



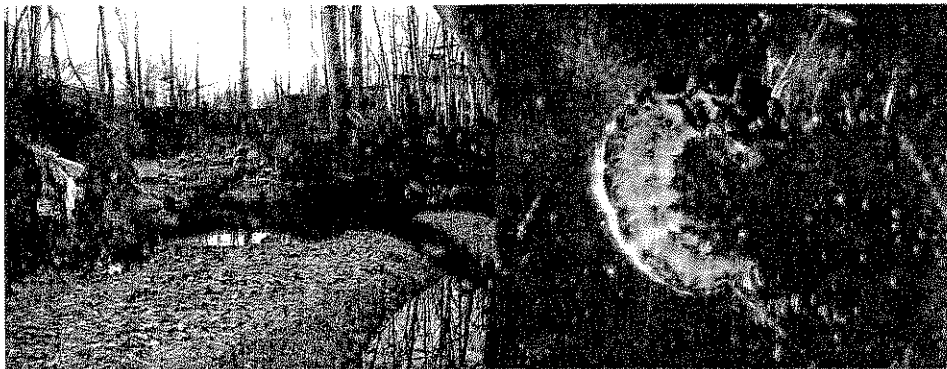
BIOLOGICAL MONITORING REPORT #1

*Pre-construction Monitoring*

NORTHERN VIRGINIA STREAM RESTORATION BANK

*Snakeden Branch Watershed*  
(±21,000 LINEAR FEET)

FAIRFAX COUNTY, VIRGINIA



Prepared For:

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

WSSI Project #20003 – Task D

JANUARY 29, 2008

## TABLE OF CONTENTS

I.	Executive Summary
II.	Introduction
III.	Project Area
IV.	Overall Methodology
V.	Biological Stream Assessment Reconnaissance
VI.	Biological Stream Monitoring
VII.	Conclusions
VIII.	Limitations
IX.	Literature Cited

## EXHIBITS

1.	Vicinity Map
2.	USGS Topographic Quad Map - Vienna, VA-MD 1994
3.	Biological Monitoring Maps <ul style="list-style-type: none"><li>A. Biological Stream Assessment Reconnaissance Map</li><li>B. Biological Monitoring Map</li></ul>
4.	Site Photographs <ul style="list-style-type: none"><li>A. Biological Stream Assessment Reconnaissance</li><li>B. Biological Monitoring</li></ul>
5.	WSSI Benthic Macroinvertebrate I.D. and Enumeration Bench Sheets <ul style="list-style-type: none"><li>A. Bench Sheet for Biological Reconnaissance (12 Stream Reaches)</li><li>B. Bench Sheet for Biological Monitoring (Nine Stream Reaches)</li></ul>
6.	WSSI Habitat Assessment Field Data Sheets for High Gradient Streams (Nine Stream Reaches)
7.	WSSI Benthic Macroinvertebrate Field Data Sheets (Nine Stream Reaches)
8.	Land Cover Map
9.	Excerpt from Appendix A – List of Impaired (Category 3) Waters in 2006 from the The DEQ Final 2006 305(b)/303(d) Water Quality Assessment Integrated Report (Integrated Report), dated October 30, 2006 and approved by the EPA on October 16, 2006.



Biological Monitoring Report #1  
Pre-construction Monitoring

Northern Virginia Stream Restoration Bank  
Snakeden Branch Watershed  
(±21,000 Linear Feet)  
WSSI #20003

January 29, 2008

I. Executive Summary

As set forth in the “Northern Virginia Stream Restoration Bank Banking Instrument” (Banking Instrument), approximately 21,000 linear feet of streams and drainage features within the Snakeden Branch 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 Snakeden Branch Watershed portion of the Northern Virginia Stream Restoration Bank (NVS RB) 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 Snakeden Branch 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 Snakeden Branch 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 Snakeden Branch Watershed portion of the NVSRB is “Poor” to “Fair”, with habitat assessment scores of 130 (out of 200) or less. 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, and lack of vegetation protection along the stream banks.

Baseline benthic macroinvertebrate results indicate that streams within the Snakeden Branch watershed portion of the NVSRB are in “Severe Stress”, with VA-SCI scores below 20 (out of 100) for all streams assessed. The low VA-SCI scores are likely due to several confounding abiotic factors, including highly impervious land cover within the watershed, 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.

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 in-stream 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 Snakeden Branch Watershed portion of the NVSRB, against which future biological monitoring in the study area will be compared. With these data, and data from subsequent monitoring reports, we propose to determine the effect of stream restoration on the condition of streams within the Snakeden Branch Watershed portion of the NVSRB<sup>1</sup>, 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 21,000 linear feet of stream along Snakeden Branch and several unnamed tributaries of Snakeden Branch, as well as the adjacent riparian corridor. The study area is located southeast of Reston Parkway (Route 602) and immediately northwest of Lake Audubon 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. Snakeden Branch flows in a southeasterly direction through the central portion of the study area. An asphalt recreational trail, which crosses Snakeden Branch 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 Snakeden Branch Reach 1 and Snakeden Branch Reach 2 delineation reports, dated February 14, 2005 and May 18, 2005, respectively. The U.S. Army Corps of Engineers verified the Snakeden Branch Reach 1 and Snakeden Branch Reach 2 delineation, with jurisdictional determinations (JD) dated May 17, 2006 (JD #05-R0601 and JD #05-R1495, respectively)<sup>2</sup>.

### 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

---

<sup>1</sup> Note that monitoring reports for the Colvin Run and The Glade watershed portions of the NVSRB will be provided under separate cover.

<sup>2</sup> Note that for design purposes, Snakeden Branch Reach 1 and Snakeden Branch Reach 2 have been further divided into 17 manageable restoration reaches, as depicted on the NVSRB – Snakeden Branch plan sets, dated May, August, October, November, and December 2007 (plan sets for Reaches 1-11 have been completed). The biological monitoring reaches for this report are located within a portion of these 17 reaches. The locations of the biological monitoring reaches relative to these 17 reaches are described below.

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)<sup>3</sup>.
- 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)<sup>4</sup>.

## V. Biological Stream Assessment Reconnaissance

Biological Stream Assessment Reconnaissance Methodology. The biological stream assessment reconnaissance consisted of three components: 1) a pedestrian reconnaissance; 2) Biological Reconnaissance (BioRecon) (a.k.a. Problem Identification Survey); 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. 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 Craig E. Tumer, PWS<sup>5</sup>, PWD<sup>6</sup>, Christine A. Geist, PWS, CE<sup>7</sup> and Sean D. Sipple, PWS, CT<sup>8</sup> on December 11 and 12, 2006. During this reconnaissance, WSSI traversed all jurisdictional streams along the entire Snakeden Branch Watershed study area to determine the locations of potential permanent biological monitoring stations. 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 December 2006 field work were noted as potential streams for permanent biological monitoring stations and BioRecon macroinvertebrate samples were taken 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 stations. Streams that contained discontinuous flow were to be re-evaluated during the time of the pre-construction monitoring sampling to determine if they

<sup>3</sup> This method was used to aid in the selection of permanent monitoring reaches and is not required in subsequent monitoring years.

<sup>4</sup> This method will be used in all subsequent monitoring years and is accompanied by a habitat assessment, following guidance established 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).

<sup>5</sup> VA Certified Professional Wetland Delineator #3402-000025.

<sup>6</sup> Professional Wetland Scientist #00001290, Society of Wetlands Scientists Certification Program, Inc.

<sup>7</sup> Professional Wetland Scientist #1728; Certified Ecologist, Ecological Society of America

<sup>8</sup> Professional Wetland Scientist #1730, Society of Wetlands Scientists Certification Program, Inc.; North American Benthological Society (NABS) Certified Level 2 Taxonomist: EPT Taxa (Ephemeroptera, Plecoptera, Trichoptera).

contain enough flowing water to sample. Photographs of BioRecon sampling reaches and representative non-samplable streams are provided in [Exhibit 4a](#).

WSSI used the BioRecon method to assess 12 stream reaches<sup>9</sup> along five candidate streams that contained flowing water during the December 2006 field work. Assessments were conducted on Snakeden Branch and four unnamed tributaries to Snakeden Branch. The approximate locations of these twelve reaches are depicted on [Exhibit 3a](#). Sampling reaches were 300 linear feet, as recommended in the EPA's RBP (except for Reach 3A, which is a stream that is a total of only 81 linear feet). 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.

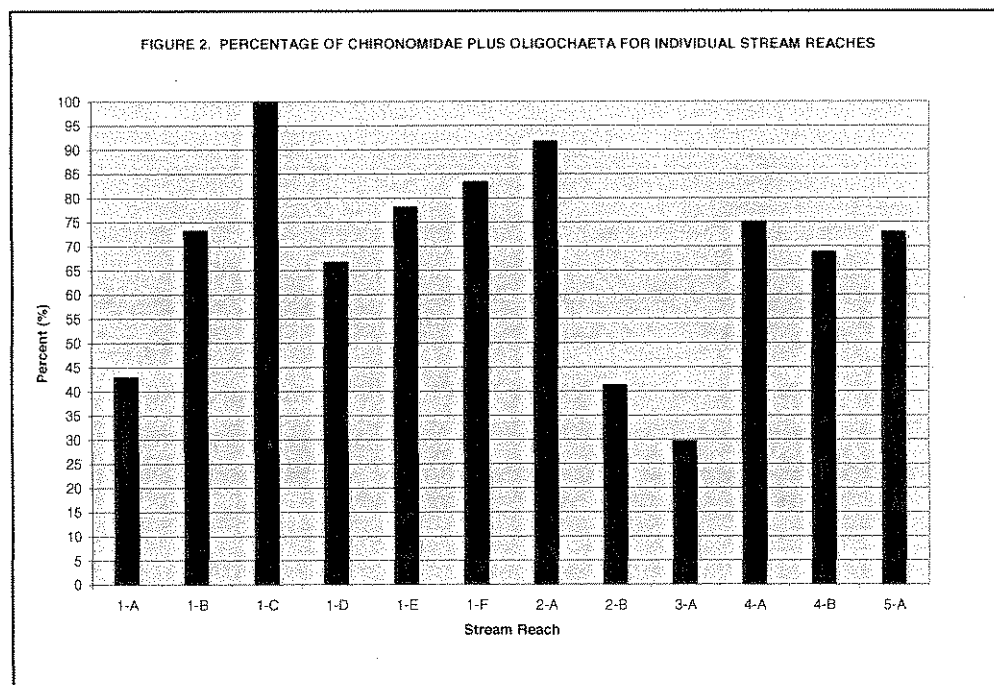
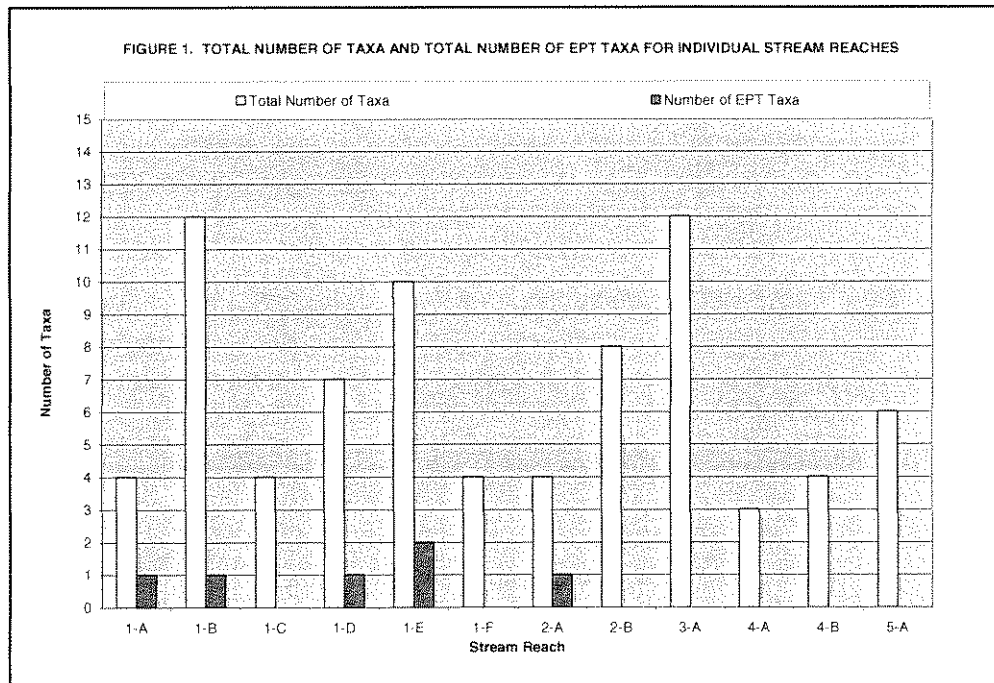
---

<sup>9</sup> Note that the 12 BioRecon reaches correspond with reaches of the NVSRB-Snakeden Branch plan sets, as follows: BioRecon Reach 1-F corresponds with Reach 1 of the May 2007 plan set; BioRecon Reach 1-E corresponds with Reach 2 of the August 2007 plan set; BioRecon Reach 5-A corresponds with Tributary 1 of Reach 3 of the October 2007 plan set; BioRecon Reaches 4-A and 4-B correspond with Reach 4 of the October 2007 plan set; BioRecon Reaches 1-D and 1-C correspond with Reaches 5 and 7, respectively of the November 2007 plan set; BioRecon Reach 3-A corresponds with Tributary 7 of Reach 11 of the December 2007 plan set; and BioRecon Reaches 1-B, 2-B, 2-A, and 1-A correspond with Reaches 12, 13, 16, and 17, respectively of pending plan sets.

**Biological Stream Assessment Reconnaissance Results and Discussion.** The results of the pedestrian reconnaissance field work indicated that only five streams (Reach 1-A through 1-F, 2-A, 2-B, 3-A, 4-A, 4-B and 5-A; Exhibit 4a, Photos #1 through #12, respectively) have enough flowing water to establish permanent biological monitoring stations. The remainder of the streams within the study area do not contain enough flowing water to sample (e.g., Exhibit 4a, Photos #13 through #18). The streams that contained discontinuous flow during the December 2006 field work were re-evaluated during the biological monitoring field work and determined to lack enough flowing water to establish permanent monitoring reaches.

Of the 12 stream reaches characterized, Reach 1-B, 1-E and 3-A had the highest Taxa Richness, with 12, 10, and 12 total taxa respectively (Table 1). The lowest Taxa Richness was observed at Reach 4-A, 4-B, 1-A, 1-C, 1-F and 2-A, all containing only 3 or 4 taxa (Figure 1). EPT Taxa Richness was low at all 12 reaches, with only 2 total EPT taxa collected (*Hydropsyche* sp. and *Cheumatopsyche* sp.). Furthermore, the only EPT taxa observed in any reaches are members of the caddisfly Family Hydropsychidae, a caddisfly family indicative of degraded streams (Voshell 2002). Percent Chironomidae + Oligochaeta was lowest at Reach 3-A, 2-B and 1-A (30, 41, and 43, respectively), and highest at Reach 1-C, 2-A and 1-F, (100, 92, and 83, respectively; Table 1, Figure 2). Therefore, the BioRecon results showed that most stream reaches within the study area are likely in poor condition.

Table 1. Snakeden Branch BioRecon Biotic Metrics				
Reach	Total Individuals	Biotic Metrics		
		Total Taxa Richness	EPT Taxa Richness	% Chironomidae + Oligochaeta
1-A	7	4	1	43
1-B	41	12	1	73
1-C	13	4	0	100
1-D	15	7	1	67
1-E	41	10	2	78
1-F	6	4	0	83
2-A	24	4	1	92
2-B	17	8	0	41
3-A	44	12	0	30
4-A	4	3	0	75
4-B	16	4	0	69
5-A	107	6	0	73



The results of the three biotic metrics suggested that Reach 3-A and 2-B may have the best condition, with 12 and 8 total taxa and only 30 and 41 percent Chironomidae + Oligochaeta, respectively. The results also suggested that Reach 1-C, 2-A and 1-F may have the worst biotic condition, each with only 4 total taxa and 100, 92, and 83 percent Chironomidae + Oligochaeta, respectively. Note that although Reach 1-B and 1-E had relatively high Taxa Richness (12 and 10, respectively), both reaches had relatively high Percent Chironomidae + Oligochaeta (73 and

78, respectively). The relatively high taxa richness suggests that these reaches provide a relatively suitable substrate for colonization; however, the high Percent Chironomidae + Oligochaeta suggests that these reaches 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 21,000 linear feet of stream restoration within the Snakeden Branch Watershed portion of the NVSRB, approximately 16,000 linear feet is samplable for macroinvertebrates, thus eight permanent monitoring reaches were established within the study area. However, WSSI established an extra permanent biological monitoring reach (for a total of nine permanent biological monitoring reaches) in anticipation of potential future modifications of the study area to ensure that the streams were adequately sampled. Based on the BioRecon (and pedestrian reconnaissance) results, WSSI established one permanent biological monitoring reach in the vicinity of Reach 1-A, 1-B, 1-C, 1-D, 1-E, 1-F, 2-A, and 4-A and 5-A, for a total of nine permanent monitoring reaches. The approximate location of these nine reaches is depicted on Exhibit 3b<sup>10</sup>.

Because most of the restoration is being conducted along Snakeden Branch, six of the permanent monitoring reaches were chosen along the non-perennial (Reach 1-F) and perennial sections (Reach 1-A through 1-E) of Snakeden Branch, varying in condition. Reach 1-A was selected because it shows the lowest Taxa Richness. Reaches 1-B and 1-E<sup>11</sup> were chosen because they have the highest Taxa Richness. Reaches 1-C and 1-F were selected because the three metric scores suggest they have the lowest condition. Reach 1-D was selected because its metric scores were in the middle compared to the other reaches.

Three of the permanent biological monitoring stations will be established along unnamed perennial tributaries of Snakeden Branch (Reach 2-A, 2-B, and 4-A). Reach 2-A was selected because our results suggest it has the second lowest condition. Reach 2-B was selected because our results suggest it has the second highest condition. Reach 4-A was selected because it shows the lowest Taxa Richness.

Because the streams characterized by Photos #13 through #18 (Exhibit 4a) either lacked flowing water or had discontinuous flow during the reconnaissance fieldwork (and the pre-construction monitoring field work), these streams were eliminated as candidate permanent biological monitoring reaches.

## VI. Biological Stream Monitoring

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).

---

<sup>10</sup> 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.

<sup>11</sup> Note that Reach 1-E is located in a section of stream that was previously restored. This section of stream will be enhanced as part of the NVSRB and will be studied closely to monitor its recovery.

A total of nine permanent sampling reaches were selected based on the results of the pedestrian reconnaissance and BioRecon (Reach 1-A through 1-F, 2-A, 2-B, and 3-A)<sup>12</sup>. 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 was conducted by WSSI environmental scientists Christine A. Geist, PWS, CE and Joseph N. Carpenter between April 4 and 10, 2007. Habitat assessment field work was conducted by WSSI environmental scientists Craig E. Tumer, PWD, PWD, Sean D. Sipple, CT, PWS, and Christine A. Geist, PWS, CE on December 11 and 12, 2006 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<sup>13</sup>, 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:

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

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](#).

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

---

<sup>12</sup> Note that the nine permanent monitoring reaches correspond with reaches of the NVSRB-Snakeden Branch plan sets, as follows: Reach 1-F corresponds with Reach 1 of the May 2007 plan set; Reach 1-E corresponds with Reach 2 of the August 2007 plan set; Reach 3-A corresponds with Reach 4 of the October 2007 plan set; Reaches 1-D and 1-C correspond with Reaches 5 and 7, respectively of the November 2007 plan set; and Reaches 1-B, 2-B, 2-A, and 1-A correspond with Reaches 12, 13, 15, and 17, respectively of pending plan sets.

<sup>13</sup> 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.



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 the 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 Chironomidae 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:
  - Total Taxa: Score =  $100 \times (X/22)$ , where X = Metric Value
  - EPT Taxa: Score =  $100 \times (X/11)$ , where X = Metric Value
  - Percent Ephemeroptera: Score =  $100 \times (X/61.3)$ , where X = Metric Value
  - Percent Plecoptera + Trichoptera less Hydropsychidae: Score =  $100 \times (X/35.6)$ , where X = Metric Value
  - Percent Scrapers: Score =  $100 \times (X/51.6)$ , where X = Metric Value
  - Percent Chironomidae: Score =  $100 \times [(100-X) (100-0)]$ , where X = Metric Value
  - Percent Top 2 Dominant: Score =  $100 \times [(100-X) (100-30.8)]$ , where X = Metric Value
  - Hilsenhoff Biotic Index: Score =  $100 \times [(100-X) (100-3.2)]$ , 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 all nine stream reaches (Reaches 1-A through 1-F, 2-A, 2-B, and 3-A) have either “Poor” or “Fair” habitat conditions (Table 2, below; Exhibit 6). Reach 1-E and 1-F have the best habitat, with habitat assessment scores of 130 out of 200 (“Fair”). Reach 1-B has the worst habitat, with a habitat assessment score of 103 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, and lack of vegetation protection along the stream banks. The average habitat assessment score for all streams assessed within the Snakeden Branch Watershed portion of the NVSRB is 117, which is 58 percent of the best possible score (“Fair”).

Table 2. Total Habitat Assessment Scores			
REACH	Habitat Assessment Score	Percent Best Possible Score	Narrative Rating
1-A	114	57	Poor
1-B	103	52	Poor
1-C	116	58	Fair
1-D	121	61	Fair
1-E	130	65	Fair
1-F	113	57	Poor
2-A	112	56	Poor
2-B	118	59	Fair
3-A	112	56	Poor
<b>Average</b>	<b>115</b>	<b>58</b>	<b>Fair</b>

Benthic macroinvertebrate results show that individuals from 18 taxa<sup>14</sup> were collected from all nine reaches collectively (Table 3, below; Exhibit 5b) during the pre-construction benthic macroinvertebrate monitoring. These 18 taxa include ancylid, physid, and ramshorn snails (Families Ancylidae, Physidae, and Planorbidae, respectively), fingernail clams (Family Sphaeriidae), oligochaete and horsehair worms (Families Naididae and Tubificidae and Phylum Nematomorpha, respectively), scuds (Family Crangonyctidae), aquatic moth larvae (Family Pyralidae), non-biting midge, blackfly, soldierfly, mothfly, deerfly, and crane fly larvae (Families Chironomidae, Simuliidae, Stratiomyidae, Syrphidae, Tabanidae, and Tipulidae, respectively), and common net-spinning and fingernet caddisfly larvae (Families Hydropsychidae and Philipotamidae, respectively). Of all 18 taxa collected, non-biting midge larvae comprised the majority of individuals in each reach, with numbers ranging from 62-135.

Table 3. Snakeden Branch Raw Data									
TAXA	REACH								
	1-A	1-B	1-C	1-D	1-E	1-F	2-A	2-B	3-A
Ancylidae	-	-	1	-	-	-	-	-	-
Calopterygidae	1	-	-	-	-	-	-	-	-
Chironomidae	96	135	86	62	111	104	93	88	100
Crangonyctidae	1	-	-	-	-	-	-	-	-
Hydropsychidae	-	1	8	-	-	-	-	-	-
Naididae	-	-	1	-	-	-	-	2	-
Nematomorpha	-	-	-	-	-	-	4	-	-
Oligochaeta	-	-	-	17	2	3	-	1	1
Philipotamidae	2	-	-	-	-	-	-	-	-
Physidae	2	-	2	-	-	-	4	7	3
Planorbidae	1	-	-	-	-	-	-	2	-
Pyralidae	-	-	1	-	-	-	3	2	-
Simuliidae	1	1	-	-	-	-	-	1	-
Sphaeriidae	-	-	-	-	-	-	1	1	-
Stratiomyidae	-	-	-	-	-	-	1	-	-
Syrphidae	-	-	-	-	-	-	-	-	1
Tabanidae	1	-	-	-	-	-	-	-	-
Tipulidae	-	-	1	-	-	-	1	1	-
Tubificidae	13	-	8	-	1	1	-	1	5
<b>Total</b>	<b>118</b>	<b>137</b>	<b>108</b>	<b>79</b>	<b>114</b>	<b>108</b>	<b>107</b>	<b>106</b>	<b>110</b>

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 all nine stream reaches (Reaches 1-A through 1-F, 2-A, 2-B, and 3-A) are in “Severe Stress” prior to stream restoration activities based on their VA-SCI scores (Table 4). The highest VA-SCI score was observed at Reach 2-B (18.26) and the lowest VA-SCI score was observed at Reach 1-E (9.11). The average VA-SCI numerical score for all streams assessed within the Snakeden Branch Watershed portion of the NVSRB is 13.15 (“Severe Stress”).

<sup>14</sup> Although 19 taxa are listed in Table 3, Oligochaeta was not included as part of the total taxa collected within the study area, because individuals were too damaged to identify to the family-level.

<b>Table 4. Snakeden Branch Biotic Metric and Index Weighting and VA-SCI</b>									
<b>METRIC</b>	<b>REACH</b>								
	<b>1-A</b>	<b>1-B</b>	<b>1-C</b>	<b>1-D</b>	<b>1-E</b>	<b>1-F</b>	<b>2-A</b>	<b>2-B</b>	<b>3-A</b>
Total Taxa	36.36	13.64	36.36	9.09	9.09	9.09	31.82	40.91	18.18
EPT Taxa	9.09	9.09	9.09	0.00	0.00	0.00	0.00	0.00	0.00
Percent Ephemeroptera	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent Plecoptera + Trichoptera (Excluding Hydropsychidae)	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent Scrapers	4.93	0.00	5.38	0.00	0.00	0.00	7.24	16.45	5.29
Percent Chironomidae	18.64	1.46	20.37	21.52	2.63	3.70	13.08	16.98	9.09
Percent Top Two Dominant	11.02	0.00	8.03	0.00	1.27	1.34	8.10	15.00	6.57
HBI	53.09	58.93	55.28	46.16	59.86	60.73	61.02	56.74	55.61
<b>VA-SCI Numerical Score</b>	<b>17.81</b>	<b>10.39</b>	<b>16.81</b>	<b>9.60</b>	<b>9.11</b>	<b>9.36</b>	<b>15.16</b>	<b>18.26</b>	<b>11.84</b>
<b>VA-SCI Narrative Score</b>	<b>Severe Stress</b>	<b>Severe Stress</b>	<b>Severe Stress</b>	<b>Severe Stress</b>	<b>Severe Stress</b>	<b>Severe Stress</b>	<b>Severe Stress</b>	<b>Severe Stress</b>	<b>Severe Stress</b>
<b>Average VA-SCI Numerical Score</b>	<b>13.15</b>								
<b>Average VA-SCI Narrative Score</b>	<b>Severe Stress</b>								

These scores are the result of the low number of total taxa, low number of total EPT taxa, 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).

<b>Table 5. Snakeden Branch Biotic Metric and Index Scores</b>								
<b>Reach</b>	<b>Total Taxa<sup>15</sup></b>	<b>Total EPT Taxa</b>	<b>Percent Ephemeroptera</b>	<b>Percent Plecoptera + Trichoptera (Excluding Hydropsychidae)</b>	<b>Percent Scrapers</b>	<b>Percent Chironomidae</b>	<b>Percent Top Two Dominant</b>	<b>HBI</b>
1-A	9	1	0.00	1.69	2.54	81.36	92.37	6.39
1-B	3	1	0.00	0.00	0.00	98.54	100.00	5.99
1-C	8	1	0.00	0.00	2.78	79.63	94.44	6.24
1-D	2	0	0.00	0.00	0.00	78.48	100.00	6.86
1-E	2	0	0.00	0.00	0.00	97.37	99.12	5.93
1-F	2	0	0.00	0.00	0.00	96.30	99.07	5.87
2-A	7	0	0.00	0.00	3.74	86.92	94.39	5.85
2-B	9	0	0.00	0.00	8.49	83.02	89.62	6.14
3-A	4	0	0.00	0.00	2.73	90.91	95.45	6.22

<sup>15</sup> Although Table 3 lists 10 and 5 taxa for Reaches 2-B and 5-A, Oligochaeta was not included in the calculation of Total Taxa because individuals were too damaged to identify to family-level.

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 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.

An analysis of land use within the watershed of each stream reach indicates that each watershed is highly developed, with all reaches having greater than 20 percent impervious land cover (with a weighted watershed average of 38 percent), as depicted in the Land Cover Map (Exhibit 8), and Table 6, below. Reach 1-E has the highest imperviousness, with 50 percent impervious land cover. Reaches 2-A and 2-B have the lowest imperviousness, with 26 and 25 percent impervious land cover, respectively. It is important to note that Reach 1-E has the lowest VA-SCI score (9.11) and Reach 2-B has the highest VA-SCI score (18.26), 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).

REACH	Watershed Acres	Percent Impervious	VA-SCI
1-A	863	38	17.81
1-B	540	45	10.39
1-C	386	46	16.81
1-D	291	45	9.60
1-E	77	50	9.11
1-F	55	47	9.36
2-A	256	26	15.16
2-B	169	25	18.26
3-A	75	49	11.84

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, the Reston National Golf Course, waterfowl and faulty sewer lines. Evidence of nutrient pollution input into Snakeden Branch can be found in the DEQ Final 2006 305(b)/303(d) Water Quality Assessment Integrated Report (Integrated Report), dated October 30, 2006 and approved by the EPA on October 16, 2006. In this report the DEQ identified Snakeden Branch as an impaired water body, based on high numbers of *Escherichia coli*, which is an indicator of fecal bacterial contamination from

urban/residential areas within the watershed (Exhibit 9<sup>16</sup>; DEQ 2006c). High amounts of such pollutants into streams inevitably result in a shift in macroinvertebrate community composition, where pollution tolerant taxa such as non-biting midges and oligochaete worms out-compete pollution sensitive taxa such as EPT (Shueler 1994). 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. In addition, Maher (1999) found that highly suburbanized watersheds within Northern Virginia negatively impact macroinvertebrates and habitat when compared to forested areas with light development.

## VII. Conclusions

The above results indicate that the habitat of the streams within the Snakeden Branch watershed portion of the NVSRB is "Poor" to "Fair" and the streams themselves are in "Severe Stress". 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.

---

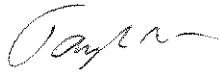
<sup>16</sup> *Exhibit 9 contains an excerpt from Appendix A – List of Impaired (Category 3) Waters in 2006 from the The DEQ Final 2006 305(b)/303(d) Water Quality Assessment Integrated Report (Integrated Report), dated October 30, 2006 and approved by the EPA on October 16, 2006.*

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.



