

Euclid Creek
August 18, 2010
River Mile: 0.20
Collection Method: Boat Electroshocking
Drainage Area: 24 miles²
Collection Distance: 0.5 km

<u>Species</u>	<u>Number</u>	<u>Weight (kg)</u>	<u>Pollution Tolerance</u>	<u>#</u>	<u>DELT Anomalies Description</u>
<i>Dorosoma cepedianum</i> Eastern gizzard shad	8	0.328	--	0	--
<i>Carpiodes cyprinus</i> Central quillback carpsucker	3	0.040	--	0	--
<i>Hypentelium nigricans</i> Northern hog sucker	1	0.238	Moderately Intolerant	0	--
<i>Catostomus commersonii</i> Common white sucker	211	6.440	Highly Tolerant	0	--
<i>Cyprinus carpio</i> Common carp	1	1.880	Highly Tolerant	0	--
<i>Carassius auratus</i> Goldfish	2	0.540	Highly Tolerant	0	--
<i>Notemigonus crysoleucas</i> Golden shiner	2	0.038	Highly Tolerant	0	--
<i>Semotilus atromaculatus</i> Creek chub	52	1.184	Highly Tolerant	0	--
<i>Notropis chrysocephalus</i> Striped shiner	1	0.030	--	0	--
<i>Notropis volucellus</i> Mimic Shiner	89	0.170	Common Intolerant	0	
<i>Pimephales notatus</i> Bluntnose minnow	16	0.050	Highly Tolerant	0	--
<i>Campostoma anomalum</i> Central stoneroller minnow	50	0.740	--	1	Lesion
<i>Ictalurus natalis</i> Yellow bullhead	4	0.584	Highly Tolerant	0	--
<i>Ictalurus nebulosus</i> Brown bullhead	26	4.570	Highly Tolerant	5	Deformity & erosions

Euclid Creek
August 18, 2010
River Mile: 0.20

<i>Ambloplites rupestris</i> Northern rockbass	3	0.190	--	0	--
<i>Micropterus dolomieu</i> Smallmouth bass	2	0.020	Moderately Intolerant	0	--
<i>Micropterus salmoides</i> Largemouth bass	38	0.728	--	0	--
<i>Lepomis cyanellus</i> Green sunfish	2	0.064	Highly Tolerant	0	--
<i>Lepomis macrochirus</i> Northern bluegill sunfish	6	0.132	Moderately Tolerant	0	--
<i>Lepomis gibbosus</i> Pumpkinseed sunfish	142	1.908	Moderately Tolerant	0	--
<i>Percina caprodes</i> Northern logperch darter	2	0.012	Moderately Intolerant	0	--
<i>Aplodinotus grunniens</i> Freshwater drum	1	0.600	Moderately Tolerant	1	Multiple
<i>Neogobius melanostomus</i> Round goby	8	0.020	--	0	--
Totals	<u><u>670</u></u>	<u><u>20.506</u></u>		<u><u>7</u></u>	

*DELT anomalies were observed on 1.045 % of the fish collected.
 Index of Biotic Integrity (IBI) = 32 (Fair)
 Modified Index of Well-Being (MIwb) 8.7 (Marginally Good)
 Shannon Diversity Index, wt. 2.084
 Shannon Diversity Index, no. 2.159
 N 692
 B 10.27

