



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
OBS130-0002	15T-001	MHAB	AB22384	150908401	9/8/15	Washington

Stream Name	Location	HUC 12	HUCTO14
South Fork Blue River	Fredericksburg Road	051401040606	05140104130080

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4254348.2	571270.79	71	3.479	126.08	64

Taxon	Count	Notes	HBI Tolerance
1260 (NEMATODA)	2		6
1426 (Branchiura sowerbyi)	1		6
1552 (Tubificidae with bifid chetae and no hair chetae)	2		
2215 (Elimia)	2		
2156 (Corbicula fluminea)	1		6
8996 (Orconectes)	1	1F	4
1017 (HEPTAGENIIDAE)	1		4
3020 (Stenonema femoratum)	3		3
3065 (Baetis)	7		3
3066 (Baetis intercalaris)	3		3
3183 (Caenis)	1		3
3197 (Ephemera)	2		3
3245 (Boyeria vinosa)	4		4
7026 (Calopteryx maculata)	1		
3549 (Enallagma divagans)	5		
3572 (Argia tibialis)	4		
3366 (Agneta)	17		2
3960 (Helichus basalis)	1	1A	
7293 (Psephenus herricki)	8	8L	4
7307 (Stenelmis)	6	6L	5
7309 (Stenelmis crenata)	33	24M, 9F; Slides 0255.1 & 0225.2	5
7317 (Stenelmis sexlineata)	5	5A	
7300 (Dubiraphia vittata)	8	4M, 4F; Slide 0255.4, 246um	
7295 (Ancyronyx variegatus)	23	23A	4
7321 (Macronychus glabratus)	2	2A	3
3799 (Corydalus cornutus)	1		2
3267 (Chimarra obscura)	7		4
3432 (Cheumatopsyche)	45		3
8980 (Hydropsyche betteni grp)	2		
9222 (Cerotina/Polycentropus)	1		
7610 (Hexatoma)	2		2
7941 (Natarsia baltimoreus)	1		6
7946 (Ablabesmyia mallochii)	1		5
9153 (Tribelos)	2		5
7926 (Tanypodinae (Subfamily))	2		
8082 (Chironominae (Subfamily))	1		
8083 (Chironomini (Tribe))	4		
8227 (Tanytarsini (Tribe))	2		
9261 (Thienemannimyia grp.)	5		
8086 (Chironomus)	8		8
8099 (Cryptochironomus)	6		5
8151 (Microtendipes)	2		7

Type	Value	Metric Score
Total Taxa:	50	5
Total No. Individuals:	258	5
EPT Taxa:	11	3
% Orthocladinae + Tanytarsini of Chironomidae:	8.93	5
% Non-insects excluding Astacidae:	3.1	5
Diptera Taxa:	20	5
% Intolerant (0-3):	32.17	5
% Tolerant (8-10):	3.1	5
% Predators FFG 1:	16.67	1
% Shredders + Scrapers FFG 1:	18.6	3
% Collector-Filterers FFG 1:	22.87	1
% Sprawlers:	2.33	1
MIBI Metric Score:		44

Supplemental Metrics

	HBI	
	3.98	
Shannon-Weaver Index		4.64
Shannon Equitability		0.5
% Dominant 3 Taxon		39.15
% Chironomidae		21.71



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Taxon	Count	Notes	HBI Tolerance
8172 (Phaenopsectra)	1		7
8228 (Cladotanytarsus)	1		4
8241 (Tanytarsus)	2		4
9277 (Polypedilum (Tripodura) scalaenum grp)	2		
9238 (Polypedilum (Uresipedilum) flavum)	12		
9240 (Polypedilum (Polypedilum) fallax grp.)	2		
9241 (Polypedilum (Polypedilum) illinoense grp.)	2		
8355 (Tabanus)	1		5



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Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
OBS-06-0016	15T-002	MHAB	AB22385	150908402	9/8/15	Washington

Stream Name	Location	HUC 12	HUCTO14
South Fork Blue River	Palmyra Road	051401040606	05140104130080

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4255928.98	575467.63	71	3.264	94.742	62

Taxon	Count	Notes	HBI Tolerance
1357 (BRANCHIOBDELLIDAE)	8		6
1207 (VIVIPARIDAE)	1		6
2215 (Elimia)	9		
2181 (Sphaerium)	5		6
1083 (ACARI)	1		4
8996 (Orconectes)	3	2MII, 1F	4
9006 (Orconectes juvenilis)	1	1MI	
1251 (ISOTOMIDAE)	1		
1017 (HEPTAGENIIDAE)	5		4
9090 (Maccaffertium mediopuncta)	4		2
3049 (Stenacron interpunctatum)	1		7
1012 (BAETIDAE)	2		4
3065 (Baetis)	4		3
3066 (Baetis intercalaris)	5		3
3183 (Caenis)	1		3
1011 (EPHEMERIDAE)	1		4
3109 (Isonychia)	6		2
3245 (Boyeria vinosa)	2		4
3397 (Macromia)	1		2
3546 (Enallagma)	3		9
3549 (Enallagma divagans)	8		
7032 (Argia moesta)	1		
3572 (Argia tibialis)	5		
1130 (PLECOPTERA)	1	Immature	
3366 (Agneta)	6		2
3600 (Peltodytes duodecimpunctatus)	1	1A	
7293 (Psephenus herricki)	4	1A, 3L	4
7307 (Stenelmis)	6	6L	5
7309 (Stenelmis crenata)	13	5M, 8F; Slide 0257.1	5
7300 (Dubiraphia vittata)	8	4M, 4F; Slide 0257.2 256um	
9116 (Optioservus trivittatus)	1	1A	4
7295 (Ancyronyx variegatus)	14	14A	4
7321 (Macronychus glabratus)	1	1A	3
3773 (Sialis)	2		5
3799 (Corydalus cornutus)	7		2
3267 (Chimarra obscura)	17		4
1057 (HYDROPSYCHIDAE)	1	Immature	4
3432 (Cheumatopsyche)	11		3
3314 (Nyctiophylax)	1		3
7814 (Simulium)	1		5
9162 (Nilotanypus fimbriatus)	1		3
8083 (Chironomini (Tribe))	2		
8227 (Tanytarsini (Tribe))	1		

