APPENDIX B – Wetland Delineation Report and Approved Jurisdictional Determinations

September 25, 2020

U.S. Army Corps of Engineers
Kansas City District: Regulatory Office
601 E. 12th Street, Room 402
Kansas City, MO 64106

Re: Request for Approved Jurisdictional Determination
Missouri 150 and Botts Road Project
Kansas City, Jackson County, Missouri

Dear Regulator:

Platform Ventures retained Olsson to conduct a wetland delineation and stream assessment for the Missouri 150 and Botts Road Project (Project). The proposed Project is located on the north side of Highway 150 and north and west of Colorado Avenue in Kansas City, Jackson County, Missouri. The project center is located at 38.862639 degrees latitude and -94.536703 degrees longitude. Olsson has completed the wetland delineation and stream assessment and is now requesting an Approved Jurisdictional Determination (AJD) for the Project area. A signed AJD request form is attached to this letter.

Olsson conducted a wetland delineation and stream assessment of the Project area in August 2020 and documented nine palustrine emergent wetlands, three intermittent streams, and 15 ephemeral streams. Olsson's report, with associated data forms, figures, and photos, is included as an attachment to this letter. One of the identified streams (Tributary 5), was documented flowing south to north in the Project area and was not depicted by any desktop resources (topographic map, NWI, or NHD). Photos of the stream are provided in the photolog appendix of the attached report. At the time of the field visit, Tributary 5 contained flowing water without recent rainfall. However, the channel was relatively narrow, lacked significant incision, and contained an ordinary high water mark width more consistent with an ephemeral stream. Olsson reviewed surrounding land uses near the Project and determined that flow supplied to Tributary 5 is likely provided by discharge from a detention pond located on the south side of Missouri 150; groundwater does not appear to be a contributor to flow in this stream. Based on the source of flow, Olsson determined that Tributary 5 is an ephemeral stream. However, because of the borderline nature of the stream, Olsson is requesting concurrence from the USACE.

Please contact me if you have any questions about this submittal. I can be reached at 913.748.2575, or by email at aball@olsson.com.

Sincerely,

Aaron Ball
Olsson Senior Scientist

Enclosure

7301 W. 133rd Street / Suite 200 / Overland Park, KS 66213
O 913.381.1170 / olsson.com

U.S. ARMY CORPS OF ENGINEERS

REQUEST FOR CORPS JURISDICTIONAL DETERMINATION

*__Authorities__: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332. __Principal Purpose__: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above. __Routine Uses__: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website. __Disclosure__: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

CORPS USE ONLY:
DATE RECEIVED:

PROJECT NO.:

1. PROPERTY LOCATION:

Street Address: Northwest of MO 150 and Colorado Ave

City/Township/Parish: Kansas City

County: Jackson State: MO

Acreage of Parcel/Review Area for JD: 146

Section: 26 Township: 47N Range: 33W

Latitude: 38.862639 Longitude: -94.536703

(For linear projects, please include the center point of the proposed alignment.)

2.REQUESTOR CONTACT INFORMATION:

Typed or Printed Name: Aaron Ball

Company Name: Olsson

Street Address: 7301 W. 133rd St., Suite 200

City: Overland Park State: KS ZIP: 66213

Phone Number: (913) 748-2575

E-mail: aball@olsson.com

3. MAP: Please attach a survey/plat map and vicinity map identifying location and review area for the JD.

4. REASON FOR REQUEST (check as many as applicable):

- ☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
- ☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
- ☒ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
- ☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
- ☐ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
- ☐ A Corps JD is required in order to obtain my local/state authorization.
- ☐ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
- ☐ I believe that the site may be comprised entirely of dry land.
- ☐ Other:

5. TYPE OF DETERMINATION BEING REQUESTED:

- ☒ I am requesting an approved JD.
- ☐ I am requesting a preliminary JD.
- ☐ I am requesting a “no permit required” letter as I believe my proposed activity is not regulated.
- ☐ I am unclear as to which JD I would like to request and require additional information to inform my decision.

6. OWNERSHIP DETAILS:

- ☐ I currently own this property.
- ☐ I plan to purchase this property.
- ☒ I am an agent/consultant acting on behalf of the requestor.
- ☐ Other (please explain:)

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

Signature: Date: 9/25/2020

WETLAND DELINEATION AND STREAM ASSESSMENT REPORT

MISSOURI 150 AND BOTTS ROAD PROPERTY

Prepared for:
Platform Ventures LLC

September 25, 2020
Olsson Project No: 020-2417

olsson®

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APPENDICES

1. INTRODUCTION

Platform Venture (PV) retained Olsson to conduct a wetland delineation and stream assessment of the proposed infrastructure (Project) north of Missouri Route 150 and west of U.S. Route 71 / Interstate 49 in Kansas City, Jackson County, Missouri (Appendix A, Figure 1). The center of the Project area is located at 38.862639 degrees north latitude and -94.536703 degrees longitude. The Project is located in Section 26, of Township 47 North, Range 33 West (Appendix A, Figure 2).

The Project area contains approximately 146 acres of land. The land types within the Project area include existing right-of-way (ROW), developed land, row crop agriculture, and natural areas. The existing ROW areas were dominated by native and nonnative grasses and forbs including Indian grass (*Sorghastrum nutans*), sideoats grama (*Bouteloua curtipendula*), switchgrass (*Panicum virgatum*), tall fescue (*Schedonorus arundinaceus*), smooth brome (*Bromus inermis*), sunflowers (*Helianthus* spp.), clover (*Trifolium* sp.), goldenrod (*Solidago* spp.), and foxtails (various species). Wooded areas were dominated by deciduous trees and shrubs including common hackberry (*Celtis occidentalis*), American elm (*Ulmus americana*), black walnut (*Juglans nigra*), silver maple (*Acer saccharinum*), bush honeysuckle (*Lonicera maackii*), and coralberry (*Symphoricarpos orbiculatus*).

2. METHODS

2.1. Desktop Wetland and Stream Review

Olsson conducted a desktop review using publicly available data sources to identify locations in the Project area that were likely to contain wetlands or require stream assessments. The desktop review was followed by an on-site investigation by Olsson biologists. Resources used during the desktop review included the following:

- U.S. Geological Survey (USGS): 1:24,000 Topographic Map, 1991 Belton Missouri Quadrangles
- U.S. Fish and Wildlife Service (USFWS): National Wetlands Inventory (NWI) Map
- Natural Resources Conservation Service (NRCS): Web Soil Survey, Jackson County Soils Survey Map
- Environmental Systems Research Institute (ESRI): Aerial Imagery
- Google Earth: Historical Aerial Photographs
- USGS: National Hydrography Dataset (NHD; USGS 2019)

The desktop review identified sites that warranted field surveys to document the presence or absence of wetlands and streams. Sample sites identified for review in the field are not

necessarily wetlands; however, they are areas where wetland or stream indicators may be present. The field coverage was not limited or restricted by the desktop review.

2.2. Wetland Delineation

The wetland delineation was conducted per methodology outlined by the *Corps of Engineers Wetland Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region, Version 2.0* (USACE 2010).

Wetland delineations were performed for all sites that were composed of hydric vegetation, hydric soils, and wetland hydrology. The boundaries of these three indicators were determined and sufficient data was collected to aid the U.S. Army Corps of Engineers (USACE) in making a preliminary jurisdictional determination. Data required for each collection point at a sample site included the following:

- Midwest Region Version 2.0 worksheet
- GPS points (in and out) and wetland boundary shapefile
- Primary and secondary indicators of hydrology
- Vegetation indicators based on the 2016 National Wetland Plant List (Lichvar et al. 2016)
- Soil description based on a soil sample

All wetland data points are denoted with a “w” in figures (Appendix A) and datasheets (Appendix B). The point where all three indicators exist is considered an *in point*. The wetland boundary exists where one or more of the three indicators is no longer present. A data collection point was collected outside the wetland boundary and identified as an *out point*, to document conditions outside the wetland. Geographic information system (GIS) data for a sample site included a polygon of the wetland boundary and GPS points for the in points and out points. Photographs were taken for each wetland to document conditions at the time of the survey and are included within each wetland datasheet.

2.3. Stream Assessment

Stream assessments were conducted to collect data to aid the USACE in making a preliminary jurisdictional determination of the stream reach. The assessments that were conducted were consistent with the Missouri Stream Mitigation Method (MSMM) for compensatory mitigation. Guidance for the stream assessments is contained in the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (USACE 2007) and the *State of Missouri Stream Mitigation Method* (USACE 2013).

Once a potential stream reach was located during the field survey, field teams collected assessment data using the stream assessment data form. All stream points are denoted with a

"t" in figures (Appendix A) and datasheets (Appendix C). These data forms assess the following aspects of the stream:

- Stream type: perennial, intermittent, or ephemeral
- Stream classification: traditional navigable water (TNW), relatively permanent waters (RPW), or non-relatively permanent waters (Non-RPW)
- Ordinary high-water mark (OHWM) characteristics
- Stream bottom composition
- Description of stream bank
- Natural, artificial, or manipulated stream characteristics
- Stream condition and stability
- Water characteristics: clear, discolored, flowing, or standing
- Riparian buffer vegetation and characteristics

Photos and GPS points were taken to document stream conditions at the time of the survey.

3. SUMMARY OF FINDINGS

Ms. Caroline Skidmore and Mr. Mark Sowers assisted Mr. Jack Finley of Olsson when he collected data from August 25 through 28 and September 2, 2020. Mr. Sowers and Mr. Finley have received formal training in wetland delineation. Weather data for the Project area was summarized from the National Oceanic and Atmospheric Administration (NOAA) Record of Climatological Observations at the Overland Park, Kansas (Station number US1KSJO0053). No precipitation fell within the 10 days preceding the August visits. Within the three days preceding September 1, 2.33 inches of precipitation were recorded.

3.1. Desktop Wetland and Stream Review

U.S. Geological Survey Topographic Map

The USGS topographic map (Appendix A, Figure 2), indicates that relief within the Project area is variable and hilly. Elevations range from approximately 1,040 feet at mean sea level (AMSL) at the southcentral property border to approximately 940 feet AMSL in the thalweg of an intermittent drainage that flows from west to east in the northern half of the Project area. The topographic map also depicts numerous smaller drainages that generally flow from the north and from the south into this intermittent drainage. No ponds or wetlands are depicted in the topographic map.

Environmental Systems Research Institute (ESRI) Aerial Map

The aerial map (Appendix A, Figure 3) indicates that the Project area is a mixture of row crop agriculture, scattered woodlands, and riparian corridors. The areas surrounding the Project area are composed of commercial facilities to the west, south, and east; single-family residences to the north; and apartment complexes on the eastern side. The streams depicted in the topographic map correspond to wooded corridors in the aerial map.

National Wetlands Inventory and National Hydrography Dataset Map

The NHD (USGS 2019) within the Project area (Appendix A, Figure 4) indicates the presence of several unnamed intermittent stream segments (5,091 linear feet; [LF]). No perennial or ephemeral stream segments were specified by the NHD and no wetlands were indicated by the NWI (2019) within the Project area.

Jackson County Soil Survey

Soil units with a soil matrix composed of greater than 60 percent of hydric inclusions are considered predominantly hydric. The existence of predominantly hydric soils indicates the potential for an area that can support wetlands. According to the soil survey for Jackson County (Appendix A, Figure 5), no soils exceeded 60 percent hydric inclusions. Soils mapped within the project area are as follow:

- 10000 Arisburg silt loam; 1 to 5 percent slopes; 3 percent hydric inclusions
- 30080 Greenton silty clay loam; 5 to 9 percent slopes; 10 percent hydric inclusions
- 36083 Kennebec silt loam; 1 to 4 percent slopes; occasionally flooded; 3 percent hydric inclusions

According to the Jackson County soils list, the Project area is composed of predominately non-hydric soils.

3.2. Wetland Delineation Results

The wetland delineation identified nine palustrine emergent (PEM) wetlands totaling 0.79 acre within the Project area (Appendix A, Figure 6). Based on the new Navigable Waters Protection Rule (NWPR) published in the Federal Register on June 22, 2020, none of these wetlands are considered jurisdictional features because they are adjacent to or abut ephemeral streams. Streams documented within the Project area are discussed in detail in Section 3.3, below. Table 1, below, summarizes the wetland features documented in the Project area. Detailed descriptions of each feature follow Table 1, and wetland data forms are provided in Appendix B.

Table 1. Wetland Delineation Summary.

Wetland ID	Data Point	Classification[1]	Jurisdictional[2]	Size (acres)
Wetland 1	w1	PEM	No	0.05
Wetland 2	w2	PEM	No	0.02
Wetland 3	w3	PEM	No	0.07
Wetland 4	w4	PEM	No	0.31
Wetland 5	w5	PEM	No	0.15
Wetland 6	w6	PEM	No	0.11
Wetland 7	w7	PEM	No	0.02
Wetland 8	w8	PEM	No	0.03
Wetland 9	w9	PEM	No	0.03
			TOTAL ACRES	**0.79**
			JURISDICTIONAL ACRES	**0.00**

[1]PEM = Palustrine emergent wetland
[2]Jurisdiction determined based on the June 22, 2020, Navigable Water Protection Rule (NWPR)

Of the nine delineated PEM wetlands, four wetlands (Wetlands 4-7) were documented in low-lying areas of an agricultural field that was unplanted at the time of the wetland delineation. These low-lying areas were likely created as the result of runoff from the surrounding areas. Wetlands 4-7 were dominated by sedges (*Carex* spp.), broadleaf cattail (*Typha latifolia*), and rough barnyard grass (*Echinochloa muricata*). All four wetlands contained hydric soil indicators and wetland hydrology indicators.

One delineated wetland (Wetland 8) was documented in a transitional area between an agricultural field (unplanted at the time of the delineation) and an adjacent wooded corridor. Wetland 8 was dominated by broadleaf cattail and contained wetland soil and hydrology indicators.

Remaining delineated wetlands (Wetlands 1, 2, 3, and 9) were all documented in non-agricultural portions of the Project area. In general, these wetlands were dominated by bearded beggarticks (*Bidens aristosa*), dotted smartweed (*Persicaria punctatum*), and sedges (*Carex* spp.). The wetlands contained wetland soil and hydrology indicators.

3.3. Stream Assessment Results

The stream assessment identified a total of 18 stream reaches totaling 12,237 LF within the Project area (Appendix A, Figure 6). Fifteen ephemeral streams totaling 5,069 LF and three intermittent streams totaling 7,168 LF were documented. No perennial streams were present. Under the new NWPR, only intermittent and perennial streams are considered jurisdictional features.

Of the 18 delineated streams, only the three intermittent streams (Tributary 1, 8, and 9) were indicated by desktop resources. All 15 ephemeral streams ultimately flow into Tributary 1 before exiting the Project area on the eastern side. Tributary 1 is an unnamed intermittent stream that flows into the Little Blue River and ultimately into the Missouri River; the Missouri River is designated as a TNW. Stream assessment data forms are provided in Appendix C, and Table 2 below details each stream reach. Supplemental stream photos are provided in the Photolog in Appendix E.

Table 2. Stream Assessment Summary.

Feature ID	Data Points	Stream Type	Stream Length within Project Area (linear feet)	Jurisdictional*
Tributary 1	t1	Intermittent	5,238	Yes
Tributary 2	t2	Ephemeral	188	No
Tributary 3	t3	Ephemeral	106	No
Tributary 4	t4	Ephemeral	298	No
Tributary 5	t5	Ephemeral	1,405	No
Tributary 6	t6	Ephemeral	120	No
Tributary 7	t7	Ephemeral	185	No
Tributary 8	t8	Intermittent	715	Yes
Tributary 9	t9	Intermittent	1,215	Yes
Tributary 10	t10	Ephemeral	86	No
Tributary 11	t11	Ephemeral	107	No
Tributary 12	t12	Ephemeral	220	No
Tributary 13	t13	Ephemeral	54	No
Tributary 14	t14	Ephemeral	910	No
Tributary 15	t15	Ephemeral	238	No
Tributary16	t16	Ephemeral	69	No
Tributary 17	t17	Ephemeral	590	No
Tributary 18	t18	Ephemeral	493	No
		TOTAL LENGTH	**12,237**	
		JURISDICTIONAL LENGTH	**7,168**	

* Jurisdiction determined based on the June 22, 2020, Navigable Water Protection Rule (NWPR)

3.4. Upland Areas

Two non-wetland points were taken during the field delineation to document upland conditions within the Project area (Appendix A, Figure 6). One non-wetland point (Non-Wetland 1) was taken in an upland wooded corridor and a second non-wetland point (Non-Wetland 2) was taken in an upland agricultural field. Non-Wetland 1 was dominated by American elm, honey locust, and bush honeysuckle. Non-Wetland 2 was dominated by giant ragweed (*Ambrosia trifida*),

rough barnyard grass, and Johnson grass (*Sorghum halepense*). Conditions documented at these two non-wetland points are representative of upland areas found throughout the Project area. Non-wetland data forms are provided in Appendix D.

4. CONCLUSIONS

The wetland delineation and stream assessment evaluated the 146-acre Project area that included row crop agriculture, riparian corridors, and scattered wood lots. The field study identified nine palustrine emergent wetlands, 15 ephemeral streams, and three intermittent streams within the Project Area. The nine emergent wetlands and 15 ephemeral streams are likely non-jurisdictional features based on the Navigable Water Protection Rule. **The three intermittent streams (totaling 7,168 LF) are considered jurisdictional under the new Navigable Water Protection Rule because of their downstream connection to the Missouri River.** Impacts to any of these jurisdictional features will require coordination with the USACE under Section 404 of the Clean Water Act.

5. REFERENCES

ESRI (Environmental Systems Research Institute). 2020. Imagery provide by Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

Google Earth Pro. 2020. Version 7.3.3.7786.

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

NOAA (National Oceanic and Atmospheric Administration). 2020. Record of Climatological Observations at the Overland Park, Kansas (Station number US1KSJO0053). https://www.ncdc.noaa.gov/cdo-web/search. Accessed September21, 2020.

Natural Resources Conservation Service. 2019. Web Soil Survey, Jackson County Soils Data.

USACE (U.S. Army Corps of Engineers). January 1987. Corps of Engineers Wetlands Delineation Manual, Wetlands Research Program Technical Report.

USACE. May 2007. Jurisdictional Determination Form Instructional Guidebook.

