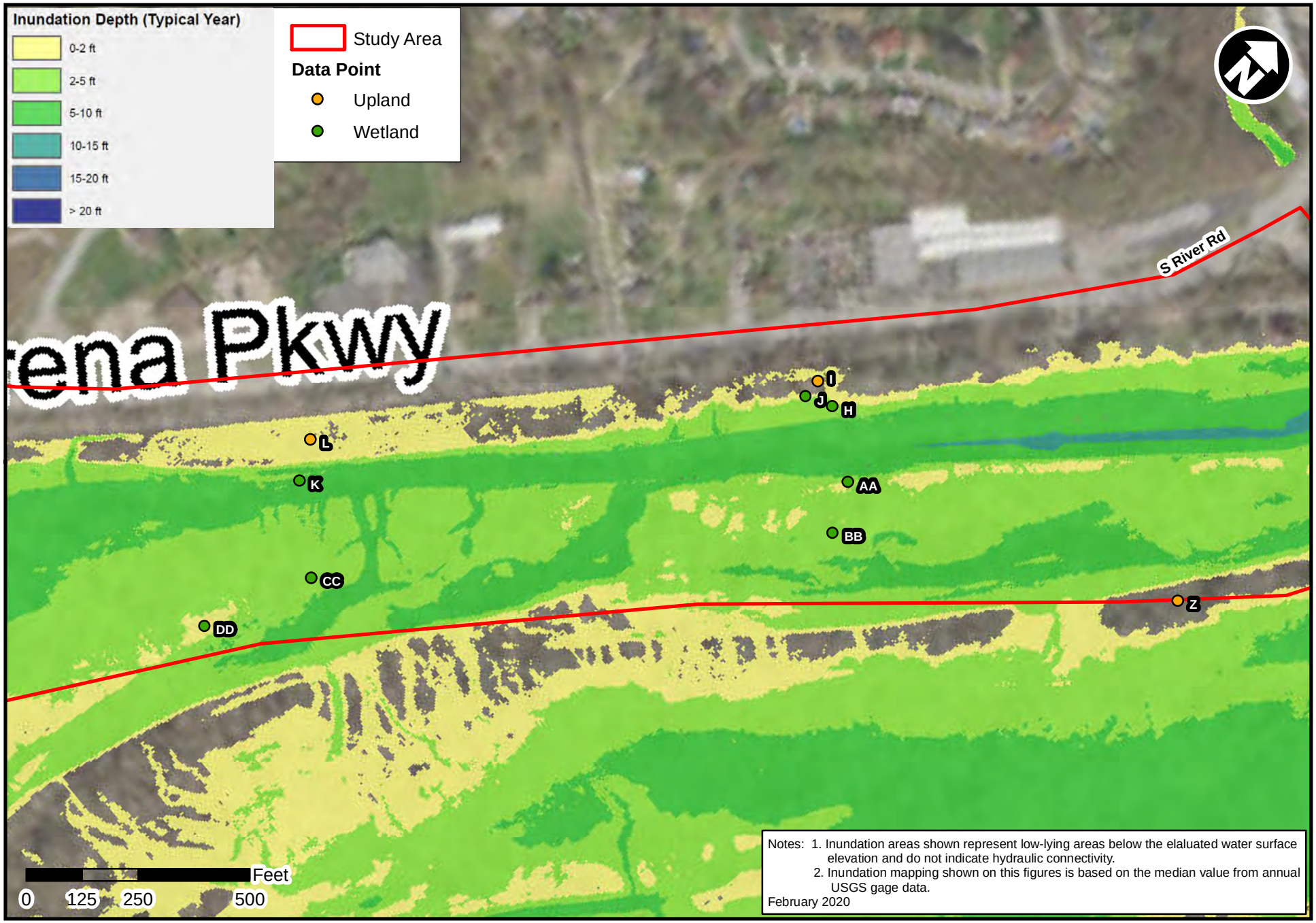
Exhibit M

Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

Water Resources Map - North

CMT
Crawford, Murphy & Tilly

Exhibit N

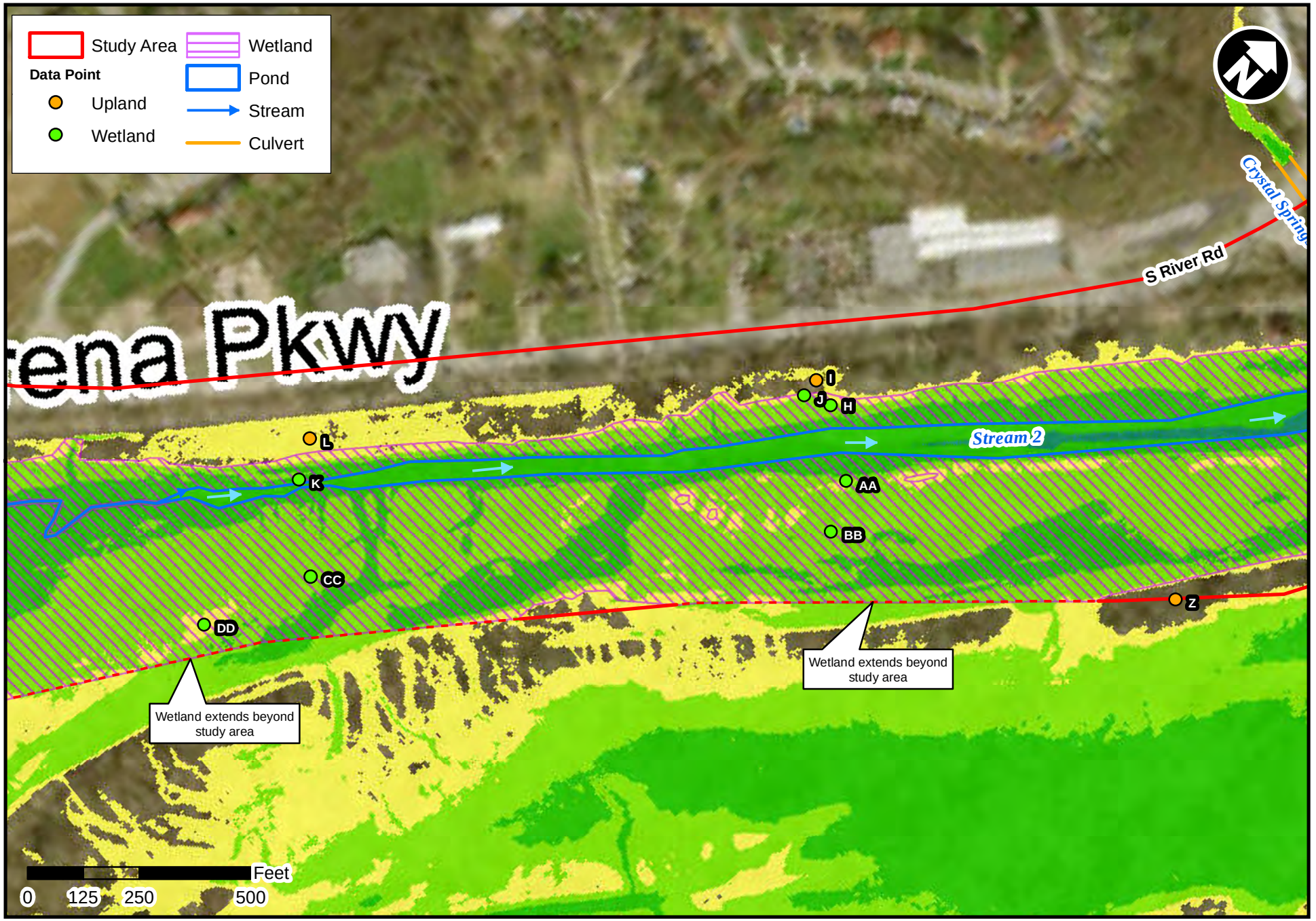


Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

Inundation Depth Typical Year - Central

CMT
Crawford, Murphy & Tilly

Exhibit O

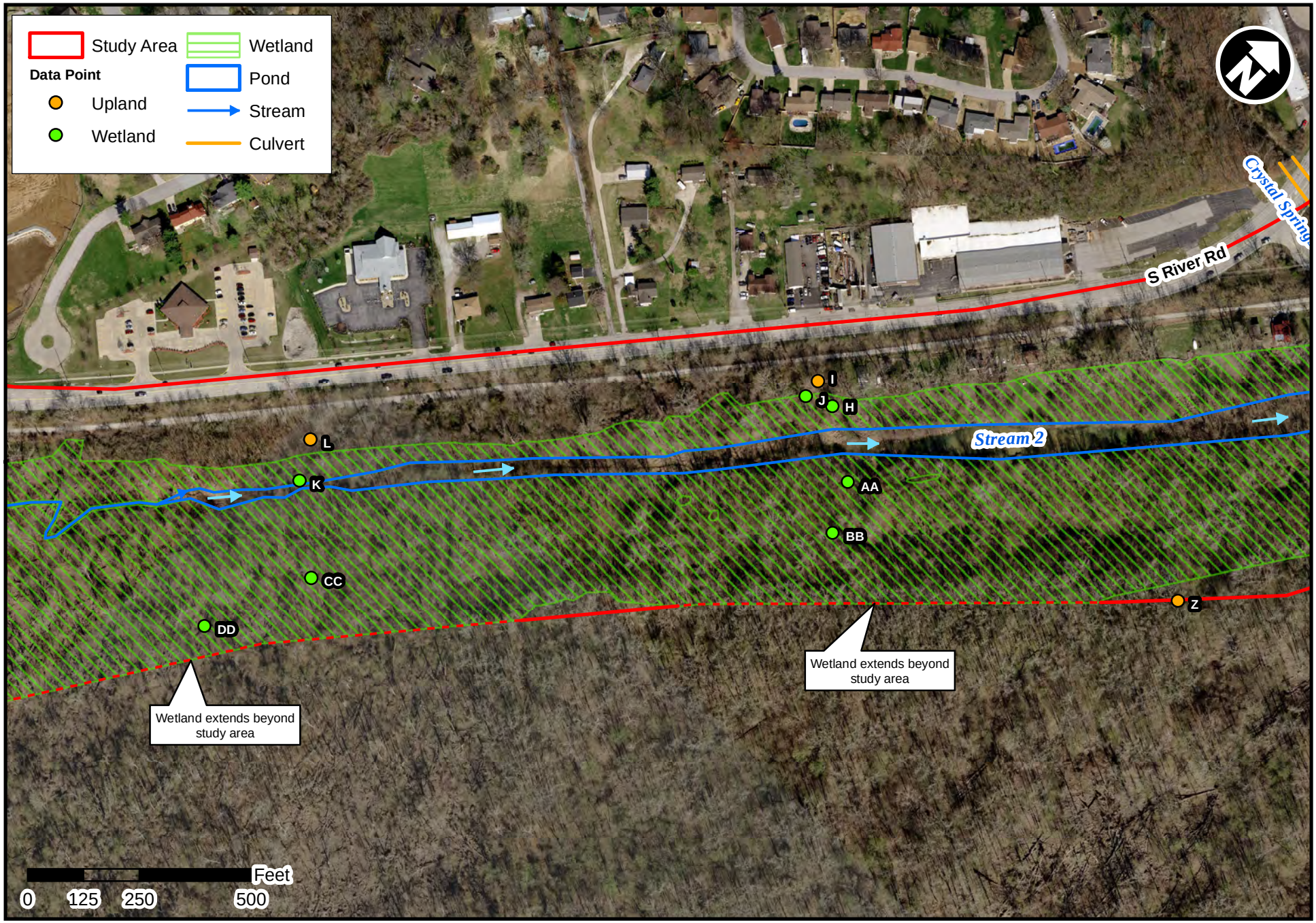


Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

Water Resources Map - Central

CMT
Crawford, Murphy & Tilly

Exhibit P



Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

Water Resources Map - Central

CMT
Crawford, Murphy & Tilly

Exhibit Q

Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

Inundation Depth Typical Year - South

CMT
Crawford, Murphy & Tilly

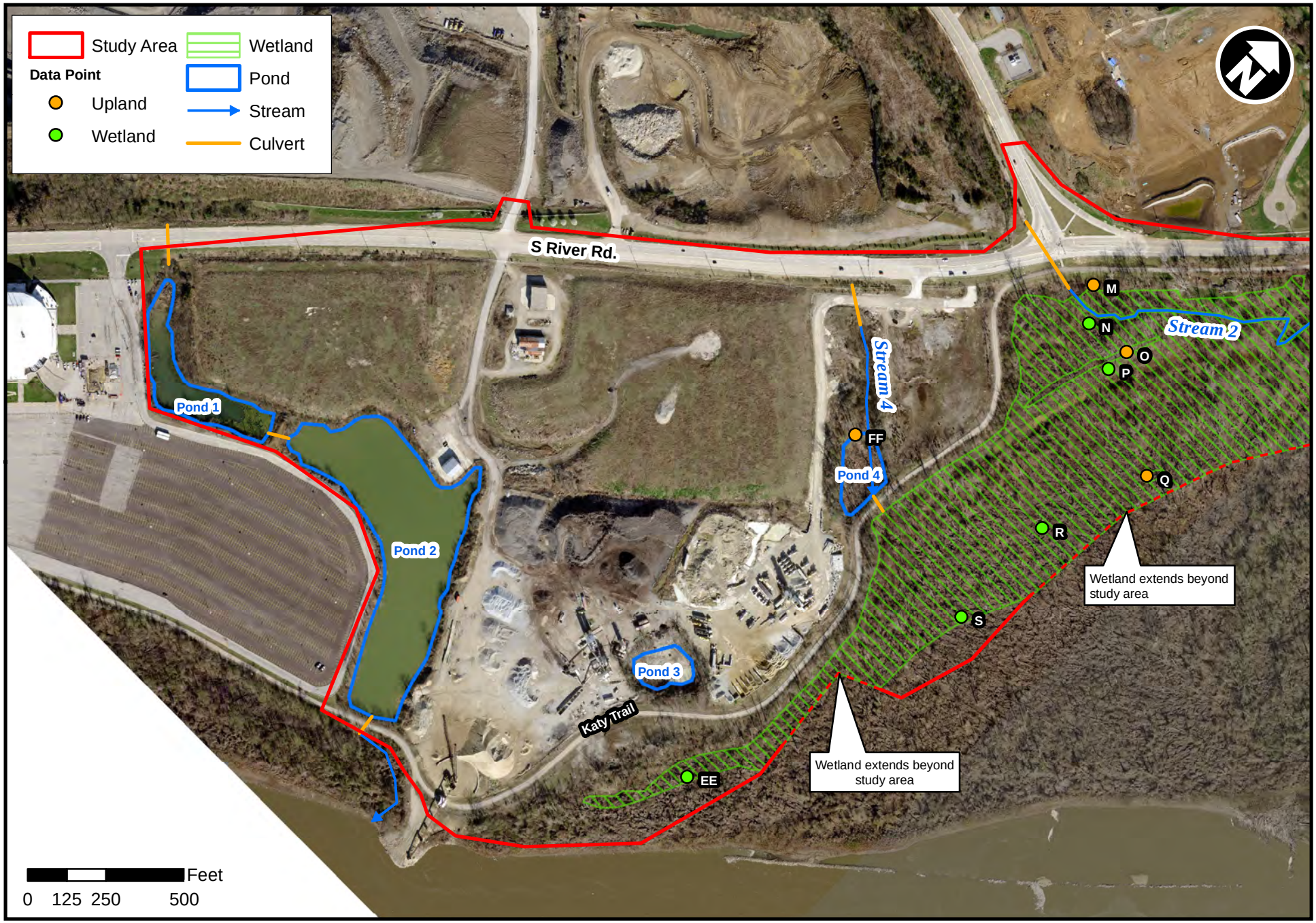
Exhibit R

Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

Water Resources Map - South

CMT
Crawford, Murphy & Tilly

Exhibit S



Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

Water Resources Map - South

CMT
Crawford, Murphy & Tilly

Exhibit T

Riverpointe Public Infrastructure Project - St. Charles, St. Charles Co., MO

Water Resources Map - Overall

CMT
Crawford, Murphy & Tilly

Wetland and Other Waters of the United States Delineation Report

APPENDIX B: DATA FORMS AND FQI

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: A

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): floodplain depression Local relief (concave, convex, none): concave

Slope (%): 1 Lat: 38.765003 Long: -90.489648 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	40	Y	FACW
2. *Acer negundo*	15	Y	FAC
3. *Salix nigra*	5	N	OBL
4. *Morus alba*	5	N	FAC
5.			
	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1.			
2. *Acer saccharinum*	1	Y	FACW
3. *Packera glabella*	1	Y	FACW
4. *Impatiens capensis*	1	Y	FACW
5. *Toxicodendron radicans*	1	Y	FAC
6.			
7.			
8.			
9.			
10.			
	4	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	_____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	43	x 2 =	86
FAC species	21	x 3 =	63
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	69 (A)		154 (B)

Prevalence Index = B/A = 2.23

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: A

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/2	80	10YR 4/6	20	C	M	not sand	loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 2-5 feet; inundation present within larger area