Type	Value	Metric Score
Total Taxa:	51	5
Total No. Individuals:	204	3
EPT Taxa:	15	5
% Orthoclaadiinae + Tanytarsini of Chironomidae:	22.22	5
% Non-insects excluding Astacidae:	11.76	5
Diptera Taxa:	12	3
% Intolerant (0-3):	25	3
% Tolerant (8-10):	1.47	5
% Predators FFG 1:	19.61	3
% Shredders + Scrapers FFG 1:	14.71	3
% Collector-Filterers FFG 1:	22.55	1
% Sprawlers:	0	1
mIBI Metric Score:		42

Supplemental Metrics

	HBI	
	3.99	
Shannon-Weaver Index		5.05
Shannon Equitability		0.54
% Dominant 3 Taxon		22.55
% Chironomidae		13.24



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Taxon	Count	Notes	HBI Tolerance
8006 (Orthocladiinae (Subfamily))	1		
8112 (Dicrotendipes)	1		6
8206 (Stenochironomus)	1		4
8238 (Rheotanytarsus)	3		3
9221 (Stempellina)	1		
9238 (Polypedilum (Uresipedilum flavum))	15		
9241 (Polypedilum (Polypedilum illinoense grp.))	1		
8355 (Tabanus)	4		5



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Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
OBS-06-0015	15T-003	MHAB	AB22386	150909301	9/9/15	Washington

Stream Name	Location	HUC 12	HUCTO14
Licking Creek	Palmyra Rd	051401040606	05140104130080

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4254701.66	575964.62	71	16.269	8.697	66

Taxon	Count	Notes	HBI Tolerance
1396 (LUMBRICULIDAE)	1		5
1232 (NAIDIDAE)	1		8
1552 (Tubificidae with bifid chetae and no hair chetae)	1		
1357 (BRANCHIOBDELLIDAE)	2		6
1233 (ERPOBDELLIDAE)	2		
2215 (Elimia)	14		
2156 (Corbicula fluminea)	1		6
2181 (Sphaerium)	15		6
9031 (Lirceus)	12		8
9008 (Orconectes rusticus)	6	1MI, 4MII, 1F	6
1251 (ISOTOMIDAE)	2		
1017 (HEPTAGENIIDAE)	12	Immature, Damaged	4
9156 (Maccaffertium)	30		
3022 (Maccaffertium modestum)	1		1
3020 (Stenonema femoratum)	1		3
3036 (Leucrocuta)	6		2
3049 (Stenacron interpunctatum)	5		7
7011 (Acerpenna pygmaea)	1		2
3065 (Baetis)	2		3
3066 (Baetis intercalaris)	4		3
3071 (Baetis flavistriga)	8		3
3183 (Caenis)	1		3
3109 (Isonychia)	7		2
3120 (Stylogomphus)	1		1
7032 (Argia moesta)	8		
3366 (Agneta)	14		2
7131 (Rhagovelia obesa)	4	3M, 1F	
7293 (Psephenus herricki)	92	92L	4
7307 (Stenelmis)	6	6L	5
7309 (Stenelmis crenata)	10	4M, 6F; Slide 0261.1	5
7317 (Stenelmis sexlineata)	1	1A	
7302 (Microcylloepus pusillus)	1	1A	3
3797 (Nigronia serricornis)	2		4
3003 (Chimarra aterrima)	8		2
1057 (HYDROPSYCHIDAE)	2	Immature	4
3432 (Cheumatopsyche)	11		3
8980 (Hydropsyche betteni grp)	4		
1055 (LIMNEPHILIDAE)	1	1P	4
1072 (TIPULIDAE)	1		3
7814 (Simulium)	1		5
7941 (Natarsia baltimoreus)	1		6
7926 (Tanypodinae (Subfamily))	2		
8227 (Tanytarsini (Tribe))	1		
9261 (Thienemannimyia grp.)	2		

Type	Value	Metric Score
Total Taxa:	49	5
Total No. Individuals:	314	5
EPT Taxa:	18	5
% Orthoclaadiinae + Tanytarsini of Chironomidae:	41.67	3
% Non-insects excluding Astacidae:	15.61	5
Diptera Taxa:	11	3
% Intolerant (0-3):	21.97	3
% Tolerant (8-10):	4.14	5
% Predators FFG 1:	10.83	1
% Shredders + Scrapers FFG 1:	37.26	5
% Collector-Filterers FFG 1:	14.65	3
% Sprawlers:	0.96	1
mIBI Metric Score:		44

Supplemental Metrics

	HBI	Value
Shannon-Weaver Index	4.11	4.28
Shannon Equitability		0.46
% Dominant 3 Taxon		43.63
% Chironomidae		3.82



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Taxon	Count	Notes	HBI Tolerance
8006 (Orthoclaadiinae (Subfamily))	1		
8060 (Parametriocnemus)	2		3
9100 (Tvetenia)	1	1P	5
8179 (Polypedilum)	1		
9238 (Polypedilum (Uresipedilum flavum))	1		



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Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
OBS-06-0021	15T-004	MHAB	AB22387	150909302	9/9/15	Washington

Stream Name	Location	HUC 12	HUCTO14
Bear Creek	Wetzel Rd	051401040603	05140104130060

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4253692	582844.1	71	22.189	5.927	47

