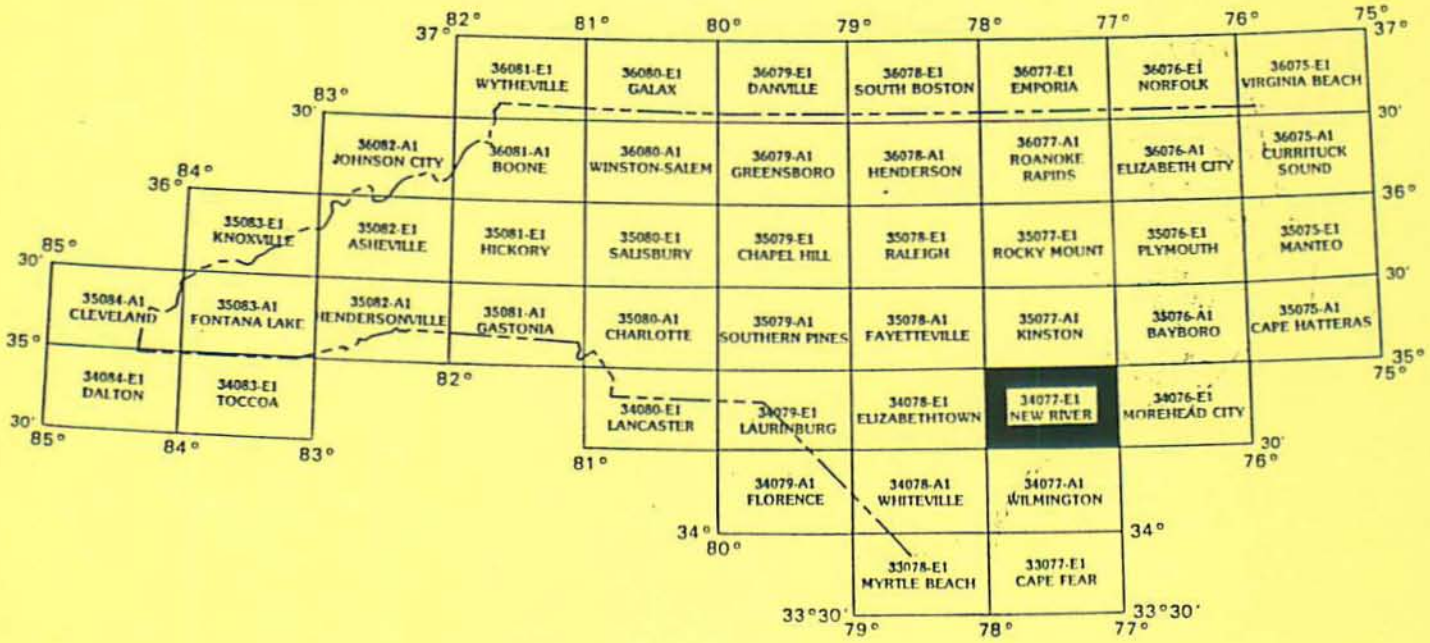
Listing of Concentrations of Variables of Stream Sediment, Stream Water, and Groundwater for the New River 30 x 60 - Minute Quadrangle -NURE Database

by
Robert H. Carpenter and Jeffrey C. Reid



NORTH CAROLINA GEOLOGICAL SURVEY
OPEN-FILE REPORT 93-28

State of North Carolina
James B. Hunt, Jr., Governor

Department of Environment, Health and Natural Resources
Jonathan B. Howes, Secretary
Division of Land Resources
Charles H. Gardner,
Director and State Geologist

July, 1993

GEOLOGICAL SURVEY SECTION

The Geological Survey Section examines, surveys and maps the geology, mineral resources, and topography of the State to encourage the wise conservation and use of these resources by industry, commerce, agriculture and government agencies for the general welfare of the citizens of North Carolina.

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Jeffrey C. Reid
Chief Geologist

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INTRODUCTION

This report is a compilation of geochemical data for stream sediment and groundwater for the New River 30 x 60 - minute quadrangle (Figure 1). Maps and tables were prepared from statewide data obtained by the Savannah River Laboratory under sponsorship of the U.S. Dept. of Energy in its National Uranium Resources Evaluation (NURE) program (Sargent and others, 1982). Sampling and analysis were performed during the period 1976 - 1980.

Because of the large size of the database, the North Carolina Geological Survey is presenting the database in both statewide and 30 x 60 - minute quadrangle formats. Statewide formats currently available include atlases of stream sediment and hydrogeochemical data which contain maps showing quartile distribution of concentrations of variables (Reid, 1991; Reid, 1993). Reid and Carpenter (1993a, 1993b) present listings of concentrations of variables which equal or exceed the 90th percentile (and pH and conductivity below the 10th percentile) for stream sediment and groundwater-stream water.

This open-file report is part of a series of reports that present sample-location maps and listings of analyses of all variables in all of the 30 x 60 - minute quadrangles that comprise the state of North Carolina. Subsequent reports will review the NURE data for individual 30 x 60 - minute quadrangles. These reviews will contain the following: 1) maps showing concentrations of all the variables in up to eight class intervals; 2) geologic review of the quadrangle and discussion of relationship of geochemical variables to rock units and structural features; 3) review of mineral resources and discussion of relationship of geochemical variables to mineral occurrences; and 4) discussion of outliers that may relate to anthropogenic contamination.

In this report, site-location maps use state boundaries, county boundaries and 7-1/2 - minute quadrangle boundaries as references to site-locations. The North Carolina Index to Topographic and Other Map Coverage, prepared by the U.S. Geological Survey, is a useful reference document. The List of Publications of the North Carolina Geological Survey indicates areas within the state for which some geologic and geophysical maps, and reports, are available.

Listings in this report are in the same basic format as those presented in microfiche by Sargent

and others (1982). Column 1 lists the laboratory numbers applied to each analyzed sample. Column 2 lists site identification codes. The first two characters are the codes for the county name. The next three digits are sample numbers. They are listed sequentially for each county in the order they were collected. The next two columns list the latitude and longitude of the sampling sites in decimal degree format. The remaining columns are data columns and analyses are given in parts per million (stream sediment) and parts per billion (groundwater). In these columns, a minus (-) sign indicates that a value is below the detection limit. If background is high, and an accurate estimate of minimum detection limit could not be made, a period (.) indicates that the element was not detected and that the detection limit is unusually high. Missing data are denoted by the letter "M". For gold, analyses are listed only for those samples in which gold was detected. For arsenic, a value of 0 is assigned for samples in which arsenic was analyzed, but not detected.

For stream sediment, two listings are presented. The first listing is for elements analyzed by neutron activation as well as field measurements for pH and conductivity of stream water. Variables included in this listing are pH, conductivity, uranium (U), thorium (Th), hafnium (Hf), cerium (Ce), iron (Fe), manganese (Mn), sodium (Na), scandium (Sc), titanium (Ti), vanadium (V), aluminum (Al), dysprosium (Dy), europium (Eu), lanthanum (La), samarium (Sm), ytterbium (Yb), and lutetium (Lu). The second listing is for supplemental elements analyzed by a variety of techniques. These include extractable uranium (Ux), silver (Ag), arsenic (As), barium (Ba), beryllium (Be), calcium (Ca), cobalt (Co), chromium (Cr), copper (Cu), potassium (K), lithium (Li), magnesium (Mg), molybdenum (Mo), niobium (Nb), nickel (Ni), phosphorous (P), lead (Pb), selenium (Se), tin (Sn), strontium (Sr), tungsten (W), yttrium (Y), and zinc (Zn). Stream sediment analyses are for the minus 100 mesh fraction (< 149 microns) unless otherwise noted.

Groundwater, normally samples of water from wells, was also analyzed by neutron activation. Field measurements were made of pH and conductivity. Variables included in listings of groundwater analyses include pH, conductivity, uranium (U), bromine (Br), chlorine (Cl), fluorine (F), magnesium (Mg), manganese (Mn), sodium (Na), vanadium (V), uranium/conductivity, aluminum (Al), and dysprosium (Dy). Stream water was also analyzed for these variables at 295 sites in North Carolina. Listings for stream water are included for areas in which these sites are located.

Although the data was acquired with considerable attention to quality control, some errors exist. These include uncertainties of sample locations due to the use of county road maps as base maps for field use and digitizing sampling sites. Malfunction of field equipment used in measurement of pH and conductivity has also been recognized in some areas. Some of the analyses are also in error. Some of these errors are apparent when concentrations show systematic "breaks" at county boundaries. This suggests that conditions of analysis for different batches of samples were not uniform. In general, analyses of stream sediment by neutron activation are more reliable than analyses of sediment by other supplemental methods.

For a number of counties, supplemental analyses were not made. Thus elements of interest for mineral exploration and environmental geochemistry are lacking for large areas.

REFERENCES

Reid, Jeffrey C., 1991 (revised 1993), A geochemical atlas of North Carolina: North Carolina Geological Survey, Bulletin 93, text plus 45 plates.

Reid, Jeffrey C., 1993, A hydrogeochemical atlas of North Carolina: North Carolina Geological Survey, Bulletin 94, text plus 26 plates.

Reid, Jeffrey C., and Carpenter, Robert H.,1993a, Listings of concentrations (stream sediments) of variables which equal or exceed the 90th percentile, and pH and conductivity below the 10th percentile in the North Carolina portion of the NURE database: North Carolina Geological Survey, Open-File Report 93-1, introductory text plus 178 pages of data.

Reid, Jeffrey C., and Carpenter, Robert H., 1993b, Listing of concentrations (groundwater and stream water) of variables which equal or exceed the 90th percentile, and pH and conductivity below the 10th percentile in the North Carolina portion of the NURE data base: North Carolina Geological Survey, Open-File Report 93-2, introductory text plus 162 pages of data.

Sargent, K.A., Cook, J.R., and Fay, W.M., 1982, Data report: North and South Carolina, National Uranium Resource Evaluation Program, Hydrochemical and stream sediment reconnaissance: E.I. du Pont de Nemours & Co., Savannah River Laboratory, Aiken, S.C., under contract to the U.S. Dept of Energy, contract DE-AC09-76SR000001 (DPST-81-146-22; GBJX-102), 45 p. plus microfiche.

