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**VIA EMAIL**

November 15, 2021

Ms. Laura Barlow  
LDG Development, LLC  
1469 South Fourth Street  
Louisville, Kentucky 40208  
lbarlow@ldgdevelopment.com

**Subject: Water/Wetland Delineation Summary Report  
Terry Road and Landcross Drive Properties  
Jefferson County, Kentucky  
Redwing Project No.: 105535**

Dear Ms. Barlow:

RES Kentucky, LLC dba Redwing (Redwing) is pleased to provide LDG Development, LLC (LDG) with this Water/Wetland Delineation Summary Report for three properties in Jefferson County, Kentucky: 5127 Terry Road, 5127-R Terry Road, and 5601-R Landcross Drive. The three properties are adjacent to each other and are located approximately 0.6 mile southwest of the intersection of Kentucky Highway 1934 and Terry Road (Figure 1). The goal of these services was to identify the location and extent of jurisdictional waters/wetlands and federally threatened/endangered (T/E) species habitat on the 5127 Terry Road property to assist with preliminary project planning. An in-house review of potential waters/wetlands on the 5127-R Terry Road and 5601-R Landcross Drive properties was also performed.

Based on the delineation, no water/wetland features are present on the 5127 Terry Road property. Suitable habitat for federally T/E species on the property is limited to summer habitat for the federally endangered Indiana bat (*Myotis sodalis*) and federally threatened northern long-eared bat (*Myotis septentrionalis*) (Figure 2). Additionally, several water/wetland features and the 100-year floodplain are mapped on the 5127-R Terry Road and 5601-R Landcross Drive properties.

**METHODOLOGY**

The water/wetland delineation included in-house and field components. In-house research involved review of the Shively, Kentucky USGS topographic quadrangle map, aerial photography, the USDA Soil Survey Geographic Database, U.S. Fish and Wildlife Service National Wetland Inventory (NWI) mapping, and Federal Emergency Management Agency (FEMA) floodplain mapping for all three properties. Following

review of these materials, Redwing conducted a field visit on October 29, 2021 to identify the location and extent of jurisdictional waters/wetlands on the 5127 Terry Road property. During the field visit, the presence of streams was evaluated based on ordinary high-water mark, 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 2.0* (April 2012). This technique uses a multi-parameter approach that requires positive evidence of three criteria: wetland hydrology, hydric soils, and hydrophytic vegetation. The field assessment was also used to identify suitable habitat for federally T/E species known to occur in Jefferson County, including the Indiana bat, northern long-eared bat, gray bat (*Myotis grisescens*), clubshell (*Pleurobema clava*), fanshell (*Cyprogenia stegaria*), northern riffleshell (*Epioblasma torulosa rangiana*), orangefoot pimpleback (*Plethobasus cooperianus*), pink mucket (*Lampsilis abrupta*), rabbitsfoot (*Quadrula cylindrica cylindrica*), ring pink (*Obovaria retusa*), rough pigtoe (*Pleurobema plenum*), sheepsnose (*Plethobasus cyphus*), and spectaclecase (*Cumberlandia monodonta*).

## RESULTS

The in-house review of the 5127-R Terry Road and 5601-R Landcross Drive properties showed that the FEMA 100-year floodplain (Zone A) is located throughout the central portion of both properties. Additionally, the USDA Soil Survey Geographic Database for Jefferson County, Kentucky maps the central portion of both properties as being underlain by hydric and hydric-by-inclusion soils, including Robertsville silt loam throughout the central portion of both properties and the Urban land-Alfic Udarents-Robertsville complex in the eastern portion of the 5127-R Terry Road property. Mapped stream features on the 5127-R Terry Road property include Mill Creek, which is identified on the USGS topographic quadrangle map with a dashed blue line, indicating that it is likely an intermittent stream. NWI mapping shows a riverine wetland along Mill Creek on the 5127-R Terry Road property and two freshwater emergent wetlands (PEM1C) on the 5601-R Landcross Drive property.

