BIOLOGICAL MONITORING REPORT #1

Pre-construction Monitoring

NORTHERN VIRGINIA STREAM RESTORATION BANK

The Glade Watershed (±24,600 LINEAR FEET)

FAIRFAX COUNTY, VIRGINIA



Prepared For:

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WSSI Project #20030 - Task D

December 8, 2008

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Biological Monitoring Report #1 Pre-construction Monitoring

Northern Virginia Stream Restoration Bank The Glade Watershed (<u>+</u>24,600 Linear Feet) WSSI #20030

December 8, 2008

I. Executive Summary

As set forth in the "Northern Virginia Stream Restoration Bank Banking Instrument" (Banking Instrument), approximately 24,600 linear feet of streams and drainage features within The Glade Watershed will be stabilized and restored. This stream restoration project should result in a direct improvement of in-stream habitat and an indirect improvement in water quality.

Wetland Studies and Solutions, Inc. (WSSI) conducted pre-construction biological stream assessments along The Glade Watershed portion of the Northern Virginia Stream Restoration Bank (NVSRB) pursuant to the maintenance and monitoring requirements defined in the NVSRB Banking Instrument, Section VI.B.2.(i). The purpose of this pre-construction monitoring is to determine the baseline conditions of the streams within The Glade Watershed portion of the NVSRB, against which future biological monitoring in the study area will be compared.

A total of nine permanent monitoring reaches were established along representative, samplable streams within The Glade Watershed portion of the NVSRB. A biological field reconnaissance (U.S. Environmental Protection Agency's BioRecon) combined with observations of stream flow were used to establish the location of these permanent monitoring reaches. Once established, biological stream monitoring was conducted along these reaches using benthic macroinvertebrate and habitat data. Benthic macroinvertebrate data was used to calculate a Stream Condition Index for Virginia Non-coastal Streams (VA-SCI) and habitat data was used to calculate the percentage of best possible habitat for each reach.

Our baseline habitat results indicate that habitat of the streams within The Glade Watershed portion of the NVSRB is "Poor" to "Good", with habitat assessment scores ranging from 71 to 174 (out of 200). The low habitat assessment scores are due to the lack of epifaunal substrate/available cover for stream macrofauna, highly embedded epifaunal substrate, overwidened stream channels, bank instability, channel alteration and lack of vegetation protection along the stream banks.

Baseline benthic macroinvertebrate results indicate that the benthic macroinvertebrate community of streams within The Glade Watershed portion of the NVSRB is in "Stress" and "Severe Stress", with VA-SCI scores ranging from 13.45 to 44.42 (out of 100). These results indicate that the streams within The Glade Watershed Portion of the NVSRB are unhealthy prior to restoration activities. The low VA-SCI scores are likely due to several confounding abiotic factors, including high nutrient, toxicant and sediment input from highly impervious land cover and other adjacent land use within the watershed, high sediment deposition from bank instability, channel alteration, and lack of epifaunal substrate/available cover.

II. Introduction

As set forth in the "Northern Virginia Stream Restoration Bank Banking Instrument" (Banking Instrument), dated February 17, 2006 and prepared by Wetland Studies and Solutions,

Inc. (WSSI), 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 the town of Reston, Virginia. As required in Section VI.B.2.(i) of the Banking Instrument, biological monitoring will be conducted within restored streams within these watersheds. These stream restoration activities should result in a direct improvement of instream habitat and an indirect improvement in water quality. Using benthic macroinvertebrate and habitat data, this pre-construction monitoring report characterizes the baseline conditions of the streams within The Glade Watershed portion of the NVSRB, against which future biological monitoring reports, we propose to determine the effect of stream restoration on the condition of streams within The Glade Watershed portion of the NVSRB¹, as well as aid in the development of numerical success criteria for non-coastal stream restoration projects in Virginia.

III. Project Area

The study area includes approximately 24,600 linear feet of stream along The Glade and several unnamed tributaries of The Glade, as well as the adjacent riparian corridor. The study area is located north of Lawyers Road (Route 673) between Reston Parkway (Route 602) and Twin Branches Road, and is bisected by Soapstone Drive in Fairfax County, Virginia. 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. The Glade flows in a easterly direction through the central portion of the study area. An asphalt recreational trail, which crosses The Glade multiple times, is located parallel to the stream and to several of its unnamed tributaries. 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 2, as well as in the background topography on the Biological Stream Assessment Reconnaissance and Biological Monitoring Maps (Exhibits 3a and 3b, respectively).

The boundaries of jurisdictional wetlands and other waters of the U.S. located within the study area were delineated and survey-located by WSSI as described in The Glade delineation report, dated October 9, 2008. A jurisdictional determination from the U.S. Army Corps of Engineers (COE) is pending.

IV. Overall Methodology

Per maintenance and monitoring requirements defined in the Banking Instrument, Section VI.B.2.(i), biological stream assessment reaches are to be established for every 2000 linear feet of stream restoration along samplable streams at the NVSRB. Once established, these reaches are to be monitored prior to stream restoration, then in years 1, 5, and 10. The following methods are to be employed:

• Biological Reconnaissance (BioRecon), following guidance established in the U.S. Environmental Protection Agency's "Rapid Bioassessment Protocols for Use in Streams and Wadable Rivers" (EPA's RBP; Barbour et al. 1999)².

Note that monitoring reports for the Colvin Run and the Snakeden Branch watershed portions of the NVSRB will be provided under separate cover.

This method was used to aid in the selection of permanent monitoring reaches and is not required in subsequent monitoring years.

> Biological stream assessment for Calculating the Stream Condition Index for Virginia Non-coastal Streams (VA-SCI), following guidance established in "A Stream Condition Index for Virginia Non-Coastal Streams" (Tetra Tech 2003) and "Using Probabilistic Monitoring Data to Validate the Non-Coastal Virginia Stream Condition Index" (DEQ 2006a)³.

V. <u>Biological Stream Assessment Reconnaissance</u>

Biological Stream Assessment Reconnaissance Methodology. The biological stream assessment reconnaissance consisted of three components: 1) a pedestrian reconnaissance; 2) BioRecon; and 3) permanent biological monitoring reach selection. The pedestrian reconnaissance was used to determine which streams within the study area contain enough flowing water to sample for benthic macroinvertebrates during the biological stream monitoring. The BioRecon, established in the EPA's RBP for benthic macroinvertebrates (Barbour et al. 1999), is a rapid assessment using benthic macroinvertebrates and was used to determine the general condition of the streams within the study area. Combined, both the pedestrian reconnaissance and BioRecon helped prioritize the placement of permanent biological monitoring reaches along representative stream reaches within the study area.

The biological stream assessment reconnaissance was conducted by WSSI environmental scientists Sean D. Sipple, PWS, PWD⁵, CT⁶ and Amy M. Connelly, PWD⁷, WPIT⁸ on April 12 and 18, 2007. During this reconnaissance, WSSI traversed all jurisdictional streams along the entire study area to determine the locations of potential permanent biological monitoring reaches. All streams within the study area were characterized as having flowing water, discontinuous flow, or lacking flow altogether. Streams that contained flowing water during the April 2007 field work were noted as potential streams for permanent biological monitoring reaches and BioRecon macroinvertebrate samples were taken in a few of these reaches to determine their general biotic condition. Streams that lacked flowing water during the reconnaissance fieldwork were eliminated as candidate streams for establishing permanent biological monitoring reaches. Photographs of BioRecon sampling reaches and representative non-samplable streams are provided in Exhibit 4a.

This method will be used in all subsequent monitoring years and is accompanied by a habitat assessment, following guidance established in Virginia Department of Environmental Quality's (DEQ) standard operating procedures for stream habitat assessment (SOPs; DEQ 2006b) and the EPA's RBP for habitat (Barbour et al. 1999).

The results of WSSI's BioRecon for the Snakeden Branch Watershed portion of the NVSRB indicated that the streams are in poor condition, and the BioRecon method may not be useful in highly developed watersheds. Therefore, since The Glade Watershed is also highly developed permanent biological sampling reaches were chosen without using data from the BioRecon. However, a few BioRecon samples were taken prior to selecting permanent monitoring stations within The Glade Watershed to determine whether this watershed indeed appears to be impaired or there are substantial differences in the biology within the streams.

Professional Wetland Scientist #1730, Society of Wetlands Scientists Certification Program, Inc. VA Certified Professional Wetland Delineator #3402-000096.

North American Benthological Society (NABS) Certified Level 2 Taxonomist: EPT Taxa (Ephemeroptera, Plecoptera, Trichoptera), North American Benthological Society (NABS) Certified Level 1 Taxonomist: All Phyla.

VA Certified Professional Wetland Delineator #3402-000082

Wetland Professional in Training, Society of Wetland Scientists Certification Program, Inc.

WSSI used the BioRecon method to assess three representative stream reaches along The Glade that contained flowing water during the April 2007 field work. BioRecon reaches 1-A and 1-B were selected in an area affected by historic beaver impoundment. BioRecon reach 1-C was selected in an area upstream of the beaver affected area. This is an incised section of The Glade, which is representative of most of the streams within the study area. The approximate locations of these three reaches are depicted on Exhibit 3a. Sampling reaches were 300 linear feet, as recommended in the EPA's RBP. In accordance with the BioRecon, an area of 4 square feet of best-available habitat was sampled in each reach using a D-Framed Net. Multiple habitat types were sampled including cobble/gravel, snags/leafpacks, and under-cut banks. Benthic macroinvertebrate field samples were collected, processed, and identified according to guidance established in the EPA's RBP.

Benthic macroinvertebrate samples were sorted and identified to the lowest taxonomic level possible (mostly Genus-level) at WSSI in the Science Laboratory. Due to taxonomic difficulty, members of the dipteran family Chironomidae were identified to tribe, and aquatic annelids (segmented worms) were identified to class. Each individual found in a sample was recorded and enumerated on a WSSI Benthic Macroinvertebrate I.D. and Enumeration Bench Sheet, which is included in Exhibit 5a for each individual reach.

Benthic macroinvertebrate data were used to calculate 3 biotic metrics, including Total Taxa Richness, Ephemeroptera, Plecoptera, and Trichoptera (EPT) Taxa Richness, and Percent Chironomidae + Oligochaeta. The individual metrics used are described as follows:

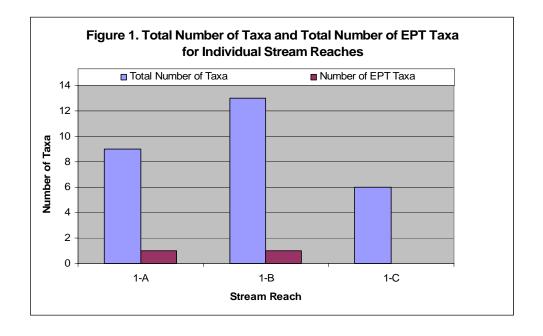
- Total Taxa Richness. Total Taxa Richness represents the total number of taxa in a sample. Total Taxa Richness is expected to be relatively high in undisturbed streams and is expected to decrease in response to environmental disturbance.
- EPT Taxa Richness. EPT Taxa Richness represents the number of taxa from the aquatic insect orders Ephemeroptera, Plecoptera, and Trichoptera. EPT taxa are generally very sensitive to pollution. Total EPT Taxa Richness is expected to be relatively high in undisturbed streams, and it is expected to decrease in response to environmental disturbance.
- Percent Chironomidae + Oligochaeta. The Percent Chironomidae + Oligochaeta represents the ratio of members of the aquatic insect family Chironomidae (non-biting midges) plus members of the aquatic annelid class Oligochaeta to the total number of individuals in a sample. Because both chironomids and oligochaetes are generally tolerant to pollution, Percent Chironomidae + Oligochaeta is expected to increase in response to environmental disturbance.

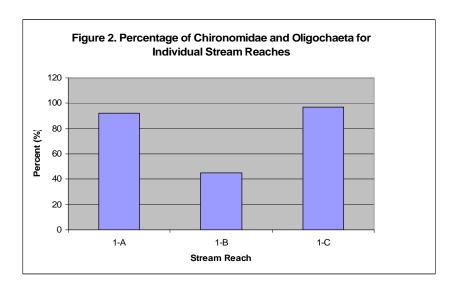
<u>Biological Stream Assessment Reconnaissance Results and Discussion.</u> The results of the pedestrian reconnaissance field work indicated that only three streams have enough flowing water to establish permanent biological monitoring reaches. Three stream reaches were evaluated (Reaches 1-A, 1-B, and 1-C; Photos #1-3, <u>Exhibit 4a</u>). The remainder of the streams within the study area do not contain enough flowing water to sample (Photos #4-6, <u>Exhibit 4a</u>) or the streams contained flow, but are too short to sample (less than 300 feet).

Note that the three BioRecon reaches correspond with reaches of the NVSRB-The Glade plan sets, as follows: BioRecon Reach 1-A corresponds with construction Reach 6; BioRecon Reach 1-B corresponds with construction Reach 3.

Of the three stream reaches characterized with the BioRecon method, BioRecon Reach 1-B had the highest Taxa Richness, with 13 total taxa (<u>Table 1</u>), below. The lowest Taxa Richness was observed at BioRecon Reach 1-C, which contained only 6 taxa (<u>Table 1</u>). EPT Taxa Richness was low at all three reaches, with only three total EPT taxa collected (*Stenonema* sp., *Aphinemura* sp., and *Cheumatopsyche* sp.). Percent Chironomidae + Oligochaeta was lowest at BioRecon Reach 1-B (45), and highest at BioRecon Reach 1-C (97; <u>Table 1</u>, <u>Figure 2</u>). Therefore, the BioRecon results showed that most stream reaches within the study area are likely in poor condition.

	Table 1. The Glade BioRecon Biotic Metrics										
Dia Danasa	Tatal	Biotic Metrics									
BioRecon Reach	Total Individuals	Total Taxa Richness	EPT Taxa Richness	% Chironomidae + Oligochaeta							
1-A	115	9	1	92							
1-B	154	13	1	45							
1-C	541	6	0	97							





The results of the three biotic metrics suggested that Reach 1-B may have the best condition, with 13 total taxa and only 45 percent Chironomidae + Oligochaeta. The results also suggested that BioRecon Reach 1-C may have the worst biotic condition, with only 6 total taxa and 97 percent Chironomidae + Oligochaeta. The relatively high Taxa Richness and lower Percent Chironomidae + Oligochaeta of Reach 1-B suggests that this reach provides a relatively suitable substrate for colonization, most likely due to the habitat provided by the area historically affected by beaver. BioRecon Reaches 1-A and 1-C have low Taxa Richness (9 and 6, respectively) and high Percent Chironomidae + Oligochaeta (92 and 97, respectively), which suggests that these reaches do not have suitable substrate for colonization and may have lower water quality.

Permanent Biological Monitoring Reach Selection. The Banking Instrument defines the number of permanent biological monitoring reaches as the total length (in linear feet) of samplable restored stream divided by 2000. Of the approximately 24,600 linear feet of stream restoration within The Glade Watershed portion of the NVSRB, approximately 18,000 linear feet is samplable for macroinvertebrates, thus nine permanent monitoring reaches were established within the study area. Based on the pedestrian reconnaissance and BioRecon results, WSSI established one permanent biological monitoring reach in the vicinity of BioRecon Reach 1-A, 1-B, and 1-C. WSSI also established six other reaches along The Glade and unnamed tributaries of The Glade, for a total of nine permanent monitoring reaches. The approximate location of these nine reaches is depicted on Exhibit 3b¹⁰.

Because most of the restoration is being conducted along The Glade, seven of the permanent monitoring reaches were chosen along The Glade (Monitoring Reaches 1-A through 1-G). Two of the permanent biological monitoring stations will be established along unnamed tributaries of The Glade (Monitoring Reaches 2-A, and 3-A).

Because the streams characterized by Photos #4 through #6 (Exhibit 4a) either lacked flowing water or had discontinuous flow during the reconnaissance fieldwork (and the pre-

¹⁰ The locations of each of the nine stream reaches were approximated on Exhibit 3b using survey-located tagged trees, which were noted during the biological monitoring field work and are depicted on Exhibit 3b.

construction monitoring field work), these streams were eliminated as candidate permanent biological monitoring reaches.

VI. <u>Biological Stream Monitoring</u>

Biological Stream Monitoring Methodology. The biological stream monitoring consisted of two components: 1) stream habitat assessment and 2) benthic macroinvertebrate assessment. The habitat assessment field work was conducted using guidance established in the DEQ standard operating procedures for stream habitat assessment (SOPs; DEQ 2006b) and the EPA's RBP for habitat (Barbour et al. 1999). The benthic macroinvertebrate assessment field work was conducted using guidance established in the SOPs for multi-habitat benthic macroinvertebrate sampling (DEQ 2006b).

A total of nine permanent sampling reaches were selected based on the results of the pedestrian reconnaissance and BioRecon (Monitoring Reaches 1-A through 1-G, 2-A, and 3-A, Photos #1-9, Exhibit 4b, Figure 3)¹¹. As required by the SOPs, each reach is 300 linear feet. The approximate location of each reach is depicted on Exhibit 3b. Photographs of each reach are included on Exhibit 4b. Benthic macroinvertebrate sampling field work and habitat assessment field work was conducted by WSSI environmental scientists Sean D. Sipple, PWS, PWD, CT, Amy M. Connelly, PWD, WPIT, Benjamin N. Rosner, PWS, PWD, and Beth A. Clements on April 12 and 18, 2007 in conjunction with the biological stream assessment reconnaissance field work.

In accordance with the SOPs, habitat conditions were assessed by qualitatively rating ten habitat parameters, including Epifaunal Substrate/Available Cover, Pool Substrate Characterization, Pool Variability, Sediment Deposition, Channel Flow Status, Channel Alteration, Channel Sinuosity, Bank Stability, Vegetative Protection, and Riparian Vegetative Zone. The overall habitat quality of each reach was determined by calculating the percentage of the best possible score ¹², where the best possible score for each reach equals 200. The following formula was used to determine the percentage of best possible score for each reach:

Percentage of Best Possible Score = (Total Habitat Score)/(200)*100

Each reach was then assigned a narrative rating according to the calculated percentage of best possible score, where "Excellent" is >90, "Good" is 75-88, "Fair" is 60-73, and "Poor" is <58. WSSI Habitat Assessment Field Data Sheets (developed from the EPA's RBP Habitat Assessment Field Data Sheets) for each reach are included as Exhibit 6.

Note that for design purposes, The Glade has been divided into 6 manageable restoration reaches. Monitoring stream reach labels 1-A, 1-B, 1-C, 1-D, 1-E, 1-F, 1-G, 1-H, 2-A, and 3-A correspond with construction design reach labels as follows: 2(1-G, 1-F), 3(1-E, 3-A), 4(1-D, 2-A), 5(1-C) and 6(1-B, 1-A).

The SOPs indicate that overall habitat quality is determined by calculating the percent similarity to reference score. Since reference reaches were not available to assess, WSSI used the best possible score as the reference score.

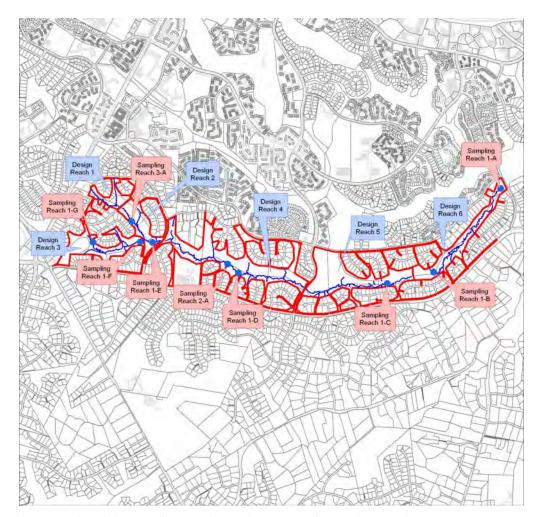


Figure 3. The Glade Sampling Reaches and Corresponding Design Reaches

To assess benthic macroinvertebrate condition, 60 linear feet of best-available habitat was sampled in each reach using a D-Framed Net. Habitat types sampled include cobble/gravel, snags/leafpacks, under-cut banks, root-wads, and submerged vegetation. Benthic field data was recorded on WSSI Benthic Macroinvertebrate Field Data Sheets (developed from the EPA's RBP Benthic Macroinvertebrate Field Data Sheets), which are included as Exhibit 7.

Benthic macroinvertebrate samples were processed and subsampled by WSSI staff using guidance from the SOPs. Specifically, a fixed-count method was used, where one hundred twenty organisms were randomly picked from a gridded (numbered) tray and the organisms were identified to the family level (if possible) using a dissecting microscope. Each individual (containing a head) found in a sample was recorded and enumerated on a WSSI Benthic Macroinvertebrate I.D. and Enumeration Bench Sheet (Exhibit 5b).

Benthic macroinvertebrate data were analyzed by calculating the Stream Condition Index for Virginia Non-coastal Streams (VA-SCI), following guidance established in "A Stream Condition Index for Virginia Non-Coastal Streams" and "Using Probabilistic Monitoring Data to

Validate the Non-Coastal Virginia Stream Condition Index". The VA-SCI is a multi-metric Index of Biotic Integrity developed for the DEQ to assess Streams of the Commonwealth. The VA-SCI uses seven biotic metrics and one biotic index including Total Taxa, EPT Taxa, Percent Ephemeroptera, Percent Plecoptera + Trichoptera (Excluding Hydropsychidae), Percent Scrapers, Percent Chironomidae, Percent Top Two Dominant Taxa, and Hilsenhoff Biotic Index. The individual metrics and index used are defined and described as follows:

- Total Taxa Richness. Total Taxa Richness represents the total number of taxa in a sample. Total Taxa Richness is expected to be relatively high in undisturbed streams and is expected to decrease in response to environmental disturbance. Total Taxa Richness can range from 0-22 for the VA-SCI.
- EPT Taxa Richness. EPT Taxa Richness represents the number of taxa from the aquatic insect orders Ephemeroptera, Plecoptera, and Trichoptera. EPT taxa are generally very sensitive to pollution. Total EPT Taxa Richness is expected to be relatively high in undisturbed streams, and it is expected to decrease in response to environmental disturbance. EPT Taxa Richness can range from 0-11 for the VA-SCI.
- Percent Ephemeroptera. The Percent Ephemeroptera represents the ratio of members of the aquatic insect order Ephemeroptera (mayflies) to the total number of individuals in a sample. Mayflies are generally very sensitive to pollution, thus Percent Ephemeroptera is expected to decrease in response to environmental disturbance. Percent Ephemeroptera can range from 0-61.3 for the VA-SCI.
- Percent Plecoptera + Trichoptera (Excluding Hydropsychidae). The Percent Plecoptera + Trichoptera (Excluding Hydropsychidae) represents the ratio of members of the aquatic insect orders Plecoptera (stoneflies) and Trichoptera (caddisflies) (excluding those in the pollution tolerant family Hydropsychidae) to the total number of individuals in a sample. Percent Plecoptera + Trichoptera (Excluding Hydropsychidae) is expected to decrease in response to environmental disturbance. Percent Plecoptera + Trichoptera (Excluding Hydropsychidae) can range from 0-35.6 for the VA-SCI.
- Percent Scrapers. The Percent Scrapers represents the ratio of taxa adapted primarily for scraping food from a substrate to the total number of individuals in a sample. Percent Scrapers is expected to decrease in response to environmental disturbance. Percent Scrapers can range from 0-51.6 for the VA-SCI.
- Percent Chironomidae. The Percent Chironomidae represents the ratio of members of the aquatic insect family Chironomidae (non-biting midges) to the total number of individuals in a sample. Because chironomids are generally tolerant to pollution, Percent Chironomidae is expected to increase in response to environmental disturbance. Percent Chrionomidae can range from 0-100 for the VA-SCI.
- Percent Top Two Dominant. The Percent Top Two Dominant is the ratio of the top two
 most abundant taxa in a sample to the total number of individuals in a sample. Percent
 Top Two Dominant is expected to increase in response to environmental disturbance.
 Percent Top Two Dominant can range from 30.8-100 for the VA-SCI.
- Hilsenhoff Biotic Index (HBI). The Hilsenhoff Biotic Index is the abundance-weighted average tolerance of assemblage of organisms (Family taxonomic level). The HBI is

expected to increase in response to environmental disturbance. The HBI can range from 3.2-10 for the VA-SCI.

- The VA-SCI was calculated by taking the weighted average of the individual metric (and index) scores, with an VA-SCI range of 0-100. The weighting is as follows:
 - o Total Taxa: Score = 100 x (X/22), where X = Metric Value
 - \circ EPT Taxa: Score = 100 x (X/11), where X = Metric Value
 - o Percent Ephemeroptera: Score = 100 x (X/61.3), where X = Metric Value
 - o Percent Plecoptera + Trichoptera less Hydropsychidae: Score = 100 x (X/35.6), where X = Metric Value
 - o Percent Scrapers: Score = $100 \times (X/51.6)$, where X = Metric Value
 - o Percent Chironomidae: Score = 100 x [(100-X) (100-0)], where X = Metric Value
 - o Percent Top 2 Dominant: Score = 100 x [(100-X) (100-30.8)], where X = Metric Value
 - O Hilsenhoff Biotic Index: Score = 100 x [(100-X) (100-3.2)], where X = Metric Value

Each reach was then assigned a narrative rating according to the calculated VA-SCI, where "Excellent" is >73, "Good" is 60-72, "Stress" is 43-59, and "Severe Stress" is <42.

Biological Stream Monitoring Results and Discussion. Habitat results show that two of the reaches (Reaches 1-A and 1-B) have "Good" habitat conditions, two (Monitoring Reaches 1-G and 2-A) have "Poor" habitat conditions, and the remaining reaches (Monitoring Reaches 1-C through 1-F, and 3-A) have "Fair" habitat conditions (Table 2, below; Exhibit 6). Monitoring Reaches 1-A has the best habitat, with a habitat assessment score of 174 out of 200 ("Good"). Monitoring Reach 1-H has the worst habitat, with a habitat assessment score of 71 out of 200 ("Poor"). The low habitat assessment scores are due to the lack of epifaunal substrate/available cover for stream fauna, highly embedded epifaunal substrate, overwidened stream channels, bank instability, channel alteration, and lack of vegetation protection along the stream banks. The average habitat assessment score for all streams assessed within The Glade Watershed portion of the NVSRB is 129, which is 64 percent of the best possible score ("Fair").

Table 2. The GladeTotal Habitat Assessment Scores										
REACH	Habitat Assessment Score	Percent Best Possible Score	Narrative Rating							
1-A	174	87	Good							
1-B	169	85	Good							
1-C	139	70	Fair							
1-D	137	69	Fair							
1-E	125	63	Fair							
1-F	129	65	Fair							
1-G	71	36	Poor							
2-A	94	47	Poor							
3-A	121	61	Fair							
Average	129	64	Fair							

Benthic macroinvertebrate results show that individuals from 29 taxa¹³ were identified from all nine reaches collectively (Table 3, below; Exhibit 5b) during the pre-construction benthic macroinvertebrate monitoring. These 32 taxa include ancylid, physid, and planorbid snails (Families Ancylidae, Physidae, and Planorbidae, respectively), fingernail clams (Family Sphaeridae), aquatic earthworms (Families Naididae and Tubificidae), scuds (Family Cambaridae, Crangonyctidae, and Gammaridae), aquatic moth larvae (Family Pyralidae), nonbiting midge, dancefly, phorid, blackfly, and cranefly larvae (Families Chironomidae, Empididae, Phoridae, Simulidae, and Tipulidae, respectively), small minnow and flathead mayfly larvae (Families Baetidae and Heptageniidae, respectively), broadwinged damselfly, narrowwinged damselfly, skimmer dragonfly, and darnerdragonfly larvae (Families Calopterygindae, Coenagrionidae, Libellulidae, and Aeshnidae, respectively), Dobson fly larvae (Family Corydalidae), aquatic weevil, long-tailed water beetle, predacious diving beetle, riffle beetle larvae (Families Curculionidae, Dryopidae, Dytiscidae, and Elmidae, respectively), nemourid stonefly larvae (Family Nemouridae), and common net-spinning, and northern casemaker caddisfly larvae (Families Hydropsychidae, and Limnephilidae). Of all 29 taxa collected, non-biting midge larvae comprised the majority of individuals in each reach, with numbers ranging from 7-100 (47-85%).

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Although 32 taxa are listed in <u>Table 3</u>, Oligochaeta, Diptera, and Lepidoptera were not included as part of the total taxa collected within the study area, because individuals were too damaged or too small to identify to the family-level.

	Ta	able 3	. т	he Gl	ade Ra	aw Dat	a			
					RI	EACH				
ТАХА	1-A	1-B	1-C	1-D	1-E	1-F	1-G	2-A	3-A	Total
Aeshnidae	-	1	-	1	-	-	-	-	-	2
Ancylidae	-	-	2	-	-	-	-	-	-	2
Baetidae	5	13	-	-	-	-	-	-	-	18
Calopterygidae	2	1	-	-	-	-	-	-	-	3
Cambaridae	1	-	-	1	-	-	-	-	-	2
Chironomidae	55	78	82	57	54	37	7	100	59	529
Coenagrionidae	3	-	-	-	-	-	-	-	-	3
Corydalidae	-	1	-	-	-	-	-	-	-	1
Crangonyctidae	-	7	ı	ı	2	2	-	-	ı	11
Curculionoidae	-	-	-	-	-	-	1	-	-	1
Diptera	-	-	1	-	-	-	-	-	-	1
Dryopidae	1	-	1	-	-	-	-	-	-	2
Dytiscidae	-	-	-	1	2	5	-	-	1	9
Elmidae	10	-	-	-	-	-	-	-	-	10
Empididae	1	-	-	-	-	-	-	-	-	1
Gammaridae	-	-	-	-		1	-	-	-	1
Heptageniidae	20	-	-	-	-	-	-	-	-	20
Hydropsychidae	10	-	1	7	-	-	-	11		29
Lepidoptera	-	-	-	-	-	-	-	1	-	1
Libellulidae	-	-	-	1	1	2	-	-	-	4
Limnephelidae	-	1	1	-	2	1	-	4	-	9
Naididae	-	-	1	-	30	-	-	-	-	31
Nemouridae	1	-	-	4	5	3	-	-	-	13
Oligochaeta	4	5	4	11	-	26	4	-	1	54
Phoridae	-	-	ı	ı	1	ı	-	1	ı	1
Physidae	-	6	-	1	6	6	-	-	-	19
Planorbidae	-	-	-	-	-	-	1	-		1
Pyralidae	-	-	-	-	1	1	2	1	1	3
Simulidae	1	1	2	-	-	-	-	-		4
Sphaeridae	-	6	2	-	-	-	-	-	32	40
Tipulidae	-	1	-	1	-	2	-	-	-	4
Tubificidae	1	5	-	4	11	9	-	-	2	32
Total	115	126	97	89	113	94	15	118	94	861

The above data collected for each reach were used to calculate the biotic metrics, indices, and VA-SCI. The results of our data analysis indicate that the benthic macroinvertebrate community of Monitoring Reach 1-A is in "Stress" and the benthic macroinvertebrate community of the remaining eight stream reaches (Monitoring Reaches 1-B through 1-G, 2-A, and 3-A) is in "Severe Stress" prior to stream restoration activities, based on their VA-SCI scores (Table 4, below). The highest VA-SCI score was observed at Monitoring Reach 1-A (44.42) and

the lowest VA-SCI score was observed at Monitoring Reach 3-A (13.45). The average VA-SCI numerical score for all streams assessed within The Glade Watershed portion of the NVSRB is 26.17 ("Severe Stress").