CONTENTS

COUNTY CODES

Code	County
CN	Craven
CR	Carteret
DU	Duplin
JN	Jones
ON	Onslow
PE	Pender

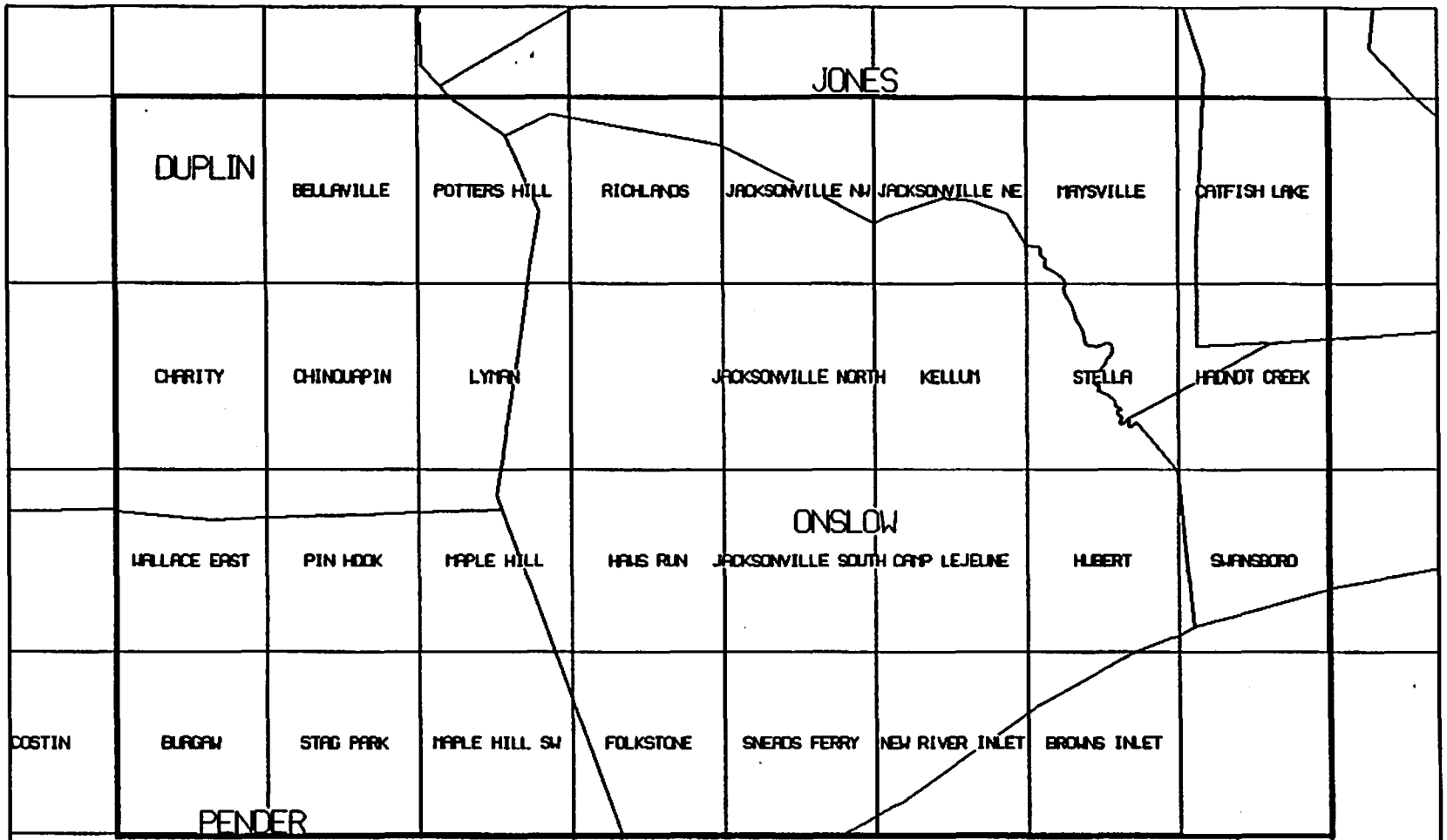

Figure 1. Map Showing Outlines of New River 30 x 60 Minute - Quadrangle and Contained 7 - 1/2 Minute Quadrangles.

