



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW050-0023	14T-001	MHAB	AB17867	140721302	7/21/14	Decatur

Stream Name	Location	HUC 12	HUCTO14
Tributary of Salt Creek	CR 150 N	050800030501	05080003050010

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4357753.92	645100.28	55	19.115	6.542	55

Taxon	Count	Notes	HBI Tolerance
1552 (Tubificidae with bifid chetae and no hair chetae)	1		
1233 (ERPOBDELLIDAE)	2		
2252 (Physella)	6		8
1083 (ACARI)	2		4
8996 (Orconectes)	1	1F	4
1251 (ISOTOMIDAE)	1		
3020 (Stenonema femoratum)	1		3
3066 (Baetis intercalaris)	1	slide 0164.3	3
3071 (Baetis flavistriga)	1		3
3188 (Caenis latipennis)	2		
9287 (Gomphus (Gomphus))	1		
3448 (Somatochlora)	3		1
7122 (Microvelia)	1		
3946 (Cyphon)	3	3L	
7307 (Stenelmis)	4	4L	5
7309 (Stenelmis crenata)	4	2M, 2F; slide 0164.1	5
7300 (Dubiraphia vittata)	1	1M; slide 0164.2, 256.2um	
7295 (Ancyronyx variegatus)	3	3A	4
1057 (HYDROPSYCHIDAE)	1		4
3432 (Cheumatopsyche)	73		3
8980 (Hydropsyche betteni grp)	2		
9319 (Ceratopsyche "checkerboard")	2		
8952 (Helicopsyche borealis)	1		3
7814 (Simulium)	2		5
7984 (Procladius)	3		7
8083 (Chironomini (Tribe))	1		
8227 (Tanytarsini (Tribe))	1		
9248 (Ablabesmyia (Ablabesmyia mallochi grp.))	3		
9296 (Microtendipes pedellus grp)	2		
8235 (Paratanytarsus)	6		4
9093 (Stempellinella)	1		3
8241 (Tanytarsus)	8		4
9277 (Polypedilum (Tripodura) scalaenum grp)	1		
9238 (Polypedilum (Uresipedilum) flavum)	1		
9241 (Polypedilum (Polypedilum) illinoense grp.)	5		
9257 (Cricotopus (Cricotopus))	2		

Type	Value	Metric Score
Total Taxa:	36	3
Total No. Individuals:	153	3
EPT Taxa:	9	5
% Orthocladiinae + Tanytarsini of Chironomidae:	47.06	1
% Non-insects excluding Astacidae:	7.19	5
Diptera Taxa:	13	3
% Intolerant (0-3):	52.94	5
% Tolerant (8-10):	3.92	5
% Predators FFG 1:	5.88	1
% Shredders + Scrapers FFG 1:	11.76	3
% Collector-Filterers FFG 1:	55.56	1
% Sprawlers:	2.61	1
MIBI Metric Score:		36

Supplemental Metrics

	HBI
Shannon-Weaver Index	3.64
Shannon Equitability	.37
% Dominant 3 Taxon	56.86
% Chironomidae	22.22



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-05-0006	14T-002	MHAB	AB17890	140721301	7/21/14	Decatur

Stream Name	Location	HUC 12	HUCTO14
Salt Creek	CR 50 N	050800030502	05080003050020

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4356729.72	645937.85	55	12.262	17.545	48

Taxon	Count	Notes	HBI Tolerance
1234 (GLOSSIPHONIIDAE)	1		
1233 (ERPOBDELLIDAE)	2		
2252 (Physella)	13		8
1083 (ACARI)	7		4
3066 (Baetis intercalaris)	1		3
3071 (Baetis flavistriga)	5		3
3600 (Peltodytes duodecimpunctatus)	2	2A	
3851 (Berosus peregrinus)	2	2A	6
3946 (Cyphon)	1	1L	
3960 (Helichus basalis)	2	2A	
7309 (Stenelmis crenata)	5	2M, 3F; slide 0167.1	5
7317 (Stenelmis sexlineata)	2	2F	
9326 (Dubiraphia minima grp)	1	1F	
7295 (Ancyronyx variegatus)	1	1A	4
3432 (Cheumatopsyche)	43		3
9319 (Ceratopsyche "checkerboard")	1		
7814 (Simulium)	4		5
7964 (Labrundinia pilosella)	1		3
7984 (Procladius)	4		7
7926 (Tanypodinae (Subfamily))	3		
8083 (Chironomini (Tribe))	1	1P	
9248 (Ablabesmyia (Ablabesmyia mallochi grp.))	1		
9261 (Thienemannimyia grp.)	3		
8099 (Cryptochironomus)	1		5
8104 (Cryptotendipes)	1		4
8112 (Dicrotendipes)	3		6
9296 (Microtendipes pedellus grp)	1		
8168 (Paratendipes albimanus)	11		4
8228 (Cladotanytarsus)	5		4
8235 (Paratanytarsus)	3	1P	4
8238 (Rheotanytarsus)	1		3
8241 (Tanytarsus)	34		4
9260 (Cricotopus (Cricotopus)/Orthocladius (Orthocladius))	2		
9204 (Phaenopsectra/Tribelos)	1		
9277 (Polypedilum (Tripodura scalaenum grp)	10		
9238 (Polypedilum (Uresipedilum flavum))	8		
9241 (Polypedilum (Polypedilum illinoense grp.))	2		

Type	Value	Metric Score
Total Taxa:	37	3
Total No. Individuals:	189	3
EPT Taxa:	4	3
% Orthocladiinae + Tanytarsini of Chironomidae:	44.79	3
% Non-insects excluding Astacidae:	12.17	5
Diptera Taxa:	21	5
% Intolerant (0-3):	26.98	3
% Tolerant (8-10):	6.88	5
% Predators FFG 1:	6.35	1
% Shredders + Scrapers FFG 1:	11.11	3
% Collector-Filterers FFG 1:	43.39	1
% Sprawlers:	2.65	1
mIBI Metric Score:		36

Supplemental Metrics

HBI	4.23
Shannon-Weaver Index	4.11
Shannon Equitability	.44
% Dominant 3 Taxon	47.62
% Chironomidae	50.79



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-05-0014	14T-003	MHAB	AB17863	140722303	7/22/14	Decatur

Stream Name	Location	HUC 12	HUCTO14
Righthand Fork Salt Creek	E CR 550 N	050800030502	05080003050030

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4364981.68	644556.83	55	18.228	2.223	54

Taxon	Count	Notes	HBI Tolerance
1552 (Tubificidae with bifid chetae and no hair chetae)	2		
1233 (ERPOBDELLIDAE)	1		
2252 (Physella)	48		8
1092 (PISIDIIDAE)	1		8
9031 (Lirceus)	1		8
9056 (Crangonyx)	54		6
9019 (Cambarus)	3	3F	2
8996 (Orconectes)	7	4MII, 3F; imm	4
1017 (HEPTAGENIIDAE)	1		4
3036 (Leucrocuta)	1	slide 0177.1	2
3188 (Caenis latipennis)	1		
3245 (Boyeria vinosa)	1		4
1041 (CORIXIDAE)	6		5
7189 (Sigara)	18	11M, 7F	
7117 (Trepobates)	2		
7120 (Trepobates pictus)	1		
7122 (Microvelia)	6		
7123 (Microvelia americana)	6	3M, 3F	
3600 (Peltodytes duodecimpunctatus)	2	2A	
7723 (Dixella)	1		
7977 (Zavreliomyia)	1		4
7984 (Procladius)	5		7
8083 (Chironomini (Tribe))	1		
8099 (Cryptochironomus)	1		5
9296 (Microtendipes pedellus grp)	1		
8168 (Paratendipes albimanus)	1		4
8211 (Stictochironomus)	3		4
8241 (Tanytarsus)	1		4
9241 (Polypedilum (Polypedilum illinoense grp.))	2		

Type	Value	Metric Score
Total Taxa:	29	3
Total No. Individuals:	179	3
EPT Taxa:	3	3
% Orthocladiinae + Tanytarsini of Chironomidae:	6.25	5
% Non-insects excluding Astacidae:	59.78	1
Diptera Taxa:	10	3
% Intolerant (0-3):	2.23	1
% Tolerant (8-10):	27.93	1
% Predators FFG 1:	23.46	3
% Shredders + Scrapers FFG 1:	27.37	5
% Collector-Filterers FFG 1:	1.12	5
% Sprawlers:	3.35	3
mIBI Metric Score:		36

Supplemental Metrics

	HBI	Score
Shannon-Weaver Index	6.39	3.3
Shannon Equitability		.35
% Dominant 3 Taxon		67.04
% Chironomidae		8.94



OWQ/WAPB Macroinvertebrate Community Assessment
MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-05-0011	14T-004	MHAB	AB17873	140721303	7/21/14	Franklin
Stream Name		Location		HUC 12	HUCTO14	
Righthand Fork Salt Creek		Hamburg Rd		050800030502	05080003050030	
Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score	
4360561.89	647590.91	55	48.529	5.482	60	

Taxon	Count	Notes	HBI Tolerance
1084 (TURBELLARIA)	2		4
1552 (Tubificidae with bifid chetae and no hair chetae)	3		
3071 (Baetis flavistriga)	2		3
3322 (Libellula luctuosa)	1	good specimen	
3532 (Hetaerina)	1		3
3546 (Enallagma)	1		9
9095 (Argia fumipennis)	1		
7117 (Trepobates)	1		
7123 (Microvelia americana)	6		
7293 (Psephenus herricki)	3	3L	4
7307 (Stenelmis)	3	3L	5
7309 (Stenelmis crenata)	2	1M, 1F	5
7317 (Stenelmis sexlineata)	11	8M, 3F	
9326 (Dubiraphia minima grp)	2	2F; slide 0166.1	
3267 (Chimarra obscura)	1		4
8980 (Hydropsyche betteni grp)	3		
7814 (Simulium)	1		5
8083 (Chironomini (Tribe))	1		
9261 (Thienemannimyia grp.)	1		
8006 (Orthocladiinae (Subfamily))	1		
8099 (Cryptochironomus)	2		5
8168 (Paratendipes albimanus)	24		4
8211 (Stictochironomus)	1		4
8235 (Paratanytarsus)	1		4
9093 (Stempellinella)	1		3
8241 (Tanytarsus)	5		4
9277 (Polypedilum (Tripodura) scalaenum grp)	1		
9238 (Polypedilum (Uresipedilum) flavum)	7		
9241 (Polypedilum (Polypedilum) illinoense grp.)	1		
8397 (Hemerodromia)	1		

Type	Value	Metric Score
Total Taxa:	30	3
Total No. Individuals:	91	1
EPT Taxa:	3	1
% Orthocladiinae + Tanytarsini of Chironomidae:	17.39	5
% Non-insects excluding Astacidae:	5.49	5
Diptera Taxa:	14	5
% Intolerant (0-3):	4.4	1
% Tolerant (8-10):	1.1	5
% Predators FFG 1:	7.69	1
% Shredders + Scrapers FFG 1:	8.79	1
% Collector-Filterers FFG 1:	7.69	5
% Sprawlers:	4.4	3
mIBI Metric Score:		36

Supplemental Metrics

HBI	4.18
Shannon-Weaver Index	4.05
Shannon Equitability	.43
% Dominant 3 Taxon	46.15
% Chironomidae	50.55



OWQ/WAPB Macroinvertebrate Community Assessment

MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-05-0009	14T-005	MHAB	AB17875	140722302	7/22/14	Franklin
Stream Name		Location		HUC 12		HUCTO14
Bull Fork		Bullfork Rd		050800030503		05080003050050
Northing	Easting	Ecoregion	Gradient	Drainage Area		QHEI Score
4362037.33	650398.75	55	46.569	18.49		67

