

Watershed Summary Information

Accounting Unit Name:	Eastern Lake Erie
State(s):	OH PA NY
Political Boundaries:	Erie, Chautauqua, Ashtabula, Crawford
Major Waterways:	Conneaut Cr Elk Cr Walnut Cr Canadaway Cr Chautauqua Cr
Number of Stations in Watershed:	Tier1 - 21 Tier2 - 86 Tier3 - 3

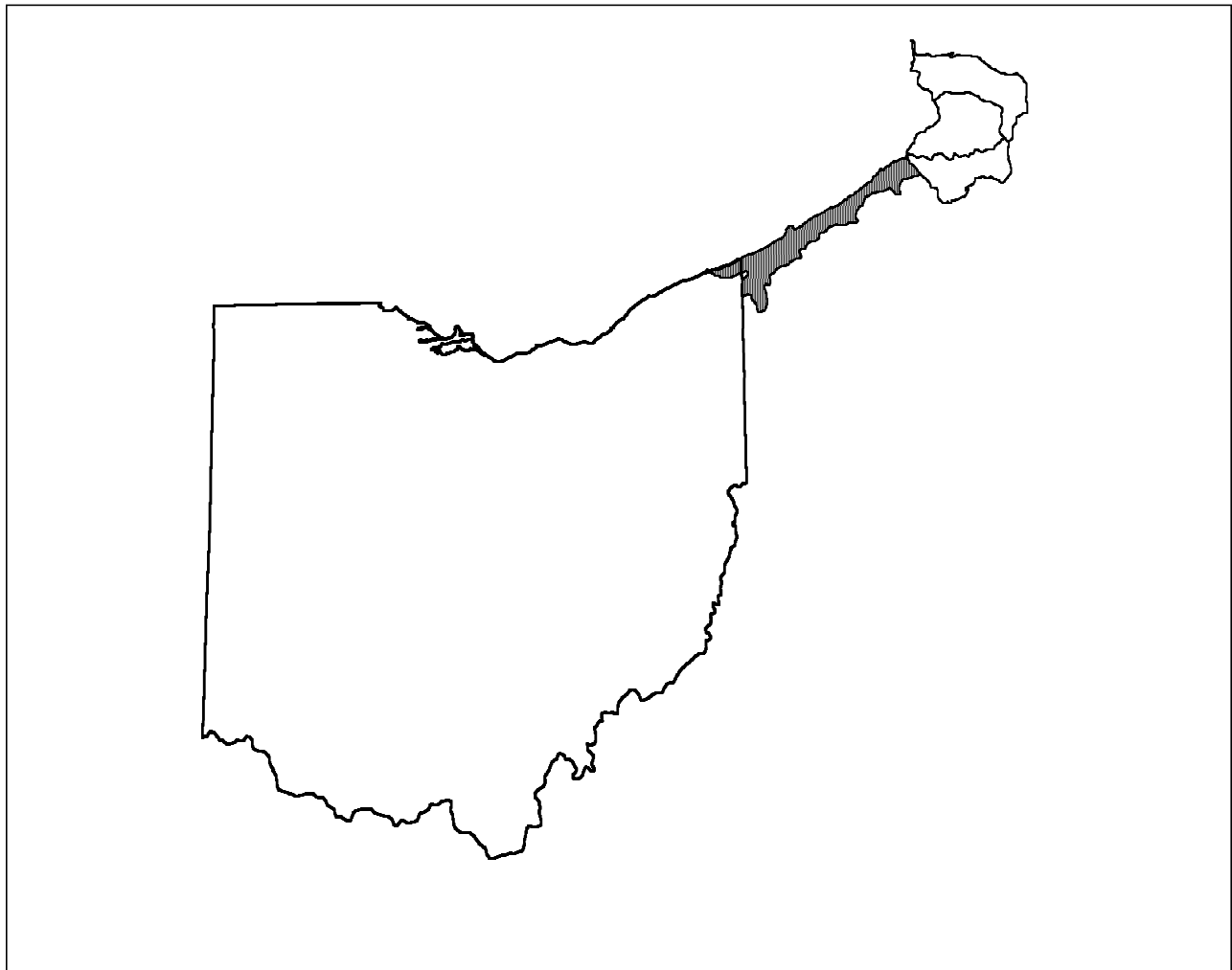