Taxon	Count	Notes	HBI Tolerance
1260 (NEMATODA)	1		6
1357 (BRANCHIOBDELLIDAE)	14		6
2215 (Elimia)	20		
1083 (ACARI)	3		4
9068 (Gammarus)	4		6
8996 (Orconectes)	5	3MII, 2F	4
9156 (Maccaffertium)	1		
1012 (BAETIDAE)	2	Damaged	4
3066 (Baetis intercalaris)	1		3
3071 (Baetis flavistriga)	2		3
3183 (Caenis)	9		3
3109 (Isonychia)	3		2
3245 (Boyeria vinosa)	1		4
3120 (Stylogomphus)	3		1
3348 (Acroneuria)	1		1
1038 (GERRIDAE)	1		
7293 (Psephenus herricki)	9	9L	4
9326 (Dubiraphia minima grp)	2	2F	
7321 (Macronychus glabratus)	1	1L	3
3432 (Cheumatopsyche)	8		3
9149 (Hydropsyche demora)	1		
8980 (Hydropsyche betteni grp)	22		
8952 (Helicopsyche borealis)	38		3
1072 (TIPULIDAE)	1	1P	3
8083 (Chironomini (Tribe))	1		
8227 (Tanytarsini (Tribe))	1		
9261 (Thienemannimyia grp.)	3		
8006 (Orthocladiinae (Subfamily))	2	1P	
8074 (Thienemanniella)	1		4
8099 (Cryptochironomus)	5		5
8112 (Dicrotendipes)	1		6
8151 (Microtendipes)	6		7
8211 (Stictochironomus)	1		4
8228 (Cladotanytarsus)	2		4
9093 (Stempellinella)	4		3
8241 (Tanytarsus)	2		4
9277 (Polypedilum (Tripodura) scalaenum grp)	1		
9238 (Polypedilum (Uresipedilum) flavum)	3		
8274 (Stratiomys)	3		

Type	Value	Metric Score
Total Taxa:	39	3
Total No. Individuals:	189	3
EPT Taxa:	11	5
% Orthocladiinae + Tanytarsini of Chironomidae:	36.36	3
% Non-insects excluding Astacidae:	22.22	3
Diptera Taxa:	16	5
% Intolerant (0-3):	37.57	5
% Tolerant (8-10):	0	5
% Predators FFG 1:	6.35	1
% Shredders + Scrapers FFG 1:	24.87	5
% Collector-Filterers FFG 1:	12.17	3
% Sprawlers:	6.88	5
mIBI Metric Score:		46

Supplemental Metrics

	HBI	Score
Shannon-Weaver Index	3.85	4.32
Shannon Equitability		0.46
% Dominant 3 Taxon		42.33
% Chironomidae		17.46



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MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
OBS-06-0014	15T-005	MHAB	AB22388	150909303	9/9/15	Washington
Stream Name		Location		HUC 12		HUCTO14
Bear Creek		Martinsburg Fire Rd		051401040603		05140104130060
Northing	Easting	Ecoregion	Gradient	Drainage Area		QHEI Score
4255100.51	582256.6	71	18.785	10.019		56

Taxon	Count	Notes	HBI Tolerance
1357 (BRANCHIOBELLELLIDAE)	3		6
2215 (Elimia)	31		
2181 (Sphaerium)	3		6
9068 (Gammarus)	1		6
9006 (Orconectes juvenilis)	2		
1012 (BAETIDAE)	2		4
3365 (Proclleon)	1		
3166 (Eurylophella)	5		2
3183 (Caenis)	8		3
3188 (Caenis latipennis)	3		
3245 (Boyeria vinosa)	1		4
3248 (Basiaeschna janata)	3		6
3120 (Stylogomphus)	1		1
1022 (CALOPTERYGIDAE)	1		5
7026 (Calopteryx maculata)	4		
3549 (Enallagma divagans)	21		
9095 (Argia fumipennis)	1		
7120 (Trepobates pictus)	6		
7107 (Limnoporus canaliculatus)	1		
7131 (Rhagovelia obesa)	14		
7123 (Microvelia americana)	2		
3600 (Peltodytes duodecimpunctatus)	1	1A	
3959 (Helichus lithophilus)	1	1A	
7293 (Psephenus herricki)	15	15L	4
7307 (Stenelmis)	7	7L	5
7309 (Stenelmis crenata)	8	8A; Slide 0260.1	5
7296 (Dubiraphia)	3	3L	5
7300 (Dubiraphia vittata)	5	5A; Slide 0260.2	
7321 (Macronychus glabratus)	1	1A	3
3797 (Nigronia serricornis)	2		4
3432 (Cheumatopsyche)	2		3
3423 (Hydropsyche)	3		4
8980 (Hydropsyche betteni grp)	3		
8920 (Nectopsyche)	1		2
8952 (Helicopsyche borealis)	6		3
7814 (Simulium)	2		5
7926 (Tanypodinae (Subfamily))	1		
9261 (Thienemannimyia grp.)	3		
8099 (Cryptochironomus)	2		5
8211 (Stictochironomus)	1		4
8228 (Cladotanytarsus)	7		4
8235 (Paratanytarsus)	1		4
9221 (Stempellina)	1		
9093 (Stempellinella)	2		3

Type	Value	Metric Score
Total Taxa:	46	5
Total No. Individuals:	194	3
EPT Taxa:	10	5
% Orthocladiinae + Tanytarsini of Chironomidae:	60	1
% Non-insects excluding Astacidae:	19.59	3
Diptera Taxa:	11	3
% Intolerant (0-3):	13.4	1
% Tolerant (8-10):	0	5
% Predators FFG 1:	29.38	3
% Shredders + Scrapers FFG 1:	21.65	5
% Collector-Filterers FFG 1:	5.67	5
% Sprawlers:	2.06	1
mIBI Metric Score:		40

Supplemental Metrics

	HBI	
	HBI	4.1
Shannon-Weaver Index		4.71
Shannon Equitability		0.5
% Dominant 3 Taxon		34.54
% Chironomidae		10.31



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Taxon	Count	Notes	HBI Tolerance
8241 (Tanytarsus)	1		4
9238 (Polypedilum (Uresipedilum) flavum)	1		



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Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
OBS-06-0013	15T-006	MHAB	AB22389	150909304	9/9/15	Washington
Stream Name		Location		HUC 12		HUCTO14
Bear Creek		State Road 135		051401040603		05140104130060
Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score	
4257413.16	580095.54	71	14.316	13.198	67	