Taxon	Count	Notes	HBI Tolerance
1552 (Tubificidae with bifid chetae and no hair chetae)	2		
2252 (Physella)	1		8
1083 (ACARI)	10		4
9008 (Orconectes rusticus)	6	1J, 5MII	6
9016 (Orconectes sloanii)	1	1MII	
1017 (HEPTAGENIIDAE)	4		4
9156 (Maccaffertium)	3		
3020 (Stenonema femoratum)	30		3
3066 (Baetis intercalaris)	1		3
3071 (Baetis flavistriga)	2		3
3365 (Procloeon)	1		
3183 (Caenis)	9		3
3188 (Caenis latipennis)	4		
1035 (CAPNIIDAE)	1		1
7099 (Aquarius remigis)	3	1M, 2F	
7123 (Microvelia americana)	2	1M, 1F	
3959 (Helichus lithophilus)	1	1A	
3960 (Helichus basalis)	1	1A	
7293 (Psephenus herricki)	4	4L	4
7307 (Stenelmis)	6	6L	5
7309 (Stenelmis crenata)	33	19M, 14F; slides 0181.2, 0181.3	5
7310 (Stenelmis decorata)	8	4M, 4F; slide 0181.1	
7317 (Stenelmis sexlineata)	13	8M, 5F	
3797 (Nigronia serricornis)	1		4
3432 (Cheumatopsyche)	14		3
8980 (Hydropsyche betteni grp)	3		
9319 (Ceratopsyche "checkerboard")	5		
8952 (Helicopsyche borealis)	1		3
9295 (Tipula (Nippotipula))	1		
9248 (Ablabesmyia (Ablabesmyia) mallochi grp.)	2		
8397 (Hemerodromia)	3		

Type	Value	Metric Score
Total Taxa:	31	3
Total No. Individuals:	176	3
EPT Taxa:	13	5
% Orthocladiinae + Tanytarsini of Chironomidae:	0	5
% Non-insects excluding Astacidae:	7.39	5
Diptera Taxa:	3	1
% Intolerant (0-3):	32.95	5
% Tolerant (8-10):	.57	5
% Predators FFG 1:	2.27	1
% Shredders + Scrapers FFG 1:	30.68	5
% Collector-Filterers FFG 1:	7.95	5
% Sprawlers:	1.7	1
mIBI Metric Score:		44

Supplemental Metrics

	HBI	Score
Shannon-Weaver Index	HBI	3.96
Shannon Equitability		4.08
% Dominant 3 Taxon		.44
% Chironomidae		43.75
		1.14



OWQ/WAPB Macroinvertebrate Community Assessment

MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-05-0007	14T-006	MHAB	AB17860	140721304	7/21/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
Salt Creek	Rail Fence Rd	050800030502	05080003050030

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4360945.21	653441.62	71	9.569	45.72	68

Taxon	Count	Notes	HBI Tolerance
1357 (BRANCHIOBELLELLIDAE)	2		6
2215 (Elimia)	7		
1092 (PISIDIIDAE)	1		8
1083 (ACARI)	11		4
9008 (Orconectes rusticus)	3	1MII, 2F	6
1251 (ISOTOMIDAE)	1		
3020 (Stenonema femoratum)	3		3
7011 (Acerpenna pygmaea)	1		2
3066 (Baetis intercalaris)	3		3
3183 (Caenis)	3		3
3188 (Caenis latipennis)	12		
3197 (Ephemera)	1		3
3247 (Basiaeschna)	2		6
3397 (Macromia)	1		2
1026 (COENAGRIONIDAE)	2		9
3568 (Argia)	1		5
7111 (Rheumatobates)	19		
7113 (Rheumatobates rileyi)	3	3M	
7118 (Trepobates inermis)	1	1F	
7097 (Aquarius nebularis)	2	1M, 1F	
3600 (Peltodytes duodecimpunctatus)	1	1A	
3959 (Helichus lithophilus)	1	1A	
3960 (Helichus basalis)	1	1A	
7307 (Stenelmis)	5	1F, 4L	5
7317 (Stenelmis sexlineata)	8	5M, 3F	
7300 (Dubiraphia vittata)	1	1M; slide 0195.1, um=256	
3432 (Cheumatopsyche)	14		3
8952 (Helicopsyche borealis)	2		3
7984 (Procladius)	1		7
7926 (Tanypodinae (Subfamily))	2		
8083 (Chironomini (Tribe))	2		
8067 (Rheocricotopus robacki)	1		4
8112 (Dicrotendipes)	2		6
9296 (Microtendipes pedellus grp)	3		
9165 (Saetheria tylus)	1		4
8211 (Stictochironomus)	3		4
8228 (Cladotanytarsus)	3	1P	4
8235 (Paratanytarsus)	1		4
9093 (Stempellinella)	4		3
9260 (Cricotopus (Cricotopus)/Orthocladius (Orthocladius))	1		
9277 (Polypedilum (Tripodura))	6		

Type	Value	Metric Score
Total Taxa:	43	5
Total No. Individuals:	149	3
EPT Taxa:	8	5
% Orthocladiinae + Tanytarsini of Chironomidae:	24.32	3
% Non-insects excluding Astacidae:	14.09	5
Diptera Taxa:	15	5
% Intolerant (0-3):	21.48	3
% Tolerant (8-10):	2.01	5
% Predators FFG 1:	17.45	1
% Shredders + Scrapers FFG 1:	4.7	1
% Collector-Filterers FFG 1:	10.07	3
% Sprawlers:	3.36	3
mIBI Metric Score:		42

Supplemental Metrics

	HBI	Value
Shannon-Weaver Index	4.1	4.78
Shannon Equitability		.51
% Dominant 3 Taxon		30.2
% Chironomidae		24.83



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MHAB Report

Taxon	Count	Notes	HBI Tolerance
scalaenum grp)			
9238 (Polypedilum (Uresipedilum) flavum)	1		
9241 (Polypedilum (Polypedilum) illinoense grp.)	6		



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-05-0012	14T-007	MHAB	AB17870	140722301	7/22/14	Franklin
Stream Name		Location		HUC 12		HUCTO14
Harvey Branch		Rail Fence Rd		050800030505		05080003050040
Northing	Easting	Ecoregion	Gradient	Drainage Area		QHEI Score
4360959.35	653598.96	71	27.537	8.861		61

Taxon	Count	Notes	HBI Tolerance
1357 (BRANCHIOBDELLIDAE)	4		6
2252 (Physella)	1		8
9008 (Orconectes rusticus)	2	2MII	6
9002 (Orconectes virilis)	2	2MII	6
1017 (HEPTAGENIIDAE)	2		4
3020 (Stenonema femoratum)	2		3
3183 (Caenis)	11		3
3188 (Caenis latipennis)	18		
1026 (COENAGRIONIDAE)	1		9
7031 (Ischnura verticalis)	1		
7189 (Sigara)	2		
7111 (Rheumatobates)	1		
7118 (Trepobates inermis)	1		
7099 (Aquarius remigis)	2		
3599 (Peltodytes dunavani)	1	1A	
3600 (Peltodytes duodecimpunctatus)	52	52A	
3851 (Berosus peregrinus)	1	1A	6
7293 (Psephenus herricki)	1	1L	4
7984 (Procladius)	1		7
8083 (Chironomini (Tribe))	3		
8099 (Cryptochironomus)	1		5
8168 (Paratendipes albimanus)	2		4
8211 (Stictochironomus)	6		4
8228 (Cladotanytarsus)	3		4
9278 (Polypedilum (Tripodura) halterale-simulans grp)	4		
9241 (Polypedilum (Polypedilum) illinoense grp.)	3		

Type	Value	Metric Score
Total Taxa:	26	3
Total No. Individuals:	128	1
EPT Taxa:	4	3
% Orthocladiinae + Tanytarsini of Chironomidae:	13.04	5
% Non-insects excluding Astacidae:	3.91	5
Diptera Taxa:	8	3
% Intolerant (0-3):	10.16	1
% Tolerant (8-10):	1.56	5
% Predators FFG 1:	6.25	1
% Shredders + Scrapers FFG 1:	2.34	1
% Collector-Filterers FFG 1:	0	5
% Sprawlers:	1.56	1
mIBI Metric Score:		34

Supplemental Metrics

Metric	Value
HBI	4.45
Shannon-Weaver Index	3.33
Shannon Equitability	.36
% Dominant 3 Taxon	63.28
% Chironomidae	17.97



OWQ/WAPB Macroinvertebrate Community Assessment

MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-05-0015	14T-008	MHAB	AB17862	140722304	7/22/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
S Fk Little Salt Cr	Chapel Rd	050800030504	05080003050070

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4369939.24	648183.14	55	23.582	6.328	66

Taxon	Count	Notes	HBI Tolerance
1084 (TURBELLARIA)	1		4
10107 (Chordodes morgani)	1	1F; slide 0171.1	
1396 (LUMBRICULIDAE)	1		5
1556 (NAIDIDAE w/bifid chetae + hair chetae)	2		
1357 (BRANCHIOBDELLIDAE)	13		6
1083 (ACARI)	2		4
9031 (Lirceus)	1		8
9056 (Crangonyx)	2		6
9022 (Cambarus laevis)	1	1F	
9008 (Orconectes rusticus)	1	1MI	6
9016 (Orconectes sloanii)	1	MII	
1017 (HEPTAGENIIDAE)	1		4
3021 (Maccaffertium luteum)	2	slide 0171.4	4
3071 (Baetis flavistriga)	8		3
3183 (Caenis)	3		3
7215 (Nepa apiculata)	2		
7113 (Rheumatobates rileyi)	1	1M	
7123 (Microvelia americana)	5		
7288 (Ectopria)	1	1L	5
1068 (ELMIDAE)	3	3L	4
7307 (Stenelmis)	9	9L	5
7309 (Stenelmis crenata)	15	11M, 4F; slide 0171.3	5
7317 (Stenelmis sexlineata)	17	9M, 8F	
7299 (Dubiraphia quadrinotata)	1	1F	3
7298 (Dubiraphia minima)	5	3M, 2F; slide 0171.2, 347.7um	
7303 (Optioservus)	1	1L	4
7304 (Optioservus fastiditus)	1	1A	2
7321 (Macronychus glabratus)	1	1A	3
3796 (Nigronia fasciatus)	1		2
3003 (Chimarra aterrima)	1		2
1057 (HYDROPSYCHIDAE)	9		4
3432 (Cheumatopsyche)	64		3
8980 (Hydropsyche betteni grp)	9		
9285 (Tipula (Yamatotipula))	2		
7814 (Simulium)	6		5
7955 (Conchapelopia)	1	1P	4
7926 (Tanypodinae (Subfamily))	1		
9261 (Thienemannimyia grp.)	5		
8017 (Corynoneura)	1		4
8062 (Paraphaenocladus)	11		
8067 (Rheocricotopus robacki)	5		4
9296 (Microtendipes pedellus grp)	1		
8211 (Stictochironomus)	6		4

Type	Value	Metric Score
Total Taxa:	49	5
Total No. Individuals:	246	3
EPT Taxa:	8	5
% Orthoclaadiinae + Tanytarsini of Chironomidae:	44	3
% Non-insects excluding Astacidae:	9.35	5
Diptera Taxa:	16	5
% Intolerant (0-3):	34.15	5
% Tolerant (8-10):	.41	5
% Predators FFG 1:	1.63	1
% Shredders + Scrapers FFG 1:	11.79	3
% Collector-Filterers FFG 1:	33.74	1
% Sprawlers:	6.1	5
MIBI Metric Score:		46

Supplemental Metrics

	HBI	Score
Shannon-Weaver Index	3.9	4.43
Shannon Equitability		.47
% Dominant 3 Taxon		39.02
% Chironomidae		20.33



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Taxon	Count	Notes	HBI Tolerance
8238 (Rheotanytarsus)	2		3
9093 (Stempellinella)	2		3
8241 (Tanytarsus)	1		4
9238 (Polypedilum (Uresipedilum) flavum)	14		
8320 (Chrysops)	1		5
1074 (EMPIDIDAE)	1	1P	6



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-05-0008	14T-009	MHAB	AB17889	140722305	7/22/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
Little Salt Creek	Stipps Hill Rd	050800030504	05080003050070

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4366867.51	655299.02	71	28.151	25.073	61

