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Water-Data Report 2009

**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 mi<sup>2</sup>.

**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 2008 TO SEPTEMBER 2009**

Part 1 of 5

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

Date	Time	Medium name	Baro-	Color,	Dis-	pH,	Specif-		Trans-
			metric pres- sure, mm Hg (00025)	water, filtrd, Pt-Co units (00080)	solved oxygen, mg/L (00300)	solved oxygen, percent of sat- uration (00301)	water, unfiltrd field, std units (00400)	conduc- tance, wat unf μS/cm @ 25 degC (00095)	
<b>Oct</b>									
14...	1400	Surface water	--	--	--	--	--	--	1.00
14...	1405	Surface water	766	80	8.3	94	7.4	74	21.3
14...	1410	Surface water	766	--	5.7	63	6.7	74	20.8
14...	1415	Surface water	766	--	4.9	54	6.7	75	20.8
<b>Dec</b>									
05...	0900	Surface water	--	--	--	--	--	--	.90
05...	0905	Surface water	765	30	11.3	95	7.2	71	8.1
05...	0910	Surface water	765	--	11.3	95	7.2	71	8.2
05...	0915	Surface water	765	--	11.2	95	7.2	70	8.3
<b>Feb</b>									
04...	1015	Surface water	--	--	--	--	--	--	.70
04...	1020	Surface water	759	50	12.5	101	6.8	83	6.0
04...	1025	Surface water	759	--	12.4	100	6.5	83	6.0
04...	1030	Surface water	759	--	12.4	100	6.1	84	6.0
<b>Apr</b>									
14...	1130	Surface water	--	--	--	--	--	--	.60
14...	1135	Surface water	754	100	9.8	100	7.1	81	15.5
14...	1140	Surface water	754	--	8.7	88	6.9	81	15.2
14...	1145	Surface water	754	--	7.4	75	6.7	82	15.0
14...	1230	Bottom material	--	--	--	--	--	--	--
<b>Jun</b>									
22...	1230	Surface water	--	--	--	--	--	--	.90
22...	1235	Surface water	746	30	8.6	113	7.6	105	28.5
22...	1240	Surface water	746	--	3.6	47	6.5	105	27.3
22...	1245	Surface water	746	--	.1	.0	6.5	131	23.6
<b>Aug</b>									
10...	1145	Surface water	--	--	--	--	--	--	.60
10...	1150	Surface water	762	30	9.6	127	8.4	103	30.3
10...	1155	Surface water	762	--	4.2	54	6.6	100	28.6
10...	1200	Surface water	762	--	.2	2	6.5	123	27.0

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

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**  
 Part 2 of 5  
 [Remark codes: <, less than; E, estimated.]

