

BIOLOGICAL MONITORING REPORT #2

Pre-construction Monitoring

NORTHERN VIRGINIA STREAM RESTORATION BANK

Colvin Run Watershed (±31,000 LINEAR FEET)

FAIRFAX COUNTY, VIRGINIA



Prepared For:

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WSSI Project #20010 - Task D

December 8, 2008

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Biological Monitoring Report #2 Pre-construction Monitoring

Northern Virginia Stream Restoration Bank Colvin Run Watershed (±31,000 Linear Feet) WSSI #20010

December 8, 2008

I. Executive Summary

As set forth in the "Northern Virginia Stream Restoration Bank Banking Instrument" (Banking Instrument), approximately 31,000 linear feet of streams and drainage features within the Colvin Run 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 Colvin Run Watershed portion of the Northern Virginia Stream Restoration Bank (NVSRB) in 2007 and 2008 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 in addition to prior pre-construction monitoring is to determine the baseline conditions of the streams within the Colvin Run Watershed Portion of the NVSRB in 2008, against which future biological monitoring in the study area will be compared. This report summarizes the 2008 preconstruction monitoring.

Biological stream monitoring was conducted along ten permanent biological monitoring 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 Colvin Run Watershed portion of the NVSRB in 2008 is in a range from "Poor" to "Fair", with habitat assessment scores of 139 (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. The habitat conditions in 2008 are similar to the conditions observed for the 2007 preconstruction monitoring.

Baseline benthic macroinvertebrate results indicate that the benthic macroinvertebrate community of the streams within the Colvin Run watershed portion of the NVSRB in 2008 is in the category of "Stress" to "Severe Stress", with VA-SCI scores below 49 (out of 100) for all stream reaches 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. However, since 2007, almost all of the VA-SCI scores have increased. The lower VA-SCI scores in 2007 may be attributed to natural variability in both abiotic (e.g., amount of precipitation) and biotic conditions, rather than benthic macroinvertebrate recovery, as

no restoration activities or other water quality enhancements are known to have occurred within the study area prior to the 2008 monitoring.

II. Introduction

As set forth in the "Northern Virginia Stream Restoration Bank Banking Instrument" (Banking Instrument), dated February 17, 2006 and prepared by Wetland Studies and Solutions, Inc. (WSSI), Northern Virginia Stream Restoration, L.C. will restore approximately 14 miles of streams and upland buffers, within portions of the Snakeden Branch, Colvin Run, and The Glade watersheds in the town of Reston, Virginia. As required in Section VI.B.2.(i) of the Banking Instrument, biological monitoring will be conducted within restored streams within these watersheds. These stream restoration activities should result in a direct improvement of instream habitat and an indirect improvement in water quality. Using benthic macroinvertebrate and habitat data, this second pre-construction monitoring report and the first pre-construction monitoring report characterize the baseline conditions of the streams within the Colvin Run Watershed portion of the NVSRB in 2008, against which future biological monitoring in the study area will be compared. With these data, and data from previous and subsequent monitoring reports, we propose to determine the effect of stream restoration on the condition of streams within the Colvin Run Watershed portion of the NVSRB', 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 31,000 linear feet of stream along Colvin Run and several unnamed tributaries of Colvin Run, as well as the adjacent riparian corridor. The study area is located between the Dulles Access Road (Route 267) and Harry Bird Highway (Route 7) to the west of Lake Fairfax Park, in Northern 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. Colvin Run flows in a northeasterly direction through the southern portion of the study area. The study area is gently to steeply 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 Monitoring Map (Exhibit 3).

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 a report entitled "Waters of the U.S. Delineation, Northern Virginia Stream Restoration Bank, A Portion of the Colvin Run Watershed (\pm 116 acres)". WSSI has received a confirmation letter (# 2007-2482) from the U.S. Army Corps of Engineers (COE) dated May 31, 2007, confirming the delineation.

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 2,000 linear feet of stream restoration along samplable streams at the NVSRB. Once established, these reaches

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

are to be monitored prior to stream restoration, then in years 1, 5, and 10. The following methods are to be employed:

- Biological Reconnaissance (BioRecon), following guidance established in the U.S. Environmental Protection Agency's "Rapid Bioassessment Protocols for Use in Streams and Wadable Rivers" (EPA's RBP; Barbour et al. 1999)².
- Biological stream assessment for Calculating the Stream Condition Index for Virginia Non-coastal Streams (VA-SCI), following guidance established in "A Stream Condition Index for Virginia Non-Coastal Streams" (Tetra Tech 2003) and "Using Probabilistic Monitoring Data to Validate the Non-Coastal Virginia Stream Condition Index" (DEQ 2006a)³.

V. 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). WSSI assessed the ten permanent sampling reaches that were selected in Biological Monitoring Report #1 (Reaches 1-A, 2-A, 2-B, 3-A, 4-A, 5-A, 6-A, 7-A, 8-A⁴, and 9-A). The location of these ten sampling reaches relative to the reaches created for restoration design purposes is depicted in Figure 1, below⁵. As required by the SOPs, each reach is 300 linear feet. The approximate location of each reach is depicted on the Biological Stream Monitoring Map (Exhibit 3). Photographs of each reach are included on Exhibit 4. Benthic macroinvertebrate sampling and habitat assessment field work was conducted by WSSI environmental scientists Sean D. Sipple, CT, PWS⁶, Lynn Straughan, PWS, Jennifer Van Houten, PWS, PWD, and Beth Clements between March 10 and 12, 2008.

This method is to be used in all monitoring years and is accompanied by a habitat assessment, following guidance established by 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).

Note that during the 2008 sampling, Stream Reach 8-a was shifted approximately 200 feet downstream due to lack of flowing water in the original reach.

Note that for design purposes, Colvin Run has been divided into 16 manageable restoration reaches. Monitoring stream reach labels 1-A, 2-A, 2-B, 3-A, 4-A, 5-A, 6-A, 7-A, 8-A, and 9-A correspond with construction design reach labels 12, 10, 9, 8, 7, 6, 6, 4, 3A, and 2 respectively.

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).

Note that the BioRecon was used to aid in the selection of permanent monitoring reaches during the first year of pre-construction monitoring and is not required in subsequent monitoring years. The results of the BioRecon are described in "Biological Monitoring Report #1, Pre-construction Monitoring, Northern Virginia Stream Restoration Bank, Colvin Run Watershed", dated November 6, 2008.

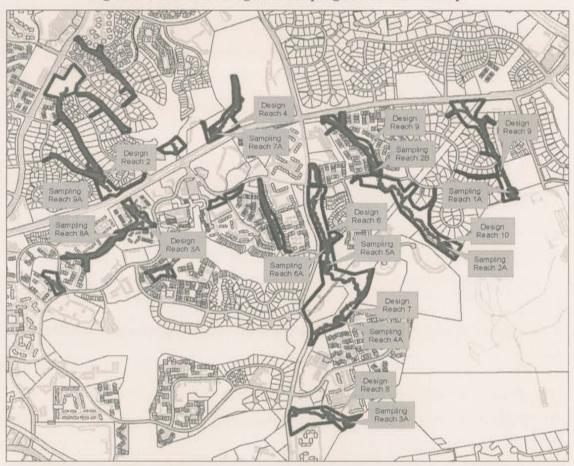


Figure 1. Restoration Design and Sampling Reach Location Map

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, where the best possible score for each reach equals 200. The following formula was used to determine the percentage of best possible score for each reach:

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

Each reach was then assigned a narrative rating according to the calculated percentage of best possible score, where "Excellent" is >90, "Good" is 75-88, "Fair" is 60-73, and "Poor" is <58. WSSI Habitat Assessment Field Data Sheets (developed from the EPA's RBP Habitat Assessment Field Data Sheets) for each reach are included as Exhibit 5.

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.

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 6.

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 7).

Benthic macroinvertebrate data were analyzed by calculating the Stream Condition Index for Virginia Non-coastal Streams (VA-SCI), following guidance established in "A Stream Condition Index for Virginia Non-Coastal Streams" and "Using Probabilistic Monitoring Data to Validate the Non-Coastal Virginia Stream Condition Index". The VA-SCI is a multi-metric Index of Biotic Integrity developed for the DEQ to assess Streams of the Commonwealth. The VA-SCI uses seven biotic metrics and one biotic index including Total Taxa, EPT Taxa, Percent Ephemeroptera, Percent Plecoptera + Trichoptera (Excluding Hydropsychidae), Percent Scrapers, Percent Chironomidae, Percent Top Two Dominant Taxa, and Hilsenhoff Biotic Index. The individual metrics and index used are defined and described as follows:

- Total Taxa Richness. Total Taxa Richness represents the total number of taxa in a sample. Total Taxa Richness is expected to be relatively high in undisturbed streams and is expected to decrease in response to environmental disturbance. Total Taxa Richness can range from 0-22 for the VA-SCI.
- EPT Taxa Richness. EPT Taxa Richness represents the number of taxa from the aquatic insect orders Ephemeroptera, Plecoptera, and Trichoptera. EPT taxa are generally very sensitive to pollution. Total EPT Taxa Richness is expected to be relatively high in undisturbed streams, and it is expected to decrease in response to environmental disturbance. EPT Taxa Richness can range from 0-11 for the VA-SCI.
- Percent Ephemeroptera. The Percent Ephemeroptera represents the ratio of members of the aquatic insect order Ephemeroptera (mayflies) to the total number of individuals in a sample. Mayflies are generally very sensitive to pollution, thus Percent Ephemeroptera is expected to decrease in response to environmental disturbance. Percent Ephemeroptera can range from 0-61.3 for the VA-SCI.
- Percent Plecoptera + Trichoptera (Excluding Hydropsychidae). The Percent Plecoptera +
 Trichoptera (Excluding Hydropsychidae) represents the ratio of members of the aquatic
 insect orders Plecoptera (stoneflies) and Trichoptera (caddisflies) (excluding those in
 the pollution tolerant family Hydropsychidae) to the total number of individuals in a
 sample. Percent Plecoptera + Trichoptera (Excluding Hydropsychidae) is expected to
 decrease in response to environmental disturbance. Percent Plecoptera + Trichoptera
 (Excluding Hydropsychidae) can range from 0-35.6 for the VA-SCI.

- Percent Scrapers. The Percent Scrapers represents the ratio of taxa adapted primarily for scraping food from a substrate to the total number of individuals in a sample. Percent Scrapers is expected to decrease in response to environmental disturbance. Percent Scrapers can range from 0-51.6 for the VA-SCI.
- Percent Chironomidae. The Percent Chironomidae represents the ratio of members of the
 aquatic insect family Chironomidae (non-biting midges) to the total number of
 individuals in a sample. Because chironomids are generally tolerant to pollution, Percent
 Chironomidae is expected to increase in response to environmental disturbance. Percent
 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 a VA-SCI range of 0-100. The weighting is as follows:
 - o Total Taxa: Score = 100 x (X/22), where X = Metric Value
 - o EPT Taxa: Score = $100 \times (X/11)$, where X = Metric Value
 - o Percent Ephemeroptera: Score = $100 \times (X/61.3)$, where X = Metric Value
 - Percent Plecoptera + Trichoptera less Hydropsychidae: Score = 100 x (X/35.6), where X = Metric Value
 - o Percent Scrapers: Score = $100 \times (X/51.6)$, where X = Metric Value
 - O Percent Chironomidae: Score = 100 x [(100-X) (100-0)], where X = Metric Value
 - Percent Top 2 Dominant: Score = 100 x [(100-X) (100-30.8)], where X = Metric Value
 - Hilsenhoff Biotic Index: Score = 100 x [(100-X) (100-3.2)], where X = Metric Value

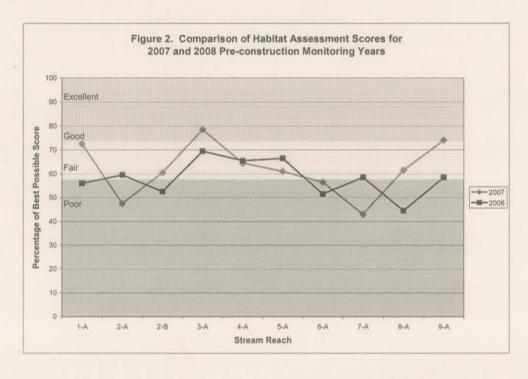
Each reach was then assigned a narrative rating according to the calculated VA-SCI, where "Excellent" is >73, "Good" is 60-72, "Stress" is 43-59, and "Severe Stress" is <42.

Biological Stream Monitoring Results and Discussion. Habitat results for 2008 show that all ten stream reaches (Reaches 1-A, 2-A, 2-B, 3-A, 4-A, 5-A, 6-A, 7-A, 8-A, and 9-A) have either "Poor" or "Fair" habitat conditions (<u>Table 1</u>, below; <u>Exhibit 5</u>). Reaches 3-A and 5-A have the best habitat scores, with habitat assessment scores of 139 out of 200 ("Fair") and 133 out of 200 ("Fair"), respectively. Reach 8-A has the worst habitat score, having a habitat assessment score of 89 out of 200 ("Poor"). All reaches have low habitat assessment scores 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

Colvin Run Watershed portion of the NVSRB in 2008 is 117, which is 59 percent of the best possible score ("Poor").

REACH	Habitat Assessment Score	Percent Best Possible Score	Narrative Rating
1-A	112	56	Poor
2-A	119	60	Fair
2-B	105	53	Poor
3-A	139	70	Fair
4-A	- 131	66	Fair
5-A	133	67	Fair
6-A	103	52	Poor
7-A	117	59	Poor
8-A	89	45	Poor
9-A	117	59	Poor
Average	117	59	Poor

The habitat conditions in 2008 are similar to the conditions observed for the 2007 preconstruction monitoring, as all reaches in 2007 had either "Poor" or "Fair" habitat assessment scores (Figure 2, below). The average habitat assessment score for all streams assessed within the Colvin Run Watershed portion of the NVSRB in 2007 was 124, which is 62 percent of the best possible score ("Fair").



Benthic macroinvertebrate results show that individuals from 33 taxa⁸ were collected from all ten reaches collectively (Table 2, below; Exhibit 7) during the 2008 pre-construction benthic macroinvertebrate monitoring. These 33 taxa include physid, hydrobiid, lymnaid snails, and unknown snails (Families Physidae, Hydrobiidae, Lymnaeidae, and Order Gastropoda, respectively); fingernail clams (Family Sphaeriidae); oligochaete, ribbon, and flat worms (Family Tubificidae and Class Oligochaeta, Phylum Nemertea, and Family Planariidae, respectively); mites (Family Hydrachnida); springtails (Family Isotomidae); aquatic moth larvae (Family Noctuidae); broad shoulder water striders (Family Veliidae); scuds (Family Crangonyctidae); aquatic sowbugs (Family Asellidae); crayfish (Family Cambaridae); non-biting midge, crane, aquatic longlegged, moth, phorid, dixid, and unknown fly larvae (Families Chironomidae, Tipulidae, Dolichopodidae, Psychididae, Phoridae, Dixidae, Diptera Family #1, and Order Diptera respectively); common net-spinning, northern casemaker, and fingernet caddisfly larvae (Families Hydropsychidae, Limnephilidae, and Philipotamidae, respectively); broadwinged and narrowwinged damselfly larvae (Families Calopterygidae and Coenagrionidae, respectively); green-eyed skimmer, darner, and clubtail, dragonfly larvae (Families Corduliidae, Aeshnidae, and Gomphidae, respectively); and weevils, predaceous diving beetles, and riffle beetles (Families Curculionidae, Dytiscidae, and Elmidae, respectively). Of all 33 taxa collected, non-biting midge larvae and oligochaete worms comprised the majority of individuals in each reach (Table 2, below).

The data collected for each reach (<u>Table 2</u>) were used to calculate the biotic metrics as shown in <u>Table 3</u>, below. The VA-SCI requires that these metrics be weighted to determine the VA-SCI, as shown in <u>Table 4</u>. The results of our data analysis indicate that the benthic macroinvertebrate community at nine of the stream reaches (Reaches 1-A, 2-A, 2-B, 3-A, 4-A, 5-A, 7-A, 8-A, and 9-A) are in "Severe Stress" and stream reach (6-A) is in "Stress" in 2008 prior to stream restoration activities, based on their VA-SCI scores (<u>Table 4</u>). The highest VA-SCI score was observed at Reach 6-A (48.52) and the lowest VA-SCI score was observed at Reach 8-A (14.65). The average VA-SCI numerical score for all streams assessed within the Colvin Run Watershed portion of the NVSRB in 2008 is 31.36 ("Severe Stress"). 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 (<u>Table 3</u>).

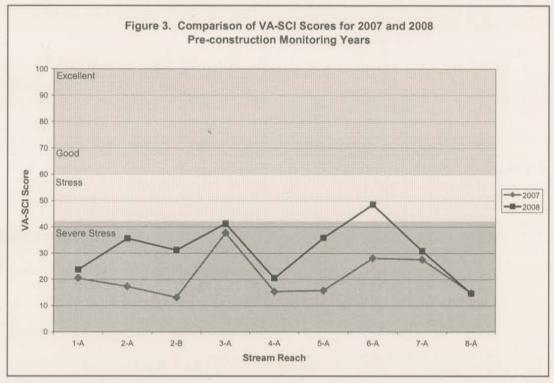
Although 36 taxa are listed in <u>Table 2</u>, Diptera, Gastropoda, and Oligochaeta were not included as part of the total taxa collected within the study area, because individuals were too damaged to identify to the family-level.

San	T	able 2.	Colvi	n Run V	Vatersh	ed Raw	v Data				
	RI GARA					REA	СН	1917/45			
TAXA	1-A	2-A	2-B	3-A	4-A	5-A	6-A	7-A	8-A	9-A	TOTAL
Aeshnidae	-	-	-	2	-	-	-	-		-	2
Asellidae	7.	7.		:=:	-	7.	7	- 5	15	1	1
Calopterygidae	-	1.0	-	2	1	2	2	-	12	-	3
Cambaridae	-	-	100	-	*	-	-	-	2	2	4
Chironomidae	71	18	18	39	60	32	18	4	97	42	399
Coenagrionidae	-	-	-	8	2	7	2	-	- 2	-	8
Corbiculidae	1	-	*	-	-	-	-	-	(4	-	1
Corduliidae	-	1	-	*	-	=	-	-	-	+	1
Crangonyctidae		4	-	35	-	9	15	6	1	-	70
Curculionidae	-	-	-	-	1	_	-	1	1	-	1
Diptera	-	-	- 14	-	-	1	-	5	-	-	6
Diptera Family #1	-	-	-		-	1	-	-	-	196	1
Dixidae	-	-	-		-	-	3	-		-	3
Dolichopodidae	-	-	2	-	_	1	-	-	1	3	5
Dytiscidae		1	-	*	-	-	-	7	-	-	8
Elmidae	-	-	-	11	-			-	-		11
Gastropoda	-		2		2	E	1	-	-	-	3
Gomphidae	-	-		2	-	-	-	-	-	-	2
Hydrachnida	-	-		-		1		-		-	1
Hydrobiidae	-	-	-	-	-	1	80	-	-	-	81
Hydropsychidae	-	-	2	8	5	-	-	-	-	-	15
Isotomidae	-	3	-	-	-	2	3	-	-	2	10
Limnephilidae	-	-	-	-	-	17	+			1	1
Lymnaeidae	6	-	-		-	4	-	- 4	-	-	6
Nemertea	1	14	-	-	-	-	-	-	-	- 2	1
Noctuidae		-	-	-		1	15	18	7,00		1
Oligochaeta	14	54	75	-	2	25	3	18	2	28	221
Philopotamidae	-	-	-	9	-	-	-	-		-	9
Phoridae	2	3	-	-	-:	1	3	3	1	6	19
Physidae	1	3	-	3	4	3	-	(A	-	-	14
Planariidae		1	*	-	-	1	*	26	-	-	28
Psychodidae	-	-	-	-	~	2	1	-	~	-	3
Sphaeridae	8	-	-		1	+	7	3	-	3	22
Tipulidae	2	4	1	2	1	3	9	2	2	1	27
Tubificidae	5	2	-	1	-	2	2	43	4	2	61
Veliidae		-		-	5	-	-	-	-	-	5
Total	111	94	98	122	80	86	145	117	110	91	1054

		THE REAL PROPERTY.	Table 3. 2008 C	olvin Run Watershe	d Biotic Met	ric Scores	State of the Lot	
Reach	Total Taxa	Total EPT Taxa	Percent Ephemeroptera	Percent Plecoptera + Trichoptera (Excluding Hydropsychidae)	Percent Scrapers	Percent Chironomidae	Percent Top Two Dominant	нві
1-A	9	0	0.00	0.00	6.31	63.96	76.58	5.44
2-A	10	0	0.00	0.00	3.19	19.15	76.60	1.95
2-B	5	1	0.00	0.00	0.00	18.37	94.90	1.23
3-A	12	2	0.00	7.38	11.48	31.97	60.66	3.89
4-A	9	1	0.00	0.00	5.00	75.00	87.50	5.85
5-A	14	0	0.00	0.00	4.65	37.21	66.28	3.03
6-A	10	0	0.00	0.00	55.17	12.41	67.59	3.11
7-A	8	0	0.00	0.00	0.00	3.42	58.97	6.27
8-A	7	0	0.00	0.00	0.00	88.18	91.82	5.80
9-A	10	1	0.00	1.10	0.00	46.15	76.92	3.53

Table	4. 2008 C	olvin Run	Watershe	ed Biotic	Metric a		Weighting	and VA	SCI	
METRIC	1-A	2-A	2-B	3-A	4-A	5-A	6-A	7-A	8-A	9-A
Total Tayla	40.91							36.36	31.82	
Total Taxa		45.45	22.73	54.55	40.91	63.64	45.45			45.45
EPT Taxa	0.00	0.00	9.09	18.18	9.09	0.00	0.00	0.00	0.00	9.09
Percent Ephemeroptera	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent Plecoptera + Trichoptera (Excluding Hydropsychidae)	0.00	0.00	0.00	20.72	0.00	0.00	0.00	0.00	0.00	3.09
Percent										
Scrapers	12.22	6.19	0.00	22.24	9.69	9.01	106.92	0.00	0.00	0.00
Percent Chironomidae	36.04	80.85	81.63	68.03	25.00	62.79	87.59	96.58	11.82	53.85
Percent Top										
Two Dominant	33.85	33.82	7.37	56.86	18.06	48.73	46.84	59.29	11.82	33.35
HBI	67.04	118.43	128.90	89.80	61.03	102.43	101.32	54.80	61.76	95.18
VA-SCI Numerical Score	23.76	35.59	31.22	41.30	20.47	35.82	48.52	30.88	14.65	30.00
Average VA- SCI Numerical Score	31.36									
Average VA- SCI Narrative Score	Severe Stress									

These results are similar to the 2007 monitoring, except for Reach 6-A, which went from "Severe Stress" in 2007 to "Stress" in 2008 (Figure 3, below). However, since 2007, almost all of the VA-SCI scores have increased. The lower VA-SCI scores in 2007 may be attributed to natural variability in both abiotic (e.g., amount of precipitation) and biotic conditions, rather than benthic macroinvertebrate recovery, as no restoration activities or other water quality enhancements are known to have occurred within the study area prior to the 2008 monitoring.



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), except for Reach 7-A, as depicted in the Land Cover Map (Exhibit 8), and Table 5, below. 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).

	1		
REACH	Watershed Acres	Percent Impervious	VA- SCI
1-A	156	22	23.76
2-A	176	24	35.59
2-B	100	26	31.22
3-A	704	43	41.30
4-A	245	25	20.47
5-A	75	28	35.82
6-A	- 5.7	23	48.52
7-A	44	1.3	30.88
8-A	48	29	14.65
9-A	67	22	30.00
Total	1620.7	-	-

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, waterfowl and faulty sewer lines. 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 and oligochaete worms as the dominant taxa. However, because the proposed stream restoration should result in an improvement of in-stream habitat and water quality, there should also be an improvement in the benthic macroinvertebrate community over subsequent monitoring years.

VI. 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 benthic macroinvertebrate community of the streams are primarily in "Severe Stress". The low VA-SCI and habitat scores are likely due to several confounding abiotic factors, including channel alteration, high sediment deposition, bank instability, lack of vegetative protection along the stream banks, lack of epifaunal substrate/available cover, highly impervious land cover, and high nutrient, toxicant and sediment input from adjacent land use.

VII. Limitations

This study is based on examination of the conditions on the site at the time of our review and does not address conditions in the future. Such conditions may change over time and will be

addressed in subsequent monitoring reports. Our biological monitoring report has been prepared in accordance with generally accepted guidelines for the conduct of such evaluations. We make no other warranties, either expressed or implied, and our report is not a recommendation to buy, sell or develop the property.

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

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

WETLAND STUDIES AND SOLUTIONS, INC.

Mulantout for

Beth Clements

Environmental Technician

Sean D. Sipple, CT, PWS, PWD

Environmental Scientist

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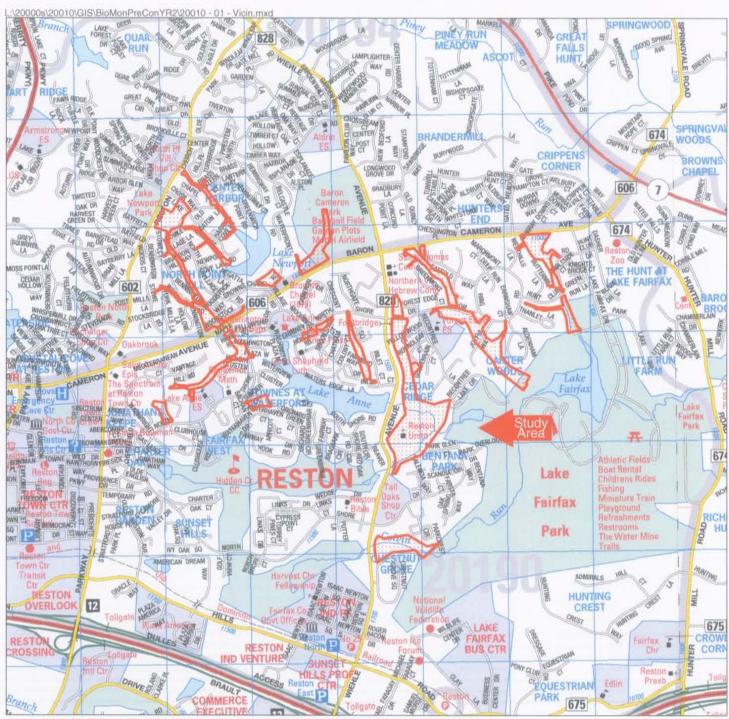
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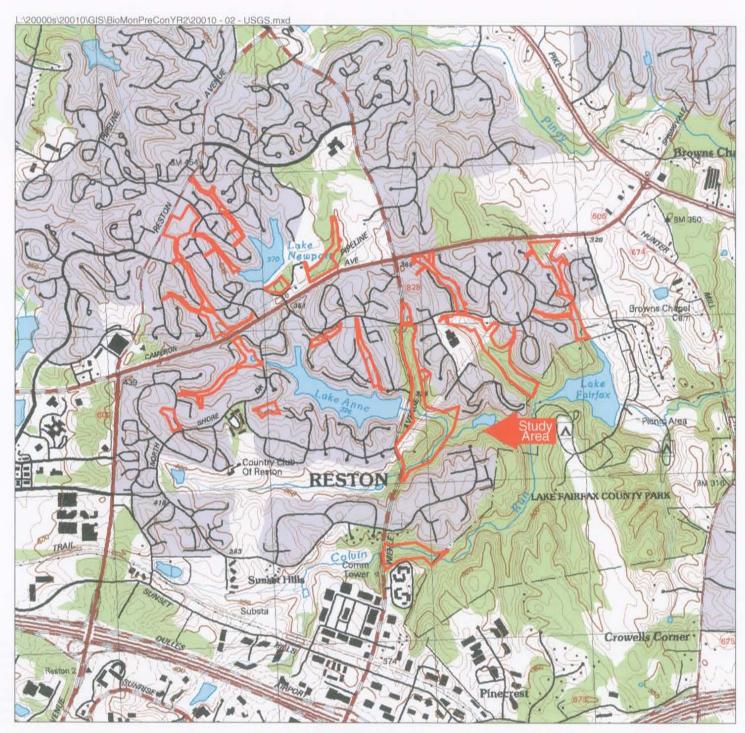


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Vicinity Map Colvin Run WSSI #20010 Scale: 1" = 2000'





USGS Quad Map Vienna, VA-MD 1994 Colvin Run WSSI #20010 Scale: 1" = 2000'

Latitude: 38°58'00" N Longitude: 77°20'06" W

Hydrologic Unit Code (HUC): 020700081004

Stream Class: III

Name of Watershed:Colvin Run





Boundary and Topo Source:



 Looking north-northwest (upstream) at Reach 1-A of an unnamed tributary of Lake Fairfax in the eastern portion of the study area.



Looking southeast (downstream) at Reach 2-A of an unnamed tributary of Lake Fairfax in the eastern portion of the study area.



3. Looking west (upstream) at Reach 3-A, Colvin Run, in the southern portion of the study area.



 Looking southwest (downstream) at Reach 4-A of an unnamed tributary of Colvin Run in the central portion of the study area.



5. Looking north (upstream) at Reach 5-A of an unnamed tributary of Colvin Run in the central portion of the study area.



 Looking northeast (upstream) at Reach 6-A of an unnamed tributary of Colvin Run in the central portion of the study area.



 Looking south-southeast (downstream) at Reach 2-B of an unnamed tributary of Colvin Run in the eastern portion of the study area.



 Looking northeast (upstream) at Reach 7-A of an unnamed tributary of Lake Anne in the northwestern portion of the study area.



 Looking southwest (upstream) at Reach 8-A, an unnamed tributary of Lake Anne in the western portion of the study area.



 Looking west-southwest (upstream) at Reach 9-A, an unnamed tributary of Lake Anne in the western portion of the study area.

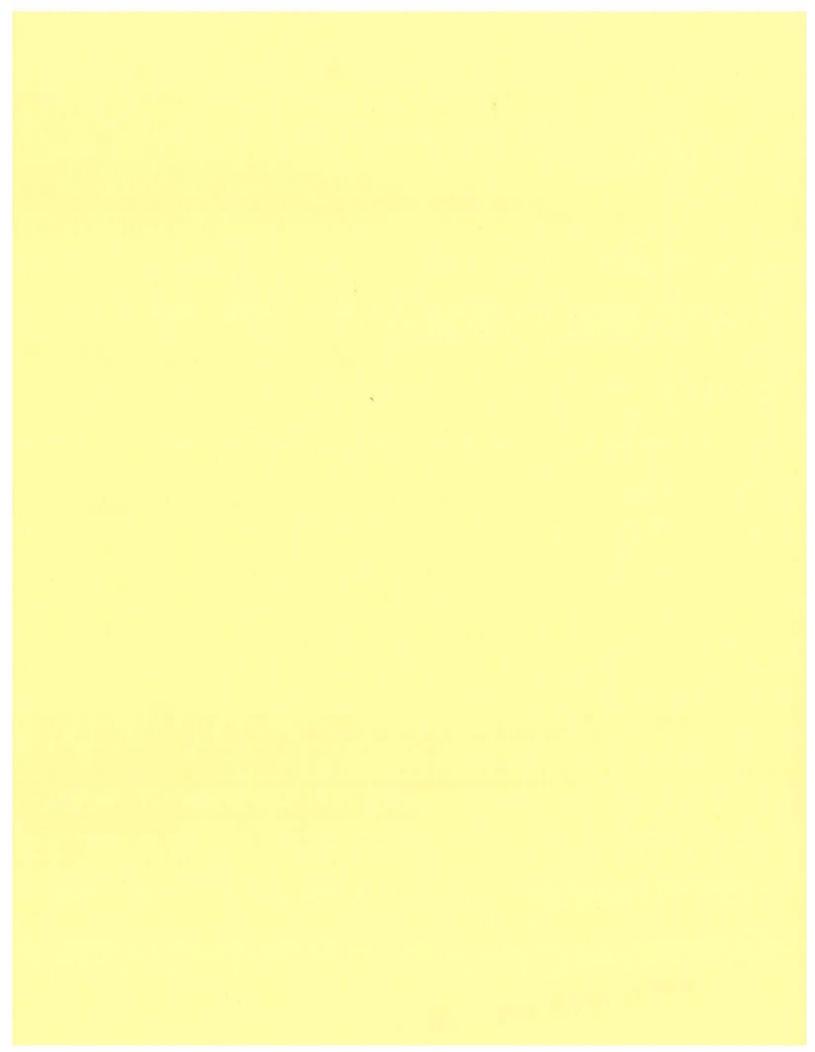


EXHIBIT 5: HABITAT ASSESSMENT FIELD DATA SHEET - SUMMARY WORKSHEET

Project Name and WSSI Number: Northern Virginia Stream Restoration Bank: Colvin Run (WSSI # 20010) Date: 2/10/08-2/10/08 HUC: 02070008 Postrestoration Stream ID: Colvin Run and Unnamed Tributaries to Colvin Run Prerestoration Evaluators: SDS/LS/JVH/BC Assessment Period:

						Condition	indition Category							Percent of		
Assessme	Assessment Reach		Embedded-		Sediment		Channel	Frequency of	Bank	Vegetation	Riparian	TOTAL	Narrative	Best Possible	Reach	Stream
Name	ше	Substrate	ness	Velocity	Depostion	Flow Status	Atteration	Riffles	Stability	Protection*	Zone*	SCORE	Rating	Score	Length	Type
Stream 1	1-A	Marginal	Marginal	Suboptimal	Poor	Suboptimal	Optimal	Marginal	Suboptimal	Marginal	Suboptimal	112	Poor	56	300	R3
Stream 2	2-A	Suboptimal	Suboptimal Suboptimal	Optimal	Marginal	Marginal	Optimal	Suboptimal	Marginal	Marginal	Optimal	119	Fair	09	300	R3
	2-B	Marginal	Suboptimal	Marginal	Marginal	Marginal	Marginal	Poor	Suboptimal	Optimal	Suboptimal	105	Poor	53	300	H3
Stream 3	3-A	Suboptimal	Suboptimal	Suboptimal Suboptimal Suboptimal Suboptimal	Suboptimal	Marginal	Optimal	Optimal	Marginal	Optimal	Optimal	139	Fair	70	300	H3
Stream 4	4-A	Marginal	Suboptimal	Suboptimal Suboptimal Suboptimal	Suboptimal	200	Optimal	Suboptimal	Poor	Optimal	Optimal	131	Fair	99	300	R3
Stream 5	5-A	Marginal	Suboptimal	Suboptimal Suboptimal Marginal	Marginal	Marginal	Optimal	Optimal	Marginal	Optimal	Optimal	133	Fair	29	300	R3
Stream 6	6-A	Marginal	Marginal	Marginal	Marginal	Marginal	Optimal	Poor	Poor	Suboptimal	Optimal	103	Poor	52	300	R4
Stream 7	7-A	Poor	Marginal	Marginal Suboptimal Marginal		Suboptimal	Optimal	Suboptimal	Marginal	Marginal	Optimal	117	Poor	59	300	H3
Stream 8	8-A	Poor	Suboptimal Marginal	Marginal	Suboptimal	Marginal	Poor	Marginal	Suboptimal	Marginal	Optimal	89	Poor	45	300	R4
Stream 9	9-A	Suboptimal	Suboptimal	Suboptimal Suboptimal Suboptimal	Marginal	Marginal	Optimal	Suboptimal	Marginal	Marginaf	Optimal	117	Poor	59	300	B4
												Total			3,000	