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: B

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

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

Slope (%): 1 Lat: 38.763380 Long: -90.491729 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: none

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	40	Y	FAC
2. *Celtis occidentalis*	20	Y	FAC
3. *Acer saccharinum*	5	N	FACW
4.			
5.			
	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Lonicera maackii*	40	Y	UPL
2. *Acer negundo*	15	Y	FAC
3.			
4.			
5.			
	55	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Toxicodendron radicans*	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	80	x 3 =	240
FACU species	0	x 4 =	0
UPL species	40	x 5 =	200
Column Totals:	125 (A)		450 (B)

Prevalence Index = B/A = 3.60

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Distinct change in vegetation with presence of dead/live honeysuckle

SOIL

Sampling Point: B

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	99	10YR 5/6	1		M	not sand	clay loam
3-15	10YR 4/2	99	10YR 5/6	1		M	sand	sand loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Area not inundated long enough to sustain prominent, abundant redox concentrations.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Inundation depth (typical year): border of none and 0-2 feet; hydrology indicators not as prominent

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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/50/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: C

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): toe of slope Local relief (concave, convex, none): concave

Slope (%): 3 Lat: 38.763331 Long: -90.491649 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

Transitional boundary area between upland and wetland areas.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	40	Y	FAC
2. *Acer saccharinum*	10	Y	FACW
3.			
4.			
5.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Lonicera maackii*	10	Y	UPL
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Acer negundo*	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	45	x 3 =	135
FACU species	0	x 4 =	0
UPL species	10	x 5 =	50
Column Totals:	65 (A)		205 (B)

Prevalence Index = B/A = 3.15

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Transition area of honeysuckle becoming less abundant.

