



## MEMORANDUM VIA EMAIL

**DATE:** July 25, 2014

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**FROM:** <sup>SAB</sup> Seth Bishop and <sup>RT</sup> Ron Thomas - Redwing Ecological Services, Inc.

**SUBJECT:** **Water/Wetland Delineation Summary**  
**Stapleton Ridge Development**  
**Jefferson County, Kentucky**  
**Redwing Project No.: 14-093**

Redwing Ecological Services, Inc. (Redwing) is pleased to submit this summary memorandum to Mindel, Scott and Associates, Inc. (MSA) regarding our recent water/wetland delineation of the proposed Stapleton Ridge residential development site in Jefferson County, Kentucky. The approximately 70-acre site is located on the south side of Aiken Road, approximately 0.5 mile east of North Beckley Station Road and immediately west of Floyds Fork.

### DELINEATION RESULTS

Redwing completed a delineation of the location and extent of jurisdictional waters of the U.S., including wetlands, on the site on July 18, 2014. The delineation followed current methodologies as outlined in Redwing's proposal and included a GPS survey of jurisdictional wetland and ephemeral stream boundaries. The results of the delineation, as presented in this memorandum, have not been verified by the U.S. Army Corps of Engineers (USACE), who holds final authority over the location and extent of jurisdictional waters/wetlands.

Water/wetland features delineated on site total 6.99 acres, as depicted on Figure 1 and summarized in the following table.

Feature	Length (feet)	Area (acre)
Perennial Stream 1 (Floyds Fork)	460	0.42
<b>Total Perennial Stream</b>	<b>460</b>	<b>0.42</b>
Ephemeral Stream 1	620	0.04
<b>Total Ephemeral Stream</b>	<b>620</b>	<b>0.04</b>
Wetland 1	-	0.98
<b>Total Wetland</b>	<b>-</b>	<b>0.98</b>
Pond 1	-	1.13
Pond 2	-	1.27
Pond 3	-	3.15
<b>Total Open Water</b>	<b>-</b>	<b>5.55</b>
<b>TOTAL JURISDICTIONAL WATERS</b>	<b>1,080</b>	<b>6.99</b>

## PERMITTING OPTIONS

Based on a cursory review of preliminary site development plans, it appears that impacts to jurisdictional waters/wetlands, may be limited to approximately:

- 0.3 acre of pond for a road crossing (assuming a 90-foot wide fill in a narrower portion of Pond 3)
- 620 feet (0.04 acre) of the ephemeral stream for expansion of Pond 1 and construction of residential lots

Based on these impacts, the project can likely to be authorized by the USACE under a Nationwide Permit 29 (NWP 29) for residential development, assuming that they issue the typical waiver for impacts to greater than 300 feet of stream. Mitigation for the pond impacts would likely be required, as the USACE generally requires mitigation for impacts to greater than 0.1 acre of jurisdictional waters. At their discretion, the USACE may require stream or wetland mitigation to compensate for pond impacts; however, it's possible that the expansion of additional pond area on site may be deemed as suitable mitigation. The USACE does not require mitigation for ephemeral stream impacts outside of the project's stormwater management system.

The Kentucky Division of Water (KDOW) does not regulate impacts to ephemeral streams, and impacts to less than 0.5 acre of wetland and 300 feet of intermittent/perennial stream meet the conditions for General Water Quality Certification (WQC); therefore, no permits or coordination with the KDOW-WQC Section is required for the above impacts.

We understand that the project may also involve excavation within one or more of the existing ponds to expand its storage capacity. This alone is not a regulated activity as it does not involve the placement of fill material within a jurisdictional water of the U.S.

Should development plans change and increase water/wetland impacts to greater than 0.5 acre, an Individual Section 404 Permit would be required from the USACE and an Individual WQC would be required from the KDOW. This process can take 6 to 12 months to complete and requires extensive project justification, 30-day public notice periods, and more extensive consultation with additional state and federal agencies.

## ADDITIONAL ISSUES

As part of their NWP review process, the USACE must determine if consultation with the U.S. Fish and Wildlife Service (USFWS) or the State Historic Preservation Office (SHPO) is required to address potential impacts to threatened/endangered species or significant archaeological/historic resources, respectively. No formal archaeological survey is proposed at this time; however, Redwing will conduct a screening of available state archaeological and historic databases as part of the water/wetland permitting project.