Sean D. Sipple, CT, PWS  
Environmental Scientist



Taylor S. Sprenkle, WPIT  
Environmental Scientist

## IX. Literature Cited

- Barbour, M. T., J. Gerritsen, B. D. Snyder, and J. B. Stribling. 1999. Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates and Fish, Second Edition. EPA 841-B-99-002. U.S. Environmental Protection Agency; Office of Water; Washington, D.C. 339 pp.
- Debrey, L. D. and J.A. Lockwood. 1990. Effects of sediment and flow regime on the aquatic insects of a high mountain stream. *Regulated Rivers: Research & Management*. 5 (3): 241-250.
- Kiffney, P. M. and W. H. Clements. 1994. Effects of metals on a macroinvertebrate assemblage from a Rocky Mountain stream in experimental microcosms. *Journal of the North American Benthological Society*. 13: 511-523.
- Klein, R. 1979. Urbanization and stream quality impairment. *Water Resource Bulletin*. 15 (4): 948-963.
- Maher, A. C. 1999. Stream habitat and macroinvertebrate community response to watershed suburbanization in Northern Virginia. A Thesis Submitted to the Graduate Faculty of George Mason University in Partial Fulfillment of the Requirements for the Degree of Master of Science Biology.
- O'Halloran, S. L., K. S. Liber, K.L. Schmude, and T. D. Corry. 1996. Effects of diflubenzuron on benthic macroinvertebrates in littoral enclosures. *Archives of Environmental Contamination and Toxicology*. 30(4):444-51.
- Raven, P. J., N.T.H. Holmes, F. H. Dawson, P. J. A. Fox, M. Everard, I. R. Fozzard, and K. J. Rowen. 1998. *River Habitat Quality: The physical character of rivers and streams in the UK and Isle of Man*. Environment Agency. ISBN1 873760 42 9. Bristol, England.
- Shueler, T. 1994. The importance of imperviousness. *Watershed Protection Techniques*. 1(3): 100-111.
- Tetra Tech, Inc. 2003. A Stream Condition Index for Virginia Non-Coastal Streams. Tetra Tech, Inc. Owings Mills, Maryland. Prepared for Virginia Department of Environmental Quality, Richmond, Virginia. 163 pp.
- Virginia Department of Environmental Quality (DEQ) 2006a. Using Probabilistic Monitoring Data to Validate the Non-Coastal Virginia Stream Condition Index. Division of Water Quality. Biological Monitoring Program. Richmond, Virginia. 54 pp.
- DEQ. 2006b. Standard Operating Procedures for Multi-habitat Benthic Macroinvertebrate Sampling and Habitat Assessment. Obtained through October 13, 2006 email correspondence between Warren Smigo (DEQ) and Sean Sipple (WSSI). 17 pp.
- DEQ. 2006c. DEQ Final 2006 305(b)/303(d) Water Quality Assessment Integrated Report (Integrated Report). Approved by the EPA on October 16, 2006.
- Voshell, J. R. 2002. *A Guide to Common Freshwater Invertebrates of North America*. The McDonald & Woodward Publishing Company, Blacksburg, Virginia. 456 pp.



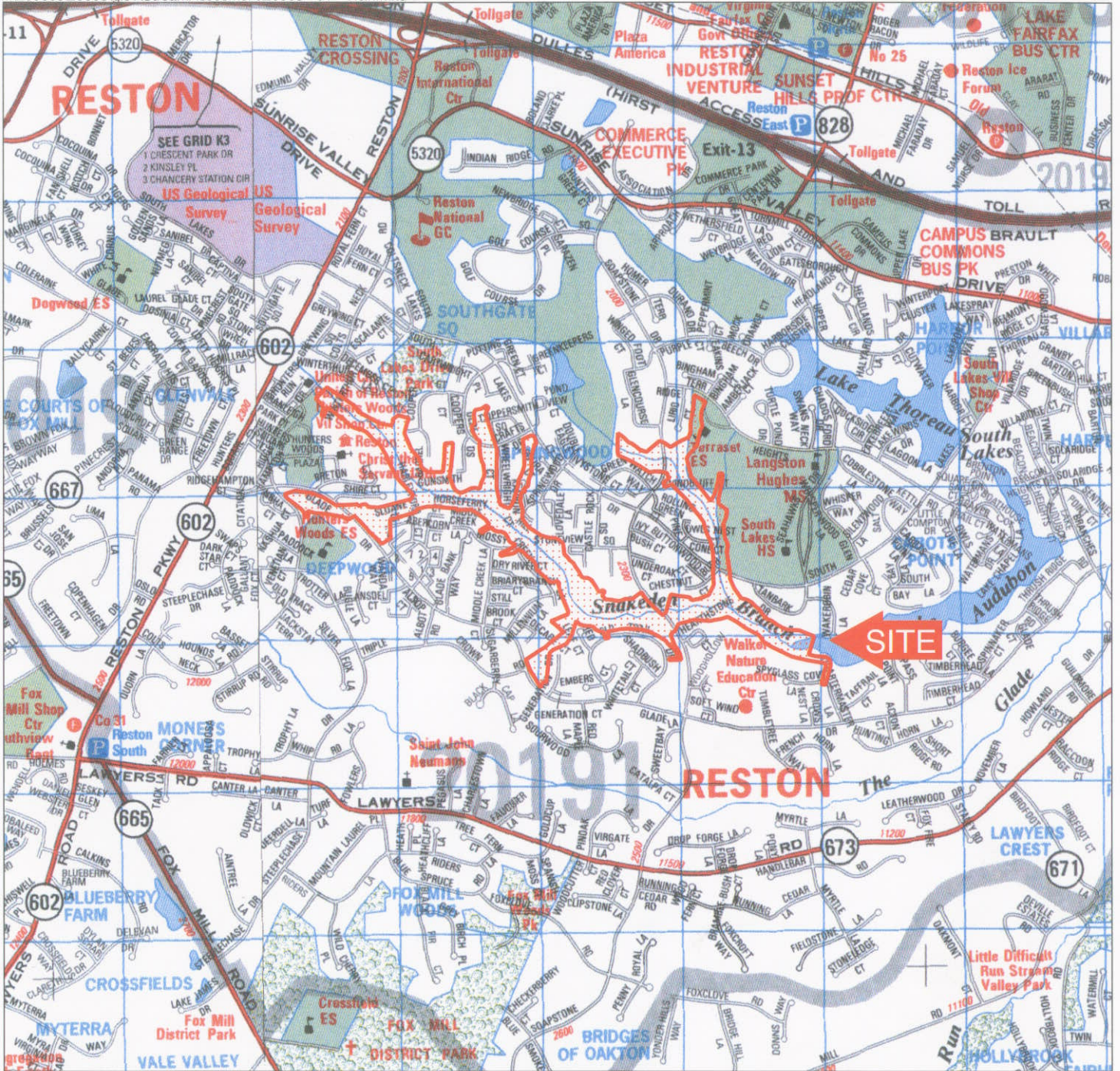
Biological Monitoring Report #1  
Northern Virginia Stream Restoration Bank  
Snakeden Branch Watershed  
WSSI #20003  
January 29, 2008  
Page 17

Wood, P. J. and P. D. Armitage. 1997. Biological effects of fine sediment in the lotic environment. *Environmental Management*. 21(2):203-217.

Wright I. A., B. C. Chessman, P.G. Fairweather, and L. J. Benson 1995. Measuring the impact of sewage effluent on the macroinvertebrate community of an upland stream: the effect of different levels of taxonomic resolution and quantification. *Australian Journal of Ecology*. 20, 142-149.

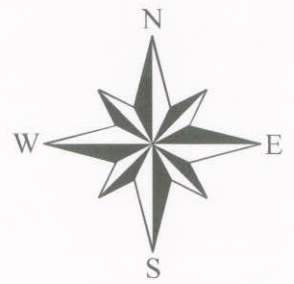
L:\20000s\20003\Admin\05-ENVR\Biomonitoring\Year 1 - 2007 Monitoring\Bioassessmentrpt.doc

# **Exhibit 1**



Copyright ADC The Map People  
 Permitted Use Number 30411160

Vicinity Map  
 Snakeden Branch  
 WSSI #20003  
 Scale: 1" = 2000'



# Exhibit 2





**USGS Quad Map  
Vienna, VA-MD 1994  
Snakeden Branch  
WSSI #20003  
Scale: 1" = 2000'**

Latitude: 38°55'59" N  
Longitude: 77°21'00" W  
Hydrologic Unit Code (HUC): 02070008  
Stream Class: III  
Name of Watershed: Snakeden Branch





# Exhibit 3

# Tab A



BIOLOGICAL STREAM ASSESSMENT RECONNAISSANCE NOTES:

- Wetland Studies and Solutions, Inc. (WSSI) performed a biological stream assessment reconnaissance on the Snakeden Branch 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) (a.k.a. Problem Identification Survey), 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. The BioRecon 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.
- The boundaries of jurisdictional wetlands and other waters of the U.S. located within the limits of the Snakeden Branch Watershed portion of the NVSRB were delineated and survey-located by WSSI as described in the Snakeden Branch Reach 1 and Snakeden Branch Reach 2 delineation reports, dated February 14, 2005 and May 18, 2005, respectively. The U.S. Army Corps of Engineers verified the Snakeden Branch Reach 1 and Snakeden Branch Reach 2 delineations, both with a jurisdictional determination (JD) dated May 17, 2006 (JD # 05-R0601 and JD #05-R1495, respectively). Note that for logistical purposes, Snakeden Branch Reach 1 and Snakeden Branch Reach 2 have been further divided into 17 manageable restoration reaches, as depicted on the NVSRB - Snakeden Branch plan sets, dated May, August, October, November, and December 2007. The BioRecon reaches for this report are located within a portion of these 17 reaches. The locations of the BioRecon reaches relative to these 17 reaches are as follows: BioRecon Reach 1-F corresponds with Reach 1 of the May 2007 plan set; BioRecon Reach 1-E corresponds with Reach 2 of the August 2007 plan set; BioRecon Reach 5-A corresponds with Tributary 1 of Reach 3 of the October 2007 plan set; BioRecon Reaches 4-A and 4-B correspond with Reach 4 of the October 2007 plan set; BioRecon Reaches 1-D and 1-C correspond with Reaches 5 and 7, respectively of the November 2007 plan set; BioRecon Reach 3-A corresponds with Tributary 7 of Reach 11 of the December 2007 plan set; and Reaches 1-B, 2-B, 2-A, and 1-A correspond with Reaches 12, 13, 16, and 17, respectively of pending plan sets.
- Reconnaissance fieldwork for the Snakeden Branch Watershed portion of the NVSRB was performed by WSSI on December 11 and 12, 2006 by Craig E. Tumer, PWS, PWD, Christine A. Geist, CE, WPIT and Sean D. Sipple, CT, WPIT. Assessments were conducted on Snakeden Branch and four unnamed tributaries to Snakeden Branch. Five streams were assessed for a total of twelve stream reaches.
- The results of the biological stream assessment reconnaissance indicated that only five 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. Based on the stream assessment reconnaissance, permanent biological reaches should be established in the vicinity of Reaches 1-A, 1-B, 1-C, 1-D, 1-E, 1-F, 2-A, 4-A and 5-A, for a total of nine permanent monitoring reaches.

**Table 1. NOVA Stream Bank - Snakeden Branch Benthic Indices**

Station	Total Individuals	Total Taxa Richness	EPT Taxa Richness	% Chironomidae + Oligochaeta
1-A	7	4	1	43
1-B	41	12	1	73
1-C	13	4	0	100
1-D	15	7	1	67
1-E	41	10	2	78
1-F	6	4	0	83
2-A	24	4	1	92
2-B	17	8	0	41
3-A	44	12	0	30
4-A	4	3	0	75
4-B	16	4	0	69
5-A	107	6	0	73

**LEGEND**

- STUDY AREA BOUNDARY
- PERENNIAL STREAM (PER FAIRFAX COUNTY RPA MAP)
- NON-PERENNIAL STREAM (PER FAIRFAX COUNTY RPA MAP)
- JURISDICTIONAL WETLAND AREAS
- UPLAND

**COWARDIN CLASSIFICATION**

- PFO PALUSTRINE FORESTED WETLAND
- R3 RIVERINE PERENNIAL



NORTHERN VIRGINIA STREAM RESTORATION BANK  
 SNAKEDEN BRANCH  
 Fairfax County, Virginia

EXHIBIT 3A: BIOLOGICAL STREAM ASSESSMENT RECONNAISSANCE MAP

**REVISIONS**

No.	Date	Description	Rev. By	App. By

Horizontal Datum: NAD 83  
 Vertical Datum: NGVD 29  
 Boundary and Topo Source: Fairfax County Digital Data, Air Survey Corp.

Computer File Name: L:\2008\Biology\CV\2008\Biology\Map  
 Design: SJS  
 Draft: SJS  
 Approved: MASR  
 Date: JANUARY 2008  
 Scale: 1"=200'  
 Sheet # 1 of 1

**Wetland**  
 Wetland Studies and Solutions, Inc.  
 1500 Wollington Branch Drive, Suite 100 • Gaithersburg, VA 20878  
 Phone: (301) 591-5600 • Fax: (301) 591-5601  
 www.wetlandstudies.com  
 Copyright © 2008 Wetland Studies and Solutions, Inc.



# Tab B



**BIOLOGICAL STREAM MONITORING NOTES:**

1. Wetland Studies and Solutions, Inc. (WSSI) performed biological stream monitoring on the Snakeden Branch 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 "Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers" for benthic macroinvertebrates, dated July 1999.

Based on the results of the biological reconnaissance, nine permanent biological monitoring reaches were established along Snakeden Branch and two unnamed tributaries to Snakeden Branch. Pre-construction biological assessment fieldwork was conducted along these permanent monitoring stations on December 11 and 12, 2006 (habitat assessment field work) by Craig E. Tumer, PWS, PWD, Sean D. Sipple, CT, PWS, and Christine A. Geist, CE, PWS, and between April 4 and April 10, 2007 (macroinvertebrate sampling field work) by Christine A. Geist, CE, PWS and Joseph N. Carpenter.

3. Our baseline habitat results indicate that habitat of the streams within the Snakeden Branch Watershed portion of the NVSRB is "Poor" to "Fair", with habitat assessment scores of 130 (out of 200) or less (See "Total Habitat Assessment Scores for Snakeden Branch" table 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, and lack of vegetation protection along the stream banks.

4. Baseline benthic macroinvertebrate results indicate that streams within the Snakeden Branch Watershed portion of the NVSRB are in "Severe Stress", with VA-SCI scores below 20 (out of 100) for all streams assessed (See "Snakeden Branch Biotic Metric and Index Weighting and VA-SCI" and "Snakeden Branch 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 Snakeden Branch portion of the NVSRB were delineated and survey-located by WSSI as described in the Snakeden Branch Reach 1 and Snakeden Branch Reach 2 delineation reports, dated February 14, 2005 and May 18, 2005, respectively. The U.S. Army Corps of Engineers verified the Snakeden Branch Reach 1 and Snakeden Branch Reach 2 delineations, with jurisdictional determinations (JD) dated May 17, 2006 (JD # 05-R0601 and JD #05-R1495, respectively). Note that for logistical purposes, Snakeden Branch Reach 1 and Snakeden Branch Reach 2 have been further divided into 17 manageable restoration reaches, as depicted on the NVSRB - Snakeden Branch plan sets, dated May, August, October, November, and December 2007. The biological monitoring reaches for this report are located within a portion of these 17 reaches. The locations of the biological monitoring reaches relative to these 17 reaches are as follows: Reach 1-F corresponds with Reach 1 of the May 2007 plan set; Reach 1-E corresponds with Reach 2 of the August 2007 plan set; Reach 3-A corresponds with Reach 4 of the October 2007 plan set; Reaches 1-D and 1-C correspond with Reaches 5 and 7, respectively of the November 2007 plan set; and Reaches 1-B, 2-B, 2-A, and 1-A correspond with Reaches 12, 13, 15, and 17, respectively of pending plan sets.

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

METRIC	Snakeden Branch Biotic Metric and Index Weighting and VA-SCI								
	RIQACT								
	1-A	1-B	1-C	1-D	1-E	1-F	2-A	2-B	3-A
Total Taxa	40.91	13.64	36.38	9.09	9.09	9.09	31.82	40.91	18.18
EPT Taxa	9.09	9.09	9.09	0.00	0.00	0.00	0.00	0.00	0.00
Percent Ephemeroptera	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent Plecoptera + Trichoptera (Excluding Hydropsychidae)	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent Scrapers	4.93	0.00	5.38	0.00	0.00	0.00	7.24	16.45	5.29
Percent Chironomidae	16.64	1.46	20.37	21.52	2.63	3.70	13.08	16.98	9.09
Percent Top Two Dominant	11.02	0.00	8.03	0.00	1.27	1.34	8.10	15.00	6.87
HBI	53.09	58.93	55.28	46.16	59.88	60.73	61.02	56.74	56.61
VA-SCI Numerical Score	17.81	10.39	16.81	9.60	9.11	9.36	15.16	18.26	11.84
VA-SCI Narrative Score	Severe	Severe	Severe	Severe	Severe	Severe	Severe	Severe	Severe
Average VA-SCI Numerical Score	13.16								
Average VA-SCI Narrative Score	Severe								

Reach	Total Taxa	Total EPT Taxa	Percent Ephemeroptera	Percent Plecoptera + Trichoptera (Excluding Hydropsychidae)	Percent Scrapers	Percent Chironomidae	Percent Top Two Dominant	HBI	VA-SCI	
									Numerical Score	Narrative Score
1-A	9	1	0.00	1.69	2.54	81.36	92.37	6.39	17.81	Severe
1-B	3	1	0.00	0.00	0.00	98.54	100.00	5.99	10.39	Severe
1-C	8	1	0.00	0.00	2.78	79.63	94.44	6.24	16.81	Severe
1-D	2	0	0.00	0.00	0.00	78.48	100.00	6.86	9.60	Severe
1-E	2	0	0.00	0.00	0.00	97.37	99.12	5.93	9.11	Severe
1-F	2	0	0.00	0.00	0.00	96.30	99.07	5.87	9.36	Severe
2-A	7	0	0.00	0.00	3.74	86.92	94.39	6.85	15.16	Severe
2-B	9	0	0.00	0.00	8.49	83.02	89.62	6.14	18.26	Severe
3-A	4	0	0.00	0.00	2.73	90.91	95.45	6.22	11.84	Severe

**LEGEND**

- STUDY AREA BOUNDARY
- PERENNIAL STREAM (PER FAIRFAX COUNTY RPA MAP)
- NON-PERENNIAL STREAM (PER FAIRFAX COUNTY RPA MAP)
- JURISDICTIONAL WETLAND AREAS
- UPLAND
- 11995 SURVEY-LOCATED TREE (NOTE 7)

**Total Habitat Assessment Scores for Snakeden Branch**

REACH	Habitat Assessment Score	Percent Best Possible Score	Narrative Rating
1-A	114	57	Poor
1-B	103	52	Poor
1-C	116	58	Fair
1-D	121	61	Fair
1-E	130	65	Fair
1-F	113	57	Poor
2-A	112	56	Poor
2-B	118	59	Fair
3-A	112	56	Poor
<b>Average</b>	<b>115</b>	<b>58</b>	<b>Fair</b>



**Wetland Studies and Solutions, Inc.**  
 3500 Wetland Branch Drive, Suite 100, Fairfax, VA 22031  
 Phone: 703.679.5600 | Fax: 703.679.5601  
 www.wetlandstudies.com

**NORTHERN VIRGINIA STREAM RESTORATION BANK  
 SNAKEDEN BRANCH**  
 Fairfax County, Virginia

**EXHIBIT 3B: BIOLOGICAL STREAM MONITORING MAP**

No.	Date	Description	By	App. By

Horizontal Datum: NAD 83  
 Vertical Datum: NGVD 29  
 Boundary and Top Source: Fairfax County Digital Data  
 Air Survey Corp.

DATE: JANUARY 2008  
 SCALE: 1"=200'

Computer File Name: Snakeden.dwg  
 Design: SWS  
 Draft: SWS  
 Approved: MSR  
 Date: 1/1/08

Sheet # 1 of 1

L:\2008\08\200803\CADD\05-ENVR\Biomonitoring\Year 1 - 2007\Monitoring\BiomonitoringMap.dwg



# Exhibit 4

# Tab A

**EXHIBIT 4A  
BIOLOGICAL RECONNAISSANCE PHOTOGRAPHS  
PHOTOS TAKEN BETWEEN DECEMBER 11 AND 12, 2006  
SNAKEDEN BRANCH WATERSHED  
WSSI #20003**



1. Looking northwest (upstream) at Reach 1-A of Snakeden Branch on the eastern portion of the study area.



2. Looking west (upstream) at Reach 1-B of Snakeden Branch on the eastern portion of the study area.



**EXHIBIT 4A**  
**BIOLOGICAL RECONNAISSANCE PHOTOGRAPHS**  
**PHOTOS TAKEN BETWEEN DECEMBER 11 AND 12, 2006**  
**SNAKEDEN BRANCH WATERSHED**  
**WSSI #20003**



3. Looking northwest (upstream) at Reach 1-C of Snakeden Branch on the central portion of the study area.



4. Looking southwest (upstream) at Reach 1-D of Snakeden Branch on the central portion of the study area



**EXHIBIT 4A  
BIOLOGICAL RECONNAISSANCE PHOTOGRAPHS  
PHOTOS TAKEN BETWEEN DECEMBER 11 AND 12, 2006  
SNAKEDEN BRANCH WATERSHED  
WSSI #20003**



5. Looking northwest (upstream) at Reach 1-E of Snakeden Branch on the western portion of the study area.



6. Looking northwest (upstream) at Reach 1-F of Snakeden Branch on the western portion of the study area.



**EXHIBIT 4A  
BIOLOGICAL RECONNAISSANCE PHOTOGRAPHS  
PHOTOS TAKEN BETWEEN DECEMBER 11 AND 12, 2006  
SNAKEDEN BRANCH WATERSHED  
WSSI #20003**



7. Looking northwest (upstream) at Reach 2-A of an unnamed tributary to Snakeden Branch on the eastern portion of the study area.



8. Looking northwest (upstream) at Reach 2-B of an unnamed tributary to Snakeden Branch on the eastern portion of the study area.



**EXHIBIT 4A  
BIOLOGICAL RECONNAISSANCE PHOTOGRAPHS  
PHOTOS TAKEN BETWEEN DECEMBER 11 AND 12, 2006  
SNAKEDEN BRANCH WATERSHED  
WSSI #20003**



9. Looking north (upstream) at Reach 3-A, an unnamed tributary of Snakeden Branch on the eastern portion of the study area.



10. Looking northwest (upstream) at Reach 4-A of an unnamed tributary of Snakeden Branch on the western portion of the study area.



**EXHIBIT 4A  
BIOLOGICAL RECONNAISSANCE PHOTOGRAPHS  
PHOTOS TAKEN BETWEEN DECEMBER 11 AND 12, 2006  
SNAKEDEN BRANCH WATERSHED  
WSSI #20003**



11. Looking west (upstream) at Reach 4-B of an unnamed tributary of Snakeden Branch on the western portion of the study area.



12. Looking north-northeast (upstream) at Reach 5-A of an unnamed tributary of Snakeden Branch on the western portion of the study area.



**EXHIBIT 4A  
BIOLOGICAL RECONNAISSANCE PHOTOGRAPHS  
PHOTOS TAKEN BETWEEN DECEMBER 11 AND 12, 2006  
SNAKEDEN BRANCH WATERSHED  
WSSI #20003**



13. Looking west (upstream) at an unnamed tributary of Snakeden Branch on the eastern portion of the study area. This stream only had standing water during the reconnaissance field work and was not samplable.



14. Looking southeast (upstream) at an unnamed tributary of Snakeden Branch on the eastern portion of the study area. This stream lacked flowing water during the reconnaissance field work.



**EXHIBIT 4A  
BIOLOGICAL RECONNAISSANCE PHOTOGRAPHS  
PHOTOS TAKEN BETWEEN DECEMBER 11 AND 12, 2006  
SNAKEDEN BRANCH WATERSHED  
WSSI #20003**



15. Looking south (upstream) at an unnamed tributary of Snakeden Branch on the central portion of the study area. This stream lacked flowing water during the reconnaissance field work.



16. Looking northeast (upstream) at an unnamed tributary of Snakeden Branch on the central portion of the site. This stream lacked flowing water during the reconnaissance field work.



**EXHIBIT 4A  
BIOLOGICAL RECONNAISSANCE PHOTOGRAPHS  
PHOTOS TAKEN BETWEEN DECEMBER 11 AND 12, 2006  
SNAKEDEN BRANCH WATERSHED  
WSSI #20003**



17. Looking south (downstream) at an unnamed tributary of Snakeden Branch on the western portion of the study area. This stream lacked flowing water during the reconnaissance field work.



18. Looking southwest (upstream) at an unnamed tributary of Snakeden Branch on the western portion of the study area. This stream lacked flowing water during the reconnaissance field work.

# Tab B



**EXHIBIT 4B  
BIOLOGICAL STREAM ASSESSMENT PHOTOGRAPHS  
PHOTOGRAPHS TAKEN BETWEEN APRIL 4 AND APRIL 10, 2007  
SNAKEDEN BRANCH WATERSHED  
WSSI #20003**



1. **Looking northwest (upstream) at Reach 1-A of Snakeden Branch on the eastern portion of the study area.**



2. **Looking west (upstream) at Reach 1-B of Snakeden Branch on the eastern portion of the study area.**



**EXHIBIT 4B  
BIOLOGICAL STREAM ASSESSMENT PHOTOGRAPHS  
PHOTOGRAPHS TAKEN BETWEEN APRIL 4 AND APRIL 10, 2007  
SNAKEDEN BRANCH WATERSHED  
WSSI #20003**



3. **Looking northwest (upstream) at Reach 1-C of Snakeden Branch on the central portion of the study area.**



4. **Looking southwest (upstream) at Reach 1-D of Snakeden Branch on the central portion of the study area.**



**EXHIBIT 4B  
BIOLOGICAL STREAM ASSESSMENT PHOTOGRAPHS  
PHOTOGRAPHS TAKEN BETWEEN APRIL 4 AND APRIL 10, 2007  
SNAKEDEN BRANCH WATERSHED  
WSSI #20003**



**5. Looking northwest (upstream) at Reach 1-E of Snakeden Branch on the western portion of the study area.**



**6. Looking northwest (upstream) at Reach 1-F of Snakeden Branch on the western portion of the study area.**



**EXHIBIT 4B  
BIOLOGICAL STREAM ASSESSMENT PHOTOGRAPHS  
PHOTOGRAPHS TAKEN BETWEEN APRIL 4 AND APRIL 10, 2007  
SNAKEDEN BRANCH WATERSHED  
WSSI #20003**



**7. Looking northwest (upstream) at Reach 2-A of an unnamed tributary of Snakeden Branch on the eastern portion of the study area.**



**8. Looking northwest (upstream) at Reach 2-B of an unnamed tributary of Snakeden Branch on the eastern portion of the study area.**



**EXHIBIT 4B  
BIOLOGICAL STREAM ASSESSMENT PHOTOGRAPHS  
PHOTOGRAPHS TAKEN BETWEEN APRIL 4 AND APRIL 10, 2007  
SNAKEDEN BRANCH WATERSHED  
WSSI #20003**



9. Looking west (upstream) at Reach 3-A, an unnamed tributary of Snakeden Branch on the western portion of the study area.

# **Exhibit 5**

# Tab A

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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-A	SDS/CAG	1	N/A
<b>Date ID'd</b>	<b>Date Sorted</b>	<b>Taxonomist</b>	<b>Sorter</b>	<b># Grids in Subsample</b>	<b>Total No. Organisms ID'd</b>
12/14/2006	12/14/2006	SDS	SDS	N/A	7
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculium sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>		<b>Tanypodinae</b>	
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Damicyptochironomus sp.		Guttipelopia sp.	
<b>CURCULIONIDAE</b>		Dicotendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastia sp.		Procladius sp.	
Laccornis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloepus sp.		Phaenopsectra sp.		Thienemannimyia gp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zavrelia sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempelina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanytarsus complex		Orthopodomyia	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettaea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Potthastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Sympotthastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthoclaadiinae</b>	1	<b>PELCORHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Sygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.	3	Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladus sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthoclaadiinae A		Eristalis sp.	
<b>PALAEOMONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>		Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrichocladius sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrissocladius sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGNIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Pseudolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-A	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	7
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		HIRUDINEA - Leeches		Prostola sp.	
Pilaria sp.		HOPLOMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
TRICHOCERIDAE		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp.		NOCTUIDAE		Swetlsa sp.	
EPHEMEROPTERA - Mayflies		Archanara sp.		TAENIOPTERIDAE	
AMELETIDAE		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taeniopteryx sp.	
BAETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalis sp.		CALAMOCERATIDAE	
Centropilum sp.		Nigronia sp.		Heteroplectron sp.	
Dipheter sp.		SIALIDAE		DIPSEUDOPSIDAE	
BAETISCIDAE		Sialis sp.		Phyllocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
CAENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp.		ODONATA (Anisoptera - Dragonflies)		Agapetus sp.	
EPHEMERELLIDAE		AESHNIDAE		HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Baiaesha sp.		HYDROPSYCHIDAE	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	1
Euryophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
EPHEMERIDAE		CORDULIDAE		Parapsyche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
HEPTAGENIIDAE		Arigomphus sp.		HYDROPTILIDAE	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocota sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
LEPTOPHLEBIDAE		LIBELLULIDAE		Lepidostoma sp.	
Leptophlebia sp.		MACROMIIDAE		LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Trianodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Ceraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies		Oecetis sp.	
NEOEPHEMERIDAE		CALOPTERYGIDAE		LIMNephilidae	
OLIGONEURIDAE		Calopteryx sp.		Apatna sp.	
Isonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
POLYMITARCYIDAE		Argia sp.		Ironoquia sp.	
POTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	2	MOLANNIDAE	
Siphonurus sp.		LUMBRICINA		Molanna sp.	
TRICORYTHIDAE		ENCHYTRAIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
GASTROPODA - Snails		TUBIFICIDAE		PHILOPOTAMIDAE	
ANCYLIDAE		LUMBRICULIDAE		Chimarra sp.	
Ferissa sp.		POLYCHAETA - Polychaete Worms		Wormaldia sp.	
HYDROBIIDAE		AEOLOSOMATIDAE		PHRYGANEIDAE	
LYMNAEIDAE		Aeolosoma sp.		Ptilostomis sp.	
Fossaria sp.		PLECOPTERA - Stonefly Larvae		POLYCENTROPIDAE	
Stagnicola sp.		PERLIDAE		Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
PHYSIDAE		Beloneuria sp.		PSYCHOMYIDAE	
Physella sp.		Ecoptura sp.		Lype sp.	
PLANORBIDAE		Neoperla sp.		Psychomyia sp.	
Menetus sp.		Perlesta sp.		RHYACOPHILIDAE	
Gyraulus sp.		Perlinella sp.		Ryacophila sp.	
PLEUROCERIDAE		PERLODIDAE		UENODIDAE	
VIVIPARIDAE		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		TUBELLARIA - Flatworms	
HAPLOSCLERIDA		Isoperla sp.		PLANARIIDAE	
SPONGILLIDAE		Cultus sp.		DENDROCOELIDAE	
HEMIPTERA - True Bugs		PTERONARCYIDAE		COLLEMBOLA - Springtails	
BELOSTOMATIDAE		Pteronarcys sp.		ISOTOMURIDAE	
Belostoma sp.		PELTOPERLIDAE		Isotomurus sp.	
Lethocerus sp.		Peltoperla sp.			
CORIXIDAE		LEUCTRIDAE			
GELASTOCORIDAE		Leuctra sp.			
GERRIDAE		Zaalupectra sp.			
Trepobates sp.		Paraleuctra sp.			
HEBRIDAE		CAPNIDAE			
HYDROMETRIDAE		Allocapnia sp.			
MESOVELIIDAE		Paracapnia sp.			
NEPIDAE		NEMOURIDAE			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
VELIIDAE		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.