Figure 75. Watershed Location Map

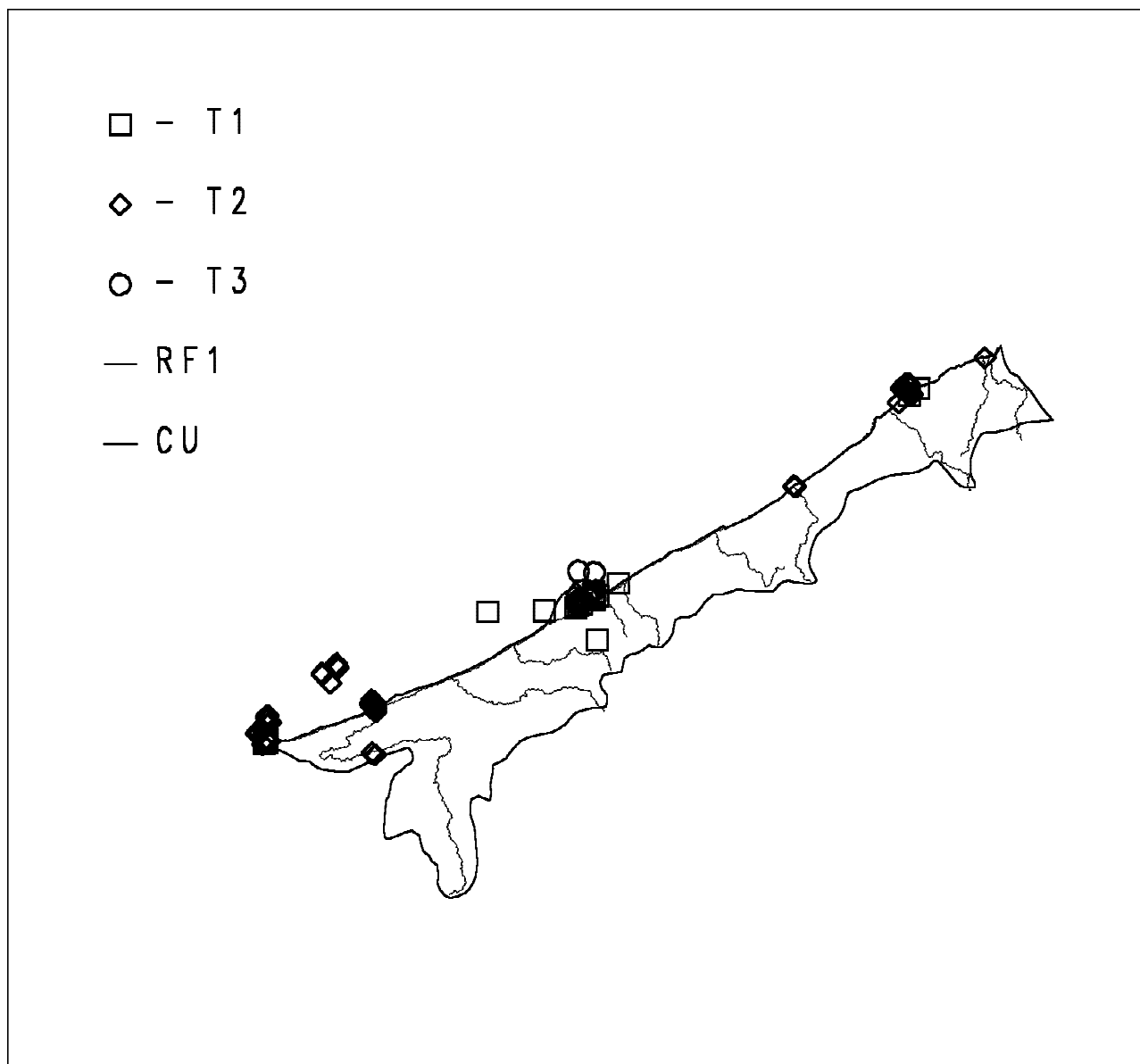


Figure 76. Major Waterways and Location of Sampling Stations

Data Source(s) Used in Evaluation

Source: **STORET** Agency: **11BIOACC**
 Monitoring Program: **USEPA National Bioaccumulation Study**
 Num. of Stations: 1 Date Range: 1989