Taxon	Count	Notes	HBI Tolerance
2252 (Physella)	1		8
1083 (ACARI)	1		4
9031 (Lirceus)	1		8
9002 (Orconectes virilis)	2	1MII, 1F	6
9016 (Orconectes sloanii)	1	1MII	
9156 (Maccaffertium)	1		
3020 (Stenonema femoratum)	6		3
3065 (Baetis)	5		3
3066 (Baetis intercalaris)	18		3
3183 (Caenis)	2		3
3109 (Isonychia)	1		2
3600 (Peltodytes duodecimpunctatus)	3	3A	
3740 (Heterosternuta pulcher)	1	1A	
3851 (Berosus peregrinus)	1	1A	6
3960 (Helichus basalis)	1	1A	
7307 (Stenelmis)	1	1L	5
7309 (Stenelmis crenata)	1	1A; slide 0180.1	5
7317 (Stenelmis sexlineata)	7	7A	
7304 (Optioservus fastiditus)	1	1A	2
3267 (Chimarra obscura)	5		4
3432 (Cheumatopsyche)	23		3
3423 (Hydropsyche)	1	1P	4
3479 (Hydropsyche dicantha)	1		4
9319 (Ceratopsyche "checkerboard")	8		
9162 (Nilotanypus fimbriatus)	1		3
9248 (Ablabesmyia (Ablabesmyia mallochi grp.))	1		
9261 (Thienemannimyia grp.)	1		
8006 (Orthocladiinae (Subfamily))	1	1P	
8037 (Eukiefferiella)	1		
8066 (Rheocricotopus)	1		5
8074 (Thienemanniella)	1		4
9100 (Tvetenia)	12		5
8112 (Dicrotendipes)	1		6
9296 (Microtendipes pedellus grp)	1		
8168 (Paratendipes albimanus)	1		4
8238 (Rheotanytarsus)	1		3
8241 (Tanytarsus)	3		4
9238 (Polypedilum (Uresipedilum flavum))	5		
9257 (Cricotopus (Cricotopus))	1		
9258 (Cricotopus (Cricotopus) trifascia)	13		

Type	Value	Metric Score
Total Taxa:	40	3
Total No. Individuals:	138	3
EPT Taxa:	11	5
% Orthocladiinae + Tanytarsini of Chironomidae:	44.44	3
% Non-insects excluding Astacidae:	2.17	5
Diptera Taxa:	16	5
% Intolerant (0-3):	42.03	5
% Tolerant (8-10):	1.45	5
% Predators FFG 1:	.72	1
% Shredders + Scrapers FFG 1:	3.62	1
% Collector-Filterers FFG 1:	24.64	1
% Sprawlers:	9.42	5
mIBI Metric Score:		42

Supplemental Metrics

	HBI	Score
Shannon-Weaver Index	3.68	
Shannon Equitability	4.37	
% Dominant 3 Taxon	.47	
% Chironomidae	39.13	
	32.61	



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MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-05-0010	14T-010	MHAB	AB17874	140819101	8/19/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
Salt Creek	SR 229	050800030505	05080003050080

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4367933.15	659148.95	71	5.574	117.285	57

Taxon	Count	Notes	HBI Tolerance
2252 (Physella)	1		8
2215 (Elimia)	1		
3020 (Stenonema femoratum)	1		3
3074 (Centroptilum)	2		3
3179 (Brachycercus)	1		3
3183 (Caenis)	5		3
3188 (Caenis latipennis)	9		
3189 (Caenis punctata)	1	slide 0169.2	
3202 (Hexagenia)	2		4
3175 (Tricorythodes)	11		3
3248 (Basiaeschna janata)	4		6
9286 (Gomphus (Gomphurus))	1		
3397 (Macromia)	2		2
3546 (Enallagma)	3		9
3549 (Enallagma divagans)	12		
3568 (Argia)	4		5
7032 (Argia moesta)	1		
7230 (Neoplea striola)	1		
7111 (Rheumatobates)	1		
7113 (Rheumatobates rileyi)	1		
7118 (Trepobates inermis)	7		
7121 (Trepobates subnitidus)	4		
7145 (Mesovelia mulsanti)	8		
3600 (Peltodytes duodecimpunctatus)	1	1A	
3604 (Peltodytes sexmaculatus)	1	1A	
3851 (Berosus peregrinus)	1	1A	6
3877 (Tropisternus glaber)	1	1A	
3959 (Helichus lithophilus)	1	1A	
7293 (Psephenus herricki)	1	1L	4
7317 (Stenelmis sexlineata)	3	3A	
7300 (Dubiraphia vittata)	1	1M; slide 0169.1	
7295 (Ancyronyx variegatus)	2	2A	4
7321 (Macronychus glabratus)	1	1A	3
8926 (Oecetis)	1		3
8083 (Chironomini (Tribe))	3		
8227 (Tanytarsini (Tribe))	1		
9248 (Ablabesmyia (Ablabesmyia mallochi grp.))	2		
8086 (Chironomus)	1		8
8099 (Cryptochironomus)	2		5
8104 (Cryptotendipes)	1		4
8112 (Dicrotendipes)	2		6
8166 (P. nigrohalterale)	1		
8168 (Paratendipes albimanus)	1		4

Type	Value	Metric Score
Total Taxa:	48	5
Total No. Individuals:	116	1
EPT Taxa:	9	3
% Orthocladiinae + Tanytarsini of Chironomidae:	16.67	5
% Non-insects excluding Astacidae:	2.59	5
Diptera Taxa:	13	3
% Intolerant (0-3):	20.69	3
% Tolerant (8-10):	4.31	5
% Predators FFG 1:	36.21	5
% Shredders + Scrapers FFG 1:	2.59	1
% Collector-Filterers FFG 1:	1.72	5
% Sprawlers:	1.72	1
mIBI Metric Score:		42

Supplemental Metrics

	HBI	
	4.33	
Shannon-Weaver Index		4.99
Shannon Equitability		.53
% Dominant 3 Taxon		27.59
% Chironomidae		15.52



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Taxon	Count	Notes	HBI Tolerance
8228 (Cladotanytarsus)	1		4
8241 (Tanytarsus)	1		4
9277 (Polypedilum (Tripodura) scalaenum grp)	1		
9241 (Polypedilum (Polypedilum) illinoense grp.)	1		
18006 (Urnatella gracilis)	1		



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-04-0018	14T-011	MHAB	AB18774	140805306	8/5/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
Whitewater River	US 52	050800030408	05080003040130

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4368315.08	659313.52	71	5.725	605.695	70

Taxon	Count	Notes	HBI Tolerance
2252 (Physella)	5		8
8996 (Orconectes)	2		4
1251 (ISOTOMIDAE)	2		
1017 (HEPTAGENIIDAE)	3		4
9156 (Maccaffertium)	1		
3036 (Leucrocuta)	3		2
3063 (Heterocloeon)	1	slide 0187.1	3
3066 (Baetis intercalaris)	23	slide 0186.3	3
3109 (Isonychia)	28		2
3175 (Tricorythodes)	22		3
3245 (Boyeria vinosa)	3		4
9287 (Gomphus (Gomphus))	1		
1022 (CALOPTERYGIDAE)	1		5
7027 (Hetaerina americana)	10		
3546 (Enallagma)	1		9
1038 (GERRIDAE)	1	imm	
7116 (Metrobates hesperius)	3		
7130 (Rhagovelia)	2	imm	
7131 (Rhagovelia obesa)	4		
3846 (Berosus)	1	1L	7
3851 (Berosus peregrinus)	5	5A	6
3877 (Tropisternus glaber)	1	1A	
3879 (Enochrus)	1	1L	
3959 (Helichus lithophilus)	3	3A	
3960 (Helichus basalis)	1	1A	
1068 (ELMIDAE)	1	1L	4
9266 (Stenelmis grossa)	2	2A; slide 0186.2	
7300 (Dubiraphia vittata)	6	6A; slide 0186.1	
7295 (Ancyronyx variegatus)	1	1A	4
7321 (Macronychus glabratus)	3	3A	3
3267 (Chimarra obscura)	7		4
3432 (Cheumatopsyche)	53		3
3479 (Hydropsyche dicantha)	2		4
9319 (Ceratopsyche "checkerboard")	23		
3000 (Hydroptila)	3		3
8885 (Pycnopsyche)	1		3
9224 (Nectopsyche exquisita-candida)	1		
8837 (Neureclipsis crepuscularis)	1		
7814 (Simulium)	3		5
7984 (Procladius)	3		7
9248 (Ablabesmyia (Ablabesmyia) mallochi grp.)	2		
8006 (Orthocladiinae (Subfamily))	3	2P	

Type	Value	Metric Score
Total Taxa:	56	5
Total No. Individuals:	318	5
EPT Taxa:	15	5
% Orthocladiinae + Tanytarsini of Chironomidae:	24.39	3
% Non-insects excluding Astacidae:	1.57	5
Diptera Taxa:	18	5
% Intolerant (0-3):	46.54	5
% Tolerant (8-10):	1.89	5
% Predators FFG 1:	9.43	1
% Shredders + Scrapers FFG 1:	7.23	1
% Collector-Filterers FFG 1:	33.33	1
% Sprawlers:	1.89	1
mIBI Metric Score:		42

Supplemental Metrics

	HBI	Score
Shannon-Weaver Index	3.49	4.64
Shannon Equitability		.5
% Dominant 3 Taxon		34.91
% Chironomidae		25.79



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MHAB Report

Taxon	Count	Notes	HBI Tolerance
9100 (Tvetenia)	1		5
8099 (Cryptochironomus)	1		5
8112 (Dicrotendipes)	2		6
9296 (Microtendipes pedellus grp)	1		
8162 (Paracladopelma)	1		7
8172 (Phaenopsectra)	5		7
8228 (Cladotanytarsus)	1		4
8238 (Rheotanytarsus)	11	1P	3
8241 (Tanytarsus)	4	1P	4
9238 (Polypedilum (Uresipedilum) flavum)	30		
9240 (Polypedilum (Polypedilum) fallax grp.)	1		
9241 (Polypedilum (Polypedilum) illinoense grp.)	15		
9257 (Cricotopus (Cricotopus))	1		
8320 (Chrysops)	1		5



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-06-0022	14T-013	MHAB	AB17859	140804302	8/4/14	Franklin
Stream Name		Location		HUC 12		HUCTO14
Whitewater Canal		Park Ave at Whitewater Canal State Historic Site		050800030605		05080003060020
Northing	Easting	Ecoregion	Gradient	Drainage Area		QHEI Score
4368365.11	661798.8	71	5.048	0.822		24

Taxon	Count	Notes	HBI Tolerance
1514 (Pristina)	1		8
1552 (Tubificidae with bifid chetae and no hair chetae)	5		
2225 (Fossaria)	1		6
2252 (Physella)	2		8
9050 (Hyaella)	3		
9002 (Orconectes virilis)	6	5MII, 1F	6
1251 (ISOTOMIDAE)	1		
3074 (Centroptilum)	1		3
1041 (CORIXIDAE)	12		5
7189 (Sigara)	1	1M	
7201 (Trichocorixa calva)	22	9M, 13F	4
7186 (Palmacorixa nana)	1	1F	4
7230 (Neoplea striola)	1		
7111 (Rheumatobates)	8		
9290 (Gerridae (Gerrinae))	4		
9110 (Laccophilus maculosus)	1	1A	8
7732 (Anopheles)	5	1P, 4L	
9111 (Ceratopogon)	2		
7940 (Natarsia)	1		6
7943 (Ablabesmyia)	1	1P	5
7984 (Procladius)	1		7
7992 (Tanypus neopunctipennis)	13		8
7926 (Tanypodinae (Subfamily))	1	1P	
8086 (Chironomus)	8		8
8104 (Cryptotendipes)	1		4
8112 (Dicrotendipes)	2		6
8241 (Tanytarsus)	2		4
9241 (Polypedilum (Polypedilum illinoense grp.))	26		

Type	Value	Metric Score
Total Taxa:	28	3
Total No. Individuals:	133	3
EPT Taxa:	1	1
% Orthocladiinae + Tanytarsini of Chironomidae:	3.57	5
% Non-insects excluding Astacidae:	9.02	5
Diptera Taxa:	12	3
% Intolerant (0-3):	.75	1
% Tolerant (8-10):	18.8	3
% Predators FFG 1:	36.84	5
% Shredders + Scrapers FFG 1:	2.26	1
% Collector-Filterers FFG 1:	5.26	5
% Sprawlers:	1.5	1
mIBI Metric Score:		36

Supplemental Metrics	
	HBI
	5.78
Shannon-Weaver Index	3.91
Shannon Equitability	.42
% Dominant 3 Taxon	45.86
% Chironomidae	42.11



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MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-06-0022	14T-013	MHAB	AB19405	140804303	8/4/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
Whitewater Canal	Park Ave at Whitewater Canal State Historic Site	050800030605	05080003060020

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4368365.11	661798.8	71	5.048	0.822	24