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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-B	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	41
<b>BIVALVIA - Clams</b>		Forcipomya sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezziya sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.	1	Stilobezziya sp.		Unniella sp.	
Musculum sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>		<b>Tanypodinae</b>	3
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>	3	Alotarypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicrocryptochironomus sp.		Guttipeloplia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus sp.		Microtendipes sp.		Parameritha sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastella sp.		Procladius sp.	
Laccornis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloopus sp.		Phaenopsectra sp.		Thienemannimyia gp.	
Oplioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zavrelia sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>	1	Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanytarsus complex		Orthopodomya	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochaeres sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Sympothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthocladinae</b>	18	<b>PELCO RHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladus sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladus sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	1
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladus sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEEMONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>		Parachaetocladus sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrachocladus sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrisocladus sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	3
Bezzia sp.		Rheosmittia sp.		Pseudolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladus sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladus sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-B	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	41
Pedicia sp.		Microvelia sp.	1	Paranemoura sp.	
Limonia sp.		HIRUDINEA - Leeches		Prostia sp.	
Pilaria sp.		HOPLOMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
TRICHOCERIDAE		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp.		NOCTUIDAE		Sweltsa sp.	
EPHEMEROPTERA - Mayflies		Archanara sp.		TAENIOPTERIDAE	
AMELETIDAE		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taeniopteryx sp.	
BAETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalis sp.		CALAMOCERATIDAE	
Centropilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetero sp.		SIALIDAE		DIPSEUDOPSIDAE	
BAETISCIDAE		Stelis sp.		Phylocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
CAENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp.		ODONATA (Anisoptera - Dragonflies)		Agapetus sp.	
EPHEMERELLIDAE		AESHNIDAE		HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Baiaesha sp.		HYDROPSYCHIDAE	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	2
Eurylophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
EPHEMERIDAE		CORDULIDAE		Parapsyche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
HEPTAGENIIDAE		Arigomphus sp.		HYDROPTILIDAE	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
LEPTOPHLEBIDAE		LIBELLULIDAE		Lepidostoma sp.	
Leptophlebia sp.		MACROMIIDAE		LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Caraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies		Oecetis sp.	
NEOEPHEMERIDAE		CALOPTERYGIDAE		LIMNIPHILIDAE	
OLIGONEURIDAE		Calopteryx sp.		Apatna sp.	
Isonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
POLYMITARCYIDAE		Argia sp.	5	Ironoquia sp.	
POTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms		MOLANNIDAE	
Siphonurus sp.		LUMBRICINA		Molanna sp.	
TRICORYTHIDAE		ENCHYTRAIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
GASTROPODA - Snails		TUBIFICIDAE		PHILOPOTAMIDAE	
ANCYLIDAE		LUMBRICULIDAE		Chimarra sp.	
Ferissa sp.		POLYCHAETA - Polychaete Worms		Wormaldia sp.	
HYDROBIIDAE		AELOSOMATIDAE		PHRYGANEIDAE	
LYMNAEIDAE		Aeolosoma sp.		Ptilostomis sp.	
Fossaria sp.		PLECOPTERA - Stonefly Larvae		POLYCENTROPIDAE	
Stagnicola sp.		PERLIDAE		Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
PHYSIDAE		Beloneuria sp.		PSYCHOMYIDAE	
Physella sp.	1	Ecoptura sp.		Lype sp.	
PLANORBIDAE		Neoperla sp.		Psychomyia sp.	
Menetus sp.		Perlenta sp.		RHYACOPHILIDAE	
Gyraulus sp.		Perlenta sp.		Ryacophila sp.	
PLEUROCERIDAE		PERLODIDAE		UENODAE	
VIVIPARIDAE		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		TUBELLARIA - Flatworms	
HAPLOSCLERIDA		Isoperla sp.		PLANARIIDAE	
SPONGILLIDAE		Cultus sp.		DENDROCOELIDAE	
HEMIPTERA - True Bugs		PTERONARCYIDAE		COLLEMBOLA - Springtails	
BELOSTOMATIDAE		Pteronarcys sp.		ISOTOMURIDAE	
Belostoma sp.		PELTOPERLIDAE		Isotomurus sp.	2
Lethocerus sp.		Peltoperla sp.			
CORIXIDAE		LEUCTRIDAE			
GELASTOCORIDAE		Leuctra sp.			
GERRIDAE		Zaenuectra sp.			
Trepobates sp.		Paraleuctra sp.			
HEBRIDAE		CAPNIDAE			
HYDROMETRIDAE		Allocapnia sp.			
MESOVELIIDAE		Paracapnia sp.			
NEPIDAE		NEMOURIDAE			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
VELIIDAE		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.

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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-C	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	13
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pleidium sp.		Stilobezzia sp.		Unniella sp.	
Musculum sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>		<b>Tanypodinae</b>	
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>	1	Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicroptochironomus sp.		Guttipelopia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus 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.		Paracledopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloopus sp.		Phaenopsectra sp.		Thienemannimyia sp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zavrellella sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>	3	Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanyarsus complex		Orthopodomyia	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodya sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Halophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chellifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Sympotthastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthoclaadiinae</b>	6	<b>PELCO RHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eulieferella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladius sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>		Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrachocladius sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrisocladus sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Pseudolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-C	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	13
Pedicia sp.		Microvelia sp.			Paranemoura sp.
Limonia sp.		HIRUDINEA - Leeches			Prostoia sp.
Pilaria sp.		HOPLOMERTEA - Ribbon Worms			Shipsa sp.
Erioptera sp.		TETRASTEMMATIDAE			CHLOROPERLIDAE
Rhabdomastix sp.		Prostoma sp.			Alloperla sp.
<b>TRICHOCERIDAE</b>		LEPIDOPTERA - Moth Larvae			Haploperla sp.
Trichocera sp.		NOCTUIDAE			Swellsa sp.
<b>EPHEMEROPTERA - Mayflies</b>		Archanaera sp.			<b>TAENIOPTERIGIDAE</b>
<b>AMELETIDAE</b>		Bellura sp.			Strophopteryx sp.
Ameletus sp.		PYRALIDAE			Taeniopteryx sp.
<b>BAETIDAE</b>		MEGALOPTERA - Dobsonflies			TRICHOPTERA - Caddisflies
Acentrella sp.		CORYDALIDAE			BRACHYCENTRIDAE
Acerpenna sp.		Chauliodes sp.			Brachycentrus sp.
Baetis sp.		Corydatus sp.			CALAMOCERATIDAE
Centropilum sp.		Nigronia sp.			Heteroplectron sp.
Diphotor sp.		SIALIDAE			DIPSEUDOPSIDAE
<b>BAETISCIDAE</b>		Sialis sp.			Phylocentropus sp.
Baetisca sp.		NEMATODA - Roundworms			GLOSSOSOMATIDAE
<b>CAENIDAE</b>		NEMATOMORPHA - Horsehair Worms			Glossosoma sp.
Caenis sp.		ODONATA (Anisoptera - Dragonflies)			Agapetus sp.
<b>EPHEMERELLIDAE</b>		AESHNIDAE			HELICOPSYCHIDAE
Dannella sp.		Anax sp.			Helicopsyche sp.
Drunella sp.		Basiaesha sp.			HYDROPSYCHIDAE
Ephemerella sp.		Boyeria sp.			Cheumatopsyche sp.
Eurylophella sp.		CORDULEGASTRIDAE			Diplectrona sp.
Serratella sp.		Cordulegaster sp.			Hydropsyche sp.
<b>EPHEMERIDAE</b>		CORDULIIDAE			Parapsyche sp.
Ephemera sp.		GOMPHIDAE			Potamyla sp.
<b>HEPTAGENIIDAE</b>		Argomphus sp.			HYDROPTILIDAE
Epeorus sp.		Gomphus sp.			Hydroptila sp.
Leucrocota sp.		Hagenius sp.			Leucotrichia sp.
Stenacron sp.		Lanthus sp.			Ochrotrichia sp.
Stenonema sp.		Stylogomphus sp.			LEPIDOSTOMATIDAE
<b>LEPTOPHLEBIDAE</b>		LIBELLULIDAE			Lepidostoma sp.
Leptophlebia sp.		MACROMIIDAE			LEPTOCERIDAE
Habrophlebia sp.		Macromia sp.			Trienodes sp.
Habrophlebiodes sp.		PETALURIDAE			Ceraclaea sp.
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies			Oacetus sp.
<b>NEOEPHEMERIDAE</b>		CALOPTERYGIDAE			LIMNIPHILIDAE
<b>OLIGONEURIDAE</b>		Calopteryx sp.			Apatina sp.
Isonychia sp.		COENAGRIONIDAE			Hydatophylax sp.
<b>POLYMITARCYIDAE</b>		Argia sp.			Ironoquia sp.
<b>POTAMANTHIDAE</b>		LESTIDAE			Pycnopsyche sp.
<b>SIPHONEURIDAE</b>		OLIGOCHAETA - Oligochaete Worms	3		MOLANNIDAE
Siphonurus sp.		LUMBRICINA			Molanna sp.
<b>TRICORYTHIDAE</b>		ENCHYTRAETIDAE			ODONTOCERIDAE
Tricorythodes sp.		NAIDIDAE			Psilotreta sp.
<b>GASTROPODA - Snails</b>		TUBIFICIDAE			PHILOPOTAMIDAE
<b>ANCYLIDAE</b>		LUMBRICULIDAE			Chimarra sp.
Ferissa sp.		POLYCHAETA - Polychaete Worms			Wormaklia sp.
<b>HYDROBIIDAE</b>		AELOSOMATIDAE			PHRYGANEIDAE
<b>LYMNAEIDAE</b>		Aelosoma sp.			Ptilostomis sp.
Fossaria sp.		PLECOPTERA - Stonefly Larvae			POLYCENTROPIDAE
Stagnicola sp.		PERLIDAE			Cymellus sp.
Pseudosuccinea sp.		Acroneuria sp.			Polycentropus sp.
<b>PHYSIDAE</b>		Beloneuria sp.			PSYCHOMYIDAE
Physella sp.		Ecoptura sp.			Lype sp.
<b>PLANORBIDAE</b>		Neoperla sp.			Psychomyia sp.
Menetus sp.		Perlenta sp.			RHYACOPHILIDAE
Gyraulus sp.		Perlina sp.			Ryacophila sp.
<b>PLEUROCERIDAE</b>		PERLODIDAE			UENOIDAE
<b>VIVIPARIDAE</b>		Clioperla sp.			Neophylax sp.
Vviparus sp.		Diploperla sp.			<b>TUBELLARIA - Flatworms</b>
<b>HAPLOSCLERIDA</b>		Isoperla sp.			PLANARIIDAE
<b>SPONGILLIDAE</b>		Cultus sp.			DENDROCOELIDAE
<b>HEMIPTERA - True Bugs</b>		PTERONARCYIDAE			COLLEMBOLA - Springtails
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.			ISOTOMURIDAE
Belostoma sp.		PELTOPERLIDAE			Isotomurus sp.
Lethocerus sp.		Peltoperla sp.			
<b>CORIXIDAE</b>		LEUCTRIDAE			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zealuctra sp.			
Trepobates sp.		Paraleuctra sp.			
<b>HEBRIDAE</b>		CAPNIDAE			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		NEMOURIDAE			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-D	SDS/CAG	1	N/A
<b>Date ID'd</b>	<b>Date Sorted</b>	<b>Taxonomist</b>	<b>Sorter</b>	<b># Grids in Subsample</b>	<b>Total No. Organisms ID'd</b>
12/14/2006	12/14/2006	SDS	SDS	N/A	15
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Muscullum sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>		<b>Tanypodinae</b>	1
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicyptochironomus sp.		Guttipeloplia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopeloplia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Halichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropeloplia sp.	
Agabus sp.		Kiefferulus sp.		Meropeloplia sp.	
Hydroporus sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastella sp.		Procladius sp.	
Laccosis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopeloplia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloopus sp.		Phaenopsectra sp.		Thienemannimyia sp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopeloplia sp.	
Promoresia sp.		Stictochironomus sp.		Zavelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zaveliella sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanytarsus complex		Orthopodomyia	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Sympothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthoclaadiinae</b>	5	<b>PELCOHYDRIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladus sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladus sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladus sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthoclaadiinae A		Eristalis sp.	
<b>PALAEEMONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>		Parachaetocladus sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrachocladus sp.		<b>TIPULIDAE</b>	1
Atherix sp.		Paratrissocladus sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Psuedolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladus sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladus sp.		Ormosia sp.	