Date	Sam- pling depth, meters	Dis- solved solids dried @ 180degC	Hard- ness, water, mg/L as CaCO <sub>3</sub>	Calci- um, water, filtrd, mg/L (00900)	Magnes- ium, water, filtrd, mg/L (00915)	Potas- sium, water, filtrd, mg/L (00925)	Sodium, water, filtrd, mg/L (00935)	ANC, wat unf infl pt titr., field, mg/L as CaCO <sub>3</sub> (00419)	Bicar- bonate, wat unf infl pt titr., field, mg/L (00450)	Carbon- ate, wat unf infl pt titr., field, mg/L (00447)	Chlor- ide, water, filtrd, mg/L (00940)	Fluor- ide, water, filtrd, mg/L (00950)	Silica, water, filtrd, mg/L as SiO <sub>2</sub> (00955)
<b>Oct</b>													
14...	2.0	--	--	--	--	--	--	--	--	--	--	--	--
14...	1.0	63	22	5.48	2.11	2.61	5.13	18.6	22.6	--	4.99	E.08	6.56
14...	3.0	--	--	--	--	--	--	--	--	--	--	--	--
14...	5.0	--	--	--	--	--	--	--	--	--	--	--	--
<b>Dec</b>													
05...	1.8	--	--	--	--	--	--	--	--	--	--	--	--
05...	1.0	57	22	5.32	2.01	2.69	5.28	17.5	21.3	--	4.93	E.06	6.29
05...	3.0	--	--	--	--	--	--	--	--	--	--	--	--
05...	6.0	--	--	--	--	--	--	--	--	--	--	--	--
<b>Feb</b>													
04...	1.4	--	--	--	--	--	--	--	--	--	--	--	--
04...	1.0	57	25	6.17	2.43	2.60	6.90	19.5	23.8	--	6.74	E.05	7.00
04...	3.0	--	--	--	--	--	--	--	--	--	--	--	--
04...	5.0	--	--	--	--	--	--	--	--	--	--	--	--
<b>Apr</b>													
14...	1.2	--	--	--	--	--	--	--	--	--	--	--	--
14...	1.0	64	24	5.72	2.29	1.92	5.93	16.7	20.3	--	6.83	E.05	5.52
14...	4.0	--	--	--	--	--	--	--	--	--	--	--	--
14...	9.0	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Jun</b>													
22...	1.8	--	--	--	--	--	--	--	--	--	--	--	--
22...	1.0	70	30	7.20	2.90	2.23	7.77	27.3	33.3	--	7.72	E.08	4.34
22...	4.0	--	--	--	--	--	--	--	--	--	--	--	--
22...	8.0	--	--	--	--	--	--	--	--	--	--	--	--
<b>Aug</b>													
10...	1.2	--	--	--	--	--	--	--	--	--	--	--	--
10...	1.0	80	27	6.42	2.56	2.25	7.54	25.9	30.6	.4	7.64	E.09	7.05
10...	3.0	--	--	--	--	--	--	--	--	--	--	--	--
10...	5.0	--	--	--	--	--	--	--	--	--	--	--	--

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

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**  
 Part 3 of 5  
 [Remark codes: <, less than; E, estimated.]

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L (00625)	Ammonia water, fltrd, mg/L (00608)	Nitrate + nitrite water, fltrd, mg/L (00631)	Nitrite water, fltrd, mg/L (00613)	Ortho-phosphate, water, fltrd, mg/L (00671)	Phosphorus, water, fltrd, mg/L (00665)	Chlorophyll a, phytoplankton, fluoro, µg/L (70953)	Pheophytin a, phytoplankton, µg/L (62360)	Mercury bed sediment, µg/g (01385)	Alum-inum, water, recoverable, µg/L (01105)	Cadmium water, unfltrd µg/L (01027)	Chromium, water, recoverable, µg/L (01034)
<b>Oct</b>													
14...	--	.68	.022	E.011	<.002	E.004	.041	18.4	9.8	--	--	--	--
14...	5.79	--	--	--	--	--	--	--	--	--	54	<.06	<.40
14...	--	.65	.058	E.016	E.001	<.008	.042	--	--	--	--	--	--
14...	5.75	.67	.064	E.013	E.002	<.008	.050	--	--	--	--	--	--
<b>Dec</b>													
05...	--	.69	E.015	<.016	E.001	E.005	.056	26.4	13.1	--	--	--	--
05...	6.57	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	.64	E.012	<.016	<.002	<.008	.041	--	--	--	--	--	--
05...	6.61	.69	<.020	<.016	<.002	<.008	.042	--	--	--	--	--	--
<b>Feb</b>													
04...	--	.70	E.014	.191	.002	E.006	.056	26.9	16.9	--	--	--	--
04...	7.66	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	.72	<.020	.193	.002	E.005	.054	--	--	--	--	--	--
04...	7.57	.72	E.014	.192	.002	E.006	.054	--	--	--	--	--	--
<b>Apr</b>													
14...	--	.80	E.015	.135	.004	E.006	.064	31.0	23.0	--	--	--	--
14...	7.65	--	--	--	--	--	--	--	--	--	220	<.06	E.39
14...	--	.66	.029	.140	.004	E.006	.064	--	--	--	--	--	--
14...	7.64	.73	.047	.141	.005	E.004	.065	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	.02	--	--	--
<b>Jun</b>													
22...	--	.67	<.020	<.016	<.002	E.005	.041	21.9	8.1	--	--	--	--
22...	6.69	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	.63	<.020	<.016	<.002	E.005	.044	--	--	--	--	--	--
22...	4.28	1.1	.454	<.016	<.002	E.007	.068	--	--	--	--	--	--
<b>Aug</b>													
10...	--	.73	<.020	<.016	<.002	<.008	.043	24.2	6.4	--	--	--	--
10...	5.96	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	.65	<.020	<.016	<.002	<.008	.039	--	--	--	--	--	--
10...	--	1.1	.463	<.016	<.002	<.008	.071	--	--	--	--	--	--

