

CLEAR TECHNICAL REPORT NO. 236  
(LAKE ERIE TAT CONTRIBUTION NO. 11)



LAKE ERIE INTENSIVE STUDY:  
WATER QUALITY INDEX EVALUATION

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## WATER QUALITY INDEX

### RATIONALE

The Water Resources Center at the University of Wisconsin (Steinhart et al. 1981) has developed a water quality index for the Great Lakes. The index incorporates information on water quality parameters grouped into four classes: (1) physical parameters, including suspended solids and obvious pollution, designated with a P; (2) chemical parameters, including specific conductance, chloride, and total phosphorus, designated with a C; (3) biological parameters, including fecal coliform organisms and chlorophyll-a, designated with a B; and (4) toxic substance parameters, designated as T. The final index is comprised of the calculated index value and letters with subscripts indicating the types and numbers of parameters whose values were equal to or worse than the standard or objective. For example, an index of  $69C_1B_2$  means that the weighted sum of the subindices was 69 and that one chemical and two biological parameters exceeded their standards. An index of  $*69C_1B_2$  was derived from a data set lacking one or more parameters required by the index.

A subindex value of 100 for a particular parameter is typically the background concentration found in open waters of Lake Superior. For each parameter, a subindex value of 50 represents the cutoff point between acceptable and unacceptable, as defined by some standard or criterion, such as IJC water quality objectives. Rating curves have been developed for each parameter to relate a subindex value to specific concentrations measured in the lake.

### EVALUATION

To test the applicability of this system to the nearshore waters of Lake Erie, twelve stations were selected in the Western Basin extending from the Michigan shore near the Detroit River mouth, southward to the Ohio shore near Toledo, then eastward to Huron, Ohio near the division of the Central and Western Basins. The 12 stations were selected in couplets, one station within a few hundred meters of the shore (inshore) and another station in the same general area but several kilometers from the shore (offshore):

<u>Couplet Area</u>	<u>Inshore Station</u>	<u>Offshore Station</u>
A. Point Mouillee, MI, near Detroit River mouth	M7	M3
B. Monroe, MI, near mouth of River Raisin	M16	M15
C. Toledo, OH, near Maumee River mouth in Maumee Bay	02	04
D. Locust Point, OH, near Toussaint River mouth	016	020
E. Sandusky, OH, in Sandusky Bay and bay mouth	034	039
F. Huron, OH, near mouth of Huron River	044	050

The results of this analysis are summarized in Table 1 and the individual station sheets are included in an appendix. Station location maps are located in the Introduction (Figures 1-5). The analysis was performed on 1978 spring, summer and fall cruise data for each station, yielding a total of 36 index values.

It can be seen from the summary table that throughout the ice-free period of the year the inshore water of western Lake Erie averages below 50 on the pollution index while the offshore water is typically above 60 on the index. The lowest quality water was found along the Michigan shoreline near the Detroit River mouth (28.8) and along the Ohio shoreline near the Huron River mouth (33.4). Throughout the year the index values varied as much as 28 units at a single station, however mean seasonal values for all stations show only small differences. The inshore/offshore differences were greatest during the summer period when turbulent mixing is at a minimum. The annual mean index for all nearshore waters (both inshore and offshore) stations was 55.0, near the division between polluted and non-polluted water.

The water quality index proposed by the Wisconsin Water Resources Center appears to be useful in comparing Lake Erie water quality with that found in the other Great Lakes. It also may be useful in comparing inshore and offshore water, in following seasonal water quality changes and in identifying locations with critical water quality problems.

#### REFERENCE CITED

Steinhart, C. E., L-J. Schierow and G. Chesters. 1981. An environmental quality index for the nearshore waters of the Great Lakes. Great Lakes Environmental Planning Study Contribution no. 42. Water Resources Center, Univ. of Wisc. 83 pp.

TABLE 1  
SUMMARY OF WESTERN LAKE ERIE NEARSHORE  
WATER QUALITY INDICES

STATIONS	SAMPLING SEASON - 1978			
	Spring	Summer	Fall	Annual
101/103 Mean	57.2 --- 61.2	28.8 --- 42.4	48.9 --- 48.3	45.0 --- 50.6 47.8
116/115 Mean	46.9 --- 59.8	46.0 --- 67.8	50.6 --- 60.6	47.8 --- 62.7 55.3
202/204 Mean	39.4 --- 58.2	44.6 --- 59.4	54.5 --- 62.9	46.2 --- 60.2 53.2
216/220 Mean	44.5 --- 48.0	48.2 --- 71.9	68.2 --- 73.3	53.6 --- 64.4 59.0
234/239 Mean	68.2 --- 70.4	52.8 --- 75.4	53.9 --- 59.3	58.3 --- 68.4 63.3
244/250 Mean	42.2 --- 65.2	52.1 --- 62.9	33.4 --- 52.5	42.6 --- 60.2 51.4
Mean Mean	49.7 --- 60.5	45.4 --- 63.3	51.6 --- 59.5	48.9 --- 61.1 55.0
Percent Difference	21.7%	39.4%	15.3%	24.9%

APPENDIX A

Individual Station Sheets  
Western Lake Erie - 1978

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Point Mouillee

Station: 101

Depth: 2 m

Date: 117-118

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	238	67	8.9
Suspended Solids	mg/l	27.84	(48.13)	6.4
Total Phosphorous	µg/l	346.0	(14.91)	2.0
Chloride	mg/l	29.5	(46.51)	6.2
Fecal Coliforms	/100 m	N/A	N/A	N/A
Chlorophyll -a	µg/l	4.6	52.41	7.0
Obvious Pollution	--		50	6.7
Inorganic Toxics			100	20.0
AS	µg/l	.770		
Cd	µg/l	0.220		
Cr (Total)	µg/l	3.70		
Pb	µg/l	8.50		
Hg	µg/l	0.034		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				*57.2 B <sub>1</sub> C <sub>1</sub> P <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Point Mouillee

Station: 101

Depth: 2 m

Date: 177-179

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	455	(35)	4.7
Suspended Solids	mg/l	N/A	N/A	N/A
Total Phosphorous	µg/l	116.3	(30.53)	4.7
Chloride	mg/l	37.1	(41.53)	5.5
Fecal Coliforms	/100 m	2700	(0)	0
Chlorophyll -a	µg/l	61.74	(29.29)	3.9
Obvious Pollution	--		0	0
Inorganic Toxics			(50)	10.0
AS	µg/l	2.50	>	
Cd	µg/l	.750		
Cr (Total)	µg/l	18.00		
Pb	µg/l	5.10		
Hg	µg/l	0.013		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				* 28.8 T <sub>1</sub> P <sub>1</sub> C <sub>3</sub> B <sub>2</sub>



NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Point Mouillee

Station: 101

Depth: 2 m

Date: 276-278

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	213	72	8.5
Suspended Solids	mg/l	9.56	80.88	9.5
Total Phosphorous	µg/l	191.5	(23.39)	2.8
Chloride	mg/l	16.5	68.84	8.1
Fecal Coliforms	/100 m	33000	(0)	0
Chlorophyll -a	µg/l	10.29	(45.25)	5.3
Obvious Pollution	--		50	5.9
Inorganic Toxics			50	8.8
AS	µg/l	.92	>	
Cd	µg/l	1.6		
Cr (Total)	µg/l	37.00		
Pb	µg/l	8.00		
Hg	µg/l	0.044		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				*48.9 T <sub>1</sub> C <sub>1</sub> B <sub>2</sub>

## NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Detroit River Mouth

Station: 103

Depth: 4.5 m

Date: 117-118

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	μmhos/cm	180	81	9.5
Suspended Solids	mg/l	10.44	79.12	9.3
Total Phosphorous	μg/l	91.0	(34.05)	4.0
Chloride	mg/l	18.7	63.95	7.5
Fecal Coliforms	/100 m	1400	(7.69)	0.9
Chlorophyll -a	μg/l	4.74	52.14	1.1
Obvious Pollution	--		50	5.9
Inorganic Toxics			100	1.8
AS	μg/l	.770		
Cd	μg/l	0.220		
Cr (Total)	μg/l	3.70		
Pb	μg/l	4.50		
Hg	μg/l	0.016		
Organic Toxics			N/A	N/A
Phthalates	μg/l			
PCB's	μg/l			
Pesticides	μg/l			
Phenols	μg/l			
Index Value				*61.2 B <sub>1</sub> C <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Detroit River Mouth

Station: 103

Depth: 4.0 m

Date: 178-180

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	270	59	6.9
Suspended Solids	mg/l	44.19	(37.23)	4.4
Total Phosphorous	µg/l	114.2	(30.80)	3.6
Chloride	mg/l	17.8	65.95	7.8
Fecal Coliforms	/100 m	1300	(9.30)	1.1
Chlorophyll -a	µg/l	41.24	(32.88)	3.9
Obvious Pollution	--		50	5.9
Inorganic Toxics			50	8.8
AS	µg/l	2.50	>	
Cd	µg/l	.940		
Cr (Total)	µg/l	30.00		
Pb	µg/l	1.90		
Hg	µg/l	0.01		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				* 42.4 T <sub>1</sub> P <sub>1</sub> C <sub>1</sub> B <sub>2</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Detroit River Mouth

Station: 103

Depth: 4.0 m

Date: 276-278

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	180	81	9.5
Suspended Solids	mg/l	33.26	(44.52)	5.3
Total Phosphorous	µg/l	171.4	(24.98)	2.9
Chloride	mg/l	9.4	84.61	10.0
Fecal Coliforms	/100 m	46000	(0)	0
Chlorophyll -a	µg/l	5.99	50.06	5.9
Obvious Pollution	--		50	5.9
Inorganic Toxics			50	8.8
AS	µg/l	1.920	>	
Cd	µg/l	1.900		
Cr (Total)	µg/l	31.00		
Pb	µg/l	5.4		
Hg	µg/l	0.01		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				* 48.3T <sub>1</sub> P <sub>1</sub> C <sub>1</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Rasin River Mouth

Station: 112

Depth: 5.6 m

Date: 115-116

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	$\mu\text{mhos/cm}$	199	75	7.5
Suspended Solids	mg/l	28.48	95.04	9.5
Total Phosphorous	$\mu\text{g/l}$	122.1	(29.84)	3.0
Chloride	mg/l	23.0	54.39	5.4
Fecal Coliforms	/100 m	700	(22.75)	2.3
Chlorophyll -a	$\mu\text{g/l}$	2.27	58.70	5.9
Obvious Pollution	--		50	5.0
Inorganic Toxics			50	7.5
AS	$\mu\text{g/l}$	.620	>	
Cd	$\mu\text{g/l}$	.220		
Cr (Total)	$\mu\text{g/l}$	7.60		
Pb	$\mu\text{g/l}$	11.00		
Hg	$\mu\text{g/l}$	0.010		
Organic Toxics			100	15
Phthalates	$\mu\text{g/l}$	L		
PCB's	$\mu\text{g/l}$	L		
Pesticides	$\mu\text{g/l}$	L		
Phenols	$\mu\text{g/l}$	L		
Index Value				61.10 T <sub>1</sub> B <sub>1</sub> C <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Rasin River Mouth

Station: 112

Depth: 6.3 m

Date: 178-180

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	N/A	N/A	N/A
Suspended Solids	mg/l	13.10	73.8	8.1
Total Phosphorous	µg/l	107.7	(31.64)	3.5
Chloride	mg/l	20.2	60.62	6.7
Fecal Coliforms	/100 m	N/A	N/A	N/A
Chlorophyll -a	µg/l	32.36	(35.04)	3.9
Obvious Pollution	--		50	5.5
Inorganic Toxics			100	16.7
AS	µg/l	1.60		
Cd	µg/l	.220		
Cr (Total)	µg/l	4.20		
Pb	µg/l	1.70		
Hg	µg/l	0.01		
Organic Toxics			100	16.7
Phthalates	µg/l	L		
PCB's	µg/l	L		
Pesticides	µg/l	L		
Phenols	µg/l	L		
Index Value				*61.1 C <sub>1</sub> B <sub>1</sub>

## NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Rasin River Mouth

Station: 112

Depth: 5.3 m

Date: 276-278

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	255	63	6.3
Suspended Solids	mg/l	17.20	65.6	6.6
Total Phosphorous	µg/l	182.9	(24.05)	2.4
Chloride	mg/l	20.00	61.06	6.1
Fecal Coliforms	/100 m	2800	(0)	0
Chlorophyll -a	µg/l	41.35	(32.86)	3.3
Obvious Pollution	--		50	5.0
Inorganic Toxics			25	3.75
AS	µg/l	1.200	>	
Cd	µg/l	9.300		
Cr (Total)	µg/l	58.00		
Pb	µg/l	1.400		
Hg	µg/l	0.01		
Organic Toxics			100	15
Phthalates	µg/l	L		
PCB's	µg/l	L		
Pesticides	µg/l	L		
Phenols	µg/l	L		
Index Value				48.45 T <sub>2</sub> C <sub>1</sub> B <sub>2</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Rasin River Navigation Channel

Station: 115

Depth: 8.1 m

Date: 115-116

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	173	82	9.6
Suspended Solids	mg/l	12.96	74.08	8.7
Total Phosphorous	µg/l	91.5	(33.97)	4.0
Chloride	mg/l	17.2	67.33	7.9
Fecal Coliforms	/100 m	1900	(1.06)	0.1
Chlorophyll -a	µg/l	6.22	(49.72)	5.9
Obvious Pollution	--		50	5.9
Inorganic Toxics			100	17.7
AS	µg/l	.620		
Cd	µg/l	0.220		
Cr (Total)	µg/l	3.70		
Pb	µg/l	5.80		
Hg	µg/l	0.01		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				* 59.8 B <sub>2</sub> C <sub>1</sub>



NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Rasin River Navigation Channel

Station: 115

Depth: 7.6 m

Date: 178-180

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	N/A	N/A	N/A
Suspended Solids	mg/l	13.10	73.8	9.8
Total Phosphorous	µg/l	69.3	( 37.96)	5.1
Chloride	mg/l	18.6	64.17	8.6
Fecal Coliforms	/100 m	0	100	13.3
Chlorophyll -a	µg/l	39.97	(33.16)	4.4
Obvious Pollution	--		50	6.6
Inorganic Toxics			100	20.0
AS	µg/l	01.60		
Cd	µg/l	0.220		
Cr (Total)	µg/l	20.0		
Pb	µg/l	1.700		
Hg	µg/l	0.010		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				*67.8 C <sub>1</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Rasin River Navigation Channel

Station: 115

Depth: 7.8 m

Date: 276-278

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	191	78	9.2
Suspended Solids	mg/l	13.64	72.72	8.6
Total Phosphorous	µg/l	138.0	(28.08)	3.3
Chloride	mg/l	13.5	75.50	8.9
Fecal Coliforms	/100 m	0	100	11.8
Chlorophyll -a	µg/l	31.26	(35.35)	4.1
Obvious Pollution	--		50	5.9
Inorganic Toxics			50	8.8
AS	µg/l	1.2	>	
Cd	µg/l	0.67		
Cr (Total)	µg/l	3.70		
Pb	µg/l	2.20		
Hg	µg/l	0.030		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				* 60.6 T <sub>1</sub> C <sub>1</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Monroe Power Plant Outfall

