



WILDLIFE HABITAT FEATURE INVENTORY

NORTHERN VIRGINIA STREAM RESTORATION BANK

THE GLADE – REACH 5

FAIRFAX COUNTY, VIRGINIA

Prepared For:

Northern Virginia Stream Restoration, L.C.
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WSSI Project #20030

February 2009

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Wildlife Habitat Feature Inventory

The Glade – Reach 5
Fairfax County, Virginia
WSSI #20030

February 25, 2009

Executive Summary

On December 17-19 and 22, 2008, Wetland Studies and Solutions, Inc. (WSSI), assisted by Reston Association Staff and William Sipple, conducted a Wildlife Habitat Feature Inventory along design Reach 5 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 5 of The Glade.

In summary, a number of 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 5 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 effects of restoration activities on resident wildlife populations within The Glade, WSSI is inventorying 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 along Reach 5 of The Glade. The location of these features in the remaining portions of The Glade will be documented in separate inventory reports.

Project Area

The study area includes approximately 5,300 linear feet of stream along Reach 5 of The Glade, as well as the adjacent riparian corridor. This report also includes approximately 525 feet of stream (A.K.A. The Beaver Area) that is not being restored, from the downstream limits of Reach 5 to the upstream limits of Reach 6. The study area is located north of Lawyers Road (Route 673) and east of Soapstone Drive. 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 in Exhibit 2. The Glade flows in an easterly 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 17-19 and 22, 2008 environmental scientist Eric Calladine, ISA Certified Arborist¹, environmental compliance specialist Jason Beeler CPESC-IT², environmental scientists Sean D. Sipple, PWS, PWD, CT³, Jean Tufts, WPIT⁴, Nicki Foremsky⁵, Brian Petty⁶ and ecologist William S. Sipple⁷ examined the entire study area for potential wildlife habitat features. The study area was inspected to identify and map specific wildlife habitat features within the study area to classify them according to type. Only representative wildlife habitat features (or lack of) 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

¹ WSSI - International Society of Arboriculture (ISA) Certified Arborist
² WSSI – Certified Professional in Erosion and Sediment Control – In Training
³ WSSI – Professional Wetland Scientists, Professional Wetland Delineator, Certified Taxonomist
⁴ WSSI – Wetland Professional In-Training, Society of Wetland Scientists Certification Program, Inc.
⁵ Reston Association- Watershed Manager
⁶ Reston Association
⁷ 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 noted in design Reach 5 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 5 of The Glade. (Cont.)

Feature	Tree Tag	Description
A1	Tree #N/A	Inactive unknown stick nest, 12' SSW of Tree #24067
A1	Tree #N/A	Inactive unknown stick nest, 20' East of Tree #24157
A1	Tree #N/A	Inactive unknown stick nest, 10' South of Tree #24174
A1	Tree #N/A	Inactive unknown stick nest, 2' SE of Tree #25623
A1	Tree #N/A	Inactive unknown stick nest, 50' North of Tree #32333
A1	Tree #N/A	Inactive unknown stick nest, 30' North of Tree #32475
A1	Tree #N/A	Inactive unknown stick nest, 35' West of Tree #32337
A1	Tree #22839	Inactive unknown stick nest
A1	Tree #22980	Inactive unknown stick nest
A1	Tree #22987	Inactive unknown stick nest
A1	Tree #23041	Inactive unknown stick nest
A1	Tree #23266	Inactive unknown stick nest
A1	Tree #23286	Inactive unknown stick nest
A1	Tree #23305	Inactive unknown stick nest
A1	Tree #23387	Inactive unknown stick nest
A1	Tree #23394	Inactive unknown stick nest
A1	Tree #23455	Inactive unknown stick nest
A1	Tree #24102	Inactive unknown stick nest
A1	Tree #24140	Inactive unknown stick nest
A1	Tree #24166	Inactive unknown stick nest
A1	Tree #24177	Inactive unknown stick nest
A1	Tree #24182	Inactive unknown stick nest

Table 1. List of Wildlife Habitat Features Observed Within Design Reach 5 of The Glade. (Cont.)

Feature	Tree Tag	Description
A1	Tree #24191	Inactive unknown stick nest
A1	Tree #24354	Inactive unknown stick nest
A1	Tree #24437	Inactive unknown stick nest
A1	Tree #25438	Inactive unknown stick nest
A1	Tree #25454	Inactive unknown stick nest
A1	Tree #25457	Inactive unknown stick nest
A1	Tree #32061	Inactive unknown stick nest
A1	Tree #32711	Inactive unknown stick nest
A1/A2	Tree #25655	Inactive unknown stick nest, Squirrel leaf nest
A1/B2	Tree #23161	Inactive unknown stick nest/Unknown cavity in live tree
A1/B2	Tree #23459	Inactive unknown stick nest/Unknown cavity in live tree
A1/B2	Tree #24089	Inactive unknown stick nest/Unknown cavity in live tree
A1/B2	Tree #24131	Inactive unknown stick nest/Unknown cavity in live tree
A2	Tree #N/A	Squirrel leaf nest, 50' NE of Tree #32336
A2	Tree #N/A	Squirrel leaf nest, 30' North of Tree #32468
A2	Tree #22969	Squirrel leaf nest
A2	Tree #23053	Squirrel leaf nest
A2	Tree #23148	Squirrel leaf nest
A2	Tree #23164	Squirrel leaf nest
A2	Tree #23375	Squirrel leaf nest
A2	Tree #23378	Squirrel leaf nest
A2	Tree #23380	Squirrel leaf nest
A2	Tree #23425	Squirrel leaf nest
A2	Tree #23471	Squirrel leaf nest
A2	Tree #24015	Squirrel leaf nest
A2	Tree #24053	Squirrel leaf nest
A2	Tree #24129	Squirrel leaf nest
A2	Tree #24143	Squirrel leaf nest
A2	Tree #24194	Squirrel leaf nest
A2	Tree #24204	Squirrel leaf nest
A2	Tree #24270	Squirrel leaf nest
A2	Tree #24293	Squirrel leaf nest
A2	Tree #24317	Squirrel leaf nest
A2	Tree #24351	Squirrel leaf nest
A2	Tree #24356	Squirrel leaf nest
A2	Tree #24358	Squirrel leaf nest
A2	Tree #24375	Squirrel leaf nest
A2	Tree #24380	Squirrel leaf nest
A2	Tree #25330	Squirrel leaf nest
A2	Tree #25359	Squirrel leaf nest
A2	Tree #32145	Squirrel leaf nest
A2/B2	Tree #24043	Squirrel leaf nest/Unknown cavity in live tree
A3	Tree #N/A	Inactive unknown song bird nest, 40' NE of Tree #32333
A3	Tree #23377	Inactive unknown song bird nest
A3	Tree #23466	Inactive unknown song bird nest
A3	Tree #24297	Inactive unknown song bird nest