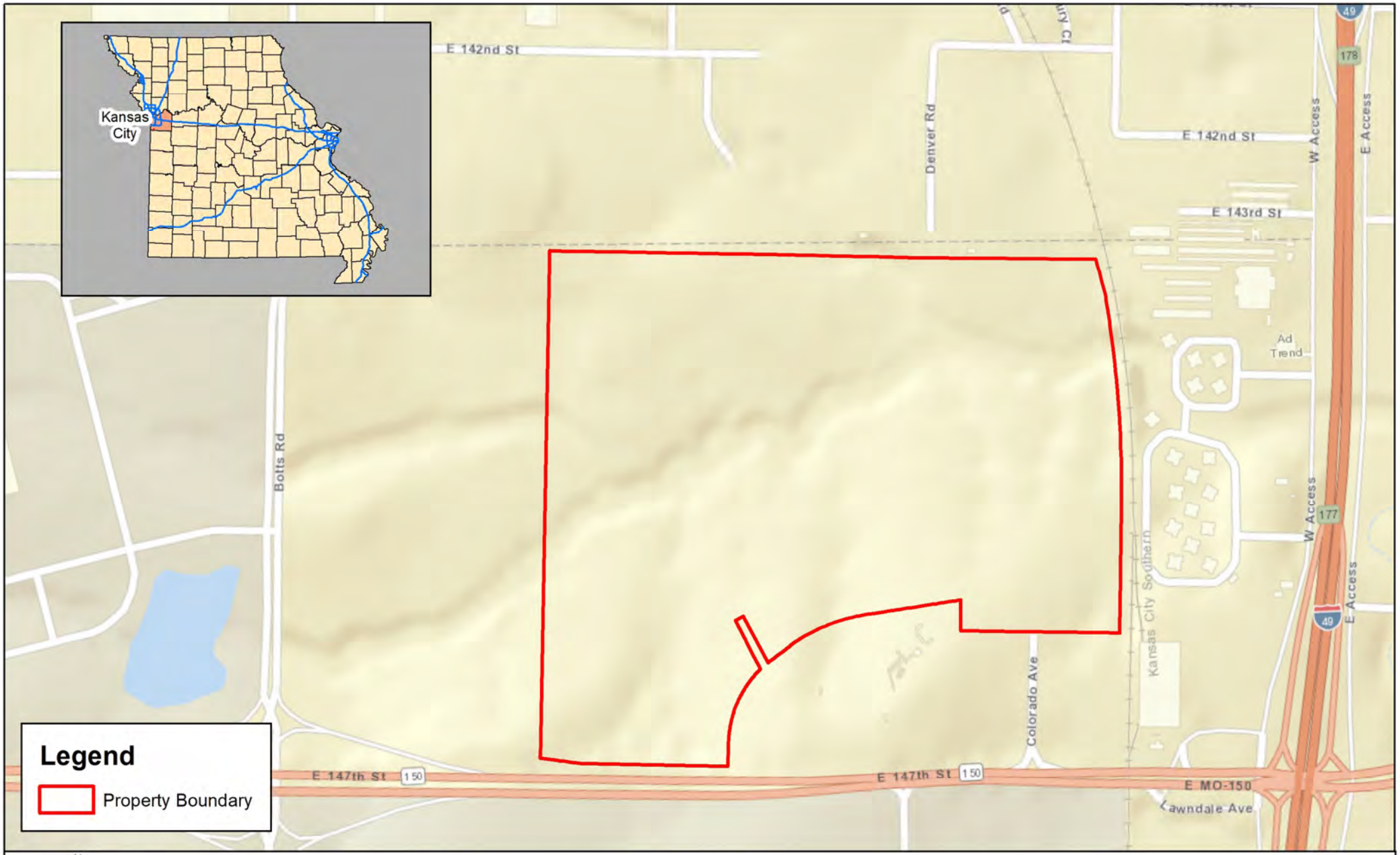
USACE. August 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0), Wetlands Regulatory Assistance Program.

USACE. April 2013. The State of Missouri Stream Mitigation Method.

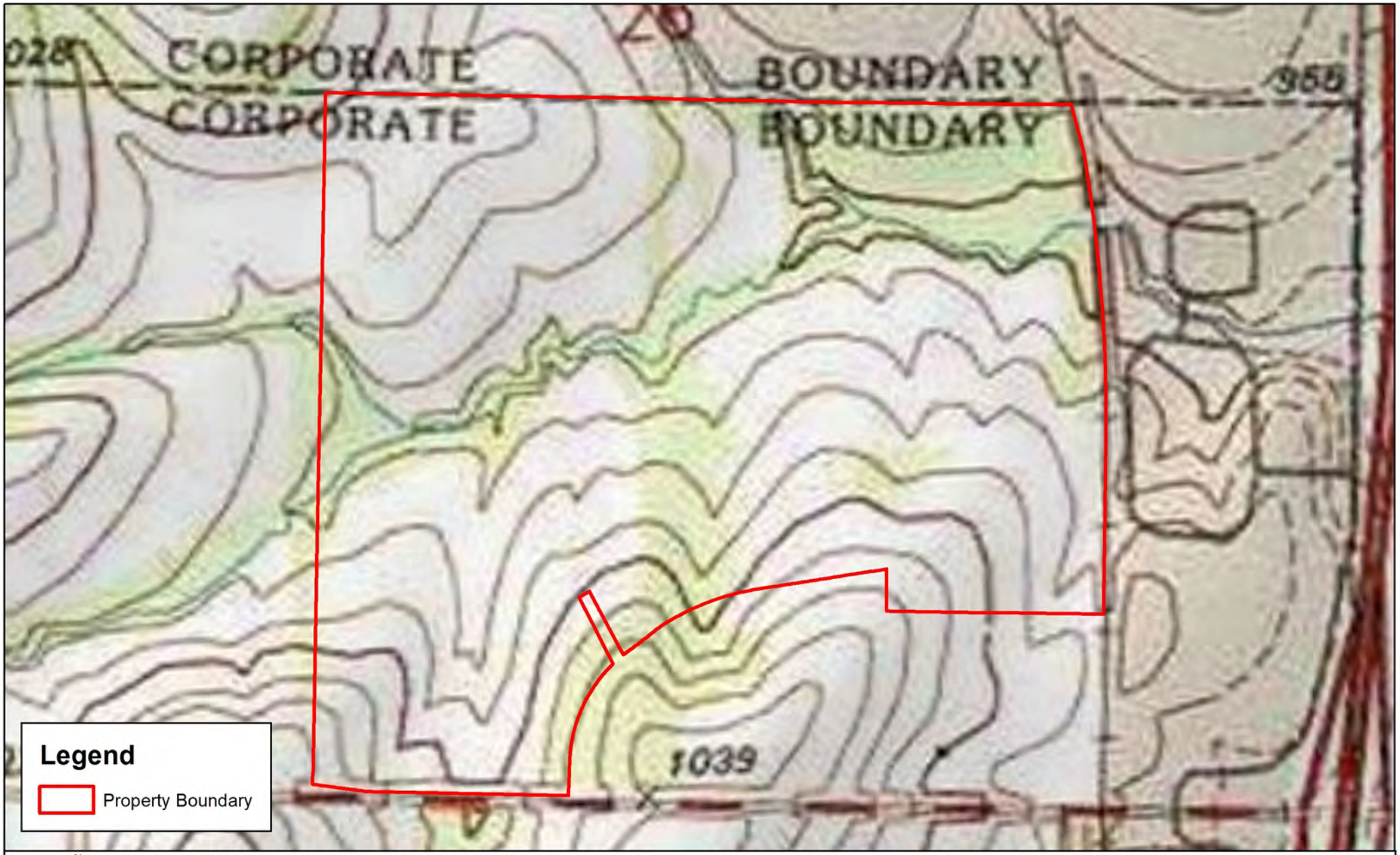
USFWS (U.S. Fish and Wildlife Service). 2019. National Wetlands Inventory, Surface Waters and Wetlands.

USGS (U.S. Geological Survey). 2019. National Hydrography Dataset.

APPENDIX A
Figures



Project Number: 020-2417 *Drawn By: MS* *Revision Date: 9/22/2020*	**Location Map** Platform Ventures 150 Hwy and Botts Rd Jackson County, Missouri	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 West 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure 1



Project Number: 020-2417 *Drawn By: MS* *Revision Date: 9/22/2020*	**Topographic Map** Platform Ventures 150 Hwy and Botts Rd Jackson County, Missouri	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 West 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure **2**

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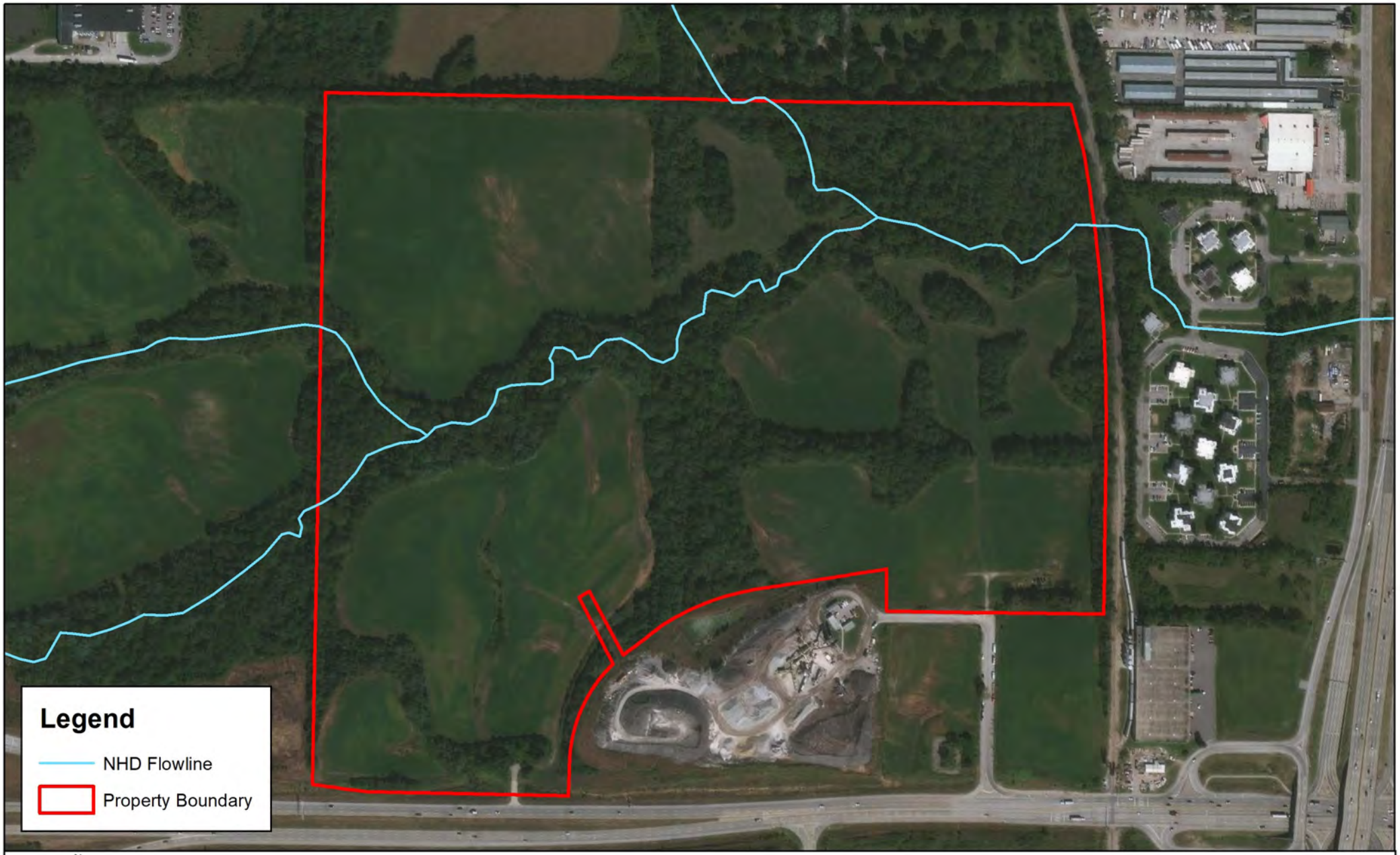
Project Number: 020-2417 *Drawn By: MS* *Revision Date: 9/22/2020*	**Aerial Map** Platform Ventures 150 Hwy and Botts Rd Jackson County, Missouri	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 West 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure **3**



Project Number: 020-2417 *Drawn By: MS* *Revision Date: 9/23/2020*	**NHD and NWI Map** Platform Ventures 150 Hwy and Botts Rd Jackson County, Missouri	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 West 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure **4**

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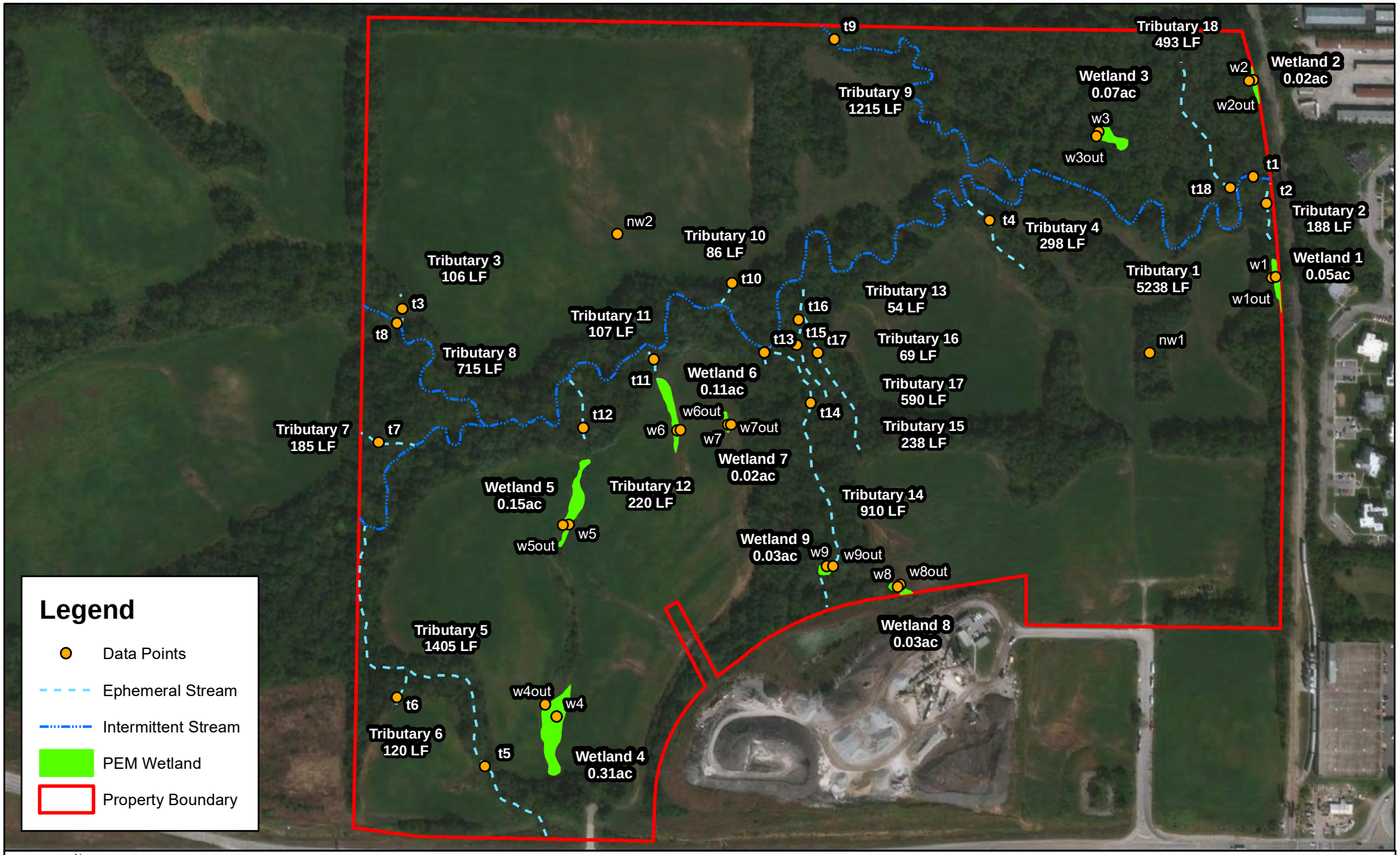
Project Number: 020-2417 *Drawn By: MS* *Revision Date: 9/22/2020*	**Soils Map** Platform Ventures 150 Hwy and Botts Rd Jackson County, Missouri	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 West 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure **5**

oaconsulting.com\lte-ns1\projects\2020\2001-2500\020-2417\40-Design\Exhibits\GIS\Ex5_soils.mxd



Project Number: 020-2417 *Drawn By: MS* *Revision Date: 9/25/2020*	**Delineated Aquatic Features Map** Platform Ventures 150 Hwy and Botts Rd Jackson County, Missouri	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 West 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure **6**

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APPENDIX B

Wetland Data Forms: Midwest Region

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 8/25/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: W1

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 0-2% Lat: 38.863243 Long: -94.53108 Datum: UTM83

Soil Map Unit Name: Snead-Rock outcrop complex, 14 to 30 percent slopes NWI classification: PEM

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 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Persicaria punctata	20		OBL
2. Bidens aristosa	70	X	FACW
3. Schedonorus arundinaceus	10		FACU
4. Elymus virginicus	10		FACW
5.			
6.			
7.			
8.			
9.			
10.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	20	x 1 =	20
FACW species	80	x 2 =	160
FAC species	0	x 3 =	0
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	110 (A)		220 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes X** **No ____**

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

SOIL

Sampling Point: W1

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	10yr3-2	95	2.5yr2.5-4	5	C	M	Silty Clay	
4-8	10yr3-1	90	2.5yr2.5-4	10	C	M	Silty Clay	
8-15	10yr3-1	75	2.5yr2.5-4	15	C	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

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)
- 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)
- 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:

Wetland Wetland 1 **Sample Point** W1

Longitude	Latitude
-94.53108	38.863243

Cowardin Classification: _____

Size: _____

Landform: Depression

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Persicaria punctata Bidens aristosa Schedonorus arundinaceus

Vine Stratum: _____

Hydric Soil Indicators: Redox Dark Surface (F6)

Hydrology Indicators: Geomorphic Position (D2)

Significant Nexus: No Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1 South

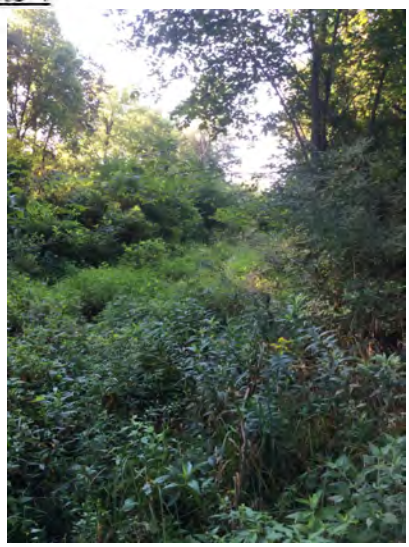


Photo 2 West

Photo 3 North

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 8/25/2020

Applicant/Owner: Platform Ventures State: ___ Sampling Point: W1out

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 0-2% Lat: 38.863320 Long: -94.531192 Datum: UTM83

Soil Map Unit Name: Snead-Rock outcrop complex, 14 to 30 percent slopes NWI classification: UPL

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

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

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

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Juglans nigra	50	X	FACU
2. Ulmus americana	10		FACW
3. Gleditsia triacanthos	40	X	FACU
4.			
5.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. Celtis occidentalis	70	X	FAC
2.			
3.			
4.			
5.			
	70	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Ageratina altissima	40	X	FACU
2. Elymus canadensis	30	X	FACU
3. Symphoricarpos occidentalis	20	X	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1. Parthenocissus quinquefolia	10	X	FACU
2.			
	10	= 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 14% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	70	x 3 =	210
FACU species	170	x 4 =	680
UPL species	20	x 5 =	100
Column Totals:	270 (A)		1010 (B)

Prevalence Index = B/A = 3.74

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ___ **No** X

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

SOIL

Sampling Point: W1out

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	10yr2-1	100					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

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 X

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

Remarks:

Wetland _____ **Sample Point** W1out

Longitude	Latitude
-94.531192	38.863320

Cowardin Classification: _____

Size: _____

Landform: Hillslope

Tree Stratum: Juglans nigra Ulmus americana Gleditsia triacanthos

Sapling/Shrub: Celtis occidentalis

Herb Stratum: Ageratina altissima Elymus canadensis Symphoricarpos occidentalis

Vine Stratum: Parthenocissus quinquefolia

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: No Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1 North

Photo 2 West

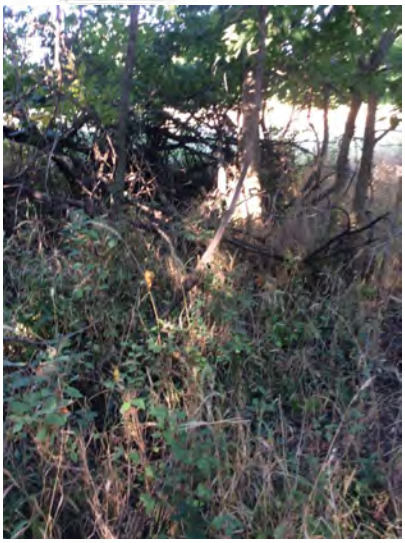


Photo 3 South

Photo 4 East

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 8/25/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: W2