Station: 116

Depth: 2.5 m

Date: 115-116

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	419	(38)	3.8
Suspended Solids	mg/l	75.36	(16.43)	1.6
Total Phosphorous	µg/l	192.1	(23.34)	2.3
Chloride	mg/l	29.9	(46.22)	4.6
Fecal Coliforms	/100 m	20000	(0)	0
Chlorophyll -a	µg/l	9.89	(45.60)	4.6
Obvious Pollution	--		(0)	0
Inorganic Toxics			100	15
AS	µg/l	1.30		
Cd	µg/l	0.220		
Cr (Total)	µg/l	11.00		
Pb	µg/l	5.00		
Hg	µg/l	0.01		
Organic Toxics			100	15
Phthalates	µg/l	L		
PCB's	µg/l	L		
Pesticides	µg/l	L		
Phenols	µg/l	L		
Index Value				46.90 P <sub>2</sub> B <sub>2</sub> C <sub>3</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Monroe Power Plant Outfall

Station: 116

Depth: 2.0 m

Date: 178-180

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	μmhos/cm	350	(46)	4.6
Suspended Solids	mg/l	55.88	(29.43)	2.9
Total Phosphorous	μg/l	143.1	(27.56)	2.8
Chloride	mg/l	24.6	50.84	5.1
Fecal Coliforms	/100 m	10000	(0)	0
Chlorophyll -a	μg/l	52.44	(30.75)	3.1
Obvious Pollution	--		50	5.0
Inorganic Toxics			50	7.5
AS	μg/l	2.50	>	
Cd	μg/l	.220		
Cr (Total)	μg/l	57.000 <sup>+</sup>		
Pb	μg/l	1.50		
Hg	μg/l	0.010		
Organic Toxics			100	15
Phthalates	μg/l	L		
PCB's	μg/l	L		
Pesticides	μg/l	L		
Phenols	μg/l	L		
Index Value				46.00 T <sub>1</sub> P <sub>1</sub> C <sub>2</sub> B <sub>2</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Monroe Power Plant Outfall

Station: 116

Depth: 2.8 m

Date: 276-278

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	μmhos/cm	395	(41)	4.1
Suspended Solids	mg/l	14.84	70.32	7.1
Total Phosphorous	μg/l	137.8	(28.10)	2.8
Chloride	mg/l	22.4	55.73	5.6
Fecal Coliforms	/100 m	5000	(0)	0
Chlorophyll -a	μg/l	32.82	(34.92)	3.5
Obvious Pollution	--		50	5.0
Inorganic Toxics			50	7.5
AS	μg/l	2.40	>	
Cd	μg/l	.540		
Cr (Total)	μg/l	46.00		
Pb	μg/l	1.20		
Hg	μg/l	0.01		
Organic Toxics			100	15
Phthalates	μg/l	L		
PCB's	μg/l	L		
Pesticides	μg/l	L		
Phenols	μg/l	L		
Index Value				50.6 T <sub>1</sub> C <sub>2</sub> B <sub>2</sub>

## NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Mouth Maumee River

Station: 202

Depth: 9.5 m

Date: 117-118

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	435	(37)	3.7
Suspended Solids	mg/l	71.48	(19.02)	1.9
Total Phosphorous	µg/l	*616.4	(6.63)	.7
Chloride	mg/l	224.5	51.60	5.2
Fecal Coliforms	/100 m	720000	(0)	0
Chlorophyll -a	µg/l	3.71	54.21	5.4
Obvious Pollution	--		(0)	0
Inorganic Toxics			50	7.5
AS	µg/l	1.30	>	
Cd	µg/l	.340		
Cr (Total)	µg/l	11.00		
Pb	µg/l	3.50		
Hg	µg/l	0.01		
Organic Toxics			100	15
Phthalates	µg/l	L		
PCB's	µg/l	L		
Pesticides	µg/l	L		
Phenols	µg/l	L		
Index Value				39.40 T <sub>1</sub> P <sub>2</sub> C <sub>2</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Mouth Maumee River

Station: 202

Depth: 9.0 m

Date: 181-183

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	560	( 24 )	2.4
Suspended Solids	mg/l	47.48	( 35.30 )	3.5
Total Phosphorous	µg/l	581.6	( 7.47 )	.7
Chloride	mg/l	42.6	( 38.53 )	3.9
Fecal Coliforms	/100 m	10000	( 0 )	0
Chlorophyll -a	µg/l	16.57	( 41.0 )	4.1
Obvious Pollution	--		( 0 )	0
Inorganic Toxics			100	15
AS	µg/l	1.60		
Cd	µg/l	.220		
Cr (Total)	µg/l	5.70		
Pb	µg/l	2.20		
Hg	µg/l	0.011		
Organic Toxics			100	15
Phthalates	µg/l	L		
PCB's	µg/l	L		
Pesticides	µg/l	L		
Phenols	µg/l	L		
Index Value				44.6 P <sub>2</sub> C <sub>3</sub> B <sub>2</sub>

## NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Mouth Maumee River

Station: 202

Depth: 9.9 m

Date: 280-282

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	μmhos/cm	309	50	5.0
Suspended Solids	mg/l	51.43	(32.40)	3.2
Total Phosphorous	μg/l	204.4	(22.45)	2.2
Chloride	mg/l	37.7	(41.18)	4.1
Fecal Coliforms	/100 m	2500	(0)	0
Chlorophyll -a	μg/l	41.18	(49.59)	5.0
Obvious Pollution	--		50	5.0
Inorganic Toxics			100	15
AS	μg/l	1.600		
Cd	μg/l	0.220		
Cr (Total)	μg/l	8.800		
Pb	μg/l	3.800		
Hg	μg/l	0.025		
Organic Toxics			100	15
Phthalates	μg/l	L		
PCB's	μg/l	L		
Pesticides	μg/l	L		
Phenols	μg/l	L		
Index Value				54.50 P <sub>1</sub> C <sub>1</sub> B <sub>2</sub>



NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Maumee Navigation Channel

Station: 204

Depth: 10.5 m

Date: 117-118

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	*440	(36)	3.6
Suspended Solids	mg/l	75.80	(16.62)	1.7
Total Phosphorous	µg/l	134.0	(28.51)	2.9
Chloride	mg/l	22.1	56.39	5.6
Fecal Coliforms	/100 m	0	100	10.0
Chlorophyll -a	µg/l	10.89	(44.74)	4.4
Obvious Pollution	--		(0)	0
Inorganic Toxics			100	15
AS	µg/l	0.970		
Cd	µg/l	0.220		
Cr (Total)	µg/l	13.00		
Pb	µg/l	5.30		
Hg	µg/l	0.01		
Organic Toxics			100	15
Phthalates	µg/l	L		
PCB's	µg/l	L		
Pesticides	µg/l	L		
Phenols	µg/l	L		
Index Value				58.2 P <sub>2</sub> C <sub>2</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Maumee Navigation Channel

