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VIA EMAIL

September 1, 2022

Patrick Madden, Attorney-at-Law
Wildcat, LLC
P.O. Box 12128
Lexington, Kentucky 40580
patmadden@hamburgplace.com

**Subject: Water/Wetland Delineation Summary Report
6803 & 6805 Beulah Church Road Project
Jefferson County, Kentucky
RES Project No.: 107181**

Dear Mr. Madden:

RES Kentucky, LLC (RES) is pleased to provide Wildcat, LLC with this Water/Wetland Delineation Summary Report for the 6803 & 6805 Beulah Church Road project in Jefferson County, Kentucky. The approximately 87-acre property is located immediately southeast of the intersection of Damascus Road and Beulah Church Road in Louisville, Kentucky (Figures 1 and 2). The goal of these services was to identify the location and extent of jurisdictional waters/wetlands and threatened/endangered (T/E) species habitat on the property to assist with preliminary project planning.

Based on the delineation, jurisdictional water/wetland features present on site are:

- One intermittent stream measuring 175 linear feet (0.012 acre)
- Eight ephemeral streams totaling 2,396 linear feet (0.216 acre)
- Five wetlands totaling 1.209 acres

Non-jurisdictional features identified on site include three isolated wetlands totaling 0.720 acre. In addition, 75.51 acres of the mixed-age woods located on the property is considered suitable habitat for the Indiana bat (*Myotis sodalis*) and the northern long-eared bat (*Myotis septentrionalis*).

METHODOLOGY

The water/wetland delineation included in-house and field components. In-house research involved review of the USGS topographic quadrangle map, aerial photography, the Jefferson County soil

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survey, and Federal Emergency Management Agency (FEMA) floodplain mapping. Following review of these materials, RES conducted a field delineation on August 17 to 19, 2022, to identify the location and extent of jurisdictional waters/wetlands on the site. During the field visit, 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 Mountain Piedmont Region – Version 3.5* (April 2012). This technique uses a multi-parameter approach that requires positive evidence of three criteria: wetland hydrology, hydric soils, and hydrophytic vegetation. This delineation has not been verified by the USACE, who holds final authority over determinations of the location and extent of jurisdictional waters/wetlands.

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 project vicinity, including the Indiana bat, northern long-eared bat, gray bat (*Myotis grisescens*), pink mucket (*Lampsilis abrupta*), and Kentucky glade cress (*Leavenworthia exigua laciniata*). Potential impacts to T/E species must be addressed in any federal permitting process.

RESULTS

Based on the delineation, jurisdictional waters present on site are one intermittent stream, eight ephemeral streams, and five wetlands. Non-jurisdictional features identified on site included three isolated wetlands. The three wetlands are located in isolated low-lying areas with no connection to other waters and are, thus, considered non-jurisdictional. The results of the water/wetland delineation are depicted on Figure 2 and summarized in the table below.



Feature	Stream Length (feet)	Stream Width (feet)	Area (acres)	Federal Status
Intermittent Stream 1	175	3	0.012	Jurisdictional
Intermittent Stream Total	175	--	0.012	--
Ephemeral Stream 1	96	3	0.007	Jurisdictional
Ephemeral Stream 2	90	1.5	0.003	Jurisdictional
Ephemeral Stream 3	325	3.5	0.026	Jurisdictional
Ephemeral Stream 4	151	2	0.007	Jurisdictional
Ephemeral Stream 5	231	3	0.016	Jurisdictional
Ephemeral Stream 6	1,327	5	0.152	Jurisdictional
Ephemeral Stream 7	53	1	0.001	Jurisdictional
Ephemeral Stream 8	123	1.5	0.004	Jurisdictional
Ephemeral Stream Total	2,396	--	0.216	--
Wetland 1	--	--	0.052	Jurisdictional
Wetland 2	--	--	0.659	Jurisdictional
Wetland 3	--	--	0.015	Non-Jurisdictional
Wetland 4	--	--	0.019	Jurisdictional
Wetland 5	--	--	0.022	Jurisdictional
Wetland 6	--	--	0.192	Non-Jurisdictional
Wetland 7	--	--	0.513	Non-Jurisdictional
Wetland 8	--	--	0.457	Jurisdictional
Jurisdictional Wetland Total	--	--	1.209	--
Non-Jurisdictional Wetland Total	--	--	0.720	--
Jurisdictional Features Total	2,435	--	1.437	--
Non-Jurisdictional Features Total	0	--	0.720	--

