

Watershed Summary Information

Accounting Unit Name: Neosho

State(s): KS MO OK

Political Boundaries: Jasper, Cherokee, Barton, Lawrence, Ottawa, Newton, Barry, Dade, Crawford

Major Waterways: Spring R, N Fk
Shoal Cr
Spring R
Center Cr
Cow Cr

Number of Stations in Watershed: Tier1 - 10
Tier2 - 25
Tier3 - 6

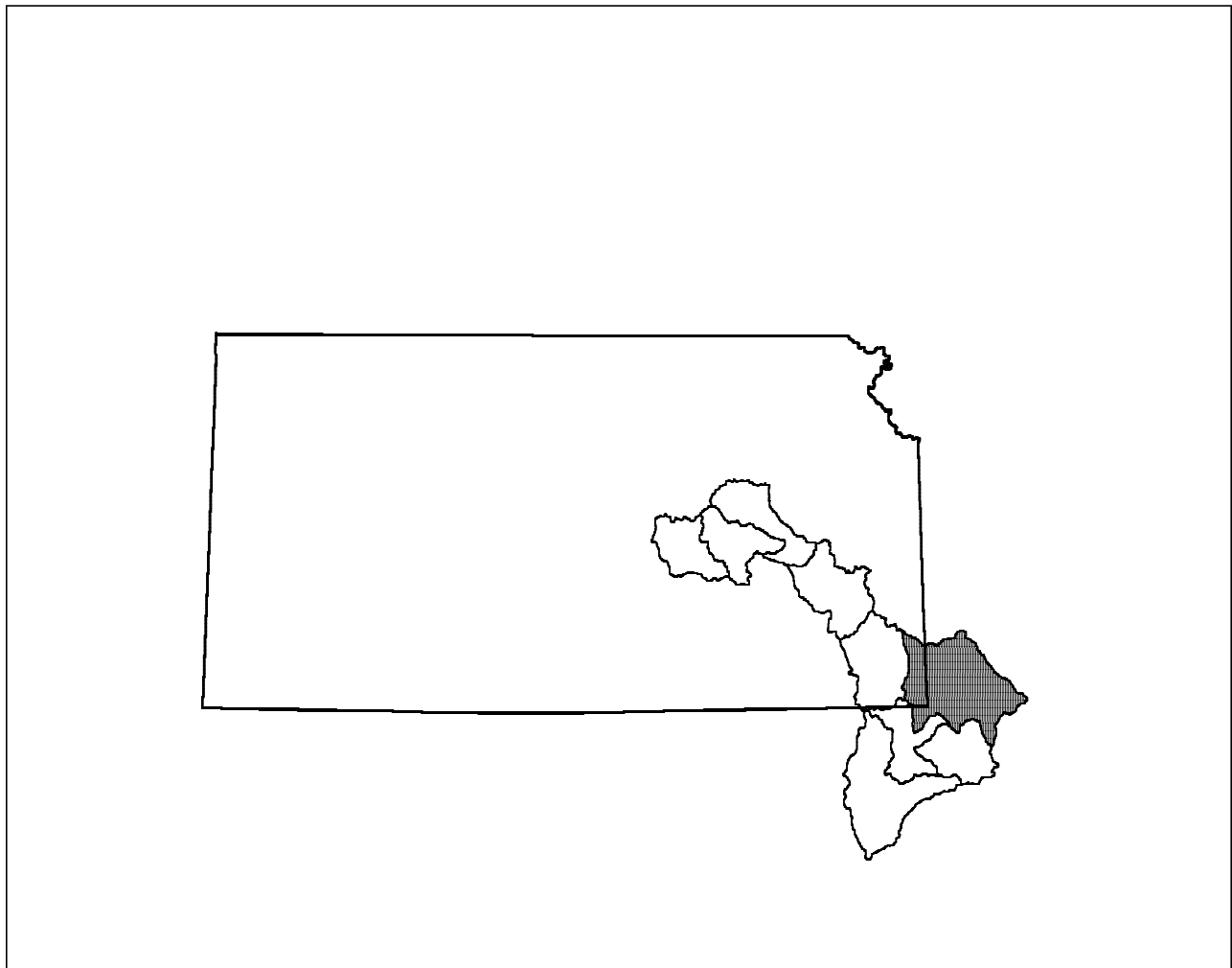


Figure 153. Watershed Location Map

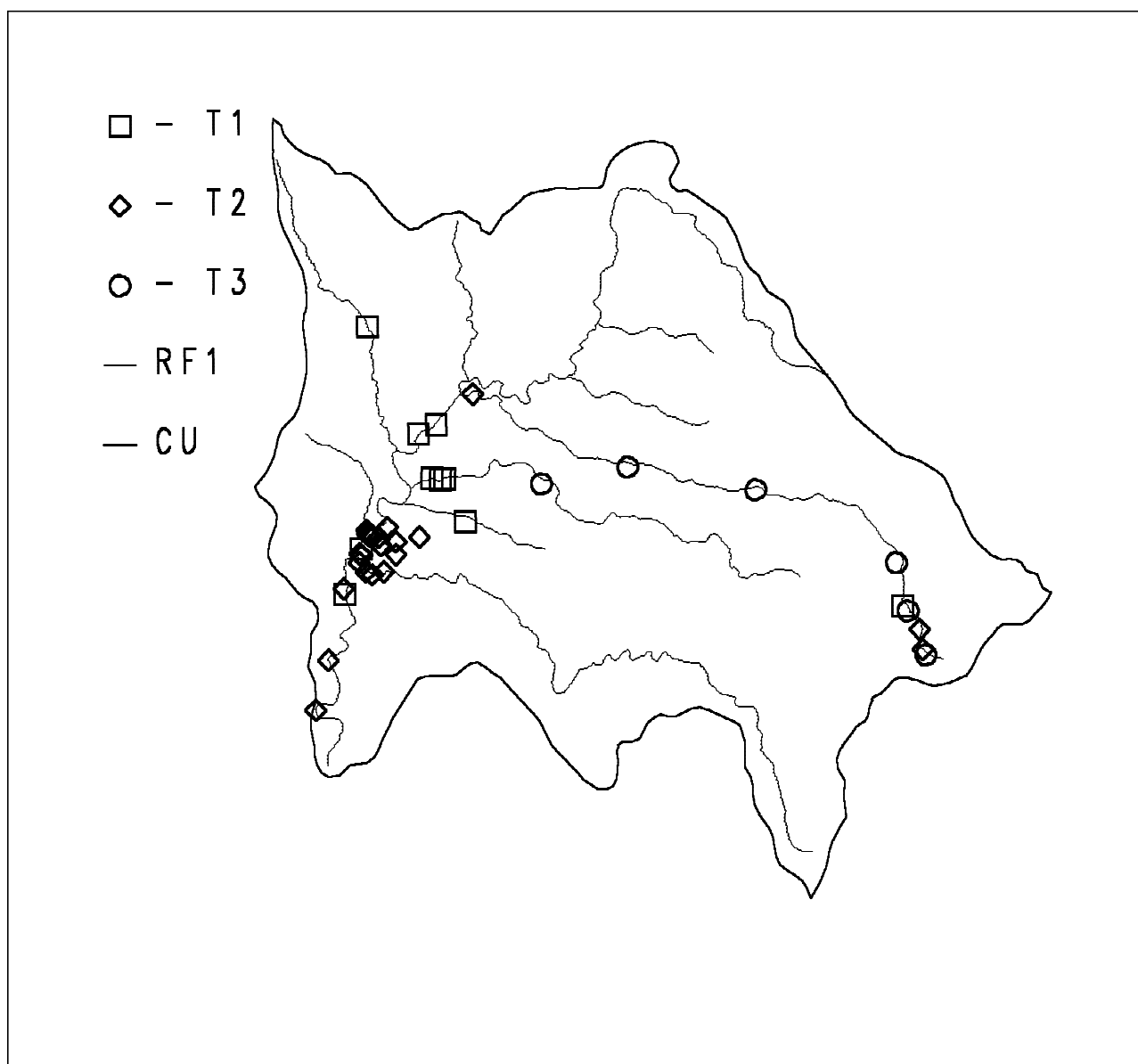


Figure 154. Major Waterways and Location of Sampling Stations

Data Source(s) Used in Evaluation

Source: **STORET** Agency: **1117MBR**
 Monitoring Program: **USEPA Region 7 Data**
 Num. of Stations: 39 Date Range: 1980-92