Table 4.	The Gla	ide Biotic	Metric ar	nd Index \	Weighting	and VA-	SCI			
		REACH								
METRIC	1-A	1-B	1-C	1-D	1-E	1-F	1-G	2-A	3-A	
Total Taxa	59.09	54.55	36.36	45.45	40.91	45.45	22.73	22.73	18.18	
EPT Taxa	36.36	18.18	18.18	18.18	18.18	18.18	0.00	9.09	0.00	
Percent Ephemeroptera	35.46	16.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Percent Plecoptera + Trichoptera (Excluding Hydropsychidae)	0.00	2.23	2.90	0.00	4.97	2.99	0.00	0.00	0.00	
Percent Scrapers	50.56	9.23	4.00	4.36	10.29	12.37	12.92	0.00	0.00	
Percent Chironomidae	52.17	38.10	15.46	35.96	52.21	60.64	53.33	15.25	37.23	
Percent Top Two Dominant	50.26	40.14	16.39	34.10	37.09	47.66	38.54	8.57	4.61	
HBI	71.48	66.29	63.07	72.04	44.12	82.29	84.31	64.81	47.50	
VA-SCI Numerical Score	44.42	30.69	19.54	26.26	25.97	33.70	26.48	15.06	13.45	
VA-SCI Narrative Score	Stress	Severe Stress								
Average VA-SCI Numerical Score	26.17									
Average VA-SCI Narrative Score	Severe Stress									

These scores are the result of the low number of total taxa, low number of total EPT taxa, low number or lack of Ephemeroptera taxa, low percentage of Plecoptera + Trichoptera (excluding Hydropsychidae taxa), low percentage of Scraper taxa, high percentage of Chironomidae, high percentage of top two dominant taxa, and high HBI found within the reaches assessed (Table 5, below).

	Table 5. The Glade Biotic Metric Scores											
Reach	Total Taxa	Total EPT Taxa	Percent Ephemeroptera	Percent Plecoptera + Trichoptera (Excluding Hydropsychidae)	Percent Scrapers	Percent Chironomidae	Percent Top Two Dominant	НВІ				
1-A	13	4	21.74	0.00	26.09	47.83	65	5.14				
1-B	12	2	10.32	0.79	4.76	61.90	72	5.49				
1-C	8	2	0.00	1.03	2.06	84.54	89	5.71				
1-D	10	2	0.00	0.00	2.25	64.04	76	5.10				
1-E	9	2	0.00	1.77	5.31	47.79	74	7.00				
1-F	10	2	0.00	1.06	6.38	39.36	67	4.40				
1-G	5	0	0.00	0.00	6.67	46.67	73	4.27				
2-A	5	1	0.00	0.00	0.00	84.75	94	5.59				
3-A	4	0	0.00	0.00	0.00	62.77	97	6.77				

Given the low habitat scores, it is not surprising that the VA-SCI scores are low as well. In general, biological diversity and habitat in streams are closely linked (Raven et al. 1998). Thus, the low VA-SCI scores are likely due to several confounding abiotic factors, including highly impervious land cover, high nutrient, toxicant and sediment input from highly impervious land cover and other adjacent land use within the watershed, high sediment deposition from bank instability, channel alteration, and lack of epifaunal substrate/available cover.

An analysis of land use within the watershed of each stream reach indicates that each watershed is highly developed, with all reaches having at least 15 percent impervious land cover (with a weighted watershed average of 15 percent), as depicted in the Land Cover Map (Exhibit 8), and Table 6, below. Reach 2-A and 3-A have the highest imperviousness, with 28 and 18 percent impervious land cover, respectively. Reaches 1-A through 1-C and 1-F have the lowest imperviousness, with 15 percent impervious land cover. It is important to note that Reaches 2-A and 3-A have the lowest VA-SCI score (15.06 and 13.45, respectively) and Reaches 1-A, 1-B and 1-F have the highest VA-SCI score (44.42, 30.69, and 33.70, respectively), suggesting a link between impervious land cover and VA-SCI scores. It has been documented that increases in watershed imperviousness reduce macroinvertebrate diversity, such that when imperviousness exceeds 10 to 15 percent, macroinvertebrate diversity becomes low (Klein 1979). Runoff from the highly impervious land within these watersheds produces a high volume and velocity of flowing water and sediment in the stream channels during storm events. Because the streams we studied are laterally unstable (e.g., overwidened channel, lack of vegetative protection along the stream banks, and bank instability) and incised, these streams likely do not overflow their channel during bankfull flood events. As a result, epifaunal substrate/available cover within these streams becomes highly mobile and benthic macrofauna can not easily colonize the available substrate (Debrey and Lockwood 1990) or get buried and killed by high sediment deposition (Wood and Armitage 1997).

Table 6. Impervious Land Cover and VA- SCI for Each Reach										
REACH Watershed Percent VA- Impervious SCI										
1-A	780	15	44.42							
1-B	668	15	30.69							
1-C	618	15	19.54							
1-D	395	16	26.26							
1-E	221	16	25.97							
1-F	95	15	33.70							
1-G	27	17	26.48							
2-A	40	28	15.06							
3-A	91	18	13.45							

Nutrients, pesticides, and other chemical pollutants that enter the streams through runoff can also have a negative effect on the macroinvertebrate community (Wright et al 1995; O'Halloran et al. 1996; Kiffney and Clements 1994). Sources for such pollutants within the streams we assessed likely include residential lawns, roads, wildlife, and faulty sewer lines. Thus, it is not a surprise that our baseline benthic macroinvertebrate data show low VA-SCI scores and non-biting midges as the dominant taxa. However, because proposed stream restoration should result in improvement of in-stream habitat and water quality, there should be an improvement in the benthic macroinvertebrate community over subsequent monitoring years.

VII. Conclusions

The above results indicate that the habitat of the streams within The Glade Watershed portion of the NVSRB is "Poor" to "Good" and the benthic macroinvertebrate community of the streams is in "Stress" or "Severe Stress". These results indicate that the streams within The Glade Watershed portion of the NVSRB are unhealthy. The low VA-SCI and habitat scores are likely due to several confounding abiotic factors, including highly impervious land cover, high nutrient, toxicant and sediment input from adjacent land use, channel alteration, high sediment deposition, bank instability, lack of vegetative protection along the stream banks, and lack of epifaunal substrate/available cover.

VIII. Limitations

This study is based on examination of the conditions on the site at the time of our review and does not address conditions in the future. Such conditions may change over time and will be addressed in subsequent monitoring reports. Our biological monitoring 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, and our report is not a recommendation to buy, sell or develop the property.

We offer no opinion and do not purport to opine on the possible application of various building codes, zoning ordinances, other land use or platting regulations, environmental or health laws and other similar statutes, laws, ordinances, code and regulations affecting the possible use and occupancy of the property for the purpose for which it is being used, except as specifically provided above. The opinions set forth above are rendered only and exclusively for the benefit of the addressees, the COE, the DEQ, and no other parties, successors or assigns. The foregoing opinions are based on applicable laws, ordinances, and regulations in effect as of the date hereof

and should not be construed to be an opinion as to the matters set out herein should such laws, ordinances or regulations be modified, repealed or amended.

This document is solely for your benefit and is not to be quoted in whole or in part or otherwise referred to in any statement or document (except for purposes of identification) nor is it to be filed with any governmental agency or other person (other than the COE and DEQ), without the prior written consent of this firm, unless required by law.

WETLAND STUDIES AND SOLUTIONS, INC.

Benjamin N. Rosner, PWS, PWD Environmental Scientist

Sean D. Sipple, CT, PWS Environmental Scientist

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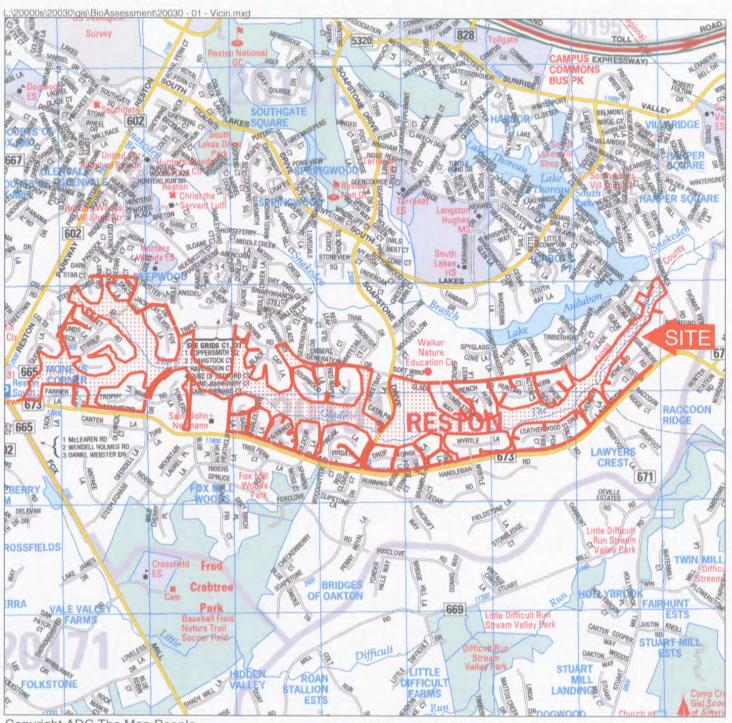
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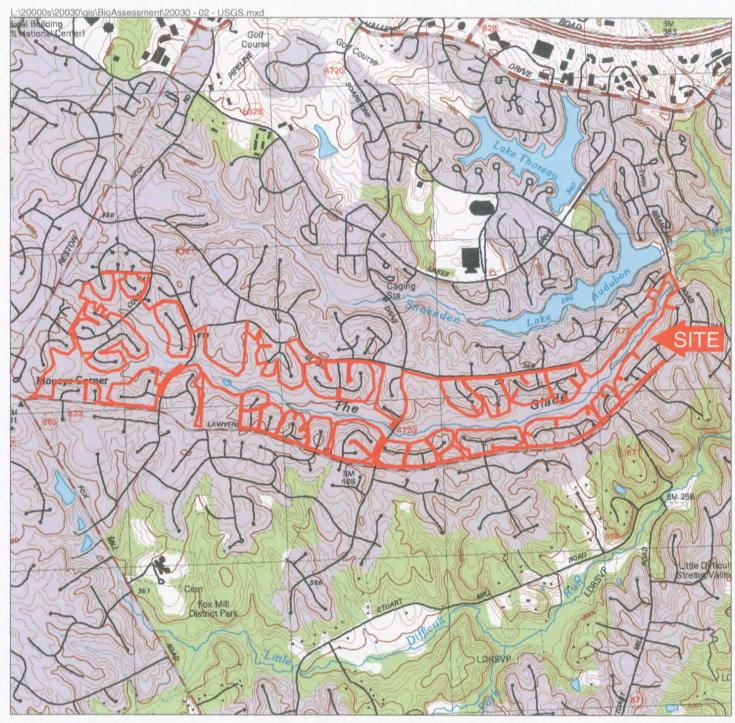


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Vicinity Map The Glade WSSI #20030 Scale: 1" = 2000'





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

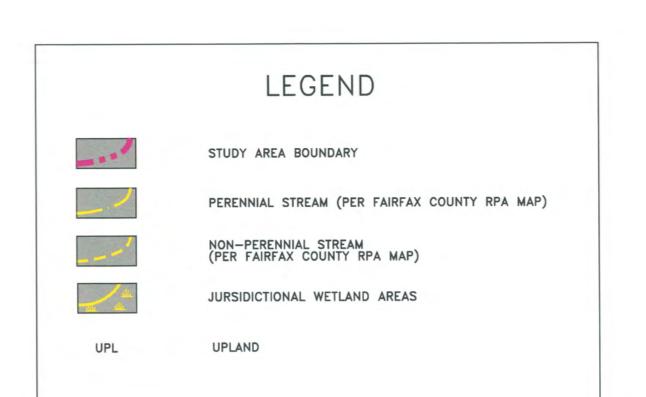
Latitude: 38°55'50" N Longitude: 77°20'51" W

Hydrologic Unit Code (HUC): 020700081004

Stream Class: III

Name of Watershed: The Glade





BIOLOGICAL STREAM ASSESSMENT RECONNAISSANCE NOTES:

1. Wetland Studies and Solutions, Inc. (WSSI) performed a biological stream assessment reconnaissance on The Glade watershed portion of the Northern Virginia Stream Restoration Bank (NVSRB). The biological stream assessment reconnaissance consisted of three components: 1) a pedestrian reconnaissance; 2) a Biological Reconnaissance (BioRecon); and 3) permanent biological monitoring stream reach selection. The pedestrian reconnaissance was used to determine which streams within the study area contain enough flowing water to sample for benthic macroinvertebrates. The BioRecon, established in the Rapid Bioassessment Protocol for benthic macroinvertebrates, is a rapid assessment using benthic macroinvertebrates and was used to determine the general condition of the streams within the study area. Combined, both the pedestrian reconnaissance and BioRecon helped prioritize the placement of permanent biological monitoring reaches along representative stream reaches within the study area.

 The BioRecon was conducted using guidance established in the Environmental Protection Agency's "Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers" for benthic macroinvertebrates, dated July 1999.

 Topographic information provided by Fairfax County Digital Data and Air Survey Corp., boundary information provided by WSSI, and a February 23, 2004 natural color image provided by Air Survey Corp. were used as a base for this attachment.

4. The boundaries of jurisdictional wetlands and other waters of the U.S. located within the limits of The Glade portion of the NVSRB were delineated and survey-located by WSSI as described in a delineation report, dated October 9, 2008. A jurisdictional determination for this delineation is pending.

5. Biological stream assessment reconnaissance field work for The Glade watershed portion of the NVSRB was performed on April 12 and 18, 2007 by WSSI Environmental Scientists Sean D. Sipple, CT, PWS and Amy M. Connelly, WPIT. The assessments were conducted on The Glade resulting in a total of three stream reaches.

6. The results of the biological stream assessment reconnaissance indicated that only three streams have enough flowing water to establish permanent biological monitoring stations. The remainder of the streams within the study area contain only ephemeral or intermittent flows and did not contain enough flowing water to sample. The BioRecon results showed that these streams are likely in poor biotic condition.

CORRESPONDING	STREAM REACH
LAB	ELS
MONITORING	CONSTRUCTION

MONITORING	CONSTRUCTION
REACH 1-A	REACH 6
REACH 1-B	REACH 5
REACH 1-C	REACH 3

able 1.	NOVA Stream Bank - The Glade Benthic Indices						
Station	Total Individuals	Total Taxa Richness	EPT Taxa Richness	%Chironomidae + Oligochaeta			
1-A	115	9	1	92			
1-B	154	13	1	45			
1-C	541	6	0	97			



BIOLOGICAL STREAM MONITORING NOTES:

1. Wetland Studies and Solutions, Inc. (WSSI) performed biological stream monitoring on The Glade Watershed portion of the Northern Virginia Stream Restoration Bank (NVSRB). This monitoring was conducted pursuant to the maintenance and monitoring requirements defined in the Northern Virginia Stream Restoration Bank (NVSRB) Banking Instrument. This pre-construction monitoring report characterizes the baseline conditions against which future biological monitoring in the study area will be compared.

The biological stream monitoring consisted of two components: 1) stream habitat assessment and 2) benthic macroinvertebrate assessment. The habitat assessment field work was conducted using guidance established in the Virginia Department of Environmental Quality's (DEQs) standard operating procedures (SOPs) for stream habitat assessment and the U.S. Environmental Protection Agency's (EPAs) "Rapid Bioassessment Protocols for Use in Wadable Streams and Rivers" for habitat, dated July 1999. The benthic macroinvertebrate assessment field work was conducted using guidance established in the DEQs SOPs for multi-habitat benthic macroinvertebrate sampling. Habitat data from these stream assessments were used to calculate the percentage of best available habitat for each reach. Benthic macroinvertebrate data from these stream assessments were used to calculate the Stream Condition Index for Non-coastal Streams of Virginia (VA-SCI).

2. Prior to conducting the biological stream monitoring field work, WSSI performed a pedestrian reconnaissance and a BioRecon to prioritize stream reaches for assessment and to establish permanent monitoring stations. BioRecon was conducted using guidance established in the EPAs "RBP" for benthic macroinvertebrates, dated July 1999.

Based on the results of the biological reconnaissance, nine permanent biological monitoring reaches were established along The Glade and two unnamed tributaries of The Glade. Pre-construction biological assessment fieldwork was conducted along these permanent monitoring reaches by Sean D. Sipple, PWS, PWD, CT, Amy M. Connelly, PWD, WPIT, Benjamin N. Rosner, PWD, PWS, and Beth A. Clements on April 12 and 18, 2007.

3. Our baseline habitat results indicate that habitat of the streams within The Glade Watershed portion of the NVSRB is "Poor" to "Good", with habitat assessment scores of 174 (out of 200) or less (See "Total Habitat Assessment Scores" table for The Glade" on this map). The low habitat assessment scores are due to the lack of epifaunal substrate/available cover for aquatic stream fauna, highly embedded epifaunal substrate, overwidened stream channels, bank instability, channel alteration and lack of vegetation protection along the stream banks.

4. Baseline benthic macroinvertebrate results indicate that streams within The Glade Watershed portion of the NVSRB are in "Stress" or "Severe Stress", with VA-SCI scores below 45 (out of 100) for all streams assessed (See "The Glade Biotic Metric and Index Weighting and VA-SCI" and "The Glade Biotic Metric Scores" tables on this map. The low VA-SCI scores are likely due to several confounding abiotic factors, including highly impervious land cover, high nutrient, toxicant and sediment input from adjacent land use, channel alteration, high sediment deposition, bank instability, lack of vegetative protection along the stream banks, and lack of epifaunal substrate/available cover.

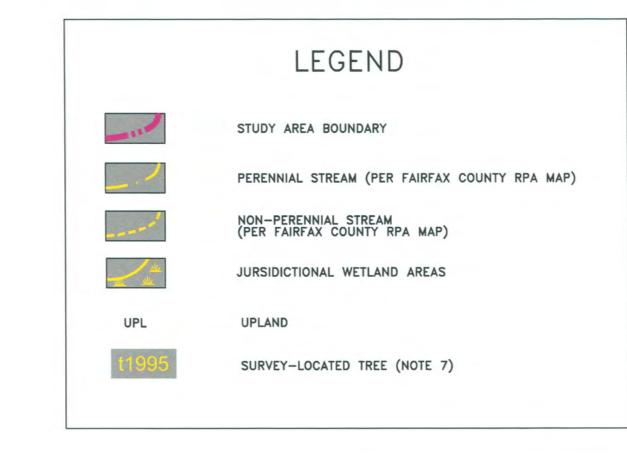
5. Topographic information provided by Fairfax County Digital Data and Air Survey Corp., boundary information provided by WSSI, and a February 23, 2004 natural color image provided by Air Survey Corp. were used as a base for this attachment.

6. The boundaries of jurisdictional wetlands and other waters of the U.S. located within the limits of The Glade portion of the NVSRB were delineated and survey-located by WSSI as described in The Glade delineation report, dated October 9, 2008. A jurisdictional determination from the U.S. Army Corps of Engineers verifying this delineation is pending. Note that for design purposes, The Glade has been divided into 6 manageable restoration reaches. Monitoring stream reach labels 1-A, 1-B, 1-C, 1-B, 1-E, 1-F, 1-G, 2-A, and 3-A correspond with construction design reach labels as follows: 2(1-G, 1-F), 3(1-E, 3-A), 4(1-D, 2-A), 5(1-C) and 6(1-B, 1-A).

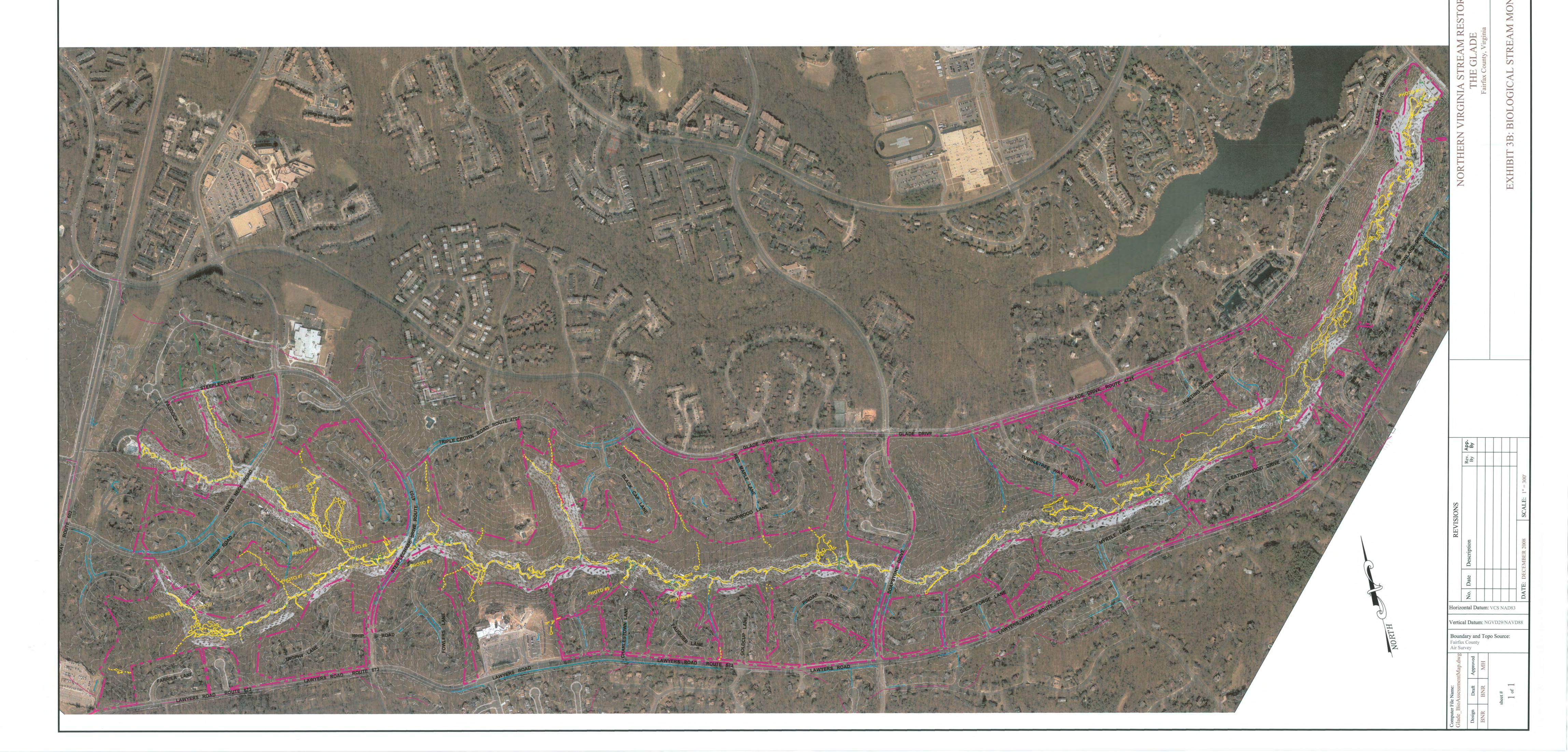
7. The locations of each of the nine stream reaches were approximated on this exhibit using survey-located trees or existing culverts, which were noted during the biological monitoring field work.

The G	lade Biot	tic Metric	and Ind	ex Weig	hting and	VA-SCI			
METRIC REACH									
WIETRIC	1-A	1-B	1-C	1-D	1-E	1-F	1-G	2-A	3-A
Total Taxa	59.09	54.55	36.36	45.45	40.91	45.45	22.73	22.73	18.18
EPT Taxa	36.36	18.18	18.18	18.18	18.18	18.18	0.00	9.09	0.00
Percent Ephemeroptera	35.46	16.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent Plecoptera + Trichoptera (Excluding Hydropsychidae)	0.00	2.23	2.90	0.00	4.97	2.99	0.00	0.00	0.00
Percent Scrapers	50.56	9.23	4.00	4.36	10.29	12.37	12.92	0.00	0.00
Percent Chironomidae	52.17	38.10	15.46	35.96	52.21	60.64	53.33	15.25	37.23
Percent Top Two Dominant	50.26	40.14	16.39	34.10	37.09	47.66	38.54	8.57	4.61
HBI	71.48	66.29	63.07	72.04	44.12	82.29	84.31	64.81	47.50
VA-SCI Numerical Score	44.42	30.69	19.54	26.26	25.97	33.70	26.48	15.06	13.45
VA-SCI Narrative Score	Stress	Severe Stress	Severe Stress	Severe Stress	Severe Stress	Severe Stress			Severe Stress
Average VA-SCI Numerical Score	26.17			The state of the s					
Average VA-SCI Narrative Score	Severe Stress								

				The Glade Blotic Met	110 000100			
Reach	Total Taxa	Total EPT Taxa	Percent Ephemeroptera	Percent Plecoptera + Trichoptera (Excluding Hydropsychidae)	Percent Scrapers	Percent Chironomidae	Percent Top Two Dominant	НВІ
1-A	13	4	21.74	0.00	26.09	47.83	65	5.14
1-B	12	2	10.32	0.79	4.76	61.90	72	5.49
1-C	8	2	0.00	1.03	2.06	84.54	89	5.71
1-D	10	2	0.00	0.00	2.25	64.04	76	5.10
1-E	9	2	0.00	1.77	5.31	47.79	74	7.00
1-F	10	2	0.00	1.06	6.38	39.36	67	4.40
1-G	5	0	0.00	0.00	6.67	46.67	73	4.27
2-A	5	1	0.00	0.00	0.00	84.75	94	5.59
3-A	4	0	0.00	0.00	0.00	62.77	97	6.77



REACH	Habitat Assessment	Percent Best Possible Score	Narrative Rating
1-A	174	87	Good
I-A	1/4		Good
1-B	169	85	Good
1-C	139	70	Fair
1-D	137	69	Fair
1-E	125	63	Fair
1-F	129	65	Fair
1-G	71	36	Poor
2-A	94	47	Poor
3-A	121	61	Fair
Average	129	64	Fair





1. Looking southwest (upstream) at Reach 1-A of The Glade on the eastern portion of the study area.



2. Looking southwest (upstream) at Reach 1-B of The Glade on the eastern portion of the study area.



3. Looking southeast (downstream) at Reach 1-C of The Glade on the western portion of the study area.



4. Looking north-northeast (downstream) at a non-sampleable unnamed tributary of The Glade due to no flow.



5. Looking north-northeast (downstream) at a non-sampleable unnamed tributary of The Glade due to no flow.



6. Looking north (upstream) at a non-sampleable unnamed tributary of The Glade with due to no flow.



1. Looking south-southwest (upstream) at Reach 1-A of The Glade in the eastern portion of the study area.



2. Looking northeast (downstream) at Reach 1-B of The Glade in the eastern portion of the study area.



3. Looking southwest (upstream) at Reach 1-C of The Glade in the eastern portion of the study area.



4. Looking northwest (upstream) at Reach 1-D of an unnamed tributary of Colvin Run in the central portion of the study area.



5. Looking west (upstream) at Reach 1-E of The Glade in the western portion of the study area.



6. Looking northeast (downstream) at Reach 1-F of The Glade in the western portion of the study area.



7. Looking northwest (upstream) at Reach 1-G of The Glade in the western portion of the study area.



8. Looking northeast (downstream) at Reach 2-A, an unnamed tributary of The Glade in the central portion of the study area.



9. Looking northwest (upstream) at Reach 3-A, an unnamed tributary of The Glade in the western portion of the study area.



