

Watershed Summary Information

Accounting Unit Name:	Lower Hudson
State(s):	NJ NY
Political Boundaries:	Bergen, Passaic, Morris, Rockland, Essex, Somerset, Orange, Hudson, Union
Major Waterways:	Passaic R Whippany R Ramapo R Pompton Cr Oradell Res
Number of Stations in Watershed:	Tier1 - 43 Tier2 - 58 Tier3 - 2

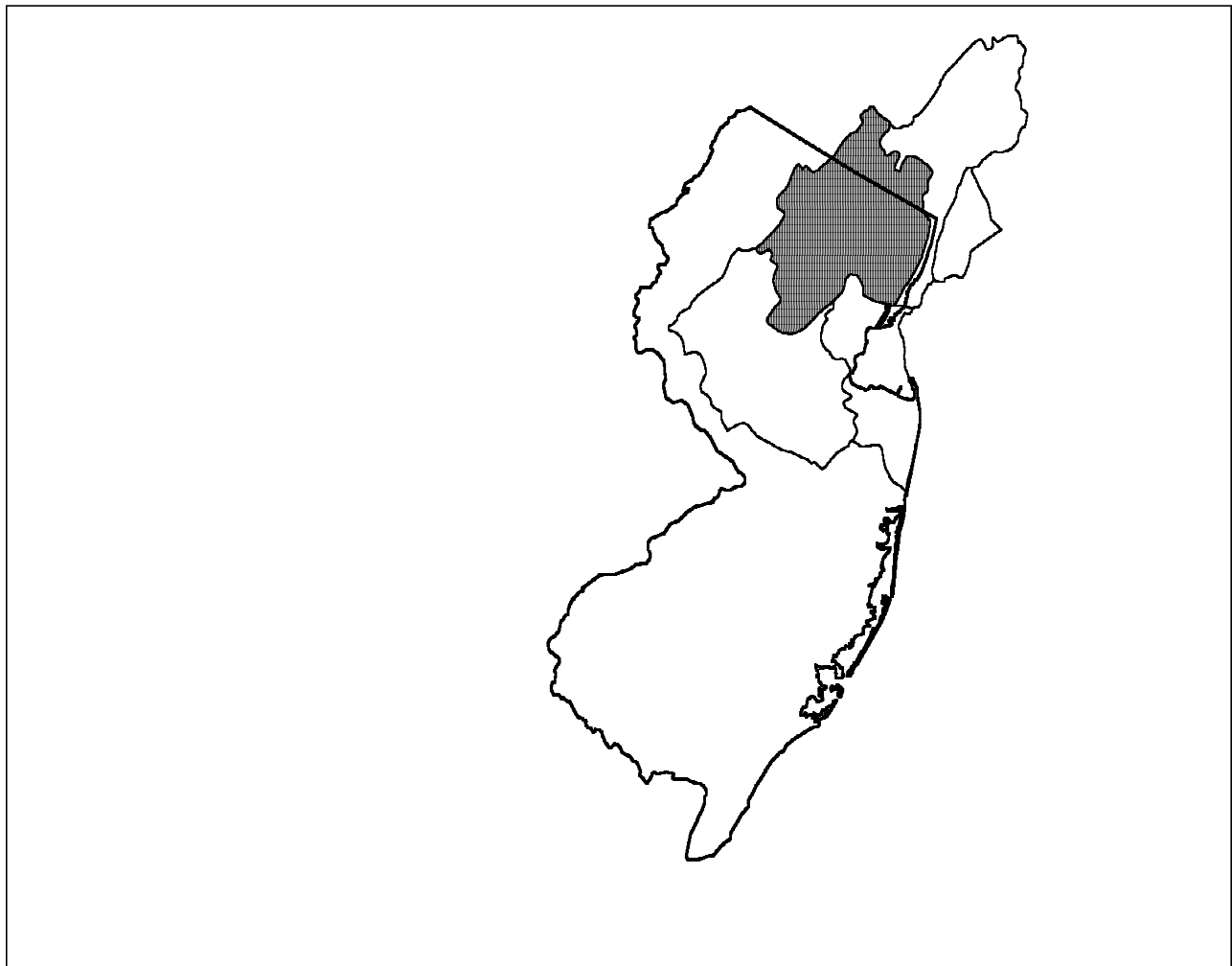


Figure 7. Watershed Location Map

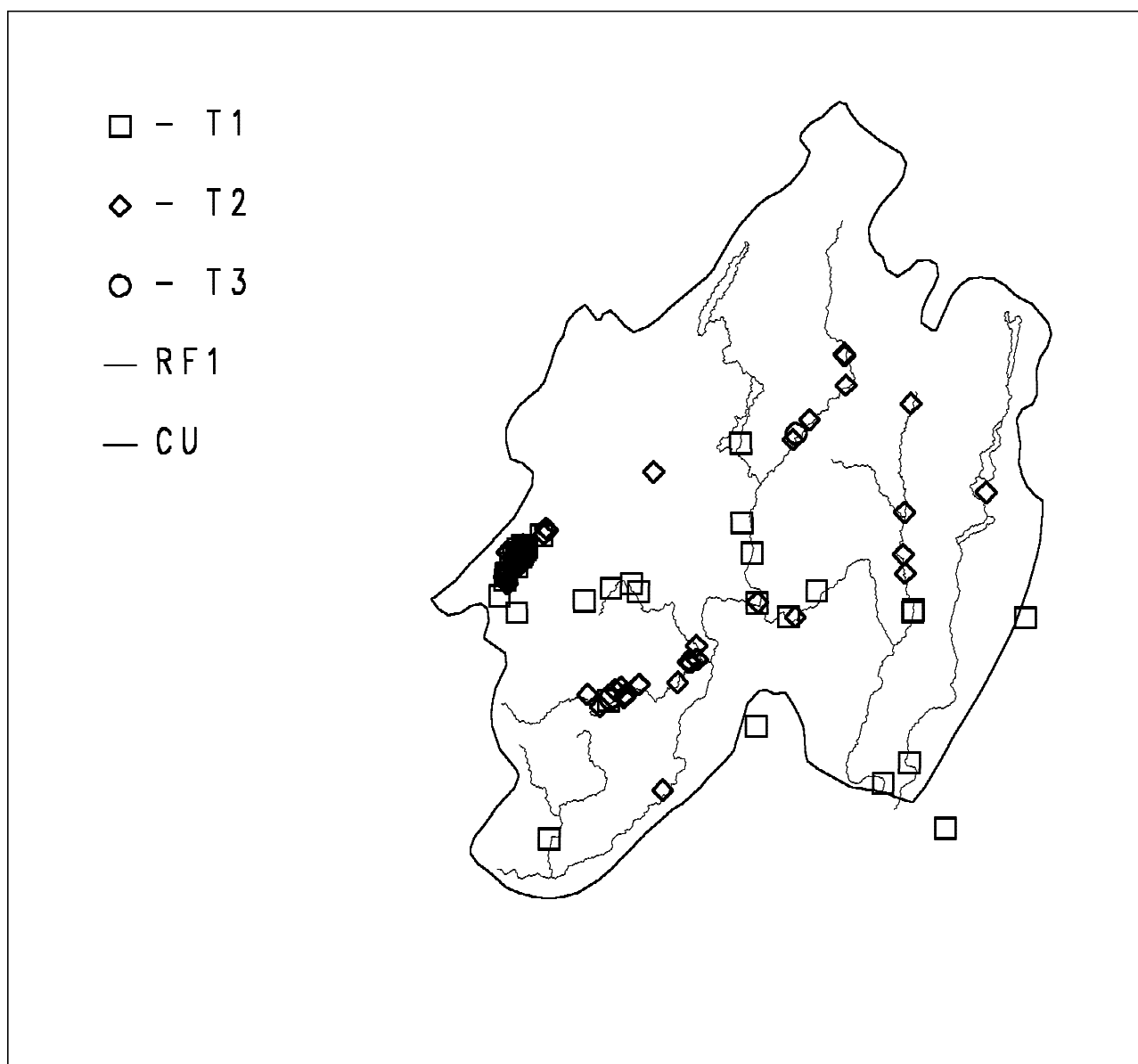


Figure 8. Major Waterways and Location of Sampling Stations

Data Source(s) Used in Evaluation

Source: **COSED** Agency: **NS&T**
 Monitoring Program: **NOAA/National Status and Trends**
 Num. of Stations: 3 Date Range: 1986-89

Source: **EMAP-VA** Agency: **EMAPVA**
 Monitoring Program: **EMAP-VA Province**
 Num. of Stations: 2 Date Range: 1990

Source: **STORET** Agency: **11BIOACC**
 Monitoring Program: **USEPA National Bioaccumulation Study**
 Num. of Stations: 1 Date Range: 1984

Source: **STORET** Agency: **111H030**
Monitoring Program: **USEPA Region 2 Data**
Num. of Stations: 5 Date Range: 1981-83

Source: **STORET** Agency: **112WRD**
Monitoring Program: **US Geological Survey Data**
Num. of Stations: 74 Date Range: 1980-93

Source: **STORET** Agency: **21NJDEP1**
Monitoring Program: **New Jersey Dept Environ Protection Data - Div of Water Resources**
Num. of Stations: 17 Date Range: 1980-81

Source: **STORET** Agency: **21NYDECA**
Monitoring Program: **NY Dept of Env. Cons. Water Quality Network Data**
Num. of Stations: 1 Date Range: 1991-92

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	99	75	.	75	.	75	.	.
Lead	100	61	.	61	.	61	.	.
DDT	80	60	23	37	23	37	.	15
Mercury	103	60	21	39	21	39	.	.
Cadmium	99	53	.	53	.	53	.	.
Polychlorinated biphenyls	63	47	13	34	12	16	1	46
Chlordane	77	44	.	44	.	44	.	30
Zinc	100	41	.	41	.	41	.	.
Arsenic	98	28	2	26	2	26	.	.
Chromium	99	26	8	18	8	18	.	.
Pyrene	63	24	4	20	4	20	.	.
Phenanthrene	63	22	9	13	9	13	.	.
Nickel	49	22	.	22	.	22	.	.
Fluoranthene	63	21	3	18	3	18	.	.
Chrysene	63	20	4	16	4	16	.	.
Benzo(a)anthracene	63	17	6	11	6	11	.	17
Benzo(a)pyrene	63	17	4	13	4	13	.	17
Bis(2-ethylhexyl)phthalate	58	17	2	15	2	15	.	2
Benzo(b)fluoranthene	61	15	.	15	.	1	.	15
Anthracene	62	13	4	9	4	9	.	.
Indeno(1,2,3-cd)pyrene	63	13	.	13	.	10	.	13
Dieldrin	80	12	.	12	.	7	.	10
Diazinon/Spectracide	66	10	.	10	.	10	.	.
Mirex/Dechlorane	64	10	.	10	.	.	.	10
Fluorene	63	9	4	5	4	5	.	.
Naphthalene	62	7	2	5	2	5	.	.
Benzo(ghi)perylene	63	7	.	7	.	7	.	.

Classifying Parameter	Number of Stations							
	All Parameters				Aquatic Life		Human Health	
	Total	T.1&2	Tier1	Tier2	Tier1	Tier2	Tier1	Tier2
Dibenzo(a,h)anthracene	63	6	6	.	6	.	.	6
Nitrosodiphenylamine, N-	58	6	.	6	.	6	.	.
Acenaphthene	62	5	2	3	2	3	.	.
Acenaphthylene	63	4	2	2	2	2	.	.
Silver	8	4	2	2	2	2	.	.
Diethyl phthalate	58	2	1	1	1	1	.	.
BHC	79	2	.	2	.	2	.	.
Malathion	66	2	.	2	.	2	.	.
Dioxins	19	1	1	.	.	.	1	.
Aldrin	78	1	.	1	.	.	.	1
Benzo(k)fluoranthene	61	1	.	1	.	1	.	.
Di-n-butyl phthalate	58	1	.	1	.	1	.	.
Heptachlor	80	1	.	1	.	.	.	1
Heptachlor epoxide	80	1	.	1	.	.	.	1
Methylnaphthalene, 2-	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	79	160.01	0.00	13	5120.00	39.00
Acenaphthylene	75	44.85	0.00	4	2400.00	21.00
Aldrin	143	0.05	0.00	6	2.50	0.20
Anthracene	80	381.31	0.00	19	8000.00	25.00
Antimony	6	2640.50	1671.50	4	6500.00	843.00
Arsenic	160	6538.84	2000.00	125	120000.0	100.00
Benzo(a)anthracene	81	893.98	0.00	25	29100.00	58.50
Benzo(a)pyrene	81	542.35	0.00	23	8900.00	150.00
Benzo(b)fluoranthene	73	213.01	0.00	15	5500.00	130.00
Benzo(ghi)perylene	75	311.76	0.00	13	9080.00	92.00
Benzo(k)fluoranthene	73	153.32	0.00	10	4700.00	72.00
Biphenyl	11	187.93	104.00	10	860.00	3.20
Bis(2-ethylhexyl)phthalate	70	352.14	0.00	18	9500.00	200.00
Bromophenyl phenyl ether, 4-	70	0.00	0.00	0	.	.
Butyl benzyl phthalate	70	5.29	0.00	1	370.00	370.00
BHC	150	0.03	0.00	6	2.60	0.10
Cadmium	179	3151.94	0.00	82	200000.0	50.00
Chlordane	144	16.04	3.00	106	510.00	0.42
Chlorpyrifos/Dursban	2	0.00	0.00	0	.	.
Chromium	175	46207.39	9000.00	155	610000.0	947.00
Chrysene	81	782.09	0.00	27	18400.00	69.10
Copper	178	202492.4	24565.00	173	16000000	1000.00
Di-n-butyl phthalate	70	160.29	0.00	20	3400.00	200.00

Sediment Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Di-n-octyl phthalate	70	0.00	0.00	0	.	.
Diazinon/Spectracide	115	0.09	0.00	26	3.10	0.10
Dibenzo(a,h)anthracene	81	146.03	0.00	12	5740.00	7.80
Dichlorobenzene, 1,2-	70	0.00	0.00	0	.	.
Dichlorobenzene, 1,3-	70	0.00	0.00	0	.	.
Dichlorobenzene, 1,4-	70	0.00	0.00	0	.	.
Dieldrin	156	0.54	0.00	77	6.40	0.10
Diethyl phthalate	70	15.86	0.00	2	910.00	200.00
Dimethyl phthalate	70	0.00	0.00	0	.	.
Dimethylphenol, 2,4-	70	0.00	0.00	0	.	.
Dioxins	18	0.00	0.00	0	.	.
DDT	473	8.40	1.20	337	410.00	0.04
Endosulfan mixed isomers	137	0.03	0.00	1	4.60	4.60
Endosulfan, alpha-	2	0.00	0.00	0	.	.
Endosulfan, beta-	2	0.00	0.00	0	.	.
Endrin	139	0.00	0.00	0	.	.
Ethion/Bladen	115	0.00	0.00	0	.	.
Fluoranthene	81	1264.33	0.00	32	42200.00	101.00
Fluorene	81	76.51	0.00	15	1280.00	4.00
Heptachlor	146	0.12	0.00	16	7.50	0.10
Heptachlor epoxide	145	0.25	0.00	28	10.00	0.10
Hexachlorobenzene	78	0.06	0.00	6	1.50	0.16
Hexachlorobutadiene	70	0.00	0.00	0	.	.
Hexachloroethane	70	0.00	0.00	0	.	.
Indeno(1,2,3-cd)pyrene	75	405.08	0.00	14	15100.00	71.00
Isophorone	70	0.00	0.00	0	.	.
Lead	180	100708.4	32360.00	161	2900000	7622.00
Malathion	114	0.11	0.00	5	11.00	0.10
Mercury	174	669.17	100.00	140	32000.00	10.00
Methoxychlor	139	0.01	0.00	1	1.10	1.10
Methylnaphthalene, 2-	1	258.00	258.00	1	258.00	258.00
Mirex/Dechlorane	128	75.84	0.00	44	7100.00	0.10
Naphthalene	80	104.19	0.00	13	2000.00	15.00
Nickel	102	11655.83	10000.00	60	100000.0	1744.00
Nitrosodiphenylamine, N-	70	33.71	0.00	6	1000.00	200.00
Pentachlorophenol	70	0.00	0.00	0	.	.
Phenanthrene	81	706.91	0.00	33	12800.00	35.00
Phenol	70	5.29	0.00	1	370.00	370.00
Polychlorinated biphenyls	129	126.86	10.00	88	4100.00	1.00
Pyrene	81	1242.56	0.00	32	31800.00	117.00
Silver	11	1754.55	640.00	7	6100.00	190.00
Toxaphene	139	0.00	0.00	0	.	.
Trichlorobenzene, 1,2,4-	70	0.00	0.00	0	.	.
Zinc	180	225280.7	70000.00	178	7100000	5549.00

Tissue Residue Data: Chemical Summary

Tissue Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Biphenyl	1	0.00	0.00	0	.	.
BHC	2	2.62	2.62	1	5.25	5.25
Chlordane	2	0.00	0.00	0	.	.
Chlorpyrifos/Dursban	1	4.59	4.59	1	4.59	4.59
Dicofol/Kelthane	1	0.00	0.00	0	.	.
Dieldrin	1	23.80	23.80	1	23.80	23.80
Dioxins	2	0.00	0.00	2	0.00	0.00
Endrin	1	0.00	0.00	0	.	.
Heptachlor	1	0.00	0.00	0	.	.
Heptachlor epoxide	1	6.57	6.57	1	6.57	6.57
Hexachlorobenzene	1	2.56	2.56	1	2.56	2.56
Hexachlorobutadiene	1	0.00	0.00	0	.	.
Isopropalin	1	0.00	0.00	0	.	.
Mercury	1	140.00	140.00	1	140.00	140.00
Methoxychlor	1	0.00	0.00	0	.	.
Mirex/Dechlorane	1	5.90	5.90	1	5.90	5.90
Pentachlorobenzene	1	0.00	0.00	0	.	.
Pentachloronitrobenzene/Quin	1	0.00	0.00	0	.	.
Polychlorinated biphenyls	1	1833.00	1833.00	1	1833.00	1833.00
Tetrachlorobenzene, 1,2,4,5-	1	0.00	0.00	0	.	.
Trichlorobenzene, 1,2,4-	1	0.00	0.00	0	.	.
Trifluralin/Treflan	1	0.00	0.00	0	.	.

Biotoxicity Data

Lat.	Long.	Date	Species Name	Phase	% Mortality		Sign.
					Test	Control	
Monitoring Program: EMAP-VA Province							
40.7500	74.0867	90-08-01	Ampelisca Abdita	S	20.00	9.00	no
40.8833	73.9428	90-08-12	Ampelisca Abdita	S	9.00	6.00	no