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% Lat: 38.864864 Long: -94.531193 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 2 to 5 percent slopes NWI classification: PEM

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 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Bidens aristosa	70	X	FACW
2. Persicaria punctata	10		OBL
3. Solidago gigantea	10		FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	10	x 1 =	10
FACW species	80	x 2 =	160
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	90 (A)		170 (B)

Prevalence Index = B/A = 1.89

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** X **No** ____

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

SOIL

Sampling Point: W2

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 3/1	100					Clay	
4-8	10yr 4/1	85	10yr 4/6	15			Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

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)
- 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)
- 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:

Wetland Wetland 2 **Sample Point** W2

Longitude	Latitude
-94.531193	38.864864

Cowardin Classification: PEM

Size:

Landform: Depression

Tree Stratum:

Sapling/Shrub:

Herb Stratum: Bidens aristosa Persicaria punctata Solidago gigantea

Vine Stratum:

Hydric Soil Indicators: Redox Dark Surface (F6)

Hydrology Indicators: Drainage Patterns (B10)

Significant Nexus: No Adjacent: Abuts: Stream Name:

Jurisdictional Status and Comments:

Photo 1 North

Photo 2 South

Photo 3 East

Photo 4 West

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 08/25/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: W2out

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% Lat: 38.864865 Long: -94.531284 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 2 to 5 percent slopes NWI classification: UPL

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

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

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

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Gleditsia triacanthos	30	X	FACU
2. Juglans nigra	60	X	FACU
3. Celtis occidentalis	10		FAC
4.			
5.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. Cornus drummondii	70	X	FAC
2. Lonicera maackii	10		NI
3.			
4.			
5.			
	80	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Symphoricarpos orbiculatus	40	X	FACU
2. Elymus canadensis	10	X	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	80	x 3 =	240
FACU species	140	x 4 =	560
UPL species	0	x 5 =	0
Column Totals:	220 (A)		800 (B)

Prevalence Index = B/A = 3.64

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

SOIL

Sampling Point: W2out

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	10yr2-1						Silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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:

Wetland _____ **Sample Point** W2out

Longitude	Latitude
-94.531284	38.864865

Cowardin Classification: _____

Size: _____

Landform: Hillslope

Tree Stratum: Gleditsia triacanthos Juglans nigra Celtis occidentalis

Sapling/Shrub: Cornus drummondii Lonicera maackii

Herb Stratum: Symphoricarpos orbiculatus Elymus canadensis

Vine Stratum: _____

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1 South

Photo 2 West

Photo 3 East

Photo 4 North

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 8/25/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: W3

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): _____ Lat: 38.864610 Long: -94.532944 Datum: UTM83

Soil Map Unit Name: Kennebec silt loam, 1 to 4 percent slopes, occasionally flooded NWI classification: PEM

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

Remarks:

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Persicaria punctata	20	X	OBL
2. Carex sp.	70	X	FAC
3. Rubus sp.	10		FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	80	x 3 =	240
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		260 (B)

Prevalence Index = B/A = 2.60

Hydrophytic Vegetation Indicators:

- _ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- _ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- _ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

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

Sedge and blackberry could not be identified to species. Given their position in a wetland with an obligate plant, it is likely that their wetland indicator is FAC or wetter.

SOIL

Sampling Point: W3

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
1-16	10yr 2/1	95	2.5yr 3/4	5	C	M	Silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

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)
- 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:

Wetland Wetland 3 **Sample Point** W3

Longitude	Latitude
-94.532944	38.864610

Cowardin Classification: PEM
Size:
Landform: Depression
Tree Stratum:
Sapling/Shrub:
Herb Stratum: Persicaria punctata Carex sp. Rubus sp.
Vine Stratum:
Hydric Soil Indicators: Redox Dark Surface (F6)
Hydrology Indicators: FAC-Neutral Test (D5)
Significant Nexus: No Adjacent: Abuts: Stream Name:

Jurisdictional Status and Comments:
W3 is not adjacent to a jurisdictional stream.

Photo 1 East

Photo 2 South

Photo 3 West

Photo 4 North

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 8/25/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: W3out

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% Lat: 38.864576 Long: -94.533059 Datum: UTM83

Soil Map Unit Name: Kennebec silt loam, 1 to 4 percent slopes, occasionally flooded NWI classification: UPL

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

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

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

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Juglans nigra	90	X	FACU
2.			
3.			
4.			
5.			
	90 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. Cornus drummondii	50	X	FAC
2. Lonicera mackii	10		
3.			
4.			
5.			
	60 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Symphoricarpos orbiculatus	20	X	FACU
2. Rosa sp.	20	X	
3. Ageratina altissima	40	X	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	50	x 3 =	150
FACU species	150	x 4 =	600
UPL species	0	x 5 =	0
Column Totals:	200 (A)		750 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

SOIL

Sampling Point: W3out

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 2/1	100					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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 X

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

Remarks:

Wetland _____ **Sample Point** W3out

Longitude	Latitude
-94.533059	38.864576

Cowardin Classification: UPL
Size: _____
Landform: Hillslope
Tree Stratum: Juglans nigra
Sapling/Shrub: Cornus drummondii Lonicera mackii
Herb Stratum: Symphoricarpos orbiculatus Rosa sp. Ageratina altissima
Vine Stratum: _____
Hydric Soil Indicators: _____
Hydrology Indicators: _____
Significant Nexus: No Adjacent: _____ Abuts: _____ Stream Name: _____
Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 8/27/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: W4

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): ____ Lat: 38.859663 Long: -94.539440 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 5 to 9 percent slopes NWI classification: PEM

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

Remarks:

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Echinochloa muricata	50	X	OBL
2. Stachys tenuifolia	40	X	OBL
3. Cyperus sp.	10		FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	90	x 1 =	90
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		120 (B)

Prevalence Index = B/A = 1.20

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL

Sampling Point: W4

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	2.5y 2.5/1	95	5yr 3/4	5	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

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)
- 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:

Wetland Wetland 4 **Sample Point** W4

Longitude	Latitude
-94.539440	38.859663

Cowardin Classification: PEM

Size:

Landform: Drainageway

Tree Stratum:

Sapling/Shrub:

Herb Stratum: Echinochloa muricata Stachys tenuifolia Cyperus sp.

Vine Stratum:

Hydric Soil Indicators: Redox Dark Surface (F6)

Hydrology Indicators: FAC-Neutral Test (D5)

Significant Nexus: No Adjacent: Abuts: Stream Name:

Jurisdictional Status and Comments:

Photo 1 North

Photo 2 East

Photo 3 West

Photo 4 South

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 8/27/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: W4out

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% Lat: 38.859908 Long: -94.539358 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 5 to 9 percent slopes NWI classification: UPL

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

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

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

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Bromus inermis	100	X	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 000% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	100 (A)		400 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

SOIL

Sampling Point: W4out

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	10yr2-2	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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)
- 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 _____ No X

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

Remarks:

Wetland _____ **Sample Point** W4out

Longitude	Latitude
-94.539358	38.859908

Cowardin Classification: _____
Size: _____
Landform: Hillslope
Tree Stratum: _____
Sapling/Shrub: _____
Herb Stratum: Bromus inermis
Vine Stratum: _____
Hydric Soil Indicators: _____
Hydrology Indicators: _____
Significant Nexus: No Adjacent: _____ Abuts: _____ Stream Name: _____
Jurisdictional Status and Comments:

Photo 1 North

Photo 2 East

Photo 3 South

Photo 4 West

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 8/27/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: W5

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% Lat: 38.861360 Long: -94.539188 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 5 to 9 percent slopes NWI classification: PEM

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

Remarks:

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Typha latifolia	60	X	OBL
2. Carex vulpinoidea	50	X	FACW
3. Persicaria punctata	10		OBL
4. Solidago gigantea	10		FACW
5.			
6.			
7.			
8.			
9.			
10.			
	130 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	70	x 1 =	70
FACW species	60	x 2 =	120
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	130 (A)		190 (B)

Prevalence Index = B/A = 1.46

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL

Sampling Point: W5

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 3/1	98	5yr 3/4	2			Clay	
4-8	10yr 3-1	95	5yr 3/4	5			Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

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)
- 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)
- 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:

Wetland Wetland 5 **Sample Point** W5

Longitude	Latitude
-94.539188	38.861360

Cowardin Classification: PEM

Size:

Landform: Drainageway

Tree Stratum:

Sapling/Shrub:

Herb Stratum: Typha latifolia Carex vulpinoidea Persicaria punctata

Vine Stratum:

Hydric Soil Indicators: Redox Dark Surface (F6)

Hydrology Indicators: Drainage Patterns (B10)

Significant Nexus: No Adjacent: Abuts: Stream Name:

Jurisdictional Status and Comments:
Not adjacent to a jurisdictional stream.

Photo 1 South

Photo 2 East

Photo 3 North

Photo 4 West

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 8/27/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: W5out

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

Landform (hillslope, terrace, etc.): Hillslope-ag. field Local relief (concave, convex, none): None

Slope (%): 2-5% Lat: 38.861357 Long: -94.539293 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 5 to 9 percent slopes NWI classification: UPL

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

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

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

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Glycine max	20	X	NI
2. Amaranthus retroflexus	10	X	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	30 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 000% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

SOIL

Sampling Point: W5out

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 2/2	100					Silt	
4-16	10yr 2/2	99	5yr 4/4	1			Silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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:

Wetland _____ **Sample Point** W5out

Longitude	Latitude
-94.539293	38.861357

Cowardin Classification: UPL

Size: _____

Landform: Hillslope-ag. field

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Glycine max Amaranthus retroflexus

Vine Stratum: _____

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: No Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 08/28/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: w6

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% Lat: 38.86215 Long: -94.53792 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 5 to 9 percent slopes NWI classification: PEM

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Typha latifolia	100	X	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	100	x 1 =	100
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		100 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL

Sampling Point: w6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10yr 4/2	95	10yr 5/6	5	C	M	Clay	
4-8	10yr 3/2	95	10yr 5/6	5	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

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)
- __ 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)
- 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) 0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Wetland Wetland 6 **Sample Point** w6

Longitude	Latitude
-94.53792	38.86215

Cowardin Classification: PEM

Size:

Landform: Drainageway

Tree Stratum:

Sapling/Shrub:

Herb Stratum: Typha latifolia

Vine Stratum:

Hydric Soil Indicators: Depleted Matrix (F3)

Hydrology Indicators: Saturation (A3)

Significant Nexus: No Adjacent: Abuts: Stream Name:

Jurisdictional Status and Comments:
Not adjacent to a jurisdictional stream.

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 08/28/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: w6out

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% Lat: 38.862151 Long: -94.537882 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 5 to 9 percent slopes NWI classification: UPL

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

Remarks:

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Glycine max	20	X	NI
2. Ambrosia artemisiifolia	40	X	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 000% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	40 (A)		160 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

SOIL

Sampling Point: w6out

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 2/2	100					Silt Loam	
4-8	10yr 3/2	96	5yr 3/2	5	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:
Rock precluded deeper excavation.

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:

Wetland _____ **Sample Point** w6out

Longitude	Latitude
-94.537882	38.862151

Cowardin Classification: UPL

Size: _____

Landform: Hillslope

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Glycine max Ambrosia artemisiifolia

Vine Stratum: _____

Hydric Soil Indicators: Redox Dark Surface (F6)

Hydrology Indicators: _____

Significant Nexus: No Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 08/28/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: w7

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% Lat: 38.862175 Long: -94.537346 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 5 to 9 percent slopes NWI classification: PEM

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 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Typha angustifolia	50	X	OBL
2. Scirpus atrovirens	20	X	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	70	x 1 =	70
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	70 (A)		70 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

— Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes X** **No ____**

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

SOIL

Sampling Point: w7

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 2/1	95	2.5yr 3/6	5	C	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

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)
- 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:

Wetland Wetland 7 **Sample Point** w7

Longitude	Latitude
-94.537346	38.862175

Cowardin Classification: PEM

Size:

Landform: Depression

Tree Stratum:

Sapling/Shrub:

Herb Stratum: Typha angustifolia Scirpus atrovirens

Vine Stratum:

Hydric Soil Indicators: Redox Dark Surface (F6)

Hydrology Indicators: Geomorphic Position (D2)

Significant Nexus: No Adjacent: Abuts: Stream Name:

Jurisdictional Status and Comments:

Wetland is not located adjacent to a jurisdictional stream.

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 08/28/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: w7out

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% Lat: 38.862175 Long: -94.537309 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 5 to 9 percent slopes NWI classification: UPL

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Iva annua	70	X	FAC
2. Vicea sp.	30	X	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	70	x 3 =	210
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	70 (A)		210 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL

Sampling Point: w7out

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
*								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
*Soil was too rocky (disturbed) to excavate.

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:

Wetland _____ **Sample Point** w7out

Longitude	Latitude
-94.537309	38.862175

Cowardin Classification: UPL

Size: _____

Landform: Hillslope

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Iva annua Vicea sp.

Vine Stratum: _____

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: No Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 09/02/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: w8

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% Lat: 38.860672 Long: -94.535516 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 5 to 9 percent slopes NWI classification: PEM

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 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Typha latifolia	85	X	OBL
2. Scirpus atrovirens	5		OBL
3. Lobelia siphilitica	10		OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	100	x 1 =	100
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		100 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes X** **No ____**

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

SOIL

Sampling Point: w8

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 3/2	95	5yr 4/6	5	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

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)
- 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)
- 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:

Wetland Wetland 8 **Sample Point** w8

Longitude	Latitude
-94.535516	38.860672

Cowardin Classification: PEM

Size:

Landform: Drainageway

Tree Stratum:

Sapling/Shrub:

Herb Stratum: Typha latifolia Scirpus atrovirens Lobelia siphilitica

Vine Stratum:

Hydric Soil Indicators: Redox Dark Surface (F6)

Hydrology Indicators: Drainage Patterns (B10)

Significant Nexus: No Adjacent: Abuts: Stream Name:

Jurisdictional Status and Comments:
Wetland is not adjacent to a jurisdictional stream.

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 09/02/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: w8out

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% Lat: 38.860692 Long: 38.860692 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 5 to 9 percent slopes NWI classification: UPL

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

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

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

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Medicago lupulina	80	X	FACU
2. Heliopsis helianthoides	20	X	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 000% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	100 (A)		400 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

SOIL

Sampling Point: w8out

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 4/4	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Disturbed 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:

Wetland _____ **Sample Point** w8out

Longitude	Latitude
38.860692	38.860692

Cowardin Classification: UPL
Size: _____
Landform: Hillslope
Tree Stratum: _____
Sapling/Shrub: _____
Herb Stratum: Medicago lupulina Heliopsis helianthoides
Vine Stratum: _____
Hydric Soil Indicators: _____
Hydrology Indicators: _____
Significant Nexus: No Adjacent: _____ Abuts: _____ Stream Name: _____
Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 09/02/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: w9

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% Lat: 38.860885 Long: -94.536307 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 5 to 9 percent slopes NWI classification: PEM

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 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Persicaria punctata	80	X	OBL
2. Carex frankii	10		OBL
3. Bidens aristosa	10		FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	90	x 1 =	90
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		110 (B)

Prevalence Index = B/A = 1.10

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** X **No** ____

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

SOIL

Sampling Point: w9

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	10yr 2/2	95	5yr 3/4	5	C	M	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

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)
- __ 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)
- 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? Yes X No ____ Depth (inches) 0

(includes capillary fringe)

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Wetland Wetland 9 **Sample Point** w9

Longitude	Latitude
-94.536307	38.860885

Cowardin Classification: PEM

Size:

Landform: Hillslope

Tree Stratum:

Sapling/Shrub:

Herb Stratum: Persicaria punctata Carex frankii Bidens aristosa

Vine Stratum:

Hydric Soil Indicators: Redox Dark Surface (F6)

Hydrology Indicators: Saturation (A3)

Significant Nexus: No Adjacent: Abuts: Stream Name:

Jurisdictional Status and Comments:

Connected to ephemeral stream which is not jurisdictional under the NWPR.

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: Highway 150/Colorado Ave. City/County: Grandview (Jackson) Sampling Date: 09/02/2020

Applicant/Owner: Platform Ventures State: MO Sampling Point: w9out

Investigator(s): Jack Finley Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% Lat: 38.860882 Long: -94.536234 Datum: UTM83

Soil Map Unit Name: Sampsel silty clay loam, 5 to 9 percent slopes NWI classification: UPL

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

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

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

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus americana	30	X	FACW
2. Crataegus sp.	30	X	
3. Gleditsia triacanthos	30	X	FACU
4.			
5.			
	90	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft)			
1. Lonicera maackii	80	X	NI
2.			
3.			
4.			
5.			
	80	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. Ageratina altissima	30	X	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	30	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft)			
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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	0	x 3 =	0
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	90 (A)		300 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

Hawthorn (Crataegus) could not be identified to species.

SOIL

Sampling Point: w9out

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 2/2	100					Loam	
4-16	10yr 3/2	98	5yr 3/4	2	C	M	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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:

Wetland _____ **Sample Point** w9out

Longitude	Latitude
-94.536234	38.860882

Cowardin Classification: _____

Size: _____

Landform: Hillslope

Tree Stratum: Ulmus americana Crataegus sp. Gleditsia triacanthos

Sapling/Shrub: Lonicera maackii

Herb Stratum: Ageratina altissima

Vine Stratum: _____

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: No Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

APPENDIX C

Stream Assessment Data Forms

Date: 8/25/2020 Investigator(s): _____ 38.864139 -94.531278

Feature ID:	Tributary 1
Unique Site ID:	T1
Project name:	Highway 150/Colorado Ave.
Project #:	020-2417
County, State:	Jackson, Missouri

Stream Classification: ☐TNW ☒RPW ☐Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☒ Flowing ☐ Standing ☐ None

Water Color/Quality: ☒Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☐Relatively Straight ☒Meandering

OHWM width:	20	Top of bank to top of bank width:	30
OHWM height:	1ft	Top of Bank height:	8

Riparian Buffer Width: N/E side: 100 Ft. S/W side: 100 Ft.

Buffer (adjacent bank) vegetation:
Walnut, hackberry, bush honeysuckle

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☒gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☒Discrete
☐Confined
☐Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☒Intermittent ☐Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
Current flow and well developed channel.

Significant Nexus: ☒ Yes ☐ No
Explain:
Flows into the Little Blue River which eventually flows in the Missouri River, a traditional navigable river.

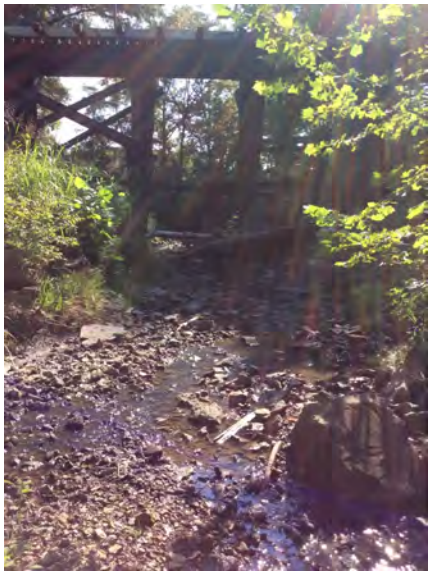
OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☒steep side slopes
☒vegetated banks
☒stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____



Date: 8/25/2020 Investigator(s): _____ 38.863899 -94.531144

Feature ID: Tributary 2

Unique Site ID: T2

Project name: Highway 150/Colorado Ave.

Project #: 020-2417

County, State: Jackson, Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☐2:1 ☒3:1 ☐4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☐Relatively Straight ☒Meandering

OHWM width: 3ft Top of bank to top of bank width: 3ft

OHWM height: 6in Top of Bank height: 4ft

Riparian Buffer Width: N/E side: 100 Ft.
S/W side: 100 Ft.

