



Water-Data Report 2007

**0208708905 FALLS LAKE AT NORTH CAROLINA HIGHWAY 98 NEAR BAYLEAF, NC**

Neuse Basin  
Upper Neuse Subbasin

LOCATION.--Lat 35°58'43", long 78°37'58" referenced to North American Datum of 1983, Wake County, NC, Hydrologic Unit 03020201, at bridge on North Carolina Highway 98, 2.0 mi north of Bayleaf.

DRAINAGE AREA.--704 mi<sup>2</sup>.

**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.

**WATER-QUALITY DATA  
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

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)
<b>Oct</b>													
12...	1000	25	1.0	.90	750	5.9	68	6.8	108	21.6	28	6.87	2.73
12...	1005	--	3.0	--	750	3.4	40	6.5	108	21.4	--	--	--
12...	1010	--	7.0	--	750	1.6	19	6.3	111	21.3	--	--	--
<b>Apr</b>													
25...	1000	40	1.0	.80	759	8.9	98	7.3	91	19.8	24	5.88	2.33
25...	1005	--	5.0	--	759	6.5	67	6.3	91	16.6	--	--	--
25...	1010	--	10.0	--	759	4.8	48	6.2	92	15.3	--	--	--
<b>Jun</b>													
12...	1145	25	1.0	1.40	758	8.7	113	7.6	91	28.3	25	6.01	2.48
12...	1150	--	6.0	--	758	.1	.0	6.2	100	18.3	--	--	--
12...	1155	--	11.0	--	758	.1	1	6.4	118	15.5	--	--	--
<b>Aug</b>													
14...	0900	25	1.0	1.20	757	6.8	91	7.4	85	30.2	27	6.10	2.85
14...	0905	--	4.0	--	757	.1	2	6.8	107	27.3	--	--	--
14...	0910	--	8.0	--	757	.2	2	6.6	126	17.2	--	--	--

## 0208708905 FALLS LAKE AT NORTH CAROLINA HIGHWAY 98 NEAR BAYLEAF, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 2 of 4

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

Date	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Bicar- bonate, wat unf incrm. titr., field, mg/L (00450)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (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)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
<b>Oct</b>													
12...	2.67	7.78	30	37	7.90	.14	7.52	5.40	83	.76	.242	E.008	<.002
12...	--	--	--	--	--	--	--	--	--	.79	.159	<.016	<.002
12...	--	--	--	--	--	--	--	--	--	.86	.242	<.016	<.002
<b>Apr</b>													
25...	1.97	6.41	19	23	6.58	E.08	4.32	6.57	79	.69	<.020	<.016	<.002
25...	--	--	--	--	--	--	--	--	--	.64	.029	E.012	<.002
25...	--	--	--	--	--	--	--	--	--	.66	.099	.026	<.002
<b>Jun</b>													
12...	1.97	6.33	22	27	6.39	E.08	3.65	6.52	74	.50	<.020	<.016	<.002
12...	--	--	--	--	--	--	--	--	--	.58	.051	<.016	<.002
12...	--	--	--	--	--	--	--	--	--	1.2	.620	<.016	E.001
<b>Aug</b>													
14...	2.29	7.05	25	31	7.08	E.08	5.26	5.88	61	.54	<.020	<.016	E.001
14...	--	--	--	--	--	--	--	--	--	.61	.056	<.016	E.001
14...	--	--	--	--	--	--	--	E.17	--	1.5	.965	<.016	.003

## 0208708905 FALLS LAKE AT NORTH CAROLINA HIGHWAY 98 NEAR BAYLEAF, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 3 of 4

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

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Chloro-phyll a phyto-plank-ton, fluoro, µg/L (70953)	Pheo-phytin a, phyto-plank-ton, µg/L (62360)	Alum-inum, water, unfltrd recover-able, µg/L (01105)	Arsenic water, unfltrd µg/L (01002)	Cadmium water, unfltrd µg/L (01027)	Chrom-ium, water, unfltrd recover-able, µg/L (01034)	Cobalt water, unfltrd recover-able, µg/L (01037)	Copper, water, unfltrd recover-able, µg/L (01042)	Iron, water, unfltrd recover-able, µg/L (01045)
<b>Oct</b>													
12...	E.004	.030	--	9.5	30.8	7.7	22	.74	<.02	.68	.112	<1.2	228
12...	E.004	.029	--	--	--	--	--	--	--	--	--	--	263
12...	E.004	.030	--	--	--	--	--	--	--	--	--	--	310
<b>Apr</b>													
25...	<.006	.053	--	9.9	24.1	10.4	94	.40	<.02	<.60	.26	1.4	254
25...	E.004	.049	--	--	--	--	--	--	--	--	--	--	326
25...	E.004	.056	--	--	--	--	--	--	--	--	--	--	540
<b>Jun</b>													
12...	E.003	.023	--	7.9	9.5	2.8	--	--	--	--	--	--	70
12...	<.006	.035	--	--	--	--	--	--	--	--	--	--	1,210
12...	.008	.047	--	--	--	--	--	--	--	--	--	--	3,870
<b>Aug</b>													
14...	E.005	.024	6.3	8.1	9.7	4.6	--	--	--	--	--	--	88
14...	E.004	.040	--	--	--	--	--	--	--	--	--	--	199
14...	E.005	.045	8.2	--	--	--	--	--	--	--	--	--	8,720

## 0208708905 FALLS LAKE AT NORTH CAROLINA HIGHWAY 98 NEAR BAYLEAF, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 4 of 4

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

Date	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan- ese, water, unfltrd recover -able, µg/L (01055)	Mercury water, fltrd, recover 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 recover -able, µg/L (01147)	Silver, water, unfltrd recover -able, µg/L (01077)	Zinc, water, unfltrd recover -able, µg/L (01092)
<b>Oct</b>									
12...	E.06	208	--	.013	.6	.51	.17	<.02	<2
12...	--	314	--	--	--	--	--	--	--
12...	--	482	--	--	--	--	--	--	--
<b>Apr</b>									
25...	.24	78.4	--	.032	.3	.73	.17	<.02	2.2
25...	--	90.5	--	--	--	--	--	--	--
25...	--	202	--	--	--	--	--	--	--
<b>Jun</b>									
12...	--	32.3	--	--	--	--	--	--	--
12...	--	917	--	--	--	--	--	--	--
12...	--	1,790	--	--	--	--	--	--	--
<b>Aug</b>									
14...	--	60.1	<.010	<.010	--	--	--	--	--
14...	--	1,110	--	--	--	--	--	--	--
14...	--	2,330	<.010	<.010	--	--	--	--	--