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

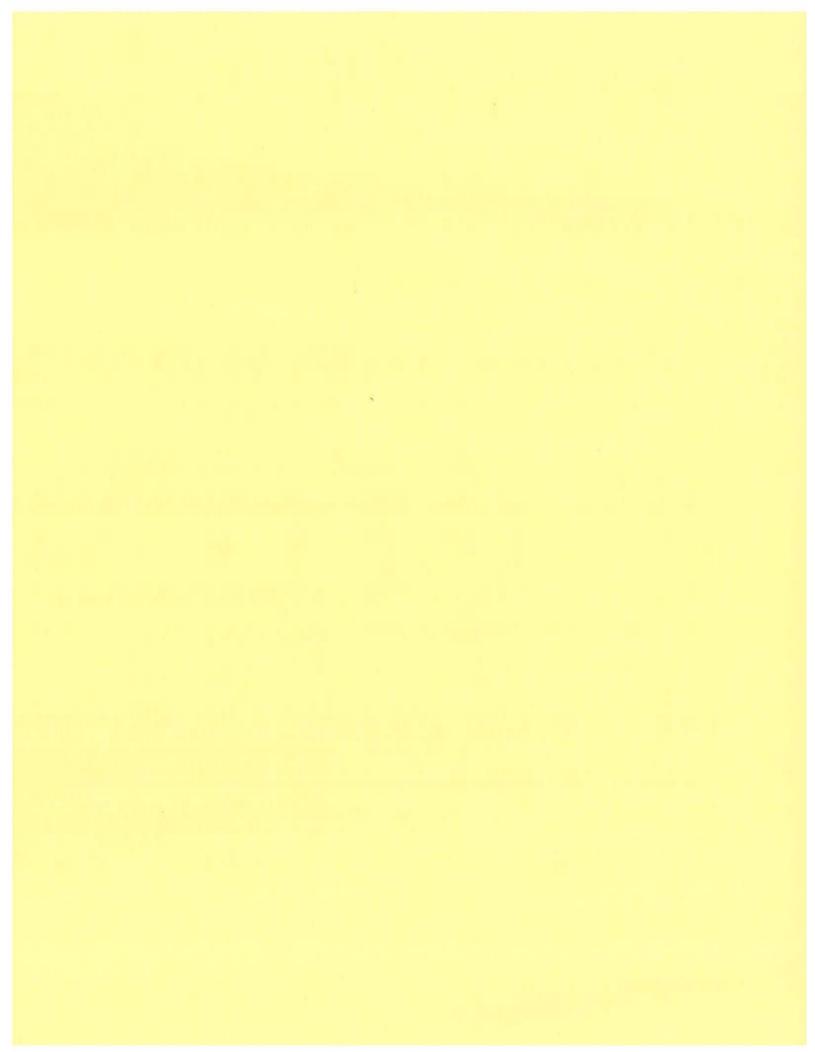




Project #	Site	Cowardin	River Basin	Date	Time
20010	NOVA Stream Bank	R3	Hiver basin	3/12/2008	12:04PN
Invest	igators	HUC	Potomac	Locality	
LS/B0	C/JVH	02070008	Potomac	Fairfax Coun	ty
Re	ach	D.A. (Acres)	Reach Length (LF)	Order	
1	-A	156	300	1	
Latitude	Longitude		Stream Nam	ie	
38°59'9"	77°19'11"		Unnamed Tributary to	Colvin Run	
		Con	dition Category		
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Score
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	10
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	7
3. Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	13
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	4
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	11
A STREET, STRE		Total Score			45



Project #	Site	Cowardin	B1	Date	Time
20010	NOVA Stream Bank	R3	River Basin	3/12/2008	12:04PN
Invest	igators	HUC	Determine	Locality	
LS/B	C/JVH	02070008	Potomac	Fairfax Count	V
Re	ach	D.A. (Acres)	Reach Length (LF)	Order	
1	-A	156	300	1	
Latitude	Longitude		Stream Nam	ne	
38°59'9"	77°19'11"		Unnamed Tributary to	Colvin Run	
THE RESIDENCE OF THE PARTY OF T		Con	dition Category		
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Score
6. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
7. Frequency of Riffles	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key, in streams where riffles are continuous, placement of boulders or other large, natural 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.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	7
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	7
9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	5
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	5
10. Riparian Vegetative Zone Width (score each pank riparian zone)	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	5
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
		Total Score			112

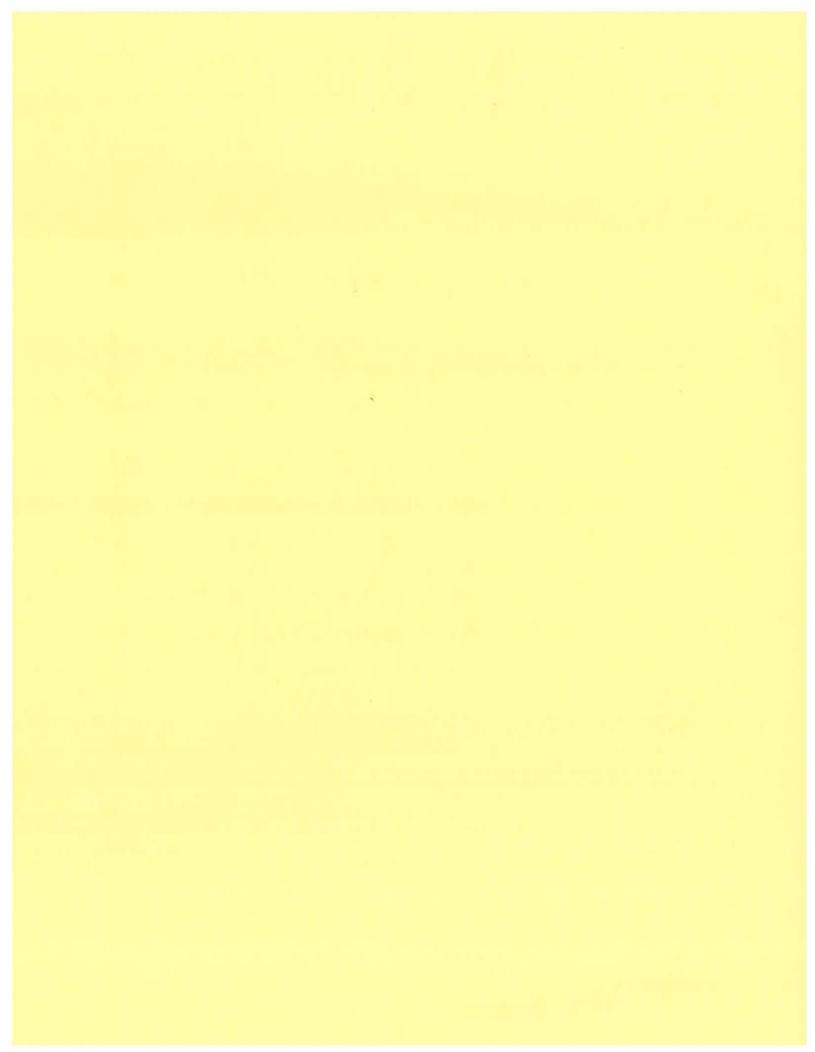




Project #	Site	Cowardin	Di	Date	Time
20010	NOVA Stream Bank	R3	River Basin	3/11/2008	3:00PN
Invest	igators	HUC	- Control Control	Locality	
	C/JVH	02070008	Potomac	Fairfax Coun	tv
The second secon	ach	D.A. (Acres)	Reach Length (LF)	Order	-,
	-A	174	300	1	
Latitude	Longitude		Stream Nam	e	
38°57'58"	77°19'27"		Unnamed Tributary to		
Habitat Parameter	Outlowal		dition Category	D.	0
	Optimal	Suboptimal	Marginal	Poor	Score
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	13
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	12
3. Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	16
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar tormation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	7
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
	NEW YORK OF THE PARTY OF THE PA	Total Score			56



Project #	Site	Cowardin		Date	Time
20010	NOVA Stream Bank	R3	River Basin	3/11/2008	3:00PN
	igators	HUC		Locality	0,007
	C/JVH	02070008	Potomac	Fairfax Count	v
	ach	D.A. (Acres)	Reach Length (LF)	Order	
2	-A	174	300	1	
Latitude	Longitude		Stream Nam	ne	
38°57'58"	77°19'27"		Unnamed Tributary to	Colvin Run	
		Con	dition Category		
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Score
6. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
7. Frequency of Riffles	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	12
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	3
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	3
9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allo	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	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	3
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	3
10. Riparian Vegetative Zone Width (score each pank riparian zone)	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, tawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	9
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
		Total Score			119

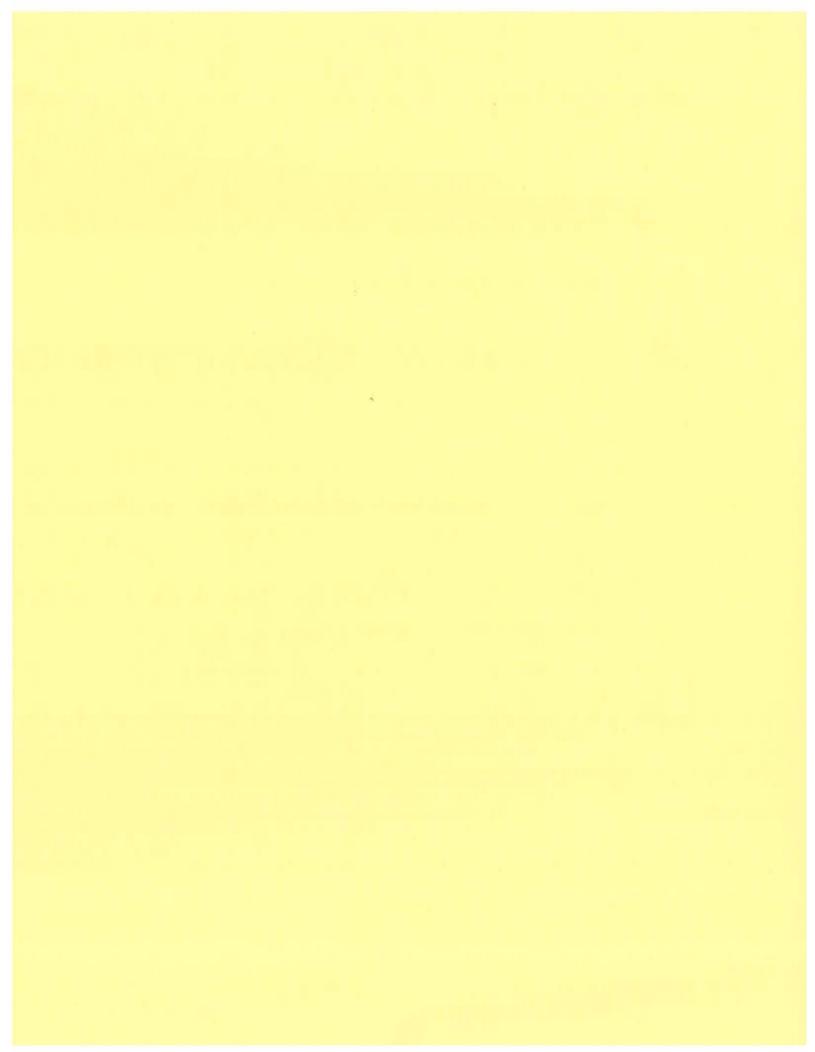




Project #	Site	Cowardin		Date	Time
20010	NOVA Stream Bank	R4	River Basin	3/12/2008	10:40AN
Invest	igators	HUC	1247010000000000	Locality	10110111
	C/JVH	02070008	Potomac	Fairfax Count	v
	ach	D.A. (Acres)	Reach Length (LF)	Order	
2-	-B	100	300	1	
Latitude	Longitude		Stream Nam	ie.	The second
38°58'14"	77°19'44"		Unnamed Tributary to		
VICE SEV 2004		Con	dition Category		
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Score
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potentiaf; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	7
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	13
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	7
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	6
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	9
		Total Score			42



Project # Site		Cowardin	River Basin	Date	Time
20010	NOVA Stream Bank	R4	Hiver Basin	3/12/2008	10:40AN
Investigators		HUC	Potomac	Locality	THE PARTY
LS/BC/JVH		02070008	Potomac	Fairfax Coun	ty
Reach		D.A. (Acres)	Reach Length (LF)	Order	
2-B		100	300	1	
Latitude	Longitude		Stream Nam		
38°58'14"	77°19'44"		Unnamed Tributary to	Colvin Run	
		Con	dition Category		
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Score
6. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
7. Frequency of Riffles	Occurrence of riffles relatively frequent, ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat, distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	5
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion,	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	8
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	8
9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	9
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	9
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally,	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	8
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	8
	THE RESERVE OF THE PARTY OF THE	Total Score	PERSONAL PROPERTY.		105

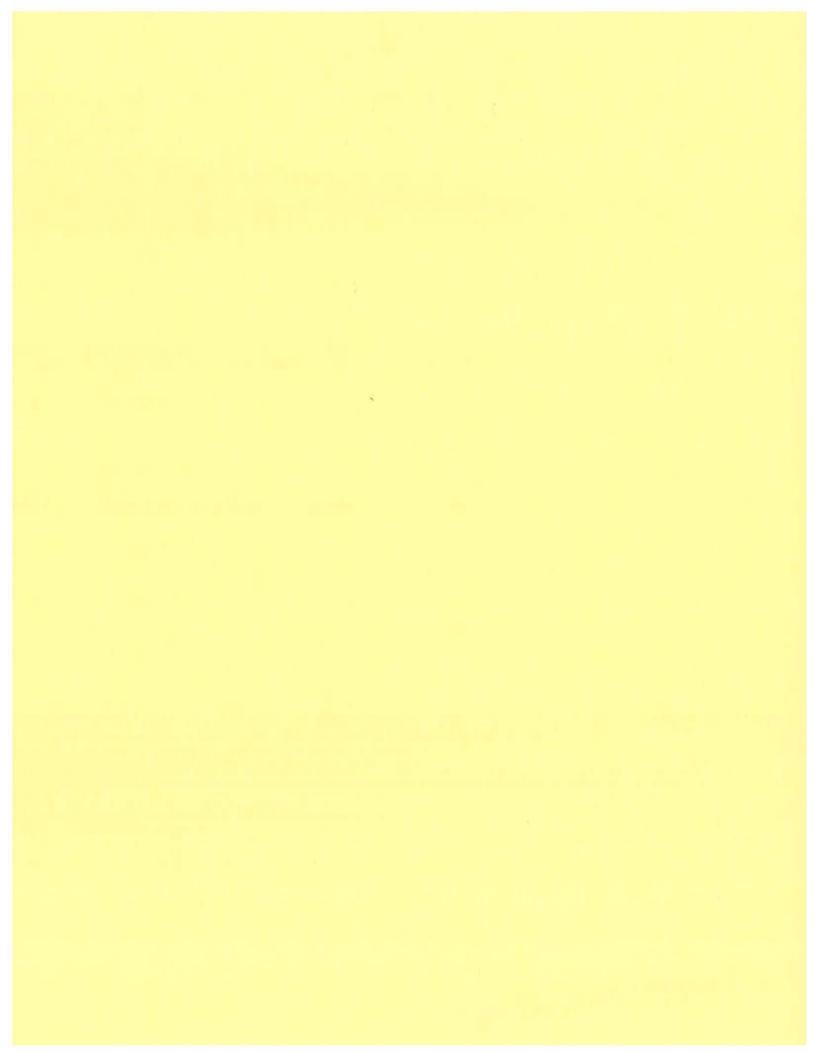




Project #	Site	Cowardin	Diver De de	Date	Time
20010	NOVA Stream Bank	R3	River Basin	3/10/2008	2:00PN
Invest	igators	HUC	A CARLON CONTROL	Locality	
SDS/I	LS/BC	02070008	Potomac	Fairfax Coun	tv
Re	ach	D.A. (Acres)	Reach Length (LF)	Order	
3-A		703	300	2	
Latitude	Longitude		Stream Nam		713111
38°57'23"	77°19'51"		Colvin Run		
		0	-Uni		
Habitat Parameter	Outlood	- Manager - Mana	dition Category	Dec.	O w waren
	Optimal	Suboptimal	Marginal	Poor	Score
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	13
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	11
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	14
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition,	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	11
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
	THE RESERVE OF THE PERSON NAMED IN COLUMN 1	Total Score	THE RESERVE OF	THE RESERVE OF THE PERSON NAMED IN	57



Project #	Site	Cowardin	River Basin	Date	Time
20010	NOVA Stream Bank	R3	Hiver basin	3/10/2008	2:00PN
	igators	HUC	Potomac	Locality	
SDS/	LS/BC	02070008	Fotomac	Fairfax Count	У
Re	ach	D.A. (Acres)	Reach Length (LF)	Order	
3	-A	703	300	2	
Latitude	Longitude		Stream Nam		
38°57'23"	77°19'51"		Colvin Run		
		Con	dition Category		
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Score
6. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
7. Frequency of Riffles	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. in streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat, distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	16
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	3
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	3
9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
		Total Score			139

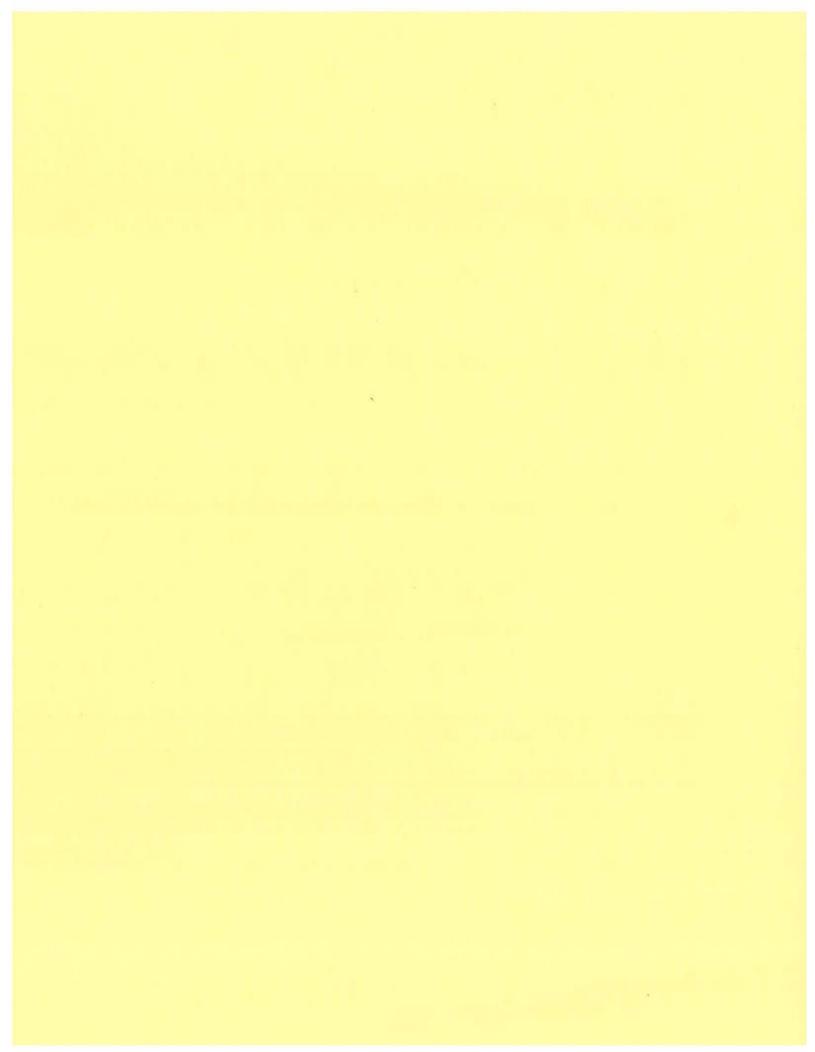




Project #	Site	Cowardin		Date	Time
20010	NOVA Stream Bank	R3	River Basin	3/10/2008	3:41PN
	igators	HUC	Mark Control of the C	Locality	0.111
The state of the s	LS/BC	02070008	Potomac	Fairfax Count	v
	ach	D.A. (Acres)	Reach Length (LF)	Order	y
	-A	245	300	1	
Latitude	Longitude		Stream Nam		
38°57'43"	77°19'53"		Unnamed Tributary to		
00.07.10	17 10 00			OUNTITION	
Habitat Parameter			dition Category		
	Optimal	Suboptimal	Marginal	Poor	Score
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not translent).	40-70% mix of stable habitat; well suited for full colonization potentiaf; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	10
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	11
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	12
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	11
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
		Total Score			52



Project #	Site	Cowardin	River Basin	Date	Time
20010	NOVA Stream Bank	R3	Hiver Basin	3/10/2008	3:41PN
Investi	igators	HUC	Determos	Locality	
SDS/I	LS/BC	02070008	Potomac	Fairfax Count	У
Rea	ach	D.A. (Acres)	Reach Length (LF)	Order	
4-	-A	245	300	1	
Latitude	Longitude		Stream Nam		
38°57'43"	77°19'53"		Unnamed Tributary to	Colvin Run	
		Con	dition Category		
abitat Parameter	Optimal	Suboptimal	Marginal	Poor	Score
6. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
7. Frequency of Riffles	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	15
B. Bank Stability score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	2
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	2
9. Vegetation rotection (score ach bank) Note: Petermine left or the side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
10. Riparian /egetative Zone lidth (score each nk riparian zone)	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
		Total Score			131

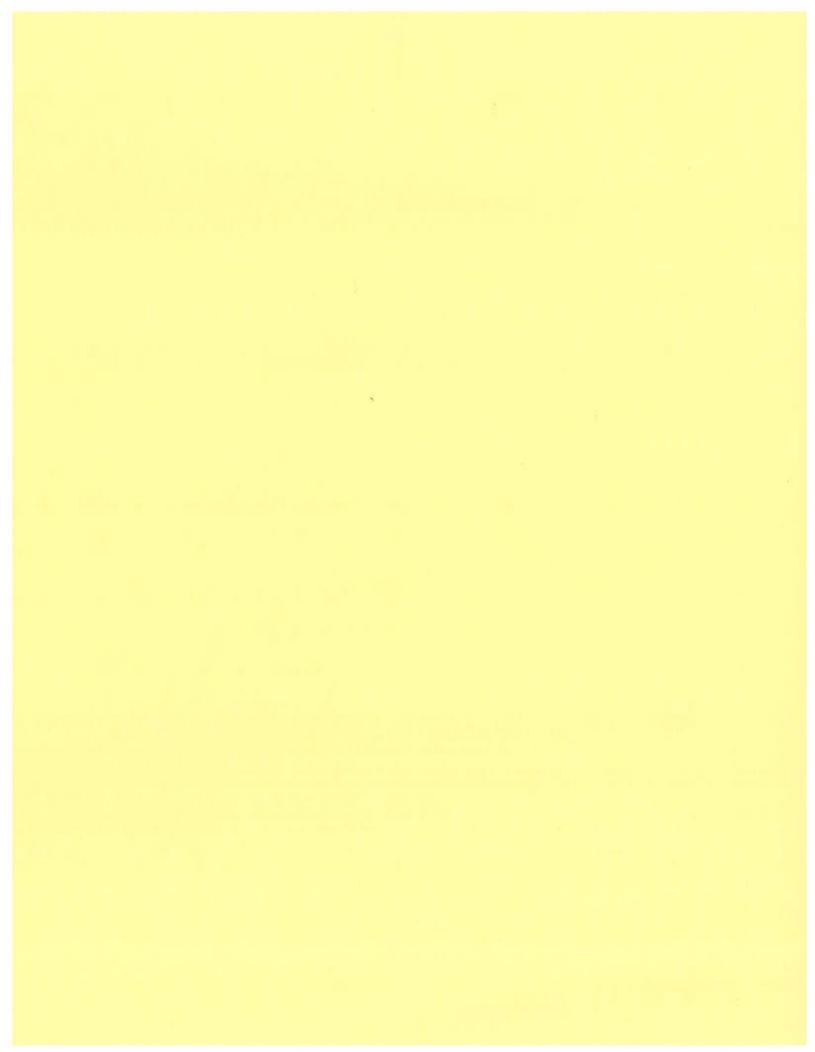




Project #	Site	Cowardin	River Basin	Date	Time
20010	NOVA Stream Bank	R3	Hiver Basin	3/11/2008	10:30AN
Invest	igators	HUC	Determen	Locality	
LS/B0	C/JVH	02070008	02070008 Potomac		ty
Re	ach	D.A. (Acres)	Reach Length (LF)	Order	
5-A		75	300	2	
Latitude	Longitude		Stream Nam		
38°57'55"	77°19'56"		Unnamed Tributary to	Colvin Run	
Habitat Payamatay Condition Category					
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Score
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	10
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	13
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	14
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on oid and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	6
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
		Total Score	No. of the last of		51



Project #	Site	Cowardin		Date	Time
20010	NOVA Stream Bank	R3	River Basin	3/11/2008	10:30AN
Invest	igators	HUC	0.4	Locality	
	C/JVH	02070008	Potomac	Fairfax Count	V
Re	ach	D.A. (Acres)	Reach Length (LF)	Order	
5	-A	75	300	2	
Latitude	Longitude		Stream Nam	ie	
38°57'55"	77°19'56"		Unnamed Tributary to	Colvin Run	
29 3 3 3 5 5 1 3 5 5 5		Con	dition Category		
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Score
6. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	20
7. Frequency of Riffles	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	16
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank fallure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over, 5-30% of bank in reach has areas of erosion,	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; *raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	3
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	3
9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
10. Riparian Vegetative Zone Width (score each pank riparian zone)	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
		Total Score			-

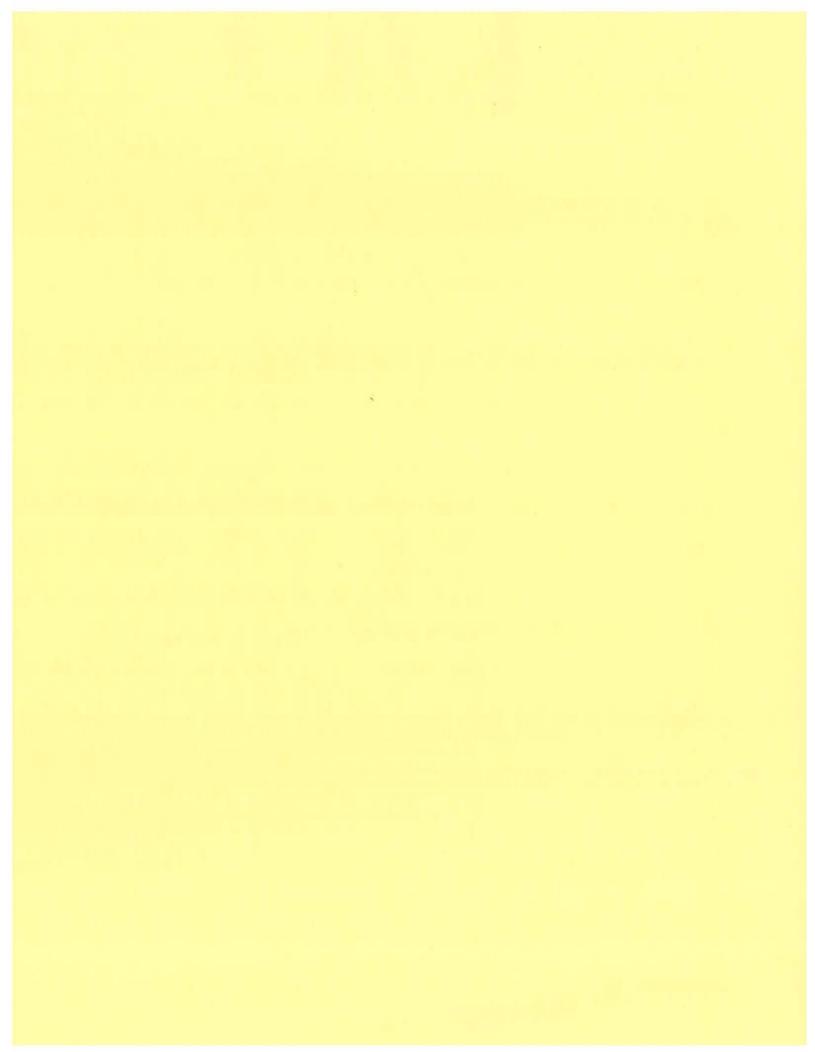




Investiga LS/BC/J Reacl 6-A Latitude 38°57'58" Habitat Parameter	JVH	R4 HUC 02070008 D.A. (Acres) 6	Potomac Reach Length (LF)	3/11/2008 Locality Fairfax County	1:15PM
LS/BC/J Reacl 6-A Latitude 38°57'58"	JVH h Longitude	02070008 D.A. (Acres)	Reach Length (LF)	Locality Fairfax County	
LS/BC/J Reacl 6-A Latitude 38°57'58"	JVH h Longitude	02070008 D.A. (Acres)	Reach Length (LF)	Fairfax County	
Reacl 6-A Latitude 38°57'58" Habitat Parameter	Longitude	D.A. (Acres)			V
6-A Latitude 38°57'58" Habitat Parameter	Longitude			Order	
Latitude 38°57'58" Habitat Parameter	Longitude		300	1	
38°57'58" Habitat Parameter			Stream Nam		
Habitat Parameter	77.70.00		Unnamed Tributary to		
				0.0111111011	
			dition Category		
Gr	Optimal	Suboptimal	Marginal	Poor	Score
1. Epifaunal Substrate/ Available Cover	freater than 70% of substrate favorable for epifaunal olionization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at tage to allow full colonization cotential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score 2	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	7
2. Embeddedness par	Gravel, cobble, and boulder articles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score 2	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	9
Velocity/Depth		Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score 2	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	10
4. Sediment Isl	Little or no enlargement of slands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score 2	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
5. Channel Flow	Water reaches base of both lower banks, and minimal mount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score 2	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
THE RESERVE OF THE PARTY OF THE		Total Score			42



Project #	Site	Cowardin	Divers Dente	Date	Time
20010	NOVA Stream Bank	R4	River Basin	3/11/2008	1:15PN
Invest	igators	HUC	Dotomos	Locality	
	C/JVH	02070008	Potomac	Fairfax Count	У
Re	ach	D.A. (Acres)	Reach Length (LF)	Order	
6	-A	6	300	1	
Latitude	Longitude		Stream Nam	ie	
38°57'58"	77°19'55"		Unnamed Tributary to	Colvin Run	
NR A (A) 20 - 0		Con	dition Category		
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Score
6. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	19
7. Frequency of Riffles	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	5
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; *raw* areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	1
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	1
9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	6
10. Riparian Vegetative Zone Width (score each pank riparian zone)	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally,	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	9
		Total Score			103

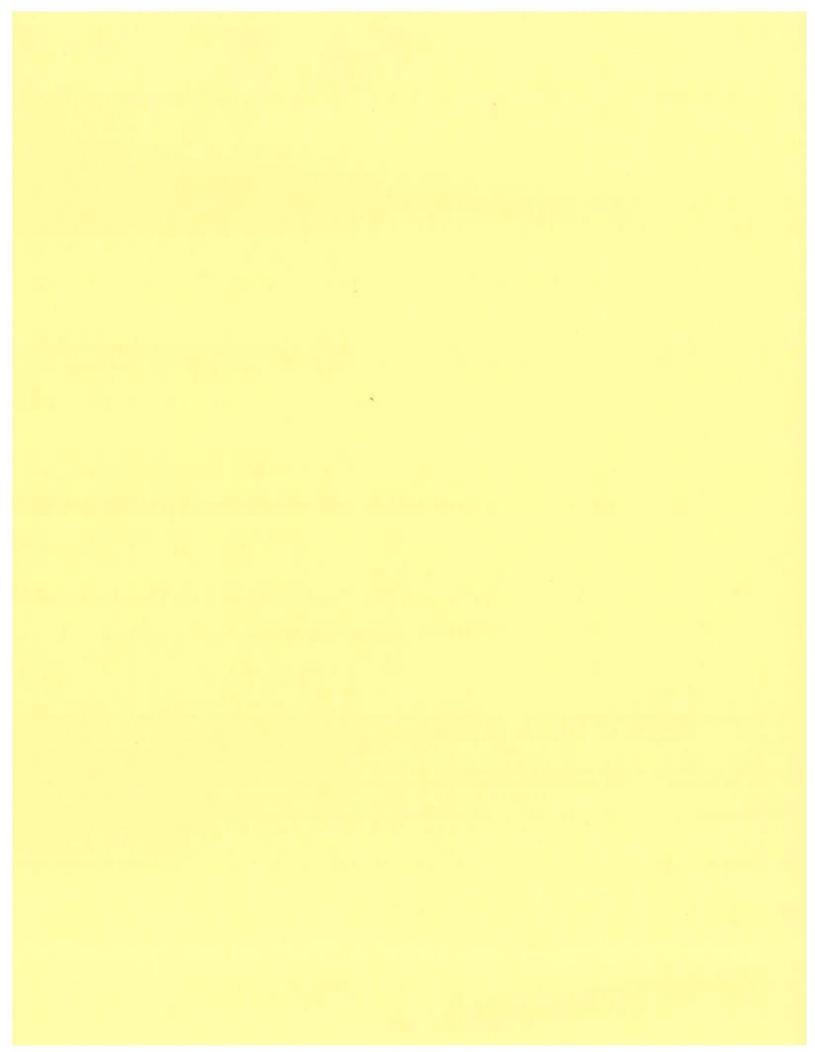




Project #	Site	Cowardin	Diver De la	Date	Time
20010	NOVA Stream Bank	R3	River Basin	3/12/2008	2:45PN
Invest	igators	HUC	D 1	Locality	
LS/B0	C/JVH	02070008	Potomac	Fairfax Coun	tv
Re	ach	D.A. (Acres)	Reach Length (LF)	Order	
7	-A	44	300	1	
Latitude	Longitude		Stream Nam	10	
38°58'22"	77°20'21"		Unnamed Tributary to	Colvin Run	
		0	distance of the same		
Habitat Parameter	Ontimal		dition Category	Dear	0
	Optimal	Suboptimal	Marginal	Poor	Score
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	5
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	13
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	10
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	14
Manager Manager		Total Score			50



Project #	Site	Cowardin	Diver Deste	Date	Time
20010	NOVA Stream Bank	R3	River Basin	3/11/2008	2:45PN
Invest	igators	HUC	Determen	Locality	
LS/B	C/JVH	02070008	Potomac	Fairfax Count	У
Re	ach	D.A. (Acres)	Reach Length (LF)	Order	
7	-A	44	300	1	
Latitude	Longitude		Stream Nam	ie	
38°58'22"	77°20'21"		Unnamed Tributary to	Colvin Run	
		Can	dition Cotomoni		
abitat Parameter	Optimal	Suboptimal	dition Category Marginal	Poor	Score
	Optimal	Suboptillai	iviai giriai	POOL	30016
6. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	17
7. Frequency of Riffles	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key, in streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat: distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	14
3. Bank Stability score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	4
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	4
9. Vegetation Protection (score each bank) Note: Determine left or ght side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	5
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	5
10. Riparian Vegetative Zone /idth (score each ink riparian zone)	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	8
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
		Total Score			117

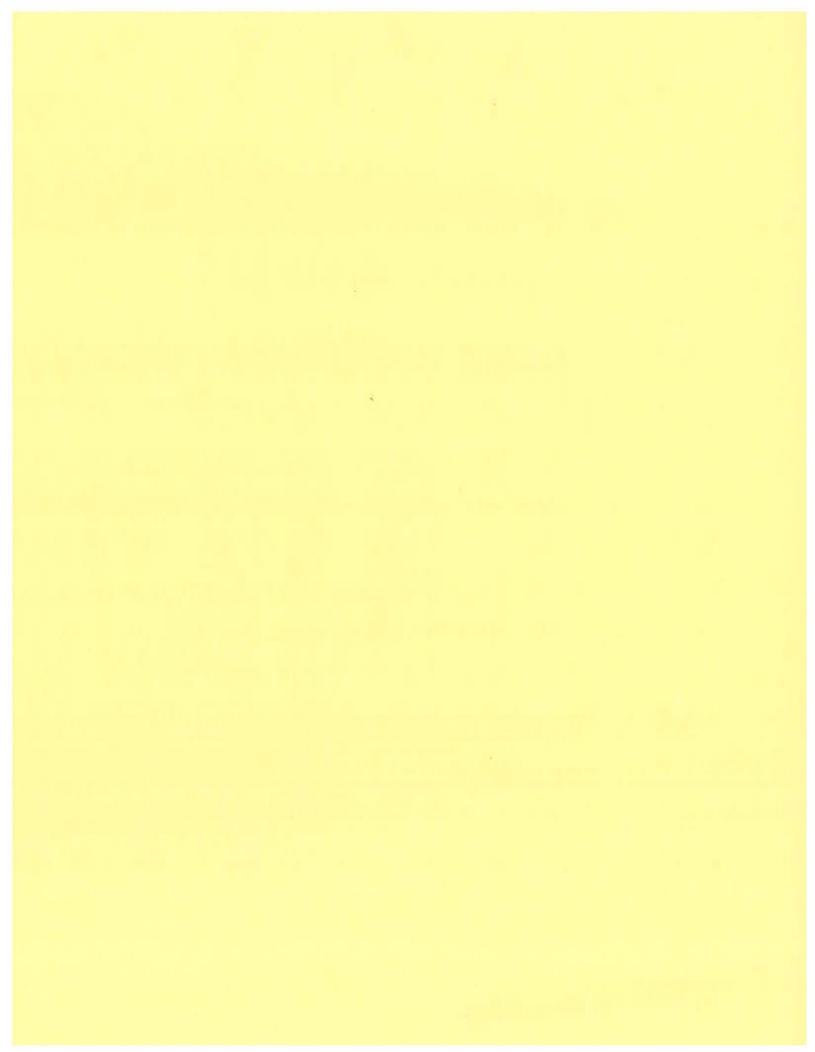




Project #	Site	Cowardin	The state of the s	Date	Time
20010	NOVA Stream Bank	R4	River Basin	3/12/2008	4:07PN
	igators	HUC		Locality	4.07 F IV
	C/JVH	02070008	Potomac	Fairfax Count	
	ach	D.A. (Acres)	Reach Length (LF)	Order	
	-A	48	300	2	
Latitude	Longitude	40	Stream Nam		
38°58'1"	77°20'44"		Unnamed Tributary to		
00 00 1	11 20 11		Official for thousand to	CONTITUTION	
Habitat Parameter		Con	dition Category		
Traditat Faramotor	Optimal	Suboptimal	Marginal	Poor	Score
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover, mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	5
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	12
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	6
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	11
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	7
THE REAL PROPERTY.		Total Score	A DESCRIPTION OF THE PARTY		41