Buffer (adjacent bank) vegetation:
Black walnut, hackberry, dogwood, bush honeysuckle

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☒Discrete
☐Confined
☐Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
No flow, little channel development.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank
☐shelving
☒veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☒change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☒steep side slopes
☒vegetated banks
☐stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____

Date: 08/27/2020 Investigator(s): _____ 38.863457 -94.541015

Feature ID:	Tributary 3
Unique Site ID:	T3
Project name:	Highway 150/Colorado Ave.
Project #:	020-2417
County, State:	Jackson, Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☐2:1 ☐3:1 ☐4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width:	3ft	Top of bank to top of bank width:	15 ft
OHWM height:	6in	Top of Bank height:	8ft
Riparian Buffer Width:		N/E side: 15 Ft.	
		S/W side: 50 Ft.	

Buffer (adjacent bank) vegetation:

Honeysuckle, dogwood, walnut, hackberry

Stream Bottom Composition:

☒silt ☐concrete
☐sand ☐muck
☒gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:

☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:

☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated

Explain Artificial/Manipulated:

Stream Type:

☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:

Dry channel, no apparent development that would indicate groundwater connection.

Significant Nexus: ☐ Yes ☒ No

Explain:

Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:

☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:

☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☐exposed tree roots
☒steep side slopes
☒vegetated banks
☐stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____

Date: 08/28/2020 Investigator(s): _____ 38.863864 -94.534279

OLSSON ASSOCIATES

Feature ID: Tributary 4

Unique Site ID: t4

Project name: Highway 150/Colorado Ave.

Project #: 020-2417

County, State: Jackson, Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width: 1.5 ft. Top of bank to top of bank width: 8 ft.

OHWM height: 0.5 ft. Top of Bank height: 4 ft.

Riparian Buffer Width: N/E side: >50 Ft.
S/W side: >50 Ft.

Buffer (adjacent bank) vegetation:
bush honeysuckle

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☐Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
No flow and a channel that shows less development and no likely groundwater connection

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☐steep side slopes
☒vegetated banks
☐stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo:_____ Downstream Photo: _____

Date: 8/27/2020 Investigator(s): _____ 38.859239 -94.540207

Feature ID:	Tributary 5
Unique Site ID:	T5
Project name:	Highway 150/Colorado Ave.
Project #:	020-2417
County, State:	Jackson, Missouri

Stream Classification: ☐TNW ☐RPW ☐Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☒ Flowing ☐ Standing ☐ None

Water Color/Quality: ☒Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width:	1ft	Top of bank to top of bank width:	3ft
OHWM height:	6in	Top of Bank height:	2ft
Riparian Buffer Width:		N/E side: 30	Ft.
		S/W side: 20	Ft.

Buffer (adjacent bank) vegetation:
Honeysuckle, black willow, red cedar

Stream Bottom Composition:
☒silt ☐sand ☐gravel ☐cobble ☐bedrock ☐concrete ☐muck ☐other: ☐vegetation (% cover, type):

Riparian Type:
☒ Forested ☐ Herbaceous ☐ Ag. Field ☐ _____

Surface Flow:
☐Discrete ☐Confined ☒Discrete and Confined ☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
Very little flow, un-apparent groundwater connection.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank ☐shelving ☐veg. matted down or absent ☐leaf litter disturbed ☐wrack line ☐scour ☐change in plant community ☐other:

Stream Condition/Stability:
☐excessive erosion ☐bank collapse ☐cut-off channels ☐riffles/runs ☐pools ☒exposed tree roots ☒steep side slopes ☒vegetated banks ☒stable stream channel ☐incised stream channel

Biological Function and Comments:

Upstream Photo: South

Downstream Photo: North

Date: 8/27/2020 Investigator(s): _____ 38.859913 -94.541233

Feature ID:	Tributary 6
Unique Site ID:	T6
Project name:	Highway 150/Colorado Ave.
Project #:	020-2417
County, State:	Jackson, Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☒Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width:	1ft	Top of bank to top of bank width:	10ft
OHWM height:	6in	Top of Bank height:	10ft
Riparian Buffer Width:		N/E side: 30	Ft.
		S/W side: 30	Ft.

Buffer (adjacent bank) vegetation:

Red cedar,honeysuckle, honey Locust, pin oak

Stream Bottom Composition:

☒silt ☐concrete
☐sand ☐muck
☒gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:

☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:

☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated

Explain Artificial/Manipulated:

Stream Type:

☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:

no flowing water or apparent connection to groundwater.

Significant Nexus: ☐ Yes ☒ No

Explain:

Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:

☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:

☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☐steep side slopes
☒vegetated banks
☐stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____

Date: 8/27/2020 Investigator(s): _____ 38.862167 -94.541314

Feature ID:	Tributary 7
Unique Site ID:	T7
Project name:	Highway 150/Colorado Ave.
Project #:	020-2417
County, State:	Jackson, Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☐2:1 ☒3:1 ☐4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☐Relatively Straight ☒Meandering

OHWM width:	3ft	Top of bank to top of bank width:	10 ft
OHWM height:	6in	Top of Bank height:	4ft
Riparian Buffer Width:		N/E side: 100 Ft.	
		S/W side: 100 Ft.	

Buffer (adjacent bank) vegetation:

Hackberry, honeysuckle

Stream Bottom Composition:

☒silt ☐sand ☐gravel ☐cobble ☐bedrock ☐concrete ☐muck ☐other: ☐vegetation (% cover, type):

Riparian Type:

☒ Forested ☐ Herbaceous ☐ Ag. Field ☐ _____

Surface Flow:

☐Discrete ☐Confined ☒Discrete and Confined ☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated

Explain Artificial/Manipulated:

Stream Type:

☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:

No flow and no apparent connection to groundwater.

Significant Nexus: ☐ Yes ☒ No

Explain:

Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:

☒clear, natural line on bank ☐shelving ☐veg. matted down or absent ☐leaf litter disturbed ☐ wrack line ☐scour ☐change in plant community ☐other:

Stream Condition/Stability:

☐excessive erosion ☐bank collapse ☐cut-off channels ☐riffles/runs ☐pools ☒exposed tree roots ☐steep side slopes ☒vegetated banks ☒stable stream channel ☐incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____

Date: 8/27/2020 Investigator(s): _____ 38.862391 -94.540285

Feature ID:	Tributary
Unique Site ID:	T8
Project name:	Highway 150/Colorado Ave.
Project #:	020-2417
County, State:	Jackson, Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☒ Flowing ☐ Standing ☐ None

Water Color/Quality: ☒Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☐Relatively Straight ☒Meandering

OHWM width:	5ft	Top of bank to top of bank width:	12ft
OHWM height:	1ft	Top of Bank height:	5ft
Riparian Buffer Width:		N/E side: 100 Ft.	
		S/W side: 100 Ft.	

Buffer (adjacent bank) vegetation:

Silver maple, honeysuckle

Stream Bottom Composition:

☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☒cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:

☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:

☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated

Explain Artificial/Manipulated:

Stream Type:

☐Perennial ☒Intermittent ☐Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:

Flowing water and an apparent groundwater connection since rainfall had not fallen in the previous 10 days.

Significant Nexus: ☒ Yes ☐ No

Explain:

It eventually flows into the Little Blue River which flows in the Missouri River, a traditional navigable stream.

OHWM has:

☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:

☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☒steep side slopes
☒vegetated banks
☒stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____

Date: 08/28/2020 Investigator(s): _____ 38.865535 -94.53593

Feature ID:	Tributary 9
Unique Site ID:	t9
Project name:	Highway 150/Colorado Ave.
Project #:	020-2417
County, State:	Jackson, Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☐ None

Water Color/Quality: ☐Clear ☒Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☐Relatively Straight ☒Meandering

OHWM width:	8 ft	Top of bank to top of bank width:	20 ft.
OHWM height:	1 ft.	Top of Bank height:	8 ft.
Riparian Buffer Width:		N/E side: 30+	Ft.
		S/W side: 30+	Ft.

Buffer (adjacent bank) vegetation:
bush honeysuckle, redbud.

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☐Discrete
☐Confined
☐Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☒Intermittent ☐Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
Flowing stream after a period of dry weather, well developed channel.

Significant Nexus: ☒ Yes ☐ No
Explain:
It eventually flows into the Little Blue River which flows in the Missouri River, a traditional navigable stream.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☒pools
☒exposed tree roots
☒steep side slopes
☒vegetated banks
☒stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____

Date: 08/28/2020 Investigator(s): _____ 38.863426 -94.537224

Feature ID:	Tributary 10
Unique Site ID:	T10
Project name:	Highway 150/Colorado Ave.
Project #:	020-2417
County, State:	Jackson, Missouri

Stream Classification: ☐ TNW ☐ RPW ☒ Non-RPW

Side Slopes: 1:1 ☐ ☒ 2:1 ☐ 3:1 ☐ 4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐ Clear ☐ Discolored ☐ Oily film

Stream Has: ☒ Bed/Bank ☒ OHWM:

Tributary Geometry: ☒ Relatively Straight ☐ Meandering

OHWM width:	1.5 ft.	Top of bank to top of bank width:	15ft.
OHWM height:	0.5 ft.	Top of Bank height:	5 ft.
Riparian Buffer Width:		N/E side:	100 Ft.
		S/W side:	100 Ft.

Buffer (adjacent bank) vegetation:
dogwood, bush honeysuckle

Stream Bottom Composition:
☒ silt ☐ concrete
☐ sand ☐ muck
☐ gravel ☐ other:
☐ cobble ☐ vegetation (% cover, type):
☐ bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☒ Discrete
☐ Confined
☐ Discrete and Confined
☐ Overland Sheet Flow

Stream Characteristics: ☒ Natural ☐ Artificial ☐ Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐ Perennial ☐ Intermittent ☒ Ephemeral ☐ Draws/Gullies/Erosional Pattern

Stream Type Rational:
No flow and a channel that shows less development and no likely groundwater connection.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒ clear, natural line on bank
☐ shelving
☐ veg. matted down or absent
☐ leaf litter disturbed
☐ wrack line
☐ scour
☒ change in plant community
☐ other:

Stream Condition/Stability:
☐ excessive erosion
☐ bank collapse
☐ cut-off channels
☐ riffles/runs
☐ pools
☒ exposed tree roots
☒ steep side slopes
☒ vegetated banks
☒ stable stream channel
☐ incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____

Date: 08/28/2020 Investigator(s): _____ 38.862787 -94.537224

Feature ID:	Tributary 11
Unique Site ID:	t11
Project name:	Highway 150/Colorado Ave.
Project #:	020-2417
County, State:	Jackson, Missouri

Stream Classification: ☐ TNW ☐ RPW ☒ Non-RPW

Side Slopes: 1:1 ☐ ☒ 2:1 ☐ 3:1 ☐ 4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐ Clear ☐ Discolored ☐ Oily film

Stream Has: ☒ Bed/Bank ☒ OHWM:

Tributary Geometry: ☐ Relatively Straight ☒ Meandering

OHWM width:	1.0 ft.	Top of bank to top of bank width:	5 ft.
OHWM height:	0.5 ft.	Top of Bank height:	4 ft.
Riparian Buffer Width:		N/E side:	>50 Ft.
		S/W side:	>50 Ft.

Buffer (adjacent bank) vegetation:

Ragweed

Stream Bottom Composition:

☒ silt ☐ concrete
☐ sand ☐ muck
☐ gravel ☐ other:
☐ cobble ☐ vegetation (% cover, type):
☐ bedrock

Riparian Type:

☐ Forested
☒ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:

☒ Discrete
☐ Confined
☐ Discrete and Confined
☐ Overland Sheet Flow

Stream Characteristics: ☒ Natural ☐ Artificial ☐ Manipulated

Explain Artificial/Manipulated:

Stream Type:

☐ Perennial ☐ Intermittent ☒ Ephemeral ☐ Draws/Gullies/Erosional Pattern

Stream Type Rational:

No flow and a channel that shows less development and no likely groundwater connection.

Significant Nexus: ☐ Yes ☒ No

Explain:

Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:

☒ clear, natural line on bank
☐ shelving
☐ veg. matted down or absent
☐ leaf litter disturbed
☐ wrack line
☐ scour
☐ change in plant community
☐ other:

Stream Condition/Stability:

☐ excessive erosion
☐ bank collapse
☐ cut-off channels
☐ riffles/runs
☐ pools
☐ exposed tree roots
☒ steep side slopes
☒ vegetated banks
☐ stable stream channel
☐ incised stream channel

Biological Function and Comments:

Upstream Photo: _____

Downstream Photo: _____

Date: 08/28/2020 Investigator(s): _____ 38.862213 -94.538978

Feature ID: Tributary 12

Unique Site ID: t12

Project name: Highway 150/Colorado Ave.

Project #: 020-2417

County, State: Jackson, Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width: 2 ft. Top of bank to top of bank width: 6 ft.

OHWM height: 0.5 ft Top of Bank height: 5 ft.

Riparian Buffer Width: N/E side: >50 Ft.
S/W side: Ft.

Buffer (adjacent bank) vegetation:
American elm, bush honeysuckle

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
No flow and a channel that shows less development and no likely groundwater connection.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☒change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☒steep side slopes
☒vegetated banks
☐stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____

Date: 08/28/2020 Investigator(s): _____ 38.862801 -94.536896

OLSSON ASSOCIATES

Feature ID: Tributary 13

Unique Site ID: t13

Project name: Highway 150/Colorado Ave.

Project #: 020-2417

County, State: Jackson, Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☐2:1 ☒3:1 ☐4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width: 3 ft. Top of bank to top of bank width: 5ft.

OHWM height: 1 ft. Top of Bank height: 8 ft.

Riparian Buffer Width: N/E side: >50 Ft.
S/W side: >50 Ft.

Buffer (adjacent bank) vegetation:

-

Stream Bottom Composition:

☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:

☐ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:

☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated

Explain Artificial/Manipulated:

Stream Type:

☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
No flow and a channel that shows less development and no likely groundwater connection.

Significant Nexus: ☐ Yes ☒ No

Explain:
Ephemeral streams are not jurisdictional under the NWPR

OHWM has:

☐clear, natural line on bank
☐shelving
☒veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:

☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☐steep side slopes
☒vegetated banks
☒stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo:_____ Downstream Photo: _____

Date: 09/02/2020 Investigator(s): _____ 38.862334 -94.536396

Feature ID: Tributary 14

Unique Site ID: T14

Project name: Highway 150/Colorado Ave.

Project #: 020-2417

County, State: Jackson, Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☐2:1 ☐3:1 ☒4:1 or >

Hydrology: ☒ Flowing ☐ Standing ☐ None

Water Color/Quality: ☒Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width: 3 ft. Top of bank to top of bank width: 4 ft.

OHWM height: 0.5 ft. Top of Bank height: 1 ft.

Riparian Buffer Width: N/E side: >50 Ft.
S/W side: >50 Ft.

Buffer (adjacent bank) vegetation:
Bush honeysuckle

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☒Discrete
☐Confined
☐Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
A trickle of water from rainfall within the previous 3 days suggests that this is ephemeral.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☐exposed tree roots
☐steep side slopes
☒vegetated banks
☒stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____

Date: 09/02/2020 Investigator(s): _____ 38.862849 -94.536525

Feature ID: Tributary 15

Unique Site ID: t15

Project name: Highway 150/Colorado Ave.

Project #: 020-2417

County, State: Jackson, Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☐2:1 ☒3:1 ☐4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width: 1.5 ft. Top of bank to top of bank width: 3 ft.

OHWM height: 0.5 Top of Bank height: 5 ft.

Riparian Buffer Width: N/E side: >50 Ft.
S/W side: >50 Ft.

Buffer (adjacent bank) vegetation:
elm, hackberry, bush honeysuckle

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☒Discrete
☐Confined
☐Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
No flow and a channel that shows less development and no likely groundwater connection.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☐steep side slopes
☐vegetated banks
☐stable stream channel
☒incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____

Date: 09/02/2020 Investigator(s): _____ 38.863074 -94.536486

Feature ID:	Tributary 16
Unique Site ID:	t6
Project name:	Highway 150/Colorado Ave.
Project #:	020-2417
County, State:	Highway 150/Colorado Ave.

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width:	2.5 ft.	Top of bank to top of bank width:	4 ft.
OHWM height:	0.5 ft.	Top of Bank height:	3 ft.
Riparian Buffer Width:		N/E side:	>50 Ft.
		S/W side:	>50 Ft.

Buffer (adjacent bank) vegetation:
Hackberry, bush honeysuckle

Stream Bottom Composition:
☒silt ☐sand ☐gravel ☐cobble ☐bedrock ☐concrete ☐muck ☐other: ☐vegetation (% cover, type):

Riparian Type:
☒ Forested ☐ Herbaceous ☐ Ag. Field ☐ _____

Surface Flow:
☐Discrete ☐Confined ☒Discrete and Confined ☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
No flow and a channel that shows less development and no likely groundwater connection.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank ☐shelving ☐veg. matted down or absent ☒leaf litter disturbed ☐ wrack line ☐scour ☐change in plant community ☐other:

Stream Condition/Stability:
☐excessive erosion ☐bank collapse ☐cut-off channels ☐riffles/runs ☐pools ☒exposed tree roots ☐steep side slopes ☒vegetated banks ☒stable stream channel ☐incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____

Date: 09/02/2020 Investigator(s): _____ 38.862772 -94.536295

OLSSON ASSOCIATES

Feature ID:	Tributary 17
Unique Site ID:	t17
Project name:	Highway 150/Colorado Ave.
Project #:	020-2417
County, State:	Jackson, Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☐Relatively Straight ☐Meandering

OHWM width:	2. ft	Top of bank to top of bank width:	15 ft
OHWM height:	0.5 ft	Top of Bank height:	4ft.
Riparian Buffer Width:		N/E side:	>50 Ft.
		S/W side:	>50 Ft.

Buffer (adjacent bank) vegetation:
hackberry bush honeysuckle

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
No flow and a channel that shows less development and no likely groundwater connection.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☐steep side slopes
☐vegetated banks
☐stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____

Date: 8/25/2020 Investigator(s): _____ 38.864051 -94.531544

Feature ID:	Tributary 18
Unique Site ID:	T18
Project name:	Highway 150/Colorado Ave.
Project #:	020-2417
County, State:	Jackson, Missouri

Stream Classification: ☐ TNW ☐ RPW ☒ Non-RPW

Side Slopes: 1:1 ☐ ☒ 2:1 ☐ 3:1 ☐ 4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐ Clear ☐ Discolored ☐ Oily film

Stream Has: ☒ Bed/Bank ☒ OHWM:

Tributary Geometry: ☐ Relatively Straight ☒ Meandering

OHWM width:	1ft	Top of bank to top of bank width:	6ft
OHWM height:	6in	Top of Bank height:	3ft
Riparian Buffer Width:		N/E side: 100 Ft.	
		S/W side: 100 Ft.	

Buffer (adjacent bank) vegetation:

Black walnut, hackberry, mulberry, honeysuckle, rye

Stream Bottom Composition:

☒ silt ☐ concrete
☐ sand ☐ muck
☐ gravel ☐ other:
☐ cobble ☐ vegetation (% cover, type):
☐ bedrock

Riparian Type:

☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:

☒ Discrete
☐ Confined
☐ Discrete and Confined
☐ Overland Sheet Flow

Stream Characteristics: ☒ Natural ☐ Artificial ☐ Manipulated

Explain Artificial/Manipulated:

Stream Type:

☐ Perennial ☐ Intermittent ☒ Ephemeral ☐ Draws/Gullies/Erosional Pattern

Stream Type Rational:

No flow

Significant Nexus: ☐ Yes ☒ No

Explain:

Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:

☒ clear, natural line on bank
☐ shelving
☐ veg. matted down or absent
☐ leaf litter disturbed
☐ wrack line
☐ scour
☒ change in plant community
☐ other:

Stream Condition/Stability:

☐ excessive erosion
☐ bank collapse
☐ cut-off channels
☐ riffles/runs
☐ pools
☒ exposed tree roots
☒ steep side slopes
☒ vegetated banks
☒ stable stream channel
☐ incised stream channel

Biological Function and Comments:

Upstream Photo:_____

Downstream Photo: _____

APPENDIX D
Supplemental Data Forms

Site Identification: nw1

Vegetation: American elm, honey Locust, coralberry, honeysuckle, snakeroot

Soils: 10yr2/1 (0-16") no redox

Hydrology: Non-wetland upland

Latitude: 38.862647 Longitude: -94.532537

Comments:

Photo #1
East

Photo #2
South

Photo #3
West

Photo #4
North

Site Identification: nw2

Vegetation: Ragweed, barnyard grass, aster sp.