Station: 204

Depth: 10.2 m

Date: 181-183

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	350	(46)	4.6
Suspended Solids	mg/l	16.66	66.68	6.7
Total Phosphorous	µg/l	97.4	(33.08)	3.3
Chloride	mg/l	19.2	62.84	6.3
Fecal Coliforms	/100 m	17000	(0)	0
Chlorophyll -a	µg/l	34.42	(35.03)	3.5
Obvious Pollution	--		50	5.0
Inorganic Toxics			100	15
AS	µg/l	1.20		
Cd	µg/l	0.220		
Cr (Total)	µg/l	1.50		
Pb	µg/l	1.00		
Hg	µg/l	0.011		
Organic Toxics			100	15
Phthalates	µg/l	L		
PCB's	µg/l	L		
Pesticides	µg/l	L		
Phenols	µg/l	L		
Index Value				59.40 C <sub>2</sub> B <sub>2</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Maumee Navigation Channel

Station: 204

Depth: 11.4 m

Date: 280-282

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	μmhos/cm	204	75	7.5
Suspended Solids	mg/l	27.86	(48.12)	4.8
Total Phosphorous	μg/l	160.4	(25.93)	2.6
Chloride	mg/l	21.2	58.39	5.8
Fecal Coliforms	/100 m	300	(41.14)	4.1
Chlorophyll -a	μg/l	53.03	(30.65)	3.1
Obvious Pollution	--		50	5.0
Inorganic Toxics			100	15
AS	μg/l	1.300		
Cd	μg/l	0.220		
Cr (Total)	μg/l	3.400		
Pb	μg/l	1.400		
Hg	μg/l	0.010		
Organic Toxics			100	15
Phthalates	μg/l	L		
PCB's	μg/l	L		
Pesticides	μg/l	L		
Phenols	μg/l	L		
Index Value				62.9 P <sub>1</sub> C <sub>1</sub> B <sub>2</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Locust Point (nearshore)

Station: 216

Depth: 1.2 m

Date: 105-106

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	240	66	7.8
Suspended Solids	mg/l	99.78	(.15)	0.2
Total Phosphorous	µg/l	194.3	(23.18)	2.7
Chloride	mg/l	19.0	(63.28)	7.4
Fecal Coliforms	/100 m	0	100	11.8
Chlorophyll -a	µg/l	6.45	(49.40)	5.8
Obvious Pollution	--		(0)	0
Inorganic Toxics			50	8.8
AS	µg/l	1.900	}	
Cd	µg/l	3.10		
Cr (Total)	µg/l	5.3		
Pb	µg/l	3.00		
Hg	µg/l	0.01		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				* 44.5 T <sub>1</sub> P <sub>2</sub> C <sub>1</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Locust Point (nearshore)

Station: 216

Depth: 2.0 m

Date: 188-190

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	μmhos/cm	280	56	6.6
Suspended Solids	mg/l	15.22	69.56	8.2
Total Phosphorous	μg/l	67.6	(38.31)	4.5
Chloride	mg/l	16.7	68.39	8.0
Fecal Coliforms	/100 m	14000	(0)	0
Chlorophyll -a	μg/l	4.36	52.89	6.2
Obvious Pollution	--		50	5.9
Inorganic Toxics			50	8.8
AS	μg/l	3.80	>	
Cd	μg/l	.700		
Cr (Total)	μg/l	.350		
Pb	μg/l	.510		
Hg	μg/l	.037		
Organic Toxics			N/A	N/A
Phthalates	μg/l			
PCB's	μg/l			
Pesticides	μg/l			
Phenols	μg/l			
Index Value				* 48.2 T.C.B.

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Locust Point (nearshore)

Station: 216

Depth: 3.0 m

Date: 284-286

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	μmhos/cm	200	76	10.1
Suspended Solids	mg/l	8.68	82.8	11.0
Total Phosphorous	μg/l	53.6	(41.64)	5.5
Chloride	mg/l	14.9	72.39	9.7
Fecal Coliforms	/100 m	N/A	N/A	N/A
Chlorophyll -a	μg/l	20.12	(39.28)	5.2
Obvious Pollution	--		50	6.7
Inorganic Toxics			100	20.0
AS	μg/l	1.900		
Cd	μg/l	0.220		
Cr (Total)	μg/l	.510		
Pb	μg/l	3.90		
Hg	μg/l	0.01		
Organic Toxics			N/A	N/A
Phthalates	μg/l			
PCB's	μg/l			
Pesticides	μg/l			
Phenols	μg/l			
Index Value				* 68.2 C <sub>1</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Locust Point (offshore)

Station: 220

Depth: 5.8 m

Date: 106-107

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	262	61	8.1
Suspended Solids	mg/l	73.60	( 17.61)	2.3
Total Phosphorous	µg/l	117.2	( 30.43)	4.0
Chloride	mg/l	17.4	66.84	8.9
Fecal Coliforms	/100 m	200	49.95	6.6
Chlorophyll -a	µg/l	1.79	60.87	8.1
Obvious Pollution	--		N/A	N/A
Inorganic Toxics			50	10.0
AS	µg/l	1.90	>	
Cd	µg/l	0.220		
Cr (Total)	µg/l	3.90		
Pb	µg/l	13.00		
Hg	µg/l	0.01		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				*48.0 T <sub>1</sub> P <sub>1</sub> C <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Locust Point (offshore)

Station: 220

Depth: 5.6 m

Date: 188-190

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	N/A	N/A	N/A
Suspended Solids	mg/l	5.88	88.24	11.7
Total Phosphorous	µg/l	68.4	( 38.14)	5.1
Chloride	mg/l	16.0	69.95	9.3
Fecal Coliforms	/100 m	0	100	13.3
Chlorophyll -a	µg/l	11.56	( 44.21)	5.9
Obvious Pollution	--		50	6.6
Inorganic Toxics			100	20.0
AS	µg/l	2.80		
Cd	µg/l	.220		
Cr (Total)	µg/l	7.10		
Pb	µg/l	4.50		
Hg	µg/l	.034		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				*71.9 B <sub>1</sub> C <sub>1</sub>



NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Locust Point (offshore)

Station: 220

Depth: 5.7 m

Date: 284-286

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	$\mu\text{mhos/cm}$	185	79.6	9.4
Suspended Solids	mg/l	7.10	85.8	10.0
Total Phosphorous	$\mu\text{g/l}$	44.7	( 44.30)	5.2
Chloride	mg/l	15.6	(70.84)	8.4
Fecal Coliforms	/100 m	100	57	6.7
Chlorophyll -a	$\mu\text{g/l}$	28.43	(36.20)	4.2
Obvious Pollution	--		100	11.8
Inorganic Toxics			100	17.6
AS	$\mu\text{g/l}$	1.9		
Cd	$\mu\text{g/l}$	<0.2		
Cr (Total)	$\mu\text{g/l}$	.51		
Pb	$\mu\text{g/l}$	3.90		
Hg	$\mu\text{g/l}$	<0.01		
Organic Toxics			N/A	N/A
Phthalates	$\mu\text{g/l}$			
PCB's	$\mu\text{g/l}$			
Pesticides	$\mu\text{g/l}$			
Phenols	$\mu\text{g/l}$			
Index Value				* 73.3 C <sub>1</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Sandusky Bay

Station: 234

Depth: 2.0 m

Date: 112-113

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	300	52	5.2
Suspended Solids	mg/l	29.10	(47.29)	4.7
Total Phosphorous	µg/l	163.0	(25.7)	2.6
Chloride	mg/l	23.4	53.51	5.4
Fecal Coliforms	/100 m	100	57	5.7
Chlorophyll -a	µg/l	21.83	(38.55)	3.9
Obvious Pollution	--		50	5.0
Inorganic Toxics			100	15
AS	µg/l	0.770		
Cd	µg/l	0.220		
Cr (Total)	µg/l	3.70		
Pb	µg/l	3.40		
Hg	µg/l	0.01		
Organic Toxics			100	15
Phthalates	µg/l	L		
PCB's	µg/l	L		
Pesticides	µg/l	L		
Phenols	µg/l	L		
Index Value				68.20 C <sub>1</sub> B <sub>1</sub> P <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Sandusky Bay