Euclid Creek Upstream of Confluence with Lake Erie

September 22, 2010

River Mile: 0.20

Collection Method: Boat Electroshocking

Drainage Area: 24 miles²

Collection Distance: 0.5 km

<u>Species</u>	<u>Number</u>	<u>Weight (kg)</u>	<u>Pollution Tolerance</u>	<u>#</u>	<u>DELT Anomalies Description</u>
<i>Oncorhynchus mykiss</i> Rainbow trout	13	25.500	--	0	--
<i>Carpiodes cyprinus</i> Central quillback carpsucker	3	0.044	--	0	--
<i>Catostomus commersonii</i> Common white sucker	248	18.862	Highly Tolerant	0	--
<i>Cyprinus carpio</i> Common carp	3	11.600	Highly Tolerant	0	--
<i>Carassius auratus</i> Goldfish	4	1.420	Highly Tolerant	1	Lesion
<i>Notemigonus crysoleucas</i> Golden shiner	3	0.014	Highly Tolerant	0	--
<i>Semotilus atromaculatus</i> Creek chub	7	0.186	Highly Tolerant	0	--
<i>Notropis atherinoides</i> Common Emerald shiner	4	0.016	--	0	--
<i>Notropis hudsonius</i> Spottail shiner	2	0.036	Moderately Tolerant	0	--
<i>Cyprinella spiloptera</i> Spotfin shiner	2	0.010	--	0	--
<i>Notropis volucellus</i> Mimic Shiner	3	0.012	Common Intolerant	0	--
<i>Pimephales notatus</i> Bluntnose minnow	4	0.012	Highly Tolerant	0	--
<i>Campostoma anomalum</i> Central stoneroller minnow	4	0.042	--	0	--
<i>Ictalurus natalis</i> Yellow bullhead	5	1.028	Highly Tolerant	3	Erosions
<i>Ictalurus nebulosus</i> Brown bullhead	16	2.232	Highly Tolerant	3	Eroded fin & lesions

Euclid Creek Upstream of Confluence with Lake Erie
September 22, 2010
River Mile: 0.20

<i>Labidesthes sicculus</i> Brook silverside	8	0.020	Moderately Intolerant	0	--
<i>Morone americana</i> White perch	5	0.034	--	0	--
<i>Pomoxis nigromaculatus</i> Black crappie	1	0.038	--	0	--
<i>Ambloplites rupestris</i> Northern rockbass	5	0.092	--	0	--
<i>Micropterus dolomieu</i> Smallmouth bass	5	0.046	Moderately Intolerant	0	--
<i>Micropterus salmoides</i> Largemouth bass	45	0.926	--	0	--
<i>Lepomis macrochirus</i> Northern bluegill sunfish	9	0.094	Moderately Tolerant	0	--
<i>Lepomis gibbosus</i> Pumpkinseed sunfish	109	1.452	Moderately Tolerant	0	--
<i>Perca flavescens</i> Yellow perch	4	0.036	--	0	--
<i>Percina caprodes</i> Northern logperch darter	2	0.014	Moderately Intolerant	0	--
<i>Aplodinotus grunniens</i> Freshwater drum	1	0.048	Moderately Tolerant	0	--
<i>Neogobius melanostomus</i> Round goby	5	0.022	--	0	--
<i>Osmerus mordax</i> Rainbow Smelt	1	0.016	--	0	
Totals	<u>521</u>	<u>63.852</u>		<u>7</u>	

*DELT anomalies were observed on 1.344 % of the fish collected.

Index of Biotic Integrity (IBI) = 34 (Fair)

Modified Index of Well-Being (MIwb) 7.4 (Fair)

