



Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director

DEPARTMENT OF NATURAL RESOURCES

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OCT - 5 2009

Mr. William S. Spratlin, Director
Water, Wetlands and Pesticides Division
U.S. Environmental Protection Agency
Region 7
901 North 5th Street
Kansas City, KS 66101

Dear Mr. Spratlin:

Thank you for the opportunity to comment on the Environmental Protection Agency's (EPA) proposed 2008 Section 303(d) list of impaired waters for the State of Missouri. Additional comments are being sent under the signature of Department of Natural Resources' Division of Environmental Quality Director Daniel R. Schuette which presents the Department's concerns regarding the EPA proposed method for identifying the length of impaired streams. The comments in this letter address other concerns regarding the addition of certain waters to the 303(d) list. We would appreciate EPA accepting both letters as comments on the proposed 303(d) list for Missouri.

Creve Coeur Creek (WBID 1703). The department agrees that the wrong tabular "z" value was used in our analysis. Consequently, we also agree with this water being listed as impaired by low dissolved oxygen.

Flat Creek (WBID 0865). Enclosed are the data upon which rescoring was based for this stream. These more recently collected data are more representative of the current condition expected in Flat Creek. The occasional re-sampling of reference streams is an integral part of updating the biological monitoring program. Biological scores used to determine impairment are based on a comparison to the most recent scores of reference streams in the same Ecological Drainage Unit (EDU). When additional data are collected for reference streams in a EDU, the scoring scale that determines impairment for all streams in that EDU may need to be altered and all streams in the EDU are rescored accordingly. This ensures decisions are based upon the most current and representative data. In this case, the rescore demonstrates full attainment of the aquatic life use in Flat Creek and supersedes any past assessment conclusions.

Muddy Creek (WBID 0557). This waterbody was originally listed by EPA, based on a visual and qualitative benthic examination of the stream by the department in August 2000. In 2006 and 2007, the department conducted a much more sophisticated quantitative aquatic invertebrate study of this stream. This study indicates a normal community exists. The earlier visual, qualitative benthic surveys are considered "screening level" assessments because they have low information content and, therefore, have low precision, accuracy, representativeness, comparability and repeatability. The qualitative aquatic invertebrate monitoring is considered "Level Four" or the highest level of data for information content and accuracy. Higher weight should be given to the data set with significantly more information content.

Willow Branch (WBID 0654U). See comment on Muddy Creek (WBID 0557).

Flat River Creek (WBID 2168). The 2004/2006 listing was based on a paper authored by Ingersoll and McDonald (1996). The criterion value against which the department made its 2008 assessment is based on a more recent paper published in 2000. The 2008 Listing Methodology switched to the new criteria proposed in the latter publication because it is based on more thorough and contemporary research. Consequently, it represents an improvement over the criteria used in the 2004/2006 Listing Methodology. EPA's decision to retain this listing appears to be based on the rationale that the criterion value used to make the original 2004/2006 listing should also be used in 2008 listing cycle rather than the "new" criterion used to develop the 2008 list. This position does not agree with the general directives of the IRG to consider all existing and available information. Nor does it agree with the general need to consider improvements in pollutant research or assessment approaches.

Flat River Creek (WBID 2168). The department agrees that our 2008 analysis was in error and that this stream should be retained on the 2008 303(d) list for cadmium in the water column. The department supports the listing of this stream.

Indian Camp Creek (WBID 0210). This creek was placed on the 303(d) list in 1998 for reasons no longer supported or considered valid for listing. EPA seems to be requiring a demonstration of use attainment regardless of the department's analysis of the pollutant (sediment). EPA bases the need for this demonstration on the fact that several facilities potentially discharge sediments to the assessed portion of the creek. A demonstration may be made two ways - 1) by showing that sediment levels are below an amount which would cause impairment, or 2) through a biological survey. While an assessment for attainment would be desirable, it is not necessary for the delisting. The 2006 IRG states that waters may be delisted if "flaws in the original analysis of data and information led to the segment being incorrectly listed". This statement implies that "good cause" for delisting does not necessarily require a demonstration of attainment. In the absence of this demonstration, the water would, according to the IRG, be placed in Category 3 of the Integrated Report.

Indian Creek (WBID 0420). EPA correctly states that the numeric threshold for the chronic chloride criterion was exceeded at three different times during the last three years of data collection. The department had discussed with EPA the effect of recent rains on the representativeness of samples. EPA accepts that rainfall can render a sample misrepresentative and, accordingly, discounted the sample taken on February 29, 2004 because of rainfall data. The sample on February 3, 2005 should be discounted as well.

The department's current methodology for water quality assessments states; "Except on large rivers where storm water flows may persist at relatively unvarying levels for several days, grab samples collected during storm water flows will not be used for assessing chronic toxicity criteria". The rationale for this decision is later explained in the document where it states; "Data sets composed mainly or entirely of storm water data or data collected only during a season when water quality problems are expected could result in a biased estimate of the true exceedence frequency." A determination that the chronic criterion was exceeded should be based on the knowledge or likelihood that the numeric criterion was exceeded for four days. For one sample to be representative of a four-day period, the sample must have been taken while the stream was experiencing a stable flow. To ensure representative samples are assessed, the department reviews the flow data two days prior to the sample date. If the flows two days prior to the sample event were between the 90% and 50% exceedence flows and there was less than a 15% change in this flow over the 48 hours, the flow is considered "stable".

Based on U.S. Geological Survey data one-half mile below the sample point, the flow in Indian Creek several days prior to and on February 3, 2005, was as follows:

Date	50% Exceedence Flow (cfs)	Flow at Sample (cfs)	Percent change from 48 hours prior
1/31/05	39	58 (> E.F.)	n/a
2/1/05	39	52 (> E.F.)	n/a
2/2/05	39	37 (< E.F.)	37% (>15%) unstable
2/3/05 Sample Date	39	35 (< E.F.)	33% (>15%) unstable

Note: The flow data shown here was taken at 103rd Street and does not correspond with the data presented by EPA.