Based on the delineation, no waters or wetlands are located on the 5127 Terry Road property. Please note that this delineation has not been verified by the U.S. Army Corps of Engineers (USACE), who holds final authority over determinations of the location and extent of jurisdictional waters/wetlands. Mixed-aged woods and scattered trees totaling 4.08 acres are present on the property and are considered suitable summer roosting, foraging, and commuting habitat for the Indiana and northern long-eared bats (Figure 2). No suitable foraging or commuting habitat for the gray bat was identified. Additionally, no potential hibernacula or non-forested roosting habitat for the three bat species is present on the property. No suitable habitat for the 10 federally listed mussels was identified on the property.

## DISCUSSION

Potential development-related issues associated with the 5127 Terry Road property are discussed below in terms of waters/wetlands, federally T/E species, and cultural resources. These issues and potential scenarios do not apply to the 5127-R Terry Road and 5601-R Landcross Drive properties, as these properties have not been formally delineated.

### 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. Impacts to waters of the U.S. can require permitting ranging from activities that are pre-authorized, to those requiring a Nationwide Permit (NWP), to those requiring a full Individual Permit. Many water/wetland impacts are also regulated by the Kentucky Division of Water (KDOW) – Water Quality Certification (WQC) Section. Based on the absence of waters and wetlands on the property, no permits from or coordination with the USACE or KDOW are required prior to development of the property.

### 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 federally T/E species. As previously discussed, T/E species habitat on the property is limited to suitable Indiana and northern long-eared bat summer habitat. Based on the absence of jurisdictional waters on the property, consultation with the USFWS under the Section 404 process is not required. Consultation with the USFWS may be required for projects with other federal involvement, such as receiving federal funding. Additionally, Section 10 of the ESA prohibits take of federally listed species from any project, whether consultation with a federal agency is required or not. Although a Section 10 permit would not be required for the proposed project, direct consultation with the USFWS can be completed to ensure that the project avoids potential take of federally listed species.

### CULTURAL 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. Based on the lack of jurisdictional features on the property, consultation with the SHPO under the Section 404 process is not required for the project.

## CONCLUSION

Based on Redwing's delineation, no water/wetland features are present on the 5127 Terry Road property; therefore, no permits from or coordination with the USACE or KDOW are required prior to development of the property. Consultation with the USFWS and SHPO is also not required if no federal permits are required. Potential water/wetland features and the 100-year floodplain are mapped on the 5127-R Terry Road and 5601-R Landcross Drive properties; therefore, a formal delineation is recommended prior to any development of these properties.

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

Sincerely,



[Cory Shumate \(Nov 15, 2021 14:26 EST\)](#)

Cory D. Shumate  
Ecologist II



[Seth R. Bishop \(Nov 15, 2021 14:38 EST\)](#)