Taxon	Count	Notes	HBI Tolerance
1498 (Nais)	2		8
1555 (Tubificidae with bifid chetae and hair)	1		
2272 (Planorbella)	4		
2252 (Physella)	2		8
2215 (Elimia)	13		
2181 (Sphaerium)	5		6
3248 (Basiaeschna janata)	1		6
3054 (Gomphus)	1		5
3099 (Hagenius brevistylus)	1		1
3120 (Stylogomphus)	1		1
3546 (Enallagma)	1		9
3600 (Peltodytes duodecimpunctatus)	14	14A	
3740 (Heterosternuta pulcher)	1	1A	
3877 (Tropisternus glaber)	1	1A	
3959 (Helichus lithophilus)	1	1A	
3960 (Helichus basalis)	1	1A	
7307 (Stenelmis)	17	1F, 16L	5
7317 (Stenelmis sexlineata)	2	2A	
7296 (Dubiraphia)	1	1F	5
3773 (Sialis)	6		5
3797 (Nigronia serricornis)	2		4
3799 (Corydalus cornutus)	1		2
7941 (Natarsia baltimoreus)	1		6
8082 (Chironominae (Subfamily))	1		
8227 (Tanytarsini (Tribe))	1		
9261 (Thienemannimyia grp.)	2		
8006 (Orthocladiinae (Subfamily))	1		
8099 (Cryptochironomus)	7		5
9296 (Microtendipes pedellus grp)	1		
8172 (Phaenopsectra)	4		7
8211 (Stictochironomus)	1		4
8228 (Cladotanytarsus)	4		4
9221 (Stempellina)	1		
8241 (Tanytarsus)	2		4
9238 (Polypedilum (Uresipedilum) flavum)	2		

Type	Value	Metric Score
Total Taxa:	35	3
Total No. Individuals:	107	1
EPT Taxa:	0	1
% Orthocladiinae + Tanytarsini of Chironomidae:	32.14	3
% Non-insects excluding Astaciidae:	25.23	3
Diptera Taxa:	13	3
% Intolerant (0-3):	2.8	1
% Tolerant (8-10):	4.67	5
% Predators FFG 1:	19.63	3
% Shredders + Scrapers FFG 1:	21.5	5
% Collector-Filterers FFG 1:	7.48	5
% Sprawlers:	6.54	5
mIBI Metric Score:		38

Supplemental Metrics

	HBI	
Shannon-Weaver Index	5.18	4.35
Shannon Equitability		0.47
% Dominant 3 Taxon		41.12
% Chironomidae		26.17



OWQ/WAPB Macroinvertebrate Community Assessment

Macroinvertebrate Header

Sample #	Macro Event #	Macro Sample Type	# Containers
AB22390		Black Light Kick	
Site Name	EPA ID		
OBS-06-0007	15T-007	Qualitative CPOM	
		Hester-Dendy MHAB	

NOTES

Stream Name / Location	County	Sample Date
Dutch Creek / Dutch Creek Rd	Washington	09/09/2015

Habitat Complete Sample Quality Rejected

Riparian Zone/Instream Features

Watershed	
Erosion	NPS Pollution
<input type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy	<input type="checkbox"/> No Evidence <input type="checkbox"/> Some Potential Sources <input type="checkbox"/> Obvious Sources

Stream Depth		
Riffle	Run	Pool

Distances	
Riffle-Riffle	Bend-Bend

Predominant Surrounding Land Use

- | | |
|---|---|
| <input checked="" type="checkbox"/> Forest | <input checked="" type="checkbox"/> Residential |
| <input checked="" type="checkbox"/> Field/Pasture | <input checked="" type="checkbox"/> Commercial |
| <input checked="" type="checkbox"/> Agricultural | <input checked="" type="checkbox"/> Industrial |
- Other
- Channelization Dam Present

Stream Width	High Water Mark	Velocity	Canopy Cover (% Open)

Sediment

- Sediment Odors: Normal Sewage Petroleum Chemical Anaerobic None Other
- Sediment Deposits: Sludge Sawdust Paper Fiber Sand Relic Shells Other
- Sediment Oils: Absent Moderate Slight Profuse Are the undersides of stones, which are not deeply embedded, black?

Substrate Components

(Note: Select From 0%, 20%, 40%, 60%, 80%, or 100% for each inorganic and organic substrate component)

Inorganic Substrate Components (% Diameter)						
Bedrock	Boulder (>10in)	Cobble (2.5-10in)	Gravel (0.1-2.5 in)	Sand (gritty)	Silt	Clay (slick)

Organic Substrate Components (% Type)			
Detritus (sticks, woods)	Detritus (CPOM)	Muck/Mud (black, fine FPOM)	Marl (gray w/shell fragments)

Water Quality

- | | | | | | | |
|---|---|---|---|---|--|---|
| Water Odors
<input checked="" type="checkbox"/> Normal <input checked="" type="checkbox"/> Sewage <input checked="" type="checkbox"/> Petroleum <input checked="" type="checkbox"/> Chemical <input checked="" type="checkbox"/> None | Water Surface Oils
<input checked="" type="checkbox"/> Slick <input checked="" type="checkbox"/> Sheen <input checked="" type="checkbox"/> Glob <input checked="" type="checkbox"/> Flocks <input checked="" type="checkbox"/> None | Stream Type
<input type="checkbox"/> Warm <input type="checkbox"/> Cold | Barometer
<input style="width: 50px;" type="text"/> | Turbidity (Estimated)
<input type="checkbox"/> Clear <input type="checkbox"/> Slightly Turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Opaque | Salinity
<input style="width: 50px;" type="text"/> | ORP
<input style="width: 50px;" type="text"/> |
|---|---|---|---|---|--|---|
- Other
- Instruments Used for:**
- | | | | |
|------------|----|----|-----------------------|
| Water Temp | DO | pH | Specific Conductivity |
| | | | |



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
OBS-06-0020	15T-009	MHAB	AB22392	150909305	9/9/15	Washington

Stream Name	Location	HUC 12	HUCTO14
South Fork Blue River	Big Springs Rd	051401040606	05140104130080

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4259519.19	577372.36	71	2.935	87.674	70