SOIL

Sampling Point: C

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/1	95	10YR 3/6	5	C	M	not sand	clay silt

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 2-5 feet

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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: D

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): ridge adjacent stream Local relief (concave, convex, none): none

Slope (%): 3 Lat: 38.763168 Long: -90.491556 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	30	Y	FAC
2. *Acer saccharinum*	20	Y	FACW
3. *Populus deltoides*	5	N	FAC
4.			
5.			
	55	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer saccharinum*	10	Y	FACW
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Acer negundo*	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	10	Y	FACW
2.			
	10	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	80 (A)		200 (B)

Prevalence Index = B/A = 2.50

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: D

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	85	10YR 3/6	15	C	M	not sand	clay silt

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 1

Water Table Present? Yes X No ___ Depth (inches): 12

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

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

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

Remarks:

Inundation depth (typical year): border 2-5 and 5-10 feet

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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: E

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): ridge/terrace Local relief (concave, convex, none): convex

Slope (%): 1 Lat: 38.762715 Long: -90.492246 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	10	Y	FAC
2. *Acer saccharinum*	10	Y	FACW
3. *Ulmus americana*	5	Y	FACW
4.			
5.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Lonicera maackii*	30	Y	UPL
2.			
3.			
4.			
5.			
	30	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Toxicodendron radicans*	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	5	Y	FACW
2.			
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	15	x 3 =	45
FACU species	0	x 4 =	0
UPL species	30	x 5 =	150
Column Totals:	65 (A)		235 (B)

Prevalence Index = B/A = 3.62

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Distinct difference in vegetation with presence of dead/live honeysuckle

SOIL

Sampling Point: E

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	99	10YR 3/6	1		M	not sand	clay loam, redox not prominent
2-16	10YR 3/2	99	10YR 3/6	1		M	sand	with clay inclusions

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Inundation depth (typical year): 0-2 feet

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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: F

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave

Slope (%): 1 Lat: 38.762863 Long: -90.492516 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: none

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

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

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

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

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

Remarks:

Transitional area between upland and wetland areas.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	20	Y	FAC
2. *Populus deltoides*	5	Y	FAC
3.			
4.			
5.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer negundo*	10	Y	FAC
2. *Lonicera maackii*	10	Y	UPL
3. *Morus alba*	5	Y	FAC
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Euonymus fortunei*	30	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	30	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	40	x 5 =	200
Column Totals:	80 (A)		320 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Distinct difference in vegetation with presence of winter creeper in herb layer and dead/live honeysuckle in shrub layer

SOIL

Sampling Point: F

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	95	7.5YR 4/6	5	C	M	not sand	silty clay
8-16	10YR 3/2	100					sand	with clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 0-2 feet

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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: G

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

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

Slope (%): 2 Lat: 38.762561 Long: -90.492693 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: none

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	15	Y	FAC
2. *Celtis occidentalis*	10	Y	FAC
3. *Acer saccharinum*	5	N	FACW
4. *Juglans nigra*	5	N	FACU
5.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Lonicera maackii*	30	Y	UPL
2. *Cornus drummondii*	5	N	FAC
3.			
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Euonymus fortunei*	5	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	30	x 3 =	90
FACU species	5	x 4 =	20
UPL species	35	x 5 =	175
Column Totals:	75 (A)		295 (B)

Prevalence Index = B/A = 3.93

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

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

SOIL

Sampling Point: G

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/1	100					not sand	clay loam
10-16	10YR 4/2	100					sand	with clay inclusions

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): none

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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: H

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): none

Slope (%): 2 Lat: 38.759648 Long: -90.495424 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: none

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Celtis occidentalis*	20	Y	FAC
2. *Ulmus americana*	15	Y	FACW
3. *Acer negundo*	10	N	FAC
4. *Acer saccharinum*	5	N	FACW
5. *Populus deltoides*	5	N	FAC
	55	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Ulmus americana*	10	Y	FACW
2. *Celtis occidentalis*	10	Y	FAC
3. *Acer negundo*	5	Y	FAC
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Toxicodendron radicans*	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	55	x 3 =	165
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	85 (A)		225 (B)

Prevalence Index = B/A = 2.65

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: H

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/1	93	7.5YR 3/4	7	C	PL	not sand	silty clay
2-16	10YR 4/2	85	7.5YR 5/6	15	C	M	not sand	clay silt

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

previously disturbed area; concrete and railroad ties present

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Water Table Present? Yes X No ___ Depth (inches): 16

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

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

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

Remarks:

Inundation depth (typical year): 2-5 feet

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: I

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

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

Slope (%): 1 Lat: 38.759693 Long: -90.495644 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: none

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Celtis occidentalis*	15	Y	FAC
2. *Platanus occidentalis*	10	Y	FACW
3.			
4.			
5.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Ulmus americana*	10	Y	FACW
2. *Cornus drummondii*	5	Y	FAC
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Viola sororia*	10	Y	FAC
2. *Alliaria petiolata*	2	N	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	12	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	32	x 3 =	96
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	52 (A)		136 (B)

Prevalence Index = B/A = 2.62

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: I

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/1	100					not sand	loam
9-16	10YR 4/2	95	7.5YR 4/6	5	C	M	not sand	silty loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Inundation depth (typical year): none; site not inundated long enough for hydrology indicators to be prominent

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: J

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): toe of slope Local relief (concave, convex, none): concave

Slope (%): 1 Lat: 38.759575 Long: -90.495628 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: none

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

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

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

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

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

Remarks:

Based on field observations, this is a boundary between wetland and upland area.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	40	Y	FAC
2. *Ulmus americana*	15	Y	FACW
3. *Platanus occidentalis*	5	N	FACW
4. *Acer saccharinum*	5	N	FACW
5.			
	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Lonicera maackii*	15	Y	UPL
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1.			NI
2. *Toxicodendron radicans*	2	Y	FAC
3. *Ulmus americana*	2	Y	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	4	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	27	x 2 =	54
FAC species	42	x 3 =	126
FACU species	0	x 4 =	0
UPL species	15	x 5 =	75
Column Totals:	84 (A)		255 (B)

Prevalence Index = B/A = 3.04

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Presence of dead honeysuckle.

SOIL

Sampling Point: J

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 3/2	95	7.5 YR 4/6	5	C	M	not sand	clay loam
11-16	10YR 4/2	95	10YR 5/6	5	C	M	not sand	silty loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 0-2 feet

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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: K

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): ridge adjacent stream Local relief (concave, convex, none): none

Slope (%): 3 Lat: 38.757013 Long: -90.497967 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: R5UBH adjacent

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	30	Y	FACW
2. *Fraxinus pennsylvanica*	10	Y	FACW
3. *Acer negundo*	5	N	FAC
4.			
5.			
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Fraxinus pennsylvanica*	5	Y	FACW
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1.			
2. *Packera glabella*	3	Y	FACW
3. *Carex sp.*	3	Y	FACW
4. *Fraxinus pennsylvanica*	3	Y	FACW
5. *Acer negundo*	3	Y	FAC
6. *Symphyotrichum sp.*	2	N	FAC
7. *Bidens sp.*	2	N	FACW
8.			
9.			
10.			
	16	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	10	Y	FACW
2.			
	10	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	66	x 2 =	132
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	76 (A)		162 (B)

Prevalence Index = B/A = 2.13

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Area lacks live/dead honeysuckle.

SOIL

Sampling Point: K

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	75	5YR 4/6	25	C	M	not sand	clay silt

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Redox much more prominant.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 1

Water Table Present? Yes X No ___ Depth (inches): 12

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

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

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

Remarks:

Inundation depth (typical year): 5-10 feet

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: L

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): terrace, ridge Local relief (concave, convex, none): none

Slope (%): 0 Lat: 38.757240 Long: -90.498134 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: none

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	20	Y	FAC
2. *Platanus occidentalis*	15	Y	FACW
3.			NI
4.			
5.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Lonicera maackii*	20	Y	UPL
2. *Acer negundo*	10	Y	FAC
3. *Cornus drummondii*	5	N	FAC
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1.			
2. *Toxicodendron radicans*	3	Y	FAC
3. *Cornus drummondii*	3	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	6	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	41	x 3 =	123
FACU species	0	x 4 =	0
UPL species	20	x 5 =	100
Column Totals:	76 (A)		253 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Presence of live/dead honeysuckle.