Table 1. List of Wildlife Habitat Features Observed Within Design Reach 5 of The Glade.(Cont.)

Feature	Tree Tag	Description
A3	Tree #24321	Inactive unknown song bird nest
A3	Tree #24411	Inactive unknown song bird nest
A3	Tree #25393	Inactive unknown song bird nest
A3	Tree #25558	Inactive unknown song bird nest
A3/B2	Tree #24343	Inactive unknown song bird nest, Unknown cavity in live tree
B1	Tree #N/A	Unknown cavity in snag, 5' SW of Tree #23148
B1	Tree #N/A	Unknown cavity in snag, 13' North of Tree #23084
B1	Tree #N/A	Unknown cavity in snag, 17' North of Tree #23466
B1	Tree #N/A	Unknown cavity in snag, 32' West of Tree #25563
B1	Tree #N/A	Unknown cavity in snag, 6' SE of Tree #25344
B1	Tree #N/A	Unknown cavity in snag, 60' SE of Tree #23502
B1	Tree #N/A	Unknown cavity in snag, 50' NE of Tree #23510
B1	Tree #N/A	Unknown cavity in snag, 40' NE of Tree #32231
B1	Tree #N/A	Unknown cavity in snag, 50' NE of Tree #32333
B1	Tree #N/A	Unknown cavity in snag, 55' NE of Tree #32333
B1	Tree #N/A	Unknown cavity in snag, 25' West of Tree #32337
B1	Tree #N/A	Unknown cavity in snag, 48' NE of Tree #32336
B1	Tree #N/A	Unknown cavity in snag, 20' North of Tree #23510
B1	Tree #N/A	Unknown cavity in snag, 12' NE of Tree #32725
B1	Tree #N/A	Unknown cavity in snag, 10' NE of Tree #32725
B1	Tree #22832	Unknown cavity in snag
B1	Tree #22849	Unknown cavity in snag
B1	Tree #23313	Unknown cavity in snag
B1	Tree #23437	Unknown cavity in snag
B1	Tree #23465	Unknown cavity in snag
B1	Tree #23484	Unknown cavity in snag
B1	Tree #23485	Unknown cavity in snag
B1	Tree #23512	Unknown cavity in snag
B1	Tree #23517	Unknown cavity in snag
B1	Tree #23518	Unknown cavity in snag
B1	Tree #23520	Unknown cavity in snag
B1	Tree #24026	Unknown cavity in snag
B1	Tree #24091	Unknown cavity in snag
B1	Tree #24097	Unknown cavity in snag
B1	Tree #24126	Unknown cavity in snag
B1	Tree #24396	Unknown cavity in snag
B1	Tree #32475	Unknown cavity in snag
B2	Tree #N/A	Unknown cavity in live tree, 9' NE of Tree #23049
B2	Tree #N/A	Unknown cavity in live tree, 26' NE of Tree #32384
B2	Tree #N/A	Unknown cavity in live tree, 22' NW of Tree #25565
B2	Tree #N/A	Unknown cavity in live tree, 24' SE of Tree #25562
B2	Tree #N/A	Unknown cavity in live tree, 65' NE of Tree #32333
B2	Tree #N/A	Unknown cavity in live tree, 50' North of Tree #32337
B2	Tree #N/A	Unknown cavity in live tree, 30' North of Tree #23509
B2	Tree #N/A	Unknown cavity in live tree, 13' NW of Tree #23519
B2	Tree #22826	Unknown cavity in live tree

Table 1. List of Wildlife Habitat Features Observed Within Design Reach 5 of The Glade. (Cont.)

