

## **Biological and Habitat Assessment of Selected Tributaries of the East Fork Little Miami River**

A report to:

Clermont Co. Office of Environmental Quality  
4400 Haskell Lane  
Batavia, Ohio 45103  
Hannah Lubbers, Project Manager  
Rebecca McClatchey, East Fork Watershed Coordinator

Submitted by:

Travis D. Smith  
Martin J. Knapp  
Chris O. Yoder  
Center for Applied Bioassessment & Biocriteria  
Midwest Biodiversity Institute  
P.O. Box 21561  
Columbus, OH 43221-0561  
[mbi@mwbinst.com](mailto:mbi@mwbinst.com)

### **Scope & Purpose**

The Clermont County Office of Environmental Quality (OEQ) conducted a multi-faceted water quality sampling program in 2010. The program involved collecting field data, water samples, and biological assessments from a number of locations around the County in support of various initiatives. Part of that effort included the collection of biological and habitat assessment data that meets the specifications of the Ohio Credible Data Law. To that end the Midwest Biodiversity Institute, Inc. (MBI) was tasked by the Clermont Co. Office of Environmental Quality (OEQ) to perform a biological and habitat assessment of five tributaries to the East Fork Little Miami River (EFLMR) in Clermont Co. during the summer-fall index period of 2010 to determine whether these streams are meeting biological criteria.

### **Study Area**

The 2010 study area consists of six locations in the East Fork Little Miami River watershed, two sites in Stonelick Creek and one site each in Poplar Creek, Pleasant Run, Ulrey Run, and Grassy Fork (Figure 1). These sites are in predominantly agricultural watersheds and are tributaries to either Stonelick or East Fork Lake. Event based chemical/physical sampling will also be conducted at these same sites and should assist in pinpointing the causes of any observed

biological impairments. The Clermont Co. OEQ is collaborating with The East Fork Watershed Collaborative, USDA, and NRCS to incentivize agricultural land in certain impaired watersheds for BMP projects. Collecting biological assessments will identify streams which should be the focus of BMP projects. The sampling in Grassy Fork, Pleasant Run, and Stonelick Creek will provide baseline data for documenting any improvements in water quality due to the implementation of future BMP projects. Pleasant Run was also selected because it receives runoff from the CECOS Hazardous Waste Facility. Poplar Creek was selected to compare biological index scores to Stonelick Creek as these two streams have similar land uses, yet have very different instream habitat quality. Ulrey Run was chosen to identify any impacts from the Forest Hills Wastewater Treatment Plant on biological condition and as a comparison to Grassy Fork.

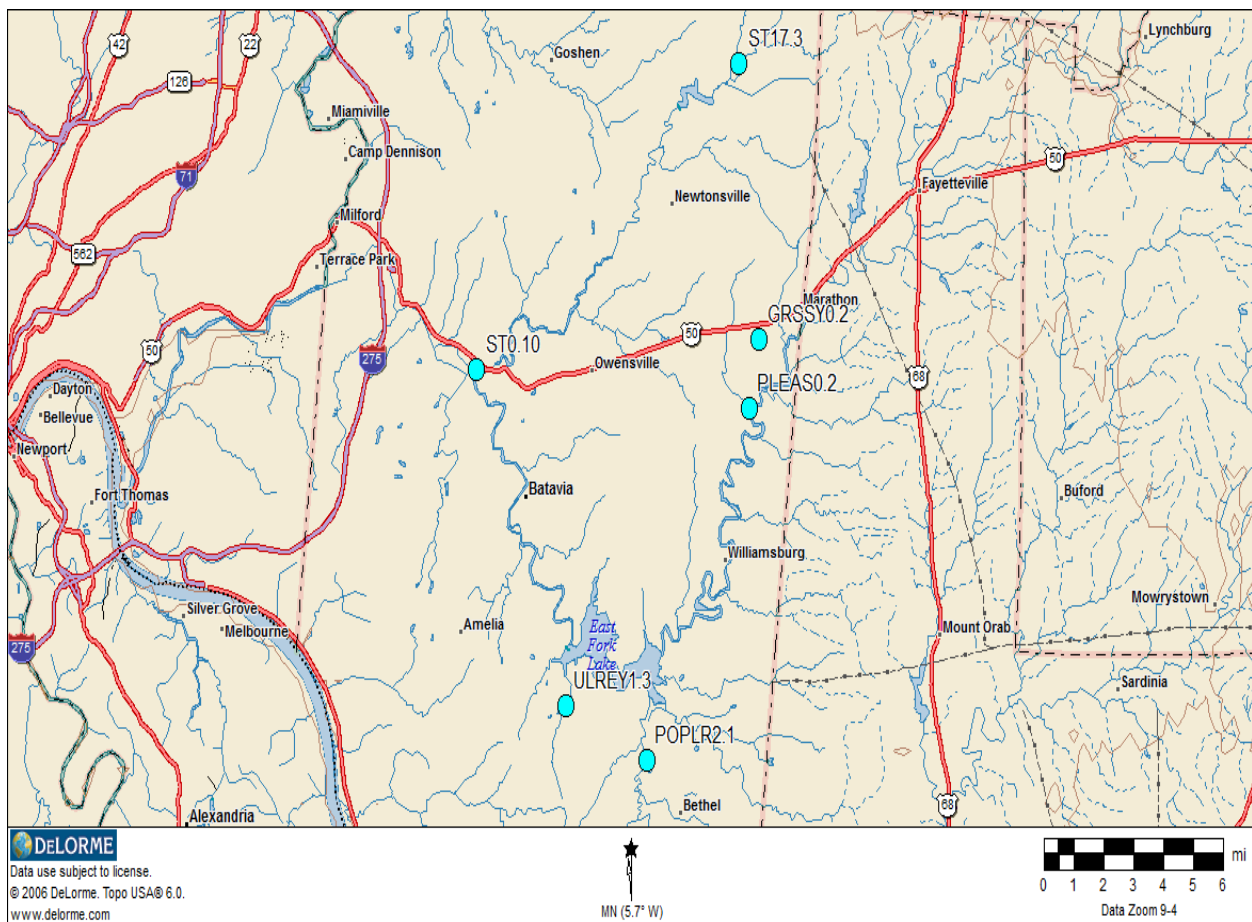


Figure 1. The East Fork Little Miami River study area, showing five headwater tributary sampling locations (ULREY1.3, POPLR2.1, PLEAS0.2, GRSSY0.2, ST17.3) and one wadeable tributary location (STO.10).

Sampling was conducted twice for fish during August and early October 2010. All data collection and analysis methods used were in accordance with Ohio EPA standard protocols (Ohio EPA 1987, 1989a,b). The results were evaluated in accordance with the biological criteria codified in the Ohio water quality standards (WQS; Ohio Administrative Code 3745-1) and

consistent with Ohio EPA reporting practices. The data were managed and analyzed by MBI using the Ohio ECOS data management programs. We also accessed relevant historical biological and habitat data that was available.

### **Methods**

Fish and macroinvertebrates were sampled in accordance with the standard methods of the Ohio EPA (1987, 1989a,b, 2006) and in a manner to produce data quality consistent with Level III in accordance with the Ohio Credible Data Law. Habitat quality was determined using the Qualitative Habitat Evaluation Index (QHEI; Rankin 1989, Ohio EPA 1989b, 2006). Fish were sampled using wading methods in this case employing a tow barge or backpack electrofishing apparatus. Macroinvertebrates were sampled using modified Hester-Dendy artificial substrate samplers and a qualitative dip net/hand pick sampling methodology. Qualitative sampling was performed using triangular frame dip nets and hand picking at the time of substrate retrieval. This consisted of sampling all available habitat types in the vicinity by two persons for a minimum of 30 minutes and thereafter until no new taxa were observed based on gross examination. Macroinvertebrates were identified in accordance with Ohio EPA (1989b) to the lowest practicable taxonomic level (usually genus/species). Sampling locations were indexed to the Ohio EPA River Mile Index (RMI) system and the Ohio ECOS river and stream coding system. Data was compiled and proofed and then entered into the MBI version of the Ohio ECOS data management system.

### **Results**

The biological results are reported as the mean of the two fish scores from the first and second pass and for the artificial substrate or qualitative sample for macroinvertebrates in Table 1 and in Appendix A (IBI and ICI metrics, fish species and macroinvertebrate taxa by site.) Table 1 is a determination of the aquatic life use attainment status using the Ohio EPA biological criteria and in accordance with the associated guidance (Ohio EPA 1987, 1989b) and in accordance with the Ohio Water Quality Standards (OAC Chapter 3745-1).

#### ***Fish Assemblage***

##### ***Stonelick Creek***

Fish were sampled on two separate occasions with the tow barge electrofishing apparatus. Sampling took place at both sites (ST17.3 and ST0.10) on August 12, 2010 and again on October 12/13, 2010, each within the seasonal index period prescribed by Ohio EPA (June 16-October 15). A total of 2016 individual fish comprised of 26 species and 1 hybrid were collected at both locations combined. The numerically predominant species included: central stoneroller (30.2%), bluntnose minnow (15.2%), bluegill sunfish (10.1%), rainbow darter (6.2%), green sunfish (4.9%), fantail darter (4.0%), longear sunfish (2.8%), banded darter (2.5%), and johnny darter (1.8%). Common carp (15.7%), white sucker (14%), yellow bullhead (8.5%), golden redhorse (5.8%), black bullhead (4.9%), white crappie (4.5%), and northern hog sucker (2.5%), predominated in terms of biomass.

Table 1. Aquatic life use attainment status of six locations sampled in five Clermont Co. streams during August and October 2010.

Site ID	River Mile	IBI	MIwb**	ICI	Use Attainment Status
ULREY1.3	1.3	39 <sup>ns</sup>	NA	34	FULL
POPLR2.1	2.1	38 <sup>ns</sup>	NA	40	FULL
PLEAS0.2	0.2	32*	6.5*	F*	<b>NON</b>
GRSSY0.2	0.2	36 <sup>ns</sup>	NA	32 <sup>ns</sup>	FULL
St17.3	17.3	28*	NA	<u>8</u> *	<b>NON</b>
ST0.10	0.10	42	8.4	36	FULL

\*-significant departure from ecoregional biocriterion; <sup>ns</sup>-non-significant departure for WWH ICI (≤ 4 units); poor and very poor values are underlined.\*\* - MIwb is not calculated for the headwater site type.

**Ecoregion Biocriteria: Interior Plateau (IP)**

Index	WWH	EWH	MWH
IBI – Headwater	40	50	24
IBI – Wading	40	50	24
MIwb – Wading	8.1	9.4	6.2
IBI – Boat	38	48	24
MIwb – Boat	8.7	9.6	5.8
ICI – all sites	34	46	22
ICI – Narrative	G*	E	F

\* G = Good; E = Exceptional; F = Fair

*Ulrey Run*

Fish were sampled on two separate occasions with the backpack electrofishing apparatus. Sampling took place on August 12, 2010 and again on October 13, 2010. A total of 8 species comprised of 626 individual fish were collected during both sampling passes combined. The numerically predominant species included: creek chub (42.3%), blacknose dace (21.1%), rainbow darter (14.7%), central stoneroller (11.7%), green sunfish (8.3%), largemouth bass (0.8%), johnny darter (0.8%), and fantail darter (0.3)

### *Poplar Creek*

Fish were sampled on two separate occasions with the tow barge electrofishing apparatus. Sampling took place on August 12, 2010 and again on October 13, 2010. A total of 12 species and 1 hybrid comprised of 1426 individual fish were collected during both sampling passes combined. The numerically predominant species included: central stoneroller (37.1%), creek chub (27.6%), fantail darter (9.0%), green sunfish (6.9%), bluntnose minnow (4.0%), silverjaw minnow (3.6%), rainbow darter (2.0%), greenside darter (0.9%), logperch (0.6%), largemouth bass (0.10%), and hybrid sunfish (0.07%). The results for each sampling pass are included in Appendix A.

### *Pleasant Run*

Fish were sampled on two separate occasions with the backpack electrofishing apparatus. Sampling took place on August 11, 2010 and again on October 12, 2010. A total of 20 species and 1 hybrid comprised of 565 individual fish were collected during both sampling passes combined. . The numerically predominant species included: creek chub (28.8%), bluntnose minnow (16.1%), central stoneroller (12.9%), spotfin shiner (11.5%), sand shiner (10.3%), green sunfish (4.6%), striped shiner (4.4%), and johnny darter (2.8%). Northern hog sucker (23.2%) predominated in terms of biomass.

### *Grassy Fork*

Fish were sampled on two separate occasions once with the tow barge electrofishing apparatus, and once with backpack electrofishing apparatus, due to low flow conditions during the second visit. Sampling took place on August 11, 2010 and again on October 12, 2010. A total species of 20 species comprised of 774 individual fish were collected during both sampling passes combined. The numerically predominant species included: creek chub (30.8%), bluntnose minnow (23.5%), central stoneroller (15,1%), blacknose dace (7.2%), rainbow darter (4.9%), green sunfish (4.7%), and johnny darter (3.6%).

