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VIA EMAIL

May 5, 2022

Mr. Chris Crumpton
BlueStone Engineers, PLLC
4350 Brownsboro Road, Suite 110
Louisville, Kentucky 40207
chris@bluestoneengineers.com

**Subject: Water/Wetland Reconnaissance Summary Report
3rd Street Road Property
Jefferson County, Kentucky
RES Project No.: 106541**

Dear Mr. Crumpton:

RES Kentucky, LLC (RES) is pleased to provide BlueStone Engineers with this Water/Wetland Reconnaissance Summary Report for the 3rd Street Road Property project in Jefferson County, Kentucky. The approximately 17-acre project boundary is located on the northwest side of 3rd Street Road, approximately 0.2 miles northeast of the intersection of 3rd Street Road and Arnoldtown Road in Louisville, Kentucky. The goal of these services was to approximate water/wetland features and federally threatened/endangered (T/E) species habitat on the site to assist BlueStone Engineers with preliminary project planning.

Based on the field reconnaissance, approximate jurisdictional water/wetland features present on the site include:

- one intermittent stream measuring 1,316 linear feet (0.604 acre)
- one ephemeral stream measuring 228 linear feet (0.013 acre)
- five wetlands totaling 6.205 acres

In addition, suitable summer habitat for the Indiana bat (*Myotis sodalis*) and the northern long-eared bat (*Myotis septentrionalis*) is present in the forested wetlands and upland mixed-age woods throughout the property. Intermittent Stream 1, the forested wetlands and upland mixed-aged woods were identified as potential foraging and commuting habitat for the gray bat. No habitat for the pink mucket was found onsite.

METHODOLOGY

The reconnaissance included in-house and field components. In-house research involved review of the USGS topographic quadrangle map, aerial photography, the Jefferson County soil survey, and Federal Emergency Management (FEMA) floodplain mapping. Following review of these materials, RES conducted a field reconnaissance on April 26, 2022, to identify the approximate location and extent of jurisdictional waters/wetlands on the site. During the field visit, the onsite stream (Intermittent Stream 1) was inundated and, therefore, was unable to be verified as an intermittent or perennial stream. This stream is mapped by the USGS as an intermittent stream, but has the size and potential to be rated as a perennial and is named as Slate Run. The presence of jurisdictional streams and open water bodies was evaluated based on ordinary high-water mark (OHWM), defined bed and bank features, and flow regimes. Potential wetland areas were investigated using the Routine On-Site Determination Method as defined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region – Version 2.0* (April 2012). This technique identifies wetlands based on evidence of wetland hydrology, hydric soils, and hydrophytic vegetation. The water/wetland features have not been formally delineated or surveyed and have not been verified by the U.S. Army Corps of Engineers (USACE), who holds final authority over their regulatory status.

The field assessment was also used to identify the presence of suitable habitat for T/E species known to occur in Jefferson County in the vicinity of the project, including the Indiana bat, northern long-eared bat, gray bat (*Myotis grisecens*) and pink mucket (*Lampsilis abrupta*). Potential impacts to T/E species must be addressed in any federal permitting process.

RESULTS

Based on the field reconnaissance, approximate jurisdictional water/wetland features present on the site include one intermittent stream, one ephemeral stream, and five wetlands. The results of the water/wetland reconnaissance are depicted on Figure 1 and summarized in the table below.

Feature	Approximate Stream Length (feet)	Stream Width (feet)	Approximate Area (acres)	Status
Intermittent Stream 1	1,316	20	0.604	Jurisdictional
Intermittent Stream Total	1,316	---	0.604	
Ephemeral Stream 1	228	2.5	0.013	Jurisdictional
Ephemeral Stream Total	228	---	0.013	
Wetland 1	---	---	5.890	Jurisdictional
Wetland 2	---	---	0.029	Jurisdictional
Wetland 3	---	---	0.018	Jurisdictional
Wetland 4	---	---	0.011	Jurisdictional
Wetland 5	---	---	0.257	Jurisdictional
Jurisdictional Wetland Total	---	---	6.205	
Jurisdictional Features Total	1,544	---	6.822	

All onsite wetlands are jurisdictional, forested wetlands. Wetland 1 has direct connection with Intermittent 1 through Ephemeral 1. Wetland 1 is also located within the FEMA 100-year floodplain and is considered jurisdictional by the USACE. Wetlands 2 through 5 are located in defined depressions that lack a direct connection to other jurisdictional water/wetland features, but are located within the FEMA 100-year floodplain and are considered jurisdictional features.

Habitat onsite consists primarily of forested wetlands and upland mixed-age woods with a section of shrub scrub/open field habitat along a utility line. Suitable summer habitat for the Indiana bat and the northern long-eared bat is present in the forested wetlands and upland mixed-age woods throughout the property. Intermittent Stream 1, the forested wetlands and upland mixed-aged woods were identified as potential foraging and commuting habitat for the gray bat. No habitat for the pink mucket was found onsite.

DISCUSSION

Potential development-related issues are discussed below in terms of waters/wetlands, federally threatened/endangered species, and cultural-historic and archaeological resources.