Station: 234

Depth: 2.7 m

Date: 191-193

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	365	(44)	4.9
Suspended Solids	mg/l	26.26	(49.18)	5.4
Total Phosphorous	µg/l	138.6	(28.02)	3.1
Chloride	mg/l	23.5	53.28	5.9
Fecal Coliforms	/100 m	N/A	N/A	N/A
Chlorophyll -a	µg/l	85.06	(26.44)	2.9
Obvious Pollution	--		50	5.5
Inorganic Toxics			50	8.4
AS	µg/l	2.50	>	
Cd	µg/l	.330		
Cr (Total)	µg/l	2.40		
Pb	µg/l	4.60		
Hg	µg/l	0.073		
Organic Toxics			100	16.7
Phthalates	µg/l	L		
PCB's	µg/l	L		
Pesticides	µg/l	L		
Phenols	µg/l	L		
Index Value				*52.8 T <sub>1</sub> P <sub>1</sub> C <sub>2</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Sandusky Bay

Station: 234

Depth: 2.5 m

Date: 288-290

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	μmhos/cm	270	59.2	5.9
Suspended Solids	mg/l	11.68	76.64	7.7
Total Phosphorous	μg/l	96.1	(33.27)	3.3
Chloride	mg/l	22.4	55.73	5.6
Fecal Coliforms	/100 m	18000	(0)	0
Chlorophyll -a	μg/l	37.13	(33.82)	3.9
Obvious Pollution	--		50	5.0
Inorganic Toxics			50	7.5
AS	μg/l	.920	>	
Cd	μg/l	1.20		
Cr (Total)	μg/l	28.0		
Pb	μg/l	.640		
Hg	μg/l	0.026		
Organic Toxics			100	15
Phthalates	μg/l	L		
PCB's	μg/l	L		
Pesticides	μg/l	L		
Phenols	μg/l	L		
Index Value				53.90 T <sub>1</sub> C <sub>1</sub> B <sub>2</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Sandusky Bay Mouth

Station: 239

Depth: 11.0 m

Date: 109-111

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	168	83	9.8
Suspended Solids	mg/l	14.10	71.8	8.5
Total Phosphorous	µg/l	*11.18	(31.10)	3.6
Chloride	mg/l	18.6	64.17	7.5
Fecal Coliforms	/100 m	0	100	11.8
Chlorophyll -a	µg/l	7.69	(47.8)	5.6
Obvious Pollution	--		50	5.9
Inorganic Toxics			100	17.7
AS	µg/l	1.90		
Cd	µg/l	0.220		
Cr (Total)	µg/l	1.70		
Pb	µg/l	8.60		
Hg	µg/l	0.01		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				* 70.4 C <sub>1</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Sandusky Bay Mouth

Station: 239

Depth: 12.0 m

Date: 191-193

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	N/A	N/A	N/A
Suspended Solids	mg/l	4.76	90.48	13.9
Total Phosphorous	µg/l	53.0	(41.80)	6.4
Chloride	mg/l	18.1	(65.28)	10.0
Fecal Coliforms	/100 m	N/A	N/A	N/A
Chlorophyll -a	µg/l	12.83	(43.28)	6.7
Obvious Pollution	--		100	15.8
Inorganic Toxics			100	23
AS	µg/l	2.50		
Cd	µg/l	.220		
Cr (Total)	µg/l	.350		
Pb	µg/l	.920		
Hg	µg/l	.050		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				*75.4 C <sub>1</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Sandusky Bay Mouth

Station: 239

Depth: 12.4 m

Date: 288-290

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	214	72.64	8.6
Suspended Solids	mg/l	16.39	67.22	7.9
Total Phosphorous	µg/l	63.8	(39.14)	4.6
Chloride	mg/l	20.8	59.28	6.9
Fecal Coliforms	/100 m	0	100	11.8
Chlorophyll -a	µg/l	15.98	(41.33)	4.8
Obvious Pollution	--		50	5.9
Inorganic Toxics			50	8.8
AS	µg/l	.920	>	
Cd	µg/l	15.00		
Cr (Total)	µg/l	2.10		
Pb	µg/l	1.10		
Hg	µg/l	0.042		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				*59.3 T <sub>1</sub> C <sub>1</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Huron River Mouth

Station: 244

Depth: 9.3 m

Date: 110-111

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	364	(44)	5.85
Suspended Solids	mg/l	143.01	(0)	0
Total Phosphorous	µg/l	60.8	(39.83)	5.29
Chloride	mg/l	36.5	(41.89)	5.57
Fecal Coliforms	/100 m	720000	(0)	0
Chlorophyll -a	µg/l	16.09	(41.27)	5.48
Obvious Pollution	--		N/A	N/A
Inorganic Toxics			100	20.0
AS	µg/l	.770		
Cd	µg/l	.220		
Cr (Total)	µg/l	.830		
Pb	µg/l	2.30		
Hg	µg/l	0.01		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				*42.19 P <sub>1</sub> C <sub>3</sub> B <sub>2</sub>



NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Huron River Mouth

Station: 244

Depth: 9.5 m

Date: 191-193

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	380	(42)	5.53
Suspended Solids	mg/l	8.92	82.16	10.9
Total Phosphorous	µg/l	54.8	(41.32)	5.5
Chloride	mg/l	21.7	57.28	7.6
Fecal Coliforms	/100 m	N/A	N/A	N/A
Chlorophyll -a	µg/l	10.46	(45.10)	6.0
Obvious Pollution	--		50	6.6
Inorganic Toxics			50	10.0
AS	µg/l	2.50	>	
Cd	µg/l	.650		
Cr (Total)	µg/l	.350		
Pb	µg/l	1.700		
Hg	µg/l	.058		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				*52.1 T <sub>1</sub> C <sub>2</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Huron River Mouth

Station: 244

Depth: 8.5 m

Date: 288-290

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	μmhos/cm	236	67.36	7.9
Suspended Solids	mg/l	66.88	(22.09)	2.6
Total Phosphorous	μg/l	154.0	(26.51)	3.2
Chloride	mg/l	21.3	58.17	6.8
Fecal Coliforms	/100 m	17000	(0)	0
Chlorophyll -a	μg/l	18.88	(39.84)	4.1
Obvious Pollution	--		(0)	0
Inorganic Toxics			50	8.8
AS	μg/l	.920	>	
Cd	μg/l	.420		
Cr (Total)	μg/l	5.0		
Pb	μg/l	2.30		
Hg	μg/l	0.01		
Organic Toxics			N/A	N/A
Phthalates	μg/l			
PCB's	μg/l			
Pesticides	μg/l			
Phenols	μg/l			
Index Value				* 33.4 T <sub>1</sub> P <sub>1</sub> C <sub>1</sub> B <sub>2</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Huron (offshore)

Station: 250

Depth: 12.5 m

Date: 110-111

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	182	81	9.5
Suspended Solids	mg/l	14.18	71.64	8.5
Total Phosphorous	µg/l	178.5	(24.40)	2.8
Chloride	mg/l	43.3	(38.18)	4.5
Fecal Coliforms	/100 m	0	100	11.8
Chlorophyll -a	µg/l	14.5	(42.19)	4.9
Obvious Pollution	--		50	5.9
Inorganic Toxics			100	17.6
AS	µg/l	.770		
Cd	µg/l	0.220		
Cr (Total)	µg/l	8.30		
Pb	µg/l	2.30		
Hg	µg/l	0.01		
Organic Toxics			N/A	N/A
Phthalates	µg/l			
PCB's	µg/l			
Pesticides	µg/l			
Phenols	µg/l			
Index Value				* 65.5 C <sub>2</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Huron (offshore)