Habitat on site is consists of mixed age woods throughout the site. A total of 75.51 acres of the scattered trees and mixed-age woods are considered suitable summer roosting habitat for the federally endangered Indiana bat and the federally threatened northern long-eared bat. No suitable habitat was identified on site for the gray bat, pink mucket, or Kentucky glade cress.

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:

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- 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 desired.
- Impacts to less than 0.5 acre of jurisdictional waters/wetlands can be authorized under the federal Nationwide Permit (NWP) program with the USACE.
- Impacts to greater than 0.5 acre of jurisdictional waters/wetlands require an Individual Section 404 from the USACE.
- Impacts to less than 300 feet of jurisdictional streams meet the conditions of a General WQC and do not require coordination with the KDOW.
- Impacts to greater than 300 feet and/or construction of an in-line stream basin require an Individual Section 401 WQC from the KDOW.
- Impacts to 0.5 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 ephemeral and intermittent streams are at 1:1, respectively, with ratios increasing with stream quality. If required, mitigation credits can be purchased from either a private mitigation bank or the Kentucky In-Lieu Fee program, which requires a 20% markup to cover temporal losses. The Kentucky In-Lieu Fee program charges \$518 per stream credit and \$78,000 per wetland credit effective August 1, 2022.

If the jurisdictional water/wetland features can be avoided, no permits from, or coordination with, the USACE or KDOW will be required. A NWP generally takes three to six months to obtain, depending on agency backlog, while an Individual Section 404 Permit with the USACE often requires 6 to 12 months to complete. Individual Section 401 WQCs with the KDOW can generally be completed within the federal time frames.

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 suitable Indiana and northern long-eared bat summer habitat. Based on maps released by the USFWS, the project is located in a "Known Summer" Habitat Zone for the Indiana 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 "Known Summer" Habitat Zone are \$6,525/acre in the unoccupied period (August 15 through March 31), \$8,700/acre for clearing in the occupied period (April 1 through August 14, excluding June/July), and \$13,050/acre for clearing during the non-volant period (June 1 through July 31).



CULTURAL HISTORIC AND ARCHAEOLOGICAL RESOURCES


Under the Section 404 permitting process, the USACE determines if consultation with the State Historic Preservation Office (SHPO) is required to address potential impacts to significant archaeological/historic features. We are not aware of any archaeological features or studies that have been done on the site. We can obtain a quote for these surveys, if required.

CONCLUSION

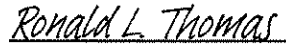
In conclusion, based on RES's delineation, jurisdictional waters present on the site include one intermittent stream measuring 175 linear feet (0.012 acre), eight ephemeral streams totaling 2,396 linear feet (0.216 acre), and five wetlands totaling 1.209 acres. Non-jurisdictional features identified on site include three wetlands totaling 0.720 acre. If the jurisdictional streams and wetlands can be avoided, no permits from, or coordination with, the USACE, KDOW, USFWS, or SHPO will be required. Final jurisdictional impacts and specific permit and mitigation requirements can be determined based on final site development plans.

We appreciate the opportunity to assist you on this important project. Please call Cory Shumate or Ron Thomas at (502) 625-3009 with any questions on this report or the overall project.