The percent change in flow over a 48-hour period between the February 1, 2005 and February 3, 2005 sample events was more than 15%. Consequently, the February 3, 2005 sample was taken during a time when the stream was still experiencing a rapid change due to storm water runoff and, therefore, is considered misrepresentative. Only one sample (i.e. January 8, 2004) exceeded the criterion threshold and is considered representative. We request EPA reconsider the listing of Indian Creek on the basis that the data is inconclusive in showing the stream to be in exceedence of the chronic toxicity criteria more than once during the last three years.

Lewistown Lake (WBID 7020). EPA requests more information to support the assertion that samples of the finished water are representative of the atrazine levels in the lake's raw water. EPA suggests that the department submit data confirming that the absence of carbon filtration in the water treatment process allows the atrazine concentration to pass through the water treatment largely unchanged. EPA suggests the department obtain scientific literature on the transport and fate of atrazine through water treatment systems not using carbon filtration, or perform a comparison between the raw water and finished water concentrations. The department was not able to complete either of these demonstrations, but may pursue further information on this matter in subsequent water quality assessment and listing efforts.

Mississippi River (WBID 1707). EPA's proposed listing of the entire classified length of the Mississippi River (195.5 miles) grossly mischaracterizes the extent of possible lead and zinc sediment toxicity. EPA's listing of the entire segment is based on a single sample taken at the area immediately below the outfall of the Herculaneum smelter. The other seventeen (17) sediment samples, some in the vicinity of the smelter outfall, showed only background levels of these two metals. The department agrees that the sample taken at the outfall does exhibit metals contamination, but this one sample is only representative of the immediate area around this outfall.

In addition to the limits in spatial representation, the number of events is inadequate to demonstrate impairment. Missouri's listing methodology requires two such occasions in the most recent 3 years of data before we can designate the water as impaired.

North Fork Spring River (WBID 3188). The department agrees with EPA's comment and supports the listing of this waterbody accordingly.

Village Creek (WBID 2863). EPA requests further information to support delisting this segment of Village Creek for manganese. Following are two reasons for the delisting.

Mr. William S. Spratlin
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The 2006 listing for manganese toxicity in sediment used the criterion value given in Ingersoll and McDonald (1996). The 2008 list used a later publication on sediment toxicity by McDonald and Ingersoll (2000). The later publication is based on more data and does not propose a sediment criterion for manganese. The publication does not provide a reason for not including manganese, but presumably, additional data made it either unclear whether manganese was a toxicant in sediments or the data were insufficient to derive an appropriate numeric criterion. In either case, it is inappropriate to list waters for sediment contamination by manganese in light of this uncertainty.

Secondly, the department completed a Total Maximum Daily Load (TMDL) on inorganic sediment (non-volatile suspended solids) and lead, and submitted the TMDL to EPA in September, 2009. The activities necessary to implement the TMDL will reduce other chemical constituents associated with sediment from Mine La Motte, such as manganese. If EPA does not agree with delisting the stream for manganese, we request EPA review and approve the TMDL and consider it a regulatory requirement that will reduce manganese while addressing inorganic sediments and lead. Under the IRG, the TMDL (as a regulatory requirement that will lead to the reduction of manganese) qualifies the placement of this segment of Village Creek (WBID 2863) in Category 4C of the Integrated Report.

Village Creek (WBID 2864). The department completed a Total Maximum Daily Load (TMDL) on inorganic sediment (non-volatile suspended solids) and lead and submitted the TMDL to EPA in September, 2009. We request EPA review and approve the TMDL so that this water body can be placed in Category 4A of the Integrated Report.

Missouri River (WBID 1604). As you know, the department is in the process of strengthening its *E. coli* standard for Whole Body Contact Recreation-Class B streams (WBCR-B.) As this new standard becomes effective on October 31, 2009, the department feels it is appropriate to use this standard for completion of the 2008 303(d) list.

North Fork Cuivre River (WBID 0170). See response on Missouri River (WBID 1604).

South Fabius River (WBID 0071). See response on Missouri River (WBID 1604).

Wilson Creek (WBID 2375). See response on Missouri River (WBID 1604).

We appreciate EPA's continued support with monitoring and assessing water quality in Missouri. Please contact Mr. Rob Morrison of the Department's Water Protection Program at (573) 751-6825 if you have any questions concerning this letter.

Sincerely,

WATER PROTECTION PROGRAM



Leanne Tippet Mosby
Director

LTM:psl

Enclosure

c: Missouri Clean Water Commission

Aquid Invertebrate Database Bench Sheet Report

Richland Cr [0137050], Station #2, Sample Date: 9/25/2001 10:30:00 AM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
"HYDRACARINA"			
Acarina	11	62	6
AMPHIPODA			
Hyaella azteca			21
ARHYNCHOBDELLIDA			
Erpobdellidae		1	
COLEOPTERA			
Berosus	4		9
Dubiraphia			5
Ectopria nervosa			1
Helichus lithophilus			2
Psephenus herricki	3		
Stenelmis	15	6	11
DECAPODA			
Orconectes luteus		-99	
DIPTERA			
Ablabesmyia	1	12	3
Ceratopogoninae	1	2	1
Chironomus		4	
Corynoneura	18	9	1
Cricotopus/Orthocladius		1	
Cryptochironomus	1	4	
Dicrotendipes		2	1
Hemerodromia	7		1
Hexatoma	3		-99
Labrundinia	2		5
Larsia	1		
Microtendipes		1	1
Nanocladius	1		2
Nilotanypus	1		
Parametrioconemus	44	1	
Paratanytarsus		2	13
Paratendipes	1	41	
Polypedilum convictum	43	1	
Polypedilum illinoense grp	7		2
Procladius		3	
Pseudochironomus	10	1	3
Rheocricotopus	1		
Rheotanytarsus	7	1	
Stempellinella		1	
Tabanus	2		