Taxon	Count	Notes	HBI Tolerance
1086 (OLIGOCHAETA)	1		8
1357 (BRANCHIOBDELLIDAE)	1		6
2215 (Elimia)	21		
2181 (Sphaerium)	6		6
1083 (ACARI)	4		4
9011 (O. n.sp. "alluvius")	1	1 MII	
1017 (HEPTAGENIIDAE)	8		4
9156 (Maccaffertium)	3	not mediopunctatum	
9090 (Maccaffertium mediopuncta)	3	Slide 0262.4	2
3020 (Stenonema femoratum)	1		3
3048 (Stenacron)	2		3
1012 (BAETIDAE)	6		4
3066 (Baetis intercalaris)	4		3
3365 (Procloeon)	2		
3183 (Caenis)	3		3
3109 (Isonychia)	7		2
1120 (ANISOPTERA)	1	immature, Libellulidae/Cordulidae	
3546 (Enallagma)	1		9
3549 (Enallagma divagans)	2		
3568 (Argia)	1		5
3572 (Argia tibialis)	3		
1029 (PERLIDAE)	2	immature	1
3366 (Agneta)	21		2
9290 (Gerridae (Gerrinae))	1	Aquarius/Gerris	
3959 (Helichus lithophilus)	1	1A	
7293 (Psephenus herricki)	9	9L	4
7307 (Stenelmis)	7	7L	5
7309 (Stenelmis crenata)	29	21M, 8F; Slides 0262.2, 0262.3	5
7317 (Stenelmis sexlineata)	19	11M, 8F	
7300 (Dubiraphia vittata)	1	1M; PL=245 um, Slide 0262.1	
9116 (Optioservus trivittatus)	3	3A	4
7321 (Macronychus glabratus)	1	1A	3
3773 (Sialis)	3		5
3799 (Corydalus cornutus)	6		2
1045 (PHILOPOTAMIDAE)	9		3
3267 (Chimarra obscura)	22		4
1057 (HYDROPSYCHIDAE)	15		4
3432 (Cheumatopsyche)	50		3
9149 (Hydropsyche demora)	4		
3480 (Hydropsyche frisoni)	2		2
3487 (Hydropsyche simulans)	2		2
8980 (Hydropsyche betteni grp)	4		

Type	Value	Metric Score
Total Taxa:	61	5
Total No. Individuals:	353	5
EPT Taxa:	22	5
% Orthocladiinae + Tanytarsini of Chironomidae:	37.25	3
% Non-insects excluding Astacidae:	9.35	5
Diptera Taxa:	17	5
% Intolerant (0-3):	33.99	5
% Tolerant (8-10):	0.57	5
% Predators FFG 1:	12.75	1
% Shredders + Scrapers FFG 1:	15.3	3
% Collector-Filterers FFG 1:	32.58	1
% Sprawlers:	2.27	1
mIBI Metric Score:		44

Supplemental Metrics

	HBI	
Shannon-Weaver Index	3.62	
Shannon Equitability	4.97	
% Dominant 3 Taxon	0.53	
% Chironomidae	28.61	
	14.45	



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Taxon	Count	Notes	HBI Tolerance
9319 (Ceratopsyche "checkerboard" grp)	4		
8952 (Helicopsyche borealis)	1		3
7830 (Atrichopogon)	1	1P	5
7926 (Tanypodinae (Subfamily))	1		
8083 (Chironomini (Tribe))	1		
9248 (Ablabesmyia (Ablabesmyia mallochi grp.)	2		
9261 (Thienemannimyia grp.)	2		
8006 (Orthoclaadiinae (Subfamily))	3	2P	
8047 (Nanocladius)	1		5
8060 (Parametricnemus)	1		3
9284 (Tribelos jucundus)	1		
8192 (Polypedilum flavum)	20		
8235 (Paratanytarsus)	3		4
9093 (Stempellinella)	5		3
8241 (Tanytarsus)	6		4
9240 (Polypedilum (Polypedilum fallax grp.)	1		
9241 (Polypedilum (Polypedilum illinoense grp.)	4		
1078 (TABANIDAE)	1		6
8355 (Tabanus)	3		5



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
OBS-06-0020	15T-009	MHAB	AB23278	150909306	9/9/15	Washington

Stream Name	Location	HUC 12	HUCTO14
South Fork Blue River	Big Springs Rd	051401040606	05140104130080

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4259519.19	577372.36	71	2.935	87.674	71

Taxon	Count	Notes	HBI Tolerance
1435 (Limnodrilus hoffmeisteri)	1	PL=450 um	10
2215 (Elimia)	23		
1210 (BIVALVIA)	1	imm	
2156 (Corbicula fluminea)	2		6
2181 (Sphaerium)	3		6
1083 (ACARI)	4		4
1110 (EPHEMEROPTERA)	1	immature	
1017 (HEPTAGENIIDAE)	2	immature	4
3024 (Maccaffertium terminatum)	2		2
9090 (Maccaffertium mediopuncta)	2		2
3020 (Stenonema femoratum)	1		3
1012 (BAETIDAE)	6	immature, damaged	4
3065 (Baetis)	3		3
3066 (Baetis intercalaris)	3		3
3074 (Centroptilum)	1	damaged	3
3121 (Choroterpes)	2		4
1007 (EPHEMERELLIDAE)	1	immature	1
3183 (Caenis)	1		3
3109 (Isonychia)	18		2
3245 (Boyeria vinosa)	1		4
3382 (Didymops transversa)	1		
7026 (Calopteryx maculata)	1		
3546 (Enallagma)	2		9
3549 (Enallagma divagans)	8		
3572 (Argia tibialis)	1		
3348 (Acroneuria)	1		1
3366 (Agneta)	36		2
7118 (Trepobates inermis)	1	F, T. knighti?	
7131 (Rhagovelia obesa)	3		
7293 (Psephenus herricki)	3	3L	4
7307 (Stenelmis)	5	5L	5
7309 (Stenelmis crenata)	25	17M, 8F; Slides 0264.3, 0264.4	5
7317 (Stenelmis sexlineata)	11	9M, 2F	
7296 (Dubiraphia)	2	2L	5
7300 (Dubiraphia vittata)	10	8M, 2F; Slides 0264.1, 245um; 0264.2, 256 um	
7302 (Microcyloopus pusillus)	1	1A	3
9116 (Optioservus trivittatus)	1	1A	4
7295 (Ancyronyx variegatus)	3	3A	4
7321 (Macronychus glabratus)	1	1A	3
3773 (Sialis)	2		5
3797 (Nigronia serricornis)	1		4
3799 (Corydalus cornutus)	10		2
1045 (PHILOPOTAMIDAE)	5		3