WSSI BENTHIC MACROINVERTEBRATE I.D. AND ENUMERATION BENCH SHEET*

Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
The Glade	20030	1-A Recon	SDS/AMC	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'o
2/21/2008	12/14/2007	JAB	BAA/CAG	N/A	115
VALVIA - Clams					
SPHAERIDAE		Forcipomyia sp. Probezzia sp.		Synorthocladius sp. Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculium sp. CORBICULIDAE		CHAOBORIDAE Chaborus sp.		Xylotopus sp.	
Corbicula fluminea sp.		CHIRONOMIDAE	11	Zalutschia sp. Tanypodinae	4
UNIONIDAE		Chironominae	- ''	Ablabesmyla sp.	-
RANCHIOBDELLIDA		Chironomini	9	Alotanypus sp.	
BRANCHIOBDELLIDAE		Chironomus sp.		Apsectrotanypus sp.	
TETRASTEMMATIDAE OLEOPTERA - Beetles		Cryptochironomus sp.		Clinotanypus sp.	
CANTHERIDAE		Cryptotendipes sp. Demicryptochironomus sp.		Conchapelopia sp. Guttipelopia sp.	
CURCULIONIDAE		Dicrotendipes sp.		Krenopelopia sp.	
DRYOPIDAE		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
DYTISCIDAE Agabus sp.		Glyptotendipes sp. Kiefferulus sp.		Macropelopia sp.	
Hydroporous sp.		Microtendipes sp.		Meropelopia sp. Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastiella sp.		Procladius sp.	
Laccomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp. ELMIDAE		Paracladopelma sp. Paratendipes sp.		Rheopelopia sp. Tanypus sp.	
Microcylloepus sp.		Phaenopsectra sp.		Thienemannimyia gp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.	1	Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp. Macronychus sp.		Stictochironomus sp. Tribelos sp.		Zavrelimyia sp. CULICIDAE	
Dubiraphia sp.		Zavreliella sp.		Aedes	
Ancyronyx sp.	2	Tanytarsini	1	Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
GYRINIDAE Dineutus		Constempellina sp.		Culiseta	
Gyrinus		Micropsectra sp. Micropsectra/Tanysarsus complex		Mansonia Orthopodomyla	
HALIPIDAE		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
HYDROPHILIDAE		Stempellina sp.		Uranotaenia	
Cymbiodyta sp. Berosus sp.		Stempellinella sp. Sublettea sp.		Wyeomyia DIXIDAE	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		DOLICHOPODIDAE	
Helophorus sp.		Diamesinae		EMPIDIDAE	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp. Tropistemus sp.		Pagastia sp. Potthastia sp.		Clinocera sp. Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp		Dolichocephala sp.	
Laccobius sp.		Sympotthastia sp.		EPHYDRIDAE	
PSEPHENIDAE		Orthocladiinae	62	PELCORHYNCHIDAE	
Psephenus sp. Ectopria sp.		Brillia sp. Cardiocladius sp.		Glutops sp. PSYCHODIDAE	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
PTILODACTYLIDAE		Corynoneura sp.		Psycoda sp.	
Anchylarsus sp.		Cricotopus sp.		SIMULIDAE	
OPEPODA		Cricotopus/Orthocladius sp.		Simulium sp.	
RUSTACEA (Amphipoda- Scuds) CRANYONYCTIDAE		Diplocladius sp. Eukiefferiella sp.		Prosimulium sp. Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladius sp.		Stegoptema sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
GAMMARIDAE Gammarus sp.		Limnophyes sp. Lopescladius sp.		STRATIOMYIDAE Oxycera sp.	
HYALELLIDAE		Mesocricotopus sp.		Oxycera sp. Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		SYRPHIDAE	
RUSTACEA (Decopoda - Crayfish)		Nanocladius sp.		Chrysogaster sp.	
CAMBARIDAE PALAEMONIDAE		Orthocladinae A		Eristalis sp.	
RUSTACEA (Isopoda- Sowbugs)		Orthocladius sp. Parachaetocladius sp.		TABANIDAE Chrysops sp.	
ASELIDAE		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametriocnemus sp.		TANYDERIDAE	
Lirceus sp.		Paraphaenocladius sp.		THAUMALEIDAE	
IPTERA - True Flies ATHERICIDAE		Parasmittia sp. Paratrichocladius sp.		Thaumalea sp. TIPULIDAE	
Atherix sp.		Paratrichocladius sp. Paratrissocladius sp.		Antocha sp.	
BLEPHARICERIDAE		Psectrocladius sp.		Hexatoma sp.	
CECIDOMYIIDAE		Pseudorthocladius sp.		Leptotarsus sp.	
CERATOPOGNIDAE		Psilometriocnemus sp.		Molophilus sp.	
Alluaudomyia sp. Bezzia sp.		Rheocricotopus sp. Rheosmittia sp.		Tipula sp. Psuedolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	
		1			



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
The Glade	20030	1-A Recon	SDS/AMC	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'o
2/21/2008	12/14/2007	JAB	BAA/CAG	N/A	115
A STATE OF THE STA		THE RESIDENCE OF THE PARTY OF THE PARTY.	Dra v Ori G		110
Pedicia sp. Limonia sp.		Microvelia sp.		Paranemoura sp.	
Pilaria sp.		HIRUDINEA - Leeches HOPLONEMERTEA - Ribbon Worms		Prostoia sp. Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp. RICHOCERIDAE		Prostoma sp. LEPIDOPTERA - Moth Larvae		Alloperla sp. Haploperla sp.	
Trichocera sp.		NOCTUIDAE		Sweltsa sp.	
HEMEROPTERA - Mayflies		Archanara sp.		TAENIOPTERGIDAE	
AMELETIDAE Ameletus sp.		Bellura sp. PYRALIDAE		Strophopteryx sp. Taeniopteryx sp.	
BAETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp. Baetis sp.		Chauliodes sp. Corydalus sp.		Brachycentrus sp. CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetor sp.		SIALIDAE		DIPSEUDOPSIDAE	
BAETISCIDAE Baetisca sp.		Sialis sp. NEMATODA - Roundworms		Phylocentropus sp. GLOSSOSOMATIDAE	
CAENIDAE		NEMATOMORPHA - Horsehair Worms		Giossosoma sp.	
Caenis sp.		ODONATA (Anispotera - Dragonflies)		Agapetus sp.	
PHEMERELLIDAE Dannella sp.		AESHNIDAE Anax sp.		HELICOPSYCHIDAE	
Drunella sp.		Basiaeshna sp.		Helicopsyche sp. HYDROPSYCHIDAE	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	2
Eurylophella sp. Serratella sp.		Cordulegaster sp.		Diplectrona sp. Hydropsyche sp.	
PHEMERIDAE		CORDULIDAE		Parapysche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
HEPTAGENIIDAE Epeorus sp.		Arigomphus sp. Gomphus sp.		HYDROPTILIDAE Hydroptila sp.	
Leucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp. Stenonema sp.	4	Lanthus sp.		Ochrotrichia sp.	
EPTOPHLEBIDAE	4	Stylogomphus sp. LIBELLULIDAE		LEPIDOSTOMATIDAE Lepidostoma sp.	
Leptophlebia sp.		MACROMIIDAE		LEPTOCERIDAE	
Habrophlebia sp. Habrophlebiodes sp.		Macromia sp. PETALURIDAE		Triaenodes sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies)		Ceraclea sp. Oecetis sp.	
NEOEPHEMERIDAE		CALOPTERYGIDAE		LIMNEPHILIDAE	
LIGONEURIDAE Isonychia sp.		Calopteryx sp. COENAGRIONIDAE		Apatina sp.	
POLYMITARCYIDAE		Argia sp.		Hydatophylax sp. Ironoquia sp.	
POTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	19	MOLANNIDAE	
Siphlonurus sp. FRICORYTHIDAE		LUMBRICINA ENCHYTRAEIDAE		Molanna sp. ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
ASTROPODA - Snails ANCYLIDAE		TUBIFICIDAE LUMBRICULIDAE		PHILOPOTAMIDAE	
Ferissa sp.		POLYCHAETA - Polychaete Worms		Chimarra sp. Wormaldia sp.	
TYDROBIIDAE		AEOLOSOMATIDAE		PHRYGANEIDAE	
YMNAEIDAE Fossaria sp.		Aeolosoma sp. PLECOPTERA - Stonefly Larvae		Ptilostomis sp. POLYCENTROPIDAE	
Stagnicola sp.		PERLIDAE		Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
PHYSIDAE Physella sp.		Beloneuria sp. Eccoptura sp.		PSYCHOMYIDAE Lype sp.	
PLANORBIDAE		Neoperla sp.		Psychomyla sp.	
Menetus sp.		Perlesta sp.		RHYACOPHILIDAE	
Gyraulus sp. PLEUROCERIDAE		Perlinella sp. PERLODIDAE		Ryacophila sp. UENOIDAE	
/IVIPARIDAE		Clioperla sp.		Neophylax sp.	
Viviparus sp. PLOSCLERIDA		Diploperla sp.		TUBELLARIA - Flatworms PLANARIIDAE	
SPONGILLIDAE		Isoperla sp. Cultus sp.		DENDROCOELIDAE	
MIPTERA - True Bugs		PTERONARCYIDAE		COLLEMBOLA - Springtails	
BELOSTOMATIDAE		Pteronarcys sp.		ISOTOMURIDAE	
Belostoma sp. .ethocerus sp.		PELTOPERLIDAE Peltoperia sp.		Isotomurus sp.	
ORIXIDAE		LEUCTRIDAE			
RELASTOCORIDAE		Leuctra sp.			
ERRIDAE Trepobates sp.		Zealuectra sp. Paraleuctra sp.			
EBRIDAE		CAPNIDAE			
IYDROMETRIDAE MESOVELIIDAE		Allocapnia sp.			
IESOVELIIDAE IEPIDAE		Paracapnia sp. NEMOURIDAE			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp			
ELIIDAE		Nemoura sp.			



WSSI BENTHIC MACROINVERTEBRATE I.D. AND ENUMERATION BENCH SHEET*

Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
The Glade	20030	1-B Recon	SDS/AMC	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
2/28/2008	4/16/2007	JAB	BAA	N/A	154
VALVIA - Clams		Forcipomyla sp.		Synorthocladius sp.	
PHAERIDAE		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.	**	Sphaeromias sp.		Tvetenia sp.	
Pisidium sp. Musculium sp.	51	Stilobezzia sp. CHAOBORIDAE		Unniella sp. Xylotopus sp.	
CORBICULIDAE		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		CHIRONOMIDAE	5	Tanypodinae	11
INIONIDAE		Chironominae		Ablabesmyia sp.	
ANCHIOBDELLIDA RANCHIOBDELLIDAE		Chironomini Chironomus sp.	18	Alotanypus sp.	
ETRASTEMMATIDAE		Cryptochironomus sp.		Apsectrotanypus sp. Clinotanypus sp.	
DLEOPTERA - Beetles		Cryptotendipes sp.		Conchapelopia sp.	
ANTHERIDAE		Demicryptochironomus sp.		Guttipelopia sp.	
CURCULIONIDAE		Dicrotendipes sp. Einteldia sp.		Krenopelopia sp.	
Helichus sp.		Enfeida sp. Endochironomus sp.		Labrundinia sp. Larsia sp.	
YTISCIDAE		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporous sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp. Dreodytes sp.		Nilothauma sp. Pagastiella sp.		Pentaneura sp. Procladius sp.	
accomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Oytiscus sp.		Paracladopelma sp.		Rheopelopia sp.	
LMIDAE		Paratendipes sp. 5		Tanypus sp.	
Microcylloepus sp. Optioservus sp.		Phaenopsectra sp. Polypedilum sp.		Thienemannimyia gp. Thienemannimyia sp.	
Stenelmis sp.	1	Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		CULICIDAE	
Dubiraphia sp. Ancyronyx sp.		Zavreliella sp. Tanytarsini	5	Aedes Anopheles	
Oulimnius sp.		Cladotanytarsus sp.	0	Culex	
YRINIDAE		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus HALIPIDAE		Micropsectra/Tanysarsus complex Paratanytarsus sp.		Orthopodomyia	
Halipus sp.		Rheotanytarsus sp.		Psorophora Toxorhynchites	
TYDROPHILIDAE		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		DIXIDAE	
Derallus sp. Helochares sp.		Tanytarsus sp. Zavrelia sp.		Dixa sp. DOLICHOPODIDAE	
Helophorus sp.		Diamesinae		EMPIDIDAE	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropistemus sp. Hydrobius sp.		Potthastia sp. Prodiamesa sp		Hemerodromia sp.	
Laccobius sp.		Sympotthastia sp.		Dolichocephala sp. EPHYDRIDAE	
PSEPHENIDAE		Orthocladiinae	12	PELCORHYNCHIDAE	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		PSYCHODIDAE	
Dicranopselaphus sp. PTILODACTYLIDAE		Chaetocladius sp. Corynoneura sp.		Pericoma sp. Psycoda sp.	
Anchytarsus sp.		Cricotopus sp.		SIMULIDAE	
PEPODA		Cricotopus/Orthocladius sp.		Simulium sp.	
RUSTACEA (Amphipoda- Scuds)		Diplocladius sp.		Prosimulium sp.	
CRANYONYCTIDAE Stygonectes sp.		Eukiefferiella sp. Heleniella sp.		Cnephia sp.	
Crangonyx sp.	25	Heterotrissocladius sp.		Twinia sp. Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
AMMARIDAE		Limnophyes sp.		STRATIOMYIDAE	
Gammarus sp. IYALELLIDAE		Lopescladius sp. Mesocricotopus sp.		Oxycera sp. Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		SYRPHIDAE	
RUSTACEA (Decopoda - Crayfish)		Nanocladius sp.		Chrysogaster sp.	
CAMBARIDAE		Orthocladinae A		Eristalis sp.	
PALAEMONIDAE RUSTACEA (Isopoda- Sowbugs)		Orthocladius sp.		TABANIDAE	
SELIDAE		Parachaetocladius sp. Parakiefferiella sp.		Chrysops sp. Tabanus sp.	
Caecidotea sp.		Parametriocnemus sp.		TANYDERIDAE	
Lirceus sp.		Paraphaenocladius sp.		THAUMALEIDAE	
TERA - True Flies THERICIDAE		Parasmittia sp.		Thaumalea sp.	
Atherix sp.		Paratrichocladius sp. Paratrissocladius sp.		TIPULIDAE Antocha sp.	
LEPHARICERIDAE		Psectrocladius sp.		Hexatoma sp.	
ECIDOMYIIDAE		Pseudorthocladius sp.		Leptotarsus sp.	
ERATOPOGNIDAE		Psilometriocnemus sp.		Molophilus sp.	
Alluaudomyia sp. Bezzia sp.		Rheocricotopus sp. Rheosmittia sp.		Tipula sp. Psuedolimnophila sp.	
Ceratopogon sp.	2	Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
The Glade	20030	1-B Recon	SDS/AMC	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID's
2/28/2008	4/16/2007	JAB	BAA	N/A	154
Pedicia sp. Imonia sp.		Microvelia sp. HIRUDINEA - Leeches		Paranemoura sp. Prostoia sp.	
Pilaria sp.		HOPLONEMERTEA - Ribbon Worms		Shipsa sp.	
rioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp. RICHOCERIDAE		Prostoma sp. LEPIDOPTERA - Moth Larvae		Alloperla sp. Haploperla sp.	
richocera sp.		NOCTUIDAE		Sweltsa sp.	
HEMEROPTERA - Mayflies		Archanara sp.		TAENIOPTERGIDAE	
MELETIDAE Ameletus sp.		Bellura sp. PYRALIDAE		Strophopteryx sp. Taeniopteryx sp.	
AETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp. Baetis sp.		Chauliodes sp. Corydalus sp.		Brachycentrus sp. CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetor sp.		SIALIDAE		DIPSEUDOPSIDAE	
AETISCIDAE		Sialis sp.		Phylocentropus sp.	
Aenibae		NEMATODA - Roundworms NEMATOMORPHA - Horsehair Worms		GLOSSOSOMATIDAE Glossosoma sp.	
Caenis sp.		ODONATA (Anispotera - Dragonflies)		Agapetus sp.	
PHEMERELLIDAE		AESHNIDAE		HELICOPSYCHIDAE	
annella sp.		Anax sp. Basiaeshna sp.		Helicopsyche sp. HYDROPSYCHIDAE	
phemerella sp.		Boyeria sp.	1	Cheumatopsyche sp.	1
urylophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
PHEMERIDAE		Cordulegaster sp. CORDULIIDAE		Hydropsyche sp. Parapysche sp.	
phemera sp.		GOMPHIDAE		Potamyia sp.	
EPTAGENIIDAE		Arigomphus sp.		HYDROPTILIDAE	
peorus sp.		Gomphus sp.		Hydroptila sp.	
eucrocuta sp. denacron sp.		Hagenius sp. Lanthus sp.		Leucotrichia sp. Ochrotrichia sp.	
stenonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
EPTOPHLEBIDAE		LIBELLULIDAE		Lepidostoma sp.	
eptophlebia sp. łabrophlebia sp.		MACROMIIDAE Macromia sp.		LEPTOCERIDAE Triaenodes sp.	
labrophlebiodes sp.		PETALURIDAE		Ceraclea sp.	
araleptophlebia sp.		ODONATA Zygoptera - Damselflies)		Oecetis sp.	
EOEPHEMERIDAE LIGONEURIDAE		CALOPTERYGIDAE Calopteryx sp.		LIMNEPHILIDAE Apatina sp.	
sonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
OLYMITARCYIDAE		Argia sp.		Ironoquia sp.	
OTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
IPHLONEURIDAE Siphlonurus sp.		OLIGOCHAETA - Oligochaete Worms LUMBRICINA	19	MOLANNIDAE Molanna sp.	
RICORYTHIDAE		ENCHYTRAEIDAE		ODONTOCERIDAE	
ricorythodes sp.		NAIDIDAE		Psilotreta sp.	
STROPODA - Snails NCYLIDAE		TUBIFICIDAE LUMBRICULIDAE		PHILOPOTAMIDAE Chimarra sp.	
erissa sp.		POLYCHAETA - Polychaete Worms		Wormaldia sp.	
YDROBIIDAE		AEOLOSOMATIDAE		PHRYGANEIDAE	
YMNAEIDAE ossaria sp.		Aeolosoma sp. PLECOPTERA - Stonefly Larvae		Ptilostomis sp. POLYCENTROPIDAE	
tagnicola sp.		PERLIDAE		Cyrnellus sp.	
seudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
HYSIDAE Physella sp.	1	Beloneuria sp. Eccoptura sp.		PSYCHOMYIDAE Lype sp.	
LANORBIDAE		Neoperia sp.		Psychomyia sp.	
lenetus sp.		Perlesta sp.		RHYACOPHILIDAE	
yraulus sp. LEUROCERIDAE	2	Perlinella sp. PERLODIDAE		Ryacophila sp. UENOIDAE	
VIPARIDAE		Clioperla sp.		Neophylax sp.	
iviparus sp.		Diploperla sp.		TUBELLARIA - Flatworms	
PLOSCLERIDA PONGILLIDAE		Isoperla sp.		PLANARIDAE	
MIPTERA - True Bugs		Cultus sp. PTERONARCYIDAE		DENDROCOELIDAE COLLEMBOLA - Springtails	
ELOSTOMATIDAE		Pteronarcys sp.		ISOTOMURIDAE	
elostoma sp.		PELTOPERLIDAE		Isotomurus sp.	
othocerus sp. DRIXIDAE		Peltoperia sp. LEUCTRIDAE			
ELASTOCORIDAE		Leuctra sp.			
ERRIDAE		Zealuectra sp.			
repobates sp. EBRIDAE		Paraleuctra sp. CAPNIDAE			
YDROMETRIDAE		Allocapnia sp.			
ESOVELIIDAE		Paracapnia sp.			
EPIDAE		NEMOURIDAE			
Nepa sp. Ranatra sp.		Amphinemura sp. Ostrocerca sp			
ELIIDAE		Nemoura sp.			
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WSSI BENTHIC MACROINVERTEBRATE I.D. AND ENUMERATION BENCH SHEET*

Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
The Glade	20030	1-C Recon	SDS/AMC	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'o
2/21/2008	12/11/2007	BNR	JMT	N/A	541
VALVIA - Clams		Forcipomyla sp.		Synorthocladius sp.	
SPHAERIDAE		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculium sp. CORBICULIDAE		CHAOBORIDAE Chaborus sp.		Xylotopus sp.	
Corbicula fluminea sp.		Chaporus sp. CHIRONOMIDAE	35	Zalutschia sp. Tanypodinae	
UNIONIDAE		Chironominae	218	Ablabesmyla sp.	
RANCHIOBDELLIDA		Chironomini		Alotanypus sp.	
BRANCHIOBDELLIDAE		Chironomus sp.		Apsectrotanypus sp.	
TETRASTEMMATIDAE		Cryptochironomus sp.		Clinotanypus sp.	
DLEOPTERA - Beetles CANTHERIDAE		Cryptotendipes sp.		Conchapelopia sp.	
CURCULIONIDAE		Demicryptochironomus sp. Dicrotendipes sp.		Guttipelopia sp. Krenopelopia sp.	
DRYOPIDAE		Einfeldia sp.		Labrundinia sp.	
Helichus sp.	1	Endochironomus sp.		Larsia sp.	
DYTISCIDAE		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporous sp. Coptotomus sp.		Microtendipes sp. Nilothauma sp.		Paramerina sp. Pentaneura sp.	
Oreodytes sp.		Pagastiella sp.		Procladius sp.	
Laccomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopelopia sp.	
Moreadeepus en		Paratendipes sp.		Tanypus sp.	
Microcylloepus sp. Optioservus sp.		Phaenopsectra sp. Polypedilum sp.		Thienemannimyla gp. Thienemannimyla sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		CULICIDAE	
Dubiraphia sp.		Zavreliella sp.		Aedes	
Ancyronyx sp. Oulimnius sp.		Tanytarsini Cladotanytarsus sp.		Anopheles Culex	
GYRINIDAE		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanysarsus complex		Orthopodomyia	
HALIPIDAE		Paratanytarsus sp.		Psorophora	
Halipus sp. HYDROPHILIDAE		Rheotanytarsus sp. Stempellina sp.		Toxorhynchites Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		DIXIDAE	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		DOLICHOPODIDAE	
Helophorus sp.		Diamesinae		EMPIDIDAE	
Hydrophilus sp. Hydrochus sp.		Diamesa sp. Pagastia sp.		Chelifera sp. Clinocera sp.	
Tropistemus sp.		Potthastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp		Dolichocephala sp.	
Laccobius sp.		Sympotthastia sp.		EPHYDRIDAE	
PSEPHENIDAE		Orthocladiinae		PELCORHYNCHIDAE	
Psephenus sp. Ectopria sp.		Brillia sp. Cardiocladius sp.		Glutops sp. PSYCHODIDAE	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
PTILODACTYLIDAE		Corynoneura sp.		Psycoda sp.	
Anchytarsus sp.		Cricotopus sp.		SIMULIDAE	
OPEPODA CONTROL CONTRO		Cricotopus/Orthocladius sp.		Simulium sp.	
RUSTACEA (Amphipoda- Scuds) CRANYONYCTIDAE		Diplocladius sp. Eukiefferiella sp.		Prosimulium sp. Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladius sp.		Stegoptema sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
GAMMARIDAE Gammarus sp		Limnophyes sp.		STRATIOMYIDAE	
Gammarus sp. HYALELLIDAE		Lopescladius sp. Mesocricotopus sp.		Oxycera sp. Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		SYRPHIDAE	
RUSTACEA (Decopoda - Crayfish)		Nanocladius sp.		Chrysogaster sp.	
CAMBARIDAE		Orthocladinae A		Eristalis sp.	
PALAEMONIDAE RUSTACEA (Isopoda- Sowbugs)		Orthocladius sp. Parachaetocladius sp.		TABANIDAE	
ASELIDAE		Parachaetocladius sp. Parakiefferiella sp.		Chrysops sp. Tabanus sp.	
Caecidotea sp.		Parametriocnemus sp.		TANYDERIDAE	
Lirceus sp.		Paraphaenocladius sp.		THAUMALEIDAE	
PTERA - True Flies	1	Parasmittia sp.		Thaumalea sp.	
ATHERICIDAE		Paratrichocladius sp.		TIPULIDAE	
Atherix sp. BLEPHARICERIDAE		Paratrissociadius sp. Psectrocladius sp.		Antocha sp. Hexatoma sp.	
CECIDOMYIIDAE		Pseudorthocladius sp.		Leptotarsus sp.	
CERATOPOGNIDAE		Psilometriocnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Psuedolimnophila sp.	
Ceratopogon sp. Culicoides sp.		Smittia sp. Stilocladius sp.		Dicranota sp. Limnophila sp.	
Dasyhelea sp.		Stilociadius sp. Symposiocladius sp.		Ormosia sp.	
		7.7		-///	



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
The Glade	20030	1-C Recon	SDS/AMC	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'o
2/21/2008	12/11/2007	BNR	JMT	N/A	541
				1973	041
Pedicia sp. imonia sp.		Microvelia sp. HIRUDINEA - Leeches		Paranemoura sp. Prostoia sp.	
Pilaria sp.		HOPLONEMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp. RICHOCERIDAE		Prostoma sp. LEPIDOPTERA - Moth Larvae		Alloperia sp. Haploperia sp.	
Trichocera sp.		NOCTUIDAE		Sweltsa sp.	
HEMEROPTERA - Mayflies MELETIDAE		Archanara sp. Bellura sp.		TAENIOPTERGIDAE	
Ameletus sp.		PYRALIDAE		Strophopteryx sp. Taeniopteryx sp.	
BAETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp. Acerpenna sp.		CORYDALIDAE Chauliodes sp.		BRACHYCENTRIDAE Brachycentrus sp.	
Baetis sp.		Corydalus sp.		CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetor sp.		SIALIDAE Sialis sp.		DIPSEUDOPSIDAE Phylocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
AENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp. PHEMERELLIDAE		ODONATA (Anispotera - Dragonflies) AESHNIDAE		Agapetus sp. HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Orunella sp.		Basiaeshna sp.		HYDROPSYCHIDAE	
Ephemerella sp. Eurylophella sp.		Boyeria sp. CORDULEGASTRIDAE		Cheumatopsyche sp. Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
PHEMERIDAE		CORDULIDAE		Parapysche sp.	
Ephemera sp. IEPTAGENIIDAE		GOMPHIDAE Arigomphus sp.		Potamyia sp. HYDROPTILIDAE	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
_eucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp. Stenonema sp.		Lanthus sp. Stylogomphus sp.		Ochrotrichia sp. LEPIDOSTOMATIDAE	
EPTOPHLEBIDAE		LIBELLULIDAE		Lepidostoma sp.	
eptophlebia sp.		MACROMIDAE		LEPTOCERIDAE	
Habrophlebia sp. Habrophlebiodes sp.		Macromia sp. PETALURIDAE		Triaenodes sp. Ceraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies)		Oecetis sp.	
LIGONEURIDAE		CALOPTERYGIDAE		LIMNEPHILIDAE	
sonychia sp.		Calopteryx sp. COENAGRIONIDAE		Apatina sp. Hydatophylax sp.	
POLYMITARCYIDAE		Argia sp.		Ironoquia sp.	
POTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
SIPHLONEURIDAE Siphlonurus sp.		OLIGOCHAETA - Oligochaete Worms LUMBRICINA		MOLANNIDAE Molanna sp.	
RICORYTHIDAE		ENCHYTRAEIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
ASTROPODA - Snails		TUBIFICIDAE LUMBRICULIDAE	273	PHILOPOTAMIDAE Chimarra sp.	
Ferissa sp.		POLYCHAETA - Polychaete Worms	270	Wormaldia sp.	
YDROBIDAE		AEOLOSOMATIDAE		PHRYGANEIDAE	
YMNAEIDAE Fossaria sp.		Aeolosoma sp. PLECOPTERA - Stonefly Larvae	1	Ptilostomis sp. POLYCENTROPIDAE	
Stagnicola sp.		PERLIDAE		Cymellus sp.	
Pseudosuccinea sp. HYSIDAE		Acroneuria sp. Beloneuria sp.		Polycentropus sp. PSYCHOMYIDAE	
Physella sp.	1	Eccoptura sp.		Lype sp.	
LANORBIDAE		Neoperla sp.		Psychomyia sp.	
Menetus sp. Gyraulus sp.		Perlesta sp. Perlinella sp.		RHYACOPHILIDAE Ryacophila sp.	
LEUROCERIDAE		PERLODIDAE		UENOIDAE	
/IVIPARIDAE /iviparus sp.		Clioperla sp.		Neophylax sp.	
PLOSCLERIDA		Diploperla sp. Isoperla sp.		TUBELLARIA - Flatworms PLANARIIDAE	
PONGILLIDAE		Cultus sp.		DENDROCOELIDAE	
MIPTERA - True Bugs		PTERONARCYIDAE		COLLEMBOLA - Springtails	
Belostoma sp.		Pteronarcys sp. PELTOPERLIDAE		ISOTOMURIDAE Isotomurus sp.	
ethocerus sp.		Peltoperla sp.		isotomards ap.	
ORIXIDAE		LEUCTRIDAE			
ELASTOCORIDAE ERRIDAE		Leuctra sp. Zealuectra sp.			
Trepobates sp.		Paraleuctra sp.			
EBRIDAE		CAPNIDAE			
YDROMETRIDAE IESOVELIIDAE		Allocapnia sp. Paracapnia sp.			
IEPIDAE		NEMOURIDAE			
Nepa sp.		Amphinemura sp.	10		
Ranatra sp. ELIIDAE		Ostrocerca sp Nemoura sp.			
	-	Page 2			



WSSI BENTHIC MACROINVERTEBRATE I.D. AND ENUMERATION BENCH SHEET* Site WSSI# Reach Collectors # Jars in Sample Total No. Organisms Sorted SDS/AMC The Glade 20030 1-A # Grids in Subsample Date ID'd **Date Sorted** Taxonomist Sorter Total No. Organisms ID'd 4/17/2007 11/29/2007 CAG AMC 13 115 BIVALVIA - Clam SPHAERIDAE Synorthocladius sp. Forcipomyia sp. Probezzia sp. Thienemanniella sp Sphaerium sp. Pisidium sp. Tvetenia sp. Unniella sp. Stilobezzia sp. CHAOBORIDAE Xylotopus sp. Zalutschia sp. CORBICULIDAE CHIRONOMIDAE 55 bicula fluminea sp Tanypodinae LINIONIDAE Chironominae Ablabesmyia sp. BRANCHIOBDELLIDA BRANCHIOBDELLIDAE TETRASTEMMATIDAE Chironomini Alotanypus sp. Chironomus sp. Apsectrotanypus sp Cryptochironomus sp Clinotanypus sp. COLEOPTERA - Bee Cryptotendipes sp. Conchapelopia sp CANTHERIDAE Demicryptochironomus sp. Guttipelopia sp. CURCULIONIDAE Dicrotendipes sp. Krenopelopia sp. DRYOPIDAE Einfeldia sp. Endochironomus sp Labrundinia sp Helichus sp. DYTISCIDAE Larsia sp. Glyptotendipes sp. Macropelopia sp. Meropelopia sp. Agabus sp. Kiefferulus sp. Hydroporous sp. Microtendipes sp. Paramerina sp Coptotomus sp. Oreodytes sp. Pagastiella sp. Procladius sp. Psectrotanypus sp. Laccomis sp Parachironomus sp. Dytiscus sp. ELMIDAE Paracladopelma sp. Rheopelopia sp. Paratendipes sp. Tanypus sp Phaenopsectra sp Thienemannimyia gp. Microcylloepus sp. Optioservus sp. Polypedilum sp. Thienemannimyia sp Stenelmis sp Stenochironomus sp. Promoresia sp. Stictochironomus sp. Zavrelimyia sp. CULICIDAE Macronychus sp Tribelos sp. Dubiraphia sp Zavreliella sp. Tanytarsini Aedes Anopheles Ancyronyx sp. Outimnius sp. GYRINIDAE Cladotanytarsus sp. Culiseta Micropsectra sp. Micropsectra/Tanysarsus complex Dineutus Mansonia Orthopodomyia HALIPIDAE Paratanytarsus sp Psorophora Rheotanytarsus sp. Toxorhynchites Halipus sp. HYDROPHILIDAE Stempellina sp. Uranotaenia Stempellinella sp Wyeomyia DIXIDAE Berosus sp. Sublettea sp. Derallus sp. Helochares sp. Tanytarsus sp Zavrelia sp. Dixa sp. DOLICHOPODIDAE Helophorus sp Diamesinae EMPIDIDAE Chelifera sp. Hydrophilus sp. Diamesa sp. Clinocera sp. Hemerodromia sp. Hydrochus sp Tropistemus sp. otthastia sp. Prodiamesa sp Dolichocephala sp Sympotthastia sp. Orthocladiinae **EPHYDRIDAE PSEPHENIDAE** PELCORHYNCHIDAE Psephenus sp Brillia sp. Cardiocladius sp. Glutops sp. PSYCHODIDAE Ectopria sp. Pericoma sp. Psycoda sp. SIMULIDAE Chaetocladius sp Dicranopselaphus s PTILODACTYLIDAE Corynoneura sp. Anchytarsus sp Cricotopus sp. Cricotopus/Orthocladius sp Simulium sp. Diplocladius sp. Prosimulium sp Eukiefferiella sp CRANGONYCTIDAE Stygonectes sp. Heleniella sp. Twinia sp. Heterotrissocladius sp. Hydrobaenus sp. Crangonyx sp. Stegopterna sp. STRATIOMYIDAE GAMMARIDAE Limnophyes sp. Oxycera sp. HYALELLIDAE Mesocricotopus sp. Hyalella sp. CRUSTACEA (Decopoda - Crayfish) Mesosmittia sp SYRPHIDAE Nanocladius sp. Chrysogaster sp CAMBARIDAE Orthocladinae A PAI AEMONIDAE Orthocladius sp. TABANIDAE Chrysops sp. Tabanus sp. TANYDERIDAE CRUSTACEA (Isopo Parachaetocladius sp Parakiefferiella sp. ASELIDAE Caecidotea sp Parametriocnemus sp. Paraphaenocladius sp. THAUMALEIDAE Parasmittia sp. Paratrichocladius sp Thaumalea sp TIPULIDAE ATHERICIDAE Atherix sp. BLEPHARICERIDAE Paratrissociadius sp. Antocha sp. Psectrocladius sp. CECIDOMYIIDAE Leptotarsus sp Pseudorthocladius sp CERATOPOGNIDAE Psilometriocnemus sp. Rheocricotopus sp. Rheosmittia sp. Molophilus sp. Alluaudomyia sp. Bezzia sp. Tipula sp. Psuedolimnophila sp

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Stilocladius sp.