## ***Macroinvertebrate Assemblage***

Macroinvertebrate community performance was evaluated in accordance with Ohio EPA (1987, 1989b) methods. Artificial substrate samplers were set and retrieved from Stonelick Creek RM 17.3, Ulrey Run RM 1.3, Poplar Creek RM 2.1, Pleasant Run RM 0.2, and Grassy Fork RM 0.2. Qualitative macroinvertebrate samples were collected at the set and retrieval (7/15/10 and 8/26/10) of the artificial substrates at these 5 locations. An additional site was added later where artificial substrate samplers were set and retrieved along with a qualitative sample collected at retrieval (9/24/10) from Stonelick Creek RM 0.1. Except for Stonelick Creek RM 17.3, which had no detectable flow over artificial substrates at the set or retrieval, artificial substrates at the other sites were set in areas of sufficient velocity (>0.3 ft/sec); however upon retrieval all artificial substrates were in velocities <0.3 ft/sec. Qualitative macroinvertebrate samples were collected using triangular frame dip nets and hand picking. This consisted of sampling all available habitat types at each site by two persons for a minimum of 30 minutes and thereafter until no new taxa are being observed based on gross examination.

The Invertebrate Community Index scores (ICI) were in attainment of the Interior Plateau (IP) ecoregion biocriterion at Grassy Run RM 0.2, Poplar Creek RM 2.1, Stonelick Creek RM 0.1, and Ulrey Run RM 1.3. The qualitative evaluations at Poplar Creek RM 2.1, Stonelick Creek RM 0.1, and Ulrey Run RM 1.3 were also evaluated as being in attainment of WWH biocriterion. Intolerant species of macroinvertebrates collected in Poplar Creek included the mayflies *Acerpenna macdunnoughi* and *Leucrocuta* sp.; in Stonelick Creek RM 0.1 the mayfly *Acerpenna* sp. and the midge *Stempellinella* n. sp. nr. *flavidula*; and in Ulrey Run RM 1.3 the mayfly *Dipheter hageni* and the caddisfly *Neophylax* sp. Two cool water macroinvertebrate taxa were collected at Ulrey Run RM 1.3, the midges *Parametriocnemus* sp and *Zavrelimyia* sp. Additionally, the southern two-lined salamander, *Eurycea bislineata cirrigera* was collected in the qualitative dipnet samples on 7/15/10 in Poplar Creek and on 7/15/10 and 8/26/10 in Ulrey Run. The Invertebrate Community Index (ICI) values at Pleasant Run RM 0.2 and Stonelick Creek RM 17.3 were evaluated as fair and poor, respectively. There were no intolerant or cool water macroinvertebrate taxa collected at these sites. Stonelick Creek at RM 17.3 was just upstream from a reservoir and appeared to be impounded with very little visible flow and no riffle-run areas present. All taxa and abundance data are available in Appendix B.

### **Habitat Assessment**

A qualitative evaluation of macrohabitat was made by the fish field crew leader after each location was sampled using the Qualitative Habitat Evaluation Index (QHEI; Rankin 1989, 1995; Ohio EPA 2006). The QHEI is a physical habitat index designed to provide an empirical, qualitative evaluation of the lotic macrohabitat characteristics that are important to fish assemblages. It consists of a visual estimate of the quality, composition, amount, and extent of substrate, cover, channel, riparian, flow, pool/run/riffle, and gradient variables. It has been shown to correspond predictably with key attributes of fish assemblage quality (Rankin 1989, 1995) and as such is an important tool in the diagnosis of habitat related fish assemblage impairments and for determining attainability at impaired sites. The QHEI was originally developed as a rapid assessment tool and in recognition of the constraints associated with the practicalities of conducting a large-scale monitoring program, i.e., the need for a rapid assessment tool that yields meaningful information and which takes advantage of the knowledge and insights of experienced field biologists who conduct the biological assessments. The QHEI incorporates the types and quality of substrate, the types and amounts of instream cover, several characteristics of channel morphology, riparian zone extent and quality, bank stability and condition, and pool-run-riffle quality and characteristics. Slope or gradient is also factored into the QHEI score. We followed the guidance and scoring procedures outlined in Ohio EPA (1989a, 2006) and Rankin (1989, 1995).

Habitat was assessed at the six fish sampling sites using the QHEI following the procedures in Ohio EPA (1989b, 2006). The results can be found in Table 2 and Appendix C.

Table 2. QHEI scores and metric values for sites in the E. Fk. L. Miami R. tribs study area during 2010.

River Mile	QHEI	Gradient (ft/mile)	WWH Attributes							Total WWH Attributes	MWH Attributes		Total MWH Attributes	QHEI <sub>MWH</sub> = (1/3)(QHEI + 1) Ratio	QHEI <sub>MLMWH</sub> = (1/3)(QHEI + 1) Ratio			
			No Channelization or Revegetation	Boulders/Cobble/Gravel Substrates	Silt/Fine Substrates	Good/Excellent Substrates	No/Basic/High Riposity	Bank/Channel/Bedrock Cover	Fast Current/Eddies		Low/Normal Current/Embeddedness	High Influence				Moderate Influence		
<b>(11107) Stonelick Creek</b>																		
Year: 2010																		
0.10	75.50	13.70	■	■	■	■	■	■	7		0	■	■	■	■	4	0.12	0.62
17.30	51.50	7.15	■			■	■	■	3	◆	1	■	■	■	■	6	0.50	2.00
<b>(11119) Ulrey Run</b>																		
Year: 2010																		
1.30	80.50	25.97	■	■	■	■	■	■	8		0	■		■	2	0.11	0.33	
<b>(11123) Poplar Creek</b>																		
Year: 2010																		
2.10	88.50	29.31	■		■	■	■	■	7		0			■	1	0.12	0.25	
<b>(11137) Pleasant Run</b>																		
Year: 2010																		
0.20	71.00	21.50	■	■	■	■	■	■	7		0			■	■	2	0.12	0.37
<b>(11142) Grassy Fork</b>																		
Year: 2010																		
0.20	78.00	13.60	■	■	■	■	■	■	8		0			■	1	0.11	0.22	

**Historical Trends**

It is a standard practice to examine available historical data in the Ohio ECOS database to determine how the 2010 results compared and if any changes through time are apparent. Data was available within the 2010 study area for five of the six sampling locations from 1993, 1997, and/or 1998. In a few select cases data is available back to 1982, but this was collected at sites that did not always match the 1993-2010 locations.

The 2010 fish assemblage results generally showed no marked improvements or declines through time with the exception of Stonelick Creek at RM 0.1/1.0. The IBI declined from 49 in 1993 and 50 in 1998 to a 42 in 2010. While this did not precipitate an impairment of the WWH use designation biocriterion, the decline is significant and warrants further analysis.

Macroinvertebrate results over the same general time period revealed only one noteworthy change which was a mix of an improvement followed by a decline. The narrative results in Pleasant Run improved from poor in 1997 to marginally good in 1998, but declined to fair in 2010. The remaining sites showed little change through time in either narrative ratings or ICI scores.

*Table 3. Fish and macroinvertebrate assemblage results obtained by Ohio EPA and MBI for the IBI, and ICI (narrative used in lieu of ICI) in the E. Fork L. Miami R. tributaries study area during 1993, 1997, 1998, and 2010. Closely adjacent historical sites were merged with 2010 locations for comparison purposes.*

River Name	RM	IBI				ICI			
		1993	1996/7	1998	2010	1993	1997	1998	2010
Stonelick Creek	17.3/17.7	30*	-	<u>26</u> *	28*	24*	-	F*	<u>8</u> *
Stonelick Creek	0.1/1.0	49	-	50	42	36	-	VG	36
Ulrey Run	1.3/1.9	-	40	-	39 <sup>ns</sup>	-	MG <sup>ns</sup>	-	34
Pleasant Run	0.2/0.5	-	33*	35*	32*	-	<u>P</u> *	MG <sup>ns</sup>	F*
Poplar Creek	2.1/3.8	-	38 <sup>ns</sup>	-	38 <sup>ns</sup>	-	MG <sup>ns</sup>	-	40



## References

- Ohio Environmental Protection Agency. 2006. Methods for assessing habitat in flowing waters: using the qualitative habitat evaluation index (QHEI). Division of Surface Water, Ecological Assessment Section, Columbus, OH. 23 pp.
- Ohio Environmental Protection Agency. 1989a. Biological criteria for the protection of aquatic life. volume III: standardized biological field sampling and laboratory methods for assessing fish and macroinvertebrate communities, Division of Water Quality Monitoring and Assessment, Columbus, Ohio.
- Ohio Environmental Protection Agency. 1989b. Addendum to biological criteria for the protection of aquatic life. volume II: users manual for biological field assessment of Ohio surface waters, Division of Water Quality Planning and Assessment, Surface Water Section, Columbus, Ohio.
- Ohio Environmental Protection Agency. 1987. Biological criteria for the protection of aquatic life: volume II. users manual for biological field assessment of Ohio surface waters, Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, Ohio.
- Rankin, E. T. 1995. The use of habitat assessments in water resource management programs, pages 181-208. in W. Davis and T. Simon (eds.). Biological Assessment and Criteria: Tools for Water Resource Planning and Decision Making. Lewis Publishers, Boca Raton, FL.
- Rankin, E.T. 1989. The Qualitative Habitat Evaluation Index (QHEI): Rationale, Methods, and Application. Ohio EPA, Division of Water Quality Planning and Assessment, Ecological Analysis Section, Columbus, Ohio.

**Appendix A: Fish Assemblage Data**

**Appendix Table A-1. Headwater IBI scores and metrics at headwater sites in the E. Fk. L. Miami R. study area during 2010.**

River Mile	Type	Date	Drainage area (sq mi)	Number of						Percent of Individuals					Rel.No. minus tolerants /(0.3km)	IBI
				Total species	Minnow species	Headwater species	Sensitive species	Darter & Sculpin species	Simple Lithophils	Tolerant fishes	Omni- vores	Pioneering fishes	Insect- ivores	DELT anomalies		
<i>Stonelick Creek - (11-107)</i>																
Year: 2010																
17.30	D	08/12/2010	11.80	13(3)	3(1)	1(1)	2(1)	3(3)	3(1)	60(1)	22(3)	34(3)	70(5)	2.6(1)	140(1)	24
17.30	D	10/12/2010	11.80	14(3)	2(1)	0(1)	3(3)	2(3)	2(1)	44(3)	32(1)	16(5)	61(5)	1.0(3)	245(3)	32
<i>Ulrey Run - (11-119)</i>																
Year: 2010																
1.30	F	08/12/2010	1.90	8(3)	3(3)	2(3)	1(1)	3(5)	2(3)	71(1)	0(5)	47(3)	21(3)	0.0(5)	224(5)	40
1.30	F	10/13/2010	1.90	8(3)	3(3)	2(3)	1(1)	3(5)	2(3)	73(1)	0(5)	58(1)	29(5)	0.0(5)	130(3)	38
<i>Poplar Creek - (11-123)</i>																
Year: 2010																
2.10	E	08/12/2010	17.50	12(3)	5(3)	1(1)	3(1)	5(5)	4(3)	42(3)	10(5)	36(3)	27(3)	0.0(5)	708(3)	38
2.10	F	10/13/2010	17.50	12(3)	4(3)	1(1)	3(1)	5(5)	4(3)	48(3)	12(5)	48(3)	21(1)	0.0(5)	840(5)	38
<i>Grassy Fork - (11-142)</i>																
Year: 2010																
0.20	D	08/11/2010	6.30	18(5)	9(5)	2(3)	4(3)	3(3)	5(3)	73(1)	25(3)	67(1)	21(3)	0.0(5)	270(3)	38
0.20	F	10/12/2010	6.30	12(3)	6(5)	1(1)	4(3)	3(3)	4(3)	47(3)	27(1)	42(3)	25(3)	0.0(5)	93(1) *	34

◆ - IBI is low end adjusted.

\* - < 200 Total individuals in sample

\*\* - < 50 Total individuals in sample

● - One or more species excluded from IBI calculation.

**Appendix Table A-2. Wading IBI scores and metrics at sites in E. Fk. L. Miami R. study area sampled in 2010 by MBI.**

River Mile	Type	Date	Drainage area (sq mi)	Number of					Percent of Individuals					Rel.No. minus tolerants /(0.3km)	IBI	Modified Iwb	
				Total species	Sunfish species	Sucker species	Intolerant species	Darter species	Simple Lithophils	Tolerant fishes	Omni- vores	Top carnivores	Insect- ivores				DELTA anomalies
Stonelick Creek - (11107)																	
Year: 2010																	
0.10	D	08/12/2010	76	26(5)	3(3)	3(3)	2(1)	6(5)	14(1)	23(5)	22(3)	0.9(1)	23(1)	0.0(5)	1307(5)	38	8.2
0.10	D	10/13/2010	76	20(3)	3(3)	2(3)	2(1)	6(5)	27(3)	12(5)	13(5)	6.4(5)	77(5)	0.0(5)	476(3)	46	8.6
Pleasant Run - (11137)																	
Year: 2010																	
0.20	F	08/11/2010	21	19(5)	3(3)	2(3)	0(1)	5(5)	6(1)	64(1)	16(5)	0.3(1)	22(1)	0.5(3)	284(3)	32	6.8
0.20	F	10/12/2010	21	10(3)	1(1)	0(1)	0(1)	1(1)	15(1)	23(5)	18(5)	0.6(1)	79(5)	0.6(5)	270(3)	32	6.1

na - Qualitative data, Modified Iwb not applicable.