Type	Value	Metric Score
Total Taxa:	73	5
Total No. Individuals:	384	5
EPT Taxa:	27	5
% Orthocladiinae + Tanytarsini of Chironomidae:	41.82	3
% Non-insects excluding Astacidae:	8.85	5
Diptera Taxa:	19	5
% Intolerant (0-3):	37.24	5
% Tolerant (8-10):	0.78	5
% Predators FFG 1:	18.75	3
% Shredders + Scrapers FFG 1:	11.46	3
% Collector-Filterers FFG 1:	35.68	1
% Sprawlers:	2.34	1
mIBI Metric Score:		46

Supplemental Metrics

Metric	HBI	Score
	HBI	3.51
Shannon-Weaver Index		5.04
Shannon Equitability		0.54
% Dominant 3 Taxon		30.73
% Chironomidae		14.32



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Taxon	Count	Notes	HBI Tolerance
3267 (Chimarra obscura)	34		4
1057 (HYDROPSYCHIDAE)	9		4
3432 (Cheumatopsyche)	48		3
9149 (Hydropsyche demora)	3		
3480 (Hydropsyche frisoni)	1		2
3487 (Hydropsyche simulans)	1		2
8980 (Hydropsyche betteni grp)	4		
9319 (Ceratopsyche "checkerboard" grp)	1		
1055 (LIMNEPHILIDAE)	1	P	4
8885 (Pycnopsyche)	1		3
1060 (LEPTOCERIDAE)	1	immature	4
7452 (Tipula)	1	immature	7
7814 (Simulium)	7		5
8083 (Chironomini (Tribe))	4		
8227 (Tanytarsini (Tribe))	3	1P	
8006 (Orthocladiinae (Subfamily))	1		
8011 (Brillia flavifrons)	1		
8017 (Corynoneura)	2		4
8074 (Thienemanniella)	2		4
8079 (Xylotopus par)	1		
8112 (Dicrotendipes)	1		6
8192 (Polypedilum flavum)	23		
8228 (Cladotanytarsus)	1		4
8238 (Rheotanytarsus)	2	1P	3
9093 (Stempellinella)	4		3
8241 (Tanytarsus)	6		4
9240 (Polypedilum (Polypedilum) fallax grp.)	1		
9241 (Polypedilum (Polypedilum) illinoense grp.)	3		
1078 (TABANIDAE)	3		6
8355 (Tabanus)	2		5



OWQ/WAPB Macroinvertebrate Community Assessment

MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
OBS-06-0004	15T-011	MHAB	AB22394	150908304	9/8/15	Washington

Stream Name	Location	HUC 12	HUCTO14
South Fork Blue River	Martinsburg Road	051401040604	05140104130050

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4261525.27	583994.41	71	4.221	51.847	61

Taxon	Count	Notes	HBI Tolerance
1357 (BRANCHIOBELLELLIDAE)	11		6
2181 (Sphaerium)	1		6
1083 (ACARI)	2		4
9056 (Crangonyx)	2		6
8996 (Orconectes)	3	2M, 1F	4
9090 (Maccaffertium mediopuncta)	2	Slide 0265.3	2
3020 (Stenonema femoratum)	7		3
3048 (Stenacron)	2		3
7010 (Acerpenna macdunnoughi)	3		1
3066 (Baetis intercalaris)	3		3
3074 (Centroptilum)	1		3
3121 (Choroerpes)	1		4
3130 (Paraleptophlebia)	8		3
3188 (Caenis latipennis)	5		
3197 (Ephemera)	1		3
3245 (Boyeria vinosa)	3		4
3382 (Didymops transversa)	2		
7026 (Calopteryx maculata)	5		
3546 (Enallagma)	4		9
3549 (Enallagma divagans)	6		
3568 (Argia)	1		5
7111 (Rheumatobates)	2		
7097 (Aquarius nebularis)	1		
3809 (Gyrinus)	1	1L	4
7293 (Psephenus herricki)	1	1L	4
7307 (Stenelmis)	3	3L	5
7309 (Stenelmis crenata)	2	2A; Slide 0265.1	5
7317 (Stenelmis sexlineata)	1	1A	
7296 (Dubiraphia)	1	1L	5
7300 (Dubiraphia vittata)	2	2A; Slide 0265.2; 256um	
7321 (Macronychus glabratus)	1	1A	3
3267 (Chimarra obscura)	8		4
1057 (HYDROPSYCHIDAE)	4		4
3432 (Cheumatopsyche)	57		3
8937 (Triaenodes)	2		
7610 (Hexatoma)	5		2
7984 (Procladius)	1		7
7926 (Tanypodinae (Subfamily))	3	1P	
9248 (Ablabesmyia (Ablabesmyia mallochi grp.))	2		
9261 (Thienemannimyia grp.)	4		
9284 (Tribelos jucundus)	2		
8151 (Microtendipes)	1		7
8235 (Paratanytarsus)	1		4
8238 (Rheotanytarsus)	1	1P	3

Type	Value	Metric Score
Total Taxa:	48	5
Total No. Individuals:	185	3
EPT Taxa:	14	5
% Orthocladiinae + Tanytarsini of Chironomidae:	15	5
% Non-insects excluding Astacidae:	8.65	5
Diptera Taxa:	13	3
% Intolerant (0-3):	49.73	5
% Tolerant (8-10):	2.16	5
% Predators FFG 1:	18.38	3
% Shredders + Scrapers FFG 1:	7.03	1
% Collector-Filterers FFG 1:	38.92	1
% Sprawlers:	1.08	1
mIBI Metric Score:		42

Supplemental Metrics

	HBI	Score
Shannon-Weaver Index	3.7	4.46
Shannon Equitability		0.48
% Dominant 3 Taxon		41.08
% Chironomidae		10.81



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MHAB Report

Taxon	Count	Notes	HBI Tolerance
9093 (Stempellinella)	1		3
9238 (Polypedilum (Uresipedilum) flavum)	3		
9241 (Polypedilum (Polypedilum) illinoense grp.)	1		
8355 (Tabanus)	1		5



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
OBS-06-0006	15T-012	MHAB	AB22395	150910301	9/10/15	Washington

Stream Name	Location	HUC 12	HUCTO14
Tributary of South Fork Blue River	Shorts Corner Rd	051401040602	05140104130040