Symposiocladius sp

Dicranota sp.

Limnophila sp.

Ormosia sp.

Ceratopogon sp.

Culicoides sp.

Dasyhelea sp.



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
The Glade	20030	1-A	SDS/AMC	1	120
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID's
11/29/2007	4/17/2007	CAG	AMC	13	115
		AND THE RESIDENCE AND THE PARTY OF THE PARTY			
Pedicia sp. Imonia sp.		Microvelia sp. HIRUDINEA - Leeches		Paranemoura sp. Prostoia sp.	
Pilaria sp.		HOPLONEMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
RICHOCERIDAE Trichocera sp.		NOCTUIDAE		Haploperla sp.	
HEMEROPTERA - Mayflies		Archanara sp.		Sweltsa sp. TAENIOPTERGIDAE	
MELETIDAE		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taeniopteryx sp.	
BAETIDAE	5	MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp. Acerpenna sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Baetis sp.		Chauliodes sp. Corydalus sp.		Brachycentrus sp. CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetor sp.		SIALIDAE		DIPSEUDOPSIDAE	
AETISCIDAE		Sialis sp.		Phylocentropus sp.	
Aenica sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
Caenis sp.		NEMATOMORPHA - Horsehair Worms ODONATA (Anispotera - Dragonflies)		Glossosoma sp.	
PHEMERELLIDAE		AESHNIDAE		Agapetus sp. HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Basiaeshna sp.		HYDROPSYCHIDAE	10
phemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp. Berratella sp.		CORDULEGASTRIDAE Cordulegaster sp.		Diplectrona sp. Hydropsyche sp.	
PHEMERIDAE		CORDULIDAE		Parapysche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
IEPTAGENIIDAE	20	Arigomphus sp.		HYDROPTILIDAE	
peorus sp.		Gomphus sp.		Hydroptila sp.	
_eucrocuta sp. Stenacron sp.		Hagenius sp. Lanthus sp.		Leucotrichia sp. Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
EPTOPHLEBIDAE		LIBELLULIDAE		Lepidostoma sp.	
_eptophlebia sp.		MACROMIDAE		LEPTOCERIDAE	
dabrophlebia sp.		Macromia sp.		Triaenodes sp.	
Habrophlebiodes sp. Paraleptophlebia sp.		PETALURIDAE ODONATA Zygoptera - Damselflies)		Ceraclea sp. Oecetis sp.	
IEOEPHEMERIDAE		CALOPTERYGIDAE	2	LIMNEPHILIDAE	
LIGONEURIDAE		Calopteryx sp.		Apatina sp.	
sonychia sp.		COENAGRIONIDAE	3	Hydatophylax sp.	
OLYMITARCYIDAE		Argia sp.		Ironoquia sp.	
OTAMANTHIDAE IPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	4	Pycnopsyche sp. MOLANNIDAE	
Siphlonurus sp.		LUMBRICINA	4	Molanna sp.	
RICORYTHIDAE		ENCHYTRAEIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
STROPODA - Snalls		TUBIFICIDAE	1	PHILOPOTAMIDAE	
NCYLIDAE		LUMBRICULIDAE		Chimarra sp.	
Ferissa sp. IYDROBIIDAE		POLYCHAETA - Polychaete Worms AEOLOSOMATIDAE		Wormaldia sp. PHRYGANEIDAE	
YMNAEIDAE		Aeolosoma sp.		Ptilostomis sp.	
ossaria sp.		PLECOPTERA - Stonefly Larvae		POLYCENTROPIDAE	
Stagnicola sp.		PERLIDAE		Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp. Beloneuria sp.		Polycentropus sp. PSYCHOMYIDAE	
Physella sp.		Eccoptura sp.		Lype sp.	
LANORBIDAE		Neoperla sp.		Psychomyia sp.	
Menetus sp.		Perlesta sp.		RHYACOPHILIDAE	
Syraulus sp.		Perlinella sp.		Ryacophila sp.	
LEUROCERIDAE IVIPARIDAE		PERLODIDAE Clioperla sp.		UENOIDAE Nacobiday so	
/iviparus sp.		Diploperia sp.		Neophylax sp. TUBELLARIA - Flatworms	
PLOSCLERIDA		Isoperla sp.		PLANARIDAE	
PONGILLIDAE		Cultus sp.		DENDROCOELIDAE	
MIPTERA - True Bugs		PTERONARCYIDAE			
ELOSTOMATIDAE elostoma sp.		Pteronarcys sp.			
ethocerus sp.		PELTOPERLIDAE Peltoperla sp.			
ORIXIDAE		LEUCTRIDAE			
ELASTOCORIDAE		Leuctra sp.			
ERRIDAE		Zealuectra sp.			
repobates sp. EBRIDAE		Paraleuctra sp.			
YDROMETRIDAE		CAPNIDAE Allocapnia sp.			
ESOVELIIDAE		Paracapnia sp.			
EPIDAE		NEMOURIDAE	1		
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp			
ELIIDAE		Nemoura sp.		-	



Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
The Glade	20030	1-B	SDS/AMC	1-B	132
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'
1/22/2008	1/21/2008	SDS/JDF	JDF	18	126
VALVIA - Clams					100
SPHAERIDAE	6	Forcipomyia sp. Probezzia sp.		Synorthocladius sp. Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculium sp.		CHAOBORIDAE		Xylotopus sp.	
CORBICULIDAE		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp. UNIONIDAE		CHIRONOMIDAE Chironominae	78	Tanypodinae	
RANCHIOBDELLIDA		Chironominae		Ablabesmyia sp. Alotanypus sp.	
BRANCHIOBDELLIDAE		Chironomus sp.		Apsectrotanypus sp.	
TETRASTEMMATIDAE		Cryptochironomus sp.		Clinotanypus sp.	
DLEOPTERA - Beetles		Cryptotendipes sp.		Conchapelopia sp.	
CANTHERIDAE		Demicryptochironomus sp.		Guttipelopia sp.	
CURCULIONIDAE		Dicrotendipes sp.		Krenopelopia sp.	
DRYOPIDAE		Einfeldia sp.		Labrundinia sp.	
Helichus sp. DYTISCIDAE		Endochironomus sp. Glyptotendipes sp.		Larsia sp.	
Agabus sp.		Kiefferulus sp.		Macropelopia sp. Meropelopia sp.	
Hydroporous sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastiella sp.		Procladius sp.	
Laccomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp. ELMIDAE		Paratendines sp.		Rheopelopia sp.	
Microcylloepus sp.		Paratendipes sp. 5		Tanypus sp. Thienemannimyia gp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia gp. Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		CULICIDAE	
Dubiraphia sp.		Zavreliella sp.		Aedes	
Ancyronyx sp. Oulimnius sp.		Tanytarsini Cladotanytarsus sp.		Anopheles Culex	
GYRINIDAE		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanysarsus complex		Orthopodomyia	
HALIPIDAE		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
HYDROPHILIDAE		Stempellina sp.		Uranotaenia	
Cymbiodyta sp. Berosus sp.		Stempellinella sp. Sublettea sp.		Wyeomyia DIXIDAE	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		DOLICHOPODIDAE	
Helophorus sp.		Diamesinae		EMPIDIDAE	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp. Hydrobius sp.		Potthastia sp.		Hemerodromia sp.	
Laccobius sp.		Prodiamesa sp Sympotthastia sp.		Dolichocephala sp. EPHYDRIDAE	
PSEPHENIDAE		Orthocladinae		PELCORHYNCHIDAE	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		PSYCHODIDAE	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
PTILODACTYLIDAE		Corynoneura sp.		Psycoda sp.	
Anchytarsus sp. DPEPODA		Cricotopus sp.		SIMULIDAE	1
RUSTACEA (Amphipoda- Scuds)		Cricotopus/Orthocladius sp. Diplocladius sp.		Simulium sp. Prosimulium sp.	
CRANGONYCTIDAE	7	Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladius sp.		Stegoptema sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
GAMMARIDAE		Limnophyes sp.		STRATIOMYIDAE	
Gammarus sp. HYALELLIDAE		Lopescladius sp. Mesocricotopus sp.		Oxycera sp. Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		SYRPHIDAE	
RUSTACEA (Decopoda - Crayfish)		Nanocladius sp.		Chrysogaster sp.	
CAMBARIDAE		Orthocladinae A		Eristalis sp.	
PALAEMONIDAE		Orthocladius sp.		TABANIDAE	
RUSTACEA (Isopoda- Sowbugs)		Parachaetocladius sp.		Chrysops sp.	
ASELIDAE Cassidates en		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp. Lirceus sp.		Parametriocnemus sp.		TANYDERIDAE THAUMALEIDAE	
PTERA - True Flies		Paraphaenocladius sp. Parasmittia sp.		Thaumalea sp.	
ATHERICIDAE		Paratrichocladius sp.		TIPULIDAE	1
Atherix sp.		Paratrissociadius sp.		Antocha sp.	1
BLEPHARICERIDAE		Psectrocladius sp.		Hexatoma sp.	
CECIDOMYIIDAE		Pseudorthocladius sp.		Leptotarsus sp.	
ERATOPOGNIDAE		Psilometriocnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp. Ceratopogon sp.		Rheosmittia sp. Smittia sp.		Psuedolimnophila sp.	
Culicoides sp.		Stilocladius sp.		Dicranota sp. Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	
		The second second			



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sor
The Glade	20030	1-B	SDS/AMC	1-B	132
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID
1/22/2008	1/21/2008	SDS/JDF	JDF	18	126
odicia sp.		Microvelia sp.		Paranemoura sp.	
monia sp.		HIRUDINEA - Leeches		Prostoia sp.	
laria sp.		HOPLONEMERTEA - Ribbon Worms		Shipsa sp.	
rioptera sp. habdomastix sp.		Prostoma sp.		CHLOROPERLIDAE	
ICHOCERIDAE		LEPIDOPTERA - Moth Larvae		Alloperia sp. Haploperia sp.	
richocera sp.		NOCTUIDAE		Sweltsa sp.	
IEMEROPTERA - Mayflies		Archanara sp.		TAENIOPTERGIDAE	
ELETIDAE		Bellura sp.		Strophopteryx sp.	
neletus sp. ETIDAE	40	PYRALIDAE		Taeniopteryx sp.	
entrella sp.	13	MEGALOPTERA - Dobsonflies CORYDALIDAE	1	TRICHOPTERA - Caddisflies BRACHYCENTRIDAE	
erpenna sp.		Chauliodes sp.		Brachycentrus sp.	
etis sp.		Corydalus sp.		CALAMOCERATIDAE	
entroptilum sp.		Nigronia sp.		Heteroplectron sp.	
ohetor sp.		SIALIDAE		DIPSEUDOPSIDAE	
ETISCIDAE etisca sp.		Sialis sp. NEMATODA - Roundworms		Phylocentropus sp. GLOSSOSOMATIDAE	
ENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
enis sp.		ODONATA (Anispotera - Dragonflies)		Agapetus sp.	
HEMERELLIDAE		AESHNIDAE	1	HELICOPSYCHIDAE	
nnella sp.		Anax sp.		Helicopsyche sp.	
unella sp. hemerella sp.		Basiaeshna sp. Boyeria sp.		HYDROPSYCHIDAE Chaumatananaha an	
rylophella sp.		CORDULEGASTRIDAE		Cheumatopsyche sp. Diplectrona sp.	
rratella sp.		Cordulegaster sp.		Hydropsyche sp.	
HEMERIDAE		CORDULIDAE		Parapysche sp.	
hemera sp.		GOMPHIDAE		Potamyia sp.	
PTAGENIDAE		Arigomphus sp. Gomphus sp.		HYDROPTILIDAE	
eorus sp. ucrocuta sp.		Hagenius sp.		Hydroptila sp. Leucotrichia sp.	
enacron sp.		Lanthus sp.		Ochrotrichia sp.	
enonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
PTOPHLEBIDAE		LIBELLULIDAE		Lepidostoma sp.	
ptophlebia sp. brophlebia sp.		MACROMIIDAE Macromia sp.		LEPTOCERIDAE	
brophlebiodes sp.		PETALURIDAE		Triaenodes sp. Ceraclea sp.	
raleptophlebia sp.		ODONATA Zygoptera - Damselflies)		Oecetis sp.	
OEPHEMERIDAE		CALOPTERYGIDAE	1	LIMNEPHILIDAE	1
GONEURIDAE		Calopteryx sp.		Apatina sp.	
nychia sp. LYMITARCYIDAE		COENAGRIONIDAE		Hydatophylax sp.	
TAMANTHIDAE		Argia sp. LESTIDAE		Ironoquia sp. Pycnopsyche sp.	
HLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	5	MOLANNIDAE	
hlonurus sp.		LUMBRICINA		Molanna sp.	
CORYTHIDAE		ENCHYTRAEIDAE		ODONTOCERIDAE	
corythodes sp.		NAIDIDAE		Psilotreta sp.	
TROPODA - Snails CYLIDAE		TUBIFICIDAE LUMBRICULIDAE	5	PHILOPOTAMIDAE	
rissa sp.		POLYCHAETA - Polychaete Worms		Chimarra sp. Wormaldia sp.	
DROBIIDAE		AEOLOSOMATIDAE		PHRYGANEIDAE	
MNAEIDAE		Aeolosoma sp.		Ptilostomis sp.	
ssaria sp.		PLECOPTERA - Stonefly Larvae		POLYCENTROPIDAE	
gnicola sp. eudosuccinea sp.		PERLIDAE Acroneuria sp.		Cyrnellus sp. Polycentropus sp.	
YSIDAE	6	Beloneuria sp.		PSYCHOMYIDAE	
ysella sp.		Eccoptura sp.		Lype sp.	
ANORBIDAE		Neoperla sp.		Psychomyia sp.	
netus sp. raulus sp.		Perlesta sp. Perlinella sp.		RHYACOPHILIDAE	
EUROCERIDAE		PERLODIDAE		Ryacophila sp. UENOIDAE	
IPARIDAE		Clioperla sp.		Neophylax sp.	
iparus sp.		Diploperla sp.		TUBELLARIA - Flatworms	
OSCLERIDA		Isoperla sp.		PLANARIIDAE	
DNGILLIDAE PTERA - True Bugs		Cultus sp.		DENDROCOELIDAE	
LOSTOMATIDAE		PTERONARCYIDAE Pteronarcys sp.			
lostoma sp.		PELTOPERLIDAE			
thocerus sp.		Peltoperla sp.			
RIXIDAE		LEUCTRIDAE			
LASTOCORIDAE		Leuctra sp.			
RRIDAE epobates sp.		Zealuectra sp. Paraleuctra sp.			
BRIDAE		CAPNIDAE			
DROMETRIDAE		Allocapnia sp.			
SOVELIIDAE		Paracapnia sp.			
PIDAE		NEMOURIDAE			
epa sp.		Amphinemura sp.			
anatra sp.		Ostrocerca sp Nemoura sp.			
		realitydia by:			



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
The Glade	20030	1-C	SDS/AMC	1	125
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'
12/11/2007	12/4/2007	CAG	JMT	N/A	97
	12.4/2007		OWIT		01
VALVIA - Clams SPHAERIDAE	2	Forcipomyia sp. Probezzia sp.		Synorthocladius sp. Thienemanniella sp.	
Sphaerium sp.	- 6	Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculium sp.		CHAOBORIDAE		Xylotopus sp.	
CORBICULIDAE		Chaborus sp. CHIRONOMIDAE	00	Zalutschia sp.	
Corbicula fluminea sp. UNIONIDAE		Chironominae	82	Tanypodinae Ablabesmyla sp.	
RANCHIOBDELLIDA		Chironomini		Alotanypus sp.	
BRANCHIOBDELLIDAE		Chironomus sp.		Apsectrotanypus sp.	
TETRASTEMMATIDAE		Cryptochironomus sp.		Clinotanypus sp.	
OLEOPTERA - Beetles		Cryptotendipes sp.		Conchapelopia sp.	
CANTHERIDAE		Demicryptochironomus sp. Dicrotendipes sp.		Guttipelopia sp. Krenopelopia sp.	
DRYOPIDAE	1	Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
DYTISCIDAE		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporous sp. Coptotomus sp.		Microtendipes sp. Nilothauma sp.		Paramerina sp. Pentaneura sp.	
Oreodytes sp.		Pagastiella sp.		Procladius sp.	
Laccomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp. ELMIDAE		Paracladopelma sp. Paratendipes sp.		Rheopelopia sp.	
Microcylloepus sp.		Paratendipes sp. h Phaenopsectra sp.		Tanypus sp. Thienemannimyia gp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp. Dubiraphia sp.		Tribelos sp. Zavreliella sp.		CULICIDAE Aedes	
Ancyronyx sp.		Tanytarsini		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
GYRINIDAE		Constempellina sp.		Culiseta	
Dineutus Gyrinus		Micropsectra sp.		Mansonia	
HALIPIDAE		Micropsectra/Tanysarsus complex Paratanytarsus sp.		Orthopodomyia Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
HYDROPHILIDAE		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp. Derallus sp.		Sublettea sp. Tanytarsus sp.		DIXIDAE Dixa sp.	
Helochares sp.		Zavrelia sp.		DOLICHOPODIDAE	
Helophorus sp.		Diamesinae		EMPIDIDAE	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropistemus sp. Hydrobius sp.		Potthastia sp. Prodiamesa sp		Hemerodromia sp. Dolichocephala sp.	
Laccobius sp.		Sympotthastia sp.		EPHYDRIDAE	
PSEPHENIDAE		Orthocladiinae		PELCORHYNCHIDAE	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		PSYCHODIDAE	
Dicranopselaphus sp. PTILODACTYLIDAE		Chaetocladius sp. Corynoneura sp.		Pericoma sp. Psycoda sp.	
Anchytarsus sp.		Cricotopus sp.		SIMULIDAE	2
OPEPODA		Cricotopus/Orthocladius sp.		Simulium sp.	
RUSTACEA (Amphipoda- Scuds)		Diplocladius sp.		Prosimulium sp.	
CRANGONYCTIDAE		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp. Crangonyx sp.		Heleniella sp. Heterotrissociadius sp.		Twinia sp. Stegoptema sp.	
Synurella sp.		Hydrobaenus sp.		Ecternia sp.	
GAMMARIDAE		Limnophyes sp.		STRATIOMYIDAE	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
HYALELLIDAE Hyalella sp.		Mesocricotopus sp. Mesosmittia sp.		Odontomyia sp. SYRPHIDAE	
RUSTACEA (Decopoda - Crayfish)		Nanocladius sp.		Chrysogaster sp.	
CAMBARIDAE		Orthocladinae A		Eristalis sp.	
PALAEMONIDAE		Orthocladius sp.		TABANIDAE	
RUSTACEA (Isopoda- Sowbugs) ASELIDAE		Parachaetocladius sp.		Chrysops sp.	
Caecidotea sp.		Parakiefferiella sp. Parametriocnemus sp.		Tabanus sp. TANYDERIDAE	
Lirceus sp.		Paraphaenocladius sp.		THAUMALEIDAE	
PTERA - True Flies	1	Parasmittia sp.		Thaumalea sp.	
ATHERICIDAE		Paratrichocladius sp.		TIPULIDAE	
Atherix sp.		Paratrissociadius sp.		Antocha sp.	
BLEPHARICERIDAE		Psectrocladius sp. Pseudorthocladius sp.		Hexatoma sp. Leptotarsus sp.	
CERATOPOGNIDAE		Pseudortnociadus sp. Psilometriocnemus sp.		Leptotarsus sp. Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Psuedolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stillocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
The Glade	20030	1-C	SDS/AMC	1	125
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'
12/11/2007	12/4/2007	CAG	JMT	N/A	97
12/11/2007	12/4/2007	CAG	JIVIT	N/A	97
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
imonia sp.		HIRUDINEA - Leeches HOPLONEMERTEA - Ribbon Worms		Prostoia sp.	
Pilaria sp. Erioptera sp.		TETRASTEMMATIDAE		Shipsa sp. CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperia sp.	
RICHOCERIDAE		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp.		NOCTUIDAE		Sweltsa sp.	
HEMEROPTERA - Mayflies		Archanara sp.		TAENIOPTERGIDAE Strophopteryx sp.	
Ameletus sp.		Bellura sp. PYRALIDAE		Taeniopteryx sp.	
BAETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp. Centroptilum sp.		Corydalus sp. Nigronia sp.		CALAMOCERATIDAE	
Diphetor sp.		SIALIDAE		Heteroplectron sp. DIPSEUDOPSIDAE	
BAETISCIDAE		Sialis sp.		Phylocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
AENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp.		ODONATA (Anispotera - Dragonflies)		Agapetus sp.	
PHEMERELLIDAE Dannella sp.		AESHNIDAE Anax sp.		HELICOPSYCHIDAE Helicopsyche sp.	
Orunella sp.		Basiaeshna sp.		HYDROPSYCHIDAE	1
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Serratella sp.		Cordulegaster sp. CORDULIIDAE		Hydropsyche sp.	
PHEMERIDAE Ephemera sp.		GOMPHIDAE		Parapysche sp. Potamyia sp.	
IEPTAGENIIDAE		Arigomphus sp.		HYDROPTILIDAE	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocuta sp.	10.000	Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp. EPTOPHLEBIDAE		Stylogomphus sp. LIBELLULIDAE		LEPIDOSTOMATIDAE Lepidostoma sp.	
Leptophlebia sp.		MACROMIDAE		LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Triaenodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Ceraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies)		Oecetis sp.	
LIGONEURIDAE		CALOPTERYGIDAE Calopteryx sp.		LIMNEPHILIDAE Apatina sp.	1
sonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
POLYMITARCYIDAE		Argia sp.		Ironoquia sp.	
POTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	4	MOLANNIDAE	
Siphlonurus sp. *RICORYTHIDAE		LUMBRICINA ENCHYTRAEIDAE		Molanna sp. ODONTOCERIDAE	
Tricorythodes sp.	1	NAIDIDAE	1	Psilotreta sp.	
STROPODA - Snalls		TUBIFICIDAE		PHILOPOTAMIDAE	
NCYLIDAE	2	LUMBRICULIDAE		Chimarra sp.	
Ferissa sp.		POLYCHAETA - Polychaete Worms		Wormaldia sp.	
YDROBIIDAE YMNAEIDAE		AEOLOSOMATIDAE Aeolosoma sp.		PHRYGANEIDAE	
ossaria sp.		PLECOPTERA - Stonefly Larvae		Ptilostomis sp. POLYCENTROPIDAE	
Stagnicola sp.		PERLIDAE		Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
Physella sp.		Beloneuria sp. Eccoptura sp.		PSYCHOMYIDAE	
LANORBIDAE		Neoperla sp.		Lype sp. Psychomyia sp.	
Menetus sp.		Perlesta sp.		RHYACOPHILIDAE	
3yraulus sp.		Perlinella sp.		Ryacophila sp.	
PLEUROCERIDAE		PERLODIDAE		UENOIDAE	
TVIPARIDAE //viparus sp.		Clioperla sp. Diploperla sp.		Neophylax sp. TUBELLARIA - Flatworms	
PLOSCLERIDA PLOSCLERIDA		Isoperia sp.		PLANARIIDAE	
PONGILLIDAE		Cultus sp.		DENDROCOELIDAE	
MIPTERA - True Bugs		PTERONARCYIDAE			
ELOSTOMATIDAE		Pteronarcys sp.			
Belostoma sp. Lethocerus sp.		PELTOPERLIDAE Poltopodo so			
ORIXIDAE		Peltoperia sp. LEUCTRIDAE			
ELASTOCORIDAE		Leuctra sp.			
ERRIDAE		Zealuectra sp.			
Trepobates sp.		Paraleuctra sp.			
IEBRIDAE IYDROMETRIDAE		CAPNIDAE Allegappie en			
MESOVELIIDAE		Allocapnia sp. Paracapnia sp.			
IEPIDAE		NEMOURIDAE			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp			
ELIIDAE		Nemoura sp.			
				-	



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
The Glade	20030	1-D	SDS/AMC	1	128
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID's
12/14/2007	12/4/2007	CAG/SDS	CAG	30	89
VALVIA - Clams		Forcipomyla sp.		Synorthocladius sp.	
SPHAERIDAE		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp. Pisidium sp.		Sphaeromias sp.		Tvetenia sp.	
Musculium sp.		Stilobezzia sp. CHAOBORIDAE		Unniella sp. Xylotopus sp.	
CORBICULIDAE		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp. UNIONIDAE		CHIRONOMIDAE	57	Tanypodinae	
RANCHIOBDELLIDA		Chironominae Chironomini		Ablabesmyla sp. Alotanypus sp.	
BRANCHIOBDELLIDAE		Chironomus sp.		Apsectrotanypus sp.	
TETRASTEMMATIDAE		Cryptochironomus sp.		Clinotanypus sp.	
OLEOPTERA - Beetles CANTHERIDAE		Cryptotendipes sp. Demicryptochironomus sp.		Conchapelopia sp. Guttipelopia sp.	
CURCULIONIDAE		Dicrotendipes sp.		Krenopelopia sp.	
DRYOPIDAE		Einfeldia sp.		Labrundinia sp.	
Helichus sp. DYTISCIDAE	1	Endochironomus sp. Glyptotendipes sp.		Larsia sp. Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporous sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp. Oreodytes sp.		Nilothauma sp. Pagastiella sp.		Pentaneura sp. Procladius sp.	
Laccomis sp.		Pagastiella sp. Parachironomus sp.		Proctadius sp. Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopelopia sp.	
ELMIDAE Microcylloepus sp.		Paratendipes sp. Phaenopsectra sp.		Tanypus sp. Thienemannimyia gp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp. Macronychus sp.		Stictochironomus sp. Tribelos sp.		Zavrelimyia sp. CULICIDAE	
Dubiraphia sp.		Zavreliella sp.		Aedes	
Ancyronyx sp.		Tanytarsini		Anopheles	
Oulimnius sp. GYRINIDAE		Cladotanytarsus sp. Constempellina sp.		Culex Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanysarsus complex		Orthopodomyia	
HALIPIDAE Halipus sp.		Paratanytarsus sp. Rheotanytarsus sp.		Psorophora Toxorhynchites	
HYDROPHILIDAE		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp. Derallus sp.		Sublettea sp. Tanytarsus sp.		DiXIDAE Dixa sp.	
Helochares sp.		Zavrelia sp.		DOLICHOPODIDAE	
Helophorus sp.		Diamesinae		EMPIDIDAE	
Hydrophilus sp. Hydrochus sp.		Diamesa sp.		Chelifera sp.	
Tropistemus sp.	0	Pagastia sp. Potthastia sp.		Clinocera sp. Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp		Dolichocephala sp.	
Laccobius sp. PSEPHENIDAE		Sympotthastia sp. Orthocladiinae		PELCORHYNCHIDAE	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		PSYCHODIDAE	
Dicranopselaphus sp. PTILODACTYLIDAE		Chaetocladius sp. Corynoneura sp.		Pericoma sp.	
Anchytarsus sp.		Cricotopus sp.		Psycoda sp. SIMULIDAE	
OPEPODA		Cricotopus/Orthocladius sp.		Simulium sp.	
RUSTACEA (Amphipoda- Scuds) CRANGONYCTIDAE		Diplocladius sp. Eukiefferiella sp.		Prosimulium sp.	
Stygonectes sp.		Heleniella sp.		Cnephia sp. Twinia sp.	
Crangonyx sp.		Heterotrissocladius sp.		Stegoptema sp.	
Synurella sp. GAMMARIDAE		Hydrobaenus sp.		Ectemnia sp. STRATIOMYIDAE	
Gammarus sp.		Limnophyes sp. Lopescladius sp.		Oxycera sp.	
HYALELLIDAE		Mesocricotopus sp.		Odontomyia sp.	
Hyalella sp. RUSTACEA (Decopoda - Crayfish)		Mesosmittia sp.		SYRPHIDAE	
CAMBARIDAE	1	Nanocladius sp. Orthocladinae A		Chrysogaster sp. Eristalis sp.	
PALAEMONIDAE		Orthocladius sp.		TABANIDAE	
RUSTACEA (Isopoda- Sowbugs) ASELIDAE		Parachaetocladius sp.		Chrysops sp.	
Caecidotea sp.		Parakiefferiella sp. Parametriocnemus sp.		Tabanus sp. TANYDERIDAE	
Lirceus sp.		Paraphaenocladius sp.		THAUMALEIDAE	
PTERA - True Flies		Parasmittia sp.		Thaumalea sp.	
ATHERICIDAE Atherix sp.		Paratrichocladius sp. Paratrissocladius sp.		TIPULIDAE Antocha sp.	1
BLEPHARICERIDAE		Psectrocladius sp.		Hexatoma sp.	
CECIDOMYIIDAE		Pseudorthocladius sp.		Leptotarsus sp.	
CERATOPOGNIDAE Alluaudomyia sp.		Psilometriocnemus sp. Rheocricotopus sp.		Molophilus sp. Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Psuedolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp. Dasyhelea sp.		Stilocladius sp.		Limnophila sp.	
Dasyndied sp.		Symposiocladius sp.		Ormosia sp.	