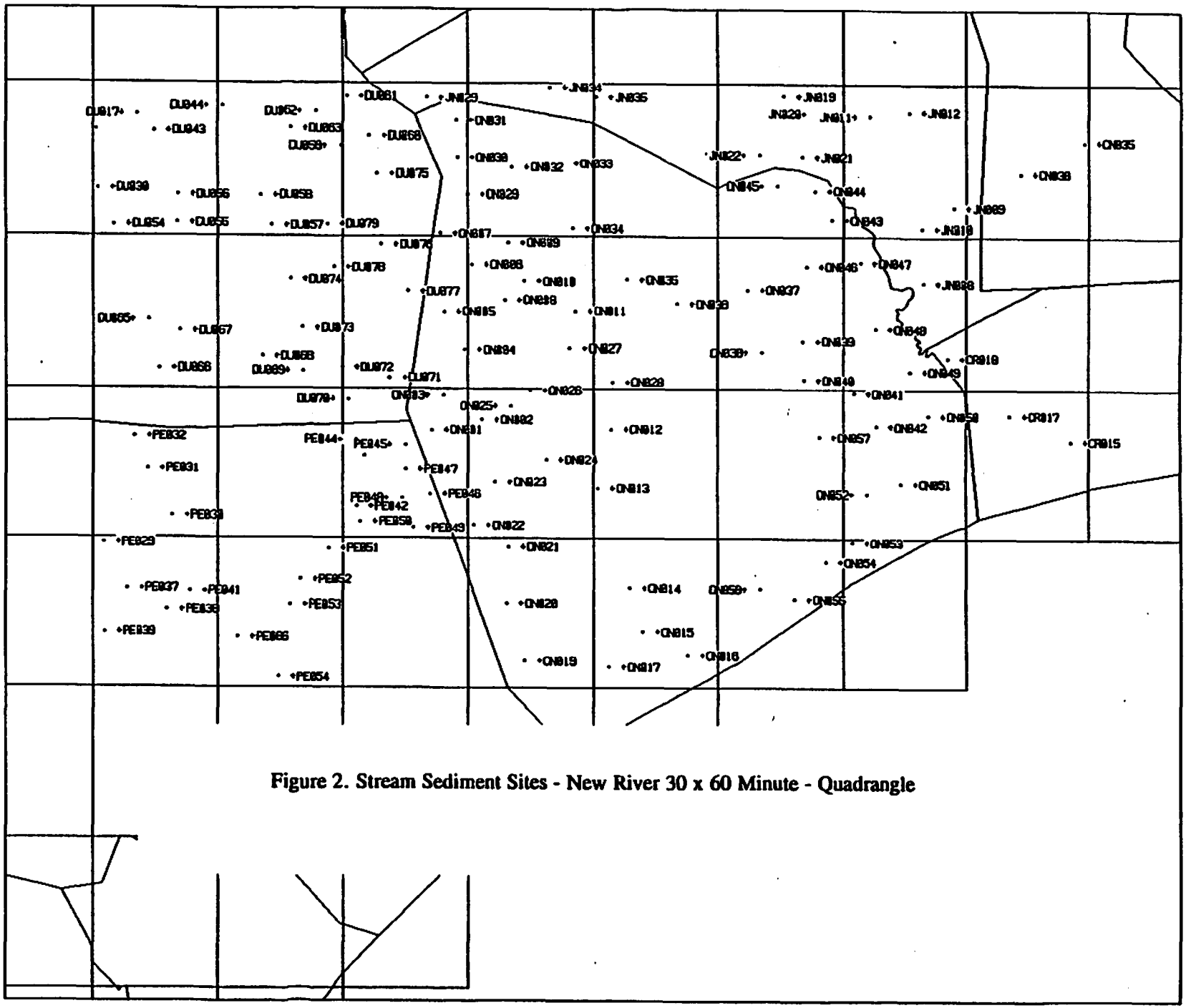

Figure 2. Stream Sediment Sites - New River 30 x 60 Minute - Quadrangle

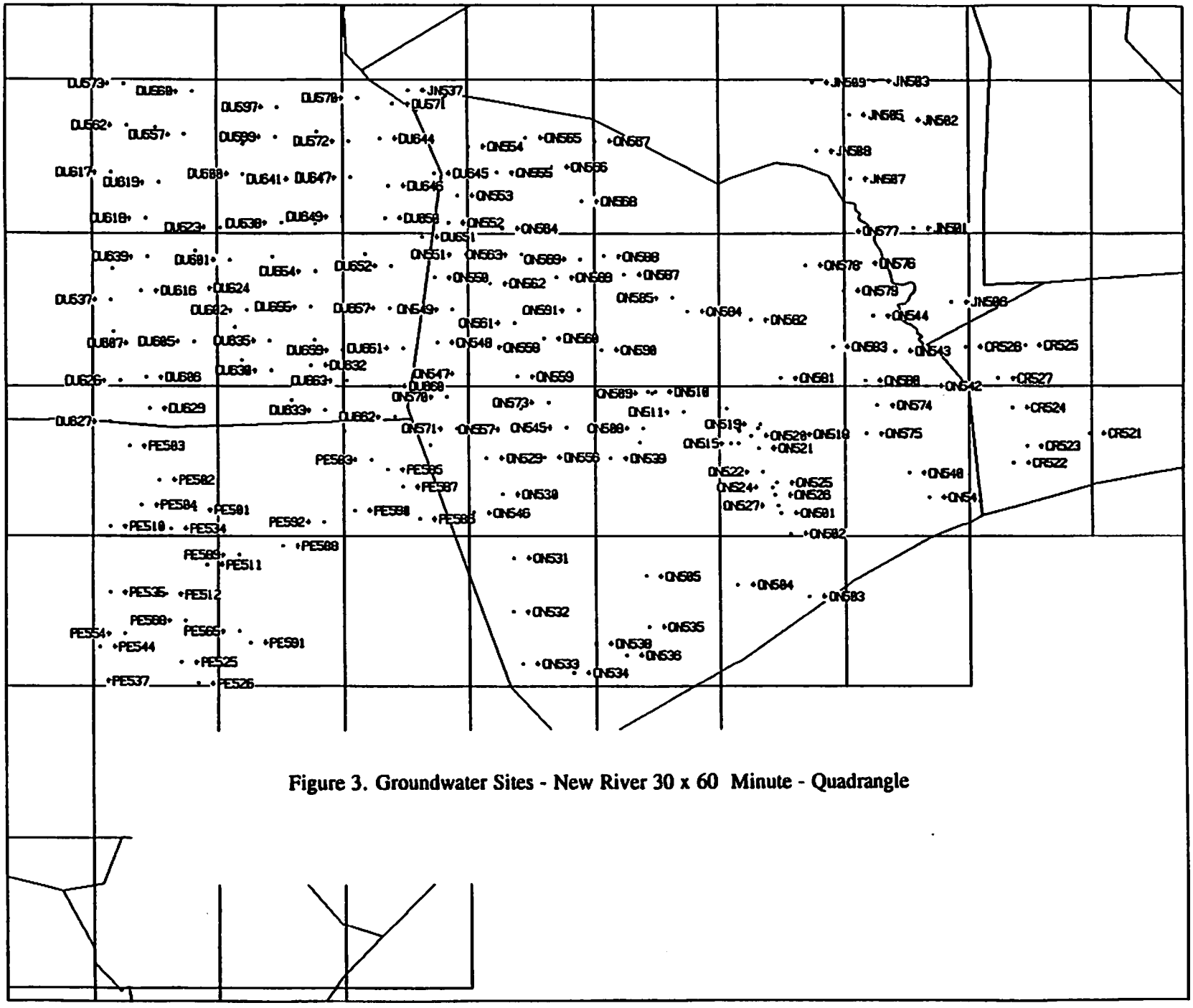

Figure 3. Groundwater Sites - New River 30 x 60 Minute - Quadrangle

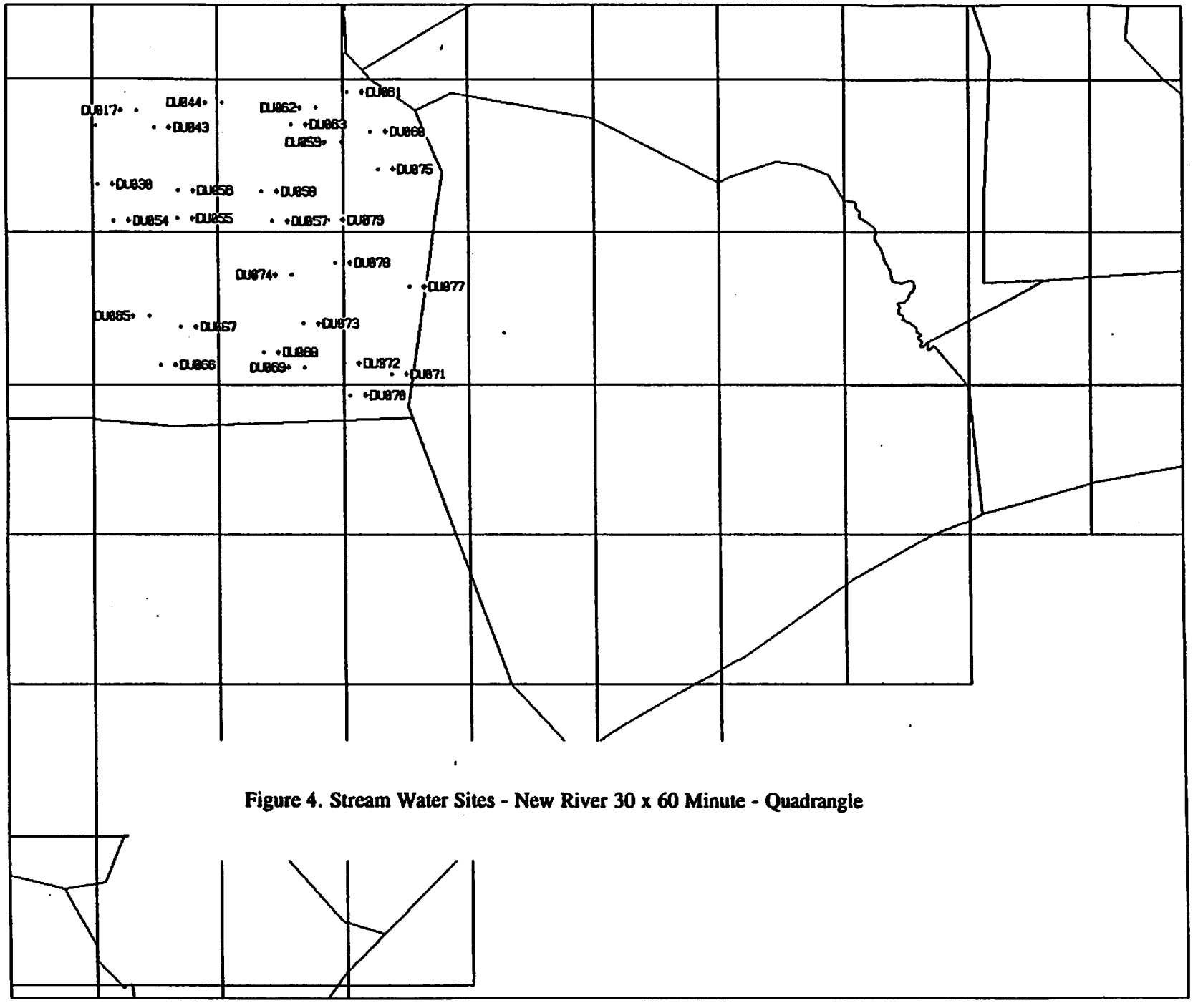

Figure 4. Stream Water Sites - New River 30 x 60 Minute - Quadrangle

NEW RIVER 100K QUADRANGLE - STREAM SEDIMENT

Lab #	County ID	Lat	Long	pH	Cond um/cm	U ppm	Th ppm	Hf ppm	Al ppm	Ce ppm	Fe ppm	Mn ppm	Na ppm	Sc ppm	Ti ppm	V ppm	Dy ppm	Eu ppm	La ppm	Sm ppm	Yb ppm	Lu ppm	Au ppm
1299	CN035	34.9538	77.0045	3.9	50	10.0	49	258	12500	216	59300	1920	2200	7.4	58100	150	M	-1.0	114	16	10.3	2.0	
1300	CN036	34.9277	77.0704	3.6	70	10.5	42	366	9700	144	23700	870	500	4.2	38400	100	6.5	-1.0	78	10	10.6	2.4	
1351	CR015	34.7074	77.0187	5.3	49	18.0	18	811	7500	57	31800	690	1200	7.4	23000	50	8.6	1.3	35	3	11.6	3.1	
1353	CR017	34.7287	77.0812	6.0	55	3.2	12	90	7900	51	14800	340	900	2.4	12300	30	3.0	M	31	5	5.9	0.6	
1354	CR018	34.7761	77.1436	6.6	112	3.4	9	8	60000	41	20800	150	2400	6.5	9800	110	M	-1.0	18	2	M	M	
1889	DU016	34.9618	77.9961	6.7	70	5.8	21	77	10700	92	8000	170	500	3.0	8900	30	4.6	-1.0	44	6	3.5	0.7	
1890	DU017	34.9743	77.9552	6.4	70	8.3	38	185	7600	163	11800	210	300	1.6	11600	30	8.0	-1.0	95	17	8.4	1.0	
1903	DU030	34.9137	77.9945	6.1	105	6.6	12	11	48000	95	20600	110	500	7.5	8000	80	6.4	1.3	43	8	2.2	0.6	
1916	DU043	34.9607	77.9381	6.6	65	7.4	23	123	8900	107	6200	180	700	2.7	8500	30	4.7	-1.4	63	9	5.7	0.8	
1917	DU044	34.9809	77.8706	6.6	80	7.8	34	113	17700	155	17900	170	600	2.8	9000	40	4.3	-1.0	78	13	6.2	0.9	
1927	DU054	34.8842	77.9786	7.4	105	2.5	7	33	5100	37	9200	140	200	1.6	7100	20	0.2	-1.0	21	3	3.0	0.4	
1928	DU055	34.8859	77.9152	6.8	70	4.5	18	71	3200	96	10200	M	M	1.8	4700	20	M	-1.2	46	8	3.7	0.6	
1929	DU056	34.9086	77.9145	5.2	50	4.3	10	24	34400	53	19400	90	400	4.5	7800	70	M	-1.0	30	4	2.6	0.4	
1930	DU057	34.8839	77.8205	6.8	50	5.0	16	93	8200	80	12200	M	M	2.6	M	M	M	-1.1	42	8	5.5	0.7	
1931	DU058	34.9083	77.8313	6.6	55	10.4	33	240	7600	117	12000	430	100	2.5	20400	50	9.7	-1.6	78	11	6.3	1.2	
1932	DU059	34.9485	77.7518	5.1	50	3.7	15	57	2000	76	10400	M	M	2.2	M	30	M	1.9	24	3	2.2	0.7	
1933	DU060	34.9570	77.7227	5.7	85	4.3	13	52	6400	78	5100	M	M	1.2	3800	20	M	-1.1	37	7	3.8	0.6	
1934	DU061	34.9893	77.7457	5.6	88	4.3	13	61	8900	50	8300	150	700	2.4	7400	20	2.4	-1.0	31	5	2.4	0.5	
1935	DU062	34.9768	77.7767	6.5	150	4.0	11	58	6600	54	12400	170	300	3.2	9100	20	1.7	-1.0	27	5	3.0	0.5	
1936	DU063	34.9630	77.8016	6.6	100	2.6	7	43	6500	33	8500	180	200	1.3	10500	30	3.0	-1.0	17	3	2.1	0.3	
1937	DU064	34.8073	77.9779	6.9	140	19.5	57	353	7000	242	13100	280	200	3.4	12300	30	9.2	-1.0	126	19	9.2	1.8	
1938	DU065	34.8062	77.9438	6.4	130	13.0	51	295	4200	201	17400	1070	M	5.8	17900	50	0.6	1.3	112	20	13.0	2.2	
1939	DU066	34.7664	77.9332	6.7	88	11.6	51	246	12200	203	17200	480	500	3.1	22400	60	M	-1.3	107	17	12.3	1.8	
1940	DU067	34.7971	77.9125	6.9	160	26.5	101	598	1600	426	7700	M	M	6.2	12400	30	0.8	-1.4	215	27	14.9	3.0	
1941	DU068	34.7765	77.8304	5.9	142	3.5	7	16	43200	51	16800	120	1500	3.4	8700	70	M	-1.0	29	5	M	0.3	
1942	DU069	34.7645	77.7888	5.6	190	2.4	7	46	3700	46	12600	M	M	2.2	M	30	M	M	23	4	M	0.3	
1943	DU070	34.7412	77.7436	6.6	160	1.8	8	28	6300	33	6700	150	500	1.4	6200	20	0.9	-1.0	15	2	1.3	0.3	
1944	DU071	34.7589	77.7028	5.2	50	2.4	7	49	M	32	9300	M	M	1.3	2300	20	M	-1.0	16	M	3.0	0.5	
1945	DU072	34.7675	77.7499	6.5	145	2.0	9	41	1300	34	7600	770	M	1.0	M	20	M	-1.0	15	3	1.2	0.3	
1946	DU073	34.7999	77.7897	8.4	285	4.9	12	95	8100	61	14600	340	300	1.7	14900	40	M	-1.0	33	5	3.8	0.8	
1947	DU074	34.8397	77.8018	7.4	90	2.9	8	41	6200	75	10600	130	300	1.7	5800	20	1.7	M	23	5	4.6	0.4	
1948	DU075	34.9261	77.7152	5.9	52	6.0	23	95	3600	89	8200	800	M	1.5	10800	20	0.5	-1.0	43	7	4.7	0.6	
1949	DU076	34.8681	77.7111	M	M	2.2	6	39	8100	34	7300	210	200	1.2	9700	30	1.7	-1.0	19	2	1.8	0.3	
1950	DU077	34.8302	77.6846	6.4	110	1.6	7	26	2100	21	8300	690	M	1.9	5700	20	M	-1.0	12	2	1.7	0.4	
1951	DU078	34.8496	77.7585	6.9	152	5.4	26	112	2900	105	16600	M	M	2.7	12400	40	M	-1.0	48	7	4.7	1.0	
1952	DU079	34.8850	77.7649	8.8	103	2.9	5	27	M	38	10900	M	M	4.3	24700	40	M	-1.0	21	3	1.4	0.2	0.014
3283	JN008	34.8376	77.1687	5.5	30	1.4	M	M	21200	M	M	120	3700	M	4300	20	1.4	M	M	2	M	M	
3284	JN009	34.8997	77.1375	3.6	25	3.6	10	68	8800	41	11400	310	800	1.7	12100	40	0.7	-1.0	26	4	2.5	0.3	