◆ - IBI is low end adjusted.

\* - < 200 Total individuals in sample

\*\* - < 50 Total individuals in sample

● - One or more species excluded from IBI calculation.

# Midwest Biodiversity Institute

## Fish Species List

Rivers: *Stonelick Creek; Ulrey Run; Poplar Creek; Pleasant Run; Grassy Fork*

Years: 2010

Number of Samples: 12      Data Sources: 99      Data Types: D; E; F

Species Code:	Species Name:	Feed Guild	Tolerance	Breed Guild	IBI Group	No. Fish	Rel. No.	% by No.	Rel. Wt.	% by Wt.	Av. Wt.
10-004	LONGNOSE GAR	P		M		2	3.0	0.04	1095	3.35	365.0
20-003	GIZZARD SHAD	O		M		19	28.5	0.35	1095	3.35	38.4
40-010	GOLDEN REDHORSE	I	M	S	R	12	18.0	0.22	1395	4.27	77.5
40-015	NORTHERN HOG SUCKER	I	M	S	R	33	49.5	0.61	1245	3.81	25.1
40-016	WHITE SUCKER	O	T	S	W	234	351.0	4.33	2220	6.79	6.3
43-001	COMMON CARP	O	T	M	G	2	3.0	0.04	6285	19.22	2095.0
43-011	WESTERN BLACKNOSE DACE	G	T	S	N	190	285.0	3.51	549	1.68	1.9
43-013	CREEK CHUB	G	T	N	N	1072	1608.0	19.83	2586	7.91	1.6
43-020	EMERALD SHINER	I		M	N	52	78.0	0.96	39	0.12	0.5
43-024	SCARLET SHINER	I	M	S	N	3	6.0	0.06	6	0.01	1.0
43-025	STRIPED SHINER	I		S	N	35	52.5	0.65	375	1.15	7.1
43-032	SPOTFIN SHINER	I		M	N	78	117.0	1.44	214	0.66	1.8
43-034	SAND SHINER	I	M	M	N	97	145.5	1.79	211	0.65	1.4
43-039	SILVERJAW MINNOW	I		M	N	55	110.0	1.02	50	0.11	0.4
43-043	BLUNTNOSE MINNOW	O	T	C	N	638	957.0	11.80	850	2.60	0.8
43-044	CENTRAL STONEROLLER	H		N	N	1403	2104.5	25.95	2284	6.99	1.0
47-004	YELLOW BULLHEAD	I	T	C		46	69.0	0.85	2277	6.96	33.0
47-006	BLACK BULLHEAD	I	P	C		1	1.5	0.02	1635	5.00	1090.0
47-008	STONECAT MADTOM	I	I	C		5	7.5	0.09	16	0.05	2.2
70-001	BROOK SILVERSIDE	I	M	M		21	31.5	0.39	48	0.15	1.5
77-001	WHITE CRAPPIE	I		C	S	23	34.5	0.43	555	1.70	16.0
77-004	SMALLMOUTH BASS	C	M	C	F	18	27.0	0.33	420	1.28	15.5
77-005	SPOTTED BASS	C		C	F	12	18.0	0.22	735	2.25	40.8
77-006	LARGEMOUTH BASS	C		C	F	35	52.5	0.65	1158	3.54	22.0
77-008	GREEN SUNFISH	I	T	C	S	311	466.5	5.75	1348	4.12	2.8
77-009	BLUEGILL SUNFISH	I	P	C	S	206	309.0	3.81	1117	3.42	3.6
77-011	LONGEAR SUNFISH	I	M	C	S	66	99.0	1.22	762	2.33	7.6
77-021	GREEN SF X LONGEAR SF					12	18.0	0.22	240	0.73	13.3
77-999	HYBRID X SUNFISH					8	12.0	0.15	240	0.73	20.0
80-005	BLACKSIDE DARTER	I		S	D	3	6.0	0.06	12	0.03	2.0
80-011	LOGPERCH	I	M	S	D	11	16.5	0.20	120	0.37	7.2
80-014	JOHNNY DARTER	I		C	D	93	139.5	1.72	201	0.61	1.4
80-015	GREENSIDE DARTER	I	M	S	D	42	63.0	0.78	208	0.64	3.3
80-016	BANDED DARTER	I	I	S	D	56	84.0	1.04	96	0.29	1.1
80-022	RAINBOW DARTER	I	M	S	D	293	439.5	5.42	507	1.55	1.1
80-024	FANTAIL DARTER	I		C	D	220	330.0	4.07	520	1.59	1.5

**No Species:** 36      **Nat. Species:** 33      **Hybrids:** 2      **Total Counted:** 5407      **Total Rel. Wt. :** 32718

# Midwest Biodiversity Institute

## Fish Species List

River: 11-107 Stonelick Creek RM: 0.10 Date: 08/12/2010  
 Time Fished: 2394 Distance: 0.200 Drainge (sq mi): 76.5 Depth: 100  
 Location: .01 RM From Mouth Lat: 39.12146 Long: -84.20608

Species Code:	Species Name:	Feed Guild	Tolerance	Breed Guild	IBI Group	No. Fish	Rel. No.	% by No.	Rel. Wt.	% by Wt.	Av. Wt.
10-004	LONGNOSE GAR	P		M		1	1.5	0.09	900	10.44	600.0
20-003	GIZZARD SHAD	O		M		1	1.5	0.09	225	2.61	150.0
40-010	GOLDEN REDHORSE	I	M	S	R	1	1.5	0.09	75	0.87	50.0
40-015	NORTHERN HOG SUCKER	I	M	S	R	22	33.0	1.94	445	5.17	13.5
40-016	WHITE SUCKER	O	T	S	W	2	3.0	0.18	13	0.16	4.5
43-001	COMMON CARP	O	T	M	G	1	1.5	0.09	3135	36.36	2090.0
43-011	WESTERN BLACKNOSE DACE	G	T	S	N	2	3.0	0.18	9	0.10	3.0
43-013	CREEK CHUB	G	T	N	N	7	10.5	0.62	30	0.35	2.8
43-020	EMERALD SHINER	I		M	N	2	3.0	0.18	9	0.10	3.0
43-032	SPOTFIN SHINER	I		M	N	4	6.0	0.35	15	0.17	2.5
43-034	SAND SHINER	I	M	M	N	9	13.5	0.80	30	0.35	2.2
43-043	BLUNTNOSE MINNOW	O	T	C	N	248	372.0	21.91	285	3.31	0.7
43-044	CENTRAL STONEROLLER	H		N	N	596	894.0	52.65	1620	18.79	1.8
47-008	STONECAT MADTOM	I	I	C		2	3.0	0.18	6	0.07	2.0
70-001	BROOK SILVERSIDE	I	M	M		3	4.5	0.27	3	0.03	0.6
77-004	SMALLMOUTH BASS	C	M	C	F	7	10.5	0.62	315	3.65	30.0
77-005	SPOTTED BASS	C		C	F	1	1.5	0.09	300	3.48	200.0
77-006	LARGEMOUTH BASS	C		C	F	1	1.5	0.09	15	0.17	10.0
77-008	GREEN SUNFISH	I	T	C	S	1	1.5	0.09	15	0.17	10.0
77-009	BLUEGILL SUNFISH	I	P	C	S	10	15.0	0.88	93	1.08	6.2
77-011	LONGEAR SUNFISH	I	M	C	S	16	24.0	1.41	633	7.34	26.3
77-021	GREEN SF X LONGEAR SF					1	1.5	0.09	45	0.52	30.0
80-011	LOGPERCH	I	M	S	D	2	3.0	0.18	37	0.43	12.5
80-014	JOHNNY DARTER	I		C	D	18	27.0	1.59	30	0.35	1.1
80-015	GREENSIDE DARTER	I	M	S	D	18	27.0	1.59	75	0.87	2.7
80-016	BANDED DARTER	I	I	S	D	38	57.0	3.36	75	0.87	1.3
80-022	RAINBOW DARTER	I	M	S	D	69	103.5	6.10	112	1.30	1.0
80-024	FANTAIL DARTER	I		C	D	49	73.5	4.33	75	0.87	1.0

**No Species:** 27    **Nat. Species:** 26    **Hybrids:** 1    **Total Counted:** 1132    **Total Rel. Wt. :** 8622  
**IBI:** 38.0

# Midwest Biodiversity Institute

## Fish Species List

River: 11-107 Stonelick Creek RM: 0.10 Date: 10/13/2010  
 Time Fished: 3119 Distance: 0.200 Drainge (sq mi): 76.5 Depth: 100  
 Location: .01 RM From Mouth Lat: 39.12146 Long: -84.20608

Species Code:	Species Name:	Feed Guild	Tolerance	Breed Guild	IBI Group	No. Fish	Rel. No.	% by No.	Rel. Wt.	% by Wt.	Av. Wt.
10-004	LONGNOSE GAR	P		M		1	1.5	0.28	195	1.94	130.0
20-003	GIZZARD SHAD	O		M		5	7.5	1.38	1350	13.46	180.0
40-010	GOLDEN REDHORSE	I	M	S	R	11	16.5	3.04	2205	21.99	133.6
40-015	NORTHERN HOG SUCKER	I	M	S	R	6	9.0	1.66	555	5.54	61.6
43-001	COMMON CARP	O	T	M	G	1	1.5	0.28	3150	31.42	2100.0
43-020	EMERALD SHINER	I		M	N	50	75.0	13.81	145	1.45	1.9
43-034	SAND SHINER	I	M	M	N	3	4.5	0.83	9	0.09	2.0
43-043	BLUNTNOSE MINNOW	O	T	C	N	41	61.5	11.33	120	1.20	1.9
43-044	CENTRAL STONEROLLER	H		N	N	14	21.0	3.87	120	1.20	5.7
47-008	STONECAT MADTOM	I	I	C		1	1.5	0.28	3	0.03	2.0
77-004	SMALLMOUTH BASS	C	M	C	F	11	16.5	3.04	105	1.05	6.3
77-005	SPOTTED BASS	C		C	F	11	16.5	3.04	1065	10.62	64.5
77-008	GREEN SUNFISH	I	T	C	S	3	4.5	0.83	18	0.18	4.0
77-009	BLUEGILL SUNFISH	I	P	C	S	53	79.5	14.64	307	3.07	3.8
77-011	LONGEAR SUNFISH	I	M	C	S	28	42.0	7.73	424	4.23	10.1
80-011	LOGPERCH	I	M	S	D	1	1.5	0.28	15	0.15	10.0
80-014	JOHNNY DARTER	I		C	D	11	16.5	3.04	16	0.16	1.0
80-015	GREENSIDE DARTER	I	M	S	D	9	13.5	2.49	45	0.45	3.3
80-016	BANDED DARTER	I	I	S	D	18	27.0	4.97	21	0.21	0.7
80-022	RAINBOW DARTER	I	M	S	D	53	79.5	14.64	96	0.96	1.2
80-024	FANTAIL DARTER	I		C	D	31	46.5	8.56	60	0.60	1.2

**No Species:** 21    **Nat. Species:** 20    **Hybrids:** 0    **Total Counted:** 362    **Total Rel. Wt. :** 10026  
**IBI:** 46.0

# Midwest Biodiversity Institute

## Fish Species List

River: 11-107      Stonelick Creek      RM: 17.30      Date: 08/12/2010

Time Fished: 2481      Distance: 0.200      Drainge (sq mi): 11.8      Depth: 35

Location: Ust old Bridge      Lat: 39.23259      Long: -84.04338

Species Code:	Species Name:	Feed Guild	Tolerance	Breed Guild	IBI Group	No. Fish	Rel. No.	% by No.	Rel. Wt.	% by Wt.	Av. Wt.
40-016	WHITE SUCKER	O	T	S	W	46	69.0	19.74	1605	24.36	23.2
43-013	CREEK CHUB	G	T	N	N	1	1.5	0.43	18	0.27	12.0
43-025	STRIPED SHINER	I		S	N	1	1.5	0.43	15	0.23	10.0
43-043	BLUNTNOSE MINNOW	O	T	C	N	5	7.5	2.15	15	0.23	2.0
47-004	YELLOW BULLHEAD	I	T	C		20	30.0	8.58	1432	21.74	47.7
77-001	WHITE CRAPPIE	I		C	S	8	12.0	3.43	552	8.38	46.0
77-006	LARGEMOUTH BASS	C		C	F	13	19.5	5.58	765	11.61	39.2
77-008	GREEN SUNFISH	I	T	C	S	68	102.0	29.18	978	14.85	9.5
77-009	BLUEGILL SUNFISH	I	P	C	S	49	73.5	21.03	931	14.14	12.6
77-011	LONGEAR SUNFISH	I	M	C	S	10	15.0	4.29	166	2.53	11.1
77-021	GREEN SF X LONGEAR SF					5	7.5	2.15	87	1.32	11.6
80-014	JOHNNY DARTER	I		C	D	4	6.0	1.72	9	0.14	1.5
80-022	RAINBOW DARTER	I	M	S	D	1	1.5	0.43	4	0.07	3.0
80-024	FANTAIL DARTER	I		C	D	2	3.0	0.86	9	0.14	3.0