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

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Part 4 of 5

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

Date	Cobalt water, unfltrd recover -able,  µg/L (01037)	Copper, water, unfltrd recover -able,  µg/L (01042)	Iron, water, unfltrd recover -able,  µg/L (01045)	Lead, water, unfltrd recover -able,  µg/L (01051)	Mangan- ese, water, unfltrd recover -able,  µg/L (01055)	Mercury Mercury water, filtrd, -able,  µg/L (71890)	Molyb- denum, water, unfltrd recover -able,  µg/L (71900)	Nickel, water, unfltrd recover -able,  µg/L (01062)	Silver, water, unfltrd recover -able,  µg/L (01067)	Zinc, water, unfltrd recover -able,  µg/L (01077)	Arsenic water, unfltrd recover -able,  µg/L (01092)	Selen- ium, water, unfltrd  µg/L (01147)
<b>Oct</b>												
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	.14	<4.0	297	.21	103	<.010	.013	.4	.66	<.06	<2.0	.59
14...	--	--	370	--	165	--	--	--	--	--	--	--
14...	--	--	446	--	205	<.010	.011	--	--	--	--	--
<b>Dec</b>												
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	225	--	72.5	<.010	<.010	--	--	--	--	--
05...	--	--	216	--	72.3	--	--	--	--	--	--	--
05...	--	--	218	--	73.4	<.010	<.010	--	--	--	--	--
<b>Feb</b>												
04...	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	698	--	80.4	<.010	.012	--	--	--	--	--
04...	--	--	711	--	82.3	--	--	--	--	--	--	--
04...	--	--	709	--	83.1	<.010	E.007	--	--	--	--	--
<b>Apr</b>												
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	.28	<4.0	634	.68	85.5	E.006	.016	.2	.77	<.06	3.4	.45
14...	--	--	656	--	85.8	--	--	--	--	--	--	--
14...	--	--	724	--	104	<.010	E.007	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
<b>Jun</b>												
22...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	151	--	120	.035	.037	--	--	--	--	--
22...	--	--	248	--	228	--	--	--	--	--	--	--
22...	--	--	1,990	--	3,150	<.010	.021	--	--	--	--	--
<b>Aug</b>												
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	148	--	125	--	--	--	--	--	--	--
10...	--	--	189	--	152	--	--	--	--	--	--	--
10...	--	--	1,220	--	1,470	--	--	--	--	--	--	--

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

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**  
 Part 5 of 5  
 [Remark codes: <, less than; E, estimated.]

Date	Organic carbon, bed sedimnt percent (01395)	Organic carbon, water, filtrd, mg/L (00681)	Organic carbon, water, unfiltrd, mg/L (00680)	<.062mm sieved, percent (69589)	Bed sediment, wet percent base number
<b>Oct</b>					
14...	--	--	--	--	01
14...	--	9.1	11.9	--	01
14...	--	--	--	--	01
14...	--	8.9	--	--	01
<b>Dec</b>					
05...	--	--	--	--	01
05...	--	8.4	10.6	--	01
05...	--	--	--	--	01
05...	--	8.3	--	--	01
<b>Feb</b>					
04...	--	--	--	--	01
04...	--	7.3	9.5	--	01
04...	--	--	--	--	01
04...	--	6.6	--	--	01
<b>Apr</b>					
14...	--	--	--	--	01
14...	--	8.2	11.3	--	01
14...	--	--	--	--	01
14...	--	7.3	--	--	01
14...	1.9	--	--	95	01
<b>Jun</b>					
22...	--	--	--	--	01
22...	--	6.8	9.5	--	01
22...	--	--	--	--	01
22...	--	8.0	--	--	01
<b>Aug</b>					
10...	--	--	--	--	01
10...	--	--	9.8	--	01
10...	--	--	--	--	01
10...	--	--	--	--	01