Sincerely,


Cory Shumate (Sep 1, 2022 16:26 EDT)

Cory D. Shumate
Project Manager I


Ronald L. Thomas (Sep 1, 2022 16:23 EDT)

Ronald L. Thomas
Senior Project Manager

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Attachments: Figures

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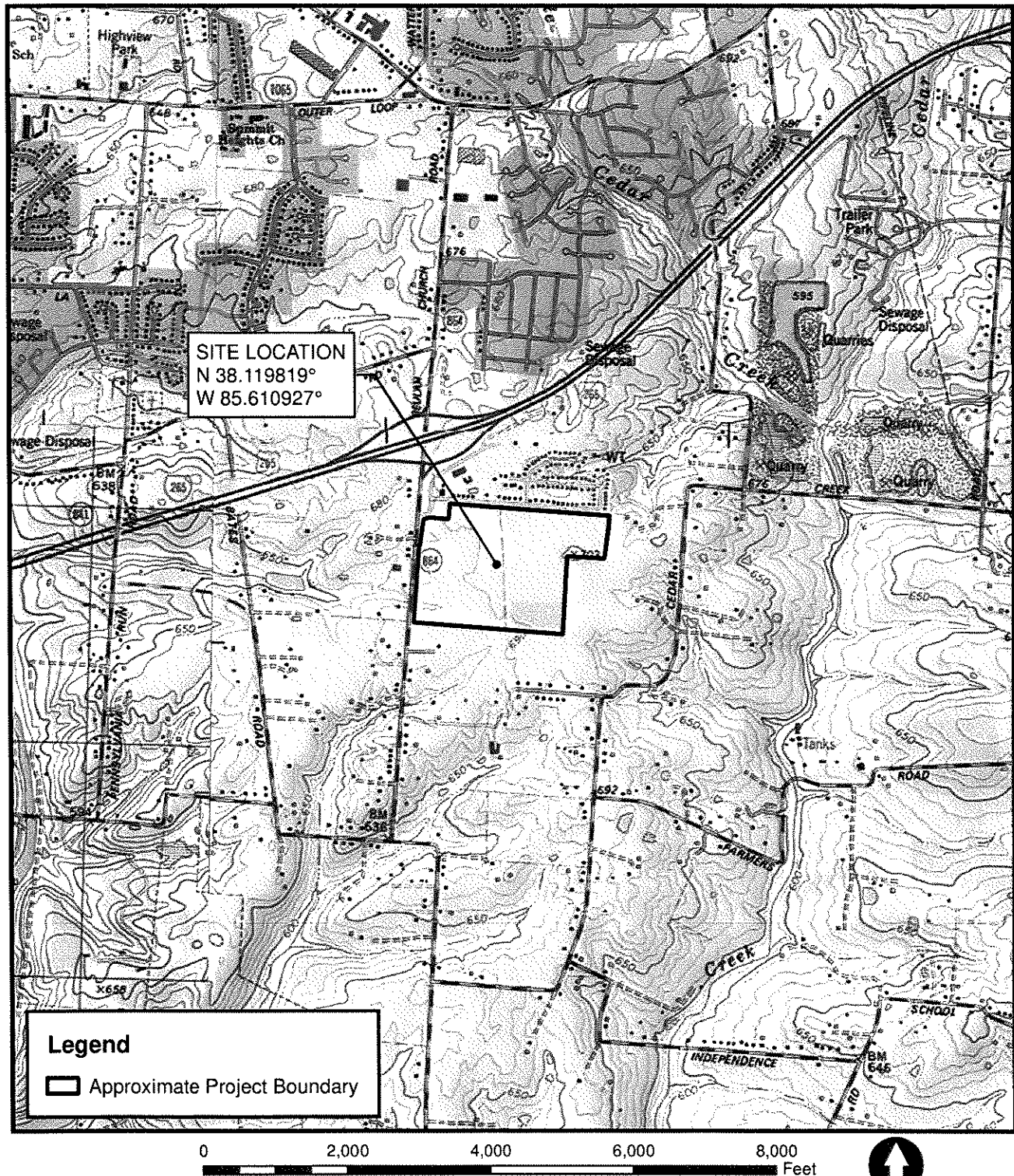
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FIGURES

Source: USGS 7.5-minute Topographic Map - Louisville East, Jeffersontown, Brooks, Mount Washington, Kentucky Quadrangles.



6803 & 6805 BEULAH CHURCH ROAD
JEFFERSON COUNTY, KENTUCKY



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SITE LOCATION MAP

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REVISED DATE: 08-30-22 DRAWN BY: JAJ/CDS

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