NEW RIVER 100K QUADRANGLE - STREAM SEDIMENT

Lab #	County ID	Lat	Long	pH	Cond	U	Th	Hf	Al	Ce	Fe	Mn	Na	Sc	Ti	V	Dy	Eu	La	Sm	Yb	Lu	Au
					um/cm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
3285	JN010	34.8827	77.1699	4.4	25	1.9	10	28	11100	59	10600	130	2100	1.9	3900	20	1.3	-1.0	17	4	M	0.3	
3286	JN011	34.9739	77.2226	5.8	65	4.3	14	103	9000	82	17900	550	500	3.0	18200	50	M	0.9	30	4	2.4	0.6	0.021
3287	JN012	34.9779	77.1830	4.3	20	2.4	5	44	8300	31	9100	130	1000	1.0	4300	20	1.4	-1.0	15	2	1.3	0.2	
3294	JN019	34.9905	77.3092	4.0	40	3.3	11	82	7600	48	7200	210	300	3.2	11000	30	2.4	-1.0	26	4	2.7	0.6	
3295	JN020	34.9763	77.2733	4.0	45	3.0	8	54	12600	20	7100	150	400	3.0	6700	30	1.8	-1.0	19	3	1.6	0.5	
3296	JN021	34.9408	77.2908	4.1	30	2.1	8	48	9000	36	8900	180	500	1.4	9200	30	2.0	-1.0	21	3	M	0.4	
3297	JN022	34.9424	77.3327	4.2	35	4.9	12	127	14600	51	12800	330	400	5.4	13900	40	1.5	-1.0	33	4	3.6	0.5	
3304	JN029	34.9884	77.6665	5.8	48	1.2	5	21	3500	20	6300	60	200	0.6	3000	10	0.8	-1.0	8	1	M	M	
3309	JN034	34.9972	77.5428	6.9	83	2.1	5	16	14900	44	14500	100	300	5.1	4000	20	2.3	-1.0	23	4	1.8	0.2	
3310	JN035	34.9890	77.4972	4.3	30	2.1	6	30	6200	17	8300	100	100	1.8	5200	20	2.9	-1.0	18	3	3.0	0.3	
4392	ON001	34.7158	77.6614	4.4	39	2.2	7	36	6600	34	5400	180	800	1.2	6600	20	3.7	-1.0	16	3	M	0.1	
4393	ON002	34.7241	77.6107	4.0	55	2.2	5	22	13400	38	8400	100	1100	3.3	3900	20	2.7	M	13	2	M	0.2	
4394	ON003	34.7442	77.6493	4.2	48	2.3	6	19	27100	23	8800	70	800	3.0	4700	30	M	M	12	M	M	0.2	
4395	ON004	34.7822	77.6283	4.5	43	4.6	14	99	5800	69	15700	440	100	5.2	20000	60	3.9	M	32	6	3.4	0.6	
4396	ON005	34.8135	77.6489	4.5	46	14.0	46	284	7300	204	11800	510	300	4.7	21500	50	16.2	1.8	104	13	7.7	1.8	
4397	ON006	34.8519	77.6209	4.3	43	1.5	9	40	3800	-20	10400	80	200	0.8	4300	10	1.0	-1.0	M	2	M	0.3	
4398	ON007	34.8776	77.6528	4.7	50	3.4	11	65	9300	45	10500	200	400	1.6	11000	30	2.4	M	36	3	M	0.4	
4399	ON008	34.8229	77.5878	4.9	43	7.4	22	147	7700	121	14200	590	200	4.7	28100	60	M	1.1	55	10	6.1	0.7	
4400	ON009	34.8697	77.5842	7.8	990	4.6	17	120	12800	74	14300	370	2200	2.2	18700	40	4.8	-1.0	30	4	7.9	0.7	
4401	ON010	34.8386	77.5683	6.4	41	6.3	15	224	9400	57	16100	480	200	3.9	23600	60	3.7	-1.0	23	3	4.7	1.0	
4402	ON011	34.8140	77.5179	5.7	25	2.4	7	16	23200	55	10800	80	700	5.4	4700	30	2.6	-1.0	15	2	M	0.2	
4403	ON012	34.7165	77.4820	6.8	83	1.6	9	28	6700	26	10700	130	700	1.8	5700	20	2.2	3.1	11	2	3.0	M	
4404	ON013	34.6669	77.4951	4.3	31	1.3	4	26	8000	34	-5000	70	1100	1.1	3100	10	0.9	M	17	2	2.7	0.3	
4405	ON014	34.5832	77.4636	5.9	38	1.8	7	27	12700	27	5600	90	2300	1.8	3500	10	1.1	M	11	1	M	0.2	
4406	ON015	34.5470	77.4503	4.1	55	1.3	3	30	4100	13	7700	90	200	1.7	5300	20	M	-1.0	10	1	M	M	
4407	ON016	34.5276	77.4050	5.8	69	1.6	3	17	13300	32	8100	120	1300	1.1	4100	20	3.4	-1.0	10	2	M	0.2	
4408	ON017	34.5177	77.4843	5.4	35	2.4	6	86	6400	33	8300	170	800	1.7	6600	20	2.3	M	19	2	4.4	0.5	
4410	ON019	34.5228	77.5681	4.1	50	2.1	7	58	5100	-23	6100	60	200	1.3	3900	10	1.2	-1.0	14	3	4.0	0.4	
4411	ON020	34.5703	77.5862	4.5	32	1.8	8	19	10900	41	7600	120	300	2.3	5900	20	2.1	M	20	3	M	0.2	
4412	ON021	34.6172	77.5844	4.4	28	0.9	3	9	5500	-29	7100	40	200	1.0	2500	10	1.3	-1.0	5	1	M	M	
4413	ON022	34.6356	77.6191	4.9	28	1.6	M	17	3300	25	10400	70	200	1.0	2700	10	1.9	-1.0	9	2	M	M	
4414	ON023	34.6719	77.5972	4.4	33	1.1	M	19	4100	9	6200	80	200	0.9	4000	10	M	-1.0	6	1	M	M	
4415	ON024	34.6910	77.5469	4.8	32	1.5	6	22	8700	34	7300	80	1800	1.5	3100	10	M	M	13	3	M	0.3	
4416	ON025	34.7356	77.5814	6.8	72	1.6	9	24	6800	16	9400	160	900	1.4	5700	20	1.7	M	14	3	M	M	
4417	ON026	34.7486	77.5625	5.1	32	1.9	8	31	6900	40	8600	160	700	0.9	6100	20	3.3	-1.0	15	3	M	0.3	
4418	ON027	34.7836	77.5236	5.2	54	1.9	4	25	13400	36	10400	160	2100	2.3	6000	20	1.7	-1.0	14	3	M	0.5	
4419	ON028	34.7555	77.4803	7.1	102	1.4	5	22	7100	35	9900	100	700	1.0	4000	10	0.4	-1.0	15	2	M	0.2	
4420	ON029	34.9095	77.6249	5.9	42	3.8	13	110	7100	54	16300	390	400	4.1	14200	30	1.3	M	22	4	3.5	0.5	

NEW RIVER 100K QUADRANGLE - STREAM SEDIMENT

Lab #	County ID	Lat	Long	pH	Cond um/cm	U ppm	Th ppm	Hf ppm	Al ppm	Ce ppm	Fe ppm	Mn ppm	Na ppm	Sc ppm	Ti ppm	V ppm	Dy ppm	Eu ppm	La ppm	Sm ppm	Yb ppm	Lu ppm	Au ppm
4421	ON030	34.9396	77.6353	4.0	44	1.6	3	31	5300	13	6500	80	100	1.4	5000	20	1.2	N	11	1	N	0.1	
4422	ON031	34.9699	77.6365	6.4	65	2.4	7	37	4200	35	7100	120	300	2.6	5100	10	1.3	N	20	2	N	0.3	
4423	ON032	34.9317	77.5806	6.0	47	5.5	18	144	7200	85	20000	400	500	4.3	16400	50	3.1	-1.0	41	1	5.9	0.8	
4424	ON033	34.9349	77.5316	5.6	38	1.5	3	19	4500	38	7700	60	100	0.9	4600	10	1.3	-1.0	15	2	N	0.4	
4425	ON034	34.8817	77.5208	5.6	34	2.3	10	36	9400	44	8400	150	N	1.9	4900	20	1.7	-1.0	19	1	N	0.4	
4426	ON035	34.8398	77.4659	4.2	37	N	4	45	4700	44	10700	170	400	1.4	7300	20	2.8	-1.0	21	2	N	N	
4427	ON036	34.8204	77.4157	4.8	37	2.8	8	50	7300	32	10000	180	200	1.8	7800	20	2.4	-1.0	22	6	N	N	
4428	ON037	34.8319	77.3449	4.1	49	3.3	12	61	14000	59	12000	270	1800	3.0	11200	40	3.1	-1.0	33	5	N	0.5	
4429	ON038	34.7806	77.3310	5.6	31	1.3	3	17	12000	41	7800	90	1300	2.9	3800	20	N	N	12	1	N	0.2	0.037
4430	ON039	34.7899	77.2902	6.5	53	2.7	9	64	8800	38	12500	460	600	4.5	16600	40	N	N	17	3	N	0.3	
4431	ON040	34.7578	77.2893	4.5	30	2.4	18	11	49600	56	24100	90	1300	8.8	5700	60	3.5	N	36	4	N	-0.4	
4432	ON041	34.7469	77.2390	6.2	51	1.7	9	34	6700	31	7800	160	300	1.3	5600	20	1.2	N	14	N	N	0.3	
4433	ON042	34.7193	77.2162	6.5	82	2.6	8	21	34900	37	13500	N	N	5.9	N	20	0.3	-1.0	29	7	N	0.3	
4434	ON043	34.8894	77.2612	4.6	28	2.2	6	41	11600	31	-5000	110	300	1.6	5000	20	2.2	0.5	20	3	N	N	
4435	ON044	34.9130	77.2781	4.2	39	2.6	11	9	62300	46	26600	60	500	6.8	6000	90	N	-1.0	19	1	N	0.3	
4436	ON045	34.9171	77.3149	4.9	33	2.7	10	42	21500	30	8800	220	500	3.0	10900	40	3.1	-1.0	37	4	N	0.3	
4437	ON046	34.8512	77.2865	4.6	30	2.7	9	49	13000	49	8700	240	2000	2.6	9900	30	N	-1.0	26	5	1.8	0.4	
4438	ON047	34.8542	77.2323	5.8	63	3.6	7	10	33700	49	20500	120	500	4.3	6300	60	4.7	-1.0	26	4	1.7	0.4	
4439	ON048	34.8000	77.2170	6.7	77	2.8	13	53	14200	54	15900	300	800	4.1	10400	30	3.3	-1.0	29	5	2.8	0.6	
4440	ON049	34.7652	77.1818	6.7	55	3.3	5	9	38000	62	15300	110	1300	6.2	5900	60	4.6	-1.0	26	4	3.0	0.2	
4441	ON050	34.7282	77.1632	5.4	39	1.4	5	21	7600	24	9700	240	800	1.1	8000	20	N	1.0	13	2	1.1	0.2	
4442	ON051	34.6714	77.1909	6.4	72	1.4	3	21	10000	16	8700	110	1300	2.1	4100	20	0.7	-1.0	8	2	N	N	
4443	ON052	34.6625	77.2253	6.6	69	1.2	5	9	16300	24	8700	70	2100	1.0	3200	20	0.9	N	10	2	1.7	0.2	
4444	ON053	34.6217	77.2404	5.1	41	1.1	3	22	6000	12	-5000	130	1200	1.0	5500	20	N	-1.0	7	1	1.4	N	
4445	ON054	34.6054	77.2672	6.2	51	0.6	4	9	11800	-20	6100	90	2400	0.9	3900	10	N	-1.0	5	1	N	N	
4446	ON055	34.5743	77.2984	5.8	57	0.9	3	7	8700	13	6700	80	1800	0.9	2900	10	0.6	N	8	1	N	0.1	
4447	ON056	34.5825	77.3322	4.1	58	0.9	6	10	12100	13	5800	80	1900	1.2	3300	10	1.7	N	7	1	2.2	N	
4448	ON057	34.7104	77.2742	4.6	32	1.6	5	12	21700	18	7100	110	1100	2.5	6000	30	2.3	-1.0	14	2	1.3	0.2	
4556	PE029	34.6205	77.9888	6.5	60	4.3	17	64	8700	85	13200	240	700	2.2	8900	30	4.5	N	38	1	6.9	0.7	
4557	PE030	34.6433	77.9204	6.6	60	4.8	15	62	8400	57	10000	170	600	2.0	7100	20	2.8	-1.0	49	1	N	0.3	
4558	PE031	34.6825	77.9448	6.3	50	5.5	19	78	9800	91	13200	200	800	2.8	8300	30	4.0	N	50	2	N	0.3	
4559	PE032	34.7099	77.9580	6.5	110	14.2	44	250	8000	191	6700	330	300	4.2	16400	50	9.3	-1.0	100	15	7.6	1.3	
4564	PE037	34.5822	77.9655	5.4	60	1.7	8	24	4200	11	10100	80	200	0.9	4000	10	1.9	N	12	2	2.9	0.4	
4565	PE038	34.5646	77.9250	6.8	120	1.8	3	24	5400	16	5000	70	200	1.1	3100	10	1.7	-1.0	20	2	N	N	
4566	PE039	34.5459	77.9878	6.7	80	13.6	51	185	8700	211	17200	430	400	5.7	16000	40	6.9	1.0	94	16	6.0	1.3	
4568	PE041	34.5801	77.9031	6.5	85	2.6	10	45	7900	29	6000	120	900	1.3	5200	20	1.6	-1.0	35	1	N	N	
4569	PE042	34.6514	77.7359	5.2	40	3.3	10	67	4800	41	6700	210	500	1.5	8000	20	2.6	-1.0	25	4	4.1	0.3	
4570	PE043	34.6942	77.7279	5.0	40	1.4	2	28	1600	12	5200	70	200	1.2	2300	10	0.8	N	8	N	N	N	