**No Species:** 13      **Nat. Species:** 13      **Hybrids:** 1      **Total Counted:** 233      **Total Rel. Wt. :** 6588

**IBI:** 24.0



# Midwest Biodiversity Institute

## Fish Species List

River: 11-107      Stonelick Creek      RM: 17.30      Date: 10/12/2010

Time Fished: 2461      Distance: 0.200      Drainge (sq mi): 11.8      Depth: 30

Location: Ust old Bridge      Lat: 39.23259      Long: -84.04338

Species Code:	Species Name:	Feed Guild	Tolerance	Breed Guild	IBI Group	No. Fish	Rel. No.	% by No.	Rel. Wt.	% by Wt.	Av. Wt.
20-003	GIZZARD SHAD	O		M		13	19.5	4.50	1755	11.77	90.0
40-016	WHITE SUCKER	O	T	S	W	67	100.5	23.18	4005	26.86	39.8
43-013	CREEK CHUB	G	T	N	N	3	4.5	1.04	255	1.71	56.6
43-043	BLUNTNOSE MINNOW	O	T	C	N	13	19.5	4.50	10	0.07	0.5
47-004	YELLOW BULLHEAD	I	T	C		16	24.0	5.54	1965	13.18	81.8
47-006	BLACK BULLHEAD	I	P	C		1	1.5	0.35	1635	10.97	1090.0
70-001	BROOK SILVERSIDE	I	M	M		18	27.0	6.23	45	0.30	1.6
77-001	WHITE CRAPPIE	I		C	S	15	22.5	5.19	1245	8.35	55.3
77-006	LARGEMOUTH BASS	C		C	F	10	15.0	3.46	277	1.86	18.5
77-008	GREEN SUNFISH	I	T	C	S	27	40.5	9.34	498	3.34	12.2
77-009	BLUEGILL SUNFISH	I	P	C	S	92	138.0	31.83	2790	18.71	20.2
77-011	LONGEAR SUNFISH	I	M	C	S	3	4.5	1.04	45	0.30	10.0
77-999	HYBRID X SUNFISH					7	10.5	2.42	375	2.52	35.7
80-014	JOHNNY DARTER	I		C	D	3	4.5	1.04	4	0.03	1.0
80-022	RAINBOW DARTER	I	M	S	D	1	1.5	0.35	3	0.02	2.0

**No Species:** 14      **Nat. Species:** 14      **Hybrids:** 1      **Total Counted:** 289      **Total Rel. Wt. :** 14908

**IBI:** 32.0

# Midwest Biodiversity Institute

## Fish Species List

River: 11-119      Ulrey Run      RM: 1.30      Date: 08/12/2010

Time Fished: 2552      Distance: 0.150      Drainge (sq mi): 1.9      Depth: 15

Location:      Lat: 39.00190      Long: -84.15110

Species Code:	Species Name:	Feed Guild	Tolerance	Breed Guild	IBI Group	No. Fish	Rel. No.	% by No.	Rel. Wt.	% by Wt.	Av. Wt.
43-011	WESTERN BLACKNOSE DACE	G	T	S	N	91	182.0	23.88	628	14.48	3.4
43-013	CREEK CHUB	G	T	N	N	152	304.0	39.90	2480	57.17	8.1
43-044	CENTRAL STONEROLLER	H		N	N	54	108.0	14.17	540	12.45	5.0
77-006	LARGEMOUTH BASS	C		C	F	3	6.0	0.79	20	0.46	3.3
77-008	GREEN SUNFISH	I	T	C	S	26	52.0	6.82	460	10.60	8.8
80-014	JOHNNY DARTER	I		C	D	1	2.0	0.26	4	0.09	2.0
80-022	RAINBOW DARTER	I	M	S	D	53	106.0	13.91	200	4.61	1.8
80-024	FANTAIL DARTER	I		C	D	1	2.0	0.26	6	0.14	3.0

**No Species:** 8      **Nat. Species:** 8      **Hybrids:** 0      **Total Counted:** 381      **Total Rel. Wt. :** 4338

**IBI:** 40.0

# Midwest Biodiversity Institute

## Fish Species List

River: 11-119      Ulrey Run      RM: 1.30      Date: 10/13/2010

Time Fished: 3074      Distance: 0.150      Drainge (sq mi): 1.9      Depth: 10

Location:      Lat: 39.00190      Long: -84.15110

Species Code:	Species Name:	Feed Guild	Tolerance	Breed Guild	IBI Group	No. Fish	Rel. No.	% by No.	Rel. Wt.	% by Wt.	Av. Wt.
43-011	WESTERN BLACKNOSE DACE	G	T	S	N	41	82.0	16.73	300	13.35	3.6
43-013	CREEK CHUB	G	T	N	N	113	226.0	46.12	1304	58.01	5.7
43-044	CENTRAL STONEROLLER	H		N	N	19	38.0	7.76	280	12.46	7.3
77-006	LARGEMOUTH BASS	C		C	F	2	4.0	0.82	16	0.71	4.0
77-008	GREEN SUNFISH	I	T	C	S	26	52.0	10.61	160	7.12	3.0
80-014	JOHNNY DARTER	I		C	D	4	8.0	1.63	20	0.89	2.5
80-022	RAINBOW DARTER	I	M	S	D	39	78.0	15.92	164	7.30	2.1
80-024	FANTAIL DARTER	I		C	D	1	2.0	0.41	4	0.18	2.0

**No Species:** 8      **Nat. Species:** 8      **Hybrids:** 0      **Total Counted:** 245      **Total Rel. Wt. :** 2248

**IBI:** 38.0

# Midwest Biodiversity Institute

## Fish Species List

River: 11-123 Poplar Creek RM: 2.10 Date: 08/12/2010  
 Time Fished: 3056 Distance: 0.150 Drainge (sq mi): 17.5 Depth: 50  
 Location: Lat: 38.98190 Long: -84.10140

Species Code:	Species Name:	Feed Guild	Tolerance	Breed Guild	IBI Group	No. Fish	Rel. No.	% by No.	Rel. Wt.	% by Wt.	Av. Wt.
40-016	WHITE SUCKER	O	T	S	W	44	88.0	7.17	2200	23.58	25.0
43-013	CREEK CHUB	G	T	N	N	168	336.0	27.36	3220	34.51	9.5
43-032	SPOTFIN SHINER	I		M	N	2	4.0	0.33	20	0.21	5.0
43-039	SILVERJAW MINNOW	I		M	N	4	8.0	0.65	20	0.21	2.5
43-043	BLUNTNOSE MINNOW	O	T	C	N	15	30.0	2.44	80	0.86	2.6
43-044	CENTRAL STONEROLLER	H		N	N	221	442.0	35.99	2480	26.58	5.6
77-008	GREEN SUNFISH	I	T	C	S	33	66.0	5.37	668	7.16	10.1
80-011	LOGPERCH	I	M	S	D	4	8.0	0.65	80	0.86	10.0
80-014	JOHNNY DARTER	I		C	D	3	6.0	0.49	18	0.19	3.0
80-015	GREENSIDE DARTER	I	M	S	D	9	18.0	1.47	100	1.07	5.5
80-022	RAINBOW DARTER	I	M	S	D	11	22.0	1.79	44	0.47	2.0
80-024	FANTAIL DARTER	I		C	D	100	200.0	16.29	400	4.29	2.0

**No Species:** 12    **Nat. Species:** 12    **Hybrids:** 0    **Total Counted:** 614    **Total Rel. Wt. :** 9330  
**IBI:** 38.0

# Midwest Biodiversity Institute

## Fish Species List

River: 11-123 Poplar Creek RM: 2.10 Date: 10/13/2010  
 Time Fished: 3170 Distance: 0.150 Drainge (sq mi): 17.5 Depth: 35  
 Location: Lat: 38.98190 Long: -84.10140

Species Code:	Species Name:	Feed Guild	Tolerance	Breed Guild	IBI Group	No. Fish	Rel. No.	% by No.	Rel. Wt.	% by Wt.	Av. Wt.
40-016	WHITE SUCKER	O	T	S	W	58	116.0	7.14	2490	24.83	21.4
43-013	CREEK CHUB	G	T	N	N	226	452.0	27.83	3400	33.90	7.5
43-039	SILVERJAW MINNOW	I		M	N	48	96.0	5.91	72	0.72	0.7
43-043	BLUNTNOSE MINNOW	O	T	C	N	43	86.0	5.30	184	1.83	2.1
43-044	CENTRAL STONEROLLER	H		N	N	309	618.0	38.05	2472	24.65	4.0
77-006	LARGEMOUTH BASS	C		C	F	2	4.0	0.25	40	0.40	10.0
77-008	GREEN SUNFISH	I	T	C	S	65	130.0	8.00	1010	10.07	7.7
77-999	HYBRID X SUNFISH					1	2.0	0.12	80	0.80	40.0
80-011	LOGPERCH	I	M	S	D	4	8.0	0.49	80	0.80	10.0
80-014	JOHNNY DARTER	I		C	D	5	10.0	0.62	16	0.16	1.6
80-015	GREENSIDE DARTER	I	M	S	D	4	8.0	0.49	48	0.48	6.0
80-022	RAINBOW DARTER	I	M	S	D	18	36.0	2.22	78	0.78	2.1
80-024	FANTAIL DARTER	I		C	D	29	58.0	3.57	60	0.60	1.0

**No Species:** 12    **Nat. Species:** 12    **Hybrids:** 1    **Total Counted:** 812    **Total Rel. Wt. :** 10030  
**IBI:** 38.0

# Midwest Biodiversity Institute

## Fish Species List

River: 11-137 Pleasant Run RM: 0.20 Date: 08/11/2010  
 Time Fished: 1501 Distance: 0.150 Drainge (sq mi): 21.5 Depth: 20  
 Location: Trib to E Fk. Little Miami .02 from the mouth Lat: 39.10904 Long: -84.03734

Species Code:	Species Name:	Feed Guild	Tolerance	Breed Guild	IBI Group	No. Fish	Rel. No.	% by No.	Rel. Wt.	% by Wt.	Av. Wt.
40-015	NORTHERN HOG SUCKER	I	M	S	R	5	10.0	1.28	1100	28.96	110.0
40-016	WHITE SUCKER	O	T	S	W	5	10.0	1.28	160	4.21	16.0
43-013	CREEK CHUB	G	T	N	N	162	324.0	41.54	1184	31.17	3.6
43-025	STRIPED SHINER	I		S	N	1	2.0	0.26	40	1.05	20.0
43-032	SPOTFIN SHINER	I		M	N	3	6.0	0.77	12	0.32	2.0
43-034	SAND SHINER	I	M	M	N	16	32.0	4.10	40	1.05	1.2
43-039	SILVERJAW MINNOW	I		M	N	2	4.0	0.51	8	0.21	2.0
43-043	BLUNTNOSE MINNOW	O	T	C	N	59	118.0	15.13	220	5.79	1.8
43-044	CENTRAL STONEROLLER	H		N	N	70	140.0	17.95	346	9.11	2.4
47-004	YELLOW BULLHEAD	I	T	C		3	6.0	0.77	16	0.42	2.6
77-006	LARGEMOUTH BASS	C		C	F	1	2.0	0.26	40	1.05	20.0
77-008	GREEN SUNFISH	I	T	C	S	19	38.0	4.87	240	6.32	6.3
77-009	BLUEGILL SUNFISH	I	P	C	S	1	2.0	0.26	20	0.53	10.0
77-011	LONGEAR SUNFISH	I	M	C	S	7	14.0	1.79	100	2.63	7.1
77-021	GREEN SF X LONGEAR SF					6	12.0	1.54	190	5.00	15.8
80-005	BLACKSIDE DARTER	I		S	D	3	6.0	0.77	12	0.32	2.0
80-014	JOHNNY DARTER	I		C	D	16	32.0	4.10	40	1.05	1.2
80-015	GREENSIDE DARTER	I	M	S	D	1	2.0	0.26	4	0.11	2.0
80-022	RAINBOW DARTER	I	M	S	D	8	16.0	2.05	20	0.53	1.2
80-024	FANTAIL DARTER	I		C	D	2	4.0	0.51	6	0.16	1.5

**No Species:** 19    **Nat. Species:** 19    **Hybrids:** 1    **Total Counted:** 390    **Total Rel. Wt. :** 3798  
**IBI:** 32.0

# Midwest Biodiversity Institute

## Fish Species List

River: 11-137 Pleasant Run RM: 0.20 Date: 10/12/2010  
 Time Fished: 711 Distance: 0.150 Drainge (sq mi): 21.5 Depth: 20  
 Location: Trib to E Fk. Little Miami .02 from the mouth Lat: 39.10904 Long: -84.03734