Feature	Tree Tag	Description
B2	Tree #22833	Unknown cavity in live tree
B2	Tree #22864	Unknown cavity in live tree
B2	Tree #22905	Unknown cavity in live tree
B2	Tree #22906	Unknown cavity in live tree
B2	Tree #22915	Unknown cavity in live tree
B2	Tree #22924	Unknown cavity in live tree
B2	Tree #22959	Unknown cavity in live tree
B2	Tree #22965	Unknown cavity in live tree
B2	Tree #22968	Unknown cavity in live tree
B2	Tree #22978	Unknown cavity in live tree
B2	Tree #22998	Unknown cavity in live tree
B2	Tree #23020	Unknown cavity in live tree
B2	Tree #23021	Unknown cavity in live tree
B2	Tree #23047	Unknown cavity in live tree
B2	Tree #23205	Unknown cavity in live tree
B2	Tree #23247	Unknown cavity in live tree
B2	Tree #23263	Unknown cavity in live tree
B2	Tree #23297	Unknown cavity in live tree
B2	Tree #23309	Unknown cavity in live tree
B2	Tree #23324	Unknown cavity in live tree
B2	Tree #23335	Unknown cavity in live tree
B2	Tree #23347	Unknown cavity in live tree
B2	Tree #23348	Unknown cavity in live tree
B2	Tree #23358	Unknown cavity in live tree
B2	Tree #23369	Unknown cavity in live tree
B2	Tree #23381	Unknown cavity in live tree
B2	Tree #23383	Unknown cavity in live tree
B2	Tree #23405	Unknown cavity in live tree
B2	Tree #23417	Unknown cavity in live tree
B2	Tree #23418	Unknown cavity in live tree
B2	Tree #23432	Unknown cavity in live tree
B2	Tree #23434	Unknown cavity in live tree
B2	Tree #23477	Unknown cavity in live tree
B2	Tree #23478	Unknown cavity in live tree
B2	Tree #23498	Unknown cavity in live tree
B2	Tree #23503	Unknown cavity in live tree
B2	Tree #23509	Unknown cavity in live tree
B2	Tree #23513	Unknown cavity in live tree
B2	Tree #23519	Unknown cavity in live tree
B2	Tree #24016	Unknown cavity in live tree
B2	Tree #24020	Unknown cavity in live tree
B2	Tree #24021	Unknown cavity in live tree
B2	Tree #24022	Unknown cavity in live tree
B2	Tree #24040	Unknown cavity in live tree

Table 1. List of Wildlife Habitat Features Observed Within Design Reach 5 of The Glade. (Cont.)

Feature	Tree Tag	Description
B2	Tree #24049	Unknown cavity in live tree
B2	Tree #24051	Unknown cavity in live tree
B2	Tree #24058	Unknown cavity in live tree
B2	Tree #24063	Unknown cavity in live tree
B2	Tree #24069	Unknown cavity in live tree
B2	Tree #24075	Unknown cavity in live tree
B2	Tree #24079	Unknown cavity in live tree
B2	Tree #24081	Unknown cavity in live tree
B2	Tree #24094	Unknown cavity in live tree
B2	Tree #24107	Unknown cavity in live tree
B2	Tree #24153	Unknown cavity in live tree
B2	Tree #24157	Unknown cavity in live tree
B2	Tree #24203	Unknown cavity in live tree
B2	Tree #24208	Unknown cavity in live tree
B2	Tree #24216	Unknown cavity in live tree
B2	Tree #24236	Unknown cavity in live tree
B2	Tree #24257	Unknown cavity in live tree
B2	Tree #24262	Unknown cavity in live tree
B2	Tree #24279	Unknown cavity in live tree
B2	Tree #24299	Unknown cavity in live tree
B2	Tree #24336	Unknown cavity in live tree
B2	Tree #24337	Unknown cavity in live tree
B2	Tree #24365	Unknown cavity in live tree
B2	Tree #24431	Unknown cavity in live tree
B2	Tree #25510	Unknown cavity in live tree
B2	Tree #25569	Unknown cavity in live tree
B2	Tree #25604	Unknown cavity in live tree
B2	Tree #25605	Unknown cavity in live tree
B2	Tree #25613	Unknown cavity in live tree
B2	Tree #25623	Unknown cavity in live tree
B2	Tree #25649	Unknown cavity in live tree
B2	Tree #25653	Unknown cavity in live tree
B2	Tree #25657	Unknown cavity in live tree
B2	Tree #25667	Unknown cavity in live tree
B2	Tree #32140	Unknown cavity in live tree
B2	Tree #32169	Unknown cavity in live tree
B2	Tree #32170	Unknown cavity in live tree
B2	Tree #32227	Unknown cavity in live tree
B2	Tree #32240	Unknown cavity in live tree
B2	Tree #32348	Unknown cavity in live tree
B2	Tree #32354	Unknown cavity in live tree
B2	Tree #32355	Unknown cavity in live tree
B2	Tree #32360	Unknown cavity in live tree
B2	Tree #32392	Unknown cavity in live tree
B2	Tree #32398	Unknown cavity in live tree
B2	Tree #32401	Unknown cavity in live tree

Table 1. List of Wildlife Habitat Features Observed Within Design Reach 5 of The Glade. (Cont.)