Project #	Site	Cowardin	Discours and the second	Date	Time
20010	NOVA Stream Bank	R4	River Basin	3/12/2008	4:07PN
	igators	HUC	P. 4	Locality	
	C/JVH	02070008	Potomac	Fairfax Count	V
	ach	D.A. (Acres)	Reach Length (LF)	Order	
	-A	48	300	2	
Latitude	Longitude		Stream Nam		
38°58'1"	77°20'44"		Unnamed Tributary to		
	77 20 11			O O I VIII Y TIGHT	
Habitat Parameter	0.45-1		dition Category		0
	Optimal	Suboptimal	Marginal	Poor	Score
6. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	0
7. Frequency of Riffles	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key, in streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffies; poor habitat; distance between riffies divided by the width of the stream is a ratio of >25.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	6
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	7
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	5
9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	1244
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	5
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	5
10. Riparian Vegetative Zone Width (score each pank riparian zone)	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	10
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
		Total Score			89
		rotal obule			03





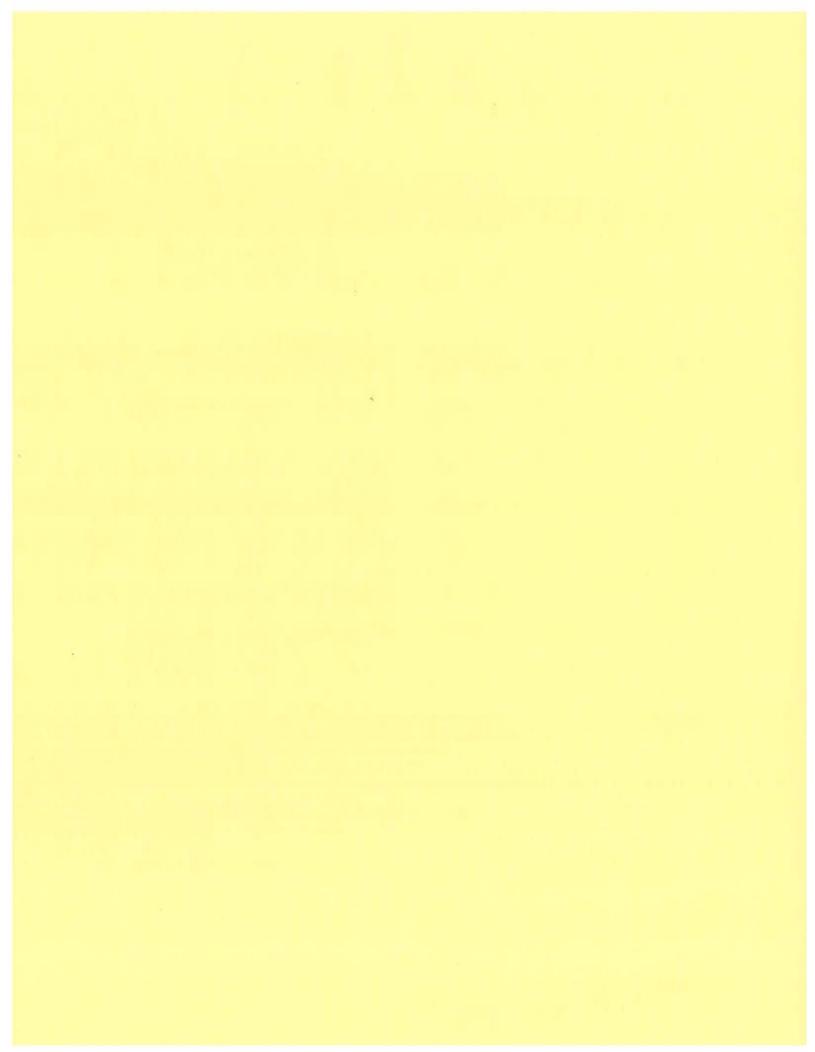
Project #	Site	Cowardin	D1	Date	Time					
20010	NOVA Stream Bank	R4	River Basin	3/12/2008	5:06PN					
Invest	igators	HUC		Locality						
	C/JVH	02070008	Potomac	Fairfax County						
	ach	D.A. (Acres)	Reach Length (LF)	Order						
	-A	67								
Latitude	Longitude		Stream Nam	e						
38°58'13"	77°20'49"		Unnamed Tributary to							
Habitat Parameter			dition Category	-	-					
	Optimal	Suboptimal	Marginal	Poor	Score					
1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epitaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble, or other stable habitat and at stage to allow full colonization potential (i.e. snags/logs that are not new fall and not transient).	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintainance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization.	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.						
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	13					
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by line sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment						
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	12					
Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow- shallow, fast-deep, fast shallow)(slow is <0.3m/s, deep is >0.5 m)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow- shallow are missing, score low)	Dominated by 1 velocity/depth regime (usually slow-deep).						
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	14					
4. Sediment Deposition	Little or no enlargement of islands or point bars and <5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand, or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand, or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.						
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	7					
5. Channel Flow status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the availible channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the availible channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.						
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	8					
		Total Score			54					



Project #	Site	Cowardin	River Basin	Date	Time
20010	NOVA Stream Bank	R4	Hiver Basin	3/12/2008	5:06PN
Invest	igators	HUC	Potomac	Locality	THE ST
	C/JVH	02070008	Potomac	Fairfax County	y
Re	ach	D.A. (Acres)	Reach Length (LF)	Order	
9	-A	67	300	1	
Latitude	Longitude		Stream Nam		
38°58'13"	77°20'49"		Unnamed Tributary to	Colvin Run	
II-LU I D		Con	dition Category		
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor	Score
6. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e. dredging, may be present, but recent channelization is not present.	Channeliztion may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	18
7. Frequency of Riffles	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distances between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.	
Score	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0	13
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank fallure 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; 30-80% of bank reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60- 100% of bank has erosional scars.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	4
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	4
9. Vegetation Protection (score each bank) Note: Determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or non-woody macrophytes; vegetation disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	3
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	3
10. Riparian Vegetative Zone Width (score each pank riparian zone)	Width of riparian zone >18 meters; human activities (i.e. parking lots, roadbeds, clear- cuts, lawns, or crops) have not (mpacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riperian zone <6 meters; little or no riparian vegetation due to human activities.	
Score Left Bank	10 9	8 7 6	5 4 3	2 1 0	8
Score Right Bank	10 9	8 7 6	5 4 3	2 1 0	10
		Total Score			117

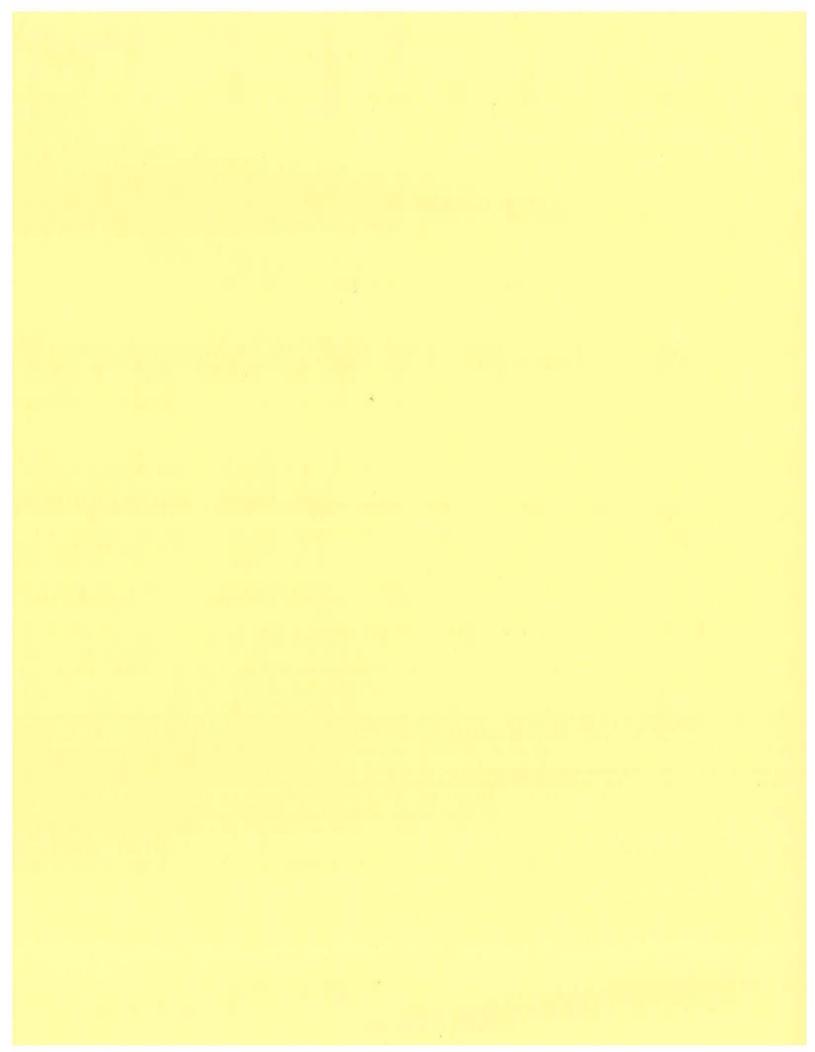


-						ATE FIELD			
Proje		Si	375	-	ardin	River B		Date	Time
200		Col	vin		3	Potom		3/12/2008	12:04 PM
		tigators			UC		ocality		
		C/JVH			8000			ax County Orde	
		ach		D.A. (Acres) Reach Length (LF)					er
1 616-		-A	to the same of the	1	56	300		1	
Latitu 38°58		Long 77°1			- 11	Stream nnamed Tributa		de Don	
00 00	09	11-1	711	450000	U	Tillamed Tributa	ary to Cor	VIII MUII	
		Habita	Types (ndicate Per	centage of	Each Habitat	Present)		PUBLIS
Cobble	40	Sand	95	Rootwads		Vegetated	Banks	0	
Large	Woody D	ebris	15	Underc	ut Banks	15	Lea	af Packs	50
					e Collectio	n			Total Control
Gear L	Jsed			mples Colle	cted?	Number of	of Jabs/K	icks Taken fro	m Each
D-Frame	X	Wad	ling	-	X		Н	abitat	
The state of the s						THE REPORT OF		Undercut	
Kick-Net		From	Bank			Cobble	6	Banks	3
Other		From	Boat			Sand	0	Submerged Macro-phytes	0
						Rootwads	0	Leaf Packs	8
						Vegetated		Large Woody	
						Banks	0	Debris	3
			THE P	Genera	I Commen	ts			
						<u> </u>			
			Qu	alitative List	ing of Aqu	atic Biota			
Indica	ate Estima	ted Abundar	ice: 0=At	sent/Not Ob	served, 1=	Rare, 2=Comm	on, 3=Ab	undant, 4=Dom	nant
				3	Slimes				1
Periphyton	Algae			2	Macroinve	ertebrates	III I AI		1
Periphyton Filamentous	Algae					AND DESCRIPTION OF THE PARTY OF			
				0	Fish				1



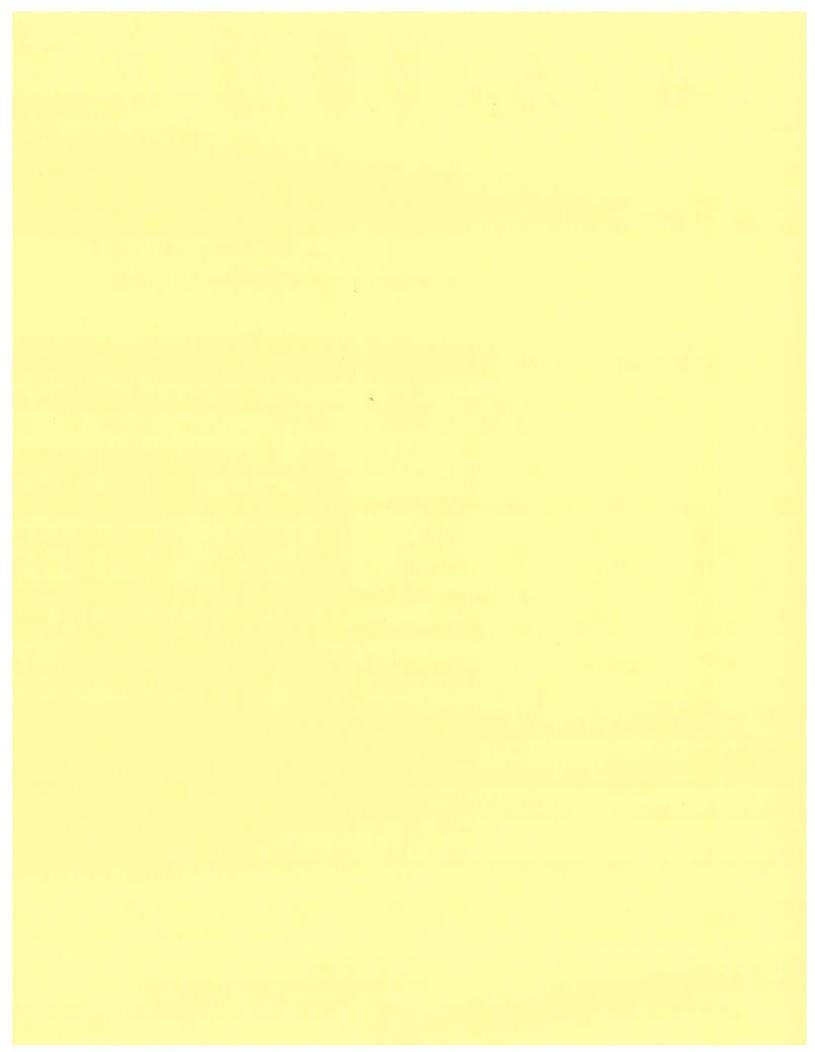


Projec	et#	Si	te	Co	wardin	River B	asin	Date	Time	
2001		Col			R3	Potom			11:00 AM	
	Investi			1	HUC			Locality		
	LS/BC				70008			County		
TAXABLE V	Rea		100		D.A. (Acres) Reach Length (LF)				ler	
	2-	A			174	300	Name and Address of the Owner, where the Owner, which the	1		
Latitu	de	Long	itude			Stream	Name			
38°57'	58"	77°1	9'27"		Unr	named Tributar	y to Colvi	n Run		
Marie .	-931.64	Habitat 7	Types (In	dicate Perc	entage of E	ach Habitat P	resent)		Bark	
Cobble	75	Sand	98	Rootwad	s 0	Vegetated	Banks	1 0		
	Woody D		5		cut Banks	45		Packs	15	
				011001		10	- Loui	- dotto	10	
				Sample	Collection	A DEFENSE				
Gear U	sed	How	Were Sa	mples Colle	CONTRACTOR IN ANY RESPONDENCE MATERIAL PROPERTY.	Number of	Jabs/Kid	cks Taken fr	om Each	
D-Frame	Х	Wad			X			bitat		
								Undercut		
Kick-Net		From	Bank			Cobble	10	Banks	7	
								Submerged		
Other		From	Boat			Sand	0	Macro-phytes	0	
						Rootwads	0	Leaf Packs	2	
						1/		Large		
						Vegetated Banks	0	Woody Debris	4	
						Danks	0	Debris		
				Ganaral	Comments					
				General	Comments					
			Qual	itativa Liati	ng of Aqua	la Piata				
			Gruai	itative List	ild of Adda	iic biota				
Indicate	Estimated	Abundance	e: 0=Abs	ent/Not Obs	served, 1=Ra	are, 2=Commo	n, 3=Abu	ndant, 4=Doi	minant	
Periphyton				1	Slimes	20-11			0	
Filamentous	Algae			0	Macroinve	ertebrates			2	
Macrophytes				0	Fish				0	





Projec	ct #	Si	e	Cow	ardin	River B	asin	Date	Time	
2001		Col			33	Potom		3/12/2008		
200		igators	VIII		UC	Locality				
		C/JVH			0008			County		
		ach		D.A. (Acres)		Reach Len			der	
		-В			00	300				
Latitu		Long	tude			Stream !				
38°58'	'14"	77°19			Unn	amed Tributar	y to Colvi	n Run		
ATTO BE	Della Si	Habitat T	ypes (In	dicate Perce	ntage of E	ach Habitat P	resent)	THE REAL PROPERTY.	Marie .	
Cobble	80	Sand	90	Rootwads	0	Vegetated	ALCOHOLD .	8	5	
Submerg	ged Macro	phytes	2		ut Banks	0		Packs	5	
				Sample (Collection					
Gear U	Jsed	How	Were Sa	mples Collec	cted?	Number of	Jabs/Kid	ks Taken fr	om Each	
D-Frame	X	Wad	ling	3.	X		Hal	bitat		
12 12 1								Undercut		
Kick-Net		From	Bank			Cobble	18	Banks	0	
046			D4			0		Submerged Macro-		
Other		From	Boat			Sand	0	phytes	1	
						Rootwads	0	Leaf Packs Large	1	
						Vegetated		Woody		
						Banks	0	Debris	0	
				General C	Comments				Ni ei	
			Qual	itative Listin	g of Aguai	ric Biota				
	WINDS OF				1900					
Indicate	Estimated	d Abundance	e: 0=Abs	ent/Not Obse	rved, 1=Ra	are, 2=Commo	n, 3=Abu	ndant, 4=Do	minant	
eriphyton				2	Slimes				0	
ilamentous	Algae			0	Macroinve	ertebrates			1	
acrophytes	3		-0114	1	Fish	Maria de la compansión de			0	



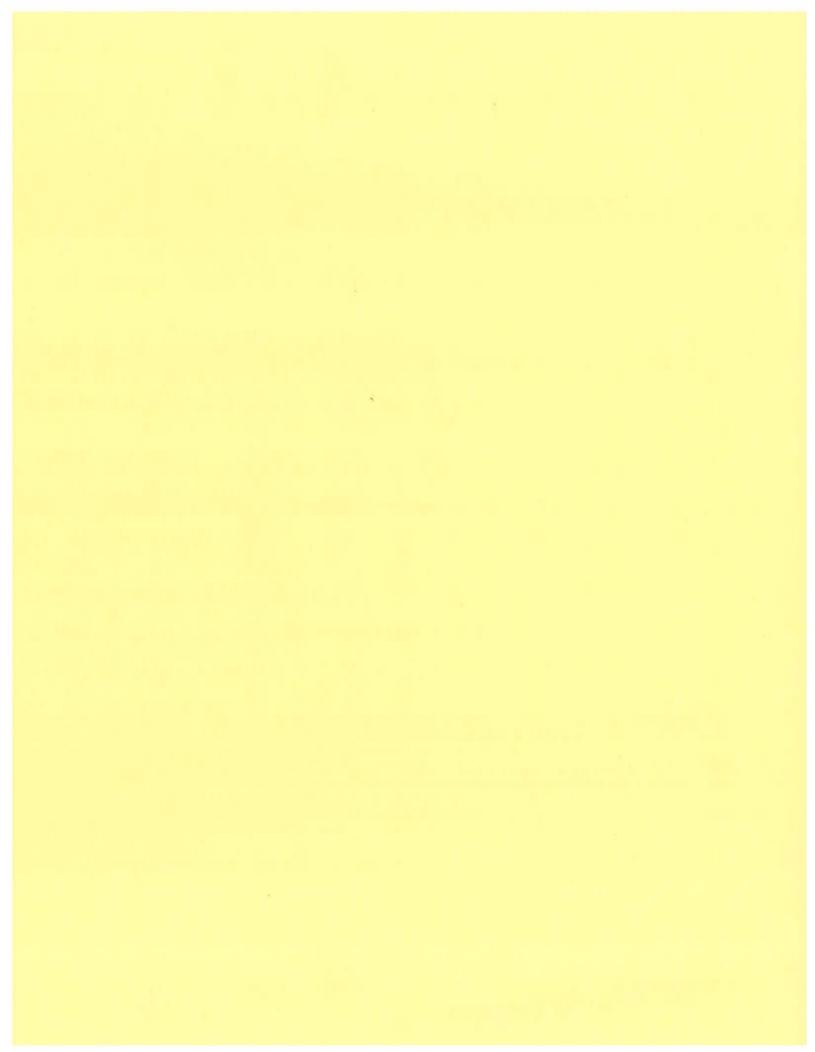


Colvin	Projec	t#	Si	te	Cow	ardin	River B	asin	Date	Time
SS/LS/BC	2001	0	Col	vin	F	3	Potomac		3/10/2008	2:00 PN
Reach		Investi	gators		H	JC				
Sample Collection Sample Collected? Submerged Macrophytes Other From Bank Submerged Macrophytes Other From Bank Submerged Macrophytes Other Sample Collected? Other Submerged Macrophytes Other Sample Collected? Other Other Other Other From Bank Other Sample Collected? Other Othe		SS/LS	S/BC		207	8000		Fairfa	ax County	
Latitude 38°57′23" 77°21′01" Colvin Run Habitat Types (Indicate Percentage of Each Habitat Present) Habitat Types (Indicate Percentage of Each Habitat Present)		Rea	ch		D.A. (Acres)	Reach Len	gth (LF)	Orde	r
Habitat Types (Indicate Percentage of Each Habitat Present)		3-			7	03	300	Ĭ.	2	
Habitat Types (Indicate Percentage of Each Habitat Present) Cobble 70 Sand 95 Rootwads 15 Vegetated Banks 0 Submerged Macrophytes 0 Undercut Banks 15 Large Woody Debris 5 Leaf Packs 5 Other (bedrocks) 0 Sample Collection Gear Used How Were Samples Collected? D-Frame X Wading X Number of Jabs/Kicks Taken from Each Habit Kick-Net From Bank Cobble 10 Banks 3 Other From Boat Sand 0 Submerged Macrophytes 0 From Boat Banks 5 Leaf Packs 1 Vegetated Large Woody Banks 0 Debris 1 General Comments General Comments Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Geriphyton 3 Slimes 0 Blamentous Algae 0 Macroinvertebrates 2										
Cobble 70 Sand 95 Rootwads 15 Vegetated Banks 0	38°57'	23"	77°2	1'01"			Colvi	n Run		
Submerged Macrophytes	and the		Habita	t Types (Indicate Per	centage o	f Each Habitat	Present)	The Real	1
Sample Collection Gear Used How Were Samples Collected? D-Frame X Wading X Number of Jabs/Kicks Taken from Each Habit Kick-Net From Bank Cobble 10 Banks 3 Other From Boat Sand 0 Submerged Macro-phytes 0 Rootwads 5 Leaf Packs 1 Vegetated Banks 0 Debris 1 General Comments General Comments Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant eriphyton 3 Stimes 0 Macroinvertebrates 2	Cobble	70	Sand	95	Rootwads	15	Vegetated	Banks	0	
Sample Collection Gear Used How Were Samples Collected? D-Frame X Wading X Number of Jabs/Kicks Taken from Each Habit Kick-Net From Bank Cobble 10 Banks 3 Other From Boat Sand 0 Submerged Macro- phytes 0 Rootwads 5 Leaf Packs 1 Vegetated Large Woody Banks 0 Debris 1 General Comments General Comments Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant eriphyton 3 Slimes 0 Idamentous Algae 0 Macroinvertebrates 2							15			
Gear Used How Were Samples Collected? D-Frame X Wading X Number of Jabs/Kicks Taken from Each Habit Kick-Net From Bank Cobble 10 Banks 3 Other From Boat Sand 0 Submerged Macrophytes 0 Rootwads 5 Leaf Packs 1 Vegetated Large Woody Banks 0 Debris 1 General Comments Qualitative Listing of Aquatic Biota	Large	Woody De	ebris	5	Leaf	Packs	5	Other	(bedrocks)	0
Gear Used How Were Samples Collected? D-Frame X Wading X Number of Jabs/Kicks Taken from Each Habit Kick-Net From Bank Cobble 10 Banks 3 Other From Boat Sand 0 Submerged Macrophytes 0 Rootwads 5 Leaf Packs 1 Vegetated Large Woody Banks 0 Debris 1 General Comments Qualitative Listing of Aquatic Biota					Sampl	e Collection	on			
Number of Jabs/Kicks Taken from Each Habit Kick-Net	Gear U	sed	How	Were Sai	- Company of the last of the l					
Cobble 10 Banks 3							Number of J	abs/Kicks	Taken from Ea	ch Habit
Other From Boat Sand 0 Submerged Macro-phytes 0 Rootwads 5 Leaf Packs 1 Vegetated Large Woody Banks 0 Debris 1 General Comments Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 3 Slimes 0 Macroinvertebrates 2										
Sand O	Kick-Net		From	Bank			Cobble	10	Banks	3
Rootwads 5 Leaf Packs 1 Vegetated Banks 0 Debris 1 General Comments										
Vegetated Banks 0 Debris 1	Other		From	Boat			25.25.27.17.17.			
General Comments General Comments Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 3 Slimes 0 Ilamentous Algae 0 Macroinvertebrates 2								5		1
General Comments Qualitative Listing of Aquatic Biota Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 3 Slimes 0 ilamentous Algae 0 Macroinvertebrates 2								0		4
Comparison of Aquatic Biota Comparison of Advantage Comparison o				-			Вапкѕ	0	Debris	
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 3 Slimes 0 Macroinvertebrates 2					Genera	I Commer	nts			
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 3 Slimes 0 Idamentous Algae 0 Macroinvertebrates 2					BOYLETON STREET, STREE		200/48490			
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant eriphyton 3 Slimes 0 Macroinvertebrates 2										
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 3 Slimes 0 Idamentous Algae 0 Macroinvertebrates 2										
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 3 Slimes 0 Idamentous Algae 0 Macroinvertebrates 2										
Indicate Estimated Abundance: 0=Absent/Not Observed, 1=Rare, 2=Common, 3=Abundant, 4=Dominant Periphyton 3 Slimes 0 Idamentous Algae 0 Macroinvertebrates 2				0			Al- Di-A-			
Periphyton 3 Slimes 0 ilamentous Algae 0 Macroinvertebrates 2				QL	lalitative Lis	ung or Aqi	uatic Biota			
ilamentous Algae 0 Macroinvertebrates 2	Indica	ite Estimat	ed Abunda	nce: 0=A	bsent/Not Ob	served, 1=	Rare, 2=Comm	non, 3=Ab	undant, 4=Domir	nant
ilamentous Algae 0 Macroinvertebrates 2	Periphyton				3	Slimes				0
		Algae				Macroinve	ertebrates		District the same	
	Ageronhytos				0	Fish	A STREET OF THE			



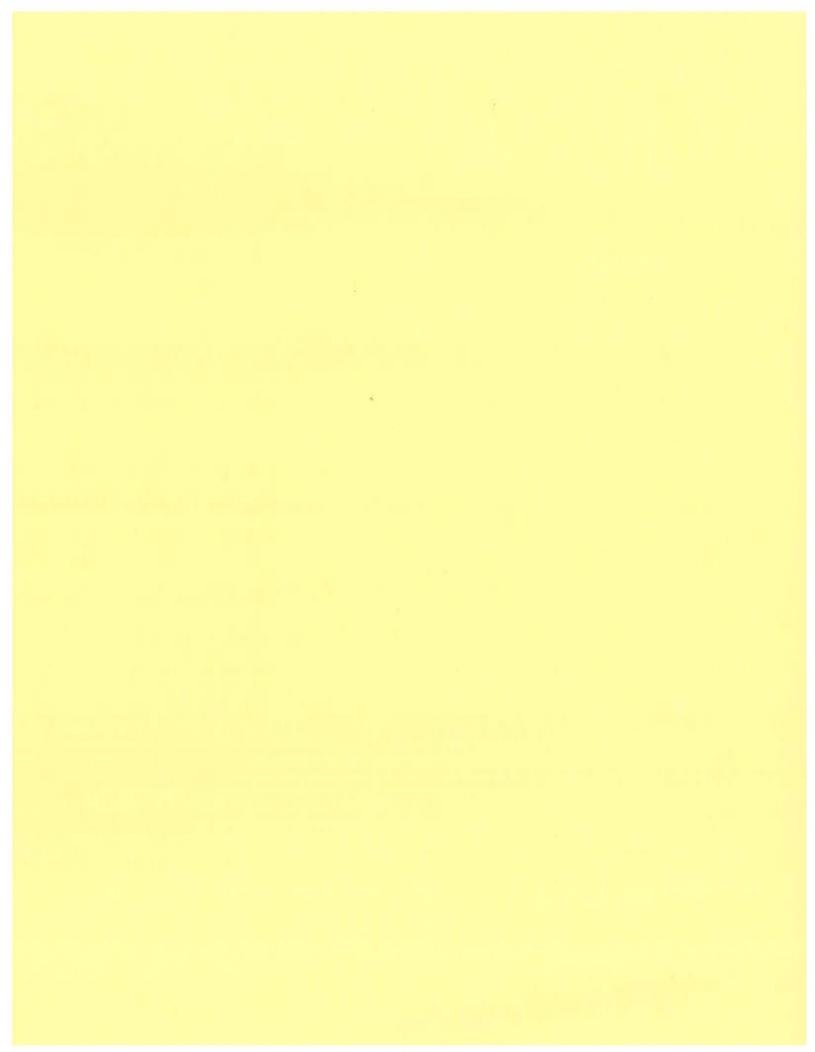


Projec	n# ##	Si	the state of the s	ACROINVI	ardin	River B	The second second second	Date	Time			
200		Col			33	Potom	PA PLANTS	3/10/2008	3:41 PN			
200	Investi		VIII		UC	FOIOII	ocality	3.41 FN				
	SS/LS				0008		ax County					
	Rea	Address of the Control of the Contro	E HOUSE		Acres)	Reach Len		Orde	r			
	4-				45	300		1				
Latitu		Long	itude		10		Name		No. of Lot			
38°57	Name of the last o	77°19			L		nnamed Tributary to Colvin Run					
				MERKE								
				Indicate Per		f Each Habitat						
Cobble	45	Sand	65	Rootwads	3	Vegetated	Banks	0				
	ged Macro		0		ut Banks	3			7.21			
Large	Woody De	ebris	0	Leaf	Packs	10	Other	(bedrocks)	10			
0 1					e Collection	on						
Gear U				mples Collec			- h - net - h -					
D-Frame	X	Wad	ning		X	Number of Ja	abs/Kicks	Taken from Ea	cn Habit			
Kick-Net		From	Pank			Cobble	11	Banks	2			
NICK-IVEL		From	Darik			CODDIE	- 11	Submerged Macro-	3			
Other		From	Boat			Sand	0	phytes	0			
			1100000000			Rootwads	1	Leaf Packs	2			
						Vegetated						
						Banks	0	Bedrocks	3			
				Genera	al Commer	nts	1000	And the last of th				
								m Verisient de				
			Qu	alitative Lis	ting of Aq	uatic Biota						
Indica	ate Estimat	ed Abunda	nce: 0=A	bsent/Not Ob	served, 1=	Rare, 2=Comm	ion, 3=Ab	undant, 4=Domir	nant			
eriphyton				3	Slimes		No. of the Lorentz Control of the Lorentz Con	The second second	0			
ilamentous	Algae		No. of Street,	0	Macroinve	ertebrates		THE RESERVE	1			
				0	Fish				2			
Macrophytes)											



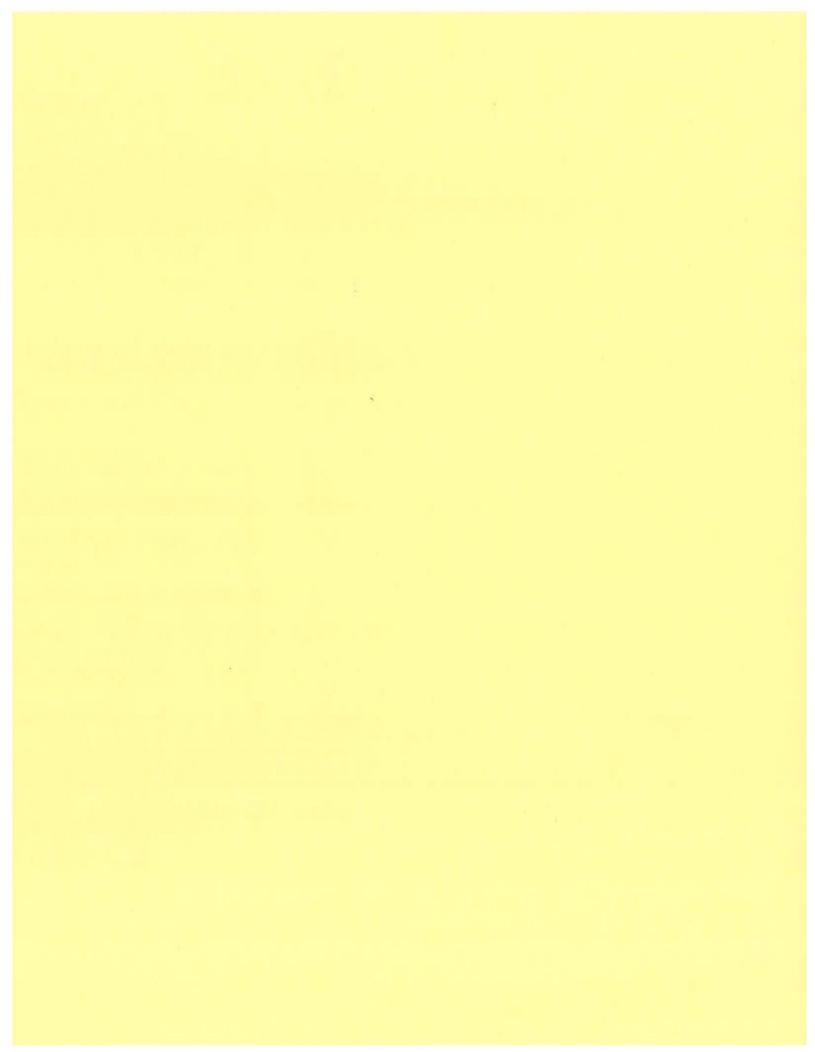


Projec	ct#	Si	te	Cow	ardin	River B	asin	Date	Time	
200	10	Col	vin	F	3	Potom	ac	3/11/2008	10:30 AI	
	Investi	gators		Н	UC	Locality Fairfax County				
	LS/BC			207	8000					
	Rea	ach		D.A. (Acres)	Reach Len		Orde	er	
	5-			7	75	300		2		
Latitu		Long				Stream	Name			
38°57	'55"	77°19	9'56"		U	nnamed Tribut	ary to Co	Ivin Run		
		Habita	t Types (Indicate Per	centage of	Each Habitat	Present)		No.	
Cobble	70	Sand	95	Rootwads	5	Vegetated	Banks	1 0		
Submerg	ged Macro	phytes	0		ut Banks	5				
	Woody De		2		Packs	15	Other	(bedrocks)	0	
THE RELEASE	IN LET I									
				Sampl	e Collectio	n				
Gear U	Ised	How	Were Sa	mples Colle	cted?	Number	of Jabs/k	Cicks Taken from	n Each	
D-Frame	X	Wac	ding		X		H	labitat		
								Undercut		
Kick-Net		From	Bank			Cobble	14	Banks	1	
Other		From	Pont			Sand	0	Submerged Macro- phytes		
Ourer		FIUIT	Dual			Rootwads	0	Leaf Packs	3	
						Vegetated		Large Woody	- 0	
						Banks	0	Debris	1	
				A DESCRIPTION OF		- Darmo		Doorio		
			711111111	Genera	al Commen	ts			THE REAL PROPERTY.	
					A PART OF THE PART					
			Qu	alitative Lis	ting of Agu	atic Biota				
Indica	ate Estimat	ted Abundar	nce: 0=Al	bsent/Not Ob	served, 1=	Rare, 2=Comm	ion, 3=At	oundant, 4=Domi	nant	
Periphyton				1 1	Slimes				0	
ilamentous	Algae			0	Macroinve	rtebrates			1	
THE PARTY OF THE P	minima Maria de Company			0	Fish				0	
//acrophytes										



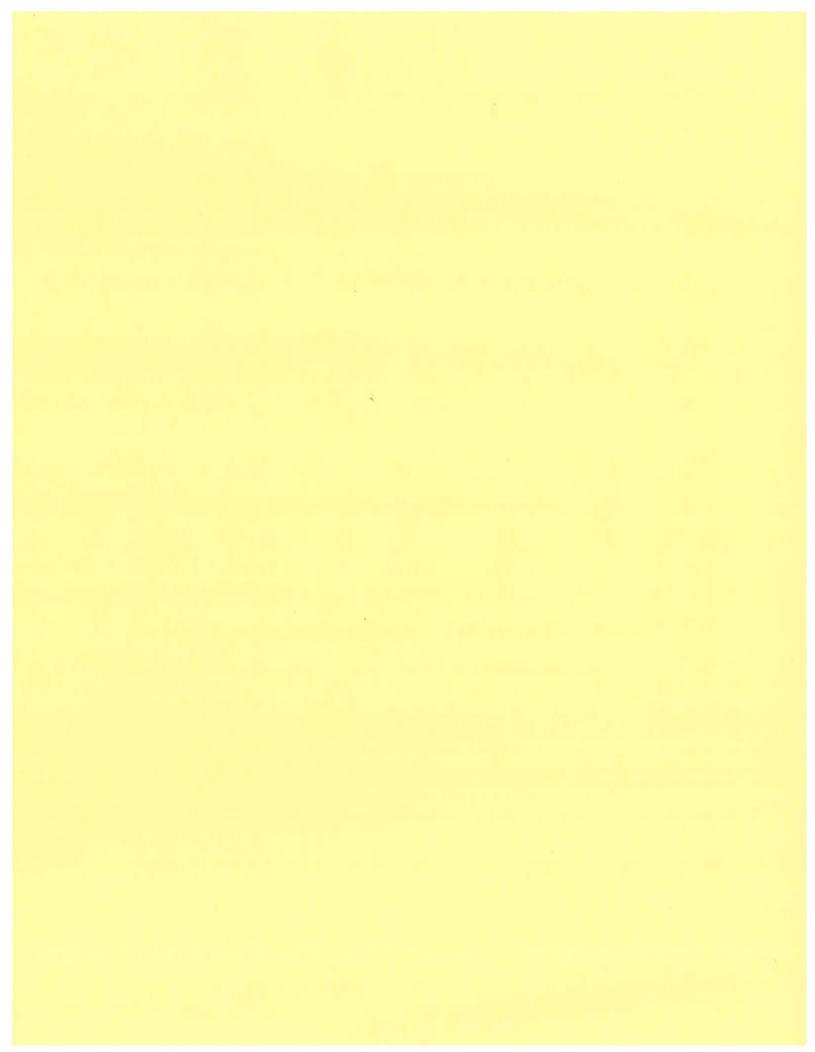


Proje	ct#	Si	te	Cow	ardin	River B	asin	Date	Time
200		Col	-		34	Potom		3/11/2008	1:15 PM
	Investi	The second secon			uc	Locality			
	LS/BC				0008		rfax County		
		ach			Acres)	Reach Len		Orde	er
	6-	·A			6	300		1	
Latitu	ide	Long	itude			Stream	n Name		
38°57	'58"	77°1			L	Innamed Tribut	ary to Co	olvin Run	
		Hotel at							
		Habita	at Types	Indicate Per	centage o	Each Habitat	Present	0	
Cobble	60	Sand	95	Rootwads	0	Vegetated	Banks	0	
Submerg	ged Macro	phytes	0	Underci	ut Banks	2			
	Woody De		2	Leaf	Packs	40	Othe	r (bedrocks)	0
				يسيين					
					e Collection	on		A STATE OF THE	
Gear L				mples Collec	cted?				
D-Frame	X	Wac	ding		X	Number of J	abs/Kicl	ks Taken from E	ach Habit
								Undercut	
Kick-Net		From	Bank			Cobble	11	Banks	111
Other		From	Boat			Sand	0	Submerged Macro-phytes	0
						Rootwads	0	Leaf Packs	7
						Vegetated		Large Woody	
						Banks	0	Debris	1
				Genera	al Commer	its			
		1	Qu	alitative List	ting of Aqu	uatic Biota			W The First
Indic	ate Estima	ted Abunda	nce: 0=A	bsent/Not Ob	served, 1=	Rare, 2=Comm	non, 3=A	bundant, 4=Domi	nant
eriphyton				2	Slimes			THE PARTITION OF	0
ilamentous	or and the second			0	Macroinve	rtebrates			2
I m m at m as has at m m				0	Fish				0
acrophytes									



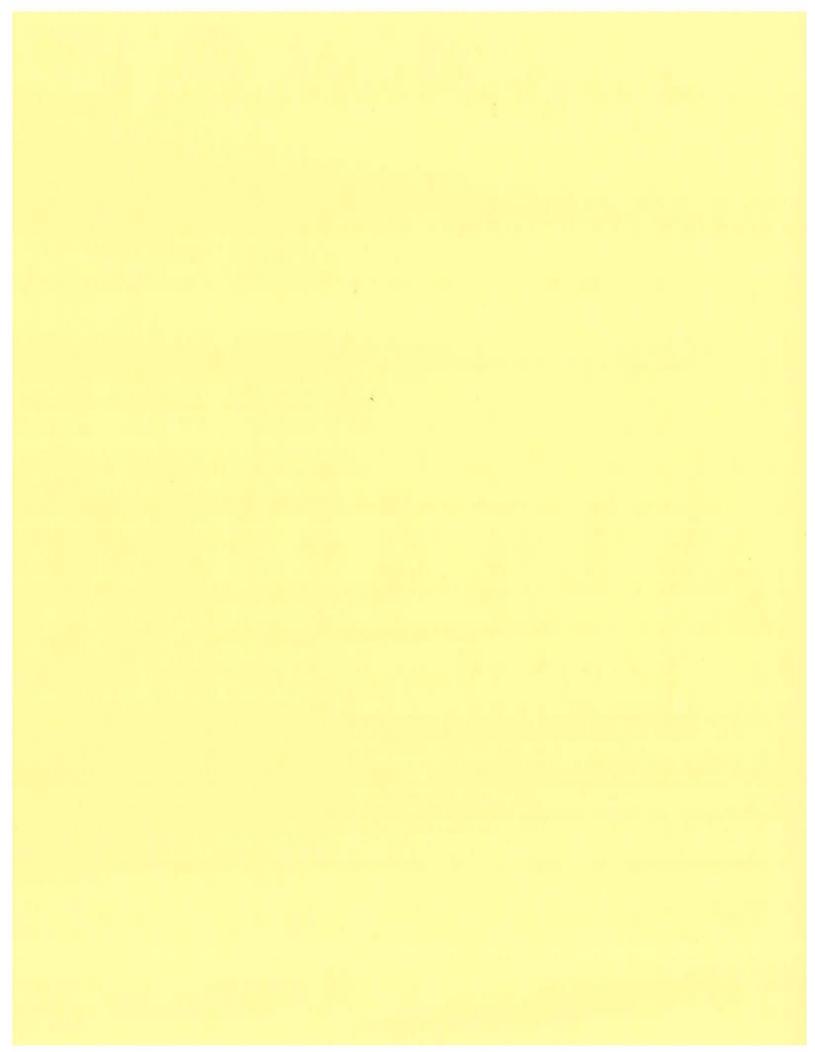


Proje	ct#	Si	te	Cow	ardin	River B	asin	Date	Time	
200		Col			33	Potom		3/12/2008	2:45 PN	
200	Investi		VIII		UC	Locality				
	LS/BC				0008	Fairfax County				
		ach	Charles .	D.A. (Acres)		Reach Len		Orde	r	
	7-				14	300	The same of the sa	1		
Latite		Long	itude			Stream		RECUE TO SERVICE	The state of	
38°58	'22"	77°20			U	nnamed Tributa	100000000000000000000000000000000000000	vin Run		
THE WAY		Habita	t Types (Indicate Per	centage of	Each Habitat	Present)	No. 198		
Cobble	30	Sand	95	Rootwads	3	Vegetated	Banks	0		
	ged Macro		0		ut Banks	0	Danie			
	Woody D		5		Packs	45	Other	(bedrocks)	5	
						Na Handa				
			No. 12 Dil	Sampl	e Collectio	n				
Gear l	Jsed	How	Were Sa	mples Colle	cted?	Number of	of Jabs/K	icks Taken from	n Each	
D-Frame	X	Wad	ding		X		Н	abitat		
a Veni								Undercut		
Kick-Net		From	Bank			Cobble	5	Banks	0	
Other		From	Post			Sand	0	Submerged Macro-phytes	0	
Olifei		FIOIII	Duai			Rootwads	1	Leaf Packs	12	
						Vegetated		Large Woody	12	
						Banks	0	Debris	2	
				Genera	I Commen	ts				
			Qu	alitative Lis	ting of Aqu	atic Biota	2190		(O) (O)	
Indica	ate Estimat	ed Abundar	nce: 0=Al	osent/Not Ob	served, 1=l	Rare, 2=Comm	ion, 3=Ab	undant, 4=Domi	nant	
Periphyton				1 1	Slimes				0	
Filamentous	Algae			0	Macroinve	rtebrates			1	
Contract to the second	3	No.		0	Fish				0	
Macrophyte:										





Pr. E. C. 3164	ct#	Si	te	Cowa	rdin	TE FIELD D		Date	Time
200		Col	Nation 1997	R4	The state of the s	Potom		3/12/2008	4:07 PN
200	Investi		VIII	HU		1 0.011		cality	1.07 1 1
	LS/BC				2070008 Fairfax County				
	Rea	The Real Property lies and the Real Property lie	- 10/1	D.A. (A	According to the second	Reach Len		Orde	er
	8-	A		55		300		2	
Latit	ude	Long	itude		HHIE	Stream	Name		
38°58	3'01"	77°2			Ur	nnamed Tributa	ary to Colv	vin Run	
I.A.P.S.YEL		Habita	t Types (Indicate Perce	entage of	Each Habitat	Present)		
Cobble	85	Sand	87	Rootwads	0	Vegetated	Banks	0	
Submer	ged Macro	phytes	0	Undercut	Banks	0			
Large	Woody De	ebris	0	Leaf Pa	acks	15	Other	(bedrocks)	13
						THE RESERVE	ATTENDED		
					Collectio	n			
Gear	Jsed			mples Collect	ed?	Number of	of Jabs/K	icks Taken from	m Each
D-Frame	X	Wad	ding	X			H	abitat	
						12-24-1-07/200-0		Undercut	
Kick-Net		From	Bank			Cobble	17	Banks	0
Other		From	Root			Sand	0	Submerged Macro-phytes	0
Outor		1-10111	Duai			Rootwads	0	Leaf Packs	3
						Vegetated		Loar racks	-
						Banks	0	Bedrocks	0
						Darins		Deurocka	
				General	Commen	te			
				General	Commen	10			
The state of the s			Qu	alitative Listir	ng of Aqu	atic Biota			
Indic	ate Estimat	ed Abundar	nce: 0=Al	osent/Not Obse	erved, 1=F	Rare, 2=Comm	ion, 3=Abi	undant, 4=Domi	nant
				2 5	Slimes				2
eriphyton									
	Algae	e de la comp		1 1	Macroinve	rtebrates			1





	ect#	Si	A STATE OF THE PARTY OF THE PAR	Cowa	The second second second	TE FIELD D		Date	Time
200		Col		R		Potom		3/12/2008	5:06 PN
200	Investi		VIII	HU		FOIOII	ice and the second	ocality	3.00 FN
	LS/BC			- Control of the	2070008 Fairfax Co				
	Rea			D.A. (A		Reach Len		Orde	ar
	9-A 67 300 1								
Latit		Long	itude						
38°58		77°20			Ur	named Tributa	ary to Col	vin Run	
Militar		Habita	t Types (I	Indicate Perc	entage of	Each Habitat	Present)		
Cobble	85	Sand	95	Rootwads	5	Vegetated	Banks	0	
	rged Macro		0	Undercu		20			
	Woody De		0	Leaf P		25	Other	(bedrocks)	15
	ALL LAND								
				Sample	Collectio	n		A STATE OF THE REAL PROPERTY.	
Gear	Used	How	Were Sar	nples Collect	ted?	Number	of Jabs/K	icks Taken from	m Each
D-Frame	X	Wad	ling	×			H	abitat	
						No. of the Park		Undercut	
Kick-Net		From	Bank			Cobble	12	Banks	3
Other		From	Post			Sand	0	Submerged	0
Olifei		FIOIII	Duai			Rootwads	1	Macro-phytes Leaf Packs	4
								Loar racks	
						Vegetated Banks	0	Bedrocks	0
				-		Dariks	.0	Dediocks	
				General	Commen	te			
				General	Commen	10			
CENTER OF THE PARTY OF THE PART			Qu	alitative Listi	ing of Agu	atic Biota		LIMB D. III	
	ate Estimat	ed Abundar					ion, 3=Abi	undant, 4=Domi	nant
Indic				1	Slimes	100000000000000000000000000000000000000			0
eriphyton					Ollines				
	s Algae				Macroinve	rtebrates		WILL WAS THE	1

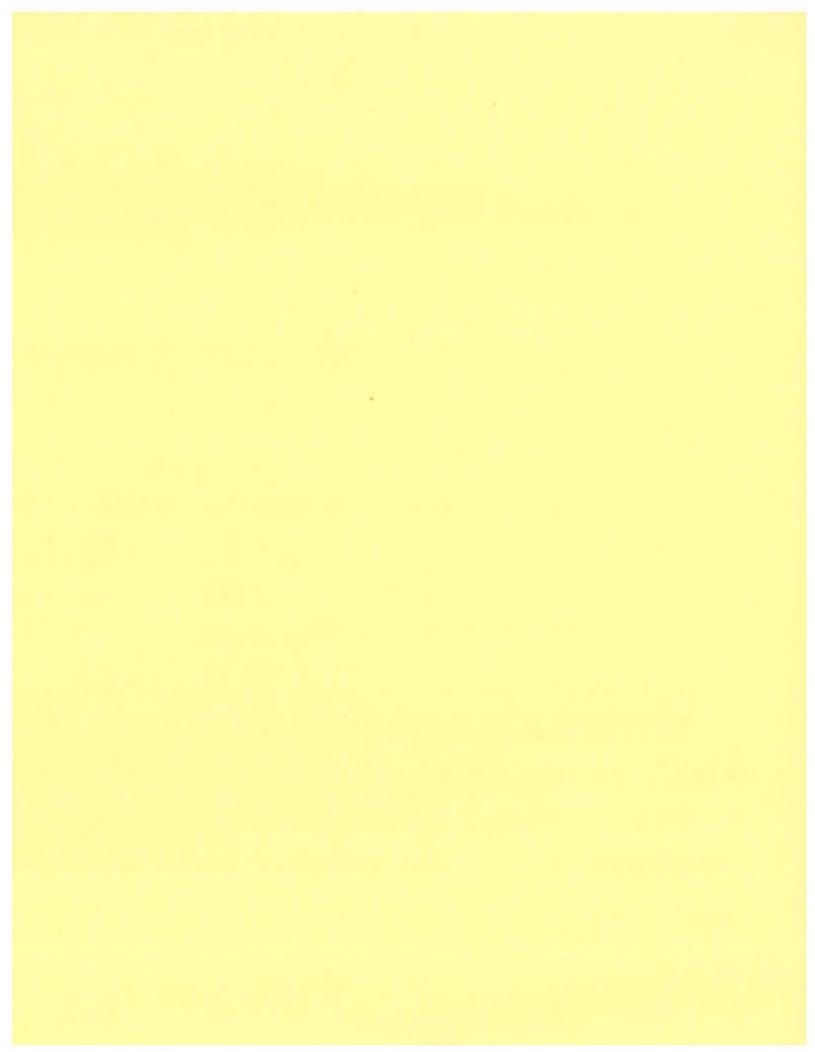


Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
Colvin Run - Pre Con. Year 2	20010	1-A	SDS/LS/JVH/BC	1	122
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'o
9/20/2008	9/9/2008	BC	BC	101	111
CARIFORMES		T F. L. L.		100	
HYDRACARINA		Forcipomyla sp. Probezzia sp.		Synorthocladius sp. Thienemanniella sp.	
VALVIA - Clama		Sphaeromias sp.		Tvetenia sp.	
SPHAERIDAE	8	Stilobezzia sp.		Unniella sp.	
Sphaerium sp. Pisidium sp.		CHAOBORIDAE Chaborus sp.		Xylotopus sp.	
Musculium sp.		CHIRONOMIDAE	71	Zalutschia sp. Tanypodinae	
CORBICULIDAE	1	Chironominae		Ablabesmyia sp.	
Corbicula fluminea sp.		Chironomini		Alotanypus sp.	
UNIONIDAE RANCHIOBDELLIDA		Chironomus sp.		Apsectrotanypus sp.	
BRANCHIOBDELLIDAE		Cryptochironomus sp. Cryptotendipes sp.		Clinotanypus sp. Conchapelopia sp.	
TETRASTEMMATIDAE		Demicryptochironomus sp.		Guttipelopia sp.	
OLEOPTERA - Beetles		Dicrotendipes sp.		Krenopelopia sp.	
CANTHERIDAE CURCULIONIDAE		Einfeldia sp. Endochironomus sp.		Labrundinia sp.	
DRYOPIDAE		Glyptotendipes sp.		Larsia sp. Macropelopia sp.	
Helichus sp.		Kiefferulus sp.		Meropelopia sp.	
DYTISCIDAE		Microtendipes sp.		Paramerina sp.	
Agabus sp.		Nilothauma sp.		Pentaneura sp.	
Hydroporous sp. Coptotomus sp.		Pagastiella sp. Parachironomus sp.		Procladius sp. Psectrotanypus sp.	
Oreodytes sp.		Paracladopelma sp.		Rheopelopia sp.	
Laccomis sp.		Paratendipes sp. ¬		Tanypus sp.	
Dytiscus sp. ELMIDAE		Phaenopsectra sp.		Thionemannimyia gp.	
Microcylloepus sp.		Polypedilum sp. Stenochironomus sp.		Thienemannimyla sp. Trissopelopia sp.	
Optioservus sp.		Stictochironomus sp.		Zavrelimyia sp.	
Stenelmis sp.		Tribelos sp.		CULICIDAE	
Promoresia sp. Macronychus sp.		Zavreliella sp. Tanytarsini		Aedes	
Dubiraphia sp.		Cladotanylarsus sp.		Anopheles Culex	
Ancyronyx sp.		Constempellina sp.		Culiseta	
Outimnius sp.		Micropsectra sp.		Mansonia	
GYRINIDAE Dineutus		Micropsectra/Tanysarsus complex Paratanytarsus sp.		Orthopodomyia	
Gyrinus		Rheotanylarsus sp.		Psorophora Toxorhynchites	
HALIPIDAE		Stempellina sp.		Uranotaenia	
Halipus sp.		Stempellinella sp.		Wysomyla	
HYDROPHILIDAE Cymbiodyta sp.		Sublettea sp.		DIXIDAE	
Berosus sp.		Tanytarsus sp. Zavrelia sp.		Dixa sp. DOLICHOPODIDAE	
Derallus sp.		Diamesinae		EMPIDIDAE	
Helochares sp.		Diamesa sp.		Chelifera sp.	
Helophorus sp. Hydrophilus sp.		Pagastia sp. Potthastia sp.		Clinocera sp.	
Hydrochus sp.		Prodiamesa sp		Hernerodromia sp. Dolichocephala sp.	
Tropistemus sp.		Sympotthastis sp.		EPHYDRIDAE	
Hydrobius sp.		Orthocladiinae		PELCORHYNCHIDAE	
Laccobius sp.		Brillia sp.		Glutops sp.	
PSEPHENIDAE Psephenus sp.		Cardiocladius sp. Chaetocladius sp.		PHORIDAE PSYCHODIDAE	2
Ectopria sp.		Corynoneura sp.		Pericoma sp.	
Dicranopselaphus sp.		Cricotopus sp.		Psycoda sp.	
PTILODACTYLIDAE		Cricotopus/Orthocladius sp.		SIMULIDAE	
Anchytarsus sp. OLLEMBOLA		Diplociadius sp. Eukiefferiella sp.		Simulium sp. Prosimulium sp.	
ISOTOMIDAE		Heleniella sp.		Cnephia sp.	
OPEPODA		Heterotrissocladius sp.		Twinia sp.	
RUSTACEA (Amphipoda- Scuds) CRANYONYCTIDAE		Hydrobaenus sp.		Stegoptema sp.	
Stygonectes sp.		Limnophyes sp. Lopescladius sp.		Ectemnis sp. STRATIOMYIDAE	
Crangonyx sp.		Mesocricotopus sp.		Oxycera sp.	
Synurella sp.		Mesosmittia sp.		Odontomyia sp.	
GAMMARIDAE Gammarus sp.		Nanocladius sp. Orthocladinae A		SYRPHIDAE	
HYALELLIDAE		Orthocladus ap.		Chrysogaster sp. Eristalis sp.	
Hyalella sp.		Parachaetocladius sp.		TABANIDAE	
RUSTACEA (Decopoda - Craylish)		Parakiefferiella sp.		Chrysops sp.	
CAMBARIDAE PALAEMONIDAE		Parametriocnemus sp.		Tabanus sp.	
RUSTACEA (Isopoda- Sowbugs)		Paraphaenocladius sp. Parasmitia sp.		TANYDERIDAE THAUMALEIDAE	
ASELIDAE		Paratrichocladius sp.		Thaumalea sp.	
Caecidotea sp.		Paratrissociadius sp.		TIPULIDAE	2
Lirceus sp.		Psectrocladius sp.		Antocha sp.	
PTERA - True Flies ATHERICIDAE		Pseudorthocladius sp. Psilometriocnamus sp.		Hexatoma sp. Leptotarsus sp.	
Atherix sp.		Rheocricotopus sp.		Leptotarsus sp. Molophilus sp.	
BLEPHARICERIDAE		Rheosmittia sp.		Tipula sp.	
CECIDOMYIIDAE		Smittia sp.		Pauedolimnophila sp.	
CERATOPOGNIDAE Alluaudomyka sp.		Stillocladius sp.		Dicranota sp.	
Bezzia sp.		Symposiocladius sp.		Limnophila sp. Omosia sp.	
Ceratopogon sp.				SOUTH STATE OF THE	
Culicoides sp.					
Dasyhelea sp.					
5					
Page 1 of 2					



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
Colvin Run - Pre Con. Year 2	20010	1-A	SDS/LS/JVH/BC	1	122
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID's
9/20/2008	9/9/2008	BC	BC	101	111
	-3/41/53431				
Pedicia sp. Limonia sp.		Microvelia sp. HIRUDINEA - Leeches		Paranemoura sp. Prostola sp.	
Pilaria sp.		HOPLONEMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp. Rhabdomastix sp.		Prostoma sp.		Alloperia sp.	
TRICHOCERIDAE		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp PHEMEROPTERA - Mayflies		NOCTUIDAE Archanara sp.		Sweltsa sp. TAENIOPTERGIDAE	
AMELETIDAE		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taeniopteryx sp.	
Acentrella sp.		MEGALOPTERA - Dobsonflies CORYDALIDAE		TRICHOPTERA - Caddisflies BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp. Centroptilum sp.		Corydalus sp. Nigronia sp.		CALAMOCERATIDAE Heteropiectron sp.	
Diphetor sp.		SIALIDAE		DIPSEUDOPSIDAE	
BAETISCIDAE Baetisca sp.		Sialis sp. NEMATODA - Floundworms		Phylocentropus sp. GLOSSOSOMATIDAE	
CAENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp.		ODONATA (Anispotera - Dragonflies)		Agapetus sp.	
EPHEMERELLIDAE Dannella sp.		AESHNIDAE Anax sp.		HELICOPSYCHIDAE Helicopsyche sp.	
Drunella sp.		Basiaeshna sp.		Helicopsyche sp. HYDROPSYCHIDAE	
Ephemerella sp. Eurylophella sp.		Boyeria sp. CORDULEGASTRIDAE		Cheumatopsyche sp. Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
EPHEMERIDAE		CORDULIDAE		Parapysche sp.	
Ephemera sp. HEPTAGENIIDAE		GOMPHIDAE Arigomphus sp.		Potamyia sp. HYDROPTILIDAE	
Epeorus sp.		Gomphus sp.		Hydroptila sp:	
Leucrocuta sp. Stenacron sp.		Hagenius sp. Lanthus sp.		Leucotrichia sp. Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
LEPTOPHLEBIDAE Leptophlebia sp.		LIBELLULIDAE MACROMIDAE		Lepidostoma sp. LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Triaenodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Ceraclea sp.	
Paraleptophlebia sp. NEOEPHEMERIDAE		ODONATA Zygoptera - Damaelflies) CALOPTERYGIDAE		Oecetis sp. LIMNEPHILIDAE	
OLIGONEURIDAE		Calopteryx sp.		Apatina sp.	
Isonychia sp. POLYMITARCYIDAE		COENAGRIONIDAE Argia sp.		Hydatophylax sp. Ironoquia sp.	
POTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	14	MOLANNIDAE	
Siphionurus sp. TRICORYTHIDAE		LUMBRICINA ENCHYTRAEIDAE		Molanna ap. ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
ASTROPODA - Snails ANCYLIDAE		NEMERTEA TUBIFICIDAE	5	PHILOPOTAMIDAE Chimarra sp.	
Ferissa sp.		LUMBRICULIDAE		Wormaldia sp.	
HYDROBIIDAE LYMNAEIDAE		POLYCHAETA - Polychaete Worms AEOLOSOMATIDAE		PHRYGANEIDAE	
Fossaria sp.	6	Aeolosoma sp.		Ptilostomis sp. POLYCENTROPIDAE	
Stagnicola sp.		PLECOPTERA - Stonefly Larvas PERLIDAE		Cymellus sp.	
Pseudosuccinea sp. PHYSIDAE	1	Acroneuria sp.		Polycentropus sp. PSYCHOMYIDAE	
Physella sp.		Beloneuria sp.		Lype sp.	
PLANORBIDAE Menetus sp.		Eccoptura sp. Neoperla sp.		Psychomyla sp. RHYACOPHILIDAE	
Gyraulus ap		Perlesta sp.		Ryacophila sp.	
PLEUROCERIDAE VIVIPARIDAE		Perlinella sp. PERLODIDAE		Neophylax sp.	
Viviparus sp.		Clioperia sp.		TURBELLARIA - Flatworms	
APLOSCLERIDA		Diploperia sp.		PLANARIIDAE	
SPONGILLIDAE EMIPTERA - True Bugs		Isoperia sp. Cultus sp.		DENDROCOELIDAE	
BELOSTOMATIDAE		PTERONARCYIDAE			
Belostoma sp. Lethocerus sp.		Pteronarcys sp. PELTOPERLIDAE			
CORIXIDAE		Petroperta sp.			
GELASTOCORIDAE		LEUCTRIDAE			
GERRIDAE Trepobates sp.		Leuctra sp. Zealuectra sp.			
HEBRIDAE		Paraleuctra sp.			
HYDROMETRIDAE MESOVELIIDAE		CAPNIDAE Allocapnia sp.			
NEPIDAE		Paracapnia sp.			
Nepa sp.		NEMOURIDAE			
Ranatra sp. VELIIDAE		Amphinemura sp. Ostrocerca sp			
		Nemoura sp.			

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



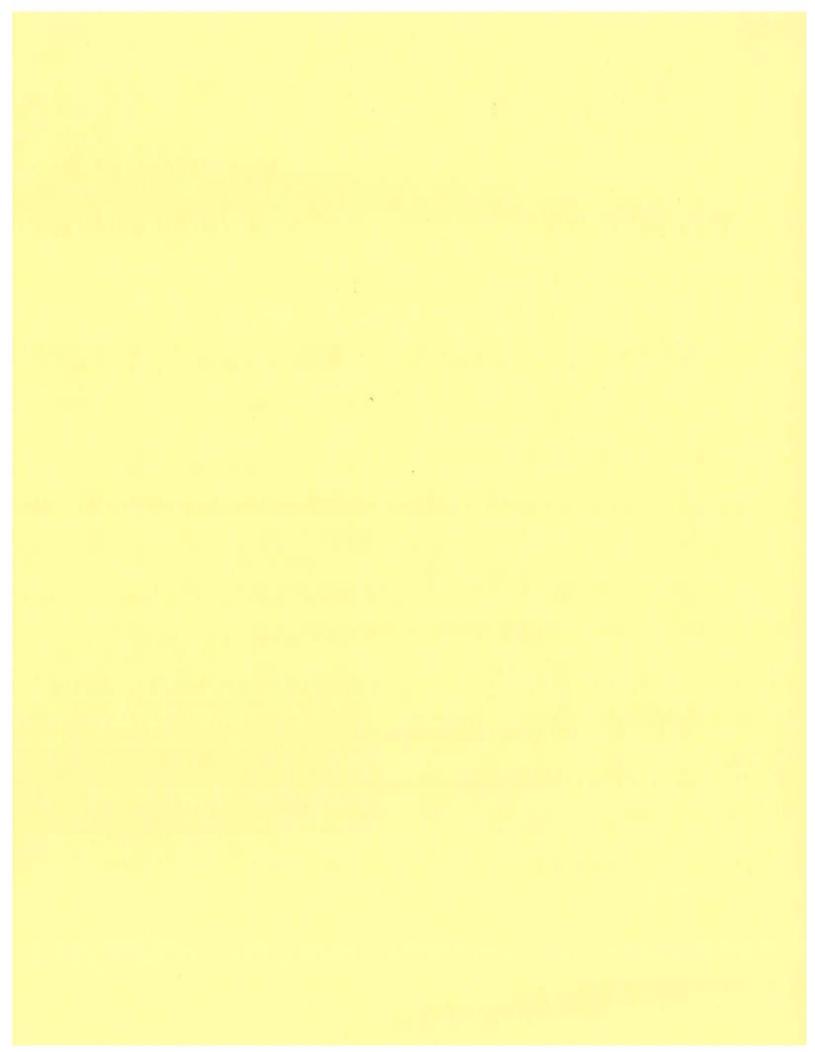


Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
Colvin Run - Pre Con. Year 2	20010	2-A	SDS/LS/JVH/BC	1	106
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
8/30/2008	8/29/2008	JVH	JVH	19	94
CARIFORMES		Forcipomyla sp.		Synorthocladius sp.	
HYDRACHNIDA		Probezzia sp.		Thienemanniella sp.	
IVALVIA - Clams		Sphaeromias sp.		Tvetenia sp.	
SPHAERIDAE Sphaerium sp.		Stilobezzia sp. CHAOBORIDAE		Unniella sp. Xylotopus sp.	
Pisidium sp.		Chaborus sp.		Zalutschia sp.	
Musculium sp.		CHIRONOMIDAE	18	Tanypodinae	
CORBICULIDAE		Chironominae		Ablabasmyla sp.	
Corbicula fluminea sp. UNIONIDAE		Chironomini Chironomus sp.		Alotanypus sp. Apsectrotanypus sp.	
RANCHIOBDELLIDA		Cryptochironomus sp.		Clinotanypus sp.	
BRANCHIOBDELLIDAE		Cryptotendipes sp.		Conchapelopia sp.	
TETRASTEMMATIDAE DLEOPTERA - Beetles		Demicryptochironomus sp. Dicrotendipes sp.		Guttipelopia sp.	
CANTHERIDAE		Einfeldin sp.		Krenopelopia sp. Labrundinia sp.	
CURCULIONIDAE		Endochironomus sp.		Larsia sp.	
DRYOPIDAE		Glyptotendipes sp.		Macropelopia sp.	
Helichus sp. DYTISCIDAE	1	Kiefferulus sp. Microtendipes sp.		Meropelopia sp. Paramerina sp.	
Agabus sp.		Nilothauma sp.		Pentaneura sp.	
Hydroporous sp.		Pagastiella sp.		Procladius sp.	
Coptotomus sp.		Parachironomus sp.		Psectrotanypus sp.	
Oreodytes sp. Laccomis sp.		Paracladopelma sp. Paratendipes sp.		Rheopelopia sp. Tanypus sp.	
Dytiscus sp.		Phaenopsectra sp.		Thienemannimyla gp.	
ELMIDAE		Polypedilum ap.		Thienemannimyla sp.	
Microcylloepus sp. Optioservus sp.		Stenochironomus sp. Stictochironomus sp.		Trissopelopia sp. Zavrelimyia sp.	
Stenelmis sp.		Tribelos sp.		CULICIDAE	
Promoresia sp.		Zavreliella sp.		Aedes	
Macronychus sp.		Tanytarsini		Anopheles	
Dubiraphia sp. Ancyronyx sp.		Cladotanytarsus sp. Constempellina sp.		Culex Culiseta	
Oulimnius sp.		Micropsectra sp.		Mansonia	
GYRINIDAE		Micropsectra/Tanysarsus complex		Orthopodomyia	
Dineutus		Paratanytarsus sp.		Psorophora	
Gyrinus HALIPIDAE		Rheotanytarsus sp. Stempellina sp.		Toxorhynchites Uranotaenia	
Halipus sp.		Stempellinella sp.		Wyeomyia	
HYDROPHILIDAE		Sublettea sp.		DIXIDAE	
Cymbiodyta sp. Berosus sp.		Tanytarsus sp. Zavrelia sp.		Dixa sp. DOLICHOPODIDAE	
Derallus sp.		Diamesinae		EMPIDIDAE	
Helochares sp.		Diamesa sp.		Chelifera sp.	
Helophorus sp.		Pagastia sp.		Clinocera sp.	
Hydrophilus sp. Hydrochus sp.		Potthastia sp. Prodiamesa sp		Hemerodromia sp. Dolichocephala sp.	
Tropistemus sp.		Sympotthestia sp.		EPHYDRIDAE	
Hydrobius sp.		Orthocladiinae		PELCORHYNCHIDAE	
Laccobius sp.		Brillie sp.		Glutops sp.	
PSEPHENIDAE Psephenus sp.		Cardiocladius sp. Chaetocladius sp.		PHORIDAE PSYCHODIDAE	3
Ectopria sp.		Corynoneura sp.		Pericoma sp.	
Dicranopselaphus sp.		Cricotopus sp.		Psycoda sp.	
PTILODACTYLIDAE		Cricotopus/Orthocladius sp.		SIMULIDAE	
Anchytarsus sp. OLLEMBOLA		Diplocladius sp. Eukiefferiella sp.		Simulium sp. Prosimulium sp.	
ISOTOMIDAE	3	Heleniella sp.		Cnephia sp.	
OPEPODA		Heterotrissociadius sp.		Twinia sp.	
FUSTACEA (Amphipoda-Scuda) CRANGONYCTIDAE	4	Hydrobaenus sp. Limnophyes sp.		Stegoptema sp. Ectemnia sp.	
Stygonectes sp.		Lopescladius sp.		STRATIOMYIDAE	
Crangonyx sp.		Mesocricotopus sp.		Oxycera sp.	
Synurella sp. GAMMARIDAE		Mesosmittia sp. Nanocladius sp.		Odontomyia sp. SYRPHIDAE	
Gammarus sp.		Orthocladinae A		Chrysogaster sp.	
HYALELLIDAE		Orthocladius sp.		Eristalis sp.	
Hyalella sp.		Parachaetocladius sp.		TABANIDAE	
RUSTACEA (Decopoda - Crayfish) CAMBARIDAE		Parakiefferiella sp. Parametriocnemus sp.		Chrysops sp. Tabanus sp.	
PALAEMONIDAE		Parametricinemus sp.		TANYDERIDAE	
RUSTACEA (Isopoda- Sowbugs)		Parasmittia sp.		THAUMALEIDAE	
ASELIDAE		Paratrichocladius sp.		Thaumalea sp.	
Caecidotea sp. Lirceus sp.		Paratrissociadius sp.		TIPULIDAE	A
PTERA - Trus Flies		Psectrocladius sp. Pseudorthocladius sp.		Antocha sp. Hexatoma sp.	
ATHERICIDAE		Psilometriocnemus sp.		Leptotarsus sp.	
Atherix sp.		Rheocricotopus sp.		Molophilus sp.	
BLEPHARICERIDAE CECIDOMYIIDAE		Rheosmittia sp. Smittia sp.		Tipula sp. Psuedolimnophila sp.	
CERATOPOGNIDAE		Stillocladius sp.		Dicranota sp.	
Alfuaudomyia sp.		Symposiocladius sp.		Limnophila sp.	
Bezzia sp.				Omosia sp.	
Ceratopogon sp. Culicoides sp.					
Dasyhelea sp.					
POWER PROPERTY.					
Page 1 of 2					



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
olvin Run - Pre Con. Year 2	20010	2-A	SDS/LS/JVH/BC	1	106
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID
8/30/2008	8/29/2008	JVH	JVH	# Grids in Subsample	94
	WY 80 07 80 07 00				
Pedicia sp. Limonia sp.		Microvelia sp. HIRUDINEA - Leeches		Paranemoura sp. Prostola sp.	
Pilaria sp.		HOPLONEMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Fihabdomastix sp.		Prostoma sp.		Alloperia sp.	
RICHOCERIDAE		LEPIDOPTERA - Moth Larvae		Haploperla sp.	
Trichocera sp. PHEMEROPTERA - Mayllies		NOCTUIDAE Archanara sp.		Sweltse sp. TAENIOPTERGIDAE	
AMELETIDAE		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taeniopteryx sp.	
BAETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp. Baetis sp.		Chauliodes sp. Corydalus sp.		Brachycentrus sp. CALAMOCERATIDAE	
Centroptilum sp		Nigronia sp.		Heteroplectron sp	
Diphetor sp.		SIALIDAE		DIPSEUDOPSIDAE	
BAETISCIDAE		Sialis sp.		Phylocentropus sp.	
Baetisca sp. CAENIDAE		NEMATODA - Roundworms NEMATOMORPHA - Horsehair Worms		GLOSSOSOMATIDAE Glossosoma sp.	
Caenis sp.		ODONATA (Anispotera - Dragonflies)		Agapetus sp.	
EPHEMERELLIDAE		AESHNIDAE		HELICOPSYCHIDAE	
Dannella sp.	/	Anax sp.		Helicopsyche sp.	
Drunella sp.		Basiaeshna sp.		HYDROPSYCHIDAE	
Ephemerella sp. Eurylophella sp.		Boyeria sp. CORDULEGASTRIDAE		Cheumatopsyche sp. Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
EPHEMERIDAE		CORDULIDAE	1	Parapysche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
HEPTAGENIIDAE		Arigomphus sp.		HYDROPTILIDAE	
Epeorus sp. Leucrocuta sp.		Gomphus sp. Hagenius sp.		Hydroptila sp. Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
LEPTOPHLEBIDAE		LIBELLULIDAE		Lepidostoma sp.	
Leptophlebia sp.		MACROMIDAE		LEPTOCERIDAE	
Habrophlebia sp. Habrophlebiodes sp.		Macromia sp. PETALURIDAE		Triaenodes sp. Ceraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies)		Oecetis sp.	
NEOEPHEMERIDAE		CALOPTERYGIDAE		LIMNEPHILIDAE	
DLIGONEURIDAE		Calopteryx sp.		Apatina sp.	
Isonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
POLYMITARCYIDAE POTAMANTHIDAE		Argia sp. LESTIDAE		Pycnopsyche sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	54	MOLANNIDAE	
Siphlonurus sp.		LUMBRICINA		Molanna sp.	
TRICORYTHIDAE		ENCHYTRAEIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Pallotreta sp.	
ASTROPODA - Snails ANCYLIDAE		NEMERTEA TUBIFICIDAE	2	PHILOPOTAMIDAE Chimarra sp.	
Ferissa sp.		LUMBRICULIDAE		Wormaldia sp.	
HYDROBIIDAE		POLYCHAETA - Polychaete Worms		PHRYGANEIDAE	
LYMNAEIDAE		AEOLOSOMATIDAE		Ptilostomis sp.	
Fossaria sp. Stagnicola sp.		Aeolosoma sp. PLECOPTERA - Stonelly Larvae		POLYCENTROPIDAE Cymellus sp.	
Pseudosuccinea sp.		PERLIDAE		Polycentropus sp.	
PHYSIDAE	3	Acroneuria sp.		PSYCHOMYIDAE	
Physella sp.		Beloneuria sp.		Lype sp.	
PLANORBIDAE Menetus sp.		Eccoptura sp. Neoperia sp.		Psychomyia sp. RHYACOPHILIDAE	
Gyraulus sp.		Periesta sp.		Ryacophila sp.	
PLEUROCERIDAE		Perlinella sp.		UENOIDAE	
VIVIPARIDAE		PERLODIDAE		Neophylax sp.	
Viviparus sp.		Clioperla sp.		TURBELLARIA - Flatworms	
APLOSCLERIDA SPONGILLIDAE		Diploperta sp.		PLANARIIDAE DENDROCOELIDAE	1.
EMIPTERA - True Bugs		Cultus sp.		NEMERTEA - Ribbon Worms	
BELOSTOMATIDAE		PTERONARCYIDAE			
Belostoma sp.		Pteronarcys sp.			
Lethocerus sp.		PELTOPERLIDAE			
CORIXIDAE GELASTOCORIDAE		Pettoperia sp. LEUCTRIDAE			
GERRIDAE		Leuctra sp.			
Trepobates sp.		Zealuectra sp.			
HEBRIDAE		Paraleuctra sp.			
HYDROMETRIDAE		CAPNIDAE			
MESOVELIIDAE NEPIDAE		Allocapnia sp. Paracapnia sp.			
Nepa sp.		NEMOURIDAE			
Ranatra sp.		Amphinemura sp.			
VELIIDAE		Ostrocerca sp			
		Nemoura sp.			

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



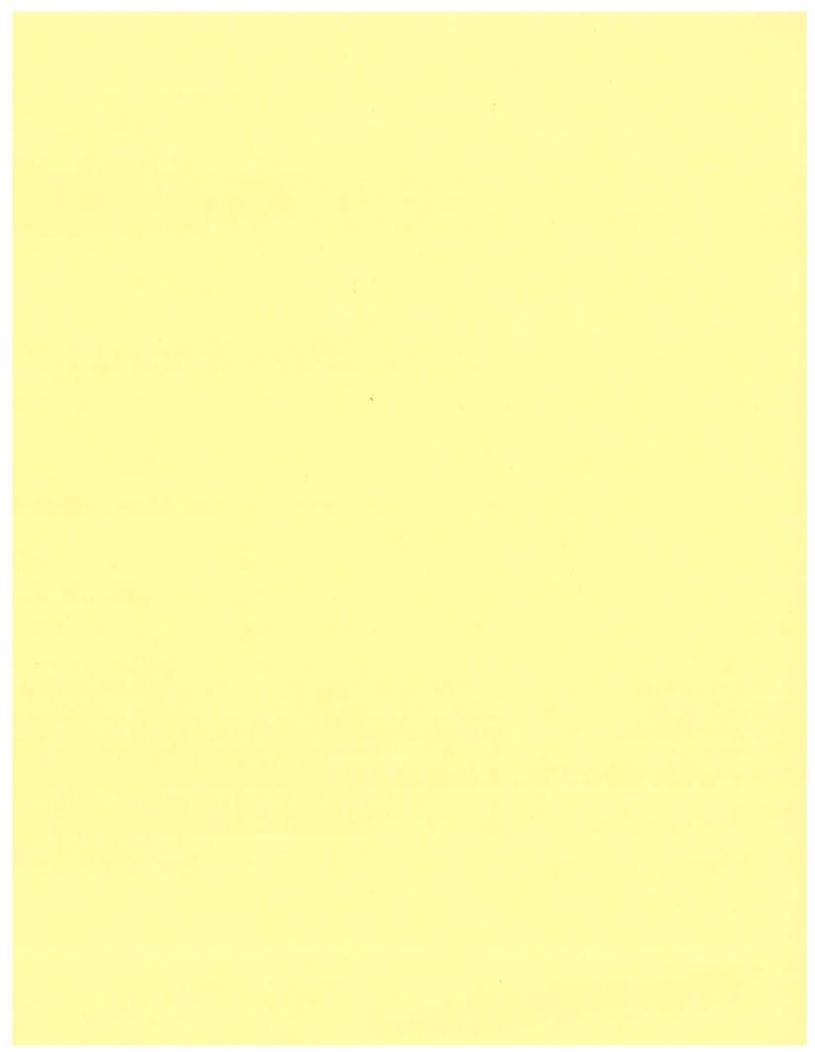


Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
Colvin Run - Pre Con. Year 2	20010	2-B	SDS/LS/JVH/BC	4	137
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID's
3/14/2008	3/13/2008	BC	BC	24	98
CARIFORMES		Forcipomyla sp.		Synorthocladius sp.	
HYDRACHNIDA		Probezzia sp.		Thienemanniella sp.	
VALVIA - Clams SPHAERIDAE		Sphaeromias sp. Stilobezzia sp.		Tvetenia sp. Unniella sp.	
Sphaerium sp.		CHAOBORIDAE		Xylotopus sp.	
Pisidium sp.		Chaborus sp.		Zalutschia sp.	
Musculium sp.		CHIRONOMIDAE	18	Tanypodinae	
CORBICULIDAE Corbicula fluminea sp.		Chironominae		Ablabesmyla sp.	
UNIONIDAE		Chironomus sp.		Alotanypus sp. Apsectrotanypus sp.	
RANCHIOBOELLIDA		Cryptochironomus sp.		Clinotanypus sp.	
BRANCHIOBDELLIDAE		Cryptotendipes sp.		Conchapelopia sp.	
TETRASTEMMATIDAE OLEOPTERA - Beetles		Demicryptochironomus sp. Dicrotendipes sp.		Guttipelopia sp. Krenopelopia sp.	
CANTHERIDAE		Einfeldia sp.		Labrundinia sp.	
CURCULIONIDAE		Endochironomus sp.		Larsia sp.	
DRYOPIDAE		Glyptotendipes sp.		Macropelopia sp.	
Helichus sp. DYTISCIDAE		Kiefferulus sp.		Meropelopia sp.	
Agabus sp.		Microtendipes sp. Nilothauma sp.		Paramerina sp. Pentaneura sp.	
Hydroporous sp.		Pagastiella sp.		Procladius sp.	
Coptotomus sp.		Parachironomus sp.		Psectrotanypus sp.	
Oreodytes sp. Laccomis sp.		Paraciadopelma sp.		Rheopelopia sp. Tanypus sp.	
Dytiscus sp		Phaenopsectra sp.		Thienemannimyia gp.	
ELMIDAE		Polypedilum sp.		Thienemannimyia sp.	
Microcylloepus sp. Optioservus sp.		Stenochironomus sp.		Trissopelopia sp.	
Stenelmis sp.		Stictochironomus sp. Tribelos sp.		Zavrelimyla sp. CULICIDAE	
Promoresia sp.		Zavreliella sp.		Aedes	
Macronychus sp.		Tanytarsini		Anopheles	
Dubiraphia sp.		Cladotanytarsus sp. Constempellina sp.		Culex	
Ancyronyx sp. Oulimnius sp.		Micropsectra sp.		Culiseta Mansonia	
GYRINIDAE		Micropsectra/Tanysarsus complex		Orthopodomyia	
Dineutus		Paratanytarsus sp.		Psorophora	
Gyrinus HALIPIDAE		Rheotanytarsus sp. Stempellina sp.		Toxorhynchites Uranotaenia	
Halipus sp.		Stempellinella sp.		Wyeomyia	
HYDROPHILIDAE		Sublettea sp.		DIXIDAE	
Cymbiodyta sp.		Tanytarsus sp.		Dixa sp.	
Berosus sp. Derallus sp.		Zavrelia sp. Diamesinae		DOLICHOPODIDAE EMPIDIDAE	
Helochares sp.		Diamesa sp.		Chelifera sp.	
Helophorus sp.		Pagastia sp.		Clinocera sp.	
Hydrophilus sp. Hydrochus sp.		Potthastia sp.		Hernerodromia sp.	
Tropistemus sp.		Prodiamesa sp Sympotthastia sp.		Dolichocephala sp. EPHYDRIDAE	
Hydrobius sp.		Orthocladiinae		PELCORHYNCHIDAE	
Laccobius sp.		Brillia sp.		Glutops sp.	
PSEPHENIDAE Psephenus sp.		Cardiocladius sp.		PHORIDAE	
Ectopria sp.		Chaetocladius sp. Corynoneura sp.		PSYCHODIDAE Pericoma sp.	
Dicranopselaphus sp.		Cricotopus sp.		Psycoda sp.	
PTILODACTYLIDAE		Cricotopus/Orthocladius sp.		SIMULIDAE	
Anchytarsus sp. OLLEMBOLA		Diplocladius sp. Euklefferiella sp.		Simulium sp. Prosimulium sp.	
ISOTOMIDAE		Heleniella sp.		Cnephia sp.	
OPEPODA		Heterotrissocladius sp.		Twinia sp.	26/05
RUSTACEA (Amphipoda- Scude) CRANYONYCTIDAE		Hydrobaenus sp.		Stegoptema sp.	
Stygonectes ap.		Limnophyes sp. Lopescladius sp.		Ecternia sp. STRATIOMYIDAE	
Crangonyx sp.		Mesocricotopus sp.		Oxycera sp.	
Synurella sp.		Mesosmittia sp.		Odontomyla sp.	
GAMMARIDAE Gammarus sp.		Nanocladius sp. Orthocladinae A		SYRPHIDAE Chrysogaster sp.	
HYALELLIDAE		Orthocladius sp.		Eristalis sp.	
Hyalella sp.		Parachaetocladius sp.		TABANIDAE	
RUSTACEA (Decopoda - Craylish)		Parakiefferiella sp.		Chrysops sp.	
CAMBARIDAE PALAEMONIDAE		Parametriocnemus sp. Paraphaenocladius sp.		Tabanus sp. TANYDERIDAE	
RUSTACEA (Isopoda- Sowbuga)		Parasmittia sp.		THAUMALEIDAE	
ASELIDAE		Paratrichocladius sp.		Thaumalea sp.	
Caecidotea sp.		Paratrissociadius sp.		TIPULIDAE	1
Lirceus sp. IPTERA - True Flies		Psectrocladius sp. Pseudorthocladius sp.		Antocha sp. Hexatoma sp.	
ATHERICIDAE		Pseudorinociadius sp. Psilometriocnemus sp.		Leplotarsus sp.	
Atherix sp.		Fiheocricotopus sp.		Molophilus sp.	
BLEPHARICERIDAE CECIDOMYIIDAE		Rheosmittia sp.		Tipula sp.	
CERATOPOGNIDAE		Smittia sp. Stilocladius sp.		Psuedolimnophila sp. Dicranota sp.	
Alluaudomyia sp.		Symposiocladius sp.		Limnophila sp.	
Bezzia sp.				Ornosia sp.	
Ceratopogon sp.					
Culicoides sp. Dasyhelea sp.					
person ap					
Page 1 of 2				-	



Date Date Date Date Sorter Sorter # Grids in Subset Transcription # Grids in Subset Transcription # Grids in Subset # Grids in S	137
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Limonia sp. HIRLDDREA' Laeches Prioris sp. HOPLENNERISTERA - Rebot Womis Shees sp. Erigions ap. TETRASTEMMATDAE CH.GORDERLOAE LEPDOPETERA - Mentacoss Trichocans sp. HERLOAE REPOORTERA - Mentacoss Trichocans sp. HERMEROPTERA - Mentacoss Trichocans	
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Serratella sp. Cordutegaster sp. Hydropsyche sp. Ephemera sp. GORDULIDAE Parapyselve sp. Ephemera sp. GORDULIDAE Potenyas sp. Potenyas sp. HOPTAGENIDAE Potenyas sp. HOPTAGENIDAE Potenyas sp. HOPTAGENIDAE Potenyas sp. Hoptoplata sp. Hydroplata sp. Hydroplata sp. Hydroplata sp. Hydroplata sp. Laucrocula sp. Laucrocula sp. Laucrocula sp. Laucrocula sp. Laucrocula sp. Laucrocula sp. Laucrotichia sp. Stenancra sp. Laucrotichia sp. Solopomphus sp. Laucrotichia sp. Stenancra sp. Laucrotichia sp. Solopomphus sp. Leprophila sp. Leprocentia sp. MacRomina sp. Trisenodes sp. Habrophilabia sp. MacRomina sp. Trisenodes sp. Petal uritidae Carolica sp. Petal uritidae Carolica sp. ODONATA Sypotens - Darnselfilise) Ocacita sp. NEGEPHEMERIDAE Caloptary sp. ODONATA Sypotens - Darnselfilise) Ocacita sp. NEGEPHEMERIDAE Caloptary sp. Apatina sp. Hydrophylax sp. NEGEPHEMERIDAE Caloptary sp. Apatina sp. Hydrophylax sp. Polymararcylidae Liminephilabe sp. Argis sp. Apatina sp. Bionychia sp. Coenancia sp. Argis sp. Polymararcylidae Hydrophylax sp. Polymararcylidae Caloptary sp. Coenancia sp. Siphilabe Sp. Siphilabe Sp. Siphilabe Sp. Nolica Sp. Petista sp. Polycentropus sp. Philabe Sp. Nolica Sp. Nolica Sp. Nolica Sp. Polycentropus sp. Philabe Sp. Nolica Sp. Polycentropus sp. Philabe Sp. Nolica Sp. Polycentropus sp. Po	
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HEPTAGENIDAE Arigomphus sp. Gomphus sp. Hydropilia sp. Leucrocula sp. Hagenius sp. Leucrocula sp. Hagenius sp. Leucrocula sp. Stenacron sp. Leucrocula sp. Stenacron sp. Leptopolibobis sp. Leptopolibobis sp. Habrophibobis sp. Habrophibobis sp. Habrophibobis sp. Paraleptophicula sp. Paraleptophicula sp. Cancella sp. Paraleptophicula sp. Pociama sp. Isonophia sp. Polumitarci via sp. Polumitarc	
Eperonus sp. Leutrocula sp. Hagenius sp. Leutrocula sp. Stenacion sp. Leptophiebia sp. Macronia sp. Macronia sp. Trienacion sp. Trienacion sp. Habrophiebia sp. Macronia sp. Paralleptophiebia sp. Macronia sp. Paralleptophiebia sp. Macronia sp. Paralleptophiebia sp. Ocenta sp. Paralleptophiebia sp. Reception sp	
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Isonychia sp. COENAGRIONIDAE Hydatophylax sp. Formation sp.	
POLYMTARCYIDAE Argis sp. POTAMANTHIDAE LESTIDAE SIPHLONEURIDAE SIBORIOLISAE SIBORIO	
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LYMNAEIDAE AEOLOSOMATIDAE Pilostomis ep. Fossaria sp. Aadosoma sp. POLYCENTROPIDAE Stagnicola sp. PIECOPTERIA - Stonelly Larvae Cymellus sp. Pasudosuccinea sp. PERLIDAE Polycentropus sp. PHYSIDAE Acroneuria sp. PSYCHOMYIDAE Physella sp. Beloneuria sp. Lype sp. PLANORBIDAE Eccoptura ap. Psychomyis sp. Menetuts sp. Neoperla sp. RHYACOPHILIDAE Gyraulus sp. Perfinella sp. Rysoophila sp. PLEUROCERIDAE Perlinella sp. UENOIDAE VIVPARIDAE PERLODIDAE Neophylax sp. VIVPARIDAE PERLODIDAE Neophylax sp. PLANARIDAE PLANARIDAE PLANARIDAE SPONGILLIDAE isoperla sp. PLANARIDAE SPONGILLIDAE DENDROCOELIDAE EMIPTERIA - True Bugs Cuttus sp. BELOSTOMATIDAE PERCONARCYIDAE	
Fossaria sp. Aeolosoma sp. POLYCENTROPIDAE	
Pasudosuocinea sp. PERLIDAE Polycentropus sp. PHYSIDAE Acroneuria sp. PSYCHOMYIDAE Physelfa sp. Beloneuria sp. Lype sp. PLANORBIDAE Eccoptura sp. Psychomyis sp. Menetus sp. Neoperla sp. RHYACOPHILIDAE Gyraulus sp. Perfesta sp. Fyacophila sp. PLEUROCERIDAE Perfinelfa sp. UENOIDAE Viviparius sp. PERLODIDAE Neophylax sp. Viviparius sp. Clioperla sp. TURBELLARIa - Flatworms APLOSCLERIDA Diploperla sp. PLANARIIDAE SPONGILLIDAE Isoperla sp. DENDROCOELIDAE EMIPTERIA - True Bugs Cuttus sp. BELOSTOMATIDAE PTERONARCYIDAE	
PHYSIDAE	
Prysella sp. Befoneuria sp. Lype sp. Lype sp. PyANORBIDAE Eccoptura sp. Psychomyla sp. Psychomyla sp. Psychomyla sp. Perfeats sp. RHYACOPHILIDAE Ryscophia sp. Ryscophia sp. Ryscophia sp. UENOIDAE Pertinetia sp. UENOIDAE Pertinetia sp. UENOIDAE Popula sp. UENOIDAE Neophylax sp. Viviparius sp. Ciloperia sp. TURBELLARIa - Flatworms APLOSCLERIDA Diploperia sp. PLANARIDAE SPONGILIDAE Spongilia sp. PLANARIDAE SPONGILIDAE Spongilia sp. PLANARIDAE SPONGILIDAE SPONGI	
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Petinella sp. UENOIDAE	
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APLOSCLERIDA Olploperta sp. PLANARIDAE SPONGILLIDAE lisoperta sp. DENDROCOELIDAE EMIPTERA - True Bugs Cultus sp. BELOSTOMATIDAE PTERONARCYIDAE	
SPONGILLIDAE Isoperta sp. DENDROCOELIDAE EMIPTERA - True Bugs Cultus sp. BELOSTOMATIDAE BELOSTOMATIDAE PTERONARCYIDAE	
EMIPTERA - True Bugs Cultus sp. BELOSTOMATIDAE PTERONARCYIDAE	
BELOSTOMATIDAE PTERONARCYIDAE	
Belostoma sp. Pteronarcys ap.	
Lethocerus sp. PELTOPERLIDAE CORIXIDAE Peltoperla sp.	
GELASTOCORIDAE LEUCTRIDAE	
GERRIDAE Leuctra sp.	
Trepobates sp. Zealuectra sp.	
HEBRIDAE Paraleuctra sp. HYDROMETRIDAE CAPNIDAE	
HYDROME THIDAE GAPHIDAE GAPHIDAE Allocapnia sp. Allocapnia sp.	
MerioaE Paracapria sp.	
Nepa sp. NEMOURIDAE	
Ranatra sp. Amphinemura sp. VELIDAE Ostrocerus sp.	
VELIIDAE Ostrocerca sp Nemoura sp.	
1.000	

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



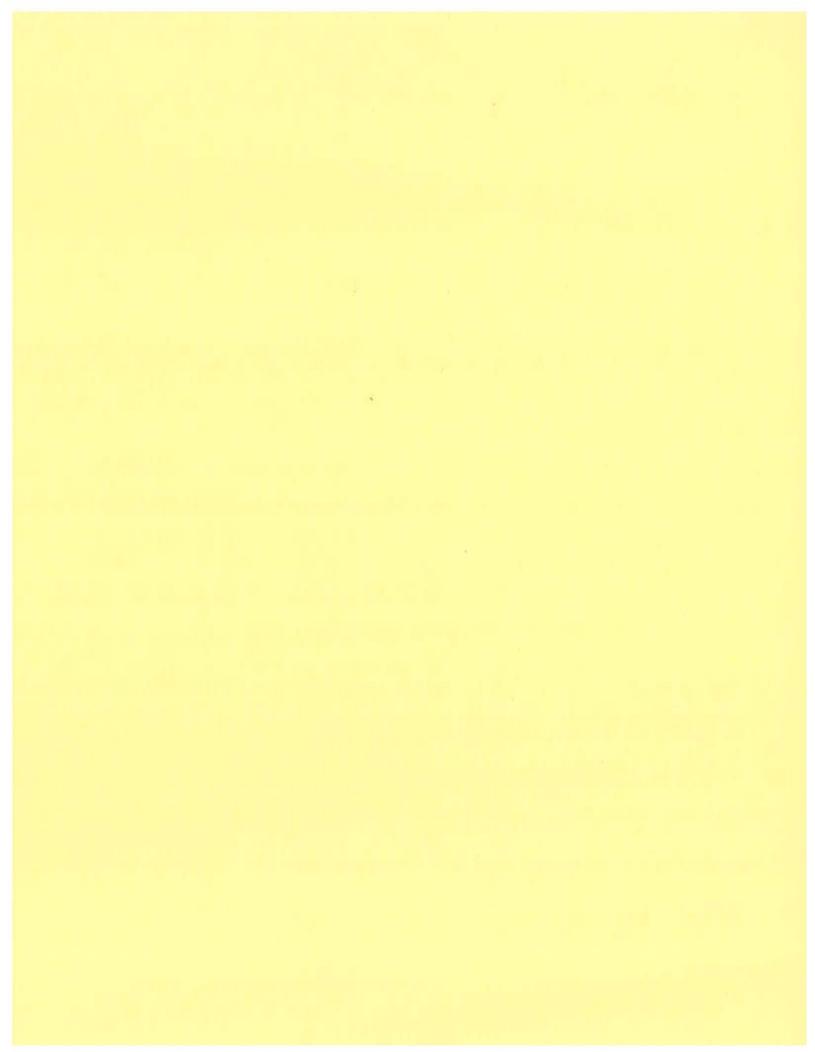


Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorts
Colvin Run - Pre Con. Year 2	20010	3-A	SDS/LS/JVH/BC	1	131
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'o
9/20/2008	9/9/2008	BC	LS	19	122
CARIFORMES		Forcipomyla sp.		Synorthocladius sp.	
HYDRACHNIDA		Probezzia sp.		Thienemanniella sp.	
SPHAERIDAE		Sphaeromias sp.		Tvetenia sp.	
Sphaerium sp.		Stilobezzia sp. CHAOBORIDAE		Unniella sp. Xylotopus sp.	
Pisidium sp.		Chaborus sp.		Zalutschia sp	
Musculium sp. CORBICULIDAE		CHIRONOMIDAE	39	Tanypodinae	
Corbicula fluminea sp.		Chironominae		Ablabesmyla sp. Alotanypus sp.	
UNIONIDAE		Chironomus sp.		Apsectrotanypus sp.	
BRANCHIOBDELLIDA BRANCHIOBDELLIDAE		Cryptochironomus sp.		Clinotanypus sp.	
TETRASTEMMATIDAE		Cryptotendipes sp. Demicryptochironomus sp.		Conchapelopia sp. Guttipelopia sp.	
OLEOPTERA - Beetles		Dicrotendipes sp.		Krenopelopia sp.	
CANTHERIDAE CURCULIONIDAE		Einfeldia sp. Endochironomus sp.		Labrundinia sp. Larsia sp.	
DRYOPIDAE		Glyptotendipes sp.		Macropelopia sp.	
Helichus sp.		Kiefferulus sp.		Meropelopia sp.	
DYTISCIDAE Agabus sp.		Microtendipes sp. Nilothauma sp.		Paramerina sp. Pentaneura sp.	
Hydroporous sp.		Pagastiella sp.		Procladius sp.	
Coptotomus sp.		Parachironomus sp.		Psectrotanypus sp.	
Oreodytes sp. Laccomis sp.		Paraciadopelma sp. Paratendipes sp.		Rheopelopia sp. Tanypus sp.	
Dytiscus sp.		Phaenopsectra sp.		Thienemannimyia gp.	-
ELMIDAE	11	Polypedilum sp. Stenochironomus sp.		Thienemannimyla sp.	
Microcylloepus sp. Optioservus sp.		Sterochironomus sp.		Trissopelopia sp. Zavrelimyla sp.	
Stenelmis sp.		Tribelos sp.		CULICIDAE	
Promoresia sp. Macronychus sp.		Zavreliella sp. Tanytarsini		Acceptator	
Dubiraphia sp.		Cladotanytarsus sp.		Anopheles Culex	
Ancyronyx sp.		Constempellina sp.		Culisota	
Oulimnius sp. GYRINIDAE		Micropsectra sp. Micropsectra/Tanysarsus complex		Mansonia Orthopodomyia	
Dineutus		Paratanytarsus sp.		Psorophora	
Gyrinus		Rheotanytarsus sp.		Toxorhynchites	
HALIPIDAE Halipus sp.		Stempellina sp. Stempellinella sp.		Uranotaenia Wyeomyia	
HYDROPHILIDAE		Sublettea sp.		DIXIDAE	
Cymbiodyta sp.		Tanylarsus sp.		Dixa sp.	
Berosus sp. Derallus sp.		Zavrelia sp. Diamesinae		DOLICHOPODIDAE EMPIDIDAE	
Helochares sp.		Diamesa sp.		Chelifera sp.	
Helophorus sp. Hydrophilus sp.		Pagastia sp. Potthastia sp.		Clinocera sp.	
Hydrochus sp.		Prodiamesa sp		Hemerodromia sp. Dolichocephala sp.	
Tropistemus sp.		Sympotthastia sp.		EPHYDRIDAE	
Hydrobius sp. Laccobius sp.		Orthocladiinae Brilla sp.		PELCORHYNCHIDAE Glutops sp.	
PSEPHENIDAE		Cardiocladius sp.		PHORIDAE	
Psephenus sp.		Chaetocladius sp.		PSYCHODIDAE	
Ectopria sp. Dicranopselaphus sp.		Cricotopus sp.		Pericoma sp. Psycoda sp.	
PTILODACTYLIDAE		Cricotopus/Orthocladius sp.		SIMULIDAE	
Anchytarsus sp. OLLEMBOLA		Diplocladius sp.		Simulium sp.	
ISOTOMIDAE		Eukiefferiella sp. Heleniella sp.		Prosimulium sp. Cnephia sp.	
OPEPODA		Heterotrissociadius sp.		Twinia sp.	
RUSTACEA (Amphipoda- Scuda) CRANGONYCTIDAE	35	Hydrobaenus sp. Limnophyes sp.		Stegoptema sp. Ectemnia sp.	
Stygonectes sp.	MG	Lopescladius sp.		STRATIOMYIDAE	
Crangonyx sp.		Mesocricotopus sp.		Oxycera sp.	
Synurella sp. GAMMARIDAE		Mesosmittia sp. Nanocladius sp.		Odontornyia sp. SYRPHIDAE	
Gammarus sp.		Orthocladinae A		Chrysogaster sp.	
HYALELLIDAE		Orthocladius sp.		Eristalia ap	
Hyalella sp. RUSTACEA (Decopoda - Craylish)		Parachaetocladius sp. Parakiefferiella sp.		TABANIDAE Chrysops sp.	
CAMBARIDAE		Parametriocnemus sp.		Tabanus sp.	
PALAEMONIDAE		Paraphaenocladius sp.		TANYDERIDAE	
RUSTACEA (Isopoda- Sowbugs) ASELIDAE		Parasmittia sp. Paratrichocladius sp.		THAUMALEIDAE Thaumaiea sp.	
Caecidotea ap.		Paratrissocladius sp.		TIPULIDAE	2
Lirceus sp.		Psectrocladius sp.		Antocha sp.	
PTERA - True Flies ATHERICIDAE		Pseudorthocladius sp. Psilometriocnemus sp.		Hexatoma sp. Leptotarsus sp.	
Atherix sp.		Rheocricotopus sp.		Molophilus sp.	
BLEPHARICERIDAE CECIDOMYIIDAE		Rheosmittia sp. Smittia sp.		Tipula sp. Psuedolimnophila sp.	
CERATOPOGNIDAE		Stilocladius sp.		Dicranota sp.	
Alluaudomyia sp.		Symposiocladius sp.		Limnophila sp.	
Bezzia sp. Ceratopogon sp.				Ormosia sp.	
Culicoides sp.					
Dasyhelea sp.					
David A of S					
Page 1 of 2					



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
olvin Run - Pre Con. Year 2	20010 Date Sorted	3-A Taxonomist	SDS/LS/JVH/BC Sorter	# Grids in Subsample	131 Total No. Organisms ID's
9/20/2008	9/9/2008	BC	LS	19	122
Pedicia sp. Limonia sp.		Microvelia sp. HIRUDINEA - Leeches		Paranemoura sp. Prostoia sp.	
Pilaria sp.		HOPLONEMERTEA - Ribbon Worma		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp. FRICHOCERIDAE		Prostoma sp. LEPIDOPTERA - Moth Larvae		Alloperia sp. Haploperia sp.	
Trichocera sp.		NOCTUIDAE		Sweltsa sp.	
PHEMEROPTERA - Mayllies		Archanara sp.		TAENIOPTERGIDAE	
AMELETIDAE		Bellura sp. PYRALIDAE		Strophopteryx sp. Taeniopteryx sp.	
Ameletus sp. BAETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddistlies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp. Centroptilum sp.		Corydalus sp. Nigronia sp.		CALAMOCERATIDAE Heteroplectron sp.	
Diphetor sp.		SIALIDAE		DIPSEUDOPSIDAE	
BAETISCIDAE		Sialis sp.		Phylocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
CAENIDAE Caenis sp.		NEMATOMORPHA - Horsehair Worms ODONATA (Anispotera - Dragontties)		Glossosoma sp. Agapetus sp.	
EPHEMERELLIDAE		AESHNIDAE	2	HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp. Ephemerella sp.		Basiaeshna sp. " Boyeria sp.	- 2.20	HYDROPSYCHIDAE Cheumatopsyche sp.	8
Eurylophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
EPHEMERIDAE		CORDULIDAE		Parapysche sp.	
Ephemera sp. HEPTAGENIDAE		GOMPHIDAE Arigomphus sp.	2	Potamyla sp. HYDROPTILIDAE	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp. Stenonema sp.		Lanthus sp. Stylogomphus sp.		Ochrotrichia sp. LEPIDOSTOMATIDAE	
LEPTOPHLEBIDAE		LIBELLULIDAE		Lepidostoma sp.	
Leptophlebia sp.		MACROMIIDAE		LEPTOCERIDAE	
Habrophlebia sp. Habrophlebiodes sp.		Macromia sp. PETALURIDAE		Triaeriodes sp. Ceraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies)		Oecetis sp.	
NEOEPHEMERIDAE		CALOPTERYGIDAE	2	LIMNEPHILIDAE	
OLIGONEURIDAE		Calopteryx sp.	-	Apatina sp.	
Isonychia sp. POLYMITARCYIDAE		COENAGRIONIDAE Argia sp.	8	Hydatophylax sp. Ironoquia sp.	
POTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms		MOLANNIDAE	
Siphionurus sp.		FAMILY #1		Molanna sp.	
TRICORYTHIDAE Tricorythodes sp.		NAIDIDAE NAIDIDAE		ODONTOCERIDAE Psilotreta sp.	
ASTROPODA - Snalls		NEMERTEA		PHILOPOTAMIDAE	9
ANCYLIDAE		TUBIFICIDAE	- 1	Chimarra sp.	
Ferissa sp. HYDROBIIDAE		POLYCHAETA - Polychaete Worms		Wormaldia sp. PHRYGANEIDAE	
LYMNAEIDAE		AEOLOSOMATIDAE		Ptilostomis sp.	
Fossaria sp.		Aeolosoma sp.		POLYCENTROPIDAE	
Stagnicola sp. Pseudosuccinea sp.		PLECOPTERA - Stonefly Larvee PERLIDAE		Cymellus sp. Polycentropus sp.	
PHYSIDAE	3	Acroneuria sp.		PSYCHOMYIDAE	
Physella sp.		Beloneuria sp.		Lype sp.	
PLANORBIDAE Menetus sp.		Eccoptura sp. Neoperia sp.		Psychomyla sp. RHYACOPHILIDAE	
Gyraulus sp.		Periesta sp.		Ryacophila sp.	
PLEUROCERIDAE		Perlinella sp.		UENOIDAE	
VIVIPARIDAE Viviparus sp.		PERLODIDAE Clioperta sp.		Neophylax sp. TURBELLARIA - Flatworms	
APLOSCLERIDA		Diploperia sp.		PLANARIDAE	
SPONGILLIDAE		Isoperia sp.		DENDROCOELIDAE	
EMIPTERA - True Bugs BELOSTOMATIDAE		Cultus sp.			
Belostoma sp.		PTERONARCYIDAE Pteronarcys sp.			
Lethocerus sp.		PELTOPERLIDAE			
CORIXIDAE		Peltoperia sp.			
GELASTOCORIDAE GERRIDAE		Leuctra sp.			
Trepobates sp.		Zealuectra sp.			
HEBRIDAE		Paraleuctra sp.			
HYDROMETRIDAE MESOVEL IIDAE		CAPNIDAE			
MESOVELIIDAE NEPIDAE		Allocapnia sp. Paracapnia sp.			
Nepa sp.		NEMOURIDAE			
Ranatra sp.		Amphinemura sp.			
VELIIDAE		Ostrocerca ap			
The state of the s		Nemoura sp.			