Source: **STORET** Agency: **11COEBUF**
 Monitoring Program: **Corps of Engineers Data Buffalo District**
 Num. of Stations: 73 Date Range: 1982-89

Source: **STORET** Agency: **11COENCD**
 Monitoring Program: **Corps of Engineers North Central Division Water & Sediments Data**
 Num. of Stations: 10 Date Range: 1980

Source: **STORET** Agency: **11FWS**
Monitoring Program: **US Fish & Wildlife Service Data - USEPA Hq Backdata Study**
Num. of Stations: 1 Date Range: 1980-86

Source: **STORET** Agency: **1115GLSB**
Monitoring Program: **USEPA Region 5 Great Lakes Surveillance Branch Data**
Num. of Stations: 15 Date Range: 1982

Source: **STORET** Agency: **112WRD**
Monitoring Program: **US Geological Survey Data**
Num. of Stations: 2 Date Range: 1987-88

Source: **STORET** Agency: **21NYDECA**
Monitoring Program: **NY Dept of Env. Cons. Water Quality Network Data**
Num. of Stations: 2 Date Range: 1987-93

Source: **STORET** Agency: **21PA**
Monitoring Program: **Pennsylvania Dept of Environmental Resources Data**
Num. of Stations: 6 Date Range: 1985-91

Chemicals Responsible for Sampling Station Classification as Tier 1 or Tier 2

Classifying Parameter	Number of Stations							
	All Parameters				Aquatic Life		Human Health	
	Total	T.1&2	Tier1	Tier2	Tier1	Tier2	Tier1	Tier2
Nickel	90	83	.	83	.	83	.	.
Copper	97	76	.	76	.	76	.	.
Arsenic	90	65	.	65	.	64	.	1
Cadmium	108	61	.	61	.	61	.	.
Lead	106	34	.	34	.	33	.	1
Polychlorinated biphenyls	108	33	18	15	11	14	7	26
Zinc	94	30	.	30	.	30	.	.
Phenanthrene	71	28	3	25	3	25	.	.
Fluoranthene	70	25	2	23	2	23	.	.
Mercury	101	23	1	22	1	22	.	.
Pyrene	71	22	3	19	3	19	.	.
Bis(2-ethylhexyl)phthalate	55	15	4	11	4	11	.	4
DDT	96	13	.	13	.	13	.	1
Anthracene	65	10	1	9	1	9	.	.
Chromium	106	10	.	10	.	10	.	.
Chlordane	90	8	.	8	.	7	.	4
BHC	89	6	.	6	.	6	.	1
Benzo(a)anthracene	63	5	.	5	.	5	.	5
Dieldrin	83	5	.	5	.	1	.	4
Di-n-butyl phthalate	52	4	.	4	.	4	.	.
Silver	26	4	.	4	.	4	.	.
Benzo(k)fluoranthene	63	3	.	3	.	.	.	3
Benzo(a)anthracene/Chrysene	2	2	2	.	2	.	.	2

Classifying Parameter	Number of Stations							
	All Parameters				Aquatic Life		Human Health	
	Total	T.1&2	Tier1	Tier2	Tier1	Tier2	Tier1	Tier2
Benzo(a)pyrene	66	2	2	.	2	.	.	2
Acenaphthene	44	2	1	1	1	1	.	.
Fluorene	44	2	1	1	1	1	.	.
Methylnaphthalene, 2-	2	2	1	1	1	1	.	.
Acenaphthylene	43	1	1	.	1	.	.	.
Dibenzo(a,h)anthracene	63	1	1	.	1	.	.	1
Aldrin	82	1	.	1	.	.	.	1
Benzo(ghi)perylene	63	1	.	1	.	1	.	.
Hexachlorobutadiene	34	1	.	1	.	1	.	.
Indeno(1,2,3-cd)pyrene	63	1	.	1	.	1	.	1
Naphthalene	43	1	.	1	.	1	.	.
Toluene	44	1	.	1	.	1	.	.
Toxaphene	76	1	.	1	.	.	.	1