Feature	Tree Tag	Description
B2	Tree #32409	Unknown cavity in live tree
B2	Tree #32428	Unknown cavity in live tree
B2	Tree #32451	Unknown cavity in live tree
B2	Tree #32468	Unknown cavity in live tree
B2/C2	Tree #22856	Unknown cavity in live tree, Inactive den in tree hollow
B2/C2	Tree #23068	Unknown cavity in live tree, Inactive den in tree hollow
B2/C2	Tree #23182	Unknown cavity in live tree, Inactive den in tree hollow
B2/C2	Tree #23234	Unknown cavity in live tree, Inactive den in tree hollow
B2/C2	Tree #23243	Unknown cavity in live tree, Inactive den in tree hollow
B2/C2	Tree #24282	Unknown cavity in live tree, Inactive den in tree hollow
B2/C2	Tree #32164	Unknown cavity in live tree, Inactive den in tree hollow
B2/C2	Tree #32166	Unknown cavity in live tree, Inactive den in tree hollow
C1	Tree #N/A	Inactive den in deadfall, 10' NE of Tree #24026
C1	Tree #N/A	Inactive den in deadfall, 30' East of Tree #22969
C1	Tree #N/A	Inactive den in deadfall, 20' North of Tree #22987
C1	Tree #N/A	Inactive den in deadfall, 6' South of Tree #22836
C1	Tree #N/A	Inactive den in deadfall, 7' North of Tree #23193
C1	Tree #N/A	Inactive den in deadfall, 14' NNE of Tree #23336
C1	Tree #N/A	Inactive den in deadfall, 2' NNE of Tree #23373
C1	Tree #N/A	Inactive den in deadfall, 9' NW of Tree #25571
C1	Tree #N/A	Inactive den in deadfall, 12' NNW of Tree #32397
C1	Tree #N/A	Inactive den in deadfall, 5' NE of Tree #23442
C1	Tree #N/A	Inactive den in deadfall, 30' North of Tree #23498
C1	Tree #N/A	Inactive den in deadfall, 10' West of Tree #23518
C1	Tree #22867	Inactive den in deadfall
C1	Tree #23156	Inactive den in deadfall
C1	Tree #23253	Inactive den in deadfall
C1	Tree #23525	Inactive den in deadfall
C1	Tree #24228	Inactive den in deadfall
C1	Tree #24230	Inactive den in deadfall
C1	Tree #25700	Inactive den in deadfall
C2	Tree #N/A	Inactive den in tree hollow, 12' NW of Tree #25621
C2	Tree #N/A	Inactive den in tree hollow, Base of Tree #23513
C2	Tree #24376	Inactive den in tree hollow
C3	Tree #N/A	Inactive den in ground hollow, 30' North of Tree #22978
C3	Tree #N/A	Inactive den in ground hollow, 4' North of Tree #23411
C3	Tree #N/A	Inactive den in ground hollow, 11' West of Tree #23429
D1	Tree #N/A	Inactive subsurface erosional feature, 30' North of Tree #23001
D1	Tree #N/A	Inactive subsurface erosional feature, 10' NE of Tree #23403
D1	Tree #N/A	Inactive subsurface erosional feature, 4' West of Tree #23408
D1	Tree #N/A	Inactive subsurface erosional feature, 16' NW of Tree #23411
D1	Tree #N/A	Inactive subsurface erosional feature, 28' NW of Tree #23411
D1	Tree #N/A	Inactive subsurface erosional feature, 20' SE of Tree #25604
D1	Tree #N/A	Inactive subsurface erosional feature, 18' East of Tree #25604
E	Tree #N/A	Snag, 8' NW of Tree #22887

Table 1. List of Wildlife Habitat Features Observed Within Design Reach 5 of The Glade. (Cont.)

Feature	Tree Tag	Description
E	Tree #N/A	Snag, 9' NW of Tree #23138
E	Tree #N/A	Snag, 5' North of Tree #23212
E	Tree #N/A	Snag, 15' WSW of Tree #25565
E	Tree #N/A	Snag, 25' NW of Tree #24417
E	Tree #N/A	Snag, 15' South of Tree #22973
E	Tree #N/A	Snag, 2' North of Tree #32279
E	Tree #N/A	Snag, Adjacent to 40' NE of Tree #32231
E	Tree #N/A	Snag, 31' North of Tree #23505
E	Tree #N/A	Snag, 17' West of Tree #23506
E	Tree #22827	Snag
E	Tree #22842	Snag
E	Tree #22843	Snag
E	Tree #22844	Snag
E	Tree #22846	Snag
E	Tree #22848	Snag
E	Tree #23278	Snag
E	Tree #23280	Snag
E	Tree #23336	Snag
E	Tree #23337	Snag
E	Tree #23353	Snag
E	Tree #23522	Snag
E	Tree #24342	Snag
E	Tree #24408	Snag
E	Tree #24412	Snag
E	Tree #24419	Snag
E	Tree #24428	Snag
E	Tree #24436	Snag
E	Tree #25344	Snag
E	Tree #25426	Snag
E	Tree #25504	Snag
E	Tree #32030	Snag
E	Tree #32279	Snag

Additionally, the area located between Reach 5 and Reach 6 (The Beaver Area) was also surveyed for wildlife habitat features. This area is approximately 525 feet long, and is not scheduled to be restored as the stream system is currently stable. [Table 2](#) below represents located features within this area as depicted within [Exhibit 5](#).

Table 2. List of Wildlife Habitat Features Observed Between Reaches 5 and 6 of The Glade.

Feature	Tree Tag	Description
A1	Tree #23547	Inactive unknown stick nest
A1	Tree #24508	Inactive unknown stick nest
A1	Tree #24531	Inactive unknown stick nest
A1	Tree #25553	Inactive unknown stick nest
A2	Tree #24522	Squirrel leaf nest
A3	Tree #N/A	Inactive unknown song bird nest, 60' West of Tree #24487

Table 2. List of Wildlife Habitat Features Observed Between Reaches 5 and 6 of The Glade. (Cont.)

Feature	Tree Tag	Description
A3	Tree #23549	Inactive unknown song bird nest
B1	Tree #N/A	Unknown cavity in snag, 40' North of Tree #24453
B1	Tree #N/A	Unknown cavity in snag, 30' SW of Tree #23569
B1	Tree #23526	Unknown cavity in snag
B1	Tree #24446	Unknown cavity in snag
B1	Tree #24449	Unknown cavity in snag
B1	Tree #24453	Unknown cavity in snag
B1	Tree #24457	Unknown cavity in snag
B1	Tree #24461	Unknown cavity in snag
B1	Tree #24465	Unknown cavity in snag
B1	Tree #24467	Unknown cavity in snag
B1	Tree #24480	Unknown cavity in snag
B1	Tree #24502	Unknown cavity in snag
B1	Tree #24529	Unknown cavity in snag
B1	Tree #25750	Unknown cavity in snag
B2	Tree #N/A	Unknown cavity in live tree, 40' NE of Tree #23567
B2	Tree #N/A	Unknown cavity in live tree, 75' East of Tree #23570
B2	Tree #N/A	Unknown cavity in live tree, 94' SE of Tree #24535
B2	Tree #N/A	Unknown cavity in live tree, 96' SE of Tree #24535
B2	Tree #N/A	Unknown cavity in live tree, 6' North of Tree #23540
B2	Tree #23527	Unknown cavity in live tree
B2	Tree #23530	Unknown cavity in live tree
B2	Tree #23531	Unknown cavity in live tree
B2	Tree #23532	Unknown cavity in live tree
B2	Tree #23538	Unknown cavity in live tree
B2	Tree #23571	Unknown cavity in live tree
B2	Tree #24482	Unknown cavity in live tree
B2	Tree #24525	Unknown cavity in live tree
B2	Tree #24534	Unknown cavity in live tree
B2	Tree #24535	Unknown cavity in live tree
B2/C2	Tree #N/A	Unknown cavity in live tree, Inactive den in tree hollow, 10' SE of Tree #24461
C1	Tree #N/A	Inactive den in deadfall, 6' East of Tree #23565
C2	Tree #N/A	Inactive den in tree hollow, 4' North of Tree #24535
E	Tree #N/A	Snag, 30' West of Tree #24487
E	Tree #23524	Snag
E	Tree #23534	Snag
E	Tree #23570	Snag
E	Tree #24445	Snag
E	Tree #24447	Snag
E	Tree #24448	Snag
E	Tree #24452	Snag
E	Tree #24456	Snag
E	Tree #24459	Snag
E	Tree #24462	Snag
E	Tree #24466	Snag

