



Water-Data Report 2011

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 1989-95, 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 2010 TO SEPTEMBER 2011

Part 1 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; m, meters; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than]

Date	Sample start time	Medium name	Sample type	Color, water, filtered, platinum cobalt units	Dissolved oxygen, water, unfiltered, mg/L	Dissolved oxygen, water, unfiltered, % saturation	pH, water, unfiltered, field, standard units
				Barometric pressure, mm Hg (00025)	(00080)	(00300)	(00400)
10-13-2010	1245	Surface water	Regular	--	--	--	--
10-13-2010	1250	Surface water	Regular	760	25	10.2	118
10-13-2010	1255	Surface water	Regular	760	--	7.7	87
10-13-2010	1300	Surface water	Regular	760	--	4.7	52
12-14-2010	0945	Surface water	Regular	--	--	--	--
12-14-2010	0950	Surface water	Regular	759	30	11.5	89
12-14-2010	0955	Surface water	Regular	759	--	11.7	90
12-14-2010	1000	Surface water	Regular	759	--	11.4	87
03-02-2011	1215	Surface water	Regular	--	--	--	--
03-02-2011	1216	QC sample - Surface water	Replicate	--	--	--	--
03-02-2011	1220	Surface water	Regular	767	25	10.2	94
03-02-2011	1221	QC sample - Surface water	Replicate	--	25	--	--
03-02-2011	1225	Surface water	Regular	767	--	10.2	93
03-02-2011	1230	Surface water	Regular	767	--	10.2	93
03-02-2011	1252	QC sample - Artificial	Blank	--	--	--	--
03-02-2011	1302	QC sample - Artificial	Blank	--	--	--	--
04-12-2011	1200	Surface water	Regular	--	--	--	--
04-12-2011	1205	Surface water	Regular	753	25	9.7	102
04-12-2011	1210	Surface water	Regular	753	--	9.7	102
04-12-2011	1215	Surface water	Regular	753	--	9.3	97
06-22-2011	1200	Surface water	Regular	--	--	--	--
06-22-2011	1205	Surface water	Regular	757	18	8.3	108
06-22-2011	1210	Surface water	Regular	757	--	4.0	52
06-22-2011	1215	Surface water	Regular	757	--	.2	7.0

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

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 2 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; m, meters; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than]

Date	Sample start time	Specific conduc-		Trans-		Dissolved		Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)
		conductance, water, unfiltered, µS/cm at 25 °C (00095)	temperature, water, °C (00010)	transparency, water, in situ, Secchi disc, m (00078)	Sampling depth, m (00098)	solids dried at 180 °C, water, filtered, mg/L (70300)	Hardness, water, mg/L as CaCO ₃ (00900)		
10-13-2010	1245	--	--	.80	1.1	--	--	--	--
10-13-2010	1250	100	22.2	--	1.0	69	25.9	6.24	2.51
10-13-2010	1255	100	21.4	--	2.0	--	--	--	--
10-13-2010	1300	107	20.4	--	4.0	--	--	--	--
12-14-2010	0945	--	--	.90	1.8	--	--	--	--
12-14-2010	0950	116	4.4	--	1.0	93	28.2	6.82	2.71
12-14-2010	0955	116	4.3	--	3.0	--	--	--	--
12-14-2010	1000	116	4.3	--	5.0	--	--	--	--
03-02-2011	1215	--	--	.80	1.6	--	--	--	--
03-02-2011	1216	--	--	.80	1.6	--	--	--	--
03-02-2011	1220	133	11.8	--	1.0	87	30.3	7.23	2.97
03-02-2011	1221	--	--	--	1.0	74	29.4	6.99	2.89
03-02-2011	1225	133	11.6	--	3.0	--	--	--	--
03-02-2011	1230	132	11.5	--	5.0	--	--	--	--
03-02-2011	1252	--	--	--	--	< .09	< .02	< .008	< .02
03-02-2011	1302	--	--	--	--	< .09	< .02	< .008	< .02
04-12-2011	1200	--	--	1.00	2.0	--	--	--	--
04-12-2011	1205	152	17.3	--	1.0	104	34.4	8.53	3.19
04-12-2011	1210	151	17.3	--	3.0	--	--	--	--
04-12-2011	1215	152	17.2	--	5.0	--	--	--	--
06-22-2011	1200	--	--	1.10	2.2	--	--	--	--
06-22-2011	1205	137	28.8	--	1.0	79	33.3	7.94	3.26
06-22-2011	1210	140	27.8	--	4.0	--	--	--	--
06-22-2011	1215	166	17.2	--	8.0	--	--	--	--

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

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 3 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; m, meters; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than]

Date	Sample start time	Bi-				Ammonia plus organic nitrogen			
		ANC, water, unfiltered, inflection-point, incremental titration method, field, mg/L as CaCO ₃	carbonate, water, unfiltered, inflection-point, incremental titration method, field, mg/L as CaCO ₃	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Sulfate, water, filtered, mg/L (00945)	water, unfiltered, mg/L as N (00625)	
10-13-2010	1245	--	--	--	--	--	--	--	.66
10-13-2010	1250	8.86	25.1	29.8	8.80	.12	6.92	6.61	--
10-13-2010	1255	--	--	--	--	--	--	--	.61
10-13-2010	1300	--	--	--	--	--	--	--	.70
12-14-2010	0945	--	--	--	--	--	--	--	.58
12-14-2010	0950	11.9	--	--	11.0	.15	6.87	9.98	--
12-14-2010	0955	--	--	--	--	--	--	--	.60
12-14-2010	1000	--	--	--	--	--	--	--	.58
03-02-2011	1215	--	--	--	--	--	--	--	.70
03-02-2011	1216	--	--	--	--	--	--	--	.72
03-02-2011	1220	13.5	27.9	34.0	13.8	.12	2.78	11.2	--
03-02-2011	1221	13.0	27.9	34.0	13.8	.12	2.76	11.1	--
03-02-2011	1225	--	--	--	--	--	--	--	.69
03-02-2011	1230	--	--	--	--	--	--	--	.72
03-02-2011	1252	<.06	--	--	<.06	<.04	<.03	<.09	<.05
03-02-2011	1302	<.06	--	--	<.06	<.04	<.03	<.09	<.05
04-12-2011	1200	--	--	--	--	--	--	--	.63
04-12-2011	1205	15.8	29.7	36.2	17.2	.16	1.29	12.1	--
04-12-2011	1210	--	--	--	--	--	--	--	.59
04-12-2011	1215	--	--	--	--	--	--	--	.61
06-22-2011	1200	--	--	--	--	--	--	--	.60
06-22-2011	1205	12.0	30.9	37.7	14.2	.14	2.22	8.69	--
06-22-2011	1210	--	--	--	--	--	--	--	.66
06-22-2011	1215	--	--	--	--	--	--	--	1.6

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

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 4 of 6

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Date	Sample start time	Nitrate plus nitrite, water, filtered, mg/L as N (00608)		Orthophosphate, water, filtered, mg/L as N (00613)		Phosphorus, water, unfiltered, mg/L as P (00665)		Aluminum, water, recoverable, µg/L (01105)		Chromium, water, Cadmium, water, unfiltered, µg/L (01027)	
		Ammonia, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L as P (00665)	Aluminum, water, recoverable, µg/L (01105)	Chromium, water, unfiltered, µg/L (01034)	Cadmium, water, unfiltered, µg/L (01027)	Chromium, water, unfiltered, µg/L (01034)	Chromium, water, unfiltered, µg/L (01034)	Chromium, water, unfiltered, µg/L (01034)
10-13-2010	1245	<.010	<.008	<.001	.006	.036	--	--	--	--	--
10-13-2010	1250	--	--	--	--	--	47	<.05	.27		
10-13-2010	1255	.017	<.008	.001	.006	.038	--	--	--		
10-13-2010	1300	.040	<.008	<.001	.006	.051	--	--	--		
12-14-2010	0945	.015	<.008	<.001	.005	.033	--	--	--		
12-14-2010	0950	--	--	--	--	--	--	--	--		
12-14-2010	0955	.013	<.008	<.001	.005	.035	--	--	--		
12-14-2010	1000	.014	<.008	<.001	.006	.036	--	--	--		
03-02-2011	1215	.036	.010	<.001	<.004	.040	--	--	--		
03-02-2011	1216	.036	.009	<.001	<.004	.033	--	--	--		
03-02-2011	1220	--	--	--	--	--	--	--	--		
03-02-2011	1221	--	--	--	--	--	--	--	--		
03-02-2011	1225	.034	<.008	<.001	.004	.044	--	--	--		
03-02-2011	1230	.035	<.008	<.001	.004	.043	--	--	--		
03-02-2011	1252	<.010	<.008	<.001	<.004	<.004	<.3	<.05	<.21		
03-02-2011	1302	.012	<.008	.002	<.004	<.004	<.3	<.05	<.21		
04-12-2011	1200	<.010	<.008	.001	<.004	.039	--	--	--		
04-12-2011	1205	--	--	--	--	--	79	<.05	<.21		
04-12-2011	1210	<.010	<.008	<.001	<.004	.039	--	--	--		
04-12-2011	1215	<.010	<.008	<.001	<.004	.035	--	--	--		
06-22-2011	1200	.020	<.008	<.001	.004	.038	--	--	--		
06-22-2011	1205	--	--	--	--	--	--	--	--		
06-22-2011	1210	.088	<.008	<.001	.004	.025	--	--	--		
06-22-2011	1215	.985	<.008	<.001	.019	.062	--	--	--		

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

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 5 of 6

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Date	Sample start time	Cobalt, water, unfiltered, recoverable, microgram s per liter (01037)	Copper, water, unfiltered, recoverable, µg/L (01042)	Iron, water, unfiltered, recoverable, µg/L (01045)	Lead, water, unfiltered, recoverable, µg/L (01051)	Manga- nese, water, unfiltered, recoverable, µg/L (01055)	Mercury, water, unfiltered, recoverable, µg/L (71900)	Molybdenum, water, unfiltered, recoverable, microgram s per liter (01062)	Nickel, water, unfiltered, recoverable, µg/L (01067)	Silver, water, unfiltered, recoverable, µg/L (01077)
10-13-2010	1245	--	--	--	--	--	--	--	--	--
10-13-2010	1250	.13	<.70	164	.10	86.8	<.005	.5	<.12	<.01
10-13-2010	1255	--	--	186	--	106	--	--	--	--
10-13-2010	1300	--	--	455	--	240	--	--	--	--
12-14-2010	0945	--	--	--	--	--	--	--	--	--
12-14-2010	0950	--	--	249	--	110	--	--	--	--
12-14-2010	0955	--	--	240	--	109	--	--	--	--
12-14-2010	1000	--	--	243	--	107	--	--	--	--
03-02-2011	1215	--	--	--	--	--	--	--	--	--
03-02-2011	1216	--	--	--	--	--	--	--	--	--
03-02-2011	1220	--	--	236	--	73.1	--	--	--	--
03-02-2011	1221	--	--	255	--	72.4	--	--	--	--
03-02-2011	1225	--	--	233	--	74.5	--	--	--	--
03-02-2011	1230	--	--	234	--	75.5	--	--	--	--
03-02-2011	1252	<.02	<.70	<5	<.04	<.4	<.005	<.1	<.12	<.01
03-02-2011	1302	<.02	<.70	<5	<.04	<.4	<.005	<.1	<.12	<.01
04-12-2011	1200	--	--	--	--	--	--	--	--	--
04-12-2011	1205	.24	1.2	154	.19	59.4	<.005	.4	.83	<.01
04-12-2011	1210	--	--	164	--	57.0	--	--	--	--
04-12-2011	1215	--	--	165	--	58.5	--	--	--	--
06-22-2011	1200	--	--	--	--	--	--	--	--	--
06-22-2011	1205	--	--	78	--	86.1	--	--	--	--
06-22-2011	1210	--	--	120	--	192	--	--	--	--
06-22-2011	1215	--	--	4,130	--	3,000	--	--	--	--

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

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 6 of 6

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Date	Sample start time	Zinc, water, unfiltered, recover- able, µg/L (01092)	Arsenic, water, unfiltered, µg/L (01002)	Selenium, water, unfiltered, µg/L (01147)	Organic carbon, water, unfiltered, mg/L (00680)
10-13-2010	1245	--	--	--	--
10-13-2010	1250	< 2.4	.76	.20	8.5
10-13-2010	1255	--	--	--	--
10-13-2010	1300	--	--	--	--
12-14-2010	0945	--	--	--	--
12-14-2010	0950	--	--	--	8.6
12-14-2010	0955	--	--	--	--
12-14-2010	1000	--	--	--	--
03-02-2011	1215	--	--	--	--
03-02-2011	1216	--	--	--	--
03-02-2011	1220	--	--	--	8.8
03-02-2011	1221	--	--	--	8.5
03-02-2011	1225	--	--	--	--
03-02-2011	1230	--	--	--	--
03-02-2011	1252	< 2.4	< .09	< .05	< .3
03-02-2011	1302	< 2.4	< .09	< .05	< .3
04-12-2011	1200	--	--	--	--
04-12-2011	1205	< 2.4	.58	.15	9.1
04-12-2011	1210	--	--	--	--
04-12-2011	1215	--	--	--	--
06-22-2011	1200	--	--	--	--
06-22-2011	1205	--	--	--	9.3
06-22-2011	1210	--	--	--	--
06-22-2011	1215	--	--	--	--