Soils: 10yr 2/2, no redox

Hydrology: drainage pattern

Latitude: 38.863798 Longitude: -94.538526

Comments: Did not meet all three criteria for a wetland.

Photo #1
North

Photo #2
South

Photo #3
East

Photo #4
West

APPENDIX E
Photolog

Photo No.	1	Photo Dir.	N

Description: Entrance point of Tributary 5 into the Project area. Tributary 5 enters the Project area through a CMP that extends underneath MO 150.

Photo No.	2	Photo Dir.	N

Description: Photo showing the OHWM and bed and bank of Tributary 5.

Photo No. 3	Photo Dir. S

Description: Tributary 5 showing OHWM and bed and bank.

Photo No. 4	Photo Dir. N

Description: Tributary 5, showing the view upstream of the same location as Photo 3.

Photo No.	5	Photo Dir.	N

Description: Tributary 5, showing an area of standing water.

Photo No.	6	Photo Dir.	S

Description: Tributary 5, showing a downstream view of the same location as Photo 5

Photo No.	7	Photo Dir.	N

Description: Tributary 5, showing the stream's bed and bank.

Photo No.	8	Photo Dir.	N

Description: Tributary 5, showing OHWM and bed and bank.

Photo No.	9	Photo Dir.	SW

Description: View of Tributary 5 from an adjacent hilltop.

Photo No.	10	Photo Dir.	N

Description: Tributary 5 showing OHWM and bed and bank.

October 14, 2020

U.S. Army Corps of Engineers
Kansas City District: Regulatory Office
601 E. 12th Street, Room 402
Kansas City, MO 64106

Re: Request for Approved Jurisdictional Determination
Missouri 150 and Botts Road Project (Promontory 150 LLC)
Kansas City, Jackson County, Missouri

Dear Regulator:

Promontory 150 LLC (Promontory) retained Olsson to conduct a wetland delineation and stream assessment for the Promontory property of the 150 and Botts Road Project (Project). The proposed Project is located on the north side of Highway 150 and east of Botts Road in Kansas City, Jackson County, Missouri. The project center is located at 38.862589 degrees latitude and -94.543681 degrees longitude. Olsson has completed the wetland delineation and stream assessment and is now requesting an Approved Jurisdictional Determination (AJD) for the Project area. A signed AJD request form is attached to this letter.

Olsson conducted a wetland delineation and stream assessment of the Project area in August and September of 2020 and documented six palustrine emergent wetlands, one palustrine forested/ scrub-shrub wetland, two intermittent streams, and six ephemeral streams. Olsson's report, with associated data forms, figures, and photos, is included as an attachment to this letter. One of the identified streams (Tributary 6), was documented flowing from north to south in the Project area and was not depicted by any desktop resources (topographic map, NWI, or NHD). Photos of the stream are provided in the photolog appendix of the attached report. At the time of the field visits, Tributary 6 contained flowing water without recent rainfall. However, the channel was relatively narrow, lacked significant incision, and contained an ordinary high-water mark width more consistent with an ephemeral stream. Olsson reviewed surrounding land uses near the Project and determined that flow supplied to Tributary 6 is likely provided by discharge from a stormwater detention pond on a commercial property located directly north of the Project area. Groundwater does not appear to be a contributor to flow within this stream. Based on the source of flow, Olsson determined that Tributary 6 is an ephemeral stream. However, because of the borderline nature of the stream, Olsson is requesting concurrence from the USACE.

Please contact me if you have any questions about this submittal. I can be reached at 913.748.2575, or by email at aball@olsson.com.

Sincerely,

Aaron Ball
Olsson Senior Scientist

Enclosure

7301 W. 133rd Street / Suite 200 / Overland Park, KS 66213
O 913.381.1170 / olsson.com

U.S. ARMY CORPS OF ENGINEERS

REQUEST FOR CORPS JURISDICTIONAL DETERMINATION

*__Authorities__: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332. __Principal Purpose__: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above. __Routine Uses__: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website. __Disclosure__: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

CORPS USE ONLY:
DATE RECEIVED:

PROJECT NO.:

1. PROPERTY LOCATION:

Street Address: Northeast of MO 150 and Botts Drive

City/Township/Parish: Kansas City

County: Jackson State: MO

Acreage of Parcel/Review Area for JD: 73

Section: 26 Township: 47N Range: 33W

Latitude: 38.862589 Longitude: -94.543681

(For linear projects, please include the center point of the proposed alignment.)

2.REQUESTOR CONTACT INFORMATION:

Typed or Printed Name: Aaron Ball

Company Name: Olsson

Street Address: 7301 W. 133rd St., Suite 200

City: Overland Park State: KS ZIP: 66213

Phone Number: (913) 748-2575

E-mail: aball@olsson.com

3. MAP: Please attach a survey/plat map and vicinity map identifying location and review area for the JD.

4. REASON FOR REQUEST (check as many as applicable):

- ☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
- ☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
- ☒ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
- ☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
- ☐ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
- ☐ A Corps JD is required in order to obtain my local/state authorization.
- ☐ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
- ☐ I believe that the site may be comprised entirely of dry land.
- ☐ Other:

5. TYPE OF DETERMINATION BEING REQUESTED:

- ☒ I am requesting an approved JD.
- ☐ I am requesting a preliminary JD.
- ☐ I am requesting a “no permit required” letter as I believe my proposed activity is not regulated.
- ☐ I am unclear as to which JD I would like to request and require additional information to inform my decision.

6. OWNERSHIP DETAILS:

- ☐ I currently own this property.
- ☐ I plan to purchase this property.
- ☒ I am an agent/consultant acting on behalf of the requestor.
- ☐ Other (please explain:)

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

Signature: Date: 10/14/2020

WETLAND DELINEATION AND STREAM ASSESSMENT REPORT

MISSOURI 150 AND BOTTS ROAD PROPERTY

Prepared for:
Promontory 150 LLC

October 2020
Olsson Project No: 019-1871

olsson®

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APPENDICES

1. INTRODUCTION

Promontory 150 LLC (Promontory) retained Olsson to conduct a wetland delineation and stream assessment of the proposed infrastructure (Project) located on 73 acres on the northeast corner of Botts Road and Missouri Route 150 in Kansas City, Jackson County, Missouri (Appendix A, Figure 1). The latitude and longitude of the center of the Project is 38.862589 degrees north and -94.543681 degrees west, respectively. The Project is located in Section 26 of Township 47 North, Range 33 West (Appendix A, Figure 2).

The land types within the Project area include existing right-of-way (ROW), developed land, row crop agriculture, and undeveloped natural areas. The existing ROW areas were dominated by native and nonnative grasses and forbs including Indian grass (*Sorghastrum nutans*), sideoats grama (*Bouteloua curtipendula*), switchgrass (*Panicum virgatum*), tall fescue (*Schedonorus arundinaceus*), smooth brome (*Bromus inermis*), sunflowers (*Helianthus* spp.), clover (*Trifolium* sp.), goldenrod (*Solidago* spp.), and foxtails (various species). Wooded areas were dominated by deciduous trees and shrubs including common hackberry (*Celtis occidentalis*), American elm (*Ulmus americana*), black walnut (*Juglans nigra*), silver maple (*Acer saccharinum*), bush honeysuckle (*Lonicera maackii*), and coralberry (*Symphoricarpos orbiculatus*).

2. METHODS

2.1. Desktop Wetland and Stream Review

Olsson conducted a desktop review using publicly available data sources to identify locations in the Project area that were likely to contain wetlands or require stream assessments. The desktop review was followed by an on-site investigation by Olsson biologists. Resources used during the desktop review included the following:

- U.S. Geological Survey (USGS): 1:24,000 Topographic Map, 1991 Belton Missouri Quadrangles (USGS 1991)
- U.S. Fish and Wildlife Service (USFWS): National Wetlands Inventory (NWI) Map, Belton Missouri Quadrangle (USFWS 2019)
- Natural Resources Conservation Service (NRCS): Web Soil Survey, Jackson County Soils Survey Map
- Environmental Systems Research Institute (ESRI): Aerial Imagery (ESRI 2020)
- Google Earth: Historical Aerial Photographs (Google 2020)
- USGS: National Hydrography Dataset (NHD; USGS 2019)

The desktop review identified sites that warranted field surveys to document the presence or absence of wetlands and streams. Sample sites identified for review in the field are not necessarily wetlands; however, they are areas where wetland or stream indicators may be present. The field coverage was not limited or restricted by the desktop review.

2.2. Wetland Delineation

The wetland delineation was conducted per methodology outlined by the *Corps of Engineers Wetland Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region, Version 2.0* (USACE 2010).

Wetland delineations were performed for all sites that were composed of hydric vegetation, hydric soils, and wetland hydrology. The boundaries of these three indicators were determined and sufficient data was collected to aid the U.S. Army Corps of Engineers (USACE) in making a preliminary jurisdictional determination. Data required for each collection point at a sample site included the following:

- Midwest Region Version 2.0 worksheet
- GPS points (in and out) and wetland boundary shapefile
- Primary and secondary indicators of hydrology
- Vegetation indicators based on the 2016 National Wetland Plant List (Lichvar et al. 2016)
- Soil description based on a soil sample

All wetland data points are denoted with a “w” in Figure 6A and 6B (Appendix A) and in the wetland datasheets (Appendix B). The point where all three indicators exist is considered an *in point*. The wetland boundary exists where one or more of the three indicators is no longer present. A data collection point was collected outside the wetland boundary and identified as an *out point*, to document conditions outside the wetland. Geographic information system (GIS) data for a sample site included a polygon of the wetland boundary and GPS points for the in points and out points. Photographs were taken for each wetland to document conditions at the time of the survey and are included within each wetland datasheet.

2.3. Stream Assessment

Stream assessments were conducted to collect data to aid the USACE in making a preliminary jurisdictional determination of the stream reach. The assessments that were conducted were consistent with the Missouri Stream Mitigation Method (MSMM) for compensatory mitigation. Guidance for the stream assessments is contained in the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (USACE 2007) and the *State of Missouri Stream Mitigation Method* (USACE 2013).

Once a potential stream reach was located during the field survey, field teams collected assessment data using the stream assessment data form. All stream points are denoted with a "t" in figures 6A and 6B (Appendix A) and datasheets (Appendix C). These data forms assess the following aspects of the stream:

- Stream type: perennial, intermittent, or ephemeral
- Stream classification: traditional navigable water (TNW), relatively permanent waters (RPW), or non-relatively permanent waters (Non-RPW)
- Ordinary high-water mark (OHWM) characteristics
- Stream bottom composition
- Description of stream bank
- Natural, artificial, or manipulated stream characteristics
- Stream condition and stability
- Water characteristics: clear, discolored, flowing, or standing
- Riparian buffer vegetation and characteristics

Photos within the Stream Datasheets (Appendix C) and GPS points were taken to document stream conditions at the time of the survey.

3. SUMMARY OF FINDINGS

Mr. Jack Finley of Olsson collected data August 26 and 28, and September 2 and 26, 2020. Mr. Finley has received formal training in wetland delineations. Weather data for the Project area was summarized from the National Oceanic and Atmospheric Administration (NOAA) Record of Climatological Observations at the Overland Park, Kansas (Station number US1KSJO0053; NOAA 2020). No precipitation fell within the 10 days preceding the August visits, 2.27 inches fell in the 10 days prior to the September 2 visit, and no precipitation fell within the 10 days preceding the September 26 visit.

3.1. Desktop Wetland and Stream Review

U.S. Geological Survey Topographic Map

The USGS topographic map (Appendix A, Figure 2), indicates that relief within the Project area is hilly. Elevations range from approximately 970 feet above mean sea level (AMSL) in the thalweg of the two intermittent drainages that flow from west to east to 1,030 feet AMSL in the northwest corner of the Project area. The topographic map also suggests the presence of two smaller drainages that generally flow from the north and from the south into the intermittent

drainages. No open water features were indicated within the Project area by the topographic map.

Environmental Systems Research Institute Aerial Map

The aerial map (Appendix A, Figure 3) indicates that the Project area is a mixture of row crop agriculture, scattered woodlands, and riparian corridors. The areas surrounding the Project area are composed of commercial facilities to the north, south, and west, and agriculture or undeveloped land to the east. The two streams depicted in the topographic map correspond to wooded corridors in the aerial map.

National Wetlands Inventory and National Hydrography Dataset Map

The NHD (USGS 2019) indicates the presence of two unnamed intermittent stream segments (3,013 linear feet; [LF]) within the Project area (Appendix A, Figure 4). These streams correspond to the intermittent streams depicted in the topographic map. No perennial or ephemeral stream segments were specified by the NHD and no wetlands were indicated by the NWI (USFWS 2019) within the Project area.

Jackson County Soil Survey

Soil units with a soil matrix composed of greater than 60 percent of hydric inclusions are considered predominantly hydric.

The existence of predominantly hydric soils indicates the potential for an area that can support wetlands. According to the soil survey for Jackson County Missouri (NRCS 2020a; Appendix A, Figure 5), soils mapped within the Project area are as follows:

- 10117 Sampsel silty clay loam, 5 to 9 percent slopes
- 10120 Sharpsburg silt loam, 2 to 5 percent slopes
- 10122 Sharpsburg silt loam, 5 to 9 percent slopes, eroded
- 30080 Greenton silty clay loam; 5 to 9 percent slopes; 10 percent hydric inclusions
- 36083 Kennebec silt loam; 1 to 4 percent slopes; occasionally flooded; 3 percent hydric inclusions

According to the Jackson County soils list, the Project area is composed of predominately non-hydric soils

3.2. Wetland Delineation Results

The wetland delineation identified six palustrine emergent (PEM) wetlands, totaling 0.22 acre, and one palustrine scrub-shrub (PSS) wetland, totaling 0.04 acre, within the Project area. Based on the new Navigable Waters Protection Rule (NWPR) published in the Federal Register June 22, 2020 (EPA, 2020), three of the PEM wetlands (0.06 acre) are considered jurisdictional features because they are adjacent or abut an intermittent stream that ultimately flows to a TNW(the Missouri River). The three remaining PEM wetlands and the one PSS wetland

documented within the Project area are nonjurisdictional features under the NWPR. Delineated wetlands are depicted in figures 6A and 6B of Appendix A and data forms documenting these features are provided in Appendix B. Table 1 summarizes the wetland features documented in the Project area. Detailed descriptions of each feature follow Table 1.

Table 1. Wetland Delineation Summary.

Wetland ID	Data Point	Wetland Type[1]	Jurisdictional[2]	Size (acres)
Wetland 1	w1	PEM	Yes	< 0.01
Wetland 2	w2	PEM	Yes	0.02
Wetland 3	w3	PEM	Yes	0.04
Wetland 4	w4	PEM	No	0.11
Wetland 5	w5	PEM	No	0.02
Wetland 6	w6	PFO/PSS	No	0.04
Wetland 7	w7	PEM	No	0.03
			TOTAL ACRES	**0.26**
			JURISDICTIONAL ACRES	**0.16**

[1] PEM = Palustrine emergent wetland, PFO/PSS = Palustrine forested/Palustrine scrub-shrub
[2] Jurisdiction based on the June 22, 2020, Navigable Water Protection Rule (NWPR)

Jurisdictional PEM Wetlands (0.06 acre). Wetlands 1, 2, and 3 were documented as jurisdictional PEM wetlands because of their connections to an intermittent stream that is considered jurisdictional according to the NWPR. All three wetlands were dominated by bearded beggarticks (*Bidens aristosa*), broadleaf cattail (*Typha latifolia*), rough cocklebur (*Xanthium strumarium*), and sedges (*Carex* spp.). These wetlands meet the requirements of wetland soils and hydrology indicators.

Nonjurisdictional Emergent Wetlands (0.20 acre). Wetlands 4, 5, and 7 were documented as nonjurisdictional PEM wetlands according to the NWPR. All three wetlands lack a connection to a jurisdictional stream as defined by the NWPR. These three wetlands were dominated by rice cutgrass (*Leersia oryzoides*), bearded beggarticks, rough barnyard grass (*Echinochloa muricata*), and green ash (*Fraxinus pennsylvanica*). These wetlands meet the requirements of wetland soils and hydrology indicators.

Nonjurisdictional Forested/Scrub-shrub Wetlands (0.04 acre). Wetland 6 was documented as a nonjurisdictional PFO/PSS wetland because it receives hydrology from an ephemeral stream lacks a connection to a jurisdictional stream. This wetland was dominated by American

elm, ash-leaf maple (*Acer negundo*), and green ash. This wetland meets the requirements of wetland soils and hydrology indicators.

3.3. Stream Assessment Results

The stream assessment identified a total of eight stream reaches totaling 4,930 LF within the Project area. Six nonjurisdictional ephemeral streams totaling 1,751 LF and two jurisdictional intermittent streams totaling 3,179 LF were documented in the Project area. The two intermittent streams were also indicated by NHD data and topographic maps. No perennial streams were present. Under the new NWPR, only intermittent and perennial streams are considered jurisdictional.

All documented ephemeral streams generally flow from the north or south into the intermittent streams, which flow from west to east before coalescing outside the Project area. These unnamed intermittent streams eventually flow into the Little Blue River and ultimately into the Missouri River, a TNW. Stream assessment data forms are provided in Appendix C, and Table 2 below details each stream reach.

Table 2. Stream Assessment Summary.

Feature ID	Data Points	Stream Type	Stream Length within Project area (linear feet)	Jurisdictional*
Tributary 1	t1	Intermittent	1,775	Yes
Tributary 2	t2	Ephemeral	192	No
Tributary 3	t3	Ephemeral	155	No
Tributary 4	t4	Ephemeral	149	No
Tributary 5	t5	Ephemeral	62	No
Tributary 6	t6	Ephemeral	1,141	No
Tributary 7	t7	Ephemeral	52	No
Tributary 8	t8	Intermittent	1,404	Yes
		TOTAL LENGTH	**4,930**	
		JURISDICTIONAL LENGTH	**3,179**	

* Jurisdiction based on the June 22, 2020, Navigable Water Protection Rule (NWPR)

4. CONCLUSIONS

The wetland delineation and stream assessment evaluated the 73-acre Project area which included the existing right-of-way (ROW), developed land, row crop agriculture, and undeveloped natural areas. The field study identified six PEM wetlands, one PSS wetland, six ephemeral streams, and two intermittent streams within the Project Area. **Of the identified features, 0.06 acre of PEM wetlands and 3,179 LF of intermittent stream are likely considered jurisdictional under the new Navigable Water Protection Rule because of their downstream connection to the Missouri River.** Impacts to any of the jurisdictional features will require coordination with the USACE under Section 404 of the Clean Water Act.