Table 2. List of Wildlife Habitat Features Observed Between Reaches 5 and 6 of The Glade. (Cont.)

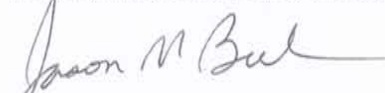
E	Tree #24488	Snag
E	Tree #24489	Snag
E	Tree #24490	Snag
E	Tree #24537	Snag

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.

WETLAND STUDIES AND SOLUTIONS, INC.



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Roy Van Houten, AWB, CWCP
Wildlife Biologist

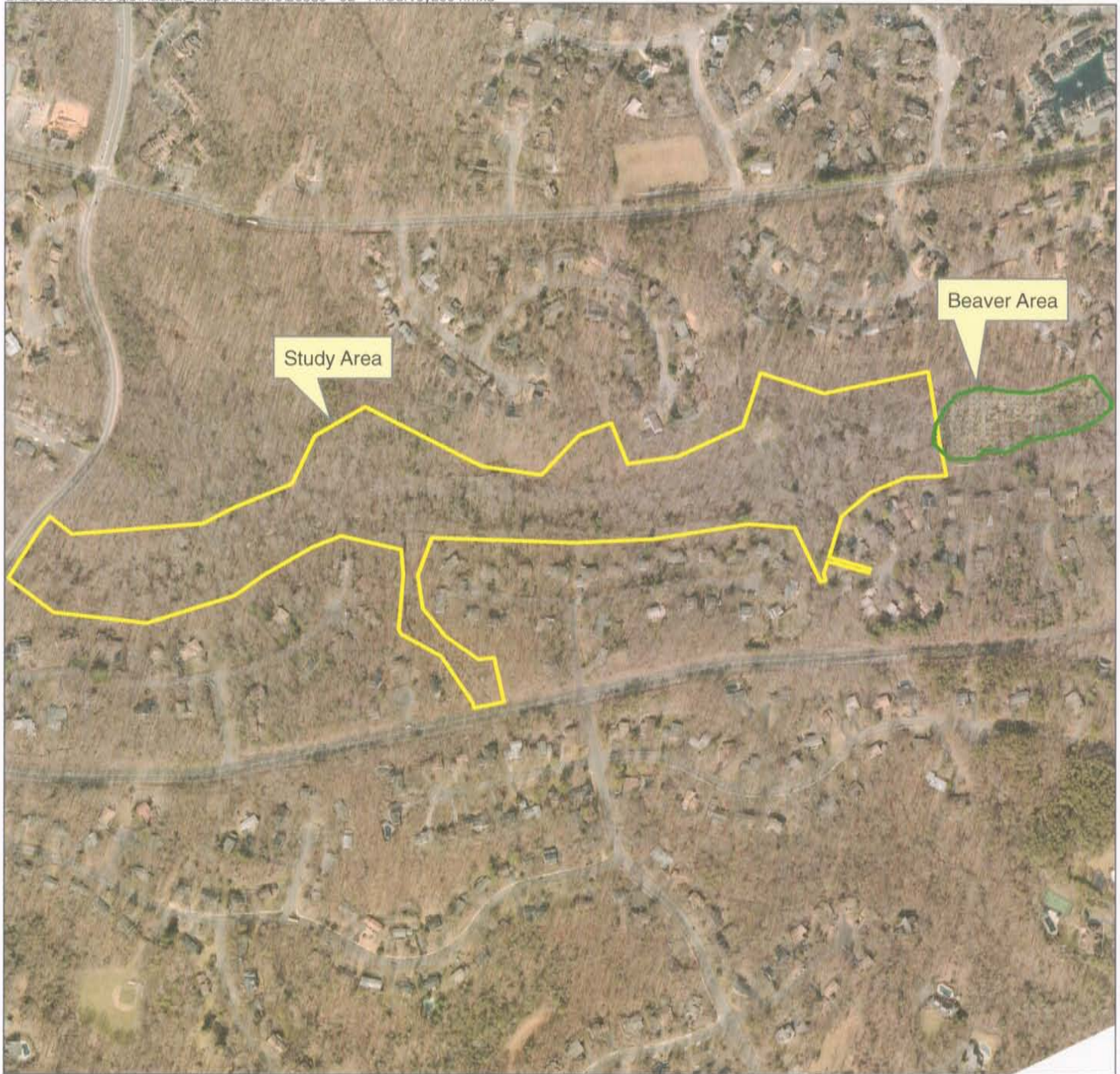


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Vicinity Map
Glade Reach 5
WSSI #20030
Scale: 1" = 2000'