Sediment Chemistry Data: Chemical Summary

Sediment Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Acenaphthene	44	56.82	0.00	2	2300.00	200.00
Acenaphthylene	43	27.91	0.00	1	1200.00	1200.00
Acrylonitrile	5	0.00	0.00	0	.	.
Aldrin	95	0.00	0.00	0	.	.
Anthracene	73	314.24	0.00	10	17900.00	300.00
Arsenic	125	12230.38	14000.00	114	39000.00	1100.00
Benzene	46	0.18	0.00	5	2.30	1.10
Benzo(a)anthracene	71	30.31	0.00	10	600.00	0.32
Benzo(a)anthracene/Chrysene	2	49650.00	49650.00	2	88000.00	11300.00
Benzo(a)pyrene	74	1117.61	0.00	5	74500.00	0.41
Benzo(b)fluoranthene	30	0.00	0.00	0	.	.
Benzo(ghi)perylene	71	411.27	0.00	1	29200.00	29200.00
Benzo(k)fluoranthene	71	170.67	0.00	8	3269.00	460.00
Bis(2-ethylhexyl)phthalate	73	641.19	0.00	16	13890.00	120.00
Butyl benzyl phthalate	45	0.00	0.00	0	.	.
BHC	367	0.19	0.00	7	14.00	7.00
Cadmium	145	2434.76	1000.00	112	54400.00	200.00
Chlordane	92	1.49	0.00	8	53.00	2.00
Chlorobenzene	72	0.05	0.00	2	2.10	1.80
Chlorpyrifos/Dursban	2	0.00	0.00	0	.	.
Chromium	143	21793.50	17000.00	126	140000.0	3000.00
Chrysene	71	0.01	0.00	1	0.73	0.73
Copper	136	29560.22	28000.00	128	120000.0	7000.00
Di-n-butyl phthalate	60	211.67	0.00	9	3500.00	600.00
Di-n-octyl phthalate	57	0.00	0.00	0	.	.

Sediment Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Dibenzo(a,h)anthracene	71	97183.10	0.00	1	6900000	6900000
Dibenzofuran	1	400.00	400.00	1	400.00	400.00
Dibromochloromethane	41	0.00	0.00	0	.	.
Dichlorobenzene, 1,2-	70	0.00	0.00	0	.	.
Dichlorobenzene, 1,3-	54	0.00	0.00	0	.	.
Dichlorobenzene, 1,4-	58	0.00	0.00	0	.	.
Dichlorobenzenes	12	0.00	0.00	0	.	.
Dichloroethane 1,1-	30	0.04	0.00	1	1.20	1.20
Dichloroethane 1,2-	44	0.22	0.00	3	7.10	1.20
Dichloroethene, trans-1,2-	12	0.00	0.00	0	.	.
Dichloromethane	56	5.78	0.00	15	96.00	6.40
Dichloropropane, 1,2-	42	0.05	0.00	1	2.00	2.00
Dieldrin	95	0.01	0.00	1	1.00	1.00
Diethyl phthalate	41	0.00	0.00	0	.	.
Dimethyl phthalate	41	0.00	0.00	0	.	.
Dimethylphenol, 2,4-	17	0.00	0.00	0	.	.
Dioxins	5	0.00	0.00	0	.	.
DCPA/Dacthal	12	0.50	0.00	2	4.00	2.00
DDT	336	0.90	0.00	30	25.00	0.04
Endosulfan, alpha-	95	0.00	0.00	0	.	.
Endosulfan, beta-	102	0.25	0.00	7	10.00	1.00
Endrin	85	0.00	0.00	0	.	.
Ethylbenzene	44	0.10	0.00	3	1.80	1.10
Fluoranthene	78	1304.73	0.00	33	77000.00	0.60
Fluorene	44	479.55	0.00	2	21000.00	100.00
Heptachlor	95	0.00	0.00	0	.	.
Heptachlor epoxide	96	0.00	0.00	0	.	.
Hexachlorobenzene	65	0.78	0.00	13	17.00	1.00
Hexachlorobutadiene	42	4.05	0.00	1	170.00	170.00
Hexachloroethane	41	0.00	0.00	0	.	.
Indeno(1,2,3-cd)pyrene	71	549.30	0.00	1	39000.00	39000.00
Isophorone	17	0.00	0.00	0	.	.
Lead	144	29036.18	20000.00	128	187900.0	9000.00
Mercury	135	83.16	67.00	88	800.00	30.00
Methoxychlor	43	0.00	0.00	0	.	.
Methylnaphthalene, 2-	2	2250.00	2250.00	2	4300.00	200.00
Mirex/Dechlorane	43	0.00	0.00	0	.	.
Naphthalene	43	2.34	0.00	2	100.00	0.57
Nickel	133	29634.89	29000.00	121	116500.0	10000.00
Nitrosodiphenylamine, N-	17	0.00	0.00	0	.	.
Pentachlorophenol	17	0.00	0.00	0	.	.
Phenanthrene	79	1239.90	0.00	39	78800.00	0.32
Phenol	17	0.00	0.00	0	.	.
Polychlorinated biphenyls	510	13.03	0.00	74	650.00	0.04