Station: 250

Depth: 12.0 m

Date: 191-193

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	µmhos/cm	N/A	N/A	N/A
Suspended Solids	mg/l	3.64	92.72	14.2
Total Phosphorous	µg/l	48.3	(43.13)	6.6
Chloride	mg/l	18.9	63.50	9.8
Fecal Coliforms	/100 m	N/A	N/A	N/A
Chlorophyll -a	µg/l	30.37	(35.37)	5.4
Obvious Pollution	--		100	15.4
Inorganic Toxics			50	±11.5
AS	µg/l	2.50	>	
Cd	µg/l	.330		
Cr (Total)	µg/l	1.800		
Pb	µg/l	1.600		
Hg	µg/l	.024		
Organic Toxics			N/A	N/A
Phthalates	µg/l	L		
PCB's	µg/l	L		
Pesticides	µg/l			
Phenols	µg/l	L		
Index Value				*62.9 T <sub>1</sub> C <sub>1</sub> B <sub>1</sub>

NEARSHORE WATER QUALITY INDEX - LAKE ERIE

Station Vicinity: Huron (offshore)

Station: 250

Depth: 12.7 m

Date: 288-290

Data Source: Ohio State University/

Year: 1978

CLEAR

PARAMETER	UNITS	VALUE	SUBINDEX	(WEIGHT) X (SUBINDEX)
Specific Conductance	$\mu\text{mhos/cm}$	210	73.6	8.7
Suspended Solids	mg/l	22.48	55.04	6.5
Total Phosphorous	$\mu\text{g/l}$	60.5	(39.90)	4.7
Chloride	mg/l	20.5	59.95	7.1
Fecal Coliforms	/100 m	200	49.95	5.9
Chlorophyll -a	$\mu\text{g/l}$	14.84	(41.99)	4.9
Obvious Pollution	--		50	5.9
Inorganic Toxics			50	8.8
AS	$\mu\text{g/l}$	.920	>	
Cd	$\mu\text{g/l}$	0.920		
Cr (Total)	$\mu\text{g/l}$	.70		
Pb	$\mu\text{g/l}$	1.10		
Hg	$\mu\text{g/l}$	0.010		
Organic Toxics			N/A	N/A
Phthalates	$\mu\text{g/l}$			
PCB's	$\mu\text{g/l}$			
Pesticides	$\mu\text{g/l}$			
Phenols	$\mu\text{g/l}$			
Index Value				* 52.5 T <sub>1</sub> C <sub>1</sub> B <sub>1</sub>

Appendix B

Station Location Maps

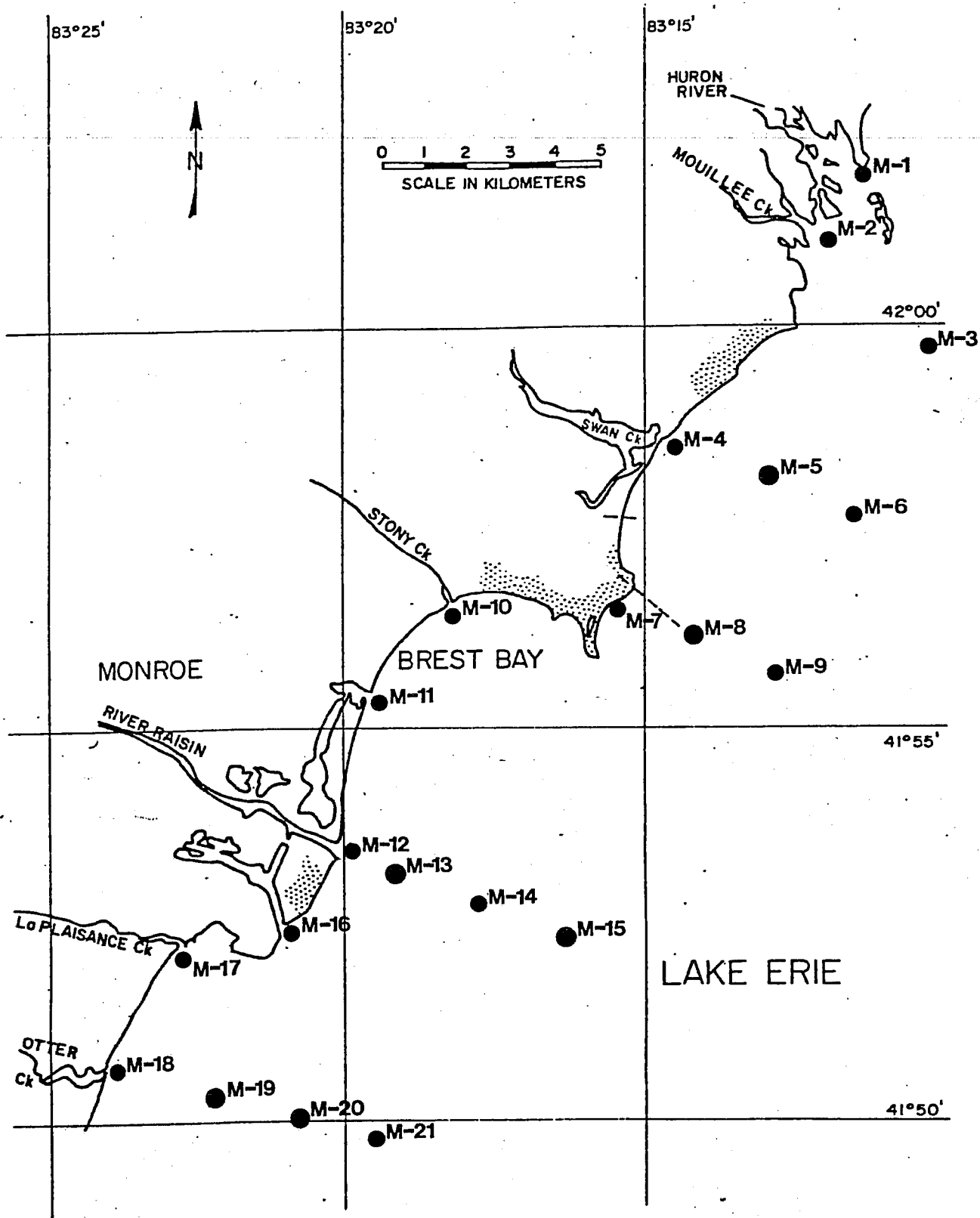


Figure 1. Nearshore Western Basin Station Map - Detroit River, Michigan to Otter Creek, Michigan.