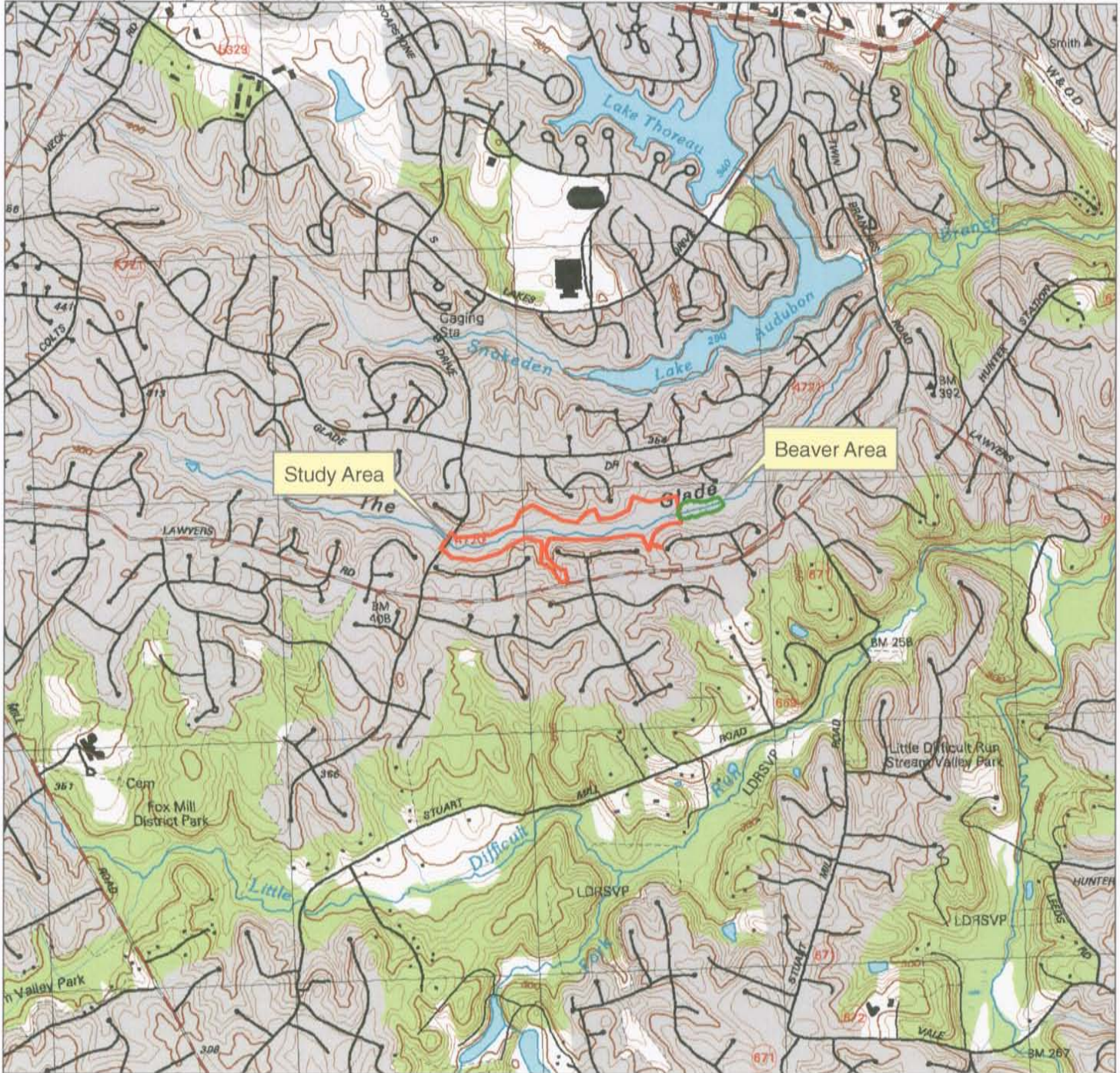




February 2004 Natural Color Imagery
Glade Reach 5
WSSI #20030
Scale: 1" = 500'



Photo Source: Air Survey



USGS Quad Map
Vienna, VA-MD 1994
Glade Reach 5
WSSI #20030
Scale: 1" = 2000'

Latitude: 38°55'22" N
Longitude: 77°20'22" W
Hydrologic Unit Code (HUC): 020700081004
Stream Class: III
Name of Watershed: The Glade



REACH 5 – THE GLADE
WILDLIFE HABITAT FEATURE INVENTORY – DECEMBER 17-19 and 22, 2008
REPRESENTATIVE PHOTOS TAKEN BY JASON BEELER