Sediment Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Pyrene	79	1017.94	0.00	24	58000.00	0.95
Silver	26	288.46	0.00	8	2400.00	300.00
Tetrachloroethane, 1,1,2,2-	45	0.74	0.00	4	13.00	2.10
Tetrachloroethene	13	0.12	0.00	1	1.60	1.60
Tetrachloromethane	41	0.00	0.00	0	.	.
Toluene	53	57.47	0.00	21	2000.00	0.01
Toxaphene	85	0.00	0.00	0	.	.
Tribromomethane/Bromoform	42	0.21	0.00	1	9.00	9.00
Trichlorobenzene, 1,2,4-	42	0.00	0.00	0	.	.
Trichloroethane, 1,1,1-	41	0.00	0.00	0	.	.
Trichloroethane, 1,1,2-	41	0.00	0.00	0	.	.
Trichloroethene	13	1.31	0.00	1	17.00	17.00
Trichlorofluoromethane	41	0.00	0.00	0	.	.
Trichloromethane/Chloroform	42	0.02	0.00	1	1.00	1.00
Xylenes	3	1.73	1.50	3	2.40	1.30
Zinc	134	120597.8	110000.0	130	430000.0	10000.00

Tissue Residue Data: Chemical Summary

Tissue Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Aldrin	10	2.00	0.00	2	10.00	10.00
Arsenic	11	91.48	135.00	6	200.00	135.00
Biphenyl	1	0.00	0.00	0	.	.
BHC	30	4.15	0.00	13	10.00	4.65
Cadmium	12	44.60	49.00	12	71.68	16.00
Chlordane	48	26.64	10.00	35	500.00	5.75
Chlorpyrifos/Dursban	1	0.00	0.00	0	.	.
Chromium	6	240.83	279.50	5	435.00	162.00
Copper	12	1314.92	1130.00	11	3240.00	870.00
Dicofol/Kelthane	1	0.00	0.00	0	.	.
Dieldrin	15	13.27	10.00	9	36.00	10.00
Dioxins	2	0.00	0.00	1	0.00	0.00
DCPA/Dacthal	6	11.67	10.00	6	20.00	10.00
DDT	60	31.68	0.00	27	270.00	10.00
Endrin	15	4.00	0.00	6	10.00	10.00
Heptachlor	13	4.62	0.00	6	10.00	10.00
Heptachlor epoxide	9	2.22	0.00	2	10.00	10.00
Hexachlorobenzene	7	8.57	10.00	6	10.00	10.00
Hexachlorobutadiene	1	0.00	0.00	0	.	.
Isopropalin	1	0.00	0.00	0	.	.
Lead	12	301.18	125.00	11	2330.00	70.00
Mercury	11	117.98	50.00	11	322.00	20.00

Tissue Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Methoxychlor	9	0.00	0.00	0	.	.
Mirex/Dechlorane	11	5.45	10.00	6	10.00	10.00
Pentachlorobenzene	1	0.00	0.00	0	.	.
Pentachloronitrobenzene/Quin	1	0.00	0.00	0	.	.
Polychlorinated biphenyls	29	548.45	300.00	27	4140.00	30.00
Selenium	6	7899.10	498.80	6	45000.00	410.00
Tetrachlorobenzene, 1,2,4,5-	1	0.00	0.00	0	.	.
Toxaphene	6	111.67	100.00	6	170.00	100.00
Trichlorobenzene, 1,2,4-	1	0.00	0.00	0	.	.
Trifluralin/Treflan	1	0.00	0.00	0	.	.
Zinc	8	17755.00	14590.00	8	31200.00	12840.00