It appears that the major threatened/endangered species issue for this project will be the clearing of potential summer habitat for the federally-endangered Indiana bat (*Myotis sodalis*) and potential foraging and commuting habitat for the federally-endangered gray bat (*Myotis grisescens*), both of which were identified on the site. We recommend including the northern long-eared bat (*Myotis septentrionalis*) in any USFWS consultation to ensure that there are no delays to the project at a later date. This species is currently proposed for listing as endangered (likely in 2015) and exhibits summer habitat similar to that for the Indiana bat.

Potential Indiana bat summer habitat includes the forested areas identified at the project site and totals approximately 10.84 acres (Figure 2). The clearing of potential Indiana bat summer habitat can generally be managed either by limiting clearing to the unoccupied period between October 16 and March 31 or the execution of a Memorandum of Agreement (MOA) with the USFWS for clearing between April 1 and October 15 with the payment of a per acre fee to the Indiana Bat Conservation Fund (currently at a rate of

\$3,300 per acre). At their discretion and depending on site conditions, the USFWS can also require an MOA and related fees for tree clearing in the unoccupied winter period.

Potential gray bat foraging habitat identified at the project site includes the three ponds and Floyds Fork (Figure 2). The forested habitats at the site represent potential commuting habitat. Minimal impacts from the project to these habitats are not likely to adversely affect the gray bat and would not require mitigation.

Development activity within the 100-year floodplain will require a Permit to Construct within a Stream/Floodplain from the KDOW – Floodplain Management Section. We understand that MSA is coordinating the floodplain permit for this project.

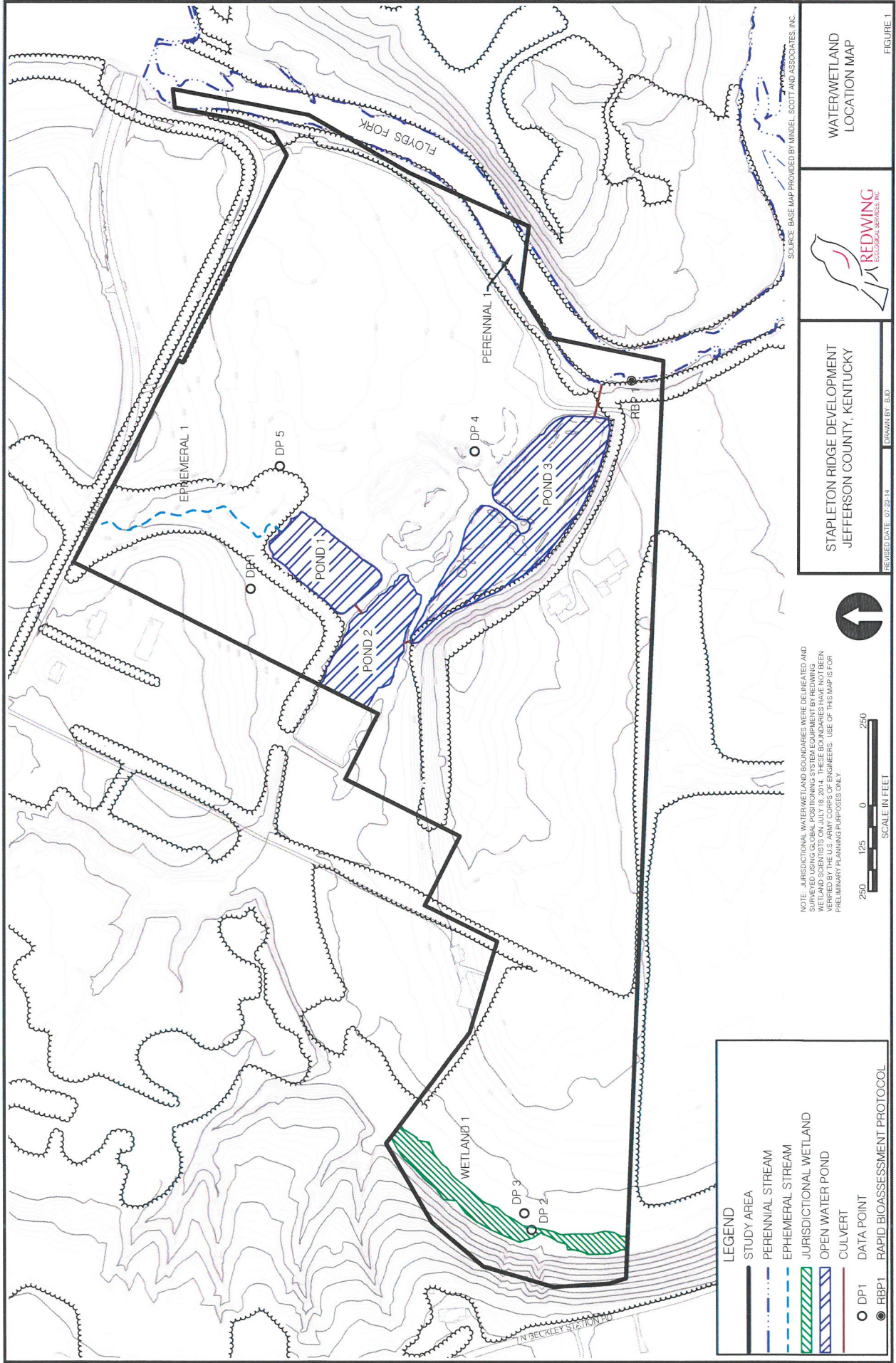
### CONCLUSION

It appears that the proposed Stapleton Ridge project will result in impacts to less than 0.4 acre of jurisdictional waters, including approximately 0.3 acre of pond and 620 feet of ephemeral stream. These impacts can be authorized with a NWP 29 from the USACE and will not require coordination with the KDOW-WQC Section. Mitigation may be required for impacts to greater than 0.1 acre of pond, but will not be required for the ephemeral stream impacts (beyond the on-site stormwater management system).

Potential additional issues include: cultural resources, the need for which will be determined by the USACE during their review; threatened/endangered species, which will be managed under the Redwing contract; and floodplain impacts, which will be handled by MSA.

The next steps in the permitting process are for Redwing to submit: 1) a Preconstruction Notification package to the USACE as application for the proposed project; 2) a request for informal consultation to the USFWS to resolve threatened/endangered species issues; and 3) a cultural resource screening request to identify any known archaeological or historic features. We will then track agency review and approval, and respond to requests for more information and questions as they arise. Drafts of all reports will be provided to the project team for review prior to submittal to the agencies.

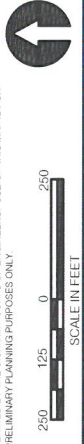
## FIGURES



**LEGEND**

- STUDY AREA
- PERENNIAL STREAM
- EPHEMERAL STREAM
- JURISDICTIONAL WETLAND
- OPEN WATER POND
- CULVERT
- DATA POINT
- RBP1 ● RBP2 ● RBP3 ● RBP4 ● RBP5

NOTE: JURISDICTIONAL WATER WETLAND BOUNDARIES WERE DELINEATED AND SURVEYED USING GLOBAL POSITIONING SYSTEM EQUIPMENT BY REDWING ECOLOGICAL SERVICES, INC. THESE BOUNDARIES HAVE BEEN VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS. USE OF THIS MAP IS FOR PRELIMINARY PLANNING PURPOSES ONLY.



REVISION DATE: 07-23-14 DRAWN BY: B.D.

**STAPLETON RIDGE DEVELOPMENT  
JEFFERSON COUNTY, KENTUCKY**



**WATERWETLAND  
LOCATION MAP**

FIGURE 1

P:\2014 Projects\14-083-Stapleton\14-083-Site plan - Fig 3 - Water Wetland Map - Enc Bowman, 7/25/2014 11:03 AM

Source: World Imagery - Esri and the GIS User Community (2012).

**Legend**

- Project Boundary
- Potential Gray Bat Foraging Habitat
- Potential Indiana Bat Summer Habitat (10.84 acres)



Source: Esri



STAPLETON RIDGE DEVELOPMENT  
JEFFERSON COUNTY, KENTUCKY

REVISED DATE: 07-23-14 DRAWN BY: SBB



HABITAT LOCATION  
MAP  
FIGURE 2