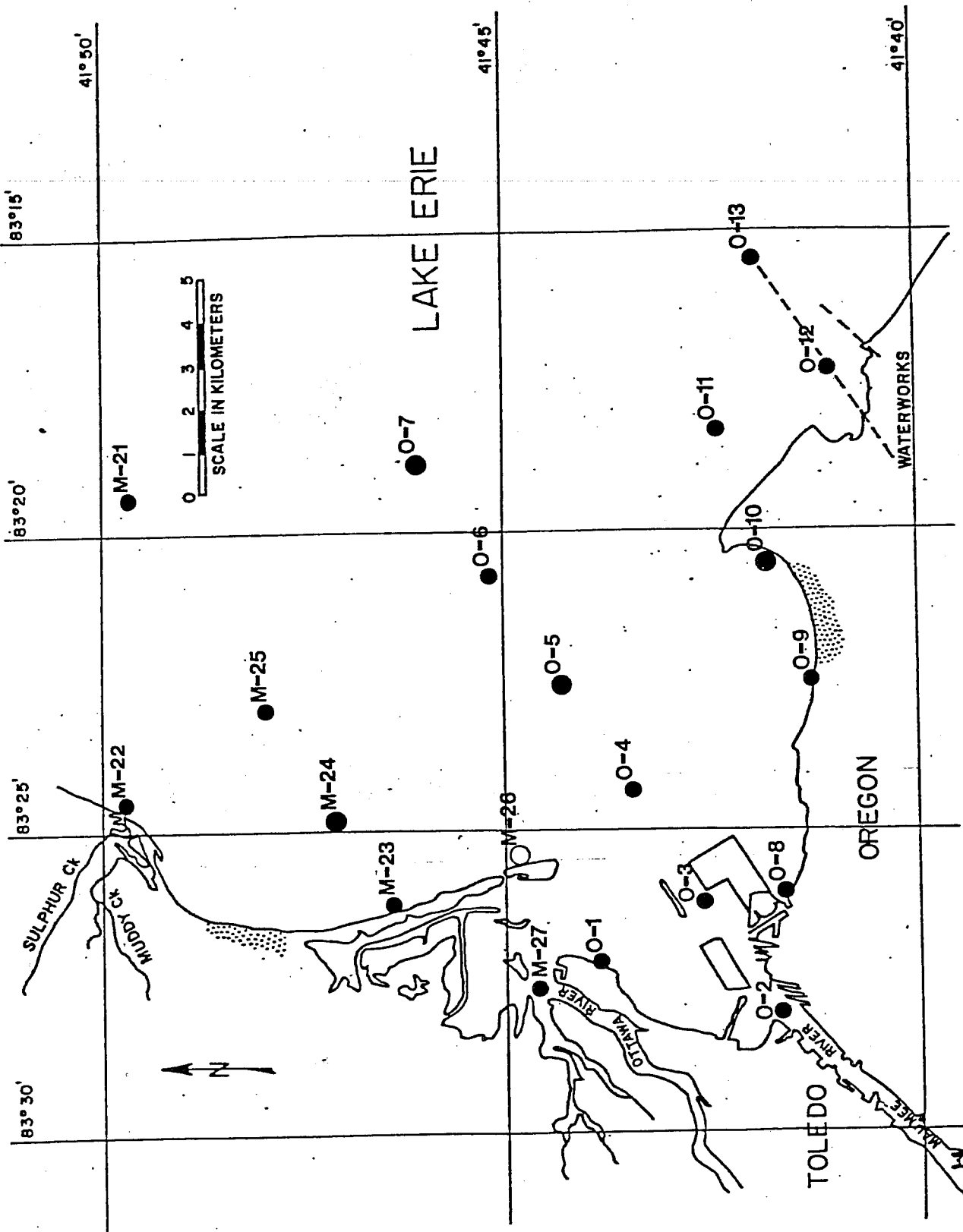


Figure 2. Nearshore Western Basin Station Map - Muddy Creek, Michigan to Toledo, Ohio's Water Intake.





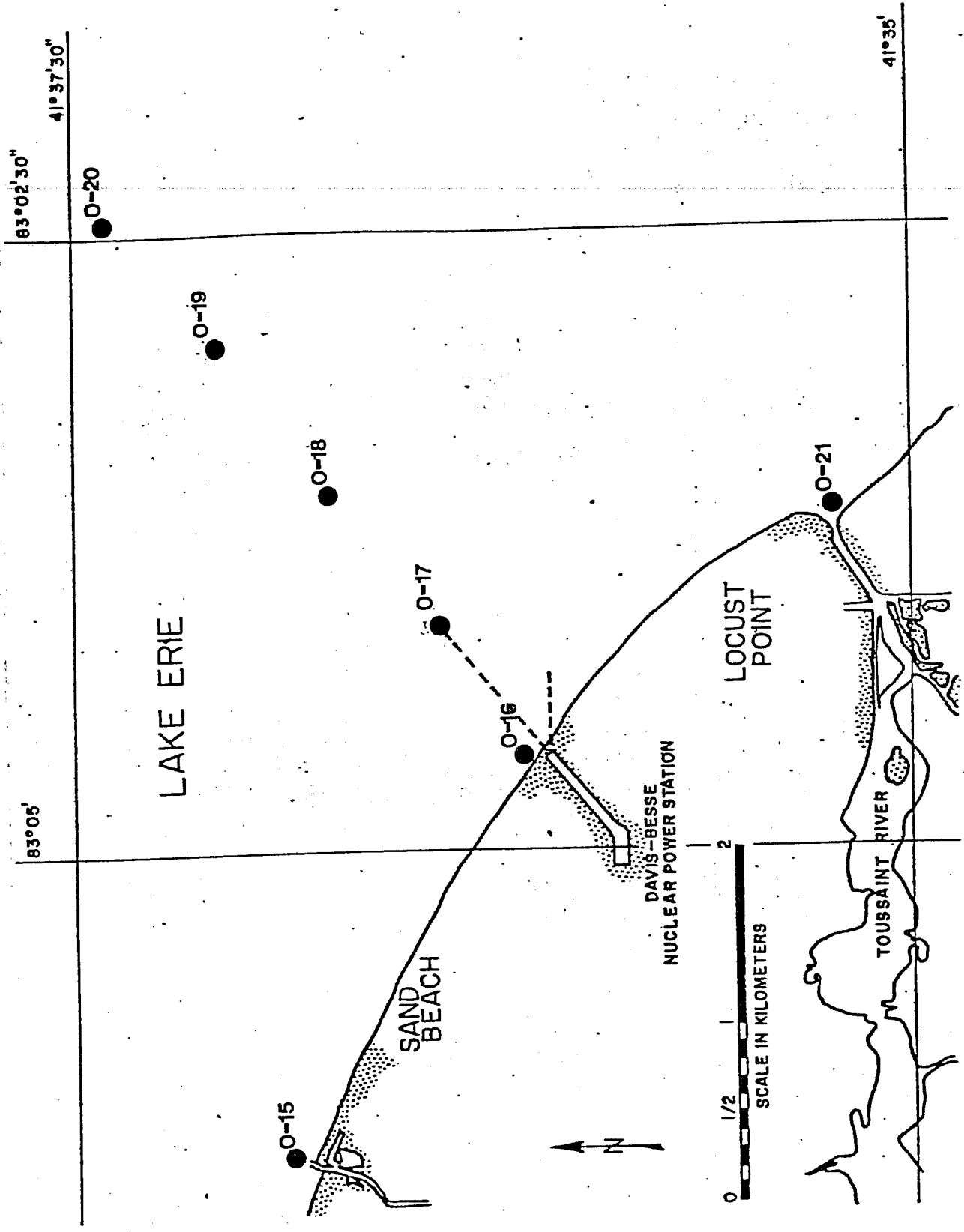


Figure 3. Nearshore Western Basin Station Map, Sand Beach to Locust Point, Ohio.