SOIL

Sampling Point: L

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	97	10YR 4/6	3		M	not sand	loam
4-16	10YR 4/1	99	10YR 4/6	1		M	not sand	silty loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Redox features present but not distinct/prominent in soil profile.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Inundation depth (typical year): 0-2 feet

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: M

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): terrace, ridge Local relief (concave, convex, none): convex

Slope (%): 2 Lat: 38.754886 Long: -90.500982 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	20	Y	FAC
2. *Acer saccharinum*	5	Y	FACW
3.			
4.			
5.			
	25 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Lonicera maackii*	30	Y	UPL
2. *Morus rubra*	10	Y	FACU
3.			
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. *Toxicodendron radicans*	5	Y	FAC
2. *Acer rubrum*	5	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	10	Y	FACW
2.			
	10 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.43 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	30	x 3 =	90
FACU species	10	x 4 =	40
UPL species	30	x 5 =	150
Column Totals:	85 (A)		310 (B)

Prevalence Index = B/A = 3.65

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: M

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 3/2	95	5YR 4/6	5	C	PL	not sand	loam clay
11-16	10YR 3/2	100					sand	sandy clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): border of none and 0-2 feet

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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: N

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): large depression Local relief (concave, convex, none): concave

Slope (%): 1 Lat: 38.754618 Long: -90.500709 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	40	Y	FAC
2. *Acer saccharinum*	20	Y	FACW
3. *Salix nigra*	5	N	OBL
4.			
5.			
	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer negundo*	15	Y	FAC
2. *Fraxinus pennsylvanica*	5	Y	FACW
3. *Acer saccharinum*	5	Y	FACW
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1.			NI
2. *Packera glabella*	3	Y	FACW
3. *Toxicodendron radicans*	3	Y	FAC
4. *Fraxinus pennsylvanica*	3	Y	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	9	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	36	x 2 =	72
FAC species	58	x 3 =	174
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	99 (A)		251 (B)

Prevalence Index = B/A = 2.54

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: N

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	75	10YR 5/6	25	C	M	not sand	silty clay
4-16	10YR 4/2	50	7.5YR 4/6	5	C	M	not sand	silty clay
	10YR 5/6	45						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Water Table Present? Yes X No _____ Depth (inches): 16

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

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

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

Remarks:

Inundation depth (typical year): 2-5 feet

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: O

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): ridge Local relief (concave, convex, none): convex

Slope (%): 1 Lat: 38.754676 Long: -90.500187 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	20	Y	FAC
2. *Acer saccharinum*	15	Y	FACW
3. *Acer negundo*	5	N	FAC
4. *Celtis occidentalis*	5	N	FAC
5.			
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Lonicera maackii*	20	Y	UPL
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1.			
2. *Euonymus fortunei*	1	Y	UPL
3. *Fraxinus pennsylvanica*	1	Y	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	2	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	_____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	16	x 2 =	32
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	21	x 5 =	105
Column Totals:	67 (A)		227 (B)

Prevalence Index = B/A = 3.39

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Distinct difference in vegetation community with presence of honeysuckle.

SOIL

Sampling Point: O

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	97	7.5YR 3/4	3	C	PL	not sand	silty clay
3-16	10YR 3/2	99	7.5YR 3/4	1		M	not sand	loam, redox features not prominent

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Top 3 inches of soil wetter than below. Redox features in 3-16 inches are not distinct/prominent

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Inundation depth (typical year): 0-2 feet

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: P

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave

Slope (%): 1 Lat: 38.754461 Long: -90.500194 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	15	Y	FACW
2. *Acer negundo*	15	Y	FAC
3. *Morus alba*	5	N	FAC
4.			
5.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Cephalanthus occidentalis*	15	Y	OBL
2. *Salix nigra*	5	Y	OBL
3. *Fraxinus pennsylvanica*	5	Y	FACW
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Hibiscus laevis*	15	Y	OBL
2. *Packera glabella*	5	Y	FACW
3. *Fraxinus pennsylvanica*	5	Y	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	25	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	35	x 1 =	35
FACW species	30	x 2 =	60
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	85 (A)		155 (B)

Prevalence Index = B/A = 1.82

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: P

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	5Y 4/1	90	10YR 4/6	10	C	PL	not sand	silt with clay
5-16	10YR 3/2	90	2.5YR 3/6	10	C	PL/M	not sand	silt with clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 7

Water Table Present? Yes X No ___ Depth (inches): 1

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

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

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

Remarks:

Inundation depth (typical year): border of 2-5 and 5-10 feet; stream backwater area, water is not flowing but generally drains to the north/ northeast during normal conditions.

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: Q

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

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

Slope (%): 1 Lat: 38.75401 Long: -90.499057 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

Dense understory of downed trees.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	70	Y	FACW
2.			
3.			
4.			
5.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer negundo*	15	Y	FAC
2. *Fraxinus pennsylvanica*	10	Y	FACW
3. *Lonicera maackii*	10	Y	UPL
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Packera glabella*	5	Y	FACW
2. *Impatiens capensis*	5	Y	FACW
3. *Viola sororia*	5	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	15	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.71 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	90	x 2 =	180
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	10	x 5 =	50
Column Totals:	120 (A)		290 (B)

Prevalence Index = B/A = 2.42

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Presence of dead/live honeysuckle indicates change in veg community.

SOIL

Sampling Point: Q

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	98	7/5YR 4/6	2		M	not sand	silty with clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Uniform throughout, redox not prominent/distinct

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Inundation depth (typical year): 0-2 feet

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: R

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): none

Slope (%): 2 Lat: 38.753061 Long: 90.499460 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	30	Y	FAC
2. *Acer saccharinum*	30	Y	FACW
3.			
4.			
5.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer negundo*	20	Y	FAC
2. *Acer saccharinum*	20	Y	FACW
3.			
4.			
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Impatiens capensis*	5	Y	FACW
2. *Symphyotrichum sp.*	5	Y	FAC
3. *Toxicodendron radicans*	2	N	FAC
4. *Packera glabella*	2	N	FACW
5. *Urtica dioica*	2	N	FACW
6.			
7.			
8.			
9.			
10.			
	16	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	59	x 2 =	118
FAC species	57	x 3 =	171
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	116 (A)		289 (B)

Prevalence Index = B/A = 2.49

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: R

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/2	90	5YR 4/6	10	C	PL	not sand	silty clay
5-16	10YR 4/2	90	10YR 4/6	10	C	PL	not sand	silty clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 2-5 feet

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/20/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: S

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): none

Slope (%): 2 Lat: 38.752013 Long: -90.499397 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

Characterize area as wetland to upland transition area.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	25	Y	FAC
2. *Morus rubra*	25	Y	FACU
3. *Populus deltoides*	15	Y	FAC
4.			
5.			
	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer negundo*	10	Y	FAC
2. *Morus rubra*	10	Y	FACU
3. *Lonica maackii*	5	Y	UPL
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Alliaria petiolata*	5	Y	FAC
2. *Urtica dioica*	3	Y	FACW
3. *Toxicodendron radicans*	3	Y	FAC
4. *Symphyotrichum sp.*	3	Y	FAC
5. *Impatiens capensis*	3	Y	FACW
6. *Campsis radicans*	3	Y	FACU
7.			
8.			
9.			
10.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 12 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	6	x 2 =	12
FAC species	61	x 3 =	183
FACU species	38	x 4 =	152
UPL species	5	x 5 =	25
Column Totals:	110 (A)		372 (B)

Prevalence Index = B/A = 3.38

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Presence of dead/alive honeysuckle.

SOIL

Sampling Point: S

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	95	7.5YR 4/6	5	C	PL	not sand	silty clay
6-16	10YR 3/2	97	7.5YR 4/6	3	C	PL	sand	sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 0-2 feet

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/21/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: T

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): ridge adjacent river Local relief (concave, convex, none): convex

Slope (%): 1 Lat: 38.764741 Long: -90.489098 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: R2UBH

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	30	Y	FAC
2. *Acer saccharinum*	10	Y	FACW
3. *Platanus occidentalis*	5	N	FACW
4.			
5.			
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer negundo*	15	Y	FAC
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Packera glabella*	10	Y	FACW
2. *Toxicodendron radicans*	5	Y	FAC
3. *Humulus japonicus*	5	Y	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	10	Y	FACW
2.			
	10	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.71 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	50	x 3 =	150
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	90 (A)		240 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: T

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	90	7.5YR 3/4	10	C	M/PL	not sand	loam
5-14	10YR 4/2	90	10YR 5/6	10	C	M	not sand	loam
14-20	10YR 4/2	85	10YR 5/6	15	C	M	not sand	loam with clay inclusions

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 2-5 feet

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/21/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: U

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave

Slope (%): 1 Lat: 38.764229 Long: -90.488327 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	15	Y	FAC
2. *Acer saccharinum*	15	Y	FACW
3. *Acer negundo*	10	Y	FAC
4.			
5.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Celtis occidentalis*	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Impatiens capensis*	5	Y	FACW
2. *Packera glabella*	3	Y	FACW
3. *Toxicodendron radicans*	2	N	FAC
4. *Carex sp.*	1	N	FACW
5. *Humulus japonicus*	1	N	FACU
6.			
7.			
8.			
9.			
10.			
	12	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	24	x 2 =	48
FAC species	32	x 3 =	96
FACU species	1	x 4 =	4
UPL species	0	x 5 =	0
Column Totals:	57 (A)		148 (B)

Prevalence Index = B/A = 2.60

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	80	7.5YR 4/6	20	C	M	not sand	clay silt
5-16	10YR 4/2	90	10YR 5/6	10	C	M	nost sand	clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 2-5 feet