Source: **STORET** Agency: **112WRD**
 Monitoring Program: **US Geological Survey Data**
 Num. of Stations: 1 Date Range: 1982

Source: **STORET** Agency: **210KOSHD**
 Monitoring Program: **Oklahoma State Health Dept Water, Sediment And Tissue Data**
 Num. of Stations: 1 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
Lead	38	25	.	25	.	21	.	4
Cadmium	38	22	.	22	.	22	.	.
Zinc	37	22	.	22	.	22	.	.
Polychlorinated biphenyls	16	9	8	1	.	1	8	1
Arsenic	25	8	.	8	.	4	.	4
Copper	25	8	.	8	.	8	.	.
Chlordane	16	7	.	7	.	.	.	7
Nickel	24	6	.	6	.	6	.	.
Dieldrin	16	5	.	5	.	.	.	5
Chromium	26	4	.	4	.	4	.	.
Dioxins	15	3	2	1	.	.	2	1
Silver	24	2	.	2	.	2	.	.
Phenanthrene	6	1	1	.	1	.	.	.
Anthracene	4	1	.	1	.	1	.	.
Benzo(a)anthracene	4	1	.	1	.	1	.	1
Benzo(a)pyrene	11	1	.	1	.	1	.	1
Chrysene	11	1	.	1	.	1	.	.
Fluoranthene	11	1	.	1	.	1	.	.
Heptachlor epoxide	15	1	.	1	.	.	.	1
Indeno(1,2,3-cd)pyrene	11	1	.	1	.	.	.	1
Mercury	18	1	.	1	.	1	.	.
Pyrene	11	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	6	0.00	0.00	0	.	.
Acenaphthylene	6	0.00	0.00	0	.	.
Acetone	1	0.00	0.00	0	.	.
Aldrin	7	0.00	0.00	0	.	.
Anthracene	1	760.00	760.00	1	760.00	760.00
Antimony	67	0.00	0.00	0	.	.
Arsenic	69	1249.28	0.00	7	17300.00	4500.00
Benzene	1	0.00	0.00	0	.	.
Benzo(a)anthracene	1	1300.00	1300.00	1	1300.00	1300.00
Benzo(a)pyrene	6	166.67	0.00	1	1000.00	1000.00
Benzo(b)fluoranthene	6	0.00	0.00	0	.	.
Benzo(ghi)perylene	6	0.00	0.00	0	.	.
Benzo(k)fluoranthene	1	1000.00	1000.00	1	1000.00	1000.00
Benzoic acid	1	0.00	0.00	0	.	.