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms So
The Glade	20030	1-D	SDS/AMC	1	128
Date ID'd	Date Sorted	Taxonomist	Sorter	# Cride in Subsemble	the state of the s
12/14/2007	12/4/2007	CAG/SDS	CAG	# Grids in Subsample	Total No. Organisms II
12/14/2007	12/4/2007	CAG/SDS	CAG	30	89
edicia sp.		Microvelia sp.		Paranemoura sp.	
monia sp. Ilaria sp.		HIRUDINEA - Leeches HOPLONEMERTEA - Ribbon Worms		Prostoia sp.	
rioptera sp.		TETRASTEMMATIDAE		Shipsa sp. CHLOROPERLIDAE	
habdomastix sp.		Prostoma sp.		Alloperia sp.	
ICHOCERIDAE		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
richocera sp.		NOCTUIDAE		Sweltsa sp.	
EMEROPTERA - Mayflies ELETIDAE		Archanara sp. Bellura sp.		TAENIOPTERGIDAE Strophopteryx sp.	
neletus sp.		PYRALIDAE		Taeniopteryx sp.	
ETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
entrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
erpenna sp.		Chauliodes sp.		Brachycentrus sp.	
etis sp. entroptilum sp.		Corydalus sp. Nigronia sp.		CALAMOCERATIDAE Heteroplectron sp.	
phetor sp.		SIALIDAE		DIPSEUDOPSIDAE	
ETISCIDAE		Sialis sp.		Phylocentropus sp.	
etisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
ENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
enis sp. HEMERELLIDAE		ODONATA (Anispotera - Dragonflies) AESHNIDAE		Agapetus sp.	
nnella sp.		Anax sp.		HELICOPSYCHIDAE Helicopsyche sp.	
unella sp.		Basiaeshna sp.		HYDROPSYCHIDAE	7
hemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
rylophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
rratella sp. HEMERIDAE		Cordulegaster sp. CORDULIIDAE		Hydropsyche sp.	
hemera sp.		GOMPHIDAE		Parapysche sp. Potamyia sp.	
PTAGENIIDAE		Arigomphus sp.		HYDROPTILIDAE	
eorus sp.		Gomphus sp.		Hydroptila sp.	
ucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
enacron sp. enonema sp.		Lanthus sp. Stylogomphus sp.		Ochrotrichia sp. LEPIDOSTOMATIDAE	
PTOPHLEBIDAE		LIBELLULIDAE	1	Lepidostoma sp.	
ptophlebia sp.		MACROMIDAE		LEPTOCERIDAE	
abrophlebia sp.		Macromia sp.		Triaenodes sp.	
abrophlebiodes sp.		PETALURIDAE		Ceraclea sp.	
raleptophlebia sp.		ODONATA Zygoptera - Damselflies)		Oecetis sp.	
GONEURIDAE		CALOPTERYGIDAE Calopteryx sp.		LIMNEPHILIDAE Apatina sp.	
onychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
LYMITARCYIDAE		Argia sp.		Ironoquia sp.	
TAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
PHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	11	MOLANNIDAE	
ohlonurus sp. ICORYTHIDAE		LUMBRICINA ENCHYTRAEIDAE		Molanna sp. ODONTOCERIDAE	
icorythodes sp.		NAIDIDAE		Psilotreta sp.	
TROPODA - Snalls		TUBIFICIDAE	4	PHILOPOTAMIDAE	
CYLIDAE	1	LUMBRICULIDAE		Chimarra sp.	
rissa sp.		POLYCHAETA - Polychaete Worms		Wormaldia sp.	
DROBIIDAE MNAEIDAE		AEOLOSOMATIDAE Aeolosoma sp.		PHRYGANEIDAE Ptilostomis sp.	
ssaria sp.		PLECOPTERA - Stonefly Larvae		POLYCENTROPIDAE	
agnicola sp.		PERLIDAE		Cymellus sp.	
eudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
YSIDAE ysella sp.	1	Beloneuria sp.		PSYCHOMYIDAE	
ANORBIDAE		Eccoptura sp. Neoperla sp.		Lype sp. Psychomyla sp.	
netus sp.		Perlesta sp.		RHYACOPHILIDAE	
raulus sp.		Perlinella sp.		Ryacophila sp.	
EUROCERIDAE IPARIDAE		PERLODIDAE		UENOIDAE	
iparus sp.		Clioperla sp. Diploperla sp.		Neophylax sp. TUBELLARIA - Flatworms	
OSCLERIDA		Isoperia sp.		PLANARIIDAE	
ONGILLIDAE		Cultus sp.		DENDROCOELIDAE	
IPTERA - True Bugs		PTERONARCYIDAE			
LOSTOMATIDAE		Pteronarcys sp.			
lostoma sp.		PELTOPERLIDAE			
thocerus sp.		Peltoperia sp. LEUCTRIDAE			
LASTOCORIDAE		Leuctra sp.			
RRIDAE		Zealuectra sp.			
repobates sp.		Paraleuctra sp.			
BRIDAE		CAPNIDAE			
DROMETRIDAE SOVELIIDAE		Allocapnia sp.			
PIDAE		Paracapnia sp. NEMOURIDAE	4		
		Amphinemura sp.	,		
epa sp.					
epa sp. anatra sp.		Ostrocerca sp			
epa sp. anatra sp. LIIDAE		Ostrocerca sp Nemoura sp.			

^{*} Taxa in grey are higher-level taxa (i.e., phylum, class, subclass order). Taxa in bold are either family or subfamily-level taxa.



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
The Glade	20030	1-E	SDS/AMC	1	124
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
11/30/2007	9/5/2007	CAG	MHS	17	113
VALVIA - Clams		Forcipomyla sp.		Synorthocladius sp.	
SPHAERIDAE		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculium sp. CORBICULIDAE		CHAOBORIDAE Chaborus sp.		Xylotopus sp. Zalutschia sp.	
Corbicula fluminea sp.		CHRONOMIDAE	54	Tanypodinae	
UNIONIDAE		Chironominae		Ablabesmyla sp.	
RANCHIOBDELLIDA		Chironomini		Alotanypus sp.	
BRANCHIOBDELLIDAE TETRASTEMMATIDAE		Chironomus sp.		Apsectrotanypus sp.	
OLEOPTERA - Beetles		Cryptochironomus sp. Cryptotendipes sp.		Clinotanypus sp. Conchapelopia sp.	
CANTHERIDAE		Demicryptochironomus sp.		Guttipelopia sp.	
CURCULIONIDAE		Dicrotendipes sp.		Krenopelopia sp.	
DRYOPIDAE		Einfeldia sp.		Labrundinia sp.	
Helichus sp. DYTISCIDAE	2	Endochironomus sp. Glyptotendipes sp.		Larsia sp.	
Agabus sp.	- 6	Kiefferulus sp.		Macropelopia sp. Meropelopia sp.	
Hydroporous sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastiella sp.		Procladius sp.	
Laccomis sp. Dytiscus sp.		Parachironomus sp. Paracladopelma sp.		Psectrotanypus sp. Rheopelopia sp.	
ELMIDAE		Paratendipes sp.		Tanypus sp.	
Microcylloepus sp.		Phaenopsectra sp.		Thienemannimyia gp.	
Optioservus sp. Stenelmis sp.		Polypedilum sp.		Thienemannimyia sp.	
Promoresia sp.		Stenochironomus sp. Stictochironomus sp.		Trissopelopia sp. Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		CULICIDAE	
Dubiraphia sp.		Zavreliella sp.		Aedes	
Ancyronyx sp.		Tanytarsini		Anopheles	
Oulimnius sp. GYRINIDAE		Cladotanytarsus sp. Constempellina sp.		Culex Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanysarsus complex		Orthopodomyia	
HALIPIDAE		Paratanytarsus sp.		Psorophora	
Halipus sp. HYDROPHILIDAE		Rheotanytarsus sp. Stempellina sp.		Toxorhynchites Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		DIXIDAE	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		DOLICHOPODIDAE	
Helophorus sp. Hydrophilus sp.		Diamesinae Diamesa sp.		EMPIDIDAE Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropistemus sp.		Potthastia sp.		Hemerodromia sp.	
Hydrobius sp. Laccobius sp.		Prodiamesa sp		Dolichocephala sp.	
PSEPHENIDAE		Sympotthastia sp. Orthocladiinae		PELCORHYNCHIDAE	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		PSYCHODIDAE	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
PTILODACTYLIDAE Anchytarsus sp.		Corynoneura sp. Cricotopus sp.		Psycoda sp. SIMULIDAE	
OPEPODA		Cricotopus/Orthocladius sp.		Simulium sp.	
RUSTACEA (Amphipoda- Scuds)		Diplocladius sp.		Prosimulium sp.	
CRANGONYCTIDAE	2	Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp. Crangonyx sp.		Heleniella sp.		Twinia sp.	
Synurella sp.		Heterotrissociadius sp. Hydrobaenus sp.		Stegopterna sp. Ectemnia sp.	
GAMMARIDAE		Limnophyes sp.		STRATIOMYIDAE	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
HYALELLIDAE Hyalella sp.		Mesocricotopus sp.		Odontomyia sp.	
RUSTACEA (Decopoda - Craylish)		Mesosmittia sp. Nanocladius sp.		SYRPHIDAE Chrysogaster sp.	
CAMBARIDAE		Orthocladinae A		Eristalis sp.	
PALAEMONIDAE		Orthocladius sp.		TABANIDAE	
RUSTACEA (Isopoda- Sowbugs)		Parachaetocladius sp.		Chrysops sp.	
ASELIDAE Caecidotea sp.		Parakiefferiella sp. Parametriocnemus sp.		Tabanus sp. TANYDERIDAE	
Lirceus sp.		Parametriocnemus sp. Paraphaenocladius sp.		THAUMALEIDAE	
IPTERA - True Flies		Parasmittia sp.		Thaumalea sp.	
ATHERICIDAE		Paratrichocladius sp.		TIPULIDAE	
Atherix sp. BLEPHARICERIDAE		Paratrissociadius sp.		Antocha sp.	
CECIDOMYIIDAE		Psectrocladius sp. Pseudorthocladius sp.		Hexatoma sp. Leptotarsus sp.	
CERATOPOGNIDAE		Psilometriocnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Psuedolimnophila sp.	
Ceratopogon sp. Culicoides sp.		Smittia sp. Stilocladius sp.		Dicranota sp.	
Dasyhelea sp.		Strocladius sp. Symposiocladius sp.		Limnophila sp. Ormosia sp.	
		- Attibonionimina alt.		STITIVANIA AP.	
Sasyrona op.					
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Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
The Glade	20030	1-E	SDS/AMC	1	124
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID's
11/30/2007	9/5/2007	CAG	MHS	17	113
	U/U/EUU/	Ond	WITO	1/	113
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp. Pilaria sp.		HIRUDINEA - Leeches HOPLONEMERTEA - Ribbon Worms		Prostoia sp. Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
RICHOCERIDAE		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp. PHEMEROPTERA - Mayllies		NOCTUIDAE		Sweltsa sp.	
AMELETIDAE		Archanara sp. Bellura sp.		TAENIOPTERGIDAE Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taeniopteryx sp.	
BAETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp. Baetis sp.		Chauliodes sp. Corydalus sp.		Brachycentrus sp. CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetor sp.		SIALIDAE		DIPSEUDOPSIDAE	
BAETISCIDAE		Sialis sp.		Phylocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
CAENIDAE Caenis sp.		NEMATOMORPHA - Horsehair Worms ODONATA (Anispotera - Dragonflies)		Glossosoma sp.	
EPHEMERELLIDAE		AESHNIDAE		Agapetus sp. HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Basiaeshna sp.		HYDROPSYCHIDAE	
Ephemerella sp. Eurylophella sp.		Boyeria sp.		Cheumatopsyche sp.	
Serratella sp.		CORDULEGASTRIDAE Cordulegaster sp.		Diplectrona sp. Hydropsyche sp.	
EPHEMERIDAE		CORDULIDAE		Parapysche sp.	
Ephemera sp.		GOMPHIDAE		Potarnyla sp.	
HEPTAGENIIDAE		Arigomphus sp.		HYDROPTILIDAE	
Epeorus sp. Leucrocuta sp.		Gomphus sp.		Hydroptila sp.	
Stenacron sp.		Hagenius sp. Lanthus sp.		Leucotrichia sp. Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
LEPTOPHLEBIDAE		LIBELLULIDAE	1	Lepidostoma sp.	
Leptophlebia sp.		MACROMIIDAE		LEPTOCERIDAE	
Habrophlebia sp. Habrophlebiodes sp.		Macromia sp. PETALURIDAE		Triaenodes sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies)		Ceraclea sp. Oecetis sp.	
NEOEPHEMERIDAE		CALOPTERYGIDAE		LIMNEPHILIDAE	2
DLIGONEURIDAE		Calopteryx sp.		Apatina sp.	
Isonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
POLYMITARCYIDAE POTAMANTHIDAE		Argia sp.		Ironoquia sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms		Pycnopsyche sp. MOLANNIDAE	
Siphlonurus sp.		LUMBRICINA		Molanna sp.	
TRICORYTHIDAE		ENCHYTRAEIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE	30	Psilotreta sp.	
ASTROPODA - Snalls ANCYLIDAE		TUBIFICIDAE	11	PHILOPOTAMIDAE	
Ferissa sp.		POLYCHAETA - Polychaete Worms		Chimarra sp. Wormaldia sp.	
HYDROBIIDAE		AEOLOSOMATIDAE		PHRYGANEIDAE	
LYMNAEIDAE		Aeolosoma sp.		Ptilostomis sp.	
Fossaria sp. Stagnicola sp.		PLECOPTERA - Stonelly Larvae PERLIDAE		POLYCENTROPIDAE Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
PHYSIDAE	6	Beloneuria sp.		PSYCHOMYIDAE	
Physella sp.		Eccoptura sp.		Lype sp.	
PLANORBIDAE		Neoperla sp.		Psychomyia sp.	
Menetus sp. Gyraulus sp.		Perlesta sp. Perlinella sp.		RHYACOPHILIDAE Ryacophila sp.	
PLEUROCERIDAE		PERLODIDAE		UENOIDAE	
VIVIPARIDAE		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		TUBELLARIA - Flatworms	
APLOSCLERIDA SPONGILLIDAE		Isoperla sp.		PLANARIIDAE	
EMIPTERA - True Bugs		Cultus sp. PTERONARCYIDAE		DENDROCOELIDAE	
BELOSTOMATIDAE		Pteronarcys sp.			
Belostoma sp.		PELTOPERLIDAE			
Lethocerus sp.		Peltoperla sp.			
CORIXIDAE		LEUCTRIDAE			
GELASTOCORIDAE GERRIDAE		Leuctra sp. Zealuectra sp.			
Trepobates sp.		Paraleuctra sp.			
IEBRIDAE		CAPNIDAE			
HYDROMETRIDAE		Allocapnia sp.			
MESOVELIIDAE		Paracapnia sp.			
NEPIDAE Nepa sp.		NEMOURIDAE Amphinemura an	5		
Ranatra sp.		Amphinemura sp. Ostrocerca sp			
VELIDAE		Nemoura sp.			



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
The Glade	20030	1-F	SDS/AMC	1	125
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
1/21/2008	12/17/2007	SDS	CAG	10	94
VALVIA - Clams		Forcipomyla sp.		Synorthocladius sp.	
SPHAERIDAE		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp. Pisidium sp.		Sphaeromias sp.		Tvetenia sp.	
Musculium sp.		Stilobezzia sp. CHAOBORIDAE		Unniella sp. Xylotopus sp.	
CORBICULIDAE		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		CHIRONOMIDAE	37	Tanypodinae	
UNIONIDAE RANCHIOBDELLIDA		Chironominae Chironomini		Ablabesmyia sp. Alotanypus sp.	
BRANCHIOBDELLIDAE		Chironomus sp.		Apsectrotanypus sp.	
TETRASTEMMATIDAE		Cryptochironomus sp.		Clinotanypus sp.	
OLEOPTERA - Beetles CANTHERIDAE		Cryptotendipes sp. Demicryptochironomus sp.		Conchapelopia sp. Guttipelopia sp.	
CURCULIONIDAE		Dicrotendipes sp.		Krenopelopia sp.	
DRYOPIDAE		Einfeldia sp.		Labrundinia sp.	
Helichus sp. DYTISCIDAE	5	Endochironomus sp. Glyptotendipes sp.		Larsia sp. Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporous sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp. Oreodytes sp.		Nilothauma sp. Pagastiella sp.		Pentaneura sp. Procladius sp.	
Laccomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp. ELMIDAE		Paracladopelma sp.		Rheopelopia sp.	
Microcylloepus sp.		Paratendipes sp. Phaenopsectra sp.		Tanypus sp. Thienemannimyia gp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp. Promoresia sp.		Stenochironomus sp.		Trissopelopia sp.	
Macronychus sp.		Stictochironomus sp. Tribelos sp.		Zavrelimyia sp. CULICIDAE	
Dubiraphia sp.		Zavreliella sp.		Aedes	
Ancyronyx sp. Oulimnius sp.		Tanytarsini		Anopheles	
GYRINIDAE		Cladotanytarsus sp. Constempellina sp.		Culex	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus HALIPIDAE		Micropsectra/Tanysarsus complex Paratanytarsus sp.		Orthopodomyia	
Halipus sp.		Rheotanytarsus sp.		Psorophora Toxorhynchites	
HYDROPHILIDAE		Stempelfina sp.		Uranotaenia	
Cymbiodyta sp. Berosus sp.		Stempellinella sp. Sublettea sp.		Wyeomyia DIXIDAE	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		DOLICHOPODIDAE	
Helophorus sp. Hydrophilus sp.		Diamesinae		EMPIDIDAE	
Hydrochus sp.		Diamesa sp. Pagastia sp.		Chelifera sp. Clinocera sp.	
Tropistemus sp.		Potthastia sp.		Hemerodromia sp.	
Hydrobius sp. Laccobius sp.		Prodiamesa sp Sympotthastia sp.		Dolichocephala sp. EPHYDRIDAE	
PSEPHENIDAE		Orthocladiinae		PELCORHYNCHIDAE	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp. Dicranopselaphus sp.		Cardiocladius sp. Chaetocladius sp.		PSYCHODIDAE Pericoma sp.	
PTILODACTYLIDAE		Corynoneura sp.		Psycoda sp.	
Anchytarsus sp.		Cricotopus sp.		SIMULIDAE	
OPEPODA RUSTACEA (Amphipoda- Scuds)		Cricotopus/Orthocladius sp. Diplocladius sp.		Simulium sp. Prosimulium sp.	
CRANGONYCTIDAE	2	Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp. Synurella sp.	-	Heterotrissociadius sp. Hydrobaenus sp.		Stegopterna sp. Ectemnia sp.	
GAMMARIDAE	1	Limnophyes sp.		STRATIOMYIDAE	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
HYALELLIDAE Hyalella sp.		Mesocricotopus sp. Mesosmittia sp.		Odontomyla sp. SYRPHIDAE	
RUSTACEA (Decopoda - Crayfish)		Nanocladius sp.		Chrysogaster sp.	
CAMBARIDAE		Orthocladinae A		Eristalis sp.	
PALAEMONIDAE RUSTACEA (Isopoda- Sowbugs)		Orthocladius sp. Parachaetocladius sp.		TABANIDAE Chrysops sp.	
ASELIDAE		Parachaetociadius sp. Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametriocnemus sp.		TANYDERIDAE	
Lirceus sp. PTERA - True Flies		Paraphaenocladius sp. Parasmittia sp.		THAUMALEIDAE Thaumalea sp.	
ATHERICIDAE		Parasmittia sp. Paratrichocladius sp.		TIPULIDAE	2
Atherix sp.		Paratrissocladius sp.		Antocha sp.	
BLEPHARICERIDAE CECIDOMYIIDAE		Psectrocladius sp. Pseudorthocladius sp.		Hexatoma sp. Leptotarsus sp.	
CERATOPOGNIDAE		Pseudortnociadius sp. Psilometriocnemus sp.		Leptotarsus sp. Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp. Ceratopogon sp.		Rheosmittia sp. Smittia sp.		Psuedolimnophila sp. Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	
Consideration of the Constant					



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
The Glade	20030	1-F	SDS/AMC	1	125
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'o
1/21/2008	12/17/2007	SDS	CAG	10	94
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		HIRUDINEA - Leeches		Prostoia sp.	
Pilaria sp.		HOPLONEMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp. Rhabdomastix sp.		TETRASTEMMATIDAE Prostoma sp.		CHLOROPERLIDAE Alloperla sp.	
TRICHOCERIDAE		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp. PHEMEROPTERA - Mayflies		NOCTUIDAE Archanara sp.		Sweltsa sp. TAENIOPTERGIDAE	
AMELETIDAE		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taeniopteryx sp.	
Acentrella sp.		MEGALOPTERA - Dobsonflies CORYDALIDAE		TRICHOPTERA - Caddisflies BRACHYCENTRIDAE	
Acerpenna sp,		Chauliodes sp.		Brachycentrus sp.	
Baetis sp. Centroptilum sp.		Corydalus sp.		CALAMOCERATIDAE	
Diphetor sp.		Nigronia sp. SIALIDAE		Heteroplectron sp. DIPSEUDOPSIDAE	
BAETISCIDAE		Sialis sp.		Phylocentropus sp.	
Baetisca sp. CAENIDAE		NEMATODA - Roundworms NEMATOMORPHA - Horsehair Worms		GLOSSOSOMATIDAE Glossosoma sp.	
Caenis sp.		ODONATA (Anispotera - Dragonflies)		Agapetus sp.	
EPHEMERELLIDAE		AESHNIDAE		HELICOPSYCHIDAE	
Dannella sp. Drunella sp.		Anax sp. Basiaeshna sp.		Helicopsyche sp. HYDROPSYCHIDAE	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp. Serratella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
EPHEMERIDAE		Cordulegaster sp. CORDULIIDAE		Hydropsyche sp. Parapysche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
HEPTAGENIIDAE Epeorus sp.		Arigomphus sp. Gomphus sp.		HYDROPTILIDAE Hydroptila sp.	
Leucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp. Stenonema sp.		Lanthus sp.		Ochrotrichia sp.	
LEPTOPHLEBIDAE		Stylogomphus sp. LIBELLULIDAE	2	LEPIDOSTOMATIDAE Lepidostoma sp.	
Leptophlebia sp.		MACROMIIDAE		LEPTOCERIDAE	
Habrophlebia sp. Habrophlebiodes sp.		Macromia sp. PETALURIDAE		Triaenodes sp. Ceraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies)		Oecetis sp.	
NEOEPHEMERIDAE		CALOPTERYGIDAE		LIMNEPHILIDAE	1
DLIGONEURIDAE Isonychia sp.		Calopteryx sp. COENAGRIONIDAE		Apatina sp. Hydatophylax sp.	
POLYMITARCYIDAE		Argia sp.		Ironoquia sp.	
POTAMANTHIDAE SIPHLONEURIDAE		LESTIDAE	0.0	Pycnopsyche sp.	
Siphlonurus sp.		OLIGOCHAETA - Oligochaete Worms LUMBRICINA	26	MOLANNIDAE Molanna sp.	
TRICORYTHIDAE		ENCHYTRAEIDAE		ODONTOCERIDAE	
Tricorythodes sp. ASTROPODA - Snails		NAIDIDAE TUBIFICIDAE	9	Psilotreta sp. PHILOPOTAMIDAE	
ANCYLIDAE		LUMBRICULIDAE	-	Chimarra sp.	
Ferissa sp.		POLYCHAETA - Polychaete Worms		Wormaldia sp.	
HYDROBIIDAE LYMNAEIDAE		AEOLOSOMATIDAE Aeolosoma sp.		PHRYGANEIDAE Ptilostomis sp.	
Fossaria sp.		PLECOPTERA - Stonefly Larvae		POLYCENTROPIDAE	
Stagnicola sp. Pseudosuccinea sp.		PERLIDAE Acroneuria sp.		Cymellus sp. Polycentropus sp.	
PHYSIDAE	6	Beloneuria sp.		PSYCHOMYIDAE	
Physella sp. PLANORBIDAE		Eccoptura sp. Neoperia sp.		Lype sp.	
Menetus sp.		Perlesta sp.		Psychomyla sp. RHYACOPHILIDAE	
Gyraulus sp.		Perlinella sp.		Ryacophila sp.	
PLEUROCERIDAE VIVIPARIDAE		PERLODIDAE Clioperla sp.		VENOIDAE Neophylax sp.	
Viviparus sp.		Diploperla sp.		TUBELLARIA - Flatworms	
APLOSCLERIDA		Isoperla sp.		PLANARIIDAE	
SPONGILLIDAE EMIPTERA - True Bugs		Cultus sp. PTERONARCYIDAE		DENDROCOELIDAE	
BELOSTOMATIDAE		Pteronarcys sp.			
Belostoma sp.		PELTOPERLIDAE			
Lethocerus sp. CORIXIDAE		Peltoperla sp. LEUCTRIDAE			
GELASTOCORIDAE		Leuctra sp.			
GERRIDAE Transhates en		Zealuectra sp.			
Trepobates sp. HEBRIDAE		Paraleuctra sp. CAPNIDAE			
HYDROMETRIDAE		Allocapnia sp.			
MESOVELIIDAE NEPIDAE		Paracapnia sp.			
Nepa sp.		NEMOURIDAE Amphinemura sp.	3		
Ranatra sp.		Ostrocerca sp			
VELIIDAE		Nemoura sp.			