5. REFERENCES

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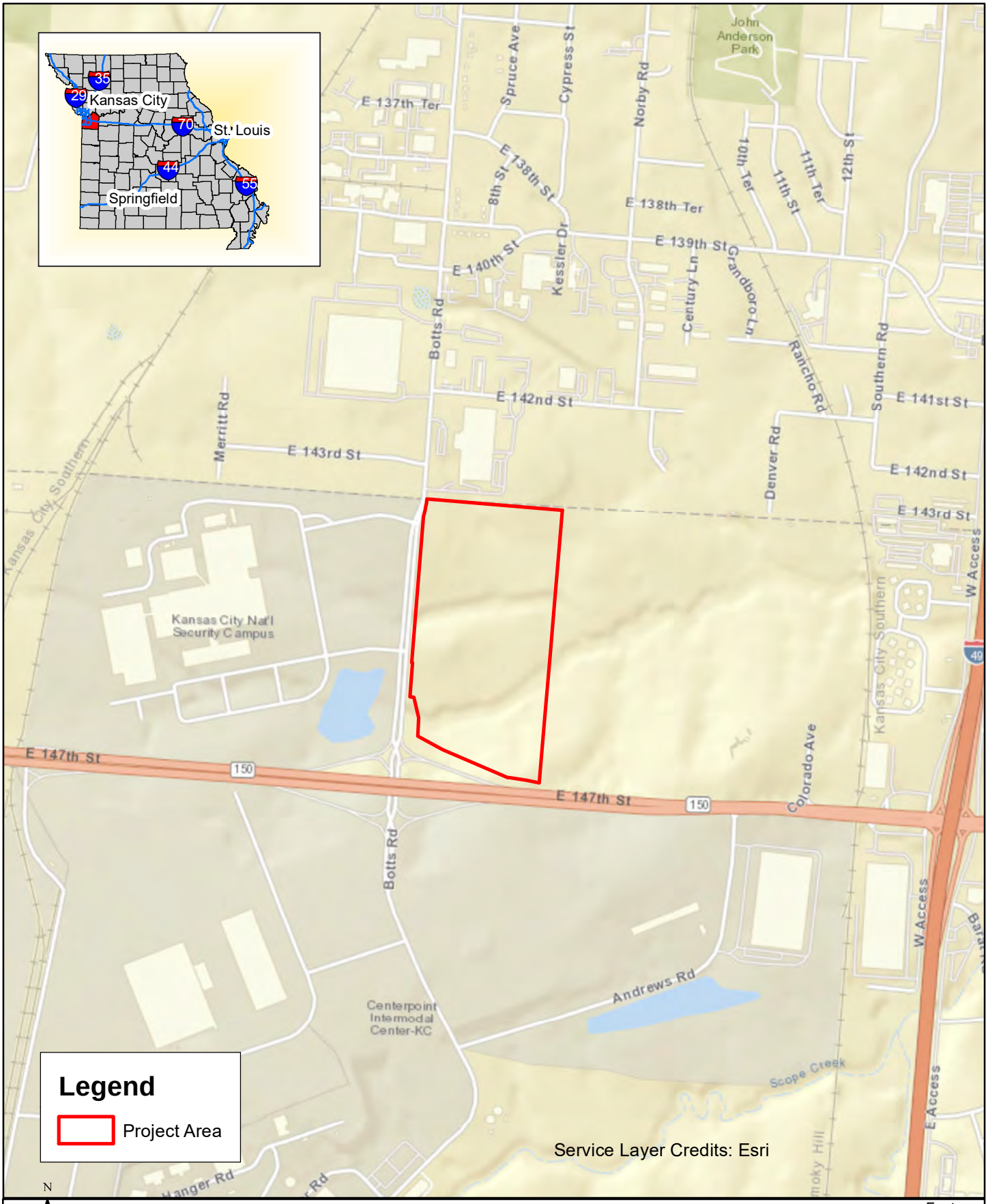
USGS 2019. National Hydrography Dataset.

APPENDIX A

Figures



Project Number: 019-1871 *Drawn By: JF* *Revision Date: 9/25/2020*	**Location Map** Promontory 150 LLC Botts Road and MO-150 Highway Kansas City, Missouri	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 W. 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure **1**

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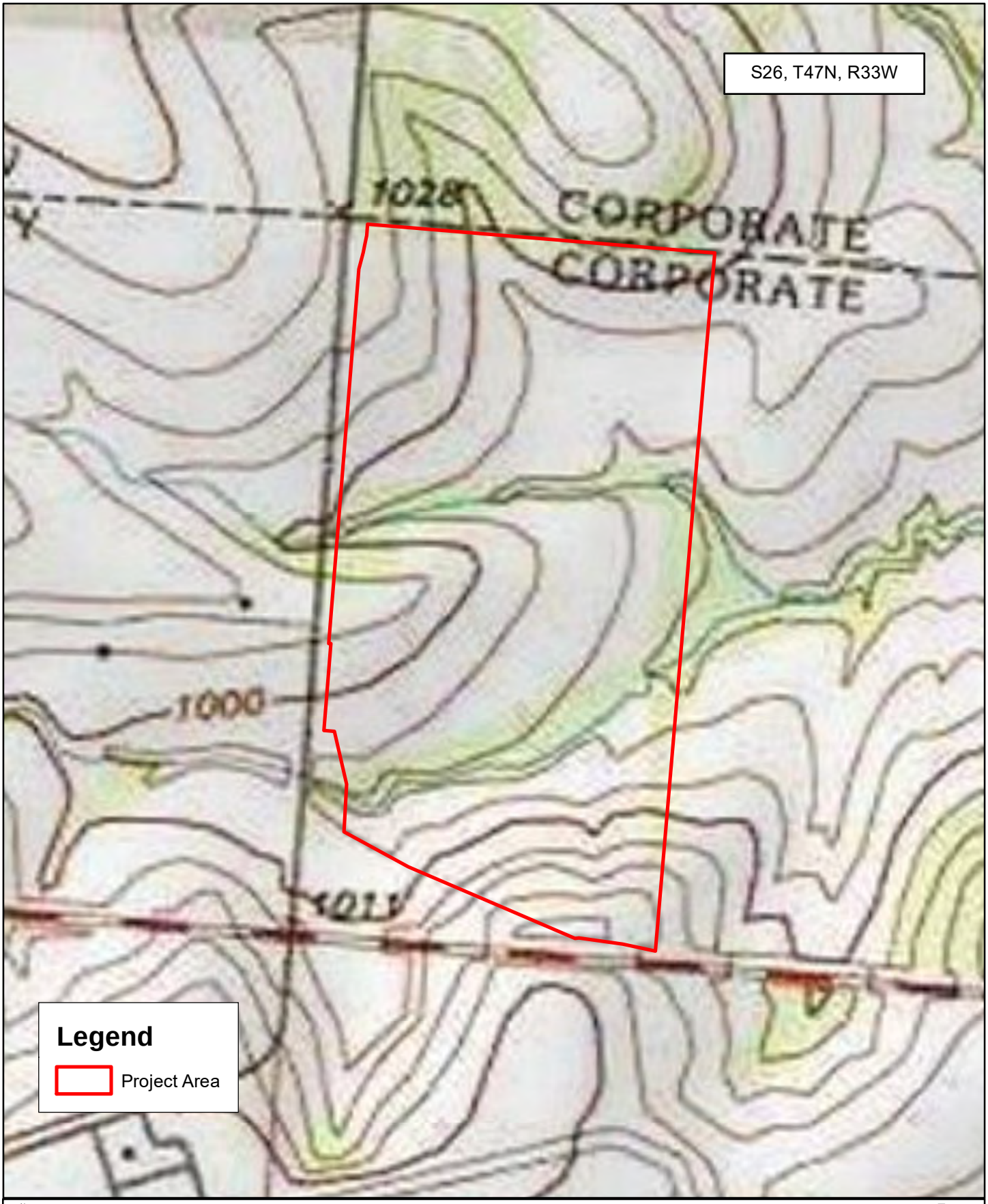

Project Number: 019-1871 *Drawn By: JF* *Revision Date: 9/25/2020*	**Topographic Map** Promontory 150 LLC Botts Road and MO-150 Highway Kansas City, Missouri	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 W. 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure **2**

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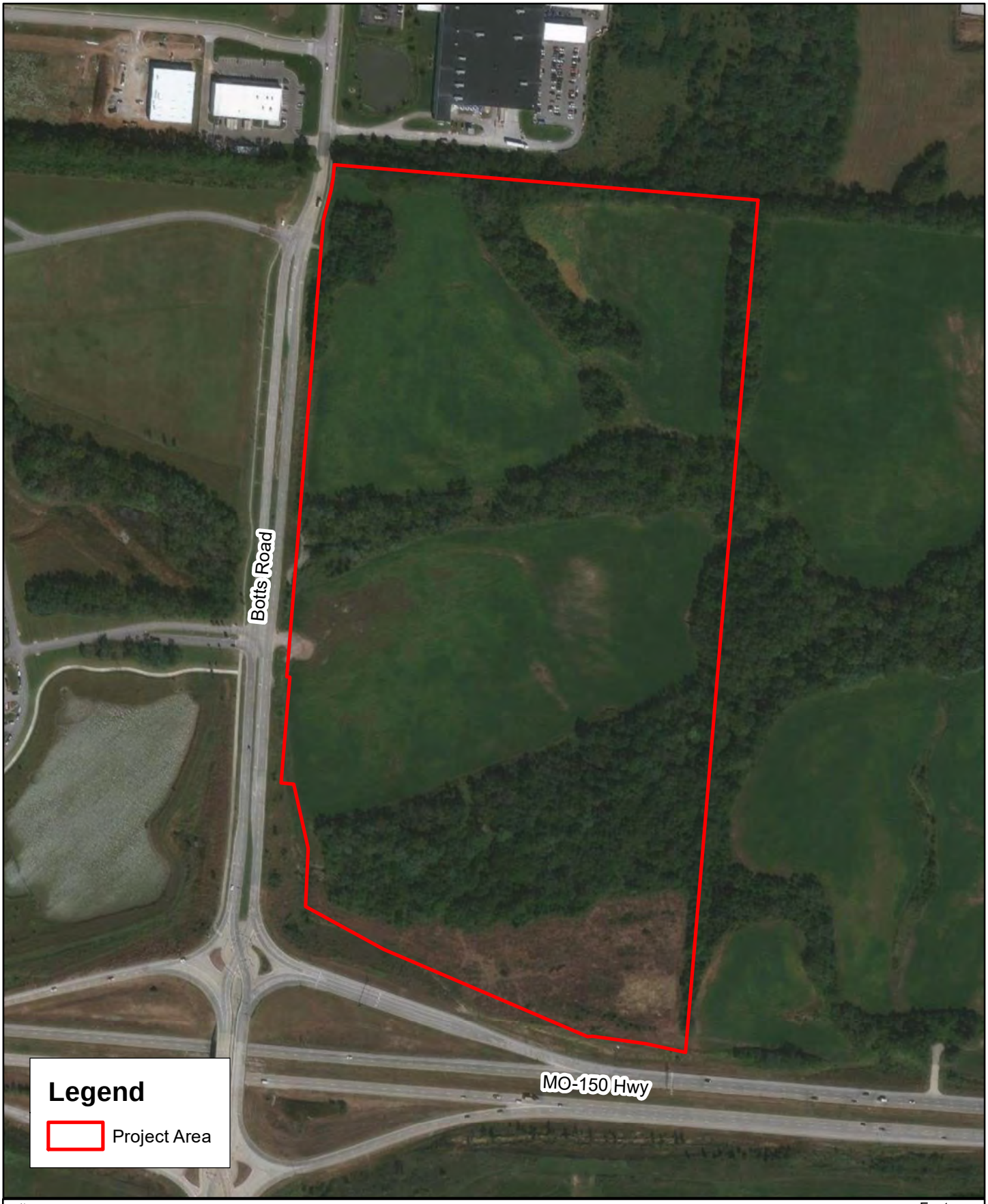
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



N

Feet

0 250 500 1,000

Project Number: 019-1871 *Drawn By: JF* *Revision Date: 9/25/2020*	**Aerial Map** Promontory 150 LLC Botts Road and MO-150 Highway Kansas City, Missouri	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 W. 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure **3**

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N

0 250 500 1,000 Feet

Project Number: 019-1871	**NWI and NHD Resources Map** Promontory 150 LLC Botts Road and MO-150 Highway Kansas City, Missouri	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 W. 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure
Drawn By: JF				4
Revision Date: 9/25/2020				

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N

0 250 500 1,000 Feet

Project Number: 019-1871 *Drawn By: JF* *Revision Date: 10/6/2020*	**Soils Map** Promontory 150 LLC Botts Road and MO-150 Highway Kansas City, Missouri	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 W. 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure **5**

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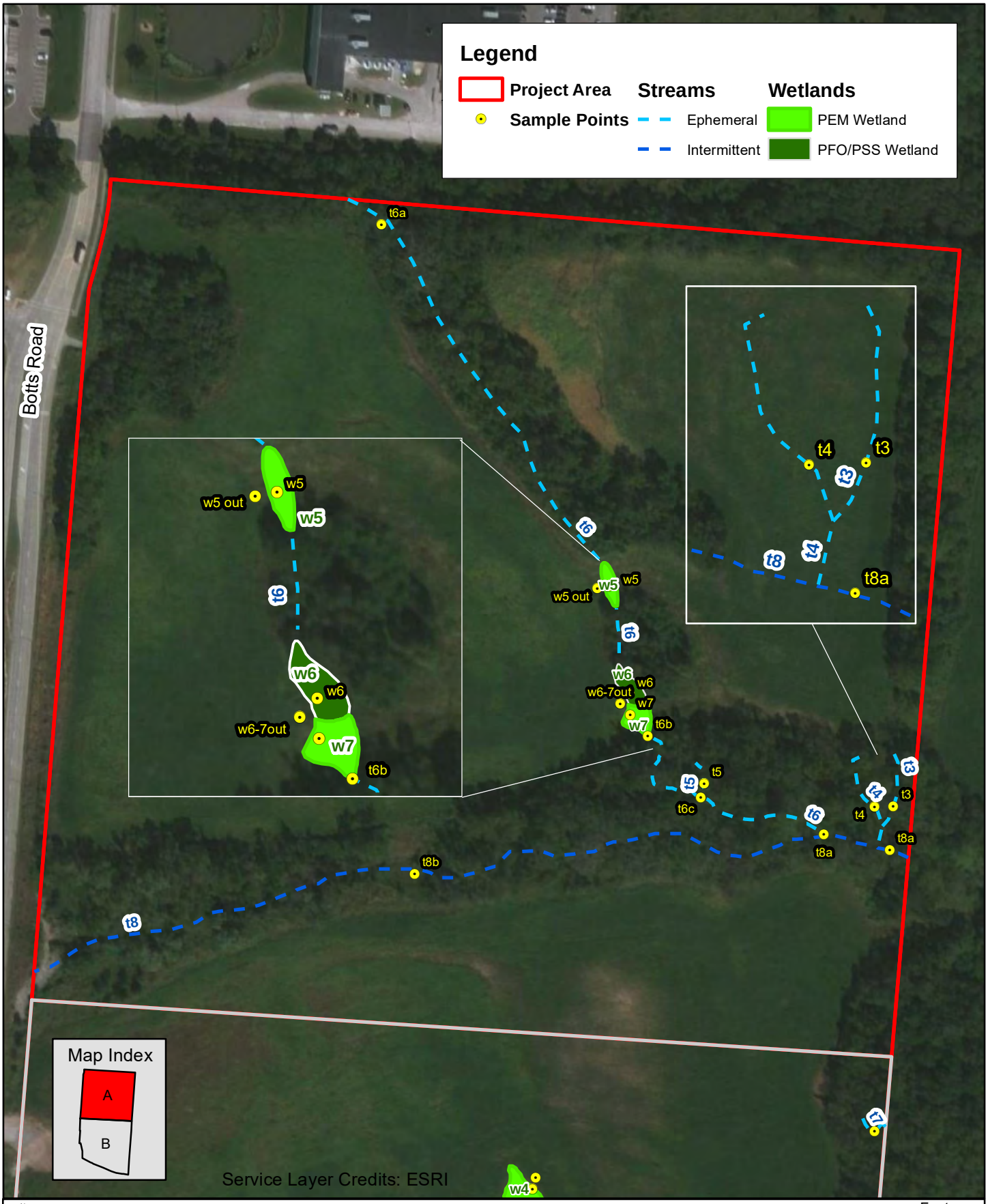

Project Number: 019-1871 *Drawn By: JF* *Revision Date: 10/1/2020*	**Aquatic Resources** Promontory Property Botts Road and MO-150 Highway Kansas City, Missouri	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 W. 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure **6A**

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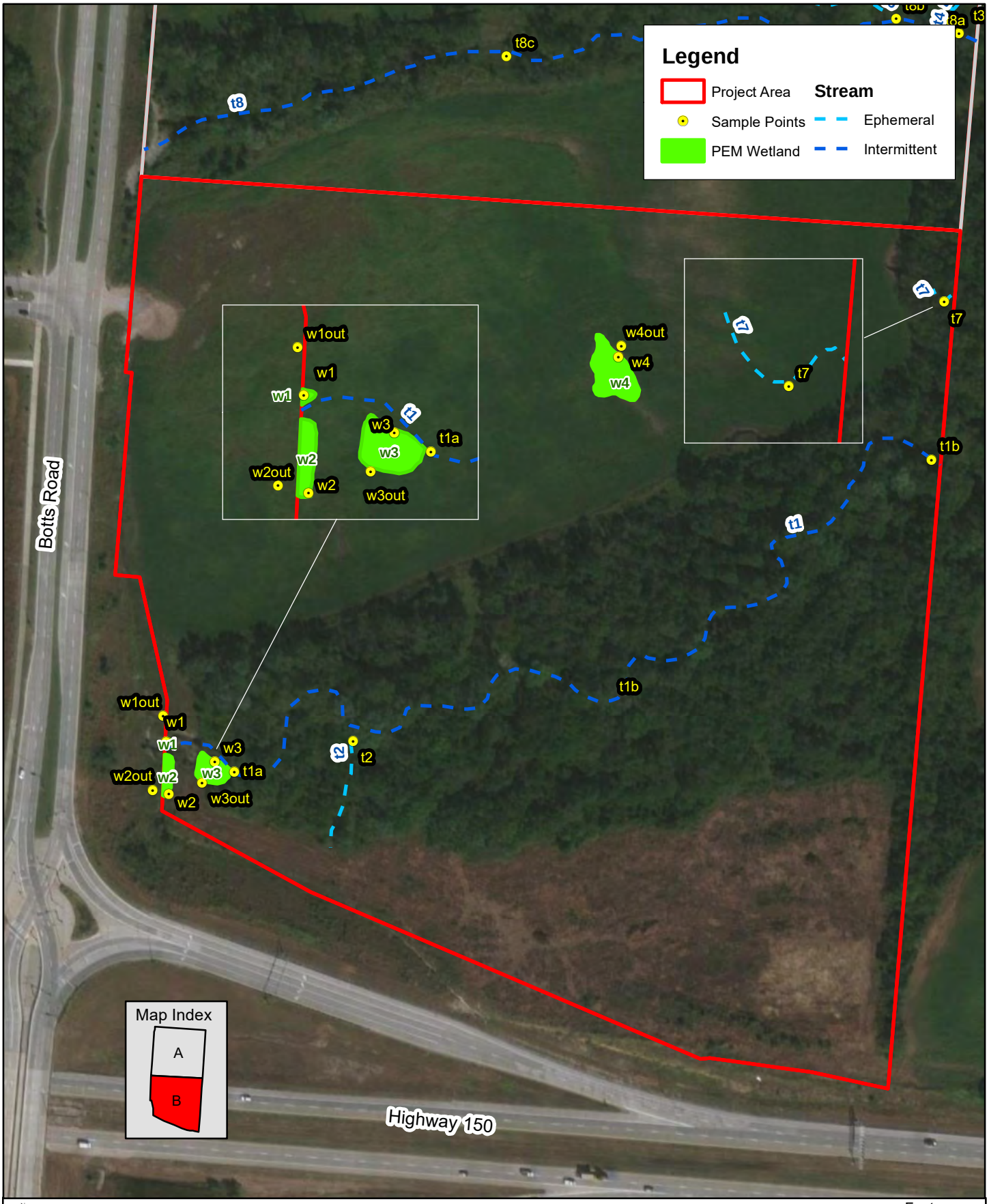

Project Number: 019-1871 *Drawn By: JF* *Revision Date: 10/1/2020*	**Aquatic Resources** Promontory Property Botts Road and MO-150 Highway Kansas City, Missouri	DISCLAIMER : This Geographic Information System (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Recorders office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.	olsson 7301 W. 133rd Street Suite 200 Overland Park, Kansas 66213 P: 913.381.1170 F: 913.381.1174	Figure **6B**

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APPENDIX B

Wetland Data Forms: Midwest Region

Wetland Determination Data Form - Midwest Region

Project/Site: HWY 150 and Botts Road | City/County: Grandview (Jackson Co.) | Sampling Date: 08/26/2020

Applicant/Owner: Promontory 150 LLC | State: MO | Sampling Point: w1

Investigator(s): Jack Finley | Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% | Lat: 38.860278 | Long: -94.545930 | Datum: UTM83

Soil Map Unit Name: Kennebec silt loam, 1 to 4 percent slopes, occasionally flooded 3% | NWI classification: PEM

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. Typha latifolia	80	X	OBL
2. Bidens frondosa	20	X	FACW
3.			
4.			
5.			
	100 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	80	x 1 =	80
FACW species	20	x 2 =	40
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		120 (B)

Prevalence Index = B/A = 1.20

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL

Sampling Point: w1

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	Gley 5/2	20					Clay	
	10YR 3/2	70	5YR 3/4	10	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No ____

Remarks:
Disturbed soils could not be excavated below 10" due to rock.