1. Photo Station #1: Unidentified cavity in tree #24021.



2. Photo Station #2: Unidentified cavity in tree #22905.

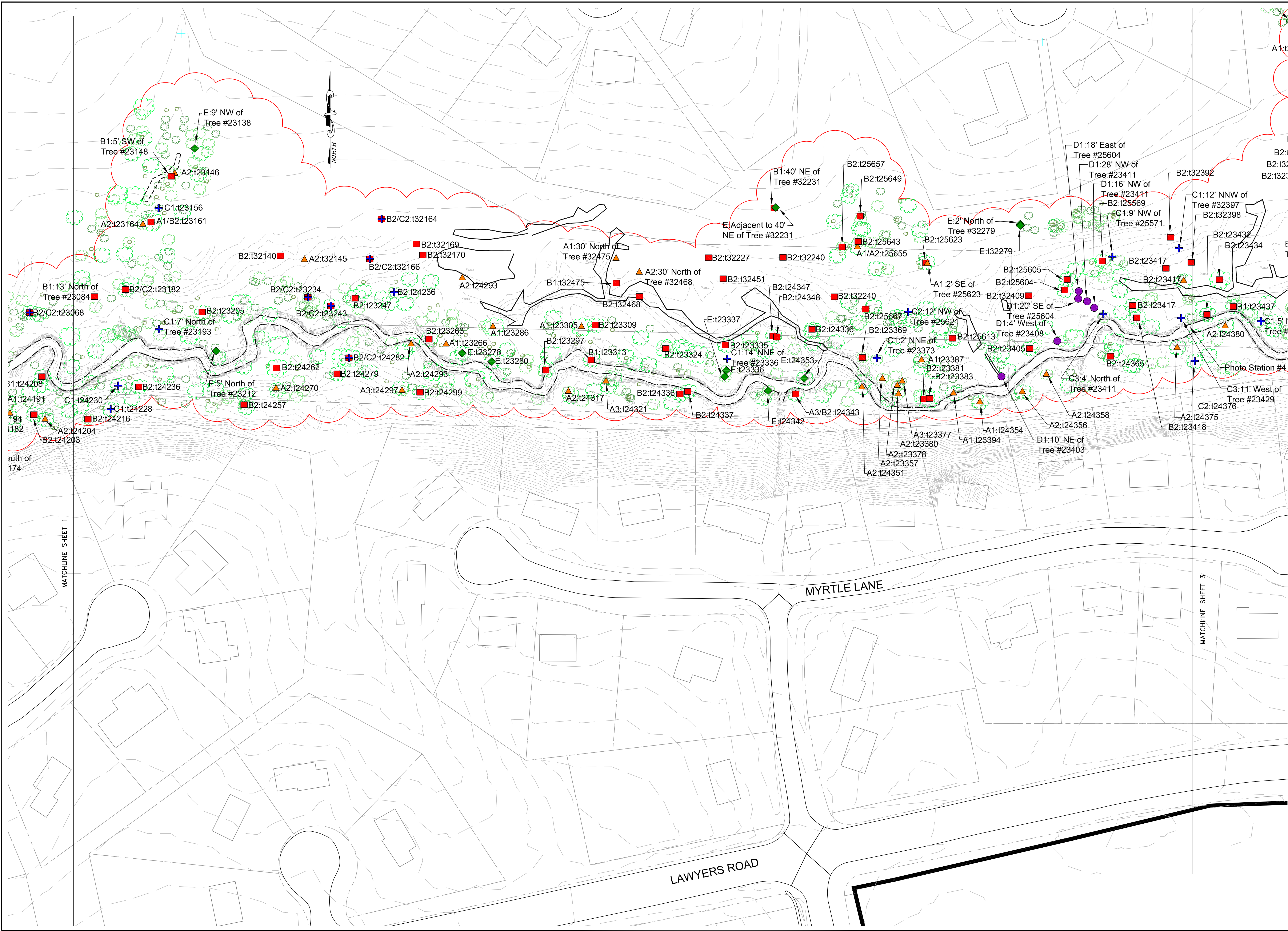
REACH 5 – THE GLADE
WILDLIFE HABITAT FEATURE INVENTORY – DECEMBER 17-19 and 22, 2008
REPRESENTATIVE PHOTOS TAKEN BY JASON BEELER



3. Photo Station #3: Squirrel nest in tree #24194.



4. Photo Station #4: Inactive den in ground hollow, 11 feet west of tree #23429.



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

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REVISIONS		
No.	Date	Description

App. By:
Rev. By:
DATE: January 2009

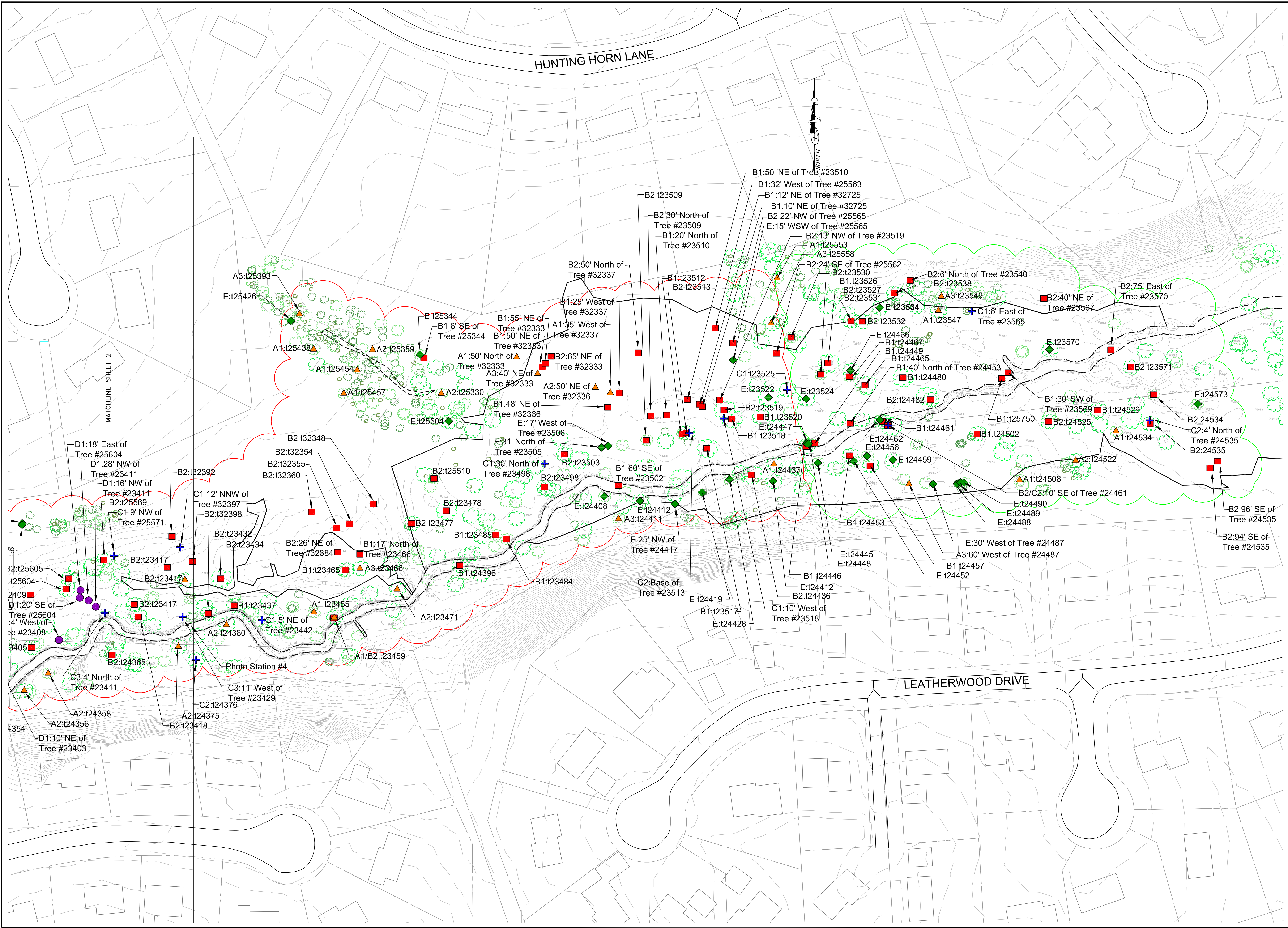
SCALE: 1" = 50'