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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-D	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	15
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		<b>HIRUDINEA - Leeches</b>		Prostolia sp.	
Ptilaria sp.		<b>HOPLOMERTEA - Ribbon Worms</b>		Shipsa sp.	
Erioptera sp.		<b>TETRASTEMMATIDAE</b>		<b>CHLOROPERLIDAE</b>	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHOCERIDAE</b>		<b>LEPIDOPTERA - Moth Larvae</b>		Haploperla sp.	
Trichocera sp.		<b>NOCTUIDAE</b>		Swellta sp.	
<b>EPHEMEROPTERA - Mayflies</b>		Archana sp.		<b>TAENIOPTERIGIDAE</b>	
<b>AMELETIDAE</b>		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		<b>PYRALIDAE</b>		Taeniopteryx sp.	
<b>BAETIDAE</b>		<b>MEGALOPTERA - Dobsonflies</b>		<b>TRICHOPTERA - Caddisflies</b>	
Acentrella sp.		<b>CORYDALIDAE</b>		<b>BRACHYCENTRIDAE</b>	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalis sp.		<b>CALAMOCERATIDAE</b>	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Dipheter sp.		<b>SIALIDAE</b>		<b>DIPSEUDOPSIDAE</b>	
<b>BAETISCIDAE</b>		Sialis sp.		Phylocentropus sp.	
Baetisca sp.		<b>NEMATODA - Roundworms</b>		<b>GLOSSOSOMATIDAE</b>	
<b>CAENIDAE</b>		<b>NEMATOMORPHA - Horsehair Worms</b>		Glossosoma sp.	
Caenis sp.		<b>ODONATA (Anisoptera - Dragonflies)</b>		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		<b>AESHNIDAE</b>		<b>HELICOPSYCHIDAE</b>	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Baiaeschna sp.		<b>HYDROPSYCHIDAE</b>	1
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Euryophella sp.		<b>CORDULEGASTRIDAE</b>		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
<b>EPHEMERIDAE</b>		<b>CORDULIDAE</b>		Parapsyche sp.	
Ephemera sp.		<b>GOMPHIDAE</b>		Potamyia sp.	
<b>HEPTAGENIIDAE</b>		Argomphus sp.		<b>HYDROPTILIDAE</b>	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocota sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		<b>LEPIDOSTOMATIDAE</b>	
<b>LEPTOPHLEBIDAE</b>		<b>LIBELLULIDAE</b>		Lepidostoma sp.	
Leptophlebia sp.		<b>MACROMIIDAE</b>		<b>LEPTOCERIDAE</b>	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		<b>PETALURIDAE</b>		Ceraclea sp.	
Paraleptophlebia sp.		<b>ODONATA Zygoptera - Damselflies</b>		Oecetis sp.	
<b>NEOPHEMERIDAE</b>		<b>CALOPTERYGIDAE</b>		<b>LIMNephilidae</b>	
<b>OLIGONEURIDAE</b>		Calopteryx sp.		Apatina sp.	
Isonychia sp.		<b>COENAGRIONIDAE</b>		Hydatophylax sp.	
<b>POLYMITARCYIDAE</b>		Argia sp.		Ironoquia sp.	
<b>POTAMANTHIDAE</b>		<b>LESTIDAE</b>		Pycnopsyche sp.	
<b>SIPHONONEURIDAE</b>		<b>OLIGOCHAETA - Oligochaete Worms</b>	4	<b>MOLANNIDAE</b>	
Siphonurus sp.		<b>LUMBRICINA</b>		Molanna sp.	
<b>TRICORYTHIDAE</b>		<b>ENCHYTRAEIDAE</b>		<b>ODONTOCERIDAE</b>	
Tricorythodes sp.		<b>NAIDIDAE</b>		Psilotreta sp.	
<b>GASTROPODA - Snails</b>		<b>TUBIFICIDAE</b>		<b>PHILOPOTAMIDAE</b>	
<b>ANCYLIDAE</b>		<b>LUMBRICULIDAE</b>		Chimarra sp.	
Ferissa sp.		<b>POLYCHAETA - Polychaete Worms</b>		Wormaldia sp.	
<b>HYDROBIIDAE</b>		<b>AEOLOSOMATIDAE</b>		<b>PHRYGANEIDAE</b>	
<b>LYMNAEIDAE</b>		Aeolosoma sp.		Ptilostomis sp.	
Fossaria sp.		<b>PLECOPTERA - Stonefly Larvae</b>		<b>POLYCENTROPIDAE</b>	
Stagnicola sp.		<b>PERLIDAE</b>		Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
<b>PHYSIDAE</b>		Beloneuria sp.		<b>PSYCHOMYIDAE</b>	
Physella sp.	2	Eccoptura sp.		Lype sp.	
<b>PLANORBIDAE</b>		Neoperla sp.		Psychomyia sp.	
Menetus sp.	1	Perlenta sp.		<b>RHYACOPHILIDAE</b>	
Gyraulus sp.		<i>Perlinella</i> sp.		Ryacophila sp.	
<b>PLEUROCERIDAE</b>		<b>PERLODIDAE</b>		<b>UENOIDAE</b>	
<b>VIVIPARIDAE</b>		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		<b>TUBELLARIA - Flatworms</b>	
<b>HAPLOSCLERIDA</b>		Isoperla sp.		<b>PLANARIIDAE</b>	
<b>SPONGILLIDAE</b>		Cultus sp.		<b>DENDROCOELIDAE</b>	
<b>HEMIPTERA - True Bugs</b>		<b>PTERONARCYIDAE</b>		<b>COLLEMBOLA - Springtails</b>	
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.		<b>ISOTOMURIDAE</b>	
Belostoma sp.		<b>PELTOPERLIDAE</b>		Isotomurus sp.	
Lethocerus sp.		Paltoerla sp.			
<b>CORIXIDAE</b>		<b>LEUCTRIDAE</b>			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zealuctra sp.			
Trepobates sp.		Paraluctra sp.			
<b>HEBRIDAE</b>		<b>CAPNIDAE</b>			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		<b>NEMOURIDAE</b>			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-E	SDS/CAG	1	N/A
<b>Date ID'd</b>	<b>Date Sorted</b>	<b>Taxonomist</b>	<b>Sorter</b>	<b># Grids in Subsample</b>	<b>Total No. Organisms ID'd</b>
12/14/2006	12/14/2006	SDS	SDS	N/A	41
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculium sp.		<b>CHAEBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>		<b>Tanypodinae</b>	13
<b>UNIONIDAE</b>		<b>Chironominae</b>		Abiabetesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>	1	Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicroptochironomus sp.		Guttipelopia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastella sp.		Procladius sp.	
Laccomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloopus sp.		Phaenopsectra sp.		Thienemannimyia gp.	
Oplioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoesia sp.		Stictochironomus sp.		Zavelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zaveliella sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>	3	Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanytarsus complex		Orthopodomyia	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Sympothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthocladinae</b>	6	<b>PELCO RHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>	1	Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda- Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ecternia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladius sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEEMONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda- Sowbugs)</b>	1	Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lircaus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrachocladus sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrissocladus sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	1
Bezzia sp.		Rheosmittia sp.		Psuedolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladus sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-E	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	41
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		HIRUDINEA - Leeches		Prostoia sp.	
Ptilaria sp.		HOPLOMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHOCEERIDAE</b>		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp.		NOCTUIDAE		Sweltsa sp.	
EPHEMEROPTERA - Mayflies		Archanara sp.		TAENIOPTERGIDAE	
<b>AMELETIDAE</b>		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taeniopteryx sp.	
<b>BAETIDAE</b>		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalus sp.		CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.		Heteropteryx sp.	
Diphetera sp.		<b>SIALIDAE</b>		DIPSEUDOPSIDAE	
<b>BAETISCIDAE</b>		Sialis sp.		Phlycentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
<b>CAENIDAE</b>		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp.		ODONATA (Anisoptera - Dragonflies)		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		AESHNIDAE		HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Baiaeschna sp.		HYDROPSYCHIDAE	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	5
Eurylophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Sarratella sp.		Cordulegaster sp.		Hydropsyche sp.	1
<b>EPHEMERIDAE</b>		CORDULIDAE		Parapsyche sp.	
Ephemerella sp.		GOMPHIDAE		Potamyia sp.	
<b>HEPTAGENIIDAE</b>		Argomphus 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	
<b>LEPTOPHLEBIIDAE</b>		LIBELLULIDAE		Lepidostoma sp.	
Leptophlebia sp.		MACROMIIDAE		LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Ceraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies		Ocellus sp.	
<b>NEOEPHEMERIDAE</b>		CALOPTERYGIDAE		LIMNephilidae	
<b>OLIGONEURIDAE</b>		Calopteryx sp.		Apatina sp.	
Isonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
<b>POLYMITARCYIDAE</b>		Argia sp.		Isonychia sp.	
<b>POTAMANTHIDAE</b>		LESTIDAE		Pycnopsyche sp.	
<b>SIPHONONEURIDAE</b>		OLIGOCHAETA - Oligochaete Worms	9	MOLANNIDAE	
Siphonurus sp.		LUMBRICINA		Molanna sp.	
<b>TRICORYTHIDAE</b>		ENCHYTRAIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
<b>GASTROPODA - Snails</b>		TUBIFICIDAE		PHILOPOTAMIDAE	
<b>ANCYLIDAE</b>		LUMBRICULIDAE		Chimarra sp.	
Ferissa sp.		POLYCHAETA - Polychaete Worms		Wormaldia sp.	
<b>HYDROBIIDAE</b>		AELOSOMATIDAE		PHRYGANEIDAE	
<b>LYMNAEIDAE</b>		Aelosoma sp.		Ptilostomis sp.	
Fossaria sp.		PLECOPTERA - Stonefly Larvae		POLYCENTROPIDAE	
Stagnicola sp.		PERLIDAE		Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
<b>PHYSIDAE</b>		Beloneuria sp.		PSYCHOMYIDAE	
Physella sp.		Eccoptura sp.		Lype sp.	
<b>PLANORBIDAE</b>		Neoperla sp.		Psychomyia sp.	
Menetus sp.		Perlenta sp.		RHYACOPHILIDAE	
Gyraulus sp.		Perlinella sp.		Ryacophila sp.	
<b>PLEUROCERIDAE</b>		PERLODIDAE		UENOIDAE	
<b>VIVIPARIDAE</b>		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		TUBELLARIA - Flatworms	
<b>HAPLOSCLERIDA</b>		Isooperla sp.		PLANARIIDAE	
<b>SPONGILLIDAE</b>		Cultus sp.		DENDROCOELIDAE	
HEMIPTERA - True Bugs		PTERONARCYIDAE		COLLEMBOLA - Springtails	
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.		ISOTOMURIDAE	
Belostoma sp.		PELTOPERLIDAE		Isotomurus sp.	
Lethocerus sp.		Peltoperla sp.			
<b>CORIXIDAE</b>		LEUCTRIDAE			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zealuctra sp.			
Trepobates sp.		Paraluctra sp.			
<b>HEBRIDAE</b>		CAPNIDAE			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		NEMOURIDAE			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-F	SDS/CAG	1	N/A
<b>Date ID'd</b>	<b>Date Sorted</b>	<b>Taxonomist</b>	<b>Sorter</b>	<b># Grids in Subsample</b>	<b>Total No. Organisms ID'd</b>
12/14/2006	12/14/2006	SDS	SDS	N/A	6
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculium sp.		<b>CHAOBORIDAE</b>		Xyotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>		<b>Tanypodinae</b>	1
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicrochironomus sp.		Guttipelopia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTTISCIDAE</b>		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastella sp.		Procladius sp.	
Laccornis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcylloepus sp.		Phaenopsectra sp.		Thienemannimyia sp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zavreliella sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonella	
Gyrinus		Micropsectra/Tanytarsus complex		Orthopodomomyia	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Cinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Sympothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthocladinae</b>	2	<b>PELCOHRHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchyrtarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyaella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladius sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>	1	Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrachocladus sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrissocladus sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Pseudolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-F	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	6
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		<b>HIRUDINEA - Leeches</b>		Prostoia sp.	
Ptilaria sp.		<b>HOPLOMERTEA - Ribbon Worms</b>		Shipsa sp.	
Erioptera sp.		<b>TETRASTEMMATIDAE</b>		<b>CHLOROPERLIDAE</b>	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHOCERIDAE</b>		<b>LEPIDOPTERA - Moth Larvae</b>		Haploperla sp.	
Trichocera sp.		<b>NOCTUIDAE</b>		Swellia sp.	
<b>EPHEMEROPTERA - Mayflies</b>		Archana sp.		<b>TAENIOPTERIGIDAE</b>	
<b>AMELETIDAE</b>		Beliura sp.		Strophopteryx sp.	
Arneletus sp.		<b>PYRALIDAE</b>		Taeniopteryx sp.	
<b>BAETIDAE</b>		<b>MEGALOPTERA - Dobsonflies</b>		<b>TRICHOPTERA - Caddisflies</b>	
Acentrella sp.		<b>CORYDALIDAE</b>		<b>BRACHYCENTRIDAE</b>	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalis sp.		<b>CALAMOCERATIDAE</b>	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Dipheter sp.		<b>SIALIDAE</b>		<b>DIPSEUDOPSIDAE</b>	
<b>BAETISCIDAE</b>		Sialis sp.		Phylocentropus sp.	
Baetisca sp.		<b>NEMATODA - Roundworms</b>		<b>GLOSSOSOMATIDAE</b>	
<b>CAENIDAE</b>		<b>NEMATOMORPHA - Horsehair Worms</b>		Glossosoma sp.	
Caenis sp.		<b>ODONATA (Anisoptera - Dragonflies)</b>		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		<b>AESHNIDAE</b>		<b>HELICOPSYCHIDAE</b>	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Baiaesha sp.		<b>HYDROPSYCHIDAE</b>	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurytophella sp.		<b>CORDULEGASTRIDAE</b>		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
<b>EPHEMERIDAE</b>		<b>CORDULIIDAE</b>		Parapsyche sp.	
Ephemera sp.		<b>GOMPHIDAE</b>		Potamyia sp.	
<b>HEPTAGENIIDAE</b>		Arigomphus sp.		<b>HYDROPTILIDAE</b>	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocota sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		<b>LEPIDOSTOMATIDAE</b>	
<b>LEPTOPHLEBIIDAE</b>		<b>LIBELLULIDAE</b>		Lepidostoma sp.	
Leptophlebia sp.		<b>MACROMIIDAE</b>		<b>LEPTOCERIDAE</b>	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		<b>PETALURIDAE</b>		Ceraclaea sp.	
Paraleptophlebia sp.		<b>ODONATA Zygoptera - Damselflies</b>		Ocellis sp.	
<b>NEOEPHEMERIDAE</b>		<b>CALOPTERYGIDAE</b>		<b>LIMNephilidae</b>	
<b>OLIGONEURIDAE</b>		Calopteryx sp.		Apatina sp.	
Isonychia sp.		<b>COENAGRIONIDAE</b>		Hydatophylax sp.	
<b>POLYMITARCYIDAE</b>		Argia sp.		Ironoquia sp.	
<b>POTAMANTHIDAE</b>		<b>LESTIDAE</b>		Pycnopsyche sp.	
<b>SIPHLONEURIDAE</b>		<b>OLIGOCHAETA - Oligochaete Worms</b>	2	<b>MOLANNIDAE</b>	
Siphonurus sp.		<b>LUMBRICINA</b>		Molanna sp.	
<b>TRICORYTHIDAE</b>		<b>ENCHYTRAEDIDAE</b>		<b>ODONTOCERIDAE</b>	
Tricorythodes sp.		<b>NAIDIDAE</b>		Psilotreta sp.	
<b>GASTROPODA - Snails</b>		<b>TUBIFICIDAE</b>		<b>PHILOPOTAMIDAE</b>	
<b>ANCYLIDAE</b>		<b>LUMBRICULIDAE</b>		Chimarra sp.	
Ferissa sp.		<b>POLYCHAETA - Polychaete Worms</b>		Wormaldia sp.	
<b>HYDROBIIDAE</b>		<b>AELOSOMATIDAE</b>		<b>PHRYGANEIDAE</b>	
<b>LYMNAEIDAE</b>		Aelosoma sp.		Ptilostomis sp.	
Fossaria sp.		<b>PLECOPTERA - Stonefly Larvae</b>		<b>POLYCENTROPIDAE</b>	
Stagnicola sp.		<b>PERLIDAE</b>		Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
<b>PHYSIDAE</b>		Beloneuria sp.		<b>PSYCHOMYIDAE</b>	
Physella sp.		Eccoptura sp.		Lype sp.	
<b>PLANORBIDAE</b>		Neoperla sp.		Psychomyia sp.	
Menetus sp.		Perlenta sp.		<b>RHYACOPHILIDAE</b>	
Gyraulus sp.		<i>Perlinella</i> sp.		Ryacophila sp.	
<b>PLEUROCERIDAE</b>		<b>PERLODIDAE</b>		<b>UENOIDAE</b>	
<b>VIVIPARIDAE</b>		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		<b>TUBELLARIA - Flatworms</b>	
<b>HAPLOSCLERIDA</b>		Isoperla sp.		<b>PLANARIIDAE</b>	
<b>SPONGILLIDAE</b>		Cultus sp.		<b>DENDROCOELIDAE</b>	
<b>HEMIPTERA - True Bugs</b>		<b>PTERONARCYIDAE</b>		<b>COLLEMBOLA - Springtails</b>	
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.		<b>ISOTOMURIDAE</b>	
Belostoma sp.		<b>PELTOPERLIDAE</b>		Isotomurus sp.	
Lethocerus sp.		Peltoperla sp.			
<b>CORIXIDAE</b>		<b>LEUCTRIDAE</b>			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zealuctra sp.			
Trepobates sp.		Paraluctra sp.			
<b>HEBRIDAE</b>		<b>CAPNIDAE</b>			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		<b>NEMOURIDAE</b>			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	2-A	SDS/CAG	1	N/A
<b>Date ID'd</b>	<b>Date Sorted</b>	<b>Taxonomist</b>	<b>Sorter</b>	<b># Grids in Subsample</b>	<b>Total No. Organisms ID'd</b>
12/14/2006	12/14/2006	SDS	SDS	N/A	24
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculum sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>		<b>Tanypodinae</b>	
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicroptochironomus sp.		Guttipeloplia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopeloplia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropeloplia sp.	
Agabus sp.		Kiefferulus sp.		Meropeloplia sp.	
Hydroporus 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.		Paracladopelma sp.		Rheopeloplia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloopus sp.		Phaenopsectra sp.		Thienemanniella sp.	
Oplioservus sp.		Polypedilium sp.		Thienemanniella sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopeloplia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zavrelieilla sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanytarsus complex		Orthopodomya	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Symptothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthoclaadiinae</b>	14	<b>PELCOCORHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Cranonyx sp.		Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladus sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthoclaadiinae A		Eristalis sp.	
<b>PALAEONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>		Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrachocladus sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrissocladus sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Pseudolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladus sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladus sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	2-A	SDS/CAG	1	N/A
<b>Date ID'd</b>	<b>Date Sorted</b>	<b>Taxonomist</b>	<b>Sorter</b>	<b># Grids in Subsample</b>	<b>Total No. Organisms ID'd</b>
12/14/2006	12/14/2006	SDS	SDS	N/A	24
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		HIRUDINEA - Leeches		Prostola sp.	
Pilaria sp.		HOPLOMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHOCEERIDAE</b>		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp.		NOCTUIDAE		Swellia sp.	
<b>EPHEMEROPTERA - Mayflies</b>		Archanaera sp.		TAENIOPTERIDAE	
<b>AMELETIDAE</b>		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taeniopteryx sp.	
<b>BAETIDAE</b>		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalus sp.		CALAMOCERATIDAE	
Centropilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetero sp.		SIALIDAE		DIPSEUDOPSIDAE	
<b>BAETISCIDAE</b>		Sialis sp.		Phyllocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
<b>CAENIDAE</b>		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp.		ODONATA (Anisoptera - Dragonflies)		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		AESHNIDAE		HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Basiaesha sp.		HYDROPSYCHIDAE	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	1
Euryophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
<b>EPHEMERIDAE</b>		CORDULIDAE		Parapsyche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
<b>HEPTAGENIIDAE</b>		Arigomphus sp.		HYDROPTILIDAE	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocota sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
<b>LEPTOPHLEBIDAE</b>		LIBELLULIDAE		Lepidostoma sp.	
Leptophlebia sp.		MACROMIIDAE		LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Ceraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies		Oecetis sp.	
<b>NEOEPHEMERIDAE</b>		CALOPTERYGIDAE		LIMNEPHILIDAE	
<b>OLIGONEURIDAE</b>		Calopteryx sp.		Apatina sp.	
Isomyia sp.		COENAGRIONIDAE		Hydatophylax sp.	
<b>POLYMITARCYIDAE</b>		Argia sp.		Ironoquia sp.	
<b>POTAMANTHIDAE</b>		LESTIDAE		Pycnopsyche sp.	
<b>SIPHLONEURIDAE</b>		OLIGOCHAETA - Oligochaete Worms	8	MOLANNIDAE	
Siphonurus sp.		LUMBRICINA		Molanna sp.	
<b>TRICORYTHIDAE</b>		ENCHYTRAEIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
<b>GASTROPODA - Snails</b>		TUBIFICIDAE		PHILOPOTAMIDAE	
<b>ANCYLIDAE</b>		LUMBRICULIDAE		Chimarra sp.	
Ferissa sp.		POLYCHAETA - Polychaete Worms		Wormaldia sp.	
<b>HYDROBIIDAE</b>		AELOSOMATIDAE		PHRYGANEIDAE	
<b>LYMNAEIDAE</b>		Aelosoma sp.		Ptilostomis sp.	
Fossaria sp.		PLECOPTERA - Stonefly Larvae		POLYCENTROPIDAE	
Stagnicola sp.		PERLIDAE		Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
<b>PHYSIDAE</b>		Beloneuria sp.		PSYCHOMYIIDAE	
Physella sp.		Eccoaptura sp.		Lype sp.	
<b>PLANORBIDAE</b>		Neoperla sp.		Psychomyia sp.	
Menetus sp.		Perlenta sp.		RHYACOPHILIDAE	
Gyraulus sp.		Perlinella sp.		Ryacophila sp.	
<b>PLEUROCERIDAE</b>		PERLODIDAE		UENOIDAE	
<b>VIVIPARIDAE</b>		Cloperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		TUBELLARIA - Flatworms	
<b>HAPLOSCLERIDA</b>		Isoperla sp.		PLANARIIDAE	
<b>SPONGILLIDAE</b>		Cultus sp.		DENDROCOELIDAE	
<b>HEMIPTERA - True Bugs</b>		PTERONARCYIDAE		COLLEMBOLA - Springtails	
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.		ISOTOMURIDAE	
Belostoma sp.		PELTOPERLIDAE		Isotomurus sp.	1
Lethocerus sp.		Peltoperla sp.			
<b>CORIXIDAE</b>		LEUCTRIDAE			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zealuctra sp.			
Trepobates sp.		Paraleuctra sp.			
<b>HEBRIDAE</b>		CAPNIDAE			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		NEMOURIDAE			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	2-B	SDS/CAG	1	N/A
<b>Date ID'd</b>	<b>Date Sorted</b>	<b>Taxonomist</b>	<b>Sorter</b>	<b># Grids in Subsample</b>	<b>Total No. Organisms ID'd</b>
12/14/2006	12/14/2006	SDS	SDS	N/A	17
<b>BIVALVIA - Clams</b>		Forcipomya sp.		Synorhocladius sp.	
<b>SPHAERIDAE</b>	1	Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculium sp.		<b>CHAOBORIDAE</b>		Xylofopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>	1	<b>Tanypodinae</b>	
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicroptochironomus sp.		Guttipelopia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DTYSCIDAE</b>	1	Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastella sp.		Procladius sp.	
Laccomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracaladopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloepus sp.		Phaenopsectra sp.		Thienemannimyia sp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zavrelia sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanyarsus complex		Orthopodomyia	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodya sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Damesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Symptothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthoclaudiinae</b>	3	<b>PELCO RHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthoclaadius sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.	1	Heterotrissocladius sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyaella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladius sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthoclaudiinae A		Eristalis sp.	
<b>PALAEONIDAE</b>		Orthoclaadius sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>		Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladius sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrachocladius sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrissocladius sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthoclaadius sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	1
Bezzia sp.		Rheosmittia sp.		Psuedolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	2-B	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	17
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		<b>HIRUDINEA - Leeches</b>		Prostolia sp.	
Ptilaria sp.		<b>HOPLOMETEREA - Ribbon Worms</b>		Shipsa sp.	
Erioptera sp.		<b>TETRASTEMMATIDAE</b>		<b>CHLOROPERLIDAE</b>	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHOCERIDAE</b>		<b>LEPIDOPTERA - Moth Larvae</b>		Haploperla sp.	
Trichocera sp.		<b>NOCTUIDAE</b>		Swellia sp.	
<b>EPHEMEROPTERA - Mayflies</b>		Archana sp.		<b>TAENIOPTERIGIDAE</b>	
<b>AMELETIDAE</b>		Bellura sp.		Strophopteryx sp.	
Arnelelus sp.		<b>PYRALIDAE</b>		Taeniopteryx sp.	
<b>BAETIDAE</b>		<b>MEGALOPTERA - Dobsonflies</b>		<b>TRICHOPTERA - Caddisflies</b>	
Acentrella sp.		<b>CORYDALIDAE</b>		<b>BRACHYCENTRIDAE</b>	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalis sp.		<b>CALAMOCERATIDAE</b>	
Centropilum sp.		Nigronia sp.		Heteroplectron sp.	
Dipheter sp.		<b>SIALIDAE</b>		<b>DIPSEUDOPSIDAE</b>	
<b>BAETISCIDAE</b>		Sialis sp.		Phylocentropus sp.	
Baetisca sp.		<b>NEMATODA - Roundworms</b>		<b>GLOSSOSOMATIDAE</b>	
<b>CAENIDAE</b>		<b>NEMATOMORPHA - Horsehair Worms</b>		Glossosoma sp.	
Caenis sp.		<b>ODONATA (Anisoptera - Dragonflies)</b>		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		<b>AESHNIDAE</b>		<b>HELICOPSYCHIDAE</b>	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Baiaesha sp.		<b>HYDROPSYCHIDAE</b>	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Euryophella sp.		<b>CORDULEGASTRIDAE</b>		Diplectrona sp.	
Sarratella sp.		Cordulegaster sp.		Hydropsyche sp.	
<b>EPHEMERIDAE</b>		<b>CORDULIDAE</b>		Parapsyche sp.	
Ephemer sp.		<b>GOMPHIDAE</b>		Potamyia sp.	
<b>HEPTAGENIIDAE</b>		Argomphus sp.		<b>HYDROPTILIDAE</b>	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocota sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		<b>LEPIDOSTOMATIDAE</b>	
<b>LEPTOPHLEBIIDAE</b>		<b>LIBELLULIDAE</b>		Lepidostoma sp.	
Leptophlebia sp.		<b>MACROMIIDAE</b>		<b>LEPTOCERIDAE</b>	
Habrophlebia sp.		Macromia sp.		Trianaodes sp.	
Habrophlebiodes sp.		<b>PETALURIDAE</b>		Ceraclaea sp.	
Paraleptophlebia sp.		<b>ODONATA Zygoptera - Damselflies</b>		Ocellis sp.	
<b>NEOPHEMERIDAE</b>		<b>CALOPTERYGIDAE</b>		<b>LIMNephilidae</b>	
<b>OLIGONEURIDAE</b>		Calopteryx sp.		Apatina sp.	
Isonychia sp.		<b>COENAGRIONIDAE</b>		Hydatophylax sp.	
<b>POLYMITARCYIDAE</b>		Argia sp.		Ironoquia sp.	
<b>POTAMANTHIDAE</b>		<b>LESTIDAE</b>		Pycnopsyche sp.	
<b>SIPHONEURIDAE</b>		<b>OLIGOCHAETA - Oligochaete Worms</b>	3	<b>MOLANNIDAE</b>	
Siphonurus sp.		LUMBRICINA		Molanna sp.	
<b>TRICORYTHIDAE</b>		<b>ENCHYTRAETIDAE</b>		<b>ODONTOCERIDAE</b>	
Tricorythodes sp.		<b>NAIDIDAE</b>		Psilotreta sp.	
<b>GASTROPODA - Snails</b>		<b>TUBIFICIDAE</b>		<b>PHILOPOTAMIDAE</b>	
<b>ANCYLIDAE</b>		<b>LUMBRICULIDAE</b>		Chimarra sp.	
Ferissa sp.		<b>POLYCHAETA - Polychaete Worms</b>		Wormaldia sp.	
<b>HYDROBIIDAE</b>		<b>AELOSOMATIDAE</b>		<b>PHRYGANEIDAE</b>	
<b>LYMNAEIDAE</b>		Aelosoma sp.		Ptilostomis sp.	
Fossaria sp.		<b>PLECOPTERA - Stonefly Larvae</b>		<b>POLYCENTROPIDAE</b>	
Stagnicola sp.		<b>PERLIDAE</b>		Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
<b>PHYSIDAE</b>		Beloneuria sp.		<b>PSYCHOMYIDAE</b>	
Physella sp.	6	Eccoptura sp.		Lype sp.	
<b>PLANORBIDAE</b>		Neoperla sp.		Psychomyia sp.	
Menetus sp.		Perlsta sp.		<b>RHYACOPHILIDAE</b>	
Gyraulus sp.		<i>Perlinella</i> sp.		Ryacophila sp.	
<b>PLEUROCERIDAE</b>		<b>PERLODIDAE</b>		<b>UENOIDAE</b>	
<b>VIVIPARIDAE</b>		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		<b>TUBELLARIA - Flatworms</b>	
<b>HAPLOSCLERIDA</b>		Isooperla sp.		<b>PLANARIIDAE</b>	
<b>SPONGILLIDAE</b>		Cultus sp.		<b>DENDROCOELIDAE</b>	
<b>HEMIPTERA - True Bugs</b>		<b>PTERONARCYIDAE</b>		<b>COLLEMBOLA - Springtails</b>	
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.		<b>ISOTOMURIDAE</b>	
Belostoma sp.		<b>PELTOPERLIDAE</b>		Isotomurus sp.	
Lethocerus sp.		Peltoperla sp.			
<b>CORIXIDAE</b>		<b>LEUCTRIDAE</b>			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zealuctra sp.			
Trepobates sp.		Paraluctra sp.			
<b>HEBRIDAE</b>		<b>CAPNIDAE</b>			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		<b>NEMOURIDAE</b>			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	3-A	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	44
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Psidium sp.	13	Stilobezzia sp.		Unniella sp.	
Musculium sp.		<b>CHAOBORIDAE</b>		Xyotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>		<b>Tanypodinae</b>	1
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicroptochironomus sp.		Guttipelopia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>	3	Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastella sp.		Procladius sp.	
Laccomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracaladopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcylloepus sp.		Phaenopsectra sp.		Thienemannimyia sp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavreimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zavreliella sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Ciadotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanyarsus complex		Orthopodomysia	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodya sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Halophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chellera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Symptothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthoclaudiinae</b>		<b>PELCO RHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>	4	Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda- Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.	2	Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyaella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladius sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	1
<b>CRUSTACEA (Isopoda- Sowbugs)</b>		Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrachocladus sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrissocladius sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>	1	Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	1
Bezzia sp.		Rheosmittia sp.		Pseudolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	3-A	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	44
Pedicia sp.	1	Microvelia sp.		Paranemoura sp.	
Limonia sp.		HIRUDINEA - Leeches		Prostia sp.	
Pilaria sp.		HOPLOMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHOCERIDAE</b>		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp.		NOCTUIDAE		Swellsa sp.	
<b>EPHEMEROPTERA - Mayflies</b>		Archana sp.		TAENIOPTERIDAE	
<b>AMELETIDAE</b>		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taeniopteryx sp.	
<b>BAETIDAE</b>		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalus sp.		CALAMOCERATIDAE	
Centropilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetero sp.		SIALIDAE		DIPSEUDOPSIDAE	
<b>BAETISCIDAE</b>		Sialis sp.		Phlyocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
<b>CAENIDAE</b>		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp.		ODONATA (Anisoptera - Dragonflies)		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		AESHNIDAE		HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Baiaesha sp.		HYDROPSYCHIDAE	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Euryphella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
<b>EPHEMERIDAE</b>		CORDULIIDAE		Parapsyche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
<b>HEPTAGENIIDAE</b>		Argomphus sp.		HYDROPTILIDAE	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocota sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
<b>LEPTOPHLEBIDAE</b>		LIBELLULIDAE		Lepidostoma sp.	
Leptophlebia sp.		MACROMIIDAE		LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Ceraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies		Oecetis sp.	
<b>NEOEPHEMERIDAE</b>		CALOPTERYGIDAE		LIMNIPHILIDAE	
<b>OLIGONEURIDAE</b>		Calopteryx sp.		Apatina sp.	
Isonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
<b>POLYMITARCYIDAE</b>		Argia sp.		Ironoquia sp.	
<b>POTAMANTHIDAE</b>		LESTIDAE		Pycnopsyche sp.	
<b>SIPHLONEURIDAE</b>		OLIGOCHAETA - Oligochaete Worms	12	MOLANNIDAE	
Siphonurus sp.		LUMBRICINA		Molanna sp.	
TRICORYTHIDAE		ENCHYTRAIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
<b>GASTROPODA - Snails</b>		TUBIFICIDAE		PHILOPOTAMIDAE	
<b>ANCYLIDAE</b>		LUMBRICULIDAE		Chimarra sp.	
Ferissa sp.		POLYCHAETA - Polychaete Worms		Wormaldia sp.	
<b>HYDROBIIDAE</b>		AELOSOMATIDAE		PHRYGANEIDAE	
<b>LYMNAEIDAE</b>		Aelosoma sp.		Ptilostomis sp.	
Fossaria sp.		PLECOPTERA - Stonefly Larvae		POLYCENTROPIDAE	
Stagnicola sp.		PERLIDAE		Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
<b>PHYSIDAE</b>		Beloneuria sp.		PSYCHOMYIDAE	
Physella sp.	4	Eccoptura sp.		Lype sp.	
<b>PLANORBIDAE</b>		Neoperla sp.		Psychomyia sp.	
Menetus sp.	1	Perlenta sp.		RHYACOPHILIDAE	
Gyraulus sp.		Perlenta sp.		Ryacophila sp.	
<b>PLEUROCERIDAE</b>		PERLODIDAE		UENOIDAE	
<b>VIVIPARIDAE</b>		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		TUBELLARIA - Flatworms	
<b>HAPLOSCLERIDA</b>		Isoperla sp.		PLANARIIDAE	
<b>SPONGILLIDAE</b>		Cultus sp.		DENDROCOELIDAE	
<b>HEMIPTERA - True Bugs</b>		PTERONARCYIDAE		COLLEMBOLA - Springtails	
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.		ISOTOMURIDAE	
Belostoma sp.		PELTOPERLIDAE		Isotomurus sp.	
Lethocerus sp.		Peltoperla sp.			
<b>CORIXIDAE</b>		LEUCTRIDAE			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zealuctra sp.			
Trepobates sp.		Paraluctra sp.			
<b>HEBRIDAE</b>		CAPNIDAE			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		NEMOURIDAE			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	4-A	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	4
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pleidium sp.		Stilobezzia sp.		Unniella sp.	
Musculum sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>		<b>Tanypodinae</b>	
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicroptochironomus sp.		Guttipelopia sp.	
<b>CURCULIONIDAE</b>		Dicortendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus 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.		Paracladopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloepus sp.		Phaenopsectra sp.		Thienemanniella sp.	
Optioservus sp.		Polypedilum sp.		Thienemanniella sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubirapha sp.		Zavrelia sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanyarsus complex		Orthopodomysia	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodyla sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Poithastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Sympoithastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthocladinae</b>		<b>PELCOHRHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.	1	Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda- Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyaella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladius sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEMONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda- Sowbugs)</b>	1	Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrachocladus sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrissocladus sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Pseudolimmophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limmophila sp.	
Dasyhelea sp.		Sympsoicladus sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	4-A	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	4
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		HIRUDINEA - Leaches		Prostola sp.	
Pilaria sp.		HOPLOMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHOCERIDAE</b>		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp.		NOCTUIDAE		Sweltsa sp.	
<b>EPHEMEROPTERA - Mayflies</b>		Archana sp.		<b>TAENIOPTERIDAE</b>	
<b>AMELETIDAE</b>		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taeniopteryx sp.	
<b>BAETIDAE</b>		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalis sp.		CALAMOCERATIDAE	
Centropilum sp.		Nigronia sp.		Heteropteron sp.	
Dipheter sp.		SIALIDAE		DIPSEUDOPSIDAE	
<b>BAETISCIDAE</b>		Sialis sp.		Phyllocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
<b>CAENIDAE</b>		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp.		ODONATA (Anisoptera - Dragonflies)		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		AESHNIDAE		HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Baiaesha sp.		HYDROPSYCHIDAE	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Euryophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
<b>EPHEMERIDAE</b>		CORDULIDAE		Parapsyche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
<b>HEPTAGENIIDAE</b>		Arigomphus sp.		HYDROPTILIDAE	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
<b>LEPTOPHLEBIDAE</b>		LIBELLULIDAE		Lepidostoma sp.	
Leptophlebia sp.		MACROMIIDAE		LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Caraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies		Oecelis sp.	
<b>NEOEPHEMERIDAE</b>		CALOPTERYGIDAE		LIMNephilidae	
<b>OLIGONEURIDAE</b>		Calopteryx sp.		Apatna sp.	
Isonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
<b>POLYMITARCYIDAE</b>		Argia sp.		Ironoquia sp.	
<b>POTAMANTHIDAE</b>		LESTIDAE		Pycnopsyche sp.	
<b>SIPHLONEURIDAE</b>		OLIGOCHAETA - Oligochaete Worms	2	MOLANNIDAE	
Siphonurus sp.		LUMBRICINA		Molanna sp.	
<b>TRICORYTHIDAE</b>		ENCHYTRAIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
<b>GASTROPODA - Snails</b>		TUBIFICIDAE		PHILOPOTAMIDAE	
<b>ANCYLIDAE</b>		LUMBRICULIDAE		Chimarra sp.	
Ferissa sp.		POLYCHAETA - Polychaete Worms		Wormaldia sp.	
<b>HYDROBIIDAE</b>		AELOSOMATIDAE		PHRYGANEIDAE	
<b>LYMNAEIDAE</b>		Aelosoma sp.		Ptilostomis sp.	
Fossaria sp.		PLECOPTERA - Stonefly Larvae		<b>POLYCENTROPIDAE</b>	
Stagnicola sp.		PERLIDAE		Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
<b>PHYSIDAE</b>		Beloneuria sp.		PSYCHOMYIDAE	
Physella sp.		Ecoptura sp.		Lype sp.	
<b>PLANORBIDAE</b>		Neoperla sp.		Psychomyia sp.	
Menetus sp.		Perlenta sp.		<b>RHYACOPHILIDAE</b>	
Gyraulus sp.		Perlinella sp.		Ryacophila sp.	
<b>PLEUROCERIDAE</b>		PERLODIDAE		UENODAE	
<b>VIVIPARIDAE</b>		Cliperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		<b>TUBELLARIA - Flatworms</b>	
<b>HAPLOSCLERIDA</b>		Isoperla sp.		PLANARIIDAE	
<b>SPONGILLIDAE</b>		Cultus sp.		DENDROCOELIDAE	
<b>HEMIPTERA - True Bugs</b>		PTERONARCYIDAE		COLLEMBOLA - Springtails	
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.		ISOTOMURIDAE	
Belostoma sp.		PELTOPERLIDAE		Isotomurus sp.	
Lethocerus sp.		Peltoperla sp.			
<b>CORIXIDAE</b>		LEUCTRIDAE			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zeatuectra sp.			
Trepobetes sp.		Paraleuctra sp.			
<b>HEBRIDAE</b>		CAPNIDAE			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		NEMOURIDAE			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	4-B	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	16
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musciculum sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>		<b>Tanypodinae</b>	3
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicryptochironomus sp.		Guttipelopia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Halichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastella sp.		Procladius sp.	
Laccomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloopus sp.		Phaenopsectra sp.		Thienemannimyia sp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubirapha sp.		Zaveliella sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanyarsus complex		Orthopodomya	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Sympothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthocladinae</b>		<b>PELCO RHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyaella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladius sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>		Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrachocladus sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrissocladus sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Pseudolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	4-B	SDS/CAG	1	N/A
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
12/14/2006	12/14/2006	SDS	SDS	N/A	16
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		HIRUDINEA - Leeches		Prostioia sp.	
Pilaria sp.		HOPLOMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHOCERIDAE</b>		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp.		NOCTUIDAE		Sweltsa sp.	
EPHEMEROPTERA - Mayflies		Archanaera sp.		TAENIOPTERIGIDAE	
AMELETIDAE		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taeniopteryx sp.	
BAETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalus sp.		CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphotor sp.		SIALIDAE		DIPSEUDOPSIDAE	
BAETISCIDAE		Sialis sp.		Phylocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
CAENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp.		ODONATA (Anisoptera - Dragonflies)		Agapetus sp.	
EPHEMERELLIDAE		AESHNIDAE		HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Baesiaesha sp.		HYDROPSYCHIDAE	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
EPHEMERIDAE		CORDULIIDAE		Parapsyche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
HEPTAGENIIDAE		Arigomphus sp.		HYDROPTILIDAE	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocota sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
LEPTOPHLEBIDAE		LIBELLULIDAE		Lepidostoma sp.	
Laptophlebia sp.		MACROMIIDAE		LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Ceraclaea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies		Oecetis sp.	
NEOEPHEMERIDAE		CALOPTERYGIDAE		LIMNephilidae	
OLIGONEURIDAE		Calopteryx sp.		Apatina sp.	
Isonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
POLYMITARCYIDAE		Argia sp.		Ironoquia sp.	
POTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
SIPHONEURIDAE		OLIGOCHAETA - Oligochaete Worms	8	MOLANNIDAE	
Siphonurus sp.		LUMBRICINA		Molanna sp.	
TRICORYTHIDAE		ENCHYTRAETIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
GASTROPODA - Snails		TUBIFICIDAE		PHILOPOTAMIDAE	
ANCYLIDAE		LUMBRICULIDAE		Chimarra sp.	
Ferissa sp.		POLYCHAETA - Polychaete Worms		Wormakia sp.	
HYDROBIIDAE		AEOLOSOEMATIDAE		PHRYGANEIDAE	
LYMNAEIDAE		Aeolosoma sp.		Ptilostomis sp.	
Fossaria sp.		PLECOPTERA - Stonefly Larvae		POLYCENTROPIDAE	
Stagnicola sp.		PERLIDAE		Cymellus sp.	
Pseudosuccinea sp.		Acronuria sp.		Polycentropus sp.	
PHYSIDAE	4	Beloneuria sp.		PSYCHOMYIDAE	
Physella sp.		Ecoptura sp.		Lype sp.	
PLANORBIDAE		Neoperla sp.		Psychomyia sp.	
Menetus sp.		Perlenta sp.		RHYACOPHILIDAE	
Gyraulus sp.		Perlinella sp.		Ryacophila sp.	
PLEUROCERIDAE		PERLODIDAE		UENOIDAE	
VIVIPARIDAE		Clioperla sp.		Neophylax sp.	
Vviparus sp.		Diploperla sp.		TUBELLARIA - Flatworms	
HAPLOSCLERIDA		Isooperla sp.		PLANARIIDAE	
SPONGILLIDAE		Cultus sp.		DENDROCOELIDAE	
HEMIPTERA - True Bugs		PTERONARCYIDAE		COLLEMBOLA - Springtails	
BELOSTOMATIDAE		Pteronarcys sp.		ISOTOMURIDAE	
Belostoma sp.		PELTOPERLIDAE		Isotomurus sp.	1
Lethocerus sp.		Peltoperla sp.			
CORIXIDAE		LEUCTRIDAE			
GELASTOCORIDAE		Leuctra sp.			
GERRIDAE		Zealuctra sp.			
Trepobates sp.		Paraluctra sp.			
HEBRIDAE		CAPNIDAE			
HYDROMETRIDAE		Allocapnia sp.			
MESOVELIIDAE		Paracapnia sp.			
NEPIDAE		NEMOURIDAE			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
VELIIDAE		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.



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	5-A	SDS/CAG	1	N/A
<b>Date ID'd</b>	<b>Date Sorted</b>	<b>Taxonomist</b>	<b>Sorter</b>	<b># Grids in Subsample</b>	<b>Total No. Organisms ID'd</b>
12/14/2006	12/14/2006	SDS	SDS	N/A	107
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.	7	Stilobezzia sp.		Unniella sp.	
Musculum sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>		<b>Tanypodinae</b>	1
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicroptochironomus sp.		Guttipolopia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>	1	Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastella sp.		Procladius sp.	
Laccomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracaladopolma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcylloepus sp.		Phaenopsectra sp.		Thienemannimyia sp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zavreliella sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanytarsus complex		Orthopodomya	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Halophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Symplothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthocladinae</b>		<b>PELCO RHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladius sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>		Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrichocladus sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrisocladus sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Psuedolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasythelea sp.		Symposiocladius sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	5-A	SDS/CAG	1	N/A
<b>Date ID'd</b>	<b>Date Sorted</b>	<b>Taxonomist</b>	<b>Sorter</b>	<b># Grids in Subsample</b>	<b>Total No. Organisms ID'd</b>
12/14/2006	12/14/2006	SDS	SDS	N/A	107
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		HIRUDINEA - Leeches		Prostoma sp.	
Pilania sp.		HOPLOMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHOPTERIDAE</b>		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp.		NOCTUIDAE		Swellsa sp.	
<b>EPHEMEROPTERA - Mayflies</b>		Archana sp.		TAENIOPTERIDAE	
<b>AMELETIDAE</b>		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taeniopteryx sp.	
<b>BAETIDAE</b>		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalus sp.		CALAMOCERATIDAE	
Centropilum sp.		Nigronia sp.		Heteroplectron sp.	
Dipheter sp.		SIALIDAE		DIPSEUDOPSIDAE	
<b>BAETISCIDAE</b>		Sialis sp.		Phylocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
<b>CAENIDAE</b>		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp.		ODONATA (Anisoptera - Dragonflies)		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		AESHNIDAE		HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Baiaesha sp.		HYDROPSYCHIDAE	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
<b>EPHEMERIDAE</b>		CORDULIIDAE		Parapsyche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
<b>HEPTAGENIIDAE</b>		Arigomphus 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	
<b>LEPTOPHLEBIDAE</b>		LIBELLULIDAE		Lepidostoma sp.	
Leptophlebia sp.		MACROMIIDAE		LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Caraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies		Oaetis sp.	
<b>NEOEPHEMERIDAE</b>		CALOPTERYGIDAE		LIMNIPHILIDAE	
<b>OLIGONEURIDAE</b>		Calopteryx sp.		Apatina sp.	
Isonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
<b>POLYMITARCYIDAE</b>		Argia sp.		Ironoquia sp.	
<b>POTAMANTHIDAE</b>		LESTIDAE		Pycnopsyche sp.	
<b>SIPHLONEURIDAE</b>		OLIGOCHAETA - Oligochaete Worms	77	MOLANNIDAE	
Siphonurus sp.		LUMBRICINA		Molanna sp.	
<b>TRICORYTHIDAE</b>		ENCHYTRAIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
<b>GASTROPODA - Snails</b>		TUBIFICIDAE		PHILOPOTAMIDAE	
<b>ANCYLIDAE</b>		LUMBRICULIDAE		Chimarra sp.	
Ferissa sp.		POLYCHAETA - Polychaete Worms		Wormaldia sp.	
<b>HYDROBIIDAE</b>		AELOSOMATIDAE		PHRYGANEIDAE	
<b>LYMNAEIDAE</b>		Aelosoma sp.		Ptilostomis sp.	
Fossaria sp.		PLECOPTERA - Stonefly Larvae		POLYCENTROPIDAE	
Stagnicola sp.		PERLIDAE		Cymellus sp.	
Pseudosuccinea sp.		Acroneuria sp.		Polycentropus sp.	
<b>PHYSIDAE</b>		Beloneuria sp.		PSYCHOMYIDAE	
Physella sp.	20	Eccoptura sp.		Lype sp.	
<b>PLANORBIDAE</b>		Neoperla sp.		Psychomyia sp.	
Menetus sp.		Perlenta sp.		RHYACOPHILIDAE	
Gyraulus sp.		Perlinella sp.		Ryacophila sp.	
<b>PLEUROCERIDAE</b>		PERLODIDAE		UENOIDAE	
<b>VIVIPARIDAE</b>		Cloperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		TUBELLARIA - Flatworms	
<b>HAPLOSCLERIDA</b>		Isoperla sp.		PLANARIIDAE	
<b>SPONGILLIDAE</b>		Cultus sp.		DENDROCOELIDAE	
<b>HEMIPTERA - True Bugs</b>		PTERONARCYIDAE		COLLEMBOLA - Springtails	
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.		ISOTOMURIDAE	
Belostoma sp.		PELTOPERLIDAE		Isotomurus sp.	1
Lethocerus sp.		Peltoperla sp.			
<b>CORIXIDAE</b>		LEUCTRIDAE			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zealuctra sp.			
Trepobates sp.		Paraleuctra sp.			
<b>HEBRIDAE</b>		CAPNIDAE			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		NEMOURIDAE			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.



