

## Watershed Summary Information

<b>Accounting Unit Name:</b>	Middle Tennessee-Hiwassee
<b>State(s):</b>	TN GA (AL)
<b>Political Boundaries:</b>	Hamilton, Rhea, Meigs, Catoosa, Bledsoe, Sequatchie, Walker, Dade, Marion, Whitfield, Roane, Jackson, Bradley, McMinn
<b>Major Waterways:</b>	Tennessee R Hiwassee R Chickamauga Cr W Chickamauga Cr L Chickamauga
<b>Number of Stations in Watershed:</b>	Tier1 - 47 Tier2 - 29 Tier3 - 18



Figure 101. Watershed Location Map

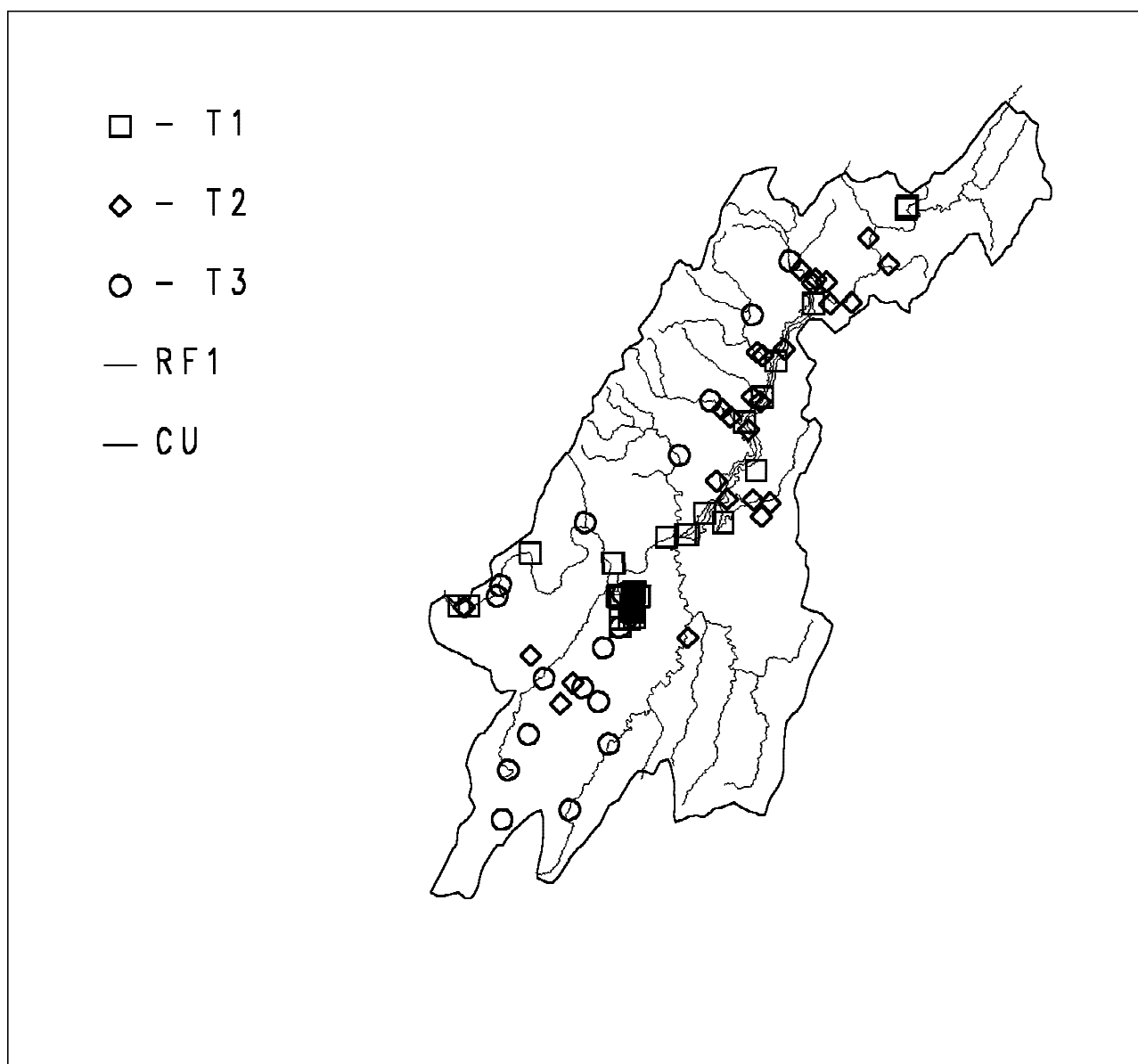


Figure 102. Major Waterways and Location of Sampling Stations

## Data Source(s) Used in Evaluation

Source: **ODES** Agency: **TN**  
 Monitoring Program: **Tennessee**  
 Num. of Stations: 1 Date Range: 1987

