

Summary of Fish Community Assessment Results for Fish Creek

1991 - 1993

Steuben and Dekalb Counties, Indiana
Williams County, Ohio

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Fish Community Assessment of Fish Creek: 1991 - 1993

Introduction and Methods

Fish communities were sampled during the summer and fall of 1991, 1992 and 1993 at various locations in Fish Creek from river mile (RM) 30.5 to the mouth (Table 1). Fish collections were made at each site using pulsed DC electrofishing gear: Ohio EPA sampling zones varied between 170 and 200 meters in length and Ohio Department of Natural Resource (Ohio DNR) and U.S. EPA, Region V (Simon) sampling zones were only 100 meters in length, which is a shorter distance than Ohio EPA recommends. Fish field work, laboratory, data processing and data analysis methods and procedures conducted by Ohio EPA were consistent with those specified in Ohio EPA's standard protocols (Ohio EPA 1987, 1989a, 1989b). Evaluation of aquatic life uses was determined by using biological criteria codified in Ohio Administrative Code (OAC) 3745-1-07, Table 7-17. The fish community performance measures that were used included the Index of Biotic Integrity (IBI) and the Modified Index of Well-Being (MIwb). The IBI is a multi-metric index originally described by Karr (1981) and Fausch *et al.* (1984) and modified for application to Ohio waters. The MIwb is a measure of fish community abundance and diversity using both numbers and biomass information. The MIwb is a modification of the original Index of Well-Being which was first applied to fish community information from the Wabash River (Gammon 1976, Gammon *et al.* 1981). Physical habitat was evaluated by Ohio EPA and U.S. EPA Region V using the Qualitative Habitat Evaluation Index (QHEI) developed by the Ohio EPA for streams and rivers in Ohio (Rankin 1989). Various attributes of the available habitat were scored based on their overall importance to the establishment of viable, diverse aquatic faunas. Evaluations of the types and quality of substrate, amount of instream cover, channel morphology, extent of riparian canopy, pool and riffle development and quality, and stream gradient are among the metrics used to evaluate the characteristics of a stream segment, not just the characteristics of a single sampling site. As such, individual sites may have much poorer physical habitat due to a localized disturbance yet still support aquatic communities closely resembling those sampled at adjacent sites with better habitat, provided water quality conditions are similar. QHEI scores from hundreds of segments throughout Ohio have indicated that values higher than 60 were generally conducive to the establishment of warmwater faunas while those which score in excess of 75-80 often typify habitat conditions which have the ability to support exceptional faunas.

Fish Creek is located in the Eastern Corn Belt Plains ecoregion. Based on a 1992 St. Joseph River watershed survey (Ohio EPA 1993), a recommendation was made to designate lower Fish Creek as Exceptional Warmwater Habitat (EWH) in a three mile stretch from the Ohio-Indiana state line (RM 5.6) to the point where the St. Joseph River floodplain physically influences instream conditions (RM 2.4 near CR 3). The remainder of the mainstem is designated as Warmwater Habitat (WWH).

Results and Discussion

Summarized results from the 1991, 1992 and 1993 fish sampling by Ohio EPA, Ohio DNR and U.S. EPA are compiled in Table 2 and longitudinally depicted in Figure 1. IBI metrics and scores and raw data tables by river mile are attached as Appendix Tables 1 and 2, respectively. Physical habitat data is attached as Appendix Table 3.

Macrohabitats of Fish Creek were evaluated at the Ohio EPA and U.S. EPA sampling locations using the Qualitative Habitat Evaluation Index (QHEI). QHEI scores ranged between 42.5 at RM 30.5 to 79.0 at RM 5.4. The macrohabitats of Fish Creek between RM 5.4 and 27.7 (QHEIs range = 72.0 - 79.0) appeared to be of a sufficient quality to

support and maintain a community of aquatic organisms capable of attaining at least the WWH biological criteria (Rankin 1989). Macrohabitats encountered at RM 30.5 and RM 0.2 were of a lesser quality and may have had a negative influence upon ambient biological potential. A detailed habitat description of Ohio EPA sampling zones can be found in the St. Joseph River and Selected Tributaries Biological and Water Quality Study (Ohio EPA 1993).

A total of 9,536 fish comprised of 49 species and three hybrids were collected from Fish Creek between 1991 and 1993. The sampling effort by the Ohio DNR, Ohio EPA and U.S. EPA included 15 stations (Table 1). Nine of the stations were located within Indiana, five were located within Ohio.

The numerically predominant fish species recorded were: creek chub (15.1%), johnny darter (13.8%), blacknose dace (8.4%), central stoneroller (8.0%), green sunfish (7.5%) and gizzard shad (6.3%). Fish species that predominated in terms of biomass were: common carp (38.6%), white sucker (11.4%), northern hog sucker (10.8%), golden redhorse (10.4%) and rock bass (7.7%).

Based on Ohio DNR sampling results three weeks after the diesel fuel spill (1993), no clear, significant trends (*i.e.*, differences >4 IBI units) in the Index of Biotic Integrity were observed in Fish Creek fish communities upstream and downstream from the diesel fuel spill location (Figure 1). IBI scores at RMs 6.5 (46) and 5.5 (40), sites immediately downstream from the spill site, were comparable to the upstream site at RM 9.9 (42). All three sites had IBI scores which were above the WWH biocriterion, but below the EWH biocriterion. A comparison of IBI scores at RM 6.5 and RM 5.5 from the 1991 and 1993 Ohio DNR results revealed identical values between years (RM 6.5 IBI = 46, RM 5.5 IBI = 40). The shorter distance employed in the Ohio DNR sampling (100 meter sampling zones) would tend to result in lower IBI scores since the IBI is calibrated to sampling zones of 150 - 200 m.

A decline in the Modified Index of Well-Being (MIwb) appeared to occur in Fish Creek downstream from the spill location at RMs 6.5, 5.5 and 2.6 between the Ohio DNR sites sampled in 1991 and 1993. However, MIwb results recorded three weeks after the spill revealed no significant difference (*i.e.*, >0.5 MIwb units) between sites sampled upstream and downstream from the spill. During 1993, two of the ten Ohio DNR sampling sites achieved the MIwb WWH biocriterion (one upstream and one downstream from the spill area); sampling at the same sites during 1991 revealed that six of ten locations achieved the MIwb WWH biocriterion (three upstream and three downstream from the spill area).

A number of pollution sensitive fish species were collected in Fish Creek during the 1991 through 1993 sampling period. Pollution sensitive species included American brook lamprey, black redhorse, hornyhead chub, river chub, rosyface shiner, silver shiner, stonecat madtom, and brindled madtom. In addition, a significant number of moderately pollution sensitive suckers (northern hog sucker, golden redhorse, silver redhorse) were also collected in Fish Creek.

Conclusions

Biological sampling in 1991 and 1992 by the Ohio EPA revealed that Fish Creek is capable of supporting exceptional warmwater fish communities. Physical habitat conditions in a majority of Fish Creek are conducive to supporting an exceptional biological community.

Ohio DNR had the only fish data results both before and after the spill occurred.

Based upon Ohio DNR results of sites sampled in 1991 and 1993 downstream from the spill site, no significant impairment was observed. Although interpretation of IBI and MIwb scores was hampered by short sampling distances, the upstream/ downstream differences after the spill do not seem to indicate long term severe effects - the worst we could expect would be for slight non-attainment of EWH in the Ohio segment.

Recommendations

Sampling in 1994 should follow Ohio EPA recommended distances, so comparisons to codified biocriteria can be made with more confidence, and to evaluate the attainment of the EWH use after the spill.

Table 1. Fish sampling locations in Fish Creek, 1991, 1992 and 1993.

Stream/ River Mile	Landmark	Date	Distance Sampled	Samplers	USGS 7.5 min. Quad. Map
<i>Fish Creek</i>					
30.5	P25 Rd., Ohio	21Aug 92	150 m	OEPA	Clear Lake
		17Sep 92	150 m	OEPA	
27.7	CR 200S, Indiana	18Jun 91	100 m	U.S.EPA ^a	Edon
26.0	CR 300S, Indiana	06Oct 93	100 m	ODNR	Edon
		10Sep 91	100 m	ODNR	
21.7	TR 850 E, Indiana	06Oct 93	100 m	ODNR	Edon
		10Sep 91	100 m	ODNR	
		18Jun 91	100 m	U.S.EPA ^a	
19.6	Rd. 650, Indiana	06Oct 93	100 m	ODNR	Edon
		10Sep 91	100 m	ODNR	
17.1	TR 700 E, Indiana	06Oct 93	100 m	ODNR	Edon
		10Sep 91	100 m	ODNR	
13.2	Rd. 71, Indiana	05Oct 93	100 m	ODNR	Edon
		11Sep 91	100 m	ODNR	
9.9	CR 12, Indiana	05Oct 93	100 m	ODNR	Butler East
		11Sep 91	100 m	ODNR	
8.3	CR 16, Indiana	11Jul 91	100 m	U.S.EPA ^a	Butler East
6.5	Rd. 73, Indiana	05Oct 93	100 m	ODNR	Butler East
		11Sep 91	100 m	ODNR	
5.5	TR 171, Ohio	04Oct 93	100 m	ODNR	Butler East
		05Sep 91	100 m	ODNR	
5.4	TR 171, Ohio	18Sep 92	200 m	OEPA	Butler East
		21Aug 92	200 m	OEPA	
		26Sep 91	170 m	OEPA	
2.6	TR 47, Ohio	04Oct 93	100 m	ODNR	Butler East
		05Sep 91	100 m	ODNR	
0.4	Upstr. SR 49, Ohio	04Oct 93	100 m	ODNR	Edgerton
		05Sep 91	100 m	ODNR	
0.2	Dst. SR 49, Ohio	18Sep 92	200 m	OEPA	Edgerton
		21Aug 92	200 m	OEPA	

^a - Sampling conducted by Tom Simon.

Table 2. Summary of fish community data based on pulsed D.C. electrofishing samples from Fish Creek and select tributaries, 1991 - 1993. Fish Creek has a WWH aquatic life use designation in the Ohio Water Quality Standards, with the EWH use designation recommended from RM 5.4 to RM 2.4 in a recent Ohio EPA report (1993).

Stream/ River Mile	Mean Number of Species	Cumulative Species	Mean Relative Number	Mean Relative Weight	QHEI	Mean Modified Index of Well-Being	Mean Index of Biotic Integrity	Narrative Evaluation ^a
<i>Fish Creek-1993</i>								
26.0	14	-	504	8.4	-	7.2*	40	Fair/ Good
21.7	24	-	849	85.2	-	9.2	40	Good/ V.Good
19.6	16	-	234	18.3	-	7.6*	40	Fair/ Good
17.1	22	-	576	12.6	-	7.7*	36 ^{ns}	Fair/M.Good
13.2	16	-	108	14.5	-	7.2*	38 ^{ns}	Fair/M.Good
9.9	15	-	177	23.6	-	7.5*	42	Fair/ Good
6.5	14	-	201	21.1	-	7.9 ^{ns}	46	M.Good-V. Good
5.5	16	-	204	5.6	-	7.5*	40	Fair/ Good
2.6	14	-	117	10.0	-	6.7*	40	Fair/ Good
0.4	13	-	123	9.7	-	7.1*	32*	Fair
<i>Fish Creek-1992</i>								
30.5	16.5	17	4,777	14.9	42.5	NA	44	Good
5.4	26.5	30	587	21.8	77.0	9.3	44	V. Good/ Good
0.2	21.5	26	695	42.7	65.0	7.5*	43	Fair/ Good
<i>Fish Creek-1991</i>								
27.7	12	-	294	19.4	72.0	<u>5.3</u>	36 ^{ns}	Poor/ M. Good
26.0	17	-	390	14.4	-	7.8 ^{ns}	36 ^{ns}	Marg. Good
21.7	19	-	642	36.1	-	8.7	42	Good
21.7	14	-	213	6.2	73.0	7.5*	40	Fair/ Good
19.6	18	-	294	24.9	-	6.6*	36 ^{ns}	Fair/ M.Good
17.1	20	-	1,023	30.0	-	8.9	38 ^{ns}	M.Good-V. Good
13.2	13	-	210	15.4	-	6.8*	30*	Fair
9.9	18	-	306	36.1	-	7.5*	42	Fair/ Good
8.3	19	-	549	21.3	72.0	8.7	36 ^{ns}	M.Good/ Good

Table 2. Continued.

Stream/ River Mile	Mean Number of Species	Cumulative Species	Mean Relative Number	Mean Relative Weight	QHEI	Mean Modified Index of Well-Being	Mean Index of Biotic Integrity	Narrative Evaluation ^a
6.5	19	-	333	9.9	-	8.2 ^{ns}	46	M.Good -V.Good
5.5	22	-	330	21.8	-	8.3	40	Good
5.4	27	-	572	-	79.0	-	52	Exceptional
2.6	19	-	381	37.2	-	8.1 ^{ns}	44	M. Good/ Good
0.4	7	-	120	34.8	-	<u>4.9*</u>	<u>26*</u>	Poor

Ecoregional Biocriteria: Eastern Corn Belt Plains (ECBP)
(from Ohio Administrative Code 3745-1-07, Table 7-17)

<u>INDEX - Site Type</u>	<u>WWH</u>	<u>EWH</u>	<u>MWH^b</u>
IBI - Headwater/Wading	40	50	24
Mod. Iwb - Wading	8.3	9.4	6.2

- * - Significant departure from applicable biological criterion (>4 IBI units or >0.5 MIwb units); underlined values are in the poor and very poor range.
- ns - Nonsignificant departure from WWH biocriterion (≤ 4 IBI units or ≤ 0.5 MIwb units).
- a - Narrative evaluation is based on both MIwb and IBI scores, when available (M.Good = Marginally Good; V.Good = Very Good).
- b - Modified Warmwater Habitat for channel modified areas.
- NA - Headwater site; MIwb is not applicable

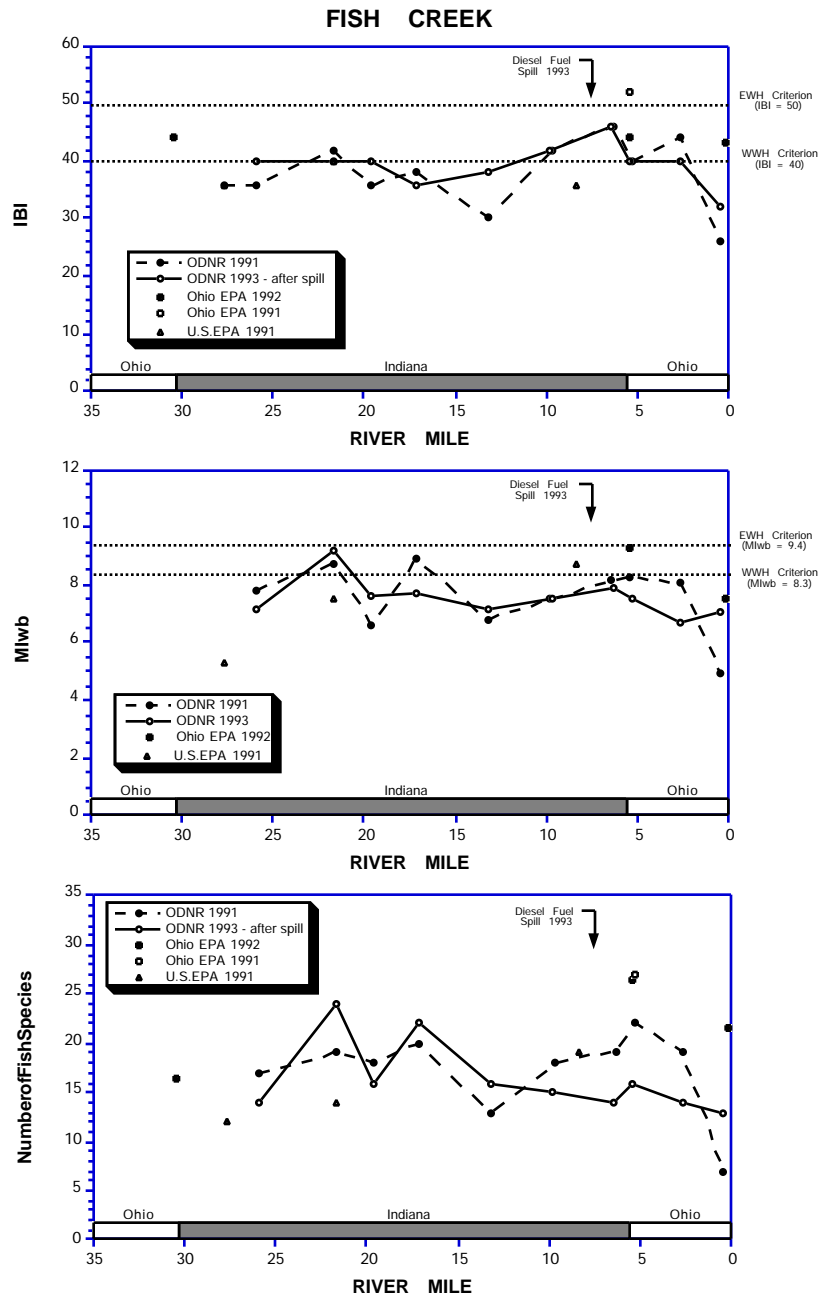


Figure 1. Longitudinal performance of the Index of Biotic Integrity, Modified Index of Well-being, and number of species in Fish Creek, 1991, 1992 and 1993.

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Appendix Table 1.

IBI metrics and scores for Fish Creek, 1991 - 1993.

Fish Creek 1991, 1992, 1993

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	Omnivores	Pioneering fishes	Insectivores	DELT anomalies		
Fish Creek - (04-405)																
Year: 92																
30.50	D	08/21/92	8.1	16(5)	6(3)	3(3)	0(1)	4(5)	3(3)	57(3)	7(5)	55(3)	33(3)	0.0(5)	2670(5)	44
30.50	D	09/17/92	8.1	15(5)	5(3)	3(3)	0(1)	4(5)	3(3)	43(3)	4(5)	58(1)	50(5)	0.0(5)	1938(5)	44

Fish Creek 1991, 1992, 1993

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				DELT anomalies
Fish Creek - (04405)																	
Year: 93																	
26.00	D	10/06/93	61	14(3)	2(3)	2(3)	1(1)	3(3)	26(3)	33(3)	7(5)	1.2(3)	77(5)	0.0(5)	336(3)	40	7.2
21.70	D	10/06/93	71	23(5)	4(5)	3(3)	2(1)	4(3)	49(5)	46(1)	25(3)	2.8(3)	54(3)	0.0(5)	456(3)	40	9.2
19.60	D	10/06/93	74	15(3)	4(5)	3(3)	1(1)	3(3)	29(3)	47(1)	14(5)	5.1(5)	64(5)	0.0(5)	123(1)	40	7.6
17.10	D	10/06/93	76	22(5)	3(3)	3(3)	2(1)	3(3)	34(3)	57(1)	23(3)	3.7(3)	40(3)	0.0(5)	249(3)	36	7.7
13.20	D	10/05/93	85	15(3)	4(5)	3(3)	0(1)	4(3)	28(3)	28(3)	8(3)	13.9(5)	67(3)	0.0(5)	78(1) *	38	▲ 7.2
9.90	D	10/05/93	95	14(3)	3(3)	4(5)	2(1)	2(1)	73(5)	27(3)	17(5)	8.5(5)	64(5)	0.0(5)	129(1) *	42	7.5
6.50	D	10/05/93	99	14(3)	3(3)	4(5)	2(1)	3(3)	57(5)	19(5)	15(5)	23.9(5)	60(5)	0.0(5)	162(1)	46	7.9
5.50	D	10/04/93	105	16(3)	2(3)	3(3)	1(1)	5(3)	28(3)	29(3)	3(5)	10.3(5)	59(5)	0.0(5)	144(1)	40	7.5
2.60	D	10/04/93	107	13(3)	3(3)	2(1)	2(1)	2(1)	38(5)	21(5)	8(5)	23.1(5)	67(5)	0.0(5)	93(1) *	40	6.7
0.40	D	10/04/93	109	12(3)	2(3)	4(3)	3(3)	1(1)	20(3)	46(1)	12(1)	24.4(5)	61(3)	0.0(5)	66(1) *	32	▲ 7.1
Year: 92																	
5.40	D	08/21/92	105	23(5)	2(3)	4(3)	5(3)	4(3)	32(3)	10(5)	37(1)	4.4(3)	53(3)	0.4(3)	684(3)	38	9.2
5.40	D	09/18/92	105	29(5)	2(3)	4(3)	7(5)	6(5)	33(3)	18(5)	8(5)	6.8(5)	72(5)	0.4(3)	341(3)	50	9.4
0.20	D	09/18/92	109	19(3)	2(3)	3(3)	3(3)	4(3)	18(1)	18(5)	11(5)	21.4(5)	60(5)	0.0(5)	161(1) *	42	7.1
0.20	D	08/21/92	109	22(3)	3(3)	3(3)	3(3)	4(3)	9(3)	10(3)	67(5)	4.2(5)	25(5)	0.3(3)	1074(5)	44	▲ 7.8
Year: 91																	
27.70	E	06/18/91	60	11(3)	4(5)	2(3)	0(1)	1(1)	21(3)	87(1)	18(5)	1.0(3)	70(5)	0.0(5)	39(1)	36	5.3
26.00	D	09/10/91	61	17(3)	3(3)	3(3)	1(1)	2(1)	32(3)	52(1)	18(5)	6.9(5)	65(5)	0.0(5)	186(1)	36	7.8
21.70	E	06/18/91	71	14(3)	2(3)	2(3)	2(1)	3(3)	58(5)	30(3)	11(5)	1.4(3)	79(5)	0.0(5)	150(1)	40	7.5
21.70	D	09/10/91	71	18(3)	3(3)	4(5)	1(1)	4(3)	35(3)	43(1)	13(5)	6.1(5)	66(5)	0.0(5)	366(3)	42	8.7
19.60	D	09/10/91	74	17(3)	4(5)	4(5)	2(1)	1(1)	22(3)	61(1)	29(3)	8.2(5)	51(3)	0.0(5)	114(1)	36	6.6

na - Qualitative data, Modified Iwb not applicable.

▲ - IBI is low-end adjusted.

● - One or more species excluded from IBI calculation.

Fish Creek 1991, 1992, 1993

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
17.10	D	09/10/91	76	19(3)	2(3)	3(3)	1(1)	4(3)	39(5)	46(1)	19(3)	3.5(3)	55(5)	0.0(5)	555(3)	38	8.9
13.20	D	09/11/91	85	12(3)	3(3)	3(3)	0(1)	1(1)	16(1)	40(3)	43(1)	17.1(5)	39(3)	0.0(5)	126(1)	30	6.8
9.90	D	09/11/91	95	17(3)	3(3)	3(3)	2(1)	4(3)	58(5)	27(3)	25(3)	9.8(5)	61(5)	0.0(5)	222(3)	42	7.5
8.30	E	07/11/91	97	18(3)	3(3)	3(3)	0(1)	4(3)	13(1)	36(3)	30(3)	10.4(5)	50(3)	0.0(5)	354(3)	36	8.7
6.50	D	09/11/91	99	18(3)	2(3)	3(3)	3(3)	4(3)	36(5)	23(5)	21(3)	5.4(5)	64(5)	0.0(5)	258(3)	46	8.2
5.50	D	09/05/91	105	21(3)	3(3)	2(1)	2(1)	4(3)	31(3)	11(5)	28(3)	10.0(5)	60(5)	0.0(5)	294(3)	40	8.3
5.40	E	09/26/91	105	26(5)	2(3)	4(3)	7(5)	5(3)	45(5)	19(5)	15(5)	6.8(5)	71(5)	0.0(5)	466(3)	52	na
2.60	D	09/05/91	107	18(3)	3(3)	3(3)	2(1)	3(3)	24(3)	19(5)	13(5)	23.6(5)	56(5)	0.0(5)	309(3)	44	8.1
0.40	D	09/05/91	109	6(1)	3(3)	2(1)	0(1)	1(1)	15(1)	53(1)	25(3)	27.5(5)	48(3)	0.0(5)	57(1) *	26	4.9

na - Qualitative data, Modified Iwb not applicable.

▲ - IBI is low-end adjusted.

● - One or more species excluded from IBI calculation.

Appendix Table 2
Relative abundance of fish by river mile in Fish Creek,
1991 - 1993
(relative numbers are per 0.3 km)

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1992
River Mile: 30.50	Basin: Maumee River	Date Range: 08/21/92
Data Source: 01	Time Fished: 3617 sec Drain Area: 8.1 sq mi	Thru: 09/17/92
Purpose:	Dist Fished: 0.30 km No of Passes: 2	Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
CENTRAL MUDMINNOW		I	C	T	15	15.00	0.31	0.11	0.74	7.39
WHITE SUCKER	W	O	S	T	117	117.00	2.45	0.59	3.93	5.02
COMMON CARP	G	O	M	T	8	8.00	0.17	0.12	0.78	14.63
GOLDEN SHINER	N	I	M	T	2	2.00	0.04	0.00	0.01	1.00
BLACKNOSE DACE	N	G	S	T	869	869.00	18.19	2.88	19.31	3.32
CREEK CHUB	N	G	N	T	990	990.00	20.72	3.61	24.18	3.65
SILVERJAW MINNOW	N	I	M		129	129.00	2.70	0.30	1.98	2.29
BLUNTNOSE MINNOW	N	O	C	T	161	161.00	3.37	0.59	3.95	3.67
CENTRAL STONEROLLER	N	H	N		776	776.00	16.24	3.57	23.92	4.60
YELLOW BULLHEAD		I	C	T	12	12.00	0.25	0.14	0.96	12.00
LARGEMOUTH BASS	F	C	C		8	8.00	0.17	0.03	0.20	3.75
GREEN SUNFISH	S	I	C	T	299	299.00	6.26	1.08	7.20	3.60
PUMPKINSEED SUNFISH	S	I	C	P	21	21.00	0.44	0.05	0.31	2.19
JOHNNY DARTER	D	I	C		1,083	1,083.00	22.67	1.14	7.61	1.05
ORANGETHROAT DARTER	D	I	S		13	13.00	0.27	0.02	0.12	1.38
FANTAIL DARTER	D	I	C		28	28.00	0.59	0.09	0.57	3.04
MOTTLED SCULPIN		I	C		246	246.00	5.15	0.63	4.21	2.56
<i>Mile Total</i>					4,777	4,777.00		14.94		
<i>Number of Species</i>					17					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1991
River Mile: 27.70	Basin: Maumee River	Date Range: 06/18/91
Data Source: 70	Time Fished: 1920 sec Drain Area: 60.0 sq mi	
Purpose:	Dist Fished: 0.10 km No of Passes: 1	Sampler Type: E

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
CENTRAL MUDMINNOW		I	C	T	1	3.00	1.02	0.02	0.12	8.00
NORTHERN HOG SUCKER	R	I	S	M	3	9.00	3.06	1.11	5.73	123.33
WHITE SUCKER	W	O	S	T	16	48.00	16.33	8.31	42.88	173.06
COMMON CARP	G	O	M	T	2	6.00	2.04	6.00	30.97	1,000.00
CREEK CHUB	N	G	N	T	10	30.00	10.20	1.02	5.28	34.10
COMMON SHINER	N	I	S		2	6.00	2.04	0.17	0.88	28.50
WHITE CRAPPIE	S	I	C		2	6.00	2.04	0.68	3.48	112.50
ROCK BASS	S	C	C		1	3.00	1.02	0.20	1.04	67.00
GREEN SUNFISH	S	I	C	T	56	168.00	57.14	1.64	8.44	9.73
BLUEGILL SUNFISH	S	I	C	P	3	9.00	3.06	0.18	0.93	20.00
JOHNNY DARTER	D	I	C		1	3.00	1.02	0.01	0.06	4.00
MOTTLED SCULPIN		I	C		1	3.00	1.02	0.03	0.17	11.00
<i>Mile Total</i>					98	294.00		19.37		
<i>Number of Species</i>					12					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1991
River Mile: 26.00	Basin: Maumee River	Date Range: 09/10/91
Data Source: 31	Time Fished:	Drain Area: 61.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
CENTRAL MUDMINNOW		I	C	T	1	3.00	0.77	0.01	0.08	4.00
GOLDEN REDHORSE	R	I	S	M	4	12.00	3.08	1.76	12.23	146.75
NORTHERN HOG SUCKER	R	I	S	M	6	18.00	4.62	1.29	8.96	71.67
WHITE SUCKER	W	O	S	T	19	57.00	14.62	5.29	36.73	92.81
CREEK CHUB	N	G	N	T	11	33.00	8.46	1.32	9.19	40.09
SILVER SHINER	N	I	S	I	2	6.00	1.54	0.01	0.08	2.00
STRIPED SHINER	N	I	S		8	24.00	6.15	0.45	3.15	18.88
COMMON SHINER	N	I	S		1	3.00	0.77	0.11	0.79	38.00
BLUNTNOSE MINNOW	N	O	C	T	5	15.00	3.85	0.01	0.06	0.60
CENTRAL STONEROLLER	N	H	N		1	3.00	0.77	0.08	0.52	25.00
YELLOW BULLHEAD		I	C	T	2	6.00	1.54	0.95	6.56	157.50
ROCK BASS	S	C	C		1	3.00	0.77	0.26	1.77	85.00
LARGEMOUTH BASS	F	C	C		8	24.00	6.15	1.79	12.39	74.38
GREEN SUNFISH	S	I	C	T	30	90.00	23.08	0.73	5.06	8.10
BLUEGILL SUNFISH	S	I	C	P	5	15.00	3.85	0.27	1.87	18.00
JOHNNY DARTER	D	I	C		25	75.00	19.23	0.07	0.49	0.93
GREENSIDE DARTER	D	I	S	M	1	3.00	0.77	0.01	0.06	3.00
<i>Mile Total</i>					130	390.00		14.40		
<i>Number of Species</i>					17					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1993
River Mile: 26.00	Basin: Maumee River	Date Range: 10/06/93
Data Source: 31	Time Fished:	Drain Area: 61.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI	Feed Grp	Breed Guild	Breed Guild Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
NORTHERN HOG SUCKER	R	I	S	M	3	9.00	1.79	1.05	12.52	116.67
WHITE SUCKER	W	O	S	T	12	36.00	7.14	1.98	23.61	55.00
CREEK CHUB	N	G	N	T	24	72.00	14.29	3.26	38.84	45.25
SILVER SHINER	N	I	S	I	2	6.00	1.19	0.04	0.43	6.00
STRIPED SHINER	N	I	S		12	36.00	7.14	0.65	7.76	18.08
CENTRAL STONEROLLER	N	H	N		1	3.00	0.60	0.08	1.00	28.00
YELLOW BULLHEAD		I	C	T	1	3.00	0.60	0.00	0.04	1.00
BLACK BULLHEAD		I	C	P	1	3.00	0.60	0.20	2.40	67.00
LARGEMOUTH BASS	F	C	C		2	6.00	1.19	0.01	0.14	2.00
GREEN SUNFISH	S	I	C	T	19	57.00	11.31	0.53	6.26	9.21
PUMPKINSEED SUNFISH	S	I	C	P	11	33.00	6.55	0.14	1.65	4.18
BLACKSIDE DARTER	D	I	S		6	18.00	3.57	0.09	1.07	5.00
JOHNNY DARTER	D	I	C		65	195.00	38.69	0.26	3.04	1.31
GREENSIDE DARTER	D	I	S	M	9	27.00	5.36	0.11	1.25	3.89
<i>Mile Total</i>					168	504.00		8.39		
<i>Number of Species</i>					14					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1991
River Mile: 21.70	Basin: Maumee River	Date Range: 06/18/91
Data Source: 31	Time Fished:	Drain Area: 71.0 sq mi
Purpose:	Dist Fished: 0.20 km	No of Passes: 2
		Thru: 09/10/91
		Sampler Type: E D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		9	13.50	3.16	0.20	0.97	15.11
GOLDEN REDHORSE	R	I	S	M	4	6.00	1.40	2.87	13.60	478.75
NORTHERN HOG SUCKER	R	I	S	M	13	19.50	4.56	2.21	10.44	113.08
WHITE SUCKER	W	O	S	T	8	12.00	2.81	1.83	8.68	152.75
SPOTTED SUCKER	R	I	S		1	1.50	0.35	0.00	0.02	3.00
COMMON CARP	G	O	M	T	5	7.50	1.75	7.05	33.39	940.40
HORNYHEAD CHUB	N	I	N	I	1	1.50	0.35	0.07	0.32	45.00
CREEK CHUB	N	G	N	T	37	55.50	12.98	2.18	10.30	39.19
SILVER SHINER	N	I	S	I	11	16.50	3.86	0.07	0.31	4.00
ROSYFACE SHINER	N	I	S	I	1	1.50	0.35	0.01	0.03	4.00
STRIPED SHINER	N	I	S		54	81.00	18.95	1.39	6.59	17.19
COMMON SHINER	N	I	S		15	22.50	5.26	0.23	1.10	10.33
BLUNTNOSE MINNOW	N	O	C	T	14	21.00	4.91	0.09	0.40	4.07
ROCK BASS	S	C	C		9	13.50	3.16	1.92	9.09	142.22
LARGEMOUTH BASS	F	C	C		5	7.50	1.75	0.02	0.09	2.60
GREEN SUNFISH	S	I	C	T	49	73.50	17.19	0.70	3.32	9.54
BLUEGILL SUNFISH	S	I	C	P	6	9.00	2.11	0.12	0.58	13.67
BLACKSIDE DARTER	D	I	S		2	3.00	0.70	0.01	0.06	4.50
JOHNNY DARTER	D	I	C		9	13.50	3.16	0.02	0.07	1.11
GREENSIDE DARTER	D	I	S	M	6	9.00	2.11	0.03	0.13	3.00
FANTAIL DARTER	D	I	C		13	19.50	4.56	0.04	0.21	2.23
MOTTLED SCULPIN		I	C		13	19.50	4.56	0.06	0.30	3.23
<i>Mile Total</i>					285	427.50		21.12		
<i>Number of Species</i>					22					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1993
River Mile: 21.70	Basin: Maumee River	Date Range: 10/06/93
Data Source: 31	Time Fished:	Drain Area: 71.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		1	3.00	0.35	0.03	0.04	10.00
GRASS PICKEREL		P	M	P	2	6.00	0.71	0.18	0.21	30.00
GOLDEN REDHORSE	R	I	S	M	14	42.00	4.95	10.50	12.33	250.00
NORTHERN HOG SUCKER	R	I	S	M	22	66.00	7.77	12.77	14.98	193.41
WHITE SUCKER	W	O	S	T	46	138.00	16.25	30.71	36.05	222.54
COMMON CARP	G	O	M	T	5	15.00	1.77	19.41	22.78	1,294.00
BLACKNOSE DACE	N	G	S	T	1	3.00	0.35	0.01	0.01	2.00
CREEK CHUB	N	G	N	T	46	138.00	16.25	3.63	4.26	26.28
SILVER SHINER	N	I	S	I	2	6.00	0.71	0.02	0.02	3.50
STRIPED SHINER	N	I	S		41	123.00	14.49	2.32	2.72	18.85
SILVERJAW MINNOW	N	I	M		7	21.00	2.47	0.07	0.08	3.43
BLUNTNOSE MINNOW	N	O	C	T	20	60.00	7.07	0.21	0.25	3.55
CENTRAL STONEROLLER	N	H	N		3	9.00	1.06	0.05	0.05	5.00
BLACK BULLHEAD		I	C	P	2	6.00	0.71	1.01	1.19	169.00
STONECAT MADTOM		I	C	I	8	24.00	2.83	1.17	1.38	48.88
BLACK CRAPPIE	S	I	C		1	3.00	0.35	0.02	0.02	6.00
ROCK BASS	S	C	C		6	18.00	2.12	1.87	2.20	104.00
GREEN SUNFISH	S	I	C	T	13	39.00	4.59	0.60	0.70	15.38
PUMPKINSEED SUNFISH	S	I	C	P	10	30.00	3.53	0.23	0.26	7.50
BLACKSIDE DARTER	D	I	S		7	21.00	2.47	0.11	0.12	5.00
JOHNNY DARTER	D	I	C		7	21.00	2.47	0.06	0.07	2.86
GREENSIDE DARTER	D	I	S	M	7	21.00	2.47	0.07	0.08	3.29
FANTAIL DARTER	D	I	C		6	18.00	2.12	0.06	0.07	3.33
MOTTLED SCULPIN		I	C		6	18.00	2.12	0.09	0.11	5.17
<i>Mile Total</i>					283	849.00		85.19		
<i>Number of Species</i>					24					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1991
River Mile: 19.60	Basin: Maumee River	Date Range: 09/10/91
Data Source: 31	Time Fished:	Drain Area: 74.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		5	15.00	5.10	0.19	0.76	12.60
GRASS PICKEREL		P	M	P	2	6.00	2.04	0.35	1.38	57.50
BLACK REDHORSE	R	I	S	I	1	3.00	1.02	1.25	4.99	415.00
GOLDEN REDHORSE	R	I	S	M	4	12.00	4.08	0.39	1.57	32.75
NORTHERN HOG SUCKER	R	I	S	M	1	3.00	1.02	0.19	0.75	62.00
WHITE SUCKER	W	O	S	T	4	12.00	4.08	1.11	4.45	92.50
COMMON CARP	G	O	M	T	6	18.00	6.12	18.11	72.54	1,005.83
CREEK CHUB	N	G	N	T	12	36.00	12.24	1.77	7.09	49.17
SILVER SHINER	N	I	S	I	2	6.00	2.04	0.01	0.04	1.50
STRIPED SHINER	N	I	S		9	27.00	9.18	0.26	1.02	9.44
COMMON SHINER	N	I	S		1	3.00	1.02	0.12	0.48	40.00
BLUNTNOSE MINNOW	N	O	C	T	13	39.00	13.27	0.05	0.19	1.23
ROCK BASS	S	C	C		4	12.00	4.08	0.45	1.82	37.75
LARGEMOUTH BASS	F	C	C		2	6.00	2.04	0.02	0.10	4.00
GREEN SUNFISH	S	I	C	T	25	75.00	25.51	0.56	2.24	7.44
BLUEGILL SUNFISH	S	I	C	P	5	15.00	5.10	0.12	0.48	8.00
PUMPKINSEED SUNFISH	S	I	C	P	1	3.00	1.02	0.02	0.10	8.00
JOHNNY DARTER	D	I	C		1	3.00	1.02	0.00	0.01	1.00
<i>Mile Total</i>					98	294.00		24.96		
<i>Number of Species</i>					18					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1993
River Mile: 19.60	Basin: Maumee River	Date Range: 10/06/93
Data Source: 31	Time Fished:	Drain Area: 74.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
Sampler Type: D		

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		3	9.00	3.85	0.05	0.26	5.33
GOLDEN REDHORSE	R	I	S	M	11	33.00	14.10	6.06	33.15	183.64
NORTHERN HOG SUCKER	R	I	S	M	1	3.00	1.28	0.36	1.99	121.00
WHITE SUCKER	W	O	S	T	6	18.00	7.69	2.70	14.77	150.00
COMMON CARP	G	O	M	T	1	3.00	1.28	4.32	23.63	1,440.00
CREEK CHUB	N	G	N	T	13	39.00	16.67	2.55	13.95	65.38
SILVER SHINER	N	I	S	I	2	6.00	2.56	0.05	0.25	7.50
BLUNTNOSE MINNOW	N	O	C	T	1	3.00	1.28	0.02	0.08	5.00
BLACK BULLHEAD		I	C	P	2	6.00	2.56	0.36	1.97	60.00
ROCK BASS	S	C	C		4	12.00	5.13	1.17	6.40	97.50
GREEN SUNFISH	S	I	C	T	16	48.00	20.51	0.39	2.13	8.13
BLUEGILL SUNFISH	S	I	C	P	1	3.00	1.28	0.06	0.33	20.00
PUMPKINSEED SUNFISH	S	I	C	P	11	33.00	14.10	0.18	0.98	5.45
BLACKSIDE DARTER	D	I	S		2	6.00	2.56	0.01	0.05	1.50
JOHNNY DARTER	D	I	C		3	9.00	3.85	0.01	0.03	0.67
GREENSIDE DARTER	D	I	S	M	1	3.00	1.28	0.00	0.02	1.00
<i>Mile Total</i>					78	234.00		18.28		
<i>Number of Species</i>					16					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1991
River Mile: 17.10	Basin: Maumee River	Date Range: 09/10/91
Data Source: 31	Time Fished:	Drain Area: 76.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		7	21.00	2.05	0.18	0.61	8.71
CENTRAL MUDMINNOW		I	C	T	3	9.00	0.88	0.07	0.22	7.33
GOLDEN REDHORSE	R	I	S	M	10	30.00	2.93	4.90	16.33	163.20
NORTHERN HOG SUCKER	R	I	S	M	13	39.00	3.81	2.65	8.82	67.85
WHITE SUCKER	W	O	S	T	20	60.00	5.87	2.62	8.72	43.60
COMMON CARP	G	O	M	T	3	9.00	0.88	9.78	32.61	1,086.67
CREEK CHUB	N	G	N	T	61	183.00	17.89	4.74	15.79	25.88
SILVER SHINER	N	I	S	I	26	78.00	7.62	0.14	0.47	1.81
STRIPED SHINER	N	I	S		48	144.00	14.08	2.45	8.18	17.04
FATHEAD MINNOW	N	O	C	T	1	3.00	0.29	0.01	0.03	3.00
BLUNTNOSE MINNOW	N	O	C	T	34	102.00	9.97	0.18	0.61	1.79
CENTRAL STONEROLLER	N	H	N		16	48.00	4.69	0.18	0.61	3.81
ROCK BASS	S	C	C		6	18.00	1.76	0.99	3.31	55.17
LARGEMOUTH BASS	F	C	C		6	18.00	1.76	0.09	0.30	5.00
GREEN SUNFISH	S	I	C	T	34	102.00	9.97	0.80	2.65	7.80
BLACKSIDE DARTER	D	I	S		5	15.00	1.47	0.04	0.14	2.80
JOHNNY DARTER	D	I	C		32	96.00	9.38	0.08	0.28	0.86
GREENSIDE DARTER	D	I	S	M	12	36.00	3.52	0.05	0.16	1.33
FANTAIL DARTER	D	I	C		1	3.00	0.29	0.00	0.01	1.00
MOTTLED SCULPIN		I	C		3	9.00	0.88	0.04	0.14	4.67
<i>Mile Total</i>					341	1,023.00		29.99		
<i>Number of Species</i>					20					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1993
River Mile: 17.10	Basin: Maumee River	Date Range: 10/06/93
Data Source: 31	Time Fished:	Drain Area: 76.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		2	6.00	1.04	0.02	0.12	2.50
GRASS PICKEREL		P	M	P	1	3.00	0.52	0.03	0.24	10.00
GOLDEN REDHORSE	R	I	S	M	2	6.00	1.04	0.24	1.88	39.50
NORTHERN HOG SUCKER	R	I	S	M	6	18.00	3.13	1.65	13.10	91.67
WHITE SUCKER	W	O	S	T	25	75.00	13.02	3.53	27.99	47.00
GOLDEN SHINER	N	I	M	T	3	9.00	1.56	0.03	0.24	3.33
CREEK CHUB	N	G	N	T	59	177.00	30.73	4.54	36.04	25.64
SILVER SHINER	N	I	S	I	7	21.00	3.65	0.12	0.95	5.71
STRIPED SHINER	N	I	S		17	51.00	8.85	0.45	3.57	8.82
SPOTFIN SHINER	N	I	M		1	3.00	0.52	0.02	0.12	5.00
FATHEAD MINNOW	N	O	C	T	1	3.00	0.52	0.01	0.05	2.00
BLUNTNOSE MINNOW	N	O	C	T	17	51.00	8.85	0.20	1.55	3.82
CENTRAL STONEROLLER	N	H	N		4	12.00	2.08	0.03	0.24	2.50
STONECAT MADTOM		I	C	I	1	3.00	0.52	0.17	1.38	58.00
ROCK BASS	S	C	C		3	9.00	1.56	1.06	8.43	118.00
LARGEMOUTH BASS	F	C	C		3	9.00	1.56	0.06	0.48	6.67
GREEN SUNFISH	S	I	C	T	4	12.00	2.08	0.05	0.40	4.25
PUMPKINSEED SUNFISH	S	I	C	P	13	39.00	6.77	0.24	1.91	6.15
BLACKSIDE DARTER	D	I	S		7	21.00	3.65	0.05	0.43	2.57
JOHNNY DARTER	D	I	C		11	33.00	5.73	0.04	0.31	1.18
GREENSIDE DARTER	D	I	S	M	1	3.00	0.52	0.00	0.02	1.00
MOTTLED SCULPIN		I	C		4	12.00	2.08	0.07	0.55	5.75
<i>Mile Total</i>					192	576.00		12.59		
<i>Number of Species</i>					22					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1991
River Mile: 13.20	Basin: Maumee River	Date Range: 09/11/91
Data Source: 31	Time Fished:	Drain Area: 85.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		11	33.00	15.71	0.24	1.56	7.27
GRASS PICKEREL		P	M	P	2	6.00	2.86	0.16	1.01	26.00
GOLDEN REDHORSE	R	I	S	M	4	12.00	5.71	1.87	12.15	156.00
NORTHERN HOG SUCKER	R	I	S	M	4	12.00	5.71	0.29	1.89	24.25
WHITE SUCKER	W	O	S	T	1	3.00	1.43	0.78	5.06	260.00
COMMON CARP	G	O	M	T	16	48.00	22.86	9.54	61.92	198.79
CREEK CHUB	N	G	N	T	1	3.00	1.43	0.01	0.04	2.00
BLUNTNOSE MINNOW	N	O	C	T	2	6.00	2.86	0.01	0.04	1.00
ROCK BASS	S	C	C		6	18.00	8.57	1.37	8.90	76.17
LARGEMOUTH BASS	F	C	C		4	12.00	5.71	0.04	0.25	3.25
GREEN SUNFISH	S	I	C	T	8	24.00	11.43	0.17	1.07	6.88
BLUEGILL SUNFISH	S	I	C	P	9	27.00	12.86	0.93	6.05	34.56
BLACKSIDE DARTER	D	I	S		2	6.00	2.86	0.01	0.06	1.50
<i>Mile Total</i>					70	210.00		15.41		
<i>Number of Species</i>					13					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1993
River Mile: 13.20	Basin: Maumee River	Date Range: 10/05/93
Data Source: 31	Time Fished:	Drain Area: 85.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GRASS PICKEREL		P	M	P	1	3.00	2.78	0.30	2.07	100.00
GOLDEN REDHORSE	R	I	S	M	2	6.00	5.56	1.34	9.19	222.50
NORTHERN HOG SUCKER	R	I	S	M	4	12.00	11.11	0.66	4.54	55.00
WHITE SUCKER	W	O	S	T	1	3.00	2.78	0.15	1.03	50.00
COMMON CARP	G	O	M	T	2	6.00	5.56	8.01	55.14	1,335.00
BLACK BULLHEAD		I	C	P	1	3.00	2.78	1.28	8.78	425.00
BLACK CRAPPIE	S	I	C		2	6.00	5.56	0.33	2.29	55.50
ROCK BASS	S	C	C		3	9.00	8.33	1.83	12.60	203.33
LARGEMOUTH BASS	F	C	C		1	3.00	2.78	0.01	0.04	2.00
GREEN SUNFISH	S	I	C	T	7	21.00	19.44	0.13	0.87	6.00
BLUEGILL SUNFISH	S	I	C	P	3	9.00	8.33	0.36	2.48	40.00
YELLOW PERCH			M		4	12.00	11.11	0.04	0.25	3.00
BLACKSIDE DARTER	D	I	S		1	3.00	2.78	0.03	0.21	10.00
LOGPERCH	D	I	S	M	1	3.00	2.78	0.06	0.41	20.00
JOHNNY DARTER	D	I	C		2	6.00	5.56	0.01	0.08	2.00
GREENSIDE DARTER	D	I	S	M	1	3.00	2.78	0.00	0.02	1.00
<i>Mile Total</i>					36	108.00		14.53		
<i>Number of Species</i>					16					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1991
River Mile: 9.90	Basin: Maumee River	Date Range: 09/11/91
Data Source: 31	Time Fished:	Drain Area: 95.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		4	12.00	3.92	0.19	0.53	16.00
GOLDEN REDHORSE	R	I	S	M	14	42.00	13.73	5.55	15.39	132.14
NORTHERN HOG SUCKER	R	I	S	M	10	30.00	9.80	0.70	1.94	23.30
WHITE SUCKER	W	O	S	T	4	12.00	3.92	1.92	5.33	160.00
COMMON CARP	G	O	M	T	4	12.00	3.92	24.57	68.15	2,047.50
RIVER CHUB	N	I	N	I	1	3.00	0.98	0.10	0.27	33.00
CREEK CHUB	N	G	N	T	4	12.00	3.92	0.25	0.70	21.00
SILVER SHINER	N	I	S	I	5	15.00	4.90	0.11	0.32	7.60
STRIPED SHINER	N	I	S		17	51.00	16.67	0.73	2.01	14.24
BLUNTNOSE MINNOW	N	O	C	T	14	42.00	13.73	0.02	0.06	0.50
ROCK BASS	S	C	C		8	24.00	7.84	1.71	4.74	71.25
LARGEMOUTH BASS	F	C	C		2	6.00	1.96	0.03	0.07	4.50
GREEN SUNFISH	S	I	C	T	2	6.00	1.96	0.08	0.22	13.00
BLUEGILL SUNFISH	S	I	C	P	1	3.00	0.98	0.04	0.10	12.00
BLACKSIDE DARTER	D	I	S		6	18.00	5.88	0.05	0.12	2.50
JOHNNY DARTER	D	I	C		2	6.00	1.96	0.01	0.02	1.00
GREENSIDE DARTER	D	I	S	M	3	9.00	2.94	0.01	0.02	0.67
FANTAIL DARTER	D	I	C		1	3.00	0.98	0.00	0.01	1.00
<i>Mile Total</i>					102	306.00		36.05		
<i>Number of Species</i>					18					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1993
River Mile: 9.90	Basin: Maumee River	Date Range: 10/05/93
Data Source: 31	Time Fished:	Drain Area: 95.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		1	3.00	1.69	0.01	0.03	2.00
GRASS PICKEREL		P	M	P	1	3.00	1.69	0.03	0.13	10.00
BLACK REDHORSE	R	I	S	I	1	3.00	1.69	0.66	2.80	220.00
GOLDEN REDHORSE	R	I	S	M	14	42.00	23.73	7.69	32.56	183.00
NORTHERN HOG SUCKER	R	I	S	M	13	39.00	22.03	2.61	11.06	66.92
WHITE SUCKER	W	O	S	T	7	21.00	11.86	1.57	6.63	74.57
COMMON CARP	G	O	M	T	1	3.00	1.69	8.82	37.37	2,940.00
CREEK CHUB	N	G	N	T	6	18.00	10.17	0.23	0.95	12.50
SILVER SHINER	N	I	S	I	4	12.00	6.78	0.06	0.25	5.00
BLUNTNOSE MINNOW	N	O	C	T	1	3.00	1.69	0.00	0.01	1.00
BLACK CRAPPIE	S	I	C		1	3.00	1.69	0.12	0.51	40.00
ROCK BASS	S	C	C		4	12.00	6.78	1.70	7.18	141.25
GREEN SUNFISH	S	I	C	T	1	3.00	1.69	0.06	0.25	20.00
BLACKSIDE DARTER	D	I	S		3	9.00	5.08	0.02	0.08	2.00
LOGPERCH	D	I	S	M	1	3.00	1.69	0.05	0.19	15.00
<i>Mile Total</i>					59	177.00		23.60		
<i>Number of Species</i>					15					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1991
River Mile: 8.30	Basin: Maumee River	Date Range: 07/11/91
Data Source: 70	Time Fished: 2700 sec	Drain Area: 97.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: E

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		24	72.00	13.11	0.14	0.63	1.88
SILVER REDHORSE	R	I	S	M	7	21.00	3.83	5.11	23.93	243.14
NORTHERN HOG SUCKER	R	I	S	M	9	27.00	4.92	1.70	7.97	63.00
WHITE SUCKER	W	O	S	T	4	12.00	2.19	1.87	8.74	155.50
COMMON CARP	G	O	M	T	4	12.00	2.19	6.81	31.91	567.50
CREEK CHUB	N	G	N	T	18	54.00	9.84	2.02	9.45	37.33
SPOTFIN SHINER	N	I	M		10	30.00	5.46	0.08	0.39	2.80
SAND SHINER	N	I	M	M	7	21.00	3.83	0.04	0.20	2.00
BLUNTNOSE MINNOW	N	O	C	T	22	66.00	12.02	0.42	1.95	6.32
YELLOW BULLHEAD		I	C	T	2	6.00	1.09	0.40	1.86	66.00
ROCK BASS	S	C	C		8	24.00	4.37	1.53	7.18	63.88
LARGEMOUTH BASS	F	C	C		11	33.00	6.01	0.20	0.91	5.91
GREEN SUNFISH	S	I	C	T	15	45.00	8.20	0.43	2.02	9.60
BLUEGILL SUNFISH	S	I	C	P	12	36.00	6.56	0.33	1.55	9.17
BLACKSIDE DARTER	D	I	S		1	3.00	0.55	0.02	0.07	5.00
LOGPERCH	D	I	S	M	1	3.00	0.55	0.05	0.25	18.00
JOHNNY DARTER	D	I	C		25	75.00	13.66	0.18	0.84	2.40
GREENSIDE DARTER	D	I	S	M	1	3.00	0.55	0.01	0.06	4.00
MOTTLED SCULPIN		I	C		2	6.00	1.09	0.02	0.07	2.50
<i>Mile Total</i>					183	549.00		21.34		
<i>Number of Species</i>					19					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1991
River Mile: 6.50	Basin: Maumee River	Date Range: 09/11/91
Data Source: 31	Time Fished:	Drain Area: 99.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI	Feed Grp	Breed Guild	Breed Guild Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		10	30.00	9.01	0.27	2.69	8.90
GOLDEN REDHORSE	R	I	S	M	5	15.00	4.50	2.70	27.16	180.00
NORTHERN HOG SUCKER	R	I	S	M	8	24.00	7.21	1.13	11.38	47.13
WHITE SUCKER	W	O	S	T	2	6.00	1.80	0.32	3.20	53.00
COMMON CARP	G	O	M	T	1	3.00	0.90	3.39	34.10	1,130.00
RIVER CHUB	N	I	N	I	4	12.00	3.60	0.38	3.86	32.00
CREEK CHUB	N	G	N	T	10	30.00	9.01	0.24	2.41	8.00
STRIPED SHINER	N	I	S		13	39.00	11.71	0.49	4.95	12.62
BLUNTNOSE MINNOW	N	O	C	T	10	30.00	9.01	0.02	0.21	0.70
CENTRAL STONEROLLER	N	H	N		1	3.00	0.90	0.01	0.09	3.00
STONECAT MADTOM		I	C	I	1	3.00	0.90	0.00	0.03	1.00
BRINDLED MADTOM		I	C	I	1	3.00	0.90	0.00	0.03	1.00
ROCK BASS	S	C	C		5	15.00	4.50	0.77	7.72	51.20
LARGEMOUTH BASS	F	C	C		1	3.00	0.90	0.02	0.24	8.00
GREEN SUNFISH	S	I	C	T	2	6.00	1.80	0.08	0.75	12.50
BLACKSIDE DARTER	D	I	S		6	18.00	5.41	0.04	0.36	2.00
JOHNNY DARTER	D	I	C		19	57.00	17.12	0.04	0.42	0.73
GREENSIDE DARTER	D	I	S	M	6	18.00	5.41	0.02	0.21	1.17
FANTAIL DARTER	D	I	C		6	18.00	5.41	0.02	0.18	1.00
<i>Mile Total</i>					111	333.00		9.94		
<i>Number of Species</i>					19					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1993
River Mile: 6.50	Basin: Maumee River	Date Range: 10/05/93
Data Source: 31	Time Fished:	Drain Area: 99.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI	Feed Grp	Breed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
BLACK REDHORSE	R	I	S	I		5	15.00	7.46	4.23	20.03	282.00
GOLDEN REDHORSE	R	I	S	M		2	6.00	2.99	1.89	8.95	315.00
NORTHERN HOG SUCKER	R	I	S	M		10	30.00	14.93	3.33	15.76	111.00
WHITE SUCKER	W	O	S	T		7	21.00	10.45	5.73	27.13	272.86
RIVER CHUB	N	I	N	I		3	9.00	4.48	0.15	0.71	16.67
CREEK CHUB	N	G	N	T		1	3.00	1.49	0.01	0.03	2.00
BLUNTNOSE MINNOW	N	O	C	T		3	9.00	4.48	0.02	0.07	1.67
YELLOW BULLHEAD		I	C	T		1	3.00	1.49	0.24	1.14	80.00
ROCK BASS	S	C	C			16	48.00	23.88	5.35	25.32	111.44
GREEN SUNFISH	S	I	C	T		1	3.00	1.49	0.02	0.09	6.00
BLUEGILL SUNFISH	S	I	C	P		1	3.00	1.49	0.01	0.03	2.00
BLACKSIDE DARTER	D	I	S			6	18.00	8.96	0.07	0.33	3.83
JOHNNY DARTER	D	I	C			3	9.00	4.48	0.04	0.17	4.00
GREENSIDE DARTER	D	I	S	M		8	24.00	11.94	0.05	0.26	2.25
<i>Mile Total</i>						67	201.00		21.12		
<i>Number of Species</i>						14					
<i>Number of Hybrids</i>						0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1991
River Mile: 5.50	Basin: Maumee River	Date Range: 09/05/91
Data Source: 31	Time Fished:	Drain Area: 105.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		25	75.00	22.73	0.55	2.54	7.38
CENTRAL MUDMINNOW		I	C	T	1	3.00	0.91	0.02	0.11	8.00
GRASS PICKEREL		P	M	P	4	12.00	3.64	0.26	1.20	21.75
NORTHERN PIKE	F	P	M		1	3.00	0.91	2.40	11.02	800.00
GOLDEN REDHORSE	R	I	S	M	6	18.00	5.45	3.11	14.29	173.00
NORTHERN HOG SUCKER	R	I	S	M	8	24.00	7.27	2.09	9.58	87.00
COMMON CARP	G	O	M	T	3	9.00	2.73	11.28	51.79	1,253.67
RIVER CHUB	N	I	N	I	2	6.00	1.82	0.08	0.36	13.00
CREEK CHUB	N	G	N	T	2	6.00	1.82	0.01	0.06	2.00
SILVER SHINER	N	I	S	I	2	6.00	1.82	0.02	0.08	3.00
STRIPED SHINER	N	I	S		6	18.00	5.45	0.24	1.09	13.17
SPOTFIN SHINER	N	I	M		2	6.00	1.82	0.03	0.12	4.50
BLUNTNOSE MINNOW	N	O	C	T	3	9.00	2.73	0.03	0.14	3.33
ROCK BASS	S	C	C		5	15.00	4.55	1.41	6.49	94.20
LARGEMOUTH BASS	F	C	C		1	3.00	0.91	0.01	0.06	4.00
GREEN SUNFISH	S	I	C	T	3	9.00	2.73	0.12	0.56	13.67
BLUEGILL SUNFISH	S	I	C	P	1	3.00	0.91	0.00	0.01	1.00
BLACKSIDE DARTER	D	I	S		5	15.00	4.55	0.02	0.07	1.00
JOHNNY DARTER	D	I	C		6	18.00	5.45	0.01	0.06	0.67
GREENSIDE DARTER	D	I	S	M	7	21.00	6.36	0.03	0.14	1.43
FANTAIL DARTER	D	I	C		16	48.00	14.55	0.05	0.23	1.06
MOTTLED SCULPIN		I	C		1	3.00	0.91	0.00	0.01	1.00
<i>Mile Total</i>					110	330.00		21.79		
<i>Number of Species</i>					22					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1993
River Mile: 5.50	Basin: Maumee River	Date Range: 10/04/93
Data Source: 31	Time Fished:	Drain Area: 105.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GOLDEN REDHORSE	R	I	S	M	1	3.00	1.47	0.72	12.80	240.00
NORTHERN HOG SUCKER	R	I	S	M	8	24.00	11.76	1.80	32.00	75.00
WHITE SUCKER	W	O	S	T	1	3.00	1.47	0.02	0.27	5.00
RIVER CHUB	N	I	N	I	9	27.00	13.24	0.67	11.95	24.89
CREEK CHUB	N	G	N	T	17	51.00	25.00	0.80	14.13	15.59
STRIPED SHINER	N	I	S		1	3.00	1.47	0.06	1.07	20.00
BLUNTNOSE MINNOW	N	O	C	T	1	3.00	1.47	0.01	0.11	2.00
CENTRAL STONEROLLER	N	H	N		2	6.00	2.94	0.02	0.43	4.00
ROCK BASS	S	C	C		7	21.00	10.29	1.11	19.79	53.00
GREEN SUNFISH	S	I	C	T	1	3.00	1.47	0.03	0.53	10.00
BLACKSIDE DARTER	D	I	S		4	12.00	5.88	0.05	0.96	4.50
LOGPERCH	D	I	S	M	2	6.00	2.94	0.14	2.40	22.50
JOHNNY DARTER	D	I	C		2	6.00	2.94	0.01	0.21	2.00
GREENSIDE DARTER	D	I	S	M	2	6.00	2.94	0.03	0.53	5.00
FANTAIL DARTER	D	I	C		3	9.00	4.41	0.05	0.80	5.00
MOTTLED SCULPIN		I	C		7	21.00	10.29	0.11	2.03	5.43
<i>Mile Total</i>					68	204.00		5.63		
<i>Number of Species</i>					16					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1991
River Mile: 5.40	Basin: Maumee River	Date Range: 09/26/91
Data Source: 01	Time Fished:	Drain Area: 105.0 sq mi
Purpose: 01	Dist Fished: 0.17 km	No of Passes: 1
		Sampler Type: E

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		9	15.88	2.78			
BLACK REDHORSE	R	I	S	I	3	5.29	0.93			
GOLDEN REDHORSE	R	I	S	M	8	14.12	2.47			
NORTHERN HOG SUCKER	R	I	S	M	33	58.24	10.19			
WHITE SUCKER	W	O	S	T	1	1.77	0.31			
COMMON CARP	G	O	M	T	1	1.77	0.31			
HORNYHEAD CHUB	N	I	N	I	26	45.88	8.02			
RIVER CHUB	N	I	N	I	5	8.82	1.54			
BLACKNOSE DACE	N	G	S	T	2	3.53	0.62			
CREEK CHUB	N	G	N	T	14	24.71	4.32			
SILVER SHINER	N	I	S	I	3	5.29	0.93			
ROSYFACE SHINER	N	I	S	I	7	12.35	2.16			
STRIPED SHINER	N	I	S		21	37.06	6.48			
SPOTFIN SHINER	N	I	M		7	12.35	2.16			
BLUNTNOSE MINNOW	N	O	C	T	39	68.82	12.04			
CENTRAL STONEROLLER	N	H	N		7	12.35	2.16			
STRIPED SH X ROSYFACE SH		I			1	1.77	0.31			
STONECAT MADTOM		I	C	I	2	3.53	0.62			
BRINDLED MADTOM		I	C	I	1	1.77	0.31			
TADPOLE MADTOM		I	C		1	1.77	0.31			
ROCK BASS	S	C	C		22	38.82	6.79			
GREEN SUNFISH	S	I	C	T	3	5.29	0.93			
BLACKSIDE DARTER	D	I	S		8	14.12	2.47			
LOGPERCH	D	I	S	M	2	3.53	0.62			
JOHNNY DARTER	D	I	C		17	30.00	5.25			
GREENSIDE DARTER	D	I	S	M	58	102.35	17.90			
FANTAIL DARTER	D	I	C		20	35.29	6.17			
MOTTLED SCULPIN		I	C		3	5.29	0.93			
<i>Mile Total</i>					324	571.77				
<i>Number of Species</i>					27					
<i>Number of Hybrids</i>					1					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1992
River Mile: 5.40	Basin: Maumee River	Date Range: 08/21/92
Data Source: 01	Time Fished: 6884 sec	Drain Area: 105.0 sq mi
Purpose:	Dist Fished: 0.40 km	No of Passes: 2
		Thru: 09/18/92
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI	Feed	Breed		# of	Relative	% by	Relative	% by	Ave(gm)
	Grp	Guild	Guild	Tol	Fish	Number	Number	Weight	Weight	Weight
AMER BROOK LAMPREY		F	N	R	1	0.75	0.13	0.00	0.02	6.00
GIZZARD SHAD		O	M		162	121.50	20.69	0.12	0.55	0.98
BLACK REDHORSE	R	I	S	I	10	7.50	1.28	1.63	7.47	217.10
GOLDEN REDHORSE	R	I	S	M	10	7.50	1.28	1.81	8.31	241.48
NORTHERN HOG SUCKER	R	I	S	M	76	57.00	9.71	7.80	35.79	136.90
WHITE SUCKER	W	O	S	T	11	8.25	1.40	0.63	2.89	76.35
COMMON CARP	G	O	M	T	9	6.75	1.15	2.68	12.27	396.36
RIVER CHUB	N	I	N	I	64	48.00	8.17	0.94	4.31	19.56
BLACKNOSE DACE	N	G	S	T	4	3.00	0.51	0.00	0.02	1.50
CREEK CHUB	N	G	N	T	49	36.75	6.26	0.84	3.84	22.78
SILVER SHINER	N	I	S	I	7	5.25	0.89	0.03	0.15	6.14
ROSYFACE SHINER	N	I	S	I	8	6.00	1.02	0.01	0.06	2.25
STRIPED SHINER	N	I	S		55	41.25	7.02	1.09	5.00	26.44
COMMON SHINER	N	I	S		7	5.25	0.89	0.16	0.72	29.71
SPOTFIN SHINER	N	I	M		42	31.50	5.36	0.09	0.39	2.71
SAND SHINER	N	I	M	M	1	0.75	0.13	0.00	0.00	1.00
BLUNTNOSE MINNOW	N	O	C	T	24	18.00	3.07	0.07	0.33	4.00
CENTRAL STONEROLLER	N	H	N		13	9.75	1.66	0.10	0.45	10.00
COMMON SH X SILVER SH		I	S		1	0.75	0.13	0.01	0.03	8.00
CHANNEL CATFISH	F		C		1	0.75	0.13	1.20	5.50	1,600.00
STONECAT MADTOM		I	C	I	2	1.50	0.26	0.01	0.04	5.50
BRINDLED MADTOM		I	C	I	2	1.50	0.26	0.01	0.03	4.00
ROCK BASS	S	C	C		41	30.75	5.24	2.23	10.23	72.50
GREEN SUNFISH	S	I	C	T	3	2.25	0.38	0.03	0.15	14.33
BLACKSIDE DARTER	D	I	S		11	8.25	1.40	0.04	0.18	4.82
LOGPERCH	D	I	S	M	2	1.50	0.26	0.02	0.11	16.00
JOHNNY DARTER	D	I	C		26	19.50	3.32	0.03	0.13	1.48
GREENSIDE DARTER	D	I	S	M	52	39.00	6.64	0.11	0.50	2.81
ORANGETHROAT DARTER	D	I	S		1	0.75	0.13	0.00	0.01	2.00
FANTAIL DARTER	D	I	C		78	58.50	9.96	0.10	0.46	1.72
MOTTLED SCULPIN		I	C		10	7.50	1.28	0.02	0.07	2.10
<i>Mile Total</i>					783	587.25		21.80		
<i>Number of Species</i>					30					
<i>Number of Hybrids</i>					1					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1991
River Mile: 2.60	Basin: Maumee River	Date Range: 09/05/91
Data Source: 31	Time Fished:	Drain Area: 107.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI	Feed Grp	Breed Guild	Breed Guild Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
GIZZARD SHAD		O	M		2	6.00	1.57	0.03	0.09	5.50
GOLDEN REDHORSE	R	I	S	M	8	24.00	6.30	5.16	13.87	214.88
NORTHERN HOG SUCKER	R	I	S	M	9	27.00	7.09	3.19	8.57	118.00
WHITE SUCKER	W	O	S	T	1	3.00	0.79	1.50	4.03	500.00
COMMON CARP	G	O	M	T	3	9.00	2.36	19.29	51.89	2,143.33
RIVER CHUB	N	I	N	I	8	24.00	6.30	0.46	1.24	19.25
CREEK CHUB	N	G	N	T	7	21.00	5.51	0.06	0.16	2.86
SILVER SHINER	N	I	S	I	3	9.00	2.36	0.02	0.06	2.33
STRIPED SHINER	N	I	S		2	6.00	1.57	0.02	0.04	2.50
SPOTFIN SHINER	N	I	M		1	3.00	0.79	0.00	0.01	1.00
BLUNTNOSE MINNOW	N	O	C	T	11	33.00	8.66	0.05	0.13	1.45
CENTRAL STONEROLLER	N	H	N		2	6.00	1.57	0.02	0.04	2.50
YELLOW BULLHEAD		I	C	T	1	3.00	0.79	0.87	2.34	290.00
ROCK BASS	S	C	C		30	90.00	23.62	6.26	16.85	69.60
GREEN SUNFISH	S	I	C	T	1	3.00	0.79	0.05	0.12	15.00
BLUEGILL SUNFISH	S	I	C	P	1	3.00	0.79	0.03	0.07	9.00
BLACKSIDE DARTER	D	I	S		1	3.00	0.79	0.01	0.02	2.00
GREENSIDE DARTER	D	I	S	M	7	21.00	5.51	0.05	0.12	2.14
FANTAIL DARTER	D	I	C		29	87.00	22.83	0.13	0.35	1.48
<i>Mile Total</i>					127	381.00		37.18		
<i>Number of Species</i>					19					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1993
River Mile: 2.60	Basin: Maumee River	Date Range: 10/04/93
Data Source: 31	Time Fished:	Drain Area: 107.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
NORTHERN HOG SUCKER	R	I	S	M	3	9.00	7.69	1.08	10.82	120.00
WHITE SUCKER	W	O	S	T	1	3.00	2.56	0.48	4.81	160.00
COMMON CARP	G	O	M	T	1	3.00	2.56	4.74	47.48	1,580.00
RIVER CHUB	N	I	N	I	6	18.00	15.38	0.52	5.20	28.83
CREEK CHUB	N	G	N	T	1	3.00	2.56	0.02	0.24	8.00
STRIPED SHINER	N	I	S		1	3.00	2.56	0.01	0.12	4.00
BLUNTNOSE MINNOW	N	O	C	T	1	3.00	2.56	0.01	0.06	2.00
YELLOW BULLHEAD		I	C	T	2	6.00	5.13	0.90	9.01	150.00
STONECAT MADTOM		I	C	I	1	3.00	2.56	0.07	0.66	22.00
ROCK BASS	S	C	C		9	27.00	23.08	1.95	19.53	72.22
GREEN SUNFISH	S	I	C	T	2	6.00	5.13	0.03	0.30	5.00
BLUEGILL SUNFISH	S	I	C	P	1	3.00	2.56	0.05	0.45	15.00
BLACKSIDE DARTER	D	I	S		1	3.00	2.56	0.01	0.09	3.00
GREENSIDE DARTER	D	I	S	M	9	27.00	23.08	0.12	1.23	4.56
<i>Mile Total</i>					39	117.00		9.98		
<i>Number of Species</i>					14					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1991
River Mile: 0.40	Basin: Maumee River	Date Range: 09/05/91
Data Source: 31	Time Fished:	Drain Area: 109.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI	Feed	Breed		# of	Relative	% by	Relative	% by	Ave(gm)
	Grp	Guild	Guild	Tol	Fish	Number	Number	Weight	Weight	Weight
GOLDEN REDHORSE	R	I	S	M	1	3.00	2.50	0.75	2.15	250.00
NORTHERN HOG SUCKER	R	I	S	M	4	12.00	10.00	1.21	3.47	100.75
COMMON CARP	G	O	M	T	10	30.00	25.00	30.55	87.75	1,018.20
ROCK BASS	S	C	C		11	33.00	27.50	1.81	5.21	54.91
GREEN SUNFISH	S	I	C	T	11	33.00	27.50	0.44	1.26	13.27
BLUEGILL SUNFISH	S	I	C	P	2	6.00	5.00	0.04	0.11	6.50
BLACKSIDE DARTER	D	I	S		1	3.00	2.50	0.02	0.05	6.00
<i>Mile Total</i>					40	120.00		34.81		
<i>Number of Species</i>					7					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1993
River Mile: 0.40	Basin: Maumee River	Date Range: 10/04/93
Data Source: 31	Time Fished:	Drain Area: 109.0 sq mi
Purpose:	Dist Fished: 0.10 km	No of Passes: 1
		Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
AMER BROOK LAMPREY		F	N	R	1	3.00	2.44	0.08	0.77	25.00
GIZZARD SHAD		O	M		1	3.00	2.44	0.01	0.09	3.00
BLACK REDHORSE	R	I	S	I	1	3.00	2.44	1.07	10.91	355.00
GOLDEN REDHORSE	R	I	S	M	2	6.00	4.88	1.65	16.91	275.00
NORTHERN HOG SUCKER	R	I	S	M	3	9.00	7.32	1.65	16.91	183.33
WHITE SUCKER	W	O	S	T	1	3.00	2.44	0.18	1.84	60.00
COMMON CARP	G	O	M	T	1	3.00	2.44	1.11	11.37	370.00
RIVER CHUB	N	I	N	I	3	9.00	7.32	0.33	3.38	36.67
BLUNTNOSE MINNOW	N	O	C	T	2	6.00	4.88	0.02	0.25	4.00
YELLOW BULLHEAD		I	C	T	1	3.00	2.44	0.38	3.84	125.00
ROCK BASS	S	C	C		10	30.00	24.39	3.02	30.89	100.50
GREEN SUNFISH	S	I	C	T	14	42.00	34.15	0.27	2.77	6.43
GREENSIDE DARTER	D	I	S	M	1	3.00	2.44	0.01	0.06	2.00
<i>Mile Total</i>					41	123.00		9.76		
<i>Number of Species</i>					13					
<i>Number of Hybrids</i>					0					

Species List

River Code: 04-405	Stream: Fish Creek	Sample Date: 1992
River Mile: 0.20	Basin: Maumee River	Date Range: 08/21/92
Data Source: 01	Time Fished: 6206 sec Drain Area: 109.0 sq mi	Thru: 09/18/92
Purpose:	Dist Fished: 0.40 km No of Passes: 2	Sampler Type: D

Species Name / Stage / ODNR Status	IBI Grp	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave(gm) Weight
AMER BROOK LAMPREY		F	N	R	4	3.00	0.43	0.04	0.09	13.25
GIZZARD SHAD		O	M		490	367.50	52.92	0.37	0.86	1.00
GOLDEN REDHORSE	R	I	S	M	11	8.25	1.19	2.23	5.22	270.09
NORTHERN HOG SUCKER	R	I	S	M	48	36.00	5.18	5.45	12.75	151.31
WHITE SUCKER	W	O	S	T	6	4.50	0.65	0.05	0.11	10.67
COMMON CARP	G	O	M	T	19	14.25	2.05	28.09	65.73	1,970.89
RIVER CHUB	N	I	N	I	67	50.25	7.24	0.81	1.90	16.18
BLACKNOSE DACE	N	G	S	T	3	2.25	0.32	0.01	0.02	3.00
CREEK CHUB	N	G	N	T	31	23.25	3.35	0.30	0.70	12.94
ROSYFACE SHINER	N	I	S	I	2	1.50	0.22	0.00	0.01	3.00
STRIPED SHINER	N	I	S		4	3.00	0.43	0.06	0.14	19.25
COMMON SHINER	N	I	S		2	1.50	0.22	0.02	0.04	11.50
SPOTFIN SHINER	N	I	M		104	78.00	11.23	0.19	0.44	2.39
BLUNTNOSE MINNOW	N	O	C	T	29	21.75	3.13	0.07	0.17	3.37
CENTRAL STONEROLLER	N	H	N		2	1.50	0.22	0.00	0.01	1.50
STRIPED SH X COMMON SH		I			1	0.75	0.11	0.01	0.02	12.00
YELLOW BULLHEAD		I	C	T	1	0.75	0.11	0.09	0.22	123.00
STONECAT MADTOM		I	C	I	9	6.75	0.97	0.52	1.21	76.22
ROCK BASS	S	C	C		60	45.00	6.48	4.07	9.52	90.36
LARGEMOUTH BASS	F	C	C		1	0.75	0.11	0.00	0.00	1.00
GREEN SUNFISH	S	I	C	T	14	10.50	1.51	0.21	0.48	19.57
BLUEGILL SUNFISH	S	I	C	P	1	0.75	0.11	0.08	0.18	104.00
DUSKY DARTER	D	I	S	M	8	6.00	0.86	0.05	0.12	8.25
BLACKSIDE DARTER	D	I	S		4	3.00	0.43	0.02	0.04	6.00
LOGPERCH	D	I	S	M	1	0.75	0.11	0.01	0.02	12.00
JOHNNY DARTER	D	I	C		1	0.75	0.11	0.00	0.00	1.00
GREENSIDE DARTER	D	I	S	M	3	2.25	0.32	0.01	0.02	4.33
<i>Mile Total</i>					926	694.50		42.73		
<i>Number of Species</i>					26					
<i>Number of Hybrids</i>					1					

Appendix Table 3

Physical habitat conditions using the Qualitative Habitat Evaluation Index (QHEI)

Fish Creek 1991, 1992, 1993