# Tab B







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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-A	CAG/JNC	1	123
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
11/5/2007	11/5/2007	SDS	SDS	25	118
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		<b>HIRUDINEA</b> - Leeches		Prostola sp.	
Ptileria sp.		<b>HOPLOMERTEA</b> - Ribbon Worms		Shipsa sp.	
Erioptera sp.		<b>TETRASTEMMATIDAE</b>		<b>CHLOROPERLIDAE</b>	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHOCERIDAE</b>		<b>LEPIDOPTERA</b> - Moth Larvae		Haploperla sp.	
Trichocera sp.		<b>NOCTUIDAE</b>		Sweltsa sp.	
<b>EPHEMEROPTERA</b> - Mayflies		Archanaera sp.		<b>TAENIOPTERIGIDAE</b>	
<b>AMELETIDAE</b>		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		<b>PYRALIDAE</b>		Taeniopteryx sp.	
<b>BAETIDAE</b>		<b>MEGALOPTERA</b> - Dobsonflies		<b>TRICHOPTERA</b> - Caddisflies	
Acentrella sp.		<b>CORYDALIDAE</b>		<b>BRACHYCENTRIDAE</b>	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalus sp.		<b>CALAMOCERATIDAE</b>	
Centropilum sp.		Nigronia sp.		Heteroplectron sp.	
Dipheter sp.		<b>SIALIDAE</b>		<b>DIPSEUDOPSIDAE</b>	
<b>BAETISCIDAE</b>		Sialis sp.		Phyllocentropus sp.	
Baetisca sp.		<b>NEMATODA</b> - Roundworms		<b>GLOSSOSOMATIDAE</b>	
<b>CAENIDAE</b>		<b>NEMATOMORPHA</b> - Horsehair Worms		Glossosoma sp.	
Caenis sp.		<b>ODONATA</b> (Anisoptera - Dragonflies)		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		<b>AESHNIDAE</b>		<b>HELICOPSYCHIDAE</b>	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Basiaeschna sp.		<b>HYDROPSYCHIDAE</b>	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp.		<b>CORDULEGASTRIDAE</b>		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
<b>EPHEMERIDAE</b>		<b>CORDULIDAE</b>		Parapsyche sp.	
Ephemera sp.		<b>GOMPHIDAE</b>		Potamyla sp.	
<b>HEPTAGENIIDAE</b>		Arigomphus sp.		<b>HYDROPTILIDAE</b>	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocota sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		<b>LEPIDOSTOMATIDAE</b>	
<b>LEPTOPHLEBIDAE</b>		<b>LIBELLULIDAE</b>		Lepidostoma sp.	
Leptophlebia sp.		<b>MACROMIIDAE</b>		<b>LEPTOCERIDAE</b>	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		<b>PETALURIDAE</b>		Ceraclea sp.	
Paraleptophlebia sp.		<b>ODONATA</b> Zygoptera - Damselflies		Oecetis sp.	
<b>NEOEPHEMERIDAE</b>		<b>CALOPTERYGIDAE</b>	1	<b>LIMNephilidae</b>	
<b>OLIGONEURIDAE</b>		Calopteryx sp.		Apatina sp.	
Isonychia sp.		<b>COENAGRIONIDAE</b>		Hydatophylax sp.	
<b>POLYMITARCYIDAE</b>		Argia sp.		Ironoquia sp.	
<b>POTAMANTHIDAE</b>		<b>LESTIDAE</b>		Pycnopsyche sp.	
<b>SIPHONEURIDAE</b>		<b>OLIGOCHAETA</b> - Oligochaete Worms		<b>MOLANNIDAE</b>	
Siphonurus sp.		<b>LUMBRICINA</b>		Molanna sp.	
<b>TRICORYTHIDAE</b>		<b>ENCHYTRAEIDAE</b>		<b>ODONTOCERIDAE</b>	
Tricorythodes sp.		<b>NAIDIDAE</b>		Psilotreta sp.	
<b>GASTROPODA</b> - Snails		<b>TUBIFICIDAE</b>	13	<b>PHILOPOTAMIDAE</b>	2
<b>ANCYLIDAE</b>		<b>LUMBRICULIDAE</b>		Chimarra sp.	
Ferissa sp.		<b>POLYCHAETA</b> - Polychaete Worms		Wormaldia sp.	
<b>HYDROBIIDAE</b>		<b>AELOSOMATIDAE</b>		<b>PHRYGANEIDAE</b>	
<b>LYMNAEIDAE</b>		Aeolosoma sp.		Ptilostomis sp.	
Fossaria sp.		<b>PLECOPTERA</b> - Stonefly Larvae		<b>POLYCENTROPIDAE</b>	
Stagnicola sp.		<b>PERLIDAE</b>		Cymellus sp.	
Pseudosuccinea sp.		Acronuria sp.		Polycentropus sp.	
<b>PHYSIDAE</b>	2	Beloneuria sp.		<b>PSYCHOMYIDAE</b>	
Physella sp.		Eccoptura sp.		Lype sp.	
<b>PLANORBIDAE</b>	1	Neoptera sp.		Psychomyia sp.	
Menetus sp.		Perlesta sp.		<b>RHYACOPHILIDAE</b>	
Gyraulus sp.		<i>Perlinella</i> sp.		Ryacophila sp.	
<b>PLEUROCERIDAE</b>		<b>PERLODIDAE</b>		<b>UENOIDAE</b>	
<b>VIVIPARIDAE</b>		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		<b>TUBELLARIA</b> - Flatworms	
<b>HAPLOSCLERIDA</b>		Isooperla sp.		<b>PLANARIIDAE</b>	
<b>SPONGILLIDAE</b>		Cultus sp.		<b>DENDROCOELIDAE</b>	
<b>HEMIPTERA</b> - True Bugs		<b>PTERONARCYIDAE</b>			
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.			
Belostoma sp.		<b>PELTOPERLIDAE</b>			
Lethocerus sp.		Peltoptera sp.			
<b>CORIXIDAE</b>		<b>LEUCTRIDAE</b>			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zealuctra sp.			
Trepobates sp.		Paraluctra sp.			
<b>HEBRIDAE</b>		<b>CAPNIDAE</b>			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		<b>NEMOURIDAE</b>			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-B	CAG/JNC	1	142
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
10/22/2007	9/20/2007	SDS	BTA	26	137
<b>BIVALVIA - Clams</b>		Forcipomya sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezziya sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezziya sp.		Unniella sp.	
Musculum sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>	135	<b>Tanypodinae</b>	
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Ciinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicyptochironomus sp.		Guttipelopia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastella sp.		Procladius sp.	
Laccornis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloepus sp.		Phaenopsectra sp.		Thienemannimyia gp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubirapha sp.		Zaveliella sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanytarsus complex		Orthopodomyia	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochaeres sp.		Zavelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Symptothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthocladinae</b>		<b>PELCO RHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	1
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda- Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonoctes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ecternia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyaella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladus sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEEMONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda- Sowbugs)</b>		Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrachocladus sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrisocladus sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezziya sp.		Rheosmittia sp.		Pseudolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladus sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladus sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-B	CAG/JNC	1	142
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
10/22/2007	9/20/2007	SDS	BTA	26	137
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		<b>HIRUDINEA</b> - Leeches		Prostolia sp.	
Pilaria sp.		<b>HOPLOMERTEA</b> - Ribbon Worms		Shipsa sp.	
Erioptera sp.		<b>TETRASTEMMATIDAE</b>		<b>CHLOROPERLIDAE</b>	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHOPTERA</b>		<b>LEPIDOPTERA</b> - Moth Larvae		Haploperla sp.	
Trichocera sp.		<b>NOCTUIDAE</b>		Sweltsa sp.	
<b>EPHEMEROPTERA</b> - Mayflies		Archanaera sp.		<b>TAENIOPTERIGIDAE</b>	
<b>AMELETIDAE</b>		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		<b>PYRALIDAE</b>		Taeniopteryx sp.	
<b>BAETIDAE</b>		<b>MEGALOPTERA</b> - Dobsonflies		<b>TRICHOPTERA</b> - Caddisflies	
Acentrella sp.		<b>CORYDALIDAE</b>		<b>BRACHYCENTRIDAE</b>	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalus sp.		<b>CALAMOCERATIDAE</b>	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetera sp.		<b>SIALIDAE</b>		<b>DIPSEUDOPSIDAE</b>	
<b>BAETISCIDAE</b>		Sialis sp.		Phyllocentropus sp.	
Baetisca sp.		<b>NEMATODA</b> - Roundworms		<b>GLOSSOSOMATIDAE</b>	
<b>CAENIDAE</b>		<b>NEMATOMORPHA</b> - Horsehair Worms		Glossosoma sp.	
Caenis sp.		<b>ODONATA</b> (Anisoptera - Dragonflies)		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		<b>AESHNIDAE</b>		<b>HELICOPSYCHIDAE</b>	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Basiaesha sp.		<b>HYDROPSYCHIDAE</b>	1
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurytophella sp.		<b>CORDULEGASTRIDAE</b>		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
<b>EPHEMERIDAE</b>		<b>CORDULIIDAE</b>		Parapsyche sp.	
Ephemerella sp.		<b>GOMPHIDAE</b>		Potamyla sp.	
<b>HEPTAGENIIDAE</b>		Arigomphus sp.		<b>HYDROPTILIDAE</b>	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthis sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		<b>LEPIDOSTOMATIDAE</b>	
<b>LEPTOPHLEBIDAE</b>		<b>LIBELLULIDAE</b>		Lepidostoma sp.	
Leptophlebia sp.		<b>MACROMIIDAE</b>		<b>LEPTOCERIDAE</b>	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		<b>PETALURIDAE</b>		Ceraclea sp.	
Paraleptophlebia sp.		<b>ODONATA</b> Zygoptera - Damselflies		Oecetis sp.	
<b>NEOEPHEMERIDAE</b>		<b>CALOPTERYGIDAE</b>		<b>LIMNephilidae</b>	
<b>OLIGONEURIDAE</b>		Calopteryx sp.		Apatina sp.	
Isonychia sp.		<b>COENAGRIONIDAE</b>		Hydatophylax sp.	
<b>POLYMITARCIDAE</b>		Argia sp.		Ironoquia sp.	
<b>POTAMANTHIDAE</b>		<b>LESTIDAE</b>		Pycnopsyche sp.	
<b>SIPHONURIDAE</b>		<b>OLIGOCHAETA</b> - Oligochaete Worms		<b>MOLLANIDAE</b>	
Siphonurus sp.		<b>LUMBRICINA</b>		Molanna sp.	
<b>TRICORYTHIDAE</b>		<b>ENCHYTRAEDAE</b>		<b>ODONTOCERIDAE</b>	
Tricorythodes sp.		<b>NAIDIDAE</b>		Psilotreta sp.	
<b>GASTROPODA</b> - Snails		<b>TUBIFICIDAE</b>		<b>PHILOPOTAMIDAE</b>	
<b>ANCYLIDAE</b>		<b>LUMBRICULIDAE</b>		Chimarra sp.	
Ferissa sp.		<b>POLYCHAETA</b> - Polychaete Worms		Wormaldia sp.	
<b>HYDROBIIDAE</b>		<b>AELOSOMATIDAE</b>		<b>PHRYGANEIDAE</b>	
<b>LYMNAEIDAE</b>		Aelosoma sp.		Philostomis sp.	
Fossaria sp.		<b>PLECOPTERA</b> - Stonefly Larvae		<b>POLYCENTROPIDAE</b>	
Stagnicola sp.		<b>PERLIDAE</b>		Cymellus sp.	
Pseudosuccinea sp.		Acronuria sp.		Polycentropus sp.	
<b>PHYSIDAE</b>		Beloneuria sp.		<b>PSYCHOMYIDAE</b>	
Physella sp.		Eccopectera sp.		Lype sp.	
<b>PLANORBIDAE</b>		Neoperla sp.		Psychomyia sp.	
Menetus sp.		Perlenta sp.		<b>RHYACOPHILIDAE</b>	
Gyraulus sp.		<i>Perlinella</i> sp.		Ryacophila sp.	
<b>PLEUROCERIDAE</b>		<b>PERLODIDAE</b>		<b>UENOIDAE</b>	
<b>VIVIPARIDAE</b>		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		<b>TUBELLARIA</b> - Flatworms	
<b>HAPLOSCLERIDA</b>		Isoperla sp.		<b>PLANARIIDAE</b>	
<b>SPONGILLIDAE</b>		Cultus sp.		<b>DENDROCOELIDAE</b>	
<b>HEMIPTERA</b> - True Bugs		<b>PTERONARCIDAE</b>			
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.			
Belostoma sp.		<b>PELTOPERLIDAE</b>			
Lethocerus sp.		Peltoperla sp.			
<b>CORIXIDAE</b>		<b>LEUCTRIDAE</b>			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zealuctra sp.			
Trepobates sp.		Paraluctra sp.			
<b>HEBRIDAE</b>		<b>CAPNIDAE</b>			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		<b>NEMOURIDAE</b>			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.















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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-D	CAG/JNC	1	91
<b>Date ID'd</b>	<b>Date Sorted</b>	<b>Taxonomist</b>	<b>Sorter</b>	<b># Grids in Subsample</b>	<b>Total No. Organisms ID'd</b>
11/9/2007	11/6/2007	JDF	JDF/SDS	102	79
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		<b>HIRUDINEA</b> - Leeches		Prostola sp.	
Pilaria sp.		<b>HOPLOMERTEA</b> - Ribbon Worms		Shipsa sp.	
Erioptera sp.		<b>TETRASTEMMATIDAE</b>		<b>CHLOROPERLIDAE</b>	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHO CERIDAE</b>		<b>LEPIDOPTERA</b> - Moth Larvae		Haploperla sp.	
Trichocera sp.		<b>NOCTUIDAE</b>		Sweltsa sp.	
<b>EPHEMEROPTERA</b> - Mayflies		Archana sp.		<b>TAENIOPTERIGIDAE</b>	
<b>AMELETIDAE</b>		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		<b>PYRALIDAE</b>		Taeniopteryx sp.	
<b>BAETIDAE</b>		<b>MEGALOPTERA</b> - Dobsonflies		<b>TRICHOPTERA</b> - Caddisflies	
Acentrella sp.		<b>CORYDALIDAE</b>		<b>BRACHYCENTRIDAE</b>	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalus sp.		<b>CALAMOCERATIDAE</b>	
Centropilum sp.		Nigronia sp.		Heteroplectron sp.	
Dipheter sp.		<b>SIALIDAE</b>		<b>DIPSEUDOPSIDAE</b>	
<b>BAETISCIDAE</b>		Sialis sp.		Phyllocentropus sp.	
Baetisca sp.		<b>NEMATODA</b> - Roundworms		<b>GLOSSOSOMATIDAE</b>	
<b>CAENIDAE</b>		<b>NEMATOMORPHA</b> - Horsehair Worms		Glossosoma sp.	
Caenis sp.		<b>ODONATA</b> (Anisoptera - Dragonflies)		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		<b>AESHNIDAE</b>		<b>HELICOPSYCHIDAE</b>	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Basiaesha sp.		<b>HYDROPSYCHIDAE</b>	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp.		<b>CORDULEGASTRIDAE</b>		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
<b>EPHEMERIDAE</b>		<b>CORDULIDAE</b>		Parapsyche sp.	
Ephemera sp.		<b>GOMPHIDAE</b>		Potamyia sp.	
<b>HEPTAGENIIDAE</b>		Arigomphus sp.		<b>HYDROPTILIDAE</b>	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocota sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthis sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		<b>LEPIDOSTOMATIDAE</b>	
<b>LEPTOPHLEBIDAE</b>		<b>LIBELLULIDAE</b>		Lepidostoma sp.	
Leptophlebia sp.		<b>MACROMIIDAE</b>		<b>LEPTOCERIDAE</b>	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		<b>PETALURIDAE</b>		Ceraclea sp.	
Paraleptophlebia sp.		<b>ODONATA</b> Zygoptera - Damselflies		Oecetis sp.	
<b>NEOEPHEMERIDAE</b>		<b>CALOPTERYGIDAE</b>		<b>LIMNIPHILIDAE</b>	
<b>OLIGONEURIDAE</b>		Calopteryx sp.		Apatina sp.	
Isonychia sp.		<b>COENAGRIONIDAE</b>		Hydatophylax sp.	
<b>POLYMTARCYIDAE</b>		Argia sp.		Ironoquia sp.	
<b>POTAMANTHIDAE</b>		<b>LESTIDAE</b>		Pycnopsyche sp.	
<b>SIPHONEURIDAE</b>		<b>OLIGOCHAETA</b> - Oligochaete Worms		<b>MOLANNIDAE</b>	
Siphonurus sp.		<b>LUMBRICINA</b>		Molanna sp.	
<b>TRICORYTHIDAE</b>		<b>ENCHYTRAEIDAE</b>		<b>ODONTOCERIDAE</b>	
Tricorythodes sp.		<b>NAIDIDAE</b>		Psilotreta sp.	
<b>GASTROPODA</b> - Snails		<b>TUBIFICIDAE</b>	17	<b>PHILOPOTAMIDAE</b>	
<b>ANCYLIDAE</b>		<b>LUMBRICULIDAE</b>		Chimarra sp.	
Ferissa sp.		<b>POLYCHAETA</b> - Polychaete Worms		Wormaldia sp.	
<b>HYDROBIIDAE</b>		<b>AELOSOMATIDAE</b>		<b>PHRYGANEIDAE</b>	
<b>LYMNAEIDAE</b>		Aelosoma sp.		Ptilosomis sp.	
Fossaria sp.		<b>PLECOPTERA</b> - Stonefly Larvae		<b>POLYCENTROPIDAE</b>	
Stagnicola sp.		<b>PERLIDAE</b>		Cymellus sp.	
Pseudosuccinea sp.		Acronuria sp.		Polycentropus sp.	
<b>PHYSIDAE</b>		Beloneuria sp.		<b>PSYCHOMYIDAE</b>	
Physella sp.		Eccoptera sp.		Lype sp.	
<b>PLANORBIDAE</b>		Neoptera sp.		Psychomyia sp.	
Menetus sp.		Perlesta sp.		<b>RHYACOPHILIDAE</b>	
Gyraulus sp.		<i>Perlinella</i> sp.		Rhyacophila sp.	
<b>PLEUROCERIDAE</b>		<b>PERLODIDAE</b>		<b>UENOIDAE</b>	
<b>VIVIPARIDAE</b>		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		<b>TUBELLARIA</b> - Flatworms	
<b>HAPLOSCLERIDA</b>		Isoperla sp.		<b>PLANARIIDAE</b>	
<b>SPONGILLIDAE</b>		Cultus sp.		<b>DENDROCOELIDAE</b>	
<b>HEMIPTERA</b> - True Bugs		<b>PTERONARCYIDAE</b>			
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.			
Belostoma sp.		<b>PELTOPERLIDAE</b>			
Lethocerus sp.		Peltoptera sp.			
<b>CORIXIDAE</b>		<b>LEUCTRIDAE</b>			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zealuctra sp.			
Trepobates sp.		Paraluctra sp.			
<b>HEBRIDAE</b>		<b>CAPNIDAE</b>			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		<b>NEMOURIDAE</b>			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-E	CAG/JNC	1	122
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
10/31/2007	10/31/2007	SDS	SDS	13	114
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezziella sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezziella sp.		Unniella sp.	
Musculium sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>	111	<b>Tanypodinae</b>	
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicroptochironomus sp.		Guttipolopia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopolopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropolopia sp.	
Hydroporus sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastiella sp.		Procladius sp.	
Laccornis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloopus sp.		Phaenopsectra sp.		Thienemannimyia sp.	
Optioservus sp.		Polypedilium sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zavreliella sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanytarsus complex		Orthopodomyia	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Halophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chellifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Symptothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthocladinae</b>		<b>PELCOHYDRIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladius sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>		Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrachocladius sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrisocladus sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Pseudolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladus sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-E	CAG/JNC	1	122
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
10/31/2007	10/31/2007	SDS	SDS	13	114
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		<b>HIRUDINEA</b> - Leeches		Prostioia sp.	
Pilania sp.		<b>HOPLOMERTEA</b> - Ribbon Worms		Shipsa sp.	
Erioptera sp.		<b>TETRASTEMMATIDAE</b>		<b>CHLOROPERLIDAE</b>	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHO CERIDAE</b>		<b>LEPIDOPTERA</b> - Moth Larvae		Haploperla sp.	
Trichocera sp.		<b>NOCTUIDAE</b>		Sweltsa sp.	
<b>EPHEMEROPTERA</b> - Mayflies		Archanaera sp.		<b>TAENIOPTERIGIDAE</b>	
<b>AMELETIDAE</b>		Ballura sp.		Strophopteryx sp.	
Ameletus sp.		<b>PYRALIDAE</b>		Taeniopteryx sp.	
<b>BAETIDAE</b>		<b>MEGALOPTERA</b> - Dobsonflies		<b>TRICHOPTERA</b> - Caddisflies	
Acentrella sp.		<b>CORYDALIDAE</b>		<b>BRACHYCENTRIDAE</b>	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalus sp.		<b>CALAMOCERATIDAE</b>	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetero sp.		<b>SIALIDAE</b>		<b>DIPSEUDOPSIDAE</b>	
<b>BAETISCIDAE</b>		Sialis sp.		Phyllocentropus sp.	
Baetisca sp.		<b>NEMATODA</b> - Roundworms		<b>GLOSSOSOMATIDAE</b>	
<b>CAENIDAE</b>		<b>NEMATOMORPHA</b> - Horsehair Worms		Glossosoma sp.	
Caenis sp.		<b>ODONATA</b> (Anisoptera - Dragonflies)		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		<b>AESHNIDAE</b>		<b>HELICOPSYCHIDAE</b>	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Basiaesha sp.		<b>HYDROPSYCHIDAE</b>	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp.		<b>CORDULEGASTRIDAE</b>		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
<b>EPHEMERIDAE</b>		<b>CORDULIIDAE</b>		Parapsyche sp.	
Ephemera sp.		<b>GOMPHIDAE</b>		Potamyia sp.	
<b>HEPTAGENIIDAE</b>		Arigomphus sp.		<b>HYDROPTILIDAE</b>	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocota sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanithus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		<b>LEPIDOSTOMATIDAE</b>	
<b>LEPTOPHLEBIDAE</b>		<b>LIBELLULIDAE</b>		Lepidostoma sp.	
Leptophlebia sp.		<b>MACROMIIDAE</b>		<b>LEPTOCERIDAE</b>	
Habrophlebia sp.		Macromia sp.		Triaenodes sp.	
Habrophlebiodes sp.		<b>PETALURIDAE</b>		Ceraclaea sp.	
Paraleptophlebia sp.		<b>ODONATA</b> Zygoptera - Damselflies		Oecetis sp.	
<b>NEOEPHEMERIDAE</b>		<b>CALOPTERYGIDAE</b>		<b>LIMNephilidae</b>	
Limnephilia sp.		Calopteryx sp.		Apatina sp.	
<b>OLIGONEURIDAE</b>		<b>COENAGRIONIDAE</b>		Hydatophylax sp.	
Isonychia sp.		Argia sp.		Ironoquia sp.	
<b>POLYMITARCYIDAE</b>		<b>LESTIDAE</b>		Pycnopsyche sp.	
Potamanthus sp.		<b>OLIGOCHAETA</b> - Oligochaete Worms	2	<b>MOLLUSCIDA</b>	
<b>SIPHONURIDAE</b>		<b>LUMBRICINA</b>		Mollusca sp.	
Siphonurus sp.		<b>ENCHYTRAIDAE</b>		<b>ODONTOCERIDAE</b>	
<b>TRICORYTHIDAE</b>		<b>NAIDIDAE</b>		Psilotreta sp.	
Tricorythodes sp.		<b>TUBIFICIDAE</b>	1	<b>PHILOPOTAMIDAE</b>	
<b>GASTROPODA</b> - Snails		<b>LUMBRICULIDAE</b>		Chimarra sp.	
Planorbis sp.		<b>POLYCHAETA</b> - Polychaete Worms		Wormaldea sp.	
<b>ANCYLIDAE</b>		<b>AELOSOMATIDAE</b>		<b>PHRYGANEIDAE</b>	
Ferissa sp.		Aelosoma sp.		Phyllosoma sp.	
<b>HYDROBIIDAE</b>		<b>PLECOPTERA</b> - Stonefly Larvae		<b>POLYCENTROPIDAE</b>	
Hydrobia sp.		<b>PERLIDAE</b>		Cymellus sp.	
<b>LYMNAEIDAE</b>		Acronuria sp.		Polycentropus sp.	
Lymnaea sp.		Beloneuria sp.		<b>PSYCHOMYIDAE</b>	
<b>FOSSIARIA</b>		Eccopectera sp.		Lype sp.	
Fossaria sp.		Neoperla sp.		Psychomyia sp.	
<b>STAGNICOLA</b>		Perlenta sp.		<b>RHYACOPHILIDAE</b>	
Stagnicola sp.		<i>Perlinella</i> sp.		Rhyacophila sp.	
<b>PSEUDOSUCCINEA</b>		<b>PERLODIDAE</b>		<b>UENOIDAE</b>	
Pseudosuccinea sp.		Cloperla sp.		Neophylax sp.	
<b>PHYSIDAE</b>		Diploperla sp.		<b>TUBELLARIA</b> - Flatworms	
Physella sp.		Isoperla sp.		<b>PLANARIIDAE</b>	
<b>PLANORBIDAE</b>		Cultus sp.		<b>DENDROCOELIDAE</b>	
Planorbis sp.		<b>PTERONARCYIDAE</b>			
<b>HEMIPTERA</b> - True Bugs		Pteronarcys sp.			
Belostomatidae		<b>PELTOPERLIDAE</b>			
<b>BELOSTOMATIDAE</b>		Peltoperla sp.			
Belostoma sp.		<b>LEUCTRIDAE</b>			
<b>CORIXIDAE</b>		Leuctra sp.			
Lethocerus sp.		Zealectra sp.			
<b>GELASTOCORIDAE</b>		Paraleuctra sp.			
Gelastocorus sp.		<b>CAPNIDAE</b>			
<b>GERRIDAE</b>		Allocapnia sp.			
Trepobates sp.		Paracapnia sp.			
<b>HEBRIDAE</b>		<b>NEMOURIDAE</b>			
Hebridae		Amphinemura sp.			
<b>HYDROMETRIDAE</b>		Ostrocerca sp.			
Hydrometra sp.		Nemoura sp.			
<b>MESOVELIIDAE</b>					
Mesovelidae					
<b>NEPIDAE</b>					
Nepa sp.					
<b>VELIIDAE</b>					
Ranatra sp.					
Velidae					