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

Source: **STORET** Agency: **112WRD**  
 Monitoring Program: **US Geological Survey Data**  
 Num. of Stations: 18 Date Range: 1980-81

Source: **STORET** Agency: **131TVAC**  
Monitoring Program: **Tennessee Valley Authority Water, Sediment And Tissue Data**  
Num. of Stations: 50 Date Range: 1980-93

Source: **STORET** Agency: **132TVAC**  
Monitoring Program: **WQ Monitoring Tenn Valley Authority**  
Num. of Stations: 3 Date Range: 1984

Source: **STORET** Agency: **21GAEPD**  
Monitoring Program: **GA Dept of Nat Resources Resources Data**  
Num. of Stations: 2 Date Range: 1982-91

Source: **STORET** Agency: **21TNWQ**  
Monitoring Program: **Tennessee Dept of Public Health Water, Sediment & Tissue Data**  
Num. of Stations: 19 Date Range: 1981-91

## 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
Copper	80	41	.	41	.	41	.	.
Nickel	58	39	.	39	.	39	.	.
Lead	65	30	.	30	.	30	.	.
Mercury	63	29	14	15	14	15	.	.
Acenaphthene	28	23	22	1	22	1	.	2
Fluoranthene	27	23	18	5	18	5	.	7
Anthracene	26	22	21	1	21	1	.	.
Fluorene	28	22	21	1	21	1	.	4
Pyrene	24	21	19	2	19	2	.	7
Zinc	62	20	.	20	.	20	.	.
Polychlorinated biphenyls	59	17	16	1	.	.	16	1
Chromium	83	17	1	16	1	16	.	.
Benzo(a)anthracene	19	14	13	1	13	1	.	14
Phenanthrene	18	14	12	2	12	2	.	.
Arsenic	34	13	.	13	.	8	.	5
Cadmium	66	10	.	10	.	10	.	.
Naphthalene	16	8	8	.	8	.	.	4
Bis(2-ethylhexyl)phthalate	12	7	3	4	3	4	.	3
Ethylbenzene	18	7	.	7	.	7	.	.
Benzo(a)pyrene	12	6	4	2	4	2	.	6
Chrysene	11	6	2	4	2	4	.	.
Chlordane	48	6	.	6	.	3	.	6
Acenaphthylene	12	5	4	1	4	1	.	.
DDT	44	5	1	4	1	2	.	2
Benzene	17	5	.	5	.	5	.	.
Benzo(b)fluoranthene	12	5	.	5	.	3	.	5
Dieldrin	46	5	.	5	.	.	.	5

Classifying Parameter	Number of Stations							
	All Parameters				Aquatic Life		Human Health	
	Total	T.1&2	Tier1	Tier2	Tier1	Tier2	Tier1	Tier2
Beryllium	8	4	.	4	.	.	.	4
Silver	21	4	.	4	.	4	.	.
Benzo(ghi)perylene	12	3	.	3	.	3	.	.
Benzo(k)fluoranthene	12	3	.	3	.	3	.	3
BHC	46	3	.	3	.	1	.	3
Heptachlor epoxide	46	3	.	3	.	.	.	3
Dichlorobenzene, 1,2-	12	2	2	.	2	.	.	.
Dichlorobenzene, 1,4-	12	2	2	.	2	.	.	1
Dioxins	2	2	2	.	.	.	2	.
Trichlorobenzene, 1,2,4-	14	2	.	2	.	2	.	.
Dibenzo(a,h)anthracene	12	1	1	.	1	.	.	1
Aldrin	44	1	.	1	.	.	.	1
Indeno(1,2,3-cd)pyrene	12	1	.	1	.	.	.	1
Phenol	13	1	.	1	.	1	.	.
Tetrachloroethene	12	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	93918.71	6100.00	25	1200000	420.00
Acenaphthylene	13	1034.62	0.00	5	10000.00	260.00
Acrylonitrile	13	0.00	0.00	0	.	.
Aldrin	50	0.00	0.00	0	.	.
Anthracene	28	177006.3	56850.00	24	722000.0	490.00
Antimony	14	0.00	0.00	0	.	.
Arsenic	31	5758.06	3000.00	24	19000.00	200.00
Benzene	18	57.82	0.00	7	490.00	8.00
Benzo(a)anthracene	20	327375.0	4050.00	14	1440000	1500.00
Benzo(a)pyrene	13	1824.62	270.00	7	8400.00	270.00
Benzo(b)fluoranthene	13	1938.46	0.00	6	10600.00	300.00
Benzo(ghi)perylene	13	1636.92	0.00	4	16000.00	380.00
Benzo(k)fluoranthene	13	2021.54	0.00	6	10600.00	300.00
Bis(2-ethylhexyl)phthalate	13	3957.69	250.00	7	41000.00	250.00
Bromophenyl phenyl ether, 4-	13	0.00	0.00	0	.	.
Butyl benzyl phthalate	13	16.92	0.00	1	220.00	220.00
BHC	193	186.53	0.00	2	29600.00	6400.00
Cadmium	75	415.20	0.00	12	5800.00	400.00
Chlordane	53	1.38	0.00	4	22.00	15.00
Chlorobenzene	13	45.23	0.00	3	560.00	13.00
Chromium	121	41250.41	33000.00	114	290000.0	3000.00
Chrysene	12	2258.33	400.00	6	16000.00	800.00
Copper	94	32375.53	26000.00	81	330000.0	1000.00

Sediment Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Di-n-butyl phthalate	13	0.00	0.00	0	.	.
Di-n-octyl phthalate	13	0.00	0.00	0	.	.
Dibenzo(a,h)anthracene	13	200.00	0.00	1	2600.00	2600.00
Dibromochloromethane	13	0.00	0.00	0	.	.
Dichlorobenzene, 1,2-	13	160.77	0.00	2	1210.00	880.00
Dichlorobenzene, 1,3-	13	23.08	0.00	1	300.00	300.00
Dichlorobenzene, 1,4-	13	230.77	0.00	2	1700.00	1300.00
Dichloroethane 1,1-	13	0.00	0.00	0	.	.
Dichloroethane 1,2-	13	0.00	0.00	0	.	.
Dichloroethene, trans-1,2-	13	0.00	0.00	0	.	.
Dichloromethane	13	78.15	17.00	12	750.00	13.00
Dichloropropane, 1,2-	13	0.00	0.00	0	.	.
Dieldrin	50	0.00	0.00	0	.	.
Diethyl phthalate	13	0.00	0.00	0	.	.
Dimethyl phthalate	13	0.00	0.00	0	.	.
Dimethylphenol, 2,4-	12	0.00	0.00	0	.	.
DDT	143	0.81	0.00	3	67.00	23.00
Endosulfan, alpha-	46	0.00	0.00	0	.	.
Endosulfan, beta-	46	0.00	0.00	0	.	.
Endrin	50	0.00	0.00	0	.	.
Ethylbenzene	19	46.55	0.00	8	311.00	1.00
Fluoranthene	29	603017.1	34000.00	25	6370000	200.00
Fluorene	31	195197.4	59000.00	24	1290000	220.00
Heptachlor	46	0.00	0.00	0	.	.
Heptachlor epoxide	46	0.00	0.00	0	.	.
Hexachlorobenzene	18	0.00	0.00	0	.	.
Hexachlorobutadiene	13	0.00	0.00	0	.	.
Hexachloroethane	13	0.00	0.00	0	.	.
Indeno(1,2,3-cd)pyrene	13	47.69	0.00	1	620.00	620.00
Isophorone	13	0.00	0.00	0	.	.
Lead	74	44105.95	35000.00	60	250000.0	7040.00
Mercury	111	3379.64	400.00	84	240000.0	10.00
Methoxychlor	14	0.00	0.00	0	.	.
Mirex/Dechlorane	5	0.00	0.00	0	.	.
Naphthalene	17	446844.1	0.00	8	2160000	490.00
Nickel	68	29783.82	26500.00	68	150000.0	7000.00
Nitrosodiphenylamine, N-	13	0.00	0.00	0	.	.
Pentachlorophenol	16	0.00	0.00	0	.	.
Phenanthrene	18	1313811	130000.0	14	10100000	490.00
Phenol	15	133.33	0.00	1	2000.00	2000.00
Polychlorinated biphenyls	581	0.02	0.00	1	9.00	9.00
Pyrene	26	487548.2	20500.00	22	4270000	440.00
Silver	16	475.00	0.00	7	1700.00	400.00
Tetrachloroethane, 1,1,2,2-	13	0.00	0.00	0	.	.

Sediment Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Tetrachloroethene	13	5.08	0.00	1	66.00	66.00
Tetrachloromethane	13	1.38	0.00	1	18.00	18.00
Toluene	18	89.84	5.50	9	650.00	11.00
Toxaphene	50	0.00	0.00	0	.	.
Tribromomethane/Bromoform	13	0.00	0.00	0	.	.
Trichlorobenzene, 1,2,4-	13	221.54	0.00	2	2400.00	480.00
Trichloroethane, 1,1,1-	13	10.00	0.00	1	130.00	130.00
Trichloroethane, 1,1,2-	13	0.00	0.00	0	.	.
Trichloroethene	13	0.00	0.00	0	.	.
Trichlorofluoromethane	13	0.00	0.00	0	.	.
Trichloromethane/Chloroform	13	10.77	0.00	1	140.00	140.00
Zinc	76	166789.5	105000.0	74	1100000	6000.00

## Tissue Residue Data: Chemical Summary

Tissue Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Aldrin	149	1.54	0.00	9	80.00	10.00
Antimony	40	0.00	0.00	0	.	.
Arsenic	43	83.02	80.00	29	350.00	30.00
Beryllium	44	26.59	0.00	8	400.00	40.00
Biphenyl	2	2.61	2.61	2	2.61	2.61
BHC	540	0.91	0.00	8	280.00	2.00
Cadmium	47	31.77	0.00	20	360.00	3.00
Chlordane	547	15.70	0.00	228	120.00	4.00
Chlorpyrifos/Dursban	1	0.00	0.00	0	.	.
Chromium	45	47.78	0.00	22	590.00	20.00
Copper	45	481.56	0.00	17	3400.00	200.00
Dicofol/Kelthane	1	0.00	0.00	0	.	.
Dieldrin	151	8.21	0.00	19	200.00	10.00
Dioxins	3	0.00	0.00	2	0.00	0.00
DDT	453	26.17	0.00	113	1700.00	3.00
Endosulfan, alpha-	147	0.00	0.00	0	.	.
Endosulfan, beta-	147	0.00	0.00	0	.	.
Endrin	150	4.53	0.00	26	70.00	10.00
Heptachlor	212	0.28	0.00	5	20.00	10.00
Heptachlor epoxide	213	0.61	0.00	6	30.00	10.00
Hexachlorobenzene	3	1.00	0.00	1	3.00	3.00
Hexachlorobutadiene	55	0.00	0.00	7	0.04	0.01
Isopropalin	1	0.00	0.00	0	.	.
Lead	47	102.55	50.00	27	800.00	20.00
Mercury	48	32.92	0.00	11	270.00	30.00
Methoxychlor	3	0.00	0.00	0	.	.

Tissue Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Mirex/Dechlorane	140	0.05	0.00	2	3.68	3.68
Nickel	44	2.27	0.00	1	100.00	100.00
Pentachlorobenzene	2	0.63	0.63	2	0.63	0.63
Pentachloronitrobenzene/Quin	1	0.00	0.00	0	.	.
Polychlorinated biphenyls	2196	158.72	0.00	622	3309.20	70.00
Selenium	42	259.52	130.00	38	1400.00	30.00
Silver	31	9.68	0.00	2	200.00	100.00
Tetrachlorobenzene, 1,2,4,5-	1	0.00	0.00	0	.	.
Toxaphene	146	0.00	0.00	0	.	.
Trichlorobenzene, 1,2,4-	2	1.43	1.43	2	1.43	1.43
Trifluralin/Treflan	1	0.00	0.00	0	.	.
Zinc	40	9317.50	6300.00	40	29000.00	4200.00