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
The Glade	20030	1-G	SDS/AMC	1	22
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
11/30/2007	8/7/2007	CAG	BTA	102	15
VALVIA - Clams		Forcipomyla sp.		Synorthocladius sp.	
SPHAERIDAE		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp. Musculium sp.		Stilobezzia sp. CHAOBORIDAE		Unniella sp.	
CORBICULIDAE		Chaborus sp.		Xylotopus sp. Zalutschia sp.	
Corbicula fluminea sp.		CHIRONOMIDAE	7	Tanypodinae	
UNIONIDAE		Chironominae		Ablabesmyla sp.	
RANCHIOBDELLIDA		Chironomini		Alotanypus sp.	
BRANCHIOBDELLIDAE TETRASTEMMATIDAE		Chironomus sp. Cryptochironomus sp.		Apsectrotanypus sp. Clinotanypus sp.	
OLEOPTERA - Beetles		Cryptotendipes sp.		Conchapelopia sp.	
CANTHERIDAE		Demicryptochironomus sp.		Guttipelopia sp.	
CURCULIONIDAE	1	Dicrotendipes sp.		Krenopelopia sp.	
DRYOPIDAE		Einfeldia sp.		Labrundinia sp.	
Helichus sp. DYTISCIDAE		Endochironomus sp. Glyptotendipes sp.		Larsia sp. Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporous sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp. Laccomis sp.		Pagastiella sp. Parachironomus sp.		Procladius sp. Psectrotanypus sp.	
Dytiscus sp.		Parachironomus sp. Paracladopelma sp.		Rheopelopia sp.	
ELMIDAE		Paratendipes sp.		Tanypus sp.	
Microcylloepus sp.		Phaenopsectra sp.		Thienemannimyia gp.	
Optioservus sp. Stenelmis sp.		Polypedilum sp. Stenochironomus sp.		Thienemannimyia sp. Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		CULICIDAE	
Dubiraphia sp.		Zavreliella sp.		Aedes	
Ancyronyx sp. Oulimnius sp.		Tanytarsini Cladotanytarsus sp.		Anopheles Culex	
GYRINIDAE		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanysarsus complex		Orthopodomyia	
HALIPIDAE		Paratanytarsus sp.		Psorophora	
Halipus sp. HYDROPHILIDAE		Rheotanytarsus sp. Stempellina sp.		Toxorhynchites Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		DIXIDAE	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp. Helophorus sp.		Zavrelia sp. Diamesinae		DOLICHOPODIDAE EMPIDIDAE	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropistemus sp.		Potthastia sp.		Hemerodromia sp.	
Hydrobius sp. Laccobius sp.		Prodiamesa sp Sympotthastia sp.		Dolichocephala sp. EPHYDRIDAE	
PSEPHENIDAE		Orthocladiinae		PELCORHYNCHIDAE	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		PSYCHODIDAE	
Dicranopselaphus sp. PTILODACTYLIDAE		Chaetocladius sp. Corynoneura sp.		Pericoma sp. Psycoda sp.	
Anchytarsus sp.		Cricotopus sp.		SIMULIDAE	
OPEPODA		Cricotopus/Orthocladius sp.		Simulium sp.	
RUSTACEA (Amphipoda- Scuds)		Diplocladius sp.		Prosimulium sp.	
CRANGONYCTIDAE Stygonectes sp.		Eukiefferiella sp.		Cnephia sp. Twinia sp.	
Crangonyx sp.		Heleniella sp. Heterotrissocladius sp.		Stegoptema sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
GAMMARIDAE		Limnophyes sp.		STRATIOMYIDAE	
Gammarus sp. HYALELLIDAE		Lopescladius sp. Mesocricotopus sp.		Oxycera sp. Odontomyia sp.	
Hyalelia sp.		Mesosmittia sp.		SYRPHIDAE	
RUSTACEA (Decopoda - Crayfish)		Nanocladius sp.		Chrysogaster sp.	
CAMBARIDAE		Orthocladinae A		Eristalis sp.	
PALAEMONIDAE RUSTACEA (Isopoda- Sowbugs)		Orthocladius sp. Parachaetocladius sp.		TABANIDAE	
ASELIDAE		Parachaetocladius sp. Parakiefferiella sp.		Chrysops sp. Tabanus sp.	
Caecidotea sp.		Parametriocnemus sp.		TANYDERIDAE	
Lirceus sp.		Paraphaenocladius sp.		THAUMALEIDAE	
IPTERA - True Flies		Parasmittia sp.		Thaumalea sp.	
ATHERICIDAE Atherix sp.		Paratrichocladius sp. Paratrissocladius sp.		TIPULIDAE Antocha sp.	
BLEPHARICERIDAE		Paratrissociadius sp. Psectrocladius sp.		Hexatoma sp.	
CECIDOMYIIDAE		Pseudorthocladius sp.		Leptotarsus sp.	
CERATOPOGNIDAE		Psilometriocnemus sp.		Molophilus sp.	
Alluaudomyia sp. Bezzia sp.		Rheocricotopus sp.		Tipula sp.	
Ceratopogon sp.		Rheosmittia sp. Smittia sp.		Psuedolimnophila sp. Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
The Glade	20030	1-G	SDS/AMC	1	22
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'
11/30/2007	8/7/2007	CAG	BTA	102	15
Pedicia sp. Limonia sp.	_	Microvelia sp. HIRUDINEA - Leeches		Paranemoura sp. Prostoia sp.	
Pilaria sp.		HOPLONEMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp. RICHOCERIDAE		Prostoma sp. LEPIDOPTERA - Moth Larvae		Alloperla sp. Haploperla sp.	
Trichocera sp.		NOCTUIDAE		Sweltsa sp.	
PHEMEROPTERA - Mayflies AMELETIDAE		Archanara sp.		TAENIOPTERGIDAE	
Ameletus sp.		Bellura sp. PYRALIDAE	2	Strophopteryx sp. Taeniopteryx sp.	
BAETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp. Acerpenna sp.		CORYDALIDAE Chauliodes sp.		BRACHYCENTRIDAE	
Baetis sp.		Corydalus sp.		Brachycentrus sp. CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetor sp. BAETISCIDAE		SIALIDAE Sialis sp.		DIPSEUDOPSIDAE Phylocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
CAENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp. EPHEMERELLIDAE		ODONATA (Anispotera - Dragonflies) AESHNIDAE		Agapetus sp. HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Basiaeshna sp. h		HYDROPSYCHIDAE	
Ephemerella sp. Eurylophella sp.		Boyeria sp. CORDULEGASTRIDAE		Cheumatopsyche sp. Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
EPHEMERIDAE		CORDULIDAE		Parapysche sp.	
Ephemera sp. HEPTAGENIIDAE		GOMPHIDAE Arigomphus sp.		Potamyia sp. HYDROPTILIDAE	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp. Stenonema sp.		Lanthus sp.		Ochrotrichia sp.	
LEPTOPHLEBIDAE		Stylogomphus sp. LIBELLULIDAE		LEPIDOSTOMATIDAE Lepidostoma sp.	
Leptophlebia sp.		MACROMIDAE		LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Triaenodes sp.	
Habrophlebiodes sp. Paraleptophlebia sp.		PETALURIDAE ODONATA Zygoptera - Damselflies)		Ceraclea sp.	
NEOEPHEMERIDAE		CALOPTERYGIDAE		Oecetis sp. LIMNEPHILIDAE	
DLIGONEURIDAE		Calopteryx sp.		Apatina sp.	
Isonychia sp. POLYMITARCYIDAE		COENAGRIONIDAE		Hydatophylax sp.	
POTAMANTHIDAE		Argia sp. LESTIDAE		Ironoquia sp. Pycnopsyche sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	4	MOLANNIDAE	
Siphlonurus sp.		NAIDIDAE		Molanna sp.	
TRICORYTHIDAE Tricorythodes sp.		TUBIFICIDAE LUMBRICULIDAE		ODONTOCERIDAE Psilotreta sp.	
ASTROPODA - Snails		POLYCHAETA - Polychaete Worms		PHILOPOTAMIDAE	
ANCYLIDAE		AEOLOSOMATIDAE		Chimarra sp.	
Ferissa sp. HYDROBIIDAE		Aeolosoma sp. PLECOPTERA - Stonefly Larvae		Wormaldia sp. PHRYGANEIDAE	
LYMNAEIDAE		PERLIDAE		Ptilostomis sp.	
Fossaria sp.		Acroneuria sp.		POLYCENTROPIDAE	
Stagnicola sp. Pseudosuccinea sp.		Beloneuria sp. Eccoptura sp.		Cymellus sp. Polycentropus sp.	
PHYSIDAE		Neoperla sp.		PSYCHOMYIDAE	
Physella sp.		Perlesta sp.		Lype sp.	
PLANORBIDAE Menetus sp.	1	Perlinella sp . PERLODIDAE		Psychomyla sp. RHYACOPHILIDAE	
Gyraulus sp.		Clioperla sp.		Ryacophila sp.	
PLEUROCERIDAE		Diploperla sp.		UENOIDAE	
VIVIPARIDAE Viviparus sp.		Isoperla sp. Cultus sp.		Neophylax sp.	
APLOSCLÉRIDA		PTERONARCYIDAE		TUBELLARIA - Flatworms PLANARIIDAE	
SPONGILLIDAE		Pteronarcys sp.		DENDROCOELIDAE	
EMIPTERA - True Bugs		PELTOPERLIDAE			
BELOSTOMATIDAE Belostoma sp.		Peltoperla sp. LEUCTRIDAE			
Lethocerus sp.		Leuctra sp.			
CORIXIDAE		Zealuectra sp.			
GERRIDAE		Paraleuctra sp. CAPNIDAE			
Trepobates sp.		Allocapnia sp.			
HEBRIDAE		Paracapnia sp.			
HYDROMETRIDAE		NEMOURIDAE			
MESOVELIIDAE NEPIDAE		Amphinemura sp.			
Nepa sp.		Ostrocerca sp Nemoura sp.			
Ranatra sp.					
VELIIDAE					



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
The Glade	20030	2-A	SDS/AMC	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'
1/23/2008	1/7/2008	JMT	TSS	N/A	118
VALVIA - Clams		Forcipornyla sp.		Synorthocladius sp.	
SPHAERIDAE		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp. Musculium sp.		Stilobezzia sp. CHAOBORIDAE		Unniella sp.	
CORBICULIDAE		Chaborus sp.		Xylotopus sp. Zalutschia sp.	
Corbicula fluminea sp.		CHIRONOMIDAE	100	Tanypodinae	
UNIONIDAE		Chironominae		Ablabesmyla sp.	
RANCHIOBDELLIDA BRANCHIOBDELLIDAE		Chironomini		Alotanypus sp.	
TETRASTEMMATIDAE		Chironomus sp. Cryptochironomus sp.		Apsectrotanypus sp. Clinotanypus sp.	
OLEOPTERA - Beetles		Cryptotendipes sp.		Conchapelopia sp.	
CANTHERIDAE		Demicryptochironomus sp.		Guttipelopia sp.	
CURCULIONIDAE DRYOPIDAE		Dicrotendipes sp.		Krenopelopia sp.	
Helichus sp.		Einfeldia sp. Endochironomus sp.		Labrundinia sp. Larsia sp.	
OYTISCIDAE		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporous sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp. Oreodytes sp.		Nilothauma sp. Pagastiella sp.		Pentaneura sp. Procladius sp.	
Laccomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopelopia sp.	
ELMIDAE Microcylloepus sp.		Paratendipes sp. " Phaenopsectra sp.		Tanypus sp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia gp. Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp. Dubiraphia sp.		Tribelos sp. Zavreliella sp.		CULICIDAE Aedes	
Ancyronyx sp.		Tanytarsini		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
GYRINIDAE		Constempellina sp.		Culiseta	
Dineutus Gyrinus		Micropsectra sp. Micropsectra/Tanysarsus complex		Mansonia Orthopodomyia	
HALIPIDAE		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
HYDROPHILIDAE		Stempellina sp.		Uranotaenia	
Cymbiodyta sp. Berosus sp.		Stempellinella sp. Sublettea sp.		Wyeomyia DIXIDAE	
Derosus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		DOLICHOPODIDAE	
Helophorus sp.		Diamesinae		EMPIDIDAE	
Hydrophilus sp. Hydrochus sp.		Diamesa sp. Pagastia sp.		Chelifera sp.	
Tropisternus sp.		Potthastia sp.		Clinocera sp. Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp		Dolichocephala sp.	
Laccobius sp. PSEPHENIDAE		Sympotthastia sp.		EPHYDRIDAE	
Psephenus sp.		Orthocladiinae Brillia sp.		PELCORHYNCHIDAE Glutops sp.	
Ectopria sp.		Cardiocladius sp.		PHORIDAE	1
Dicranopselaphus sp.		Chaetocladius sp.		PSYCHODIDAE	
PTILODACTYLIDAE		Corynoneura sp.		Pericoma sp.	
Anchytarsus sp. DPEPODA		Cricotopus sp. Cricotopus/Orthocladius sp.		Psycoda sp. SIMULIDAE	
RUSTACEA (Amphipoda- Scuds)		Diplocladius sp.		Simulium sp.	
CRANGONYCTIDAE		Eukiefferiella sp.		Prosimulium sp.	
Stygonectes sp.		Heleniella sp.		Cnephia sp.	
Crangonyx sp. Synurella sp.		Heterotrissociadius sp. Hydrobaenus sp.		Twinia sp. Stegoptema sp.	
SAMMARIDAE		Limnophyes sp.		Ectemnia sp.	
Gammarus sp.		Lopescladius sp.		STRATIOMYIDAE	
TYALELLIDAE		Mesocricotopus sp.		Oxycera sp.	
Hyalella sp. RUSTACEA (Decopoda - Craylish)		Mesosmittia sp. Nanocladius sp.		Odontomyla sp. SYRPHIDAE	
CAMBARIDAE		Orthocladinae A		Chrysogaster sp.	
PALAEMONIDAE		Orthocladius sp.		Eristalis sp.	
RUSTACEA (Isopoda- Sowbugs)		Parachaetocladius sp.		TABANIDAE	
ASELIDAE Caecidotea sp.		Parakiefferiella sp.		Chrysops sp.	
Lirceus sp.		Parametriocnemus sp. Paraphaenocladius sp.		Tabanus sp. TANYDERIDAE	
PTERA - True Flies		Parasmittia sp.		THAUMALEIDAE	
THERICIDAE		Paratrichocladius sp.		Thaumalea sp.	
Atherix sp.		Paratrissociadius sp.		TIPULIDAE	
BLEPHARICERIDAE		Psectrocladius sp.		Antocha sp.	
CERATOPOGNIDAE		Pseudorthocladius sp. Psilometriocnemus sp.		Hexatoma sp. Leptotarsus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Molophilus sp.	
Bezzia sp.		Rheosmittia sp.		Tipula sp.	
Ceratopogon sp. Culicoides sp.		Smittia sp.		Psuedolimnophila sp.	
Dasyhelea sp.		Stilocladius sp. Symposiocladius sp.		Dicranota sp. Limnophila sp.	
		ознировилизми вр.		Omosia sp.	



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sor
The Glade	20030	2-A	SDS/AMC	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID
1/23/2008	1/7/2008	JMT	TSS	N/A	118
	1112000	OWIT	100		110
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
imonia sp. Pilaria sp.		HIRUDINEA - Leeches HOPLONEMERTEA - Ribbon Worms		Prostoia sp. Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperia sp.	
RICHOCERIDAE		LEPIDOPTERA - Moth Larvae	1	Haploperla sp.	
richocera sp. HEMEROPTERA - Mayflies		NOCTUIDAE		Sweltsa sp.	
MELETIDAE		Archanara sp. Bellura sp.		TAENIOPTERGIDAE Strophopteryx sp.	
Ameletus sp.		PYRALIDAE	1	Taeniopteryx sp.	
AETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp. Baetis sp.	_	Chauliodes sp. Corydalus sp.		Brachycentrus sp. CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetor sp.		SIALIDAE		DIPSEUDOPSIDAE	
AETISCIDAE		Sialis sp.		Phylocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
AENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Daenis sp. PHEMERELLIDAE		ODONATA (Anispotera - Dragonflies) AESHNIDAE		Agapetus sp. HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Orunella sp.		Basiaeshna sp.		HYDROPSYCHIDAE	11
phemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Serratella sp. PHEMERIDAE		Cordulegaster sp. CORDULIIDAE		Hydropsyche sp. Parapysche sp.	
phemera sp.		GOMPHIDAE		Potamyia sp.	
EPTAGENIIDAE		Arigomphus sp.		HYDROPTILIDAE	
peorus sp.		Gomphus sp.		Hydroptila sp.	
eucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp. Stenonema sp.		Lanthus sp. Stylogomphus sp.		Ochrotrichia sp. LEPIDOSTOMATIDAE	
EPTOPHLEBIDAE		LIBELLULIDAE		Lepidostoma sp.	
eptophlebia sp.		MACROMIIDAE		LEPTOCERIDAE	
labrophlebia sp.		Macromia sp.		Triaenodes sp.	
labrophlebiodes sp.		PETALURIDAE		Ceraclea sp.	
Paraleptophlebia sp. EOEPHEMERIDAE	_	ODONATA Zygoptera - Damselflies) CALOPTERYGIDAE		Oecetis sp. LIMNEPHILIDAE	
LIGONEURIDAE		Calopteryx sp.		Apatina sp.	
sonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
OLYMITARCYIDAE		Argia sp.		Ironoquia sp.	
OTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
IPHLONEURIDAE Siphlonurus sp.		OLIGOCHAETA - Oligochaete Worms LUMBRICINA	4	MOLANNIDAE Molanna sp.	
RICORYTHIDAE		ENCHYTRAEIDAE		ODONTOCERIDAE	
ricorythodes sp.		NAIDIDAE		Psilotreta sp.	
STROPODA - Snalls		TUBIFICIDAE		PHILOPOTAMIDAE	
NCYLIDAE		LUMBRICULIDAE		Chimarra sp.	
erissa sp. YDROBIIDAE		POLYCHAETA - Polychaete Worms AEOLOSOMATIDAE		Wormaldia sp.	
YMNAEIDAE		Aeolosoma sp.		PHRYGANEIDAE Ptilostomis sp.	
ossaria sp.		PLECOPTERA - Stonefly Larvae		POLYCENTROPIDAE	
stagnicola sp.		PERLIDAE		Cymellus sp.	
Pseudosuccinea sp. HYSIDAE		Acroneuria sp.		Polycentropus sp.	
Physella sp.		Beloneuria sp. Eccoptura sp.		PSYCHOMYIDAE Lype sp.	
LANORBIDAE		Neoperia sp.		Psychomyia sp.	
Menetus sp.		Perlesta sp.		RHYACOPHILIDAE	
Syraulus sp.		Perlinella sp.		Ryacophila sp.	
LEUROCERIDAE IVIPARIDAE		PERLODIDAE		UENOIDAE	
/iviparus sp.		Clioperla sp. Diploperla sp.		Neophylax sp. TUBELLARIA - Flatworms	
PLOSCLERIDA		Isoperia sp.		PLANARIIDAE	
PONGILLIDAE		Cultus sp.		DENDROCOELIDAE	
MIPTERA - True Bugs		PTERONARCYIDAE			
ELOSTOMATIDAE		Pteronarcys sp.			
Belostoma sp. ethocerus sp.		PELTOPERLIDAE			
ethocerus sp. ORIXIDAE		Peltoperla sp. LEUCTRIDAE			
ELASTOCORIDAE		Leuctra sp.			
ERRIDAE		Zealuectra sp.			
Trepobates sp.		Paraleuctra sp.			
EBRIDAE		CAPNIDAE			
YDROMETRIDAE IESOVELIIDAE		Allocapnia sp. Paracapnia sp.			
EPIDAE		NEMOURIDAE			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp			
		Nemoura sp.			
ELIIDAE	-	Nemoura sp.			
ELIIDAE		Nemoura sp.			



Date ID'd Date	0030 e Sorted 20/2007 32	3-A Taxonomist CAG Forcipomyla sp. Probezzia sp. Sphaeromias sp. Stillobezzia sp. CHAOBORIDAE Chaborus sp. CHIRONOMIDAE Chironominae Chironominae Chironomini Chironomus sp. Cryptochironomus sp. Cryptochironomus sp. Demicryptochironomus sp. Dicrotendipes sp. Emfeldia sp. Endochironomus sp. Glyptotendipes sp. Kiefferulus sp. Microtendipes sp. Niothauma sp. Pagastiella sp. Parachironomus sp. Paratendipes sp. Paratendipes sp. Parachironomus sp. Paratendipes sp. Phaenopsectra sp. Phaenopsectra sp. Polypedilum sp. Stenochironomus sp. Stenochironomus sp.	SDS/AMC Sorter BTA	# Grids in Subsample 44 Synorthocladius sp. Thienemanniella sp. Tvetenia sp. Unniella sp. Xylotopus sp. Zalutschia sp. Tanypodinae Ablabesmyia sp. Alotanypus sp. Cinotanypus sp. Cinotanypus sp. Conchapelopia sp. Guttipelopia sp. Krenopelopia sp. Labrundinia sp. Larsia sp. Macropelopia sp. Maropelopia sp. Paramerina sp. Pertaneura sp. Procladius sp. Procladius sp. Psectrotanypus sp. Rheopelopia sp. Psectrotanypus sp. Psectrotanypus sp. Rheopelopia sp. Psectrotanypus sp. Rheopelopia sp. Psectrotanypus sp. Rheopelopia sp. Tanypus sp.	122 Total No. Organisms ID 94
Date ID'd 11/30/2007 9/2 IVALVIA - Clams SPHAERIDAE SPHAERIDAE SPHAERIDAE SPHAERIDAE Sphaerium sp. Pisidium sp. Musculium sp. CORBICULIDAE Corbicula fluminea sp. UNIONIDAE RANCHIOBDELLIDAE BRANCHIOBDELLIDAE TETRASTEMMATIDAE OLEOPTERA - Beetles CANTHERIDAE CURCULIONIDAE DRYOPIDAE Helichus sp. DYTISCIDAE Agabus sp. Hydroporous sp. Coptolomus sp. Coreodyles sp. Laccomis sp. Dytiscus sp. ELMIDAE Microcylloepus sp. Optioservus sp. Stenelimis sp. Promoresia sp. Microcylloepus sp. Optioservus sp. Coptolomus sp. Optioservus sp. Stenelimis sp. Promoresia sp. Microcylloepus sp. Optioservus sp. Coptionervus sp. Optioservus sp. Stenelimis sp. Promoresia sp. Microcylloepus sp. Optioservus sp. Dubiraphia sp. Ancyronyx sp. Ouliminus sp. Orynius sp. Overnius sp. Halipius pp. HALIPIDAE Halipus sp. HALIPIDAE Heliphore Helichares sp. Helochares sp. Helochares sp. Helochares sp. Helophorus sp. Derailus sp. Hydrochius sp. Tropistemus sp. Hydrochius sp. Tropistemus sp. Hydrochius sp. Dicranopselaphus sp. PSEPHENIDAE Psephenius sp. Laccobius sp. PSEPHENIDAE Psephenius sp. Hydrochius sp. Tropistemus sp. Hydrochius sp. Tropistemus sp. PSEPHENIDAE Psephenius sp. PSEPHENIDAE Psephenius sp. PSEPHENIDAE Psephenius sp. PSEPHENIDAE Psephenius sp. POFPODA RUSTACEA (Amphiboda- Scuds) CRANGONYCTIDAE	90/2007 32	Taxonomist CAG Forcipomyla sp. Probezzia sp. Sphaeromias sp. Siliobezzia sp. CHAOBORIDAE Chaborus sp. CHIRONOMIDAE Chironomias Chironominas Chironominas Chironomias sp. Cryptochironomus sp. Cryptochironomus sp. Cryptotendipes sp. Demicryptochironomus sp. Enfeldia sp. Enfeldia sp. Endechironomus sp. Glyptotendipes sp. Kiefferulus sp. Microtendipes sp. Nilothauma sp. Pagastielia sp. Paracladopelma sp. Polypedillum sp. Stenochronomus sp.	Sorter BTA	44 Synorthocladius sp. Thienemanniella sp. Tvetenia sp. Unniella sp. Xylotopus sp. Zalutschia sp. Tanypodinae Ablabesmyia sp. Alotanypus sp. Apsectrotanypus sp. Cinotanypus sp. Cinotanypus sp. Guttipelopia sp. Krenopelopia sp. Labrundinia sp. Laraia sp. Macropelopia sp. Marcopelopia sp. Paramerina sp. Paramerina sp. Pentaneurus sp. Procladius sp. Pestorotanypus sp. Procladius sp. Pastorotanypus sp. Phetopelopia sp. Procladius sp. Pastorotanypus sp. Phetopelopia sp. Procladius sp. Paetrotanypus sp. Phetopelopia sp.	Total No. Organisms ID
IVALVIA - Clams SPHAERIDAE SPHAERIDAE SPHAERIDAE Sphaerium sp. Pisidium sp. Musculium sp. Musculium sp. CORBICULIDAE Corbicula fluminea sp. UNIONIDAE RANCHIOBDELLIDA BRANCHIOBDELLIDA BRANCHIOBDELLIDAE TETRASTEMMATIDAE OLEOPTERA - Beetles CANTHERIDAE CURCULIONIDAE DRYOPIDAE Helichus sp. DYTISCIDAE Agabus sp. Hydroporous sp. Coptotomus sp. Oreodyles sp. Laccomis sp. Dyfiscus sp. ELMIDAE Microcylloepus sp. Optioservus sp. Stenelmis sp. Promoresia sp. Nacronychus sp. Oulimius sp. Dubiraphia sp. Ancyronyx sp. Oulimius ap. GYRINDAE Halipus sp. HALIPIDAE Halipus sp. HYDROPHILIDAE Cymbiodyla sp. Berosus sp. Berosus sp. HYDROPHILIDAE Heliophorus sp. HOROPHILIDAE Hydrophius sp. Hydrophius sp. Hydrophius sp. Hydrophius sp. Hydrophius sp. Hydrophius sp. Helochares sp. Helochares sp. Helophorus sp. Helophorus sp. Tropistemus sp. Hydrophius sp. Hyd	32	CAG Forcipomyla sp. Probezzla sp. Sphaeromias sp. Siliobezzla sp. CHAOBORIDAE Chaborus sp. CHIRONOMIDAE Chironomina Chironomina Chironomina Chironomus sp. Cryptotendipes sp. Demicryptochironomus sp. Dicrotendipes sp. Enfeldia sp. Enfeldia sp. Endochironomus sp. Glyptotendipes sp. Kiefferulus sp. Microtendipes sp. Niiothauma sp. Pagastiella sp. Paracladopelma sp. Stenochironomus sp. Stenochironomus sp. Stenochironomus sp. Stenochironomus sp.	BTA	44 Synorthocladius sp. Thienemanniella sp. Tvetenia sp. Unniella sp. Xylotopus sp. Zalutschia sp. Tanypodinae Ablabesmyia sp. Alotanypus sp. Apsectrotanypus sp. Cinotanypus sp. Cinotanypus sp. Guttipelopia sp. Krenopelopia sp. Labrundinia sp. Laraia sp. Macropelopia sp. Marcopelopia sp. Paramerina sp. Paramerina sp. Pentaneurus sp. Procladius sp. Pestorotanypus sp. Procladius sp. Pastorotanypus sp. Phetopelopia sp. Procladius sp. Pastorotanypus sp. Phetopelopia sp. Procladius sp. Paetrotanypus sp. Phetopelopia sp.	the state of the s
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Promoresia sp. Macronychus sp. Dubiraphia sp. Ancyronyx sp. Outlimius sp. GYRINIDAE Dineutus Gyrinus HALIPIDAE Halipus sp. HYDROPHILIDAE Cymbiodyta sp. Berosus sp. Derailus sp. Helophorus sp. Hydrophilus sp. Helophorus sp. Hydrophilus sp. Hydrophilus sp. Helophorus sp. Tropistemus sp. Tydrophilus sp. Helophorus sp. Hydrophilus sp. Hydrophilus sp. Hydrophilus sp. Tropistemus sp. Hydrophilus sp. Dicranopselaphus sp. Ectopria sp. Dicranopselaphus sp. PTILODAC TYLIDAE Anchytarsus sp. Dicranopselaphus sp. PTILODAC TYLIDAE Anchytarsus sp. DPEPODA RUSTACEA (Amphipoda- Scuda) CRANGONYCTIDAE Stygonectes sp.				Trissopelopia sp.	
Dubiraphia sp. Ancyronyx sp. Oulimnius sp. GYRINIDAE Dineutus Gyrinus HALIPIDAE Halipus sp. HYDROPHILIDAE Cymbiodyta sp. Berosus sp. Derailus sp. Helophorus sp. Hydrophilus sp. Helophorus sp. Hydrophilus sp. Dicranopsilaphus sp. Ectopria sp. Dicranopselaphus sp. PTILODAC TYLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda-Scuda) CRANGONYCTIDAE Stygonectes sp.				Zavrelimyia sp.	
Ancyronyx sp. Oulimnius sp. GYRINIDAE Dineutus Gyrinus HALIPIDAE Halipus sp. HYDROPHILIDAE Cymbiodyta sp. Berosus sp. Deraillus sp. Helophorus sp. Helophorus sp. Hydrochius sp. Hydrochius sp. Hydrochius sp. Hydrochius sp. Laccobius sp. Dependus sp. Dependus sp. Hydrochius sp. Hydrochius sp. Hydrochius sp. Hydrochius sp. Hydrochius sp. Dependus sp. PSEPHENIDAE Psephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Souds) CRANGONYCTIDAE Stygonectes sp.		Tribelos sp.		CULICIDAE	
Oulimilus sp. GYRINIDAE Dineutus GYrinus HALIPIDAE Halipus sp. HYDROPHILIDAE Cymbiodyta sp. Berosus sp. Deralius sp. Helochares sp. Helochares sp. Helophorus sp. Hydrophilus sp. Hydrophilus sp. Tropistemus sp. Hydrochus sp. Tropistemus sp. Laccobius sp. PSEPHENIDAE Psephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Souds) CRANGONYCTIDAE Stygonectes sp.		Zavreliella sp. Tanytarsini		Aedes Anopheles	
GYRINIDAE Dineutius Gyrinus HALIPIDAE HAIlpus sp. HYDROPHILIDAE Cymblodyta sp. Berosus sp. Derallus sp. Helochares sp. Helophorus sp. Hydrophilus sp. Hydrophilus sp. Hydrophilus sp. Hydrophilus sp. Hydrophilus sp. Hydrophilus sp. Tropistemus sp. Laccobius sp. Laccobius sp. PSEPHENIDAE Psephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchylarsus sp. DPPODA RUSTACEA (Amphipoda-Scuds) CRANGONYCTIDAE Stygonectes sp.		Cladotanytarsus sp.		Culex	
Gyrinus HALIPIDAE Halipus sp. HYDROPHILIDAE Cymblodyla sp. Berosus sp. Derailus sp. Helochares sp. Helochares sp. Hydrophilus sp. Hydrophilus sp. Hydrophilus sp. Hydrophilus sp. Hydrochus sp. Tropistemus sp. Hydrobius sp. PSEPHENIDAE Psephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTVLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Scuds) CRANGONYCTIDAE Stygonectes sp.		Constempellina sp.	77.4	Culiseta	
HALIPIDAE HAIIPUS sp. HYDROPHILIDAE Cymbiodyta sp. Berosus sp. Derailus sp. Helochares sp. Helochares sp. Helochares sp. Hydrochius sp. Hydrochus sp. Tropisternus sp. Hydrochus sp. Laccobius sp. PSEPHENIDAE Psephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Souda) CRANGONYCTIDAE Stygonectes sp.		Micropsectra sp.		Mansonia	
Halipus sp. HYDROPHILIDAE Cymblodyla sp. Berosus sp. Derailus sp. Helochares sp. Helophorus sp. Hydrophius sp. Hydrophius sp. Hydrochius sp. Tropistemus sp. Hydrobius sp. Laccobius sp. PSEPHENIDAE Psephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchytarsus ep. OPEPODA RUSTACEA (Amphipoda- Souds) CRANGONYCTIDAE Stygonectes sp.		Micropsectra/Tanysarsus complex		Orthopodomyia	
HYDROPHILIDAE Cymbiodyla sp. Berosus sp. Derailus sp. Helochares sp. Helochares sp. Hydrophilus sp. Hydrophilus sp. Hydrophilus sp. Tropistemus sp. Hydrobius sp. Laccobius sp. Laccobius sp. PSEPHENIDAE Psephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchylarsus sp. OPEPODA RUSTACEA (Amphipoda- Scuda) CRANGONYCTIDAE Stygonectes sp.		Paratanytarsus sp.		Psorophora	
Cymbiodyla sp. Berosus sp. Dorallus sp. Helochares sp. Helochares sp. Helochares sp. Hydrochus sp. Hydrochus sp. Tropistemus sp. Hydrochus sp. Laccobius sp. Laccobius sp. Eactopia sp. Dicranopselaphus sp. PSEPHENIDAE Psephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchylarsus sp. OPEPODA RUSTACEA (Amphipoda- Souda) CRANGONYCTIDAE Stygonectes sp.		Rheotanytarsus sp. Stempellina sp.		Toxorhynchites Uranotaenia	
Berosus sp. Derallus sp. Helochares sp. Helochares sp. Helochares sp. Helochares sp. Hydrochus sp. Tropistemus sp. Hydrochus sp. Tropistemus sp. Laccobius sp. PSEPHENIDAE Psephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Souds) CRANGONYCTIDAE Stygonectes sp.		Stempellinella sp.		Wyeomyia	
Helochares sp. Helophorus sp. Hydrochius sp. Hydrochus sp. Tropistemus sp. Hydrochus sp. Laccobius sp. Laccobius sp. Eacobius sp. PSEPHENIDAE Psephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Scuds) CRANGONYCTIDAE Stygonectes sp.		Sublettea sp.		DIXIDAE	
Helophorus sp. Hydrochilus sp. Hydrochilus sp. Tropistemus sp. Hydrochius sp. Laccobius sp. Laccobius sp. Laccobius sp. PsePHENIDAE Psephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODAC TYLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Scuds) CRANGONYCTIDAE Stygonectes sp.		Tanytarsus sp.		Dixa sp.	
Hydrophilus sp. Hydrochus sp. Tropistemus sp. Hydrobius sp. Lacobius sp. Lacobius sp. PSEPHENIDAE Psephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchylarsus sp. OPEPODA RUSTACEA (Amphipoda- Scuda) CRANGONYCTIDAE Stygonectes sp.		Zavrelia sp.		DOLICHOPODIDAE	
Hydrochus sp. Tropistemus sp. Hydrobius sp. Laccobius sp. Laccobius sp. PSEPHENIDAE Psephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Scuds) CRANGONYCTIDAE Stygonectes sp.		Diamesinae Diamesa sp.		EMPIDIDAE Chelifera sp.	
Tropistemus sp. Hydrobius sp. Lacoobius sp. PSEPHENIDAE Paephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Scuds) CRANGONYCTIDAE Stygonectes sp.		Pagastia sp.		Clinocera sp.	
Laccobius sp. PSEPHENIDAE Paephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Scuds) CRANGONYCTIDAE Stygonectes sp.		Potthastia sp.		Hemerodromia sp.	
PSEPHENIDAE Paephenus sp. Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Scuda) CRANGONYCTIDAE Stygonectes sp.		Prodiamesa sp		Dolichocephala sp.	
Psephenus sp. Ectopria sp. Dicranopsolaphus sp. PTILODACTYLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Scuda) CRANGONYCTIDAE Stygonectes sp.		Sympotthastia sp. Orthocladiinae		EPHYDRIDAE	
Ectopria sp. Dicranopselaphus sp. PTILODACTYLIDAE Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Scuds) CRANGONYCTIDAE Stygonectes sp.		Brillia sp.		PELCORHYNCHIDAE Glutops sp.	
Dicranopselaphus sp. PPTICODACTYLIDAE Anchylarsus sp. OPEPODA RUSTACEA (Amphipoda-Scuds) CRANGONYCTIDAE Stygonectes sp.		Cardiocladius sp.		PSYCHODIDAE	
Anchytarsus sp. OPEPODA RUSTACEA (Amphipoda- Scuds) CRANGONYCTIDAE Stygonectes sp.		Chaetocladius sp.		Pericoma sp.	
OPEPODA RUSTACEA (Amphipoda- Scuds) CRANGONYCTIDAE Stygonectes sp.		Corynoneura sp.		Psycoda sp.	
RUSTACEA (Amphipoda- Scuds) CRANGONYCTIDAE Stygonectes sp.		Cricotopus sp.		SIMULIDAE	
CRANGONYCTIDAE Stygonectes sp.		Cricotopus/Orthocladius sp. Diplocladius sp.		Simulium sp.	
Stygonectes sp.		Eukiefferiella sp.		Prosimulium sp. Cnephia sp.	
Crangonia en		Heleniella sp.		Twinia sp.	
		Heterotrissocladius sp.		Stegoptema sp.	
Synurella sp. GAMMARIDAE		Hydrobaenus sp.		Ectemnia sp.	
Gammarus sp.		Limnophyes sp. Lopescladius sp.		STRATIOMYIDAE Oxycera sp.	
HYALELLIDAE		Mesocricotopus sp.		Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		SYRPHIDAE	
RUSTACEA (Decopoda - Crayfish)		Nanocladius sp.		Chrysogaster sp.	
CAMBARIDAE		Orthocladinae A		Eristalis sp.	
PALAEMONIDAE		Orthocladius sp.		TABANIDAE	
RUSTACEA (Isopoda- Sowbuga) ASELIDAE		Parachaetocladius sp. Parakiefferiella sp.		Chrysops sp. Tabanus sp.	
Caecidotea sp.		Parametriocnemus sp.		TANYDERIDAE	
Lirceus sp.		Paraphaenocladius sp.		THAUMALEIDAE	
PTERA - True Flies		Parasmittia sp.		Thaumalea sp.	
ATHERICIDAE		Paratrichocladius sp.		TIPULIDAE	
Atherix sp. BLEPHARICERIDAE		Paratrissociadius sp. Psectrocladius sp.		Antocha sp.	
CECIDOMYIIDAE		Pseudorthocladius sp.		Hexatoma sp. Leptotarsus sp.	
CERATOPOGNIDAE		Psilometriocnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Psuedolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp. Dasyhelea sp.		Stilocladius sp.		Limnophila sp.	
waynered ap.		Symposiocladius sp.		Ormosia sp.	



