

Watershed Summary Information

Accounting Unit Name: Northeastern Lake Michigan

State(s): MI

Political Boundaries: Manistee, Kalkaska, Wexford, Crawford, Missaukee, Lake, Mason, Osceola, Otsego

Major Waterways: Manistee R
Little Manistee R
Pine R
Tippy Dam Pond
Manistee L

Number of Stations in Watershed: Tier1 - 11
Tier2 - 3
Tier3 - .



Figure 57. Watershed Location Map

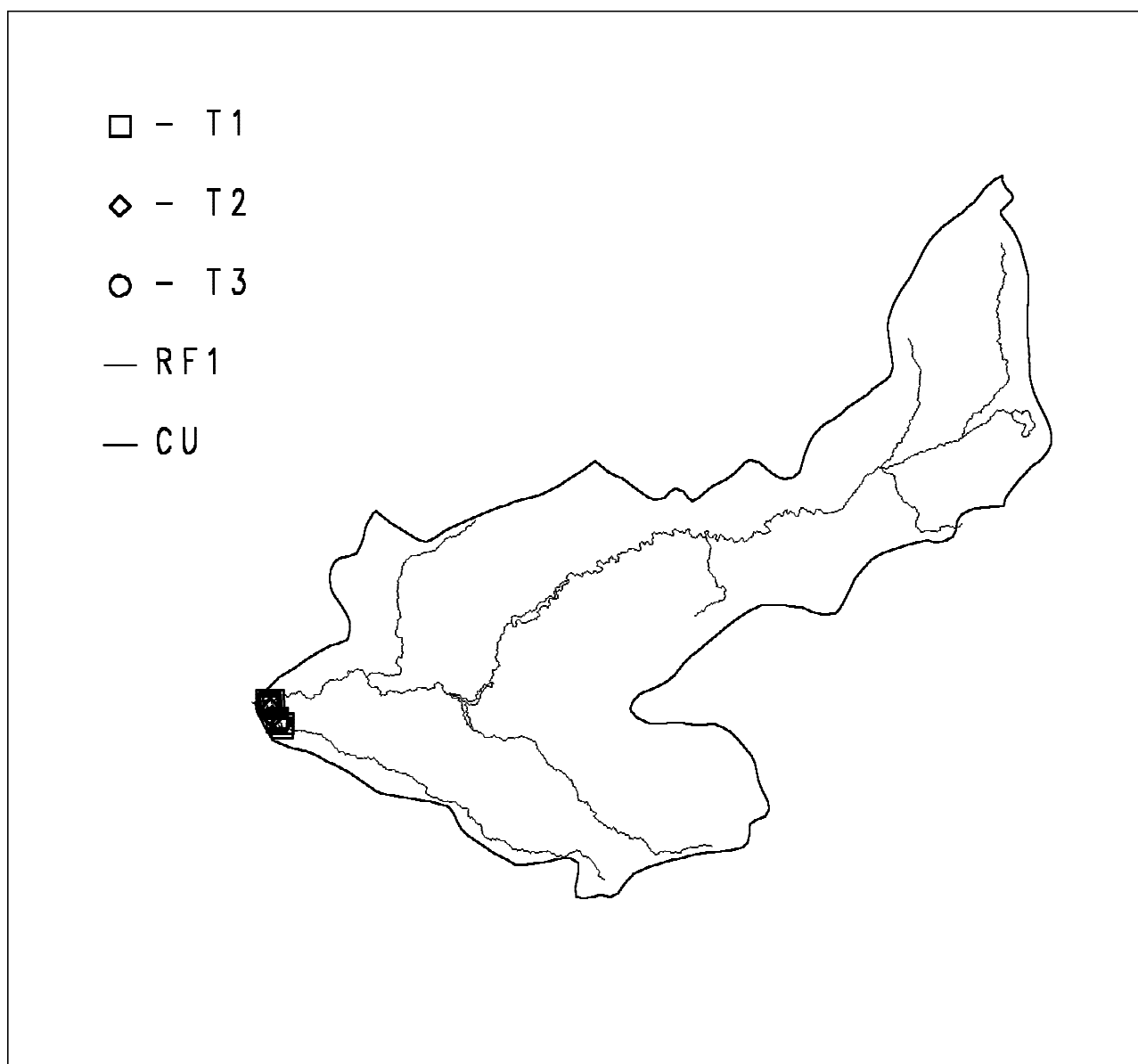


Figure 58. Major Waterways and Location of Sampling Stations

Data Source(s) Used in Evaluation

Source: **STORET** Agency: **1115GLSB**

Monitoring Program: **USEPA Region 5 Great Lakes Surveillance Branch Data**

Num. of Stations: 14 Date Range: 1981

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
Polychlorinated biphenyls	14	14	3	11	3	9	.	14
DDT	14	14	2	12	2	12	.	3
Anthracene&Phenanthrene	13	13	8	5	8	5	.	.
Fluoranthene	13	13	.	13	.	13	.	.
Naphthalene	12	12	10	2	10	2	.	.
Pyrene	13	12	4	8	4	8	.	.
Copper	14	10	.	10	.	10	.	.
Mercury	14	9	2	7	2	7	.	.
Lead	14	9	.	9	.	9	.	.
Nickel	14	9	.	9	.	9	.	.
Zinc	14	7	.	7	.	7	.	.
Benzo(a)anthracene/Chrysene	6	6	5	1	5	1	.	6
Acenaphthylene	5	5	2	3	2	3	.	.
Acenaphthene	5	5	1	4	1	4	.	.
Aldrin	6	5	.	5	.	.	.	5
Bis(2-ethylhexyl)phthalate	5	5	.	5	.	5	.	.
BHC	5	5	.	5	.	5	.	.
Fluorene	5	5	.	5	.	5	.	.
Cadmium	14	4	.	4	.	4	.	.
Chlordane	7	3	.	3	.	3	.	.
Benzo(a)pyrene	2	2	1	1	1	1	.	2
Silver	14	2	1	1	1	1	.	.
Dieldrin	3	2	.	2	.	2	.	.
Heptachlor	5	2	.	2	.	.	.	2
Hexachlorobenzene	8	2	.	2	.	2	.	.
Methoxychlor	2	2	.	2	.	2	.	.
Chromium	14	1	.	1	.	1	.	.
Diethyl phthalate	1	1	.	1	.	1	.	.
Dimethyl phthalate	1	1	.	1	.	1	.	.
Endosulfan, beta-	14	1	.	1	.	1	.	.
Heptachlor epoxide	1	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	5	450.00	280.00	5	1400.00	60.00
Acenaphthylene	5	840.00	600.00	5	1850.00	150.00
Aldrin	6	5.67	4.50	5	13.00	2.00
Anthracene&Phenanthrene	13	1944.62	1190.00	13	5100.00	170.00
Benzo(a)anthracene/Chrysene	6	8616.67	3970.00	6	33500.00	880.00

Sediment Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Benzo(a)pyrene	2	4640.00	4640.00	2	8160.00	1120.00
Bis(2-ethylhexyl)phthalate	5	1354.00	1500.00	5	1930.00	440.00
BHC	8	3.13	3.00	7	9.00	1.00
Cadmium	14	550.00	450.00	10	2500.00	300.00
Chlordane	7	2.86	2.00	5	9.00	2.00
Chromium	14	38814.29	26000.00	14	230000.0	3100.00
Copper	14	67042.86	51000.00	14	220000.0	7700.00
Di-n-butyl phthalate	13	459.85	407.00	13	1118.00	115.00
Dieldrin	3	0.67	1.00	2	1.00	1.00
Diethyl phthalate	1	610.00	610.00	1	610.00	610.00
Dimethyl phthalate	1	840.00	840.00	1	840.00	840.00
DCPA/Dacthal	11	2.55	3.00	8	8.00	1.00
DDT	64	8.45	4.00	57	63.00	1.00
Endosulfan, alpha-	1	1.00	1.00	1	1.00	1.00
Endosulfan, beta-	14	5.07	3.00	14	19.00	1.00
Endrin	1	6.00	6.00	1	6.00	6.00
Fluoranthene	13	1831.54	1320.00	13	4800.00	120.00
Fluorene	5	250.00	260.00	5	400.00	90.00
Heptachlor	5	3.20	2.00	5	6.00	1.00
Heptachlor epoxide	1	11.00	11.00	1	11.00	11.00
Hexachlorobenzene	8	23.00	3.00	6	88.00	1.00
Lead	14	65857.14	82500.00	13	110000.0	12000.00
Mercury	14	307.14	250.00	10	1100.00	100.00
Methoxychlor	2	23.00	23.00	2	24.00	22.00
Naphthalene	12	2252.50	980.00	12	8600.00	230.00
Nickel	14	25192.86	17500.00	14	150000.0	3500.00
Polychlorinated biphenyls	46	86.41	58.50	46	634.00	9.00
Pyrene	13	3000.77	1350.00	13	16400.00	120.00
Silver	14	528.57	0.00	4	5300.00	300.00
Zinc	14	137428.6	120000.0	14	260000.0	22000.00