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)
- 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)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches) ____	
Water Table Present?	Yes X	No ____	Depth (inches) ____	
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches) ____	**Wetland Hydrology Present?** Yes X No ____

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

Remarks:

Wetland Wetland 1 **Sample Point** w1

Longitude	Latitude
-94.545930	38.860278

Cowardin Classification: _____

Size: _____

Landform: Drainageway

Tree Stratum: _____

Sapling/Shrub: Typha latifolia Bidens frondosa

Herb Stratum: _____

Vine Stratum: _____

Hydric Soil Indicators: Redox Dark Surface (F6)

Hydrology Indicators: Drainage Patterns (B10) FAC-Neutral Test (D5)

Significant Nexus: Yes Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:
Drains into the adjacent t1, an intermittent stream.

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: HWY 150 and Botts Road | City/County: Grandview (Jackson Co.) | Sampling Date: 08/26/2020

Applicant/Owner: Promontory 150 LLC | State: MO | Sampling Point: w1out

Investigator(s): Jack Finley | Section, Township, Range: S26 T47N R33W

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

Slope (%): 10-15% | Lat: 38.860365 | Long: -94.545903 | Datum: UTM83

Soil Map Unit Name: Kennebec silt loam, 1 to 4 percent slopes, occasionally flooded | NWI classification: UPL

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

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

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

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Sorghum halepense	100	X	FACU
2. Ambrosia artemisiifolia	10		FACU
3. Rubus sp.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 000% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	110	x 4 =	440
UPL species	0	x 5 =	0
Column Totals:	110 (A)		440 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

Date: 09/26/2020 Investigator(s): _____ 38.863285 -94.544038

Feature ID:	Tributary 6b
Unique Site ID:	t6b
Project name:	HWY 150 and Botts Road
Project #:	019-1871
County, State:	Jackson Co., Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☒ Flowing ☐ Standing ☐ None

Water Color/Quality: ☒Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width: 4' Top of bank to top of bank width: 25'

OHWM height: 0.75 Top of Bank height: 15'

Riparian Buffer Width: N/E side: 70 Ft. S/W side: 45 Ft.

Buffer (adjacent bank) vegetation:
black willow, silver maple, bush honeysuckle.

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☒cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☒Intermittent ☐Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
Flowing water, well developed channel with a likely groundwater connection.

Significant Nexus: ☒ Yes ☐ No
Explain:
It eventually flows into the Little Blue River which flows in the Missouri River, a traditional navigable stream.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☒steep side slopes
☒vegetated banks
☒stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo: View west

Downstream Photo: View east

SOIL

Sampling Point: w1out

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Disturbed rocky soils could not be excavated.

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 X

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

Remarks:

Wetland _____ **Sample Point** w1out

Longitude	Latitude
-94.545903	38.860365

Cowardin Classification: UPL

Size: _____

Landform: Hillslope

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Sorghum halepense Ambrosia artemisiifolia Rubus sp.

Vine Stratum: _____

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: HWY 150 and Botts Road | City/County: Grandview (Jackson Co.) | Sampling Date: 08/26/2020

Applicant/Owner: Promontory 150 LLC | State: MO | Sampling Point: w2

Investigator(s): Jack Finley | Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% | Lat: 38.860022 | Long: -94.545863 | Datum: UTM83

Soil Map Unit Name: 10117 Sampsel silty clay loam, 5 to 9 percent slopes | NWI classification: PEM

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Typha latifolia	100	X	OBL
2. Scirpus atrovirens	10		OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	110	x 1 =	110
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		110 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL

Sampling Point: w2

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	2.5Y 2.5/1	100					Loam	
6-12	2.5Y 5/1	90	7.5YR 4/6	10	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

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)
- __ 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)
- 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) 0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Wetland Wetland 2 **Sample Point** w2

Longitude	Latitude
-94.545863	38.860022

Cowardin Classification: _____

Size: _____

Landform: Drainageway

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Typha latifolia Scirpus atrovirens

Vine Stratum: _____

Hydric Soil Indicators: Depleted Matrix (F3)

Hydrology Indicators: Saturation (A3) Drainage Patterns (B10)

Significant Nexus: Yes Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:
Drains into the adjacent t1, an intermittent stream.

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: HWY 150 and Botts Road | City/County: Grandview (Jackson Co.) | Sampling Date: 08/26/2020

Applicant/Owner: Promontory 150 LLC | State: MO | Sampling Point: w2out

Investigator(s): Jack Finley | Section, Township, Range: S26 T47N R33W

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

Slope (%): 5-10% | Lat: 38.860038 | Long: -94.545955 | Datum: UTM83

Soil Map Unit Name: 10117 Sampsel silty clay loam, 5 to 9 percent slopes | NWI classification: UPL

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

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

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

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Bouteloua curtipendula	40	X	UPL
2. Sorghastrum nutans	10		FACU
3. Sorghum halepense	30	X	FACU
4. Symphoricarpos orbiculatus	30	X	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 000% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	70	x 4 =	280
UPL species	40	x 5 =	200
Column Totals:	110 (A)		480 (B)

Prevalence Index = B/A = 4.36

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

SOIL

Sampling Point: w2out

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
0-8	2.5Y 2/1	100					Clay	
8-12	2.5Y 3/1	70	2.5 YR 4/6	5	C	M	Clay	
	2.5Y 5/1	25						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Disturbed soil.

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:

Wetland _____ **Sample Point** w2out

Longitude	Latitude
-94.545955	38.860038

Cowardin Classification: UPL

Size: _____

Landform: Hillslope

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Bouteloua curtipendula Sorghastrum nutans Sorghum halepense

Vine Stratum: _____

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: HWY 150 and Botts Road | City/County: Grandview (Jackson Co.) | Sampling Date: 08/26/2020

Applicant/Owner: Promontory 150 LLC | State: MO | Sampling Point: w3

Investigator(s): Jack Finley | Section, Township, Range: S26 T47N R33W

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

Slope (%): 2-5% | Lat: 38.860167 | Long: -94.545609 | Datum: UTM83

Soil Map Unit Name: 36083 Kennebec silt loam, 1 to 4 percent slopes, occasionally floode | NWI classification: PEM

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Typha latifolia	100	X	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	100	x 1 =	100
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		100 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL

Sampling Point: w3

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:
Soils inundated with water; hydric soil status assumed.

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)
- __ 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)
- 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)	0
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:

Wetland Wetland 3 **Sample Point** w3

Longitude	Latitude
-94.545609	38.860167

Cowardin Classification: PEM

Size:

Landform: Drainageway

Tree Stratum:

Sapling/Shrub:

Herb Stratum: Typha latifolia

Vine Stratum:

Hydric Soil Indicators: inundated

Hydrology Indicators: Surface Water (A1) Drainage Patterns (B10)

Significant Nexus: Yes Adjacent: Abuts: Stream Name:

Jurisdictional Status and Comments:
Drains into the adjacent t1, an intermittent stream.

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: HWY 150 and Botts Road | City/County: Grandview (Jackson Co.) | Sampling Date: 08/26/2020

Applicant/Owner: Promontory 150 LLC | State: | Sampling Point: w3out

Investigator(s): Jack Finley | Section, Township, Range: S26 T47N R33W

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

Slope (%): 5-10% | Lat: 38.860075 | Long: -94.545678 | Datum: UTM83

Soil Map Unit Name: 36083 Kennebec silt loam, 1 to 4 percent slopes, occasionally floode | NWI classification: UPL

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

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

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

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Solidago altissima	40	X	FACU
2. Daucus carota	40	X	UPL
3. Trifolium sp.	10		
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 000% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	40	x 5 =	200
Column Totals:	80 (A)		360 (B)

Prevalence Index = B/A = 4.50

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

SOIL

Sampling Point: w3out

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Disturbed soil could not be excavated due to rock.

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:

Wetland _____ **Sample Point** w3out

Longitude	Latitude
-94.545678	38.860075

Cowardin Classification: _____

Size: _____

Landform: Hillslope

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Solidago altissima Daucus carota Trifolium sp.

Vine Stratum: _____

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: HWY 150 and Botts Road | City/County: Grandview (Jackson Co.) | Sampling Date: 08/26/2020
Applicant/Owner: Promontory 150 LLC | State: MO | Sampling Point: w4
Investigator(s): Jack Finley | Section, Township, Range: S26 T47N R33W
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 0-2% | Lat: 38.861975 | Long: -94.543380 | Datum: UTM83
Soil Map Unit Name: 30080 Greenton silty clay loam, 5 to 9 percent slopes | NWI classification: PEM
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 ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Cyperus esculentus	100	X	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
— 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
— Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL

Sampling Point: w4

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 2/1	100					Silty Clay Loam	
4-8	Gley 1 4/10GY	40	5YR 4/6	10			Silty Clay Loam	
	Gley 6/10Y	50						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:
Soils have been disturbed by construction in previous years.

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)
- X Geomorphic Position (D2)
- X 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:

Wetland Wetland 4 **Sample Point** w4

Longitude	Latitude
-94.543380	38.861975

Cowardin Classification: PEM

Size:

Landform: Depression

Tree Stratum:

Sapling/Shrub:

Herb Stratum: Cyperus esculentus

Vine Stratum:

Hydric Soil Indicators: Redox Dark Surface (F6)

Hydrology Indicators: Geomorphic Position (D2) FAC-Neutral Test (D5)

Significant Nexus: No Adjacent: Abuts: Stream Name:

Jurisdictional Status and Comments:

Wetland is located in the middle of a soybean field and is without connection to a stream.

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: HWY 150 and Botts Road | City/County: Grandview (Jackson Co.) | Sampling Date: 08/26/2020
Applicant/Owner: Promontory 150 LLC | State: MO | Sampling Point: w4out
Investigator(s): Jack Finley | Section, Township, Range: S26 T47N R33W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Convex
Slope (%): 0-2% | Lat: 38.862023 | Long: -94.543364 | Datum: UTM83
Soil Map Unit Name: 30080 Greenton silty clay loam, 5 to 9 percent slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Glycine max	40	X	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	40 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 000% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Sample plot is located in a soybean field.

SOIL

Sampling Point: w4out

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 2/1 100	100					Silty Clay Loam	
4-8	Gley 1 4/10GY	40	5YR 4/6	40			Silty Clay Loam	
	Gley 6/10Y	50						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Soils are disturbed by former construction.

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:

Wetland _____ **Sample Point** w4out

Longitude	Latitude
-94.543364	38.862023

Cowardin Classification: UPL

Size: _____

Landform: Hillslope

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Glycine max

Vine Stratum: _____

Hydric Soil Indicators: Redox Dark Surface (F6)

Hydrology Indicators: _____

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: HWY 150 and Botts Road | City/County: Grandview (Jackson Co.) | Sampling Date: 08/26/2020
Applicant/Owner: Promontory 150 LLC | State: MO | Sampling Point: w5
Investigator(s): Jack Finley | Section, Township, Range: S26 T47N R33W
Landform (hillslope, terrace, etc.): Drainageway | Local relief (concave, convex, none): Concave
Slope (%): 0-2% | Lat: 38.864501 | Long: -94.543027 | Datum: UTM83
Soil Map Unit Name: 30080 Greenton silty clay loam, 5 to 9 percent slopes | NWI classification: PEM
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 ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Leersia oryzoides	100	X	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	100	x 1 =	100
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		100 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
— 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
— Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL

Sampling Point: w5

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:
Soils inundated, assumed hydric.

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)
- __ 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)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches)	2
Water Table Present?	Yes X	No ____	Depth (inches)	0
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:

Wetland Wetland 5 **Sample Point** w5

Longitude	Latitude
-94.543027	38.864501

Cowardin Classification: PEM

Size:

Landform: Drainageway

Tree Stratum:

Sapling/Shrub:

Herb Stratum: Leersia oryzoides

Vine Stratum:

Hydric Soil Indicators: Assumed hydric

Hydrology Indicators: Surface Water (A1) Saturation (A3)

Significant Nexus: No Adjacent: Abuts: Stream Name:

Jurisdictional Status and Comments:

Hydrology supplied by t6, an ephemeral drainage which is not jurisdictional under the NWPR.

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: HWY 150 and Botts Road | City/County: Grandview (Jackson Co.) | Sampling Date: 09/02/2020

Applicant/Owner: Promontory 150 LLC | State: MO | Sampling Point: w5out

Investigator(s): Jack Finley | Section, Township, Range: S26 T47N R33W

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

Slope (%): 0-2% | Lat: 38.864492 | Long: -94.543088 | Datum: UTM83

Soil Map Unit Name: 30080 Greenton silty clay loam, 5 to 9 percent slopes | NWI classification: PEM

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

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

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

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Sorghum halepense	100	X	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 000% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	100 (A)		400 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

SOIL

Sampling Point: w5out

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 2/1	100					loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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:

Wetland _____ **Sample Point** w5out

Longitude	Latitude
-94.543088	38.864492

Cowardin Classification: _____

Size: _____

Landform: Drainageway

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Sorghum halepense

Vine Stratum: _____

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: HWY 150 and Botts Road | City/County: Grandview (Jackson Co.) | Sampling Date: 09/02/2020
Applicant/Owner: Promontory 150 LLC | State: MO | Sampling Point: w6
Investigator(s): Jack Finley | Section, Township, Range: S26 T47N R33W
Landform (hillslope, terrace, etc.): Drainageway | Local relief (concave, convex, none): Concave
Slope (%): 0-2% | Lat: 38.864052 | Long: -94.542905 | Datum: UTM83
Soil Map Unit Name: 36083 Kennebec silt loam, 1 to 4 percent slopes, occasionally floode | NWI classification: PFO-PSS
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 ____		
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?**	**Yes X No ____**
Wetland Hydrology Present?	Yes X	No ____		

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	20	X	FACW
2. Ulmus americana	40	X	FACW
3. Acer negundo	20	X	FAC
4. Gleditsia triacanthos	10		FACU
5.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. Fraxinus pennsylvanica	60	X	FACW
2. Morus rubra	30	X	FACU
3.			
4.			
5.			
	90	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Persicaria punctata	20	X	OBL
2. Solidago gigantea	10	X	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	30	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
	0	= 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: 86% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	130	x 2 =	260
FAC species	20	x 3 =	60
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	210 (A)		500 (B)

Prevalence Index = B/A = 2.38

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL

Sampling Point: w6

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:
Soil inundated, assumed hydric.

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)
- __ 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)
- 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)	0
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:

Wetland Wetland 6 **Sample Point** w6

Longitude	Latitude
-94.542905	38.864052

Cowardin Classification: PFO/PSS

Size:

Landform: Drainageway

Tree Stratum: Fraxinus pennsylvanica Ulmus americana Acer negundo

Sapling/Shrub: Fraxinus pennsylvanica Morus rubra

Herb Stratum: Persicaria punctata Solidago gigantea

Vine Stratum:

Hydric Soil Indicators: Assumed hydric--inundated

Hydrology Indicators: Surface Water (A1) Saturation (A3)

Significant Nexus: No Adjacent: Abuts: Stream Name:

Jurisdictional Status and Comments:

Hydrology supplied by t6, an ephemeral drainage which is not jurisdictional under the NWPR.

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: HWY 150 and Botts Road | City/County: Grandview (Jackson Co.) | Sampling Date: 09/02/2020
Applicant/Owner: Promontory 150 LLC | State: MO | Sampling Point: w6-7out
Investigator(s): Jack Finley | Section, Township, Range: S26 T47N R33W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): None
Slope (%): 0-2% | Lat: 38.864011 | Long: -94.542954 | Datum: UTM83
Soil Map Unit Name: 36083 Kennebec silt loam, 1 to 4 percent slopes, occasionally floode | NWI classification: UPL
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Sorghum halepense	50	X	FACU
2. Glycine max	50	X	NI
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
	0 = Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 000% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	50 (A)		200 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:
- ____ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No X

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

SOIL

Sampling Point: w6-7out

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 2/2	100					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

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:

Wetland _____ **Sample Point** w6-7out

Longitude	Latitude
-94.542954	38.864011

Cowardin Classification: _____

Size: _____

Landform: Hillslope

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Sorghum halepense Glycine max

Vine Stratum: _____

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

Wetland Determination Data Form - Midwest Region

Project/Site: HWY 150 and Botts Road | City/County: Grandview (Jackson Co.) | Sampling Date: 09/02/2020
Applicant/Owner: Promontory 150 LLC | State: MO | Sampling Point: w7
Investigator(s): Jack Finley | Section, Township, Range: S26 T47N R33W
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 0-2% | Lat: 38.863965 | Long: -94.542899 | Datum: UTM83
Soil Map Unit Name: 36083 Kennebec silt loam, 1 to 4 percent slopes, occasionally floode | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (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 ____		
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?**	**Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____		

Remarks:

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Sapling/Shrub Stratum Plot size: 15 ft			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Echinochloa muricata	40	X	OBL
2. Fraxinus pennsylvanica	20		FACW
3. Persicaria punctata	40	X	OBL
4. Bidens aristosa	10		FACW
5.			
6.			
7.			
8.			
9.			
10.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
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	80	x 1 =	80
FACW species	30	x 2 =	60
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		140 (B)

Prevalence Index = B/A = 1.27

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
— 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
— Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

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

SOIL

Sampling Point: w7

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

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:
Soils inundated; assumed hydric.

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)
- __ 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)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

Wetland Wetland 7 **Sample Point** w7

Longitude	Latitude
-94.542899	38.863965

Cowardin Classification: PEM

Size:

Landform: Depression

Tree Stratum:

Sapling/Shrub:

Herb Stratum: Echinochloa muricata Fraxinus pennsylvanica Persicaria punctata

Vine Stratum:

Hydric Soil Indicators: assumed hydric-inundated

Hydrology Indicators: Surface Water (A1) Saturation (A3)

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Hydrology supplied by t6, an ephemeral drainage which is not jurisdictional under the NWPR.

Photo 1

Photo 2

Photo 3

Photo 4

APPENDIX C

Stream Assessment Data Forms

Date: 08/26/2020 Investigator(s): _____ 38.860124 -94.545498

Feature ID:	Tributary 1
Unique Site ID:	t1a
Project name:	HWY 150 and Botts Road
Project #:	019-1871
County, State:	Jackson Co., MO

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☒ Flowing ☐ Standing ☐ None

Water Color/Quality: ☒Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☐Relatively Straight ☒Meandering

OHWM width: 6' Top of bank to top of bank width: 15'

OHWM height: 1' Top of Bank height: 4

Riparian Buffer Width: N/E side: >50 Ft.
S/W side: >50 Ft.