Shannon Diversity Index, wt. 1.912

Shannon Diversity Index, no. 1.543

N 416

B 5.884

Euclid Creek Downstream of Lakeshore Boulevard

June 29, 2010

River Mile: 0.55

Collection Method: Longline Electroshocking

Drainage Area: 23.0 miles²

Collection Distance: 0.2 km

<u>Species</u>	<u>Number</u>	<u>Weight (kg)</u>	<u>Pollution Tolerance</u>	<u>#</u>	<u>DELT Anomalies Description</u>
<i>Oncorhynchus mykiss</i> Rainbow trout	2	0.070	--	0	--
<i>Moxostoma macrolepidotum</i> Shorthead redhorse	1	0.042	Moderately Intolerant	0	--
<i>Catostomus commersonii</i> Common white sucker	135	4.222	Highly Tolerant	0	--
<i>Rhinichthys atratulus</i> Western blacknose dace	1	0.010	Highly Tolerant	0	--
<i>Semotilus atromaculatus</i> Creek chub	356	4.485	Highly Tolerant	2	Lesions
<i>Pimephales promelas</i> Northern fathead minnow	4	0.015	Highly Tolerant	0	--
<i>Pimephales notatus</i> Bluntnose minnow	4	0.012	Highly Tolerant	0	--
<i>Campostoma anomalum</i> Central stoneroller minnow	56	0.480	--	0	--
<i>Ictalurus natalis</i> Yellow bullhead	3	0.180	Highly Tolerant	0	--
<i>Ictalurus nebulosus</i> Brown bullhead	7	2.685	Highly Tolerant	2	Eroded fin & lesion
<i>Ambloplites rupestris</i> Northern rockbass	3	0.240	--	0	--
<i>Lepomis cyanellus</i> Green sunfish	5	0.062	Highly Tolerant	0	--
<i>Lepomis gibbosus</i> Pumpkinseed sunfish	36	0.300	Moderately Tolerant	0	--

Euclid Creek Downstream of Lakeshore Boulevard

June 29, 2010

River Mile: 0.55

<i>Neogobius melanostomus</i> Round goby	137	0.675	--	0	--
	<hr/>	<hr/>			
Totals	<u>750</u>	<u>13.478</u>		<u>4</u>	

*DELT anomalies were observed on 0.53 % of the fish collected.

Index of Biotic Integrity (IBI) = 26 (Poor)

Modified Index of Well-Being (MIwb) 5.9 (Poor)

Shannon Diversity Index, wt. 1.523

Shannon Diversity Index, no. 1.623

N 144

B 1.593

Euclid Creek Downstream of Lakeshore Boulevard

July 26, 2010

River Mile: 0.55

Collection Method: Longline Electroshocking

Drainage Area: 23.0 miles²

Collection Distance: 0.2 km

<u>Species</u>	<u>Number</u>	<u>Weight (kg)</u>	<u>Pollution Tolerance</u>	<u>#</u>	<u>DELT Anomalies Description</u>
<i>Oncorhynchus mykiss</i> Rainbow trout	1	0.043	--	0	--
<i>Catostomus commersonii</i> Common white sucker	85	1.740	Highly Tolerant	0	--
<i>Rhinichthys atratulus</i> Western blacknose dace	1	0.003	Highly Tolerant	0	--
<i>Semotilus atromaculatus</i> Creek chub	198	1.750	Highly Tolerant	0	--
<i>Notropis volucellus</i> Mimic Shiner	9	0.020	Common Intolerant	0	--
<i>Pimephales promelas</i> Northern fathead minnow	3	0.015	Highly Tolerant	0	--
<i>Pimephales notatus</i> Bluntnose minnow	4	0.025	Highly Tolerant	0	--
<i>Campostoma anomalum</i> Central stoneroller minnow	29	0.230	--	0	--
<i>Ictalurus natalis</i> Yellow bullhead	3	0.078	Highly Tolerant	0	--
<i>Ictalurus nebulosus</i> Brown bullhead	2	0.285	Highly Tolerant	0	--
<i>Ambloplites rupestris</i> Northern rockbass	1	0.041	--	0	--
<i>Micropterus dolomieu</i> Smallmouth bass	1	0.008	Moderately Intolerant	0	--
<i>Micropterus salmoides</i> Largemouth bass	8	0.040	--	1	Deformity

Euclid Creek Downstream of Lakeshore Boulevard

July 26, 2010

River Mile: 0.55

<i>Lepomis cyanellus</i> Green sunfish	3	0.035	Highly Tolerant	0	--
<i>Lepomis gibbosus</i> Pumpkinseed sunfish	35	0.475	Moderately Tolerant	0	--
<i>Neogobius melanostomus</i> Round goby	19	0.055	--	0	--
<hr/>					
Totals	<u>402</u>	<u>4.843</u>		<u>1</u>	

*DELT anomalies were observed on 0.25 % of the fish collected.
 Index of Biotic Integrity (IBI) = 26 (Poor)
 Modified Index of Well-Being (MIwb) 5.8 (Poor)
 Shannon Diversity Index, wt. 1.628
 Shannon Diversity Index, no. 1.633
 N 124.5
 B 1.221

Euclid Creek Downstream of Lakeshore Boulevard
September 27, 2010
River Mile: 0.55
Collection Method: Longline Electroshocking
Drainage Area: 23.0 miles²
Collection Distance: 0.2 km

<u>Species</u>	<u>Number</u>	<u>Weight (kg)</u>	<u>Pollution Tolerance</u>	<u>#</u>	<u>DELT Anomalies Description</u>
<i>Oncorhynchus mykiss</i> Rainbow trout	1	0.900	--	0	--
<i>Catostomus commersonii</i> Common white sucker	159	4.368	Highly Tolerant	0	--
<i>Notemigonus crysoleucas</i> Golden shiner	3	0.012	Highly Tolerant	0	--
<i>Semotilus atromaculatus</i> Creek chub	195	3.222	Highly Tolerant	0	--
<i>Notropis atherinoides</i> Common Emerald shiner	2	0.008	--	0	--
<i>Notropis stramineus</i> Sand shiner	1	0.002	Moderately Intolerant	0	--
<i>Notropis volucellus</i> Mimic Shiner	51	0.114	Common Intolerant	0	--
<i>Pimephales promelas</i> Northern fathead minnow	2	0.008	Highly Tolerant	0	--
<i>Pimephales notatus</i> Bluntnose minnow	68	0.300	Highly Tolerant	0	--
<i>Campostoma anomalum</i> Central stoneroller minnow	139	2.685	--	0	--
<i>Ictalurus natalis</i> Yellow bullhead	11	0.500	Highly Tolerant	1	Lesion
<i>Ambloplites rupestris</i> Northern rockbass	1	0.010	--	0	--
<i>Micropterus dolomieu</i> Smallmouth bass	7	0.102	Moderately Intolerant	1	Lesion
<i>Micropterus salmoides</i> Largemouth bass	15	0.300	--	1	Lesion
<i>Lepomis macrochirus</i> Northern bluegill sunfish	26	0.332	Moderately Tolerant	0	--

**Euclid Creek Downstream of Lakeshore Boulevard
September 27, 2010**

River Mile: 0.55

<i>Lepomis gibbosus</i> Pumpkinseed sunfish	89	1.090	Moderately Tolerant	1	Deformed eye
<i>Neogobius melanostomus</i> Round goby	46	0.176	--	0	--
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Totals	<u>816</u>	<u>14.129</u>		<u>4</u>	

*DELT anomalies were observed on 0.49 % of the fish collected.

Index of Biotic Integrity (IBI) = 26 (Poor)

Modified Index of Well-Being (MIwb) 8.1 (Good)

Shannon Diversity Index, wt. 2.103

Shannon Diversity Index, no. 1.909

N 496.5

B 6.965

Euclid Creek Upstream of St. Clair Avenue
June 29, 2010
River Mile: 1.65
Collection Method: Longline Electroshocking
Drainage Area: 21.8 miles²
Collection Distance: 0.2 km

<u>Species</u>	<u>Number</u>	<u>Weight (kg)</u>	<u>Pollution Tolerance</u>	<u>#</u>	<u>DELT Anomalies Description</u>
<i>Catostomus commersonii</i> Common white sucker	60	1.444	Highly Tolerant	0	--
<i>Rhinichthys atratulus</i> Western blacknose dace	158	0.588	Highly Tolerant	0	--
<i>Semotilus atromaculatus</i> Creek chub	135	1.590	Highly Tolerant	0	--
<i>Campostoma anomalum</i> Central stoneroller minnow	140	1.110	--	0	--
Totals	<u>493</u>	<u>4.732</u>		<u>0</u>	