Species Code:	Species Name:	Feed Guild	Tolerance	Breed Guild	IBI Group	No. Fish	Rel. No.	% by No.	Rel. Wt.	% by Wt.	Av. Wt.
43-013	CREEK CHUB	G	T	N	N	1	2.0	0.57	4	0.43	2.0
43-024	SCARLET SHINER	I	M	S	N	1	2.0	0.57	4	0.43	2.0
43-025	STRIPED SHINER	I		S	N	24	48.0	13.71	340	36.32	7.0
43-032	SPOTFIN SHINER	I		M	N	62	124.0	35.43	220	23.50	1.7
43-034	SAND SHINER	I	M	M	N	42	84.0	24.00	110	11.75	1.3
43-043	BLUNTNOSE MINNOW	O	T	C	N	32	64.0	18.29	148	15.81	2.3
43-044	CENTRAL STONEROLLER	H		N	N	3	6.0	1.71	36	3.85	6.0
77-006	LARGEMOUTH BASS	C		C	F	1	2.0	0.57	10	1.07	5.0
77-008	GREEN SUNFISH	I	T	C	S	7	14.0	4.00	56	5.98	4.0
80-022	RAINBOW DARTER	I	M	S	D	2	4.0	1.14	8	0.85	2.0

**No Species:** 10    **Nat. Species:** 10    **Hybrids:** 0    **Total Counted:** 175    **Total Rel. Wt. :** 936  
**IBI:** 32.0

# Midwest Biodiversity Institute

## Fish Species List

River: 11-142      Grassy Fork      RM: 0.20      Date: 08/11/2010

Time Fished: 2818      Distance: 0.200      Drainge (sq mi): 6.3      Depth: 30

Location: Ust Clancy Marathon Rd.      Lat: 39.13344      Long: -84.01613

Species Code:	Species Name:	Feed Guild	Tolerance	Breed Guild	IBI Group	No. Fish	Rel. No.	% by No.	Rel. Wt.	% by Wt.	Av. Wt.
40-016	WHITE SUCKER	O	T	S	W	5	7.5	0.76	202	4.89	27.0
43-011	WESTERN BLACKNOSE DACE	G	T	S	N	56	84.0	8.54	225	5.43	2.6
43-013	CREEK CHUB	G	T	N	N	223	334.5	33.99	1425	34.42	4.2
43-024	SCARLET SHINER	I	M	S	N	2	3.0	0.30	9	0.22	3.0
43-025	STRIPED SHINER	I		S	N	5	7.5	0.76	54	1.30	7.2
43-032	SPOTFIN SHINER	I		M	N	6	9.0	0.91	24	0.58	2.6
43-034	SAND SHINER	I	M	M	N	21	31.5	3.20	90	2.17	2.8
43-039	SILVERJAW MINNOW	I		M	N	1	1.5	0.15	3	0.07	2.0
43-043	BLUNTNOSE MINNOW	O	T	C	N	157	235.5	23.93	735	17.75	3.1
43-044	CENTRAL STONEROLLER	H		N	N	77	115.5	11.74	690	16.67	5.9
47-004	YELLOW BULLHEAD	I	T	C		7	10.5	1.07	36	0.87	3.4
77-006	LARGEMOUTH BASS	C		C	F	2	3.0	0.30	51	1.23	17.0
77-008	GREEN SUNFISH	I	T	C	S	28	42.0	4.27	330	7.97	7.8
77-009	BLUEGILL SUNFISH	I	P	C	S	1	1.5	0.15	15	0.36	10.0
77-011	LONGEAR SUNFISH	I	M	C	S	2	3.0	0.30	57	1.38	19.0
80-014	JOHNNY DARTER	I		C	D	28	42.0	4.27	90	2.17	2.1
80-022	RAINBOW DARTER	I	M	S	D	31	46.5	4.73	87	2.10	1.8
80-024	FANTAIL DARTER	I		C	D	4	6.0	0.61	16	0.40	2.7

**No Species:** 18      **Nat. Species:** 18      **Hybrids:** 0      **Total Counted:** 656      **Total Rel. Wt. :** 4140

**IBI:** 38.0



# Midwest Biodiversity Institute

## Fish Species List

River: 11-142      Grassy Fork      RM: 0.20      Date: 10/12/2010

Time Fished: 315      Distance: 0.200      Drainage (sq mi): 6.3      Depth: 10

Location: Ust Clancy Marathon Rd.      Lat: 39.13344      Long: -84.01613

Species Code:	Species Name:	Feed Guild	Tolerance	Breed Guild	IBI Group	No. Fish	Rel. No.	% by No.	Rel. Wt.	% by Wt.	Av. Wt.
40-016	WHITE SUCKER	O	T	S	W	7	10.5	5.93	165	18.39	15.7
43-013	CREEK CHUB	G	T	N	N	16	24.0	13.56	150	16.72	6.2
43-025	STRIPED SHINER	I		S	N	4	6.0	3.39	30	3.34	5.0
43-032	SPOTFIN SHINER	I		M	N	1	1.5	0.85	4	0.50	3.0
43-034	SAND SHINER	I	M	M	N	6	9.0	5.08	15	1.67	1.6
43-043	BLUNTNOSE MINNOW	O	T	C	N	25	37.5	21.19	120	13.38	3.2
43-044	CENTRAL STONEROLLER	H		N	N	40	60.0	33.90	330	36.79	5.5
47-008	STONECAT MADTOM	I	I	C		2	3.0	1.69	7	0.84	2.5
77-008	GREEN SUNFISH	I	T	C	S	8	12.0	6.78	52	5.85	4.3
80-015	GREENSIDE DARTER	I	M	S	D	1	1.5	0.85	4	0.50	3.0
80-022	RAINBOW DARTER	I	M	S	D	7	10.5	5.93	15	1.67	1.4
80-024	FANTAIL DARTER	I		C	D	1	1.5	0.85	3	0.33	2.0

**No Species:** 12      **Nat. Species:** 12      **Hybrids:** 0      **Total Counted:** 118      **Total Rel. Wt. :** 897

**IBI:** 34.0

## **Appendix B: Macroinvertebrate Assemblage Data**

Appendix Table B-1. ICI metrics and values from data collected in the E. Fk. L. Miami R. study area during 2010.

River Mile	Drainage Area (sq mi)	Number of				Percent:					Qual. EPT	ICI or Narrative
		Total Taxa	Mayfly Taxa	Caddisfly Taxa	Dipteran Taxa	Mayflies	Caddisflies	Tanytarsini	Other Dipt/NI	Tolerant Organisms		
<b>Stonelick Creek (11-107)</b>												
Year: 2010												
0.10	76.5	33(4)	5(2)	5(6)	11(2)	35.9(6)	4.7(2)	8.4(2)	47.9(2)	5.1(6)	11(4)	<b>36</b>
17.30	11.8										1	<b>P</b>
17.30	11.8	17(2)	1(0)	0(0)	8(2)	0.3(2)	0.0(0)	1.4(2)	98.1(0)	47.3(0)	1(0)	<b>8</b>
<b>Ulrey Run (11-119)</b>												
Year: 2010												
1.30	1.9										9	<b>G</b>
1.30	1.9	24(2)	3(2)	1(4)	13(2)	14.1(4)	0.3(2)	20.3(6)	64.5(0)	1.7(6)	12(6)	<b>34</b>
<b>Poplar Creek (11-123)</b>												
Year: 2010												
2.10	17.5										8	<b>G</b>
2.10	17.5	32(4)	8(6)	1(2)	15(4)	42.3(6)	0.3(2)	10.6(2)	43.1(4)	9.7(4)	11(6)	<b>40</b>
<b>Pleasant Run (11-137)</b>												
Year: 2010												
0.20	21.5										3	<b>F</b>
0.20	21.5	18(2)	0(0)	0(0)	13(2)	0.0(0)	0.0(0)	14.9(4)	84.8(0)	20.7(2)	4(2)	<b>F</b>
<b>Grassy Fork (11-142)</b>												
Year: 2010												
0.20	6.3										3	<b>F</b>
0.20	6.3	30(4)	3(2)	4(6)	14(4)	0.7(2)	0.5(4)	19.6(6)	78.5(0)	23.0(2)	4(2)	<b>32</b>

**Appendix Table B-2. Macroinvertebrate taxa in collected in the E. Fk. L. Miami R. study area sampled during 2010 .**

Site: .01 RM From Mouth				Site ID: ST0.1			
Collection Date: 09/24/2010				River Code: 11-107			
River: Stonelick Creek				Subsample: RM: 0.10			
Taxa Code	Taxa	Tol.	Qt./Ql.	Taxa Code	Taxa	Tol.	Qt./Ql.
00401	Spongillidae	MI	+	82820	Cryptochironomus sp	F	+
01320	Hydra sp	F	90	83040	Dicrotendipes neomodestus	F	154
01801	Turbellaria	F	41 +	83050	Dicrotendipes lucifer	MT	7
03360	Plumatella sp	F	+	83300	Glyptotendipes (G.) sp	MT	14
03600	Oligochaeta	T	65 +	83840	Microtendipes pedellus group	MI	+
04935	Erpobdella punctata punctata	T	+	84300	Phaenopsectra obediens group	F	28
05900	Lirceus sp	F	+	84450	Polypedilum (Uresipedilum) flavum	F	7 +
06201	Hyalella azteca	F	9 +	84470	Polypedilum (P.) illinoense	T	+
08601	Hydracarina	F	4	85500	Paratanytarsus sp	F	14
11015	Acerpenna sp	I	12	85625	Rheotanytarsus sp	MI	+
11130	Baetis intercalaris	F	+	85720	Stempellinella n.sp nr. flavidula	I	49
11670	Proclaeon irrubrum	MI	+	85814	Tanytarsus glabrescens group	F	63 +
13400	Stenacron sp	F	181	93900	Elimia sp	MI	+
13500	Stenonema sp		+	95100	Physella sp	T	2
13521	Stenonema femoratum	F	222 +	96120	Menetus (Micromenetus) dilatatus	T	66
16700	Tricorythodes sp	MI	9 +	96900	Ferrissia sp	F	9
17200	Caenis sp	F	115 +	97601	Corbicula fluminea	MI	5 +
21300	Hetaerina sp	F	+	98600	Sphaerium sp	F	+
22001	Coenagrionidae	MT	+				
22300	Argia sp	F	12 +	No. Quantitative Taxa: 33		Total Taxa: 58	
27400	Neurocordulia sp	MI	+	No. Qualitative Taxa: 40		ICI: 36	
28208	Erythemis simplicicollis	MT	+	Number of Organisms: 1500		Qual EPT: 11	
48410	Corydalus cornutus	MI	+				
50315	Chimarra obscura	MI	+				
51300	Neureclipsis sp	MI	28 +				
51400	Nyctiophylax sp	MI	9				
52200	Cheumatopsyche sp	F	1 +				
53800	Hydroptila sp	F	20 +				
58505	Helicopsyche borealis	MI	+				
59500	Oecetis sp	MI	12				
65800	Berosus sp	MT	13				
68075	Psephenus herricki	MI	+				
69400	Stenelmis sp	F	22 +				
74501	Ceratopogonidae	F	+				
77115	Ablabesmyia janta	F	77 +				
78650	Procladius sp	MT	+				
79100	Thienemannimyia group	F	126				
81200	Nanocladius sp		+				
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	F	14				
82710	Chironomus (C.) sp	T	+				

**Appendix Table B-2. Macroinvertebrate taxa in collected in the E. Fk. L. Miami R. study area sampled during 2010 .**

Site: Ust old Bridge				Site ID: ST17.30			
Collection Date: 07/15/2010				Subsample:			
River Code: 11-107		River: Stonelick Creek		RM: 17.30			
Taxa Code	Taxa	Tol.	Qt./Ql.	Taxa Code	Taxa	Tol.	Qt./Ql.
03600	Oligochaeta	T	+				
05900	Lirceus sp	F	+				
17200	Caenis sp	F	+				
22001	Coenagrionidae	MT	+				
27400	Neurocordulia sp	MI	+				
42700	Belostoma sp	F	+				
60900	Peltodytes sp	MT	+				
65800	Berosus sp	MT	+				
74501	Ceratopogonidae	F	+				
82710	Chironomus (C.) sp	T	+				
83040	Dicrotendipes neomodestus	F	+				
84210	Paratendipes albimanus or P. duplicatus	MI	+				
84750	Stictochironomus sp	F	+				
85230	Cladotanytarsus mancus group	F	+				
96120	Menetus (Micromenetus) dilatatus	T	+				
No. Quantitative Taxa: 0		Total Taxa: 15					
No. Qualitative Taxa: 15		ICI: P					
Number of Organisms: 0		Qual EPT: 1					

