

**Watershed Summary Information**

**Accounting Unit Name:** Southwestern Lake Michigan

**State(s):** WI

**Political Boundaries:** Washington, Ozaukee, Sheboygan, Fond Du Lac, Milwaukee, Dodge

**Major Waterways:** Milwaukee R  
Milwaukee R, N Br  
Cedar Cr  
Milwaukee R, W Br  
Mink Cr

**Number of Stations in Watershed:** Tier1 - 60  
Tier2 - 16  
Tier3 - 14



Figure 53. Watershed Location Map

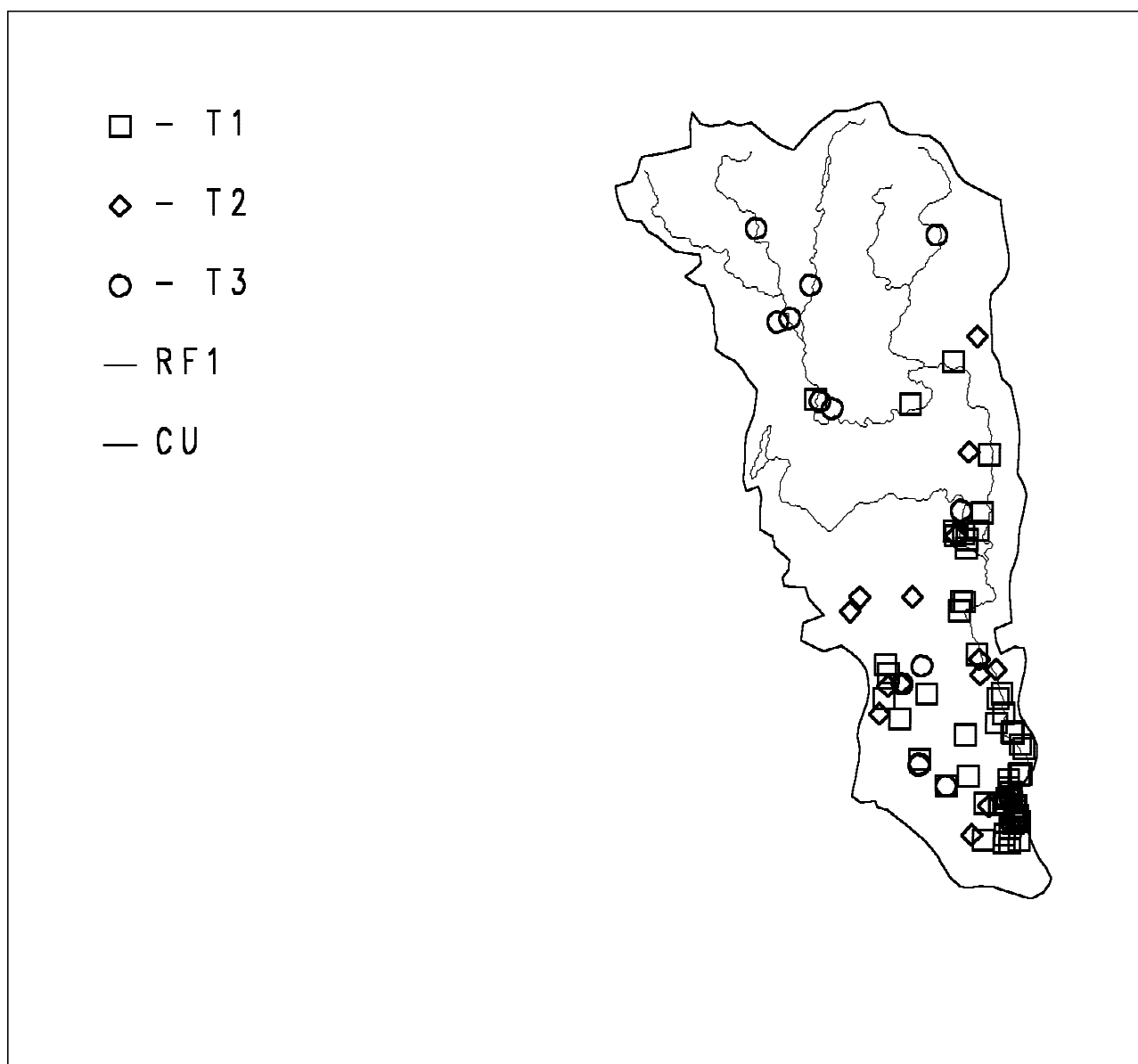


Figure 54. Major Waterways and Location of Sampling Stations

## Data Source(s) Used in Evaluation

Source: **STORET** Agency: **11BIOACC**  
 Monitoring Program: **USEPA National Bioaccumulation Study**  
 Num. of Stations: 1 Date Range: 1987

Source: **STORET** Agency: **1115GLSB**  
 Monitoring Program: **USEPA Region 5 Great Lakes Surveillance Branch Data**  
 Num. of Stations: 19 Date Range: 1980

Source: **STORET** Agency: **112WRD**  
 Monitoring Program: **US Geological Survey Data**  
 Num. of Stations: 27 Date Range: 1982-89

Source: **STORET** Agency: **21WIS**

Monitoring Program: **Wisconsin DNR Div Env Protection Water And Sediment Data**

Num. of Stations: 8 Date Range: 1980-93

Source: **STORET** Agency: **21WITIS**

Monitoring Program: **Tissue Data Wisconsin Dept of Nat Res Div of Environ Protection**