NEW RIVER 100K QUADRANGLE - STREAM SEDIMENT

Lab #	County ID	Lat	Long	pH	Cond	U	Th	Hf	Al	Ce	Fe	Mn	Na	Sc	Ti	V	Dy	Eu	La	Sm	Yb	Lu	Au
					um/cm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
4571	PE044	34.7073	77.7365	4.2	45	1.8	N	32	4700	17	5300	130	200	1.6	5800	20	1.4	-1.0	10	3	5.1	N	
4572	PE045	34.7032	77.6870	4.7	35	1.5	4	21	3800	16	-5000	90	100	1.4	4800	10	2.0	N	12	1	N	0.1	
4573	PE046	34.6620	77.6630	6.5	130	2.7	8	40	6300	33	6700	130	500	2.2	6500	20	3.2	N	31	4	3.1	0.4	
4574	PE047	34.6826	77.6874	6.4	50	1.2	3	25	6600	34	9600	130	500	1.6	5900	20	N	1.8	9	2	N	0.1	
4575	PE048	34.6584	77.6900	6.2	30	1.5	3	32	2200	26	5600	90	200	2.0	3300	10	1.0	-1.0	11	1	N	N	
4576	PE049	34.6334	77.6798	4.6	35	1.2	4	14	6400	22	9300	70	100	1.8	4300	20	1.4	-1.0	10	2	N	N	
4577	PE050	34.6386	77.7319	5.2	30	2.4	9	46	3700	32	6300	160	200	3.4	7300	20	1.3	N	19	3	N	0.2	
4578	PE051	34.6160	77.7642	4.8	30	2.7	7	40	7200	34	5600	150	900	1.3	6100	20	2.7	-1.0	23	5	3.3	0.5	
4579	PE052	34.5900	77.7924	4.0	50	4.6	15	73	7000	62	7100	170	600	1.3	6900	20	3.9	N	42	6	5.2	0.6	
4580	PE053	34.5690	77.8022	4.0	40	1.7	7	30	5100	29	6700	90	300	2.1	5100	20	1.2	N	11	2	N	N	
4581	PE054	34.5090	77.8145	4.6	30	1.6	6	23	5700	25	7800	170	500	1.1	7000	20	N	-1.0	12	2	N	N	
4593	PE066	34.5419	77.8548	6.4	80	2.8	9	41	6900	50	7600	170	600	1.3	7800	20	2.6	N	38	4	2.1	0.3	

NEW RIVER 100K QUADRANGLE - SUPPLEMENTAL STREAM SEDIMENT

Lab #	County ID	Lat	Long	Ux ppm	Ag ppm	As ppm	Ba ppm	Be ppm	Ca ppm	Co ppm	Cr ppm	Cu ppm	K ppm	Li ppm	Mg ppm	Mo ppm	Nb ppm	Ni ppm	P ppm	Pb ppm	Se ppm	Sn ppm	Sr ppm	W ppm	Y ppm	Zn ppm
1280	DU016	34.9618	77.9961	0.6	0.3	2	10	-0.5	-100	7	13	2	1000	8	950	3	20	-5	600	-10	-1	-5	.	-2	5	7
1281	DU017	34.9743	77.9552	1.2	0.4	3	5	-0.5	-100	5	19	-2	1000	7	750	2	20	-5	500	-10	1	-5	.	2	-5	-5
1294	DU030	34.9137	77.9945	3.4	0.6	4	60	1	100	22	26	6	-1000	17	-200	-2	40	-5	1400	22	-1	-5	.	2	5	22
1307	DU043	34.9607	77.9381	1.0	0.3	1	5	-0.5	-100	10	18	2	1000	9	850	-2	50	-5	600	-10	1	-5	.	2	-5	-5
1308	DU044	34.9809	77.8706	1.6	0.5	2	12	-0.5	-100	10	18	2	3000	13	1400	-2	45	-5	600	10	-1	-5	.	2	-5	15
1318	DU054	34.8842	77.9786	1.1	0.2	1	-5	-0.5	-100	7	7	-2	-1000	5	400	4	20	-5	500	-10	-1	5	.	-2	-5	-5
1319	DU055	34.8859	77.9152	1.1	0.4	1	10	-0.5	-100	10	11	-2	1000	6	600	-2	30	-5	500	-10	1	-5	.	-2	-5	-5
1320	DU056	34.9086	77.9145	2.6	0.6	4	22	1	-100	20	8	3	2000	18	1150	-2	20	-5	1100	25	1	-5	.	-2	5	10
1321	DU057	34.8839	77.8205	1.0	0.4	1	7	-0.5	-100	5	16	-2	-1000	7	400	-2	30	-5	600	-10	-1	10	.	-2	5	-5
1322	DU058	34.9083	77.8313	1.6	0.3	2	12	-0.5	-100	10	31	-2	-1000	7	250	3	35	-5	600	-10	-1	-5	.	2	10	-5
1323	DU059	34.9485	77.7518	1.0	0.3	2	5	-0.5	-100	7	10	-2	-1000	7	650	-2	15	-5	500	-10	1	-5	.	-2	-5	-5
1324	DU060	34.9570	77.7227	1.0	0.2		10	-0.5	-100	5	12	2	1000	8	650	-2	.	-5	400	10	-1	-5	.	2	5	5
1325	DU061	34.9893	77.7457	1.6	0.3	1	10	-0.5	-100	5	11	-2	2000	7	850	2	25	-5	400	-10	1	-5	.	-2	-5	-5
1326	DU062	34.9768	77.7767	1.4	0.3	1	7	-0.5	-100	7	13	-2	1000	6	950	-2	30	-5	600	-10	2	5	.	-2	-5	5
1327	DU063	34.9630	77.8016	1.0	0.5	2	7	-0.5	-100	5	10	2	-1000	6	450	3	30	-5	600	10	1	5	.	-2	10	-5
1328	DU064	34.8073	77.9779	1.0	0.5	2	10	-0.5	-100	7	28	2	-1000	7	750	2	40	-5	700	10	1	-5	.	3	-5	10
1329	DU065	34.8062	77.9438	1.0	0.3	3	7	-0.5	-100	10	26	-2	-1000	7	700	2	60	-5	700	-10	-1	-5	.	2	-5	-5
1330	DU066	34.7664	77.9332	1.9	0.3	3	12	0.5	-100	10	31	-2	1000	10	450	4	45	-5	500	10	-1	5	.	2	10	5
1331	DU067	34.7971	77.9125	3.8	0.3	0	10	0.5	100	7	52	2	-1000	7	650	2	45	-5	600	12	1	-5	.	2	-5	5
1332	DU068	34.7765	77.8304	2.3	0.3	3	47	1	-100	12	8	4	5000	24	1100	-2	10	5	600	17	1	5	.	-2	-5	17
1333	DU069	34.7645	77.7888	1.0	0.2	2	7	-0.5	-100	7	11	2	1000	9	800	-2	10	-5	600	-10	-1	-5	.	-2	-5	5
1334	DU070	34.7412	77.7436	1.1	0.1	1	10	-0.5	-100	5	7	-2	2000	8	550	-2	15	-5	500	-10	2	-5	.	-2	-5	-5
1335	DU071	34.7589	77.7028	1.1	0.2	0	7	0.5	-100	5	9	-2	-1000	6	450	-2	15	-5	500	-10	-1	-5	.	2	-5	-5
1336	DU072	34.7675	77.7499	1.1	0.2	4	7	-0.5	-100	7	16	-2	-1000	9	700	-2	30	-5	500	-10	-1	-5	.	-2	-5	-5
1337	DU073	34.7999	77.7897	1.1	0.3	2	10	-0.5	100	10	10	2	1000	9	800	-2	10	-5	400	-10	-1	5	.	-2	-5	7
1338	DU074	34.8397	77.8018	1.1	0.5	1	25	-0.5	-100	7	15	-2	-1000	7	550	-2	25	-5	700	10	-1	-5	.	-2	15	-5
1339	DU075	34.9261	77.7152	1.1	0.3	10	5	-0.5	-100	7	5	-2	-1000	6	300	-2	5	-5	600	-10	-1	5	.	-2	-5	-5
1340	DU076	34.8681	77.7111	1.0	0.3	3	10	-0.5	-100	7	10	-2	-1000	7	200	-2	15	-5	600	-10	-1	-5	.	-2	10	5
1341	DU077	34.8302	77.6846	1.0	0.1	2	7	0.5	-100	10	11	-2	-1000	7	700	-2	25	-5	1000	-10	-1	5	.	-2	-5	-5
1342	DU078	34.8496	77.7585	1.0	0.2	2	5	-0.5	-100	7	12	-2	1000	9	850	2	10	-5	500	10	1	5	.	-2	-5	15
1343	DU079	34.8850	77.7649	1.6	0.4	2	5	1	-100	10	6	2	1000	17	850	-2	10	-5	1000	20	1	5	.	-2	5	27

NEW RIVER 100K QUADRANGLE - SUPPLEMENTAL STREAM SEDIMENT

Lab #	County ID	Lat	Long	Ux ppm	Ag ppm	As ppm	Ba ppm	Be ppm	Ca ppm	Co ppm	Cr ppm	Cu ppm	K ppm	Li ppm	Mg ppm	Mo ppm	Nb ppm	Ni ppm	P ppm	Pb ppm	Se ppm	Sn ppm	Sr ppm	W ppm	Y ppm	Zn ppm

NEW RIVER 100K QUADRANGLE - SUPPLEMENTAL STREAM SEDIMENT

Lab #	County ID	Lat	Long	Ux ppm	Ag ppm	As ppm	Ba ppm	Be ppm	Ca ppm	Co ppm	Cr ppm	Cu ppm	K ppm	Li ppm	Mg ppm	Mo ppm	Nb ppm	Ni ppm	P ppm	Pb ppm	Se ppm	Sn ppm	Sr ppm	W ppm	Y ppm	Zn ppm

NEW RIVER 100K QUADRANGLE - SUPPLEMENTAL STREAM SEDIMENT

Lab #	County ID	Lat	Long	Ux ppm	Ag ppm	As ppm	Ba ppm	Be ppm	Ca ppm	Co ppm	Cr ppm	Cu ppm	K ppm	Li ppm	Mg ppm	Mo ppm	Nb ppm	Ni ppm	P ppm	Pb ppm	Se ppm	Sn ppm	Sr ppm	W ppm	Y ppm	Zn ppm