Taxon	Count	Notes	HBI Tolerance
1435 (<i>Limnodrilus hoffmeisteri</i>)	1		10
1434 (<i>Limnodrilus claparedianus</i>)	2		10
1552 (Tubificidae with bifid chetae and no hair chetae)	2		
1357 (BRANCHIOBDELLIDAE)	1		6
9050 (<i>Hyalella</i>)	2		
9002 (<i>Orconectes virilis</i>)	6	5MII, 1F	6
3074 (<i>Centroptilum</i>)	1		3
3081 (<i>Callibaetis</i>)	1		6
1041 (CORIXIDAE)	2	imm	5
7189 (<i>Sigara</i>)	5	3M, 2F	
7201 (<i>Trichocorixa calva</i>)	9	4M, 5F	4
7121 (<i>Trepobates subnitidus</i>)	2	2F	
7105 (<i>Gerris marginatus</i>)	2	1M, 1F	
9290 (<i>Gerridae</i> (<i>Gerrinae</i>))	3		
7732 (<i>Anopheles</i>)	2	1L, 1P	
9111 (<i>Ceratopogon</i>)	1		
7992 (<i>Tanypus neopunctipennis</i>)	2		8
8083 (<i>Chironomini</i> (Tribe))	1	1P	
9248 (<i>Ablabesmyia</i> (<i>Ablabesmyia</i>) <i>mallochi</i> grp.)	1		
8086 (<i>Chironomus</i>)	7		8
8104 (<i>Cryptotendipes</i>)	3		4
8241 (<i>Tanytarsus</i>)	3		4
9241 (<i>Polypedilum</i> (<i>Polypedilum</i>) <i>illinoense</i> grp.)	14		
8320 (<i>Chrysops</i>)	3		5

Type	Value	Metric Score
Total Taxa:	24	3
Total No. Individuals:	76	1
EPT Taxa:	2	3
% Orthocladiinae + Tanytarsini of Chironomidae:	9.68	5
% Non-insects excluding Astacidae:	10.53	5
Diptera Taxa:	10	3
% Intolerant (0-3):	1.32	1
% Tolerant (8-10):	15.79	3
% Predators FFG 1:	27.63	3
% Shredders + Scrapers FFG 1:	0	1
% Collector-Filterers FFG 1:	6.58	5
% Sprawlers:	0	1
mIBI Metric Score:		34

Supplemental Metrics

HBI	5.8
Shannon-Weaver Index	4.09
Shannon Equitability	.44
% Dominant 3 Taxon	39.47
% Chironomidae	40.79



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MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-06-0015	14T-014	MHAB	AB17886	140811301	8/11/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
Pipe Creek	Silver Creek Rd	050800030604	05080003060060

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4366367.2	662597.4	71	7.349	66.306	43

Taxon	Count	Notes	HBI Tolerance
1559 (Pristina osborni)	1		
1552 (Tubificidae with bifid chetae and no hair chetae)	1		
2252 (Physella)	1		8
9050 (Hyalella)	16		
3020 (Stenonema femoratum)	2		3
3074 (Centroptilum)	1		3
3188 (Caenis latipennis)	2		
1120 (ANISOPTERA)	2	Libellulidae/Corduliidae	
3248 (Basiaeschna janata)	1		6
3546 (Enallagma)	18		9
3549 (Enallagma divagans)	8		
7184 (Palmacorixa buenoi)	1	1M	4
7230 (Neoplea striola)	2		
7217 (Ranatra buenoi)	1	imm	
7111 (Rheumatobates)	4	4F, imm	
7113 (Rheumatobates rileyi)	2	2M; slide 0165.2	
7117 (Trepobates)	7	imm	
7118 (Trepobates inermis)	6	2M, 4F	
7120 (Trepobates pictus)	3	2M, 1F	
7122 (Microvelia)	1	imm	
3598 (Peltodytes)	1	1L	7
3600 (Peltodytes duodecimpunctatus)	11	11A	
3606 (Peltodytes litoralis)	1	1A	
3846 (Berosus)	10	10L	7
3851 (Berosus peregrinus)	1	1A	6
3872 (Tropisternus)	1	1L	
3959 (Helichus lithophilus)	1	1A	
3960 (Helichus basalis)	1	1A	
7317 (Stenelmis sexlineata)	5	5M	
7300 (Dubiraphia vittata)	3	3A; slide 0165.1, 259.9um	
7295 (Ancyronyx variegatus)	1	1A	4
7732 (Anopheles)	4		
1077 (CERATOPOGONIDAE)	2	2P	6
7830 (Atrichopogon)	1		5
8984 (Bezzia/Palpomyia)	4		
1073 (CHIRONOMIDAE(all other))	1		6
7965 (Larsia)	2	1P	4
7984 (Procladius)	1		7
9153 (Tribelos)	1		5
8083 (Chironomini (Tribe))	2		
9284 (Tribelos jucundus)	6		
8086 (Chironomus)	1		8

Type	Value	Metric Score
Total Taxa:	52	5
Total No. Individuals:	191	3
EPT Taxa:	3	1
% Orthoclaadiinae + Tanytarsini of Chironomidae:	31.75	3
% Non-insects excluding Astacidae:	9.95	5
Diptera Taxa:	21	5
% Intolerant (0-3):	1.57	1
% Tolerant (8-10):	10.47	5
% Predators FFG 1:	31.41	3
% Shredders + Scrapers FFG 1:	8.38	1
% Collector-Filterers FFG 1:	8.38	5
% Sprawlers:	3.66	3
MIBI Metric Score:		40

Supplemental Metrics

	HBI	
	6.08	
Shannon-Weaver Index		5
Shannon Equitability		.53
% Dominant 3 Taxon		24.61
% Chironomidae		32.98



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Taxon	Count	Notes	HBI Tolerance
8112 (Dicrotendipes)	3		6
8123 (Endochironomus)	13		6
8126 (Glyptotendipes)	1		6
8157 (Parachironomus)	1		4
8221 (Pseudochironomus)	1		5
8228 (Cladotanytarsus)	2		4
8235 (Paratanytarsus)	8		4
8241 (Tanytarsus)	10		4
9241 (Polypedilum (Polypedilum) illinoense grp.)	10		
8320 (Chrysops)	1		5



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-06-0013	14T-015	MHAB	AB17869	140730401	7/30/14	Franklin
Stream Name		Location		HUC 12		HUCTO14
Clear Fork		Schwegman Rd		050800030602		05080003060050
Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score	
4359754.17	659930.63	71	37.119	14.934	59	

Taxon	Count	Notes	HBI Tolerance
1086 (OLIGOCHAETA)	1		8
1357 (BRANCHIOBDELLIDAE)	5		6
2252 (Physella)	1		8
1083 (ACARI)	11		4
9008 (Orconectes rusticus)	2	2F	6
3020 (Stenonema femoratum)	3		3
1012 (BAETIDAE)	7		4
3066 (Baetis intercalaris)	2		3
3183 (Caenis)	4		3
3188 (Caenis latipennis)	8		
3109 (Isonychia)	1		2
7026 (Calopteryx maculata)	1		
7099 (Aquarius remigis)	2		
3960 (Helichus basalis)	1	1A	
7307 (Stenelmis)	8	8L	5
7309 (Stenelmis crenata)	6	6A; slide 0168.1	5
7317 (Stenelmis sexlineata)	4	4A	
1160 (TRICHOPTERA)	1		
3432 (Cheumatopsyche)	56		3
8980 (Hydropsyche betteni grp)	3		
9319 (Ceratopsyche "checkerboard")	5		
7926 (Tanypodinae (Subfamily))	1	1P	
9261 (Thienemannimyia grp.)	1		
8168 (Paratendipes albimanus)	2		4
8172 (Phaenopsectra)	2		7
8241 (Tanytarsus)	2		4
9260 (Cricotopus (Cricotopus)/Orthocladius (Orthocladius))	1		
9277 (Polypedilum (Tripodura) scalaenum grp)	3		
9238 (Polypedilum (Uresipedilum) flavum)	3		
9258 (Cricotopus (Cricotopus) trifascia)	1		

Type	Value	Metric Score
Total Taxa:	30	3
Total No. Individuals:	148	3
EPT Taxa:	10	5
% Orthocladiinae + Tanytarsini of Chironomidae:	12.5	5
% Non-insects excluding Astacidae:	12.16	5
Diptera Taxa:	9	3
% Intolerant (0-3):	44.59	5
% Tolerant (8-10):	1.35	5
% Predators FFG 1:	2.7	1
% Shredders + Scrapers FFG 1:	11.49	3
% Collector-Filterers FFG 1:	39.86	1
% Sprawlers:	.68	1
mIBI Metric Score:		40

Supplemental Metrics

Metric	HBI	Score
Shannon-Weaver Index	HBI	3.78
Shannon Equitability		3.72
% Dominant 3 Taxon		.4
% Chironomidae		50.68
		10.81



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-06-0020	14T-016	MHAB	AB17865	140730402	7/30/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
Pipe Creek	St Marys Rd	050800030604	05080003060040

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4357529.08	662874.11	71	24.96	31.349	55

Taxon	Count	Notes	HBI Tolerance
1084 (TURBELLARIA)	2		4
1552 (Tubificidae with bifid chetae and no hair chetae)	5		
1357 (BRANCHIOBDELLIDAE)	7		6
1083 (ACARI)	14		4
9050 (Hyalella)	2		
9016 (Orconectes sloanii)	3	2MII, 1F	
1251 (ISOTOMIDAE)	1	Head Missing	
3020 (Stenonema femoratum)	2		3
3049 (Stenacron interpunctatum)	4	slide 0172.1	7
1012 (BAETIDAE)	6		4
3066 (Baetis intercalaris)	3		3
3365 (Proclleon)	2		
3183 (Caenis)	2		3
3188 (Caenis latipennis)	14		
3247 (Basiaeschna)	1		6
3546 (Enallagma)	4		9
7122 (Microvelia)	1		
7307 (Stenelmis)	36	36L	5
7309 (Stenelmis crenata)	8	6M, 2F; slide 0172.2	5
7317 (Stenelmis sexlineata)	9	7M, 2F	
3267 (Chimarra obscura)	4	1-Head Capsule Only	4
1057 (HYDROPSYCHIDAE)	5	imm, Damaged	4
3432 (Cheumatopsyche)	27		3
9319 (Ceratopsyche "checkerboard")	3		
3000 (Hydroptila)	1		3
8952 (Helicopsyche borealis)	1		3
1077 (CERATOPOGONIDAE)	1	1P	6
8083 (Chironomini (Tribe))	1		
8227 (Tanytarsini (Tribe))	3		
9261 (Thienemannimyia grp.)	1		
8066 (Rheocricotopus)	1		5
8099 (Cryptochironomus)	2		5
9296 (Microtendipes pedellus grp)	4		
8168 (Paratendipes albimanus)	2		4
8172 (Phaenopsectra)	2		7
8235 (Paratanytarsus)	1		4
9093 (Stempellinella)	1		3
8241 (Tanytarsus)	1		4
9238 (Polypedilum (Uresipedilum) flavum)	9		
9241 (Polypedilum (Polypedilum) illinoense grp.)	1		
1074 (EMPIDIDAE)	1		6

Type	Value	Metric Score
Total Taxa:	41	5
Total No. Individuals:	198	3
EPT Taxa:	13	5
% Orthocladiinae + Tanytarsini of Chironomidae:	24.14	3
% Non-insects excluding Astacidae:	15.15	5
Diptera Taxa:	15	5
% Intolerant (0-3):	18.69	3
% Tolerant (8-10):	2.02	5
% Predators FFG 1:	5.05	1
% Shredders + Scrapers FFG 1:	24.24	5
% Collector-Filterers FFG 1:	20.2	1
% Sprawlers:	2.53	1
MIBI Metric Score:		42

Supplemental Metrics

HBI	4.49
Shannon-Weaver Index	4.46
Shannon Equitability	.48
% Dominant 3 Taxon	38.89
% Chironomidae	14.65



OWQ/WAPB Macroinvertebrate Community Assessment

MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-06-0014	14T-017	MHAB	AB17887	140723301	7/23/14	Ripley

Stream Name	Location	HUC 12	HUCTO14
Tributary of Pipe Creek	St Marys Rd	050800030601	05080003060030

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4351676.1	663464.84	55	6.753	12.826	61

Taxon	Count	Notes	HBI Tolerance
1357 (BRANCHIOBDELLIDAE)	15		6
2333 (Ferrissia rivularis)	1		6
2252 (Physella)	8		8
2181 (Sphaerium)	2		6
2157 (Musculium)	1		6
9056 (Crangonyx)	2		6
9016 (Orconectes sloanii)	8	4MII, 4F	
3020 (Stenonema femoratum)	1		3
3074 (Centroptilum)	1		3
3183 (Caenis)	3		3
3188 (Caenis latipennis)	8		
3189 (Caenis punctata)	1		
3248 (Basiaeschna janata)	2		6
1026 (COENAGRIONIDAE)	3		9
3542 (Ischnura posita)	1		
7111 (Rheumatobates)	3		
7113 (Rheumatobates rileyi)	1		
7117 (Trepobates)	1		
7118 (Trepobates inermis)	1		
7120 (Trepobates pictus)	3	2M, 1F	
7122 (Microvelia)	1		
3600 (Peltodytes duodecimpunctatus)	17	17A	
9110 (Laccophilus maculosus)	1	1A	8
3863 (Paracymus)	1	1A	
3877 (Tropisternus glaber)	2	2A	
3946 (Cyphon)	3	3L	
3960 (Helichus basalis)	3	3M	
3962 (Helichus striatus)	1	1M	2
7307 (Stenelmis)	2	2L	5
7309 (Stenelmis crenata)	1	1M	5
9326 (Dubiraphia minima grp)	1	1F	
7325 (HETEROCERIDAE)	1	1A	
3432 (Cheumatopsyche)	44		3
9285 (Tipula (Yamatotipula))	1		
7732 (Anopheles)	2	1P	
7984 (Procladius)	1		7
8083 (Chironomini (Tribe))	1		
9261 (Thienemannimyia grp.)	1		
8006 (Orthocladiinae (Subfamily))	1		
9284 (Tribelos jucundus)	1		
8086 (Chironomus)	13		8
8126 (Glyptotendipes)	6		6
8168 (Paratendipes albimanus)	1		4
8228 (Cladotanytarsus)	1		4

Type	Value	Metric Score
Total Taxa:	48	5
Total No. Individuals:	191	3
EPT Taxa:	6	3
% Orthocladiinae + Tanytarsini of Chironomidae:	18.18	5
% Non-insects excluding Astacidae:	15.18	5
Diptera Taxa:	15	5
% Intolerant (0-3):	26.18	3
% Tolerant (8-10):	13.09	3
% Predators FFG 1:	6.81	1
% Shredders + Scrapers FFG 1:	8.38	1
% Collector-Filterers FFG 1:	31.94	1
% Sprawlers:	.52	1
mIBI Metric Score:		36

Supplemental Metrics

	HBI	Value
Shannon-Weaver Index	5	4.5
Shannon Equitability		.48
% Dominant 3 Taxon		39.79
% Chironomidae		23.04



OWQ/WAPB Macroinvertebrate Community Assessment
MHAB Report

Taxon	Count	Notes	HBI Tolerance
8241 (Tanytarsus)	6		4
9277 (Polypedilum (Tripodura) scalaenum grp)	1		
9238 (Polypedilum (Uresipedilum) flavum)	3		
9241 (Polypedilum (Polypedilum) illinoense grp.)	8		



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW060-0027	14T-018	MHAB	AB17861	140804301	8/4/14	Ripley

Stream Name	Location	HUC 12	HUCTO14
Pipe Creek	Pipe Creek Rd	050800030601	05080003060030

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4351306.41	663878.35	55	5.821	8.666	49

Taxon	Count	Notes	HBI Tolerance	Type	Value	Metric Score
1552 (Tubificidae with bifid chetae and no hair chetae)	1			Total Taxa:	36	3
1357 (BRANCHIOBDELLIDAE)	8		6	Total No. Individuals:	129	3
2333 (Ferrissia rivularis)	2		6	EPT Taxa:	7	3
2252 (Physella)	3		8	% Orthoclaadiinae + Tanytarsini of Chironomidae:	27.27	3
2181 (Sphaerium)	2		6	% Non-insects excluding Astacidae:	15.5	5
1083 (ACARI)	2		4	Diptera Taxa:	8	3
9050 (Hyaella)	1			% Intolerant (0-3):	20.16	3
9056 (Crangonyx)	1		6	% Tolerant (8-10):	2.33	5
8996 (Orconectes)	2	2F	4	% Predators FFG 1:	11.63	1
9008 (Orconectes rusticus)	2	2MII	6	% Shredders + Scrapers FFG 1:	5.43	1
9016 (Orconectes sloanii)	4	4MII		% Collector-Filterers FFG 1:	3.88	5
3020 (Stenonema femoratum)	4		3	% Sprawlers:	3.88	3
3049 (Stenacron interpunctatum)	1		7	mIBI Metric Score:		38
3365 (Proclaeon)	1	slide 0170.3		Supplemental Metrics		
3376 (Pseudocentoptiloides)	2	slide 0170.2		HBI		4.59
3183 (Caenis)	22		3	Shannon-Weaver Index		4.18
3188 (Caenis latipennis)	32			Shannon Equitability		.45
3202 (Hexagenia)	1		4	% Dominant 3 Taxon		48.06
3248 (Basiaeschna janata)	4		6	% Chironomidae		8.53
7026 (Calopteryx maculata)	1					
7111 (Rheumatobates)	6					
7117 (Trepobates)	1					
7120 (Trepobates pictus)	1					
3946 (Cyphon)	2	2L				
3959 (Helichus lithophilus)	2	2A				
3960 (Helichus basalis)	1	1F, id?				
7296 (Dubiraphia)	3	3L	5			
7300 (Dubiraphia vittata)	3	3M; slide 0170.1, um=256				
7984 (Procladius)	2		7			
9248 (Ablabesmyia (Ablabesmyia mallochi grp.))	1					
8084 (Axarus)	1					
8112 (Dicrotendipes)	1		6			
8168 (Paratendipes albimanus)	1		4			
8235 (Paratanytarsus)	3		4			
9241 (Polypedilum (Polypedilum illinoense grp.))	2					
8274 (Stratiomys)	3					



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-06-0012	14T-019	MHAB	AB17866	140820401	8/20/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
Whitewater River	St Marys Rd	050800030605	05080003060080

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4365384.64	670847.63	71	6.677	841.44	69

Taxon	Count	Notes	HBI Tolerance
1084 (TURBELLARIA)	2		4
1260 (NEMATODA)	1		6
2252 (Physella)	1		8
2156 (Corbicula fluminea)	1		6
1083 (ACARI)	1		4
1017 (HEPTAGENIIDAE)	2		4
9156 (Maccaffertium)	1		
3036 (Leucrocuta)	4		2
3063 (Heterocloeon)	1	(Jubilatum)	3
3065 (Baetis)	7	Specimen missing	3
3066 (Baetis intercalaris)	24		3
3109 (Isonychia)	27		2
3175 (Tricorythodes)	15		3
3245 (Boyeria vinosa)	1		4
3248 (Basiaeschna janata)	1		6
7027 (Hetaerina americana)	3		
3568 (Argia)	1		5
7131 (Rhagovelia obesa)	7	1M, 6F	
7307 (Stenelmis)	1	1L	5
7317 (Stenelmis sexlineata)	3	3A	
1160 (TRICHOPTERA)	1		
3267 (Chimarra obscura)	7		4
3432 (Cheumatopsyche)	45		3
3479 (Hydropsyche dicantha)	2		4
8980 (Hydropsyche betteni grp)	1		
9319 (Ceratopsyche "checkerboard")	25		
8837 (Neureclipsis crepuscularis)	2		
7984 (Procladius)	1		7
8029 (Cricotopus trifascia)	1		
9100 (Tvetenia)	1		5
8086 (Chironomus)	1		8
8238 (Rheotanytarsus)	2		3
9238 (Polypedilum (Uresipedilum) flavum)	5		
9241 (Polypedilum (Polypedilum) illinoense grp.)	1		

Type	Value	Metric Score
Total Taxa:	34	3
Total No. Individuals:	199	3
EPT Taxa:	15	5
% Orthoclaadiinae + Tanytarsini of Chironomidae:	33.33	3
% Non-insects excluding Astacidae:	3.02	5
Diptera Taxa:	7	3
% Intolerant (0-3):	62.81	5
% Tolerant (8-10):	1.01	5
% Predators FFG 1:	7.04	1
% Shredders + Scrapers FFG 1:	3.52	1
% Collector-Filterers FFG 1:	41.21	1
% Sprawlers:	1.51	1
mIBI Metric Score:		36

Supplemental Metrics

HBI	3.09
Shannon-Weaver Index	3.83
Shannon Equitability	.41
% Dominant 3 Taxon	48.74
% Chironomidae	6.03



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-07-0026	14T-020	MHAB	AB17885	140722401	7/22/14	Franklin

Stream Name	Location	HUC 12	HUOTO14
East Fork Whitewater River	US 52	050800030717	05080003070180

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4364427.25	671238.53	71	17.544	382.33	65

Taxon	Count	Notes	HBI Tolerance
1396 (LUMBRICULIDAE)	1		5
1540 (Arcteonais lomondi)	1		6
1558 (Nais/Dero)	1		
2225 (Fossaria)	1		6
2252 (Physella)	8		8
2162 (Pisidium)	1		6
1002 (ASELLIDAE)	7		8
9031 (Lirceus)	77		8
9036 (Caecidotea)	3		8
9056 (Crangonyx)	11		6
3175 (Tricorythodes)	1		3
3605 (Peltodytes edentulus)	1	1A	6
3851 (Berosus peregrinus)	1	1A	6
1073 (CHIRONOMIDAE(all other))	1		6
8006 (Orthoclaadiinae (Subfamily))	2		
8029 (Cricotopus trifascia)	11		
8051 (Orthocladus)	3		4
8112 (Dicrotendipes)	2		6
9260 (Cricotopus (Cricotopus)/Orthocladus (Orthocladus))	5		
9238 (Polypedilum (Uresipedilum) flavum)	1		

Type	Value	Metric Score
Total Taxa:	20	1
Total No. Individuals:	139	3
EPT Taxa:	1	1
% Orthoclaadiinae + Tanytarsini of Chironomidae:	64	1
% Non-insects excluding Astacidae:	79.86	1
Diptera Taxa:	7	3
% Intolerant (0-3):	.72	1
% Tolerant (8-10):	68.35	1
% Predators FFG 1:	0	1
% Shredders + Scrapers FFG 1:	12.95	3
% Collector-Filterers FFG 1:	1.44	5
% Sprawlers:	0	1
mIBI Metric Score:		22

Supplemental Metrics

	HBI	7.51
Shannon-Weaver Index		2.61
Shannon Equitability		.28
% Dominant 3 Taxon		71.22
% Chironomidae		17.99



OWQ/WAPB Macroinvertebrate Community Assessment
MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0026	14T-021	MHAB	AB17872	140722402	7/22/14	Franklin
Stream Name		Location		HUC 12		HUCTO14
Wolf Creek		Blue Creek Rd		050800030802		05080003080040
Northing	Easting	Ecoregion	Gradient	Drainage Area		QHEI Score
4362897.7	670654.46	71	7.829	6.264		62

Taxon	Count	Notes	HBI Tolerance
10107 (Chordodes morgani)	1		
2252 (Physella)	1		8
1083 (ACARI)	13		4
9031 (Lirceus)	1		8
8996 (Orconectes)	3	1MII, 2F	4
9156 (Maccaffertium)	1		
3020 (Stenonema femoratum)	1		3
3066 (Baetis intercalaris)	12		3
3188 (Caenis latipennis)	1		
7099 (Aquarius remigis)	3	1M, 2F	
7123 (Microvelia americana)	1		
7309 (Stenelmis crenata)	4	4M; slide 0182.1	5
3432 (Cheumatopsyche)	25		3
8980 (Hydropsyche betteni grp)	1		
9319 (Ceratopsyche "checkerboard")	14		
9222 (Cernotina/Polycentropus)	2		
7814 (Simulium)	14		5
1077 (CERATOPOGONIDAE)	1		6
9248 (Ablabesmyia (Ablabesmyia) mallochi grp.)	1		
9165 (Saetheria tylus)	1		4
9260 (Cricotopus (Cricotopus)/Orthocladius (Orthocladius)	2		
1079 (EPHYDRIDAE)	1		6
1082 (MUSCIDAE)	1		6

Type	Value	Metric Score
Total Taxa:	23	3
Total No. Individuals:	105	1
EPT Taxa:	8	5
% Orthocladiinae + Tanytarsini of Chironomidae:	0	5
% Non-insects excluding Astacidae:	15.24	5
Diptera Taxa:	7	3
% Intolerant (0-3):	36.19	5
% Tolerant (8-10):	1.9	5
% Predators FFG 1:	4.76	1
% Shredders + Scrapers FFG 1:	4.76	1
% Collector-Filterers FFG 1:	37.14	1
% Sprawlers:	.95	1
mIBI Metric Score:	36	

Supplemental Metrics

HBI	3.92
Shannon-Weaver Index	3.52
Shannon Equitability	.38
% Dominant 3 Taxon	50.48
% Chironomidae	3.81



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW080-0003	14T-022	MHAB	AB17891	140729404	7/29/14	Franklin
Stream Name		Location		HUC 12	HUCTO14	
Blue Creek		Highland Center Rd		050800030802	05080003080040	
Northing	Eastng	Ecoregion	Gradient	Drainage Area	QHEI Score	
4362583.31	670905.62	71	9.533	32.791	63	

Taxon	Count	Notes	HBI Tolerance
1552 (Tubificidae with bifid chetae and no hair chetae)	1		
1357 (BRANCHIOBDELLIDAE)	1		6
2252 (Physella)	3		8
8996 (Orconectes)	5	1M, 4F	4
3066 (Baetis intercalaris)	3		3
3074 (Centroptilum)	1		3
3183 (Caenis)	5		3
3188 (Caenis latipennis)	3		
3202 (Hexagenia)	1		4
1041 (CORIXIDAE)	1	imm	5
7123 (Microvelia americana)	1		
3600 (Peltodytes duodecimpunctatus)	10	10A	
3604 (Peltodytes sexmaculatus)	2	2A	
3851 (Berosus peregrinus)	6	6A	6
3879 (Enochrus)	1	1L	
3799 (Corydalus cornutus)	3		2
3432 (Cheumatopsyche)	8		3
9319 (Ceratopsyche "checkerboard")	1		
3000 (Hydroptila)	1		3
1053 (POLYCENTROPODIDAE)	1		6
7814 (Simulium)	1		5
1077 (CERATOPOGONIDAE)	1		6
8984 (Bezzia/Palpomyia)	1		
1073 (CHIRONOMIDAE(all other))	1		6
7984 (Procladius)	2		7
7926 (Tanypodinae (Subfamily))	1		
8083 (Chironomini (Tribe))	2	1P	
8227 (Tanytarsini (Tribe))	1		
9261 (Thienemannimyia grp.)	1		
8074 (Thienemanniella)	2		4
8086 (Chironomus)	65		8
8099 (Cryptochironomus)	2		5
8104 (Cryptotendipes)	1		4
8211 (Stictochironomus)	1		4
8228 (Cladotanytarsus)	2	1P	4
8235 (Paratanytarsus)	1		4
9093 (Stempellinella)	1		3
8241 (Tanytarsus)	28	1P	4
9238 (Polypedilum (Uresipedilum) flavum)	1		
9241 (Polypedilum (Polypedilum))	1		

Type	Value	Metric Score
Total Taxa:	43	5
Total No. Individuals:	177	3
EPT Taxa:	9	5
% Orthocladiinae + Tanytarsini of Chironomidae:	30.7	3
% Non-insects excluding Astacidae:	2.82	5
Diptera Taxa:	23	5
% Intolerant (0-3):	12.43	1
% Tolerant (8-10):	38.42	1
% Predators FFG 1:	5.65	1
% Shredders + Scrapers FFG 1:	5.65	1
% Collector-Filterers FFG 1:	22.6	1
% Sprawlers:	5.08	3
mIBI Metric Score:		34

Supplemental Metrics

	HBI	
	5.88	
Shannon-Weaver Index		3.78
Shannon Equitability		.4
% Dominant 3 Taxon		58.19
% Chironomidae		64.41



OWQ/WAPB Macroinvertebrate Community Assessment
MHAB Report

Taxon	Count	Notes	HBI Tolerance
illinoense grp.)			
9257 (Cricotopus (Cricotopus))	1		
8320 (Chrysops)	1		5
8397 (Hemerodromia)	1		



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0014	14T-023	MHAB	AB17884	140729403	7/29/14	Franklin
Stream Name		Location		HUC 12		HUCTO14
Blue Creek		Blue Creek Rd		050800030802		05080003080030
Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score	
4358258.09	669286	71	38.222	18.359	58	

Taxon	Count	Notes	HBI Tolerance
1083 (ACARI)	11		4
9031 (Lirceus)	2		8
9008 (Orconectes rusticus)	5	2MII, 3F	6
1017 (HEPTAGENIIDAE)	3		4
3025 (Maccaffertium vicarium)	1		2
3020 (Stenonema femoratum)	8		3
3048 (Stenacron)	1		3
1012 (BAETIDAE)	1		4
3066 (Baetis intercalaris)	9		3
3365 (Proclleon)	1	slide 0174.2	
3183 (Caenis)	5		3
3188 (Caenis latipennis)	8		
3109 (Isonychia)	12		2
7307 (Stenelmis)	4	4L	5
7309 (Stenelmis crenata)	5	2M, 3F; slide 0174.1	5
3799 (Corydalis cornutus)	1		2
3267 (Chimarra obscura)	11		4
3003 (Chimarra aterrima)	1		2
1057 (HYDROPSYCHIDAE)	6		4
3432 (Cheumatopsyche)	59		3
3423 (Hydropsyche)	2		4
8980 (Hydropsyche betteni grp)	15		
9319 (Ceratopsyche "checkerboard")	25		
1054 (HYDROPTILIDAE)	1		4
9285 (Tipula (Yamatotipula))	5		
9100 (Tvetenia)	1		5
9296 (Microtendipes pedellus grp)	6		
8168 (Paratendipes albimanus)	7		4
8211 (Stictochironomus)	7		4

Type	Value	Metric Score
Total Taxa:	29	3
Total No. Individuals:	223	3
EPT Taxa:	18	5
% Orthocladiinae + Tanytarsini of Chironomidae:	4.76	5
% Non-insects excluding Astacidae:	5.83	5
Diptera Taxa:	5	1
% Intolerant (0-3):	43.5	5
% Tolerant (8-10):	.9	5
% Predators FFG 1:	.45	1
% Shredders + Scrapers FFG 1:	5.38	1
% Collector-Filterers FFG 1:	40.81	1
% Sprawlers:	.45	1
mIBI Metric Score:		36

Supplemental Metrics	
	HBI
Shannon-Weaver Index	3.48
Shannon Equitability	.43
% Dominant 3 Taxon	44.39
% Chironomidae	9.42



**OWQ/WAPB Macroinvertebrate Community Assessment
MHAB Report**

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0022	14T-024	MHAB	AB17877	140729401	7/29/14	Franklin

Stream Name	Location		HUC 12	HUCTO14	
East Fork Blue Creek	Blue Creek Rd		050800030801	05080003080020	
Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4356903.58	669620.22	71	55.484	8.512	64

Taxon	Count	Notes	HBI Tolerance
1357 (BRANCHIOBDELLIDAE)	1		6
2252 (Physella)	3		8
1083 (ACARI)	8		4
9031 (Lirceus)	1		8
9056 (Crangonyx)	1		6
9008 (Orconectes rusticus)	8	4MII, 4F	6
9156 (Maccaffertium)	2	slides 0176.1, 0176.2	
3020 (Stenonema femoratum)	16		3
3183 (Caenis)	7		3
3188 (Caenis latipennis)	4		
7099 (Aquarius remigis)	1	1M	
3600 (Peltodytes duodecimpunctatus)	1	1A	
7307 (Stenelmis)	4	4L	5
7309 (Stenelmis crenata)	8	4M, 4F; slide 0176.3	5
3267 (Chimarra obscura)	1		4
3432 (Cheumatopsyche)	12		3
8980 (Hydropsyche betteni grp)	1		
9319 (Ceratomyche "checkerboard")	2		
3000 (Hydroptila)	2	1P	3
8952 (Helicopsyche borealis)	7		3
7941 (Natarsia baltimoreus)	1		6
9153 (Tribelos)	1		5
8083 (Chironomini (Tribe))	4		
9261 (Thienemannimyia grp.)	1		
8086 (Chironomus)	2		8
9296 (Microtendipes pedellus grp)	3		
8168 (Paratendipes albimanus)	6		4
8211 (Stictochironomus)	23		4
8241 (Tanytarsus)	1		4
9277 (Polypedilum (Tripodura) scalaenum grp)	8		

Type	Value	Metric Score
Total Taxa:	30	3
Total No. Individuals:	140	3
EPT Taxa:	10	5
% Orthocladiinae + Tanytarsini of Chironomidae:	2	5
% Non-insects excluding Astacidae:	10	5
Diptera Taxa:	10	3
% Intolerant (0-3):	31.43	3
% Tolerant (8-10):	4.29	5
% Predators FFG 1:	.71	1
% Shredders + Scrapers FFG 1:	17.14	3
% Collector-Filterers FFG 1:	10	3
% Sprawlers:	0	1
mIBI Metric Score:		40

Supplemental Metrics

	HBI	Value
	HBI	4.13
Shannon-Weaver Index		4.25
Shannon Equitability		.45
% Dominant 3 Taxon		36.43
% Chironomidae		35.71



OWQ/WAPB Macroinvertebrate Community Assessment

MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0022	14T-024	MHAB	AB19406	140729402	7/29/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
East Fork Blue Creek	Blue Creek Rd	050800030801	05080003080020

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4356903.58	669620.22	71	55.484	8.512	64

Taxon	Count	Notes	HBI Tolerance
1232 (NAIDIDAE)	1		8
1552 (Tubificidae with bifid chetae and no hair chetae)	1		
1357 (BRANCHIOBDELLIDAE)	3		6
2252 (Physella)	8		8
1083 (ACARI)	4		4
9031 (Lirceus)	3		8
9008 (Orconectes rusticus)	6	3MII, 3F	6
3020 (Stenonema femoratum)	17		3
3183 (Caenis)	11		3
3188 (Caenis latipennis)	14		
7123 (Microvelia americana)	2		
7293 (Psephenus herricki)	1	1L	4
7307 (Stenelmis)	1	1L	5
7309 (Stenelmis crenata)	1	1M; slide 0191.1	5
3003 (Chimarra aterrima)	1		2
3432 (Cheumatopsyche)	5		3
9319 (Ceratopsyche "checkerboard")	2		
8952 (Helicopsyche borealis)	1		3
7977 (Zavrelimyia)	1		4
8083 (Chironomini (Tribe))	10		
8086 (Chironomus)	1		8
8099 (Cryptochironomus)	1		5
8112 (Dicrotendipes)	2		6
9296 (Microtendipes pedellus grp)	1		
8168 (Paratendipes albimanus)	12		4
8211 (Stictochironomus)	16		4
9277 (Polypedilum (Tripodura) scalaenum grp)	4		

Type	Value	Metric Score
Total Taxa:	27	3
Total No. Individuals:	130	3
EPT Taxa:	7	3
% Orthoclaadiinae + Tanytarsini of Chironomidae:	0	5
% Non-insects excluding Astacidae:	15.38	5
Diptera Taxa:	9	3
% Intolerant (0-3):	26.92	3
% Tolerant (8-10):	10	5
% Predators FFG 1:	1.54	1
% Shredders + Scrapers FFG 1:	9.23	1
% Collector-Filterers FFG 1:	4.62	5
% Sprawlers:	.77	1
mIBI Metric Score:		38

Supplemental Metrics

	HBI
Shannon-Weaver Index	4.43
Shannon Equitability	.44
% Dominant 3 Taxon	36.15
% Chironomidae	36.92



OWQ/WAPB Macroinvertebrate Community Assessment

MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0015	14T-025	MHAB	AB17883	140908401	9/8/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
Whitewater River	SR 1	050800030804	05080003080060

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4358653.73	676213.31	71	5.118	1283.637	77

Taxon	Count	Notes	HBI Tolerance
1086 (OLIGOCHAETA)	1		8
1263 (Dreissena polymorpha)	1		8
2156 (Corbicula fluminea)	1		6
9156 (Maccaffertium)	1		
3019 (Maccaffertium exiguum)	1		2
3066 (Baetis intercalaris)	4		3
3183 (Caenis)	1		3
3109 (Isonychia)	7		2
3175 (Tricorythodes)	4		3
3245 (Boyeria vinosa)	1		4
9286 (Gomphus (Gomphurus))	1		
3397 (Macromia)	2		2
7027 (Hetaerina americana)	2		
3549 (Enallagma divagans)	3		
1041 (CORIXIDAE)	12		5
7201 (Trichocorixa calva)	7	2M, 5F	4
7202 (Trichocorixa kanza)	1		4
7183 (Palmacorixa)	2		5
7131 (Rhagovelia obesa)	2		
3600 (Peltodytes duodecimpunctatus)	2	2A	
3851 (Berosus peregrinus)	4	4A	6
3959 (Helichus lithophilus)	2	2A	
7307 (Stenelmis)	2	1L, 1F	5
7317 (Stenelmis sexlineata)	3	3A	
3799 (Corydalus cornutus)	3		2
3267 (Chimarra obscura)	4		4
3432 (Cheumatopsyche)	4		3
9319 (Ceratopsyche "checkerboard")	22		
3000 (Hydroptila)	2		3
7814 (Simulium)	2		5
8083 (Chironomini (Tribe))	3		
8012 (Cardiocladius)	1		5
9100 (Tvetenia)	2		5
8086 (Chironomus)	2		8
8241 (Tanytarsus)	1		4
9277 (Polypedilum (Tripodura) scalaenum grp)	1		
9238 (Polypedilum (Uresipedilum) flavum)	6		
9241 (Polypedilum (Polypedilum) illinoense grp.)	1		

Type	Value	Metric Score
Total Taxa:	38	3
Total No. Individuals:	121	1
EPT Taxa:	10	3
% Orthoclaadiinae + Tanytarsini of Chironomidae:	23.53	5
% Non-insects excluding Astacidae:	2.48	5
Diptera Taxa:	9	3
% Intolerant (0-3):	23.14	3
% Tolerant (8-10):	3.31	5
% Predators FFG 1:	29.75	3
% Shredders + Scrapers FFG 1:	6.61	1
% Collector-Filterers FFG 1:	16.53	3
% Sprawlers:	1.65	1
mIBI Metric Score:		36

Supplemental Metrics

	HBI	Value
Shannon-Weaver Index	4.08	
Shannon Equitability		.5
% Dominant 3 Taxon		33.88
% Chironomidae		14.05



**OWQ/WAPB Macroinvertebrate Community Assessment
MHAB Report**

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0016	14T-026	MHAB	AB17882	140728402	7/28/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
Big Cedar Creek	US 52	050800030803	05080003080080

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4358497.43	677428.91	71	38.336	29.542	61

Taxon	Count	Notes	HBI Tolerance
1396 (LUMBRICULIDAE)	1		5
2252 (Physella)	3		8
1083 (ACARI)	5		4
3025 (Maccaffertium vicarium)	1		2
9090 (Maccaffertium mediopuncta)	2		2
3020 (Stenonema femoratum)	1		3
3036 (Leucrocuta)	4		2
3063 (Heterocloeon)	1	(Jubilatum)	3
3066 (Baetis intercalaris)	35		3
3071 (Baetis flavistriga)	2		3
3188 (Caenis latipennis)	7		
3109 (Isonychia)	3		2
1021 (GOMPHIDAE)	2		1
1025 (MACROMIIDAE)	1		3
7123 (Microvelia americana)	1		
3851 (Berosus peregrinus)	1	1A	6
7307 (Stenelmis)	1	1L	5
7309 (Stenelmis crenata)	8	8A; slide 0188.1	5
3799 (Corydalus cornutus)	2		2
1057 (HYDROPSYCHIDAE)	1	1P	4
3432 (Cheumatopsyche)	17		3
9319 (Ceratopsyche "checkerboard")	30		
3000 (Hydroptila)	2		3
8837 (Neureclipsis crepuscularis)	1		
9248 (Ablabesmyia (Ablabesmyia mallochi grp.))	2		
8006 (Orthocladiinae (Subfamily))	1	1P	
9100 (Tvetenia)	1		5
9296 (Microtendipes pedellus grp)	1		
9165 (Saetheria tylus)	1		4
8238 (Rheotanytarsus)	1		3

Type	Value	Metric Score
Total Taxa:	30	3
Total No. Individuals:	139	3
EPT Taxa:	14	5
% Orthocladiinae + Tanytarsini of Chironomidae:	42.86	3
% Non-insects excluding Astacidae:	6.47	5
Diptera Taxa:	6	1
% Intolerant (0-3):	53.24	5
% Tolerant (8-10):	2.16	5
% Predators FFG 1:	2.16	1
% Shredders + Scrapers FFG 1:	16.55	3
% Collector-Filterers FFG 1:	15.83	3
% Sprawlers:	.72	1
mIBI Metric Score:		38

Supplemental Metrics

HBI	3.32
Shannon-Weaver Index	3.66
Shannon Equitability	.39
% Dominant 3 Taxon	58.99
% Chironomidae	5.04



OWQ/WAPB Macroinvertebrate Community Assessment

MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0024	14T-027	MHAB	AB17876	140728403	7/28/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
Big Cedar Creek	Big Cedar Rd	050800030803	05080003080070

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4365514.11	680179.62	55	54.985	7.646	58

Taxon	Count	Notes	HBI Tolerance
1084 (TURBELLARIA)	1		4
1552 (Tubificidae with bifid chetae and no hair chetae)	3		
1553 (Tubificidae with pectinate chetae and hair chetae)	2		
1233 (ERPODELLIDAE)	1		
2252 (Physella)	8		8
1083 (ACARI)	3		4
9156 (Maccaffertium)	1		
1012 (BAETIDAE)	9		4
3066 (Baetis intercalaris)	29		3
3540 (Ischnura)	2		9
7031 (Ischnura verticalis)	2		
3542 (Ischnura posita)	1		
3560 (Enallagma basidens)	1		
7118 (Trepobates inermis)	2	1M, 1F	
7123 (Microvelia americana)	1		
7307 (Stenelmis)	13	13L	5
7309 (Stenelmis crenata)	9	7M, 2F; slide 0190.1	5
3267 (Chimarra obscura)	1		4
3432 (Cheumatopsyche)	4		3
9319 (Ceratopsyche "checkerboard")	6		
3000 (Hydroptila)	1		3
9285 (Tipula (Yamatotipula))	1		
7814 (Simulium)	7		5
1077 (CERATOPOGONIDAE)	1	1P	6
7984 (Procladius)	1		7
9261 (Thienemannimyia grp.)	2		
8006 (Orthocladiinae (Subfamily))	1		
9296 (Microtendipes pedellus grp)	3		
8211 (Stictochironomus)	14		4
9277 (Polypedilum (Tripodura) scalaenum grp)	3		
9241 (Polypedilum (Polypedilum) illinoense grp.)	1		

Type	Value	Metric Score
Total Taxa:	31	3
Total No. Individuals:	134	3
EPT Taxa:	7	3
% Orthocladiinae + Tanytarsini of Chironomidae:	4	5
% Non-insects excluding Astacidae:	13.43	5
Diptera Taxa:	10	3
% Intolerant (0-3):	25.37	3
% Tolerant (8-10):	7.46	5
% Predators FFG 1:	6.72	1
% Shredders + Scrapers FFG 1:	23.13	5
% Collector-Filterers FFG 1:	8.96	5
% Sprawlers:	1.49	1
mIBI Metric Score:		42

Supplemental Metrics

HBI	4.41
Shannon-Weaver Index	4.11
Shannon Equitability	.44
% Dominant 3 Taxon	41.79
% Chironomidae	18.66



OWQ/WAPB Macroinvertebrate Community Assessment

MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0019	14T-028	MHAB	AB17880	140728401	7/28/14	Dearborn

Stream Name	Location	HUC 12	HUCTO14
Logan Creek	SR 46	050800030806	05080003080100

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4349692.76	682622.23	71	9.189	12.572	45

Taxon	Count	Notes	HBI Tolerance
2252 (Physella)	3		8
9002 (Orconectes virilis)	1		6
3183 (Caenis)	3		3
3248 (Basiaeschna janata)	2		6
3540 (Ischnura)	1		9
3542 (Ischnura posita)	1		
7111 (Rheumatobates)	1		
7118 (Trepobates inermis)	2		
7121 (Trepobates subnitidus)	2		
7122 (Microvelia)	1		
3600 (Peltodytes duodecimpunctatus)	16	16A	
3601 (Peltodytes lengi)	1	1A	
3604 (Peltodytes sexmaculatus)	4	4A	
3851 (Berosus peregrinus)	2	2A	6
3910 (Helochaers maculicollis)	1	1A	
3946 (Cyphon)	3	3L	
9326 (Dubiraphia minima grp)	2	2F	
3773 (Sialis)	16		5
1077 (CERATOPOGONIDAE)	1	1P	6
1073 (CHIRONOMIDAE(all other))	1		6
7984 (Procladius)	3		7
8083 (Chironomini (Tribe))	1		
9284 (Tribelos jucundus)	2		
8123 (Endochironomus)	2		6
8241 (Tanytarsus)	1		4
9278 (Polypedilum (Tripodura) halterale-simulans grp)	5		

Type	Value	Metric Score
Total Taxa:	26	3
Total No. Individuals:	78	1
EPT Taxa:	1	1
% Orthocladiinae + Tanytarsini of Chironomidae:	6.67	5
% Non-insects excluding Astacidae:	3.85	5
Diptera Taxa:	8	3
% Intolerant (0-3):	3.85	1
% Tolerant (8-10):	5.13	5
% Predators FFG 1:	35.9	3
% Shredders + Scrapers FFG 1:	12.82	3
% Collector-Filterers FFG 1:	2.56	5
% Sprawlers:	5.13	3
mIBI Metric Score:		38

Supplemental Metrics

HBI	5.58
Shannon-Weaver Index	3.97
Shannon Equitability	.42
% Dominant 3 Taxon	47.44
% Chironomidae	19.23



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0030	14T-029	MHAB	AB17864	140909401	9/9/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
Whitewater River	St Peters Rd	050800030805	05080003080090

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4353764.54	680556.6	71	4.431	1323.945	73

Taxon	Count	Notes	HBI Tolerance
1260 (NEMATODA)	1		6
1396 (LUMBRICULIDAE)	2		5
1543 (LUMBRICIDAE)	1		
2156 (Corbicula fluminea)	2		6
2157 (Musculium)	1		6
9156 (Maccaffertium)	4		
9090 (Maccaffertium mediopuncta)	3		2
3066 (Baetis intercalaris)	20	slide 0175.1	3
3109 (Isonychia)	23		2
3175 (Tricorythodes)	28		3
7027 (Hetaerina americana)	1		
7130 (Rhagovelia)	2		
7131 (Rhagovelia obesa)	4	2M, 2F	
1065 (HYDROPHILIDAE)	2	2L	
3851 (Berosus peregrinus)	1	1A	6
1068 (ELMIDAE)	1	1L	4
7307 (Stenelmis)	3	2L, 1F	5
7317 (Stenelmis sexlineata)	13	7M, 6F	
3799 (Corydalis cornutus)	4		2
3267 (Chimarra obscura)	7		4
1057 (HYDROPSYCHIDAE)	4		4
3432 (Cheumatopsyche)	9		3
9319 (Ceratopsyche "checkerboard")	31		
3000 (Hydroptila)	5		3
8832 (Protoptila)	1	slide 0175.2	1
9117 (CRAMBIDAE)	1		
7548 (Antocha)	1		2
9285 (Tipula (Yamatotipula))	1		
9100 (Tvetenia)	4		5
9296 (Microtendipes pedellus grp)	4		
8172 (Phaenopsectra)	2		7
8228 (Cladotanytarsus)	2		4
8238 (Rheotanytarsus)	1		3
9238 (Polypedilum (Uresipedilum) flavum)	7		

Type	Value	Metric Score
Total Taxa:	34	3
Total No. Individuals:	196	3
EPT Taxa:	11	3
% Orthocladiinae + Tanytarsini of Chironomidae:	35	3
% Non-insects excluding Astacidae:	3.57	5
Diptera Taxa:	8	3
% Intolerant (0-3):	48.47	5
% Tolerant (8-10):	0	5
% Predators FFG 1:	5.61	1
% Shredders + Scrapers FFG 1:	7.65	1
% Collector-Filterers FFG 1:	23.98	1
% Sprawlers:	2.04	1
mIBI Metric Score:		34

