

Watershed Summary Information

Accounting Unit Name: St. Johns

State(s): FL

Political Boundaries: Duval, Putnam, St Johns, Clay, Flagler, Volusia

Major Waterways: St Johns R
Oklawaha R
Dunns Cr
Crescent L
L Disston

Number of Stations in Watershed: Tier1 - 32
Tier2 - 111
Tier3 - 45



Figure 33. Watershed Location Map

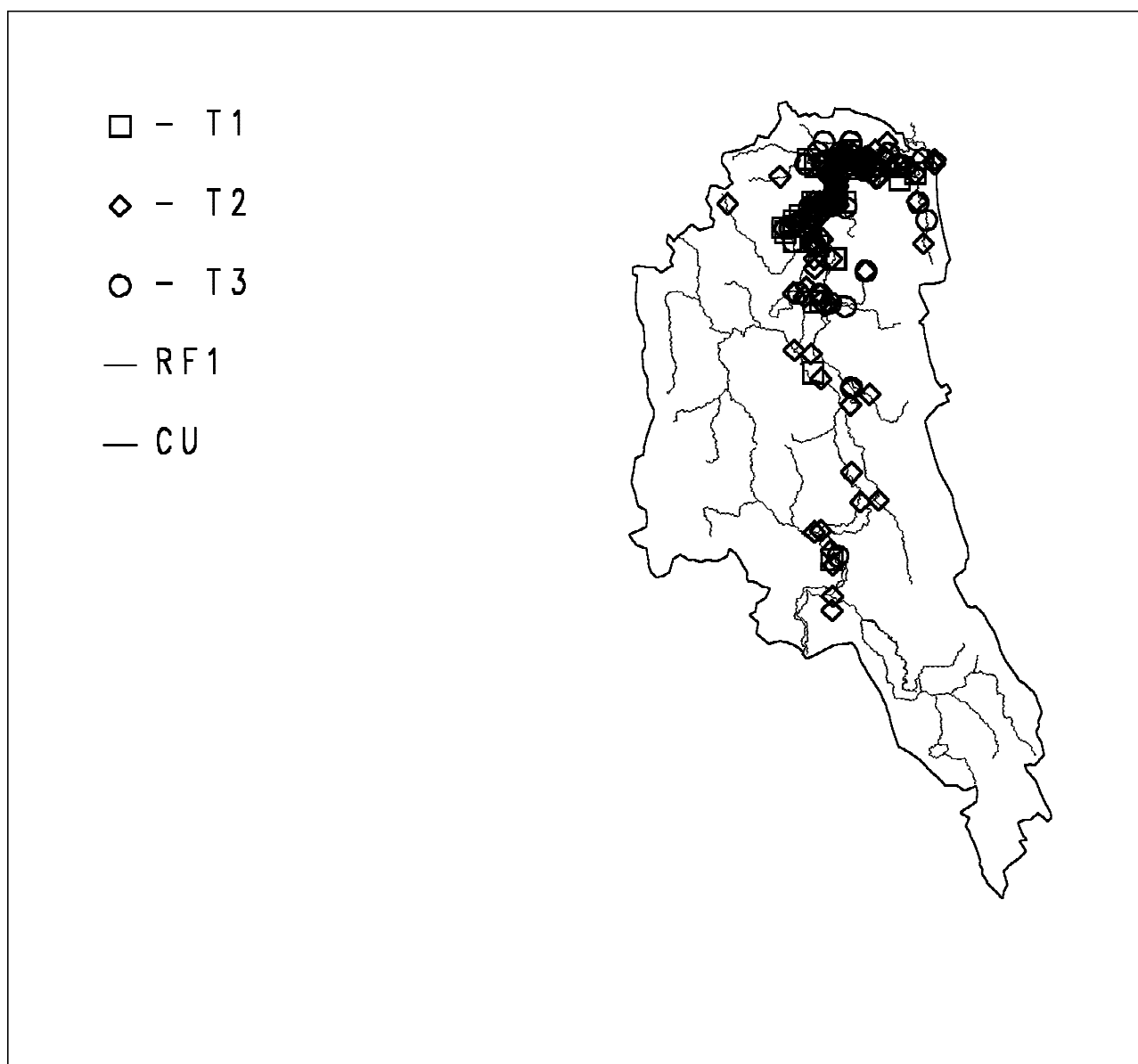


Figure 34. Major Waterways and Location of Sampling Stations

Data Source(s) Used in Evaluation

Source: **COSED** Agency: **NS&T**
 Monitoring Program: **NOAA/National Status and Trends**
 Num. of Stations: 11 Date Range: 1984-87

Source: **ODES** Agency: **FL**
 Monitoring Program: **Florida**
 Num. of Stations: 3 Date Range: 1984-88

Source: **REGION 4** Agency: **FL DER**
 Monitoring Program: **FL DER**
 Num. of Stations: 98 Date Range: 1982-88

Source: **STORET** Agency: **11BIOACC**
 Monitoring Program: **USEPA National Bioaccumulation Study**
 Num. of Stations: 2 Date Range: 1984-87

Source: **STORET** Agency: **1114PEST**
 Monitoring Program: **USEPA SE Environ Water Lab Data**
 Num. of Stations: 1 Date Range: 1981

Source: **STORET** Agency: **112WRD**
 Monitoring Program: **US Geological Survey Data**
 Num. of Stations: 16 Date Range: 1982-84

Source: **STORET** Agency: **21FLA**
 Monitoring Program: **Fla Dept Environmental Regulation (Protection) Water, Sediment & Tissue Data**
 Num. of Stations: 54 Date Range: 1982-86

Source: **STORET** Agency: **21FLSJWM**
 Monitoring Program: **Surface Water Quality - St. Johns River Water Management District**
 Num. of Stations: 3 Date Range: 1992-93

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
Pyrene	94	61	11	50	11	50	.	.
Lead	165	55	.	55	.	55	.	.
Benzo(a)pyrene	81	53	10	43	10	38	.	53
Chrysene	81	47	.	47	.	47	.	.
Copper	159	47	.	47	.	47	.	.
DDT	97	44	3	41	3	41	.	.
Cadmium	160	44	.	44	.	44	.	.
Mercury	132	42	7	35	7	35	.	.
Benzo(a)anthracene	85	41	7	34	7	33	.	20
Chlordane	110	40	.	40	.	40	.	6
Anthracene	75	38	2	36	2	36	.	.
Fluorene	60	25	2	23	2	23	.	.
Polychlorinated biphenyls	68	23	5	18	.	12	5	18
Fluoranthene	94	20	.	20	.	20	.	.
Zinc	125	20	.	20	.	19	.	1
Dibenzo(a,h)anthracene	20	17	4	13	4	13	.	14
Acenaphthene	55	14	5	9	5	9	.	.
Naphthalene	51	14	.	14	.	14	.	.
Chromium	69	11	.	11	.	11	.	.
Nickel	103	11	.	11	.	11	.	.
Benzo(b)fluoranthene	40	10	.	10	.	1	.	10
Acenaphthylene	44	9	1	8	1	8	.	.
Arsenic	23	8	.	8	.	7	.	1

Classifying Parameter	Number of Stations							
	All Parameters				Aquatic Life		Human Health	
	Total	T.1&2	Tier1	Tier2	Tier1	Tier2	Tier1	Tier2
Phenanthrene	85	7	.	7	.	7	.	.
Benzo(ghi)perylene	53	4	.	4	.	4	.	.
Dieldrin	51	4	.	4	.	.	.	4
Indeno(1,2,3-cd)pyrene	11	3	.	3	.	1	.	3
Dioxins	5	2	2	.	.	.	2	.
Heptachlor	51	2	.	2	.	.	.	2
Aldrin	58	1	.	1	.	.	.	1
Benzo(k)fluoranthene	40	1	.	1	.	1	.	1
Heptachlor epoxide	49	1	.	1	.	.	.	1
Hexachlorobenzene	9	1	.	1	.	1	.	1
Silver	24	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	65	120.41	30.00	41	865.00	1.60
Acenaphthylene	49	56.61	0.00	14	841.00	8.70
Acrylonitrile	1	0.00	0.00	0	.	.
Aldrin	58	0.00	0.00	0	.	.
Anthracene	84	161.01	45.50	64	2365.00	1.00
Antimony	6	1133.33	1300.00	5	1700.00	1000.00
Arsenic	55	2914.16	2000.00	42	12000.00	480.00
Benzene	1	0.00	0.00	0	.	.
Benzo(a)anthracene	102	386.83	69.50	67	6800.00	2.20
Benzo(a)pyrene	95	451.17	140.00	68	3520.00	21.00
Benzo(b)fluoranthene	47	430.60	86.00	30	4950.00	50.00
Benzo(ghi)perylene	62	288.38	0.00	27	6100.00	40.00
Benzo(k)fluoranthene	45	291.86	67.50	28	6940.00	43.50
Biphenyl	12	82.66	29.62	12	625.00	1.60
Bis(2-ethylhexyl)phthalate	4	0.00	0.00	0	.	.
Bromophenyl phenyl ether, 4-	4	0.00	0.00	0	.	.
Butyl benzyl phthalate	4	0.00	0.00	0	.	.
BHC	26	0.00	0.00	0	.	.
Cadmium	233	531.85	253.33	203	6150.00	0.04
Chlordane	116	5.28	0.00	55	100.00	0.24
Chlorobenzene	1	0.00	0.00	0	.	.
Chromium	100	19344.42	2000.00	99	98000.00	1.35
Chrysene	94	316.92	145.00	78	2800.00	2.50
Copper	231	13217.08	5675.00	223	296100.0	0.72
Di-n-butyl phthalate	4	140.00	0.00	1	560.00	560.00
Di-n-octyl phthalate	4	0.00	0.00	0	.	.
Dibenzo(a,h)anthracene	28	1180.74	122.00	26	29600.00	2.70

Sediment Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Dibromochloromethane	1	0.00	0.00	0	.	.
Dichlorobenzene, 1,2-	4	0.00	0.00	0	.	.
Dichlorobenzene, 1,3-	4	0.00	0.00	0	.	.
Dichlorobenzene, 1,4-	4	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	50	0.26	0.00	7	2.80	0.63
Diethyl phthalate	4	0.00	0.00	0	.	.
Dimethyl phthalate	4	0.00	0.00	0	.	.
Dimethylphenol, 2,4-	6	0.00	0.00	0	.	.
Dioxins	1	0.00	0.00	0	.	.
DDT	268	3.26	0.13	135	77.00	0.11
Endosulfan mixed isomers	6	0.00	0.00	0	.	.
Endosulfan, alpha-	35	0.00	0.00	0	.	.
Endosulfan, beta-	34	0.00	0.00	0	.	.
Endrin	12	0.00	0.00	0	.	.
Ethion/Bladen	2	0.00	0.00	0	.	.
Ethylbenzene	1	0.00	0.00	0	.	.
Fluoranthene	110	798.22	200.00	101	10900.00	6.90
Fluorene	70	73.51	7.84	39	1480.00	6.00
Heptachlor	49	3.28	0.00	6	88.00	1.10
Heptachlor epoxide	47	0.18	0.00	6	2.00	1.00
Hexachlorobenzene	6	163.33	0.00	1	980.00	980.00
Hexachlorobutadiene	4	0.00	0.00	0	.	.
Hexachloroethane	4	0.00	0.00	0	.	.
Indeno(1,2,3-cd)pyrene	16	225.15	166.50	12	797.00	62.00
Isophorone	4	0.00	0.00	0	.	.
Lead	241	26360.35	9650.00	209	425333.3	0.65
Malathion	2	0.00	0.00	0	.	.
Mercury	216	233.88	40.15	174	22700.00	0.04
Methoxychlor	9	0.00	0.00	0	.	.
Methylnaphthalene, 2-	29	0.00	0.00	0	.	.
Mirex/Dechlorane	26	0.37	0.00	3	9.00	0.15
Naphthalene	61	54.36	0.62	31	580.00	0.62
Nickel	174	4545.20	42.33	127	32100.00	0.69
Nitrosodiphenylamine, N-	4	0.00	0.00	0	.	.
Pentachlorophenol	19	0.00	0.00	0	.	.
Phenanthrene	97	294.36	109.00	81	3380.00	1.70
Phenol	17	0.00	0.00	0	.	.
Polychlorinated biphenyls	256	3.89	0.00	29	188.60	1.80
Pyrene	108	867.64	335.00	97	8470.00	3.75

Sediment Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Silver	41	170.43	79.00	40	912.00	0.03
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	58	0.00	0.00	0	.	.
Tribromomethane/Bromoform	1	0.00	0.00	0	.	.
Trichlorobenzene, 1,2,4-	4	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	.	.
Trichlorofluoromethane	1	0.00	0.00	0	.	.
Trichloromethane/Chloroform	1	0.00	0.00	0	.	.
Zinc	160	56399.70	16000.00	160	702566.7	1.60

Tissue Residue Data: Chemical Summary

Tissue Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Aldrin	1	9.70	9.70	1	9.70	9.70
Antimony	1	220.00	220.00	1	220.00	220.00
Arsenic	9	14229.63	15000.00	9	19000.00	8866.67
Benzo(a)anthracene	4	151.00	135.00	4	270.00	64.00
Biphenyl	5	40.00	0.00	1	200.00	200.00
BHC	12	2.15	2.25	9	4.90	0.81
Cadmium	9	1010.74	930.00	9	1566.67	520.00
Chlordane	17	16.06	9.70	17	45.50	4.53
Chlorpyrifos/Dursban	2	0.00	0.00	0	.	.
Chromium	9	545.19	500.00	9	930.00	410.00
Chrysene	1	190.00	190.00	1	190.00	190.00
Copper	9	52111.11	50000.00	9	66000.00	36000.00
Dicofol/Kelthane	2	0.00	0.00	0	.	.
Dieldrin	12	11.15	7.35	11	24.00	2.80
Dioxins	6	0.00	0.00	5	0.00	0.00
DDT	28	26.72	12.50	28	96.00	2.80
Endrin	2	0.00	0.00	0	.	.
Fluoranthene	2	230.00	230.00	2	300.00	160.00
Heptachlor	7	4.10	4.80	5	10.00	3.60
Heptachlor epoxide	6	6.48	6.45	4	17.00	5.10
Hexachlorobenzene	6	1.68	0.28	4	5.70	0.21
Hexachlorobutadiene	2	0.00	0.00	0	.	.
Isopropalin	3	6.80	10.20	2	10.20	10.20
Lead	9	895.56	950.00	9	1300.00	550.00

Tissue Parameter	Total Observations			Detected Observations		
	Num.	Mean (ppb)	Median (ppb)	Num.	Max (ppb)	Min (ppb)
Manganese	6	13394.44	14000.00	6	20000.00	8300.00
Mercury	13	97.31	100.00	13	130.00	60.00
Methoxychlor	2	0.00	0.00	0	.	.
Mirex/Dechlorane	5	4.12	1.90	3	13.00	1.90
Nickel	9	1733.33	1800.00	9	2200.00	1500.00
Pentachlorobenzene	2	0.00	0.00	0	.	.
Pentachloronitrobenzene/Quin	2	0.00	0.00	0	.	.
Polychlorinated biphenyls	10	248.39	243.30	10	485.52	54.40
Pyrene	2	145.00	145.00	2	190.00	100.00
Selenium	9	2366.67	2400.00	9	3000.00	1900.00
Silver	9	607.41	620.00	9	976.67	340.00
Tetrachlorobenzene, 1,2,4,5-	3	0.00	0.00	0	.	.
Tin	9	456.67	490.00	9	790.00	230.00
Trichlorobenzene, 1,2,4-	3	0.00	0.00	0	.	.
Trifluralin/Treflan	2	0.00	0.00	0	.	.
Zinc	9	2955556	2900000	9	4200000	1900000