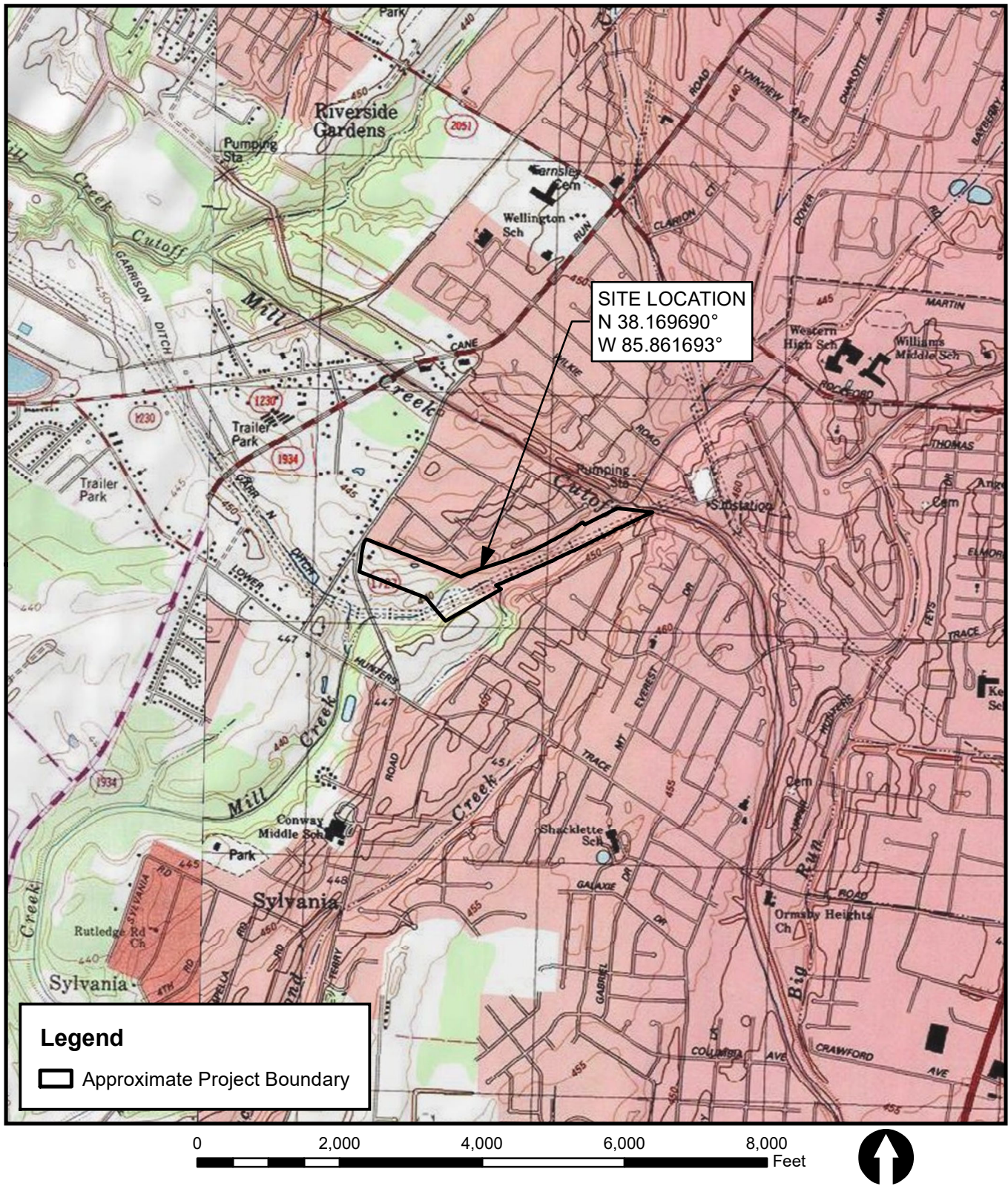
Seth R. Bishop  
Project Manager II

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Attachments: Figures

## FIGURES

Source: USGS 7.5-minute Topographic Map - Shively, Kentucky Quadrangle.



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TERRY ROAD AND LANDCROSS DRIVE  
PROPERTIES  
JEFFERSON COUNTY, KENTUCKY



SITE LOCATION MAP

REVISED DATE: 11-12-21 | DRAWN BY: EDB/CDS

Received October 5, 2022

Planning & Design Services

22-ZONE-0050

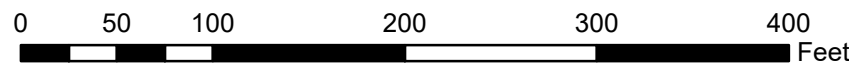
FIGURE 1

Source: Aerial - (NAIP-FSA) from kygissserver.ky.gov ArcGIS services (2018); Kentucky Tagged Vector Contour (TVC) by Kentucky Division of Geographic Information; National Hydrography Dataset (NHD) 24k streams in Kentucky by USGS and USEPA (2003).



**Legend**

- Approximate Project Boundary
- Wetland Determination Data Point
- Suitable Indiana and Northern Long-eared Bat Habitat (3.81 acres)
- Suitable Indiana and Northern Long-eared Bat Habitat Tree (3 trees\*0.09 ac = 0.27 acres)



NOTE: JURISDICTIONAL WATER/WETLAND BOUNDARIES WERE DELINEATED AND SURVEYED BY RES WETLAND SCIENTISTS ON OCTOBER 29, 2021. THESE BOUNDARIES HAVE NOT BEEN VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS. USE OF THIS MAP IS FOR PRELIMINARY PLANNING PURPOSES ONLY.



5127 TERRY ROAD PROPERTY JEFFERSON COUNTY, KENTUCKY			ECOLOGICAL RESOURCES MAP
REVISED DATE: 11-10-21	DRAWN BY: EDB/CDS		

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