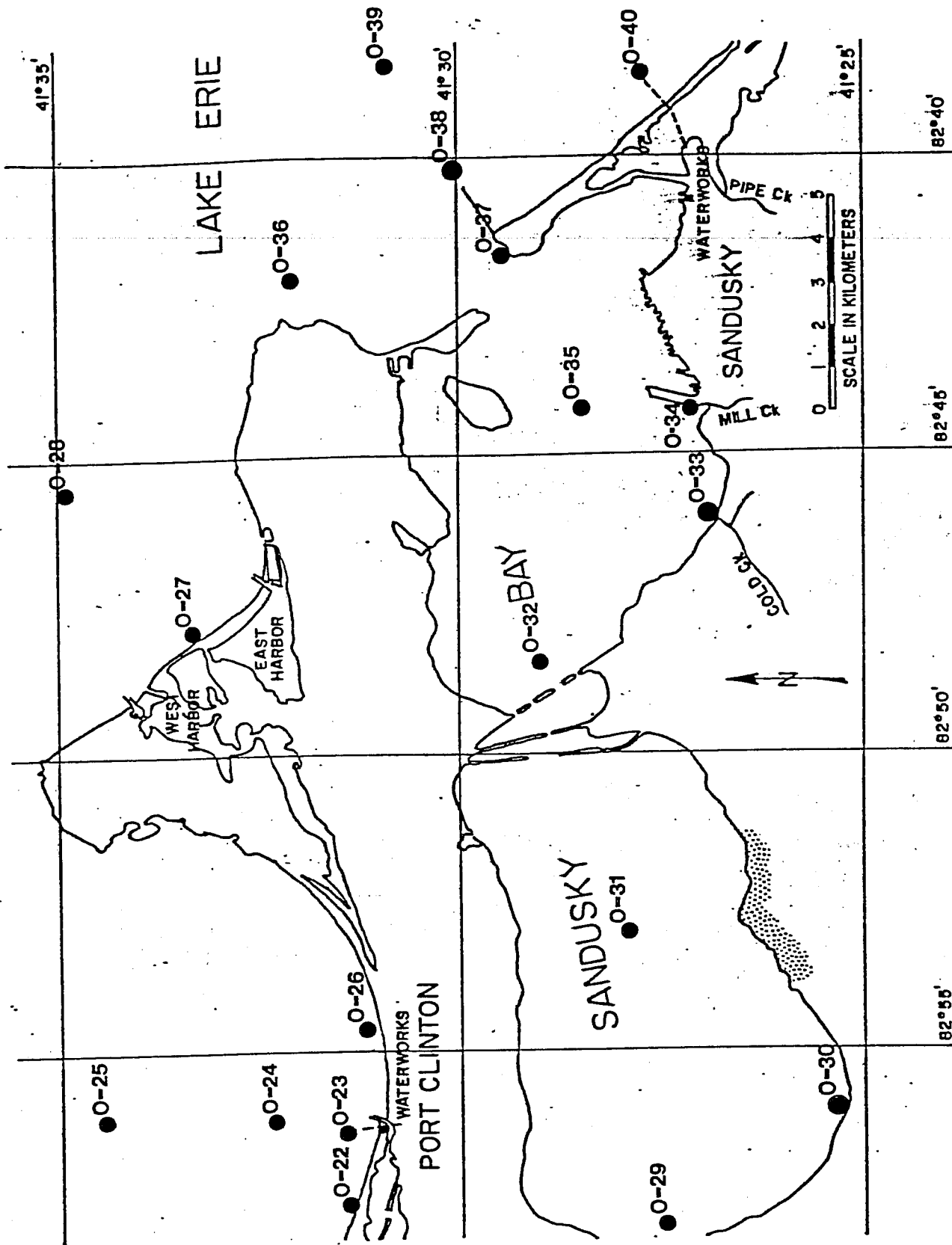


Figure 4. Nearshore Western Basin Station Map, Port Clinton, Ohio to Sandusky, Ohio including Sandusky Bay.

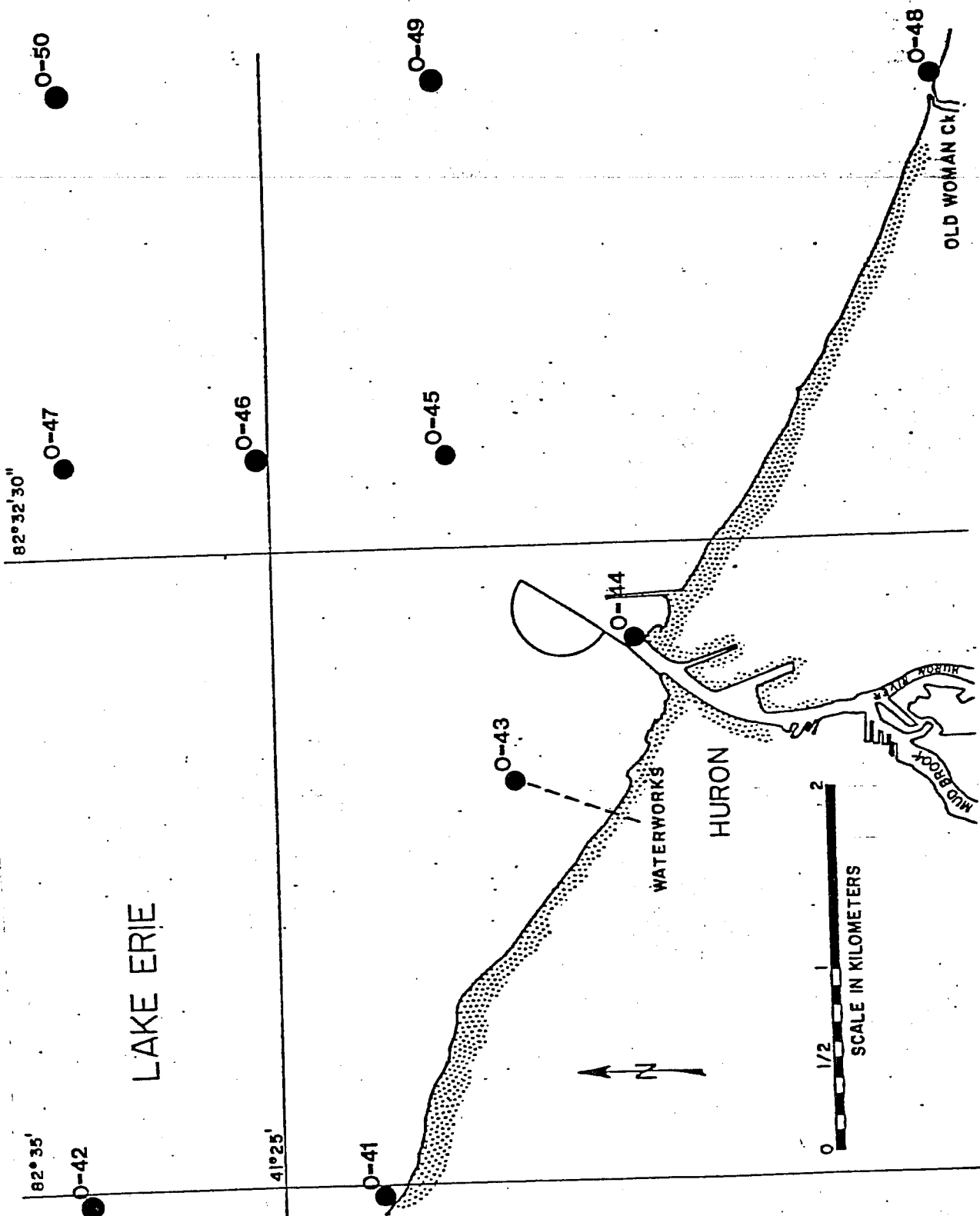


Figure 5. Nearshore Western Basin Station Map Sandusky, Ohio to Old Woman Creek, Ohio.