**Appendix Table B-2. Macroinvertebrate taxa in collected in the E. Fk. L. Miami R. study area sampled during 2010 .**

Site: Ust old Bridge				Site ID: ST17.30			
Collection Date: 08/26/2010				River Code: 11-107			
				River: Stonelick Creek			
				RM: 17.30			
Subsample:							
Taxa Code	Taxa	Tol.	Qt./Ql.	Taxa Code	Taxa	Tol.	Qt./Ql.
00401	Spongillidae	MI	+				
01801	Turbellaria	F	108 +				
03600	Oligochaeta	T	340 +				
04637	Batracobdella phalera	T	1				
04664	Helobdella stagnalis	T	2				
08601	Hydracarina	F	+				
11200	Callibaetis sp	MT	+				
13521	Stenonema femoratum	F	5				
22001	Coenagrionidae	MT	2 +				
22300	Argia sp	F	+				
23804	Basiaeschna janata	F	+				
27001	Corduliidae		+				
27400	Neurocordulia sp	MI	+				
28001	Libellulidae	T	2				
77355	Clinotanytus pinguis	T	+				
78450	Nilotanytus fimbriatus	MI	12				
78655	Procladius (Holotanytus) sp	MT	12 +				
79100	Thienemannimyia group	F	12				
82710	Chironomus (C.) sp	T	24 +				
82820	Cryptochironomus sp	F	+				
83051	Dicrotendipes simpsoni	T	414				
83300	Glyptotendipes (G.) sp	MT	663 +				
84210	Paratendipes albimanus or P. duplicatus	MI	12				
84750	Stictochironomus sp	F	+				
85230	Cladotanytus mancus group	F	+				
85800	Tanytarsus sp	MI	24				
94800	Stagnicola sp	T	+				
95100	Physella sp	T	24				
96120	Menetus (Micromenetus) dilatatus	T	38				
No. Quantitative Taxa:		17	Total Taxa:	29			
No. Qualitative Taxa:		18	ICI:	8			
Number of Organisms:		1695	Qual EPT:	1			

**Appendix Table B-2. Macroinvertebrate taxa in collected in the E. Fk. L. Miami R. study area sampled during 2010 .**

Site: Ulrey Run at RM 1.3				Site ID: Ulrey1.3			
Collection Date: 07/15/2010				River Code: 11-119			
River: Ulrey Run				Subsample:			
				RM: 1.30			
Taxa Code	Taxa	Tol.	Qt./Ql.	Taxa Code	Taxa	Tol.	Qt./Ql.
01801	Turbellaria	F	+				
03600	Oligochaeta	T	+				
04664	Helobdella stagnalis	T	+				
05900	Lirceus sp	F	+				
08250	Orconectes (Procericambarus) rusticus	F	+				
11120	Baetis flavistriga	F	+				
13521	Stenonema femoratum	F	+				
14950	Leptophlebia sp or Paraleptophlebia sp	MI	+				
50301	Chimarra aterrima	MI	+				
51600	Polycentropus sp	MI	+				
52200	Cheumatopsyche sp	F	+				
52530	Hydropsyche depravata group	F	+				
57400	Neophylax sp	I	+				
58505	Helicopsyche borealis	MI	+				
68075	Psephenus herricki	MI	+				
69400	Stenelmis sp	F	+				
71100	Hexatoma sp	MI	+				
74100	Simulium sp	F	+				
80350	Corynoneura sp	MI	+				
81650	Parametriocnemus sp	MI	+				
83840	Microtendipes pedellus group	MI	+				
85800	Tanytarsus sp	MI	+				
No. Quantitative Taxa:		0	Total Taxa:		22		
No. Qualitative Taxa:		22	ICI:		G		
Number of Organisms:		0	Qual EPT:		9		

**Appendix Table B-2. Macroinvertebrate taxa in collected in the E. Fk. L. Miami R. study area sampled during 2010 .**

Site: Ulrey Run at RM 1.3				Site ID: Ulrey1.3					
Collection Date: 08/26/2010				River Code: 11-119		River: Ulrey Run		Subsample: RM: 1.30	
Taxa Code	Taxa	Tol.	Qt./Ql.	Taxa Code	Taxa	Tol.	Qt./Ql.		
01320	Hydra sp	F	1	85625	Rheotanytarsus sp	MI	+		
01801	Turbellaria	F	+	85818	Tanytarsus glabrescens group sp 4	MI	7		
03600	Oligochaeta	T	2 +	85821	Tanytarsus glabrescens group sp 7	MI	39 +		
04664	Helobdella stagnalis	T	+	87501	Empididae	F	+		
05900	Lirceus sp	F	2 +	95100	Physella sp	T	5 +		
08250	Orconectes (Procericambarus) rusticus	F	+	96900	Ferrissia sp	F	2		
11120	Baetis flavistriga	F	+						
11250	Centroptilum sp (w/o hindwing pads)	MI	+	No. Quantitative Taxa: 24		Total Taxa: 46			
11430	Dipheter hageni	I	+	No. Qualitative Taxa: 33		ICI: 34			
11651	Procladius sp (w/o hindwing pads)	MI	6 +	Number of Organisms: 581		Qual EPT: 12			
13521	Stenonema femoratum	F	75 +						
17200	Caenis sp	F	1						
21200	Calopteryx sp	F	+						
50301	Chimarra aterrima	MI	+						
51600	Polycentropus sp	MI	+						
52200	Cheumatopsyche sp	F	+						
52530	Hydropsyche depravata group	F	+						
53800	Hydroptila sp	F	+						
57400	Neophylax sp	I	+						
58505	Helicopsyche borealis	MI	2 +						
68025	Ectopria sp	MI	2						
68075	Psephenus herricki	MI	2 +						
71100	Hexatoma sp	MI	+						
72700	Anopheles sp	F	+						
74100	Simulium sp	F	+						
77120	Ablabesmyia mallochi	F	20 +						
77500	Conchapelopia sp	F	+						
77750	Hayesomyia senata or Thienemannimyia norena	F	7						
79400	Zavrelimyia sp	F	7 +						
80370	Corynoneura lobata	MI	5						
80430	Cricotopus (C.) tremulus group	F	32						
82121	Thienemanniella lobapodema	MI	1						
82820	Cryptochironomus sp	F	+						
83040	Dicrotendipes neomodestus	F	223						
83840	Microtendipes pedellus group	MI	59 +						
84210	Paratendipes albimanus or P. duplicatus	MI	8						
84450	Polypedilum (Uresipedilum) flavum	F	+						
84460	Polypedilum (P.) fallax group	F	1						
84470	Polypedilum (P.) illinoense	T	+						
85500	Paratanytarsus sp	F	72						



**Appendix Table B-2. Macroinvertebrate taxa in collected in thR. study area sampled during 2010 .**

Site: Poplar Creek at RM 2.1 Site ID: Poplar2.1  
Subsample:  
 Collection Date: 07/15/2010 River Code: 11-123 River: Poplar Creek RM: 2.10

Taxa Code	Taxa	Tol.	Qt./Ql.	Taxa Code	Taxa	Tol.	Qt./Ql.
05900	Lirceus sp	F	+				
08250	Orconectes (Procericambarus) rusticus	F	+				
11120	Baetis flavistriga	F	+				
11130	Baetis intercalaris	F	+				
13000	Leucrocuta sp	I	+				
13400	Stenacron sp	F	+				
13521	Stenonema femoratum	F	+				
21200	Calopteryx sp	F	+				
22001	Coenagrionidae	MT	+				
50315	Chimarra obscura	MI	+				
52200	Cheumatopsyche sp	F	+				
52530	Hydropsyche depravata group	F	+				
59970	Petrophila sp	I	+				
68075	Psephenus herricki	MI	+				
68201	Scirtidae	F	+				
69400	Stenelmis sp	F	+				
74100	Simulium sp	F	+				
77140	Ablabesmyia peleensis		+				
84450	Polypedilum (Uresipedilum) flavum	F	+				
85625	Rheotanytarsus sp	MI	+				
93900	Elimia sp	MI	+				

No. Quantitative Taxa:	0	Total Taxa:	21
No. Qualitative Taxa:	21	ICI:	G
Number of Organisms:	0	Qual EPT:	8

**Appendix Table B-2. Macroinvertebrate taxa in collected in the E. Fk. L. Miami R. study area sampled during 2010 .**

Site: Poplar Creek at RM 2.1				Site ID: Poplar2.1					
Collection Date: 08/26/2010				River Code: 11-123		River: Poplar Creek		Subsample: RM: 2.10	
Taxa Code	Taxa	Tol.	Qt./Ql.	Taxa Code	Taxa	Tol.	Qt./Ql.		
01320	Hydra sp	F	2	85814	Tanytarsus glabrescens group	F	29		
01801	Turbellaria	F	2	87540	Hemerodromia sp	F	1		
03600	Oligochaeta	T	4	93900	Elimia sp	MI	+		
05900	Lirceus sp	F	1	98001	Sphaeriidae		1+		
06904	Synurella dentata	F	+	<hr/>					
08250	Orconectes (Procericambarus) rusticus	F	+	No. Quantitative Taxa: 32		Total Taxa: 45			
08601	Hydracarina	F	1	No. Qualitative Taxa: 24		ICI: 40			
11020	Acerpenna pygmaea	I	22+	Number of Organisms: 350		Qual EPT: 11			
11120	Baetis flavistriga	F	+						
11130	Baetis intercalaris	F	10+						
11650	Procloeon sp (w/ hindwing pads)	MI	22+						
13000	Leucrocuta sp	I	1+						
13400	Stenacron sp	F	44+						
13521	Stenonema femoratum	F	46+						
14950	Leptophlebia sp or Paraleptophlebia sp	MI	1						
17200	Caenis sp	F	2						
21200	Calopteryx sp	F	+						
22001	Coenagrionidae	MT	+						
22300	Argia sp	F	5+						
28500	Libellula sp	T	+						
50315	Chimarra obscura	MI	+						
51600	Polycentropus sp	MI	+						
52200	Cheumatopsyche sp	F	1+						
52530	Hydropsyche depravata group	F	+						
68075	Psephenus herricki	MI	8+						
71100	Hexatoma sp	MI	+						
74100	Simulium sp	F	+						
77120	Ablabesmyia mallochi	F	11						
77800	Helopelopia sp	F	32						
78140	Labrundinia pilosella	MI	4						
78450	Nilotanypus fimbriatus	MI	2						
80370	Corynoneura lobata	MI	19						
83040	Dicrotendipes neomodestus	F	8						
83840	Microtendipes pedellus group	MI	17						
84000	Parachironomus sp	F	2						
84450	Polypedilum (Uresipedilum) flavum	F	10+						
84460	Polypedilum (P.) fallax group	F	30						
84540	Polypedilum (Tripodura) scalaenum group	F	4						
85260	Cladotanytarsus vanderwulpi group	MI	2						
85625	Rheotanytarsus sp	MI	+						
85800	Tanytarsus sp	MI	6						

**Appendix Table B-2. Macroinvertebrate taxa in collected in the E. Fk. L. Miami R. study area sampled during 2010 .**

Site ID: Pleas0.2

Site: Trib to E Fk. Little Miami .02 from the mouth

Subsample:

Collection Date: 07/15/2010

River Code: 11-137

River: Pleasant Run

RM: 0.20

Taxa Code	Taxa	Tol.	Qt./Ql.	Taxa Code	Taxa	Tol.	Qt./Ql.
01801	Turbellaria	F	+				
03360	Plumatella sp	F	+				
03600	Oligochaeta	T	+				
04685	Placobdella ornata	F	+				
04901	Erpobdellidae	T	+				
04935	Erpobdella punctata punctata	T	+				
13400	Stenacron sp	F	+				
52200	Cheumatopsyche sp	F	+				
58505	Helicopsyche borealis	MI	+				
71900	Tipula sp	F	+				
82820	Cryptochironomus sp	F	+				
84750	Stictochironomus sp	F	+				
93200	Hydrobiidae	MT	+				
96900	Ferrissia sp	F	+				

No. Quantitative Taxa: 0      Total Taxa: 14

No. Qualitative Taxa: 14      ICI: F

Number of Organisms: 0      Qual EPT: 3

**Appendix Table B-2. Macroinvertebrate taxa in collected in the E. Fk. L. Miami R. study area sampled during 2010 .**

Site: Trib to E Fk. Little Miami .02 from the mouth				Site ID: Pleas0.2			
Collection Date: 08/26/2010				Subsample:			
River Code: 11-137				River: Pleasant Run			
				RM: 0.20			
Taxa Code	Taxa	Tol.	Qt./Ql.	Taxa Code	Taxa	Tol.	Qt./Ql.
01801	Turbellaria	F	+				
03000	Ectoprocta		+				
03600	Oligochaeta	T	35 +	No. Quantitative Taxa:	18	Total Taxa:	37
04666	Helobdella triserialis	T	+	No. Qualitative Taxa:	27	ICI:	12
04935	Erpobdella punctata punctata	T	+	Number of Organisms:	435	Qual EPT:	4
13400	Stenacron sp	F	+				
13521	Stenonema femoratum	F	+				
21200	Calopteryx sp	F	1				
22300	Argia sp	F	+				
50315	Chimarra obscura	MI	+				
58505	Helicopsyche borealis	MI	+				
70000	Diptera		1				
71900	Tipula sp	F	+				
77120	Ablabesmyia mallochi	F	4 +				
77140	Ablabesmyia peleensis		+				
77500	Conchapelopia sp	F	+				
78655	Procladius (Holotanypus) sp	MT	+				
80370	Corynoneura lobata	MI	2				
82820	Cryptochironomus sp	F	+				
83040	Dicrotendipes neomodestus	F	135 +				
83051	Dicrotendipes simpsoni	T	39 +				
83840	Microtendipes pedellus group	MI	+				
83900	Nilothauma sp	MI	4				
84210	Paratendipes albimanus or P. duplicatus	MI	104				
84300	Phaenopsectra obediens group	F	12				
84450	Polypedilum (Uresipedilum) flavum	F	+				
84470	Polypedilum (P.) illinoense	T	+				
84540	Polypedilum (Tripodura) scalaenum group	F	15				
84750	Stictochironomus sp	F	+				
85500	Paratanytarsus sp	F	8 +				
85800	Tanytarsus sp	MI	23 +				
85814	Tanytarsus glabrescens group	F	+				
85818	Tanytarsus glabrescens group sp 4	MI	15				
85821	Tanytarsus glabrescens group sp 7	MI	19				
95100	Physella sp	T	3 +				
96280	Planorbella (Pierosoma) trivolvis	VT	2				
96900	Ferrissia sp	F	13 +				