Aquid Invertebrate Database Bench Sheet Report

Richland Cr [0137050], Station #2, Sample Date: 9/25/2001 10:30:00 AM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Tanytarsus	11	3	10
Thienemanniella	2	1	
Thienemannimyia grp.	27	5	16
Tipula			1
Tribelos		2	
undescribed Empididae	1		
EPHEMEROPTERA			
Acerpenna	3		
Baetis	32	2	
Caenis anceps	13	51	1
Caenis latipennis	133	4	33
Choroterpes		13	
Heptageniidae	7		
Isonychia	6		
Leptophlebiidae		3	
Maccaffertium pulchellum	33		
Stenacron		2	
Stenonema femoratum	9	45	1
HEMIPTERA			
Corixidae		1	
Microvelia	6		
Rhagovelia	4		
Trepobates	1		1
LIMNOPHILA			
Ancylidae		9	2
Lymnaeidae	2	1	
Menetus			8
Physella	6	3	10
LUMBRICINA			
Lumbricidae			1
MEGALOPTERA			
Corydalus	1		
Sialis		-99	
MESOGASTROPODA			
Elimia	9	17	17
ODONATA			
Argia	91	14	1
Enallagma			18
Libellulidae			1
Stylogomphus albistylus	8		

Aquid Invertebrate Database Bench Sheet Report**Richland Cr [0137050], Station #2, Sample Date: 9/25/2001 10:30:00 AM****CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence**

ORDER: TAXA	CS	NF	RM
PLECOPTERA			
Perlidae	4		
TRICHOPTERA			
Cheumatopsyche	73		
Helicopsyche	5		13
Hydropsyche	3		
Hydroptila	1	3	4
Nectopsyche			1
Polycentropus	1		
Pycnopsyche			-99
Triaenodes			8
TRICLADIDA			
Planariidae	3	1	3
TUBIFICIDA			
Tubificidae	1	1	1

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [0137051], Station #1, Sample Date: 9/26/2001 12:55:00 PM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
"HYDRACARINA"			
Acarina		22	
AMPHIPODA			
Hyalella azteca			108
ARHYNCHOBDELLIDA			
Erpobdellidae	-99	1	
COLEOPTERA			
Berosus		1	
Dubiraphia		5	34
Scirtidae		1	6
Stenelmis	59	1	4
DIPTERA			
Ablabesmyia		8	
Anopheles			1
Ceratopogoninae		9	
Chironomus		2	
Corynoneura	1		3
Cricotopus bicinctus	1		
Cricotopus/Orthocladius	3		
Cryptochironomus	2	8	
Dicotendipes		3	5
Glyptotendipes	4		74
Hemerodromia	10		
Labrundinia			11
Larsia	2		1
Nanocladius	1		3
Nilotanypus	1		
Nilothauma			2
Parachironomus	1		4
Paralauterborniella		4	
Paratanytarsus			25
Polypedilum convictum	44		4
Polypedilum halterale grp		2	
Polypedilum illinoense grp	1	1	8
Polypedilum scalaenum grp	15		
Procladius		11	2
Pseudosmittia			1
Rheotanytarsus	52		9
Simulium	1	1	
Stempellinella		1	

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [0137051], Station #1, Sample Date: 9/26/2001 12:55:00 PM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Stenochironomus		1	
Tabanus	1		
Tanytarsus	40	19	44
Thienemanniella	1	1	1
Thienemannimyia grp.	19		16
Tribelos			1
EPHEMEROPTERA			
Acerpenna	26		
Apobaetis		1	
Baetidae	5		
Baetis	32	7	2
Caenis latipennis	12	177	19
Fallceon	1		
Isonychia	3		
Proclleon		4	
Stenacron	32	5	12
Stenonema femoratum	33	44	6
Tricorythodes			2
HEMIPTERA			
Belostoma			1
Corixidae		4	
Microvelia			1
Neoplea			1
Ranatra fusca			-99
Rheumatobates			3
Trepobates			1
LIMNOPHILA			
Ancylidae	1	1	38
Menetus			21
Physella	3	1	65
LUMBRICINA			
Lumbricidae	1		
MEGALOPTERA			
Corydalus	2		
ODONATA			
Argia	1	1	28
Basiaeschna janata			-99
Enallagma			19
Epicordulia			-99
Erythemis			1
Gomphidae		1	1

Aquid Invertebrate Database Bench Sheet Report**Heaths Cr [0137051], Station #1, Sample Date: 9/26/2001 12:55:00 PM****CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence**

ORDER: TAXA	CS	NF	RM
Macromia		1	
Nasiaeschna pentacantha			3
TRICHOPTERA			
Cheumatopsyche	281		6
Chimarra	1		
Nectopsyche			1
Oecetis		3	1
TRICLADIDA			
Planariidae			4
TUBIFICIDA			
Branchiura sowerbyi	4	5	
Tubificidae	11	8	
VENEROIDA			
Pisidiidae	1	1	

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [0137052], Station #2, Sample Date: 9/26/2001 3:45:00 PM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
"HYDRACARINA"			
Acarina		11	1
AMPHIPODA			
Hyaella azteca			504
ARHYNCHOBDELLIDA			
Erpobdellidae	-99	-99	
BRANCHIOBDELLIDA			
Branchiobdellida			1
COLEOPTERA			
Berosus		1	1
Dubiraphia		3	2
Scirtidae			3
Stenelmis	8	1	5
DECAPODA			
Orconectes luteus			-99
Orconectes virilis	-99		
DIPTERA			
Axarus		2	
Ceratopogoninae	3	4	
Chironomus		5	
Corynoneura	5		
Cricotopus/Orthocladius	4		
Cryptochironomus	3	5	
Dicrotendipes		1	1
Glyptotendipes	1	2	3
Hemerodromia	4		
Labrundinia		3	9
Nanocladius	4		2
Nilotanypus	3		
Parachironomus			2
Paralauterborniella		4	
Polypedilum convictum	26		1
Polypedilum illinoense grp	3		1
Polypedilum scalaenum grp	3		
Procladius		8	
Rheotanytarsus	32		
Simulium	4		
Stempellinella	2	2	
Tabanus	2		
Tanytarsus	5	4	1

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [0137052], Station #2, Sample Date: 9/26/2001 3:45:00 PM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Thienemanniella	4		
Thienemannimyia grp.	37		8
EPHEMEROPTERA			
Acerpenna	57		
Apobaetis	1		
Baetis	88		
Caenis latipennis	211	208	10
Heptageniidae	10	2	
Hexagenia limbata		2	
Isonychia	3		
Stenacron	33		
Stenonema femoratum	90	5	1
HEMIPTERA			
Rheumatobates		1	1
LIMNOPHILA			
Ancylidae		4	
Menetus			15
Physella	3	7	50
MEGALOPTERA			
Corydalus	1		-99
ODONATA			
Argia	7		15
Enallagma			7
Gomphidae		1	
Macromia		2	-99
Nasiaeschna pentacantha			-99
TRICHOPTERA			
Cheumatopsyche	216		2
Chimarra	7		
Hydroptila	1		
Oecetis	1		
TRICLADIDA			
Planariidae		1	28
TUBIFICIDA			
Branchiura sowerbyi	1	10	
Tubificidae	7	56	
VENEROIDA			
Pisidiidae	2		-99

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [0703304], Station #1a, Sample Date: 9/25/2007 1:00:00 PM

NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	NF	RM
"HYDRACARINA"		
Acarina	31	24
AMPHIPODA		
Hyaella azteca		147
ARHYNCHOBDELLIDA		
Erpobdellidae	3	
BRANCHIOBDELLIDA		
Branchiobdellida		3
COLEOPTERA		
Berosus		1
Dubiraphia	13	20
Scirtidae		6
Stenelmis	7	
DECAPODA		
Orconectes virilis		-99
Palaemonetes kadiakensis		1
DIPTERA		
Ablabesmyia	1	4
Axarus	2	
Ceratopogoninae	27	
Chaoborus	31	1
Chironomus	13	
Cladotanytarsus	2	
Corynoneura	1	
Cryptochironomus	11	
Cryptotendipes	1	
Dicrotendipes	4	9
Glyptotendipes	7	23
Nanocladius		1
Paralauterborniella	2	
Paratanytarsus		6
Polypedilum		1
Polypedilum halterale grp	4	
Polypedilum illinoense grp		1
Procladius	10	1
Stempellina	1	
Stempellinella	1	
Tanypus	1	
Tanytarsus	11	10
Thienemannimyia grp.	1	4

Aquid Invertebrate Database Bench Sheet Report**Heaths Cr [0703304], Station #1a, Sample Date: 9/25/2007 1:00:00 PM****NF = Nonflow; RM = Rootmat; -99 = Presence**

ORDER: TAXA	NF	RM
EPHEMEROPTERA		
Caenis latipennis	57	31
Callibaetis		1
Hexagenia limbata	2	1
Leptophlebiidae		1
Proclleon	1	
Stenacron	4	1
Stenonema femoratum	5	2
HEMIPTERA		
Corixidae	10	
Neoplea		2
LIMNOPHILA		
Ancylidae		15
Menetus		52
Physella		13
MEGALOPTERA		
Sialis	-99	-99
ODONATA		
Argia		10
Dromogomphus	-99	
Enallagma		23
Epicordulia		-99
Macromia		-99
Nasiaeschna pentacantha		-99
TRICHOPTERA		
Oecetis	2	4
TRICLADIDA		
Planariidae		2
TUBIFICIDA		
Branchiura sowerbyi	10	
Limnodrilus hoffmeisteri	1	
Tubificidae	56	9
VENEROIDA		
Pisidiidae		-99

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [0703305], Station #1b, Sample Date: 9/25/2007 1:00:00 PM

NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	NF	RM
"HYDRACARINA"		
Acarina	27	5
AMPHIPODA		
Hyalella azteca		158
ARHYNCHOBDELLIDA		
Erpobdellidae		1
BRANCHIOBDELLIDA		
Branchiobdellida	1	
COLEOPTERA		
Berosus		4
Dubiraphia	10	24
Scirtidae		10
Stenelmis	5	7
DECAPODA		
Palaemonetes kadiakensis		1
DIPTERA		
Axarus	9	
Ceratopogoninae	27	
Chaoborus	39	
Chironomus	28	1
Cladotanytarsus	5	
Cryptochironomus	7	
Cryptotendipes	2	
Dicrotendipes	2	7
Glyptotendipes	2	27
Labrundinia		2
Nilothauma		1
Paralauterborniella	2	
Paratanytarsus		8
Polypedilum	1	
Polypedilum halterale grp	4	2
Procladius	13	
Stenochironomus		1
Tanypus	2	
Tanytarsus	4	4
Thienemannimyia grp.	2	2
EPHEMEROPTERA		
Caenis latipennis	52	10
Hexagenia limbata	1	
Proclleon	1	

Aquid Invertebrate Database Bench Sheet Report**Heaths Cr [0703305], Station #1b, Sample Date: 9/25/2007 1:00:00 PM****NF = Nonflow; RM = Rootmat; -99 = Presence**

ORDER: TAXA	NF	RM
Stenacron	1	3
Stenonema femoratum	5	1
HEMIPTERA		
Corixidae	6	
Neoplea		1
Ranatra fusca		1
ISOPODA		
Lirceus		1
LIMNOPHILA		
Ancylidae		7
Menetus		26
Physella		18
MEGALOPTERA		
Sialis	-99	-99
ODONATA		
Argia		13
Enallagma		38
Nasiaeschna pentacantha		1
TRICHOPTERA		
Oecetis	1	2
TRICLADIDA		
Planariidae	1	32
TUBIFICIDA		
Branchiura sowerbyi	9	2
Limnodrilus hoffmeisteri	1	
Tubificidae	81	7

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [988954], Station #1, Sample Date: 9/17/1998 1:00:00 PM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
"HYDRACARINA"			
Acarina		4	
AMPHIPODA			
Crangonyx		1	
Hyaella azteca			2
ARHYNCHOBDELLIDA			
Erpobdellidae	3		
BRANCHIOBDELLIDA			
Branchiobdellida	4	1	
COLEOPTERA			
Berosus		4	
Dubiraphia		5	3
Helichus			1
Stenelmis	109	21	16
DECAPODA			
Orconectes virilis	1	1	
DIPTERA			
Ablabesmyia		26	1
Chelifera		1	
Corynoneura		3	
Cricotopus/Orthocladius	1		1
Cryptochironomus	3	6	
Cryptotendipes		1	
Dicrotendipes	2	4	1
Endochironomus	1		
Glyptotendipes		4	1
Goeldichironomus		1	
Hemerodromia	1		
Labrundinia		2	9
Microtendipes		1	
Nanocladius			3
Nilotanytus			1
Parachironomus			1
Paralauterborniella		1	
Paratanytarsus		1	
Paratendipes	2		
Polypedilum convictum	105	2	9
Polypedilum illinoense grp	1	7	25
Polypedilum scalaenum grp	10	4	
Rheotanytarsus	63	5	106

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [988954], Station #1, Sample Date: 9/17/1998 1:00:00 PM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Simulium	3		5
Tabanus	2		
Tanypus		1	
Tanytarsus	3	6	6
Thienemanniella	3		3
Thienemannimyia grp.	16	2	7
EPHEMEROPTERA			
Acerpenna	29		7
Baetis	101	1	2
Caenis latipennis	6	38	13
Proclleon		1	
Stenacron	5	23	3
Stenonema femoratum	41	56	
Tricorythodes			2
ISOPODA			
Caecidotea		1	
LIMNOPHILA			
Ferrissia	2		
Menetus			1
Physella		1	
MEGALOPTERA			
Corydalus	4		
ODONATA			
Argia	1	2	10
Dromogomphus		-99	
Enallagma			5
Gomphidae		1	
Hetaerina			1
Macromia			-99
RHYNCHOBDELLIDA			
Glossiphoniidae			1
TRICHOPTERA			
Cheumatopsyche	73		6
Chimarra	47		
TUBIFICIDA			
Branchiura sowerbyi		9	
Limnodrilus hoffmeisteri		2	
Tubificidae	3	10	
VENEROIDA			
Pisidiidae	2	1	3

Aquid Invertebrate Database Bench Sheet Report

Richland Cr [0119530], Station #1, Sample Date: 3/28/2001 9:45:00 AM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
"HYDRACARINA"			
Acarina	7	6	
AMPHIPODA			
Crangonyx	15	17	3
Hyalella azteca	4	8	21
Stygobromus		1	
COLEOPTERA			
Berosus		1	
Ectopria nervosa		1	
Lioporeus		2	1
Paracymus		1	
Peltodytes			4
Psephenus herricki		1	
Stenelmis	5		
DECAPODA			
Orconectes		1	
DIPTERA			
Ablabesmyia		2	
Ceratopogoninae	4	1	
Corynoneura		1	
Cricotopus/Orthocladius	148	1	71
Cryptochironomus		1	
Dicrotendipes		2	2
Empididae		1	
Eukiefferiella brevicar grp	61	2	
Hemerodromia	9		
Hexatoma	-99		
Hydrobaenus		2	8
Larsia		3	
Microtendipes		1	
Orthocladius (Euorthocladius)	3		
Parakiefferiella	5	90	17
Parametriocnemus	11		1
Paraphaenocladius		2	
Paratanytarsus			3
Paratendipes		1	
Phaenopsectra			2
Polypedilum fallax grp		1	
Polypedilum scalaenum grp		1	

Aquid Invertebrate Database Bench Sheet Report

Richland Cr [0119530], Station #1, Sample Date: 3/28/2001 9:45:00 AM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Prosimulium	40		
Stictochironomus	1	36	
Sympotthastia	27		
Tabanus	1		
Tanytarsus		2	1
Thienemannimyia grp.		5	4
Tvetenia discoloripes grp	3		
EPHEMEROPTERA			
Caenis anceps		10	
Caenis latipennis	7	15	18
Maccaffertium pulchellum			1
Stenonema femoratum	2		
GORDIOIDEA			
Gordiidae	1		
HEMIPTERA			
Ranatra fusca			1
ISOPODA			
Caecidotea (Blind & Unpigmented)		2	
LEPIDOPTERA			
Pyralidae		1	
LIMNOPHILA			
Fossaria		2	3
Laevapex		2	
Menetus	1		
Physella	2		2
LUMBRICINA			
Lumbricidae	1	1	
MESOGASTROPODA			
Elimia	-99		6
ODONATA			
Boyeria			1
Enallagma		1	
Erythemis			1
Libellulidae		4	1
PLECOPTERA			
Acroneuria	1		
Alloperla	167	11	
Amphinemura	3		
Isoperla	11		

Aquid Invertebrate Database Bench Sheet Report**Richland Cr [0119530], Station #1, Sample Date: 3/28/2001 9:45:00 AM****CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence**

ORDER: TAXA	CS	NF	RM
Zealeuctra	4	4	
RHYNCHOBDELLIDA			
Piscicolidae	1		
TRICHOPTERA			
Cernotina			1
Helicopsyche	1		
Polycentropus	1		
Rhyacophila	3		
TRICLADIDA			
Planariidae	1		
TUBIFICIDA			
Enchytraeidae	7	4	2

Aquid Invertebrate Database Bench Sheet Report

Richland Cr [0119531], Station #2, Sample Date: 3/28/2001 11:15:00 AM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
"HYDRACARINA"			
Acarina	1	8	
AMPHIPODA			
Crangonyx	6	3	44
Hyalella azteca			2
ARHYNCHOBDELLIDA			
Erpobdellidae			-99
BRANCHIOBDELLIDA			
Branchiobdellida			9
COLEOPTERA			
Berosus	1		
Dubiraphia			1
Hydroporus		1	
Paracymus			2
Peltodytes		2	3
DECAPODA			
Orconectes virilis			2
DIPTERA			
Ceratopogoninae	3	1	
Clinocera	2		
Cricotopus/Orthocladius	171	3	96
Cryptochironomus		1	
Dasyheleinae	1		
Dicrotendipes		3	
Diptera			2
Erioptera		2	
Eukiefferiella brevicar grp	5		2
Hexatoma	7	-99	
Hydrobaenus		1	3
Larsia		10	
Microtendipes			1
Nanocladius			1
Orthocladius (Euorthocladius)	7		
Parakiefferiella	4	248	14
Parametriocnemus	4		
Paratanytarsus			1
Polypedilum illinoense grp	1		
Prosimulium	103		4
Rheocricotopus	1		4
Stictochironomus		4	1

Aquid Invertebrate Database Bench Sheet Report

Richland Cr [0119531], Station #2, Sample Date: 3/28/2001 11:15:00 AM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Sympotthastia	48		26
Thienemannimyia grp.	1		
Tipula		-99	-99
Tvetenia bavarica grp	1		
EPHEMEROPTERA			
Caenis anceps	4	1	1
Caenis latipennis	4	6	39
Paraleptophlebia	1		1
Stenonema femoratum	1		
GORDIOIDEA			
Gordiidae	1		
LIMNOPHILA			
Fossaria	1		3
LUMBRICINA			
Lumbricidae	-99		
MEGALOPTERA			
Sialis		-99	
MESOGASTROPODA			
Elimia			4
ODONATA			
Basiaeschna janata			-99
Libellulidae			3
PLECOPTERA			
Alloperla	112	3	1
Amphinemura	1		
Isoperla	52		
Neoperla	2		
Zealeuctra	14	1	1
RHYNCHOBDELLIDA			
Piscicolidae		2	1
TRICHOPTERA			
Helicopsyche		2	2
Isonychia			-99
Polycentropus		1	
Rhyacophila	2		
TUBIFICIDA			
Enchytraeidae	1	1	

Aquid Invertebrate Database Bench Sheet Report

Richland Cr [0804030], Station #2, Sample Date: 4/22/2008 9:45:00 AM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
"HYDRACARINA"			
Acarina	1		3
AMPHIPODA			
Crangonyx	27	48	167
Hyalella azteca			1
ARHYNCHOBDELLIDA			
Erpobdellidae	-99	1	-99
COLEOPTERA			
Agabus			1
Berosus	3	1	
Dytiscidae	1	8	3
Ectopria nervosa		2	
Heterosternuta	1	1	
Microcylloepus pusillus	1		
Neoporus		1	
Peltodytes		5	1
Stenelmis	35	40	6
DECAPODA			
Orconectes luteus	-99		
Orconectes virilis			-99
DIPTERA			
Ceratopogoninae	3	2	
Chironomidae	2	1	
Chironomus		1	
Cladotanytarsus	2		
Clinocera	3		
Constempellina	1	1	
Cricotopus/Orthocladius	58	9	48
Dicrotendipes	1		
Diptera		3	
Eukiefferiella	37		
Hydrobaenus	3	22	3
Larsia		9	
Orthocladius (Euorthocladius)	2		1
Paracricotopus	33		
Parakiefferiella		1	
Parametricnemus		1	
Paratendipes		4	
Polypedilum convictum	1		
Rheocricotopus	1		2

Aquid Invertebrate Database Bench Sheet Report**Richland Cr [0804030], Station #2, Sample Date: 4/22/2008 9:45:00 AM****CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence**

ORDER: TAXA	CS	NF	RM
Simulium	57		
Stictochironomus		1	
Sympothastia		1	
Tanytarsus	4	2	
Tipula	1		4
Tribelos		2	
EPHEMEROPTERA			
Acentrella	13		
Caenis latipennis	18	25	5
Heptageniidae	41	66	13
Leptophlebia			1
Leptophlebiidae	12	26	21
Stenonema femoratum	5	6	
LIMNOPHILA			
Lymnaeidae	1		
Menetus		2	
LUMBRICULIDA			
Lumbriculidae	5	1	
MESOGASTROPODA			
Elimia	12	1	5
ODONATA			
Calopteryx			-99
Enallagma			1
Somatochlora		1	1
PLECOPTERA			
Acroneuria	1		
Amphinemura	15	1	
Chloroperlidae	19	27	
Isoperla	81		
Perlesta	132	2	5
TRICHOPTERA			
Hydroptila	4		
Isonychia			-99
Polycentropodidae	1		
Pycnopsyche	1		-99
Rhyacophila	-99		
TRICLADIDA			
Planariidae	5		
TUBIFICIDA			
Enchytraeidae	12	12	

Aquid Invertebrate Database Bench Sheet Report

Richland Cr [0804030], Station #2, Sample Date: 4/22/2008 9:45:00 AM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Limnodrilus hoffmeisteri	1		
Tubificidae	5	1	
VENEROIDA			
Pisidiidae	23		

Aquid Invertebrate Database Bench Sheet Report

Richland Cr [0804031], Station #1, Sample Date: 4/22/2008 11:00:00 AM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
"HYDRACARINA"			
Acarina	1	1	3
AMPHIPODA			
Crangonyx	102	105	164
COLEOPTERA			
Agabus	1		3
Berosus		2	
Dubiraphia		2	
Dytiscidae	1	20	
Heterosternuta		2	1
Hydraena	1		
Hydrobius		1	
Neoporus		2	1
Peltodytes		2	2
Stenelmis	28	11	
DECAPODA			
Orconectes virilis		2	1
DIPTERA			
Ceratopogoninae	10	8	1
Chironomidae	1		1
Chironomus	1		
Chrysops		1	
Clinocera	1	1	
Constempellina		2	
Cricotopus/Orthocladius	35	6	35
Dicrotendipes	3		
Diptera		3	1
Empididae		2	
Eukiefferiella	19	1	
Hydrobaenus	5	20	4
Larsia		3	
Ormosia	1		
Parametrioconemus	1		
Paraphaenocladus	1		
Paratanytarsus			1
Paratendipes		5	
Polypedilum convictum	2		
Procladius		2	
Simulium	19		
Stegopterna	1		

Aquid Invertebrate Database Bench Sheet Report

Richland Cr [0804031], Station #1, Sample Date: 4/22/2008 11:00:00 AM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Tanytarsus	1		
Thienemannimyia grp.	1		
Tipula		-99	
EPHEMEROPTERA			
Acentrella	5		
Ameletus lineatus			1
Caenis latipennis	2	24	5
Heptageniidae	15	27	1
Leptophlebiidae		5	14
Maccaffertium pulchellum	1		
Stenonema femoratum		4	
LIMNOPHILA			
Ancylidae		1	
Helisoma			-99
Physella	1	1	-99
LUMBRICINA			
Lumbricina	1		-99
MESOGASTROPODA			
Elimia		4	3
ODONATA			
Stylogomphus albistylus		3	
PLECOPTERA			
Amphinemura	37		1
Chloroperlidae	62	7	
Clioperla clio	-99		
Isoperla	82		
Perlesta	114	2	4
Perlinella drymo		1	
Zealeuctra	-99		
RHYNCHOBDELLIDA			
Glossiphoniidae			1
TRICHOPTERA			
Ochrotrichia	5		
Rhyacophila	1		
TRICLADIDA			
Planariidae	4		2
TUBIFICIDA			
Enchytraeidae	10	20	2
Limnodrilus claparedianus	1		
Limnodrilus hoffmeisteri	1	7	

Aquid Invertebrate Database Bench Sheet Report

Richland Cr [0804031], Station #1, Sample Date: 4/22/2008 11:00:00 AM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Tubificidae	3	11	1
VENEROIDA			
Pisidiidae	3	2	

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [0119532], Station #2, Sample Date: 3/29/2001 10:45:00 AM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
"HYDRACARINA"			
Acarina	2	6	
AMPHIPODA			
Crangonyx		1	24
Hyalella azteca		1	41
ARHYNCHOBDELLIDA			
Erpobdellidae	1	1	-99
BRANCHIOBDELLIDA			
Branchiobdellida			5
COLEOPTERA			
Dineutus			-99
Dubiraphia		2	5
Helichus			1
Hydroporus			1
Macronychus glabratus			1
Stenelmis	91	12	17
Stenelmis sexlineata	24		
DECAPODA			
Orconectes virilis		1	-99
DIPTERA			
Ablabesmyia		4	
Ceratopogoninae	5	6	
Chironomus		2	
Cladotanytarsus	2	3	
Cnephia	2		
Corynoneura		1	
Cricotopus/Orthocladius	80	4	17
Cryptochironomus	4	9	
Dicrotendipes	2	1	
Diptera		1	
Eukiefferiella brevicar grp	6		
Glyptotendipes		3	1
Hemerodromia	2		
Hydrobaenus	5	7	8
Nanocladius		1	4
Orthocladius (Euorthocladius)	1		
Parachironomus			1
Parakiefferiella	2		1
Paratanytarsus			2
Paratendipes		3	

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [0119532], Station #2, Sample Date: 3/29/2001 10:45:00 AM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Phaenopsectra		1	
Polypedilum convictum	21		
Polypedilum halterale grp		4	
Polypedilum scalaenum grp	1	1	
Procladius		2	
Pseudochironomus	1	4	
Rheocricotopus			1
Rheotanytarsus	1		
Simulium	11		
Stegopterna	2		
Stictochironomus		2	
Tanytarsus	3		11
Thienemanniella	1		
Thienemannimyia grp.	19		10
EPHEMEROPTERA			
Acerpenna	4		
Caenis latipennis	144	72	91
Stenacron	2	3	
Stenonema femoratum	39	11	
ISOPODA			
Caecidotea	1		5
LIMNOPHILA			
Menetus			1
Physella		2	1
LUMBRICINA			
Lumbricidae			-99
MEGALOPTERA			
Chauliodes rastricornis			-99
Sialis			-99
ODONATA			
Argia			9
Calopteryx			-99
Enallagma		1	4
Gomphus		1	
Nasiaeschna pentacantha			-99
Somatochlora			-99
PLECOPTERA			
Amphinemura	6		1
Isoperla	150		
TRICHOPTERA			

Aquid Invertebrate Database Bench Sheet Report**Heaths Cr [0119532], Station #2, Sample Date: 3/29/2001 10:45:00 AM****CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence**

ORDER: TAXA	CS	NF	RM
Cheumatopsyche			3
Chimarra	1		
Hydroptila	1		
Oecetis			1
Ptilostomis			-99
Rhyacophila	7		
Triaenodes			2
TUBIFICIDA			
Branchiura sowerbyi	1	47	1
Limnodrilus cervix		2	
Limnodrilus claparedianus		2	1
Limnodrilus hoffmeisteri		13	4
Tubificidae	14	33	3
VENEROIDA			
Pisidiidae		1	4

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [0119533], Station #1, Sample Date: 3/29/2001 1:05:00 PM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
"HYDRACARINA"			
Acarina		19	8
AMPHIPODA			
Crangonyx	1	-99	16
Hyaella azteca			43
ARHYNCHOBDELLIDA			
Erpobdellidae	-99		
COLEOPTERA			
Dineutus			-99
Dubiraphia			3
Dytiscus			-99
Laccophilus			1
Peltodytes			1
Stenelmis	231	8	2
DECAPODA			
Orconectes virilis		1	-99
DIPTERA			
Ablabesmyia		5	1
Ceratopogoninae		6	
Chironomus		1	
Cladotanytarsus		16	
Corynoneura		8	5
Cricotopus/Orthocladius	89	5	16
Cryptochironomus	5	12	
Dicrotendipes	3	4	3
Diptera		1	
Eukiefferiella brevicarcar grp	7		
Glyptotendipes	1		5
Hemerodromia	3		
Hydrobaenus	11	12	25
Labrundinia			1
Larsia	1		1
Nanocladius		1	1
Nemotelus		1	
Nilotanypus	1		
Parakiefferiella	4		1
Paratanytarsus			1
Paratendipes	2	16	1
Polypedilum convictum	12	1	
Polypedilum halterale grp	1	20	

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [0119533], Station #1, Sample Date: 3/29/2001 1:05:00 PM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Polypedilum scalaenum grp	20	2	
Procladius		2	
Pseudochironomus		1	
Rheocricotopus	3		
Simulium	18		
Stegopterna	1		
Tabanus	2		
Tanytarsus	2	10	2
Thienemannimyia grp.	4	3	6
Tvetenia bavarica grp	1		
EPHEMEROPTERA			
Acerpenna	4		
Caenis latipennis	22	60	99
Stenacron	3	3	1
Stenonema femoratum	30	13	1
GORDIOIDEA			
Gordiidae	-99		
ISOPODA			
Caecidotea	4	2	10
Caecidotea (Blind & Unpigmented)	1	1	
LIMNOPHILA			
Physella		-99	2
MEGALOPTERA			
Sialis		-99	
ODONATA			
Aeshnidae			1
Argia			5
Enallagma			3
PLECOPTERA			
Amphinemura	3		
Isoperla	106		1
TRICHOPTERA			
Polycentropus	4		
Triaenodes			1
TUBIFICIDA			
Branchiura sowerbyi	1		
Enchytraeidae	6	6	
Limnodrilus cervix		1	
Limnodrilus hoffmeisteri	2	3	

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [0119533], Station #1, Sample Date: 3/29/2001 1:05:00 PM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Tubificidae	36	24	

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [0804141], Station #1, Sample Date: 3/26/2008 3:00:00 PM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
"HYDRACARINA"			
Acarina	3	26	24
AMPHIPODA			
Crangonyx		1	1
Hyalella azteca			19
ARHYNCHOBDELLIDA			
Erpobdellidae	3	3	
BRANCHIOBDELLIDA			
Branchiobdellida	1		3
COLEOPTERA			
Berosus	1		1
Dubiraphia		5	5
Scirtidae			1
Stenelmis	147	3	2
DECAPODA			
Orconectes virilis	-99		1
Palaemonetes kadiakensis			-99
DIPTERA			
Ablabesmyia		1	
Ceratopogoninae	4	47	3
Chironomidae	2	3	1
Chironomus		3	
Cladotanytarsus		8	
Clinocera	1		
Corynoneura		1	
Cricotopus/Orthocladius	95	10	33
Cryptochironomus	1	3	
Dicrotendipes	2	2	1
Diptera		2	
Eukiefferiella	18	1	
Glyptotendipes	2	5	10
Hemerodromia	5		
Hydrobaenus	16	24	56
Labrundinia	1		1
Mesosmittia			1
Nanocladius			2
Nilothauma		2	
Paratanytarsus			4
Paratendipes	1		
Polypedilum convictum	16		

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [0804141], Station #1, Sample Date: 3/26/2008 3:00:00 PM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Polypedilum halterale grp	5	6	
Polypedilum scalaenum grp	53	2	
Procladius		2	1
Pseudochironomus		7	
Simulium	20		
Stictochironomus	1	1	
Tabanus	2	1	
Tanytarsus	4	6	6
Thienemanniella	1		
Thienemannimyia grp.	3		1
EPHEMEROPTERA			
Acerpenna	1		
Caenis latipennis	65	33	76
Hexagenia limbata			-99
Stenacron	9		
Stenonema femoratum	14	6	-99
HEMIPTERA			
Belostoma			2
ISOPODA			
Caecidotea	10	8	13
LIMNOPHILA			
Ancylidae	4		
Menetus			1
Physella	3		4
LUMBRICULIDA			
Lumbriculidae	3		
MEGALOPTERA			
Sialis		-99	
ODONATA			
Argia	2		4
Basiaeschna janata			-99
Enallagma			12
Nasiaeschna pentacantha			-99
PLECOPTERA			
Isoperla	9		
Perlesta	4		
RHYNCHOBDELLIDA			
Glossiphoniidae		1	
TRICHOPTERA			
Cheumatopsyche	2	1	

Aquid Invertebrate Database Bench Sheet Report**Heaths Cr [0804141], Station #1, Sample Date: 3/26/2008 3:00:00 PM****CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence**

ORDER: TAXA	CS	NF	RM
Chimarra	11		
Ironoquia			-99
Rhyacophila	-99		
TRICLADIDA			
Planariidae	2		
TUBIFICIDA			
Branchiura sowerbyi	1	5	
Enchytraeidae	2	4	6
Limnodrilus claparedianus		2	
Limnodrilus hoffmeisteri	2	9	2
Tubificidae	27	72	11
VENEROIDA			
Pisidiidae	16		1

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [984845], Station #1, Sample Date: 4/7/1998 1:00:00 PM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
"HYDRACARINA"			
Acarina		2	14
AMPHIPODA			
Crangonyx		11	17
Hyaella azteca			1
ARHYNCHOBDELLIDA			
Erpobdellidae	3	-99	-99
COLEOPTERA			
Berosus		1	1
Dubiraphia			2
Helichus			1
Hydroporus			1
Peltodytes			1
Scirtidae			4
Stenelmis	98	3	2
DECAPODA			
Orconectes virilis		-99	
DIPTERA			
Ablabesmyia		3	
Ceratopogoninae	1	1	2
Chironomus		1	
Cladotanytarsus	1	1	
Corynoneura			1
Cricotopus/Orthocladius	25	2	14
Cryptochironomus	4	9	
Dicrotendipes	3	7	3
Eukiefferiella	2	1	
Forcipomyiinae			1
Hydrobaenus	1	7	6
Nilotanypus	4		
Nilothauma			2
Paracladopelma		1	
Paramerina			1
Paraphaenocladus	1		
Paratanytarsus			1
Paratendipes	1	8	1
Phaenopsectra		1	
Polypedilum convictum	33	1	
Polypedilum illinoense grp	1		6
Polypedilum scalaenum grp	22	9	2

Aquid Invertebrate Database Bench Sheet Report

Heaths Cr [984845], Station #1, Sample Date: 4/7/1998 1:00:00 PM

CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence

ORDER: TAXA	CS	NF	RM
Pseudochironomus	1	2	1
Rheocricotopus	1	1	1
Simulium	11		
Stictochironomus	1	2	
Tabanus	2		
Tanytarsus	4	11	12
Thienemannimyia grp.	12	2	1
Tipula	-99		
Tvetenia	1		
Zavreliomyia			2
EPHEMEROPTERA			
Acerpenna	1		
Caenis	205	121	177
Leptophlebia			-99
Leucocuta	1		1
Stenacron		1	2
Stenonema femoratum	36	16	2
HEMIPTERA			
Ranatra nigra			1
ISOPODA			
Caecidotea	17	6	106
LIMNOPHILA			
Ferrissia		1	
Lymnaeidae	1		
Menetus		1	
Physella		-99	2
MEGALOPTERA			
Corydalus	1		
ODONATA			
Argia			2
Enallagma			1
Libellulidae	1		3
Nasiaeschna pentacantha			-99
PLECOPTERA			
Amphinemura	105		
Isoperla	107		
Leuctridae	2		
Perlesta	25		
Perlidae	5		
TRICHOPTERA			

Aquid Invertebrate Database Bench Sheet Report**Heaths Cr [984845], Station #1, Sample Date: 4/7/1998 1:00:00 PM****CS = Coarse; NF = Nonflow; RM = Rootmat; -99 = Presence**

ORDER: TAXA	CS	NF	RM
Chimarra	2		
Ironoquia			3
TUBIFICIDA			
Branchiura sowerbyi	1	7	
Enchytraeidae	5	1	
Limnodrilus cervix		1	
Limnodrilus hoffmeisteri	3	6	1
Tubificidae	6	14	2
VENEROIDA			
Pisidiidae	1		1