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
The Glade	20030	3-A	SDS/AMC	1	122
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID
11/30/2007	9/20/2007	CAG	BTA	# Grids in Subsample	
11/30/2007	3/20/2007	CAG	DIA	44	94
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
imonia sp.		HIRUDINEA - Leeches		Prostoia sp.	
Pilaria sp. Erioptera sp.		HOPLONEMERTEA - Ribbon Worms TETRASTEMMATIDAE		Shipsa sp. CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
RICHOCERIDAE		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp.		NOCTUIDAE		Sweltsa sp.	
PHEMEROPTERA - Mayflies		Archanara sp.		TAENIOPTERGIDAE	
AMELETIDAE Ameletus sp.		Bellura sp. PYRALIDAE		Strophopteryx sp. Taeniopteryx sp.	
BAETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalus sp.		CALAMOCERATIDAE	
Centroptilum sp. Diphetor sp.		Nigronia sp.		Heteroplectron sp.	
BAETISCIDAE		SIALIDAE Sialis sp.		DIPSEUDOPSIDAE Phylocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
CAENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp.		ODONATA (Anispotera - Dragonflies)		Agapetus sp.	
PHEMERELLIDAE		AESHNIDAE		HELICOPSYCHIDAE	
Dannella sp. Drunella sp.		Anax sp. Basiaeshna sp.		Helicopsyche sp. HYDROPSYCHIDAE	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
EPHEMERIDAE		CORDULIDAE		Parapysche sp.	
Ephemera sp. HEPTAGENIIDAE		GOMPHIDAE Arigomphus sp.		Potamyia sp. HYDROPTILIDAE	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
LEPTOPHLEBIDAE Leptophlebia sp.		LIBELLULIDAE MACROMIDAE		Lepidostoma sp. LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Triaenodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Ceraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies)		Oecetis sp.	
NEOEPHEMERIDAE		CALOPTERYGIDAE		LIMNEPHILIDAE	
DLIGONEURIDAE Isonychia sp.		Calopteryx sp. COENAGRIONIDAE		Apatina sp.	
POLYMITARCYIDAE		Argia sp.		Hydatophylax sp. Ironoquia sp.	
POTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms		MOLANNIDAE	
Siphlonurus sp.		LUMBRICINA		Molanna sp.	
TRICORYTHIDAE		ENCHYTRAEIDAE		ODONTOCERIDAE	
Tricorythodes sp. ASTROPODA - Snails		NAIDIDAE TUBIFICIDAE	2	Psilotreta sp. PHILOPOTAMIDAE	
ANCYLIDAE		LUMBRICULIDAE		Chimarra sp.	
Ferissa sp.		POLYCHAETA - Polychaete Worms		Wormaldia sp.	
HYDROBIIDAE		AEOLOSOMATIDAE		PHRYGANEIDAE	
YMNAEIDAE		Aeolosoma sp.		Ptilostomis sp.	
Fossaria sp. Stagnicola sp.		PLECOPTERA - Stonefly Larvae PERLIDAE		POLYCENTROPIDAE Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
PHYSIDAE		Beloneuria sp.		PSYCHOMYIDAE	
Physella sp.		Eccoptura sp.		Lype sp.	
PLANORBIDAE Menetus sp.		Neoperla sp. Perlesta sp.		Psychomyia sp.	
Gyraulus sp.		Perlinella sp.		RHYACOPHILIDAE Ryacophila sp.	
PLEUROCERIDAE		PERLODIDAE		UENOIDAE	
/IVIPARIDAE		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		TUBELLARIA - Flatworms	
APLOSCLERIDA SPONGILLIDAE		Isoperla sp.		PLANARIIDAE	
MIPTERA - True Bugs		Cultus sp. PTERONARCYIDAE		DENDROCOELIDAE	
BELOSTOMATIDAE		Pteronarcys sp.			
Belostoma sp.		PELTOPERLIDAE			
Lethocerus sp.		Peltoperia sp.			
CORIXIDAE		LEUCTRIDAE			
BELASTOCORIDAE BERRIDAE		Leuctra sp. Zealuectra sp.			
Trepobates sp.		Paraleuctra sp.			
IEBRIDAE		CAPNIDAE			
IYDROMETRIDAE		Allocapnia sp.			
MESOVELIIDAE		Paracapnia sp.			
IEPIDAE		NEMOURIDAE			
Nepa sp.		Amphinemura sp.			
Ranatra sp. /ELIIDAE		Ostrocerca sp Nemoura sp.			
Marine Citi		resiliouru ap.			



EXHIBIT 6: HABITAT ASSESSMENT FIELD DATA SHEET - SUMMARY WORKSHEET

Date: 4/12/07 and 4/18/07 Project Name and WSSI Number: Northern Virginia Stream Restoration Bank: Glade (WSSI # 20030) HUC: 02070008 Stream ID: The Glade and Unnamed Tributaries of The Glade Evaluators: SDS/AMC/BAA/BNR

Prerestoration

Assessment Peri

^{*} The score for Bank Stability, Vegetation Protection and Ripanian Zone combines the left and right bank scores.

^{**} The stream is characterized as non-perennial by Fairfax County and is thus either intermittent or ephemeral.

^{***} Percentage of Best Possible Score= (Total Habitat Score)/(200)*100



Project #	Site	Cowardin		Date	Time			
20030	NOVA Stream Bank	R3	River Basin	4/12/2007	N/A			
Invest	igators	HUC		Locality				
	AMC	02070008	Potomac	Fairfax County	,			
	ach	D.A. (Acres)	Reach Length (LF)					
	-A	780 300 3rd						
Latitude	Longitude	Stream Name						
38°55'49"	77°19'29"		GLADE					
	Condition Category							
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Scor			
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.				
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	18			
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment				
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	18			
3. Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).				
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	18			
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.				
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	15			
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.				
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	17			
		Total Score			86			



BITAT ASSESSMENT FIELD DATA SHEET-HIGH (
Site Cowardin River Basin	Date Tim
NOVA Stream Bank R3	4/12/2007 N//
ators HUC Potomac	Locality
MC 02070008	Fairfax County
h D.A. (Acres) Reach Length (
780 300	3rd
Longitude Stream	
77°19'29" GLA	'E
Condition Category	
Optimal Suboptimal Marginal	Poor Sco
Channelization or dredging absent or minimal; stream width normal pattem. Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present. Channelization may be extensive; embankmer shoring structures present both banks; and 40-80 stream reach channelization is not present.	s or cement; over 80% of the stream reach channelized and disrupted. Instream habitat
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6	5 4 3 2 1 0 20
ccurrence of riffles relatively frequent; ratio of distance	
between riffles divided by width of the stream <7:1 Generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, acment of boulders or other arge, natural obstructions is important. Occurrence of riffles infrequent; distances between riffles divided by the width of the stream is between a to 15.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the
20 19 18 17 16	5 4 3 2 1 0 18
Banks stable; evidence of rosion or bank failure absent or minimal; little potential for ture problems. <5% of bank affected. Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion. Moderately unstable; 30 of bank reach has area of erosion, high erosion potential for reach has areas of erosion.	of straight sections and bends;
10 9 8 7 6 5 4 3	2 1 0 7
10 9 8 7 6 5 4 3	2 1 0 5
More than 90% of the streambank surfaces and immediate riparian zone bovered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plants allowed to grow naturally. 70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, but one class of plants is not well-represented; disruption of vegetation, vegetatio	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been specified to surprise the formula of the surprise of the
10 9 8 7 6 5 4 3	2 1 0 9
10 9 8 7 6 5 4 3	2 1 0 9
Width of riparian zone >18 reters; human activities (i.e. arking lots, roadbeds, clear-ts, lawns, or crops) have not impacted zone only minimally. Width of riparian zone 12-18 meters; human activities have impacted zone a great impacted zone a great	have recetation due to human
10 9 8 7 6 5 4 3	2 1 0 10
10 9 8 7 6 5 4 3	2 1 0 10
Total Score	17-



Project #	Site	Cowardin		Date	Time
20030	NOVA Stream Bank	R3	River Basin	4/12/2007	N/A
	igators	HUC		Locality	14//5
	AMC	02070008 Potomac		Fairfax County	,
	ach	D.A. (Acres)	Reach Length (LF)	Order	
	-B	668	300	3rd	
Latitude	Longitude	000	Stream Nam		
38°55'25"	77°19'54"		GLADE		
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
1. Epifaunal substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	12
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	18
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	14
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	18
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
		Total Score			82



Project #	Site	Cowardin		Date	Time
20030	NOVA Stream Bank	R3	River Basin	4/12/2007	N/A
	igators	HUC	D.A.	Locality	. 4774
	AMC	02070008	Potomac	Fairfax County	/
	ach	D.A. (Acres)	Reach Length (LF)	Order	
1-	-B	668	300	3rd	
Latitude	Longitude		Stream Nam		
38°55'25"	77°19'54"		GLADE		
		Con	dition Cotononi		
labitat Parameter	Optimal	Suboptimal	dition Category Marginal	Poor	Score
	Optimal	Заворина	Margina	Pool	3001
6. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
	Occurrence of riffles relatively				20
7. Frequency of Riffles	frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	13
8. Bank Stability score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	8
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	8
9. Vegetation Protection (score each bank) Note: Determine left or ght side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	9
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	9
10. Riparian Vegetative Zone Vidth (score each ank riparian zone)	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
		Total Score			169



Project #	Site	Cowardin		Date	Time		
20030	NOVA Stream Bank	R3	River Basin	4/12/2007	N/A		
Invest	igators	HUC	4 1000000	Locality			
	AMC	02070008	Potomac	Fairfax County			
	ach	D.A. (Acres)	Reach Length (LF)				
1-	-C	618					
Latitude	Longitude		Stream Name				
38°55'22"	77°20'12"		GLADE				
		0	1111 0 1				
Habitat Parameter	Ontimal		dition Category	Deer	0		
	Optimal	Suboptimal	Marginal	Poor	Scor		
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover, mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.			
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	17		
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment			
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	11		
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).			
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	10		
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.			
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	10		
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.			
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	14		
		Total Score			62		



Project #	Site	Cowardin	NAME OF TAXABLE PARTY.	Date	Time
	NOVA Stream Bank	R3	River Basin	4/12/2007	N/A
Investig		HUC	4.00000	Locality	14/74
SDS;		02070008	Potomac	Fairfax County	1
Rea		D.A. (Acres)	Reach Length (LF)	Order	
1-0		618	300	3rd	
Latitude	Longitude		Stream Nam		
38°55'22"	77°20'12"		GLADE	-	
bitat Parameter -	Ontino		dition Category	Danie I	0
	Optimal	Suboptimal	Marginal	Poor	Scor
6. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
Frequency of Riffles	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	15
Dank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; *raw* areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
core Left Bank	10 9	8 7 6	5 4 3	2 1 0	4
core Right Bank	10 9	8 7 6	5 4 3	2 1 0	4
downstream.	More than 90% of the streambank surfaces and immediate riparlan zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or nowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
core Left Bank	10 9	8 7 6	5 4 3	2 1 0	7
ore Right Bank	10 9	8 7 6	5 4 3	2 1 0	7
10. Riparian egetative Zone dth (score each k riparian zone)	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
core Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
core Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
		Total Score			139



				DIENT STREAMS	
Project #	Site	Cowardin	River Basin	Date	Time
20030	NOVA Stream Bank	R3	111101 1010111	4/12/2007	N/A
	igators	HUC	Potomac	Locality	
SDS;	AMC	02070008	1.00000000	Fairfax County	/
Re	ach	D.A. (Acres)	Reach Length (LF)	Order	
1-	-D	395	300	3rd	
Latitude	Longitude		Stream Nam	ie	
38°55'26"	77°2108"		GLADE		
	District a real part of	Con	dition Category		
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Scor
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	17
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	10
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	9
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	10
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	14
		Total Score			60



Investigators Company		ABITAT ASSESSM		OHEET HIGH GHA		100.0
NOVA Stream Bank H3				River Basin		Time
Reach 1-D 1-D 1-D 1-D 1-D 1-D 1-D 1-						N/A
Reach 1-D 395 300 3rd 3rd 395 300 3rd 375 39				Potomac		
Latitude 38*5526* 77*2108* Condition Category Optimal Channelization or dredging absent or minimal; stream width normal pattern. Channelization or dredging absent or minimal; stream width normal pattern. Channelization or dredging absent or minimal; stream width normal pattern. Channelization or dredging absent or minimal; stream width normal pattern. Score 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 Cocarismon of ifflies relatively frequent; rate of distance between efflies divided by width of the stream rate half allow absent where efflies are continuous, placement of boulden or other larger, natural destruction is important. Score 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 Cocarismon of ifflies relatively frequent; rate of distance between efflies divided by with the stream is between 15 to distance between efflies divided by the width of the stream is a rate of 225. Score 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 Cocarismon of ifflies relatively frequent; rate of distance between efflies divided by the width of the stream is not between 15 to distance between efflies divided by the width of the stream is a rate of 225. Score 20 19 18 7 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 Unitable; many eroded areas; "reach has a reas of ordinor notary healted over. 5-30% of bank reach has a reas of erosion or bank fallow absent surfaces accoured by the stream hands surfaces covered by reach patch, or non-woody memory health with a part of the stream hands surfaces covered by reached and surfaces covered by relatively remaining. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Unitable; many eroded areas; "reach has a reas of ordinor notary health of reparting room promise in the stream hands surfaces accoured by remaining downstream. 10 9 8 7 6 5 4 3 2 1 0 Unitable; many eroded areas; "remaining downstream." Width of ripartan zone - 18 meters, human activities have remaining downstream. 10 9 8 7 6 5 4 3 2 1 0 Unitable; many eroded areas; "remaining downstream." Width of rip						У
Latitude 38°5526° 77°2108° GLADE Channel						
## Alteration Channelization or drodging about or minimal stream, width normal patition. ## Channelization or drodging about or minimal stream, width normal patition. ## Channelization or drodging about or minimal stream, width normal patition. ## Channelization or drodging about or minimal stream, width normal patition. ## Channelization or drodging about or minimal stream, width normal patition. ## Channelization or drodging about or discount or drodging about or minimal stream, width normal patition. ## Channelization or drodging about or discount or drodging about or minimal stream, width normal patition. ## Channelization or drodging about or discount or drodging about or discount or drodging about or dronger, with or present. ## Score			395			
Channell Alteration Channelization or dredging abeard or minimals stream width normal pattern, width normal p		Longitude			10	
6. Channel Alteration Channelization or dredging absent or minimal; stream width normal pattern. Channelization present, sally in areas of bridge absuments; will reduce on the stream in a fact of the content of the	38°55'26"	77°2108"		GLADE		
6. Channel Alteration Channelization or dredging absent or minimal; stream width normal pattern. Channelization or dredging absent or minimal; stream width normal pattern. Channelization or dredging absent or minimal; stream width normal pattern. Channelization is not present, usually in areas of bridge abstrantiation, i.e. dredging, may be present on both barks; and 40-80% of the aream reach channelized and disrupted. Instream habitat greatly areas and disrupted. Instream habitat greatly areas and disrupted. Channelization in a present, usually in areas of bridge abstrantiation, i.e. dredging, may be present, but record to both barks; and 40-80% of the stream reach channelized and disrupted. Instream habitat greatly already or enrowed entitled, or the stream is between filles divided by the width of the stream	Hahitat Darameter		Con	dition Category		
Channel Alteration Channel Channel Channelization or dredging absent or minimal; stream width normal pattern. Channelization is described absent or minimal; stream width normal pattern. Channelization is described absent or minimal; stream habitation is described and disrupted. Cocurrence of riffles relatively frequent; ratio of distance between fiftles divided by width of the stream x-7:1 (garanty is to 7); valided by width of the stream is between 7:10 15, placement of boulders or other large, natural obstruction is important. Cocurrence of riffles are continued by width of the stream x-7:1 (garanty is 10.7); valided by yield of the stream is between 7:10 15, placement of boulders or other large, natural obstruction is important. Score 20 19 18 17 16 Banks stable; evidence of stream reach between 7:10 15, placement of boulders or other large, natural obstruction is important. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Instable; many eroded areas; "raw" areas frequent along the stream habitatis statemed between fiftes divided by the width of the stream is a ratio of >25. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Instable; many eroded areas; "raw" areas frequent along between the surfaces covered by native vegletation; but one class to place a subject to the streambank surfaces and immediate reparison zone covered by native vegletation; disruption of the streambank surfaces covered by native vegletation streambank surfaces covered by native vegletation for the vegletation common, dispution through grazing but not vegletation common, dispution through grazing but nother provides of the streambank surfaces covered by native vegletation stream, but not vegletation due to this stream is a trait of partial pant stubble height remaining. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Width of riparian zone -12 more provided come only minimally. Impacted zone only minim	Habitat Farameter	Optimal	Suboptimal	Marginal	Poor	Scor
Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream *7.1 bits is key. in stream where riffles are continuous, placement of boulders or other large, natural obstruction is important. Score 20 19 18 17 16 Banks stability (score each bank) Bank Stability (score each bank) Score Left Bank 10 9 8 7 6 Score	701.00000000000000000000000000000000000	absent or minimal; stream	usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent	extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and	cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed	
Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream *7.1 bits is key. in stream where riffles are continuous, placement of boulders or other large, natural obstruction is important. Score 20 19 18 17 16 Banks stability (score each bank) Bank Stability (score each bank) Score Left Bank 10 9 8 7 6 Score	Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
frequent; ratio of distance between riffles divided by width of the stream x-7:1 (generally 5 to 7); variety of habitat is key, in streams where riffles are continuous, placement of boulders or other large, natural obstruction is important. Score 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 Banks stability (score each bank) Banks stabile; evidence of erosion or bank failure absent or minimal; little potential for future problems. x-5% of bank affected. Moderately stable; infrequent, small areas of erosion mostly of total reach has areas of erosion mostly of total reach has areas of erosion. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Worderately stable; infrequent, small areas of erosion mostly of total reach has areas of erosion. Score Right Bank 10 9 8 7 6 5 4 3 2 1 0 Worderately stable; infrequent, small areas of erosion mostly of total reach has areas of erosion. Score Right Bank 10 9 8 7 6 5 4 3 2 1 0 Worderately stable; infrequent, small areas of erosion mostly of bank reach has areas of erosion mostly of total reach has areas of erosion mostly of total reach has areas of erosion. Score Right Bank 10 9 8 7 6 5 4 3 2 1 0 Worderately unstable; 30-60% of bank in reach has areas of erosion, high erosion potential during floods. Score Right Bank 10 9 8 7 6 5 4 3 2 1 0 Worderately unstable; 30-60% of bank reach has areas of erosion, high erosion potential during floods. Score Right Bank 10 9 8 7 6 5 4 3 2 1 0 Worderately unstable; 30-60% of bank reach has areas of erosion, high erosion potential during floods. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 To special to the streambank surfaces covered by native vegetation, including trees, understop, between 7 to 15. Score Right Bank 10 9 8 7 6 5 4 3 2 1 0 Width of riparian zone > 1 8 70-90% of the streambank surfaces covered by native vegetation disruption obvious, between 7 to 15. Bank Stability (score each bank) Note: the potential for	00010		10 15 17		0 4 0 2 1 0	20
Bank Stability (score each bank) 8. Bank Stability (score each bank) 8. Bank Stability (score each bank) 9. Vegetation Protection (score each bank) Note: Determine left or including trees, understory shubs, or non-woody macrophytes; vegetation downstream. 9. Vegetation Protection (score each bank) Note: Determine left or including trees, understory shubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally. Score Left Bank 10. 9 8 7 6 5 4 3 2 1 0 Moderately unstable; 30-60% of bank has areas of erosion mostly helado over, 5-30% of bank in reach has areas of erosion, small areas of erosion mostly helado over, 5-30% of bank in reach has areas of erosion, small areas of erosion mostly helado over, 5-30% of bank in reach has areas of erosion, small areas of erosion mostly helado over, 5-30% of bank in reach has areas of erosion, small areas of erosion mostly helado over, 5-30% of bank in reach has areas of erosion, small areas of erosion mostly helado over, 5-30% of bank in reach has areas of erosion, small areas of erosion mostly helado over, 5-30% of bank in reach has areas of erosion, small areas of erosion. Score Left Bank 10. 9 8 7 6 5 4 3 2 1 0 Less than 50% of the streambank surfaces covered by vegetation, but one class of plants is not well-represented; disruption obvious; plants is not well-represented; the potential plant stubble height remaining. Score Left Bank 10. 9 8 7 6 5 4 3 2 1 0 Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. Width of riparian zone 6-12 meters; luman activities have impacted zone a great deal. Width of riparian zone a great deal.		frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is	infrequent; distance between riffles divided by the width of	bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to	shallow riffles; poor habitat; distance between riffles divided by the width of the	
Score Left Bank 9. Vegetation Protection (score each bank) 9. Vegetation Protection (score each bank) 10. 9. 8. 7. 6. 5. 4. 3. 2. 1. 0. 5.70% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing downstream. Score Left Bank 10. 9. 8. 7. 6. 5. 4. 3. 2. 1. 0. 5.70% of the streambank surfaces covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or moving minimal or not evident almost all plants allowed to grow naturally. Score Left Bank 10. 9. 8. 7. 6. 5. 4. 3. 2. 1. 0. 5.70% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent, more than one-half of the potential plant stubble height remaining. Score Left Bank 10. 9. 8. 7. 6. 5. 4. 3. 2. 1. 0. 5.70% of the streambank surfaces covered by vegetation; disruption of straembank surfaces covered by vegetation; disruption of st	Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	17
9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Less than 50% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation; clisruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Less than 50% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Width of riparian zone > 18 meters; human activities flave impacted zone a great deal. Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0	The state of the s	erosion or bank failure absent or minimal; little potential for future problems, <5% of bank	small areas of erosion mostly healed over. 5-30% of bank in	of bank reach has areas of erosion; high erosion potential	"raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional	
9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Less than 50% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation; clisruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Less than 50% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Width of riparian zone > 18 meters; human activities flave impacted zone a great deal. Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0	Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	3
streambank surfaces and immediate riparian zone each bank) Note: Determine left or each by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Width of riparian zone > 18 meters; human activities have brank riparian zone) Width of riparian zone) Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Width of riparian zone > 18 meters; human activities have impacted zone only minimally. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0 Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0						3
Score Right Bank 10. Riparian Vegetative Zone Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone. Width of riparian zone 12-18 meters; human activities have impacted zone a great deal. Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. Score Left Bank 10. 9 8 7 6 5 4 3 2 1 0 Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. Score Left Bank 10. 9 8 7 6 5 4 3 2 1 0 Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. Score Left Bank 10. 9 8 7 6 5 4 3 2 1 0	Protection (score each bank) Note: Determine left or ight side by facing downstream.	streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to	surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height	surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
10. Riparian Vegetative Zone Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone. Width of riparian zone 12-18 meters; human activities have impacted zone a great deal. Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0	THE RESERVE AND ADDRESS OF THE PARTY OF THE					7
Vegetative Zone Width (score each bank riparian zone) meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone. Width of riparian zone 12-18 meters; human activities have impacted zone a great deal. Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. Width of riparian zone 6-12 meters; human activities have impacted zone a great deal. Score Left Bank 10 9 8 7 6 5 4 3 2 1 0	Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	7
Score Left Bank 10 9 8 7 6 5 4 3 2 1 0	Vegetative Zone Width (score each	meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not	meters; human activities have	meters; human activities have	meters; little or no riparian vegetation due to human	
Sparra Dight Pank 10 0 9 7 0 5 4 0 0 1 0	Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
Score right bank 10 9 8 / 6 5 4 3 2 1 0	Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
						137



Project #	Site	Cowardin		Date	Time
20030		R4	River Basin		N/A
10000	NOVA Stream Bank	HUC HUC		4/188/2007	N/A
	igators		Potomac		
	AMC	02070008	D (1 E)	Fairfax County	
	ach	D.A. (Acres)	Reach Length (LF)	Order	
	-E	221	300	3rd	
Latitude	Longitude		Stream Nam	10	
38°55'35"	77°21'40"		GLADE		
H-Mark Barrer		Con	dition Category		
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Scor
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	4
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low)	regime (usually slow-deep)	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	13
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools,	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	7
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	15
		Total Score			47



			SHEET-HIGH GRA		TOTAL CONTRACTOR
Project #	Site	Cowardin	River Basin	Date	Time
20030	NOVA Stream Bank	R4		4/188/2007	N/A
	igators	HUC	Potomac	Locality	
	AMC	02070008	December 1 (1 F)	Fairfax Count	/
	ach	D.A. (Acres)	Reach Length (LF)	Order	
	-E	221	300	3rd	
Latitude 38°55'35"	Longitude		Stream Nam	10	
38 55 35	77°21'40"		GLADE		
Habitat Parameter			dition Category		
THE PROPERTY OF STREET	Optimal	Suboptimal	Marginal	Poor	Score
6. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattem.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
	Occurrence of riffles relatively				20
7. Frequency of Riffles	frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	16
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	3
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	3
9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	8
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	8
10. Riparian Vegetative Zone Width (score each pank riparian zone)	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
		Total Score			125
		Total Odolo			120



Project #	Site	Cowardin		Date	Time
20030	NOVA Stream Bank	R4	River Basin	4/12/2007	N/A
THE RESERVE OF THE PERSON NAMED IN COLUMN 2 IS NOT THE PERSON NAME	igators	HUC		Locality	
	AMC	02070008	Potomac	Fairfax County	/
	ach	D.A. (Acres)	Reach Length (LF)	Order	
	-F	95	300	2nd	
Latitude	Longitude		Stream Nam		
38°55'35"	77°21'45"		GLADE		
Habitat Parameter	The state of the s		dition Category		
	Optimal	Suboptimal	Marginal	Poor	Scor
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and n	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	9
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	6
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	13
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	15
		Total Score			51



