

Water-Data Report 2008

0208703650 FALLS LAKE AT NORTH CAROLINA HIGHWAY 50 NEAR SANDY PLAIN, NC

Neuse Basin
Upper Neuse Subbasin

LOCATION.--Lat 36°00'55", long 78°41'28" referenced to North American Datum of 1983, Wake County, NC, Hydrologic Unit 03020201, at bridge on North Carolina Highway 50, 3.3 mi south of Sandy Plain.

DRAINAGE AREA.--620 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1989 to 1995, 2005 to current year.

REMARKS.--Station operated to define water quality as part of a regional surface-water quality assessment. A GC/FID scan for trace organic compounds was performed on samples collected in October 1994 and May 1995. Results may be obtained from the USGS Water Science Center, Raleigh, NC. Samples for nutrient, chlorophyll *a*, and pheophytin *a* analyses were collected through a sampling zone equal to double the secchi disk depth using the depth-integration sampling technique. Prior to October 1, 2005, samples for chlorophyll *a* were analyzed using a high-performance liquid chromatography method.

0208703650 FALLS LAKE AT NORTH CAROLINA HIGHWAY 50 NEAR SANDY PLAIN, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 1 of 4

[Remark codes: <, less than; E, estimated.]

Date	Time	Color, water, fltrd, Pt-Co units (00080)	Sam- pling depth, meters (00098)	Trans- parency Secchi disc, meters (00078)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif- ic conduc- tance, wat unf μS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)
Oct													
03...	1315	40	1.0	.60	761	8.8	105	8.2	128	24.0	32	7.97	2.92
03...	1320	--	2.0	--	761	7.0	82	7.3	128	23.4	--	--	--
03...	1325	--	3.0	--	761	4.3	51	7.0	130	23.0	--	--	--
Dec													
11...	1030	--	1.0	.50	--	--	--	--	--	--	--	--	--
11...	1035	50	1.0	--	765	10.7	97	7.4	167	11.1	32	7.85	3.00
11...	1045	--	2.0	--	765	9.3	82	7.3	168	10.2	--	--	--
Feb													
11...	1430	--	1.0	.50	--	--	--	--	--	--	--	--	--
11...	1435	40	1.0	--	768	11.9	106	8.1	172	10.6	35	8.68	3.20
11...	1440	--	3.0	--	768	11.0	96	7.6	172	9.7	--	--	--
11...	1445	--	7.0	--	768	10.6	92	7.5	170	9.5	--	--	--
Apr													
08...	1200	--	1.4	.70	--	--	--	--	--	--	--	--	--
08...	1205	60	1.0	--	763	9.8	95	7.3	119	14.2	28	6.86	2.54
08...	1210	--	3.0	--	763	9.5	92	7.3	119	14.2	--	--	--
08...	1215	--	6.0	--	763	9.3	90	7.2	119	14.1	--	--	--
Jun													
17...	1230	--	2.6	1.30	--	--	--	--	--	--	--	--	--
17...	1235	35	1.0	--	754	8.1	110	8.1	112	30.6	30	7.39	2.84
17...	1240	--	4.0	--	754	.1	2	6.9	128	24.3	--	--	--
17...	1245	--	9.0	--	754	.2	2	6.8	155	16.5	--	--	--
Aug													
20...	1245	--	2.0	1.00	--	--	--	--	--	--	--	--	--
20...	1250	30	1.0	--	760	7.2	93	7.5	114	28.2	32	7.87	2.99
20...	1255	--	3.0	--	760	1.4	18	6.8	119	26.6	--	--	--
20...	1300	--	5.0	--	760	.7	8	6.8	122	26.5	--	--	--

0208703650 FALLS LAKE AT NORTH CAROLINA HIGHWAY 50 NEAR SANDY PLAIN, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 4

[Remark codes: <, less than; E, estimated.]

Date	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf infl pt titr., field, mg/L as CaCO3 (00419)	Bicar- bonate, wat unf infl pt titr., field, mg/L (00450)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L as SiO2 (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
Oct													
03...	2.87	11.8	32	39	11.5	.16	9.56	8.91	69	1.0	<.020	<.016	<.002
03...	--	--	--	--	--	--	--	--	--	.98	<.020	<.016	<.002
03...	--	--	--	--	--	--	--	9.25	--	.99	<.020	<.016	<.002
Dec													
11...	--	--	--	--	--	--	--	--	--	1.2	.090	.032	.002
11...	3.54	17.9	31	38	17.4	.20	7.18	17.7	121	--	--	--	--
11...	--	--	--	--	--	--	--	17.7	--	1.3	.092	.031	.003
Feb													
11...	--	--	--	--	--	--	--	--	--	1.0	E.014	.412	.006
11...	3.90	18.1	27	33	17.0	.15	4.38	21.4	108	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	.98	.020	.406	.006
11...	--	--	--	--	--	--	--	21.2	--	.94	.030	.403	.005
Apr													
08...	--	--	--	--	--	--	--	--	--	.83	.023	.206	.005
08...	2.74	10.3	16	20	10.8	E.08	2.07	18.0	85	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	.82	.028	.211	.005
08...	--	--	--	--	--	--	--	18.1	--	.76	.036	.208	.005
Jun													
17...	--	--	--	--	--	--	--	--	--	.64	E.012	<.016	<.002
17...	2.53	7.91	22	27	8.13	E.09	1.74	11.3	77	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	.75	.097	<.016	<.002
17...	--	--	--	--	--	--	--	7.14	--	2.0	1.30	<.016	E.001
Aug													
20...	--	--	--	--	--	--	--	--	--	.74	.030	<.016	<.002
20...	2.72	8.41	26.9	32.8	8.24	E.10	4.98	8.58	81	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	.67	.095	<.016	<.002
20...	--	--	--	--	--	--	--	8.77	--	.74	.143	<.016	<.002

0208703650 FALLS LAKE AT NORTH CAROLINA HIGHWAY 50 NEAR SANDY PLAIN, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 3 of 4

[Remark codes: <, less than; E, estimated.]

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L as P (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd, mg/L (00680)	Chlorophyll a phytoplankton, fluoro, µg/L (70953)	Pheophytin a, phytoplankton, µg/L (62360)	Aluminum, water, unfltrd recoverable, µg/L (01105)	Arsenic, water, unfltrd, µg/L (01002)	Cadmium, water, unfltrd, µg/L (01027)	Chromium, water, unfltrd recoverable, µg/L (01034)	Cobalt, water, unfltrd recoverable, µg/L (01037)	Copper, water, unfltrd recoverable, µg/L (01042)	Iron, water, unfltrd recoverable, µg/L (01045)
Oct													
03...	E.003	.055	6.5	11.0	46.5	8.4	69	.61	<.01	<.40	.22	<1.2	290
03...	E.004	.051	--	--	--	--	--	--	--	--	--	--	308
03...	E.004	.061	6.5	--	--	--	--	--	--	--	--	--	380
Dec													
11...	<.006	.067	--	--	23.0	16.0	--	--	--	--	--	--	--
11...	--	--	6.7	10.7	--	--	--	--	--	--	--	--	383
11...	<.006	.066	6.9	--	--	--	--	--	--	--	--	--	386
Feb													
11...	<.006	.068	--	--	36.4	18.7	--	--	--	--	--	--	--
11...	--	--	6.8	10.4	--	--	--	--	--	--	--	--	332
11...	<.006	.068	--	--	--	--	--	--	--	--	--	--	362
11...	<.006	.072	6.7	--	--	--	--	--	--	--	--	--	446
Apr													
08...	<.006	.062	--	--	35.0	16.4	--	--	--	--	--	--	--
08...	--	--	7.3	10.4	--	--	232	E.46	.01	.46	.27	1.7	377
08...	<.006	.062	--	--	--	--	--	--	--	--	--	--	396
08...	<.006	.062	7.0	--	--	--	--	--	--	--	--	--	412
Jun													
17...	<.006	.037	--	--	14.7	7.6	--	--	--	--	--	--	--
17...	--	--	8.8	10.6	--	--	--	--	--	--	--	--	97
17...	<.006	.051	--	--	--	--	--	--	--	--	--	--	518
17...	.021	.070	8.7	--	--	--	--	--	--	--	--	--	4,670
Aug													
20...	E.003	.037	--	--	21.1	10.7	--	--	--	--	--	--	--
20...	--	--	7.9	9.8	--	--	--	--	--	--	--	--	117
20...	E.004	.037	--	--	--	--	--	--	--	--	--	--	218
20...	E.004	.041	7.6	--	--	--	--	--	--	--	--	--	289

0208703650 FALLS LAKE AT NORTH CAROLINA HIGHWAY 50 NEAR SANDY PLAIN, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 4 of 4

[Remark codes: <, less than; E, estimated.]

Date	Lead, water, unfltrd recover- able, µg/L (01051)	Mangan- ese, water, unfltrd recover- able, µg/L (01055)	Mercury water, unfltrd recover- able, µg/L (71890)	Mercury water, unfltrd recover- able, µg/L (71900)	Molyb- denum, water, unfltrd recover- able, µg/L (01062)	Nickel, water, unfltrd recover- able, µg/L (01067)	Selen- ium, water, unfltrd µg/L (01147)	Silver, water, unfltrd recover- able, µg/L (01077)	Zinc, water, unfltrd recover- able, µg/L (01092)
Oct									
03...	.19	209	.022	.235	.9	.52	.23	<.02	E1.8
03...	--	219	--	--	--	--	--	--	--
03...	--	285	E.008	.027	--	--	--	--	--
Dec									
11...	--	--	--	--	--	--	--	--	--
11...	--	236	.013	.028	--	--	--	--	--
11...	--	249	E.008	.010	--	--	--	--	--
Feb									
11...	--	--	--	--	--	--	--	--	--
11...	--	132	<.010	.012	--	--	--	--	--
11...	--	142	--	--	--	--	--	--	--
11...	--	157	<.010	<.010	--	--	--	--	--
Apr									
08...	--	--	--	--	--	--	--	--	--
08...	.42	93.0	.020	.020	.4	1.1	.15	<.02	3.1
08...	--	88.1	--	--	--	--	--	--	--
08...	--	96.5	E.008	E.008	--	--	--	--	--
Jun									
17...	--	--	--	--	--	--	--	--	--
17...	--	74.5	<.010	<.010	--	--	--	--	--
17...	--	1,540	--	--	--	--	--	--	--
17...	--	1,990	<.010	<.010	--	--	--	--	--
Aug									
20...	--	--	--	--	--	--	--	--	--
20...	--	97.8	.019	.030	--	--	--	--	--
20...	--	278	--	--	--	--	--	--	--
20...	--	490	<.010	.013	--	--	--	--	--