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/21/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: V

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): ridge Local relief (concave, convex, none): convex

Slope (%): 3 Lat: 38.763430 Long: -90.486946 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

wetland to upland transition area; close to Missouri River

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	20	Y	FACW
2. *Acer negundo*	15	Y	FAC
3.			
4.			
5.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1.			NI
2. *Ambrosia artemisiifolia*	2	Y	FACU
3. *Symphyotrichum sp.*	2	Y	FAC
4. *Solidago sp.*	2	Y	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	6	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	5	Y	FACW
2.			
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	19	x 3 =	57
FACU species	2	x 4 =	8
UPL species	0	x 5 =	0
Column Totals:	46 (A)		115 (B)

Prevalence Index = B/A = 2.50

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: V

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1.5	10YR 5/1	95	10YR 5/6	5	C	PL	sand	sand with clay
1.5-6	10YR 5/3	100					sand	
6-13	10YR 4/2	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Organic matter present within top layer, indicating layering and deposition. Redox not present throughout soil profile. Possible depositional influence from proximity to Missouri River.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Inundation depth (typical year): 0-2 feet

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/21/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: W

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): sandy ridge Local relief (concave, convex, none): none

Slope (%): 1 Lat: 38.763653 Long: -90.486615 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	15	Y	FAC
2. *Acer saccharinum*	15	Y	FACW
3. *Populus deltoides*	5	N	FAC
4.			
5.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer negundo*	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1.			NI
2. *Alliaria petiolata*	3	Y	FAC
3. *Toxicodendron radicans*	1	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	4	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	29	x 3 =	87
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	44 (A)		117 (B)

Prevalence Index = B/A = 2.66

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: W

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 5/3	100					sand	
5-8	10YR 4/2	100					sand	sand and silt
8-16	10YR 5/2	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Possible depositional influence from proximity to Missouri River.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Inundation depth (typical year): none; sediment deposit ring around trees

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/21/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: X

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): ridge adjacent stream Local relief (concave, convex, none): convex

Slope (%): 2 Lat: 38.762819 Long: -90.491327 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: R2UBH

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	30	Y	FAC
2. *Populus deltoides*	10	Y	FAC
3. *Salix nigra*	10	Y	OBL
4.			
5.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer saccharinum*	5	Y	FACW
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Impatiens capensis*	5	Y	FACW
2. *Packera glabella*	3	Y	FACW
3. *Toxicodendron radicans*	3	Y	FAC
4. *Euonymus fortunei*	1	N	UPL
5. *Carex sp.*	1	N	FACW
6.			
7.			
8.			
9.			
10.			
	13	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	14	x 2 =	28
FAC species	43	x 3 =	129
FACU species	0	x 4 =	0
UPL species	1	x 5 =	5
Column Totals:	68 (A)		172 (B)

Prevalence Index = B/A = 2.53

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No _____

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

SOIL

Sampling Point: X

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/1	90	5YR 4/6	10	C	PL	not sand	silty clay
2-16	10YR 3/1	90	5YR 4/6	10	C	PL	not sand	silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 10

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

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

Remarks:

Inundation depth (typical year): 2-5 feet

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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/21/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: Y

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

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

Slope (%): 1 Lat: 38.762448 Long: -90.490469 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

Much less hydrology indicators present in comparison to other areas; transitional areas between wetland and upland

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	20	Y	FAC
2. *Acer saccharinum*	15	Y	FACW
3.			
4.			
5.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Celtis occidentalis*	15	Y	FAC
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Packera glabella*	5	Y	FACW
2. *Humulus japonicus*	5	Y	FACU
3. *Impatiens capensis*	5	Y	FACW
4. *Toxicodendron radicans*	5	Y	FAC
5. *Acer saccharinum*	1	N	FACW
6.			
7.			
8.			
9.			
10.			
	21	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.71 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	26	x 2 =	52
FAC species	40	x 3 =	120
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	71 (A)		192 (B)

Prevalence Index = B/A = 2.70

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: Y

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/1	90	7.5YR 4/6	10	C	PL	not sand	clay loam; redox more prominent
5-16	10YR 4/2	60	10YR 6/4	1		M	not sand	silt loam; redox not prominent
	10YR 3/2	39						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 0-2 feet; hydrology indicators not as prominent in wide, less inundated area.

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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/21/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: Z

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

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

Slope (%): 0 Lat: 38.760303 Long: -90.492432 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	40	Y	FAC
2. *Populus deltoides*	20	Y	FAC
3. *Morus rubra*	5	N	FACU
4. *Celtis occidentalis*	5	N	FAC
5.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Celtis occidentalis*	10	Y	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Alliaria petiolata*	40	Y	FAC
2. *Toxicodendron radicans*	5	N	FAC
3. *Viola sororia*	3	N	FAC
4. *Impatiens capensis*	1	N	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	49	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0 x 1 =	0
FACW species	1 x 2 =	2
FAC species	123 x 3 =	369
FACU species	5 x 4 =	20
UPL species	0 x 5 =	0
Column Totals:	129 (A)	391 (B)

Prevalence Index = B/A = 3.03

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Distinct difference in vegetation; less FACW species seen in other areas present.

SOIL

Sampling Point: Z

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	95	10YR 4/6	5		M	not sand	clay silt; redox not prominent
8-16	10YR 4/2	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

buried organic matter in layers; redox present but not prominent/distinct

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Inundation depth (typical year): none; hydrology indicators not as prominent in this wide, less inundated area.

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WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/21/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: AA

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): ridge Local relief (concave, convex, none): none

Slope (%): 0 Lat: 38.759387 Long: -90.494919 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: R2UBH

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	50	Y	FAC
2. *Platanus occidentalis*	10	N	FACW
3.			
4.			
5.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer negundo*	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1.			
2. *Acer negundo*	3	Y	FAC
3. *Impatiens capensis*	3	Y	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	6	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	13	x 2 =	26
FAC species	58	x 3 =	174
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	71 (A)		200 (B)

Prevalence Index = B/A = 2.82

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: AA

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	90	7.5YR 4/6	10	C	PL	not sand	clay loam
6-16	10YR 4/2	95	10YR 4/6	5	C	PL	not sand	clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 0-2 feet; hydrology indicators not as prominent

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/21/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: BB

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): wide depression Local relief (concave, convex, none): concave

Slope (%): 2 Lat: 38.759102 Long: -90.494721 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	50	Y	FAC
2. *Populus deltoides*	20	Y	FAC
3. *Platanus occidentalis*	10	N	FACW
4.			
5.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1.			
2. *Campsis radicans*	3	Y	FACU
3. *Toxicodendron radicans*	3	Y	FAC
4. *Packera glabella*	2	Y	FACW
5. *Impatiens capensis*	2	Y	FACW
6.			
7.			
8.			
9.			
10.			
	10	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	14	x 2 =	28
FAC species	73	x 3 =	219
FACU species	3	x 4 =	12
UPL species	0	x 5 =	0
Column Totals:	90 (A)		259 (B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: BB

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR 4/1	90	7.5YR 4/6	10	C	PL	not sand	clay loam
15-20	10YR 4/1	90	10YR 6/4	10	C	M	not sand	silty loam
20-24	10YR 5/3	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 2-5 feet

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/21/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: CC

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): wide floodplain Local relief (concave, convex, none): concave

Slope (%): 1 Lat: 38.756642 Long: -90.497364 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	20	Y	FAC
2. *Acer saccharinum*	15	Y	FACW
3. *Platanus occidentalis*	10	N	FACW
4. *Populus deltoides*	10	N	FAC
5.			
	55	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer negundo*	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Packera glabella*	10	Y	FACW
2. *Symphyotrichum sp.*	10	Y	FAC
3. *Impatiens capensis*	5	N	FACW
4. *Toxicodendron radicans*	1	N	FAC
5. *Urtica dioica*	1	N	FACW
6. *Humulus japonicus*	1	N	FACU
7.			
8.			
9.			
10.			
	28	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	5	Y	FACW
2.			
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	46	x 2 =	92
FAC species	46	x 3 =	138
FACU species	1	x 4 =	4
UPL species	0	x 5 =	0
Column Totals:	93 (A)		234 (B)

Prevalence Index = B/A = 2.52

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: CC

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	85	7.5YR 4/6	15	C	PL/M	not sand	silty clay
16-20+	10YR 5/2	90	7.5YR 4/6	10	C	PL	not sand	silty loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 2-5 feet

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/21/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: DD

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): small ridge Local relief (concave, convex, none): none

Slope (%): 0 Lat: 38.755970 Long: -90.497687 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

numerous downed trees surrounding data point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	50	Y	FAC
2. *Morus rubra*	10	N	FACU
3.			
4.			
5.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer negundo*	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Impatiens capensis*	10	Y	FACW
2. *Toxicodendron radicans*	3	N	FAC
3. *Alliaria petiolata*	3	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	16	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	61	x 3 =	183
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	81 (A)		243 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: DD

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/1	93	10YR 5/6	7	C	M	not sand	silt loam
10-16	10YR 4/2	95	10YR 5/6	5	C	M	not sand	silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 0-2 feet; hydrology indicators not as prominent