Supplemental Metrics

Metric	Value
HBI	3.18
Shannon-Weaver Index	4.17
Shannon Equitability	.45
% Dominant 3 Taxon	41.84
% Chironomidae	10.2



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0018	14T-030	MHAB	AB17881	140721401	7/21/14	Dearborn
Stream Name		Location		HUC 12	HUCTO14	
Johnson Fork		Johnson Fork Rd		050800030806	05080003080110	
Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score	
4350942.12	686263.98	71	34.188	12.561	59	

Taxon	Count	Notes	HBI Tolerance
3018 (Maccaffertium pulchellum)	1		2
3025 (Maccaffertium vicarium)	1	slide 0183.2	2
3066 (Baetis intercalaris)	1		3
3365 (Procloeon)	1		
3183 (Caenis)	5		3
3188 (Caenis latipennis)	12		
3197 (Ephemera)	1		3
7307 (Stenelmis)	5	5L	5
7309 (Stenelmis crenata)	11	11A; slide 0183.1	5
7610 (Hexatoma)	1		2
7732 (Anopheles)	1		
7814 (Simulium)	1		5
9261 (Thienemannimyia grp.)	3		
9100 (Tvetenia)	3		5
8238 (Rheotanytarsus)	1		3
8355 (Tabanus)	1		5
8397 (Hemerodromia)	1		

Type	Value	Metric Score
Total Taxa:	17	1
Total No. Individuals:	50	1
EPT Taxa:	7	3
% Orthocladiinae + Tanytarsini of Chironomidae:	57.14	1
% Non-insects excluding Astacidae:	0	5
Diptera Taxa:	8	3
% Intolerant (0-3):	22	3
% Tolerant (8-10):	0	5
% Predators FFG 1:	4	1
% Shredders + Scrapers FFG 1:	36	5
% Collector-Filterers FFG 1:	6	5
% Sprawlers:	8	5
mIBI Metric Score:		38

Supplemental Metrics

HBI	4.22
Shannon-Weaver Index	3.37
Shannon Equitability	.36
% Dominant 3 Taxon	56
% Chironomidae	14



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0018	14T-030	MHAB	AB19407	140721402	7/21/14	Dearborn
Stream Name		Location		HUC 12	HUCTO14	
Johnson Fork		Johnson Fork Rd		050800030806	05080003080110	
Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score	
4350942.12	686263.98	71	34.188	12.561	59	

Taxon	Count	Notes	HBI Tolerance
8996 (Orconectes)	1		4
3025 (Maccaffertium vicarium)	2		2
3020 (Stenonema femoratum)	11		3
3036 (Leucrocuta)	2		2
3066 (Baetis intercalaris)	8	slide 0173.3	3
3188 (Caenis latipennis)	37	slide 0173.2	
7307 (Stenelmis)	1	1L	5
7309 (Stenelmis crenata)	2	2A; slide 0173.1	5
3267 (Chimarra obscura)	3		4
3432 (Cheumatopsyche)	20		3
9319 (Ceratopsyche "checkerboard")	7		
3000 (Hydroptila)	2		3
8952 (Helicopsyche borealis)	2		3
7452 (Tipula)	1		7
7610 (Hexatoma)	4		2
1077 (CERATOPOGONIDAE)	1		6
7893 (Probezzia)	3		
7926 (Tanypodinae (Subfamily))	1		
9248 (Ablabesmyia (Ablabesmyia mallochi grp.))	9		
9261 (Thienemannimyia grp.)	4		
8099 (Cryptochironomus)	1		5
9296 (Microtendipes pedellus grp)	2		
8168 (Paratendipes albimanus)	1		4
8211 (Stictochironomus)	1		4
8238 (Rheotanytarsus)	1		3
9277 (Polypedilum (Tripodura) scalaenum grp)	6		

Type	Value	Metric Score
Total Taxa:	26	3
Total No. Individuals:	133	3
EPT Taxa:	10	5
% Orthocladiinae + Tanytarsini of Chironomidae:	3.85	5
% Non-insects excluding Astacidae:	0	5
Diptera Taxa:	13	3
% Intolerant (0-3):	39.1	5
% Tolerant (8-10):	0	5
% Predators FFG 1:	7.52	1
% Shredders + Scrapers FFG 1:	9.02	1
% Collector-Filterers FFG 1:	18.05	3
% Sprawlers:	1.5	1
mIBI Metric Score:		40

Supplemental Metrics

	HBI	Score
Shannon-Weaver Index	3.2	3.73
Shannon Equitability		.4
% Dominant 3 Taxon		51.13
% Chironomidae		19.55



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0021	14T-031	MHAB	AB17878	140910401	9/10/14	Dearborn

Stream Name	Location	HUC 12	HUCTO14
Whitewater River	Jamison Rd	050800030810	05080003080120

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4346706.28	688035.98	71	3.7	1369.728	65

Taxon	Count	Notes	HBI Tolerance
1396 (LUMBRICULIDAE)	1		5
1490 (Dero digitata)	1		10
2215 (Elimia)	1		
2156 (Corbicula fluminea)	7		6
1083 (ACARI)	2		4
1017 (HEPTAGENIIDAE)	3		4
9156 (Maccaffertium)	3		
9090 (Maccaffertium mediopuncta)	1		2
3036 (Leucrocuta)	2		2
1012 (BAETIDAE)	2		4
3063 (Heterocloeon)	2	slide 0179.2	3
3066 (Baetis intercalaris)	27		3
3183 (Caenis)	2		3
3186 (Caenis anceps)	1		
3187 (Caenis hilaris)	1		
3188 (Caenis latipennis)	1		
3194 (Anthopotamus)	4		4
3109 (Isonychia)	14		2
3175 (Tricorythodes)	30		3
3846 (Berosus)	1	1L	7
7307 (Stenelmis)	6	6L	5
7309 (Stenelmis crenata)	1	1M; slide 0179.1	5
7317 (Stenelmis sexlineata)	7	3M, 4F	
3799 (Corydalus cornutus)	9		2
1045 (PHILOPOTAMIDAE)	1	imm	3
3267 (Chimarra obscura)	1		4
3432 (Cheumatopsyche)	26		3
3487 (Hydropsyche simulans)	1		2
9319 (Ceratopsyche "checkerboard")	16		
7926 (Tanypodinae (Subfamily))	1		
8006 (Orthocladiinae (Subfamily))	1		
8086 (Chironomus)	4		8
9296 (Microtendipes pedellus grp)	1		
8228 (Cladotanytarsus)	3		4
8238 (Rheotanytarsus)	1		3
8241 (Tanytarsus)	3		4
9238 (Polypedilum (Uresipedilum) flavum)	1		

Type	Value	Metric Score
Total Taxa:	37	3
Total No. Individuals:	189	3
EPT Taxa:	19	5
% Orthocladiinae + Tanytarsini of Chironomidae:	53.33	1
% Non-insects excluding Astacidae:	6.35	5
Diptera Taxa:	8	3
% Intolerant (0-3):	61.38	5
% Tolerant (8-10):	2.65	5
% Predators FFG 1:	5.82	1
% Shredders + Scrapers FFG 1:	6.35	1
% Collector-Filterers FFG 1:	28.04	1
% Sprawlers:	0	1
MIBI Metric Score:		34

Supplemental Metrics

	HBI	Score
Shannon-Weaver Index	3.38	
Shannon Equitability		.45
% Dominant 3 Taxon		43.92
% Chironomidae		7.94



OWQ/WAPB Macroinvertebrate Community Assessment

MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0027	14T-032	MHAB	AB17871	140721403	7/21/14	Franklin
Stream Name		Location		HUC 12	HUOTO14	
Sours Run		Drewersburg Rd		050800030808	05080003080140	
Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score	
4361053.88	686323.08	55	22.189	5.232	56	

Taxon	Count	Notes	HBI Tolerance
2252 (Physella)	5		8
1083 (ACARI)	4		4
9050 (Hyalella)	1		
8996 (Orconectes)	1	1F	4
3020 (Stenonema femoratum)	1		3
3183 (Caenis)	6		3
3188 (Caenis latipennis)	1		
3189 (Caenis punctata)	1	slide 0185.2	
3245 (Boyeria vinosa)	2		4
7117 (Trepobates)	2	imm	
7120 (Trepobates pictus)	4	1M, 3F	
7099 (Aquarius remigis)	1	1M	
7122 (Microvelia)	1	imm	
7123 (Microvelia americana)	1		
3600 (Peltodytes duodecimpunctatus)	2	2A	
3740 (Heterosternuta pulcher)	1	1A	
3809 (Gyrinus)	1	1A	4
3960 (Helichus basalis)	2	2F	
7307 (Stenelmis)	1	1L	5
7299 (Dubiraphia quadrinotata)	3	1M, 2F; slide 0185.1, 423um	3
7984 (Procladius)	1		7
7926 (Tanypodinae (Subfamily))	1	1P	
8083 (Chironomini (Tribe))	8		
9261 (Thienemannimyia grp.)	1		
8086 (Chironomus)	1		8
8126 (Glyptotendipes)	1		6
9296 (Microtendipes pedellus grp)	1		
8168 (Paratendipes albimanus)	1		4
8211 (Stictochironomus)	12		4

Type	Value	Metric Score
Total Taxa:	29	3
Total No. Individuals:	68	1
EPT Taxa:	4	3
% Orthocladiinae + Tanytarsini of Chironomidae:	0	5
% Non-insects excluding Astacidae:	14.71	5
Diptera Taxa:	9	3
% Intolerant (0-3):	14.71	1
% Tolerant (8-10):	8.82	5
% Predators FFG 1:	19.12	3
% Shredders + Scrapers FFG 1:	8.82	1
% Collector-Filterers FFG 1:	1.47	5
% Sprawlers:	1.47	1
MIBI Metric Score:		36

Supplemental Metrics

HBI	4.5
Shannon-Weaver Index	4.28
Shannon Equitability	.46
% Dominant 3 Taxon	38.24
% Chironomidae	39.71



OWQ/WAPB Macroinvertebrate Community Assessment MHAB Report

Site Name	EPA ID	Macro Sample Type	Sample #	Macro Event #	Sample Date	County
GMW-08-0020	14T-033	MHAB	AB17879	140721404	7/21/14	Franklin

Stream Name	Location	HUC 12	HUCTO14
Dry Fork Whitewater River	Dickson Rd	050800030807	05080003080130

Northing	Easting	Ecoregion	Gradient	Drainage Area	QHEI Score
4362607.59	687619.37	55	55.154	11.774	50

Taxon	Count	Notes	HBI Tolerance
1396 (LUMBRICULIDAE)	2		5
1083 (ACARI)	14		4
9016 (Orconectes sloanii)	2	2MII	
7111 (Rheumatobates)	1		
7122 (Microvelia)	1		
7123 (Microvelia americana)	1		
7307 (Stenelmis)	1	1L	5
7309 (Stenelmis crenata)	6	6A; slide 0184.1	5
3797 (Nigronia serricornis)	1		4
3000 (Hydroptila)	1		3
9153 (Tribelos)	1		5
8086 (Chironomus)	3		8
8168 (Paratendipes albimanus)	1		4
8211 (Stictochironomus)	14		4
9277 (Polypedilum (Tripodura) scalaenum grp)	2		
9241 (Polypedilum (Polypedilum) illinoense grp.)	1		

Type	Value	Metric Score
Total Taxa:	16	1
Total No. Individuals:	52	1
EPT Taxa:	1	1
% Orthoclaadiinae + Tanytarsini of Chironomidae:	0	5
% Non-insects excluding Astacidae:	30.77	3
Diptera Taxa:	6	1
% Intolerant (0-3):	1.92	1
% Tolerant (8-10):	5.77	5
% Predators FFG 1:	5.77	1
% Shredders + Scrapers FFG 1:	15.38	3
% Collector-Filterers FFG 1:	0	5
% Sprawlers:	0	1
mIBI Metric Score:		28

Supplemental Metrics

HBI	4.48
Shannon-Weaver Index	3.15
Shannon Equitability	.34
% Dominant 3 Taxon	65.38
% Chironomidae	42.31