NEW RIVER 100K QUADRANGLE - GROUNDWATER

Lab #	County ID	Lat	Long	pH	Cond um/cm	U ppb	Br ppb	Cl ppb	F ppb	Mg ppb	Mn ppb	Na ppb	V ppb	U/cond x 1000	Al ppb	Dy ppb
1303	CR521	34.7109	77.0025	6.6	140	0.007	74	9700	.	.	101	18190	3.2	0.0	117	-0.001
1304	CR522	34.6862	77.0811	6.8	235	0.111	222	13800	.	.	82	18250	0.7	0.4	83	-0.001
1305	CR523	34.7003	77.0675	7.8	250	0.007	77	10400	56	.	89	17130	0.4	0.0	134	-0.001
1306	CR524	34.7322	77.0821	7.2	600	0.038	.	17100	99	2850	201	35160	-0.1	0.0	290	-0.001
1307	CR525	34.7839	77.0691	7.2	625	-0.002	72	12400	175	.	200	31220	-0.1	0.0	300	-0.001
1308	CR526	34.7824	77.1285	7.7	300	0.008	.	6800	70	.	88	16770	-0.1	0.0	137	-0.001
1309	CR527	34.7565	77.0965	7.4	375	-0.002	.	7600	126	.	92	16420	-0.1	0.0	36	-0.001
1718	DU537	34.8208	77.9812	7.6	223	0.002	47	7900	71	.	91	13180	-0.1	0.0	154	-0.001
1737	DU556	34.9613	77.9359	7.8	275	0.018	.	3800	23	.	59	6590	-0.1	0.0	35	-0.001
1738	DU557	34.9552	77.9075	8.1	231	0.002	22	4300	41	.	53	8430	-0.1	0.0	32	-0.001
1739	DU558	34.9478	77.8491	7.7	295	-0.002	14	4600	42	.	56	5860	-0.1	0.0	44	-0.001
1740	DU559	34.9776	77.8540	7.9	242	-0.002	7	4300	25	.	66	3620	-0.1	0.0	38	-0.001
1741	DU560	34.9904	77.8996	7.1	210	-0.002	21	7800	26	.	46	3570	-0.1	0.0	37	-0.001
1742	DU561	34.9878	77.9350	7.9	230	-0.002	31	5200	25	.	45	2780	-0.1	0.0	28	-0.001
1743	DU562	34.9626	77.9650	5.2	100	0.055	39	7200	.	.	36	4720	-0.1	0.5	54	-0.001
1751	DU570	34.9849	77.7349	7.9	240	-0.002	.	3700	55	.	.	6230	-0.1	0.0	44	-0.001
1752	DU571	34.9801	77.7000	7.7	308	0.003	36	7900	117	5840	110	17430	-0.1	0.0	117	-0.001
1753	DU572	34.9500	77.7437	8.0	220	0.011	15	6900	141	6570	102	15540	0.4	0.0	132	-0.001
1754	DU573	34.9969	77.9683	8.2	200	-0.002	57	8400	95	.	143	13080	-0.1	0.0	149	-0.001
1778	DU597	34.9779	77.8147	7.4	315	-0.002	.	4400	42	.	80	4740	-0.1	0.0	15	-0.001
1780	DU599	34.9536	77.8168	7.8	291	-0.002	.	4500	120	.	44	5330	-0.1	0.0	27	-0.001
1781	DU600	34.9235	77.8491	7.6	292	-0.002	.	4200	58	.	43	5580	-0.1	0.0	25	-0.001
1782	DU601	34.8533	77.8624	5.9	115	-0.002	.	6900	.	.	36	3930	0.8	0.0	89	-0.001
1783	DU602	34.8122	77.8459	6.1	150	0.028	22	11300	.	.	28	6410	0.7	0.1	179	0.090
1784	DU603	34.7714	77.8512	4.8	90	0.041	25	4600	.	.	40	3130	-0.1	0.4	169	-0.001
1785	DU604	34.7983	77.8573	5.2	100	-0.002	35	7900	.	.	40	3260	0.4	0.0	161	-0.001
1786	DU605	34.7864	77.8990	7.5	210	0.004	15	4000	66	.	35	3220	-0.1	0.0	34	-0.001
1787	DU606	34.7574	77.9467	7.5	380	-0.002	.	5800	84	.	56	4060	-0.1	0.0	34	-0.001
1788	DU607	34.7850	77.9501	5.2	50	0.040	43	6600	.	.	21	4620	-0.1	0.8	45	-0.001
1795	DU614	34.8877	77.9776	7.6	213	-0.002	21	4300	55	.	38	2510	-0.1	0.0	33	-0.001
1796	DU615	34.8461	77.9801	7.2	360	-0.002	.	5300	.	.	252	2680	-0.1	0.0	14	-0.001
1797	DU616	34.8281	77.9510	7.8	235	-0.002	15	4700	53	.	78	3740	-0.1	0.0	24	0.050
1798	DU617	34.9244	77.9805	7.7	260	-0.002	30	7200	10	.	29	2540	-0.1	0.0	35	-0.001
1799	DU618	34.8874	77.9465	7.7	340	-0.002	12	5200	60	.	51	3220	-0.1	0.0	28	-0.001
1800	DU619	34.9162	77.9331	4.7	138	1.879	.	15800	57	.	.	14600	-0.1	13.6	953	-0.001
1801	DU620	34.9264	77.8872	5.3	75	0.074	85	12000	28	1710	.	9950	-0.1	0.9	202	-0.001
1802	DU621	34.8819	77.8944	7.6	220	0.146	.	8200	114	4430	60	9880	0.5	0.6	187	-0.001
1803	DU622	34.8608	77.8974	4.5	228	0.147	53	15500	41	2620	.	14060	-0.1	0.6	1217	25.370

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Lab #	County ID	Lat	Long	pH	Cond um/cm	U ppb	Br ppb	Cl ppb	F ppb	Mg ppb	Mn ppb	Na ppb	V ppb	U/cond x 1000	Al ppb	Dy ppb
1804	DU623	34.8802	77.8721	7.6	200	0.103	44	7400	56	2940	70	9850	-0.1	0.5	189	-0.001
1805	DU624	34.8301	77.8977	7.6	300	0.038	49	6500	90	5830	.	12640	0.3	0.1	150	-0.001
1806	DU625	34.7946	77.9792	7.6	300	0.020	23	6800	67	2560	43	10880	-0.1	0.0	156	-0.001
1807	DU626	34.7544	77.9726	7.7	305	0.013	12	7900	112	4500	77	13380	-0.1	0.0	158	-0.001
1808	DU627	34.7203	77.9820	7.6	390	0.064	28	8000	105	8050	.	13330	0.4	0.1	169	-0.001
1810	DU629	34.7312	77.9431	5.0	102	0.098	.	8700	35	950	63	9430	-0.1	0.9	812	-0.001
1811	DU630	34.7629	77.8219	8.0	360	0.011	45	8900	89	13700	.	12290	0.3	0.0	161	-0.001
1812	DU631	34.7384	77.8017	7.8	280	0.007	30	9300	133	8830	.	12170	-0.1	0.0	151	-0.001
1813	DU632	34.7672	77.7821	7.8	330	0.002	31	9000	190	10290	.	16970	-0.1	0.0	135	-0.001
1814	DU633	34.7298	77.7682	6.1	51	0.017	22	9800	.	.	60	10720	0.4	0.3	180	-0.001
1815	DU634	34.7225	77.7407	7.4	340	0.014	23	10300	39	3200	203	13640	-0.1	0.0	119	-0.001
1816	DU635	34.7871	77.8233	8.0	375	0.018	.	8400	488	6480	.	43230	0.5	0.0	143	-0.001
1817	DU636	34.8153	77.8145	7.6	320	0.058	16	12500	46	1450	65	10930	-0.1	0.1	163	-0.001
1818	DU637	34.8557	77.8204	4.5	130	0.057	150	22100	.	.	53	18380	0.4	0.4	521	-0.001
1819	DU638	34.8837	77.8112	7.6	250	0.002	.	7900	182	2650	98	11570	-0.1	0.0	144	-0.001
1820	DU639	34.8557	77.9449	5.7	118	0.017	72	10300	.	.	59	16980	-0.1	0.1	160	-0.001
1821	DU640	34.9159	77.8134	4.2	112	0.588	47	7500	.	2080	91	11180	-0.1	5.2	936	1.160
1822	DU641	34.9194	77.7899	5.3	40	-0.002	.	12500	38	.	63	11280	0.9	0.0	164	-0.001
1823	DU642	34.9577	77.7758	7.9	260	0.021	34	7100	165	6090	101	16680	-0.1	0.0	149	-0.001
1824	DU643	34.9857	77.7835	4.9	30	-0.002	.	8300	29	.	66	12040	-0.1	0.0	341	-0.001
1825	DU644	34.9523	77.7128	7.5	265	-0.002	9	6900	66	3090	92	14660	0.8	0.0	130	-0.001
1826	DU645	34.9241	77.6587	7.7	290	0.010	19	7500	95	6030	116	15270	0.5	0.0	148	-0.001
1827	DU646	34.9139	77.7043	7.4	370	-0.002	35	8400	79	2210	132	14850	-0.1	0.0	135	-0.001
1828	DU647	34.9202	77.7419	6.0	110	0.014	49	22100	101	1950	108	15130	0.4	0.1	123	16.400
1829	DU648	34.8831	77.7770	7.8	248	-0.002	24	7100	160	3370	103	15810	-0.1	0.0	68	-0.001
1830	DU649	34.8887	77.7507	7.8	282	0.005	31	6400	153	4180	104	18480	-0.1	0.0	101	-0.001
1831	DU650	34.8877	77.7081	7.8	318	0.025	62	6700	107	8430	125	20380	-0.1	0.0	154	-0.001
1832	DU651	34.8726	77.6711	7.6	255	-0.002	32	8700	85	.	167	14030	0.4	0.0	151	-0.001
1833	DU652	34.8486	77.7020	7.8	210	0.013	29	8900	67	900	168	13850	-0.1	0.0	128	-0.001
1834	DU653	34.8578	77.7281	7.7	248	-0.002	36	7600	77	1840	135	15140	0.4	0.0	118	-0.001
1835	DU654	34.8439	77.7777	7.7	310	0.296	52	11600	74	1200	85	13450	0.6	0.9	128	-0.001
1836	DU655	34.8150	77.7822	7.5	300	0.011	91	10800	67	.	141	14600	-0.1	0.0	115	-0.001
1837	DU656	34.8137	77.7465	7.0	255	0.057	41	12300	51	2940	114	15500	0.8	0.2	129	-0.001
1838	DU657	34.8140	77.7041	7.5	410	0.023	31	9000	203	7480	.	16090	-0.1	0.0	75	-0.001
1839	DU658	34.7879	77.7784	7.9	332	-0.002	.	6300	416	10860	.	22910	-0.1	0.0	97	-0.001
1840	DU659	34.7794	77.7507	8.3	410	0.020	141	7100	459	3950	109	53830	-0.1	0.0	127	-0.001
1841	DU660	34.7500	77.7041	7.8	280	0.005	17	5400	28	.	125	13680	-0.1	0.0	133	-0.001
1842	DU661	34.7811	77.6906	7.6	300	0.016	79	9400	71	.	184	17970	-0.1	0.0	107	-0.001

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Lab #	County ID	Lat	Long	pH	Cond um/cm	U ppb	Br ppb	Cl ppb	F ppb	Mg ppb	Mn ppb	Na ppb	V ppb	U/cond x 1000	Al ppb	Dy ppb
1843	DU662	34.7243	77.6990	7.9	312	0.010	13	7300	316	7850	114	29410	-0.1	0.0	113	-0.001
1844	DU663	34.7544	77.7467	7.9	290	0.014	.	6400	262	9010	129	24750	-0.1	0.0	123	-0.001
2869	JN501	34.8799	77.1801	7.2	560	0.017	.	9300	109	.	137	32620	1.1	0.0	312	-0.001
2870	JN502	34.9675	77.1896	7.9	290	-0.002	62	10100	154	.	43	19590	0.6	0.0	163	-0.001
2871	JN503	34.9993	77.2187	7.6	400	0.069	36	11400	139	.	55	21190	-0.1	0.1	147	-0.001
2873	JN505	34.9716	77.2440	8.1	300	0.051	44	10300	180	1960	27	19090	0.6	0.1	157	-0.001
2874	JN506	34.8192	77.1425	6.4	80	0.081	.	8000	191	.	41	17700	1.0	1.0	210	-0.001
2875	JN507	34.9195	77.2428	6.8	300	0.004	43	8600	145	.	53	18190	-0.1	0.0	167	-0.001
2876	JN508	34.9424	77.2771	7.3	380	-0.002	146	5900	216	1230	68	16270	0.3	0.0	149	-0.001
2877	JN509	34.9982	77.2816	8.0	210	0.012	10	4900	342	.	34	16760	-0.1	0.0	129	-0.001
2905	JN537	34.9916	77.6846	8.2	270	0.006	.	4100	87	3450	62	19530	0.3	0.0	204	-0.001
3715	ON501	34.6442	77.3140	7.8	180	0.036	.	4200	57	1520	76	19890	-0.1	0.2	172	-0.001
3716	ON502	34.6269	77.3046	7.5	230	-0.002	.	5500	65	.	73	17670	0.3	0.0	102	-0.001
3717	ON503	34.5746	77.2861	7.4	300	0.012	115	10900	116	.	95	19800	-0.1	0.0	71	-0.001
3718	ON504	34.5842	77.3571	7.3	300	0.008	30	8600	75	1400	116	20730	-0.1	0.0	122	-0.001
3719	ON505	34.5913	77.4496	7.4	310	0.003	.	7100	55	2230	167	21630	-0.1	0.0	131	-0.001
3720	ON506	34.7449	77.4472	7.1	700	0.041	.	9400	40	4680	208	34640	-0.1	0.0	291	-0.001
3721	ON507	34.7031	77.4553	7.3	450	-0.002	40	10600	119	.	107	30300	-0.1	0.0	159	-0.001
3722	ON508	34.7150	77.4519	7.4	700	0.020	.	41000	389	.	176	88140	-0.1	0.0	250	-0.001
3723	ON509	34.7440	77.4431	7.0	1000	-0.002	.	18800	237	.	469	85600	-0.1	0.0	458	-0.001
3724	ON510	34.7452	77.4398	8.1	1300	0.057	192	120900	1128	.	323	252900	-0.1	0.0	462	-0.001
3725	ON511	34.7283	77.4114	7.2	400	0.025	.	9800	75	.	72	24510	-0.1	0.0	119	-0.001
3726	ON512	34.7318	77.3754	7.4	460	-0.002	.	7200	64	.	108	19290	-0.1	0.0	92	-0.001
3727	ON513	34.7313	77.3673	7.4	330	0.108	.	6800	43	3840	69	17820	0.3	0.3	134	-0.001
3728	ON514	34.7023	77.3631	6.7	240	0.019	.	10500	130	.	92	19620	0.7	0.0	140	-0.001
3729	ON515	34.7023	77.3561	7.0	390	0.040	15	8600	114	3020	87	18820	-0.1	0.1	77	-0.001
3730	ON516	34.7128	77.3547	7.3	360	-0.002	52	19000	205	.	83	30390	-0.1	0.0	106	-0.001
3731	ON517	34.7147	77.3363	7.3	310	0.012	.	7700	76	1710	73	19020	-0.1	0.0	143	-0.001
3732	ON518	34.7097	77.3006	7.5	290	0.017	.	7200	97	1130	75	18690	0.6	0.0	131	-0.001
3733	ON519	34.7185	77.3339	7.3	310	0.025	23	7900	57	.	86	19300	0.6	0.0	99	-0.001
3734	ON520	34.7088	77.3432	7.6	260	-0.002	28	7100	103	1000	72	18690	-0.1	0.0	149	-0.001
3735	ON521	34.6983	77.3358	7.5	350	0.051	43	8200	46	2030	78	18090	-0.1	0.1	100	-0.001
3736	ON522	34.6782	77.3312	7.3	310	0.027	27	9000	109	1680	63	17820	-0.1	0.0	59	-0.001
3737	ON523	34.6684	77.3423	7.3	470	0.006	112	14000	.	3150	77	20620	-0.1	0.0	55	-0.001
3738	ON524	34.6655	77.3226	7.3	390	0.008	.	4300	.	.	75	17150	-0.1	0.0	139	-0.001
3739	ON525	34.6692	77.3182	7.3	440	0.007	.	2600	64	.	102	19470	-0.1	0.0	144	-0.001
3740	ON526	34.6591	77.3198	7.4	340	0.047	74	7500	77	.	81	19250	-0.1	0.1	163	-0.001
3741	ON527	34.6501	77.3162	7.7	230	0.006	.	6700	148	.	70	17420	-0.1	0.0	168	-0.001

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3742	ON528	34.7013	77.6640	7.2	250	0.007	.	4900	22	.	86	16900	-0.1	0.0	140	-0.001
3743	ON529	34.6903	77.6072	7.3	270	-0.002	.	1400	61	3170	128	20520	-0.1	0.0	89	-0.001
3744	ON530	34.6597	77.5916	7.3	350	0.016	16	M	23	3620	73	20960	-0.1	0.0	138	-0.001
3745	ON531	34.6064	77.5808	7.1	420	0.003	24	2900	74	2580	133	21970	-0.1	0.0	129	-0.001
3746	ON532	34.5618	77.5818	7.2	390	0.024	.	8000	40	2430	253	22350	-0.1	0.0	134	-0.001
3747	ON533	34.5189	77.5727	5.2	80	0.019	.	8800	.	.	77	18550	-0.1	0.2	366	-0.001
3748	ON534	34.5115	77.5225	6.7	420	-0.002	45	1100	74	3140	168	22210	-0.1	0.0	146	-0.001
3749	ON535	34.5492	77.4470	7.2	260	0.006	.	M	84	1900	88	20400	0.3	0.0	184	-0.001
3750	ON536	34.5258	77.4699	7.0	410	0.017	27	1900	104	5550	241	23490	-0.1	0.0	150	-0.001
3752	ON538	34.5355	77.5000	8.0	390	-0.002	17	9200	82	7750	121	21690	1.0	0.0	143	-0.001
3753	ON539	34.6898	77.4842	7.2	500	0.058	30	10200	72	5130	152	37800	1.1	0.1	252	-0.001
3754	ON540	34.6773	77.1854	7.1	350	0.015	.	7700	135	.	79	19040	0.3	0.0	132	-0.001
3755	ON541	34.6571	77.1652	7.4	300	0.010	43	10000	101	.	69	20000	-0.1	0.0	141	-0.001
3756	ON542	34.7500	77.1674	7.0	450	0.013	.	10400	133	1240	99	18810	0.4	0.0	132	0.030
3757	ON543	34.7788	77.1982	7.1	410	0.002	22	9900	104	1500	86	20380	-0.1	0.0	133	-0.001
3758	ON544	34.8076	77.2204	7.7	330	-0.002	.	6600	93	.	85	16840	-0.1	0.0	97	-0.001
3759	ON545	34.7155	77.5283	7.3	240	0.010	21	6400	118	3050	135	21180	-0.1	0.0	122	-0.001
3760	ON546	34.6443	77.6199	7.1	430	-0.002	48	7700	36	.	96	18640	0.5	0.0	149	-0.001
3761	ON547	34.7605	77.6250	5.5	50	0.002	28	5400	.	.	82	17170	-0.1	0.0	193	-0.001
3762	ON548	34.7858	77.6563	6.8	240	-0.002	.	3800	64	2170	125	19390	-0.1	0.0	118	-0.001
3763	ON549	34.8129	77.6409	7.5	290	0.018	.	4500	104	7370	99	19900	-0.1	0.0	60	-0.001
3764	ON550	34.8391	77.6590	7.5	260	0.020	44	5200	72	1690	143	16840	0.3	0.0	111	-0.001
3765	ON551	34.8577	77.6271	7.5	290	0.018	32	3400	74	2600	69	17370	-0.1	0.0	61	-0.001
3766	ON552	34.8840	77.6444	5.9	70	-0.002	17	3700	.	.	115	15830	1.1	0.0	270	0.010
3767	ON553	34.9061	77.6353	5.3	30	0.016	18	1500	.	.	48	15910	-0.1	0.5	220	-0.001
3768	ON554	34.9459	77.6243	6.8	290	-0.002	46	5900	69	.	70	16770	-0.1	0.0	592	-0.001
3769	ON555	34.9243	77.5960	7.6	310	0.016	.	3800	144	8410	53	33660	-0.1	0.0	215	-0.001
3770	ON556	34.6909	77.5503	7.3	400	-0.002	22	6500	128	.	48	82850	-0.1	0.0	150	-0.001
3771	ON557	34.7141	77.5801	7.0	320	-0.002	29	3400	88	3330	99	20640	-0.1	0.0	132	-0.001
3772	ON558	34.7819	77.6091	6.9	420	-0.002	.	M	110	2540	162	19110	-0.1	0.0	53	-0.001
3773	ON559	34.7578	77.5764	7.5	230	0.002	.	2500	68	1300	96	18720	-0.1	0.0	53	-0.001
3774	ON560	34.7889	77.5502	7.4	260	-0.002	27	5100	51	5610	119	17650	-0.1	0.0	87	-0.001
3775	ON561	34.8018	77.5792	7.1	350	0.008	.	6600	99	1900	231	17220	-0.1	0.0	100	-0.001
3776	ON562	34.8343	77.6032	7.4	270	0.003	.	2900	49	.	155	17330	-0.1	0.0	134	-0.001
3777	ON563	34.8577	77.5717	7.5	310	0.009	.	1200	70	4760	91	18100	-0.1	0.0	149	-0.001
3778	ON564	34.8793	77.5906	6.4	120	-0.002	106	3000	103	2170	84	17930	-0.1	0.0	163	-0.001
3779	ON565	34.9531	77.5673	7.8	320	0.008	.	3500	116	5270	64	47410	-0.1	0.0	132	-0.001
3780	ON566	34.9290	77.5412	7.2	380	-0.002	.	6100	69	2390	96	17540	-0.1	0.0	100	-0.001

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3781	ON567	34.9503	77.4986	7.8	480	0.010	.	2900	146	21670	81	54800	-0.1	0.0	75	-0.001
3782	ON568	34.9012	77.5122	7.4	410	0.283	34	7600	110	4030	69	18920	-0.1	0.6	78	-0.001
3783	ON569	34.8540	77.5138	7.2	450	-0.002	.	2400	109	3260	80	20150	-0.1	0.0	91	-0.001
3784	ON570	34.7408	77.6465	7.5	220	0.017	.	5100	109	1940	113	19790	-0.1	0.0	156	-0.001
3785	ON571	34.7146	77.6369	7.3	260	0.008	18	4400	.	.	73	16350	-0.1	0.0	98	-0.001
3786	ON572	34.7316	77.5729	7.2	400	-0.002	.	5400	21	2600	131	15730	-0.1	0.0	145	-0.001
3787	ON573	34.7364	77.5461	7.4	350	0.015	.	5200	102	3270	124	19730	-0.1	0.0	130	-0.001
3788	ON574	34.7340	77.2166	7.4	270	-0.002	.	7500	113	.	52	17240	-0.1	0.0	101	-0.001
3789	ON575	34.7106	77.2278	7.4	220	0.007	.	7400	95	.	55	16900	-0.1	0.0	91	-0.001
3790	ON576	34.8507	77.2332	7.2	340	-0.002	26	7100	135	.	58	16820	-0.1	0.0	79	-0.001
3791	ON577	34.8772	77.2500	7.2	430	0.039	.	7800	83	.	51	17260	-0.1	0.0	62	-0.001
3792	ON578	34.8491	77.2888	6.9	700	-0.002	.	12400	99	2290	147	32560	-0.1	0.0	134	-0.001
3793	ON579	34.8286	77.2505	7.4	340	0.015	14	8200	67	.	64	18050	-0.1	0.0	137	-0.001
3794	ON580	34.7548	77.2288	7.4	250	0.006	.	6400	46	.	53	16420	-0.1	0.0	191	-0.001
3795	ON581	34.7566	77.3142	7.3	320	0.010	82	6900	80	.	56	16480	-0.1	0.0	165	-0.001
3796	ON582	34.8040	77.3429	6.9	500	-0.002	.	8600	36	.	140	32980	-0.1	0.0	320	-0.001
3797	ON583	34.7823	77.2614	7.2	360	0.011	.	6500	100	.	50	15800	-0.1	0.0	142	-0.001
3798	ON584	34.8113	77.4067	7.4	700	0.008	47	9000	259	5610	105	69220	-0.1	0.0	262	-0.001
3799	ON585	34.8226	77.4219	7.4	460	-0.002	16	4400	157	8010	54	25790	-0.1	0.0	139	-0.001
3800	ON586	34.8253	77.4498	7.2	600	0.033	.	8600	202	4340	119	32560	-0.1	0.0	71	-0.001
3801	ON587	34.8416	77.4700	7.6	220	-0.002	14	5100	129	.	42	14120	-0.1	0.0	28	-0.001
3802	ON588	34.8562	77.4905	7.3	330	-0.002	.	5500	65	.	58	14980	-0.1	0.0	22	-0.001
3803	ON589	34.8391	77.5370	7.1	410	0.005	39	10700	31	.	77	16980	-0.1	0.0	29	-0.001
3804	ON590	34.7796	77.4928	7.2	420	0.006	.	4700	76	2540	61	16450	-0.1	0.0	60	-0.001
3805	ON591	34.8123	77.5157	7.9	250	-0.002	.	6500	58	.	48	15330	-0.1	0.0	65	-0.001
3902	PE501	34.6464	77.8980	7.2	450	0.024	30	5600	196	11410	59	29930	-0.1	0.0	103	-0.001
3903	PE502	34.6716	77.9335	7.5	450	0.014	.	4200	183	11780	34	20090	-0.1	0.0	156	-0.001
3904	PE503	34.7003	77.9632	7.5	460	-0.002	13	4500	233	11250	20	28600	-0.1	0.0	138	-0.001
3905	PE504	34.6508	77.9511	7.3	440	0.016	.	5400	145	2380	123	21490	-0.1	0.0	135	-0.001
3911	PE510	34.6327	77.9826	7.6	480	0.025	.	4300	96	15190	18	36040	-0.1	0.0	93	-0.001
3912	PE511	34.6008	77.8864	5.6	50	0.011	.	6100	18	.	31	17170	0.9	0.2	247	0.050
3913	PE512	34.5762	77.9272	7.5	700	0.061	.	9500	555	15110	71	70480	-0.1	0.0	245	-0.001
3926	PE525	34.5200	77.9117	7.2	300	-0.002	17	5200	91	2040	90	15360	-0.1	0.0	162	-0.001
3927	PE526	34.5026	77.8956	7.3	360	0.031	.	7300	115	.	91	15470	-0.1	0.0	142	-0.001
3935	PE534	34.6311	77.9222	6.9	160	0.009	29	5500	345	3740	122	13490	-0.1	0.0	130	-0.001
3936	PE535	34.5777	77.9826	8.2	460	0.002	.	M	.	M	.		-0.1	0.0	.	-0.001
3938	PE537	34.5046	77.9997	8.3	40	0.118	.	4800	.	.	56	11290	-0.1	2.9	167	-0.001
3945	PE544	34.5326	77.9929	6.9	350	0.010	33	9400	238	8310	198	13540	-0.1	0.0	183	-0.001

NEW RIVER 100K QUADRANGLE - GROUNDWATER

Lab #	County ID	Lat	Long	pH	Cond us/cm	U ppb	Br ppb	Cl ppb	F ppb	Mg ppb	Mn ppb	Na ppb	V ppb	U/cond x 1000	Al ppb	Dy ppb
3955	PE554	34.5433	77.9677	8.6	900	0.020	139	24200	2262	4280	74	209200	-0.1	0.0	325	-0.001
3966	PE565	34.5454	77.8540	8.2	1200	0.123	.	78700	2834	.	203	273300	-0.1	0.1	718	0.060
3969	PE568	34.5543	77.9076	8.8	700	-0.002	.	16400	1697	.	93	141000	-0.1	0.0	521	-0.001
3984	PE583	34.6888	77.7222	7.2	430	0.003	.	11600	46	.	107	14930	-0.1	0.0	172	-0.001
3985	PE584	34.7125	77.7490	7.8	310	0.011	.	3800	194	6910	45	31020	-0.1	0.0	160	-0.001
3986	PE585	34.6803	77.7064	8.0	350	-0.002	.	5100	320	2470	51	37290	-0.1	0.0	172	-0.001
3987	PE586	34.6391	77.6747	7.2	390	0.010	.	6100	40	3320	66	13930	-0.1	0.0	185	0.030
3988	PE587	34.6659	77.6915	7.8	300	0.006	.	4200	213	9770	44	17150	-0.1	0.0	170	-0.001
3989	PE588	34.6164	77.8108	8.2	900	0.010	80	14700	2682	.	71	153780	-0.1	0.0	315	-0.001
3990	PE589	34.6087	77.8539	8.8	700	0.059	.	19000	923	.	63	146580	-0.1	0.0	321	-0.001
3991	PE590	34.6463	77.7390	7.6	700	0.018	40	8800	592	19490	.	67340	-0.1	0.0	341	-0.001
3992	PE591	34.5361	77.8435	8.6	1300	0.147	.	93000	1860	.	169	269150	-0.1	0.1	756	-0.001
3993	PE592	34.6364	77.7695	6.9	320	0.004	.	6100	48	1780	77	14080	-0.1	0.0	144	-0.001

NEW RIVER 100K QUADRANGLE - STREAM WATER

Lab #	County ID	Lat	Long	pH	Cond um/cm	U ppb	Al ppb	Br ppb	Cl ppb	Dy ppb	F ppb	Mg ppb	Mn ppb	Na ppb	V ppb	U/cond x 1000
107	DU061	34.9893	77.7457	5.6	88	0.048	208	.	12900	-0.001	.	.	19	4560	-0.1	0.55
90	DU044	34.9809	77.8706	6.6	80	0.079	45	39	15300	-0.001	.	1010	.	6490	-0.1	0.99
108	DU062	34.9768	77.7767	6.5	150	0.052	97	45	13900	-0.001	70	.	.	6580	-0.1	0.35
64	DU017	34.9743	77.9552	6.4	70	0.050	91	38	10200	-0.001	93	2010	42	4840	-0.1	0.71
109	DU063	34.9630	77.8016	6.6	100	0.055	152	934	12400	-0.001	60	.	.	7120	-0.1	0.55
63	DU016	34.9618	77.9961		70	0.100	161	24	13400	-0.001	108	4010	.	5550	1.6	1.43
89	DU043	34.9607	77.9381	6.6	65	1.648	149	46	12900	-0.001	61	1290	.	5310	1.7	25.35
106	DU060	34.9570	77.7227	5.7	85	0.051	124	51	10700	-0.001	30	1600	.	4890	0.5	0.60
105	DU059	34.9485	77.7518	5.1	50	0.074	297	.	9400	-0.001	60	.	19	3750	1.4	1.48
121	DU075	34.9261	77.7152	5.9	52	0.044	214	65	9200	-0.001	27	.	18	3320	0.6	0.85
76	DU030	34.9137	77.9945	6.1	105	0.079	94	48	12300	-0.001	96	.	32	3890	-0.1	0.75
102	DU056	34.9086	77.9145	5.2	50	0.060	183	81	10000	-0.001	39	3200	15	4270	-0.1	1.20
104	DU058	34.9083	77.8313	6.6	55	0.053	157	54	8400	-0.001	91	1420	8	4200	-0.1	0.96
101	DU055	34.8859	77.9152	6.8	70	0.078	178	45	8700	-0.001	39	1470	19	4190	0.5	1.11
124	DU079	34.8850	77.7649	8.8	103	0.022	153	88	13200	-0.001	187	2460	42	7890	0.9	0.21
100	DU054	34.8842	77.9786	7.4	105	0.105	89	.	10900	-0.001	145	.	.	3850	-0.1	1.00
103	DU057	34.8839	77.8205	6.8	50	0.043	56	.	9800	-0.001	131	1790	21	4500	-0.1	0.86
123	DU078	34.8496	77.7585	6.9	152	0.081	52	73	12100	-0.001	79	4890	166	5980	-0.1	0.53
120	DU074	34.8397	77.8018	7.4	90	0.032	98	46	10900	-0.001	74	1290	105	5380	1.4	0.36
122	DU077	34.8302	77.6846	6.4	110	0.043	102	85	20100	-0.001	.	.	.	9250	0.9	0.39
110	DU064	34.8073	77.9779	6.9	140	0.097	123	70	13700	-0.001	55	3220	39	8160	0.8	0.69
111	DU065	34.8062	77.9438	6.4	130	0.022	100	83	10900	-0.001	66	.	.	6520	-0.1	0.17
119	DU073	34.7999	77.7897	8.4	285	0.320	227	62	10300	-0.001	42	1530	89	6590	0.9	1.12
113	DU067	34.7971	77.9125	6.9	160	0.046	74	18	10200	-0.001	35	2720	35	4140	0.3	0.29
114	DU068	34.7765	77.8304	5.9	142	0.054	177	79	21200	-0.001	24	3270	.	11330	0.8	0.38
118	DU072	34.7675	77.7499	6.5	145	0.084	83	100	12300	-0.001	37	.	210	5050	0.9	0.58
112	DU066	34.7664	77.9332	6.7	88	0.087	167	84	13300	-0.001	119	.	20	6390	-0.1	0.99
115	DU069	34.7645	77.7888	5.6	190	0.061	341	38	28200	-0.001	.	.	34	10350	2.1	0.32
117	DU071	34.7589	77.7028	5.2	50	0.039	303	62	11100	-0.001	.	.	.	5040	1.0	0.78
116	DU070	34.7412	77.7436	6.6	160	0.057	370	78	12300	-0.001	97	2240	.	5680	1.1	0.36