Num. of Stations: 35 Date Range: 1980-90

## 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	71	46	43	3	16	2	27	19
Copper	60	43	.	43	.	43	.	.
Cadmium	57	41	.	41	.	41	.	.
Lead	58	37	.	37	.	36	.	1
Zinc	43	34	.	34	.	34	.	.
DDT	54	32	5	27	5	17	.	16
Mercury	61	27	5	22	5	22	.	.
Bis(2-ethylhexyl)phthalate	31	26	10	16	10	16	.	10
Nickel	27	25	.	25	.	25	.	.
Benzo(a)pyrene	32	24	18	6	18	6	.	24
Pyrene	31	24	14	10	14	10	.	.
Fluoranthene	32	24	13	11	13	11	.	.
Indeno(1,2,3-cd)pyrene	32	23	.	23	.	22	.	23
Dieldrin	53	22	.	22	.	13	.	9
Benzo(ghi)perylene	31	20	.	20	.	20	.	.
Arsenic	59	19	2	17	2	17	.	.
Chromium	59	18	4	14	4	14	.	.
Fluorene	31	17	11	6	11	6	.	.
Dibenzo(a,h)anthracene	31	16	16	.	16	.	.	16
Phenanthrene	23	16	11	5	11	5	.	.
Acenaphthene	31	16	8	8	8	8	.	.
Chlordane	51	16	.	16	.	14	.	16
Chrysene	22	14	10	4	10	4	.	.
Benzo(a)anthracene	22	12	8	4	8	4	.	12
Benzo(b)fluoranthene	22	12	.	12	.	1	.	12
Benzo(a)anthracene/Chrysene	10	10	10	.	10	.	.	10
Anthracene	22	10	4	6	4	6	.	.
Acenaphthylene	31	10	2	8	2	8	.	.
Anthracene&Phenanthrene	9	9	9	.	9	.	.	.
Diethyl phthalate	31	9	3	6	3	6	.	.
Naphthalene	30	9	3	6	3	6	.	.
Diazinon/Spectracide	27	7	.	7	.	7	.	.
Benzo(k)fluoranthene	22	5	.	5	.	1	.	5
BHC	42	3	1	2	1	.	.	2

Classifying Parameter	Number of Stations							
	All Parameters				Aquatic Life		Human Health	
	Total	T.1&2	Tier1	Tier2	Tier1	Tier2	Tier1	Tier2
Butyl benzyl phthalate	25	3	.	3	.	3	.	.
Dioxins	2	2	2	.	.	.	2	.
Aldrin	41	2	.	2	.	.	.	2
Dimethylphenol, 2,4-	24	2	.	2	.	2	.	.
Dichlorobenzene, 1,4-	23	1	1	.	1	.	.	.
Di-n-butyl phthalate	30	1	.	1	.	1	.	.
Heptachlor	29	1	.	1	.	.	.	1
Heptachlor epoxide	29	1	.	1	.	.	.	1
Malathion	27	1	.	1	.	1	.	.
Nitrosodiphenylamine, N-	23	1	.	1	.	1	.	.
Toxaphene	32	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	31	401.29	210.00	16	2470.00	210.00
Acenaphthylene	31	151.29	0.00	10	1220.00	110.00
Aldrin	31	4.52	0.00	2	70.00	70.00
Anthracene	22	435.91	0.00	10	2000.00	340.00
Anthracene&Phenanthrene	9	14961.11	15300.00	9	36200.00	1390.00
Antimony	22	500.00	0.00	10	2000.00	1000.00
Arsenic	43	18639.53	7000.00	43	200000.0	1000.00
Benzo(a)anthracene	22	1515.00	615.00	12	8000.00	420.00
Benzo(a)anthracene/Chrysene	10	21389.00	15500.00	10	82900.00	2050.00
Benzo(a)pyrene	32	3408.75	1800.00	24	19100.00	500.00
Benzo(b)fluoranthene	22	1046.36	600.00	12	6100.00	460.00
Benzo(ghi)perylene	31	2323.23	1400.00	22	9100.00	490.00
Benzo(k)fluoranthene	22	1159.09	945.00	13	6000.00	510.00
Bis(2-ethylhexyl)phthalate	31	3578.06	830.00	26	19000.00	220.00
Bromophenyl phenyl ether, 4-	22	0.00	0.00	0	.	.
Butyl benzyl phthalate	25	327.20	0.00	9	2200.00	220.00
BHC	30	0.33	0.00	1	10.00	10.00
Cadmium	43	4676.74	3000.00	41	17500.00	800.00
Chlordane	27	7.19	7.00	15	20.00	2.00
Chromium	44	89545.45	42500.00	43	616000.0	15000.00
Chrysene	22	2492.73	1500.00	14	8800.00	800.00
Copper	44	80204.55	52500.00	44	380000.0	2000.00
Di-n-butyl phthalate	30	209.00	0.00	10	3800.00	100.00
Di-n-octyl phthalate	27	55.56	0.00	5	520.00	140.00
Diazinon/Spectracide	29	0.23	0.00	13	2.20	0.10
Dibenzo(a,h)anthracene	31	1214.84	440.00	16	6250.00	440.00
Dichlorobenzene, 1,2-	22	0.00	0.00	0	.	.

Sediment Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Dichlorobenzene, 1,3-	23	7.83	0.00	1	180.00	180.00
Dichlorobenzene, 1,4-	23	34.35	0.00	1	790.00	790.00
Dieldrin	29	0.45	0.00	13	1.00	1.00
Diethyl phthalate	31	221.29	0.00	10	2400.00	140.00
Dimethyl phthalate	22	0.00	0.00	0	.	.
Dimethylphenol, 2,4-	24	22.92	0.00	2	410.00	140.00
DDT	96	9.01	3.00	70	160.00	0.05
Endosulfan mixed isomers	29	0.03	0.00	1	1.00	1.00
Endrin	29	0.01	0.00	1	0.40	0.40
Ethion/Bladen	24	0.01	0.00	2	0.10	0.10
Fluoranthene	32	8461.25	2575.00	24	64700.00	310.00
Fluorene	31	535.81	250.00	17	2640.00	210.00
Heptachlor	30	6.67	0.00	1	200.00	200.00
Heptachlor epoxide	30	1.34	0.00	2	40.00	0.20
Hexachlorobenzene	22	0.00	0.00	0	.	.
Hexachlorobutadiene	22	0.00	0.00	0	.	.
Hexachloroethane	22	0.00	0.00	0	.	.
Indeno(1,2,3-cd)pyrene	32	2674.06	1675.00	23	11000.00	640.00
Isophorone	22	0.00	0.00	0	.	.
Lead	44	188068.2	95000.00	43	838000.0	20000.00
Malathion	29	0.04	0.00	1	1.10	1.10
Mercury	44	305.00	195.00	41	1480.00	40.00
Methoxychlor	29	0.00	0.00	0	.	.
Mirex/Dechlorane	29	0.03	0.00	1	1.00	1.00
Naphthalene	30	293.67	0.00	9	5680.00	220.00
Nickel	27	24592.59	21000.00	26	40000.00	10000.00
Nitrosodiphenylamine, N-	23	26.09	0.00	1	600.00	600.00
Pentachlorophenol	22	0.00	0.00	0	.	.
Phenanthrene	23	2225.22	1400.00	16	9900.00	220.00
Phenol	22	0.00	0.00	0	.	.
Polychlorinated biphenyls	76	1425.37	85.00	46	9660.00	20.00
Pyrene	31	6195.48	2000.00	24	48900.00	290.00
Silver	1	0.00	0.00	0	.	.
Toxaphene	28	0.00	0.00	0	.	.
Trichlorobenzene, 1,2,4-	22	0.00	0.00	0	.	.
Zinc	43	302139.5	220000.0	43	919000.0	73000.00

## Tissue Residue Data: Chemical Summary

Tissue Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Aldrin	23	0.00	0.00	0	.	.
Arsenic	32	0.00	0.00	0	.	.
Biphenyl	1	0.00	0.00	0	.	.
BHC	43	1.31	0.00	4	20.00	6.28
Cadmium	30	3.00	0.00	2	50.00	40.00
Chlordane	264	5.48	0.00	23	120.00	30.90
Chlorpyrifos/Dursban	1	0.00	0.00	0	.	.
Chromium	31	126.77	0.00	8	800.00	30.00
Copper	32	2069.37	1800.00	32	5000.00	810.00
Dicofol/Kelthane	1	0.00	0.00	0	.	.
Dieldrin	68	11.09	0.00	16	150.00	0.02
Dioxins	6	6666.69	0.04	6	20000.00	0.02
DDT	397	61.49	0.00	95	1800.00	50.00
Endrin	26	0.00	0.00	0	.	.
Heptachlor	1	0.00	0.00	0	.	.
Heptachlor epoxide	1	0.00	0.00	0	.	.
Hexachlorobenzene	26	0.18	0.00	3	4.69	0.01
Hexachlorobutadiene	1	0.00	0.00	0	.	.
Isopropalin	1	0.00	0.00	0	.	.
Lead	29	234.48	0.00	2	6000.00	800.00
Mercury	33	64.24	40.00	30	280.00	20.00
Methoxychlor	22	0.00	0.00	0	.	.
Mirex/Dechlorane	1	2.90	2.90	1	2.90	2.90
Pentachlorobenzene	1	0.00	0.00	0	.	.
Pentachloronitrobenzene/Quin	1	0.00	0.00	0	.	.
Pentachlorophenol	19	0.00	0.00	0	.	.
Polychlorinated biphenyls	130	10805.46	2900.00	104	160000.0	210.00
Tetrachlorobenzene, 1,2,4,5-	1	0.00	0.00	0	.	.
Toxaphene	9	111.11	0.00	1	1000.00	1000.00
Trichlorobenzene, 1,2,4-	1	0.00	0.00	0	.	.
Trichlorophenol, 2,4,5-	7	0.00	0.00	0	.	.
Trichlorophenol, 2,4,6-	7	0.00	0.00	0	.	.
Trifluralin/Treflan	1	0.00	0.00	0	.	.