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



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-F	CAG/JNC	1	121
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
11/6/2007	11/5/2007	SDS	SDS	11	108
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculium sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>	104	<b>Tanypodinae</b>	
<b>UNIONIDAE</b>		Chironominae		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		Chironomini		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinolanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicroptochironomus sp.		Guttipelopia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus 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.		Paracladopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloepus sp.		Phaenopsectra sp.		Thienemannimyia sp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoresia sp.		Stictochironomus sp.		Zavrelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zavreliella sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Diheutus		Microsectra sp.		Mansonia	
Gyrinus		Microsectra/Tanytarsus complex		Orthopodomyia	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodytia sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochares sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Sympothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthocladinae</b>		<b>PELCOHRHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Gitutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyalella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladius sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>		Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrachocladus sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrisocladus sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psiolmetricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Pseudolimoniphila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	1-F	CAG/JNC	1	121
<b>Date ID'd</b>	<b>Date Sorted</b>	<b>Taxonomist</b>	<b>Sorter</b>	<b># Grids in Subsample</b>	<b>Total No. Organisms ID'd</b>
11/6/2007	11/5/2007	SDS	SDS	11	108
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		<b>HIRUDINEA - Leeches</b>		Prostola sp.	
Pilaria sp.		<b>HOPLOMERTEA - Ribbon Worms</b>		Shipsa sp.	
Erioptera sp.		<b>TETRASTEMMATIDAE</b>		<b>CHLOROPERLIDAE</b>	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHOPTERA</b>		<b>LEPIDOPTERA - Moth Larvae</b>		Haploperla sp.	
Trichocera sp.		<b>NOCTUIDAE</b>		Swellsa sp.	
<b>EPHEMEROPTERA - Mayflies</b>		Archanaera sp.		<b>TAENIOPTERIGIDAE</b>	
<b>AMELETIDAE</b>		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		<b>PYRALIDAE</b>		Taeniopteryx sp.	
<b>BAETIDAE</b>		<b>MEGALOPTERA - Dobsonflies</b>		<b>TRICHOPTERA - Caddisflies</b>	
Acentrella sp.		<b>CORYDALIDAE</b>		<b>BRACHYCENTRIDAE</b>	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalis sp.		<b>CALAMOCERATIDAE</b>	
Centropitulum sp.		Nigronia sp.		Heteroplectron sp.	
Dipheter sp.		<b>SIALIDAE</b>		<b>DIPSEUDOPSIDAE</b>	
<b>BAETISCIDAE</b>		Siella sp.		Phyllocentropus sp.	
Baetisca sp.		<b>NEMATODA - Roundworms</b>		<b>GLOSSOSOMATIDAE</b>	
<b>CAENIDAE</b>		<b>NEMATOMORPHA - Horsehair Worms</b>		Glossosoma sp.	
Caenis sp.		<b>ODONATA (Anisoptera - Dragonflies)</b>		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		<b>AESHNIDAE</b>		<b>HELICOPSYCHIDAE</b>	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Basiaeschna sp.		<b>HYDROPSYCHIDAE</b>	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurytophella sp.		<b>CORDULEGASTRIDAE</b>		Dipletrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
<b>EPHEMERIDAE</b>		<b>CORDULIIDAE</b>		Parapsyche sp.	
Ephemer sp.		<b>GOMPHIDAE</b>		Potamyia sp.	
<b>HEPTAGENIIDAE</b>		Argomphus sp.		<b>HYDROPTILIDAE</b>	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylomphus sp.		<b>LEPIDOSTOMATIDAE</b>	
<b>LEPTOPHLEBIIDAE</b>		<b>LIBELLULIDAE</b>		Lepidostoma sp.	
Leptophlebia sp.		<b>MACROMIIDAE</b>		<b>LEPTOCERIDAE</b>	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		<b>PETALURIDAE</b>		Ceraclea sp.	
Paraleptophlebia sp.		<b>ODONATA Zygoptera - Damselflies</b>		Oacelis sp.	
<b>NEOEPHEMERIDAE</b>		<b>CALOPTERYGIDAE</b>		<b>LIMNephilidae</b>	
<b>OLIGONEURIDAE</b>		Calopteryx sp.		Apatina sp.	
Isonychia sp.		<b>COENAGRIONIDAE</b>		Hydatophylax sp.	
<b>POLYMITARCYIDAE</b>		Argia sp.		Ironoquia sp.	
<b>POTAMANTHIDAE</b>		<b>LESTIDAE</b>		Pycnopsyche sp.	
<b>SIPHONEURIDAE</b>		<b>OLIGOCHAETA - Oligochaete Worms</b>	3	<b>MOLANNIDAE</b>	
Siphonurus sp.		<b>LUMBRICINA</b>		Molanna sp.	
<b>TRICORYTHIDAE</b>		<b>ENCHYTRAEDAE</b>		<b>ODONTOCERIDAE</b>	
Tricorythodes sp.		<b>NAIDIDAE</b>		Psilotreta sp.	
<b>GASTROPODA - Snails</b>		<b>TUBIFICIDAE</b>	1	<b>PHILOPOTAMIDAE</b>	
<b>ANCYLIDAE</b>		<b>LUMBRICULIDAE</b>		Chimarra sp.	
Ferissa sp.		<b>POLYCHAETA - Polychaete Worms</b>		Wormaldia sp.	
<b>HYDROBIIDAE</b>		<b>AEOLOSOMATIDAE</b>		<b>PHRYGANEIDAE</b>	
<b>LYMNAEIDAE</b>		Aeolosoma sp.		Ptilostomis sp.	
Fossaria sp.		<b>PLECOPTERA - Stonefly Larvae</b>		<b>POLYCENTROPIDAE</b>	
Stagnicola sp.		<b>PERLIDAE</b>		Cymellus sp.	
Pseudosuccinea sp.		Acroneturia sp.		Polycentropus sp.	
<b>PHYSIDAE</b>		Beloneuria sp.		<b>PSYCHOMYIDAE</b>	
Physella sp.		Ecoptura sp.		Lype sp.	
<b>PLANORBIDAE</b>		Neoperla sp.		Psychomyia sp.	
Menetus sp.		Perlenta sp.		<b>RHYACOPHILIDAE</b>	
Gyraulus sp.		<i>Perlinella</i> sp.		Ryacophila sp.	
<b>PLEUROCERIDAE</b>		<b>PERLODIDAE</b>		<b>UENOIDAE</b>	
<b>VIVIPARIDAE</b>		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		<b>TUBELLARIA - Flatworms</b>	
<b>HAPLOSCLERIDA</b>		Isoperla sp.		<b>PLANARIIDAE</b>	
<b>SPONGILLIDAE</b>		Cultus sp.		<b>DENDROCOELIDAE</b>	
<b>HEMIPTERA - True Bugs</b>		<b>PTERONARCYIDAE</b>			
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.			
Belostoma sp.		<b>PELTOPERLIDAE</b>			
Lethocerus sp.		Peltoperla sp.			
<b>CORIXIDAE</b>		<b>LEUCTRIDAE</b>			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zealuctra sp.			
Trepobates sp.		Paraluctra sp.			
<b>HEBRIDAE</b>		<b>CAPNIDAE</b>			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		<b>NEMOURIDAE</b>			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	2-A	CAG/JNC	1	124
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
11/2/2007	11/2/2007	SDS	SDS	20	107
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>	1	Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculum sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>	93	<b>Tanypodinae</b>	
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicrochironomus sp.		Guttipelopia sp.	
<b>CURCULIONIDAE</b>		Dicrolendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastella sp.		Procladius sp.	
Laccornis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloepus sp.		Phaenopsectra sp.		Thienemannimyia gp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoesia sp.		Stictochironomus sp.		Zavelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zaveliella sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropectra sp.		Mansonia	
Gyrinus		Micropectra/Tanytarsus complex		Orthopodomyia	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Halochares sp.		Zavelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Symptothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthocladinae</b>		<b>PELCORHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladius sp.		Stagopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	1
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyaella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladius sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>		Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametrioconemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrichocladius sp.		<b>TIPULIDAE</b>	1
Atherix sp.		Paratrissocladius sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Pallometrioconemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Pseudolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted																																																																																																																																																																																																																																																																																																																																				
Snakeden Branch	20003	2-A	CAG/JNC	1	124																																																																																																																																																																																																																																																																																																																																				
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd																																																																																																																																																																																																																																																																																																																																				
11/2/2007	11/2/2007	SDS	SDS	20	107																																																																																																																																																																																																																																																																																																																																				
<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th style="width: 25%;">Taxa</th> <th style="width: 25%;">Family/Subfamily</th> <th style="width: 25%;">Count</th> <th style="width: 25%;">Family/Subfamily</th> </tr> </thead> <tbody> <tr><td>Pedicia sp.</td><td>Microvelia sp.</td><td></td><td>Paranemoura sp.</td></tr> <tr><td>Limonia sp.</td><td><b>HIRUDINEA</b> - Leeches</td><td></td><td>Prostolia sp.</td></tr> <tr><td>Pilaria sp.</td><td><b>HOPLOMERTEA</b> - Ribbon Worms</td><td></td><td>Shipsa sp.</td></tr> <tr><td>Erioptera sp.</td><td><b>TETRASTEMMATIDAE</b></td><td></td><td><b>CHLOROPERLIDAE</b></td></tr> <tr><td>Rhabdomastix sp.</td><td>Prostoma sp.</td><td></td><td>Alloperla sp.</td></tr> <tr><td><b>TRICHO CERIDAE</b></td><td><b>LEPIDOPTERA</b> - Moth Larvae</td><td></td><td>Hapterla sp.</td></tr> <tr><td>Trichocera sp.</td><td><b>NOCTUIDAE</b></td><td></td><td>Sweltsa sp.</td></tr> <tr><td><b>EPHEMEROPTERA</b> - Mayflies</td><td>Archanaera sp.</td><td></td><td><b>TAENIOPTERIGIDAE</b></td></tr> <tr><td><b>AMELETIDAE</b></td><td>Bellura sp.</td><td></td><td>Strophopteryx sp.</td></tr> <tr><td>Ameletus sp.</td><td><b>PYRALIDAE</b></td><td>3</td><td>Taeniopteryx sp.</td></tr> <tr><td><b>BAETIDAE</b></td><td><b>MEGALOPTERA</b> - Dobsonflies</td><td></td><td><b>TRICHOPTERA</b> - Caddisflies</td></tr> <tr><td>Acentrella sp.</td><td><b>CORYDALIDAE</b></td><td></td><td><b>BRACHYCENTRIDAE</b></td></tr> <tr><td>Acerpenna sp.</td><td>Chauliodes sp.</td><td></td><td>Brachycentrus sp.</td></tr> <tr><td>Baetis sp.</td><td>Corydalis sp.</td><td></td><td><b>CALAMOCERATIDAE</b></td></tr> <tr><td>Centropitulum sp.</td><td>Nigronia sp.</td><td></td><td>Heteroplectron sp.</td></tr> <tr><td>Dipheter sp.</td><td><b>SIALIDAE</b></td><td></td><td><b>DIPSEUDOPSIDAE</b></td></tr> <tr><td><b>BAETISCIDAE</b></td><td>Sialis sp.</td><td></td><td>Phyllocentropus sp.</td></tr> <tr><td>Baetisca sp.</td><td><b>NEMATODA</b> - Roundworms</td><td></td><td><b>GLOSSOSOMATIDAE</b></td></tr> <tr><td><b>CAENIDAE</b></td><td><b>NEMATOMORPHA</b> - Horsehair Worms</td><td>4</td><td>Glossosoma sp.</td></tr> <tr><td>Caenis sp.</td><td><b>ODONATA</b> (Anisoptera - Dragonflies)</td><td></td><td>Agapetus sp.</td></tr> <tr><td><b>EPHEMERELLIDAE</b></td><td><b>AESHNIDAE</b></td><td></td><td><b>HELICOPSYCHIDAE</b></td></tr> <tr><td>Dannella sp.</td><td>Anax sp.</td><td></td><td>Helicopsyche sp.</td></tr> <tr><td>Drunella sp.</td><td>Baiaeschna sp.</td><td></td><td><b>HYDROPSYCHIDAE</b></td></tr> <tr><td>Ephemerella sp.</td><td>Boyeria sp.</td><td></td><td>Cheumatopsyche sp.</td></tr> <tr><td>Eurylophella sp.</td><td><b>CORDULEGASTRIDAE</b></td><td></td><td>Dipterona sp.</td></tr> <tr><td>Serratella sp.</td><td>Cordulegaster sp.</td><td></td><td>Hydropsyche sp.</td></tr> <tr><td><b>EPHEMERIDAE</b></td><td><b>CORDULIDAE</b></td><td></td><td>Parapsyche sp.</td></tr> <tr><td>Ephemera sp.</td><td><b>GOMPHIDAE</b></td><td></td><td>Potamyia sp.</td></tr> <tr><td><b>HEPTAGENIIDAE</b></td><td>Argomphus sp.</td><td></td><td><b>HYDROPTILIDAE</b></td></tr> <tr><td>Epeorus sp.</td><td>Gomphus sp.</td><td></td><td>Hydroptila sp.</td></tr> <tr><td>Leucrocota sp.</td><td>Hagenius sp.</td><td></td><td>Leucotrichia sp.</td></tr> <tr><td>Stenacron sp.</td><td>Lanthus sp.</td><td></td><td>Ochrotrichia sp.</td></tr> <tr><td>Stenonema sp.</td><td>Stylogomphus sp.</td><td></td><td><b>LEPIDOSTOMATIDAE</b></td></tr> <tr><td><b>LEPTOPHEBIIDAE</b></td><td><b>LIBELLULIDAE</b></td><td></td><td>Lepidostoma sp.</td></tr> <tr><td>Leptophlebia sp.</td><td><b>MACROMIIDAE</b></td><td></td><td><b>LEPTOCERIDAE</b></td></tr> <tr><td>Habrophlebia sp.</td><td>Macromia sp.</td><td></td><td>Trienodes sp.</td></tr> <tr><td>Habrophlebiodes sp.</td><td><b>PETALURIDAE</b></td><td></td><td>Ceraclea sp.</td></tr> <tr><td>Paraleptophlebia sp.</td><td><b>ODONATA</b> Zygoptera - Damselflies</td><td></td><td>Oacelis sp.</td></tr> <tr><td><b>NEOEPHEMERIDAE</b></td><td><b>CALOPTERYGIDAE</b></td><td></td><td><b>LIMNephilidae</b></td></tr> <tr><td><b>OLIGONEURIDAE</b></td><td>Calopteryx sp.</td><td></td><td>Apatina sp.</td></tr> <tr><td>Isonychia sp.</td><td><b>COENAGRIONIDAE</b></td><td></td><td>Hydatophylax sp.</td></tr> <tr><td><b>POLYMITARCYIDAE</b></td><td>Argia sp.</td><td></td><td>Isonychia sp.</td></tr> <tr><td><b>POTAMANTHIDAE</b></td><td><b>LESTIDAE</b></td><td></td><td>Pycnopsyche sp.</td></tr> <tr><td><b>SIPHONEURIDAE</b></td><td><b>OLIGOCHAETA</b> - Oligochaete Worms</td><td></td><td><b>MOLANNIDAE</b></td></tr> <tr><td>Siphonurus sp.</td><td><b>LUMBRICINA</b></td><td></td><td>Molanna sp.</td></tr> <tr><td><b>TRICORYTHIDAE</b></td><td><b>ENCHYTRAEIDAE</b></td><td></td><td><b>ODONTOCERIDAE</b></td></tr> <tr><td>Tricorythodes sp.</td><td><b>NAIDIDAE</b></td><td></td><td>Psilotreta sp.</td></tr> <tr><td><b>GASTROPODA</b> - Snails</td><td><b>TUBIFICIDAE</b></td><td></td><td><b>PHILOPOTAMIDAE</b></td></tr> <tr><td><b>ANCYLIDAE</b></td><td><b>LUMBRICULIDAE</b></td><td></td><td>Chimarra sp.</td></tr> <tr><td>Ferissa sp.</td><td><b>POLYCHAETA</b> - Polychaete Worms</td><td></td><td>Wormaldia sp.</td></tr> <tr><td><b>HYDROBIIDAE</b></td><td><b>AELOSOMATIDAE</b></td><td></td><td><b>PHRYGANEIDAE</b></td></tr> <tr><td><b>LYMNAEIDAE</b></td><td>Aelosoma sp.</td><td></td><td>Ptilostomis sp.</td></tr> <tr><td>Fossaria sp.</td><td><b>PLECOPTERA</b> - Stonefly Larvae</td><td></td><td><b>POLYCENTROPIDAE</b></td></tr> <tr><td>Stagnicola sp.</td><td><b>PERLIDAE</b></td><td></td><td>Cymellus sp.</td></tr> <tr><td>Pseudosuccinea sp.</td><td>Acronuria sp.</td><td></td><td>Polycentropus sp.</td></tr> <tr><td><b>PHYSIDAE</b></td><td>Beloneuria sp.</td><td>4</td><td><b>PSYCHOMYIDAE</b></td></tr> <tr><td>Physella sp.</td><td>Eccoptera sp.</td><td></td><td>Lype sp.</td></tr> <tr><td><b>PLANORBIDAE</b></td><td>Neoperla sp.</td><td></td><td>Psychomyia sp.</td></tr> <tr><td>Menetus sp.</td><td>Perlenta sp.</td><td></td><td><b>RHYACOPHILIDAE</b></td></tr> <tr><td>Gyraulus sp.</td><td><i>Perlina</i> sp.</td><td></td><td>Ryacophila sp.</td></tr> <tr><td><b>PLEURO CERIDAE</b></td><td><b>PERLODIDAE</b></td><td></td><td><b>UENOIDAE</b></td></tr> <tr><td><b>VIVIPARIDAE</b></td><td>Clioperla sp.</td><td></td><td>Neophylax sp.</td></tr> <tr><td>Viviparus sp.</td><td>Diploperla sp.</td><td></td><td><b>TUBELLARIA</b> - Flatworms</td></tr> <tr><td><b>HAPLOSCLERIDA</b></td><td>Isoperla sp.</td><td></td><td><b>PLANARIIDAE</b></td></tr> <tr><td><b>SPONGILLIDAE</b></td><td>Cultus sp.</td><td></td><td><b>DENDROCOELIDAE</b></td></tr> <tr><td><b>HEMIPTERA</b> - True Bugs</td><td><b>PTERONARCYIDAE</b></td><td></td><td></td></tr> <tr><td><b>BELOSTOMATIDAE</b></td><td>Pteronarcys sp.</td><td></td><td></td></tr> <tr><td>Belostoma sp.</td><td><b>PELTOPERLIDAE</b></td><td></td><td></td></tr> <tr><td>Lethocerus sp.</td><td>Peltoperla sp.</td><td></td><td></td></tr> <tr><td><b>CORIXIDAE</b></td><td><b>LEUCTRIDAE</b></td><td></td><td></td></tr> <tr><td><b>GELASTOCORIDAE</b></td><td>Leuctra sp.</td><td></td><td></td></tr> <tr><td><b>GERRIDAE</b></td><td>Zealuctra sp.</td><td></td><td></td></tr> <tr><td>Trepobates sp.</td><td>Paraluctra sp.</td><td></td><td></td></tr> <tr><td><b>HEBRIDAE</b></td><td><b>CAPNIDAE</b></td><td></td><td></td></tr> <tr><td><b>HYDROMETRIDAE</b></td><td>Allocapnia sp.</td><td></td><td></td></tr> <tr><td><b>MESOVELIIDAE</b></td><td>Paracapnia sp.</td><td></td><td></td></tr> <tr><td><b>NEPIDAE</b></td><td><b>NEMOURIDAE</b></td><td></td><td></td></tr> <tr><td>Nepa sp.</td><td>Amphinemura sp.</td><td></td><td></td></tr> <tr><td>Ranatra sp.</td><td>Ostrocerca sp.</td><td></td><td></td></tr> <tr><td><b>VELIIDAE</b></td><td>Nemoura sp.</td><td></td><td></td></tr> </tbody> </table>						Taxa	Family/Subfamily	Count	Family/Subfamily	Pedicia sp.	Microvelia sp.		Paranemoura sp.	Limonia sp.	<b>HIRUDINEA</b> - Leeches		Prostolia sp.	Pilaria sp.	<b>HOPLOMERTEA</b> - Ribbon Worms		Shipsa sp.	Erioptera sp.	<b>TETRASTEMMATIDAE</b>		<b>CHLOROPERLIDAE</b>	Rhabdomastix sp.	Prostoma sp.		Alloperla sp.	<b>TRICHO CERIDAE</b>	<b>LEPIDOPTERA</b> - Moth Larvae		Hapterla sp.	Trichocera sp.	<b>NOCTUIDAE</b>		Sweltsa sp.	<b>EPHEMEROPTERA</b> - Mayflies	Archanaera sp.		<b>TAENIOPTERIGIDAE</b>	<b>AMELETIDAE</b>	Bellura sp.		Strophopteryx sp.	Ameletus sp.	<b>PYRALIDAE</b>	3	Taeniopteryx sp.	<b>BAETIDAE</b>	<b>MEGALOPTERA</b> - Dobsonflies		<b>TRICHOPTERA</b> - Caddisflies	Acentrella sp.	<b>CORYDALIDAE</b>		<b>BRACHYCENTRIDAE</b>	Acerpenna sp.	Chauliodes sp.		Brachycentrus sp.	Baetis sp.	Corydalis sp.		<b>CALAMOCERATIDAE</b>	Centropitulum sp.	Nigronia sp.		Heteroplectron sp.	Dipheter sp.	<b>SIALIDAE</b>		<b>DIPSEUDOPSIDAE</b>	<b>BAETISCIDAE</b>	Sialis sp.		Phyllocentropus sp.	Baetisca sp.	<b>NEMATODA</b> - Roundworms		<b>GLOSSOSOMATIDAE</b>	<b>CAENIDAE</b>	<b>NEMATOMORPHA</b> - Horsehair Worms	4	Glossosoma sp.	Caenis sp.	<b>ODONATA</b> (Anisoptera - Dragonflies)		Agapetus sp.	<b>EPHEMERELLIDAE</b>	<b>AESHNIDAE</b>		<b>HELICOPSYCHIDAE</b>	Dannella sp.	Anax sp.		Helicopsyche sp.	Drunella sp.	Baiaeschna sp.		<b>HYDROPSYCHIDAE</b>	Ephemerella sp.	Boyeria sp.		Cheumatopsyche sp.	Eurylophella sp.	<b>CORDULEGASTRIDAE</b>		Dipterona sp.	Serratella sp.	Cordulegaster sp.		Hydropsyche sp.	<b>EPHEMERIDAE</b>	<b>CORDULIDAE</b>		Parapsyche sp.	Ephemera sp.	<b>GOMPHIDAE</b>		Potamyia sp.	<b>HEPTAGENIIDAE</b>	Argomphus sp.		<b>HYDROPTILIDAE</b>	Epeorus sp.	Gomphus sp.		Hydroptila sp.	Leucrocota sp.	Hagenius sp.		Leucotrichia sp.	Stenacron sp.	Lanthus sp.		Ochrotrichia sp.	Stenonema sp.	Stylogomphus sp.		<b>LEPIDOSTOMATIDAE</b>	<b>LEPTOPHEBIIDAE</b>	<b>LIBELLULIDAE</b>		Lepidostoma sp.	Leptophlebia sp.	<b>MACROMIIDAE</b>		<b>LEPTOCERIDAE</b>	Habrophlebia sp.	Macromia sp.		Trienodes sp.	Habrophlebiodes sp.	<b>PETALURIDAE</b>		Ceraclea sp.	Paraleptophlebia sp.	<b>ODONATA</b> Zygoptera - Damselflies		Oacelis sp.	<b>NEOEPHEMERIDAE</b>	<b>CALOPTERYGIDAE</b>		<b>LIMNephilidae</b>	<b>OLIGONEURIDAE</b>	Calopteryx sp.		Apatina sp.	Isonychia sp.	<b>COENAGRIONIDAE</b>		Hydatophylax sp.	<b>POLYMITARCYIDAE</b>	Argia sp.		Isonychia sp.	<b>POTAMANTHIDAE</b>	<b>LESTIDAE</b>		Pycnopsyche sp.	<b>SIPHONEURIDAE</b>	<b>OLIGOCHAETA</b> - Oligochaete Worms		<b>MOLANNIDAE</b>	Siphonurus sp.	<b>LUMBRICINA</b>		Molanna sp.	<b>TRICORYTHIDAE</b>	<b>ENCHYTRAEIDAE</b>		<b>ODONTOCERIDAE</b>	Tricorythodes sp.	<b>NAIDIDAE</b>		Psilotreta sp.	<b>GASTROPODA</b> - Snails	<b>TUBIFICIDAE</b>		<b>PHILOPOTAMIDAE</b>	<b>ANCYLIDAE</b>	<b>LUMBRICULIDAE</b>		Chimarra sp.	Ferissa sp.	<b>POLYCHAETA</b> - Polychaete Worms		Wormaldia sp.	<b>HYDROBIIDAE</b>	<b>AELOSOMATIDAE</b>		<b>PHRYGANEIDAE</b>	<b>LYMNAEIDAE</b>	Aelosoma sp.		Ptilostomis sp.	Fossaria sp.	<b>PLECOPTERA</b> - Stonefly Larvae		<b>POLYCENTROPIDAE</b>	Stagnicola sp.	<b>PERLIDAE</b>		Cymellus sp.	Pseudosuccinea sp.	Acronuria sp.		Polycentropus sp.	<b>PHYSIDAE</b>	Beloneuria sp.	4	<b>PSYCHOMYIDAE</b>	Physella sp.	Eccoptera sp.		Lype sp.	<b>PLANORBIDAE</b>	Neoperla sp.		Psychomyia sp.	Menetus sp.	Perlenta sp.		<b>RHYACOPHILIDAE</b>	Gyraulus sp.	<i>Perlina</i> sp.		Ryacophila sp.	<b>PLEURO CERIDAE</b>	<b>PERLODIDAE</b>		<b>UENOIDAE</b>	<b>VIVIPARIDAE</b>	Clioperla sp.		Neophylax sp.	Viviparus sp.	Diploperla sp.		<b>TUBELLARIA</b> - Flatworms	<b>HAPLOSCLERIDA</b>	Isoperla sp.		<b>PLANARIIDAE</b>	<b>SPONGILLIDAE</b>	Cultus sp.		<b>DENDROCOELIDAE</b>	<b>HEMIPTERA</b> - True Bugs	<b>PTERONARCYIDAE</b>			<b>BELOSTOMATIDAE</b>	Pteronarcys sp.			Belostoma sp.	<b>PELTOPERLIDAE</b>			Lethocerus sp.	Peltoperla sp.			<b>CORIXIDAE</b>	<b>LEUCTRIDAE</b>			<b>GELASTOCORIDAE</b>	Leuctra sp.			<b>GERRIDAE</b>	Zealuctra sp.			Trepobates sp.	Paraluctra sp.			<b>HEBRIDAE</b>	<b>CAPNIDAE</b>			<b>HYDROMETRIDAE</b>	Allocapnia sp.			<b>MESOVELIIDAE</b>	Paracapnia sp.			<b>NEPIDAE</b>	<b>NEMOURIDAE</b>			Nepa sp.	Amphinemura sp.			Ranatra sp.	Ostrocerca sp.			<b>VELIIDAE</b>	Nemoura sp.		
Taxa	Family/Subfamily	Count	Family/Subfamily																																																																																																																																																																																																																																																																																																																																						
Pedicia sp.	Microvelia sp.		Paranemoura sp.																																																																																																																																																																																																																																																																																																																																						
Limonia sp.	<b>HIRUDINEA</b> - Leeches		Prostolia sp.																																																																																																																																																																																																																																																																																																																																						
Pilaria sp.	<b>HOPLOMERTEA</b> - Ribbon Worms		Shipsa sp.																																																																																																																																																																																																																																																																																																																																						
Erioptera sp.	<b>TETRASTEMMATIDAE</b>		<b>CHLOROPERLIDAE</b>																																																																																																																																																																																																																																																																																																																																						
Rhabdomastix sp.	Prostoma sp.		Alloperla sp.																																																																																																																																																																																																																																																																																																																																						
<b>TRICHO CERIDAE</b>	<b>LEPIDOPTERA</b> - Moth Larvae		Hapterla sp.																																																																																																																																																																																																																																																																																																																																						
Trichocera sp.	<b>NOCTUIDAE</b>		Sweltsa sp.																																																																																																																																																																																																																																																																																																																																						
<b>EPHEMEROPTERA</b> - Mayflies	Archanaera sp.		<b>TAENIOPTERIGIDAE</b>																																																																																																																																																																																																																																																																																																																																						
<b>AMELETIDAE</b>	Bellura sp.		Strophopteryx sp.																																																																																																																																																																																																																																																																																																																																						
Ameletus sp.	<b>PYRALIDAE</b>	3	Taeniopteryx sp.																																																																																																																																																																																																																																																																																																																																						
<b>BAETIDAE</b>	<b>MEGALOPTERA</b> - Dobsonflies		<b>TRICHOPTERA</b> - Caddisflies																																																																																																																																																																																																																																																																																																																																						
Acentrella sp.	<b>CORYDALIDAE</b>		<b>BRACHYCENTRIDAE</b>																																																																																																																																																																																																																																																																																																																																						
Acerpenna sp.	Chauliodes sp.		Brachycentrus sp.																																																																																																																																																																																																																																																																																																																																						
Baetis sp.	Corydalis sp.		<b>CALAMOCERATIDAE</b>																																																																																																																																																																																																																																																																																																																																						
Centropitulum sp.	Nigronia sp.		Heteroplectron sp.																																																																																																																																																																																																																																																																																																																																						
Dipheter sp.	<b>SIALIDAE</b>		<b>DIPSEUDOPSIDAE</b>																																																																																																																																																																																																																																																																																																																																						
<b>BAETISCIDAE</b>	Sialis sp.		Phyllocentropus sp.																																																																																																																																																																																																																																																																																																																																						
Baetisca sp.	<b>NEMATODA</b> - Roundworms		<b>GLOSSOSOMATIDAE</b>																																																																																																																																																																																																																																																																																																																																						
<b>CAENIDAE</b>	<b>NEMATOMORPHA</b> - Horsehair Worms	4	Glossosoma sp.																																																																																																																																																																																																																																																																																																																																						
Caenis sp.	<b>ODONATA</b> (Anisoptera - Dragonflies)		Agapetus sp.																																																																																																																																																																																																																																																																																																																																						
<b>EPHEMERELLIDAE</b>	<b>AESHNIDAE</b>		<b>HELICOPSYCHIDAE</b>																																																																																																																																																																																																																																																																																																																																						
Dannella sp.	Anax sp.		Helicopsyche sp.																																																																																																																																																																																																																																																																																																																																						
Drunella sp.	Baiaeschna sp.		<b>HYDROPSYCHIDAE</b>																																																																																																																																																																																																																																																																																																																																						
Ephemerella sp.	Boyeria sp.		Cheumatopsyche sp.																																																																																																																																																																																																																																																																																																																																						
Eurylophella sp.	<b>CORDULEGASTRIDAE</b>		Dipterona sp.																																																																																																																																																																																																																																																																																																																																						
Serratella sp.	Cordulegaster sp.		Hydropsyche sp.																																																																																																																																																																																																																																																																																																																																						
<b>EPHEMERIDAE</b>	<b>CORDULIDAE</b>		Parapsyche sp.																																																																																																																																																																																																																																																																																																																																						
Ephemera sp.	<b>GOMPHIDAE</b>		Potamyia sp.																																																																																																																																																																																																																																																																																																																																						
<b>HEPTAGENIIDAE</b>	Argomphus sp.		<b>HYDROPTILIDAE</b>																																																																																																																																																																																																																																																																																																																																						
Epeorus sp.	Gomphus sp.		Hydroptila sp.																																																																																																																																																																																																																																																																																																																																						
Leucrocota sp.	Hagenius sp.		Leucotrichia sp.																																																																																																																																																																																																																																																																																																																																						
Stenacron sp.	Lanthus sp.		Ochrotrichia sp.																																																																																																																																																																																																																																																																																																																																						
Stenonema sp.	Stylogomphus sp.		<b>LEPIDOSTOMATIDAE</b>																																																																																																																																																																																																																																																																																																																																						
<b>LEPTOPHEBIIDAE</b>	<b>LIBELLULIDAE</b>		Lepidostoma sp.																																																																																																																																																																																																																																																																																																																																						
Leptophlebia sp.	<b>MACROMIIDAE</b>		<b>LEPTOCERIDAE</b>																																																																																																																																																																																																																																																																																																																																						
Habrophlebia sp.	Macromia sp.		Trienodes sp.																																																																																																																																																																																																																																																																																																																																						
Habrophlebiodes sp.	<b>PETALURIDAE</b>		Ceraclea sp.																																																																																																																																																																																																																																																																																																																																						
Paraleptophlebia sp.	<b>ODONATA</b> Zygoptera - Damselflies		Oacelis sp.																																																																																																																																																																																																																																																																																																																																						
<b>NEOEPHEMERIDAE</b>	<b>CALOPTERYGIDAE</b>		<b>LIMNephilidae</b>																																																																																																																																																																																																																																																																																																																																						
<b>OLIGONEURIDAE</b>	Calopteryx sp.		Apatina sp.																																																																																																																																																																																																																																																																																																																																						
Isonychia sp.	<b>COENAGRIONIDAE</b>		Hydatophylax sp.																																																																																																																																																																																																																																																																																																																																						
<b>POLYMITARCYIDAE</b>	Argia sp.		Isonychia sp.																																																																																																																																																																																																																																																																																																																																						
<b>POTAMANTHIDAE</b>	<b>LESTIDAE</b>		Pycnopsyche sp.																																																																																																																																																																																																																																																																																																																																						
<b>SIPHONEURIDAE</b>	<b>OLIGOCHAETA</b> - Oligochaete Worms		<b>MOLANNIDAE</b>																																																																																																																																																																																																																																																																																																																																						
Siphonurus sp.	<b>LUMBRICINA</b>		Molanna sp.																																																																																																																																																																																																																																																																																																																																						
<b>TRICORYTHIDAE</b>	<b>ENCHYTRAEIDAE</b>		<b>ODONTOCERIDAE</b>																																																																																																																																																																																																																																																																																																																																						
Tricorythodes sp.	<b>NAIDIDAE</b>		Psilotreta sp.																																																																																																																																																																																																																																																																																																																																						
<b>GASTROPODA</b> - Snails	<b>TUBIFICIDAE</b>		<b>PHILOPOTAMIDAE</b>																																																																																																																																																																																																																																																																																																																																						
<b>ANCYLIDAE</b>	<b>LUMBRICULIDAE</b>		Chimarra sp.																																																																																																																																																																																																																																																																																																																																						
Ferissa sp.	<b>POLYCHAETA</b> - Polychaete Worms		Wormaldia sp.																																																																																																																																																																																																																																																																																																																																						
<b>HYDROBIIDAE</b>	<b>AELOSOMATIDAE</b>		<b>PHRYGANEIDAE</b>																																																																																																																																																																																																																																																																																																																																						
<b>LYMNAEIDAE</b>	Aelosoma sp.		Ptilostomis sp.																																																																																																																																																																																																																																																																																																																																						
Fossaria sp.	<b>PLECOPTERA</b> - Stonefly Larvae		<b>POLYCENTROPIDAE</b>																																																																																																																																																																																																																																																																																																																																						
Stagnicola sp.	<b>PERLIDAE</b>		Cymellus sp.																																																																																																																																																																																																																																																																																																																																						
Pseudosuccinea sp.	Acronuria sp.		Polycentropus sp.																																																																																																																																																																																																																																																																																																																																						
<b>PHYSIDAE</b>	Beloneuria sp.	4	<b>PSYCHOMYIDAE</b>																																																																																																																																																																																																																																																																																																																																						
Physella sp.	Eccoptera sp.		Lype sp.																																																																																																																																																																																																																																																																																																																																						
<b>PLANORBIDAE</b>	Neoperla sp.		Psychomyia sp.																																																																																																																																																																																																																																																																																																																																						
Menetus sp.	Perlenta sp.		<b>RHYACOPHILIDAE</b>																																																																																																																																																																																																																																																																																																																																						
Gyraulus sp.	<i>Perlina</i> sp.		Ryacophila sp.																																																																																																																																																																																																																																																																																																																																						
<b>PLEURO CERIDAE</b>	<b>PERLODIDAE</b>		<b>UENOIDAE</b>																																																																																																																																																																																																																																																																																																																																						
<b>VIVIPARIDAE</b>	Clioperla sp.		Neophylax sp.																																																																																																																																																																																																																																																																																																																																						
Viviparus sp.	Diploperla sp.		<b>TUBELLARIA</b> - Flatworms																																																																																																																																																																																																																																																																																																																																						
<b>HAPLOSCLERIDA</b>	Isoperla sp.		<b>PLANARIIDAE</b>																																																																																																																																																																																																																																																																																																																																						
<b>SPONGILLIDAE</b>	Cultus sp.		<b>DENDROCOELIDAE</b>																																																																																																																																																																																																																																																																																																																																						
<b>HEMIPTERA</b> - True Bugs	<b>PTERONARCYIDAE</b>																																																																																																																																																																																																																																																																																																																																								
<b>BELOSTOMATIDAE</b>	Pteronarcys sp.																																																																																																																																																																																																																																																																																																																																								
Belostoma sp.	<b>PELTOPERLIDAE</b>																																																																																																																																																																																																																																																																																																																																								
Lethocerus sp.	Peltoperla sp.																																																																																																																																																																																																																																																																																																																																								
<b>CORIXIDAE</b>	<b>LEUCTRIDAE</b>																																																																																																																																																																																																																																																																																																																																								
<b>GELASTOCORIDAE</b>	Leuctra sp.																																																																																																																																																																																																																																																																																																																																								
<b>GERRIDAE</b>	Zealuctra sp.																																																																																																																																																																																																																																																																																																																																								
Trepobates sp.	Paraluctra sp.																																																																																																																																																																																																																																																																																																																																								
<b>HEBRIDAE</b>	<b>CAPNIDAE</b>																																																																																																																																																																																																																																																																																																																																								
<b>HYDROMETRIDAE</b>	Allocapnia sp.																																																																																																																																																																																																																																																																																																																																								
<b>MESOVELIIDAE</b>	Paracapnia sp.																																																																																																																																																																																																																																																																																																																																								
<b>NEPIDAE</b>	<b>NEMOURIDAE</b>																																																																																																																																																																																																																																																																																																																																								
Nepa sp.	Amphinemura sp.																																																																																																																																																																																																																																																																																																																																								
Ranatra sp.	Ostrocerca sp.																																																																																																																																																																																																																																																																																																																																								
<b>VELIIDAE</b>	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.



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	2-B	CAG/JNC	1	122
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
10/19/2007	9/20/2007	SDS	MHS	10	106
<b>BIVALVIA - Clams</b>		Forcipomyia sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>	1	Probezzia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculium sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>	88	<b>Tanypodinae</b>	
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Clinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicroptochironomus sp.		Guttipelopia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopelopia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropelopia sp.	
Agabus sp.		Kiefferulus sp.		Meropelopia sp.	
Hydroporus sp.		Microtendipes sp.		Paramarina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastella sp.		Procladius sp.	
Laccomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopelopia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloepus sp.		Phaenopsectra sp.		Thienemannimyia gp.	
Optioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
Promoesia sp.		Stictochironomus sp.		Zavelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zaveliella sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropectra sp.		Mansonia	
Gyrinus		Micropectra/Tanytarsus complex		Orthopodomyia	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochaeres sp.		Zavrelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Symptothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthocladinae</b>		<b>PELCO RHYNCHIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Pericoma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	1
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladius sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ecternia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyaella sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladius sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>		Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametrioctenium sp.		<b>TANYDERIDAE</b>	
Lircus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTERA - True Flies</b>		Parasmittia sp.		Thaumalea sp.	
<b>ATHERICIDAE</b>		Paratrichocladius sp.		<b>TIPULIDAE</b>	1
Atherix sp.		Paratrissocladius sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometrioctenium sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Pseudolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasyhelea sp.		Symposiocladius sp.		Ormosia sp.	







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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	3-A	CAG/JNC	1	125
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
11/1/2007	11/1/2007	SDS	SDS	24	110
<b>BIVALVIA - Clams</b>		Forcipomya sp.		Synorthocladus sp.	
<b>SPHAERIDAE</b>		Probezia sp.		Thienemanniella sp.	
Sphaerium sp.		Sphaeromias sp.		Tvetenia sp.	
Pisidium sp.		Stilobezzia sp.		Unniella sp.	
Musculium sp.		<b>CHAOBORIDAE</b>		Xylotopus sp.	
<b>CORBICULIDAE</b>		Chaborus sp.		Zalutschia sp.	
Corbicula fluminea sp.		<b>CHIRONOMIDAE</b>	100	<b>Tanypodinae</b>	
<b>UNIONIDAE</b>		<b>Chironominae</b>		Ablabesmyia sp.	
<b>BRANCHIOBELLELLIDA</b>		<b>Chironomini</b>		Alotanypus sp.	
<b>BRANCHIOBELLELLIDAE</b>		Chironomus sp.		Apsectrotanypus sp.	
<b>TETRASTEMMATIDAE</b>		Cryptochironomus sp.		Cinotanypus sp.	
<b>COLEOPTERA - Beetles</b>		Cryptotendipes sp.		Conchapelopia sp.	
<b>CANTHERIDAE</b>		Demicyptochironomus sp.		Guttipeloplia sp.	
<b>CURCULIONIDAE</b>		Dicrotendipes sp.		Krenopeloplia sp.	
<b>DRYOPIDAE</b>		Einfeldia sp.		Labrundinia sp.	
Helichus sp.		Endochironomus sp.		Larsia sp.	
<b>DYTISCIDAE</b>		Glyptotendipes sp.		Macropeloplia sp.	
Agabus sp.		Kiefferulus sp.		Meropeloplia sp.	
Hydroporus sp.		Microtendipes sp.		Paramerina sp.	
Coptotomus sp.		Nilothauma sp.		Pentaneura sp.	
Oreodytes sp.		Pagastella sp.		Procladius sp.	
Laccomis sp.		Parachironomus sp.		Psectrotanypus sp.	
Dytiscus sp.		Paracladopelma sp.		Rheopeloplia sp.	
<b>ELMIDAE</b>		Paratendipes sp.		Tanypus sp.	
Microcyloepus sp.		Phaenopsectra sp.		Thienemannimyia sp.	
Oplioservus sp.		Polypedilum sp.		Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopeloplia sp.	
Promoresia sp.		Stictochironomus sp.		Zavelimyia sp.	
Macronychus sp.		Tribelos sp.		<b>CULICIDAE</b>	
Dubiraphia sp.		Zaveliella sp.		Aedes	
Ancyronyx sp.		<b>Tanytarsini</b>		Anopheles	
Oulimnius sp.		Cladotanytarsus sp.		Culex	
<b>GYRINIDAE</b>		Constempellina sp.		Culiseta	
Dineutus		Micropsectra sp.		Mansonia	
Gyrinus		Micropsectra/Tanytarsus complex		Orthopodomya	
<b>HALIPIDAE</b>		Paratanytarsus sp.		Psorophora	
Halipus sp.		Rheotanytarsus sp.		Toxorhynchites	
<b>HYDROPHILIDAE</b>		Stempellina sp.		Uranotaenia	
Cymbiodyta sp.		Stempellinella sp.		Wyeomyia	
Berosus sp.		Sublettea sp.		<b>DIXIDAE</b>	
Derallus sp.		Tanytarsus sp.		Dixa sp.	
Helochaeres sp.		Zavelia sp.		<b>DOLICHOPODIDAE</b>	
Helophorus sp.		<b>Diamesinae</b>		<b>EMPIDIDAE</b>	
Hydrophilus sp.		Diamesa sp.		Chelifera sp.	
Hydrochus sp.		Pagastia sp.		Clinocera sp.	
Tropisternus sp.		Pothastia sp.		Hemerodromia sp.	
Hydrobius sp.		Prodiamesa sp.		Dolichocephala sp.	
Laccobius sp.		Symphothastia sp.		<b>EPHYDRIDAE</b>	
<b>PSEPHENIDAE</b>		<b>Orthocladinae</b>		<b>PELCOHYDRIDAE</b>	
Psephenus sp.		Brillia sp.		Glutops sp.	
Ectopria sp.		Cardiocladius sp.		<b>PSYCHODIDAE</b>	
Dicranopselaphus sp.		Chaetocladius sp.		Perloma sp.	
<b>PTILODACTYLIDAE</b>		Corynoneura sp.		Psychoda sp.	
Anchytarsus sp.		Cricotopus sp.		<b>SIMULIDAE</b>	
<b>COPEPODA</b>		Cricotopus/Orthocladus sp.		Simulium sp.	
<b>CRUSTACEA (Amphipoda - Scuds)</b>		Diplocladius sp.		Prosimulium sp.	
<b>CRANYONYCTIDAE</b>		Eukiefferiella sp.		Cnephia sp.	
Stygonectes sp.		Heleniella sp.		Twinia sp.	
Crangonyx sp.		Heterotrissocladus sp.		Stegopterna sp.	
Synurella sp.		Hydrobaenus sp.		Ectemnia sp.	
<b>GAMMARIDAE</b>		Limnophyes sp.		<b>STRATIOMYIDAE</b>	
Gammarus sp.		Lopescladius sp.		Oxycera sp.	
<b>HYALELLIDAE</b>		Mesocricotopus sp.		Odontomyia sp.	
Hyaletta sp.		Mesosmittia sp.		<b>SYRPHIDAE</b>	1
<b>CRUSTACEA (Decapoda - Crayfish)</b>		Nanocladius sp.		Chrysogaster sp.	
<b>CAMBARIDAE</b>		Orthocladinae A		Eristalis sp.	
<b>PALAEONIDAE</b>		Orthocladus sp.		<b>TABANIDAE</b>	
<b>CRUSTACEA (Isopoda - Sowbugs)</b>		Parachaetocladius sp.		Chrysops sp.	
<b>ASELIDAE</b>		Parakiefferiella sp.		Tabanus sp.	
Caecidotea sp.		Parametricnemus sp.		<b>TANYDERIDAE</b>	
Lirceus sp.		Paraphaenocladus sp.		<b>THAUMALEIDAE</b>	
<b>DIPTEERA - True Flies</b>		Parasmittia sp.		Thaumatlea sp.	
<b>ATHERICIDAE</b>		Paratrachocladius sp.		<b>TIPULIDAE</b>	
Atherix sp.		Paratrisocladus sp.		Antocha sp.	
<b>BLEPHARICERIDAE</b>		Psectrocladius sp.		Hexatoma sp.	
<b>CECIDOMYIIDAE</b>		Pseudorthocladus sp.		Leptotarsus sp.	
<b>CERATOPOGONIDAE</b>		Psilometricnemus sp.		Molophilus sp.	
Alluaudomyia sp.		Rheocricotopus sp.		Tipula sp.	
Bezzia sp.		Rheosmittia sp.		Pseudolimnophila sp.	
Ceratopogon sp.		Smittia sp.		Dicranota sp.	
Culicoides sp.		Stilocladius sp.		Limnophila sp.	
Dasytelea sp.		Symposiocladius sp.		Ormosia sp.	



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

Site	WSSI #	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Snakeden Branch	20003	3-A	CAG/JNC	1	125
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
11/1/2007	11/1/2007	SDS	SDS	24	110
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp.		<b>HIRUDINEA</b> - Leeches		Prostola sp.	
Pilaria sp.		<b>HOPLOMERTEA</b> - Ribbon Worms		Shipsa sp.	
Erioptera sp.		<b>TETRASTEMMATIDAE</b>		<b>CHLOROPERLIDAE</b>	
Rhabdomastix sp.		Prostoma sp.		Alloperla sp.	
<b>TRICHOPTERIDAE</b>		<b>LEPIDOPTERA</b> - Moth Larvae		Haploperla sp.	
Trichocera sp.		<b>NOCTUIDAE</b>		Sweltsa sp.	
<b>EPHEMEROPTERA</b> - Mayflies		Archanaera sp.		<b>TAENIOPTERGIDAE</b>	
<b>AMELETIDAE</b>		Beltura sp.		Strophopteryx sp.	
Ameletus sp.		<b>PYRALIDAE</b>		Taeniopteryx sp.	
<b>BAETIDAE</b>		<b>MEGALOPTERA</b> - Dobsonflies		<b>TRICHOPTERA</b> - Caddisflies	
Acentrella sp.		<b>CORYDALIDAE</b>		<b>BRACHYCENTRIDAE</b>	
Acarpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalis sp.		<b>CALAMOCERATIDAE</b>	
Centropitulum sp.		Nigronia sp.		Heteroplectron sp.	
Dipheter sp.		<b>SIALIDAE</b>		<b>DIPSEUDOPSIDAE</b>	
<b>BAETISCIDAE</b>		Sialis sp.		Phyllocentropus sp.	
Baetisca sp.		<b>NEMATODA</b> - Roundworms		<b>GLOSSOSOMATIDAE</b>	
<b>CAENIDAE</b>		<b>NEMATOMORPHA</b> - Horsehair Worms		Glossosoma sp.	
Caenis sp.		<b>ODONATA</b> (Anisoptera - Dragonflies)		Agapetus sp.	
<b>EPHEMERELLIDAE</b>		<b>AESHNIDAE</b>		<b>HELICOPSYCHIDAE</b>	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Basiaeshna sp.		<b>HYDROPSYCHIDAE</b>	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp.		<b>CORDULEGASTRIDAE</b>		Dipletrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
<b>EPHEMERIDAE</b>		<b>CORDULIIDAE</b>		Parapsyche sp.	
Ephemera sp.		<b>GOMPHIDAE</b>		Potamyia sp.	
<b>HEPTAGENIIDAE</b>		Argomphus sp.		<b>HYDROPTILIDAE</b>	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanilus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		<b>LEPIDOSTOMATIDAE</b>	
<b>LEPTOPHLEBIIDAE</b>		<b>LIBELLULIDAE</b>		Lepidostoma sp.	
Leptophlebia sp.		<b>MACROMIIDAE</b>		<b>LEPTOCERIDAE</b>	
Habrophlebia sp.		Macromia sp.		Trienodes sp.	
Habrophlebiodes sp.		<b>PETALURIDAE</b>		Ceraclaea sp.	
Paraleptophlebia sp.		<b>ODONATA</b> Zygoptera - Damselflies		Oacetus sp.	
<b>NEOEPHEMERIDAE</b>		<b>CALOPTERYGIDAE</b>		<b>LIMNephilidae</b>	
<b>OLIGONEURIDAE</b>		Calopteryx sp.		Apatina sp.	
Isonychia sp.		<b>COENAGRIONIDAE</b>		Hydatophylax sp.	
<b>POLYMITARCYIDAE</b>		Argia sp.		Ironoquia sp.	
<b>POTAMANTHIDAE</b>		<b>LESTIDAE</b>		Pycnopsyche sp.	
<b>SIPHONEURIDAE</b>		<b>OLIGOCHAETA</b> - Oligochaete Worms	1	<b>MOLANNIDAE</b>	
Siphonurus sp.		<b>LUMBRICINA</b>		Molanna sp.	
<b>TRICORYTHIDAE</b>		<b>ENCHYTRAEIDAE</b>		<b>ODONTOCERIDAE</b>	
Tricorythodes sp.		<b>NAIDIDAE</b>		Psilotreta sp.	
<b>GASTROPODA</b> - Snails		<b>TUBIFICIDAE</b>	5	<b>PHILOPOTAMIDAE</b>	
<b>ANCYLIDAE</b>		<b>LUMBRICULIDAE</b>		Chimarra sp.	
Farissa sp.		<b>POLYCHAETA</b> - Polychaete Worms		Wormaldia sp.	
<b>HYDROBIDAE</b>		<b>AEOLOSOEMATIDAE</b>		<b>PHRYGANEIDAE</b>	
<b>LYMNAEIDAE</b>		Aeolosoma sp.		Ptilostomis sp.	
Fossaria sp.		<b>PLECOPTERA</b> - Stonefly Larvae		<b>POLYCENTROPIDAE</b>	
Stagnicola sp.		<b>PERLIDAE</b>		Cymellus sp.	
<b>PSEUDOSUCCEINEA</b> sp.		Acroneuria sp.		Polycentropus sp.	
<b>PHYSIDAE</b>	3	Beloneuria sp.		<b>PSYCHOMYIDAE</b>	
Physella sp.		Ecoptura sp.		Lype sp.	
<b>PLANORBIDAE</b>		Neoperla sp.		Psychomyia sp.	
Menetus sp.		Perlesta sp.		<b>RHYACOPHILIDAE</b>	
Gyraulus sp.		<i>Perlinella</i> sp.		Ryacophila sp.	
<b>PLEUROCERIDAE</b>		<b>PERLODIDAE</b>		<b>UENOIDAE</b>	
<b>VIVIPARIDAE</b>		Clioperla sp.		Neophylax sp.	
Viviparus sp.		Diploperla sp.		<b>TUBELLARIA</b> - Flatworms	
<b>HAPLOSCLERIDA</b>		Isoperla sp.		<b>PLANARIIDAE</b>	
<b>SPONGILLIDAE</b>		Cultus sp.		<b>DENDROCOELIDAE</b>	
<b>HEMIPTERA</b> - True Bugs		<b>PTERONARCYIDAE</b>			
<b>BELOSTOMATIDAE</b>		Pteronarcys sp.			
Belostoma sp.		<b>PELTOPERLIDAE</b>			
Lethocerus sp.		Peltoperla sp.			
<b>CORIXIDAE</b>		<b>LEUCTRIDAE</b>			
<b>GELASTOCORIDAE</b>		Leuctra sp.			
<b>GERRIDAE</b>		Zealuctra sp.			
Trepobates sp.		Paraluctra sp.			
<b>HEBRIDAE</b>		<b>CAPNIDAE</b>			
<b>HYDROMETRIDAE</b>		Allocapnia sp.			
<b>MESOVELIIDAE</b>		Paracapnia sp.			
<b>NEPIDAE</b>		<b>NEMOURIDAE</b>			
Nepa sp.		Amphinemura sp.			
Ranatra sp.		Ostrocerca sp.			
<b>VELIIDAE</b>		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.



# Exhibit 6





**EXHIBIT 6: HABITAT ASSESSMENT FIELD DATA SHEET - SUMMARY WORKSHEET**

<b>Project Name and WSSI Number:</b> Northern Virginia Stream Restoration Bank: Snakeden Branch (WSSI # 20003)	
<b>Stream ID:</b> Snakeden Branch and Unnamed Tributaries to Snakeden Branch	<b>Date:</b> 12/11/06 - 12/12/06
<b>Evaluators:</b> SDS/CAG	<b>HUC:</b> 02070008
<b>Assessment Period:</b> Prerestoration	

Assessment Reach Name	Condition Category										TOTAL SCORE	Percent of Best Possible Score***	Reach Length	Stream Type		
	Substrate	Embedded-ness	Velocity	Sediment Deposition	Flow Status	Channel Alteration	Frequency of Riffles	Bank Stability*	Vegetation Protection*	Riparian Zone*						
Stream 1	1-A	Marginal	Marginal	Optimal	Marginal	Marginal	Optimal	Poor	Poor	Optimal	Poor	Optimal	114	57	300	R3
	1-B	Marginal	Marginal	Optimal	Marginal	Marginal	Optimal	Poor	Poor	Optimal	Poor	Optimal	103	52	300	R3
	1-C	Marginal	Marginal	Optimal	Marginal	Suboptimal	Optimal	Poor	Poor	Optimal	Poor	Optimal	116	58	300	R3
	1-D	Marginal	Marginal	Optimal	Marginal	Suboptimal	Optimal	Poor	Poor	Optimal	Poor	Optimal	121	61	300	R3
	1-E	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	130	65	300
Stream 2	2-A	Marginal	Marginal	Optimal	Marginal	Marginal	Optimal	Poor	Poor	Optimal	Marginal	Optimal	113	57	300	R4/RE**
	2-B	Suboptimal	Marginal	Optimal	Marginal	Marginal	Optimal	Poor	Poor	Optimal	Marginal	Optimal	112	56	300	R3
Stream 3	3-A	Marginal	Suboptimal	Optimal	Marginal	Marginal	Suboptimal	Marginal	Marginal	Suboptimal	Marginal	Suboptimal	118	59	300	R3
													112	56	300	R3
<b>Total</b>											<b>112</b>		<b>2,700</b>			

\* The score for Bank Stability, Vegetation Protection and Riparian 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



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R3		12/11/2006	N/A
Investigators		HUC	Potomac	Locality	
SDS; CAG		02070008		Fairfax County	
Reach		D.A. (Acres)	Reach Length (LF)	Order	
1-A		863	300	3	
Latitude	Longitude	Stream Name			
38°55'58"	77°21'01"	Snakeden Branch			
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>1. Epifaunal Substrate/ Available Cover</b>	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 maintenance 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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>2. Embeddedness</b>	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	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>3. Velocity/Depth Regime</b>	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).	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>4. Sediment Deposition</b>	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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>5. Channel Flow status</b>	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>Total Score</b>					50



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS						
Project #	Site	Cowardin	River Basin	Date	Time	
20003	NOVA Stream Bank	R3		12/11/2006	N/A	
Investigators		HUC	Potomac	Locality		
SDS; CAG		02070008		Fairfax County		
Reach		D.A. (Acres)	Reach Length (LF)	Order		
1-A		863	300	3		
Latitude	Longitude	Stream Name				
38°55'58"	77°21'01"	Snakeden Branch				
Habitat Parameter	Condition Category					
	Optimal	Suboptimal	Marginal	Poor	Score	
<b>6. Channel Alteration</b>	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.	Channelization 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.		
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
<b>7. Frequency of Riffles</b>	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 obstructions 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.		
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	18
<b>8. Bank Stability (score each bank)</b>	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.		
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
	<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
<b>9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.</b>	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.		
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
	<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
<b>10. Riparian Vegetative Zone Width (score each bank riparian zone)</b>	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 riparian zone <6 meters; little or no riparian vegetation due to human activities.		
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	9
	<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	9
<b>Total Score</b>					114	



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R3		12/11/2006	N/A
Investigators		HUC	Potomac	Locality	
SDS; CAG		02070008		Fairfax County	
Reach		D.A. (Acres)	Reach Length (LF)	Order	
1-B		540	300	3	
Latitude	Longitude	Stream Name			
38°55'58"	77°21'01"	Snakeden Branch			
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>1. Epifaunal Substrate/ Available Cover</b>	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 maintenance 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.	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	7
<b>2. Embeddedness</b>	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	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
<b>Velocity/Depth Regime</b>	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).	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	16
<b>4. Sediment Deposition</b>	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.	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	6
<b>5. Channel Flow status</b>	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
<b>Total Score</b>					45



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS						
Project #	Site	Cowardin	River Basin	Date	Time	
20003	NOVA Stream Bank	R3		12/11/2006	N/A	
Investigators		HUC	Potomac	Locality		
SDS; CAG		02070008		Fairfax County		
Reach		D.A. (Acres)	Reach Length (LF)	Order		
1-B		540	300	3		
Latitude	Longitude	Stream Name				
38°55'58"	77°21'01"	Snakeden Branch				
Habitat Parameter	Condition Category					
	Optimal	Suboptimal	Marginal	Poor	Score	
<b>6. Channel Alteration</b>	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.	Channelization 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.		
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	16
<b>7. Frequency of Riffles</b>	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.		
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	16
<b>8. Bank Stability (score each bank)</b>	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.		
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
	<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
<b>9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.</b>	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.		
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
	<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
<b>10. Riparian Vegetative Zone Width (score each bank riparian zone)</b>	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 riparian zone <6 meters; little or no riparian vegetation due to human activities.		
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	9
	<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	9
<b>Total Score</b>					103	



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R3		12/12/2006	N/A
Investigators		HUC	Potomac	Locality	
SDS; CAG		02070008		Fairfax County	
Reach	D.A. (Acres)	Reach Length (LF)	Order		
1-C	386	300	3		
Latitude	Longitude	Stream Name			
38°55'58"	77°21'01"	Snakeden Branch			
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>1. Epifaunal Substrate/ Available Cover</b>	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 maintenance 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.	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
<b>2. Embeddedness</b>	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	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	10
<b>Velocity/Depth Regime</b>	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).	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	16
<b>4. Sediment Deposition</b>	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.	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	9
<b>5. Channel Flow status</b>	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	15
<b>Total Score</b>					58



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS						
Project #	Site	Cowardin	River Basin	Date	Time	
20003	NOVA Stream Bank	R3		12/12/2006	N/A	
Investigators		HUC	Potomac	Locality		
SDS; CAG		02070008		Fairfax County		
Reach		D.A. (Acres)	Reach Length (LF)	Order		
1-C		386	300	3		
Latitude	Longitude	Stream Name				
38°55'58"	77°21'01"	Snakeden Branch				
Habitat Parameter	Condition Category					
	Optimal	Suboptimal	Marginal	Poor	Score	
<b>6. Channel Alteration</b>	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.	Channelization 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.		
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
<b>7. Frequency of Riffles</b>	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.		
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	12
<b>8. Bank Stability (score each bank)</b>	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.		
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
	<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
<b>9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.</b>	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.		
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
	<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
<b>10. Riparian Vegetative Zone Width (score each bank riparian zone)</b>	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 riparian zone <6 meters; little or no riparian vegetation due to human activities.		
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	9
	<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	9
<b>Total Score</b>					116	



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R3		12/12/2006	N/A
Investigators		HUC	Potomac	Locality	
SDS; CAG		02070008		Fairfax County	
Reach		D.A. (Acres)	Reach Length (LF)	Order	
1-D		291	300	3	
Latitude	Longitude		Stream Name		
38°55'58"	77°21'01"		Snakeden Branch		
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>1. Epifaunal Substrate/ Available Cover</b>	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 maintenance 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.	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	9
<b>2. Embeddedness</b>	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	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	10
<b>Velocity/Depth Regime</b>	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).	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	17
<b>4. Sediment Deposition</b>	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.	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
<b>5. Channel Flow status</b>	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	11
<b>Total Score</b>					<b>55</b>



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R3		12/12/2006	N/A
Investigators		HUC	Potomac	Locality	
SDS; CAG		02070008		Fairfax County	
Reach		D.A. (Acres)	Reach Length (LF)	Order	
1-D		291	300	3	
Latitude	Longitude	Stream Name			
38°55'58"	77°21'01"	Snakeden Branch			
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>6. Channel Alteration</b>	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.	Channelization 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.	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	19
<b>7. Frequency of Riffles</b>	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.	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	19
<b>8. Bank Stability (score each bank)</b>	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.	
<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
<b>9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.</b>	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.	
<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	3
<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	3
<b>10. Riparian Vegetative Zone Width (score each bank riparian zone)</b>	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 riparian zone <6 meters; little or no riparian vegetation due to human activities.	
<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	9
<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	9
<b>Total Score</b>					121



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R3		12/12/2006	N/A
Investigators		HUC	Potomac	Locality	
SDS; CAG		02070008		Fairfax County	
Reach		D.A. (Acres)	Reach Length (LF)	Order	
1-E		77	300	3	
Latitude	Longitude	Stream Name			
38°55'58"	77°21'01"	Snakeden Branch			
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>1. Epifaunal Substrate/ Available Cover</b>	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 maintenance 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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>2. Embeddedness</b>	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	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>Velocity/Depth Regime</b>	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).	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>4. Sediment Deposition</b>	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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>5. Channel Flow status</b>	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>Total Score</b>					<b>61</b>



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R3		12/12/2006	N/A
Investigators		HUC	Potomac	Locality	
SDS; CAG		02070008		Fairfax County	
Reach		D.A. (Acres)	Reach Length (LF)	Order	
1-E		77	300	3	
Latitude	Longitude	Stream Name			
38°55'58"	77°21'01"	Snakeden Branch			
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>6. Channel Alteration</b>  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.	Channelization 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.		
<b>7. Frequency of Riffles</b>  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.		
<b>8. Bank Stability (score each bank)</b>  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.		
<b>Score Right Bank</b> 10 9    8 7 6    5 4 3    2 1 0					
<b>9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.</b>  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.		
<b>Score Right Bank</b> 10 9    8 7 6    5 4 3    2 1 0					
<b>10. Riparian Vegetative Zone Width (score each bank riparian zone)</b>  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 riparian zone <6 meters; little or no riparian vegetation due to human activities.		
<b>Score Right Bank</b> 10 9    8 7 6    5 4 3    2 1 0					
<b>Total Score</b>					130



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R4		12/12/2006	N/A
Investigators		HUC	Potomac	Locality	
SDS; CAG		02070008		Fairfax County	
Reach		D.A. (Acres)	Reach Length (LF)	Order	
1-F		55	300	3	
Latitude	Longitude	Stream Name			
38°55'58"	77°21'01"	Snakeden Branch			
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>1. Epifaunal Substrate/ Available Cover</b>	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 maintenance 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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>2. Embeddedness</b>	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	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>Velocity/Depth Regime</b>	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).	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>4. Sediment Deposition</b>	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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>5. Channel Flow status</b>	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>Total Score</b>					<b>52</b>



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R4		12/12/2006	N/A
Investigators		HUC	Potomac	Locality	
SDS; CAG		02070008		Fairfax County	
Reach		D.A. (Acres)	Reach Length (LF)	Order	
1-F		55	300	3	
Latitude	Longitude	Stream Name			
38°55'58"	77°21'01"	Snakeden Branch			
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>6. Channel Alteration</b>	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.	Channelization 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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>7. Frequency of Riffles</b>	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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>8. Bank Stability (score each bank)</b>	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.	
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0
<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	3
<b>9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.</b>	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.	
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0
<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	3
<b>10. Riparian Vegetative Zone Width (score each bank riparian zone)</b>	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 riparian zone <6 meters; little or no riparian vegetation due to human activities.	
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0
<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	8
<b>Total Score</b>					113



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R3		12/11/2006	N/A
Investigators		HUC	Potomac	Locality	
SDS; CAG		02070008		Fairfax County	
Reach		D.A. (Acres)	Reach Length (LF)	Order	
2-A		256	300	3	
Latitude	Longitude	Stream Name			
38°55'58"	77°21'01"	Unnamed Tributary to Snakeden Branch			
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>1. Epifaunal Substrate/ Available Cover</b>	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 maintenance 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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>2. Embeddedness</b>	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	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>Velocity/Depth Regime</b>	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).	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>4. Sediment Deposition</b>	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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>5. Channel Flow status</b>	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>Total Score</b>					50