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/21/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: EE

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): slight hillsope Local relief (concave, convex, none): none

Slope (%): 2 Lat: 38.749325 Long: -90.500302 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: PFO1A

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	20	Y	FAC
2. *Morus rubra*	20	Y	FACU
3. *Acer saccharinum*	10	Y	FACW
4.			
5.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Morus rubra*	10	Y	FACU
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1.			
2. *Toxicodendron radicans*	2	Y	FAC
3. *Alliaria petiolata*	2	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	4	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	10	Y	FACW
2.			
	10	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.43 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	24	x 3 =	72
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	74 (A)		232 (B)

Prevalence Index = B/A = 3.14

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: EE

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	95	10YR 4/6	5	C	PL	not sand	silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

Inundation depth (typical year): 0-2 feet; hydrology indicators not as prominent

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Riverpointe Public Infrastructure Project City/County: St. Charles, St. Charles County Sampling Date: 5/21/2020

Applicant/Owner: City of St. Charles State: MO Sampling Point: FF

Investigator(s): AMZ, ELH Section, Township, Range: Section 08, Township 46 N, Range 5 E

Landform (hillslope, terrace, etc.): stream bank, depression Local relief (concave, convex, none): concave

Slope (%): 1 Lat: 38.752484 Long: -90.501681 Datum: NAD 83

Soil Map Unit Name: 66126: Haynie-Treloar-Blake complex, 0-2 % slopes, frequently flooded; hydric NWI or WWI classification: none

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

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

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

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

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

Remarks:

Stream adjacent to quarry drains into wide depression with standing water due to poor drainage from culverts at downstream end. Flow through culverts only during higher flow events.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	10	Y	FACW
2. *Populus deltoides*	10	Y	FAC
3. *Salix nigra*	5	Y	OBL
4.			
5.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			NI
2. *Salix nigra*	3	Y	OBL
3.			
4.			
5.			
	3	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Packera glabella*	7	Y	FACW
2. *Acer saccharinum*	3	Y	FACW
3. *Ambrosia artemisiifolia*	3	Y	FACU
4. *Campsis radicans*	3	Y	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	16	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis riparia*	5	Y	FACW
2.			
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 77.78 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	8	x 1 =	8
FACW species	25	x 2 =	50
FAC species	10	x 3 =	30
FACU species	6	x 4 =	24
UPL species	0	x 5 =	0
Column Totals:	49 (A)		112 (B)

Prevalence Index = B/A = 2.29

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: FF

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 5/3	100					sand	sandy silt with organic material
4-16	10YR 6/3	100					sand	sand/fine gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Heavy sand/gravel deposits likely from upstream developed areas. Potentially problematic

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 12

Water Table Present? Yes X No _____ Depth (inches): 3

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

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

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

Remarks:

Inundation depth (typical year): 5-10 feet

Floristic Quality Assessement
Riverpointe Public Infrastructure Project, St. Charles County, Missouri

Resource: Wetland B

Field Assessment:	May 20-21, 2020	Practitioner:	AMZ, ELH	Community Type:	forested wetland
FQA DB Region:	Missouri				
FQA Publication:	Ladd, D. and J.R. Thomas. 2015. Ecological Checklist of the Missouri Flora for Floristic Quality Assessment. Phytoneuron 2015-12: 1-274				

FQA DB Description:

Conservatism-Based Metrics:

Total Mean C:	2	% C value 1-3:	57.1
Native Mean C:	2.6	% C value 4-6:	19
Total FQI:	9.2	% C value 7-10:	0
Native FQI:	10.4	Native Tree Mean C:	2.6
Adjusted FQI:	22.7	Native Shrub Mean C:	3
% C value 0:	23.8	Native Herbaceous Mean C:	2.7

Species Richness:			**Species Wetness:**		
Total Species:	21		Mean Wetness:	-0.6	
Native Species:	16	76.20%	Native Mean Wetness:	-1.7	
Non-native Species:	5	23.80%			

Physiognomy Metrics:			**Duration Metrics:**		
Tree:	10	47.60%	Annual:	3	14.30%
Shrub:	2	9.50%	Perennial:	17	81%
Vine:	3	14.30%	Biennial:	1	4.80%
Forb:	6	28.60%	Native Annual:	2	9.50%
Grass:	0	0%	Native Perennial:	14	66.70%
Sedge:	0	0%	Native Biennial:	0	0%
Rush:	0	0%			
Fern:	0	0%			
Bryophyte:	0	0%			

Species:

Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name
Acer negundo	Sapindaceae	ACENEG	native	1	0	tree	perennial	box elder
Acer saccharinum	Sapindaceae	ACESIL	native	2	-3	tree	perennial	silver maple
Alliaria petiolata	Brassicaceae	ALLPET	non-native	0	3	forb	biennial	garlic mustard
Campsis radicans	Bignoniaceae	CAMRAD	native	3	0	vine	perennial	trumpet creeper
Celtis occidentalis	Ulmaceae	CELOCC	native	3	3	tree	perennial	hackberry
Cephalanthus occidentalis	Rubiaceae	CEPOCC	native	3	-5	shrub	perennial	buttonbush
Fraxinus pennsylvanica var. subintegerrima	Oleaceae	FRAPES	native	2	-3	tree	perennial	green ash
Hibiscus laevis	Malvaceae	HIBLAE	native	4	-5	forb	perennial	halberd-leaved rose mallow
Humulus japonicus	Cannabaceae	HUMJAP	non-native	0	3	forb	annual	japanese hop
Impatiens capensis	Balsaminaceae	IMPCAP	native	3	-3	forb	annual	orange jewelweed
Lonicera maackii	Caprifoliaceae	LONMAA	non-native	0	5	shrub	perennial	amur honeysuckle
Morus alba	Moraceae	MORALB	non-native	0	3	tree	perennial	white mulberry
Morus rubra	Moraceae	MORRUB	native	4	3	tree	perennial	red mulberry
Packera glabella	Asteraceae	PACGLA	native	1	-3	forb	annual	butterweed
Platanus occidentalis	Platanaceae	PLAOCC	native	3	-3	tree	perennial	sycamore
Populus deltoides	Salicaceae	POPDEL	native	2	0	tree	perennial	cottonwood
Salix nigra	Salicaceae	SALNIG	native	2	-5	tree	perennial	black willow
Toxicodendron radicans	Anacardiaceae	TOXRAD	native	1	0	vine	perennial	poison ivy
Ulmus americana	Ulmaceae	ULMAME	native	4	0	tree	perennial	american elm
Urtica dioica subsp. dioica	Urticaceae	URTDID	non-native	0	0	forb	perennial	european nettle
Vitis riparia	Vitaceae	VITRIP	native	4	-3	vine	perennial	riverbank grape

CMT

Wetland and Other Waters of the United States Delineation Report

APPENDIX C: PHOTOGRAPHS

1. Overall view at wetland data point A.

2. View of surface water near wetland data point A.

3. Overall view at upland data point B.

4. Overall view at wetland data point C, a transitional area between wetlands and uplands.

5. Overall view at wetland data point D, adjacent to Crystal Springs Creek.

6. Overall view at upland data point E.

7. Overall view at wetland data point F.

8. Overall view at upland data point G.

9. Overall view at wetland data point H.

10. View at upland data point I.

11. Overall view at wetland data point J, a transitional area between wetlands and uplands.

12. Overall view at wetland data point K, adjacent to Stream 2.

13. Overall view at upland data point L.

14. View of upland area near upland data point L.

15. Overall view at upland data point M.

16. Overall view at wetland data point N.

17. View of soil cracks near wetland data point N.

18. View of wetland area near wetland data point N.

19. Overall view at upland data point O.

20. Overall view at wetland data point P.

21. Overall view at upland data point Q.

22. Overall view at wetland data point R.

23. Overall view at wetland data point S, a transitional area between wetlands and uplands.

24. Overall view at wetland data point T.

25. Overall view of surface water between wetland data points T and U.

26. Overall view and visible water marks at wetland data point U.

27. Overall view at upland data point V.

28. Overall view at upland data point W.

29. Overall view at wetland data point X.

30. Overall view at wetland data point Y, a transitional area between wetlands and uplands.

31. Overall view at wetland data point AA.

32. Overall view at wetland data point BB.

33. Overall view at wetland data point CC.

34. Overall view at wetland data point DD.

35. Overall view at wetland data point EE, a transitional area between wetlands and uplands.

36. Overall view at upland data point FF.

37. View of Crystal Springs Creek looking downstream.

38. View of Crystal Springs Creek looking downstream.

39. View of Crystal Springs Creek looking upstream.

40. View of Crystal Springs Creek looking downstream towards confluence with Stream 2.

41. View of Crystal Springs Creek looking downstream towards culvert under Old South River Rd.

42. View of Stream 2 looking upstream.

43. View of Stream 2 looking downstream.

44. View of Stream 2 looking upstream.

45. View of Stream 2 looking downstream.

46. View of Stream 2 looking downstream.

47. View of Stream 2 looking downstream.

48. View of Stream 2 looking downstream.

49. View of Stream 2 looking downstream.

50. View of Stream 2 looking upstream towards culvert outlet under South River Road.

51. View of Stream 3 at confluence with Crystal Springs Creek.

52. View of Stream 3 looking downstream towards confluence with Crystal Springs Creek.

53. View of Stream 3 looking downstream towards culvert under access road.

54. View of Stream 3 looking downstream.

55. View of Stream 3 looking upstream towards culvert outlet under the Katy Trail.

56. View of Stream 4 looking upstream towards outlet into standing water.

57. View of Stream 4 looking upstream.

58. View of Stream 4 looking upstream.

59. View of Stream 4 looking upstream.

60. View of Stream 4 looking upstream towards silted-in culvert outlet.

61. View of Pond 1 looking south from northwestern shore.

62. View of culvert and drainage swale looking north at the northern shore of Pond 1.

63. View of Pond 1 looking north from southern shore.

64. View of Pond 1 looking southwest from eastern shore.

65. View of pipe connection from Pond 1 to Pond 2.

66. View of Pond 2 looking northeast from western shore.

67. View of Pond 2 looking south from northern shore.

68. View of Pond 2 looking southeast from northern shore.

69. View of Pond 2 looking north from southern shore.

70. View of culvert outlet under the Katy Trail at the southern shore of Pond 2.

71. View of culvert outlet from Pond 2 and unnamed tributary (outside study area) to the Missouri River.

72. View of Pond 3 looking northeast from western shore.

73. View of Pond 3 looking southeast from northern shore.

74. View of Pond 3 looking north from southern shore.

75. View of Pond 4 looking southwest.

76. View of Pond 4 looking southeast.

77. View of Pond 4 looking east.

78. View of culvert inlet from Pond 4 under the Katy Trail.

79. View of culvert outlet from Pond 4 under the Katy Trail.

80. View of second culvert outlet from Pond 4 under the Katy Trail.

81. View of drainage from Pond 4 in undefined channel/swale within the larger forested wetland area.

Wetland and Other Waters of the United States Delineation Report

APPENDIX D: INITIAL WETLAND/HABITAT SUMMARY (2016)

Initial Field Wetland/Habitat Summery for Bangert Island:

On February 25-26, 2016 USACE biologists performed an initial wetlands field review at Bangert Island and located two separate potential wetlands that had all three wetland characteristics (soil, hydrology, & plants). Roughly 3% of the approximately 195 acres could be wetland. (About 5-7 acres along the ditch that flows along the northern boundary & roughly 1.0 acres within the interior.) Additional observations include, multiple marked bike/running trails that spider web the sites interior and they seem to have frequent use. Also, much of the habitat within the interior seems to have excellent Indiana &/or northern long-eared bat habitat. Old growth cottonwood & black willow as well as large silver maples are scatted throughout. Large standing dead trees (snags) are also prevalent with most having loose bark intact. Overall the tree canopy is fairly dense, 60-90% closer. With the size, species, and amount of shaggy bark living and dead standing trees, it is likely that a majority of the property is habitat that would be conducive to Indiana &/or northern long-eared bats. See GPS photos DSCN1049-1090 for wetland photos.

Other Observations:

Approximately half or more of the properties interior is large, mature sized trees. Living black willows and snags range between 15-20 inches in diameter. Living cottonwoods and snags range from 15-36 inches in diameter. There are patches of natural succession where large trees have fallen from flooding or wind actions resulting in open areas with many standing snags and a few 3-10 inch diameter trees have starting growing. Other areas with dense canopies and large mature trees have little to no mid or understory vegetation. See GPS photos DSCN1091-1145 for habitat photos.

Fish and wildlife observations include small fish or minnows, evidence of crayfish borrows, beaver and/or muskrat signs within the flowing ditch along the north boundary. Other beaver signs can also be seen along the banks of the Missouri River. Plentiful whitetail deer signs and game trail were seen throughout and well as active small mammal signs; likely raccoon, opossum, squirrel, and groundhogs/woodchuck. Many various song birds were also observed.

Besides the network of labeled running and biking trails for recreation, numerous portable hunting stands were observed as well. Most of these hunting stands seem to fairly new and likely from the previous winters hunting seasons.

KC DISTRICT
WETLAND INVESTIGATION
FEBRUARY 2016
Legend
Bangert Wetland
Out
S 5th St
Faulkner Dr
Burn Oak Dr
Basket Oak Dr
Rio Vista Dr
Camille Dr
San Carlos Dr
San Juan Dr
S River Rd
Beale St
S Main St
Ameristar Blvd
Thomas Ave
Moreau Terrace
Le Beau Ln
NE Vivaron
Tower Dr
Frieedens Rd
Orchard Ln
Katy Trail
70
Arena Pkwy
Wetland Area
2-A In
2-B Out
1-B Out
1-A In
3-C Out
3-A In
3-B Out
Wetland Area
4-B Out
4-A In
Wetland Area
5-B Out
5-A In
Wetland Area
Potential Bat Habitat
Google Earth
© 2020 Google
2000 ft

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bangert Island City/County: St. Charles Sampling Date: 25 Feb 2016

Applicant/Owner: USACE KCD State: MO Sampling Point: 1-A

Investigator(s): Chris Name, Rick Morrow Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave

Slope (%): 3 Lat: 38°45'9.73"N Long: 90°30'2.17"W Datum: _____

Soil Map Unit Name: _____ NWI or WWI classification: PFOE

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

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

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

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

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

Remarks:

Historic Channel Scar/Drainage

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	5	Y	OBL
2. *Populus deltoids*	2	Y	FAC
3. *Platanus occidentalis*	2	Y	FACW
4.			
5.			
	9	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. *Acer negundo*	15	Y	FAC
2. *Salix nigra*	5	Y	OBL
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: _____)			
1. *carex*	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. *Vitis aestivalis*	5	Y	FACU
2.			
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.71 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	2	x 2 =	4
FAC species	22	x 3 =	66
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	39 (A)		100 (B)

Prevalence Index = B/A = 2.56

Hydrophytic Vegetation Indicators:

✗ Dominance Test is >50%

✗ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✗ No _____

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

GPS Photo 1049-1053

SOIL

Sampling Point: 1-A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR3/1	70					SiCl	
	10YR3/2	10						
	10YR2/2	10						
6-18	10YR3/1	70	10YR3/6	25	D	M	SiCl	Organic Material
			10YR5/6	5				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bangert Island City/County: St. Charles Sampling Date: 25 Feb 2016

Applicant/Owner: USACE KCD State: MO Sampling Point: 1-B

Investigator(s): Chris Name, Rick Morrow Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): convex

Slope (%): 15 Lat: 38°45'10.19"N Long: 90°30'1.65"W Datum:

Soil Map Unit Name: NWI or WWI classification:

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✗ No ____

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

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

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

Remarks:

Edge of a historic channel scar/drainage

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	5	Y	FACW
2. *Morus alba*	5	Y	FAC
3. *Platanus occidentalis*	25	Y	FACW
4. *Populus deltoids*	5	N	FAC
5.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Salix nigra*	5	Y	OBL
2. *Acer negundo*	10	Y	FAC
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: ____)			
1. *polgonum*	10	Y	FAC
2. *cares*	20	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	30	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	30	x 2 =	60
FAC species	50	x 3 =	150
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	85 (A)		215 (B)

Prevalence Index = B/A = 2.53

Hydrophytic Vegetation Indicators:

✗ Dominance Test is >50%

✗ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✗ No ____

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

GPS Photo 1049-1053

SOIL

Sampling Point: 1-B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-10	10YR3/2	90					SiCl	
10-18	10YR4/2	90					SiCl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ___X___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ___X___ No _____

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

Remarks:

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bangert Island City/County: St. Charles Sampling Date: 25 Feb 2016

Applicant/Owner: USACE KCD State: MO Sampling Point: 2-A

Investigator(s): Chris Name, Rick Morrow Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave

Slope (%): 3 Lat: 38°45'14.71"N Long: 90°30'0.84"W Datum: _____

Soil Map Unit Name: _____ NWI or WWI classification: PFOE

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

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

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

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

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

Remarks:

Historic Channel Scar/Drainage

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	5	Y	FACW
2.			
3.			
4.			
5.			
	5 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. *Acer negundo*	25	Y	FAC
2.			
3.			
4.			
5.			
	25 = Total Cover		
Herb Stratum (Plot size: _____)			
1. *carex*	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	5	x 2 = 10
FAC species	30	x 3 = 90
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	35 (A)	100 (B)

Prevalence Index = B/A = 2.86

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

GPS photo 1054-1059

SOIL

Sampling Point: 2-A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR3/1	80	10YR4/6	15	RM		SiCl	
6-10	10YR4/3	25	10YR5/6	40	RM		SSiCl	SANDY
			10YR4/6	30				
10-18	10YR4/1	90	10YR3/6	15	RM		SiCl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- X Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bangert Island City/County: St. Charles Sampling Date: 25 Feb 2016

Applicant/Owner: USACE KCD State: MO Sampling Point: 2-B

Investigator(s): Chris Name, Rick Morrow Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): convex

Slope (%): 10 Lat: 38°45'14.72"N Long: 90°30'0.50"W Datum:

Soil Map Unit Name: NWI or WWI classification:

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

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

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

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

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

Remarks:

Edge of drainage path

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Platanus occidentalis*	10	Y	FACW
2. *Acer saccharinum*	40	Y	FACW
3.			
4.			
5.			
	50 = Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. *Acer saccharinum*	50	Y	FACW
2.			
3.			
4.			
5.			
	50 = Total Cover		
Herb Stratum (Plot size:)			
1. *carex*	5	Y	FAC
2. *polygonum*	15	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	120 (A)		260 (B)

Prevalence Index = B/A = 2.17

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No

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

GPS photos 1054-1059

SOIL

Sampling Point: 2-B

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR3/2						SiCl	
8-18	10YR4/2						SiCl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✗

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✗ No _____

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

Remarks:

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bangert Island City/County: St. Charles Sampling Date: 25 Feb 2016

Applicant/Owner: USACE KCD State: MO Sampling Point: 3-A

Investigator(s): Chris Name, Rick Morrow Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave

Slope (%): 3 Lat: 38°45'22.13"N Long: 90°29'50.38"W Datum:

Soil Map Unit Name: NWI or WWI classification: PFOE

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✗ No ____

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

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

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

Remarks:

Drainage path

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Platanus occidentalis*	10	Y	FACW
2. *Acer negundo*	15	Y	FAC
3. *Salix nigra*	5	N	OBL
4. *Populus deltoids*	5	N	FAC
5.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: ____)			
1. *polygonum*	25	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	25	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	10	x 2 =	20
FAC species	45	x 3 =	135
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	60 (A)		160 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:

✗ Dominance Test is >50%

✗ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✗ No ____

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

GPS Photos 1062-1068

SOIL

Sampling Point: 3-A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR3/1	80	10YR3/6	15	RM		SiCl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bangert Island City/County: St. Charles Sampling Date: 25 Feb 2016

Applicant/Owner: USACE KCD State: MO Sampling Point: 3-B

Investigator(s): Chris Name, Rick Morrow Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): convex

Slope (%): 10 Lat: 38°45'21.82"N Long: 90°29'49.97"W Datum:

Soil Map Unit Name: NWI or WWI classification:

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

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

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

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

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

Remarks:

Edge of a drainage

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoids*	25	Y	FAC
2. *Morus alba*	5	N	FAC
3. *Acer saccharinum*	5	N	FACW
4.			
5.			
	35 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: ____)			
1. *polygonum*	15	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	15 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1. *Vitis aestivalis*	5	Y	FACU
2.			
	5 = Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	45	x 3 =	135
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	55 (A)		165 (B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

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

GPS Photos 1062-1068

SOIL

Sampling Point: 3-B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR3/2	90						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bangert Island City/County: St. Charles Sampling Date: 25 Feb 2016

Applicant/Owner: USACE KCD State: MO Sampling Point: 3-C

Investigator(s): Chris Name, Rick Morrow Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): convex

Slope (%): 5 Lat: 38°45'23.35"N Long: 90°29'50.45"W Datum: _____

Soil Map Unit Name: _____ NWI or WWI classification: _____

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

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

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

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

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

Remarks:

Edge of a drainage

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Platanus occidentalis*	30	Y	FACW
2. *Populus deltoids*	10	Y	FAC
3.			
4.			
5.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. *Acer negundo*	10	Y	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: _____)			
1. *polygonum*	25	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	25	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. *Vitis aestivalis*	10	Y	FACU
2.			
	10	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	45	x 3 =	135
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	85 (A)		235 (B)

Prevalence Index = B/A = 2.76

Hydrophytic Vegetation Indicators:

✗ Dominance Test is >50%

✗ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✗ No _____

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

GPS Photos 1062-1068

SOIL

Sampling Point: 3-C

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR3/2							
6-12	10YR4/2							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No __X__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes __X__ No _____

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

Remarks:

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bangert Island City/County: St. Charles Sampling Date: 25 Feb 2016

Applicant/Owner: USACE KCD State: MO Sampling Point: 3-C

Investigator(s): Chris Name, Rick Morrow Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): convex

Slope (%): 5 Lat: 38°45'23.35"N Long: 90°29'50.45"W Datum:

Soil Map Unit Name: NWI or WWI classification:

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✗

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

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

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

Remarks:

Edge of a drainage

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Platanus occidentalis*	30	Y	FACW
2. *Populus deltoids*	10	Y	FAC
3.			
4.			
5.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Acer negundo*	10	Y	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: ____)			
1. *polygonum*	25	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	25	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1. *Vitis aestivalis*	10	Y	FACU
2.			
	10	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	45	x 3 =	135
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	85 (A)		235 (B)

Prevalence Index = B/A = 2.76

Hydrophytic Vegetation Indicators:

✗ Dominance Test is >50%

✗ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✗ No ____

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

GPS Photos 1062-1068

SOIL

Sampling Point: 3-C

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR3/2							
6-12	10YR4/2							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✗

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✗ No _____

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

Remarks:

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bangert Island City/County: St. Charles Sampling Date: 26 Feb 2016

Applicant/Owner: USACE KCD State: MO Sampling Point: 4-A

Investigator(s): Chris Name, Rick Morrow Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave

Slope (%): 3 Lat: 38°45'50.93"N Long: 90°29'19.93"W Datum: _____

Soil Map Unit Name: _____ NWI or WWI classification: PFOE

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

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

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

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

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

Remarks:

Floodplain depression

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	25	Y	OBL
2. *Acer saccharinum*	5	N	FACW
3.			
4.			
5.			
	30 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	30 (A)		35 (B)

Prevalence Index = B/A = 1.17

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

GPS Photos 1069,1071-1075

SOIL

Sampling Point: 4-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR2/1	90	10YR3/6	10	RM		SiCl	
12-18	10YR3/2	60	10YR3/6	5	RM		SiCl	
	10YR3/1	30						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- X Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bangert Island City/County: St. Charles Sampling Date: 26 Feb 2016

Applicant/Owner: USACE KCD State: MO Sampling Point: 4-B

Investigator(s): Chris Name, Rick Morrow Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): convex

Slope (%): 10 Lat: 38°45'51.25"N Long: 90°29'19.99"W Datum:

Soil Map Unit Name: NWI or WWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes No X	
Wetland Hydrology Present?	Yes X No	

Remarks:

Edge of a floodplain depression

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	20	Y	OBL
2. *Acer saccharinum*	20	Y	FACW
3.			
4.			
5.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Acer saccharinum*	15	Y	FACW
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	
Woody Vine Stratum (Plot size:)			
1. *Vitis aestivalis*	5	Y	FACU
2.			
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	35	x 2 =	70
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	60 (A)		110 (B)

Prevalence Index = B/A = 1.83

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

GPS Photos 1069,1071-1075

SOIL

Sampling Point: 4-B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR3/2	90						
10-18	10YR4/2	80						
	10YR3/1	30						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✗

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ✗ Water Marks (B1)
- ✗ Sediment Deposits (B2)
- ✗ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✗ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✗ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bangert Island City/County: St. Charles Sampling Date: 26 Feb 2016

Applicant/Owner: USACE KCD State: MO Sampling Point: 5-A

Investigator(s): Chris Name, Rick Morrow Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave

Slope (%): 3 Lat: 38°45'43.06"N Long: 90°29'17.29"W Datum:

Soil Map Unit Name: NWI or WWI classification: PFOE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X No	
Wetland Hydrology Present?	Yes X No	

Remarks:

GPS Photo 1080-1090

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	20	Y	OBL
2. *Populus deltoids*	5	Y	FAC
3.			
4.			
5.			
	25 = Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	25 (A)		35 (B)

Prevalence Index = B/A = 1.4

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

X Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

Trees of 15-20"
GPS Photo 1080-1090

SOIL

Sampling Point: 5-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR2/1	90					SiCl	
6-18	10YR4/2	70	10YR3/6	10	D	M	SiCl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- X Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): _____

Water Table Present? Yes ___ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Reset Form | Print Form

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Bangert Island City/County: St. Charles Sampling Date: 26 Feb 2016

Applicant/Owner: USACE KCD State: MO Sampling Point: 5-B

Investigator(s): Chris Name, Rick Morrow Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): convex

Slope (%): 3 Lat: 38°45'43.34"N Long: 90°29'17.87"W Datum: _____

Soil Map Unit Name: _____ NWI or WWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✗ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✗ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✗	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✗
Hydric Soil Present?	Yes _____	No ✗	
Wetland Hydrology Present?	Yes ✗	No _____	

Remarks:

Edge of a floodplain depression

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoids*	10	Y	FAC
2. *Acer saccharinum*	10	Y	FACW
3. *Salix nigra*	5	Y	OBL
4.			
5.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. *Vitis aestivalis*	5	Y	FACU
2.			
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:
OBL species	5	x 1 = 5
FACW species	10	x 2 = 20
FAC species	10	x 3 = 30
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	30 (A)	75 (B)

Prevalence Index = B/A = 2.5

Hydrophytic Vegetation Indicators:

✗ Dominance Test is >50%

✗ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✗ No _____

Remarks: (Include photo numbers here or on a separate sheet.)

Trees 15-20" diameter
GPS Photos 1080-1090

SOIL

Sampling Point: 5-B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR3/2							
6-12	10YR4/2							
12-18	10YR3/2							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✗

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ✗ Water Marks (B1)
- ✗ Sediment Deposits (B2)
- ✗ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✗ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ✗ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✗ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✗ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: