



## WILDLIFE HABITAT FEATURE INVENTORY

NORTHERN VIRGINIA STREAM RESTORATION BANK

*THE GLADE – REACH 3*

FAIRFAX COUNTY, VIRGINIA

Prepared For:

Northern Virginia Stream Restoration, L.C.  
c/o Wetland Studies and Solutions, Inc.  
5300 Wellington Branch Drive, Suite 100  
Gainesville, Virginia 20155

WSSI Project #20030

JANUARY 12, 2009

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## Wildlife Habitat Feature Inventory

The Glade – Reach 3  
Fairfax County, Virginia  
WSSI #20030

January 12, 2009

### Executive Summary

On Tuesday, December 9, 2008, Wetland Studies and Solutions, Inc. (WSSI), assisted by Reston Association Staff and William Sipple, conducted a Wildlife Habitat Feature Inventory along design Reach 3 of The Glade portion of the Northern Virginia Stream Restoration Bank (NVS RB). This study was conducted to determine the location of active, inactive, and potential wildlife denning and nesting features within a study area along Reach 3 of The Glade.

In summary, several wildlife habitat features were found, including stick nests, squirrel nests, tree cavities, dens, sub surface runs, and snags, within the study area of design Reach 3 of The Glade. The results of this inventory will be used by project engineers to minimize the stream restoration project's impact on local wildlife.

### Introduction

As set forth in NVSRB Banking Instrument, dated February 17, 2006 and prepared by WSSI, the Northern Virginia Stream Restoration, L.C. will restore approximately 14 miles of streams and upland buffers, within portions of the Snakeden Branch, Colvin Run, and The Glade watersheds in Reston, Virginia. In response to resident concerns about the potential effects of restoration activities on resident wildlife populations within The Glade, WSSI inventoried the location of active, inactive, and potential wildlife denning and nesting features within The Glade portion of the NVRSB. This report identifies the location of these features located within design Reach 3 of The Glade. The location of these features in other portions of The Glade will be documented in separate inventory reports.

### Project Area

The study area includes approximately 3,610 linear feet of stream along Reach 3 of The Glade, as well as the adjacent riparian corridor. The study area is located between the Colt's Neck Road and Lawyers Road (Route 673). Exhibit 1 is a vicinity map that depicts the approximate location of the study area.

The study area is covered mostly by mixed-deciduous forest, as depicted in the February 23, 2004 Natural Color Imagery from Air Survey aerial photograph of the study area Exhibit 2. The Glade flows in a southeasterly direction through the central portion of the study area. Both an asphalt recreational trail and an unpaved horse trail, which cross The Glade multiple times, are located parallel to the stream. The study area is gently to moderately sloping. The topography can be seen in the excerpt from the Vienna, Virginia-Maryland 1994 USGS topographical quadrangle map included as Exhibit 3.

The boundaries of jurisdictional wetlands and other waters of the U.S. (WOUS) located within the study area were delineated and survey-located by WSSI as described in The Glade delineation report, dated October 9, 2008.

## Methodology

On December 9, 2008, environmental scientist Eric Calladine, ISA Certified Arborist<sup>1</sup>, environmental compliance specialist Jason Beeler CPESC-IT<sup>2</sup>, environmental scientists Sean D. Sipple, PWS, PWD, CT<sup>3</sup>, Nicki Foremsky<sup>4</sup>, Claudia Thompson-Deahl<sup>5</sup> and ecologist William S. Sipple<sup>6</sup> examined the entire study area, including both aquatic and terrestrial habitats. Aquatic and terrestrial areas were inspected to identify and map specific wildlife habitat features within the study area to classify them according to type. All features were noted and representative examples were photographed, as depicted in Exhibit 4. Any wildlife species directly observed or animal signs such as tracks and scat were noted during the fieldwork. For the purpose of this report, WSSI has defined the wildlife habitat features as follows:

**A. Nest** – A nest is defined as a place of refuge to hold an animal's eggs and/or provide a place to raise their offspring. Nests are usually made of sticks and leaves. Nest were subsequently categorized in Table 1 as:

- 1) Stick Nest
- 2) Squirrel Nest
- 3) Songbird nest

**B. Cavity** – A cavity is defined as a hollowed out feature in a standing tree which can provide an animal with refuge and a place to raise their offspring. Cavities were subsequently categorized in Table 1 as:

- 1) Snag
- 2) Live Tree

**C. Den** – A den is defined as a hollowed out feature, either in a deadfall, tree hollow, or ground hollow. Dens were subsequently categorized in Table 1 as:

- 1) Deadfall
- 2) Tree Hollow
- 3) Ground Hollow

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<sup>1</sup> WSSI - International Society of Arboriculture (ISA) Certified Arborist  
<sup>2</sup> WSSI – Certified Professional in Erosion and Sediment Control – In Training  
<sup>3</sup> WSSI – Professional Wetland Scientists, Professional Wetland Delineator, Certified Taxonomist  
<sup>4</sup> Reston Association- Watershed Manager  
<sup>5</sup> Reston Association-Environmental Resource Manager  
<sup>6</sup> Principal of William S. Sipple Wetland and Environmental Training and Consulting



**D. Subsurface Erosional Feature** – A subsurface erosional feature is defined as a naturally-occurring subterranean hollow, usually associated with a drainage feature and may be used as a wildlife travel corridor. These features are not likely to be utilized as den sites due to their high probability of flooding during runoff-producing events. Subsurface erosional features were subsequently categorized in Table 1 as:

- 1) Inactive
- 2) Active

**E. Snags** - A snag refers to a standing, partly or completely dead tree, often missing a top or most of the smaller branches, and greater than or equal to 20 inches diameter breast height. These features were identified regardless of evidence of known wildlife usage.

### Results and Conclusions

A number of wildlife habitat features were located in design Reach 3 of The Glade during this inventory, including stick and squirrel nests, cavities, snags, and subsurface erosional features. The location of these features is depicted on the Wildlife Habitat Feature Location Map (Exhibit 5) and is summarized in Table 1 below. The results of this inventory will be used by project engineers to further limit the stream restoration project's impact on local wildlife habitat features.

**Table 1. List of Wildlife Habitat Features Observed Within Design Reach 3 of The Glade**

Feature	Tree Tag	DESCRIPTION
A1	Tree #14429	Inactive unknown stick nest
A1	Tree #14434	Inactive unknown stick nest
A1	Tree #14477	Inactive unknown stick nest
A1	Tree #14981	Inactive unknown stick nest
A1	Tree #14990	Inactive unknown stick nest
A1	Tree #15219	Inactive unknown stick nest
A1	Tree #15228	Inactive unknown stick nest
A1	Tree #16174	Inactive unknown stick nest
A1	Tree #30022	Inactive unknown stick nest
A1	Tree #30442	Inactive unknown stick nest
A1	Tree #N/A	Inactive unknown stick nest located 7 feet north of Tree #15036
A1	Tree #N/A	Inactive unknown stick nest located 8 feet west of Tree #30446
A1	Tree #N/A	Inactive unknown stick nest located 15 feet southeast of tree #30651
A1/B1	Tree #15010	Inactive unknown stick nest/Unknown cavity in snag
A1/B1	Tree #15269	Inactive unknown stick nest/Unknown cavity in snag
A1/B1	Tree #15272	Inactive unknown stick nest/Unknown cavity in snag
A1/B2	Tree #N/A	Inactive unknown stick nest/Unknown cavity in live tree located 8 feet northwest of Tree# 14984
A2	Tree #14426	Squirrel leaf nest
A2	Tree #14458	Squirrel leaf nest
A2	Tree #14463	Squirrel leaf nest
A2	Tree #14499	Squirrel leaf nest

**Table 1. List of Wildlife Habitat Features Observed Within Design Reach 3 of The Glade**

A2	Tree #14932	Squirrel leaf nest
A2	Tree #14944	Squirrel leaf nest
A2	Tree #14946	Squirrel leaf nest
A2	Tree #14968	Squirrel leaf nest
A2	Tree #15265	Squirrel leaf nest
A2	Tree #15298	Squirrel leaf nest
A2	Tree #15406	Squirrel leaf nest
A2	Tree #15432	Squirrel leaf nest
A2	Tree #16034	Squirrel leaf nest
A2	Tree #16049	Squirrel leaf nest
A2	Tree #16051	Squirrel leaf nest
A2	Tree #16076	Squirrel leaf nest
A2	Tree #16087	Squirrel leaf nest
A2	Tree #30133	Squirrel leaf nest
A2	Tree #30207	Squirrel leaf nest
A2	Tree #30388	Squirrel leaf nest
A2	Tree #30458	Squirrel leaf nest
A2	Tree #30635	Squirrel leaf nest
A2	Tree #30636	Squirrel leaf nest
A2	Tree #30638	Squirrel leaf nest
A2	Tree #N/A	Squirrel leaf nest located 8 feet southwest of Tree #15210
A2	Tree #N/A	Squirrel leaf nest located 18 feet southwest of Tree #16197
A2/B2	Tree #16150	Squirrel leaf nest/Unknown cavity in live tree
A2/B2	Tree #30061	Squirrel leaf nest/Unknown cavity in live tree
A2/B2	Tree #N/A	Squirrel leaf nest/Unknown cavity in live tree located 17 feet northwest of 14946
A3	Tree #16058	Inactive unknown song bird nest
B1	Tree #15240	Unknown cavity in a snag
B1	Tree #15251	Unknown cavity in a snag
B1	Tree #15303	Unknown cavity in a snag
B1	Tree #15312	Unknown cavity in a snag
B1	Tree #15363	Unknown cavity in a snag
B1	Tree #15402	Unknown cavity in a snag
B1	Tree #16052	Unknown cavity in a snag
B1	Tree #16086	Unknown cavity in a snag
B1	Tree #16164	Unknown cavity in a snag
B1	Tree #16211	Unknown cavity in a snag
B1	Tree #16216	Unknown cavity in a snag
B1	Tree #30143	Unknown cavity in a snag
B1	Tree #30158	Unknown cavity in a snag
B1	Tree #30374	Unknown cavity in a snag
B1	Tree #30448	Unknown cavity in a snag
B1	Tree #30595	Unknown cavity in a snag
B1	Tree #30631	Unknown cavity in a snag
B1	Tree #N/A	Unknown cavity in a snag located 17 feet southwest of Tree #16187
B1	Tree #N/A	Unknown cavity in a snag located 14 feet southwest of Tree #30439
B1	Tree #N/A	Unknown cavity in a snag located 16 feet north of Tree #30422



**Table 1. List of Wildlife Habitat Features Observed Within Design Reach 3 of The Glade**

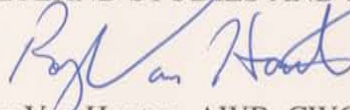
B2	Tree #14447	Unknown cavity in live tree
B2	Tree #14457	Unknown cavity in live tree
B2	Tree #14472	Unknown cavity in live tree
B2	Tree #15055	Unknown cavity in live tree
B2	Tree #15083	Unknown cavity in live tree
B2	Tree #15277	Unknown cavity in live tree
B2	Tree #15288	Unknown cavity in live tree
B2	Tree #15308	Unknown cavity in live tree
B2	Tree #15331	Unknown cavity in live tree
B2	Tree #15338	Unknown cavity in live tree
B2	Tree #16004	Unknown cavity in live tree
B2	Tree #16092	Unknown cavity in live tree
B2	Tree #16106	Unknown cavity in live tree
B2	Tree #30083	Unknown cavity in live tree
B2	Tree #30127	Unknown cavity in live tree
B2	Tree #30205	Unknown cavity in live tree
B2	Tree #30290	Unknown cavity in live tree
B2	Tree #30417	Unknown cavity in live tree
B2	Tree #30432	Unknown cavity in live tree
B2	Tree #30435	Unknown cavity in live tree
B2	Tree #30438	Unknown cavity in live tree
B2	Tree #30634	Unknown cavity in live tree
C1	Tree #N/A	Den in deadfall located 8 feet southwest of Tree #15058
C1	Tree #N/A	Den in deadfall located 5 feet west of Tree #15042
Big Tree LITU	Tree #16068	86" LITU (Tulip Poplar)
C1	Tree #14945	Den in deadfall
C1	Tree #N/A	Den in deadfall located 16 feet southwest Tree #30405
C1	Tree #N/A	Den in deadfall located 20 feet southeast of Tree #30372
C1	Tree #N/A	Den in deadfall located 7 feet northeast of Tree #14473
D1	Tree #16056	Inactive subsurface erosional feature
D2	Tree #N/A	Active subsurface erosional feature located 8 feet south of tree #15307
E	Tree #30147	Snag without wildlife feature
E	Tree #N/A	Snag without wildlife feature located 11 feet northeast of Tree #30185
E	Tree #N/A	Snag without wildlife feature located 9 feet southeast of Tree #16128

### Limitations

This study is based on examination of the conditions on the study site at the time of our review and does not address conditions in the future. Such conditions change over time. Therefore, our conclusions may vary from future observations. Our wildlife habitat feature inventory report has been prepared in accordance with generally accepted guidelines for the conduct of such evaluations. We make no other warranties, either expressed or implied that other wildlife species will not be observed in the project site during future wildlife surveys.

If you have any questions regarding this report, please contact me at (703) 679-5631 or [rvanhouten@wetlandstudies.com](mailto:rvanhouten@wetlandstudies.com).

WETLAND STUDIES AND SOLUTIONS, INC.



Roy Van Houten, AWB, CWCP  
Wildlife Biologist





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**Vicinity Map**  
**The Glade Reach 3**  
**WSSI #20030**  
**Scale: 1" = 2000'**







February 2004 Natural Color Imagery  
The Glade Reach 3  
WSSI #20030  
Scale: 1" = 300'

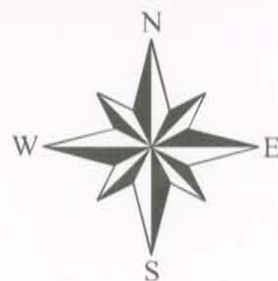


Photo Source: Air Survey



### Exhibit 3



**REACH 3 – THE GLADE  
WILDLIFE HABITAT FEATURE INVENTORY – DECEMBER 16, 2008  
PHOTOS TAKEN BY JASON BEELER**



**1. Inactive unidentified stick nest in tree #14429.**



**2. Inactive squirrel nest in tree #14426.**



**REACH 3 – THE GLADE**  
**WILDLIFE HABITAT FEATURE INVENTORY – DECEMBER 16, 2008**  
**PHOTOS TAKEN BY JASON BEELER**



**3. Inactive unidentified song bird 16058.**



**4. Inactive unknown cavity in live tree #30438.**



**REACH 3 – THE GLADE  
WILDLIFE HABITAT FEATURE INVENTORY – DECEMBER 16, 2008  
PHOTOS TAKEN BY JASON BEELER**



**5. Active unknown den in dead fall tree #30374.**



**6. Large tree *Liriodendron tulipifera* #16068.**



**REACH 3 – THE GLADE**  
**WILDLIFE HABITAT FEATURE INVENTORY – DECEMBER 16, 2008**  
**PHOTOS TAKEN BY JASON BEELER**



**7. Inactive subsurface erosional feature adjacent to tree #16056.**

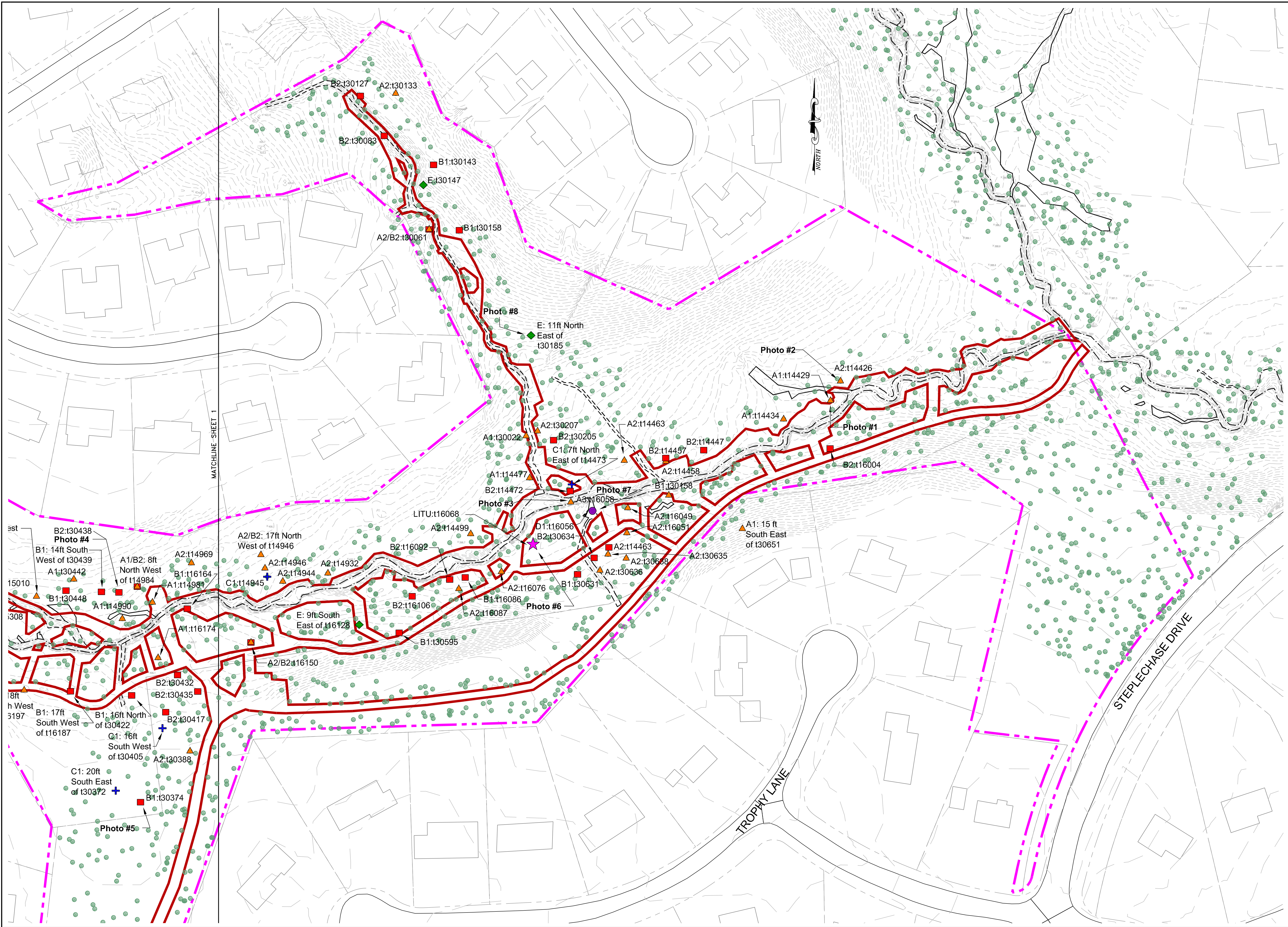


**8. Snag located 11 feet northeast of tree #30185.**









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Exhibit 5:  
Wildlife Habitat Feature Location Map  
Prepared For: Northern Virginia Stream Restoration, L.C.  
The Glade - Reach 3  
Fairfax County, Virginia

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REVISIONS			App. By		Rev. By	
No.	Date	Description				

Horizontal Datum: VCS NAD83  
Vertical Datum: NGVD 29  
Boundary and Topo Source:  
Fairfax County Digital Data

Design	Draft	Approved
SDS	SDS	MSR

Sheet #  
2 of 2

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