Buffer (adjacent bank) vegetation:

-

Stream Bottom Composition:
☐silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☒cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☒Intermittent ☐Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
flowing water, well developed stream channel.

Significant Nexus: ☒ Yes ☐ No
Explain:
T1eventually flows into the Little Blue River which flows in the Missouri River, a traditional navigable stream.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☒excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☐exposed tree roots
☐steep side slopes
☒vegetated banks
☒stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo: View west.

Downstream Photo: View east

Date: 08/26/2020 Investigator(s): _____ 38.861545 -94.541613

Feature ID:	Tributary 1b
Unique Site ID:	t1b
Project name:	HWY 150 and Botts Road
Project #:	019-1871
County, State:	Jackson Co., MO

Stream Classification: ☐TNW ☐RPW ☐Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☒ Flowing ☐ Standing ☐ None

Water Color/Quality: ☐Clear ☒Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☐Relatively Straight ☒Meandering

OHWM width: 13' Top of bank to top of bank width: 20'

OHWM height: 1.5' Top of Bank height: S-4', N-8'

Riparian Buffer Width: N/E side: >50 Ft.
S/W side: >50 Ft.

Buffer (adjacent bank) vegetation:
Bush honeysuckle, hackberry.

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☒cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☒Intermittent ☐Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
Flowing water, well developed channel.

Significant Nexus: ☒ Yes ☐ No
Explain:
It eventually flows into the Little Blue River which flows in the Missouri River, a traditional navigable stream.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☒change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☒steep side slopes
☐vegetated banks
☒stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo: View west

Downstream Photo: View east

Date: 08/26/2020 Investigator(s): _____ 38.860268 -94.544833

Feature ID:	Tributary 2
Unique Site ID:	t2
Project name:	HWY 150 and Botts Road
Project #:	019-1871
County, State:	Jackson Co., MO

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☐2:1 ☐3:1 ☒4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width: 1.5' Top of bank to top of bank width: 20'

OHWM height: 0.5' Top of Bank height: 6'

Riparian Buffer Width: N/E side: >50 Ft.
S/W side: >50 Ft.

Buffer (adjacent bank) vegetation:
osage orange

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
Dry, poorly developed.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☐exposed tree roots
☐steep side slopes
☐vegetated banks
☒stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo: view south

Downstream Photo: View north

Date: 08/26/2020 Investigator(s): _____ 38.863601 -94.541483

OLSSON ASSOCIATES

Feature ID:	Tributary 3
Unique Site ID:	t3
Project name:	HWY 150 and Botts Road
Project #:	019-1871
County, State:	Jackson Co., MO

Stream Classification: ☐ TNW ☐ RPW ☒ Non-RPW

Side Slopes: 1:1 ☐ ☒ 2:1 ☐ 3:1 ☐ 4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐ Clear ☐ Discolored ☐ Oily film

Stream Has: ☒ Bed/Bank ☒ OHWM:

Tributary Geometry: ☒ Relatively Straight ☐ Meandering

OHWM width: 1.5' Top of bank to top of bank width: 6'

OHWM height: 0.5' Top of Bank height: 2'

Riparian Buffer Width: N/E side: >50 Ft. S/W side: >50 Ft.

Buffer (adjacent bank) vegetation:
American elm, bush honeysuckle

Stream Bottom Composition:
☒ silt ☐ concrete
☐ sand ☐ muck
☐ gravel ☐ other:
☐ cobble ☐ vegetation (% cover, type):
☐ bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☐ Discrete
☐ Confined
☒ Discrete and Confined
☐ Overland Sheet Flow

Stream Characteristics: ☒ Natural ☐ Artificial ☐ Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐ Perennial ☐ Intermittent ☒ Ephemeral ☐ Draws/Gullies/Erosional Pattern

Stream Type Rational:
No flow and a channel that shows little development and no likely groundwater connection.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒ clear, natural line on bank
☐ shelving
☐ veg. matted down or absent
☐ leaf litter disturbed
☐ wrack line
☐ scour
☐ change in plant community
☐ other:

Stream Condition/Stability:
☐ excessive erosion
☐ bank collapse
☐ cut-off channels
☐ riffles/runs
☐ pools
☒ exposed tree roots
☐ steep side slopes
☐ vegetated banks
☒ stable stream channel
☐ incised stream channel

Biological Function and Comments:

Upstream Photo: View north

Downstream Photo: View south

Date: 08/26/2020 Investigator(s): _____ 38.863597 -94.541586

Feature ID: Tibutary 4
Unique Site ID: t4
Project name: HWY 150 and Botts Road
Project #: 019-1871
County, State: Jackson Co., MO
Stream Classification: ☐TNW ☐RPW ☒Non-RPW
Side Slopes: 1:1 ☐ ☐2:1 ☒3:1 ☐4:1 or >
Hydrology: ☐ Flowing ☐ Standing ☒ None
Water Color/Quality: ☐Clear ☐Discolored ☐Oily film
Stream Has: ☒Bed/Bank ☒OHWM:
Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width: 2' Top of bank to top of bank width: 5'
OHWM height: .75' Top of Bank height: 2'
Riparian Buffer Width: N/E side: >50 Ft.
S/W side: >50 Ft.

Buffer (adjacent bank) vegetation:
bush honeysuckle

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☐Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern
Stream Type Rational:
No flow and a channel that shows little development and no likely groundwater connection.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☒excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☐steep side slopes
☒vegetated banks
☐stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo: View north

Downstream Photo: View south

Date: 08/26/2020 Investigator(s): _____ 38.863683 -94.542499

OLSSON ASSOCIATES

Feature ID:	Tributary 5
Unique Site ID:	t5
Project name:	HWY 150 and Botts Road
Project #:	019-1871
County, State:	Jackson Co., MO

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width:	1'	Top of bank to top of bank width:	3'
OHWM height:	0.5	Top of Bank height:	1'
Riparian Buffer Width:		N/E side:	>50 Ft.
		S/W side:	>50 Ft.

Buffer (adjacent bank) vegetation:

bush honeysuckle

Stream Bottom Composition:

☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:

☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:

☐Discrete
☐Confined
☐Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated

Explain Artificial/Manipulated:

Stream Type:

☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:

No flow and a channel that shows little development and no likely groundwater connection.

Significant Nexus: ☐ Yes ☒ No

Explain:

Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:

☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:

☐excessive erosion ☒exposed tree roots
☐bank collapse ☐steep side slopes
☐cut-off channels ☐vegetated banks
☐riffles/runs ☒stable stream channel
☐pools ☐incised stream channel

Biological Function and Comments:

Upstream Photo: View north

Downstream Photo: View south

Date: 09/02/2020 Investigator(s): _____ 38.865998 -94.544275

OLSSON ASSOCIATES

Feature ID:	Tributary 6a
Unique Site ID:	t6a
Project name:	HWY 150 and Botts Road
Project #:	019-1871
County, State:	Jackson Co., Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☒ Flowing ☐ Standing ☐ None

Water Color/Quality: ☒Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☐OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width: 2' Top of bank to top of bank width: 15'

OHWM height: 0.75' Top of Bank height: 6'

Riparian Buffer Width: N/E side: >50 Ft.
S/W side: <50 Ft.

Buffer (adjacent bank) vegetation:

-

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
The channel shows less development than many intermittent streams and a strong groundwater connection is not apparent.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☒steep side slopes
☒vegetated banks
☐stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo: View north

Downstream Photo: View south

Date: 09/02/2020 Investigator(s): _____ 38.863878 -94.542803

OLSSON ASSOCIATES

Feature ID:	Tributary 6b
Unique Site ID:	t6b
Project name:	HWY 150 and Botts Road
Project #:	019-1871
County, State:	Jackson Co., Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☐2:1 ☐3:1 ☒4:1 or >

Hydrology: ☒ Flowing ☐ Standing ☐ None

Water Color/Quality: ☒Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width: 2' Top of bank to top of bank width: 3'

OHWM height: 0.5' Top of Bank height: 1.5'

Riparian Buffer Width: N/E side: 30 Ft.
S/W side: 30 Ft.

Buffer (adjacent bank) vegetation:
goldenrod, green ash

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☐ Forested
☒ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☒Discrete
☐Confined
☐Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
Channel that shows less development than an intermittent stream and a groundwater connection is not apparent.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☐exposed tree roots
☐steep side slopes
☒vegetated banks
☒stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo: view west

Downstream Photo: _____

Date: 08/26/2020 Investigator(s): _____ 38.863624 -94.542515

Feature ID:	Tributary 6c
Unique Site ID:	t6c
Project name:	HWY 150 and Botts Road
Project #:	019-1871
County, State:	Jackson Co., Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☒ Flowing ☐ Standing ☐ None

Water Color/Quality: ☒Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width: 2' Top of bank to top of bank width: 15'

OHWM height: 0.5' Top of Bank height: 10'

Riparian Buffer Width: N/E side: >50 Ft.
S/W side: >50 Ft.

Buffer (adjacent bank) vegetation:
hackberry, walnut, and bush honeysuckle

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☐cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
The channel shows less development than a typical intermittent stream and a groundwater connection is unknown.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☐pools
☒exposed tree roots
☒steep side slopes
☐vegetated banks
☒stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo: View north

Downstream Photo: View south

Date: 09/26/2020 Investigator(s): _____ 38.862241 -94.541555

Feature ID:	Tributary 7
Unique Site ID:	t7
Project name:	HWY 150 and Botts Road
Project #:	019-1871
County, State:	Jackson Co., Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☐ Flowing ☐ Standing ☒ None

Water Color/Quality: ☐Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☐Relatively Straight ☒Meandering

OHWM width:	2'	Top of bank to top of bank width:	20'
OHWM height:	0.75	Top of Bank height:	12'

Riparian Buffer Width: N/E side: >50 Ft. S/W side: >50 Ft.

Buffer (adjacent bank) vegetation:
bush honeysuckle

Stream Bottom Composition:
☒silt ☐sand ☐gravel ☐cobble ☐bedrock ☐concrete ☐muck ☐other: ☐vegetation (% cover, type):

Riparian Type:
☒ Forested ☐ Herbaceous ☐ Ag. Field ☐ _____

Surface Flow:
☐Discrete ☐Confined ☒Discrete and Confined ☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☐Intermittent ☒Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
Channel shows less development than an intermittent stream and a groundwater connection is not apparent.

Significant Nexus: ☐ Yes ☒ No
Explain:
Ephemeral streams are not jurisdictional under the NWPR.

OHWM has:
☒clear, natural line on bank ☐shelving ☐veg. matted down or absent ☐leaf litter disturbed ☐wrack line ☐scour ☐change in plant community ☐other:

Stream Condition/Stability:
☐excessive erosion ☐bank collapse ☐cut-off channels ☐riffles/runs ☐pools ☒exposed tree roots ☒steep side slopes ☒vegetated banks ☒stable stream channel ☐incised stream channel

Biological Function and Comments:

Upstream Photo: View NW

Downstream Photo: View SE

Date: 09/26/2020 Investigator(s): _____ 38.863419 -94.541499

Feature ID:	Tributary 8a
Unique Site ID:	t8a
Project name:	HWY 150 and Botts Road
Project #:	019-1871
County, State:	Jackson Co., Missouri

Stream Classification: ☐TNW ☐RPW ☒Non-RPW

Side Slopes: 1:1 ☐ ☒2:1 ☐3:1 ☐4:1 or >

Hydrology: ☒ Flowing ☐ Standing ☐ None

Water Color/Quality: ☒Clear ☐Discolored ☐Oily film

Stream Has: ☒Bed/Bank ☒OHWM:

Tributary Geometry: ☒Relatively Straight ☐Meandering

OHWM width: 6' Top of bank to top of bank width: 10'

OHWM height: 0.75' Top of Bank height: 20'

Riparian Buffer Width: N/E side: >50 Ft.
S/W side: <50 Ft.

Buffer (adjacent bank) vegetation:
bush honeysuckle

Stream Bottom Composition:
☒silt ☐concrete
☐sand ☐muck
☐gravel ☐other:
☒cobble ☐vegetation (% cover, type):
☐bedrock

Riparian Type:
☒ Forested
☐ Herbaceous
☐ Ag. Field
☐ _____

Surface Flow:
☐Discrete
☐Confined
☒Discrete and Confined
☐Overland Sheet Flow

Stream Characteristics: ☒Natural ☐Artificial ☐Manipulated
Explain Artificial/Manipulated:

Stream Type:
☐Perennial ☒Intermittent ☐Ephemeral ☐Draws/Gullies/Erosional Pattern

Stream Type Rational:
Flowing water, well developed channel with a likely groundwater connection since it is the lowest part of the landscape.

Significant Nexus: ☒ Yes ☐ No
Explain:
It eventually flows into the Little Blue River which flows in the Missouri River, a traditional navigable stream.

OHWM has:
☒clear, natural line on bank
☐shelving
☐veg. matted down or absent
☐leaf litter disturbed
☐ wrack line
☐scour
☐change in plant community
☐other:

Stream Condition/Stability:
☐excessive erosion
☐bank collapse
☐cut-off channels
☐riffles/runs
☒pools
☒exposed tree roots
☒steep side slopes
☒vegetated banks
☒stable stream channel
☐incised stream channel

Biological Function and Comments:

Upstream Photo: View west

Downstream Photo: _____

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, KANSAS CITY DISTRICT
601 E. 12TH STREET, 635 FEDERAL BUILDING
KANSAS CITY, MO 64106-2824

January 11, 2021

Regulatory Branch
NWK-2021-00041

Mr. Aaron Ball
Olsson Associates, Inc.
7301 West 133rd Street, Suite 200
Overland Park, KS 66213

Dear Mr. Ball:

This letter is in response to your request submitted on behalf of Promontory 150 LLC for a Jurisdictional Determination for commercial land development. The site is located in Section 26, Township 47 north, Range 33 west, Jackson County, Missouri. Your request has been assigned Regulatory File No. NWK-2021-00041. Please reference this file number on any correspondence to us or to other interested parties concerning this matter.

This letter contains an approved jurisdictional determination for your project site. This jurisdictional determination is valid for a 5-year period from the date of this letter unless new information warrants revision of the determination before the expiration date. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Administrative Appeal Options and Process and Request for Appeal (NAO-RFA) form. If you request to appeal this determination, you must submit a completed NAO-RFA form to the Northwestern Division Office at the following address:

Division Engineer
U.S. Army Corps of Engineers, Northwestern Division
ATTN: Melinda M. Larsen
Regulatory Appeals Review Officer
1201 NE Lloyd Blvd., Suite 400
Portland, OR 97232
Telephone: 503-808-3888

In order for an NAO-RFA to be accepted by the Corps, the Corps must determine that it is completed, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAO-RFA. Should you decide to submit a NAO-RFA form, it must be received at the above address by March 12, 2021. It is not necessary to submit a NAO-RFA form to the Division Office if you do not object to the determination in this letter.

In the event that you disagree with an approved jurisdictional determination and you have **new information** not considered in the original determination, you may request reconsideration of that determination by the Corps District prior to initiating an appeal. To request this reconsideration based upon new information, you must submit the completed NAO-RFA form and the new information to the District Office so that it is received within 60 days of the date of the NAO-RFA. Send approved jurisdictional determination reconsideration requests to:

District Commander
U.S. Army Corps of Engineers, Kansas City District
ATTN: Mark D. Frazier
Chief, Regulatory Branch
601 East 12th Street, Suite 402
Kansas City, MO 64106-2824
Telephone: 816-389-3990 - FAX: 816-389-2032

The Corps of Engineers has jurisdiction over all waters of the United States. Discharges of dredged or fill material in waters of the United States, including wetlands, require prior authorization from the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-332.

We are interested in your thoughts and opinions concerning your experience with the Kansas City District, Corps of Engineers Regulatory Program. Please feel free to complete our Customer Service Survey form on our website at: http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. You may also call and request a paper copy of the survey which you may complete and return to us by mail.

If you have any questions concerning this matter, please feel free to write or contact me at 816-389-3115 or by email at Connor.N.Bickford@usace.army.mil. Please reference Regulatory File No. NWK-2021-00041 in all comments and/or inquiries relating to this project. This letter is only being provided to you electronically at aball@olsson.com.

Sincerely,

Connor N. Bickford

Connor Bickford
Regulatory Specialist

Enclosures

cc (electronically w/o enclosures):

Environmental Protection Agency,
Watershed Planning and Implementation Branch
U.S. Fish and Wildlife Service, Columbia, Missouri
Missouri Department of Natural Resources,
Water Protection Program
State Historic Preservation Office
Missouri Department of Conservation

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, KANSAS CITY DISTRICT
635 FEDERAL BUILDING
601 E. 12TH STREET
KANSAS CITY, MISSOURI 64106-2824

November 9, 2020

Regulatory Branch
NWK-2020-00813

Mr. Aaron Ball
Olsson
7301 West 133rd Street, Suite 200
Overland Park, Kansas 66213

Dear Mr. Ball:

This letter is in response to the approved jurisdictional determination request you submitted on behalf of Platform Ventures. It was received on September 29, 2020. The area covered by the jurisdictional determination involves waters within the upper watershed of the Little Blue River. The project is located in Section 26, Township 47 North, Range 33 West, Jackson County, Missouri.

This letter contains an approved jurisdictional determination for your project site. This jurisdictional determination is valid for a 5-year period from the date of this letter unless new information warrants revision of the determination before the expiration date. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Administrative Appeal Options and Process and Request for Appeal (NAO-RFA) form. If you request to appeal this determination, you must submit a completed NAO-RFA form to the Northwestern Division Office at the following address:

Division Engineer
U.S. Army Corps of Engineers, Northwestern Division
ATTN: Melinda M. Larsen
Regulatory Appeals Review Officer
1201 NE Lloyd Blvd., Suite 400
Portland, OR 97232
Telephone: 503-808-3888

In order for an NAO-RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAO-RFA. Should you decide to submit an NAO-RFA form, it must be received at the above address by January 8, 2021. It is not necessary to submit an NAO-RFA form to the Division Office if you do not object to the determination in this letter.

In the event that you disagree with an approved jurisdictional determination, and you have **new information** not considered in the original determination, you may request reconsideration of that determination by the Corps District prior to initiating an appeal. To request this reconsideration based upon new information, you must submit the completed NAO-RFA form and the new information to the District Office so that it is received within 60 days of the date of the NAO-RFA. Send approved jurisdictional determination reconsideration requests to:

District Commander
ATTN: Mark D. Frazier
Chief, Regulatory Branch
U.S. Army Engineer District, Kansas City
601 East 12th Street, Suite 402
Kansas City, MO 64106-2824
Voice: 816-389-3990 – FAX: 816-389-2032

The Corps of Engineers has jurisdiction over all waters of the United States. Discharges of dredged or fill material in waters of the United States, including wetlands, require prior authorization from the Corps under Section 404 of the Clean Water Act (33 U.S.C. 1344). The implementing regulation for this Act is found at 33 CFR 320-332.

We are interested in your thoughts and opinions concerning your experience with the Kansas City District, Corps of Engineers Regulatory Program. Please feel free to complete our Customer Service Survey form on our website at: http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. You may also call and request a paper copy of the survey which you may complete and return to us by mail.

If you have any questions concerning this matter, please feel free to write or contact me at 816-389-3739 or by email at jesse.s.cochran@usace.army.mil. Please reference Regulatory File No. NWK-2020-813 in all comments and/or inquiries relating to this project. This letter is only being provided to you electronically at: aball@olsson.com.

Sincerely,

Jesse Cochran
Regulatory Specialist

Enclosures

cc (electronically w/o enclosures):

Environmental Protection Agency,
Watershed Planning and Implementation Branch
U.S. Fish and Wildlife Service, Columbia, Missouri
Missouri Department of Natural Resources,
Water Protection Program
State Historic Preservation Office
Missouri Department of Conservation