Sediment Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Benzyl alcohol	1	0.00	0.00	0	.	.
Bis(2-ethylhexyl)phthalate	6	0.00	0.00	0	.	.
Bromophenyl phenyl ether, 4-	6	0.00	0.00	0	.	.
Butyl benzyl phthalate	6	0.00	0.00	0	.	.
BHC	24	0.00	0.00	0	.	.
Cadmium	141	50937.52	23400.00	136	571000.0	2000.00
Chlordane	15	0.00	0.00	0	.	.
Chlorobenzene	1	0.00	0.00	0	.	.
Chromium	70	25330.43	19700.00	70	132000.0	5000.00
Chrysene	6	216.67	0.00	1	1300.00	1300.00
Copper	69	84983.77	54800.00	69	425000.0	2900.00
Cresol, o	1	0.00	0.00	0	.	.
Cresol, p-	1	0.00	0.00	0	.	.
Di-n-butyl phthalate	6	0.00	0.00	0	.	.
Di-n-octyl phthalate	6	0.00	0.00	0	.	.
Dibenzo(a,h)anthracene	6	0.00	0.00	0	.	.
Dibenzofuran	1	0.00	0.00	0	.	.
Dibromochloromethane	1	0.00	0.00	0	.	.
Dichlorobenzene, 1,2-	1	0.00	0.00	0	.	.
Dichlorobenzene, 1,3-	1	0.00	0.00	0	.	.
Dichlorobenzene, 1,4-	1	0.00	0.00	0	.	.
Dichloroethane 1,1-	1	0.00	0.00	0	.	.
Dichloroethane 1,2-	1	0.00	0.00	0	.	.
Dichloroethene, trans-1,2-	1	0.00	0.00	0	.	.
Dichloromethane	1	0.00	0.00	0	.	.
Dichloropropane, 1,2-	1	0.00	0.00	0	.	.
Dieldrin	7	0.00	0.00	0	.	.
Diethyl phthalate	6	0.00	0.00	0	.	.
Dimethyl phthalate	6	0.00	0.00	0	.	.
Dimethylphenol, 2,4-	6	0.00	0.00	0	.	.
Dioxins	6	4.00	0.00	2	12.00	12.00
DDT	29	0.00	0.00	0	.	.
Endosulfan, alpha-	5	0.00	0.00	0	.	.
Endosulfan, beta-	5	0.00	0.00	0	.	.
Endrin	7	0.00	0.00	0	.	.
Ethylbenzene	1	0.00	0.00	0	.	.
Fluoranthene	6	200.00	0.00	1	1200.00	1200.00
Fluorene	6	0.00	0.00	0	.	.
Heptachlor	6	0.00	0.00	0	.	.
Heptachlor epoxide	5	0.00	0.00	0	.	.
Hexachlorobenzene	8	0.00	0.00	0	.	.
Hexachlorobutadiene	6	0.00	0.00	0	.	.
Hexachloroethane	6	0.00	0.00	0	.	.
Indeno(1,2,3-cd)pyrene	6	83.33	0.00	1	500.00	500.00

Sediment Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Isophorone	6	0.00	0.00	0	.	.
Lead	140	647515.0	229550.0	136	16080000	4600.00
Mercury	8	49.37	20.00	6	295.00	10.00
Methoxychlor	2	0.00	0.00	0	.	.
Methyl ethyl ketone	1	0.00	0.00	0	.	.
Methylnaphthalene, 2-	1	0.00	0.00	0	.	.
Naphthalene	6	0.00	0.00	0	.	.
Nickel	67	16834.33	13500.00	67	55900.00	1670.00
Nitrosodiphenylamine, N-	6	0.00	0.00	0	.	.
Pentachlorophenol	6	0.00	0.00	0	.	.
Phenanthrene	6	566.67	0.00	1	3400.00	3400.00
Phenol	6	0.00	0.00	0	.	.
Polychlorinated biphenyls	37	2.54	0.00	1	94.00	94.00
Pyrene	6	416.67	0.00	1	2500.00	2500.00
Silver	67	210.46	0.00	20	1850.00	220.00
Tetrachloroethane, 1,1,2,2-	1	0.00	0.00	0	.	.
Tetrachloroethene	1	0.00	0.00	0	.	.
Tetrachloromethane	1	0.00	0.00	0	.	.
Toluene	1	0.00	0.00	0	.	.
Toxaphene	6	0.00	0.00	0	.	.
Tribromomethane/Bromoform	1	0.00	0.00	0	.	.
Trichlorobenzene, 1,2,4-	6	0.00	0.00	0	.	.
Trichloroethane, 1,1,1-	1	0.00	0.00	0	.	.
Trichloroethane, 1,1,2-	1	0.00	0.00	0	.	.
Trichloroethene	1	0.00	0.00	0	.	.
Trichloromethane/Chloroform	1	0.00	0.00	0	.	.
Xylenes	1	0.00	0.00	0	.	.
Zinc	138	6301709	3346500	138	66500000	47000.00

Tissue Residue Data: Chemical Summary

Tissue Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Acenaphthene	10	0.00	0.00	0	.	.
Acrolein	10	0.00	0.00	0	.	.
Acrylonitrile	10	0.00	0.00	0	.	.
Alachlor/Lasso	22	0.00	0.00	0	.	.
Aldrin	32	0.00	0.00	0	.	.
Anthracene	7	0.00	0.00	0	.	.
Antimony	20	0.00	0.00	0	.	.
Arsenic	31	36.45	0.00	12	220.00	50.00
Atrazine	20	0.00	0.00	0	.	.
Barium	26	3170.19	3225.00	26	5800.00	163.00

Tissue Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Benzene	21	2.81	0.00	2	51.00	8.00
Benzidine	10	0.00	0.00	0	.	.
Benzo(a)anthracene	7	0.00	0.00	0	.	.
Benzo(a)pyrene	10	0.00	0.00	0	.	.
Benzo(b)fluoranthene	10	0.00	0.00	0	.	.
Benzo(k)fluoranthene	7	0.00	0.00	0	.	.
Beryllium	22	0.00	0.00	0	.	.
Bis(2-chloroethyl)ether	10	0.00	0.00	0	.	.
Bis(2-ethylhexyl)phthalate	10	0.00	0.00	0	.	.
Bromodichloromethane	10	0.00	0.00	0	.	.
Bromomethane	10	0.00	0.00	0	.	.
Bromophenyl phenyl ether, 4-	10	0.00	0.00	0	.	.
Butyl benzyl phthalate	10	0.00	0.00	0	.	.
BHC	117	0.10	0.00	2	8.50	3.50
Cadmium	31	140.26	102.00	23	714.00	60.00
Chlordane	159	44.69	8.00	120	780.00	2.00
Chlorobenzene	19	0.00	0.00	0	.	.
Chloroethane	10	0.00	0.00	0	.	.
Chloroethene	12	0.00	0.00	0	.	.
Chloroethylvinyl ether, 2-	10	0.00	0.00	0	.	.
Chloromethane	19	0.00	0.00	0	.	.
Chloronaphthalene, 2-	10	0.00	0.00	0	.	.
Chlorophenol, 2-	10	0.00	0.00	0	.	.
Chlorpyrifos/Dursban	8	0.00	0.00	0	.	.
Chromium	26	430.19	417.00	26	877.00	160.00
Chrysene	10	0.00	0.00	0	.	.
Copper	24	912.71	964.00	24	1780.00	318.00
Cyanazine	3	0.00	0.00	0	.	.
Di-n-butyl phthalate	10	0.00	0.00	0	.	.
Di-n-octyl phthalate	10	0.00	0.00	0	.	.
Dibenzo(a,h)anthracene	10	0.00	0.00	0	.	.
Dibromochloromethane	10	0.00	0.00	0	.	.
Dichlorobenzene, 1,2-	19	0.00	0.00	0	.	.
Dichlorobenzene, 1,3-	16	0.00	0.00	0	.	.
Dichlorobenzene, 1,4-	19	0.00	0.00	0	.	.
Dichlorobenzidine, 3,3'-	10	0.00	0.00	0	.	.
Dichlorodifluoromethane	3	0.00	0.00	0	.	.
Dichloroethane 1,1-	10	0.00	0.00	0	.	.
Dichloroethane 1,2-	21	0.00	0.00	0	.	.
Dichloroethene, trans-1,2-	19	0.00	0.00	0	.	.
Dichloroethene, 1,1-	21	0.00	0.00	0	.	.
Dichloromethane	10	91.00	0.00	3	737.00	13.00
Dichlorophenol, 2,4-	10	0.00	0.00	0	.	.
Dichloropropane, 1,2-	10	0.00	0.00	0	.	.

Tissue Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Dieldrin	31	13.48	0.00	13	76.00	6.00
Diethyl phthalate	10	0.00	0.00	0	.	.
Dimethyl phthalate	10	0.00	0.00	0	.	.
Dimethylphenol, 2,4-	10	0.00	0.00	0	.	.
Dinitrophenol, 2,4-	10	0.00	0.00	0	.	.
Dinitrotoluene, 2,4-	10	0.00	0.00	0	.	.
Dinitrotoluene, 2,6-	10	0.00	0.00	0	.	.
Dioxins	15	0.00	0.00	3	0.01	0.00
Diphenylhydrazine, 1,2-	10	0.00	0.00	0	.	.
DDT	151	6.05	0.00	27	130.00	6.00
Endosulfan, alpha-	32	0.00	0.00	0	.	.
Endosulfan, beta-	21	0.00	0.00	0	.	.
Endrin	32	0.00	0.00	0	.	.
Ethylbenzene	19	0.21	0.00	1	4.00	4.00
Fluoranthene	10	0.00	0.00	0	.	.
Fluorene	10	0.00	0.00	0	.	.
Fonofos	8	0.00	0.00	0	.	.
Heptachlor	34	0.69	0.00	3	11.00	3.30
Heptachlor epoxide	34	1.24	0.00	9	17.00	1.50
Hexachlorobenzene	15	0.00	0.00	0	.	.
Hexachlorobutadiene	10	0.00	0.00	0	.	.
Hexachloroethane	10	0.00	0.00	0	.	.
Indeno(1,2,3-cd)pyrene	10	0.00	0.00	0	.	.
Isophorone	10	0.00	0.00	0	.	.
Lead	31	616.35	0.00	15	3770.00	80.00
Malathion	8	0.00	0.00	0	.	.
Manganese	22	7845.09	6950.00	22	16000.00	712.00
Mercury	31	40.88	27.00	25	328.00	10.00
Methoxychlor	19	0.00	0.00	0	.	.
Metribuzin	8	0.00	0.00	0	.	.
Mirex/Dechlorane	8	0.00	0.00	0	.	.
Molybdenum	16	36.44	0.00	5	148.00	72.00
Naphthalene	10	0.00	0.00	0	.	.
Nickel	24	93.87	0.00	7	494.00	155.00
Nitrobenzene	10	0.00	0.00	0	.	.
Nitrophenol, 4	9	0.00	0.00	0	.	.
Nitrosodi-n-propylamine, N-	10	0.00	0.00	0	.	.
Nitrosodiphenylamine, N-	10	0.00	0.00	0	.	.
Parathion ethyl	8	0.00	0.00	0	.	.
Pentachlorophenol	19	0.00	0.00	0	.	.
Phenol	10	0.00	0.00	0	.	.
Polychlorinated biphenyls	155	39.37	0.00	37	510.00	20.00
Prometon/Pramitol	8	0.00	0.00	0	.	.
Pyrene	10	0.00	0.00	0	.	.

Tissue Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Selenium	21	380.00	410.00	20	790.00	120.00
Silver	22	0.00	0.00	0	.	.
Simazine	8	0.00	0.00	0	.	.
Styrene	2	0.00	0.00	0	.	.
Tetrachloroethane, 1,1,2,2-	21	0.00	0.00	0	.	.
Tetrachloroethene	21	0.00	0.00	0	.	.
Tetrachloromethane	21	0.00	0.00	0	.	.
Toluene	19	0.79	0.00	1	15.00	15.00
Toxaphene	23	0.00	0.00	0	.	.
Tribromomethane/Bromoform	19	0.00	0.00	0	.	.
Trichlorobenzene, 1,2,4-	10	0.00	0.00	0	.	.
Trichloroethane, 1,1,1-	19	0.00	0.00	0	.	.
Trichloroethane, 1,1,2-	18	0.00	0.00	0	.	.
Trichloroethene	21	0.00	0.00	0	.	.
Trichlorofluoromethane	3	0.00	0.00	0	.	.
Trichloromethane/Chloroform	21	0.00	0.00	0	.	.
Trichlorophenol, 2,4,6-	10	0.00	0.00	0	.	.
Trifluralin/Treflan	11	1.18	0.00	1	13.00	13.00
Vanadium	16	141.31	139.50	13	340.00	109.00
Zinc	24	59700.00	62500.00	24	150000.0	4900.00