Tim	Date	SHEET-HIGH GRA	Cowardin	Site	Project #
N/A	4/12/2007	River Basin	R4	NOVA Stream Bank	20030
	Locality	2/10/10	HUC	igators	
	Fairfax Count	Potomac	02070008	AMC	
	Order	Reach Length (LF)	D.A. (Acres)	ach	
	2nd	300	95	-F	
		Stream Nam		Longitude	Latitude
		GLADE		77°21'45"	38°55'35"
		dition Category	Con		ACTION OF A SECOND COMM
Sco	Poor	Marginal	Suboptimal	Optimal	Habitat Parameter
and at	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channelization or dredging absent or minimal; stream width normal pattern.	6. Channel Alteration
20	5 4 3 2 1 0	10 9 8 7 6	15 14 13 12 11	20 19 18 17 16	Score
at;	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	Occasional riffle or bend; bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to 25.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruct	7. Frequency of Riffles
16	5 4 3 2 1 0	10 9 8 7 6	15 14 13 12 11	20 19 18 17 16	Score
g ds; io-	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	8. Bank Stability (score each bank)
3	2 1 0	5 4 3	8 7 6	10 9	Score Left Bank
3	2 1 0	5 4 3	8 7 6	10 9	Score Right Bank
of ery n or	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allo	9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.
8	2 1 0	5 4 3	8 7 6	10 9	Score Left Bank
8	2 1 0	5 4 3	8 7 6	10 9	Score Right Bank
n	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	10. Riparian Vegetative Zone Width (score each pank riparian zone)
10	2 1 0	5 4 3	8 7 6	10 9	Score Left Bank
10	2 1 0	5 4 3	8 7 6	10 9	Score Right Bank
129			Total Score		



Project #	Site	Cowardin	THE RESERVE OF THE PARTY OF THE	Date	Time
20030	NOVA Stream Bank	R4	River Basin	4/12/2007	N/A
The second secon	igators	HUC			IN/A
			Potomac	Locality	
	BNR	02070008	Desch Lausth (LE)	Fairfax County	
		D.A. (Acres)	Reach Length (LF)	Order	
	G	27	300	1st	
Latitude 38°55'35"	Longitude 77°22'02"		Stream Nam	ie	
38 55 35	77°22'02"		GLADE		
Unhited December		Con	dition Category		
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Scor
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover, mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and n	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	1
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	1
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	4
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	1
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	18
		Total Score			25



		SHEET-HIGH GRA			
Time	Date	River Basin	Cowardin	Site	Project #
N/A	4/12/2007		R4	NOVA Stream Bank	20030
	Locality	Potomac	HUC	igators	
У	Fairfax County		02070008	BNR	
	Order	Reach Length (LF)	D.A. (Acres)	ach	
	1st	300	27	-G	
	е	Stream Nam		Longitude	Latitude
		GLADE		77°22'02"	38°55'35"
		dition Category	Con		Habitat Parameter
Scor	Poor	Marginal	Suboptimal	Optimal	Habitat Faraineter
	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channelization or dredging absent or minimal; stream width normal pattern.	6. Channel Alteration
1	5 4 3 2 1 0	10 9 8 7 6	15 14 13 12 11	20 19 18 17 16	Score
	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25,	Occasional riffle or bend; bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to 25.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruct	7. Frequency of Riffles
3	5 4 3 2 1 0	10 9 8 7 6	15 14 13 12 11	20 19 18 17 16	Score
	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	8. Bank Stability (score each bank)
3	2 1 0	5 4 3	8 7 6	10 9	Score Left Bank
3	2 1 0	5 4 3	8 7 6	10 9	Score Right Bank
	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height	More than 90% of the streambank surfaces and immediate fiparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allo	9. Vegetation Protection (score each bank) Note: Determine left or ight side by facing downstream.
9	2 1 0	5 4 3	8 7 6	10 9	Score Left Bank
9	2 1 0	5 4 3	8 7 6	10 9	Score Right Bank
	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	10. Riparian Vegetative Zone Width (score each pank riparian zone)
8	2 1 0	5 4 3	8 7 6	10 9	Score Left Bank
10	2 1 0	5 4 3	8 7 6	10 9	Score Right Bank
71			Total Score		



Project #	Site	Cowardin	River Basin	Date	Time
20030	NOVA Stream Bank	R4		4/12/2007	N/A
	igators	HUC	Potomac	Locality	
	AMC	02070008	2.717.777	Fairfax County	/
Rea	ach	D.A. (Acres)	Reach Length (LF)	Order	
The second secon	-A	40	300	1st	
Latitude	Longitude		Stream Nam	ie	
38°55'29"	77°21'12"		GLADE		
		Con	dition Category		
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Scor
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	5
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	6
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	7
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
		Total Score			46



Investiga SDS; AN Reach 2-A Latitude		Cowardin R4	River Basin	Date	Time
SDS; AN Reach 2-A Latitude				4/12/2007	N/A
SDS; AN Reach 2-A Latitude		HUC	Data	Locality	
2-A Latitude	MC I	02070008	Potomac	Fairfax County	V
Latitude	h	D.A. (Acres)	Reach Length (LF)	Order	
		40	300	1st	
00055100"	Longitude		Stream Nam	ie	
38°55'29"	77°21'12"		GLADE		
		0	-libi O-t		
Habitat Parameter -	Ontined		dition Category	Dane I	
	Optimal	Suboptimal	Marginal	Poor	Scor
	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cernent; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score 2	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	7
7. Frequency of Riffles	ccurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, accment of boulders or other arge, natural obstruction is	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	
	important.	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	3
8. Bank Stability	Banks stable; evidence of rosion or bank fallure absent or minimal; little potential for ture problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	4
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	4
9. Vegetation Protection (score each bank) Note: Determine left or ight side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone overed by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation isruption through grazing or owing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	5
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	5
Vegetative Zone	Width of riparian zone >18 neters; human activities (i.e. arking lots, roadbeds, clear- ts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
		Total Score			94



Project #	Site	Cowardin		Date	Time
20030	NOVA Stream Bank	R3	River Basin	4/12/2007	N/A
	igators	HUC		Locality	1000
	BNR	02070008	Potomac	Fairfax County	,
	ach	D.A. (Acres)	Reach Length (LF)	Order	
and the same of th	-A	91	300	2nd	
Latitude	Longitude		Stream Nam	30114	
38°55'41"	77°21'48"		GLADE		
Habitat Parameter	0-111	The second secon	dition Category		0
	Optimal	Suboptimal	Marginal	Poor	Score
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	3
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	13
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	9
		Total Score			41



			SHEET-HIGH GRA		
Project #	Site	Cowardin	River Basin	Date	Time
	NOVA Stream Bank	R3	THYOT DUGHT	4/12/2007	N/A
Investig		HUC	Potomac	Locality	
BAA; I		02070008	100000000000000000000000000000000000000	Fairfax County	/
Rea	ch	D.A. (Acres)	Reach Length (LF)	Order	
3-/		91	300	2nd	
Latitude	Longitude		Stream Nam	ie	
38°55'41"	77°21'48"		GLADE		
at Darameter		Con	dition Category		
at Parameter -	Optimal	Suboptimal	Marginal	Poor	Score
. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
	Occurrence of riffles relatively	13 14 13 12 11	10 8 0 7 0	3 4 3 2 1 0	20
requency of Riffles	frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	18
ank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
re Left Bank	10 9	8 7 6	5 4 3	2 1 0	2
e Right Bank	10 9	8 7 6	5 4 3	2 1 0	2
bank) Note: rmine left or side by facing wnstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
re Left Bank	10 9	8 7 6	5 4 3	2 1 0	9
e Right Bank	10 9	8 7 6	5 4 3	2 1 0	9
	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
re Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
e Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
		Total Score			121



Projec	ct#	Sit	е	Cow	ardin	River B	asin	Date	Time
2003		Gla			33	Potom			
	Inves	tigators		Н	UC		Loc		
	SDS	; AMC		207	0008				
	Re	each		D.A. (Acres)	Reach Len	gth (LF)	Or	der
	1	I-A		7	80	300		3	rd
Latitu		Longi				Stream I	Name		
38°55	'49"	77°19	129"			The GI	ade		
		Habitat T	ypes (Inc	dicate Perce	ntage of E	ach Habitat P	resent)	70 1011	
Cobble	90	Sand	10	Rootwads	2	Vegetated	Banks	1	5
	ged Macr	ophytes	1		ut Banks	40			15
			100000						
THE PERSON NAMED IN		THE STATE OF		Sample	Collection	STEEL STREET,			
Gear U	Jsed	How	Were Sa	mples Colle		Number of	Jabs/Kid	ks Taken fi	om Eac
D-Frame	X	Wad	ing	,	X		Hal	bitat	
		The state of the s						ther cks Taken f bitat Undercut Banks Submerged Macro- phytes Other	
Kick-Net		From E	Bank			Cobble	7	d/12/2007 cality c County Core 3r 18 ther cks Taken fr bitat Undercut Banks Submerged Macro- phytes Other in net.	6
Other		From	Boat			Large Woody Debris	3	Macro-	0
						Rootwads	1		
						Vegetated			
						Banks	0	Other	3
				General (Comments				
				dellerar	Johnnents				
	Caug	tht brown bull	head cat	fish, bluegill s	sunfish, and	d two-lined sala	amander	in net.	
			Qual	tative Listin	g of Aquat	tic Biota			
Indicate	Estimate	d Abundance	: 0=Abse	ent/Not Obse	rved, 1=Ra	are, 2=Commo	n, 3=Abur	ndant, 4=Do	minant
Periphyton		Reset See		2	Slimes				0
Olibrigion	Alman		-	1	Macroinve	ertebrates			3
					Macroinvertebrates				



Projec	ct #	Si	le	Cow	ardin	River B	lacin	Date	Time
2003		Gla			33	Poton		cks Taken frobitat Undercut Banks Submerged Macro- phytes Other	12:00 PN
2000		igators	uc		UC	1 01011			12.0011
		AMC			0008			sality County Ord 3rd Street S	
		ach			Acres)	Reach Len			der
		-B			68	300			
Latitu	ide	Long	itude	N COLOR		Stream	Name	Marie College	
38°55'	'25"	77°1	9'54"			The G	lade	4/12/2007 Decality ax County) Ore 3r Stocks Taken fr abitat Undercut Banks Submerged Macro- phytes Other	
		Habitat T	ypes (In	dicate Perce	ntage of E	ach Habitat P	resent)		
Cobble	0	Sand	0	Rootwads	30	Vegetated	Ranke	5	0
	ged Macro		5		ut Banks	50			100
Oubillorg	jou maore	phytos		Ondere	at Danks	- 00		1101	100
				Sample (Collection				
Gear U	Ised	How	Were Sa	mples Collec		Number of	Jabs/Kid	ks Taken fr	om Each
D-Frame	X	Wad			X		Hal	oitat	
								Undercut	
Kick-Net		From	Bank			Cobble	0	Banks	3
Other		From	Boat			Large Woody Debris	7	Macro-	4
						Rootwads	4		
						Vegetated			
						Banks	2	Other	0
						No. 10 STOKE 1		THE REAL PROPERTY.	Harris .
				General C	Comments				
		Car	ught one	creek chub ai	nd black no	ose dace in ne	t.		
			Qual	itative Listin	a of Agua	ic Biota			
Indicate	Estimated	d Abundance				are, 2=Commo	n, 3=Abu	ndant, 4=Do	minant
Periphyton				0	Slimes				0
ilamentous				0	Macroinve	ertebrates			2
/lacrophytes	3			1	Fish	AL CANA			1
idoi opilytoo									



Projec	+ #	Sit	to	Cow	ardin	Divor D	acin	Doto	Time
2003		Gla		_	33		Locality Fairfax County Reach Length (LF) Orde 300 3rd Stream Name The Glade Ch Habitat Present) Vegetated Banks 5 70 Other Number of Jabs/Kicks Taken from Habitat Cobble 10 Banks Large Woody Debris 1 Phytes Rootwads 0 Vegetated Banks 0 Other g tadpole in net.	2:15 PM	
2000		igators	ue		UC	Poton			2.13 FIV
		AMC			0008			ther Cks Taken fribitat Undercut Banks Submerged Macro- phytes Other	
		ach	and at the		Acres)	Reach Len			der
		-C			18				
Latitu		Longi	itude		No.				
38°55'		77°20	0'12"						
ONLE									
		Habitat T	vpes (Inc	dicate Perce	ntage of E	ach Habitat P	resent)		
Cobble	80	Sand	20	Rootwads	1		Banks	5	5
Submerg	jed Macro	ophytes	0	Underc	ut Banks	70	Of	ther	15
		SV KINDS				And the latest terminal			
			Maria		Collection				
Gear U	sed			mples Collec	cted?	Number of	Jabs/Kid	cks Taken fr	om Each
D-Frame	Х	Wad	ling		X		Ha	412/2007 pcality ax County Toronto Street Tor	
		The same							
Kick-Net		From	Bank			Cobble	10	Banks	7
Other		From	Boat				1	Macro-	1
O III O		110111	2001					priyiou	
						The state of the s	0	Other	1
				General C	Comments				
		Caug	jht one bl	acknose dac	e and bullfr	og tadpole in r	net.		
			Qual	itative Listin	g of Aqua	tic Biota		at the same of	
Indicate	Estimated	d Abundance	e: 0=Abs	ent/Not Obse	rved, 1=Ra	are, 2=Commo	n, 3=Abu	ndant, 4=Do	minant
Periphyton				0	Slimes				0
ilamentous	Algae			0	Macroinve	ertebrates			2
ALL DESCRIPTION OF THE PARTY OF				0	Fish				1
/lacrophytes									



Projec	ct#	Si	te	Cow	ardin	River E	Basin	Date	Time
2003		Gla			33	Poton			3:20 PM
TELEVISION OF THE PARTY OF THE		gators	ALC: N		UC				
		AMC			8000				
	Rea	ach		D.A. (Acres)	Reach Len			der
	1-	·D			95	300		4/12/2007 cality ax County Orde 3rd Other Cicks Taken fro abitat Undercut Banks Submerged Macro-phytes Other	rd
Latitu	ide	Longi	tude	The Residence		Stream	Name		
38°55	26"	77°2	1'08"			The C	alade		
		Habitat	Types (Ir	ndicate Perce	entage of E	Each Habitat	Present)		
Cobble	80	Sand	20	Rootwads	1	Vegetated	Banks	1 !	5
	ged Macro		0		ut Banks	60			1
			FOR STATE				1000		CHARLE
				Sample	Collection		A STATE	HI LO CO NOTICE	HARD
Gear U	Ised	How	Were Sa	mples Collec			of Jabs/K	icks Taken fr	om Each
D-Frame	Х	Wad	ling		X	E FIEL MARK	Ha	4/12/2007 cality x County Ord 3rd Sther 5 ther Coks Taken from the state of the s	
		THE STATE OF					1		
Kick-Net		From	Bank			Cobble	12	Banks	8
Other		From	Boat			Sand	0		0
Olivor		110111	Dour			Rootwads	0	Widero priytes	0
						Vegetated			
						Banks	0	Other	0
		T. Herrish	TENDE			2017110	E MARIE	0.1101	
				General	Comments	S			
			Ca	ught one blad	knose dac	e in net.			
			Qua	litative Listin	ng of Agua	tic Biota			mes desired
	Market St.						4 18		BUR STILL
Indicat	e Estimate	ed Abundand	e: 0=Abs	sent/Not Obs	erved, 1=R	are, 2=Comm	on, 3=Abu	undant, 4=Dor	minant
eriphyton		NAMES AND DESCRIPTION OF THE PERSON OF THE P		2	Slimes		011111111	Table 1	0
ilamentous				0	Macroinve	rtebrates			2
lacrophytes				0	Fish		III.		2



Projec	~+ #	Si	10	Cow	ardin	River E	Pacin	Data	Time
2003		Gla			3	Poton			10:30 AM
2000	Investi		ue .		UC	T Otor			10.30 AIV
	SDS;				0008				
1000000		ach			Acres)	Reach Len		A/18/2007 cality County Orc 3r Cher Cks Taken fr bitat Undercut Banks Submerged Macro- phytes Other	der
	1-				21	300			
Latitu		Long	tude			Stream	_		
38°55'		77°2	1'40"			The G			
	WIE FO								
		Habitat T	ypes (Inc	dicate Perce	ntage of E	ach Habitat F	resent)		
Cobble	85	Sand	50	Rootwads	5	Vegetated	Banks)
Submerg	ged Macro	phytes	0	Underci	ut Banks	50		ther	20
							SPACE		
	Selle Ci			Sample (Collection	NO PORTOR OF	FARTER .		TEL MAIN
Gear U	lsed	How	Were Sa	mples Collec	ted?	Number of	Jabs/Kid	cks Taken fi	rom Each
D-Frame	Х	Wad	ling		X		Ha	bitat	
								cality x County Ord 3rd Other Other	
Kick-Net		From	Bank			Cobble	11	Banks	4
Othor		From	Post			Large Woody	0	Macro-	0
Other		From	Doal			Rootwads	1	pnytes	0
						Vegetated	-		
						Banks	0	Othor	2
						Daliks	0	Other	
				General C	comments				
				General	zomments				
			Caught	two two-lined	d salamano	ders in net			
			o a a g		a cararriarri				
	SPACE.	MESSI							
			Qual	itative Listin	g of Aquai	tic Biota			
Indicate	Estimated	Abundance	e: 0=Abs	ent/Not Obse	rved, 1=Ra	are, 2=Commo	n, 3=Abu	ndant, 4=Do	minant
Periphyton				1	Slimes				1
ilamentous				1	Macroinve	ertebrates			2
Macrophytes				0	Fish				1



Project 20030		Sit	0	0					
20030					ardin	River B		Date	Time
		Gla	de		34	Potom			11:30 AN
	Investi				UC				
	SDS;				8000			A/18/2007 cality County Orde 2nd Oher cks Taken fro oitat Undercut Banks Submerged Macro- phytes Other	
	Rea				Acres)	Reach Len		ocality ax County b) Ord 2nd 2nd Cicks Taken from the county of the coun	
	1-				95	300		2n	id
Latitud		Longi				Stream I			
38°55'3	5"	77°21	'45"		S. P. S. D.	The GI	ade		
		Habitat T	ypes (Inc	dicate Perce	ntage of E	ach Habitat P	resent)	10-10	
Cobble	85	Sand	20	Rootwads	15	Vegetated	Banks		
Submerge			0		ut Banks	50			15
	TO SHARE	MINISTER .	DOMESTIC OF	Sample	Collection				TO SERVICE STATE OF THE PARTY O
Gear Us	ed	How	Were Sa	mples Colle		Number of	Jabs/Kid	ks Taken fr	om Each
D-Frame	Х	Wad			X				
								Undercut	
Kick-Net		From	Bank			Cobble	13	Banks	4
Other		From	Roat			Sand	0	Macro-	0
Cirio		110111	Doar			Rootwads	1	priytes	- 0
						Vegetated	-		
						Banks	0	Other	2
		The same				Darmo		Otrioi	
		No. of the last		General (Comments			PER STREET	
		Caug	iht one gi	reen frog and	l one bullfro	og tadpole in ne	et.		
			Qual	itative Listin	g of Aqua	tic Biota		and site	
Indicate E	stimated	Abundance	: 0=Abs	ent/Not Obse	erved, 1=Ra	are, 2=Commo	n, 3=Abui	ndant, 4=Dor	minant
Periphyton				1	Slimes				0
ilamentous A	lgae			1	Macroinve	ertebrates			2
Macrophytes				0	Fish				1



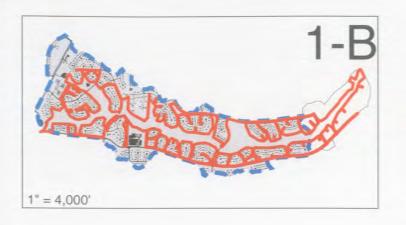
Project # Site Cowardin River Basin Date Time			SI BENTI	The second second second			the state of the s			
Investigators									Date	Time
BAA; BNR	2003			ade			Poton			12:00 PM
Reach 1-G 27 300 1st										
1-G 27 300 1st Latitude Longitude 38°55'35" 77°22'02" The Glade Habitat Types (Indicate Percentage of Each Habitat Present) Cobble N/A Sand N/A Rootwads N/A Vegetated Banks N/A Submerged Macrophytes N/A Undercut Banks N/A Other 100 Sample Collection Gear Used How Were Samples Collected? Number of Jabs/Kicks Taken from Each Percentage of Each Habitat Undercut Macrophytes N/A Samples Collected? Number of Jabs/Kicks Taken from Each Percentage of Each Habitat Undercut Macrophytes N/A Banks N/A Submerged Macrophytes N/A Banks N/A Submerged Macrophytes N/A Banks N/A Submerged Macrophytes N/A Rootwads N/A Vegetated Banks N/A Vegetated Banks N/A Other N/A Vegetated Banks N/A Vegetated Banks N/A Vegetated Banks N/A Other N/A Vegetated Banks N/A Veget										
Latitude Stream Name The Glade The Glade The Glade						C Locality 008 Fairfax County 008 Fairfax County 008 Fairfax County 008 Fairfax County 009 300 1st 009 Stream Name 009 The Glade 009 The G				
Habitat Types (Indicate Percentage of Each Habitat Present) Cobble N/A Sand N/A Rootwads N/A Vegetated Banks N/A Submerged Macrophytes N/A Undercut Banks N/A Other 100					2	7			1:	st
Habitat Types (Indicate Percentage of Each Habitat Present) Cobble N/A Sand N/A Rootwads N/A Vegetated Banks N/A Submerged Macrophytes N/A Undercut Banks N/A Other 100 Sample Collection Gear Used How Were Samples Collected? Number of Jabs/Kicks Taken from Each Habitat D-Frame X Wading X Habitat Kick-Net From Bank Cobble N/A Banks N/A Submerged Macrophytes N/A Banks N/A Submerged Macrophytes N/A Rootwads N/A Phytes N/A Rootwads N/A Vegetated Banks N/A Vegetated Banks N/A Other N/A General Comments Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Macroinvertebrates 0					N Carrier State					
Cobble N/A Sand N/A Rootwads N/A Vegetated Banks N/A Submerged Macrophytes N/A Undercut Banks N/A Other 100 Sample Collection Sample Collection Sample Collected? Number of Jabs/Kicks Taken from Each Habitat Undercut Banks N/A Undercut Banks N/A Submerged Macrophytes N/A Banks N/A Submerged Macrophytes N/A Sand N/A Banks N/A Submerged Macrophytes N/A Rootwads N/A Vegetated Banks N/A Vegetated Banks N/A Vegetated Banks N/A Other N/A Other N/A Vegetated Banks N/A Other N/A Other N/A Vegetated Banks N/A Other N/A Vegetated Banks N/A Other N/A Other N/A Other N/A Vegetated Banks N/A Other	38°55	35"	77°2	2.02			The G	lade		
Submerged Macrophytes N/A Undercut Banks N/A Other 100 Sample Collection Gear Used How Were Samples Collected? Number of Jabs/Kicks Taken from Each Habitat N/A Banks N/A Submerged Macrophytes N/A Rootwads N/A Vegetated Banks N/A Vegetated Banks N/A Other N/A General Comments Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Macroinvertebrates 0		TALL OF	Habitat 1	ypes (Inc	licate Percer	tage of E	ach Habitat P	resent)	Market .	
Submerged Macrophytes N/A Undercut Banks N/A Other 100 Sample Collection Gear Used How Were Samples Collected? Number of Jabs/Kicks Taken from Each Habitat N/A Banks N/A Submerged Macrophytes N/A Rootwads N/A Vegetated Banks N/A Vegetated Banks N/A Other N/A General Comments Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Macroinvertebrates 0	Cobble	N/A	Sand	N/A	Rootwads	N/A	Vegetated	Banks	T N	/A
Sample Collection Gear Used How Were Samples Collected? Number of Jabs/Kicks Taken from Each D-Frame x Wading x Habitat Kick-Net From Bank Cobble N/A Banks N/A Other From Boat Sand N/A Submerged Macro-phytes N/A Rootwads N/A Vegetated Banks N/A Other N/A General Comments Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Indicate			The second secon							
Gear Used How Were Samples Collected? Number of Jabs/Kicks Taken from Each D-Frame X Wading X Habitat Kick-Net From Bank Cobble N/A Banks N/A Other From Boat Sand N/A Submerged Macro-phytes N/A Rootwads N/A Vegetated Banks N/A Other N/A General Comments Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Macroinvertebrates 0					RALL HARS	THE RES				
Cobble N/A Banks N/A					Sample C	ollection				
Cobble N/A Banks N/A Other From Boat Sand N/A Submerged Macro-phytes N/A Rootwads N/A Vegetated Banks N/A Other N/A General Comments Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Macroinvertebrates 0	Gear U	Ised	How	Were Sar	nples Collec	ted?	Number of	Jabs/Kid	cks Taken fr	om Each
Cobble N/A Banks N/A Other From Bank Cobble N/A Banks N/A Submerged Macro-phytes N/A Rootwads N/A Vegetated Banks N/A Other N/A General Comments Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Indicate Estimated Abundance: 0 Submerged Macro-phytes N/A Other N/A	D-Frame	Х	Wad	ding	` >			Ha	bitat	
Other From Boat Sand N/A Submerged Macro-phytes N/A Rootwads N/A Vegetated Banks N/A Other N/A General Comments Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Filamentous Algae 1 Macroinvertebrates 0									Undercut	
Caught one green frog and one bullfrog tadpole in net. Caught one green frog and one bullfrog tadpole in net.	Kick-Net		From	Bank			Cobble	N/A	Banks	N/A
General Comments Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Macroinvertebrates 0	Other		From	Roat			Sand	N/A	Macro-	N/A
General Comments Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Macroinvertebrates 0	Other		110111	Doar					priytes	IN/A
General Comments Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Macroinvertebrates 0								14//3		
Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota								N/A	Other	N/A
Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Filamentous Algae 1 Macroinvertebrates 0					THE STATE OF		Danne	1,1/1,	O ii i o	1477
Caught one green frog and one bullfrog tadpole in net. Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Filamentous Algae 1 Macroinvertebrates 0					General C	omments		100000		
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 2 Slimes 1 Gilamentous Algae 1 Macroinvertebrates 0			Cau	ght one gr	een frog and	one bullfro	og tadpole in n	et.		
Periphyton 2 Slimes 1 Filamentous Algae 1 Macroinvertebrates 0				Quali	tative Listing	of Aquat	tic Biota			
Filamentous Algae 1 Macroinvertebrates 0	Indicate	Estimated	l Abundance	e: 0=Abse	ent/Not Obser	ved, 1=Ra	are, 2=Commo	n, 3=Abu	ndant, 4=Do	minant
		NIS CE								
Macrophytes 0 Fish 0							ertebrates			
	Macrophytes	3			0	Fish			The Land	0

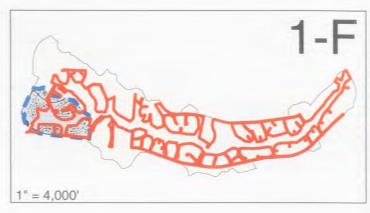


Projec	ct#	Sit	e	Cow	ardin	River E	Basin	Date	Time
2003		Gla			34	Poton		4/4/2007	12:50 PM
The Lines	Investi	igators			UC			ality	
		AMC			0008			County	
	The second secon	ach		D.A. (Acres)	Reach Len			der
	2	-A			10	300		1	st
Latitu		Longi				Stream	Name		
38°55'	29"	77°2	1'12"			The G	lade		
		Habitat T	ypes (Inc	dicate Perce	ntage of E	ach Habitat F	Present)		
Cobble	5	Sand	40	Rootwads	0	Vegetated	Banks	1)
The second secon	ged Macro		0		ut Banks	1		ther	75
									Do Price III
	9.55	CHOICE CO.	STATE OF	Sample (Collection	CERTIFICATION OF THE PERSON OF		ISM NEW	
Gear U	sed	How	Were Sa	mples Collec		Number of	f Jabs/Kid	cks Taken f	rom Each
D-Frame	Х	Wad	ling	1	X		На	bitat	
		113	No.					Undercut	
Kick-Net		From	Bank			Cobble	N/A	Banks	N/A
								Submerged	
Other		From	Roat			Sand	N/A	Macro- phytes	N/A
Otrici		110111	Doar			Rootwads	N/A	phytes	19/73
						Vegetated	13/73		
						Banks	N/A	Other	N/A
	10 DE 10					Danno	13/73	Otrici	14//3
			2 1 5 1 5	General (Comments				
			Caugh	t one two-line	d salaman	der in net.			
			Ovel	lanalism I linalism	A	in Diete			
			Quai	itative Listin	g of Aqua	tic Biota			
Indicate	Estimated	d Abundance	: 0=Abs	ent/Not Obse	rved, 1=Ra	are, 2=Commo	on, 3=Abu	ndant, 4=Do	minant
Periphyton				3	Slimes				0
ilamentous	Algae			0	Macroinve	ertebrates			1
Macrophytes				0	Fish	MECHANICAL PROPERTY.			0



Projec		Sit	•			E FIELD D	Pagin	Doto	Time
2003		Gla		_	ardin 3	Poton		Date 4/10/2007	11:31 AN
2000		igators	de		JC	Potor			11:31 AN
		BNR			0008			County	
The same of		ach			Acres)	Possib Lon			der
		-A			1	Reach Len			nd
Latitu		Longi	tudo	8		Stream			IU
38°55		77°21	'AQ"			The G			
00 00		112	40			THE G	laue	al Mines	
		Habitat T	vpes (In	dicate Perce	ntage of E	ach Habitat F	resent)		
Cobble	55	Sand	0	Rootwads	5	Vegetated	Banks)
	ged Macro	phytes	0		it Banks	15		her	25
						A SHARRAN			S OF S A SECOND
See Care				Sample (Collection			Na Balanca	THE REAL PROPERTY.
Gear U	Jsed	How	Were Sa	mples Collec		Number of	Jabs/Kid	ks Taken f	om Each
D-Frame	X	Wad		1	X		Ha	bitat	
				R				Undercut	
Kick-Net		From	Bank			Cobble	11	Banks	3
				M				Submerged	
0.11								Macro-	
Other		From	Boat			Sand	0	phytes	0
						Rootwads	1		
						Vegetated			
						Banks	0	Other	5
				General C	comments				
			Cau	ight one black	nose dace	in net.			
			Qual	itative Listin	g of Aquat	tic Biota			
Indicate	Estimated	d Abundance	: 0=Abs	ent/Not Obse	rved, 1=Ra	are, 2=Commo	on, 3=Abu	ndant, 4=Do	minant
Periphyton				1	Slimes				0
ilamentous				0	Macroinve	ertebrates			1
	3			0	Fish				2
Macrophytes									





Land Cover Map

The Glade Scale as Noted