WATERS/WETLANDS

Jurisdictional waters of the U.S., including wetlands, are defined by 33 CFR Part 328.3 and are protected by Section 404 of the Clean Water Act (33 USC 1344), which is administered and enforced by the USACE. Many water/wetland impacts are also regulated by the Kentucky Division of Water (KDOW) – Water Quality Certification (WQC) Section. Current permitting thresholds are as follows:

- Avoidance of the jurisdictional water/wetland features would require no permits from, or

coordination with, the USACE or KDOW. A formal Jurisdictional Determination (JD) can be obtained from the USACE, if needed.

- Impacts to less than 0.5 acre of waters can be authorized under the federal Nationwide Permit (NWP) program with the USACE
- Impacts to greater than 0.5 acre of waters require an Individual Section 404 Permit from the USACE
- Impacts to greater than 300 feet of intermittent/perennial stream or 0.5 acre of wetland or an in-line stream basin require an Individual Section 401 WQC from the KDOW
- Impacts to less than 300 feet of intermittent/perennial stream or 0.5 acre of wetland meet the conditions of a General WQC and do not require coordination with the KDOW
- Impacts to isolated streams, wetlands, or ponds do not require a permit from the USACE or KDOW and no mitigation is required
- Impacts to 0.1 acre or more of jurisdictional wetlands or 0.03 acre or more of jurisdictional stream will require compensatory mitigation. Mitigation ratios for impacts to poor quality perennial, intermittent and ephemeral streams are 1.5:1, 1:1 and 0.5:1, respectively, with ratios increasing with stream quality. Wetland mitigation is required at a ratio of 3:1 because the site is located in the Pond Creek watershed. If required, mitigation credits can be purchased from either a private mitigation bank or the Kentucky Stream and Wetland In-Lieu Fee program, which requires a 20% credit markup to cover temporal losses. The Kentucky Stream and Wetland In-Lieu Fee program currently charges \$415 per stream credit, and \$61,500 per wetland credit.

A NWP with the USACE generally takes three to six months and an Individual Section 404 Permit with the USACE generally takes six to 12 months. Permitting with the KDOW can generally be completed within the federal permitting timeframes.

THREATENED/ENDANGERED SPECIES

Under the Section 404 permitting process, the USACE determines if consultation with the U.S. Fish and Wildlife Service (USFWS) is required to address potential impacts to T/E species. The major T/E species issue of concern at this site is the clearing of the suitable Indiana bat and northern long-eared bat summer habitat. Based on maps released by the USFWS, the project is located in a "Potential" Habitat Zone for the Indiana bat and northern long-eared bat. In addition, Intermittent Stream 1, the forested wetlands, and upland mixed-aged woods were identified as potential foraging and commuting habitat for the gray bat. Under the 404 permitting process, impacts to this habitat will require consultation with the USFWS. Consultation generally results in a combination of seasonal tree clearing restrictions, presence/absence surveys, and/or mitigation through payments into the Imperiled Bat Conservation Fund (IBCF). Current rates for tree clearing in a "Potential" Habitat Zone are 2,000/acre in the unoccupied period (October 15 through March 31), \$4,000/acre for clearing in the occupied period (April 1 through October 14, excluding June/July), and \$8,000/acre

for clearing during the non-volant period (June 1 through July 31). The 4(d) Rule can be used to address potential indirect impacts to the northern long-eared bat as a result of the clearing of suitable summer habitat in a "Potential" habitat zone. Incidental take is not prohibited under the 4(d) Rule since the project is not located within 0.25 mile of a known hibernacula or 150 feet of a known maternity roost tree.

CONCLUSION

In conclusion, based on RES's reconnaissance, the approximate jurisdictional water/wetland features present on the site include one intermittent stream measuring 1,316 linear feet (0.604 acre), one ephemeral stream measuring 228 linear feet (0.013 acre), and five wetlands totaling 6.205 acres. If the streams and wetlands can be avoided, no permits from, or coordination with, the USACE or KDOW will be required, unless a formal delineation or Jurisdictional Determination from the USACE are required to verify the delineation. If the jurisdictional features will be impacted, a formal delineation will be required, and the project will require authorization from the USACE and potentially the KDOW. Permitting and mitigation scenarios will depend on the final site development plan.

We appreciate the opportunity to assist you on this important project. Please call Zach Triplett or Kiersten Fuchs at (502) 625-3009 with any questions on this report or the overall project.

Sincerely,

Zachary T. Triplett
Zachary T. Triplett (May 5, 2022 12:08 EDT)
Zachary T. Triplett
Ecologist II

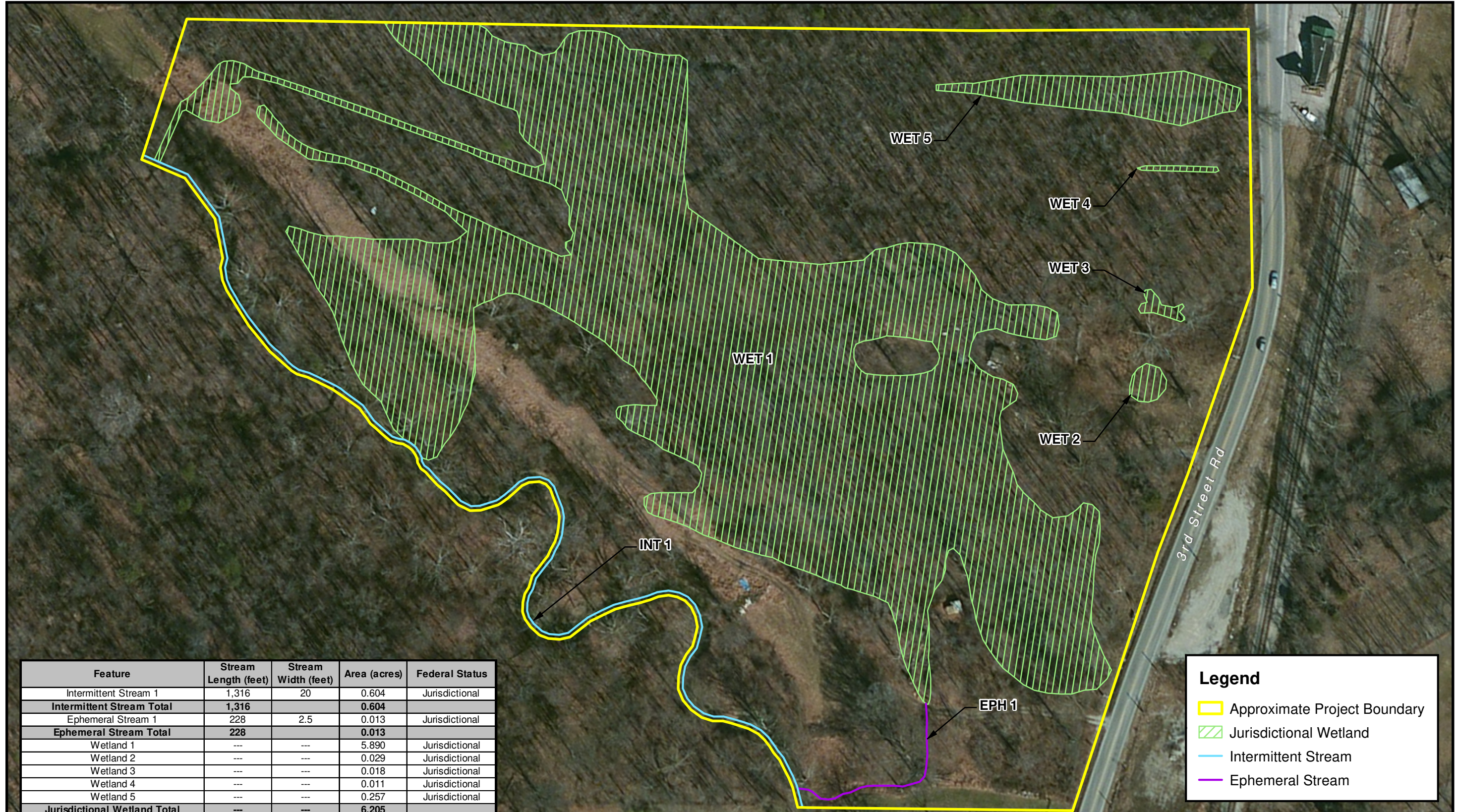
Kiersten R. Fuchs
Kiersten R. Fuchs (May 5, 2022 13:31 EDT)
Kiersten R. Fuchs
Senior Project Manager

R:\Projects\106541-3rd Street Road Property\Report\3rd Street Road Property_Recon Summary Report

Attachments: Figure

FIGURE

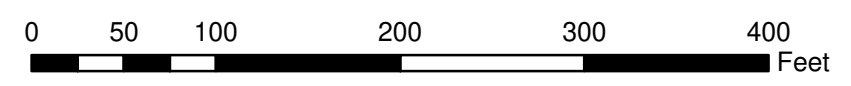
Source: World Imagery - Esri and the GIS User Community (YEAR).



Feature	Stream Length (feet)	Stream Width (feet)	Area (acres)	Federal Status
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Legend

- Approximate Project Boundary
- Jurisdictional Wetland
- Intermittent Stream
- Ephemeral Stream



NOTE: WATER/WETLAND BOUNDARIES WERE APPROXIMATED BY RES WETLAND SCIENTISTS ON APRIL 26, 2022. THESE BOUNDARIES HAVE NOT BEEN VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS. USE OF THIS MAP IS FOR PRELIMINARY PLANNING PURPOSES ONLY.



3RD STREET ROAD PROPERTY
JEFFERSON COUNTY, KENTUCKY



WATER/WETLAND
RECONNAISSANCE MAP

REVISED DATE: 5-3-22 | DRAWN BY: JAJ/ZTT

FIGURE 1

R:\Res\gis\Projects\106541_3rd Street Road_Property\MXD\WW Recon Map.mxd, 05-5-2022, temp