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

Design	Draft	Approved
JMB	JMB	MH

Sheet #
2 of 4

Computer File Name:
L:\2009\2009\01\Fairfax_Maps\Reach5\Reach5_StationMap.mxd



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Exhibit 5:
Wildlife Habitat Feature Location Map

Prepared For: Northern Virginia Stream Restoration, L.C.

The Glade - Reach 5
Fairfax County, Virginia

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Horizontal Datum: VCS NAD83

Vertical Datum: NGVD 29

Boundary and Topo Source: Fairfax County Digital Data

REVISIONS		
No.	Date	Description

App. By:
Rev. By:

DATE: January 2009

SCALE: 1" = 50'

Design: JMB Draft: JMB Approved: MH

Sheet #
3 of 4

Computer File Name:
L:\2009\20090101\Fairfax_Maps\Reach5\Reach5_StationMap.mxd

REACH 5

IMMEDIATELY DOWNSTREAM
OF REACH 5 AND BEFORE
REACH6

[illegible]

Feature	Tree Tag	Description
A1	Tree #23547	Inactive unknown stick nest
A1	Tree #24508	Inactive unknown stick nest
A1	Tree #24531	Inactive unknown stick nest
A1	Tree #25553	Inactive unknown stick nest
A2	Tree #24522	Squirrel leaf nest
A3	Tree #N/A	Inactive unknown song bird nest, 60' West of Tree #24487
A3	Tree #23549	Inactive unknown song bird nest
B1	Tree #N/A	Unknown cavity in snag, 40' North of Tree #24453
B1	Tree #N/A	Unknown cavity in snag, 30' SW of Tree #23569
B1	Tree #23526	Unknown cavity in snag
B1	Tree #24446	Unknown cavity in snag
B1	Tree #24449	Unknown cavity in snag
B1	Tree #24453	Unknown cavity in snag
B1	Tree #24457	Unknown cavity in snag
B1	Tree #24461	Unknown cavity in snag
B1	Tree #24465	Unknown cavity in snag
B1	Tree #24467	Unknown cavity in snag
B1	Tree #24480	Unknown cavity in snag
B1	Tree #24502	Unknown cavity in snag
B1	Tree #24529	Unknown cavity in snag
B1	Tree #25750	Unknown cavity in snag
B2	Tree #N/A	Unknown cavity in live tree, 40' NE of Tree #23567
B2	Tree #N/A	Unknown cavity in live tree, 9' East of Tree #23570
B2	Tree #N/A	Unknown cavity in live tree, 94' SE of Tree #24535
B2	Tree #N/A	Unknown cavity in live tree, 96' SE of Tree #24535
B2	Tree #N/A	Unknown cavity in live tree, 6' North of Tree #23540
B2	Tree #23527	Unknown cavity in live tree
B2	Tree #23530	Unknown cavity in live tree
B2	Tree #23531	Unknown cavity in live tree
B2	Tree #23532	Unknown cavity in live tree
B2	Tree #23538	Unknown cavity in live tree
B2	Tree #23571	Unknown cavity in live tree
B2	Tree #24482	Unknown cavity in live tree
B2	Tree #24525	Unknown cavity in live tree
B2	Tree #24534	Unknown cavity in live tree
B2	Tree #24535	Unknown cavity in live tree
B2/C1	Tree #N/A	Unknown cavity in live tree, Den in tree hollow, 10' SE of Tree #24461
C1	Tree #N/A	Den in deadfall, 6' East of Tree #23565
C2	Tree #N/A	Den in tree hollow, 4' North of Tree #24535
E	Tree #N/A	Snag, 30' West of Tree #24487
E	Tree #23524	Snag
E	Tree #23534	Snag
E	Tree #23570	Snag
E	Tree #24445	Snag
E	Tree #24447	Snag
E	Tree #24448	Snag
E	Tree #24452	Snag
E	Tree #24456	Snag
E	Tree #24459	Snag
E	Tree #24482	Snag
E	Tree #24486	Snag
E	Tree #24488	Snag
E	Tree #24489	Snag
E	Tree #24490	Snag
E	Tree #24537	Snag

Prepared For: Northern Virginia Stream Restoration, L.C.

Horizontal Datum: VCS NAD83

Vertical Datum: NGVD 29

Boundary and Topo Source:
Fairfax County Digital Data

Design	Draft	Approved
JMB	JMB	MH

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4 of 4

Computer File Name: