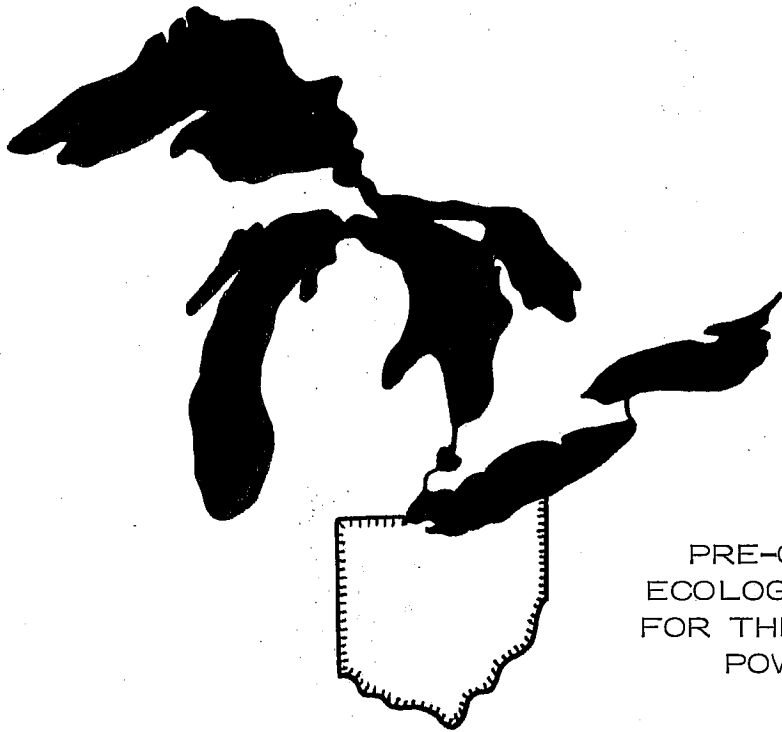




PRE-OPERATIONAL AQUATIC
ECOLOGY MONITORING PROGRAM
FOR THE DAVIS-BESSE NUCLEAR
POWER STATION, UNIT 1

PROGRESS REPORT
JANUARY 1 - JUNE 30
1975

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CENTER FOR LAKE ERIE AREA RESEARCH
THE OHIO STATE UNIVERSITY
COLUMBUS, OHIO

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OBJECTIVE

The purpose of this investigation is to ascertain the existing character of the aquatic ecosystem at Locust Point, Lake Erie prior to operation of the Davis-Besse Nuclear Power Station, Unit 1. Included in the assessment are studies of existing plankton, benthos, and fish populations and water quality and recent trends in these parameters. The report contained herein is for the period January 1, 1975 to June 30, 1975.

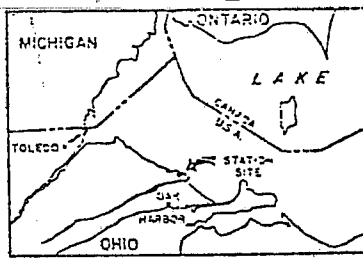
PROCEDURES

Sampling Station Location

Twenty-five stations, 18 along 4 transects in the open lake, 2 stations in the intake canal, 2 stations in the marshes, and 3 stations along the shoreline, were designated as sampling stations (Fig. 1). Of the 4 transects, one followed the intake conduit, one the discharge conduit, while control transects were set up on the east and west sides of the entire intake and discharge complex. Control west ran due north from the shore-end of the intake conduit with sampling stations located at 500 ft (Station 1), 1000 ft (Station 2), 2000 ft (Station 3), and 3000 ft (Station 4) from the shore line, sampling stations on the intake were located at 500 ft (Station 5), 1000 ft (Station 6), 2000 ft (Station 7), 3000 ft (Station 8, proposed intake), and 4000 ft (Station 9) from shore. Along the discharge transect sampling stations were at distances of 500 ft (Station 10), 1000 ft (Station 11), 1500 ft (Station 12, proposed discharge), 2000 ft (Station 13), and 3000 ft (Station 14) from shore. Additional stations were placed 500 ft due north of Station 12 (Station 15) and 500 ft south of Station 12 (Station 16). Control east ran perpendicular to the shore line, parallel to the intake, and approximately 2500 ft east of the intake. Stations were located 500 ft (Station 17) and 1000 ft (Station 18) from shore. Station 19 was located in the center of the intake canal, 1000 ft from the lake shore. Station 20 was drained of all water in 1974 and samples are no longer being collected there. Stations 21 and 22 were located in the northwest and southeast marshes, respectively. Stations 23-25 were on the shoreline at the intersection of the intake conduit and 1500 ft to either side.

Plankton

Plankton was sampled monthly, April through June, from 11 stations, 10 in the open lake and 1 in the intake canal (Table 1). Duplicate vertical tows, bottom to surface, were taken at each of



SITE LOCATION

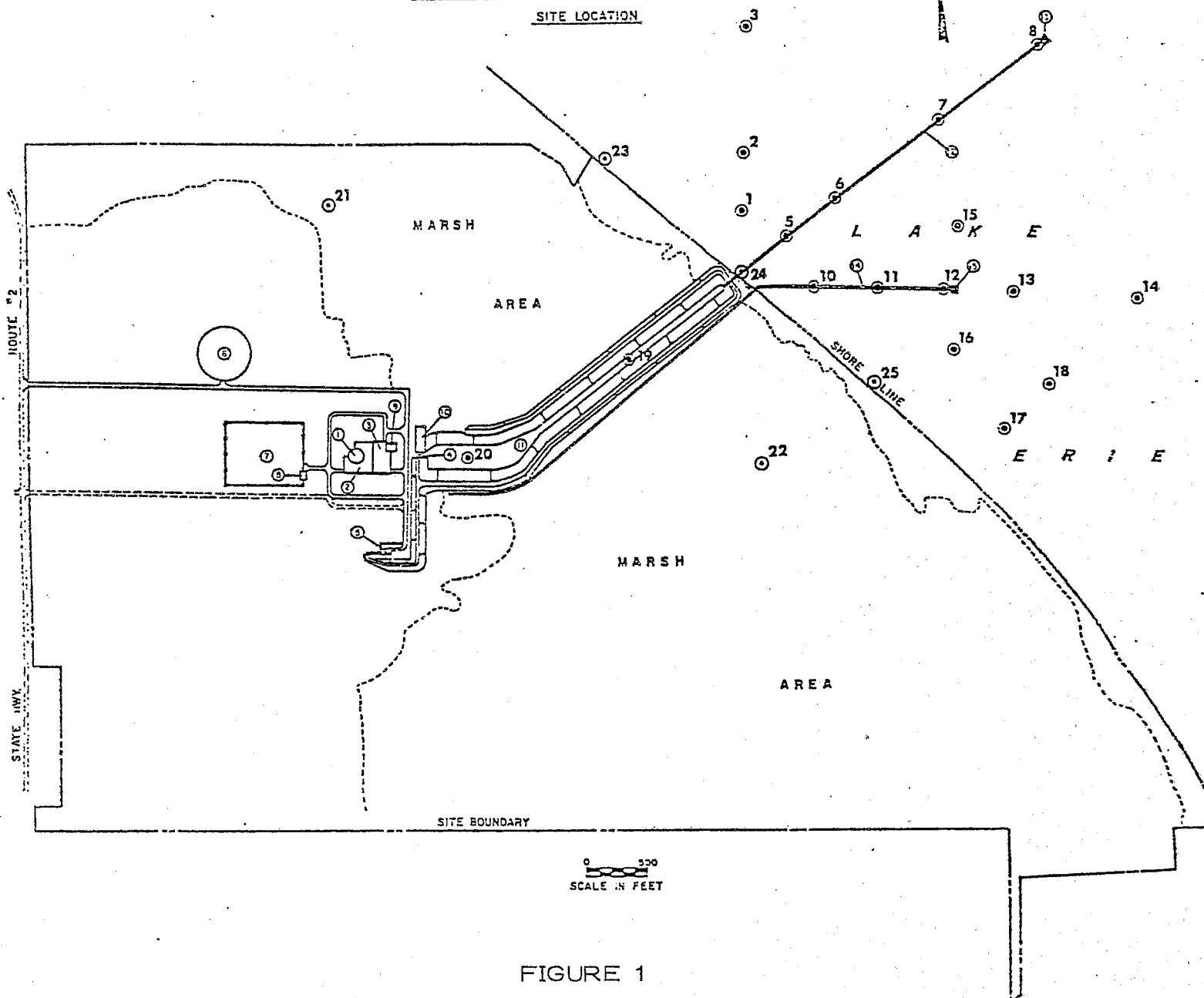


FIGURE 1

LOCATION MAP OF SAMPLING STATIONS AT THE DAVIS-BESSE NUCLEAR POWER STATION

LEGEND

EXISTING BUILDING & STATION AREA

- ① CONTAINMENT BUILDING
- ② AUXILIARY BUILDING
- ③ TURBINE BUILDING
- ④ INTAKE STRUCTURE
- ⑤ WASTE TREATMENT PLANT
- ⑥ COOLING TOWER
- ⑦ SWITCH YARD
- ⑧ RELAY HOUSE
- ⑨ CIRCULATION WATER SYSTEM PUMP HOUSE
- ⑩ WATER TREATMENT BUILDING
- ⑪ FOREBAY & INTAKE CANAL

PROPOSED WATER INTAKE AND DISCHARGE

- ⑫ 96" INTAKE CONDUIT
- ⑬ INTAKE CHIM
- ⑭ 72" DISCHARGE CONDUIT
- ⑮ DISCHARGE STRUCTURE

⊙ Monitoring Stations

WATER INTAKE AND DISCHARGE
DAVIS - BESSE NUCLEAR POWER STATION

the 11 stations with a Wisconsin plankton net (12 cm mouth; no. 25, 0.064 mm mesh). Each sample was concentrated to 50 ml and preserved in 5% formalin. The volume of each sample was computed by multiplying the length of the tow by the area of the net mouth. The works of Chengalath, Fornando, and George (1971), Collins and Kalinsky (1972), Eddy and Hodson (1964), Ewers (1930), Jahoda (1948), Pennak (1953), Taft and Taft (1971), Torke (1974), and Ward and Whipple (1959) were used in plankton identification.

TABLE 1
AQUATIC MONITORING PROGRAM SAMPLING
DATES - 1974

Sample	March	April	May	June
PLANKTON		22	29	16
BENTHOS		23	21	19
FISH				
Gill Net		17-18	22-23	16-17
Shore Seine		17	22	17
Otter Trawl				
Lake			5,27	17
Intake Canal				13
Hoop Net		17-18	22-23	16-17
Fry Net				
Lake		22	12,25	2,15,22
Intake Canal				13
WATER QUALITY		22	29	16
CURRENTS				16
SOLAR RADIATION	24			19

Phytoplankton. Three 1-ml aliquots were withdrawn from each sample and placed in Sedgewick-Rafter counting cells. Whole counts of individual phytoplankters were made from 25 random Whipple disk fields from each 1-ml aliquot in the Sedgewick-Rafter counting cell. When filamentous forms numbered 100 or more in 10 Whipple fields, they were not counted in the remaining 15 fields. Identification was generally to the genus level. Results were reported as number per liter.

Zooplankton. Again, three 1-ml aliquots were withdrawn from each sample and placed in Sedgewick-Rafter cells. The entire cell was scanned under a microscope at 60x while counting and identifying all zooplankters. Individuals were identified as far as possible (generally to the genus or species level) and reported as number per liter.

Benthos

Benthos was sampled monthly, April through June, from Stations 1 to 19 (Table 1). Three replicate samples were taken at each station with a Ponar grab ($A = 0.055 \text{ m}^2$). Samples were sieved through a U.S. #40 sieve, preserved in 10% formalin and returned to the laboratory. Individuals were identified as far as possible (usually to genus; to species where possible) and reported as numbers of individuals per square meter. The works of Brinkhurst (1963), (1964), (1965), Brinkhurst, Hamilton, and Herrington (1968), Klemm (1972), Mason (1968), Pennak (1953), Stein (1962), Usinger (1956), Walter and Burch (1957), and Ward and Whipple (1959) were used for the benthos identification.

Fish

Fish were sampled by 5 methods, gill nets, shore seine, otter trawl, hoop nets, and fry net, April through June (Table 1). All fish captured were weighed, measured, and identified to species (Trautman, 1957).

Gill nets. Two experimental gill nets were set parallel to and near the end of the intake and discharge pipelines (Stations 8 and 12, respectively). Each net (125 ft x 6 ft) consisted of five 25 ft x 6 ft contiguous panels (1/2", 3/4", 1", 1 1/2", and 2" bar mesh). The nets were fished for approximately 24 hours monthly.

Shore Seine. Shore seining was accomplished monthly with a 100 ft bag seine at Stations 23, 24, and 25. The seine was stretched perpendicular to the shoreline until the shore brail was at the water's edge. The far brail was then dragged through a 90° arc back to shore. Two hauls were made at each station.

Otter Trawl. Both a 16-ft and an 8-ft otter trawl were used to collect fish for estimates of relative abundance and to obtain live fish for stomach analysis. The 16-ft trawl was used in the open lake. Four 5-minute tows between the intake (Station 8) and the discharge (Station 12) were completed monthly. A representative number of stomachs were taken from these for stomach analysis. Stomachs were preserved in 5 - 10% formalin.

The 8-ft trawl was used within the intake canal. Two tows of the entire canal length were conducted quarterly.

Hoop nets. Hoop nets (2.5 ft diameter, 1" bar mesh) were set at Stations 21 and 22 in the northwest and southeast marshes. The nets were fished for approximately 24 hours monthly. These fish were identified, weighed, measured and released.

Fry Net. A 0.75-meter diameter oceanographic plankton net (no. 00, 0.75 mm mesh) was used to capture fry, larvae, and eggs (ichthyoplankton). Five-minute circular tows, surface and near bottom, around the intake (Station 8), discharge (Station 12), and Toussaint Reef were completed 6 times from April - June (Fig. 1 & 2). Additional tows, surface and bottom, were made within the intake canal in June. Ichthyoplankton was preserved in 5% formalin and analyzed under a dissecting microscope. Individuals were identified as far as possible (generally species) using the works of Fish (1932) and Norden (unpublished key to larval fishes).

Water Quality

Twenty water quality parameters were measured monthly during the ice-free period from January to June 1975, at three stations in Lake Erie (1, 8 and 13). These parameters and the analytical method employed are listed in Table 2.

Field Measurements. Water quality measurements were made monthly in the field at Station 1, 8, and 13 (Figure 1). Temperature, dissolved oxygen and conductivity were measured from a small survey boat with submerged sensors and shipboard readout meters. Dissolved oxygen was determined with a YSI model 54 meter and conductivity with a Beckman RB3-3341 solubridge temperature-compensated meter; each meter was equipped with a thermistor for temperature readings. Sensor readings were taken at the surface and approximately 50 cm above the bottom. Transparency was determined with a 30 cm diameter Secchi disk lowered on a marked line until it was no longer visible. Solar radiation was measured at Station 8 with a Lambda Instruments Corp. underwater quantum sensor, model LI-185, at the surface and at one-meter depth intervals. This meter measures quanta of sunlight in the photosynthetically active radiation spectrum between 400 and 700 nm. Current velocity and direction were measured at Stations 8 and 12 with a HydroProducts model 65-A meter and surface drift drogues.

Laboratory Determinations. Surface and bottom (50 cm above) water samples were taken at Stations 1, 8, and 13 with a 3-liter

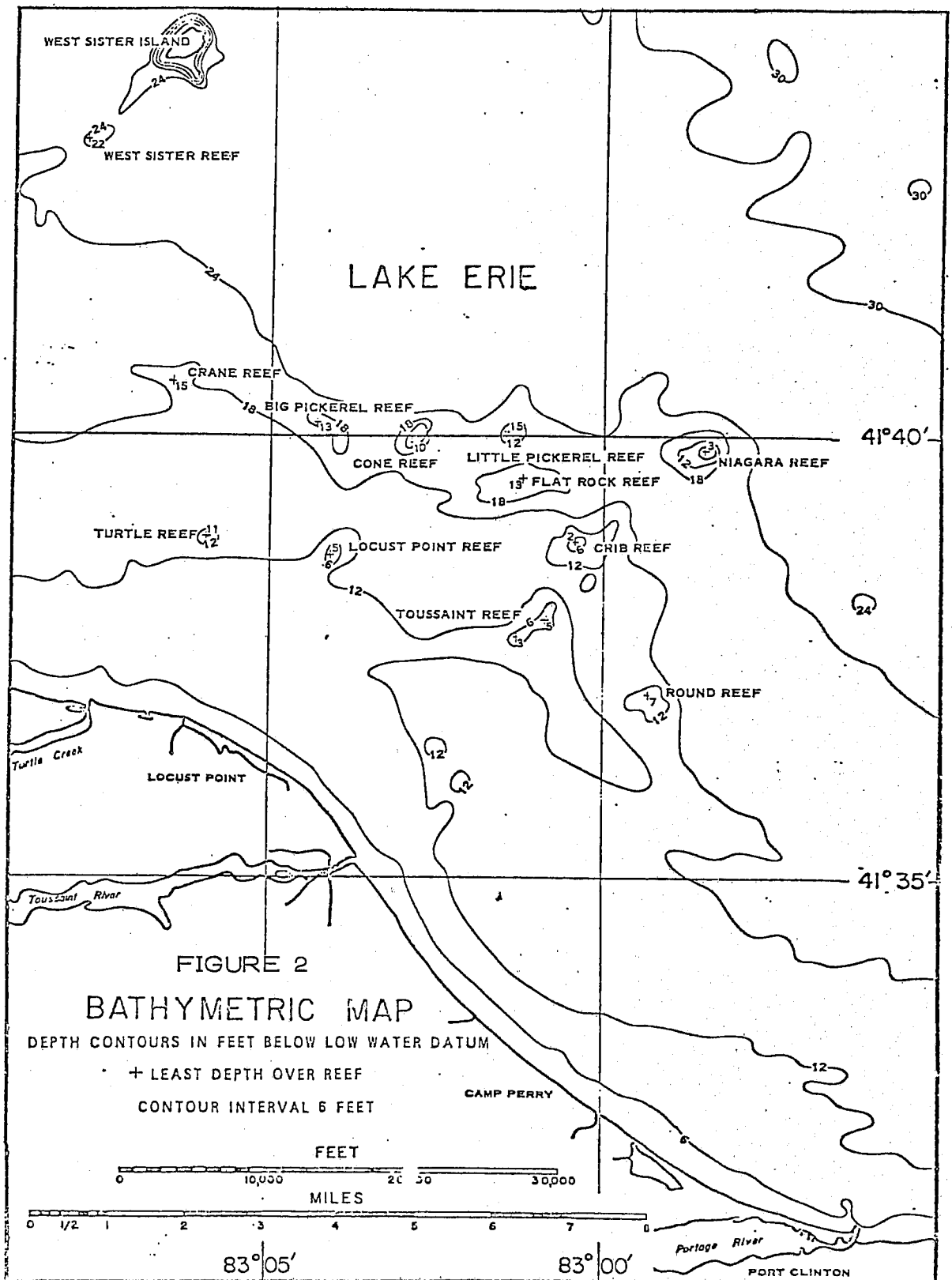


TABLE 2

ANALYTICAL METHODS FOR WATER QUALITY DETERMINATIONS

<u>Parameter</u>	<u>Units</u>	<u>Analytical Method</u>
1. Temperature	°C	Std. Methods, 13th Ed., 162 (1971)
2. Dissolved oxygen	ppm	Std. Methods, 13th Ed., 218B (1971)
3. Conductivity	umhos/cm (25°C)	ASTM D1135-64 (1973)
4. Transparency	meters	Secchi disk (Welch, 1948)
5. Calcium (Ca)	mg/l	Std. Methods, 13th Ed., 110C (1971)
6. Magnesium (Mg)	mg/l	Std. Methods, 13th Ed., 122B (1971)
7. Sodium (Na)	mg/l	ASTM D1428-64 (1973)
8. Chloride (Cl)	mg/l	Std. Methods, 13th Ed., 112B (1971)
9. Nitrate (NO ₃)	mg/l	ASTM D992-71 (1973)
10. Sulfate (SO ₄)	mg/l	ASTM D516-68C (1973)
11. Phosphorus (Total as P)	mg/l	Std. Methods, 13th Ed., 223F (1971)
12. Silica (SiO ₂)	mg/l	ASTM D859-68B (1973)
13. Alkalinity (Total as CaCO ₃)	mg/l	Std. Methods, 13th Ed., 102 (1971)
14. Biochemical oxygen demand	mg/l	Std. Methods, 13th Ed., 219 (1971)
15. Suspended solids	mg/l	Std. Methods, 13th Ed., 224C (1971)
16. Dissolved solids	mg/l	USEPA, Chem. Analysis, Water (1971)
17. Turbidity	F.T.U.	Std. Methods, 13th Ed., 163A (1971)
18. Hydrogen-ion conc.	pH units	ASTM D1293-65 (1973)
19. Solar Radiation	μ einsteins m ⁻² sec ⁻¹	Lambda underwater quantum sensor, model LI-185
20. Currents	cm/sec	HydroProducts, A-65 current meter and drift drouges

Kemmerer sampler at the same time that field measurements were being made. These samples were placed in polyethylene containers and taken to the laboratory for analysis; in most cases, analyses were completed within 24 hours of the sampling time. Fifteen water quality parameters (Table 2) were determined in the laboratory using the procedures prescribed in "Standard Methods for the Examination of Water, 13th Edition" (American Public Health Association, 1971) and in "ASTM Standards, Part 23, Water" (American Society for Testing and Materials, 1973).

RESULTS

Plankton

Phytoplankton. Phytoplankters collected April through June 1975 were divided into 43 taxa, generally to the genus level (Table 3). Twelve taxa were in the class Bacillariophyceae, 21 in the class Chlorophyceae, 1 in the class Chrysophyceae, 2 in the class Dinophyceae, 1 in the class Euglenophyceae, and 6 in the class Myxophyceae.

The range of the total phytoplankton population per liter per station was 22,272 - 233,105 in April, 366 - 15,744 in May and 9,575 - 77,018 in June (Table 4). The intake canal, Station 19, always had the lowest populations. Additional data are contained in Appendix A.

Zooplankton. Zooplankters collected April through June 1975 were divided into 39 taxa, 18 under Rotifera, 13 under Copepoda, 7 under Cladocera, and 1 under Protozoa (Table 5). Twenty-four taxa were identified to the species level, 7 to the genus level, 1 consisted of unidentified rotifers, and 7 contained immature copepods.

The total zooplankton population per liter per station ranged from 87.1 - 223.6 in April, 391.6 - 1721.7 in May and 342.5 - 2412.7 in June (Table 6). Additional data are contained in Appendix B.

Benthos

Benthic macroinvertebrates collected at Locust Point April through June 1975 were divided into 21 taxa (Table 7). The population was dominated by Oligochaetes. The total benthic macroinvertebrate population per square meter per station ranged from 6.4 - 2,215.6 in April, 38.2 - 2,960.5 in May, and 216.5 - 3,030.5 in June (Table 8). Additional data are contained in Appendix C.

TABLE 3
MONTHLY MEAN PHYTOPLANKTON POPULATIONS AT LOCUST POINT
APRIL - JUNE 1975

Taxa	22 April 1975		29 May 1975		16 June 1975	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
BACILLARIOPHYCEAE						
(Diatoms)						
<u>Asterionella</u> sp.	16179	11621	148	117	2409	845
Centric diatom	51	49	52	60	102	95
<u>Cymatopleura</u> sp.	14	19	3	9	6	9
<u>Diatoma</u> sp.	13382	10609	13	24	43	35
<u>Fragilaria</u> sp.	7933	4442	218	83	744	196
<u>Gyrosigma</u> sp.	25	38	9	21	2	4
<u>Melosira</u> sp.	7222	5296	1377	2318	1253	250
Naviculoid	385	262	23	41	237	296
<u>Stephanodiscus binderanus</u>	43925	31053	120	99	427	352
<u>Surirella</u> sp.	4	9	22	24	9	8
<u>Synedra</u> sp.	1566	1138	4	9	47	36
<u>Tabellaria</u> sp.	6093	3679	121	71	1400	715
Subtotal	96783	65821	2080	2466	6573	2161
CHLOROPHYCEAE						
(Green Algae)						
<u>Actinastrum</u> sp.	5	12	9	21	101	45
<u>Ankistrodesmus</u> sp.			3	9	22	24
<u>Binuclearia</u> sp.	14	19	13	20	297	150
<u>Closterium</u> sp.	38	47	42	38	33	29
<u>Coelastrum</u> sp.			100	93	75	101
<u>Dictyosphaerium</u> sp.	18	36	38	59	212	239
<u>Dimorphococcus</u> sp.			8	14	0	0
<u>Eudorina</u> sp.	35	29			2	7
<u>Micractinium</u> sp.	5	10	5	11	168	144
<u>Mougeotia</u> sp.	176	152	134	226	873	575
<u>Oedogonium</u> sp.			73	90	1537	1128
<u>Oocystis</u> sp.			36	42	60	39
<u>Pediastrum</u> sp.	54	54	1395	734	4262	2858
<u>Scenedesmus</u> sp.	34	40	162	232	266	327
<u>Schroederia</u> sp.					31	40
<u>Selenastrum</u> sp.			6	14	13	23
<u>Sphaerocystis</u> sp.			13	18	0	0
<u>Spirogyra</u> sp.			4	14	1	5
<u>Staurastrum</u> sp.			69	70	399	171
<u>Westella</u> sp.	85	63	7	16	0	0
Unidentified			56	55	0	0
Subtotal	464	299	2110	1331	8347	5584
CHRYSTOPHYCEAE						
(Brown Algae)						
<u>Dinobryon</u> sp.	107	50	6	20	0	0
DINOPHYCEAE						
(Dinoflagellates)						
<u>Ceratium hirundinella</u>			9	12	28	29
<u>Peridinium</u> sp.					8	10
Subtotal			9	12	36	34
EUGLENOPHYCEAE						
<u>Euglena</u> sp.			1	4	7	12
MYXOPHYCEAE						
(Blue-green Algae)						
<u>Anabaena</u> sp.			5	18	36	23
<u>Aphanizomenon</u> sp.			531	781	12183	10193
<u>Chroococcus</u> sp.	8	13	1	4	8	10
<u>Merismopedia</u> sp.			6	14	7	11
<u>Microcystis</u> sp.			146	109	610	364
<u>Oscillatoria</u> sp.	205	124	17	42	11	25
Subtotal	213	128	688	902	12854	10579
TOTAL	97567	66174	4883	4386	27817	18047

S.D. = Standard Deviation. Data presented as number/liter.

TABLE 4

TOTAL PHYTOPLANKTON POPULATIONS PER LITER

Station	22 April 1975		29 May 1975		16 June 1975	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	78323	5093	5423	590	41866	156
3	66189	2515	3553	165	18380	1130
6	84222	3747	5470	2200	25362	4961
8	49687	1961	1634	235	22427	684
9	72091	6255	1717	104	18692	1406
10	233105	22794	15744	2624	77018	6559
122	200831	570	9588	649	20828	1336
133	141458	7698	4224	212	23356	36
14	51792	483	2190	230	22752	1105
18	73268	598	3800	165	25731	233
19	22272	8592	366	136	9575	208
TOTAL	997567	66174	4883	4386	27817	18047

S.D. = Standard Deviation

TABLE 5

MONTHLY MEAN ZOOPLANKTON POPULATIONS AT LOCUST POINT
APRIL - JUNE 1975

Taxa	22 April 1975		29 May 1975		16 June 1975	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
ROTIFERA						
<u>Asplanchna priodonta</u>	0.1	0.2	2.2	2.7		
<u>Branchionus angularis</u>	18.7	60.8	5.8	7.7	16.7	7.9
<u>B. calyciflorus</u>	7.2	6.2	0.2	0.8	0.5	0.7
<u>B. havanaensis</u>			0.6	1.0	0.1	0.4
<u>B. urceolaris</u>	1.0	1.0				
<u>Conchiloides</u> sp.			24.8	93.4	36.8	20.5
<u>Filinia terminalis</u>	1.0	1.3	0.7	1.4	1.9	1.4
<u>Kellicottia longispina</u>	0.6	0.4	0.5	1.4	8.0	3.1
<u>Keratella cochlearis</u>	2.1	2.2	89.8	57.7	89.1	40.8
<u>K. quadrata</u>	3.9	2.5	14.3	15.1	16.3	5.1
<u>Notholca</u> sp.	31.6	10.7	0.1	0.2		
<u>Polyarthra</u> sp.	22.1	23.5	114.4	73.2	25.7	10.8
<u>Pompholyx sulcata</u>					4.2	3.2
<u>Synchaeta</u> sp.	10.7	4.1	1.0	1.2	1.1	3.1
<u>Trichocerca multicrinis</u>			1.1	1.0	0.5	0.6
<u>Trichocerca</u> sp.					0.9	1.0
<u>Trichotria tetractis</u>					0.1	0.1
Unidentified rotifer	29.7	13.5	0.1	0.2	32.9	16.6
Subtotal	112.8	42.7	258.1	83.5	234.2	72.1
COPEPODA						
Calanoid copepods						
<u>Diaptomus</u> sp.	0.7	0.6	6.5	6.5	2.0	1.4
<u>Eurytemora affinis</u>			0.6	0.9	0.0	0.0
<u>Limnocalanus macrurus</u>	0.0	0.0				
Immatures, calanoid	0.3	0.2				
Immatures, <u>Diaptomus</u>			2.1	2.8	1.9	1.7
Immatures, <u>Eurytemora</u>			0.1	0.2		
Nauplii, calanoid	15.9	5.8	24.7	12.0	9.5	7.9
Cyclopoid copepods						
<u>Cyclops bicuspidatus</u>	1.0	1.5	5.5	3.8	6.6	3.6
<u>C. vernalis</u>	0.1	0.1	16.1	11.0	33.0	23.7
<u>Mesocyclops edax</u>					0.0	0.0
Immatures, cyclopoid	1.0	0.6	61.1	27.5	8.0	3.9
Nauplii, cyclopoid	4.9	2.7	411.7	183.3	120.9	75.6
Nauplii, harpacticoid	0.4	0.3				
Subtotal	24.3	4.8	533.3	219.0	181.7	111.1
CLADOCERA						
<u>Bosmina longirostris</u>	0.5	0.5	296.3	408.0	0.8	0.9
<u>Chydorus shaericus</u>	0.3	0.6	5.1	3.4	0.5	0.7
<u>Daphnia galeata</u>			0.1	0.3		
<u>D. parvula</u>					0.0	0.0
<u>D. retrocurva</u>	0.3	0.4	211.6	180.4	30.1	20.8
<u>Eubosmina coregoni</u>			10.6	9.1	71.0	58.5
<u>Leptodora kindtii</u>			2.0	1.7	0.5	0.4
Subtotal	1.1	0.6	521.9	426.6	102.7	78.4
PROTOZOA						
<u>Diffugia</u> sp.	12.6	12.4	39.5	21.5	843.4	379.7
TOTAL	150.7	44.9	1357.3	589.4	1365.2	601.2

S.D. = Standard Deviation. Data presented as number/liter.

TABLE 6

TOTAL ZOOPLANKTON POPULATION PER LITER

Station	22 April 1975		29 May 1975		16 June 1975	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	176.3	21.0	625.2	60.9	2412.7	332.3
3	113.7	18.9	661.7	32.1	1209.9	81.7
6	136.8	6.5	915.7	157.3	1294.9	119.0
8	103.7	6.8	700.6	46.0	1673.0	48.3
9	87.1	6.7	655.6	24.4	1229.8	102.1
10	187.8	2.0	1296.4	7.4	2342.4	203.1
12	208.0	4.5	1721.7	476.4	808.3	42.2
13	126.6	9.9	963.8	0.9	1229.9	33.0
14	123.8	10.9	773.9	68.7	1317.6	41.3
18	170.7	5.0	917.2	49.9	1157.6	69.0
19	223.6	102.7	391.6	20.1	342.5	3.0
TOTAL	150.7	44.9	874.9	365.5	1365.2	601.2

S.D. = Standard Deviation

TABLE 7

MONTHLY MEAN BENTHIC MACROINVERTEBRATE POPULATIONS
AT LOCUST POINT
APRIL - JUNE 1975

Taxa	23 April 1975		21 May 1975		19 June 1975	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
COELENTERATA						
<u>Hydra</u> sp. (single polyp)			5.4	21.9	1.4	2.7
<u>Hydra</u> sp. (budding polyp)			4.4	19.0	10.7	2.0
ANNELIDA						
Hirudinea						
<u>Glossiphonia complanata</u>	0.3	1.5	0.3	1.5		
<u>Helobdella stagnalis</u>	1.3	3.4	0.7	2.0	1.3	3.4
Oligochaeta						
Immatures (no hair setae)	509.8	666.5	559.9	635.9	686.2	769.6
Immatures (hair setae)						
<u>Branchyura sowerbyi</u>	7.0	18.7	5.4	8.3	7.7	14.2
<u>Limnodrilus cervix</u>	7.4	22.2	8.1	9.0	19.4	37.0
<u>L. claparedeanus</u>	0.3	1.5	0.3	1.5	15.1	35.0
<u>L. claparedeanus-cervix</u>	1.7	3.6	4.7	7.6	5.4	12.4
<u>L. maumeensis</u>	2.0	4.8	4.0	10.2	0.7	2.0
<u>Potamotheix moldaviensis</u>	10.7	13.8	13.1	22.5	13.1	16.0
ARTHROPODA						
Cladocera						
<u>Leptodora kindtii</u>	0.3	1.5	85.6	79.0	431.9	402.8
Amphipoda						
<u>Gammarus fasciatus</u>	2.7	4.4	41.6	56.0	9.4	17.7
Chironomidae						
<u>Chironomus (chironomus)</u> sp.	15.8	19.6	44.2	39.8	18.1	22.3
<u>Cryptochironomus</u> sp.	3.4	8.3	10.4	14.9	1.0	2.4
<u>Procladius</u> sp.	3.0	4.9	10.7	19.1	6.4	21.8
<u>Procladius</u> pupa			2.3	10.2		
<u>Tanytarsus</u> sp.	1.7	3.6	0.3	1.5	31.0	40.1
Ephemeroptera						
<u>Caenis</u> sp.	2.0	6.0	11.4	23.8	0.7	2.0
MOLLUSCA						
Pelecypoda						
<u>Amblema plicata</u>	1.7	4.2				
TOTAL	584.1	710.3	796.9	758.0	1222.6	720.5

S.D. = Standard Deviation

TABLE 8
TOTAL BENTHIC MACROINVERTEBRATE POPULATION
PER SQUARE METER

Station	23 April 1975		21 May 1975		19 June 1975	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	6.4	11.0	38.2	0.0	573.0	248.3
2	57.3	57.3	184.6	29.2	1356.1	1418.7
3	553.9	619.8	375.6	601.7	1693.5	496.0
4	865.9	559.6	1426.1	1267.0	1859.1	898.8
5	133.7	33.1	1159.2	94.2	216.5	173.3
6	579.4	606.8	1018.7	944.3	1747.7	2172.4
7	878.6	356.8	719.4	646.4	1069.6	763.0
8	343.8	368.9	1012.3	813.3	573.0	368.4
9	744.8	606.6	2960.5	600.4	3030.5	852.5
10	63.7	48.1	140.1	177.5	388.4	573.7
11	50.9	11.0	362.9	175.1	1680.8	827.4
12	2177.4	1663.0	1050.5	1094.4	1362.5	335.4
13	165.5	140.8	901.1	558.7	923.2	447.7
14	1699.9	1874.6	1795.4	981.6	2317.5	809.1
15	222.8	108.6	273.8	77.2	1076.3	412.0
16	38.2	38.2	254.7	153.2	764.0	125.3
17	19.1	0.0	101.9	94.2	744.9	686.3
18	280.1	61.4	640.8	174.7	464.8	337.6
19	2215.6	1582.8	1725.4	1653.7	1387.9	618.7
TOTAL	584.1	710.3	796.9	758.0	1222.6	720.5

S.D. = Standard Deviation

Fish

The five fishing methods employed yielded 26,755 fish of 24 species during the period April through June 1975. Scientific and common names of the fish are contained in Appendix F.

Gill Net. Gill netting from April through June yielded 1,463 fish representing 17 species. The catch at Station 8 (intake) totaled 786 fish of 11 species, while at Station 12 (discharge) 677 fish of 15 species were captured (Tables 9 and 10).

Shore Seine. The yield from shore seines during the period April through June was 21,939 fish of 13 species. The monthly catches ranged from 44 - 20,497 fish (Tables 11 - 13). Of the 20,497 fish captured in June, 20,418 were Dorosoma cepedianum (gizzard shad) fry.

Otter Trawl. Trawling in the lake during the period April through June yielded 344 fish of 12 species (Table 14). Scheduled trawling within the intake canal yielded 20 fish of 4 species on 13 June 1975 (Table 15).

Hoop Net. Hoop nets set in the northwest marsh (Station 21) April through June yielded 16 fish of 4 species, 7 Blandings turtles, 5 painted turtles, and 2 snapping turtles (Table 16). Nets set in the southeast marsh (Station 22) during the same period caught 3 carp (Cyprinus carpio) (Table 17).

Fry Net. A total of 2,966 fry of 8 species and 164 eggs were captured from April through June (Tables 18 and 19). On 13 June 251 fry and no eggs were collected from the intake canal. Of the 2,715 fry captured in the open lake, 94% or 2,552 were collected near the bottom, 99.6% or 2,704 were collected at Stations 8 and 12 at Davis-Besse, and 78% (2,108) of those collected at Davis-Besse were yellow perch (Perca flavescens). Of the 164 eggs collected, 98% or 161 were collected at Toussaint Reef.

Food Habits

During April through November 1974, the contents of stomachs representing 12 fish species were examined (Table 20). Food items were placed in 23 taxa. Additional data are contained in Appendix D.

During April through June 1975, the contents of 48 stomachs representing 10 fish species were examined (Table 21). Food items were grouped into 21 taxa. Additional data are contained in Appendix E.

TABLE 9

ANALYSIS OF GILL NET CATCH AT LOCUST POINT
STATION 8 - APRIL-JUNE 1975

Date	Taxa	No.	Length (mm)		Weight (g)	
			Mean	Range	Mean	Total
17 April 1975						
	<u>Aplodinotus grunniens</u>	1	320		415	415
	<u>Notropis hudsonius</u>	3	114	111-120	16	48
	<u>Perca flavescens</u>	4	199	180-233	112	448
	Subtotal	8				
22 May 1975						
	<u>Alosa pseudoharengus</u>	2	196	182-210	62	124
	<u>Aplodinotus grunniens</u>	4	254	240-264	194	777
	<u>Catostomus c. commersoni</u>	2	333	330-335	503	1006
	<u>Cyprinus carpio</u>	1	316		539	539
	<u>Morone chrysops</u>	3	203	137-333	194	582
	<u>Notropis a. atherinoides</u>	3	115	112-119	12	35
	<u>N. hudsonius</u>	260	114	103-130	16	4171
	<u>Perca flavescens</u>	243	170	90-247	58	13960
	Subtotal	518				
16 June 1975						
	<u>Alosa pseudoharengus</u>	21	163	139-220	45	860
	<u>Carassius auratus</u>	1	263		317	317
	<u>Cyprinus carpio</u>	11	275	226-345	320	3515
	<u>Dorosoma cepedianum</u>	9	332	298-360	442	3976
	<u>Morone chrysops</u>	11	136	128-146	35	383
	<u>Notropis a. atherinoides</u>	3	105		12	36
	<u>Osmerus eperlanus mordax</u>	1	165		28	28
	<u>Perca flavescens</u>	203	179	130-205	77	4595
	Subtotal	260				
	Total	786				

TABLE 10

ANALYSIS OF GILL NET CATCH AT LOCUST POINT
STATION 12 - APRIL-JUNE 1975

Date	Taxa	No.	Length (mm)		Weight (g)	
			Mean	Range	Mean	Total
17 April 1975						
	<u>Alosa pseudoharengus</u>	10	174	162-180	37	374
	<u>Cyprinus carpio</u>	1	292		426	426
	<u>Dorosoma cepedianum</u>	1	114		16	16
	<u>Morone chrysops</u>	1	310		432	432
	<u>Notropis hudsonius</u>	63	111	100-145	16	989
	<u>Perca flavescens</u>	10	185	169-202	79	788
	<u>Percopsis omiscomaycus</u>	1	113		17	17
	<u>Stizostedion v. vitreum</u>	1	225		106	106
	Subtotal	88				
22 May 1975						
	<u>Alosa pseudoharengus</u>	44	173	152-190	39	1731
	<u>Aplodinotus grunniens</u>	4	196	168-259	91	363
	<u>Catostomus c. commersoni</u>	1	355		584	584
	<u>Cyprinus carpio</u>	4	294	236-339	396	1583
	<u>Dorosoma cepedianum</u>	9	329	285-352	426	3838
	<u>Hybopsis storeriana</u>	1	185		70	70
	<u>Ictalurus nebulosus</u>	1	252		287	287
	<u>Morone chrysops</u>	3	135	134-137	32	95
	<u>Notropis hudsonius</u>	293	117	107-127	14	4030
	<u>Perca flavescens</u>	109	154	82-227	56	6091
	<u>Stizostedion canadense</u>	6	229	212-258	114	686
	<u>S. v. vitreum</u>	2	221	208-233	98	195
	Subtotal	477				
16 June 1975						
	<u>Alosa pseudoharengus</u>	24	159	137-198	43	1030
	<u>Aplodinotus grunniens</u>	4	130	95-162	73	293
	<u>Cyprinus carpio</u>	8	292	220-375	365	2921
	<u>Dorosoma cepedianum</u>	4	336	320-372	425	1701
	<u>Ictalurus punctatus</u>	7	359	267-412	466	3265
	<u>Morone chrysops</u>	4	140	132-144	38	152
	<u>Notropis a. atherinoides</u>	1	115		12	12
	<u>Perca flavescens</u>	56	171	103-228	73	4109
	<u>Stizostedion v. vitreum</u>	4	211	193-224	83	331
	Subtotal	112				
	Total	677				

TABLE 11

ANALYSIS OF SHORE SEINE CATCH AT LOCUST POINT
17 APRIL 1975

Station	Taxa	No.	Length (mm)		Weight (g)	
			Mean	Range	Mean	Total
23	No fish in the first tow. Hazardous weather conditions prevented completion of the second tow.					
24	<u>Dorosoma cepedianum</u>	2	324	311-337	439	877
	<u>Notropis atherinoides</u>	273	53	44-65	1	295
	Subtotal	275				
25	<u>Cyprinus carpio</u>	1	535		2293	2293
	<u>Notropis atherinoides</u>	1122	53	39-66	1	1212
	Subtotal	1123				
	Total	1398				

TABLE 12

ANALYSIS OF SHORE SEINE CATCH AT LOCUST POINT
22 MAY 1975

Station	Taxa	No.	Length (mm)		Weight (g)	
			Mean	Range	Mean	Total
23	<u>Cyprinus carpio</u>	1	640		4331	4331
	<u>Ictalurus nebulosus</u>	2	212	200-224	130	260
	<u>Notropis atherinoides</u>	13	55	50-72	1	16
	<u>N. hudsonius</u>	4	68	57-65	4	15
	Subtotal	20				
24	<u>Aplodinotus grunniens</u>	1	260		223	223
	<u>Cyprinus carpio</u>	1	671		5436	5436
	<u>Dorosoma cepedianum</u>	3	314	290-334	294	883
	<u>Notropis atherinoides</u>	2	57	53-60	1	2
	Subtotal	7				
25	<u>Cyprinus carpio</u>	4	587	449-702	3178	12712
	<u>Dorosoma cepedianum</u>	2	321	309-332	339	677
	<u>Notropis atherinoides</u>	9	50	48-55	1	9
	<u>N. hudsonius</u>	1	81		6	6
	<u>Pomoxis nigromaculatus</u>	1	135		38	38
	Subtotal	17				
	Total	44				

TABLE 13

ANALYSIS OF SHORE SEINE CATCH AT LOCUST POINT
17 JUNE 1975

Station	Taxa	No.	Length (mm)		Weight (g)	
			Mean	Range	Mean	Total
23	<u>Dorosoma cepedianum</u>	6042	28	22-34		
	<u>Morone chrysops</u>	3	22	18-27		
	<u>Notropis atherinoides</u>	28	55	46-72	1	29
	<u>N. hudsonius</u>	3	64	24-109	5	14
	Subtotal	6076				
24	<u>Aplodinotus grunniens</u>	1	115		21	21
	<u>Catostomus commersoni</u>	4	19	17-22		
	<u>Dorosoma cepedianum</u>	14235	28	21-33		
	<u>Morone chrysops</u>	64	17	13-22		
	<u>Notropis atherinoides</u>	41	55	19-115	1	33
	<u>N. hudsonius</u>	6	17	15-20	17	104
	<u>Perca flavescens</u>	8	20	18-22		
	<u>Pimephales promelas</u>	1	38		1	1
	<u>Pomoxis annularis</u>	3	20	19-21		
	<u>P. nigromaculatus</u>	1	17			
	Subtotal	14364				
25	<u>Dorosoma cepedianum</u>	12	20	15-24		
	<u>Morone chrysops</u>	6	19	9-24		
	<u>Notropis atherinoides</u>	35	59	49-107	2	64
	<u>N. hudsonius</u>	2	62	20-103		
	<u>N. volucellus</u>	2	41	36-45	1	2
	Subtotal	57				
	Total	20497				

TABLE 14

ANALYSIS OF TRAWL CATCH AT LOCUST POINT
APRIL - JUNE 1975

Date	Taxa	No.	Length (mm)		Weight (g)	
			Mean	Range	Mean	Total
May 5, 1975						
	<u>Aplodinotus grunniens</u>	3	157	111-186		
	<u>Notropis a. atherinoides</u>	1	107			
	<u>N. hudsonius</u>	5	113	107-121		
	<u>Osmerus eperlanus mordax</u>	1	140			
	<u>Perca flavescens</u>	2	203	167-239		
	<u>Percina caprodes</u>	1	62			
	Subtotal	13				
May 27, 1975						
	<u>Ictalurus punctatus</u>	2	137	116-157		
	<u>Notropis a. atherinoides</u>	4	87	31-114		
	<u>N. hudsonius</u>	1	101			
	<u>Perca flavescens</u>	4	202	185-221		
	Subtotal	11				
June 17, 1975						
	<u>Alosa pseudoharengus</u>	1	132		27	27
	<u>Aplodinotus grunniens</u>	2	95	93-96	10	20
	<u>Cyprinus carpio</u>	1	358		590	590
	<u>Ictalurus nebulosus</u>	1	277		204	204
	<u>I. punctatus</u>	1	148		34	34
	<u>Morone chrysops</u> (Fry)	3	16	15-18		
	<u>Notropis a. atherinoides</u>	26	103	84-115	10	256
	<u>N. hudsonius</u>	3	95	66-128	12	36
	<u>Osmerus eperlanus mordax</u> (Fry)	4	25	20-29		
	<u>Perca flavescens</u> (Fry)	269	22	16-28		
	<u>P. flavescens</u>	6	164	105-201	61	299
	<u>Pomoxis annularis</u>	1	141		38	38
	<u>P. nigromaculatus</u> (Fry)	2	17	16-18		
	Subtotal	320				1504
	TOTAL	344				

TABLE 15

ANALYSIS OF TRAWL CATCH FROM THE INTAKE CANAL
AT THE DAVIS-BESSE NUCLEAR POWER STATION

Date	Taxa	No.	Length (mm)		Weight (g)	
			Mean	Range	Mean	Total
June 13, 1975						
	<u>Lepomis gibbosus</u>	2	107	103-110	35	69
	<u>Notropis hudsonius</u>	1	86		7	7
	<u>Perca flavescens</u> (adult)	5	120	110-125	25	123
	<u>P. flavescens</u> (YOY)	11	29	20-35		
	<u>Pomoxis nigromaculatus</u>	1	22			
	TOTAL	20				199

TABLE 16

ANALYSIS OF HOOP NET CATCH IN NORTHWEST MARSH (STATION 21),
APRIL - JUNE 1975

Date	Taxa	No.	Length (mm)		Weight (g)	
			Mean	Range	Mean	Total
April 17-18, 1975						
	<u>Amia calva</u>	2	526	505-546	1429	2858
	<u>Cyprinus carpio</u>	1	295		362	362
	<u>Pomoxis nigromaculatus</u>	4	230	210-259	193	771
	Subtotal	7				3991
May 22-23, 1975						
	<u>Cyprinus carpio</u>	1	628		2293	2293
	Subtotal	1				2293
June 16-17, 1975						
	<u>Amia calva</u>	3	544	433-620	1576	4727
	<u>Carassius auratus</u>	2	234	215-252	237	474
	<u>Cyprinus carpio</u>	3	340	324-365	559	1677
	Blanding's Turtle	7			1039	7274
	Midlands Painted Turtle	7			328	2299
	Snapping turtle	2			5818	11636
	Subtotal	8				6878
	TOTAL	16				13162

TABLE 17

ANALYSIS OF HOOP NET CATCH IN SOUTHEAST MARSH (STATION 22),
APRIL - JUNE 1975

Date	Taxa	No.	Length (mm)		Weight (g)	
			Mean	Range	Mean	Total
April 17-18, 1975						
	No Fish					
May 22-23, 1975						
	<u>Cyprinus carpio</u>	3	243	210-263	210	629
	Subtotal	3				
June 16-17, 1975						
	No Fish					
	TOTAL	3				629

TABLE 18

SPECIES ANALYSIS OF ICHTHYOPLANKTON COLLECTED
IN THE VICINITY OF LOCUST POINT, LAKE ERIE
APRIL - JUNE 1975

Date	Taxa	Length Range (mm)	Individuals Captured Per 5-minute Tow							
			Sta. 8 (Intake)		Sta. 12 (Discharge)		Toussaint Reef		Sta. 19 (Canal)	
			Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
22 April 1975										
No larvae captured		48-55	0	2	0	0	-	-	-	-
1 Emerald shiner (<u>Notropis a. atherinoides</u>)										
12 May 1975		43-51	0	0	2	0	-	-	-	-
1 Emerald shiner (<u>Notropis a. atherinoides</u>)										
Yellow perch (<u>Perca flavescens</u>)		6-7	0	226	0	872	-	-	-	-
25 May 1975		62	1	0	0	0	0	0	-	-
1 Emerald shiner (<u>Notropis a. atherinoides</u>)										
Yellow perch (<u>Perca flavescens</u>)		6-12	0	515	99	376	0	8	-	-
White sucker (<u>Catostomus c. commersoni</u>)		7	0	1	0	0	0	0	-	-
Fish eggs		-	0	0	0	0	60	7	-	-
2 June 1975		54-64	1	1	6	0	0	0	-	-
1 Emerald shiner (<u>Notropis a. atherinoides</u>)										
Yellow perch (<u>Perca flavescens</u>)		8-13	0	2	1	8	0	0	-	-

TABLE 18 CONT.

SPECIES ANALYSIS OF ICHTHYOPLANKTON COLLECTED
IN THE VICINITY OF LOCUST POINT, LAKE ERIE
APRIL - JUNE 1975

Date	Taxa	Length Range (mm)	Individuals Captured Per 5-minute Tow							
			Sta. 8 (Intake)		Sta. 12 (Discharge)		Toussaint Reef		Sta. 19 (Canal)	
			Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
13-16 June 1975	Gizzard shad (<u>Dorosoma cepedianum</u>)	6-15	0	408	13	31	0	0	-	-
	Fish eggs	-	0	0	0	0	13	4	-	-
	<u>Emerald shiner</u> (<u>Notropis a. atherinoides</u>)	8	1	0	0	1	0	0	0	0
	Yellow perch (<u>Perca flavescens</u>)	12-15	2	0	2	1	0	0	0	0
	Gizzard shad (<u>Dorosoma cepedianum</u>)	4-27	2	7	36	75	0	0	37	27
22 June 1975	White bass (<u>Morone chrysops</u>)	18	0	0	0	0	0	0	1	0
	White crappie (<u>Pomoxis annularis</u>)	4-7	0	0	0	0	0	0	32	148
	Carp (<u>Cyprinus carpio</u>)	4-7	0	0	0	4	0	0	2	4
	Unknown Fish eggs	5-6	0	0	4	0	0	0	0	0
		-	0	0	0	0	2	10	0	0
22 June 1975	<u>Emerald shiner</u> (<u>Notropis a. atherinoides</u>)	7-12	0	0	0	0	2	0	-	-
	Gizzard shad (<u>Dorosoma cepedianum</u>)	7-10	0	7	1	9	0	0	-	-

TABLE 18 CONT.

SPECIES ANALYSIS OF ICHTHYOPLANKTON COLLECTED
IN THE VICINITY OF LOCUST POINT, LAKE ERIE
APRIL - JUNE 1975

Date	Taxa	Length Range (mm)	Individuals Captured Per 5-minute Tow							
			Sta. 8 (Intake)		Sta. 12 (Discharge)		Toussaint Reef		Sta. 19 (Canal)	
			Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
Carp (<u>Cyprinus carpio</u>) Fish eggs	-	6	0	0	0	0	0	1	-	-
		-	2	1	0	0	64	1	-	-

TABLE 19

TOTAL ICHTHYOPLANKTON CAPTURED
IN THE VICINITY OF LOCUST POINT, LAKE ERIE
APRIL - JUNE 1975

Date	Station 8		Station 12		Toussaint Reef		Station 19		Total	
	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom
22 April Larvae Eggs	0 0	0 0	0 0	0 0	- -	- -	- -	- -	0 0	0 0
12 May Larvae Eggs	0 0	226 0	0 0	872 0	- -	- -	- -	- -	0 0	1098 0
25 May Larvae Eggs	0 0	516 0	99 0	376 0	0 60	8 7	- -	- -	99 60	900 7
2 June Larvae Eggs	0 0	410 0	14 0	39 0	0 13	0 4	- -	- -	14 13	449 4
13-16 June Larvae Eggs	5 0	7 0	42 0	81 0	0 2	0 10	72 0	179 0	119 2	267 10
22 June Larvae Eggs	0 2	7 1	1 0	9 0	2 64	1 1	- -	- -	3 66	17 2

TABLE 20

SUMMARY OF FOOD HABITS OF FISH COLLECTED AT LOCUST POINT
APRIL - NOVEMBER 1974

Month	Species	No. Captured	% Containing food	Length (mm)		Food Items																						
				Mean	Range	Nematodea	Bryozoa	Cladocera	Bosmina sp.	Daphnia pulex	D. retrocurva	Leptodora kindtii	Copepoda	Calanoid	Cyclopoid	Gammarus sp.	Insecta	Caenis sp.	Coleoptera	Diptera	Chironomidae	C. (Chironomus) sp.	Procladius sp.	Tanytarsus sp.	Fish	Notropis hudsonius	Eggs	Debris
April	<u>Aplodinotus grunniens</u>	7	43	230	128-310	14																						
	<u>Ictalurus punctatus</u>	4	50	170	78-334															25								
	<u>Morone chrysops</u>	1	0	303	-																							
	<u>Notropis hudsonius</u>	4	50	121	115-135	25																						
	<u>Perca flavescens</u>	7	0	155	99-194																							
	Subtotal	23	30																									
May	<u>Alosa pseudoharengus</u>	2	50	168	160-175																							
	<u>Aplodinotus grunniens</u>	3	100	132	83-192																							
	<u>Ictalurus punctatus</u>	3	100	103	91-111																							
	<u>Morone chrysops</u>	1	100	300	-																							
	<u>Notropis hudsonius</u>	18	94	106	77-130																							
	Subtotal	27	93																									
June	<u>Notropis a. atherinoides</u>	41	63	87	57-108	32																						
	<u>Notropis hudsonius</u>	5	80	104	76-127																							
	Subtotal	46	65																									
July	<u>Aplodinotus grunniens</u>	1	100	120	-																							
	<u>Ictalurus nebulosus</u>	2	0	249	247-250																							
	<u>Ictalurus punctatus</u>	5	100	125	97-145																							

TABLE 20 CONT.

SUMMARY OF FOOD HABITS OF FISH COLLECTED AT LOCUST POINT
APRIL - NOVEMBER 1974

Month	Species	No. Captured	% Containing food	Length (mm)		Food Items																						
				Mean	Range	Nematodea	Bryozoa	Cladocera	Bosmina sp.	Daphnia pulex	D. retrocurva	Leptodora kindtii	Copepoda	Calanoid	Cyclopoid	Gammarus sp.	Insecta	Caenis sp.	Coleoptera	Diptera	Chironomidae	C. (chironomus) sp.	Procladius sp.	Tanytarsus sp.	Fish	Notropis hudsonius	Eggs	Debris
August	Morone chrysops	2	100	171	150-192																							50
	Notropis a. atherinoides	2	50	98	95-101																							
	Notropis hudsonius	2	0	106	94-117																							
	Perca flavescens	1	100	166	-																							
	Pomoxis nigromaculatus	1	100	134	-																							
	Subtotal	16	69																									
August	Aplodinotus grunniens	1	100	136	-																							
	Ictalurus punctatus	1	0	192	-																							
	Notropis a. atherinoides	2	0	107	97-116																							
	Stizostedion v. vitreum	1	100	145	-																							
	Subtotal	5	40																									
	November	Dorosoma cepedianum	15	67	80	61-135																						
Morone chrysops		5	80	114	91-138																							
Notropis a. atherinoides		22	0	61	46-87																							
Notropis hudsonius		14	21	92	55-121																							
Perca flavescens		8	88	183	138-204																							
Percina caprodes		2	100	55	48-62																							
Subtotal		66	39																									
TOTAL		183	56																									

Water Quality

The results of the monthly water quality determinations at Stations 1, 8 and 13 are shown in Tables 22 - 24. Solar Radiation measurements for Station 8 are given in Table 25 and current measurements for Stations 8 and 13 are listed in Table 26. The mean and ranges for water quality determinations for the ice-free period of the first half of 1975 are shown in Table 27.

DISCUSSION

Plankton

Phytoplankton. This was the second year in which phytoplankton has been analyzed quantitatively, and, therefore, the first time quantitative comparisons could be made.

Populations from April 1975 appeared similar to populations from April 1974 in that both were dominated by diatoms. However, the 1975 population was more than 12 times as large as the 1974 population. Diatoms composed 99% of the 1975 population.

In May 1974 the population rose to 98,517 individuals/liter while in May 1975 the population fell to 4,888/liter. Diatoms composed 99% of the May 1974 population.

In June 1974 the population fell to 2,092/liter. Pediastrum sp. was the most abundant phytoplankter and Aphanizomenon sp. (a summer species) did not appear until July. In June 1975 the population rose to 28,817/liter, 40% of which was Aphanizomenon sp.

The mean water temperatures for April, May, and June 1974 were 8.7°C, 14.6°C, and 18.8°C, respectively. In 1975 they were 7.2°C, 20.3°C and 21.2°C, respectively. Therefore, it appears that the warm water temperatures of summer arrived approximately one month earlier in 1975 than in 1974. This caused a similar shift in phytoplankton populations so that May 1974 resembles April 1975 more than May 1975.

This shows the magnitude of natural variation from year to year and the fallacy of attempting to predict annual phytoplankton populations from the results of one year. This type variation was first pointed out by Chandler and Weeks (1945) who showed the importance of climatic factors to phytoplankton production.

TABLE 22

LAKE ERIE WATER QUALITY ANALYSES FOR APRIL 1975

Dates:

Field 4-22-75

Laboratory 4-23-75

Parameters	Station No. 1		Station No. 8		Station No. 13		Range	Mean	Standard Deviation
	Surface	Bottom	Surface	Bottom	Surface	Bottom			
<u>Field Measurements:</u>									
Temperature (°C)	8.0	7.5	6.0	6.0	8.0	7.5	6.0-8.0	7.2	0.9
Dissolved Oxygen (ppm)	11.8	11.8	12.2	11.9	12.2	12.2	11.8-12.2	12.0	0.2
Conductivity (umhos/cm)	270	270	270	280	270	270	270-280	272	4
Transparency (m)	0.3		0.5		0.3		0.3-0.5	0.4	0.1
Depth (m)		1.8		4.3		3.1	1.8-4.3	3.1	1.3
<u>Laboratory Determinations:</u>									
Calcium (mg/l)	32.8	33.6	33.6	32.8	33.6	33.6	32.8-33.6	33.3	0.41
Magnesium (mg/l)	7.68	7.20	7.20	7.68	7.20	7.20	7.68-7.20	7.36	0.25
Sodium (mg/l)	8.9	8.9	9.2	9.2	8.9	8.9	8.9-9.2	9.0	0.15
Chloride (mg/l)	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	0.0
Nitrate (mg/l)	2.44	2.44	2.44	2.76	1.81	2.44	1.81-2.76	2.39	0.31
Sulfate (mg/l)	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	0.00
Phosphorus (mg/l)	0.05	0.05	0.04	0.06	0.05	0.04	0.04-0.06	0.05	0.01
Silica (mg/l)	0.26	0.26	0.55	0.47	0.06	0.06	0.06-0.55	0.28	0.20
Total Alkalinity (mg/l)	84	86	87	88	89	87	84-89	87	2.0
B.O.D. (mg/l)	4	4	2	3	3	3	2-4	3	1.0
Suspended Solids (mg/l)	41	31	18	17	36	31	17-41	29	10
Dissolved Solids (mg/l)	168	172	158	158	148	182	148-182	164	12.0
Turbidity (F.T.U.)	28	25	13	12	25	24	12-28	21	7.0
pH	8.1	8.3	7.8	8.0	7.8	7.8	7.8-8.3	8.0	0.2
Conductivity (umhos/cm)	282	279	293	287	276	279	276-293	282	

TABLE 23

LAKE ERIE WATER QUALITY ANALYSES FOR MAY 1975

Dates:
Field 5-29-75
Laboratory 5-30-75

Parameters	Station No. 1		Station No. 8		Station No. 13		Range	Mean	Standard Deviation
	Surface	Bottom	Surface	Bottom	Surface	Bottom			
<u>Field Measurements:</u>									
Temperature (°C)	20.0	20.0	20.5	20.0	21.0	20.0	20.0-21.0	20.3	0.4
Dissolved Oxygen (ppm)	8.8	8.6	7.4	7.2	9.0	8.6	7.2-9.0	8.3	0.8
Conductivity (umhos/cm)	320	320	300	300	310	315	300-320	311	9
Transparency (m)	0.4		0.6		0.6		0.4-0.6	0.5	0.1
Depth (m)		2.0		3.2		3.2	2.0-3.2	2.8	0.7
<u>Laboratory Determinations:</u>									
Calcium (mg/l)	46.0	44.4	38.0	38.0	38.8	38.8	38.0-46.0	40.7	3.6
Magnesium (mg/l)	6.5	7.4	9.1	9.4	9.8	10.3	6.5-10.3	8.8	1.5
Sodium (mg/l)	10.7	10.7	10.1	10.1	10.1	10.1	10.1-10.7	10.3	0.3
Chloride (mg/l)	20.5	20.5	18.5	19.0	20.0	20.0	18.5-20.5	19.8	0.8
Nitrate (mg/l)	5.1	5.8	4.4	5.8	5.8	6.5	4.4-6.5	5.6	0.7
Sulfate (mg/l)	30.0	30.0	22.5	25.0	25.0	30.0	22.5-30.0	27.0	3.3
Phosphorus (mg/l)	0.07	0.05	0.04	0.06	0.04	0.03	0.03-0.07	0.05	0.01
Silica (mg/l)	0.25	0.27	0.23	0.23	0.29	0.29	0.23-0.29	0.26	0.03
Total Alkalinity (mg/l)	103	105	103	101	102	104	101-105	103	1
B.O.D. (mg/l)	3	3	1	1	2	3	1-3	2	1
Suspended Solids (mg/l)	41	50	18	26	17	34	17-50	31	13.0
Dissolved Solids (mg/l)	236	234	234	230	226	232	226-236	232	4
Turbidity (F.T.U.)	28	32	16	18	16	18	16-32	21	7
pH	8.20	7.78	7.72	7.80	8.25	7.82	7.72-8.25	7.93	0.23
Conductivity (umhos/cm)	327	330	315	313	318	327	313-327	322	7

TABLE 24

LAKE ERIE WATER QUALITY ANALYSES FOR JUNE 1975

 Dates:
 Field 6-16-75
 Laboratory 6-17-75

Parameters	Station No. 1		Station No. 8		Station No. 13		Range	Mean	Standard Deviation
	Surface	Bottom	Surface	Bottom	Surface	Bottom			
<u>Field Measurements:</u>									
Temperature (°C)	22.2	22.2	20.6	20.6	21.1	20.6	20.6-22.2	21.2	0.8
Dissolved Oxygen (ppm)	280	280	10.4	10.2	10.2	10.1	10.1-10.4	10.2	0.1
Conductivity (umhos/cm)	0.4		280	275	280	280	275-280	279	2
Transparency (m)		1.7	0.6		0.5		0.4-0.6	0.5	0.1
Depth (m)				4.1		3.1	1.7-4.1	3.0	1.2
<u>Laboratory Determinations:</u>									34
Calcium (mg/l)	37.2	37.2	36.0	36.8	36.4	36.0	36.0-37.2	36.6	0.5
Magnesium (mg/l)	7.0	7.4	7.7	7.9	8.2	8.2	7.0-8.2	7.7	0.5
Sodium (mg/l)	8.9	8.4	8.4	8.4	8.4	8.0	8.0-8.9	8.4	0.3
Chloride (mg/l)	17.0	16.8	16.5	16.5	17.3	16.8	16.5-17.3	16.8	0.3
Nitrate (mg/l)	2.1	2.1	1.2	1.5	2.1	2.1	1.2-2.1	1.9	0.4
Sulfate (mg/l)	25.0	24.5	25.5	25.0	26.0	26.0	24.5-26.0	25.3	0.6
Phosphorus (mg/l)	0.02	0.01	0.02	0.01	0.01	0.01	0.01-0.02	0.01	0.01
Silica (mg/l)	0.25	0.18	0.16	0.30	0.20	0.16	0.16-0.30	0.21	0.06
Total Alkalinity (mg/l)	93	94	92	91	95	95	91-95	93	2.0
B.O.D. (mg/l)	3	5	3	3	3	3	3-5	3	1.0
Suspended Solids (mg/l)	13	13	9	9	8	7	7-13	10	3.0
Dissolved Solids (mg/l)	166	186	164	162	156	166	156-186	167	10
Turbidity (F.T.U.)	16	25	18	20	10	7	7-25	16	7
pH	8.85	8.75	8.80	8.62	8.85	8.60	8.60-8.85	8.75	0.11
Conductivity (umhos/cm)	280	284	282	286	288	286	282-288	284	3

TABLE 25

SOLAR RADIATION IN LAKE ERIE AT LOCUST POINT
FOR MARCH - JUNE 1975¹

Date: 24 March 1975 (1337 - 1400 hrs)

<u>Depth</u>	<u>Quantum meter</u>	<u>Turbidity</u>	<u>Temperature</u>
0.0 m	1950.0 μ einsteins $m^{-2} sec^{-1}$		
1.0	20.0	30 FTU	4.0°C
2.0	2.0		4.0°C
3.0	0.0	30 FTU	4.0°C

Date: 19 June 1975 (1830 - 1900 hrs)

<u>Depth</u>	<u>Quantum meter</u>	<u>Temperature</u>
0.0 m	155.0 μ einsteins $m^{-2} sec^{-1}$	26.8
1.0	27.0	23.3
2.0	7.6	23.0
3.0	3.9	22.7
4.0	1.1	22.5

- ¹ Quantum meter readings taken at Station No. 8, 3000 feet offshore at intake structure.

TABLE 26

CURRENT MEASUREMENTS IN LAKE ERIE AT LOCUST POINT
FOR JUNE 1975

<u>Date/Time</u>	<u>Station No.</u>	<u>Velocity (cm/sec)</u>	<u>Direction (compass°)</u>
6-16-75/1123	8	11.2	344
6-16-75/1157	13	11.5	343

TABLE 27

MEAN VALUES AND RANGES FOR WATER QUALITY PARAMETERS
TESTED - APRIL - JUNE 1975

Parameter	April - June 1975		Units
	Mean	Range	
1. Temperature	16.2	16.0-22.2	°C
2. Dissolved oxygen	10.2	7.2-12.2	ppm
3. Conductivity	287	227-320	umhos/cm
4. Transparency	0.5	0.3-0.6	m
5. Calcium	36.9	32.8-46.0	mg/l
6. Magnesium	7.95	6.5-10.3	mg/l
7. Sodium	9.23	8.0-10.7	mg/l
8. Chloride	18.2	16.5-20.5	mg/l
9. Nitrate	3.3	1.2-6.5	mg/l
10. Sulfate	26.6	22.5-30.0	mg/l
11. Phosphorus	0.04	0.01-0.07	mg/l
12. Silica	0.25	0.06-0.55	mg/l
13. Total alkalinity	94	84-105	mg/l
14. BOD	3	1-5	mg/l
15. Suspended Solids	23	7-50	mg/l
16. Dissolved Solids	188	148-236	mg/l
17. Turbidity	19	7-32	F.T.U.
18. Hydrogen-ions	8.23	7.72-8.85	pH
19. Solar Radiation (1m)	23.5	20.0-27.0	u einsteins/m ² /sec
20. Currents (speed)	11.4	11.2-11.5	cm/sec

Zooplankton. With the exception of May, phytoplankton populations were much higher in 1975 than 1974. Consequently, a larger food supply was available for the zooplankton which allowed larger zooplankton populations. In general, zooplankton populations for April, May, and June were 2 - 3 times larger in 1975 than 1974. The 1974 and 1975 populations in June would have been very similar had it not been for the large Diffugia sp. population, 873.4/liter, in 1975.

Benthos

Total benthos populations showed a steady increase from April through June. Values obtained in June 1974 and 1975 were similar. However, values obtained in April and May 1974 were approximately twice as large as populations obtained in 1975. This decrease was mainly due to a decrease in the number of immature Oligochaetes (no hair setae) and midges, Chironomus (chironomus) sp. The populations of most other taxa were relatively stable. This was a good example of natural variation since the populations of the less abundant species would be the first to be effected if an environmental change occurred.

Fish

At this time in 1974 2,941 fish had been captured by all methods but fry netting. This year 23,789 fish have been captured by the four methods other than fry netting. Were it not for the 20,418 gizzard shad (Dorosoma cepedianum) taken in June 1975 with the seine, the two years would be very similar in numbers of fish collected. However, at this time in 1974 the number of predators, specifically yellow perch (Perca flavescens) was observed to have declined from previous years. Populations in 1975 were high, again. Gill nets were the best indicators of this. During April, May and June 1974, 71 yellow perch were collected with gill nets. With the same effort, 1,058 yellow perch were captured in 1975, a 15 fold increase. This magnitude of natural population variation will make determining the effects of plant operation extremely difficult.

This year an effort was made to determine the size of the ichthyoplankton populations on the surrounding reefs in relation to that at Davis-Besse. Sampling was started one month earlier than in 1974. No ichthyoplankters were taken on the first sampling date, 22 April 1975. This indicates that in April Locust Point is not a spawning area or nursery ground or that spawning had not yet occurred.

In mid-May sizable numbers of yellow perch (Perca flavescens) were captured at the bottom at Station 8 (intake) and Station 12

(discharge). The small size of these fry (6 - 7 mm) indicated a relatively recent hatch. The numbers collected (up to 872/5-minute tow) were larger than last year but probably were due to natural variation in the yellow perch population which appears to have increased some 15 fold in the vicinity since 1974.

By late May, the composition and numbers of the ichthyoplankton population were relatively the same. However, the size of some of the yellow perch larvae had almost doubled.

Gizzard shad (Dorosoma cepedianum) first appeared in the ichthyoplankton in early June. At this time few yellow perch were taken, indicating they were now large enough to avoid the net. However, their increased size made them susceptible to the trawl as 269 individuals (mean length 22 mm) were captured in June.

Gizzard shad decreased in number through the remaining 2 sampling dates in June, indicating that they were getting larger and were now able to avoid the fry net. However, as they got larger they became susceptible to the shore seine as 20,418 were captured in mid-June.

Sampling on Toussaint Reef was not initiated until late-May. Only 11 larvae were captured here during the 4 remaining sampling dates. However, 161 eggs were collected on this reef while only 3 were collected at Davis-Besse. The eggs collected over the reef indicated that fish spawned there as first noted by The Ohio Division of Wildlife, but left soon after hatching, as indicated by the small numbers of larvae collected.

The fact that few fish larvae were taken on the reef but many were collected at Davis-Besse indicates that after spawning on the reefs the larvae move to inshore waters. We still feel that yellow perch probably don't spawn in significant numbers at Locust Point, but the small size of the first larvae collected (6 - 7 mm) and the fact that they were near the bottom gives rise to the possibility of some yellow perch spawning in the rip-rap aprons around the intake and discharge structures. An additional near-shore sampling station, away from these structures, will have to be established to test this hypothesis.

Although the number of yellow perch collected at Locust Point was sizeable, the total number of larvae collected was relatively small when compared to other collections by the Center for Lake Erie Area Research in Sandusky Bay where up to 13,000 individuals were collected per 5-minute tow (mainly gizzard shad).

Food Habits

The 1974 results showed that zooplankton in general and specifically the crustaceans were the most important food source at Locust Point. A closer look showed that Daphnia pulex was strongly selected for by many fish, but by the shiners Notropis a. atherinoides and Notropis hudsonius in particular. Although D. pulex was only common in the plankton in May, 10.5/liter, and in no other month was even as high as 0.5/liter, it was a very common food item as long as it was present in the plankton, April through July.

In April through June 1975 Daphnia pulex was not found in the plankton or as a food item. However, crustaceans were still the most common food item with Bosmina sp., Daphnia retrocurva, and Leptodora kindtii being the most common crustaceans.

Water Quality

Seasonal Variations. The water quality in the vicinity of the Davis-Besse Nuclear Power Station during the period of April through June 1975 was typical for inshore western Lake Erie and showed normal seasonal trends. Water temperature rose 16°C during the 3-month period while the dissolved oxygen level fell 4 ppm (Fig. 3). The high turbulence and sediment load of the lake in early spring improved in June as indicated by an increase in transparency, a 3-fold decrease in suspended solids, a decrease in turbidity and an increase in the amount of solar radiation at 1-meter below the surface (Figs. 4 & 5). Biochemical oxygen demand, which is related to the suspended organic material in the water, also showed some improvement from April to May.

However, the dissolved substances in the water were highest in the May samples; both conductivity and total dissolved solids showed a significant decrease between May and June. Specific ions such as calcium and chloride were also highest in May. The important nutrients, such as nitrate, phosphate and silica, for primary productivity by green algae and diatoms had a peak in the spring and decreased markedly during June.

The alkalinity and pH of the water remained fairly constant throughout the period. Lake Erie is primarily a bicarbonate solution with a corresponding moderately alkaline pH of approximately 8. The bicarbonate in the water provides an abundant source of carbon for algae production. The pH showed a slight rise in June which may correspond with an algae pulse.

FIGURE 3. TRENDS IN MEAN MONTHLY TEMPERATURE, DISSOLVED OXYGEN, AND HYDROGEN IONS MEASUREMENTS FOR LAKE ERIE AT LOCUST POINT FOR THE PERIOD 1972 - 1975

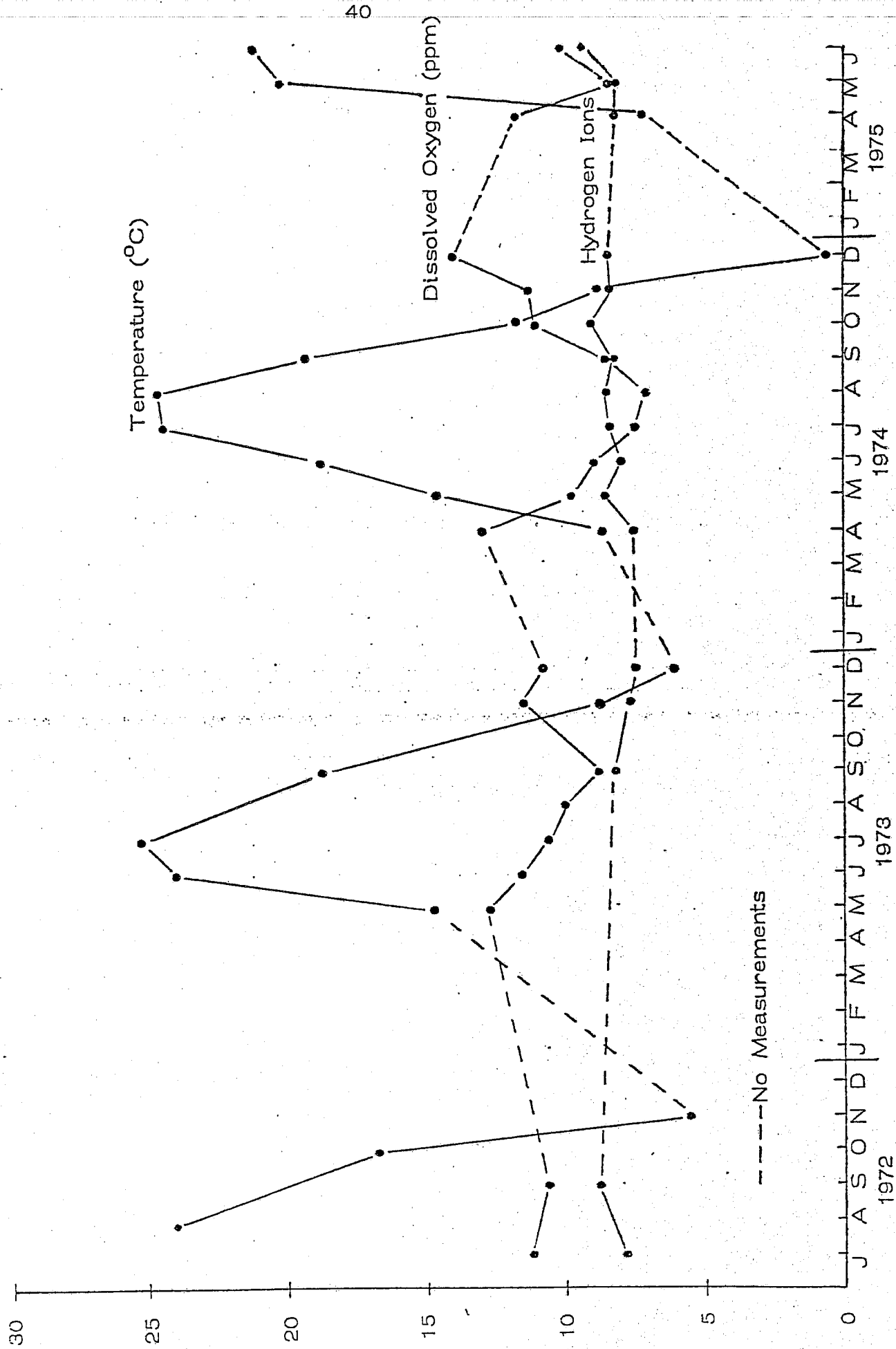


FIGURE 4. TRENDS IN MEAN MONTHLY TRANSPARENCY AND PHOSPHORUS MEASUREMENTS FOR LAKE ERIE AT LOCUST POINT FOR THE PERIOD 1972 - 1975

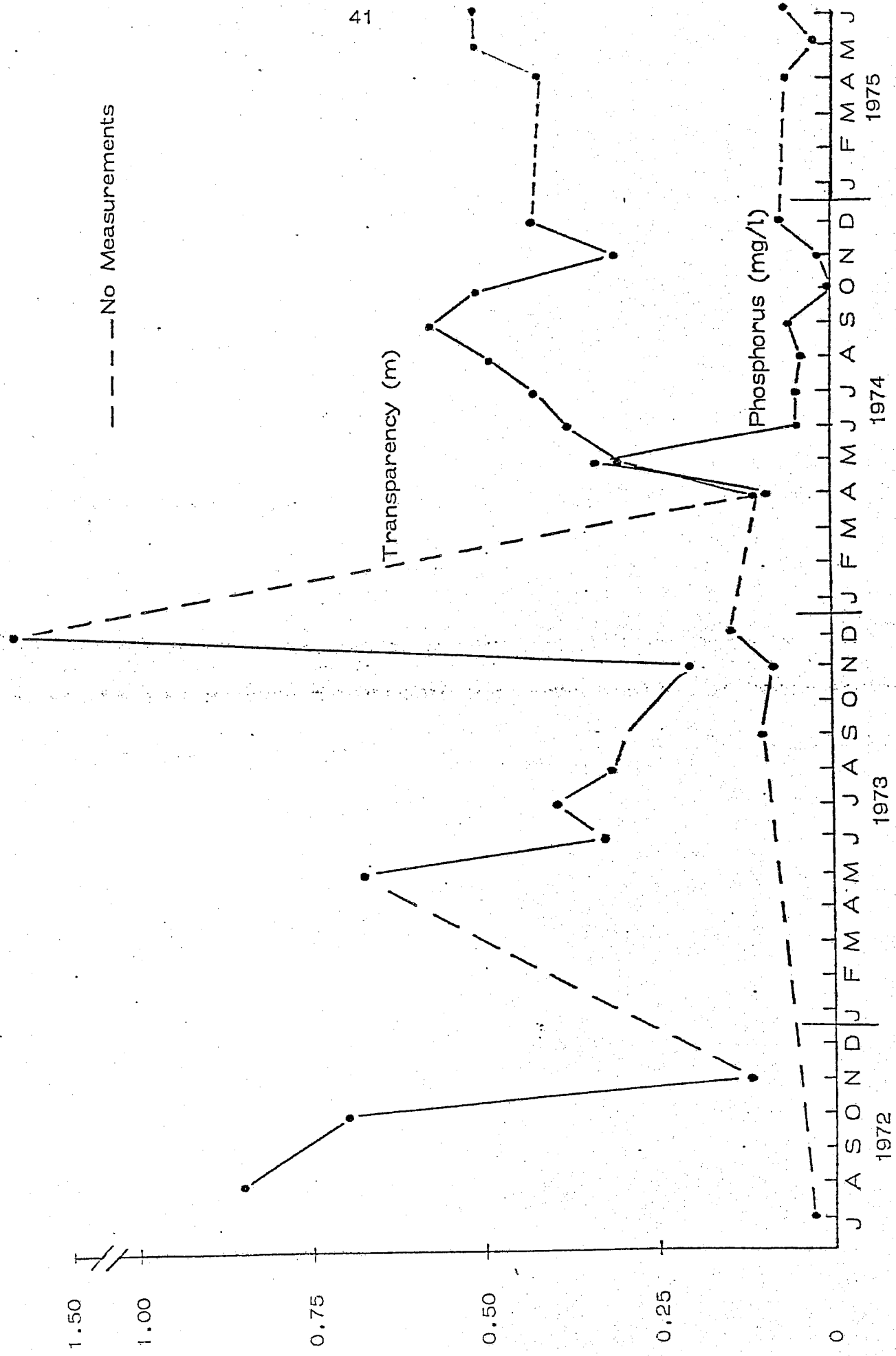
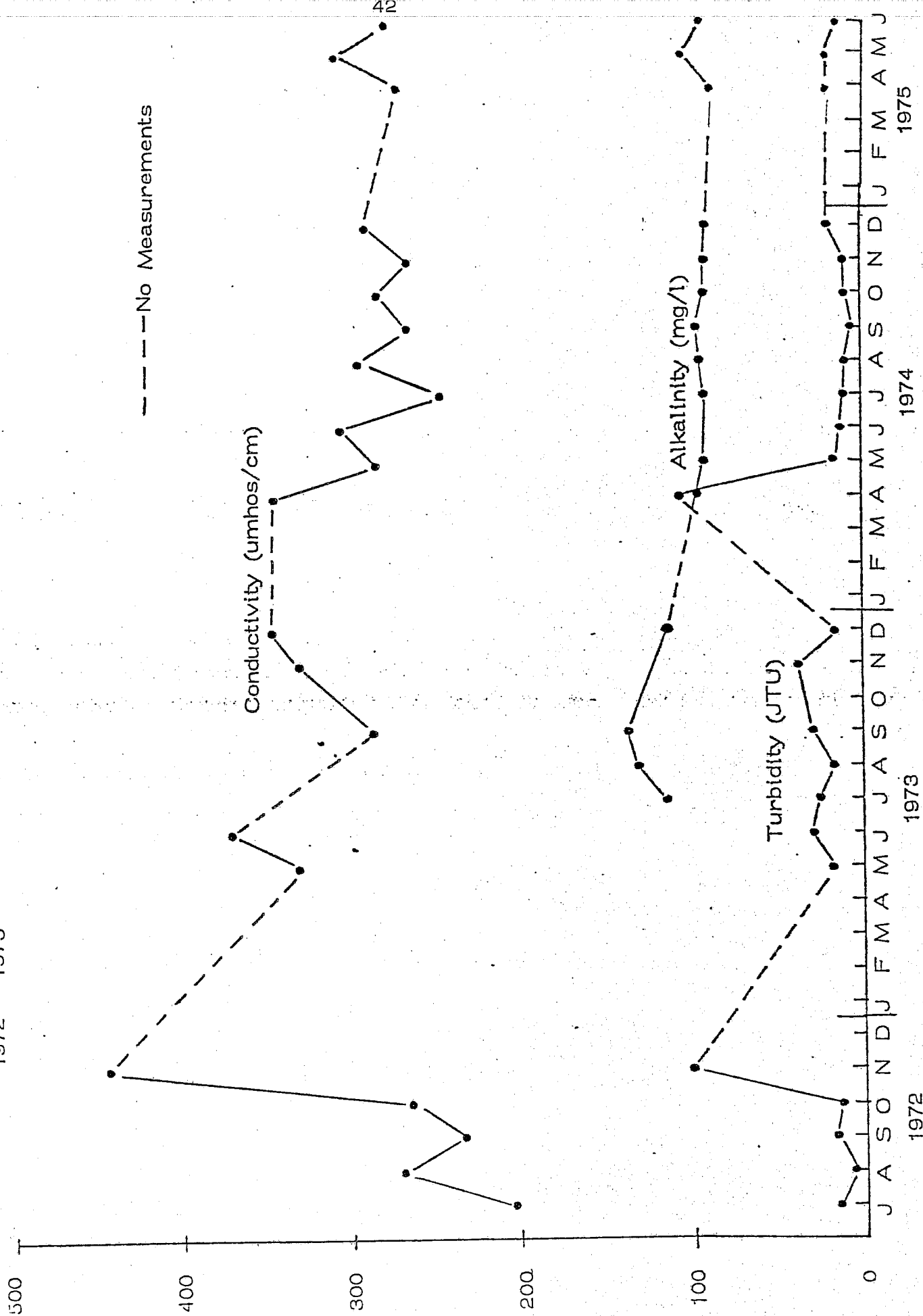


FIGURE 5. TRENDS IN MEAN MONTHLY CONDUCTIVITY, ALKALINITY AND TURBIDITY MEASUREMENTS FOR LAKE ERIE AT LOCUST POINT FOR THE PERIOD 1972 - 1975



Station Variation. Stations 1, 8 and 13 are located approximately 500, 3,000 and 2,000 feet offshore respectively. Generally a slight temperature decrease was noted in an offshore direction in the spring. More noticeable decreases were found for such parameters as conductivity, most of the specific ions, alkalinity, B.O.D., suspended and dissolved solids, and turbidity in the early part of the year. Conversely, transparency increases away from the shore. Although Station 8 (the farthest offshore) had the best water quality, Station 13 (intermediate offshore) had the poorest quality for some parameters. This may be related to the condition of the lake bottom. Station 1 (nearshore) has a clean sand bottom whereas Station 13 has a mud bottom and is down current from the disturbed bottom along the intake pipeline. The differential in water quality values was greatest in the spring which may have been related to rough weather.

Differences between the surface and bottom water quality were slight because of the shallowness of this portion of Lake Erie. Some depression in the level of dissolved oxygen and small increases in the concentrations of dissolved and suspended solids were noted near the bottom.

Water Quality Trends. The Ohio State University, Center for Lake Erie Area Research initiated water quality studies at Locust Point in July 1972. Trends for eight water quality parameters from that date through June 1975 are shown on Figures 3 - 5. Temperature and dissolved oxygen show typical seasonal trends for each year with only minor variations from one year to the next. Dissolved oxygen appears to have undergone more depletion in 1974 than the two previous years. Hydrogen-ion concentration and alkalinity remained fairly stable over the three-year period. Transparency, turbidity, phosphorus and conductivity values have shown radical variations which are probably due to storms and dredging activities that have disturbed the bottom sediments. In general, no significant deviations from the normal quality of the water in this part of western Lake Erie have been observed in the past three years.

LITERATURE CITED

- American Public Health Association. 1971. Standard methods for the examination of water and wastewater. 13th ed. APHA, New York. 847 p.
- American Society for Testing and Materials. 1973. Annual book of ASTM standards, part 23, water; atmospheric analysis. ASTM, Philadelphia. 1108 p.
- Brinkhurst, R. O. 1963. Taxonomical studies on the Tubificidae (annelida, Oligochaeta) in R. Woltereck, ed., Internationale review der gesamten hydrobiologie. Systematische beihefte 2. Akademie-Verlag, Berlin. pp. 1-89.
- Brinkhurst, R. O. 1964. Studies on the North American aquatic Oligochaeta I: Naididae and Opistocystidae. Proc. Acad. Nat. Sci., Phila. 116:195-230.
- Brinkhurst, R. O. 1965. Studies on the North American aquatic Oligochaeta II: Tubificidae. Proc. Acad. Nat. Sci., Phila. 117:117-172.
- Brinkhurst, R. O., A. L. Hamilton, and H. B. Herrington. 1968. Components of the bottom fauna of the St. Lawrence Great Lakes. Univ. Toronto, Gt. Lakes Inst. PR 33. 49 p.
- Chandler, D. C., and O. B. Weeks. 1945. Limnological studies of western Lake Erie V: relation of limnological and meteorological conditions to the production of phytoplankton in 1942. Ecol. Monogr. 15:435-456.
- Chengalath, R., C. H. Fernando, and M. G. George. 1971. The planktonic Rotifera of Ontario with keys to genera and species. Univ. Waterloo Biology Series, No. 2. 40 p.
- Collins, G. B., and R. O. Kalinsky. 1972. The diatoms of the Scioto River basin. The Ohio State Univ. Botany Dept., unnumbered mimeo.
- Eddy, S., and A. C. Hodson. 1964. Taxonomic keys to the common animals of the north central states. Burgess Publishing Company, Minnesota. 162 p.
- Ewers, L. A. 1930. The larval development of fresh-water copepoda. Contrib. No. 3, The Franz Theodore Stone Lab. 43 p.
- Fish, M. P. 1932. Contributions to the early life histories of 62 species of fishes from Lake Erie and its tributary waters. Bur. Fish. Bull. XLVII(10):293-398.

- Jahoda, W. J. 1948. Seasonal differences of *Diaptomus* (Copepoda) in western Lake Erie. Ph.D. Thesis, Ohio State Univ. 100 p.
- Klemm, D. J. 1972. Biota of freshwater ecosystems identification manual No. 8. Freshwater leeches (Annelida: Hirudinea) of North America. U. S., E. P. A. 53 p.
- Mason, W. T. 1968. An introduction to the identification of chironomid larvae. Fed. Water Poll. Contr. Admin. 89 p.
- Norden, C. R. unpublished. A key to larval fishes from Lake Erie. Univ. Southwestern Louisiana. Lafayette, Louisiana. 4 p.
- Pennak, R. W. 1953. Fresh-water invertebrates of the United States. The Ronald Press Company, New York. 769 p.
- Stein, C. B. 1962. Key to the fresh-water mussels (Family Unionidae) of western Lake Erie. Ohio State Univ. Museum of Zool. Mimeo. 7 p.
- Taft, C. E., and C. W. Taft. 1971. The algae of western Lake Erie. Bull. of Ohio Biol. Survey, New Series 4(1):1-185.
- Torke, B. G. 1974. An illustrated guide to the identification of the planktonic crustacea of Lake Michigan with notes on their ecology. Center for Great Lakes Studies, The Univ. Wisconsin-Milwaukee, Special Report No. 17. 42 p.
- Trautman, M. B. 1957. The fishes of Ohio. Ohio State Univ. Press, Columbus. 683 p.
- U. S. Environmental Protection Agency. 1971. Methods for chemical analysis of water and wastes. Analytical Quality Control Laboratory, Cincinnati, Ohio. 125 p.
- Usinger, R. L. 1956. Aquatic insects of California. Univ. Calif. Press, Berkeley. 508 p.
- Walter, H. J., and J. B. Burch. 1957. Key to the genera of fresh-water gastropods (snails and limpets) occurring in Michigan. Univ. Mich. Museum of Zool., Circ. No. 3. 8 p.
- Ward, H. B., and G. C. Whipple. 1959. Fresh-water biology. 2nd ed., W. T. Edmondson, ed. John Wiley & Sons, New York. 1248 p.

Welch, P. S. 1948. Limnological methods. McGraw-Hill, New York.
381 p.

APPENDIX A

PHYTOPLANKTON POPULATIONS AT LOCUST POINT
APRIL - JUNE 1975

TABLE A-1

ANALYSIS OF PHYTOPLANKTON POPULATIONS AT LOCUST POINT
APRIL 22, 1975

TAXA	Station 1		Station 3		Station 6		Station 8	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
BACILLARIOPHYCEAE (Diatoms)								
<u>Asterionella</u> sp.	11043	473	6890	285	12391	148	8893	745
Centric Diatoms			128	10			47	47
<u>Cymatopleura</u> sp.					36	36		
<u>Diatoma</u> sp.	7747	1986	8787	649	11971	201	7450	466
<u>Fragilaria</u> sp.	6792	991	4630	148	7418	199	6100	47
<u>Gyrosigma</u> sp.	98	98	89	30				
<u>Melosira</u> sp.	3269	1173	4669	423	7251	251	3306	93
Naviculoid	811	25	610	78	260	48	233	47
<u>Stephanodiscus</u> sp.	42511	5915	35226	376	36267	2728	18135	1513
<u>Surirella</u> sp.			19	19			24	24
<u>Synedra</u> sp.	1136	5	1042	216	1285	131	1234	163
<u>Tabellaria</u> sp.	4074	682	3588	167	6447	985	3841	23
Subtotal	77481	4801	65678	2400	83326	3934	49263	1958
CHLOROPHYCEAE (Green Algae)								
<u>Actinastrum</u> sp.			19	19				
<u>Binuclearia</u> sp.	20	20	30	30			24	24
<u>Closterium</u> sp.	44	5	138	20			24	24
<u>Dictyosphaerium</u> sp.								
<u>Eudorina</u> sp.	74	74	10	10	39	39		
<u>Micractinium</u> sp.	25	25					24	24
<u>Mougeotia</u> sp.	162	83	138	20	222	10	47	0
<u>Pediastrum</u> sp.	49	49					24	24
<u>Scenedesmus</u> sp.	79	79	30	30	110	33		
<u>Westella</u> sp.	158	39	48	48	36	36	24	24
Subtotal	611	179	413	86	407	18	167	26
CHRYSTOPHYCEAE								
<u>Dinobryon</u> sp.	93	54	30	30	113	42	94	47
MYXOPHYCEAE (Blue-green algae)								
<u>Chroococcus</u> sp.					36	36		
<u>Oscillatoria</u> sp.	138	59	59	0	340	198	163	23
Subtotal	138	59	59	0	376	163	163	23
TOTAL	78323	5093	66189	2515	84222	3747	49687	1961

S.D. = Standard Deviation.

Data presented as number/liter.

TABLE A-1 CONT.

ANALYSIS OF PHYTOPLANKTON POPULATIONS AT LOCUST POINT
APRIL 22, 1975

TAXA	Station 9		Station 10		Station 12		Station 13	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
BACILLARIOPHYCEAE (Diatoms)								
<i>Asterionella</i> sp.	16385	572	38335	884	34501	2654	26180	3799
Centric Diatoms	66	37	118	118	89	89	87	44
<i>Cymatopleura</i> sp.	8	8	44	44	44	44	44	44
<i>Diatoma</i> sp.	9694	1290	37450	2359	29967	774	14894	3017
<i>Fragilaria</i> sp.	12091	664	15481	1032	12607	663	11877	137
<i>Gyrosigma</i> sp.					44	44		
<i>Melosira</i> sp.	5769	387	19168	1474	13601	553	11303	1037
Naviculoid	22	7	590	0	354	177	633	152
<i>Stephanodiscus</i> sp.	18688	2543	104093	15334	92667	663	66977	4943
<i>Surirella</i> sp.								
<i>Synedra</i> sp.	1290	258	2359	944	4645	664	1474	230
<i>Tabellaria</i> sp.	7796	1272	13859	2359	11179	542	7071	1064
Subtotal	71809	6463	231453	22440	199698	733	140540	7654
CHLOROPHYCEAE (Green Algae)								
<i>Actinastrum</i> sp.								
<i>Binuclearia</i> sp.			59	59			22	22
<i>Closterium</i> sp.	8	8	118	0	44	44		
<i>Dictyosphaerium</i> sp.			59	59			22	22
<i>Eudorina</i> sp.			59	59	44	44	33	33
<i>Micractinium</i> sp.	37	37	590	236				
<i>Mougeotia</i> sp.	37	37	590	236	220	132	208	10
<i>Pediastrum</i> sp.	22	7	118	0	162	103	44	44
<i>Scenedesmus</i> sp.	8	8			88	0		
<i>Westella</i> sp.	37	22	177	59	44	44	174	87
Subtotal	112	52	1180	354	602	191	503	23
CHRYSTOPHYCEAE <i>Dinobryon</i> sp.	126	67	177	59	177	177	142	98
MYXOPHYCEAE (Blue-green algae)								
<i>Chroococcus</i> sp.							22	22
<i>Oscillatoria</i> sp.	44	30	295	118	354	177	251	55
Subtotal	44	30	295	118	354	177	273	79
TOTAL	72091	6255	233105	22794	200831	570	141458	7698

S.D. = Standard Deviation.

Data presented as number/liter.

TABLE A-1 CONT.

ANALYSIS OF PHYTOPLANKTON POPULATIONS AT LOCUST POINT
APRIL 22, 1975

TAXA	Station 14		Station 18		Station 19		Mean/ Station	S.D.
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
BACILLARIOPHYCEAE (Diatoms)								
<u>Asterionella</u> sp.	8695	354	11279	1327	3381	1140	16179	11621
Centric Diatoms	25	25					51	49
<u>Cymatopleura</u> sp.	25	25					14	19
<u>Diatoma</u> sp.	7633	657	8736	111	2870	1416	13382	10609
<u>Fragilaria</u> sp.	4449	455	4792	72	1022	629	7933	4442
<u>Gyrosigma</u> sp.					39	0	25	38
<u>Melosira</u> sp.	3640	405	5087	885	2378	845	7222	5296
Naviculoid	303	50	479	184			385	262
<u>Stephanodiscus</u> sp.	21863	379	36528	479	10221	3892	43925	31053
<u>Surirella</u> sp.							4	9
<u>Synedra</u> sp.	1087	127	1475	148	197	118	1566	1138
<u>Tabellaria</u> sp.	3387	51	3870	553	1906	570	6093	3679
Subtotal	51107	456	72246	588	22014	8531	96783	65821
CHLOROPHYCEAE (Green Algae)								
<u>Actinastrum</u> sp.			37	37			5	12
<u>Binuclearia</u> sp.							14	19
<u>Closterium</u> sp.	25	0			20	20	38	47
<u>Dictyosphaerium</u> sp.			111	37			18	36
<u>Eudorina</u> sp.	51	0	74	0			35	29
<u>Micractinium</u> sp.							5	10
<u>Mougeotia</u> sp.	102	51	111	37	99	99	176	152
<u>Pediastrum</u> sp.	102	0	74	0			54	54
<u>Scenedesmus</u> sp.	25	25	37	37			34	40
<u>Westella</u> sp.	51	0	147	0	40	40	85	63
Subtotal	356	1	591	72	159	41	464	299
CHRYSTOPHYCEAE <u>Dinobryon</u> sp.	127	25	62	13	40	40	107	50
MYXOPHYCEAE (Blue-green algae)								
<u>Chroococcus</u> sp.	25	25					8	13
<u>Oscillatoria</u> sp.	177	25	369	74	59	20	205	124
Subtotal	202	51	369	74	59	20	213	128
TOTAL	51792	483	73268	598	22272	8592	97567	66174

S.D. = Standard Deviation.

Data presented as number/liter.

TABLE A-2

ANALYSIS OF PHYTOPLANKTON POPULATIONS AT LOCUST POINT
MAY 29, 1975

Taxa	Station 1		Station 3		Station 6		Station 8	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
BACILLARIOPHYCEAE								
(Diatoms)								
<u>Asterionella</u> sp.	197	39	76	42	161	134	60	1
Centric diatom	79	39	37	3	102	75		
<u>Cymatopleura</u> sp.							20	0
<u>Diatoma</u> sp.	79	79						
<u>Fragilaria</u> sp.	354	236	267	30	242	54	202	123
<u>Gyrosigma</u> sp.								
<u>Melosira</u> sp.	629	0	373	117	416	175	130	8
Naviculoid			37	3				
<u>Stephanodiscus binderanus</u>	275	118	330	26	140	22	50	11
<u>Surtrella</u> sp.	79	39	10	10	30	30		
<u>Synedra</u> sp.			19	2	27	27		
<u>Tabellaria</u> sp.	275	39	107	28	158	78	131	92
Subtotal	1965	354	1270	49	1274	497	593	219
CHLOROPHYCEAE								
(Green Algae)								
<u>Actinastrum</u> sp.								
<u>Ankistrodesmus</u> sp.							31	11
<u>Binuclearia</u> sp.							10	10
<u>Closterium</u> sp.	79	0	45	6	59	59	40	20
<u>Coelastrum</u> sp.	79	0	107	28	204	150		
<u>Dictyosphaerium</u> sp.	79	0			59	59		
<u>Dimorphococcus</u> sp.	39	39	19	2				
<u>Eudorina</u> sp.								
<u>Micractinium</u> sp.					188	108		
<u>Mougeotia</u> sp.					311	43	50	11
<u>Oedogonium</u> sp.	79	39	10	10	99	19		
<u>Oocystis</u> sp.	39	39	37	3				
<u>Pediastrum</u> sp.	1965	157	1684	108	2282	1022	610	1
<u>Scenedesmus</u> sp.	432	0	99	20	274	140		
<u>Selenastrum</u> sp.	39	39						
<u>Sphaerocystis</u> sp.	39	39	10	10	14	14		
<u>Spriogyra</u> sp.								
<u>Staurastrum</u> sp.	197	118	9	9	118	118	81	11
<u>Westella</u> sp.					30	30		
Unidentified	197	79	38	21	59	59	31	11
Subtotal	3144	275	2056	125	3695	1792	800	12
CHRYSTOPHYCEAE								
(Brown Algae)								
<u>Dinobryon</u> sp.								
DINOPHYCEAE								
(Dinoflagellates)								
<u>Ceratium hirundinella</u>			27	7			10	10
EUGLENOPHYCEAE								
<u>Euglena</u> sp.					14	14		
MYXOPHYCEAE								
(Blue-green Algae)								
<u>Anabaena</u> sp.								
<u>Aphanizomenon</u> sp.	197	39	130	29	306	70	160	18
<u>Chroococcus</u> sp.								
<u>Merismopedia</u> sp.	39	0						
<u>Microcystis</u> sp.	118	39	72	13	183	5	70	11
<u>Oscillatoria</u> sp.								
Subtotal	314	39	202	16	488	75	230	7
TOTAL	5423	590	3553	165	5470	2200	1634	235

S.D. = Standard Deviation. Data presented as number/liter.

TABLE A-2 (CON'T.)

ANALYSIS OF PHYTOPLANKTON POPULATIONS AT LOGUST POINT
MAY 29, 1975

Taxa	Station 9		Station 10		Station 12		Station 13	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
BACILLARIOPHYCEAE								
(Diatoms)								
<i>Asterionella</i> sp.	44	15	459	0	177	30	165	24
Centric diatom	30	15	197	131	59	30		
<i>Cymatopleura</i> sp.					30	30		
<i>Diatoma</i> sp.							24	24
<i>Fragilaria</i> sp.	237	15	197	197	236	0	142	47
<i>Gyrosigma</i> sp.			66	66	30	30		
<i>Melosira</i> sp.	192	118	6888	459	5045	295	873	142
Naviculoid			131	0	59	30	24	24
<i>Stephanodiscus binderanus</i>	44	0	66	66	59	59	94	0
<i>Surirella</i> sp.	15	0			30	30	24	24
<i>Synedra</i> sp.								
<i>Tabellaria</i> sp.	89	0	197	197	30	30	94	71
Subtotal	651	118	8069	656	5635	236	1416	189
CHLOROPHYCEAE								
(Green Algae)								
<i>Actinastrum</i> sp.			66	66	30	30		
<i>Ankistrodesmus</i> sp.					30	30		
<i>Binuclearia</i> sp.	30	15			59	30	24	24
<i>Closterium</i> sp.	15	15	131	66	30	30	47	24
<i>Coelastrum</i> sp.	44	15	328	66	30	30	94	71
<i>Dictyosphaerium</i> sp.			197	66	30	30	24	24
<i>Dimorphococcus</i> sp.					30	30		
<i>Eudorina</i> sp.					30	30	24	24
<i>Micractinium</i> sp.								
<i>Mougeotia</i> sp.			590	262	561	118	94	24
<i>Oedogonium</i> sp.	59	15			59	0	118	71
<i>Oocystis</i> sp.	15	0	131	131	30	30	24	24
<i>Pediastrum</i> sp.	607	15	2296	66	1505	207	1558	47
<i>Scenedesmus</i> sp.	15	15	722	262	177	0	24	0
<i>Selenastrum</i> sp.					30	30		
<i>Sphaerocystis</i> sp.					30	30		
<i>Spriogyna</i> sp.								
<i>Staurostrum</i> sp.	44	30	197	197	59	30	24	24
<i>Westella</i> sp.								
Unidentified			66	66	30	30	94	24
Subtotal	799	15	4526	590	2567	384	2053	47
CHRYSTOPHYCEAE								
(Brown Algae)								
<i>Dinobryon</i> sp.			66	66				
DINOPHYCEAE								
(Dinoflagellates)								
<i>Ceratium hirundinella</i>	30	15					24	24
EUGLENOPHYCEAE								
<i>Euglena</i> sp.								
MYXOPHYCEAE								
(Blue-green Algae)								
<i>Anabaena</i> sp.					59	30		
<i>Aphanizomenon</i> sp.	133	44	2690	1378	1121	148	543	47
<i>Chroococcus</i> sp.	15	15						
<i>Merismopedia</i> sp.					30	30		
<i>Microcystis</i> sp.	118	30	394	131	207	89	236	24
<i>Oscillatoria</i> sp.			131	66	59	30		
Subtotal	252	15	3149	1443	1387	30	779	71
TOTAL	1717	104	15744	2624	9588	649	4224	212

S.D. = Standard Deviation. Data presented as number/liter.

TABLE A-2 (CON'T.)

ANALYSIS OF PHYTOPLANKTON POPULATIONS AT LOCUST POINT
MAY 29, 1975

Taxa	Station 14		Station 18		Station 19		Mean/ Station	S.D.
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
BACILLARIOPHYCEAE								
(Diatoms)								
<u>Asterionella</u> sp.	61	27	71	0	153	55	148	117
Centric diatom			71	24			52	60
<u>Cymatopleura</u> sp.							3	9
<u>Diatoma</u> sp.	17	0					13	24
<u>Fragilaria</u> sp.	207	89	283	24	30	30	218	83
<u>Gyrosigma</u> sp.							9	21
<u>Melosira</u> sp.	216	81	354	71	32	2	1377	2318
Naviculoid							23	41
<u>Stephanodiscus binderanus</u>	102	50	142	71	15	15	120	99
<u>Surirella</u> sp.	9	9	47	24			22	24
<u>Synedra</u> sp.							4	9
<u>Tabellaria</u> sp.	96	62	118	47	32	2	121	71
Subtotal	706	199	1038	47	259	95	2080	2466
CHLOROPHYCEAE								
(Green Algae)								
<u>Actinastrum</u> sp.							9	21
<u>Ankistrodesmus</u> sp.							3	9
<u>Binuclearia</u> sp.							13	20
<u>Closterium</u> sp.	17	17	24	24			42	38
<u>Coelastrum</u> sp.	60	25	118	47			100	93
<u>Dictyosphaerium</u> sp.	26	0					38	59
<u>Dimorphococcus</u> sp.							8	14
<u>Eudorina</u> sp.								
<u>Micractinium</u> sp.							5	11
<u>Mougeotia</u> sp.	17	17	24	0			134	226
<u>Oedogonium</u> sp.	112	27					73	90
<u>Oocystis</u> sp.			24	24			36	42
<u>Pediastrum</u> sp.	986	12	1794	142	63	4	1395	734
<u>Scenedesmus</u> sp.	18	18	24	24			162	232
<u>Selenastrum</u> sp.							6	14
<u>Sphaerocystis</u> sp.			47	24			13	18
<u>Springira</u> sp.					45	45	4	14
<u>Staurastrum</u> sp.	35	17	47	24			69	70
<u>Westella</u> sp.			47	24			7	16
Unidentified	35	0	71	24			56	55
Subtotal	1320	15	2148	212	107	41	2110	1331
CHRYSTOPHYCEAE								
(Brown Algae)								
<u>Dinobryon</u> sp.							6	20
DINOPHYCEAE								
(Dinoflagellates)								
<u>Ceratium hirundinella</u>	9	9					9	12
EUGLENOPHYCEAE								
<u>Euglena</u> sp.							1	4
MYXOPHYCEAE								
(Blue-green Algae)								
<u>Anabaena</u> sp.							5	18
<u>Aphanizomenon</u> sp.	112	27	448	47			531	781
<u>Chroococcus</u> sp.							1	4
<u>Merismopedia</u> sp.							6	14
<u>Microcystis</u> sp.	44	27	165	47			146	109
<u>Oscillatoria</u> sp.							17	42
Subtotal	155	54	614	0			688	902
TOTAL	2190	230	3800	165	366	136	4883	4386

S.D. = Standard Deviation. Data presented as number/liter.

TABLE A-3

ANALYSIS OF PHYTOPLANKTON POPULATIONS AT LOCUST POINT
JUNE 16, 1975

TAXA	Station 1		Station 3		Station 6		Station 8	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
BACILLARIOPHYCEAE								
(Diatoms)								
<i>Asterionella</i> sp.	2750	470	1648	348	2091	99	2020	353
Centric diatoms	150	21	38	7	82	2	118	29
<i>Cymatopleura</i> sp.			8	8	24	4	15	15
<i>Diatoma</i> sp.	65	26	22	7	34	6	51	8
<i>Fragilaria</i> sp.	660	110	559	151	851	160	627	37
<i>Gyrosigma</i> sp.			8	8				
<i>Melosira</i> sp.	1817	87	937	60	1306	126	1305	37
Naviculoid	302	105	121	15	62	21	243	67
<i>Stephanodiscus binderanus</i>	228	47	244	2	246	20	171	53
<i>Surirella</i> sp.			8	8	14	14	8	8
<i>Synedra</i> sp.	62	16	68	8	139	58	37	22
<i>Tabellaria</i> sp.	2538	455	1104	0	948	316	1276	126
Subtotal	8572	1221	4833	721	5797	774	5871	339
CHLOROPHYCEAE								
(Green Algae)								
<i>Actinastrum</i> sp.	144	53	113	22	95	73	103	0
<i>Ankistrodesmus</i> sp.	22	22	15	0				
<i>Binuclearia</i> sp.	393	197	257	15	284	81	191	30
<i>Closterium</i> sp.	81	36	60	0	24	4	30	14
<i>Coelastrum</i> sp.	146	10	15	0	77	35	22	8
<i>Dictyosphaerium</i> sp.	374	57	174	38	176	7	96	7
<i>Eudorina</i> sp.								
<i>Micractinium</i> sp.	273	1	71	20	107	5	132	30
<i>Mougeotia</i> sp.	1008	328	378	151	988	276	634	0
<i>Oedogonium</i> sp.	3093	327	1096	83	1712	533	859	118
<i>Oocystis</i> sp.	124	33	45	15	49	7	81	8
<i>Pediastrum</i> sp.	8172	36	3961	332	3839	401	2736	22
<i>Scenedesmus</i> sp.	446	53	121	15	207	45	213	8
<i>Schroederia</i> sp.					34	6		
<i>Selenastrum</i> sp.	20	20	15	15				
<i>Spirogyra</i> sp.								
<i>Staurostrum</i> sp.	516	162	317	0	358	49	228	7
Subtotal	14812	401	6638	455	7950	1398	5325	337
DINOPHYCEAE								
(Dinoflagellates)								
<i>Ceratium hirundinella</i>			22	8			37	7
<i>Peridinium</i> sp.							22	8
Subtotal			22	8			59	15
EUGLENOPHYCEAE								
<i>Euglena</i> sp.	20	20	8	8	38	18		
MYXOPHYCEAE								
(Blue-green algae)								
<i>Anabaena</i> sp.			30	15	52	32	15	0
<i>Aphanizomenon</i> sp.	17732	862	6464	174	10965	2850	10530	29
<i>Chroococcus</i> sp.			30	0	10	10	15	15
<i>Merismopedia</i> sp.	20	20	30	15	20	20		
<i>Microcystis</i> sp.	688	98	325	113	530	80	612	52
<i>Oscillatoria</i> sp.	22	22						
Subtotal	18462	957	6879	31	11577	2771	11172	8
TOTAL	41866	156	18380	1130	25362	4961	22427	684

S.D. = Standard Deviation.

Data presented as number/liter.

TABLE A-3 CONT.
ANALYSIS OF PHYTOPLANKTON POPULATIONS AT LOCUST POINT
JUNE 16, 1975

TAXA	Station 9		Station 10		Station 12		Station 13	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
BACILLARIOPHYCEAE								
(Diatoms)								
<i>Asterionella</i> sp.	1821	44	4720	590	2090	137	2066	52
Centric diatoms	8	8	358	63	99	23	84	18
<i>Cymatopleura</i> sp.					20	1		
<i>Diatoma</i> sp.			91	7	39	18	22	22
<i>Fragilaria</i> sp.	598	8	1019	260	583	107	1056	80
<i>Gyrosigma</i> sp.							11	11
<i>Melosira</i> sp.	1150	139	1201	274	1064	55	1422	18
Naviculoid	51	9	1096	85	197	7	158	5
<i>Stephanodiscus binderanus</i>	332	67	554	133	149	34	570	20
<i>Surirella</i> sp.	8	8			19	19	22	22
<i>Synedra</i> sp.	53	5			30	11	43	23
<i>Tabellaria</i> sp.	952	25	3049	99	984	166	1235	209
Subtotal	4973	254	12088	1385	5274	661	6689	38
CHLOROPHYCEAE								
(Green Algae)								
<i>Actinastrum</i> sp.	49	25	133	35	70	51	95	14
<i>Ankistrodesmus</i> sp.	27	3			29	4	20	20
<i>Binuclearia</i> sp.	156	19	625	133	286	20	296	32
<i>Closterium</i> sp.	25	11			20	20		
<i>Coelastrum</i> sp.	52	8	358	63	39	19	49	29
<i>Dictyosphaerium</i> sp.	89	29	878	203	108	13	138	16
<i>Eudorina</i> sp.								
<i>Micractinium</i> sp.	66	6	548	42	129	53	234	71
<i>Mougeotia</i> sp.	442	28	2486	463	531	2	853	285
<i>Oedogonium</i> sp.	774	148	4186	141	1089	213	1429	97
<i>Oocystis</i> sp.	89	29	99	99	10	10	33	13
<i>Pediastrum</i> sp.	2592	88	10977	2297	3256	59	4120	232
<i>Scenedesmus</i> sp.	60	1	1187	91	108	6	160	58
<i>Schroederia</i> sp.	39	9	140	56	10	10	43	23
<i>Selenastrum</i> sp.	21	9			78	17	11	11
<i>Spirogyra</i> sp.								
<i>Staurastrum</i> sp.	341	29	759	169	365	42	495	7
Subtotal	4756	239	22376	2991	6128	440	7976	353
DINOPHYCEAE								
(Dinoflagellates)								
<i>Ceratium hirundinella</i>	98	50			20	1	10	10
<i>Peridinium</i> sp.	21	9			10	10	22	22
Subtotal	119	59			30		32	
EUGLENOPHYCEAE								
<i>Euglena</i> sp.							10	10
MYXOPHYCEAE								
(Blue-green algae)								
<i>Anabaena</i> sp.	50	34	84	84	29	9	32	12
<i>Aphanizomenon</i> sp.	8343	1312	40764	1911	8865	227	8017	369
<i>Chroococcus</i> sp.	8	8						
<i>Merismopedia</i> sp.								
<i>Microcystis</i> sp.	437	52	1622	442	502	27	600	31
<i>Oscillatoria</i> sp.	6	6	84	84				
Subtotal	8844	1332	42554	2183	9396	243	8649	349
TOTAL	18692	1406	77018	6559	20828	1336	23356	36

S.D. = Standard Deviation.

Data presented as number/liter.

TABLE A-3 CONT.

ANALYSIS OF PHYTOPLANKTON POPULATIONS AT LOCUST POINT
JUNE 16, 1975

TAXA	Station 14		Station 18		Station 19		Mean/ Station	S.D.
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
BACILLARIOPHYCEAE								
(Diatoms)								
<i>Asterionella</i> sp.	2009	475	2921	373	2560	171	2409	845
Centric diatoms	38	7	113	29	30	0	102	95
<i>Cymatopleura</i> sp.							6	9
<i>Diatoma</i> sp.			51	9	100	9	43	35
<i>Fragilaria</i> sp.	894	83	847	68	491	98	744	196
<i>Gyrosigma</i> sp.							2	4
<i>Melosira</i> sp.	1223	90	1412	297	941	4	1253	250
Naviculoid	160	42	176	7	38	22	237	296
<i>Stephanodiscus binderanus</i>	280	15	547	63	1380	80	427	352
<i>Surirella</i> sp.	15	1					9	8
<i>Synedra</i> sp.	16	16	31	11	38	8	47	36
<i>Tabellaria</i> sp.	1095	55	1365	38	857	50	1400	715
Subtotal	5729	480	7463	873	5017	152	6573	2161
CHLOROPHYCEAE								
(Green Algae)								
<i>Actinastrum</i> sp.	144	26	155	13	8	8	101	45
<i>Ankistrodesmus</i> sp.	53	6	72	9			22	24
<i>Binuclearia</i> sp.	219	17	464	85	92	32	297	150
<i>Closterium</i> sp.	82	20	31	11	8	8	33	29
<i>Coelastrum</i> sp.	15	1	31	11	23	7	75	101
<i>Dictyosphaerium</i> sp.	166	11	134	13			212	239
<i>Eudorina</i> sp.	23	8					2	7
<i>Micractinium</i> sp.	107	17	133	28	46	1	168	144
<i>Mougeotia</i> sp.	681	32	715	64	888	50	873	575
<i>Oedogonium</i> sp.	1017	148	1346	65	314	27	1537	1128
<i>Oocystis</i> sp.	91	18	41	1			60	39
<i>Pediastrum</i> sp.	2917	92	3608	154	704	6	4262	2858
<i>Scenedesmus</i> sp.	266	44	166	13			266	327
<i>Schroederia</i> sp.	45	2	20	1	8	8	31	40
<i>Selenastrum</i> sp.							13	23
<i>Spirogyra</i> sp.					15	1	1	5
<i>Staurostrum</i> sp.	422	34	486	2	100	40	399	171
Subtotal	6248	179	7402	76	2206	17	8347	5584
DINOPHYCEAE								
(Dinoflagellates)								
<i>Ceratium hirundinella</i>	23	8	52	11	39	9	28	29
<i>Peridinium</i> sp.	15	1					8	10
Subtotal	38	7	52	11	39	9	36	34
EUGLENOPHYCEAE								
<i>Euglena</i> sp.							7	12
MYXOPHYCEAE								
(Blue-green algae)								
<i>Anabaena</i> sp.	53	9	31	11	15	15	36	23
<i>Aphanizomenon</i> sp.	10206	751	10098	579	2030	4	12183	10193
<i>Chroococcus</i> sp.	8	8			15	0	8	10
<i>Merismopedia</i> sp.					8	8	7	11
<i>Microcystis</i> sp.	470	27	685	136	237	20	610	364
<i>Oscillatoria</i> sp.					8	8	11	25
Subtotal	10737	795	10814	705	2313	30	12854	10579
TOTAL	22752	1105	25731	233	9575	208	27817	18047

S.D. = Standard Deviation.

Data presented as number/liter.

APPENDIX B

ZOOPLANKTON POPULATIONS AT LOCUST POINT
APRIL - JUNE 1975

TABLE B-1

ANALYSIS OF ZOOPLANKTON POPULATIONS AT LOCUST POINT
APRIL 22, 1975

TAXA	Station 1		Station 3		Station 6		Station 8	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
ROTIFERA								
<u>Asplanchna priodonta</u>			0.5	0.5				
<u>Brachionus angularis</u>					0.6	0.6		
<u>B. calyciflorus</u>	7.1	5.2	2.5	1.0	4.0	0.3	1.2	0.0
<u>B. urceolaris</u>	2.2	0.2	0.5	0.5	0.6	0.6		
<u>Filinia terminalis</u>			0.5	0.0	1.2	0.1		
<u>Kellicottia longispina</u>			1.5	1.5	0.3	0.3	0.6	0.2
<u>Keratella cochlearis</u>	4.5	1.6	4.5	1.4	3.9	1.4	3.5	2.3
<u>K. quadrata</u>	4.4	0.5	3.4	0.5	3.7	0.2	2.1	1.0
<u>Notholca sp.</u>	40.1	7.7	30.0	0.5	38.7	0.2	43.8	7.4
<u>Polyarthra sp.</u>	18.6	3.9	6.1	0.7	12.0	0.2	3.9	1.2
<u>Synchaeta sp.</u>	10.2	3.3	10.7	1.7	7.4	0.3	8.3	0.6
Unidentified rotifer	38.8	5.4	20.6	2.0	24.8	1.1	12.6	0.6
Subtotal	125.9	19.8	80.8	5.7	97.2	4.2	76.0	3.2
COPEPODA								
<u>Diaptomus spp.</u>	0.5	0.5	0.5	0.0	0.9	0.3	1.2	0.8
Immatures, calanoid			0.5	0.0	0.3	0.3	0.2	0.2
Nauplii, calanoid	15.0	2.7	21.2	8.4	19.8	1.5	15.1	1.2
<u>Limnocalanus macrurus</u>							0.2	0.2
<u>Cyclops bicuspidatus</u>					0.6	0.0		
<u>C. vernalis</u>								
Immatures, cyclopoid	1.1	0.1	1.0	0.5	0.9	0.3	0.4	0.4
Nauplii, cyclopoid	3.3	0.4	2.7	0.2	4.3	0.2	5.2	0.2
Nauplii, harpacticoid	0.5	0.5	0.2	0.2	0.6	0.6		
Subtotal	20.4	3.2	26.1	7.9	27.4	0.3	22.3	2.1
CLADOCERA								
<u>Bosmina longirostris</u>			0.7	0.7	0.3	0.3	0.4	0.4
<u>Chydorus sp.</u>			0.2	0.2			0.2	0.2
<u>Daphnia retrocurva</u>	0.5	0.5	0.7	0.2			0.4	0.0
Subtotal	0.5	0.5	1.6	0.1	0.3	0.3	1.0	0.6
PROTOZOANS								
<u>Diffugia sp.</u>	29.5	4.9	5.2	1.2	11.9	2.3	4.4	0.6
TOTAL	176.3	21.0	113.7	18.9	136.8	6.5	103.7	6.8

S D. = Standard Deviation.

Data presented as number/liter.

TABLE B-1 CONT.

ANALYSIS OF ZOOPLANKTON POPULATIONS AT LOCUST POINT
APRIL 22, 1975

TAXA	Station 9		Station 10		Station 12		Station 13	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
ROTIFERA								
<u>Asplanchna priodonta</u>					2.2	0.7	0.5	0.4
<u>Brachionus angularis</u>					18.1	4.1	7.4	0.8
<u>B. calyciflorus</u>	0.4	0.0	8.1	3.7	2.9	0.0	1.6	0.0
<u>B. urceolaris</u>			0.7	0.7	2.2	0.7	0.8	0.8
<u>Filinia terminalis</u>	2.2				0.7	0.7	1.1	0.0
<u>Kellicottia longispina</u>	0.6	0.2			10.7	0.4	3.0	1.4
<u>Keratella cochlearis</u>	1.7	0.2	3.0	0.0	8.1	0.7	8.2	2.7
<u>K. quadrata</u>	0.9	0.2	5.1	0.7	35.4	0.0	23.5	2.7
<u>Notholca sp.</u>	27.8	0.9	25.8	3.7	33.9	8.8	18.8	5.8
<u>Polyarthra sp.</u>	0.9	0.2	28.8	8.1	15.9	2.6	10.1	0.3
<u>Synchaeta sp.</u>	5.5	2.2	10.3	4.4	37.6	0.7	24.6	1.6
Unidentified rotifer	13.6	1.8	36.1	2.2				
Subtotal	51.4	4.9	117.9	14.8	167.7	1.8	99.6	9.6
COPEPODA								
<u>Diaptomus spp.</u>	0.9	0.5	0.7	0.7	0.4	0.4	0.5	0.5
Immatures, calanoid					0.4	0.4	0.3	0.3
Nauplii, calanoid	19.7	2.0	19.2	3.0	16.2	0.7	13.7	3.3
<u>Limnocalanus macrurus</u>								
<u>Cyclops bicuspidatus</u>	2.7	2.0	0.7	0.7	0.4	0.4	0.8	0.3
<u>C. vernalis</u>							1.9	0.3
Immatures, cyclopoid	0.9	0.2	0.7	0.7			4.1	1.9
Nauplii, cyclopoid	5.0	0.9	4.4	0.0	5.9	0.7	1.1	0.0
Nauplii, harpacticoid	2.2	2.2	0.7	0.7	0.4	0.4		
Subtotal	29.4	4.0	26.4	3.1	23.7	0.1	22.4	0.5
CLADOCERA								
<u>Bosmina longirostris</u>	0.4	0.4	1.5	0.0	0.4	0.4		
<u>Chydorus sp.</u>					1.1	1.1		
<u>Daphnia retrocurva</u>	0.4	0.4			1.5	1.5	0.0	0.0
Subtotal	0.8	0.8	1.5	0.0				
PROTOZOANS								
<u>Diffugia sp.</u>	5.5	1.5	42.0	8.1	15.1	1.1	4.6	0.3
TOTAL	87.1	6.7	187.8	2.0	208.0	4.5	126.6	9.9

S D. = Standard Deviation.

Data presented as number/liter.

TABLE B-1 CONT.

ANALYSIS OF ZOOPLANKTON POPULATIONS AT LOCUST POINT
APRIL 22, 1975

TAXA	Station 14		Station 18		Station 19		Mean/ Station	S.D.
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
ROTIFERA							0.13	0.25
<u>Asplanchna priodonta</u>							18.7	60.8
<u>Brachionus angularis</u>	0.4	0.0	2.5	0.0			7.2	6.2
<u>B. calyciflorus</u>	2.1	0.4	9.8	1.2	18.2	1.5	1.0	1.0
<u>B. urceolaris</u>	0.8	0.0	1.2	0.0			1.0	1.3
<u>Filinia terminalis</u>	0.2	0.2	4.0	2.8	2.5	1.5	0.6	0.4
<u>Kellicottia longispina</u>	0.2	0.2	0.9	0.3	0.5	0.5	2.1	2.2
<u>Keratella cochlearis</u>	3.6	0.6	7.4	0.0	3.4	0.5	3.9	2.5
<u>K. quadrata</u>	1.5	0.2	3.4	0.9	2.0	2.0	31.6	10.7
<u>Notholca sp.</u>	41.9	12.4	34.1	10.1	6.4	3.4	22.1	23.5
<u>Polyarthra sp.</u>	4.4	1.5	32.9	4.0	83.1	54.5	10.7	4.1
<u>Synchaeta sp.</u>	8.5	0.4	10.4	0.6	20.2	4.4	29.7	13.5
Unidentified rotifer	22.1	0.2	36.5	0.9	59.0	31.5	112.8	42.7
Subtotal	85.7	13.7	143.1	3.1	195.3	96.0		
COPEPODA							0.7	0.6
<u>Diaptomus spp.</u>	2.1	0.0	0.3	0.3			0.3	0.2
Immatures, calanoid	0.6	0.2	0.6	0.0	0.5	0.5	15.9	5.8
Nauplii, calanoid	22.1	1.5	11.1	0.6	1.9	1.0	0.0	0.1
<u>Limnocalanus macrurus</u>							1.0	1.5
<u>Cyclops bicuspidatus</u>	1.1	0.2			5.0	1.0	0.1	0.1
<u>C. vernalis</u>	0.2	0.2	0.3	0.3			1.0	0.6
Immatures, cyclopoid	1.1	0.2	0.9	0.3	2.0	0.0	4.9	2.7
Nauplii, cyclopoid	5.5	1.7	1.2	1.2	11.8	4.9	0.4	0.3
Nauplii, harpacticoid			0.6	0.0	0.5	0.5	24.3	4.8
Subtotal	32.7	3.1	15.0	1.0	21.7	7.0		
CLADOCERA							0.5	0.5
<u>Bosmina longirostris</u>	0.6	0.2	0.9	0.3			0.3	0.6
<u>Chydorus sp.</u>	0.2	0.2	0.3	0.3	2.0	0.9	0.3	0.4
<u>Daphnia retrocurva</u>	0.4	0.4					1.1	0.6
Subtotal	1.2	0.0	1.2	0.0	2.0	0.9		
PROTOZOANS								
<u>Diffugia sp.</u>	4.2	0.4	11.4	0.9	4.91	1.0	12.6	12.4
TOTAL	123.8	10.9	170.7	5.0	223.6	102.7	150.7	44.9

S D. = Standard Deviation.

Data presented as number/liter.

TABLE B-2

ANALYSIS OF ZOOPLANKTON POPULATIONS AT LOCUST POINT
MAY 29, 1975

	Station 1		Station 3		Station 6		Station 8	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
ROTIFERA								
<u>Asplanchna priodonta</u>			0.3	0.35	1.4	0.45	1.0	0.00
<u>Brachionus angularis</u>	6.9	1.00	0.7	0.35	0.7	0.70		
<u>B. calyciflorus</u>								
<u>B. havanaensis</u>								
<u>Conochiloides sp.</u>	0.55	0.55						
<u>Filinia terminalis</u>							0.5	0.50
<u>Kellicottia longispina</u>	63.9	16.35	38.0	0.20	61.0	16.15	47.1	1.50
<u>Keratella cochlearis</u>			1.4	0.40	6.2	2.85	9.8	2.45
<u>K. quadrata</u>			0.2	0.25				
<u>Notholca sp.</u>								
<u>Polyarthra sp.</u>	87.6	11.35	55.3	0.95	82.2	25.95	21.8	12.50
<u>Synchaeta sp.</u>	1.0	1.00	1.5	1.00	0.7	0.70		
<u>Trichocerca multicornis</u>	0.5	0.55	1.5	1.10	2.9	0.20	0.8	0.35
Unidentified rotifer			0.2	0.25				
Subtotal	160.44	5.00	99.0	1.00	154.8	43.60	80.8	16.90
COPEPODA								
Calanoida								
<u>Diaptomus sp.</u>	3.0	1.00					17.3	0.25
<u>Diaptomus immatures</u>			0.4	0.40			1.5	1.50
<u>Eurytemora affinis</u>							1.3	0.35
<u>Eurytemora immatures</u>								
Calanoid nauplii	13.4	1.55	12.1	2.30	13.9	2.50	20.4	7.25
Cyclopoida								
<u>Cyclops bicuspidatus</u>			1.8	0.80	3.1	1.60	2.0	0.00
<u>C. vernalis</u>	66.4	4.55	9.8	1.05	11.3	0.60	17.8	4.15
Cyclopoid immatures	15.3	3.55	28.2	5.15	26.8	1.35	37.2	2.05
Cyclopoid nauplii	213.8	59.40	249.5	8.40	303.6	2.80	232.1	5.75
Subtotal	275.2	22.70	301.7	5.70	358.6	5.50	319.4	1.90
CLADOCERA								
<u>Bosmina longirostris</u>	34.7	5.90	146.8	36.60	227.7	59.55	169.1	4.40
<u>Chydorus sphaericus</u>	3.0	3.00	1.4	0.40	7.2	3.25	0.3	0.30
<u>Daphnia galeata</u>								
<u>D. retrocurva</u>	68.8	2.55	85.7	34.55	100.0	24.35	195.6	21.25
<u>Eubosmina coregoni</u>	2.0	2.00	4.2	0.80	5.5	3.55	14.3	1.00
<u>Leptodora kindtii</u>	1.55	1.55	1.1	0.35	1.9	1.25	0.3	0.35
Subtotal	109.9	4.00	239.1	38.30	327.3	76.75	279.4	26.10
PROTOZOA								
<u>Diffugia sp.</u>	79.7	24.35	22.0	0.25	60.3	16.7	21.0	0.9
TOTAL	625.2	60.9	661.7	32.1	915.7	157.3	700.6	46.0

S.D. = Standard Deviation. Data presented as number/liter.

TABLE B-2 CONT.

ANALYSIS OF ZOOPLANKTON POPULATIONS AT LOCUST POINT
MAY 29, 1975

	Station 9		Station 10		Station 12		Station 13	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
ROTIFERA								
<u>Asplanchna priodonta</u>	1.5	0.7			0.7	0.0	3.2	1.5
<u>Brachionus angularis</u>	0.2	0.2	36.1	1.6	10.2	10.2	18.6	1.5
<u>B. calyciflorus</u>					1.8	0.4		
<u>B. havanaensis</u>			3.3	1.6	1.8	1.1	1.2	0.6
<u>Conochiloides</u> sp.	0.7	0.7						
<u>Filinia terminalis</u>			4.1	2.5	2.8	1.4	0.6	0.0
<u>Kellicottia longispina</u>	1.7	0.2						
<u>Keratella cochlearis</u>	44.4	1.9	273.9	13.1	144.2	7.7	58.1	1.5
<u>K. quadrata</u>	20.2	1.3	12.3	4.7	3.9	0.4	5.3	3.0
<u>Notholca</u> sp.								
<u>Polyarthra</u> sp.	35.5	0.7	123.8	9.0	78.8	22.1	154.0	3.0
<u>Synchaeta</u> sp.			2.5	2.5			1.2	0.6
<u>Trichocerca multicornis</u>	0.4	0.0	1.6	0.0	0.4	0.4	0.6	0.0
Unidentified rotifer							0.3	0.3
Subtotal	104.5	2.0	441.2	50.8	243.6	21.0	233.1	3.0
COPEPODA								
Calanoida								
<u>Diaptomus</u> sp.	3.3	0.7	7.4	0.8	14.7	0.0	3.0	1.8
<u>Diaptomus</u> immatures	2.8	0.6	0.8	0.8	1.4	0.7	0.6	0.6
<u>Eurytemora affinis</u>	0.6	0.6			0.7	0.7		
<u>Eurytemora</u> immatures	0.2	0.2						
Calanoid nauplii	17.0	4.4	20.5	0.8	14.4	3.9	16.5	0.0
Cyclopoida								
<u>Cyclops bicuspidatus</u>	3.9	1.3	6.6	3.3	7.7	1.4	1.8	0.6
<u>C. vernalis</u>	8.9	0.0	25.4	2.5	24.5	6.3	8.0	0.9
Cyclopoid immatures	39.0	1.7	41.8	0.8	48.0	9.5	44.0	3.2
Cyclopoid nauplii	205.2	10.9	476.4	33.6	250.6	15.4	333.9	11.2
Subtotal	280.6	116.5	577.3	29.5	361.9	4.2	407.7	14.2
CLADOCERA								
<u>Bosmina longirostris</u>	144.7	4.8	130.4	38.5	1034.6	491.4	1113.9	1.2
<u>Chydorus sphaericus</u>	1.1	1.1	1.6	1.6	8.1	4.6	3.2	0.9
<u>Daphnia galeata</u>								
<u>D. retrocurva</u>	97.3	13.3	53.3	13.9	41.7	0.4	177.0	17.1
<u>Eubosmina coregoni</u>	9.8	0.6	0.8	0.8	7.4	1.1	3.0	0.0
<u>Leptodora kindtii</u>	0.3	0.3	4.1	2.5	2.1	0.0	3.8	2.1
Subtotal	252.9	17.6	190.2	55.8	1093.8	497.4	300.9	13.0
PROTOZOA								
<u>Diffugia</u> sp.	17.6	1.7	71.3	0.8	22.4	4.2	22.1	0.3
TOTAL	655.6	24.4	1296.4	7.4	1721.7	476.4	963.8	0.9

S.D. = Standard Deviation. Data presented as number/liter.

TABLE B-2 CONT.

ANALYSIS OF ZOOPLANKTON POPULATIONS AT LOCUST POINT
MAY 29, 1975

	Station 14		Station 18		Station 19		Mean/ Station	S.D.
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
ROTIFERA								
<u>Asplanchna priodonta</u>	3.7	0.8	0.6	0.6			1.4	1.3
<u>Brachionus angularis</u>			1.8	1.2			5.9	10.7
<u>B. calyciflorus</u>							0.2	0.5
<u>B. havanaensis</u>							0.6	1.1
<u>Conochiloides sp.</u>					241.7	7.5	22.1	72.8
<u>Filinia terminalis</u>							0.7	1.4
<u>Kellicottia longispina</u>							0.2	0.5
<u>Keratella cochlearis</u>	17.0	1.5	28.6	2.7	4.7	1.0	71.0	76.4
<u>K. quadrata</u>	29.5	1.1	8.0	3.2	13.0	4.0	8.1	15.8
<u>Notholca sp.</u>			0.3	0.3			0.1	0.1
<u>Polyarthra sp.</u>	63.0	47.7	130.7	1.5	9.3	0.3	76.5	46.0
<u>Synchaeta sp.</u>			1.2	1.2			0.7	0.8
<u>Trichocerca multicornis</u>			0.3	0.3			0.8	0.9
Unidentified rotifer							0.1	0.1
Subtotal	293.2	34.4	171.4	7.4	268.7	6.1	186.4	106.4
COPEPODA								
Calanoida								
<u>Diaptomus sp.</u>	3.7	0.6	3.0	3.0	0.4	0.4	4.2	4.3
<u>Diaptomus immatures</u>	0.5	0.5	4.4	1.5			1.1	1.4
<u>Eurytemora affinis</u>					0.8	0.0	0.3	0.5
<u>Eurytemora immatures</u>							0.02	0.1
Calanoid nauplii	14.5	3.2	15.9	0.6	7.3	2.4	14.7	14.7
Cyclopoida								
<u>Cyclops bicuspidatus</u>	15.0	0.8	3.0	0.0	2.8	0.3	3.4	2.3
<u>C. vernalis</u>	17.4	4.9	5.6	0.3	8.0	3.1	12.1	7.1
<u>Cyclopoid immatures</u>	37.4	3.0	42.2	3.8	48.5	27.0	37.1	10.0
<u>Cyclopoid nauplii</u>	264.8	2.7	330.4	46.0	23.8	16.6	234.9	126.4
Subtotal	332.9	11.2	404.4	39.8	191.4	15.2	337.4	117.2
CLADOCERA								
<u>Bosmina longirostris</u>	179.3	0.5	118.9	0.3	9.5	2.1	191.8	285.8
<u>Chydorus sphaericus</u>	2.8	0.3	3.5	0.6	7.4	0.0	3.6	2.7
<u>Daphnia galeata</u>			0.6	0.6			0.1	0.2
<u>D. retrocurva</u>	248.3	24.1	203.8	2.7	5.7	3.2	116.1	177.9
<u>Eubosmina coregoni</u>	3.3	0.2	16.5	0.0	18.6	0.5	15.9	3.9
<u>Leptodora kindtii</u>	0.6	0.2	0.6	0.0	0.4	0.4	1.5	1.4
Subtotal	334.3	24.7	333.9	3.0	31.5	1.2	317.6	275.0
PROTOZOA								
<u>Diffugia sp.</u>	13.6	0.8	7.4	0.3			30.7	26.8
TOTAL	1773.9	68.7	917.2	49.9	391.6	20.1	874.9	365.5

S.D. = Standard Deviation.

Data presented as number/liter.

TABLE B-3

ANALYSIS OF ZOOPLANKTON POPULATIONS AT LOCUST POINT
JUNE 16, 1975

TAXA	Station 1		Station 3		Station 6		Station 8	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
ROTIFERA								
<u>Branchionus angularis</u>	8.4	0.4	5.9	1.7	13.2	1.5	27.8	3.4
<u>B. calyciflorus</u>							0.5	0.1
<u>B. havanaensis</u>							1.3	0.2
<u>Conochiloides sp.</u>	81.1	1.7	44.7	3.9	42.0	4.3	58.1	3.0
<u>Filinia terminalis</u>	2.2	1.2			1.0	0.5	3.5	0.2
<u>Kellicottia longispina</u>	5.2	1.8	8.4	1.6	8.2	2.6	6.5	0.5
<u>Keratella cochlearis</u>	151.0	5.8	80.8	5.9	65.4	22.2	101.2	8.8
<u>K. quadrata</u>	21.0	7.3	20.3	2.2	12.9	1.1	15.8	0.6
<u>Polyarthra sp.</u>	17.6	2.9	16.8	5.5	13.6	1.9	20.3	1.8
<u>Pompholyx sulcata</u>	2.2	1.2	4.2	1.2	2.8	0.8	4.9	0.8
<u>Synchaeta sp.</u>	1.1	0.1						
<u>Trichocerca multiepinis</u>			1.0	0.6	1.3	1.3	0.5	0.1
<u>Trichocerca sp.</u>	1.7	0.7			1.1	0.5	0.8	0.4
<u>Trichotria tetractis</u>			0.2	0.2	0.4	0.4		
Unidentified rotifer	42.8	3.7	38.7	1.3	21.9	2.0	25.0	0.9
Subtotal	334.3	10.8	221.0	23.7	183.8	21.4	266.2	17.3
COPEPODA								
Calanoid copepods								
<u>Diaptomus sp.</u>	2.5	1.4	2.3	0.0	2.0	0.5	3.5	0.2
Immatures, Diaptomus	5.9	1.0	2.3	0.0	0.7	0.7	1.1	0.0
<u>Eurytemora affinis</u>								
Nauplii, calanoid	17.6	3.9	11.0	1.5	7.0	1.0	6.3	0.0
Cyclopoid copepods								
<u>Cyclops bicuspidatus</u>	10.2	4.5	4.2	1.1	5.0	1.3	6.7	0.3
<u>C. vernalis</u>	70.5	0.1	20.7	2.5	28.8	1.3	20.4	1.1
<u>Mesocyclops edax</u>								
Immatures, cyclopoid	9.7	2.8	6.5	0.4	4.2	0.1	6.5	0.5
Nauplii, cyclopoid	281.3	14.7	117.7	2.9	118.5	22.9	67.7	6.1
Subtotal	397.7	21.3	164.7	0.8	166.2	23.8	112.2	7.6
CLADOCERA								
<u>Bosmina longirostris</u>							0.2	0.2
<u>Chydorus shaericus</u>							0.5	0.2
<u>Daphnia parvula</u>							0.2	0.2
<u>D. retrocurva</u>	48.0	6.0	39.9	3.8	42.9	0.9	25.8	2.0
<u>Eubosmina coregoni</u>	159.7	30.4	77.2	5.0	65.3	4.7	56.6	1.1
<u>Leptodora kindtii</u>	0.5	0.5	1.0	0.1	0.4	0.4	0.9	0.2
Subtotal	208.2	36.6	118.1	8.7	108.6	4.1	83.5	1.4
PROTOZOA								
<u>Diffugia sp.</u>	1472.5	327.9	706.1	48.1	836.3	69.8	1174.4	71.4
TOTAL	2412.7	332.3	1209.9	81.7	1294.9	119.0	1673.0	48.3

S.D. = Standard Deviation

Data presented as number/liter.

TABLE B-3 CONT.

ANALYSIS OF ZOOPLANKTON POPULATIONS AT LOCUST POINT
JUNE 16, 1975

TAXA	Station 9		Station 10		Station 12		Station 13	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
ROTIFERA								
<u>Branchionus angularis</u>	17.8	5.3	18.0	3.2	13.6	0.2	24.5	0.1
<u>B. calyciflorus</u>	1.2	0.3	2.1	2.1				
<u>B. havanaensis</u>								
<u>Conochiloides</u> sp.	18.3	3.9	50.2	3.9	16.5	5.9	26.4	0.6
<u>Filinia terminalis</u>	2.1	1.2	1.2	1.2	0.7	0.2	1.5	0.1
<u>Kellicottia longispina</u>	8.9	1.9	14.9	2.2	6.0	1.7	8.8	3.2
<u>Keratella cochlearis</u>	42.1	7.4	153.6	18.6	50.1	4.0	114.5	6.4
<u>K. quadrata</u>	13.7	3.5	28.0	9.0	11.2	1.6	15.9	1.6
<u>Polyarthra</u> sp.	26.9	5.3	50.5	8.6	14.8	0.4	29.7	3.7
<u>Pompholyx sulcata</u>	4.1	2.6	12.7	2.1	2.5	2.0	5.8	0.2
<u>Synchaeta</u> sp.	0.3	0.3						
<u>Trichocerca multicrinis</u>	0.5	0.5					1.6	0.6
<u>Trichocerca</u> sp.			3.5	1.4	1.0	0.5	0.5	0.0
<u>Trichotria tetractis</u>								
Unidentified rotifer	60.9	12.0	24.8	12.1	13.0	2.9	16.7	2.2
Subtotal	196.8	36.0	359.5	36.6	129.4	18.9	245.9	0.1
COPEPODA								
Calanoid copepods								
<u>Diaptomus</u> sp.	0.9	0.9	4.7	2.6	3.5	1.1	0.5	0.5
Immatures, Diaptomus	1.1	0.1	2.3	0.2	0.5	0.0	2.6	1.0
<u>Eurytemora affinis</u>							0.3	0.3
Nauplii, calanoid	3.4	0.2	29.5	0.0	6.4	0.2	8.2	0.5
Cyclopoid copepods	3.6	1.4	10.0	2.7	9.7	2.5	9.0	1.9
<u>Cyclops bicuspidatus</u>	12.9	1.5	80.1	23.1	38.9	1.4	29.6	0.5
<u>C. vernalis</u>					0.3	0.3		
<u>Mesocyclops edax</u>	5.8	0.4	18.6	8.8	6.7	1.5	7.7	2.1
Immatures, cyclopoid	76.8	2.4	254.6	35.3	58.3	5.0	96.8	6.7
Nauplii, cyclopoid	104.5	5.3	399.8	49.6	124.3	9.1	154.4	3.7
Subtotal								
CLADOCERA								
<u>Bosmina longirostris</u>	0.3	0.3	2.1	2.1	1.4	0.1	1.5	0.1
<u>Chydorus shaericus</u>	1.1	0.4	2.3	0.2	0.3	0.3		
<u>Daphnia parvula</u>								
<u>D. retrocurva</u>	18.7	1.6	78.1	4.2	22.0	5.8	14.0	0.7
<u>Eubosmina coregoni</u>	17.5	4.1	198.3	40.3	63.3	3.4	62.7	5.6
<u>Leptodora kindtii</u>	0.2	0.2			0.3	0.3	0.5	0.0
Subtotal	37.8	1.5	280.8	34.2	87.3	9.6	78.8	6.3
PROTOZOA								
<u>Diffugia</u> sp.	890.7	59.3	1302.3	82.7	467.3	23.8	750.8	30.1
TOTAL	1229.8	102.1	2342.4	203.1	808.3	42.2	1229.9	33.0

S.D. = Standard Deviation

Data presented as number/liter.

TABLE B-3 CONT.

ANALYSIS OF ZOOPLANKTON POPULATIONS AT LOCUST POINT
JUNE 16, 1975

TAXA	Station 14		Station 18		Station 19		Mean/ Station	S.D.
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
ROTIFERA								
<u>Branchionus angularis</u>	22.5	2.3	26.3	5.4	6.2	1.0	16.7	7.9
<u>B. calyciflorus</u>	0.2	0.2	0.3	0.3	0.8	0.0	0.5	0.7
<u>B. havanaensis</u>			0.3	0.3			0.1	0.4
<u>Conochiloides sp.</u>	27.3	1.8	24.3	10.5	16.2	3.3	36.8	20.5
<u>Filinia terminalis</u>	5.1	0.3	0.8	0.8	1.5	0.7	1.9	1.4
<u>Kellicottia longispina</u>	10.8	0.8	6.6	3.0	3.4	0.4	8.0	3.1
<u>Keratella cochlearis</u>	91.4	2.9	99.5	1.1	30.6	0.6	89.1	40.8
<u>K. quadrata</u>	14.9	0.9	15.6	4.9	10.3	0.3	16.3	5.1
<u>Polyarthra sp.</u>	37.2	3.2	24.1	1.7	26.1	9.7	25.7	10.8
<u>Pompholyx sulcata</u>	4.0	1.4	2.0	0.0	0.9	0.1	4.2	3.2
<u>Synchaeta sp.</u>					10.4	1.4	1.1	3.1
<u>Trichocerca multigrinis</u>	0.7	0.1					0.5	0.6
<u>Trichocerca sp.</u>			0.7	0.2	0.2	0.2	0.9	1.0
<u>Trichotria tetractis</u>							0.1	0.1
Unidentified rotifer	60.6	2.5	21.1	1.1	36.8	1.1	32.9	16.6
Subtotal	274.7	3.8	221.6	27.5	143.4	5.9	234.2	72.1
COPEPODA								
Calanoid copepods								
<u>Diaptomus sp.</u>	1.0	0.6	1.5	0.5			2.0	1.4
Immatures, Diaptomus	1.0	0.6	3.1	1.5			1.9	1.7
<u>Eurytemora affinis</u>							0.0	0.1
Nauplii, calanoid	7.6	0.2	6.7	0.4	0.9	0.2	9.5	7.9
Cyclopoid copepods								
<u>Cyclops bicuspidatus</u>	3.6	1.2	10.9	0.7			6.6	3.6
<u>C. vernalis</u>	22.9	0.4	37.5	8.4	0.2	0.2	33.0	23.7
<u>Mesocyclops edax</u>							0.0	0.1
Immatures, cyclopoid	5.5	0.3	8.8	1.7	7.4	1.6	8.0	3.9
Nauplii, cyclopoid	89.8	0.6	99.3	4.4	68.9	7.3	120.9	75.6
Subtotal	129.4	1.8	167.8	12.7	77.4	8.6	181.7	111.1
CLADOCERA								
<u>Bosmina longirostris</u>	1.5	0.8	2.1	1.1			0.8	0.9
<u>Chydorus shaericus</u>	0.2	0.2			1.2	0.2	0.5	0.7
<u>Daphnia parvula</u>							0.0	0.1
<u>D. retrocurva</u>	15.7	2.5	22.0	2.7	3.7	1.0	30.1	20.8
<u>Eubosmina coregoni</u>	36.1	3.5	43.2	1.1	1.5	0.1	71.0	58.5
<u>Leptodora kindtii</u>	1.0	0.2	0.3	0.3			0.5	0.4
Subtotal	52.8	4.3	67.6	2.4	6.4	0.9	102.7	78.4
PROTOZOA								
<u>Diffugia sp.</u>	860.7	42.1	700.6	26.4	115.3	0.6	843.4	379.7
TOTAL	1317.6	41.3	1157.6	69.0	342.5	3.0	1365.2	601.2

S.D. = Standard Deviation

Data presented as number/liter.

APPENDIX C

BENTHOS POPULATIONS AT LOCUST POINT
APRIL - JUNE 1975

TABLE C-1

ANALYSIS OF BENTHOS AT LOCUST POINT
APRIL 23, 1975

TAXA	Station 1		Station 2		Station 3		Station 4	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
ANNELIDA								
Hirudinea								
<u>Glossiphonia complontota</u>								
<u>Helobdella stagnalis</u>								
Oligochaeta (unidentified)								
Immatures (no hair setae)			50.9	48.1	503.0	561.5	821.3	527.6
<u>Branchyura sowerbyi</u>								
<u>Limnodrilus cervix</u>								
<u>L. claparedeanus</u>								
<u>L. claparedeanus-cervix</u>					12.7	22.1	12.7	22.1
<u>L. maumeensis</u>							12.7	22.1
<u>Potamotheix moldaviensis</u>	6.4	11.0						
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>								
Amphipoda								
<u>Gammarus fasciatus</u>								
Chironomidae								
<u>Chironomus (chironomus) sp.</u>					38.2	38.2	19.1	33.1
<u>Cryptochironomus sp.</u>								
<u>Procladius sp.</u>								
<u>Tanytarsus sp.</u>								
Ephemeroptera								
<u>Caenis sp.</u>			6.4	11.0				
MOLLUSCA								
Pelecypoda								
<u>Amblema plicata</u>								
Station Total	6.4	11.0	57.3	57.3	553.9	619.8	865.9	559.6

S.D. = Standard Deviation.

Data presented as number/m².

TABLE C-1 CONT.

ANALYSIS OF BENTHOS AT LOCUST POINT
APRIL 23, 1975

TAXA	Station 5		Station 6		Station 7		Station 8	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
ANNELIDA								
Hirudinea								
<u>Glossiphonia complontota</u>			6.4	11.0				
<u>Helobdella stagnalis</u>							6.4	11.0
Oligochaeta (unidentified)								
Immatures (no hair setae)	89.1	58.4	477.5	446.7	744.9	238.6	267.4	307.4
<u>Branchyura sowerbyi</u>			19.1	33.1	31.8	39.8	6.4	11.0
<u>Limnodrilus cervix</u>			25.5	44.1			6.4	11.0
<u>L. claparedeanus</u>								
<u>L. claparedeanus-cervix</u>			12.7	22.1	6.4	11.0		
<u>L. maumeensis</u>								
<u>Potamotheix moldaviensis</u>			12.7	22.1	44.6	29.2	6.4	11.0
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>								
Amphipoda								
<u>Gammarus fasciatus</u>	12.7	11.0	6.4	11.0			6.4	11.0
Chironomidae								
<u>Chironomus (chironomus) sp.</u>	19.1	33.1	19.1	33.1	6.4	11.0	12.7	22.1
<u>Cryptochironomus sp.</u>					31.8	29.2	6.4	11.0
<u>Procladius sp.</u>							12.7	22.1
<u>Tanytarsus sp.</u>	6.4	11.0			12.7	22.1		
Ephemeroptera								
<u>Caenis sp.</u>								
MOLLUSCA								
Pelecypoda								
<u>Amblema plicata</u>							12.7	22.1
Station Total	133.7	33.1	579.4	606.8	878.6	356.8	343.8	368.9

S.D. = Standard Deviation.

Data presented as number/m².

TABLE C-1 CONT.

ANALYSIS OF BENTHOS AT LOCUST POINT
APRIL 23, 1975

TAXA	Station 9		Station 10		Station 11		Station 12	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
ANNELIDA								
Hirudinea								
<u>Glossiphonia complontota</u>								
<u>Helobdella stagnalis</u>	6.4	11.0						
Oligochaeta (unidentified)								
Immatures (no hair setae)	383.3	544.9	44.6	29.2	38.2	0.0	2062.8	1605.8
<u>Branchyura sowerbyi</u>								
<u>Limnodrilus cervix</u>							6.4	11.0
<u>L. claparedeanus</u>							6.4	11.0
<u>L. claparedeanus-cervix</u>								
<u>L. maumeensis</u>								
<u>Potamotheix moldaviensis</u>	38.2	66.2	19.1	19.1	12.7	22.1		
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>	6.4	11.0						
Amphipoda								
<u>Gammarus fasciatus</u>	12.7	22.1					6.4	11.0
Chironomidae								
<u>Chironomus (chironomus) sp.</u>	44.6	39.8					76.4	33.1
<u>Cryptochironomus sp.</u>								
<u>Procladius sp.</u>	6.4	11.0						
<u>Tanytarsus sp.</u>								
Ephemeroptera								
<u>Caenis sp.</u>							6.4	11.0
MOLLUSCA								
Pelecypoda								
<u>Amblema plicata</u>	6.4	11.0					12.7	22.1
Station Total	744.8	606.6	63.7	48.1	50.9	11.0	2177.4	1663.0

S.D. = Standard Deviation.

Data presented as number/m².

TABLE C-1 CONT.

ANALYSIS OF BENTHOS AT LOCUST POINT
APRIL 23, 1975

TAXA	Station 13		Station 14		Station 15		Station 16	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
ANNELIDA								
Hirudinea								
<u>Glossiphonia complontota</u>								
<u>Helobdella stagnalis</u>								
Oligochaeta (unidentified)								
Immatures (no hair setae)	140.1	162.4	1623.5	1806.0	165.9	86.6	31.8	29.2
<u>Branchyura sowerbyi</u>								
<u>Limnodrilus cervix</u>			6.4	11.0				
<u>L. claparedeanus</u>			6.4	11.0				
<u>L. claparedeanus-cervix</u>			12.7	22.1				
<u>L. maumeensis</u>			6.4	11.0	31.8	29.2		
<u>Potamotheix moldaviensis</u>								
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>								
Amphipoda								
<u>Gammarus fasciatus</u>					6.4	11.0		
Chironomidae								
<u>Chironomus (chironomus) sp.</u>			12.7	22.1	6.4	11.0		
<u>Cryptochironomus sp.</u>			19.1	19.1	6.4	11.0		
<u>Procladius sp.</u>			12.7	22.1	6.4	11.0	6.4	11.0
<u>Tanytarsus sp.</u>								
Ephemeroptera								
<u>Caenis sp.</u>	25.5	22.1						
MOLLUSCA								
Pelecypoda								
<u>Amblema plicata</u>								
Station Total	165.5	140.8	1699.9	1874.6	222.8	108.6	38.2	38.2

S.D. = Standard Deviation.

Data presented as number/m².

TABLE C-1 CONT.

ANALYSIS OF BENTHOS AT LOCUST POINT
APRIL 23, 1975

TAXA	Station 17		Station 18		Station 19		Mean/ Station	S.D.
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
ANNELIDA								
Hirudinea								
<u>Glossiphonia complontota</u>							0.3	1.5
<u>Helobdella stagnalis</u>			12.7	22.1			1.3	3.4
Oligochaeta (unidentified)								
Immatures (no hair setae)	6.4	11.0	235.6	72.3	1999.1	1395.3	509.8	666.5
<u>Branchyura sowerbyi</u>					76.4	38.2	7.0	18.7
<u>Limnodrilus cervix</u>			6.4	11.0	95.5	87.5	7.4	22.2
<u>L. claparedeanus</u>							0.3	1.5
<u>L. claparedeanus-cervix</u>							1.7	3.6
<u>L. maumeensis</u>							2.0	4.8
<u>Potamotheix moldaviensis</u>			12.7	22.1			10.7	13.8
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>							0.3	1.5
Amphipoda								
<u>Gammarus fasciatus</u>							2.7	4.4
Chironomidae								
<u>Chironomus (chironomus) sp.</u>	12.7	22.1	6.4	11.0	25.5	44.1	15.8	19.6
<u>Cryptochironomus sp.</u>							3.4	8.3
<u>Procladius sp.</u>					12.7	22.1	3.0	4.9
<u>Tanytarsus sp.</u>			6.4	11.0	6.4	11.0	1.7	3.6
Ephemeroptera								
<u>Caenis sp.</u>							2.0	6.0
MOLLUSCA								
Pelecypoda								
<u>Ambelma plicata</u>							1.7	4.2
Station Total	19.1	0.0	280.1	61.4	2215.6	1582.8	584.1	710.3

S.D. = Standard Deviation.

Data presented as number/m².

TABLE C-2

ANALYSIS OF BENTHOS AT LOCUST POINT
MAY 21, 1975

TAXA	Station 1		Station 2		Station 3		Station 4	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
COELENTERATA								
<u>Hydra</u> sp. (budding polyp)								
<u>Hydra</u> sp. (single polyp)								
ANNELIDA								
Hirudinea								
<u>Glossiphonia complontota</u>								
<u>Helobdella stagnalis</u>					6.4	11.0		
Oligochaeta								
Immatures (no hair setae)	12.7	22.1	25.5	29.2	222.8	353.4	948.6	800.0
<u>Branchyura sowerbyi</u>							25.5	22.1
<u>Limnodrilus cervix</u>							25.5	29.2
<u>L. claparedeanus</u>								
<u>L. claparedeanus-cervix</u>							12.7	22.1
<u>L. maumeensis</u>							38.2	19.1
<u>Potamotheix moldaviensis</u>					63.7	94.2	19.1	0.0
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>	6.4	11.0	108.2	39.8	44.6	77.2	95.5	87.5
Amphipoda								
<u>Gammarus fasciatus</u>			31.8	29.2	12.7	22.1	140.1	242.6
Chironomidae								
<u>Chironomus (chironomus)</u> sp.	6.4	11.0	6.4	11.0	6.4	11.0	38.2	19.1
<u>Cryptochironomus</u> sp.					6.4	11.0	6.4	11.0
<u>Procladius</u> sp.					12.7	22.1		
<u>Procladius</u> pupa							44.6	77.2
<u>Tanytarsus</u> sp.	6.4	11.0						
Ephemeroptera								
<u>Caenis</u> sp.	6.4	11.0	12.7	22.1			31.8	55.1
Station Total	38.2	0.0	184.6	29.2	375.6	601.7	1426.1	1267.0

S.D. = Standard Deviation.

Data presented as number/m².

TABLE C-2 CONT.

ANALYSIS OF BENTHOS AT LOCUST POINT
MAY 21, 1975

TAXA	Station 5		Station 6		Station 7		Station 8	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
COELENTERATA								
<u>Hydra</u> sp. (budding polyp)							95.5	165.4
<u>Hydra</u> sp. (single polyp)							82.8	143.4
ANNELIDA								
Hirudinea								
<u>Glossiphonia complontota</u>								
<u>Helobdella stagnalis</u>								
Oligochaeta								
Immatures (no hair setae)	63.7	61.4	617.6	705.8	394.7	324.9	528.4	341.9
<u>Branchyura sowerbyi</u>	6.4	11.0	25.5	44.1	12.7	22.1	12.7	22.1
<u>Limnodrilus cervix</u>			25.5	44.1	12.7	22.1		
<u>L. claparedeanus</u>			6.4	11.0				
<u>L. claparedeanus-cervix</u>			25.5	44.1	12.7	22.1		
<u>L. maumeensis</u>					25.5	44.1		
<u>Potamothrix moldaviensis</u>	6.4	11.0	19.1	33.1	19.1	33.1		
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>	25.5	11.0	76.4	50.5	57.3	50.5	12.7	22.1
Amphipoda								
<u>Gammarus fasciatus</u>			38.2	50.5	57.3	68.9	216.5	155.6
Chironomidae								
<u>Chironomus (chironomus)</u> sp.	50.9	39.8	25.5	11.0	89.1	96.1	12.7	11.0
<u>Cryptochironomus</u> sp.	6.4	11.0	12.7	11.0	31.8	55.1	31.8	55.1
<u>Procladius</u> sp.			82.8	111.9	6.4	11.0	25.5	29.2
<u>Procladius</u> pupa								
<u>Tanytarsus</u> sp.								
Ephemeroptera								
<u>Caenis</u> sp.			12.7	22.1				
Station Total	159.2	94.2	1018.7	944.3	719.4	646.4	1012.3	813.3

S.D. = Standard Deviation.

Data presented as number/m².

TABLE C-2 CONT.

ANALYSIS OF BENTHOS AT LOCUST POINT
MAY 21, 1975

TAXA	Station 9		Station 10		Station 11		Station 12	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
COELENTERATA								
<u>Hydra</u> sp. (budding polyp)								
<u>Hydra</u> sp. (single polyp)								
ANNELIDA								
Hirudinea								
<u>Glossiphonia complontota</u>								
<u>Helobdella stagnalis</u>								
Oligochaeta								
Immatures (no hair setae)	2438.4	545.7	50.9	72.3	203.7	138.2	744.9	995.4
<u>Branchyura sowerbyi</u>							6.4	11.0
<u>Limnodrilus cervix</u>			12.7	22.1			12.7	22.1
<u>L. claparedeanus</u>							12.7	22.1
<u>L. claparedeanus-cervix</u>								
<u>L. maumeensis</u>								
<u>Potamothrux moldaviensis</u>	82.8	86.1	12.7	11.0	6.4	11.0		
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>	267.4	87.5	57.3	68.9	78.8	64.8	127.3	48.1
Amphipoda								
<u>Gammarus fasciatus</u>	25.5	29.2			6.4	11.0	70.0	22.1
Chironomidae								
<u>Chironomus (chironomus)</u> sp.	82.8	44.1	6.4	11.0	50.9	72.3	19.1	19.1
<u>Cryptochironomus</u> sp.	57.3	33.1					6.4	11.0
<u>Procladius</u> sp.	6.4	11.0					6.4	11.0
<u>Procladius</u> pupa								
<u>Tanytarsus</u> sp.								
Ephemeroptera								
<u>Caenis</u> sp.							44.6	61.4
Station Total	2960.5	600.4	140.1	177.5	362.9	175.1	1050.5	1094.4

S.D. = Standard Deviation.

Data presented as number/m².

TABLE C-2 CONT.

ANALYSIS OF BENTHOS AT LOCUST POINT
MAY 21, 1975

TAXA	Station 13		Station 14		Station 15		Station 16	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
COELENTERATA								
<u>Hydra</u> sp. (budding polyp)	6.4	11.0						
<u>Hydra</u> sp. (single polyp)								
ANNELIDA								
Hirudinea								
<u>Glossiphonia complontota</u>	6.4	11.0						
<u>Helobdella stagnalis</u>	6.4	11.0						
Oligochaeta								
Immatures (no hair setae)	553.9	307.4	1356.1	806.5	57.3	38.2	171.9	116.2
<u>Branchyura sowerbyi</u>			6.4	11.0				
<u>Limnodrilus cervix</u>	6.4	11.0	12.7	22.1	6.4	11.0		
<u>L. claparedeanus</u>								
<u>L. claparedeanus-cervix</u>								
<u>L. maumeensis</u>			6.4	11.0	6.4	11.0		
<u>Potamothrrix moldaviensis</u>	6.4	11.0	6.4	11.0			6.4	11.0
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>	127.3	29.2	280.1	77.2	152.8	38.2	38.2	66.2
Amphipoda								
<u>Gammarus fasciatus</u>	76.4	76.4	6.4	11.0	6.4	11.0		
Chironomidae								
<u>Chironomus (chironomus)</u> sp.	50.9	29.2	101.9	111.9	25.5	29.2	31.8	22.1
<u>Cryptochironomus</u> sp.	12.7	11.0	12.7	11.0				
<u>Procladius</u> sp.	25.5	11.0	6.4	11.0	6.4	11.0	6.4	11.0
<u>Procladius</u> pupa								
<u>Tanytarsus</u> sp.								
Ephemeroptera								
<u>Caenis</u> sp.	95.5	133.7			12.7	11.0		
Station Total	901.1	558.7	1795.4	981.6	273.8	77.2	254.7	153.2

S.D. = Standard Deviation.

Data presented as number/m².

TABLE C-2 CONT.

ANALYSIS OF BENTHOS AT LOCUST POINT
MAY 21, 1975

TAXA	Station 17		Station 18		Station 19		Mean/ Station	S.D.
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
COELENTERATA								
<u>Hydra</u> sp. (budding polyp)							5.4	21.9
<u>Hydra</u> sp. (single polyp)							4.4	19.0
ANNELIDA								
Hirudinea								
<u>Glossiphonia complontota</u>							0.3	1.5
<u>Helobdella stagnalis</u>							0.7	2.0
Oligochaeta								
Immatures (no hair setae)	50.9	58.4	694.0	334.3	1502.5	1440.3	559.9	635.9
<u>Branchyura sowerbyi</u>			6.4	11.0			5.4	8.3
<u>Limnodrilus cervix</u>			12.7	11.0	19.1	19.1	8.1	9.0
<u>L. claparedeanus</u>							0.3	1.5
<u>L. claparedeanus-cervix</u>			12.7	22.1	12.7	22.1	4.7	7.6
<u>L. maumeensis</u>							4.0	10.2
<u>Potamothrrix moldaviensis</u>							13.1	22.5
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>	38.2	50.5	25.5	11.0	6.4	11.0	85.6	79.0
Amphipoda								
<u>Gammarus fasciatus</u>			57.3	83.3	44.6	29.2	41.6	56.0
Chironomidae								
<u>Chironomus (chironomus) sp.</u>	6.4	11.0	146.4	140.8	82.8	86.1	44.2	39.8
<u>Cryptochironomus sp.</u>	6.4	11.0	6.4	11.0			10.4	14.9
<u>Procladius sp.</u>			12.7	11.0	6.4	11.0	10.7	19.1
<u>Procladius pupa</u>							2.3	10.2
<u>Tanytarsus sp.</u>							0.3	1.5
Ephemeroptera								
<u>Caenis sp.</u>							11.4	23.8
Station Total	101.9	94.2	640.8	174.7	1725.4	1653.7	796.9	758.0

S.D. = Standard Deviation.

Data presented as number/m².

TABLE C-3

ANALYSIS OF BENTHOS AT LOCUST POINT
JUNE 19, 1975

TAXA	Station 1		Station 2		Station 3		Station 4	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
COELENTERATA								
<u>Hydra</u> sp. (single polyp)								
<u>Hydra</u> sp. (budding polyp)								
ANNELIDA								
Hirudinea								
<u>Glossiphonia complanata</u>								
<u>Helobdella stagnalis</u>								
Oligochaeta								
Immatures (no hair setae)			89.1	138.2	1254.2	355.5	1407.0	795.0
Immatures (hair setae)								
<u>Branchyura sowerbyi</u>			25.5	44.1	12.7	11.0	31.8	39.8
<u>Limnodrilis cervix</u>					12.7	11.0	6.4	11.0
<u>L. claparedeanus</u>								
<u>L. claparedeanus/cervix</u>								
<u>L. maumeensis</u>								
<u>Potamothrrix moldaviensis</u>	6.4	11.0	12.7	22.1	44.6	22.1	38.2	50.5
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>	515.7	294.0	452.0	315.2	261.0	171.2	312.0	144.6
Amphipoda								
<u>Gammarus fasciatus</u>			31.8	39.8	6.4	11.0	12.7	22.1
Ephemeroptera								
<u>Caenis</u> sp.								
Chironomidae								
<u>Chironomus (Chironomus)</u> sp.	6.4	11.0			31.8	22.1	44.6	29.2
<u>Cryptochironomus</u> sp.					6.4	11.0		
<u>Procladius</u> sp.					6.4	11.0		
<u>Tanytarsus</u> sp.	44.6	61.4			57.3	19.1	6.4	11.0
MOLLUSCA								
Pelecypoda								
<u>Amblema</u> sp.								
TOTAL	578.0	248.3	1356.1	1418.7	1693.5	496.0	1859.1	898.8

S.D. = Standard Deviation.

Data presented as number/liter.

TABLE C-3 CONT.

ANALYSIS OF BENTHOS AT LOCUST POINT
JUNE 19, 1975

TAXA	Station 5		Station 6		Station 7		Station 8	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
COELENTERATA								
<u>Hydra</u> sp. (single polyp)					6.4	11.0		
<u>Hydra</u> sp. (budding polyp)								
ANNELIDA								
Hirudinea								
<u>Glossiphonia complanata</u>								
<u>Helobdella stagnalis</u>								
Oligochaeta								
Immatures (no hair setae)	44.6	44.1	3230.5	1893.3	713.1	747.7	101.9	116.7
Immatures (hair setae)								
<u>Branchyura sowerbyi</u>			38.2	38.2				
<u>Limnodrilis cervix</u>			108.2	88.2	19.1	33.1		
<u>L. claparedeanus</u>			70.0	58.4	12.7	22.1		
<u>L. claparedeanus/cervix</u>			38.2	38.2				
<u>L. maumeensis</u>								
<u>Potamothrix moldaviensis</u>	6.4	11.0	38.2	33.1	6.4	11.0		
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>	101.9	160.2	50.9	88.2	222.8	98.0	458.4	265.4
Amphipoda								
<u>Gammarus fasciatus</u>			31.8	39.8	70.0	61.4		
Ephemeroptera								
<u>Caenis</u> sp.							6.4	11.0
Chironomidae								
<u>Chironomus (Chironomus)</u> sp.			12.7	22.1			6.4	11.0
<u>Cryptochironomus</u> sp.								
<u>Procladius</u> sp.	6.4	11.0						
<u>Tanytarsus</u> sp.			38.2	19.1	19.1	33.1		
MOLLUSCA								
Pelecypoda								
<u>Amblema</u> sp.								
TOTAL	216.5	173.3	1747.7	2172.4	1069.6	763.0	573.0	368.4

S.D. = Standard Deviation.

Data presented as number/liter.

TABLE C-3 CONT.

ANALYSIS OF BENTHOS AT LOCUST POINT
JUNE 19, 1975

TAXA	Station 9		Station 10		Station 11		Station 12	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
COELENTERATA								
<u>Hydra</u> sp. (single polyp)	6.4	11.0					6.4	11.0
<u>Hydra</u> sp. (budding polyp)					6.4	11.0		
ANNELIDA								
Hirudinea								
<u>Glossiphonia complanata</u>								
<u>Helobdella stagnalis</u>	6.4	11.0					6.4	11.0
Oligochaeta								
Immatures (no hair setae)	632.1	209.7	50.9	29.2	382.0	137.7	649.4	593.0
Immatures (hair setae)								
<u>Branchyura sowerbyi</u>								
<u>Limnodrilis cervix</u>	12.7	22.1					19.1	33.1
<u>L. claparedeanus</u>	6.4	11.0						
<u>L. claparedeanus/cervix</u>							6.4	11.0
<u>L. maumeensis</u>								
<u>Potamothrix moldaviensis</u>	6.4	11.0					6.4	11.0
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>	1623.5	231.6	312.0	523.9	1241.5	960.1	649.4	325.8
Amphipoda								
<u>Gammarus fasciatus</u>	6.4	11.0					6.4	11.0
Ephemeroptera								
<u>Caenis</u> sp.								
Chironomidae								
<u>Chironomus</u> (<u>Chironomus</u>) sp.	31.8	29.2	6.4	11.0				
<u>Cryptochironomus</u> sp.	6.4	11.0						
<u>Procladius</u> sp.							6.4	11.0
<u>Tanytarsus</u> sp.	25.5	29.2	19.1	33.1	50.9	48.1	6.4	11.0
MOLLUSCA								
Pelecypoda								
<u>Amblema</u> sp.								
TOTAL	3030.5	852.5	388.4	573.7	1680.8	827.4	1362.5	335.4

S.D. = Standard Deviation.

Data presented as number/liter.

TABLE C-3 CONT.

ANALYSIS OF BENTHOS AT LOCUST POINT
JUNE 19, 1975

TAXA	Station 13		Station 14		Station 15		Station 16	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
COELENTERATA								
<u>Hydra</u> sp. (single polyp)	6.4	11.0						
<u>Hydra</u> sp. (budding polyp)								
ANNELIDA								
Hirudinea								
<u>Glossiphonia complanata</u>								
<u>Helobdella stagnalis</u>	12.7	22.1						
Oligochaeta								
Immatures (no hair setae)	643.0	568.0	1528.0	1267.5	700.3	191.3	261.0	124.3
Immatures (hair setae)								
<u>Branchyura sowerbyi</u>			38.2	38.2				
<u>Limnodrilis cervix</u>	12.7	22.1	76.4	87.5				
<u>L. claparedeanus</u>					38.2	33.1		
<u>L. claparedeanus/cervix</u>			19.1	33.1				
<u>L. maumeensis</u>								
<u>Potamotheix moldaviensis</u>	19.1	33.1	12.7	11.0	44.6	39.8		
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>	178.3	96.1	553.9	670.1	273.8	206.0	375.6	254.4
Amphipoda								
<u>Gammarus fasciatus</u>	6.4	11.0					6.4	11.0
Ephemeroptera								
<u>Caenis</u> sp.								
Chironomidae								
<u>Chironomus (Chironomus)</u> sp.	12.7	22.1	70.0	88.2	6.4	11.0	25.5	29.2
<u>Cryptochironomus</u> sp.			6.4	11.0				
<u>Procladius</u> sp.			6.4	11.0				
<u>Tanytarsus</u> sp.	31.8	22.1	6.4	11.0	12.7	22.1	143.3	40.5
MOLLUSCA								
Pelecypoda								
<u>Amblema</u> sp.								
TOTAL	923.2	447.7	2317.5	809.1	1076.3	412.0	764.0	125.3

S.D. = Standard Deviation.

Data presented as number/liter.

TABLE C-3 CONT.

ANALYSIS OF BENTHOS AT LOCUST POINT

JUNE 19, 1975

TAXA	Station 17		Station 18		Station 19		Mean/ Station	S.D.
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
COELENTERATA								
<u>Hydra</u> sp. (single polyp)							1.4	2.7
<u>Hydra</u> sp. (budding polyp)							0.7	2.0
ANNELIDA								
Hirudinea								
<u>Glossiphonia complanata</u>								
<u>Helobdella stagnalis</u>							1.3	3.4
Oligochaeta								
Immatures (no hair setae)	178.3	79.5	369.3	270.3	802.2	547.9	686.2	769.6
Immatures (hair setae)								
<u>Branchyura sowerbyi</u>							7.7	14.2
<u>Limnodrilis cervix</u>	6.4	11.0			114.6	19.1	19.4	37.0
<u>L. claparedeanus</u>					140.1	44.1	15.1	35.0
<u>L. claparedeanus/cervix</u>					38.2	33.1	5.4	12.4
<u>L. maumeensis</u>					6.4	11.0	0.7	2.0
<u>Potamotheix moldaviensis</u>			6.4	11.0			13.1	16.0
ARTHROPODA								
Cladocera								
<u>Leptodora kindtii</u>	547.5	717.0	76.4	57.3			431.9	402.8
Amphipoda								
<u>Gammarus fasciatus</u>							9.4	17.7
Ephemeroptera								
<u>Caenis</u> sp.							0.7	2.0
Chironomidae								
<u>Chironomus (Chironomus)</u> sp.	6.4	11.0	12.7	11.0	70.0	55.1	18.1	22.3
<u>Cryptochironomus</u> sp.							1.0	2.4
<u>Procladius</u> sp.					95.5	38.2	6.4	21.8
<u>Tanytarsus</u> sp.	6.4	11.0			121.0	67.1	31.0	40.1
MOLLUSCA								
Pelecypoda								
<u>Amblema</u> sp.								
TOTAL	744.9	686.3	464.8	337.6	1387.9	618.7	1222.6	720.5

S.D. = Standard Deviation.

Data presented as number/liter.

APPENDIX D

STOMACH ANALYSIS OF FISH COLLECTED AT
LOCUST POINT
APRIL - NOVEMBER 1974

TABLE D-1

STOMACH ANALYSIS OF FISH COLLECTED AT LOCUST POINT
APRIL - NOVEMBER 1974

Month	Species	Length (mm)	Weight (g)	Food Items																	
April	<u>Aplodinotus grunniens</u>	128	20	Nematodea																	
	<u>A. grunniens</u>	134	27	Bryozoa																	
	<u>A. grunniens</u>	235	165	Cladocera																	
	<u>A. grunniens</u>	237	141	Bosmina sp.																	
	<u>A. grunniens</u>	268	213	Daphnia pulex																	
	<u>A. grunniens</u>	297	393	D. retrocurva																	
	<u>A. grunniens</u>	310	392	Leptodora kindtii																	
	<u>Ictalurus punctatus</u>	78	4	Copepoda																	
	<u>I. punctatus</u>	97	7																		
	<u>I. punctatus</u>	100	10																		
	<u>I. punctatus</u>	334	340																		
	<u>Morone chrysops</u>	303	423																		
	<u>Notropis hudsonius</u>	110	17																		
	<u>N. hudsonius</u>	115	15																		
	<u>N. hudsonius</u>	124	19																		
	<u>N. hudsonius</u>	135	31																		
	<u>Perca flavescens</u>	167	58																		
	<u>P. flavescens</u>	168	52																		
	<u>P. flavescens</u>	173	55																		
	<u>P. flavescens</u>	173	58																		
	<u>P. flavescens</u>	182	71																		
				Nematodea	2																
				Bryozoa																	
				Cladocera																	
				Bosmina sp.																	
				Daphnia pulex																	
				D. retrocurva																	
				Leptodora kindtii																	
				Copepoda																	
				Calanoid																	
				Cyclopoid																	
				Gammarus sp.																	
				Insecta																	
				Caenis sp.																	
				Coleoptera																	
				Diptera																	
				Chironomidae																	
				C. (chironomus) sp.																	
				Procladius sp.																	
				Tanytarsus sp.																	
				Fish																	
				Notropis hudsonius																	
				Eggs																	
				Debris																	

STOMACH ANALYSIS OF FISH COLLECTED AT LOCUST POINT
APRIL - NOVEMBER 1974

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STOMACH ANALYSIS OF FISH COLLECTED AT LOCUST POINT
APRIL - NOVEMBER 1974

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STOMACH ANALYSIS OF FISH COLLECTED AT LOCUST POINT
·APRIL - NOVEMBER 1974

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STOMACH ANALYSIS OF FISH COLLECTED AT LOCUST POINT
APRIL - NOVEMBER 1974

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STOMACH ANALYSIS OF FISH COLLECTED AT LOCUST POINT
APRIL - NOVEMBER 1974

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STOMACH ANALYSIS OF FISH COLLECTED AT LOCUST POINT
APRIL - NOVEMBER 1974

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TABLE D-1 CONT.

STOMACH ANALYSIS OF FISH COLLECTED AT LOCUST POINT
APRIL - NOVEMBER 1974

Month	Species	Length (mm)	Weight (g)	Food Items																
	<u>Notropis a. atherinoides</u>	54	2	Nematodea																
N.	<u>a. atherinoides</u>	54	1	Bryozoa																
N.	<u>a. atherinoides</u>	55	2	Cladocera																
N.	<u>a. atherinoides</u>	56	1	Bosmina sp.																
N.	<u>a. atherinoides</u>	57	1	Daphnia pulex																
N.	<u>a. atherinoides</u>	57	1	D. retrocurva																
N.	<u>a. atherinoides</u>	57	1	Leptodora kindtii																
N.	<u>a. atherinoides</u>	57	1	Copepoda																
N.	<u>a. atherinoides</u>	59	1	Calanoid																
N.	<u>a. atherinoides</u>	59	2	Cyclopoid																
N.	<u>a. atherinoides</u>	62	1	Gammarus sp.																
N.	<u>a. atherinoides</u>	64	2	Insecta																
N.	<u>a. atherinoides</u>	64	2	Caen's sp.																
N.	<u>a. atherinoides</u>	80	4	Coleoptera																
N.	<u>a. atherinoides</u>	82	4	Diptera																
N.	<u>a. atherinoides</u>	84	5	Chironomidae																
N.	<u>a. atherinoides</u>	87	5	C. (chironomus) sp.																
N.	<u>a. atherinoides</u>	87	2	Procladius sp.																
N.	<u>hudsonius</u>	55	2	Tanytarsus sp.																
N.	<u>hudsonius</u>	58	2	Fish																
N.	<u>hudsonius</u>	78	5	Notropis hudsonius																
N.	<u>hudsonius</u>	80	6	Eggs																
				Debris																

TABLE D-1 CONT.

STOMACH ANALYSIS OF FISH COLLECTED AT LOCUST POINT
APRIL - NOVEMBER 1974

Month	Species	Length (mm)	Weight (g)	Food Items																		x x x			Debris																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	<u>Notropis hudsonius</u>	81	5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

APPENDIX E

STOMACH ANALYSIS OF FISH COLLECTED AT
LOCUST POINT
APRIL - JUNE 1975

TABLE E-1

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TABLE E-1 CONT.
STOMACH ANALYSIS OF FISH COLLECTED AT LOCUST POINT
APRIL - JUNE 1975

Month	Species	Length (mm)	Weight (g)	Oligochaeta	Cladocera	Bosmina sp.	Daphnia retrocurva	Leptodora kindtii	Copepoda	Amphipoda	Insecta	Diptera	Chironomidae pupae	Chironomidae larvae	Chironomus sp.	Gryllochironomus sp.	Polypedium sp.	Tanypodinae	Procladius sp.	Trichoptera larvae	Fish	Animal debris	Plant debris
June	<u>Alosa pseudoharengus</u>	132	27			120	880	620	80												1	A	
	<u>Aplocheilichthys grunniens</u>	96	10			3	63	22	1													A	
	<u>Ictalurus nebulosus</u>	277	204			12	8	500														A	
	<u>I. punctatus</u>	148	34			10	45	200														A	
	<u>Notropis a. atherinoides</u>	89	6		25	620	360		5													A	
	<u>N. a. atherinoides</u>	94	10			19	230	105	1													A	
	<u>N. a. atherinoides</u>	102	8			40	350															A	
	<u>N. a. atherinoides</u>	105	11			60	340		6													A	
	<u>N. a. atherinoides</u>	108	10			130	200	15														A	
	<u>N. a. atherinoides</u>	111	9			80	880	2	1													A	
	<u>N. a. atherinoides</u>	112	13			160	640	60	10													A	
	<u>N. a. atherinoides</u>	112	14		25	32	185		1													A	
	<u>N. a. atherinoides</u>	113	12			25	650	2	1													A	
	<u>N. hudsonius</u>	66	3			22		1														A	
	<u>N. hudsonius</u>	91	10		100	500		10														A	
	<u>N. hudsonius</u>	128	23			85	520	2	2												1	A	
	<u>Perca flavescens</u>	105	14			5	300	5														A	
	<u>P. flavescens</u>	161	48			520		40														A	
	<u>P. flavescens</u>	171	64			240		10														B	
	<u>P. flavescens</u>	171	66			800		5														A	
	<u>P. flavescens</u>	175	71			210		10														A	
	<u>P. flavescens</u>	201	100			1040		15														A	
	<u>Pomoxis annularis</u>	141	38			43	55	36	31												3	B	

Notes: Letters used under headings "animal debris" and "plant debris" denote the relative abundance of the debris:

- A = slight amount
- B = moderate amount
- C = plentiful amount

Numbers used under all other headings denote the actual number of organisms contained within the stomach.

APPENDIX F

SCIENTIFIC AND COMMON NAME OF FISH SPECIES
COMMON TO LOCUST POINT

TABLE F-1

SCIENTIFIC AND COMMON NAMES OF SPECIES
FOUND IN THE LOCUST POINT AREA 1963 - 1974

1972	1973	1974	Scientific Name	Common Name
*	*	*	Amiidae	
			<u>Amia calva</u>	bowfin
		*	Atherinidae	
			<u>Labidesthes sicculus</u>	brook silversides
		*	Catostomidae	
	*	*	<u>Carpiodes cyprinus</u>	quillback carpsucker
	*	*	<u>Catostomus c. commersoni</u>	common white sucker
*	*	*	<u>Minytrema melanops</u>	spotted sucker
*	*	*	<u>Moxostoma erythrurum</u>	golden redhorse
*	*	*	<u>Ictiobus cyprinellus</u>	bigmouth buffalo fish
		*	Centrarchidae	
	*	*	<u>Ambloplites rupestris</u>	northern rockbass
	*	*	<u>Lepomis cyanellus</u>	green sunfish
	*	*	<u>L. gibbosus</u>	pumpkinseed sunfish
	*	*	<u>L. humilis</u>	orangespotted sunfish
	*	*	<u>L. macrochirus</u>	northern bluegill sunfish
*	*	*	<u>L. microlophus</u>	redeer sunfish
*	*	*	<u>Micropterus d. dolomieu</u>	smallmouth bass
	*	*	<u>M. s. salmoides</u>	largemouth bass
*	*	*	<u>Pomoxis annularis</u>	white crappie
*	*	*	<u>P. nigromaculatus</u>	black crappie
	*	*	Clupeidae	
*	*	*	<u>Alosa pseudoharengus</u>	alewife
*	*	*	<u>Dorosoma cepedianum</u>	gizzard shad
	*	*	Cyprinidae	
*	*	*	<u>Carassius auratus</u>	goldfish
*	*	*	<u>C. auratus</u> x <u>Cyprinus carpio</u>	carp x goldfish hybrid
*	*	*	<u>Cyprinus carpio</u>	carp
*	*	*	<u>Hybopsis storeriana</u>	silver chub
*	*	*	<u>Notropis a. atherinoides</u>	emerald shiner
*	*	*	<u>N. hudsonius</u>	spottail shiner

TABLE F-1 CONT.

SCIENTIFIC AND COMMON NAMES OF SPECIES
FOUND IN THE LOCUST POINT AREA 1963 - 1974

1972	1973	1974	Scientific Name	Common Name
	*		<u>N. spilopterus</u>	spotfin shiner
	*		<u>N. v. volucellus</u>	northern mimic shiner
			<u>Pimephales p. promelas</u>	fathead minnow
			Esocidae	
			<u>Esox lucius</u>	northern pike
			Ictaluridae	
		*	<u>Ictalurus melas</u>	black bullhead
*	*	*	<u>I. natalis</u>	yellow bullhead
*	*	*	<u>I. nebulosus</u>	brown bullhead
*	*	*	<u>I. punctatus</u>	channel catfish
			<u>Noturus flavus</u>	stonecat madtom
			Lepisosteidae	
		*	<u>Lepisosteus osseus</u>	longnose gar
			Osmeridae	
*	*	*	<u>Osmerus eperlanus mordax</u>	American smelt
			Percidae	
*	*	*	<u>Perca flavescens</u>	yellow perch
	*	*	<u>Percina caprodes</u>	logperch darter
*	*	*	<u>Stizostedion v. vitreum</u>	walleye
			Percichthyidae	
*	*	*	<u>Morone chrysops</u>	white bass
			Percopsidae	
	*	*	<u>Percopsis omiscomaycus</u>	troutperch
			Petromyzontidae	
		*	<u>Petromyzon marinus</u>	sea lamprey
			Salmonidae	
*	*	*	<u>Oncorhynchus kisutch</u>	coho salmon
			Sciaenidae	
*	*	*	<u>Aplodinotus grunniens</u>	freshwater drum