**Appendix Table B-2. Macroinvertebrate taxa in collected in the E. Fk. L. Miami R. study area sampled during 2010 .**

Site: Ust Clancy Marathon Rd. Site ID: Grassy Fork0.2  
Subsample:  
 Collection Date: 07/15/2010 River Code: 11-142 River: Grassy Fork RM: 0.20

Taxa Code	Taxa	Tol.	Qt./Ql.	Taxa Code	Taxa	Tol.	Qt./Ql.
01801	Turbellaria	F	+				
03600	Oligochaeta	T	+				
13400	Stenacron sp	F	+				
50315	Chimarra obscura	MI	+				
52200	Cheumatopsyche sp	F	+				
77120	Ablabesmyia mallochi	F	+				
84210	Paratendipes albimanus or P. duplicatus	MI	+				
84450	Polypedilum (Uresipedilum) flavum	F	+				
84750	Stictochironomus sp	F	+				
95100	Physella sp	T	+				

No. Quantitative Taxa: 0 Total Taxa: 10  
 No. Qualitative Taxa: 10 ICI: F  
 Number of Organisms: 0 Qual EPT: 3

**Appendix Table B-2. Macroinvertebrate taxa in collected in the E. Fk. L. Miami R. study area sampled during 2010 .**

Site: Ust Clancy Marathon Rd.				Site ID: Grassy Fork0.2			
Collection Date: 08/26/2010				River Code: 11-142		River: Grassy Fork	
				Subsample: RM: 0.20			
Taxa Code	Taxa	Tol.	Qt./Ql.	Taxa Code	Taxa	Tol.	Qt./Ql.
01801	Turbellaria	F	9 +				
03600	Oligochaeta	T	468	No. Quantitative Taxa:	30	Total Taxa:	37
04660	Helobdella sp	T	1	No. Qualitative Taxa:	16	ICI:	32
11200	Callibaetis sp	MT	1	Number of Organisms:	2087	Qual EPT:	4
13521	Stenonema femoratum	F	8 +				
17200	Caenis sp	F	6				
21200	Calopteryx sp	F	2 +				
22001	Coenagrionidae	MT	+				
22300	Argia sp	F	7 +				
28500	Libellula sp	T	4				
48410	Corydalus cornutus	MI	+				
50315	Chimarra obscura	MI	+				
52200	Cheumatopsyche sp	F	1 +				
58505	Helicopsyche borealis	MI	7 +				
59001	Leptoceridae	MI	1				
59500	Oecetis sp	MI	2				
72700	Anopheles sp	F	+				
77140	Ablabesmyia peleensis		44 +				
78140	Labrundinia pilosella	MI	15				
79100	Thienemannimyia group	F	29				
80370	Corynoneura lobata	MI	4				
82121	Thienemanniella lobapodema	MI	16				
83040	Dicrotendipes neomodestus	F	936				
83840	Microtendipes pedellus group	MI	+				
83900	Nilothauma sp	MI	15				
84210	Paratendipes albimanus or P. duplicatus	MI	44 +				
84300	Phaenopsectra obediens group	F	29				
84450	Polypedilum (Uresipedilum) flavum	F	15				
84470	Polypedilum (P.) illinoense	T	+				
84540	Polypedilum (Tripodura) scalaenum group	F	+				
85500	Paratanytarsus sp	F	117				
85800	Tanytarsus sp	MI	44				
85818	Tanytarsus glabrescens group sp 4	MI	44				
85821	Tanytarsus glabrescens group sp 7	MI	205				
95100	Physella sp	T	4 +				
95501	Planorbidae	MT	1				
96900	Ferrissia sp	F	8				

### **Appendix C: QHEI Data**

**Appendix Table C-1. QHEI metric scores for stations sampled in the E. Fk. L. Miami R. study area during 2010.**

River Mile	QHEI	QHEI Metrics:						Gradient & Score	Narrative
		Substrate Cover	Channel	Riparian	Pool	Riffle			
(11107) Stonelick Creek									
Year:2010									
0.1	<b>75.50</b>	14.0	16.0	16.0	8.00	10.0	3.5	13.70 - ( 8)	<b>Excellent</b>
17.3	<b>51.50</b>	4.0	15.0	10.0	6.50	6.0	0.0	7.15 - (10)	<b>Fair</b>
(11119) Ulrey Run									
Year:2010									
1.3	<b>80.50</b>	16.0	16.0	17.0	9.00	8.0	4.5	25.97 - (10)	<b>Excellent</b>
(11123) Poplar Creek									
Year:2010									
2.1	<b>88.50</b>	19.0	17.0	17.0	10.00	10.0	7.5	29.31 - ( 8)	<b>Excellent</b>
(11137) Pleasant Run									
Year:2010									
0.2	<b>71.00</b>	16.0	14.0	17.0	10.00	4.0	0.0	21.50 - (10)	<b>Good</b>
(11142) Grassy Fork									
Year:2010									
0.2	<b>78.00</b>	18.0	17.0	16.0	7.50	7.0	4.5	13.60 - ( 8)	<b>Excellent</b>



**Appendix D: Historical IBI and ICI Data**

**Appendix Table D-1. Headwater IBI scores and metrics at headwater sites in the E. Fk. L. Miami R. study areas including historical data.**

River Mile	Type	Date	Drainage area (sq mi)	Number of						Percent of Individuals					Rel.No. minus tolerants /(0.3km)	IBI
				Total species	Minnow species	Headwater species	Sensitive species	Darter & Sculpin species	Simple Lithophils	Tolerant fishes	Omni-vores	Pioneering fishes	Insect-ivores	DELT anomalies		
<i>Stonelick Creek - (11-107)</i>																
Year: 1982																
19.00	S	07/01/1982	6.50	9(3)	3(3)	1(1)	1(1)	1(1)	1(1)	92(1)	18(3)	91(1)	30(3)	0.0(5)	73(1)	24
19.00	S	09/22/1982	6.50	15(5)	6(5)	1(1)	2(1)	2(3)	4(3)	77(1)	19(3)	74(1)	41(5)	0.0(5)	197(3)	36
19.00	S	10/07/1982	6.50	14(5)	4(3)	1(1)	1(1)	1(1)	2(1)	89(1)	34(1)	86(1)	30(3)	3.8(1)	153(1)	20
Year: 1993																
20.00	E	10/13/1993	5.40	11(3)	3(3)	1(1)	0(1)	3(3)	3(3)	81(1)	5(5)	85(1)	19(3)	0.0(5)	108(1)	30
16.70	A	07/29/1993	14.80	7(1)	1(1)	0(1)	1(1)	0(1)	0(1)	5(5)	24(3)	0(5)	71(5)	0.7(3)	532(3)	30
Year: 1998																
17.70	D	07/06/1998	11.00	7(1)	1(1)	1(1)	0(1)	3(3)	1(1)	54(3)	0(5)	61(1)	96(5)	0.0(5)	32(1) *	28
17.70	D	08/12/1998	11.00	11(3)	4(3)	1(1)	1(1)	2(3)	2(1)	69(1)	35(1)	75(1)	36(3)	0.0(5)	54(1) *	24
Year: 2010																
17.30	D	08/12/2010	11.80	13(3)	3(1)	1(1)	2(1)	3(3)	3(1)	60(1)	22(3)	34(3)	70(5)	2.6(1)	140(1)	24
17.30	D	10/12/2010	11.80	14(3)	2(1)	0(1)	3(3)	2(3)	2(1)	44(3)	32(1)	16(5)	61(5)	1.0(3)	245(3)	32
<i>Ulrey Run - (11-119)</i>																
Year: 1997																
1.90	E	09/16/1997	1.50	10(5)	4(3)	3(3)	1(1)	3(5)	4(5)	73(1)	12(3)	58(1)	17(3)	0.0(5)	192(5)	40
Year: 2010																
1.30	F	08/12/2010	1.90	8(3)	3(3)	2(3)	1(1)	3(5)	2(3)	71(1)	0(5)	47(3)	21(3)	0.0(5)	224(5)	40
1.30	F	10/13/2010	1.90	8(3)	3(3)	2(3)	1(1)	3(5)	2(3)	73(1)	0(5)	58(1)	29(5)	0.0(5)	130(3)	38
<i>Poplar Creek - (11-123)</i>																
Year: 1997																
3.80	E	09/16/1997	16.10	13(3)	4(3)	1(1)	3(1)	3(3)	2(1)	22(5)	7(5)	25(5)	49(5)	0.4(3)	295(3)	38
Year: 2010																

◆ - IBI is low end adjusted.

\* - < 200 Total individuals in sample

\*\* - < 50 Total individuals in sample

● - One or more species excluded from IBI calculation.

Appendix Table D-1. Headwater IBI scores and metrics at headwater sites in the E. Fk. L. Miami R. study areas including historical data.

River Mile	Type	Date	Drainage area (sq mi)	Number of						Percent of Individuals					Rel.No. minus tolerants /(0.3km)	IBI
				Total species	Minnow species	Headwater species	Sensitive species	Darter & Sculpin species	Simple Lithophils	Tolerant fishes	Omni-vores	Pioneering fishes	Insect-ivores	DELT anomalies		
2.10	E	08/12/2010	17.50	12(3)	5(3)	1(1)	3(1)	5(5)	4(3)	42(3)	10(5)	36(3)	27(3)	0.0(5)	708(3)	38
2.10	F	10/13/2010	17.50	12(3)	4(3)	1(1)	3(1)	5(5)	4(3)	48(3)	12(5)	48(3)	21(1)	0.0(5)	840(5)	38
<i>Pleasant Run - (11-137)</i>																
Year: 1996																
2.50	F	09/03/1996	2.80	8(3)	5(5)	0(1)	0(1)	1(1)	1(1)	81(1)	13(3)	87(1)	21(3)	0.0(5)	40(1)	26
2.50	F	11/08/1996	2.80	8(3)	5(5)	1(1)	0(1)	1(1)	1(1)	57(1)	10(5)	52(3)	48(5)	0.0(5)	18(1) * *	32
1.90	F	09/03/1996	3.60	6(3)	3(3)	0(1)	0(1)	0(1)	1(1)	71(1)	20(3)	61(1)	61(5)	0.0(5)	24(1) *	26
1.90	F	11/08/1996	3.60	10(3)	5(3)	0(1)	0(1)	1(1)	3(3)	54(3)	6(5)	54(3)	41(5)	0.0(5)	50(1) *	34
1.30	F	09/03/1996	4.30	13(5)	5(3)	1(1)	1(1)	4(5)	4(3)	30(5)	6(5)	31(3)	63(5)	0.0(5)	112(3) *	44
1.30	F	11/08/1996	4.30	11(3)	6(5)	1(1)	1(1)	1(1)	3(3)	34(3)	23(3)	28(5)	59(5)	0.0(5)	118(3) *	38
0.50	F	09/03/1996	6.60	11(3)	5(3)	1(1)	0(1)	3(3)	3(3)	41(3)	2(5)	50(3)	55(5)	0.0(5)	76(1) *	36
0.50	F	11/08/1996	6.60	12(3)	7(5)	1(1)	2(1)	1(1)	1(1)	55(3)	32(1)	56(1)	55(5)	0.0(5)	218(3)	30
Year: 1997																
1.30	E	09/15/1997	4.30	15(5)	5(3)	1(1)	3(3)	4(5)	4(3)	50(3)	31(1)	35(3)	38(5)	0.5(3)	194(3)	38
Year: 1998																
4.00	E	07/07/1998	1.50	2(1)	0(1)	0(1)	1(1)	0(1)	0(1)	0(1)	0(1)	0(1)	63(1)	0.0(1)	24(1) * *	12
2.50	E	07/07/1998	2.80	5(3)	3(3)	1(1)	1(1)	1(1)	1(1)	50(3)	0(5)	50(3)	40(5)	0.0(5)	25(1) * *	32
2.50	E	08/13/1998	2.80	11(5)	5(5)	1(1)	0(1)	3(5)	3(3)	62(1)	12(3)	79(1)	43(5)	0.0(5)	98(3)	38
1.30	E	07/07/1998	4.30	12(5)	5(3)	1(1)	2(3)	3(5)	2(1)	47(3)	23(3)	64(1)	43(5)	0.0(5)	74(1) *	36
1.30	E	08/13/1998	4.30	16(5)	6(5)	1(1)	3(3)	4(5)	5(5)	58(1)	24(3)	52(3)	35(5)	0.0(5)	158(3)	44
0.50	E	07/07/1998	6.60	9(3)	3(3)	1(1)	1(1)	4(5)	2(1)	58(1)	15(3)	65(1)	45(5)	0.0(5)	74(1) *	30
0.50	E	08/13/1998	6.60	15(5)	5(3)	2(3)	4(3)	5(5)	5(3)	63(1)	10(5)	63(1)	49(5)	0.5(3)	166(3)	40

*Grassy Fork - (11-142)*

◆ - IBI is low end adjusted.

\* - < 200 Total individuals in sample

\*\* - < 50 Total individuals in sample

● - One or more species excluded from IBI calculation.

**Appendix Table D-1. Headwater IBI scores and metrics at headwater sites in the E. Fk. L. Miami R. study areas including historical data.**

River Mile	Type	Date	Drainage area (sq mi)	Number of						Percent of Individuals					Rel.No. minus tolerants / (0.3km)	IBI
				Total species	Minnow species	Headwater species	Sensitive species	Darter & Sculpin species	Simple Lithophils	Tolerant fishes	Omni-vores	Pioneering fishes	Insect-ivores	DELT anomalies		
Year: 2010																
0.20	D	08/11/2010	6.30	18(5)	9(5)	2(3)	4(3)	3(3)	5(3)	73(1)	25(3)	67(1)	21(3)	0.0(5)	270(3)	38
0.20	F	10/12/2010	6.30	12(3)	6(5)	1(1)	4(3)	3(3)	4(3)	47(3)	27(1)	42(3)	25(3)	0.0(5)	93(1) *	34

◆ - IBI is low end adjusted.

\* - < 200 Total individuals in sample

\*\* - < 50 Total individuals in sample

● - One or more species excluded from IBI calculation.

**Appendix Table D-2. Wading IBI scores and metrics at sites in the E. Fk. L. Miami R. study area including historical data.**

River Mile	Type	Date	Drainage area (sq mi)	Number of					Percent of Individuals					Rel.No. minus tolerants /(0.3km)	IBI	Modified Iwb	
				Total species	Sunfish species	Sucker species	Intolerant species	Darter species	Simple Lithophils	Tolerant fishes	Omnivores	Top carnivores	Insectivores				DELT anomalies
Stonelick Creek - (11107)																	
Year: 1982																	
8.00	S	07/02/1982	40	14(3)	4(5)	1(1)	0(1)	2(1)	1(1)	38(3)	8(5)	1.1(3)	18(1)	0.0(5)	587(3)	32	7.1
1.20	G	07/01/1982	76	21(3)	3(3)	2(3)	2(1)	3(3)	30(3)	10(5)	6(5)	6.4(5)	57(5)	0.0(5)	170(1) *	42	na
1.20	S	10/07/1982	76	25(5)	4(5)	1(1)	2(1)	5(5)	15(1)	13(5)	8(5)	1.7(3)	31(3)	0.0(5)	1883(5)	44	8.3
1.20	S	10/15/1982	76	26(5)	4(5)	2(3)	1(1)	5(5)	12(1)	35(3)	35(1)	2.8(3)	56(5)	0.0(5)	913(5)	42	8.5
1.20	S	11/01/1982	76	25(5)	3(3)	2(3)	3(3)	6(5)	27(3)	13(5)	12(5)	0.9(1)	43(3)	0.0(5)	2736(5)	46	8.8
Year: 1984																	
1.20	D	08/16/1984	76	27(5)	6(5)	3(3)	3(3)	5(5)	13(1)	8(5)	8(5)	3.1(3)	47(3)	0.0(5)	1474(5)	48	9.1
1.20	D	09/19/1984	76	18(3)	3(3)	1(1)	2(1)	6(5)	15(1)	22(5)	23(3)	2.3(3)	54(3)	0.2(3)	609(3)	34	7.8
1.20	D	10/04/1984	76	14(3)	3(3)	1(1)	2(1)	3(3)	20(3)	14(5)	13(5)	1.6(3)	60(5)	0.0(5)	352(3)	40	6.8
Year: 1987																	
5.30	D	10/05/1987	58	26(5)	5(5)	4(5)	2(1)	4(3)	17(1)	17(5)	35(1)	4.5(3)	52(3)	0.7(3)	955(5)	40	10.3
5.20	D	10/05/1987	61	14(3)	4(5)	1(1)	0(1)	2(1)	1(1)	24(5)	5(5)	0.3(1)	92(5)	0.3(3)	568(3)	34	6.7
3.10	D	10/05/1987	71	31(5)	4(5)	6(5)	3(3)	6(5)	20(3)	17(5)	19(5)	2.1(3)	64(5)	0.0(5)	892(5)	54	10.4
Year: 1993																	
3.10	D	07/27/1993	71	30(5)	4(5)	3(3)	3(3)	5(5)	32(3)	24(5)	23(3)	4.3(3)	64(5)	0.6(3)	723(3)	46	9.3
3.10	D	10/15/1993	71	23(5)	3(3)	3(3)	2(1)	5(5)	28(3)	20(5)	28(3)	6.9(5)	63(5)	0.5(3)	470(3)	44	8.3
1.20	D	07/28/1993	76	34(5)	5(5)	5(5)	4(3)	6(5)	36(3)	10(5)	20(3)	4.8(3)	64(5)	0.8(3)	701(3)	48	10.6
1.20	D	09/02/1993	76	36(5)	5(5)	5(5)	4(3)	5(5)	31(3)	18(5)	26(3)	5.6(5)	55(5)	1.2(3)	731(3)	50	10.2

na - Qualitative data, Modified Iwb not applicable.

◆ - IBI is low end adjusted.

\* - < 200 Total individuals in sample

\*\* - < 50 Total individuals in sample

● - One or more species excluded from IBI calculation.

**Appendix Table D-2. Wading IBI scores and metrics at sites in the E. Fk. L. Miami R. study area including historical data.**

River Mile	Type	Date	Drainage area (sq mi)	Number of					Percent of Individuals					Rel.No. minus tolerant/(0.3km)	IBI	Modified Iwb	
				Total species	Sunfish species	Sucker species	Intolerant species	Darter species	Simple Lithophils	Tolerant fishes	Omnivores	Top carnivores	Insectivores				DELT anomalies
Year: 1998																	
9.80	E	07/07/1998	39	11(3)	4(5)	0(1)	0(1)	3(3)	1(1)	54(1)	34(3)	5.2(5)	53(3)	0.0(5)	94(1)	32	5.9
9.80	E	08/12/1998	39	14(3)	5(5)	0(1)	1(1)	3(3)	0(1)	65(1)	59(1)	1.2(3)	37(3)	0.0(5)	314(3)	30	6.4
1.00	D	07/01/1998	80	26(5)	5(5)	3(3)	5(3)	5(5)	24(3)	6(5)	3(5)	2.2(3)	89(5)	0.3(5)	504(3)	50	8.6
1.00	D	08/12/1998	80	28(5)	6(5)	2(3)	3(3)	5(5)	11(1)	11(5)	9(5)	2.3(3)	73(5)	0.0(5)	812(5)	50	9.1
Year: 2002																	
3.10	D	07/11/2002	71	19(3)	4(5)	2(3)	1(1)	5(5)	33(3)	9(5)	8(5)	2.2(3)	54(3)	0.0(5)	551(3)	44	8.4
1.00	D	07/11/2002	80	19(3)	4(5)	3(3)	1(1)	4(3)	9(1)	1(5)	1(5)	1.1(3)	18(1)	0.0(5)	1481(5)	40	8.2
Year: 2006																	
10.70	E	08/07/2006	34	15(3)	3(3)	1(1)	0(1)	3(3)	7(1)	51(1)	32(3)	1.3(3)	30(3)	0.2(3)	350(3)	28	7.6
10.70	E	10/10/2006	34	16(3)	3(3)	0(1)	0(1)	4(3)	6(1)	38(3)	24(3)	1.4(3)	54(3)	0.0(5)	261(3)	32	7.4
10.50	E	08/07/2006	36	15(3)	2(3)	1(1)	0(1)	4(3)	5(1)	49(1)	30(3)	0.9(1)	27(3)	0.0(5)	542(3)	28	7.4
10.50	D	10/10/2006	36	12(3)	3(3)	0(1)	0(1)	4(3)	5(1)	24(5)	18(5)	1.9(3)	46(3)	0.0(5)	543(3)	36	7.4
Year: 2010																	
0.10	D	08/12/2010	76	26(5)	3(3)	3(3)	2(1)	6(5)	14(1)	23(5)	22(3)	0.9(1)	23(1)	0.0(5)	1307(5)	38	8.2
0.10	D	10/13/2010	76	20(3)	3(3)	2(3)	2(1)	6(5)	27(3)	12(5)	13(5)	6.4(5)	77(5)	0.0(5)	476(3)	46	8.6
Pleasant Run - (11137)																	
Year: 2010																	
0.20	F	08/11/2010	21	19(5)	3(3)	2(3)	0(1)	5(5)	6(1)	64(1)	16(5)	0.3(1)	22(1)	0.5(3)	284(3)	32	6.8
0.20	F	10/12/2010	21	10(3)	1(1)	0(1)	0(1)	1(1)	15(1)	23(5)	18(5)	0.6(1)	79(5)	0.6(5)	270(3)	32	6.1

na - Qualitative data, Modified Iwb not applicable.

◆ - IBI is low end adjusted.

\* - < 200 Total individuals in sample

\*\* - < 50 Total individuals in sample

● - One or more species excluded from IBI calculation.

Appendix Table D-3. ICI metrics and values from data collected in the E. Fk. L. Miami R. study area .

River Mile	Drainage Area (sq mi)	Number of				Percent:						Qual. EPT	ICI or Narrative
		Total Taxa	Mayfly Taxa	Caddisfly Taxa	Dipteran Taxa	Mayflies	Caddisflies	Tanytarsini	Other Dipt/NI	Tolerant Organisms			
<b>Stonelick Creek (11-107)</b>													
<b>Year: 1982</b>													
1.00	80.0											15	E
<b>Year: 1984</b>													
1.00	80.0	36(4)	4(2)	2(4)	19(4)	48.7(6)	0.7(2)	5.9(2)	42.9(4)	7.3(4)	11(4)	36	
<b>Year: 1993</b>													
17.70	11.0	29(4)	5(4)	0(0)	15(4)	29.1(6)	0.0(0)	7.3(2)	61.8(2)	27.2(0)	5(2)	24	
2.90	71.0	29(4)	6(4)	2(4)	14(4)	19.5(4)	1.0(2)	3.0(2)	76.0(0)	8.0(4)	12(4)	32	
1.00	80.0	27(4)	7(4)	1(2)	13(2)	38.2(6)	0.1(2)	4.4(2)	56.9(2)	2.6(6)	17(6)	36	
<b>Year: 1998</b>													
17.70	11.0										4	F	
9.80	39.0										11	G	
1.00	80.0										18	VG	
<b>Year: 2006</b>													
10.70	34.4										7	G	
10.50	36.7										10	G	
<b>Year: 2010</b>													
17.30	11.8										1	P	
17.30	11.8	17(2)	1(0)	0(0)	8(2)	0.3(2)	0.0(0)	1.4(2)	98.1(0)	47.3(0)	1(0)	8	
0.10	76.5	33(4)	5(2)	5(6)	11(2)	35.9(6)	4.7(2)	8.4(2)	47.9(2)	5.1(6)	11(4)	36	
<b>Ulrey Run (11-119)</b>													
<b>Year: 1997</b>													
1.30	1.9										5	MG	
<b>Year: 2010</b>													
1.30	1.9										9	G	
1.30	1.9	24(2)	3(2)	1(4)	13(2)	14.1(4)	0.3(2)	20.3(6)	64.5(0)	1.7(6)	12(6)	34	
<b>Poplar Creek (11-123)</b>													
<b>Year: 1997</b>													
2.10	17.5										7	MG	
<b>Year: 2010</b>													
2.10	17.5										8	G	
2.10	17.5	32(4)	8(6)	1(2)	15(4)	42.3(6)	0.3(2)	10.6(2)	43.1(4)	9.7(4)	11(6)	40	
<b>Pleasant Run (11-137)</b>													
<b>Year: 1997</b>													
0.50	6.6										1	P	

Appendix Table D-3. ICI metrics and values from data collected in the E. Fk. L. Miami R. study area .

River Mile	Drainage Area (sq mi)	Number of				Percent:					Qual. EPT	ICI or Narrative
		Total Taxa	Mayfly Taxa	Caddisfly Taxa	Dipteran Taxa	Mayflies	Caddisflies	Tanytarsini	Other Dipt/NI	Tolerant Organisms		
Year: 1998												
4.00	1.5										2	P
2.60	0.0										2	P
1.30	4.3										5	F
0.50	6.6										9	MG
Year: 2010												
0.20	21.5										3	F
0.20	21.5	18(2)	0(0)	0(0)	13(2)	0.0(0)	0.0(0)	14.9(4)	84.8(0)	20.7(2)	4(2)	F