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R3	Potomac	12/11/2006	N/A
Investigators		HUC		Locality	
SDS; CAG		02070008	Fairfax County		
Reach	D.A. (Acres)	Reach Length (LF)	Order		
2-A	256	300	3		
Latitude	Longitude	Stream Name			
38°55'58"	77°21'01"	Unnamed Tributary to Snakeden Branch			
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>6. Channel Alteration</b>	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.	Channelization 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.	16
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	
<b>7. Frequency of Riffles</b>	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.	19
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	
<b>8. Bank Stability (score each bank)</b>	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.	2
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	
					2
<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	
<b>9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.</b>	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.	2
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	
					2
<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	
<b>10. Riparian Vegetative Zone Width (score each bank riparian zone)</b>	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 riparian zone <6 meters; little or no riparian vegetation due to human activities.	9
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	
					10
<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	
<b>Total Score</b>					112



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R3	Potomac	12/11/2006	N/A
Investigators		HUC		Locality	
SDS; CAG		02070008	Fairfax County		
Reach		D.A. (Acres)	Reach Length (LF)	Order	
2-B		169	300	3	
Latitude	Longitude	Stream Name			
38°55'58"	77°21'01"	Unnamed Tributary to Snakeden Branch			
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>1. Epifaunal Substrate/ Available Cover</b>	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 maintenance 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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>2. Embeddedness</b>	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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>Velocity/Depth Regime</b>	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).	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>4. Sediment Deposition</b>	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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>5. Channel Flow status</b>	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>Total Score</b>					<b>58</b>



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS						
Project #	Site	Cowardin	River Basin	Date	Time	
20003	NOVA Stream Bank	R3		12/11/2006	N/A	
Investigators		HUC	Potomac	Locality		
SDS; CAG		02070008		Fairfax County		
Reach		D.A. (Acres)	Reach Length (LF)	Order		
2-B		169	300	3		
Latitude	Longitude	Stream Name				
38°55'58"	77°21'01"	Unnamed Tributary to Snakeden Branch				
Habitat Parameter	Condition Category					
	Optimal	Suboptimal	Marginal	Poor	Score	
<b>6. Channel Alteration</b>	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.	Channelization 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.	15	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6		5 4 3 2 1 0
<b>7. Frequency of Riffles</b>	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.	15	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6		5 4 3 2 1 0
<b>8. Bank Stability (score each bank)</b>	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.	4	
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3		2 1 0
	<i>Score Right Bank</i>	10 9	8 7 6	5 4 3		2 1 0
<b>9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.</b>	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.	4	
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3		2 1 0
	<i>Score Right Bank</i>	10 9	8 7 6	5 4 3		2 1 0
<b>10. Riparian Vegetative Zone Width (score each bank riparian zone)</b>	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 riparian zone <6 meters; little or no riparian vegetation due to human activities.	9	
	<i>Score Left Bank</i>	10 9	8 7 6	5 4 3		2 1 0
	<i>Score Right Bank</i>	10 9	8 7 6	5 4 3		2 1 0
<b>Total Score</b>					<b>118</b>	



WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R3		12/12/2006	N/A
Investigators		HUC	Potomac	Locality	
SDS; CAG		02070008		Fairfax County	
Reach		D.A. (Acres)	Reach Length (LF)	Order	
3-A		75	300	1	
Latitude	Longitude	Stream Name			
38°55'58"	77°21'01"	Unnamed Tributary to Snakeden Branch			
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>1. Epifaunal Substrate/ Available Cover</b>	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 maintenance 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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>2. Embeddedness</b>	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	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>Velocity/Depth Regime</b>	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).	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>4. Sediment Deposition</b>	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.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>5. Channel Flow status</b>	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
	<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>Total Score</b>					52





WSSI HABITAT ASSESSMENT FIELD DATA SHEET-HIGH GRADIENT STREAMS					
Project #	Site	Cowardin	River Basin	Date	Time
20003	NOVA Stream Bank	R3		12/12/2006	N/A
Investigators		HUC	Potomac	Locality	
SDS; CAG		02070008		Fairfax County	
Reach		D.A. (Acres)	Reach Length (LF)	Order	
3-A		75	300	1	
Latitude	Longitude	Stream Name			
38°55'58"	77°21'01"	Unnamed Tributary to Snakeden Branch			
Habitat Parameter	Condition Category				
	Optimal	Suboptimal	Marginal	Poor	Score
<b>6. Channel Alteration</b>	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.	Channelization 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.	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	16
<b>7. Frequency of Riffles</b>	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.	
<i>Score</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	18
<b>8. Bank Stability (score each bank)</b>	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.	
<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
<b>9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.</b>	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.	
<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	2
<b>10. Riparian Vegetative Zone Width (score each bank riparian zone)</b>	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clearcuts, 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 riparian zone <6 meters; little or no riparian vegetation due to human activities.	
<i>Score Left Bank</i>	10 9	8 7 6	5 4 3	2 1 0	9
<i>Score Right Bank</i>	10 9	8 7 6	5 4 3	2 1 0	9
<b>Total Score</b>					112



# Exhibit 7





WSSI BENTHIC MACROINVERTEBRATE FIELD DATA SHEET							
<b>Project #</b>	<b>Site</b>	<b>Cowardin</b>	<b>River Basin</b>	<b>Date</b>	<b>Time</b>		
20003	Snakeden	R3	Potomac	4/4/2007	10:43 AM		
<b>Investigators</b>		<b>HUC</b>	<b>Locality</b>				
CAG/JNC		2070008	Fairfax County				
<b>Reach</b>		<b>D.A. (Acres)</b>	<b>Reach Length (LF)</b>	<b>Order</b>			
1-A		863	300	3			
<b>Latitude</b>	<b>Longitude</b>	<b>Stream Name</b>					
38°55'58"	77°21'01"	Snakeden Branch					
<b>Habitat Types (Indicate Percentage of Each Habitat Present)</b>							
<b>Cobble</b>	75	<b>Sand</b>	25	<b>Rootwads</b>	10	<b>Vegetated Banks</b>	2
<b>Submerged Macrophytes</b>		0	<b>Undercut Banks</b>		10	<b>Other</b>	5
<b>Sample Collection</b>							
<b>Gear Used</b>		<b>How Were Samples Collected?</b>		<b>Number of Jabs/Kicks Taken from Each Habitat</b>			
<i>D-Frame</i>	x	<i>Wading</i>		x			
<i>Kick-Net</i>		<i>From Bank</i>		<i>Cobble</i>	5	<i>Undercut Banks</i>	3.5
<i>Other</i>		<i>From Boat</i>		<i>Sand</i>	0	<i>Submerged Macrophytes</i>	0
				<i>Rootwads</i>	5		
				<i>Vegetated Banks</i>	0	<i>Other</i>	6.5
<b>General Comments</b>							
Caught brown bullhead catfish, bluegill sunfish, and two-lined salamander in net.							
<b>Qualitative Listing of Aquatic Biota</b>							
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant							
Periphyton	2	Slimes	2				
Filamentous Algae	0	Macroinvertebrates	1				
Macrophytes	0	Fish	2				
Page 1 of 1							





WSSI BENTHIC MACROINVERTEBRATE FIELD DATA SHEET							
<b>Project #</b>	<b>Site</b>	<b>Cowardin</b>	<b>River Basin</b>	<b>Date</b>	<b>Time</b>		
20003	Snakeden	R3	Potomac	4/5/2007	9:51 AM		
<b>Investigators</b>		<b>HUC</b>	<b>Locality</b>				
CAG/JNC		2070008	Fairfax County				
<b>Reach</b>		<b>D.A. (Acres)</b>	<b>Reach Length (LF)</b>	<b>Order</b>			
1-B		540	300	3			
<b>Latitude</b>	<b>Longitude</b>	<b>Stream Name</b>					
38°55'58"	77°21'01"	Snakeden Branch					
<b>Habitat Types (Indicate Percentage of Each Habitat Present)</b>							
<b>Cobble</b>	75	<b>Sand</b>	25	<b>Rootwads</b>	2	<b>Vegetated Banks</b>	0
<b>Submerged Macrophytes</b>		0	<b>Undercut Banks</b>		5	<b>Other</b>	
						2	
<b>Sample Collection</b>							
<b>Gear Used</b>		<b>How Were Samples Collected?</b>		<b>Number of Jabs/Kicks Taken from Each Habitat</b>			
<i>D-Frame</i>	x	<i>Wading</i>		x			
<i>Kick-Net</i>		<i>From Bank</i>		<i>Cobble</i>	10	<i>Undercut Banks</i>	4
<i>Other</i>		<i>From Boat</i>		<i>Sand</i>	0	<i>Submerged Macrophytes</i>	0
				<i>Rootwads</i>	4		
				<i>Vegetated Banks</i>	0	<i>Other</i>	2
<b>General Comments</b>							
Caught one creek chub and black nose dace in net.							
<b>Qualitative Listing of Aquatic Biota</b>							
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant							
Periphyton	2	Slimes	1				
Filamentous Algae	1	Macroinvertebrates	0				
Macrophytes	0	Fish	1				
Page 1 of 1							



WSSI BENTHIC MACROINVERTEBRATE FIELD DATA SHEET								
Project #	Site	Cowardin	River Basin	Date	Time			
20003	Snakeden	R3	Potomac	4/5/2007	12:33 PM			
Investigators		HUC	Locality					
CAG/JNC		2070008	Fairfax County					
Reach		D.A. (Acres)	Reach Length (LF)	Order				
1-C		386	300	3				
Latitude	Longitude	Stream Name						
38°55'58"	77°21'01"	Snakeden Branch						
Habitat Types (Indicate Percentage of Each Habitat Present)								
Cobble	70	Sand	20	Rootwads	20	Vegetated Banks	0	
Submerged Macrophytes		10	Undercut Banks		10	Other		2
Sample Collection								
Gear Used		How Were Samples Collected?		Number of Jabs/Kicks Taken from Each Habitat				
D-Frame	x	Wading		x				
Kick-Net		From Bank		Cobble	7	Undercut Banks	3	
Other		From Boat		Sand	0	Submerged Macrophytes	0	
				Rootwads	6			
				Vegetated Banks	0	Other	4	
General Comments								
Caught one blacknose dace and 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	
Macrophytes		0	Fish				1	
Page 1 of 1								





WSSI BENTHIC MACROINVERTEBRATE FIELD DATA SHEET								
Project #	Site	Cowardin	River Basin	Date	Time			
20003	Snakeden	R3	Potomac	4/10/2007	10:02 AM			
Investigators		HUC	Locality					
CAG/JNC		2070008	Fairfax County					
Reach		D.A. (Acres)	Reach Length (LF)	Order				
1-D		291	300	3				
Latitude	Longitude	Stream Name						
38°55'58"	77°21'01"	Snakeden Branch						
<b>Habitat Types (Indicate Percentage of Each Habitat Present)</b>								
Cobble	80	Sand	15	Rootwads	30	Vegetated Banks	0	
Submerged Macrophytes		0	Undercut Banks		15	Other		5
<b>Sample Collection</b>								
Gear Used		How Were Samples Collected?		Number of Jabs/Kicks Taken from Each Habitat				
D-Frame	x	Wading		x				
Kick-Net		From Bank		Cobble	9	Undercut Banks	1	
Other		From Boat		Sand	0	Submerged Macro-phytes	0	
				Rootwads	9			
				Vegetated Banks	0	Other	1	
<b>General Comments</b>								
Caught one blacknose dace in net.								
<b>Qualitative Listing of Aquatic Biota</b>								
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant								
Periphyton	3	Slimes				3		
Filamentous Algae	3	Macroinvertebrates				0		
Macrophytes	0	Fish				1		
Page 1 of 1								



WSSI BENTHIC MACROINVERTEBRATE FIELD DATA SHEET							
Project #	Site	Cowardin	River Basin	Date	Time		
20003	Snakeden	R3	Potomac	4/10/2007	12:55 AM		
Investigators		HUC	Locality				
CAG/JNC		2070008	Fairfax County				
Reach		D.A. (Acres)	Reach Length (LF)	Order			
1-E		77	300	3			
Latitude	Longitude	Stream Name					
38°55'58"	77°21'01"	Snakeden Branch					
<b>Habitat Types (Indicate Percentage of Each Habitat Present)</b>							
Cobble	70	Sand	30	Rootwads	0	Vegetated Banks	50
Submerged Macrophytes		0	Undercut Banks		0	Other	
							1
<b>Sample Collection</b>							
Gear Used		How Were Samples Collected?		Number of Jabs/Kicks Taken from Each Habitat			
D-Frame	x	Wading		x			
Kick-Net		From Bank		Cobble	15	Undercut Banks	0
Other		From Boat		Sand	0	Submerged Macrophytes	0
				Rootwads	0		
				Vegetated Banks	2	Other	3
<b>General Comments</b>							
Caught two two-lined salamanders in net.							
<b>Qualitative Listing of Aquatic Biota</b>							
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant							
Periphyton		3	Slimes				2
Filamentous Algae		2	Macroinvertebrates				0
Macrophytes		1	Fish				0
Page 1 of 1							



WSSI BENTHIC MACROINVERTEBRATE FIELD DATA SHEET							
Project #	Site	Cowardin	River Basin	Date	Time		
20003	Snakeden	R3	Potomac	4/10/2007	2:02 PM		
Investigators		HUC	Locality				
CAG/JNC		2070008	Fairfax County				
Reach		D.A. (Acres)	Reach Length (LF)	Order			
1-F		55	300	3			
Latitude	Longitude	Stream Name					
38°55'58"	77°21'01"	Snakeden Branch					
<b>Habitat Types (Indicate Percentage of Each Habitat Present)</b>							
Cobble	80	Sand	10	Rootwads	5	Vegetated Banks	0
Submerged Macrophytes		0	Undercut Banks		5	Other	
							12
<b>Sample Collection</b>							
Gear Used		How Were Samples Collected?		Number of Jabs/Kicks Taken from Each Habitat			
D-Frame	x	Wading		x			
Kick-Net		From Bank		Cobble	12	Undercut Banks	6
Other		From Boat		Sand	0	Submerged Macrophytes	0
				Rootwads	0		
				Vegetated Banks	0	Other	2
<b>General Comments</b>							
Caught two two-lined salamanders in net.							
<b>Qualitative Listing of Aquatic Biota</b>							
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant							
Periphyton		3	Slimes				3
Filamentous Algae		3	Macroinvertebrates				0
Macrophytes		0	Fish				0
Page 1 of 1							





WSSI BENTHIC MACROINVERTEBRATE FIELD DATA SHEET							
<b>Project #</b>	<b>Site</b>	<b>Cowardin</b>	<b>River Basin</b>	<b>Date</b>	<b>Time</b>		
20003	Snakeden	R3	Potomac	4/4/2007	12:50 PM		
<b>Investigators</b>		<b>HUC</b>	<b>Locality</b>				
CAG/JNC		2070008	Fairfax County				
<b>Reach</b>		<b>D.A. (Acres)</b>	<b>Reach Length (LF)</b>	<b>Order</b>			
2-A		256	300	3			
<b>Latitude</b>	<b>Longitude</b>	<b>Stream Name</b>					
38°55'58"	77°21'01"	Snakeden Branch					
<b>Habitat Types (Indicate Percentage of Each Habitat Present)</b>							
<b>Cobble</b>	50	<b>Sand</b>	0	<b>Rootwads</b>	10	<b>Vegetated Banks</b>	0
<b>Submerged Macrophytes</b>		0	<b>Undercut Banks</b>		0	<b>Other</b>	60
<b>Sample Collection</b>							
<b>Gear Used</b>		<b>How Were Samples Collected?</b>		<b>Number of Jabs/Kicks Taken from Each Habitat</b>			
<i>D-Frame</i>	x	<i>Wading</i>		x			
<i>Kick-Net</i>		<i>From Bank</i>		<i>Cobble</i>	10	<i>Undercut Banks</i>	0
<i>Other</i>		<i>From Boat</i>		<i>Sand</i>	0	<i>Submerged Macrophytes</i>	0
				<i>Rootwads</i>	4		
				<i>Vegetated Banks</i>	0	<i>Other</i>	6
<b>General Comments</b>							
Caught one two-lined salamander in net.							
<b>Qualitative Listing of Aquatic Biota</b>							
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant							
Periphyton	2	Slimes	1				
Filamentous Algae	0	Macroinvertebrates	0				
Macrophytes	0	Fish	0				
Page 1 of 1							



WSSI BENTHIC MACROINVERTEBRATE FIELD DATA SHEET								
Project #	Site	Cowardin	River Basin	Date	Time			
20003	Snakeden	R3	Potomac	4/4/2007	2:00 PM			
Investigators		HUC	Locality					
CAG/JNC		2070008	Fairfax County					
Reach		D.A. (Acres)	Reach Length (LF)	Order				
2-B		169	300	3				
Latitude	Longitude	Stream Name						
38°55'58"	77°21'01"	Snakeden Branch						
Habitat Types (Indicate Percentage of Each Habitat Present)								
Cobble	80	Sand	0	Rootwads	5	Vegetated Banks	0	
Submerged Macrophytes		0	Undercut Banks		0	Other		12
Sample Collection								
Gear Used		How Were Samples Collected?		Number of Jabs/Kicks Taken from Each Habitat				
D-Frame	x	Wading		x				
Kick-Net		From Bank		Cobble	12	Undercut Banks	0	
Other		From Boat		Sand	0	Submerged Macrophytes	0	
				Rootwads	5			
				Vegetated Banks	0	Other	3	
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				0	
Filamentous Algae		0	Macroinvertebrates				0	
Macrophytes		0	Fish				0	
<i>Page 1 of 1</i>								



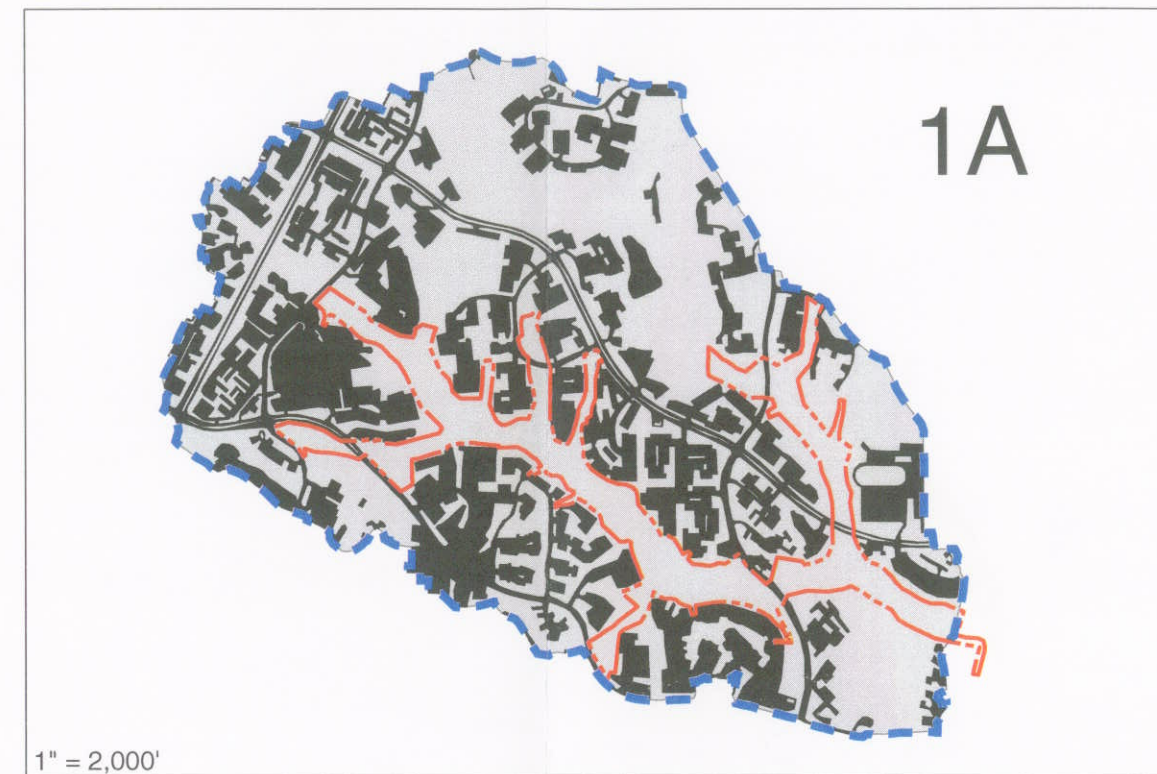
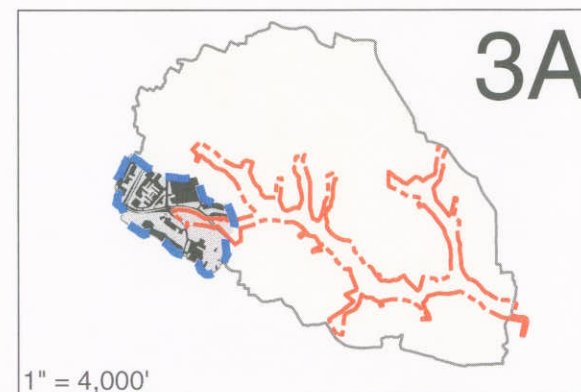
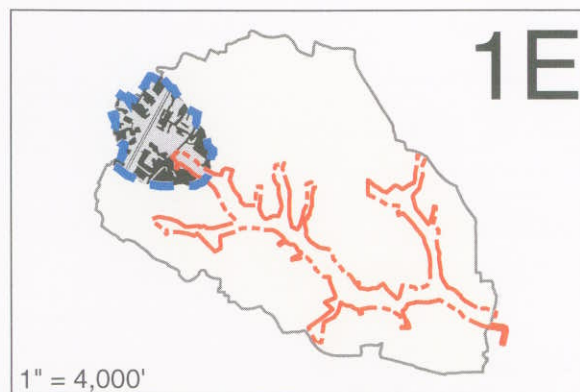
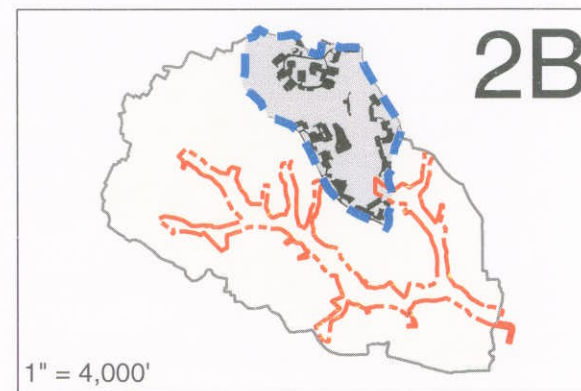
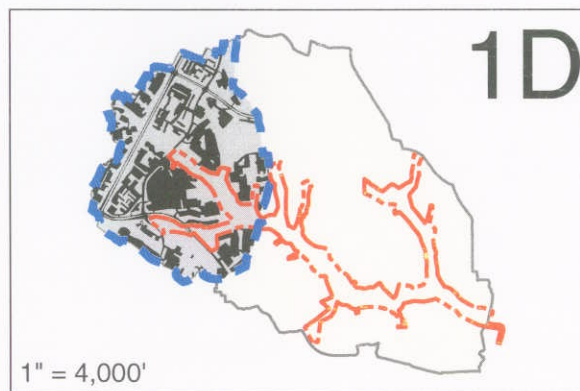
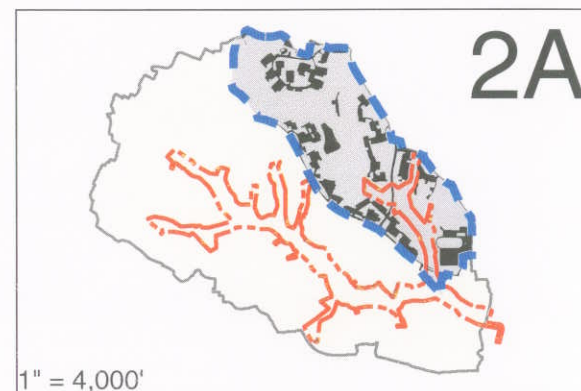
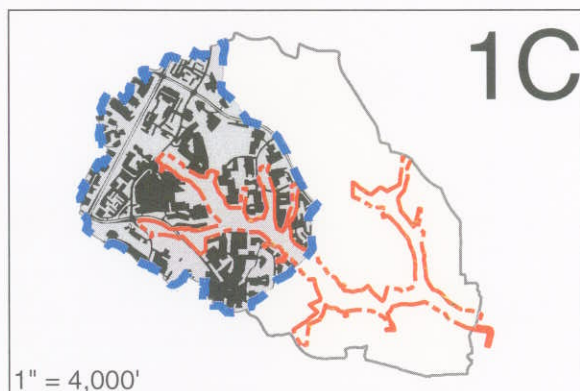
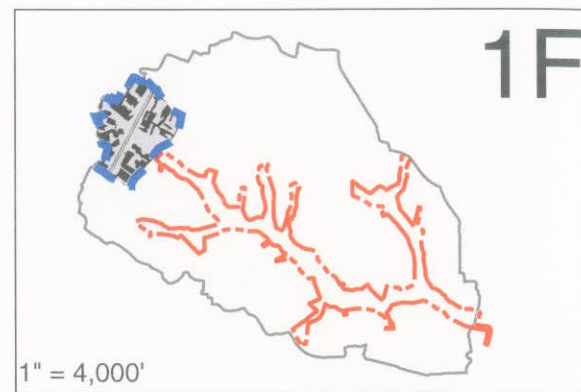
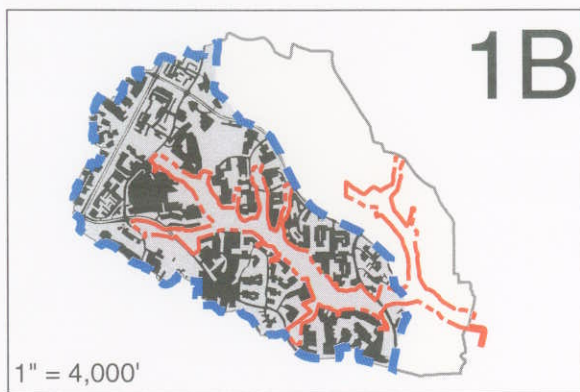


WSSI BENTHIC MACROINVERTEBRATE FIELD DATA SHEET							
<b>Project #</b>	<b>Site</b>	<b>Cowardin</b>	<b>River Basin</b>	<b>Date</b>	<b>Time</b>		
20003	Snakeden	R3	Potomac	4/10/2007	11:31 AM		
<b>Investigators</b>		<b>HUC</b>	<b>Locality</b>				
CAG/JNC		2070008	Fairfax County				
<b>Reach</b>		<b>D.A. (Acres)</b>	<b>Reach Length (LF)</b>	<b>Order</b>			
3-A		75	300	1			
<b>Latitude</b>	<b>Longitude</b>	<b>Stream Name</b>					
38°55'58"	77°21'01"	Snakeden Branch					
<b>Habitat Types (Indicate Percentage of Each Habitat Present)</b>							
<b>Cobble</b>	75	<b>Sand</b>	25	<b>Rootwads</b>	10	<b>Vegetated Banks</b>	0
<b>Submerged Macrophytes</b>		0	<b>Undercut Banks</b>		10	<b>Other</b>	15
<b>Sample Collection</b>							
<b>Gear Used</b>		<b>How Were Samples Collected?</b>		<b>Number of Jabs/Kicks Taken from Each Habitat</b>			
<i>D-Frame</i>	x	<i>Wading</i>		x			
<i>Kick-Net</i>		<i>From Bank</i>		<i>Cobble</i>	11	<i>Undercut Banks</i>	0
<i>Other</i>		<i>From Boat</i>		<i>Sand</i>	0	<i>Submerged Macrophytes</i>	0
				<i>Rootwads</i>	1		
				<i>Vegetated Banks</i>	0	<i>Other</i>	8
<b>General Comments</b>							
Caught one blacknose dace in net.							
<b>Qualitative Listing of Aquatic Biota</b>							
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant							
Periphyton		3	Slimes				3
Filamentous Algae		3	Macroinvertebrates				0
Macrophytes		0	Fish				1
Page 1 of 1							



# Exhibit 8





**Land Cover Map**  
Snakeden Branch  
Scale as Noted

Stream ID	Impervious Percent	Total Acres
1A	38%	863
1B	45%	540
1C	46%	386
1D	45%	291
1E	50%	77
1F	47%	55
2A	26%	256
2B	25%	169
3A	49%	75

- SITE
- DRAINAGE BOUNDARIES
- IMPERVIOUS AREAS
- PERVIOUS AREAS





# Exhibit 9



# Appendix A - List of Impaired (Category 5) Waters in 2006\*

Assessment Unit ID      Waterbody Name      City / County      Assessment Unit Description

## Potomac and Shenandoah River Basins

TMDL Watershed Name: Shenandoah River, South Fork

TMDL Group ID: 00403

VAV-B35R\_SSF01A00      South Fork Shenandoah River      ROCKINGHAM CO      South Fork Shenandoah River from its confluence with Big Run downstream to its confluence with Naked Creek.

VA Overall AU Category: 5A      Impairment: Fecal Coliform      15.17 MILES      TMDL Group ID: 00403      First Listed on 303(d): 2002      TMDL Schedule: 2010      Impairment Specific Comments and/or Impairment Specific VA Category: Recreation      Sources: Source Unknown

VAV-B37R\_SSF01A00      S.F. Shenandoah River      PAGE CO      South Fork Shenandoah River from its confluence with Naked Creek downstream to its confluence with Stoney Run just above the Route 340 bridge at Alma.

VA Overall AU Category: 5A      Impairment: Fecal Coliform      18.28 MILES      TMDL Group ID: 00403      First Listed on 303(d): 2002      TMDL Schedule: 2010      Impairment Specific Comments and/or Impairment Specific VA Category: Recreation      Sources: Source Unknown

VAV-B38R\_SSF01A00      South Fork Shenandoah River      PAGE CO      South Fork Shenandoah River from its confluence with Stoney Run just above the Route 340 bridge at Alma downstream to its confluence with Hawksbill Creek.

VA Overall AU Category: 5A      Impairment: Fecal Coliform      16.09 MILES      TMDL Group ID: 00403      First Listed on 303(d): 2002      TMDL Schedule: 2010      Impairment Specific Comments and/or Impairment Specific VA Category: Recreation      Sources: Source Unknown  
Wildlife Other than Waterfowl

TMDL Watershed Name: Snakeden Branch

TMDL Group ID: 60019

VAN-A11R\_SNA01A02      Snakeden Branch      FAIRFAX CO      Segment begins at the confluence with an unnamed tributary to Snakeden Branch, approximately 0.4 rivermile downstream from the Twin Branches Road bridge, and continues downstream until the confluence with Difficult Run.

VA Overall AU Category: 5A      Impairment: Escherichia coli      0.79 MILES      TMDL Group ID: 60019      First Listed on 303(d): 2006      TMDL Schedule: 2018      Impairment Specific Comments and/or Impairment Specific VA Category: Recreation      Sources: Source Unknown  
Sufficient exceedances of the instantaneous E.coli bacteria criterion (2 of 8 samples - 25.0%) were recorded at DEQ's ambient water quality monitoring station (IASNA000.21) at the Route 677 bridge to assess this stream segment as not supporting of the recreation use goal for the 2006 water quality assessment.