*DELT anomalies were observed on 0.00 % of the fish collected.
 Index of Biotic Integrity (IBI) = 26 (Poor)
 Modified Index of Well-Being (MIwb) 5.6 (Poor)
 Shannon Diversity Index, wt. 1.333
 Shannon Diversity Index, no. 1.328
 N 210
 B 1.665

Euclid Creek Upstream of St. Clair Avenue
September 3, 2010
River Mile: 1.65
Collection Method: Longline Electroshocking
Drainage Area: 21.8 miles²
Collection Distance: 0.2 km

<u>Species</u>	<u>Number</u>	<u>Weight (kg)</u>	<u>Pollution Tolerance</u>	<u>#</u>	<u>DELT Anomalies Description</u>
<i>Catostomus commersonii</i> Common white sucker	51	1.200	Highly Tolerant	0	--
<i>Rhinichthys atratulus</i> Western blacknose dace	290	0.503	Highly Tolerant	0	--
<i>Semotilus atromaculatus</i> Creek chub	131	0.990	Highly Tolerant	0	--
<i>Pimephales promelas</i> Northern fathead minnow	2	0.003	Highly Tolerant	0	--
<i>Pimephales notatus</i> Bluntnose minnow	3	0.008	Highly Tolerant	0	--
<i>Campostoma anomalum</i> Central stoneroller minnow	101	1.355	--	0	--
Totals	<u>578</u>	<u>4.059</u>		<u>0</u>	

*DELT anomalies were observed on 0.00 % of the fish collected.
 Index of Biotic Integrity (IBI) = 24 (Poor)
 Modified Index of Well-Being (MIwb) 5.5 (Poor)
 Shannon Diversity Index, wt. 1.248
 Shannon Diversity Index, no. 1.347
 N 151.5
 B 2.033

Euclid Creek Upstream of St. Clair Avenue
September 27, 2010
River Mile: 1.65
Collection Method: Longline Electroshocking
Drainage Area: 21.8 miles²
Collection Distance: 0.2 km

<u>Species</u>	<u>Number</u>	<u>Weight (kg)</u>	<u>Pollution Tolerance</u>	<u>#</u>	<u>DELTA Anomalies Description</u>
<i>Catostomus commersonii</i> Common white sucker	83	1.430	Highly Tolerant	0	--
<i>Rhinichthys atratulus</i> Western blacknose dace	236	0.512	Highly Tolerant	0	--
<i>Semotilus atromaculatus</i> Creek chub	118	0.973	Highly Tolerant	0	--
<i>Pimephales promelas</i> Northern fathead minnow	4	0.010	Highly Tolerant	0	--
<i>Pimephales notatus</i> Bluntnose minnow	3	0.006	Highly Tolerant	0	--
<i>Campostoma anomalum</i> Central stoneroller minnow	116	1.186	--	0	--
Totals	<u>560</u>	<u>4.117</u>		<u>0</u>	

*DELTA anomalies were observed on 0.00 % of the fish collected.
 Index of Biotic Integrity (IBI) = 24 (Poor)
 Modified Index of Well-Being (MIwb) 5.6 (Poor)
 Shannon Diversity Index, wt. 1.365
 Shannon Diversity Index, no. 1.35
 N 174
 B 1.779

Euclid Creek Upstream of Highland Road
June 30, 2010
River Mile: 2.70
Collection Method: Longline Electroshocking
Drainage Area: 21.4 miles²
Collection Distance: 0.2 km

<u>Species</u>	<u>Number</u>	<u>Weight (kg)</u>	<u>Pollution Tolerance</u>	<u>#</u>	<u>DELTA Anomalies Description</u>
<i>Catostomus commersonii</i> Common white sucker	68	0.660	Highly Tolerant	0	--
<i>Rhinichthys atratulus</i> Western blacknose dace	244	0.783	Highly Tolerant	0	--
<i>Semotilus atromaculatus</i> Creek chub	127	0.623	Highly Tolerant	0	--
<i>Pimephales notatus</i> Bluntnose minnow	22	0.048	Highly Tolerant	0	--
<i>Campostoma anomalum</i> Central stoneroller minnow	254	1.380	--	0	--
<i>Lepomis megalotis</i> Northern longear sunfish	1	0.022	Moderately Intolerant	0	--
Totals	<u>716</u>	<u>3.516</u>		<u>0</u>	

*DELTA anomalies were observed on 0.00 % of the fish collected.
 Index of Biotic Integrity (IBI) = 26 (Poor)
 Modified Index of Well-Being (MIwb) 6.1 (Fair)
 Shannon Diversity Index, wt. 1.381
 Shannon Diversity Index, no. 1.413
 N 382.5
 B 2.103

Euclid Creek Upstream of Highland Road
September 3, 2010
River Mile: 2.70
Collection Method: Longline Electroshocking
Drainage Area: 21.4 miles²
Collection Distance: 0.2 km

<u>Species</u>	<u>Number</u>	<u>Weight (kg)</u>	<u>Pollution Tolerance</u>	<u>#</u>	<u>DELT Anomalies Description</u>
<i>Catostomus commersonii</i> Common white sucker	10	0.140	Highly Tolerant	0	--
<i>Rhinichthys atratulus</i> Western blacknose dace	678	1.156	Highly Tolerant	0	--
<i>Semotilus atromaculatus</i> Creek chub	138	0.560	Highly Tolerant	0	--
<i>Pimephales promelas</i> Northern fathead minnow	9	0.008	Highly Tolerant	0	--
<i>Pimephales notatus</i> Bluntnose minnow	18	0.042	Highly Tolerant	0	--
<i>Campostoma anomalum</i> Central stoneroller minnow	210	1.724	--	0	--
<i>Ictalurus natalis</i> Yellow bullhead	2	0.008	Highly Tolerant	0	--
Totals	<u>1065</u>	<u>3.638</u>		<u>0</u>	

*DELT anomalies were observed on 0.00 % of the fish collected.
 Index of Biotic Integrity (IBI) = 26 (Poor)
 Modified Index of Well-Being (MIwb) 5.6 (Poor)
 Shannon Diversity Index, wt. 1.037
 Shannon Diversity Index, no. 1.21
 N 315
 B 2.586

Euclid Creek Upstream of Highland Road
September 27, 2010
River Mile: 2.70
Collection Method: Longline Electroshocking
Drainage Area: 21.4 miles²
Collection Distance: 0.2 km

<u>Species</u>	<u>Number</u>	<u>Weight (kg)</u>	<u>Pollution Tolerance</u>	<u>#</u>	<u>DELT Anomalies Description</u>
<i>Catostomus commersonii</i> Common white sucker	5	0.097	Highly Tolerant	0	--
<i>Rhinichthys atratulus</i> Western blacknose dace	459	1.036	Highly Tolerant	0	--
<i>Semotilus atromaculatus</i> Creek chub	136	0.597	Highly Tolerant	0	--
<i>Pimephales promelas</i> Northern fathead minnow	13	0.020	Highly Tolerant	0	--
<i>Pimephales notatus</i> Bluntnose minnow	27	0.060	Highly Tolerant	0	--
<i>Camptostoma anomalum</i> Central stoneroller minnow	124	1.138	--	0	--
<i>Ictalurus natalis</i> Yellow bullhead	1	0.010	Highly Tolerant	0	--
Totals	<u>765</u>	<u>2.958</u>		<u>0</u>	

*DELT anomalies were observed on 0.00 % of the fish collected.
 Index of Biotic Integrity (IBI) = 24 (Poor)
 Modified Index of Well-Being (MIwb) 5.3 (Poor)
 Shannon Diversity Index, wt. 1.137
 Shannon Diversity Index, no. 1.302
 N 186
 B 1.707