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



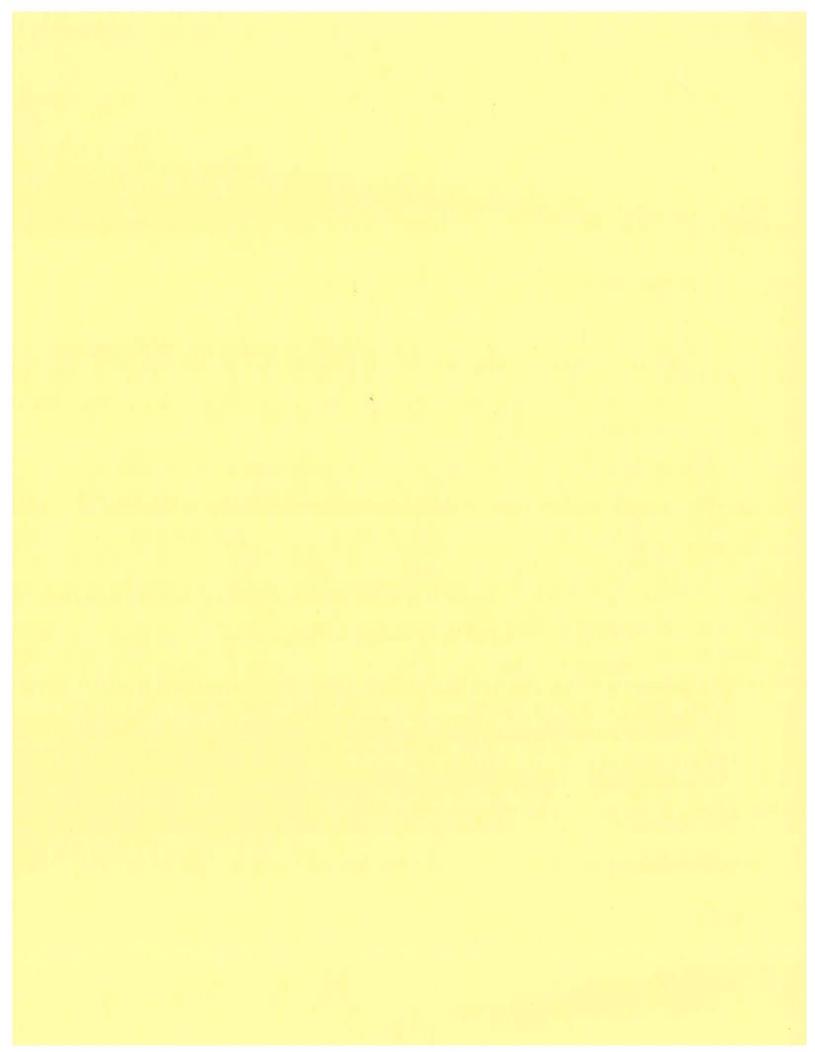


Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
Colvin Run - Pre Con. Year 2	20010	4-A	SDS/LS/JVH/BC	1	131
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
7/29/2008	3/14/2008	BC	LS	51	80
CARIFORMES		Forcipomyla sp.		Synorthocladius sp.	
HYDRACHNIDA		Probezzia sp.		Thienemanniella sp.	
IVALVIA - Clams SPHAERIDAE	1	Sphaeromias sp. Stilobezzia sp.		Tvetenia sp. Unniella sp.	
Sphaerium sp.		CHAOBORIDAE		Xylotopus sp.	
Pisidium sp.		Chaborus sp.		Zalutschia sp.	
Musculium sp. CORBICULIDAE		CHIRONOMIDAE	60	Tanypodinae Ablabeamyla sp.	
Corbicula fluminea sp.		Chironomini		Alotanypus sp.	
UNIONIDAE FRANCHIOBDELLIDA		Chironomus sp. Cryptochironomus sp.		Apsectrotanypus sp. Clinotanypus sp.	
BRANCHIOBDELLIDAE		Cryptotendipes sp.		Conchapelopia sp.	
TETRASTEMMATIDAE		Demicryptochironomus sp.		Guttipelopia sp.	
OLEOPTERA - Beetles CANTHERIDAE		Dicrotendipes sp. Einfeldia sp.		Krenopelopia sp. Labrundinia sp.	
CURCULIONIDAE	1	Endochironomus sp.		Larsia sp.	
DRYOPIDAE Helichus sp.		Glyptotendipes sp. Kiefferulus sp.		Macropelopia sp. Meropelopia sp.	
DYTISCIDAE		Microtendipes sp.		Paramerina sp.	
Agabus sp.		Nilothauma sp.		Pentaneura sp.	
Hydroporous sp. Coptotomus sp.		Pagastiella sp. Parachironomus sp.		Procladius sp. Psectrotanypus sp.	
Oreodytes sp.		Paracladopelma sp.		Rheopelopia sp.	
Laccornis sp. Dytiscus sp.		Paratendipes sp. Phaenopsectra sp.		Tanypus sp. Thienemannimyia gp.	
ELMIDAE		Polypedilum sp.		Thienemannimyia sp.	
Microcylloepus sp. Optioservus sp.		Stenochironomus sp. Stictochironomus sp.		Trissopelopia sp. Zavrelimyia sp.	
Stenelmis sp.		Tribelos sp.		CULICIDAE	
Promoresia sp.		Zavreliella sp.		Aedes	
Macronychus sp. Dubiraphia sp.		Tanytarsini Cladotanytarsus sp.		Anopheles Culex	
Ancyronyx sp.		Constempellina sp.		Culiseta	
Oulimnius sp. GYRINIDAE		Micropsectra sp. Micropsectra/Tenysarsus complex		Mansonia Orthopodomyla	
Dineutus		Paratanytarsus sp.		Paorophora	
Gyrinus HALIPIDAE		Rheotanytarsus sp. Stempellina sp.		Toxorhynchites	
Halipus sp.		Stempellinella sp.		Uranotaenia Wyeomyia	
HYDROPHILIDAE		Sublettea sp.		DIXIDAE	
Cymbiodyta sp. Berosus sp.		Tanytarsus sp. Zavrelia sp.		Dixa sp. DOLICHOPODIDAE	
Derallus sp.		Diamesinae		EMPIDIDAE	
Helochares sp. Helophorus sp.		Diamesa sp. Pagastia sp.		Chelifera sp. Clinocera sp.	
Hydrophilus sp.		Potthastia sp.		Hemerodromia sp.	
Hydrochus sp.		Prodiamesa sp		Dolichocephala sp.	
Tropistemus sp. Hydrobius sp.		Sympotthastia sp. Orthocladlinae		PELCORHYNCHIDAE	
Laccobius sp.		Brillie sp.		Glutops sp.	
PSEPHENIDAE Psephenus sp.		Cardiocladius sp. Chaetocladius sp.		PHORIDAE PSYCHODIDAE	
Ectopria sp.		Corynoneura sp.		Pericoma sp.	
Dicranopselaphus sp. PTILODACTYLIDAE		Cricotopus ap, Cricotopus/Orthocladius sp.		Psycoda sp. SIMULIDAE	
Anchytarsus sp.		Diplocladius sp.		Simulium sp.	
OLLEMBOLA ISOTOMIDAE		Eukiefferiella sp. Heleniella sp.		Prosimulium sp.	
OPEPODA		Heterotrissociadius sp.		Cnephia sp. Twinia sp.	
RUSTACEA (Amphipoda-Souda)		Hydrobaenus sp.		Stegoptema sp.	
CRANYONYCTIDAE Stygonectes sp.		Limnophyes sp. Lopescladius sp.		Ectemnia sp. STRATIOMYIDAE	
Crangonyx sp.		Mesocricotopus sp.		Oxycera sp.	
Synurella sp. GAMMARIDAE		Mesosmittia sp. Nanocladius sp.		Odontomyia sp. SYRPHIDAE	
Gammarus sp.		Orthocladinae A		Chrysogaster sp.	
HYALELLIDAE		Orthocladius sp.		Eristalis sp.	
Hyalella sp. HUSTACEA (Decopoda - Craylish)		Parachaetocladius sp. Parakiefferiella sp.		TABANIDAE Chrysops sp.	
CAMBARIDAE		Parametriocnemus sp.		Tabanus sp.	
PALAEMONIDAE RUSTACEA (Isopoda-Sowbugs)		Paraphaenocladius sp. Parasmittia sp.		TANYDERIDAE THAUMALEIDAE	
ASELIDAE		Parasmitia sp. Paratrichocladius sp.		Thaumalea sp.	
Caecidotea sp.		Paratrissocladius sp.		TIPULIDAE	1
Lirceus sp. IPTERA - True Flies		Psectrocladius sp. Pseudorthocladius sp.		Antocha sp. Hexatoma sp.	
ATHERICIDAE		Pailometriocnemus sp.		Leptotarsus sp.	
Atherix sp. BLEPHARICERIDAE		Rheocricotopus sp. Rheosmittia sp.		Molophilus sp.	
CECIDOMYIIDAE		Smittia sp.		Tipula sp. Psuedolimnophila sp.	
CERATOPOGNIDAE Alluquidomida en		Stilocladius sp.		Dicranota sp.	
Alluaudomyia sp. Bezzia sp.		Symposiocladius sp.		Limnophila sp. Omosia sp.	
Ceratopogon sp.				- Little and a second	
Culicoides sp.					
Dasyhelea sp.					



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
Colvin Run - Pre Con, Year 2	20010	4-A	SDS/LS/JVH/BC	1	131
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'
7/29/2008	3/14/2008	BC	LS	51	80
Pedicia sp. Limonia sp.		Microvella sp. HIRUDINEA - Leeches		Paranemoura sp. Prostoia sp.	
Pllaria sp.		HOPLONEMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp. Rhabdomastix sp.		Prostoma sp.		CHLOROPERLIDAE Alloperia sp.	
RICHOCERIDAE		LEPIDOPTERA - Moth Larvae		Haploperia sp.	
Trichocera sp.		NOCTUIDAE		Sweltsa sp.	
PHEMEROPTERA - Mayllies AMELETIDAE		Archanara sp. Bellura sp.		TAENIOPTERGIDAE Strophopteryx sp.	
Ameletus sp.		PYRALIDAE		Taenlopteryx sp.	
BAETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp. Baetis sp.		Chaufiodes sp. Corydalus sp.		Brachycentrus sp. CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.	4 - 4	Heteroplectron sp.	
Diphetor sp.		SIALIDAE		DIPSEUDOPSIDAE	
BAETISCIDAE Baetisca sp.		Sialis sp. NEMATODA - Roundworms		Phylocentropus sp. GLOSSOSOMATIDAE	
CAENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp.		ODONATA (Anispotera - Dragonflies)		Agapetus sp.	
EPHEMERELLIDAE		AESHNIDAE		HELICOPSYCHIDAE	
Dannella sp. Drunella sp.		Anax sp. Basiaeshna sp.		Helicopsyche sp. HYDROPSYCHIDAE	5
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp. Serratella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
EPHEMERIDAE		Cordulegaster sp. CORDULIIDAE		Hydropsyche sp. Parapysche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
HEPTAGENIIDAE		Arigomphus sp.		HYDROPTILIDAE	
Epeorus sp. Leucrocuta sp.		Gomphus sp. Hagenius sp.		Hydroptila sp. Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp.		Stylogomphus sp.		LEPIDOSTOMATIDAE	
LEPTOPHLEBIDAE Leptophlebia sp.		LIBELLULIDAE MACROMIDAE		Lepidostoma sp. LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Triaenodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Ceracles sp.	
Paraleptophlebia sp. NEOEPHEMERIDAE	-	CALOPTERYGIDAE	1	Oecetis sp. LIMNEPHILIDAE	
OLIGONEURIDAE		Calopteryx sp.		Apatina sp.	
Isonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
POLYMITARCYIDAE POTAMANTHIDAE		Argia sp. LESTIDAE		Ironoquia sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	2	Pycnopsyche sp. MOLANNIDAE	
Siphlonurus ap.		LUMBRICINA		Molanna sp.	
TRICORYTHIDAE	1	ENCHYTRAEIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE NEMERTEA		Psilotreta sp. PHILOPOTAMIDAE	
ANCYLIDAE		TUBIFICIDAE		Chimarra sp.	
Ferinsa sp.		LUMBRICULIDAE		Wormaldia sp.	
HYDROBIIDAE LYMNAEIDAE		POLYCHAETA - Polychaete Worms		PHRYGANEIDAE Ptilostomis sp.	
Fossaria sp.		AEOLOSOMATIDAE Aeolosoma sp.		POLYCENTROPIDAE	
Stagnicola sp.		PLECOPTERA - Stonelly Larvae		Cymellus sp.	
Pseudosuccinea sp. PHYSIDAE	4	PERLIDAE Acroneuria sp.		Polycentropus sp. PSYCHOMYIDAE	
Physella sp.		Beloneuria sp.		Lype sp.	
PLANORBIDAE		Eccoptura sp.		Psychomyia sp.	
Menetus sp.		Neoperia sp. Periesta sp.		RHYACOPHILIDAE Ryacophila sp.	
Gyraulus sp. PLEUROCERIDAE		Perlesta sp. Perlinella sp.		UENOIDAE	
VIVIPARIDAE		PERLODIDAE		Neophylax sp.	
Viviparus sp.		Clioperta sp.		TURBELLARIA - Flatworms	
APLOSCLERIDA SPONGILLIDAE		Diploperla sp. Isoperla sp.		PLANARIIDAE DENDROCOELIDAE	
EMIPTERA - True Bugs		Cultus sp.		NEMERTEA - Ribbon Worms	
BELOSTOMATIDAE		PTERONARCYIDAE			
Belostoma sp. Lethocerus sp.		Pteronarcys sp. PELTOPERLIDAE			
CORIXIDAE		Pelloperia sp.			
GELASTOCORIDAE		LEUCTRIDAE			
GERRIDAE Trepobates sp.		Leuctra sp.			
HEBRIDAE		Zealuectra sp. Paraleuctra sp.			
HYDROMETRIDAE		CAPNIDAE			
MESOVELIDAE		Allocapnia sp.			
NEPIDAE Nepa sp.		Paracapnia sp. NEMOURIDAE			
Ranatra sp.		Amphinemura sp.			
VELHDAE	5	Ostrocerca sp			
		Nemoura sp.			

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



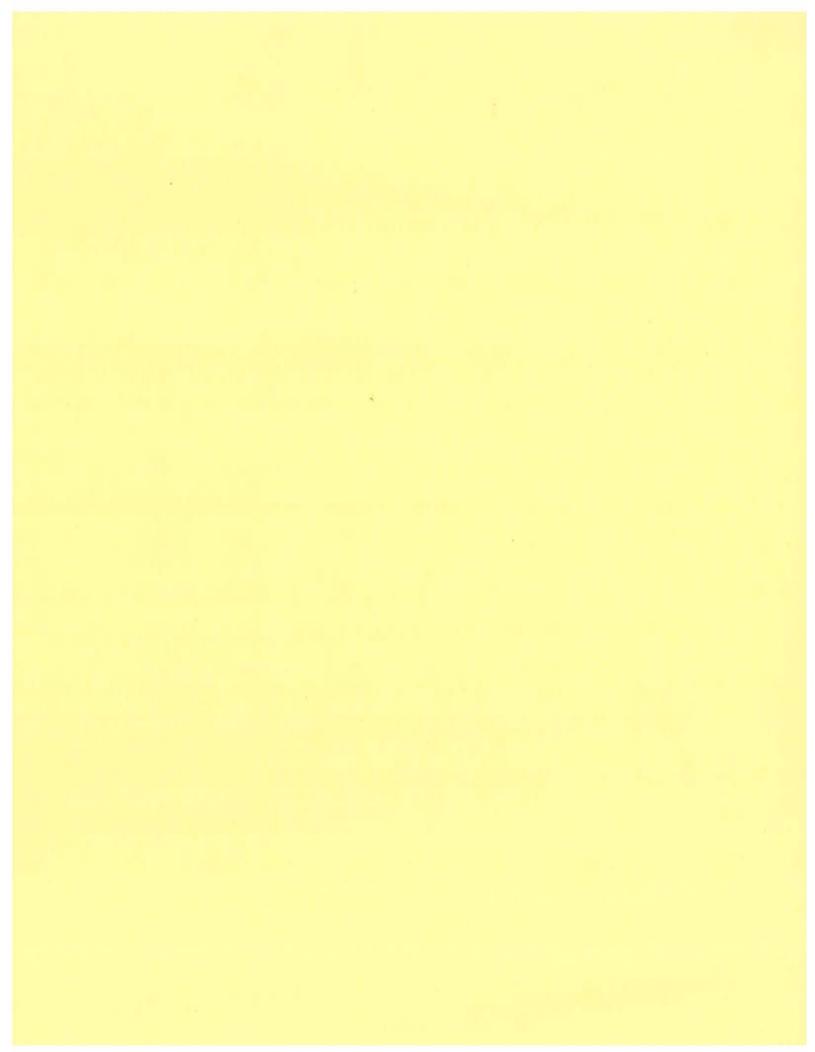


Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Colvin Run - Pre Con. Year 2	20010	5-A	SDS/LS/JVH/BC	1	97
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
9/20/2008	9/9/2008	BC.	BC	101	86
ACARIFORMES:		Forcipornyla sp.		Synorthocladius sp.	
HYDRACHNIDA	1	Probezzia sp.		Thienemanniella sp.	
BIVALVIA - Clams SPHAERIDAE		Sphaeromias sp. Stilobezzia sp.		Tvetenia sp. Unniella sp.	
Sphaerium sp.		CHAOBORIDAE		Xylotopus sp.	
Pisidium sp. Musculium sp.		Chaborus ap.	00	Zalutschia sp.	
CORBICULIDAE		CHIRONOMIDAE Chironominae	32	Tanypodinae Ablabesmyla sp.	
Corbicula fluminea sp.		Chironomini		Alotanypus sp.	
UNIONIDAE BRANCHIOBDELLIDA		Chironomus sp. Cryptochironomus sp.		Apsectrotanypus sp. Clinotanypus sp.	
BRANCHIOBDELLIDA		Cryptotendipes sp.		Conchapelopia sp.	
TETRASTEMMATIDAE		Demicryptochironomus sp.		Guttipelopia sp.	
COLEOPTERA - Beetles CANTHERIDAE		Dicrotendipes sp. Einfeldia sp.		Krenopelopia sp. Labrundinia sp.	
CURCULIONIDAE		Endochironomus sp.		Larsia sp.	
DRYOPIDAE		Glyptotendipes sp.		Macropelopia sp.	
Helichus sp. DYTISCIDAE		Kiefferulus sp. Microtendipes sp.		Meropelopia sp. Paramerina sp.	
Agabus sp.		Nilothauma sp.		Pentaneura sp.	
Hydroporous sp.		Pagastiella sp. Parachironomus sp.		Procladius sp.	
Coptotomus sp. Oreodytes sp.		Parachironomus sp. Paraciadopelma sp.		Psectrotanypus sp. Rheopelopia sp.	
Laccomis sp.		Paratendipes sp. "		Tanypus sp.	
Dytiscus sp. ELMIDAE		Phaenopsectra sp. Polypeditum sp.		Thienemannimyla gp. Thienemannimyla sp.	
Microcyllospus sp.		Stenochironomus sp.		Trissopelopia sp.	
Optioservus sp.		Stictochironomus sp.		Zavrelimyla sp. CULICIDAE	
Stenelmis sp. Promoresia sp.		Tribelos sp. Zavreliella sp.		Aedes	
Macronychus sp.		Tanytarsini		Anopheles	
Dubiraphia sp. Ancyronyx sp.		Cladotanylarsus sp. Constempellina sp.		Culex Culseta	
Oulimnius sp.		Micropsectra sp.		Mansonia	
GYRINIDAE		Micropsectra/Tanysarsus complex		Orthopodomyia	
Dineutus Gyrinus		Paratanytarsus sp. Rheotanytarsus sp.		Psorophora Toxorhynchites	
HALIPIDAE		Stempellina sp.		Uranotaenia	
Halipus sp. HYDROPHILIDAE		Stempellinella sp. Sublettea sp.		Wyeomyia DIXIDAE	
Cymbiodyta sp.		Tanytarsus sp.		Dixa sp.	
Berosus sp.		Zavrelia sp.		DOLICHOPODIDAE	1
Derallus sp. Helochares sp.		Diamesinae Diamesa sp.		EMPIDIDAE Cheilfera sp.	
Helophorus sp.		Pagastia sp.		Clinocera sp.	
Hydrophilus sp. Hydrochus sp.		Potthastia sp.		Hemerodromia sp.	
Tropistemus sp.		Prodiamesa sp Sympotthastia sp.		Dolichocephala sp. EPHYDRIDAE	
Hydrobius sp.		Orthocladiinae		PELCORHYNCHIDAE	
Laccobius sp. PSEPHENIDAE		Brillia sp. Cardiocladius sp.		Glutops sp. PHORIDAE	1
Psephenus sp.		Chaetocladius sp.		PSYCHODIDAE	2
Ectopria sp.		Corynoneura sp.		Pericoma sp.	
Dicranopselaphus sp. PTILODACTYLIDAE		Cricotopus sp. Cricotopus/Orthocladius sp.		Psycoda sp. SIMULIDAE	
Anchytarsus sp.		Diplocladius sp.		Simulium sp.	
COLLEMBOLA ISOTOMIDAE	2	Eukiefferiella sp. Heleniella sp.		Prosimulium sp. Cnephia sp.	
COPEPODA	£.	Heterotrissociadius sp.		Twinia sp.	
CRUSTACEA (Amphipoda-Scuds)		Hydrobaenus sp.		Stegoptema sp.	
CRANGONYCTIDAE Stygonectes sp.	9	Limnophyes sp. Lopescladius sp.		Ectemnia sp. STRATIOMYIDAE	
Crangonyx sp.		Mesocricotopus sp.		Oxycera sp.	
Synurella sp. GAMMARIDAE		Mesosmittie sp. Nanocladius sp.		Odontomyia sp. SYRPHIDAE	
Gammarus sp.		Orthocladinae A		Chrysogaster sp.	
HYALELLIDAE		Orthocladius sp.		Eristalis sp.	
Hyalella sp. CRUSTACEA (Decopoda - Crayfish)		Parachaetocladius sp. Parakiefferiella sp.		TABANIDAE Chrysops sp.	
CAMBARIDAE		Parametriocnemus sp.		Tabanus sp.	
PALAEMONIDAE		Paraphaenocladius sp.		TANYDERIDAE	
CRUSTACEA (Isopoda- Sowbugs) ASELIDAE		Parasmittia sp. Paratrichocladius sp.		THAUMALEIDAE Thaumalea sp.	
Caecidotea sp.		Paratrissociadius sp.		TIPULIDAE	3
Lirceus sp. DIPTERA - True Files	1	Psectrocladius sp.		Antocha sp.	
DIPTERA - True Files DIPTERA FAMILY #1	1	Pseudorthocladius sp. Psilometriocnemus sp.		Hexatoma sp. Leptotarsus sp.	
ATHERICIDAE		Rheocricotopus sp.		Molophilus sp.	
Atherix sp. BLEPHARICERIDAE		Rheosmittia sp. Smittia sp.		Tipula sp. Psuedolimnophila sp.	
CECIDOMYIIDAE		Stillocladius sp.		Dicranota sp.	
CERATOPOGNIDAE		Symposiocladius sp.		Limnophila ap.	
Alluaudomyia sp. Bezzia sp.				Omosia sp.	
Ceratopogon sp.					
Culicoides sp.					
Dasyhelea sp.					



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
Colvin Run - Pre Con. Year 2	20010	5-A	SDS/LS/JVH/BC		97
Date ID'd	20010 Date Sorted	Taxonomist	Sorter	# Grids In Subsample	Total No. Organisms ID
9/20/2008	9/9/2008	BC	BC	# Grids in Subsample	86
3/20/2006	3/3/2000	BC	DU	101	00
Pedicia sp.		Microvelia sp.		Paranemoura sp.	
Limonia sp. Pilaria sp.		HIRUDINEA - Leeches HOPLONEMERTEA - Ribbon Worms		Prostola sp. Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperia sp.	
TRICHOCERIDAE Trichocera sp.		NOCTUIDAE	1	Haploperia sp. Sweltsa sp.	
PHEMEROPTERA - Mayflies		Archanara sp.		TAENIOPTERGIDAE	
AMELETIDAE		Bellura sp.		Strophopteryx sp.	
Ameletus ap. BAETIDAE		PYRALIDAE MEGALOPTERA - Dobsonflies		Taeniopteryx sp.	
Acentrella sp.		CORYDALIDAE		TRICHOPTERA - Caddisflies BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalus sp.		CALAMOCERATIDAE	
Centroptilum sp. Diphetor sp.		Nigronia sp. SIALIDAE		Heteroplectron sp. DIPSEUDOPSIDAE	
BAETISCIDAE		Sialis sp.		Phylocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
CAENIDAE Caenis sp.		NEMATOMORPHA - Horsehair Worms ODONATA (Anispotera - Dragonflies)		Glossosoma sp.	
EPHEMERELLIDAE		AESHNIDAE		Agapetus sp. HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp.		Basiaeshna sp.		HYDROPSYCHIDAE	
Ephemerella sp. Eurylophella sp.		Boyeria sp. CORDULEGASTRIDAE		Cheumatopsyche sp. Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
EPHEMERIDAE		CORDULIDAE		Parapysche sp.	
Ephemera sp. HEPTAGENIDAE		GOMPHIDAE Arigomphus sp.		Potamyia sp. HYDROPTILIDAE	
Epeorus sp.		Gomphus sp.		Hydroptila sp.	
Leucrocuta sp.		Hagenius sp.		Leucatrichia sp.	
Stenacron sp. Stenonema sp.		Lanthus sp. Stylogomphus sp.		Ochrotrichia sp. LEPIDOSTOMATIDAE	
LEPTOPHLEBIDAE		LIBELLULIDAE		Lepidostoma sp.	
Leptophlebia sp.		MACROMIDAE		LEPTOCERIDAE	
Habrophlebia sp. Habrophlebiodes sp.		Macromia sp. PETALURIDAE		Triaenodes sp. Ceraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies)		Oecetis sp.	
NEOEPHEMERIDAE		CALOPTERYGIDAE		LIMNEPHILIDAE	
OLIGONEURIDAE		Calopteryx sp.		Apatina sp.	
Isonychia sp. POLYMITARCYIDAE		COENAGRIONIDAE Argia sp.		Hydatophylax sp. Ironoquia sp.	
POTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	25	MOLANNIDAE	
Siphlonurus sp. TRICORYTHIDAE		LUMBRICINA ENCHYTRAEIDAE		Molanna sp. ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
ASTROPODA - Snails		NEMERTEA		PHILOPOTAMIDAE	
ANCYLIDAE		TUBIFICIDAE	2	Chimarra sp.	
Ferissa sp. HYDROBIIDAE	1	POLYCHAETA - Polychaete Worms		Wormaldia sp. PHRYGANEIDAE	
LYMNAEIDAE	1	AEOLOSOMATIDAE		Ptilostomis sp.	
Fossaria sp.		Aeolosoma sp.		POLYCENTROPIDAE	
Stagnicola sp. Pseudosuccinea sp.		PLECOPTERA - Stonetly Larvee PERLIDAE		Cyrnellus sp. Polycentropus sp.	
PHYSIDAE	3	Acroneuria sp.		PSYCHOMYIDAE	
Physella sp.		Beloneuria sp.		Lype sp.	
PLANORBIDAE Menetus sp.		Eccoptura sp. Neoperla sp.		Psychomyla sp. RHYACOPHILIDAE	
Gyraulus sp.		Perlesta sp.		Flyacophila sp.	
PLEUROCERIDAE		Perlinella sp		UENOIDAE	
VIVIPARIDAE Viviparus sp.		PERLODIDAE		Neophylax sp.	
APLOSCLERIDA		Clioperta sp. Diploperta sp.		TURBELLARIA - Flatworms PLANARIDAE	1
SPONGILLIDAE		Isoperia sp.		DENDROCOELIDAE	
EMIPTERA - True Bugs		Cultus sp.			
BELOSTOMATIDAE Belostoma sp.		PTERONARCYIDAE Pteronarcys sp.			
Lethocerus ap.		PELTOPERLIDAE			
CORIXIDAE		Peltoperla sp.			
GELASTOCORIDAE GERRIDAE		LEUCTRIDAE			
Trepobates sp.		Leuctra sp. Zealuectra sp.			
HEBRIDAE		Paraleuctra sp.			
HYDROMETRIDAE		CAPNIDAE			
MESOVELIIDAE NEPIDAE		Allocapnia sp. Paracapnia sp.			
Nepa sp.		NEMOURIDAE			
Ranatra sp.		Amphinemura sp.			
VELIIDAE		Ostrocerca sp			
		Nemoura sp.			

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





Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Colvin Run - Pre Con. Year 2	20010	6-A	SDS/LS/JVH/BC	1	121
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	131 Total No. Organisms ID'd
9/20/2008	9/4/2008	BC/LS	BC/LS	# Grids in Subsample	145
CARIFORMES	SAMOUR LANGE	Forcipomyla sp.		Synorthocladius sp.	I LANGE
HYDRACHNIDA		Probezzia sp.		Thienemanniella sp.	
IVALVIA - Clams		Sphaeromias sp.		Tvetenia sp.	
SPHAERIDAE Sphaerium sp.	7	Stilobezzia sp. CHAOBORIDAE		Unniella sp. Xylotopus sp.	
Pisidium sp.		Chaborus sp.		Zalutschia sp.	
Musculium sp.		CHIRONOMIDAE	18	Tanypodinae	
CORBICULIDAE		Chironominae		Ablabesmyla sp.	
Corbicula fluminea sp. UNIONIDAE		Chironomini Chironomus sp.		Alotanypus sp. Apsectrotanypus sp.	
BRANCHIOBDELLIDA		Cryptochironomus sp.		Clinotanypus sp.	
BRANCHIOBDELLIDAE		Cryptotendipes sp.		Conchapelopia sp.	
TETRASTEMMATIDAE		Demicryptochironomus sp.		Guttipelopia sp.	
COLEOPTERA - Boetles CANTHERIDAE		Dicrotendipes sp. Einfeldia sp.		Krenopelopia sp. Labrundinia sp.	
CURCULIONIDAE		Endochironomus sp.		Larsia sp.	
DRYOPIDAE		Glyptotendipes sp.		Macropelopia sp.	
Helichus sp.		Kiefferulus sp.		Meropelopia sp.	
DYTISCIDAE Agabus sp.		Microtendipes sp. Nilothauma sp.		Paramerina sp. Pentaneura sp.	
Hydroporous sp.		Pagastiella sp.		Procladius sp.	
Coptotomus sp.		Parachironomus sp.		Psectrotanypus sp.	
Oreodytes sp.		Paracladopelma sp.		Rheopelopia sp.	
Laccomis ap, Dyliscus sp.		Paratendipes sp. 9 Phaenopsectra sp.		Tanypus sp. Thienemannimyia gp.	
ELMIDAE		Polypedilum sp.		Thienemannimyia sp.	
Microcylloepus sp.		Stenochironomus sp.		Trissopelopia sp.	
Optioservus sp. Stenelmis sp.		Stictochironomus sp. Tribelos sp.		Zavrelimyia sp. CULICIDAE	
Promoresia sp.		Zavreliella sp.		Aedes	
Macronychus sp.		Tanytarsini		Anopheles	
Dubiraphia sp.		Cladotanytarsus sp.		Culex	
Ancyronyx sp. Oulimnius sp.		Constempellina sp. Micropsectra sp.		Guliseta Mansonia	
GYRINIDAE		Micropsectra/Tanysarsus complex		Orthopodomyla	
Dineutus		Paratanytarsus sp.		Psorophora	
Gyrinus HALIPIDAE		Rheotanytarsus sp.		Toxorhynchites	
Halipus sp.		Stempellina sp. Stempellinella sp.		Uranotaenia Wyeomyla	
HYDROPHILIDAE		Sublettea sp.		DIXIDAE	3
Cymbiodyta sp.		Tanytarsus sp.		Dixa sp.	
Berosus sp. Derallus sp.		Zavrelia sp.		DOLICHOPODIDAE	
Helochares sp.		Diamesinae Diamesa sp.		EMPIDIDAE Chelifera sp.	
Helophorus sp.		Pagastia sp.		Clinocera sp.	
Hydrophilus sp.		Potthastia sp.		Hemerodromia sp.	
Hydrochus sp. Tropistemus sp.		Prodiamesa sp Sympotthastia sp.		Dolichocephala sp. EPHYDRIDAE	
Hydrobius sp.		Orthocladiinae		PELCORHYNCHIDAE	
Laccobius sp.		Brillia sp.		Glutops sp.	
PSEPHENIDAE		Cardiocladius sp.		PHORIDAE	3
Psephenus sp. Ectopria sp.		Chaetocladius sp. Corynoneura sp.		PSYCHODIDAE Pericoma sp.	1
Dicranopselaphus sp.		Cricotopus sp.		Psycoda sp.	
PTILODACTYLIDAE		Cricotopus/Orthocladius sp.		SIMULIDAE	
Anchytarsus sp.		Diploctadius sp.		Simulium sp.	
ISOTOMIDAE	3	Euklefferiella sp. Heleniella sp.		Prosimulium sp. Cnephia sp.	
COPEPODA		Heterotrissociadius sp.		Twinia sp.	
CRUSTACEA (Amphipoda-Scude)	12	Hydrobaenus sp.		Stegopterna sp.	
CRANGONYCTIDAE Stygonectes sp.	15	Limnophyes sp. Lopescladius sp.		Ecternia sp.	
Crangonyx sp.		Lopesciadius sp. Mesocricotopus sp.		Oxycera sp.	
Synurelia sp.		Mesosmittia sp.		Odontomyia sp.	
GAMMARIDAE		Nanocladius sp.		SYRPHIDAE	
Gammarus sp. HYALELLIDAE		Orthocladinae A Orthocladius sp.		Chrysogaster sp. Eristalis sp.	
Hyalelia sp.		Parachaetocladius sp.		TABANIDAE	
CRUSTACEA (Decopoda - Crayfish)		Parakiefferiella sp.		Chrysops sp.	
CAMBARIDAE		Parametriocnemus sp.		Tabanus sp.	
PALAEMONIDAE CRUSTACEA (Inopoda: Sowbugs)		Paraphaenocladius sp. Parasmitia sp.		TANYDERIDAE THAUMALEIDAE	
ASELIDAE		Paratrichocladius sp.		Thaumales sp.	
Caecidotea sp.		Paratrissociadius sp.		TIPULIDAE	9
Liroeus ap		Psectrocladius sp.		Antocha sp.	
OIPTERA - True Flies ATHERICIDAE		Pseudorthocladius sp. Psilometriocnemus sp.		Hexatoma sp. Leptotarsus sp.	
Atherix sp.		Rheodricotopus sp.		Molophilus sp.	
BLEPHARICERIDAE		Rheosmittia sp.		Tipula sp.	
CECIDOMYIIDAE CERATOPOGNIDAE		Smittia sp. Stilociadius sp.		Psuedolimnophila sp. Dicranota sp.	
Alluaudomyla sp.		Symposicoladius sp.		Limnophila sp.	
Bezzia sp.		- JAMES AND STREET		Ormosia sp.	
Ceratopogon sp.					
Culicoides sp.					
Dasyhelea sp.					



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
olvin Run - Pre Con. Year 2	20010	6-A	SDS/LS/JVH/BC		131
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID
9/20/2008	9/4/2008	BC/LS	BC/LS	21	145
			100000		
Pedicia sp. Limonia sp.		Microvelia sp. HIRUDINEA - Leeches		Paranemoura sp. Prostola sp.	
Pilaria sp.		HOPLONEMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp. LEPIDOPTERA - Moth Larvae		Alloperia sp. Haploperia sp.	
Trichocera sp.		NOCTUIDAE		Sweltsa sp.	
PHEMEROPTERA - Mayflies		Archanara sp.		TAENIOPTERGIDAE	
AMELETIDAE Ameletus sp.		Bellura sp. PYRALIDAE		Strophopteryx sp. Taeniopteryx sp.	
BAETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp. Baetis sp.	_	Chauliodes sp. Gorydalus sp.		Brachycentrus sp. CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetor sp.		SIALIDAE		DIPSEUDOPSIDAE	
BAETISCIDAE Baetisca sp.		Sialis sp. NEMATODA - Roundworms		Phylocentropus sp. GLOSSOSOMATIDAE	
CAENIDAE		NEMATOMORPHA - Horsehair Worms		Głossosoma sp.	
Caenis sp.		ODONATA (Anispotera - Oragonflies)		Agapetus sp.	
EPHEMERELLIDAE Dannella sp.		AESHNIDAE Anax sp.		HELICOPSYCHIDAE Helicopsyche sp.	
Drunella sp.		Basiaeshna sp.		HYDROPSYCHIDAE	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp. Serratella sp.		CORDULEGASTRIDAE Cordulegaster sp.		Diplectrona sp. Hydropsyche sp.	
EPHEMERIDAE		CORDULIDAE		Parapysche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
HEPTAGENIIDAE Epeorus sp.		Arigomphus sp. Gomphus sp.		HYDROPTILIDAE Hydroptila sp.	
Leucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp. LEPTOPHLEBIDAE		Stylogomphus sp LIBELLULIDAE		LEPIDOSTOMATIDAE Lepidostoma sp.	
Leptophlebia sp.		MACROMIDAE		LEPTOCERIDAE	
Habrophlebia sp.		Macromia sp.		Triaenodes sp.	
Habrophlebiodes sp. Paraleptophlebia sp.		PETALURIDAE ODONATA Zygoptera - Damselflies)		Ceraclea sp. Oecetis sp.	
NEOEPHEMERIDAE		CALOPTERYGIDAE		LIMNEPHILIDAE	
OLIGONEURIDAE		Calopteryx sp.		Apatina sp.	
Isonychia sp. POLYMITARCYIDAE		COENAGRIONIDAE Argia sp.		Hydatophylax sp. Ironoquia sp.	
POTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	3	MOLANNIDAE	
Siphlonurus sp. TRICORYTHIDAE		LUMBRICINA		Molanna sp.	
Tricorythodes sp.		NAIDIDAE NAIDIDAE		ODONTOCERIDAE Psilotreta sp.	
ASTROPODA - Snaits	1	NEMERTEA		PHILOPOTAMIDAE	
ANCYLIDAE		TUBIFICIDAE	2	Chimarra sp.	
Ferissa sp. HYDROBIIDAE	80	LUMBRICULIDAE POLYCHAETA - Polychaete Worms		Wormaldia sp. PHRYGANEIDAE	
LYMNAEIDAE		AEOLOSOMATIDAE		Ptilostomis sp.	
Fossária sp. Stagnicola sp.		Aeolosoma sp. PLECOPTERA - Stonelly Larvae		POLYCENTROPIDAE Cymellus sp.	
Pseudosuccinea sp.		PERLIDAE		Polycentropus sp.	
PHYSIDAE		Acroneuria sp.		PSYCHOMYIDAE	
Physella sp. PLANORBIDAE		Beloneuria sp. Eccoptura sp.		Lype sp. Psychomyla sp.	
Menetus sp.		Neoperia sp.		RHYACOPHILIDAE	
Gyraulus sp.		Perlesta sp.		Ryacophila sp.	
PLEUROCERIDAE VIVIPARIDAE		Perlinella sp. PERLODIDAE		VENOIDAE Neophylax sp.	
Viviparus sp.		Clioperta sp.		TURBELLARIA - Flatworms	
APLOSCLERIDA		Diploperta sp.		PLANARIIDAE	
SPONGILLIDAE EMIPTERA - True Bugs		Isoperla sp.		DENDROCOELIDAE	
BELOSTOMATIDAE		Cultus sp. PTERONARCYIDAE			
Belostoma sp.		Pteronarcys sp.			
Lethocerus sp. CORIXIDAE		PELTOPERLIDAE			
GELASTOCORIDAE		Peltoperla sp. LEUCTRIDAE			
GERRIDAE		Leuctra sp.			
Trepobates sp. HEBRIDAE		Zealuectra sp. Paraleuctra sp.			
HYDROMETRIDAE		CAPNIDAE			
MESOVELIIDAE		Allocapnia sp.			
NEPIDAE		Paracapnia sp.			
Nepa sp. Ranatra sp.		NEMOURIDAE Amphinemura sp.			
VELIIDAE		Ostrocerca sp			
		Nemoura sp.			

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



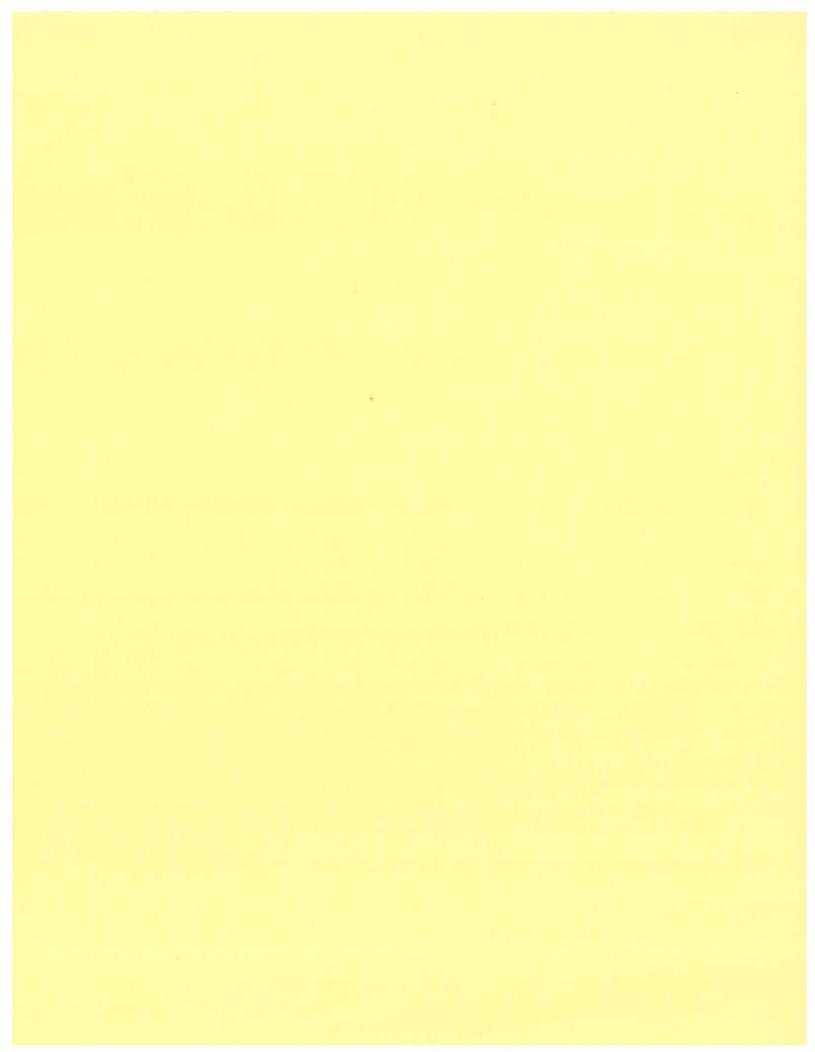


9/20/2008 CARIFORMES HYDRACHNIDA IIVALVIA - Clams SPHAERIDAE Sphaerium sp. Pisidium sp. Musculium sp. CORBICULIDAE Corbicula fluminea sp. UNIONIDAE IRANCHIOBDELLIDA BRANCHIOBDELLIDAE TETRASTEMMATIDAE OLEOPTERA - Beelles CURCULIONIDAE DRYOPIDAE Helichus sp. DYTISCIDAE Agabus sp. Hydroprorus sp. Coptolomus sp. Corocdyles sp. Laccomis sp. Dytiscus sp. ELMIDAE Microcylloepus sp. Optionervus sp. Stenelmis sp. Microcylloepus sp. Optionervus sp. Stenelmis sp.	20010 Date Sorted 7/31/2008	7-A Taxonomist BC Foreipomyla sp. Probezzia sp. Sphaeromias sp. Siliobezzia sp. Chaborus sp. Chaborus sp. Chiponus sp. Chironomina Chironomina Chironomina Chironomina Chironomina sp. Cryptotendipes sp. Demicryptochironomus sp. Erifeldia sp. Erifeldia sp. Erifeldia sp. Endochironomus sp. Kiefterulus sp. Microtendipes sp. Microtendipes sp. Microtendipes sp. Niiothauma sp. Pagastiellia sp. Pagastiellia sp. Pagastiellia sp. Parachironomus sp. Pagastiellia sp. Parachironomus sp.	SDS/LS/JVH/BC Sorter BC	# Grids in Subsample 36 Synorthocladius sp. Thienemanniella sp. Tvetenia sp. Unniella sp. Xylotopus sp. Zelutschia sp. Tanypodinae Ablabesmyla sp. Alstanypus sp. Apsoctrotanypus sp. Clinotanypus sp. Conchapelopia sp. Guttpelopia sp. Larrundinia sp. Larrundinia sp. Larrundinia sp. Larrundinia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp.	127 Total No. Organisms ID: 117
9/20/2008 CARIFORMES HYDRACHNIDA IVALVIA - Clams SPHAERIDAE Sphaerium sp. Pisidium sp. Musculium sp. CORBICULIDAE CORBICULIDAE CORBICULIDAE RANCHIOBDELLIDA BRANCHIOBDELLIDAE TETRASTEMMATIDAE OLEOPTERA - Beetles CANTHERIDAE CURCULIONIDAE DRYOPIDAE Holichus sp. DYTISCIDAE Agabus sp. Hydroporous sp. Coptolomus sp. Coptolomus sp. Coptolomus sp. Dytiscidae Microcyllospus sp. ELMIDAE Microcyllospus sp. ELMIDAE Microcyllospus sp. Optionervus sp. Optionervus sp. Stenelmis sp.	7/31/2008 3	Taxonomist BC Foreipomyla sp. Probezzia sp. Sphaeromias ap. Stiliobezzia sp. CHAOBORIDAE Chaborus sp. CHIRONOMIDAE Chironominae Chironominae Chironominae Chironomias sp. Cryptochironomus sp. Cryptochironomus sp. Demicryptochironomus sp. Demicryptochironomus sp. Dicrotendipes sp. Enteldia sp. Endochironomus sp. Glyptotendipes sp. Kiefferulus sp. Microtendipes sp. Niiothauma sp. Pagastielia sp. Pagastielia sp.	Sorter BC	Synorthocladius sp. Thienemanniella sp. Tvetenia sp. Unniella sp. Vylotopus sp. Zelutschia sp. Tanypodinae Ablabesmyla sp. Alotanypus sp. Apsectrotanypus sp. Clinotanypus sp. Conchapelopia sp. Gurtipelopia sp. Krenopelopia sp. Labrundinia sp. Larsia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp.	Total No. Organisms ID'
9/20/2008 CARIFORMES HYDRACHNIDA VALVIA - Clams SPHAERIDAE Sphaerium sp. Pisidium sp. Corbisula flumines sp. UNIONIDAE ANNCHIOBDELLIDA BRANCHIOBDELLIDAE TETRASTEMMATIDAE ULEOPTERA - Beetles CANTHERIDAE CURCULIONIDAE DOTYOPIOAE Holichus sp. DYTISCIDAE Agabus sp. Hydroporous sp. Coptolomus sp. Coreodytes sp. Laccomis sp. Dytiscus sp. Laccomis sp. Dytiscus sp. ELMIDAE Microcytiospus sp. Optiserus sp. Stenelimis sp.	7/31/2008	Forcipomyla sp. Probezzia sp. Sphaeromias sp. Stillobezzia sp. Stillobezzia sp. CHAOBORIDAE Chaborus sp. CHIRONOMIDAE Chironominae Chironominae Chironominae Chironomias sp. Cryptochironomus sp. Cryptochironomus sp. Demicryptochironomus sp. Demicryptochironomus sp. Demicryptochironomus sp. Endeldia sp. Endechironomus sp. Kiefferulius sp. Kiefferulius sp. Microtandipes sp. Niiothauma sp. Pagastielia sp.	BC	Synorthocladius sp. Thienemanniella sp. Tvetenia sp. Unniella sp. Vylotopus sp. Zelutschia sp. Tanypodinae Ablabesmyla sp. Alotanypus sp. Apsectrotanypus sp. Clinotanypus sp. Conchapelopia sp. Gurtipelopia sp. Krenopelopia sp. Labrundinia sp. Larsia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp.	
HYDRACHNIDA VALVIA - Clams SPHAERIDAE Sphaerium sp. Pisidium sp. Musculium sp. Musculium sp. Corbicula flumines sp. INIONIDAE ANCHIOBOELLIDA SRANCHIOBOELLIDA SRANCHIOBOELLIDAE FETRASTEMMATIDAE JEOPTERIA - Bestles CANTHERIDAE CURCULIONIDAE ROMOPIDAE Holichus sp. DYTISCIDAE Agabus sp. Hydroporous sp. Coreodytes sp. Laccomis sp. Dyliscus sp. Leminae Eliminae Microcyllospus sp. Optioservus sp. ELMIDAE Microcyllospus sp. Optioservus sp. Stenelmis sp.		Probezzia sp. Sphaeromias sp. Stilobezzia sp. Stilobezzia sp. CHAOBORIDAE Chaborus sp. CHIRONOMIDAE Chironominae Chironominae Chironominae Chironomis sp. Cryptochironomus sp. Cryptochironomus sp. Demicryptochironomus sp. Demicryptochironomus sp. Dicrotendipes sp. Einfeldia sp. Endochironomus sp. Glyptotendipes sp. Kiefferulius sp. Microtendipes sp. Niiothauma sp. Pagastielia sp.	4	Thienemanniella sp. Tvetenia sp. Unniella sp. Sylotopus sp. Zelutschia sp. Tanypodinae Ablabesmyte sp. Alotanypus sp. Apsectrotanypus sp. Clinotanypus sp. Gonchapelopia sp. Kronopelopia sp. Kronopelopia sp. Larrufia sp. Larrufia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp.	
HYDRACHNIDA VALVIA - Clams SPHAERIDAE Sphaerium sp. Pisidium sp. Musculium sp. Musculium sp. Corbicula fluminea sp. INIONIDAE		Probezzia sp. Sphaeromias sp. Stilobezzia sp. Stilobezzia sp. CHAOBORIDAE Chaborus sp. CHIRONOMIDAE Chironominae Chironominae Chironominae Chironomis sp. Cryptochironomus sp. Cryptochironomus sp. Demicryptochironomus sp. Demicryptochironomus sp. Dicrotendipes sp. Einfeldia sp. Endochironomus sp. Glyptotendipes sp. Kiefferulius sp. Microtendipes sp. Niiothauma sp. Pagastielia sp.	4	Thienemanniella sp. Tvetenia sp. Unniella sp. Sylotopus sp. Zelutschia sp. Tanypodinae Ablabesmyte sp. Alotanypus sp. Apsectrotanypus sp. Clinotanypus sp. Gonchapelopia sp. Kronopelopia sp. Kronopelopia sp. Larrufia sp. Larrufia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp. Macropelopia sp.	
SPHAERIDAE Sphaerium sp. Sphaerium sp. Muscullum sp. CORBICULIDAE CORDICULIDAE CORDICULIDAE CORDICULIDAE CORDICULIDAE CORDICULIDAE IANCHIOBDELLIDA SRANCHIOBDELLIDAE TETRASTEMMATIDAE DLEOPTERA - Beefles CANTHERIDAE DURCULIONIDAE DRYOPIDAE Helichus sp. SYTISCIDAE Agabus sp. Hydroporous sp. Coptolomus ap. Coreodytes sp. Laccomis sp. Dyliscus sp. LettimdaE Microcytlospus sp. ELMIDAE Microcytlospus sp. Cytlosur sp. LettimdaE Microcytlospus sp. Cytlosur sp. LettimdaE Microcytlospus sp. Optioservus sp. Stenelimis sp.		Sillobazzia sp. CHAOBORIDAE Chaborus sp. CHIPONOMIDAE Chironominae Chironominae Chironomina Chironomus sp. Gryptochironomus sp. Cryptotendipes sp. Demisryptochironomus sp. Dicrotendipes sp. Enfeldia sp. Endochironomus sp. Glyptotendipes sp. Kiefferulus sp. Microtendipes sp. Microtendipes sp. Nilothauma sp. Pagastiella sp.	4	Unniella sp. Xylotopus sp. Zelutschia sp. Tanypodinae Ablabesmyla sp. Alotanypus sp. Apsectrotanypus sp. Cinotanypus sp. Conchapelopia sp. Guttipelopia sp. Krenopelopia sp. Latrundinia sp. Latrundinia sp. Latrundinia sp. Macropelopia sp. Meropelopia sp.	
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Pisidium sp. Musculium sp. DORBICULIDAE Corbicula flumines sp. JIMONIDAE IANCHIOBDELLIDA BRANCHIOBDELLIDA BRANCHIOBDELLIDA BRANCHIOBDELLIDAE TETRASTEMMATIDAE DIEOPTERA - Beefles CANTHERIDAE DIFOPTERA - Beefles CANTHERIDAE DIFOCULIA - BEEFLES DIFOCULIA - BEE	7	Chaborus sp. CHIPONOMIDAE Chironominae Chironominae Chironomus sp. Cryptochironomus sp. Cryptochironomus sp. Demicryptochironomus sp. Dicrotendipes sp. Ernfeldia sp. Endochironomus sp. Glyptotendipes sp. Kiefterulus sp. Kiefterulus sp. Microtendipes sp. Nilothauma sp. Pagastiella sp.	4	Zalutschia sp. Tanypodinae Ablabasmys sp. Alotanypus sp. Apsactrotanypus sp. Clinotanypus sp. Conchapelopia sp. Guttipelopia sp. Krenopelopia sp. Labrundinia sp. Larsia sp. Macropelopia sp. Macropelopia sp. Meropelopia sp.	
CORBICULIDAE CORDICULIDAE CORDICULIDA BRANCHIOBDELLIDA BRANCHIOBDELLIDA BRANCHIOBDELLIDAE LEOPTERA BESTES CANTHERIDAE CURCULIONIDAE DRYOPIDAE Holichus sp. DYTISCIDAE Agabus sp. Hydroporous sp. Coptolomus sp. Coreodytes sp. Laccomis sp. Dyliscus sp. ELMIDAE Microcytloepus sp. Optiosarvus sp. Stenelmis sp.	7.	CHIPONOMIDAE Chironominae Chironomina Chironomus sp. Cryptochironomus sp. Cryptotendipes sp. Demisryptochironomus sp. Dicrotendipes sp. Einfeldia sp. Endochironomus sp. Glyptotendipes sp. Kiefferulus sp. Microtendipes sp. Niiothauma sp. Pagastiella sp.	4	Tanypodinae Ablabesmyla sp. Alotanypus sp. Apsectrotanypus sp. Cinotanypus sp. Conchapelopia sp. Guttipelopia sp. Krenopelopia sp. Labrundinia sp. Larsia sp. Macropelopia sp. Meropelopia sp.	
Corbicula fluminea sp. INIONIDAE IANCHIOBDELLIDA BRANCHIOBDELLIDA BRANCHIOBDELLIDAE FETRASTEMMATIDAE JUCOTEFIRA Beetles CANTHERIDAE JURCULIONIDAE PRYOPIDAE Helichus sp. VYTISCIDAE Agabus sp. Hydroporous sp. Coptotomus ap. Corteodytes sp. Laccomis sp. Dyliscus sp. LettimDAE Microcytleopus sp. Optiservus sp. Stenelmis sp. Optiservus sp. Stenelmis sp. Optiservus sp. Stenelmis sp.	7.	Chironomini Chironomus sp. Cryptotendipes sp. Demicryptochironomus sp. Dicrotendipes sp. Ernfeldis sp. Erndochironomus sp. Endochironomus sp. Glyptotendipes sp. Kiefferulus sp. Microtendipes sp. Nilothauma sp. Pagastiella sp.		Alotanypus sp. Apsactrotanypus sp. Clinotanypus sp. Conchapelopia sp. Guttipelopia sp. Krenopelopia sp. Labrundinia sp. Larsia sp. Macropelopia sp. Meropelopia sp.	
JNIONIDAE ARACHIOBDELLIDA BRANCHIOBDELLIDAE FETRASTEMMATIDAE DLEOPTERA - Beefles CANTHERIDAE DRYOPIDAE Holichus sp. DYTISCIDAE Agabus sp. Hydroporous sp. Coptolomus ap. Corecdyles sp. Luccomis sp. Dytiscus sp. ELMIDAE Microcyllospus sp. ELMIDAE Microcyllospus sp. Optiservus sp. ELMIDAE Microcyllospus sp. Optiservus sp. Stenelmis sp. Optiservus sp.	7.	Chironomus ap. Cryptochironomus ap. Cryptochironomus ap. Demicryptochironomus ap. Dicrotendipes ap. Einfeldis ap. Endochironomus ap. Glyptotendipes ap. Kiefferulus ap. Microtendipes ap. Niiothauma ap. Pagastiella ap.		Apsectrotarypus sp. Cinotarypus sp. Conchapelopia sp. Guttipelopia sp. Krenopelopia sp. Labrundinia sp. Labrundinia sp. Larsia sp. Macropelopia sp. Meropelopia sp.	
BRANCHIOBDELLIDAE TETRASTEMMATIDAE DLEOPTERIA - Beetles CANTHERIDAE JURCULIONIDAE PRYOPIDAE Helichus sp. 1YTISCIDAE Agabus sp. Hydroporous sp. Coptotomus ap. Oreodytes sp. Laccomis sp. Dyliscus sp. Lettindae Microcylloepus sp. Optioservus sp. Optioservus sp. Optioservus sp. Optioservus sp. Stenelmis sp. Stenelmis sp. Stenelmis sp.	7	Cryptotendipes sp. Demicryptochlronomus sp. Dicrotendipes sp. Enfeldia sp. Endochironomus sp. Glyptotendipes sp. Kiefferulus sp. Microtendipes sp. Nitothauma sp. Pagastiella sp. Pagastiella sp.		Clinotanypus sp. Conchapelopia sp. Guttipelopia sp. Krenopelopia sp. Labrundinia sp. Larsia sp. Macropelopia sp. Macropelopia sp.	
TETRASTEMMATIDAE LOPTERA - Beetles LANTHERIDAE DRYOPIDAE PHOLICIAN BARRAN PHOLICIAN BARRAN AGBBUS SP. Hydroporous sp. Coptolomus sp. Coptolomus sp. Driscus sp. Laccomis sp. Laccomis sp. Dyliscus sp. LethidaE Microcytlospus sp. Coptoservus sp. Coptolerus sp. Coptolerus sp. Laccomis sp. Dyliscus sp. LethidaE Microcytlospus sp. Stenelmis sp. Optioservus sp. Stenelmis sp.	7	Demicryptochironomus sp. Dicrotendipes sp. Einfeldis sp. Endochironomus sp. Glyptotendipes sp. Kiefferulus sp. Microtendipes sp. Niiothauma sp. Pagastiella sp.		Guttipelopia sp. Krenopelopia sp. Labrundinia sp. Larsia sp. Macropelopia sp. Meropelopia sp.	
DLEOPTERIA - Beefles CANTHERIDAE CURCULIONIDAE DRYOPIDAE Helichus sp. VYTISCIDAE Agabus sp. Hydroporous sp. Coptolomus sp. Creodytes sp. Laccomis sp. Dyliscus sp. ELMIDAE Microcytloepus sp. ELMIDAE Microcytloepus sp. Dyliscus sp. ELMIDAE Stenalmis sp. Dyliscus sp. ELSIMOAE Stenalmis sp.	7	Dicrotendipes sp. Enteddis sp. Enteddis sp. Endechironomus sp. Glyptotendipes sp. Kiefferulus sp. Microtendipes sp. Nitothauma sp. Pagastiella sp.		Krenopelopia sp. Labrundinia sp. Larsia sp. Macropelopia sp. Meropelopia sp.	
DURCULIONIDAE DRYOPIDAE Helichus sp. DYTISCIDAE Agabus sp. Hydroporous sp. Coptolomus sp. Coreodytes sp. Laccomis sp. Dyliscus sp. Laccomis sp. Dyliscus sp. LEMIDAE Microcytloepus sp. Optiosarvus sp. Stenatims sp.	7	Endochironomus sp. Glyptotenclipes sp. Kiefferulus sp. Microtenclipes sp. Nitothauma sp. Pagastiella sp.		Labrundinia sp. Larsia sp. Macropelopia sp. Meropelopia sp.	
DRYOPIDAE Helichus sp. 1/YITSCIDAE Agabus sp. Hydroporous sp. Coptolomus sp. Dreodytes sp. Jaccomis sp. Julianus sp. LIMIDAE Microcytloepus sp. Optioservus sp. Optioservus sp. Stenalmis sp.	7	Glyptotendipes sp. Kiefferulus sp. Microtendipes sp. Nilothauma sp. Pagastiella sp.		Macropelopia sp. Meropelopia sp.	
Helichus sp. VYTISCIDAE Agabus sp. Hydroporous sp. Coptotomus sp. Dreodytes sp. Laccomis sp. Dytiscus sp. LithiDAE Microcytloepus sp. Optioservus sp. Stenalmis sp. Stenalmis sp.	7	Kiefferulus sp. Microtendipes sp. Nilothauma sp. Pagastiella sp.		Meropelopia sp.	
IVYTECIOAE Agabus sp. Hydroporous sp. Optotomus sp. Optotomus sp. Accomis sp. Jyliscus sp. LiMIDAE Microcylloepus sp. Dyliscus sp. ElamoAn Stenelmis sp.	7	Microtendipes sp. Nilothauma sp. Pagastiella sp.			
Hydroporous sp. Coptolomus sp. Dreodytes sp. Lecomis sp. Dyliscus sp. LLMIDAE Microcytloepus sp. Optioservus sp. Stenalmis sp.		Pagastiella sp.		Paramerina sp.	
Coptolomus ap. Creodytes ap. Laccomis ap. Dyliscus ap. ELMIDAE Microcytloepus ap. Dpilosarvus ap. Stenalmis ap.				Pentaneura sp.	
Orecdytes sp. accomis sp. yyliscus sp. LMIDAE Microcytloopus sp. Dptioservus sp. Stenelmis sp.				Procladius sp. Psectrotanypus sp.	
Oytiscus sp. LMIDAE Microcytloepus sp. Optioservus sp. Stenelmis sp.		Paracladopelma sp.		Rheopelopia sp.	
Microcylloepus sp. Optioservus sp. Stenelmis sp.		Paratendipes sp.		Tanypus sp.	
Microcytloepus sp. Optioservus sp. Stenelmis sp.		Phaenopsectra sp. Polypedilum sp.		Thienemannimyia gp. Thienemannimyia sp.	
Stenelmis sp.		Stenochironomus sp.		Trissopelopia sp.	
		Stictochironomus sp.		Zavrelimyla sp. CULICIDAE	
Promoresia sp.		Tribelos sp. Zavreliella sp.		Aedes	
Macronychus sp.		Tanytarsini		Anopheles	
Dubiraphia sp.		Cladotanytarsus sp.		Culex	
Ancyronyx sp. Oulimnius sp.		Constempellina sp. Micropsectra sp.		Culiseta Mansonia	
YRINIDAE		Micropsectra/Tanysarsus complex		Orthopodomyla	
Dineutus		Paratanytarsus sp.		Psorophora	
Gyrinus		Rheotanytarsus sp. Stempellina sp.		Toxorhynchites Uranotaenia	
Halipus sp.		Stempellinella sp.		Wyeornyia	
IYDROPHILIDAE		Subletten sp.		DIXIDAE	
Cymbiodyta sp. Berosus sp.		Tanytarsus sp. Zavretia sp.		Dixa sp. DOLICHOPODIDAE	
Derallus sp.		Diamesinae		EMPIDIDAE	
Helochares sp.		Diamesa sp.		Chelifera sp.	
Helophorus sp. Hydrophilus sp.		Pagastia sp. Potthastia sp.		Clinocera sp. Hemerodromia sp.	
Hydrochus sp.		Prodiamesa sp		Dolichocephala sp.	
Tropistemus sp.		Sympotthastia sp.		EPHYDRIDAE	
Hydrobius sp. Laccobius sp.		Orthocladlinae Brilla sp.		PELCORHYNCHIDAE Glutops sp.	
PSEPHENIDAE		Cardiocladius sp.		PHORIDAE	3
Psephenus sp.		Chaetocladius sp.		PSYCHODIDAE	
Ectopria sp. Dicranopselaphus sp.		Cricotopus sp.		Pericoma sp. Psycoda sp.	
PTILODACTYLIDAE		Cricotopus/Orthocladius sp.		SIMULIDAE	
Anchytarsus sp.		Diplocladius sp.		Simulium sp.	
DLLEMBOLA		Eukiefferiella sp. Heleniella sp.		Prosimulium sp. Cnephia sp.	
PEPODA		Heterotrissociadius sp.		Twinia sp.	
RUSTACEA (Amphipoda-Souda)		Hydrobaenus sp.		Stegoptema sp.	
Stygonectes sp.	6	Limnophyes sp. Lopescladius sp.		Ectemnia sp. STRATIOMYIDAE	
Crangonyx sp.		Mesocricotopus sp.		Oxycera sp.	
Synurella sp.		Mesosmittia sp.		Odontomyia sp.	
Gammarus sp.		Nanocladius sp. Orthocladinae A		SYRPHIDAE Chrysogaster sp.	
IYALELLIDAE		Orthocladius sp.		Eristalis sp.	
Hyalella sp.		Parachaetocladius sp.		TABANIDAE	
RUSTACEA (Decopoda - Crayfish)		Parakiefferiella sp. Parametriocnemus sp.		Chrysops sp. Tabanus sp.	
PALAEMONIDAE		Parametriochemus sp. Paraphaenocladius sp.		TANYDERIDAE	
RUSTACEA (Isopoda- Sowbugs)		Parasmittia sp.		THAUMALEIDAE	
SELIDAE Caecidotea sp.		Paratrichoctadius sp.		Thaumalea sp.	2
Lirceus sp.		Paratrissociadius sp. Psectrociadius sp.		Antocha sp.	*
PTERA - True Flies	5	Pseudorthocladius sp.		Hexatoma sp.	
ATHERICIDAE		Psilometriocnemus sp.		Leptotarsus sp.	
Atherix sp. BLEPHARICERIDAE		Rheocricotopus sp. Rheosmittia sp.		Molophilus sp. Tipula sp.	
ECIDOMYIIDAE		Smilitia sp.		Psuedolimnophila sp.	
ERATOPOGNIDAE		Stillocladius ap.		Dicranota sp.	
Alluaudomyia sp. Bezzia sp.		Symposiocladius sp.		Limnophila sp. Omosia sp.	
Ceratopogon sp.				- A.W. 1000.	
Culicoides sp.					
Dasyhelea sp.					
Page 1 of 2					



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sort
Colvin Run - Pre Con. Year 2	20010	7-A	SDS/LS/JVH/BC	1	127
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID
9/20/2008	7/31/2008	BC	BC	36	117
AND DESCRIPTION OF THE PARTY OF					
Pedicia sp. Limonia sp.		Microvella sp. HIRUDINEA - Leeches		Paranemoura sp. Prostola sp.	
Pilaria sp.		HOPLONEMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma ap.		Alloperla sp.	
RICHOCERIDAE Trichocera sp.		NOCTUIDAE		Haploperla sp. Sweltsa sp.	
PHEMEROPTERA - Mayflies		Archanara sp.		TAENIOPTERGIDAE	
AMELETIDAE		Bellura sp.		Strophopteryx sp.	
Ameletus sp.		PYRALIDAE -		Taeniopteryx sp.	
BAETIDAE Acentrella sp.		MEGALOPTERA - Dobsonflies CORYDALIDAE		TRICHOPTERA - Caddisflies BRACHYCENTRIDAE	
Acerpenna sp.		Chauliodes sp.		Brachycentrus sp.	
Baetis sp.		Corydalus sp.		CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetor sp. BAETISCIDAE		SIALIDAE Sialis sp.		DIPSEUDOPSIDAE	
Baetisca sp.		NEMATODA - Roundworms		Phylocentropus sp: GLOSSOSOMATIDAE	
CAENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
Caenis sp.		ODONATA (Anispotera - Dragonflies)		Agapetus sp.	
PHEMERELLIDAE		AESHNIDAE		HELICOPSYCHIDAE	
Dannella sp. Drunella sp.		Anax sp. Basineshna sp.		Helicopsyche sp. HYDROPSYCHIDAE	
Ephemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
Eurylophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Serratella sp.		Cordulegaster sp.		Hydropsyche sp.	
EPHEMERIDAE Ephemera sp.		CORDULIDAE GOMPHIDAE		Parapysche sp. Potamyla sp.	
HEPTAGENIIDAE		Arigomphus sp.		HYDROPTILIDAE	
Epeorus sp.		Gomphus ap.		Hydroptila sp.	
Leucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp. Stenonema sp.		Lanthus sp. Stylogomphus sp.		Ochrotrichia sp.	
LEPTOPHLEBIDAE		LIBELLULIDAE		LEPIDOSTOMATIDAE Lepidostoma sp.	
Leptophlebia sp.		MACROMIDAE		LEPTOCERIDAE	
Habrophlebia sp.		Macromia ap.		Triaenodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Ceraclea sp.	
Paraleptophlebia sp. NEOEPHEMERIDAE		ODONATA Zygoptera - Damselflies) CALOPTERYGIDAE		Oecetis sp. LIMNEPHILIDAE	
DLIGONEURIDAE		Calopteryx sp.		Apatina sp.	
Isonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
POLYMITARCYIDAE		Argia sp.		Ironoquia sp.	
POTAMANTHIDAE SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	10	Pycnopsyche sp. MOLANNIDAE	
Siphlonurus sp.		LUMBRICINA	18	Molanna sp.	
TRICORYTHIDAE		ENCHYTRAEIDAE		ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
ASTROPODA - Snails		NEMERTEA		PHILOPOTAMIDAE	
ANCYLIDAE Ferissa sp.		TUBIFICIDAE LUMBRICULIDAE	43	Chimarra sp. Wormaldia sp.	
HYDROBIIDAE		POLYCHAETA - Polychaete Worms		PHRYGANEIDAE	
LYMNAEIDAE		AEOLOSOMATIDAE		Ptilostomis sp.	
Fossaria sp. Stagnicola sp.		Aeclosoma sp. PLECOPTERA - Stonetty Larvae		POLYCENTROPIDAE Cymellus sp.	
Pseudosuccinea sp.		PERLIDAE PERLIDAE		Polycentropus sp.	
PHYSIDAE		Acroneuria sp.		PSYCHOMYIDAE	
Physella sp.		Beloneuria sp.		Lype sp.	
PLANORBIDAE Menetus sp.		Eccoptura sp.		Psychomyia sp. RHYACOPHILIDAE	
Gyraulus sp.		Neoperla sp. Perlesta sp.		Ryacophila sp.	
PLEUROCERIDAE		Perlinella sp.		UENOIDAE	
VIVIPARIDAE		PERLODIDAE		Neophylax sp.	
Viviparus sp.		Clioperla sp.		TURBELLARIA - Fintworms	
APLOSCLERIDA SPONGILLIDAE		Diploperia sp. Isoperia sp.		PLANARIIDAE DENDROCOELIDAE	26
MIPTERA - True Bugs		Cultus sp.		DENDHOGOELIDAE	
BELOSTOMATIDAE		PTERONARCYIDAE			
Belostoma sp.		Pteronarcys sp.			
Lethocerus sp. CORIXIDAE		PELTOPERLIDAE Peltoperia sp.			
GELASTOCORIDAE		LEUCTRIDAE			
GERRIDAE		Leuctra sp.			
Trepobates ap.		Zealuectra sp.			
HEBRIDAE		Paraleuctra sp.			
HYDROMETRIDAE MESOVELIIDAE		CAPNIDAE Allocapnia sp.			
NEPIDAE		Paracapnia sp.			
Nepa sp.		NEMOURIDAE			
Ranatra sp.		Amphinemura sp.			
VELIIDAE		Ostrocerca sp Nemoura sp.			
		remoura sp.			

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



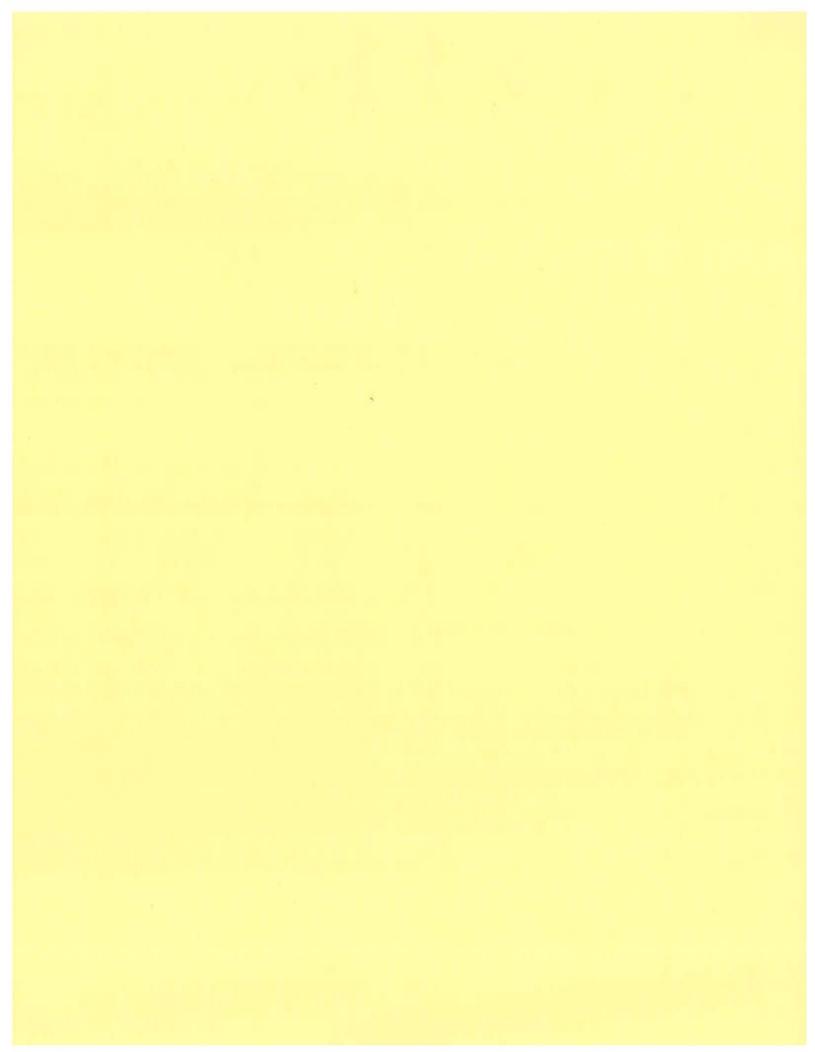


Date Det Date Severe Taxonomist Severe Golds in Subsample Teal No. Oppointes to 10	Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorted
Date Drd Date Sorted Cas Date Drd Date Drd	Colvin Run - Pre Con. Year 2	20010	8-A	SDS/LS/JVH/BC	1	125
GOODCOOK S. L.S. L.S. TOT 110 11	Date ID'd			THE RESIDENCE OF THE PERSON NAMED AND ADDRESS OF THE PERSON NA	# Grids in Subsample	
HYDRACHINDA PROMISSION FORMATION FOR	9/20/2008	9/9/2008	LS	LS		110
Production	CARIFORMES		Forcipomyia sp.		Synorthocladius sp.	
SPAMENDAIN			Probezzia sp.			
Spraeum p. - Publish B Children S Chi						
Mecodam p. CHROCOEDM 97 Tarpyoninae CONTROLLED 1	Sphaerium sp.		CHAOBORIDAE		Xylotopus sp.	
CORRECTADE CONTROLLADE CONTROL				97		
UNDONDATE MERCHICOPERION Control of the control o						
Contemporary (contemporary (Alotanypus sp.	
BRANCHORDELLOME TITLATOTRANTAM Demoprisophysionomis sp. Outplepan sp. Outplep						
Decorations on State	BRANCHIOBDELLIDAE		Cryptotendipes sp.		Conchapelopia sp.	
CAPTHERMANE						
DPYOPINE Holicitus gs. Kellerichis gs.			Einfeldia sp.			
Helchore (Inc.) More interfedies (Inc.) More interfedies (Inc.) More interfedies (Inc.) More interfedies (Inc.) Parametria					Larsia sp.	
DYTECDAÉ Mechanina p. Prateriorus p. Prater						
Pigastellas gr. Procides ye. Procides ye. Procides ye.	DYTISCIDAE				Paramerina sp.	
Copidentia Sp. Persichiopens S						
Oncodes sp. Lecture Sp. Lectur					Procladius sp. Psectrotanypus sp.	
Diffects (B. C.	Oreodytes sp.		Paracladopelma sp.		Fitheopelopia sp.	
ELMORAE Metroprilaping sp. Silencopharocraus sp. Tilencopharocraus sp. Tanylarasial Anopharocraus sp. Colection sp. Tanylarasial Anopharocraus sp. Teneropharocraus sp. Tene					Tanypus sp. Thianamannimyis an	
Oglosperus sp. Statechnoromus sp. Zarvellmyns sp. CULGDM Pomorosis sp. Cultural sp. CULGDM Pomorosis sp. Cultural sp.	ELMIDAE		Polypedilum sp.		Thienemannimyia sp.	
Stendmin sp. Tribolos sp. CULDAE Promotesia Sp. Zaretialia sp. Aedis Macropythus Sp. Aedis Macrophila sp. Contampalism sp. Cullmins sp. Maryonia sp. Cullmins sp. Maryonia sp. Maryonia sp. Maryonia sp. Maryonia sp. Maryonia sp. Maryonia sp. District Sp. Patentyprins sp. Perception sp. Maryonia sp. Patentyprins sp. Perception sp. Maryonia sp. Perception sp. Perception sp. Maryonia sp. Perception sp. Perception sp. Maryonia sp. Perception sp. Perception sp. Maryonia sp. District Sp. Perception sp. Maryonia sp. District Sp. Perception sp. Maryonia sp. District Sp. District Sp. District Sp. Maryonia sp. District Sp. District Sp. District Sp. Maryonia sp. District Sp. District Sp. District Sp. Maryonia sp. Perception sp. District Sp. District Sp. Maryonia sp. Perception sp. Perception sp. Perception sp. Maryonia sp. District Sp. District Sp. District Sp. District Sp. District Sp. District Sp. Perception sp. Maryonia sp. District Sp. Distric						
Pennoreals sp. Aedes Macromychus sp. Tarytarsini Arcypleses Dééraphis sp. Cilefolinystrius sp. Cilefolinus sp						
Dobrighia sp. Clarker (Collection Sp. Contemporation sp. Collection Sp. Collectio	Promoresia sp.		Zavreliella sp.		Aedes	
Acyclory sp. Contempelha sp. Contempelha sp. Contempelha sp. Mercepactural systems complex CYRNOME Mercepactural systems complex complex cyrnome mercepactural systems complex cyrnome						
Outhrowing sp. Meropectra sp. Meropectra sp. Meropectra sp. Meropectra sp. Orthopodomyin Paratarytarasus pornjex Perophyra P	Ancyronyx sp.					
Pendantus Paratarytamus 9, Pencephora	Oulimnius sp.		Micropsectra sp.			
Control Cont						
Halpus 90 Simpelinella sp. DixORE	Gyrinus					
HYDROPHILIDAE Subleties ap. DIXIDAE						
Gymbolydia sp. Tanylarisus sp. Zavelia sp. Douchid Popicion S. Tanylarisus sp. Diamesinae EMPIDIDE I 1 Derallus sp. Diamesinae EMPIDIDE I 1 Helocharies sp. Popicialis sp. Helocharies sp. Popicialis sp. Popicialis sp. Profiliation S. Profiliati	HYDROPHILIDAE					
Dermillus sp. Diameslane EMPIDIDAE	Cymbiodyta sp.		Tanytarsus sp.		Disa sp.	
Melocharies sp. Diameas sp. Chellera sp. Chellera sp. Circoca sp. Pagastia sp. Circoca						1
Helophorus sp. Pagastis sp. Clinocera sp. Hydrophius sp. Portlastis sp. Hemacromia sp. Hydrophius sp. Portlastis sp. Dolichocaphala sp. Hydrophius sp. Dolichocaphala sp. Hydrobius sp. EphryDRAE Hydrobius sp. PRECORMYNCHIDAE Laccobius sp. PHORDAE Laccobius sp. Phornatium sp. Laccobius sp.					Chelifera sp.	
Hydrochus sp. Produmasa sp. Doichocephala sp.	Helophorus sp.		Pagastia sp.		Clinocera sp.	
Tropistemus sp. Orthocladilinae DPLCORHYNCHIDAE Laccobius sp. Orthocladilinae DPLCORHYNCHIDAE Laccobius sp. Brillis sp. Glutops sp. Glutops sp. ProPRIDAE Cardiocladius sp. ProPRIDAE 1 Pephrenus sp. Proprint sp. Dictaropselaphus sp. Dictarop			Proflamesa sp			
Laccoblus sp. PSEPPLENIDAE Cardiocladius sp. Psepherius p. Candiocladius sp. Psepherius p. Chastocladius sp. Practicus sp. Chastocladius sp. Practicus sp. P	Tropistemus sp.		Sympotthastia sp.		EPHYDRIDAE	
PSEPHENIDAE Cardiocaldius sp. PYOCHODIAE				All All		
Pespherus sp. Chaelociadius sp. Copynoneurs gp. Copynoneurs gp. Percons gp. Dicranopselaphus sp. Dicranopselaphus sp. PriLODACTYLIDAE Chrolopus sp. PriLODACTYLIDAE Chrolopus sp. Procods sp. PriLODACTYLIDAE Anchytarius sp. Diplocladius sp. Diplocladius sp. Diplocladius sp. Diplocladius sp. Diplocladius sp. Prosimulium sp. Simulium sp. Simulium sp. Diplocladius sp. Diplocladius sp. Prosimulium sp. Simulium sp. Diplocladius sp. Di						1
Dictanopselaphus sp. Criootopus sp. SIMULIDAE PTILODAC TYLIDAE Criootopus pp. SIMULIDAE Anchytanius sp. Diblociadius sp. Simuliam sp. Diblociadius sp. Diblociadiu	Psephenus sp.		Chaetocladius sp.		PSYCHODIDAE	
PTILODACTYLIDAE Cricotopus/Orthocladius sp. Diplocitatius sp. Diplocitatius sp. Diplocitatius sp. Simulura sp. Coll EMBOLA Edustrianus sp. Diplocitatius sp. Simulura sp. Coll EMBOLA Edustrianus sp. Diplocitatius sp. Crospita sp. Crospita sp. Crospita sp. Crospita sp. Crospita sp. Diplocitatius sp. Diplocitatius sp. Crospita sp. Crospita sp. Crospita sp. Crospita sp. Diplocitatius sp. Dip					Pericoma sp.	
Eukiefferiella sp. Prosimulium sp. Prosimulium sp. Prosimulium sp. Properties sp.	PTILODACTYLIDAE				SIMULIDAE	
Helenialla sp. Crephia sp.			Diplocladius sp.		Simulium sp.	
Meterotrissociadius sp. Twinis sp. Twi	ISOTOMIDAE					
CRANGONYCTIOAE 1 Limnophyee sp. Ectemnia sp. Stygonecies sp. Lopesciadius sp. STRATIONYIDAE 5. Stygonecies sp. Lopesciadius sp. Stygonecies sp. Oxycera sp. Oxycer			Heterotrissociadius sp.		Twinia sp.	
Stygonecies sp. Crangonyx sp. Mesocritolopus sp. Mesocritolopus sp. Oxycera sp.		-			Stegoptema sp.	
Synurella sp. Mesosmitia sp. Odontomyla sp.			Lopescladius sp.			
GAMMARIDAE GARManus sp. Orthocladius sp. Orthocladius sp. Hyalella sp. Parachaetocladius sp. Parachaetocladius sp. Parakiefferiella sp. CAMBARIDAE CAMBARIDAE Parakiefferiella sp. CAMBARIDAE Parakiefferiella sp. CAMBARIDAE Parametriocnemus sp. Tabanus sp. TABANIDAE Parametriocnemus sp. Tabanus sp. TANYDERIDAE Parametriocnemus sp. TANYDERIDAE Parasmittia sp. THAUMALEIDAE ASELIDAE Parasmittia sp. THAUMALEIDAE ASELIDAE Paratichocladius sp. ThAUMALEIDAE Paratichocladius sp. Tipulidae Tipulidae Tipulidae Tipulidae CECIDOMYIDAE Smittis sp. Paratichocladius sp. Tipulidae Tipuli	Crangonyx sp.		Mesocricotopus sp.			
Gammanus sp. HYALELIDAE Orthocladius sp. Orthocladius sp. Parachaetocladius sp. Parachaetocladius sp. CAMBARIDAE CAMBARIDAE 2 Parametriocnemus sp. TABANIDAE PALAEMONIDAE 2 Parametriocnemus sp. TANUSERIDAE PALAEMONIDAE PALAEMONIDAE PARASHICAEA (Isopoda: Sowbuga) Parasmittia sp. THAUMALEIDAE THAUMALEIDAE ASELIDAE Paratriscocladius sp. Thaumales sp. Caecidotes sp. Paratriscocladius sp. Paratriscocladius sp. TIPULIDAE 2 Liceus sp. Pactrocladius sp. Dicrarota sp. Limnophila sp. CECIDOMYIDAE Siliocladius sp. Dicrarota sp. Limnophila sp. Ormosia sp. Ceratopogon sp. Ceratopogon sp. Ceratopogon sp. Culicokies sp. Ormosia sp. Culicokies sp. Culicokies sp.						
Hysiella sp. Parschaetocladius sp. Parschaetocladius sp. Chrysops sp.	Gammarus sp.		Orthocladinae A		Chrysogaster sp.	
PRUSTACEA (Decopoda - Craylish) Parakiefferiella sp. CAMBARIDAE 2 Parameiriconemus sp. Tabrous sp. Tabrous sp. TANYDERIDAE PAL AEMONIDAE Parashaenocladius sp. THAUMALEIDAE Paratrishocladius sp. THAUMALEIDAE THAUMALEIDAE ASELIDAE Paratrishocladius sp. ThOLIDAE 2 Liriceus sp. Diptera - True Files Pasudorfhocladius sp. Antocha sp. Diptera - True Files ATHERICOAE Alterix sp. Blepharice Filose Filosoficia sp. Theocorticus sp. Theocorticus sp. Dictaraus sp. Alterix sp. Blepharice Filose Smittia sp. CECIDOMYIIDAE Smittia sp. Dictaraus sp. Dictaraus sp. Dictaraus sp. Alluaudomyia sp. Bezzia sp. Dictaraus						
CAMBARIDAE 2 Parametriscnemus sp. Tabanus sp. Tabanus sp. Parametriscnemus sp. TanytoerilaaE Parametriscnemus sp. TanytoerilaaE Parametriscnemus sp. TanytoerilaaE Parametriscnemus sp. Thaumaleus sp. TipULIDAE 2 2 Linceus sp. Paratrissociadius sp. Antocha sp. Antocha sp. Pascutociadius sp. Antocha sp. Pascutociadius sp. Antocha sp. Antocha sp. Antocha sp. Antocha sp. Pascutociadius sp. Hoxatoma sp. Atherit sp. Pascutociadius sp. Hoxatoma sp. Alterit sp. Palometriscnemus sp. Lepitarius sp. Molophilius sp. Tipula sp. CECIDOMVIDAE Smittis sp. Pascutomitia sp. Tipula sp. CECIDOMVIDAE Smittis sp. Pascutomitia sp. Pascutomitia sp. Pascutomitia sp. Dicranota sp. Alliuaudomyia sp. Symposiciadius sp. Dicranota sp. Limnophila sp. Ceratopogon sp. Ceratopogon sp. Caratopogon sp. Caratopogon sp. Culicokies sp. Ormosia sp. Caratopogon sp. Caratopogon sp. Caratopogon sp. Culicokies sp. Cul						
Parasmitia sp. THAUMALEIDAE ASELIDAE Paratrishocladius sp. Thaumalea sp. Caecidotea sp. Paratrissociadius sp. TiPULIDAE 2 Liceus sp. Pactrocladius sp. Antocha sp. Pseudorhocladius sp. Antocha sp. Pseudorhocladius sp. Pseudorhocladius sp. Pseudorhocladius sp. Hoxatoma sp. Antocha sp. Hoxatoma sp. Atherica ps. Lepitamus sp. Alpires ps. Pseudorhocladius sp. Tipula sp. Tipula sp. Pseudorhocladius sp. Dicranota sp. Limnophila sp. Ormosia sp. Ceratopogon sp. Ceratopogon sp. Colicodes sp. Ormosia sp. Ormosia sp. Ceratopogon sp. Culicodes sp. Ormosia sp. Casyhelea sp. Pseudorhocladius sp. Culicodes sp. Ormosia sp. Casyhelea sp. Ormosia sp. Casyhelea sp. Culicodes sp	CAMBARIDAE	2	Parametriocnemus sp.		Tabanus sp.	
ASELIDAE Paratrishocladius sp. Thaumales sp. 2 Linceus sp. Paratrishocladius sp. TIPULIDAE 2 Linceus sp. Pascifocladius sp. Antocha sp. Antocha sp. Pascifocladius sp. Antocha sp. Antocha sp. Antocha sp. Antocha sp. Anterito Sp. Pascifocladius sp. Hoxatoma sp. Atherito Sp. Pascifocladius sp. Hoxatoma sp. Atherito Sp. Rincericolopus sp. Molophilus sp. Molophilus sp. BLEPHARICERIDAE Rhocamilia sp. Tipula sp. CECIDOWIDAE Smittis sp. Pasciformidius sp. Alluaudomya sp. Symposicladius sp. Dicrarota sp. Limnophila sp. Ceratopogon sp. Ceratopogon sp. Ceratopogon sp. Corractopogon sp. Culicokies sp. Ormosia sp. Caratopogon sp. Culicokies sp. Pasciformidius sp. Pasciformidius sp. Ceratopogon sp. Culicokies sp. Ormosia sp. Caratopogon sp. Culicokies						
Caecidotea sp. Paratrissociadius sp. 2 Liceus sp. Pasctrocladius sp. Antocha sp. Antocha sp. Pasctrocladius sp. Antocha sp. Pasctrocladius sp. Antocha sp. Pasctrocladius sp. Pascudorfhoctacidius sp. Hosaioma sp. Atherica p. Palometriocnemus sp. Lepitaraus sp. Atherica p. Rhocoricotopus sp. Molophilus sp. Tipula sp. Tipula sp. CECIDOMYRIDAE Rhocomitia sp. Pascelladius sp. Pascelladius sp. Pascelladius sp. Pascelladius sp. CERATOPOGNIDAE Smitta sp. Dicranota sp. Alluaudomya sp. Symposiciadius sp. Limnophila sp. Dicranota sp. Alluaudomya sp. Pascelladius sp. Ceratopogon sp. Ceratopogon sp. Culicotius sp. Ormosia sp. Ceratopogon sp. Culicotius sp. Dicranota sp. Caestopogon sp. Culicotius sp.					- 112 13 AT 121 THE 12 A TO	
Pasudorhoctadius ap. Hoxatoma sp.	Caecidotea sp.		Paratrissociadius sp.		TIPULIDAE	2
ATHERICIDAE Palometriconemus sp. Leptotamus sp. Atherix sp. Rhocorologus sp. Molophilus sp. BLEPHARICERIDAE Rhocomitia sp. Tpula sp. CECIDOMYIDAE Smittis sp. Psuedolimnophila sp. CERATOPOGNIDAE Stilocladius sp. Dicranota sp. Allusurdomyia sp. Symposiocladius sp. Limnophila sp. Bezzia sp. Ormosia sp. Ceratopogon sp. Culicioties sp. Culicioties sp. Culicioties sp.	Lirceus sp.					
Atherix sp. Fine-circotopus sp. Molophilus sp. BLEPHARICERIDAE Pleosmittia sp. Tipula sp. CECIDOMYIIDAE Smitia sp. Psuedolmnophila sp. CERATOPOGNIDAE Stiloctadius sp. Dicranota sp. Alluaudomyla sp. Symposicaladius sp. Limnophila sp. Bezzia sp. Ormosia sp. Ormosia sp. Ceratopogon sp. Culicokles sp. Omosia sp. Culicokles sp. Casyhelios sp. Companylerios sp.	ATHERICIDAE		Pallometriocnemus sp.		Leptotaraus sp.	
CECIDOMYIDAE Smittis sp. Psuedolimnophila sp. CERATOPOGNIDAE Stillocladius sp. Dicranota sp. Alluaudomya sp. Symposiocladius sp. Bezzia sp. Ormosia sp. Ceratopogon sp. Culicokies sp. Culicokies sp. Dasyhelies sp.			Rheocricotopus sp.		Molophilus sp.	
CERATOPOGNIDAE Stillocladius sp. Dicranota sp. Alluaudomyia sp. Symposiocladius sp. Limnophila sp. Bezzia sp. Ormosia sp. Ormosia sp. Culicoides sp. Culicoides sp. Ormosia sp.						
Bezzia sp. Ormosia sp. Certatopogon sp. Culicoides sp. Dasyheles sp. Culicoides sp.	CERATOPOGNIDAE		Stillocladius sp.	/	Dicranota sp.	
Ceratopogon sp. Culicoides sp. Dasyhelos sp.			Symposiocladius sp.			
Culicoldes sp. Dasyhelea sp.					Omosta sp.	
Dasyhelea sp.	Culicoides sp.					No. of the last of



Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorte
Colvin Run - Pre Con. Year 2	20010	8-A	SDS/LS/JVH/BC	1	125
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms ID'd
9/20/2008	9/9/2008	LS	LS	101	110
Pedicia sp.		Microvella sp.		Paranemoura sp.	
Limonia sp.		HIRUDINEA - Leeches		Prostola sp.	
Pilaria sp. Erioptera sp.	-	HOPLONEMERTEA - Ribbon Worms TETRASTEMMATIDAE		Shipsa sp. CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperta sp.	
TRICHOCERIDAE Trichocera sp.		NOCTUIDAE		Haploperia sp. Sweltsa sp.	
PHEMEROPTERA - Mayflies		Archanara sp.		TAENIOPTERGIDAE	
AMELETIDAE		Bellura sp.		Strophopteryx sp.	
Ameletus sp. BAETIDAE		PYRALIDAE MEGALOPTERA - Dobsonflies		Taeniopteryx sp. TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
Acerpenna sp. Baetis sp.		Chauliodes sp. Corydalus sp.		Brachycentrus sp. CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
Diphetor sp. BAETISCIDAE		SIALIDAE Sialis sp.		DIPSEUDOPSIDAE Phylocentropus sp.	
Baetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
CAENIDAE Caenis sp.		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
EPHEMERELLIDAE		ODONATA (Anispoters - Dragonfiles) AESHNIDAE		Agapetus sp. HELICOPSYCHIDAE	
Dannella sp.		Anax sp.		Helicopsyche sp.	
Drunella sp. Ephemerella sp.		Basiaeshna sp. " Boyeria sp.		HYDROPSYCHIDAE Cheumatopsyche sp.	
Eurylophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
Serratella sp. EPHEMERIDAE		Cordulegaster sp.		Hydropsyche sp. Parapysche sp.	
Ephemera sp.		GOMPHIDAE		Potamyia sp.	
HEPTAGENIDAE		Arigomphus sp. Gomphus sp.		HYDROPTILIDAE Hydroptila sp.	
Epeorus sp. Leucrocufa sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp. Stenonema sp.		Lanthus sp. Stylogomphus sp.		Ochrotrichia sp. LEPIDOSTOMATIDAE	
LEPTOPHLEBIDAE		LIBELLULIDAE		Lepidostoma sp.	
Leptophlebia sp.		MACROMIDAE		LEPTOCERIDAE	
Habrophlebia sp. Habrophlebiodes sp.		Macromia sp. PETALURIDAE		Triaenodes sp. Ceraclea sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damselflies)		Oecetis sp.	
NEOEPHEMERIDAE OLIGONEURIDAE		CALOPTERYGIDAE Calopteryx sp.		Apatina sp.	
Isonychia sp.		COENAGRIONIDAE		Hydatophylax sp.	
POLYMITARCYIDAE POTAMANTHIDAE		Argia sp. LESTIDAE		Pycnopsyche sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	2	MOLANNIDAE	
Siphionurus sp. TRICORYTHIDAE		LUMBRICINA ENCHYTRAEIDAE		Molanna sp. ODONTOCERIDAE	
Tricorythodes sp.		NAIDIDAE		Psilotreta sp.	
GASTROPODA - Snails ANCYLIDAE		NEMERTEA TUBIFICIDAE	4	PHILOPOTAMIDAE Chimarra sp.	
Ferissa sp.		LUMBRICULIDAE	*	Wormaldia sp.	
HYDROBIIDAE		POLYCHAETA - Polychaete Worms		PHRYGANEIDAE	
LYMNAEIDAE Fossaria sp.		AEOLOSOMATIDAE Aeolosoma sp.		Ptilostomis sp. POLYCENTROPIDAE	
Stagnicola sp. Pseudosuccinea sp.		PLECOPTERA - Stonelly Larvee PERLIDAE		Cymellus sp. Polycentropus sp.	
PHYSIDAE PHYSIDAE		Acroneuria sp.		PSYCHOMYIDAE	
Physella sp. PLANORBIDAE		Beloneuria sp.		Lype sp.	
Menetus sp.		Eccoptura sp. Neoperta sp.		Psychomyla sp. RHYACOPHILIDAE	
Gyraulus sp.		Perlesta sp.		Ryacophila sp.	
PLEUROCERIDAE VIVIPARIDAE		Perlinella sp. PERLODIDAE		VENOIDAE Neophylax sp.	
Viviparus sp.		Clioperia sp.		TURBELLARIA - Flatworms	
HAPLOSCLERIDA SPONGILLIDAE		Diploperla sp.		PLANARIIDAE DENDROCOELIDAE	
HEMIPTERA - True Bugs		Cultus sp.		DEMONOVELIBRE	
BELOSTOMATIDAE Balostoma sp.		PTERONARCYIDAE			
Lethocerus sp.		Pteronarcys sp. PELTOPERLIDAE			
CORIXIDAE GELASTOCORIDAE		Peltoperia sp. LEUCTRIDAE			
GERRIDAE		Leuctra sp.			
Trepobates sp.		Zealuectra sp.			
HEBRIDAE HYDROMETRIDAE		Paraleuctra sp. CAPNIDAE			
MESOVELIIDAE		Allocapnia sp.			
NEPIDAE Nepa sp.		Paracapnia sp. NEMOURIDAE			
Ranatra sp.		Amphinemura sp.			
VELIDAE		Ostrocerca sp			
		Nemoura sp.			

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

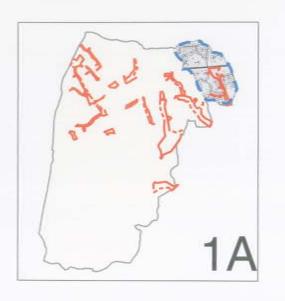


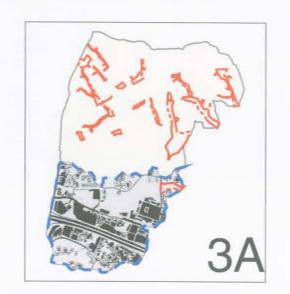


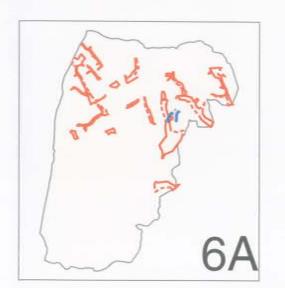
Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms Sorta
olvin Run - Pre Con. Year 2	20010	9-A	SDS/LS/JVH/BC	1	105
Date ID'd	Date Sorted	Taxonomist		# Grids in Subsample	105 Total No. Organisms ID'd
9/20/2008	9/9/2008	LS	Sorter	# Grids in Subsample	91
	01012000		DC		31
CARIFORMES HYDRACHNIDA		Forcipomyla sp. Probezzia sp.		Synorthocladius sp. Thienemanniella sp.	
VALVIA - Clame		Sphaeromias sp.		Tvetenie sp.	
SPHAERIDAE	3	Stilobezzia sp.		Unniella sp.	
Sphaerium sp.		CHAOBORIDAE		Xylotopus sp.	
Pisidium sp. Musculium sp.		Chaborus sp.	42	Zalutschia sp.	
CORBICULIDAE		CHIRONOMIDAE	92	Tanypodinae Ablabeamyla sp.	
Corbicula fluminea sp.		Chironomini		Alotanypus sp.	
UNIONIDAE		Chironomus sp.		Apsectrotanypus sp.	
RANCHIOBDELLIDA		Cryptochironomus sp.		Clinotanypus sp.	
BRANCHIOBDELLIDAE TETRASTEMMATIDAE		Cryptotendipes sp. Demicryptochironomus sp.		Gonchapelopia sp. Guttipelopia sp.	
DLEOPTERA - Beetles		Dicrotendipes sp.		Krenopelopia sp.	
CANTHERIDAE		Einfeldis sp.		Labrundinia sp.	
CURCULIONIDAE		Endochironomus sp.		Larsin sp.	
DRYOPIDAE		Glyptotendipes sp.		Macropelopia sp.	
Helichus sp.		Kiefferulus sp.		Meropelopis sp.	
DYTISCIDAE Agabus sp.		Microtendipes sp. Nilothauma sp.		Paramerina sp. Pentaneura sp.	
Hydroporous sp.		Pagastiella sp.		Procladius sp.	
Coptotomus sp.		Parachironomus sp.		Psectrotanypus sp.	
Oreodytes sp.		Paracladopelma sp.		Rheopelopia sp.	
Laccomis sp.		Paratendipes sp. " Phaeropastra en		Tanypus sp. Thienemannimyla gp.	
Dytiscus sp. ELMIDAE		Phaenopsectra sp. Polypedilum sp.		Thienemannimyla gp. Thienemannimyla sp.	
Microcylloepus sp.		Stenochironomus sp.		Trissopelopia sp.	
Optioservus sp.		Stictochironomus sp.		Zavrelimyla sp.	
Stenelmis sp.		Tribelos sp.		CULICIDAE	
Promoresia sp.		Zavreliella sp.		Aedes	
Macronychus sp. Dubiraphia sp.		Tanytarsini Cladotanytarsus sp.		Anopheles Culex	
Ancyronyx sp.		Constempellina sp.		Culiseta	
Oulimnius sp.		Micropsectra sp.		Mansonia	
GYRINIDAE		Micropsectra/Tanysarsus complex		Orthopodomyia	
Dineutus		Paratanytarsus sp.		Psorophora	
Gyrinus HALIPIDAE		Rheotanytarsus sp. Stempellina sp.		Toxorhynchites Uranotaenia	
Halipus sp.		Stempellinella sp.		Wyeomyia	
HYDROPHILIDAE		Sublettea sp.		DIXIDAE	
Cymbiodyta sp.		Tanytarsus sp.		Dixa sp.	
Berosus sp.		Zavrelia sp.		DOLICHOPODIDAE	3
Derallus sp. Helochares sp.		Diamesinae Diamesa sp.		EMPIDIDAE Cheiffera sp.	
Helophorus sp.		Pagastia sp.		Clinocera sp.	
Hydrophilus sp.		Potthastia sp.		Hemerodromia sp.	
Hydrochus sp.		Prodiamesa sp		Dolichocephala sp.	
Tropistemus sp. Hydrobius sp.		Sympotthastia sp. Orthocladiinae		PELCORHYNCHIDAE	
Laccobius sp.		Brillia sp.		Glutops sp.	
PSEPHENIDAE		Cardiocladius sp.		PHORIDAE	6
Psephenus ap.		Chaetocladius sp.		PSYCHODIDAE	
Ectopria sp.		Corynoneura sp.		Pericoma sp.	
Dicranopselaphus sp.		Gricotopus sp.		Psycoda sp.	
PTILODACTYLIDAE Anchytarsus sp.		Cricotopus/Orthocladius sp. Diploctadius sp.		SIMULIDAE Simulium sp.	
DLLEMBOLA		Eukiefferiella sp.		Prosimulium sp.	
SOTOMIDAE	2	Heteniella sp.		Cnephia sp.	
OPEPODA		Heterotrissociadius sp.		Twinia sp.	
RUSTACEA (Amphipoda- Scuds) CRANGONYCTIDAE		Hydrobaenus sp. Limnophyes sp.		Stegopterna sp. Ecternnia sp.	
Stygonectes sp.		Limnophyes sp. Lopescladius sp.		STRATIOMYIDAE	
Crangonyx sp.		Mesocricotopus sp.		Oxycera sp.	
Synurella sp.		Mesosmittia sp.		Odontomyla sp.	
GAMMARIDAE		Nanocladius sp.		SYRPHIDAE	
Gammarus sp. HYALELLIDAE		Orthocladinae A Orthocladius sp.		Chrysogaster sp. Eristalis sp.	
Hyalella sp.		Parachaetocladius sp.		TABANIDAE	
RUSTACEA (Decopoda - Crayfish)		Parakiefferiella sp.		Chrysops sp.	
CAMBARIDAE	2	Parametriocnemus sp.		Tabanus sp.	
PALAEMONIDAE		Paraphaenocladius sp.		TANYDERIDAE	
RUSTACEA (Inopoda- Sowbuga) ASELIDAE		Parasmittia ap.		THAUMALEIDAE	
Caecidotea sp.	1	Paratrichocladius sp. Paratrissocladius sp.		Thaumalea sp. TIPULIDAE	1
Lirceus sp.		Paratrissociadius sp. Psectrocladius sp.		Antocha sp.	
PTERA - True Flies		Pseudorthocladius sp.		Hexatoma sp.	7
ATHERICIDAE		Psilometriocnemus sp.		Leptotarsus sp.	
Atherix sp. BLEPHARICERIDAE		Rheocricotopus sp.		Molophilus sp.	
BLEPHARICERIDAE		Rheosmitta sp.		Tipula sp.	
CERATOPOGNIDAE		Smittle sp. Stillocladius sp.		Psuedolimnophila sp. Dicranota sp.	
Alluaudomyia sp.		Symposiocladius sp.		Limnophila sp.	
Bezzia sp.		The state of the s		Ormosia sp.	
Ceratopogon sp.					
Culicoides sp.					
Dasyhelea sp.					

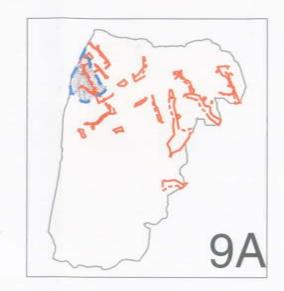


Site	WSSI#	Reach	Collectors	# Jars in Sample	Total No. Organisms So
olvin Run - Pre Con. Year 2	20010	9-A	SDS/LS/JVH/BC	4	105
Date ID'd	Date Sorted	Taxonomist	Sorter	# Grids in Subsample	Total No. Organisms II
9/20/2008	9/9/2008	LS	BC	101	91
Pedicia sp. Jimonia sp.		Microvella sp. HIRUDINEA - Leeches		Paranernoura sp. Prostoia sp.	
Pilaria sp.		HOPLONEMERTEA - Ribbon Worms		Shipsa sp.	
Erioptera sp.		TETRASTEMMATIDAE		CHLOROPERLIDAE	
Rhabdomastix sp.		Prostoma sp.		Alloperia sp.	
RICHOCERIDAE richocera sp.		NOCTUIDAE		Haploperia sp.	
HEMEROPTERA - Mayties		Archanara sp.		Sweltsa sp. TAENIOPTERGIDAE	
MELETIDAE		Bellura sp.		Strophopteryx sp.	
meletus sp.		PYRALIDAE		Taeniopteryx sp.	
AETIDAE		MEGALOPTERA - Dobsonflies		TRICHOPTERA - Caddisflies	
Acentrella sp.		CORYDALIDAE		BRACHYCENTRIDAE	
cerpenna sp.		Chauliodes sp. Corydalus sp.		Brachycentrus sp. CALAMOCERATIDAE	
Centroptilum sp.		Nigronia sp.		Heteroplectron sp.	
iphetor sp.		SIALIDAE		DIPSEUDOPSIDAE	
AETISCIDAE		Sialis sp.		Phylocentropus sp.	
aetisca sp.		NEMATODA - Roundworms		GLOSSOSOMATIDAE	
AENIDAE		NEMATOMORPHA - Horsehair Worms		Glossosoma sp.	
aenis sp. PHEMERELLIDAE		ODONATA (Anispotera - Dragonflies) AESHNIDAE		Agapetus sp. HELICOPSYCHIDAE	
PHEMERELLIDAE Pannella sp.		Anax sp.		Helicopsyche sp.	
runella sp.		Basiaeshna sp.		HYDROPSYCHIDAE	
phemerella sp.		Boyeria sp.		Cheumatopsyche sp.	
urylophella sp.		CORDULEGASTRIDAE		Diplectrona sp.	
erratella sp.		Cordulegaster sp.		Hydropsyche sp.	
PHEMERIDAE phemera sp.		GOMPHIDAE		Parapysche sp. Potamyla sp.	
IEPTAGENIDAE		Arigomphus sp.		HYDROPTILIDAE	
peorus sp.		Gomphus sp.		Hydroptila sp.	
.eucrocuta sp.		Hagenius sp.		Leucotrichia sp.	
Stenacron sp.		Lanthus sp.		Ochrotrichia sp.	
Stenonema sp. EPTOPHLEBIDAE		Stylogomphus sp. LIBELLULIDAE		LEPIDOSTOMATIDAE	
eptophlebia sp.		MACROMIDAE		Lepidostoma sp. LEPTOCERIDAE	
labrophlebia sp.		Macromia sp.		Triaenodes sp.	
Habrophlebiodes sp.		PETALURIDAE		Ceracles sp.	
Paraleptophlebia sp.		ODONATA Zygoptera - Damseiffies)		Oecetis sp.	
IEOEPHEMERIDAE		CALOPTERYGIDAE		LIMNEPHILIDAE	1
LIGONEURIDAE		Calopteryx sp. COENAGRIONIDAE		Apatina sp.	
sonychia sp. POLYMITARCYIDAE		Argia sp.		Hydatophylax sp. Ironoquia sp.	
POTAMANTHIDAE		LESTIDAE		Pycnopsyche sp.	
SIPHLONEURIDAE		OLIGOCHAETA - Oligochaete Worms	28	MOLANNIDAE	
Siphlonurus sp.		LUMBRICINA		Molanna sp.	
RICORYTHIDAE		ENCHYTRAEIDAE		ODONTOCERIDAE	
Fricorythodes sp.		NAIDIDAE		Pallotreta sp.	
STROPODA - Snaile NCYLIDAE		NEMERTEA TUBIFICIDAE	2	PHILOPOTAMIDAE Chimarra sp.	
erinsa sp.		LUMBRICULIDAE	-	Wormaldia sp.	
YDROBIIDAE		POLYCHAETA - Polychaete Worms		PHRYGANEIDAE	
YMNAEIDAE		AEOLOSOMATIDAE		Ptilostomis sp.	
ossaria sp.		Aeolosoma sp.		POLYCENTROPIDAE	
Stagnicola sp. Pseudosuccinea sp.		PLECOPTERA - Stonelly Larvae PERLIDAE		Cymellus sp. Polycentropus sp.	
HYSIDAE		Acroneuria sp.		PSYCHOMYIDAE	
Physella sp.		Beloneuria sp.		Lype sp.	
LANORBIDAE		Eccoptura sp.		Psychomyla sp.	
Menetus ap.		Neoperla sp.		RHYACOPHILIDAE	
Syraulus sp. LEUROCERIDAE		Perlesta sp. Perlinella sp.		Ryacophila sp. UENOIDAE	
IVIPARIDAE		PERLODIDAE		Neophylax sp.	
/iviparus sp.		Clioperta sp.		TURBELLARIA - Flatworms	
PLOSCLERIDA		Diploperia sp.		PLANARIIDAE	
PONGILLIDAE		Isoperia sp.		DENDROCOELIDAE	
MIPTERA - True Bugs		Cultus sp.			
ELOSTOMATIDAE Belostoma sp.		PTERONARCYIDAE Pteronarcys sp.			
ethocerus sp.		PELTOPERLIDAE			
ORIXIDAE		Peltoperia sp.			
ELASTOCORIDAE		LEUCTRIDAE			
ERRIDAE		Leuctra sp.			
Trepobates sp.		Zenluedra sp.			
EBRIDAE YDROMETRIDAE		Paraleuctra sp. CAPNIDAE			
ESOVELIIDAE		Allocapnia sp.			
EPIDAE		Paracapnia ap.			
Vepa sp.		NEMOURIDAE			
Ranatra sp.		Amphinemura sp.			
ELIIDAE		Ostrocerca sp			
		Nemoura sp.			
Page 2 of 2					







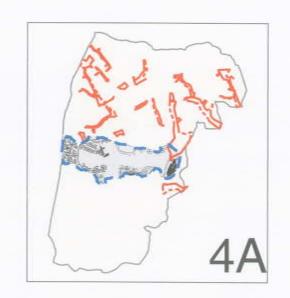






Colvin Run Scale: 1" = 1 mile







Stream	Impervious	Total		
ID	Percent	Acres	VA-SCI	
1A	22	156	23.76	
2A	24	176	35.39	
2B	26	100	31.22	
ЗА	43	704	41.30	
4A	25	245	20.47	
5A	28	75	35.82	
6A	23	5.7	48.52	
7A	1.3	44	30.88	
8A	29	48	14.65	
9A	22	67	30.00	