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4262344.06	585445.99	71	16.406	6.328	63

Taxon	Count	Notes	HBI Tolerance
1396 (LUMBRICULIDAE)	1		5
1552 (Tubificidae with bifid chetae and no hair chetae)	1		
1357 (BRANCHIOBDELLIDAE)	13		6
9031 (Lirceus)	3		8
1017 (HEPTAGENIIDAE)	9		4
9090 (Maccaffertium mediopuncta)	2		2
3020 (Stenonema femoratum)	7		3
1012 (BAETIDAE)	3		4
3066 (Baetis intercalaris)	10		3
1018 (LEPTOPHLEBIIDAE)	10		2
3130 (Paraleptophlebia)	8		3
3183 (Caenis)	6		3
3188 (Caenis latipennis)	2		
3109 (Isonychia)	1		2
3245 (Boyeria vinosa)	1		4
3120 (Stylogomphus)	1		1
9095 (Argia fumipennis)	1		
3348 (Acroneuria)	4		1
9290 (Gerridae (Gerrinae))	1		
7293 (Psephenus herricki)	30	30L	4
7307 (Stenelmis)	2	2L	5
7309 (Stenelmis crenata)	7	7A; Slides 0266.1 & .2	5
7296 (Dubiraphia)	2	2L	5
3773 (Sialis)	4		5
3797 (Nigronia serricornis)	2		4
3003 (Chimarra aterrima)	10		2
1057 (HYDROPSYCHIDAE)	5		4
3432 (Cheumatopsyche)	6		3
8952 (Helicopsyche borealis)	1		3
7610 (Hexatoma)	3		2
9285 (Tipula (Yamatotipula))	1		
7941 (Natarsia baltimoreus)	1		6
8083 (Chironomini (Tribe))	3		
8062 (Paraphaenocladus)	1	Good specimen	
8168 (Paratendipes albimanus)	4		4
8211 (Stictochironomus)	2		4
8235 (Paratanytarsus)	1		4
8241 (Tanytarsus)	1		4
9277 (Polypedilum (Tripodura) scalaenum grp)	1		

Type	Value	Metric Score
Total Taxa:	39	3
Total No. Individuals:	171	3
EPT Taxa:	15	5
% Orthocladiinae + Tanytarsini of Chironomidae:	21.43	5
% Non-insects excluding Astacidae:	10.53	5
Diptera Taxa:	10	3
% Intolerant (0-3):	40.35	5
% Tolerant (8-10):	1.75	5
% Predators FFG 1:	9.36	1
% Shredders + Scrapers FFG 1:	24.56	5
% Collector-Filterers FFG 1:	13.45	3
% Sprawlers:	0.58	1
MIBI Metric Score:		44

Supplemental Metrics

	HBI	
	3.69	
Shannon-Weaver Index		4.58
Shannon Equitability		0.49
% Dominant 3 Taxon		30.99
% Chironomidae		8.19



OWQ/WAPB Macroinvertebrate Community Assessment

MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
OBS-06-0018	15T-014	MHAB	AB22397	150908303	9/8/15	Washington

Stream Name	Location	HUC 12	HUCTO14
South Fork Blue River	Main Street	051401040602	05140104130040

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4261868.36	586359.07	71	4.946	40.553	57

Taxon	Count	Notes	HBI Tolerance
1552 (Tubificidae with bifid chetae and no hair chetae)	2		
2252 (Physella)	1		8
2181 (Sphaerium)	4		6
1083 (ACARI)	1		4
3020 (Stenonema femoratum)	3		3
3074 (Centroptilum)	2		3
3365 (Proclleon)	1		
1018 (LEPTOPHLEBIIDAE)	1		2
3130 (Paraleptophlebia)	3		3
3183 (Caenis)	4		3
3188 (Caenis latipennis)	6		
3248 (Basiaeschna janata)	1		6
3054 (Gomphus)	1		5
3382 (Didymops transversa)	1		
7026 (Calopteryx maculata)	1		
3540 (Ischnura)	1		9
3546 (Enallagma)	13		9
3549 (Enallagma divagans)	15		
3560 (Enallagma basidens)	1		
7118 (Trepobates inermis)	1	knights?	
7097 (Aquarius nebularis)	1		
7144 (Mesovelia)	1		
7163 (Saldula)	1		
9290 (Gerridae (Gerrinae))	3		
3946 (Cyphon)	3	3L	
9326 (Dubiraphia minima grp)	2	2F	
7325 (HETEROCERIDAE)	5		
3773 (Sialis)	1		5
3314 (Nyctiophylax)	1		3
9329 (Archips)	1	Semi-aquatic	
7732 (Anopheles)	13	3P	
7780 (Culex)	1		
7940 (Natarsia)	1		6
7963 (Labrundinia)	1		4
7965 (Larsia)	1	1P	4
7926 (Tanypodinae (Subfamily))	1		
8083 (Chironomini (Tribe))	4	1 Parachironomus? (Slide 21)	
9248 (Ablabesmyia (Ablabesmyia) mallochi grp.)	4		
9261 (Thienemannimyia grp.)	1		
9284 (Tribelos jucundus)	2		
8086 (Chironomus)	9		8
8099 (Cryptochironomus)	3		5

Type	Value	Metric Score
Total Taxa:	47	5
Total No. Individuals:	135	3
EPT Taxa:	8	5
% Orthocladiinae + Tanytarsini of Chironomidae:	7.69	5
% Non-insects excluding Astacidae:	5.93	5
Diptera Taxa:	17	5
% Intolerant (0-3):	10.37	1
% Tolerant (8-10):	17.78	3
% Predators FFG 1:	32.59	3
% Shredders + Scrapers FFG 1:	2.96	1
% Collector-Filterers FFG 1:	16.3	3
% Sprawlers:	3.7	3
mIBI Metric Score:		42

Supplemental Metrics

	HBI	Score
	6	
Shannon-Weaver Index		4.89
Shannon Equitability		0.52
% Dominant 3 Taxon		30.37
% Chironomidae		28.89



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MHAB Report

Taxon	Count	Notes	HBI Tolerance
8104 (Cryptotendipes)	1		4
8126 (Glyptotendipes)	1		6
8235 (Paratanytarsus)	1		4
8241 (Tanytarsus)	2		4
9241 (Polypedilum (Polypedilum) illinoense grp.)	7		



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
OBS-06-0022	15T-015	MHAB	AB22398	150910302	9/10/15	Washington

Stream Name	Location	HUC 12	HUCTO14
South Fork Blue River	Lockenour Road	051401040602	05140104130040

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4263164.16	589357.59	71	5.599	37.319	42

Taxon	Count	Notes	HBI Tolerance
9006 (Orconectes juvenilis)	2	1MI	
9011 (O. n.sp. "alluvius")	2	1MI	
1251 (ISOTOMIDAE)	1		
1017 (HEPTAGENIIDAE)	4		4
3020 (Stenonema femoratum)	35		3
3065 (Baetis)	1		3
3365 (Procloeon)	3		
1018 (LEPTOPHLEBIIDAE)	12		2
3121 (Choroterpes)	1		4
3130 (Paraleptophlebia)	8		3
3183 (Caenis)	36		3
3188 (Caenis latipennis)	2		
3549 (Enallagma divagans)	1		
3568 (Argia)	1		5
7032 (Argia moesta)	1		
7122 (Microvelia)	1		
7123 (Microvelia americana)	1		
9290 (Gerridae (Gerrinae))	1		
7293 (Psephenus herricki)	2	2L	4
7307 (Stenelmis)	3	3L	5
7300 (Dubiraphia vittata)	1	1A; Slide 0263.2	
7298 (Dubiraphia minima)	1	1A; Slide 0263.1	
3797 (Nigronia serricornis)	1		4
3432 (Cheumatopsyche)	4		3
3423 (Hydropsyche)	2		4
7610 (Hexatoma)	1		2
9153 (Tribelos)	2		5
8083 (Chironomini (Tribe))	4		
9248 (Ablabesmyia (Ablabesmyia mallochi grp.))	7		
9261 (Thienemannimyia grp.)	6		
8006 (Orthocladiinae (Subfamily))	1		
8099 (Cryptochironomus)	2		5
8168 (Paratendipes albimanus)	13		4
8172 (Phaenopsectra)	4		7
8228 (Cladotanytarsus)	5		4
8235 (Paratanytarsus)	1		4
9093 (Stempellinella)	1		3
8241 (Tanytarsus)	4		4

Type	Value	Metric Score
Total Taxa:	38	3
Total No. Individuals:	178	3
EPT Taxa:	11	5
% Orthocladiinae + Tanytarsini of Chironomidae:	24	3
% Non-insects excluding Astacidae:	0	5
Diptera Taxa:	13	3
% Intolerant (0-3):	55.06	5
% Tolerant (8-10):	0	5
% Predators FFG 1:	4.49	1
% Shredders + Scrapers FFG 1:	5.06	1
% Collector-Filterers FFG 1:	5.62	5
% Sprawlers:	1.69	1
MIBI Metric Score:		40

Supplemental Metrics

	HBI	
	3.36	
Shannon-Weaver Index		4.16
Shannon Equitability		0.45
% Dominant 3 Taxon		47.19
% Chironomidae		28.09



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
OBS-06-0002	15T-017	MHAB	AB22400	150914303	9/14/15	Washington

Stream Name	Location	HUC 12	HUCTO14
South Fork Blue River	Bowers Knob Road	051401040601	05140104130030

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4264129.44	592474.83	71	9.935	25.347	43

Taxon	Count	Notes	HBI Tolerance
1357 (BRANCHIOBDELLIDAE)	7		6
9008 (Orconectes rusticus)	1	1MII	6
1017 (HEPTAGENIIDAE)	4		4
3020 (Stenonema femoratum)	7		3
9129 (Acerpenna)	4		4
3066 (Baetis intercalaris)	9		3
3071 (Baetis flavistriga)	7		3
3183 (Caenis)	29		3
3188 (Caenis latipennis)	4		
3109 (Isonychia)	3		2
1120 (ANISOPTERA)	1		
7032 (Argia moesta)	1		
7117 (Trepobates)	1		
7118 (Trepobates inermis)	3		
7132 (Rhagovelia oriander)	1		
7123 (Microvelia americana)	2		
3740 (Heterosternuta pulcher)	1	1A	
9216 (Tropisternus lateralis)	1	1A	
3959 (Helichus lithophilus)	1	1A	
3432 (Cheumatopsyche)	37		3
8980 (Hydropsyche betteni grp)	2		
8952 (Helicopsyche borealis)	6		3
9285 (Tipula (Yamatotipula))	1		
9111 (Ceratopogon)	1		
7955 (Conchapelopia)	1		4
7926 (Tanypodinae (Subfamily))	1		
8083 (Chironomini (Tribe))	15	1P	
9248 (Ablabesmyia (Ablabesmyia mallochi grp.))	4		
9261 (Thienemannimyia grp.)	3		
9284 (Tribelos jucundus)	1		
8086 (Chironomus)	49		8
8099 (Cryptochironomus)	4		5
9296 (Microtendipes pedellus grp)	1		
8168 (Paratendipes albimanus)	14		4
8172 (Phaenopsectra)	37		7
8228 (Cladotanytarsus)	17		4
8241 (Tanytarsus)	25	1P	4
9277 (Polypedilum (Tripodura) scalaenum grp)	1		
1074 (EMPIDIDAE)	1		6

Type	Value	Metric Score
Total Taxa:	39	3
Total No. Individuals:	308	5
EPT Taxa:	11	5
% Orthocladiinae + Tanytarsini of Chironomidae:	24.28	3
% Non-insects excluding Astacidae:	2.27	5
Diptera Taxa:	17	5
% Intolerant (0-3):	31.82	5
% Tolerant (8-10):	15.91	3
% Predators FFG 1:	3.25	1
% Shredders + Scrapers FFG 1:	15.26	3
% Collector-Filterers FFG 1:	21.1	1
% Sprawlers:	1.62	1
mIBI Metric Score:		40

Supplemental Metrics

	HBI	Score
Shannon-Weaver Index	4.87	
Shannon Equitability	4.18	
Shannon Equitability	0.45	
% Dominant 3 Taxon	39.94	
% Chironomidae	56.17	

