

Water-Data Report 2008

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 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.

0208708905 FALLS LAKE AT NORTH CAROLINA HIGHWAY 98 NEAR BAYLEAF, 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, flt'd, 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, unflt'd 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, flt'd, mg/L (00915)	Magnes- ium, water, flt'd, mg/L (00925)
Oct													
04...	1130	25	1.0	.90	762	8.7	105	8.0	114	24.5	32	8.01	2.96
04...	1135	--	4.0	--	762	.4	5	6.8	117	23.3	--	--	--
04...	1140	--	8.0	--	762	.2	2	7.0	188	17.5	--	--	--
Dec													
12...	1115	--	2.2	1.10	--	--	--	--	--	--	--	--	--
12...	1120	40	1.0	--	760	10.2	95	7.3	123	12.1	31	7.67	2.92
12...	1125	--	5.0	--	760	7.2	64	6.9	139	9.8	--	--	--
12...	1130	--	9.0	--	760	6.5	57	6.9	143	9.2	--	--	--
Feb													
11...	1115	--	1.6	.80	--	--	--	--	--	--	--	--	--
11...	1120	25	1.0	--	769	11.2	94	7.3	143	8.2	31	7.49	3.02
11...	1125	--	4.0	--	769	11.1	95	7.3	143	9.2	--	--	--
11...	1130	--	8.0	--	769	10.6	90	7.3	142	9.0	--	--	--
Apr													
09...	1030	--	2.0	1.00	--	--	--	--	--	--	--	--	--
09...	1035	30	1.0	--	764	10.2	101	7.5	127	14.8	29	6.92	2.78
09...	1040	--	6.0	--	764	6.9	67	6.9	126	14.0	--	--	--
09...	1045	--	12.0	--	764	1.4	13	6.7	140	13.2	--	--	--
Jun													
18...	1045	--	2.6	1.30	--	--	--	--	--	--	--	--	--
18...	1050	40	1.0	--	754	7.7	102	7.6	108	29.2	28	6.72	2.68
18...	1055	--	6.0	--	754	.1	1	6.5	118	20.4	--	--	--
18...	1100	--	11.0	--	754	.2	2	6.6	154	15.2	--	--	--
Aug													
19...	1130	--	2.8	1.40	--	--	--	--	--	--	--	--	--
19...	1135	20	1.0	--	760	8.5	109	8.0	105	28.3	27	6.51	2.72
19...	1140	--	5.0	--	760	.1	1	6.7	112	26.6	--	--	--
19...	1145	--	10.0	--	760	.2	2	6.6	164	16.4	--	--	--

0208708905 FALLS LAKE AT NORTH CAROLINA HIGHWAY 98 NEAR BAYLEAF, 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													
04...	2.53	8.80	30	37	8.83	.13	8.20	5.90	66	.69	<.020	<.016	<.002
04...	--	--	--	--	--	--	--	--	--	1.2	.228	<.016	E.001
04...	--	--	--	--	--	--	--	.20	--	3.1	2.06	<.016	.005
Dec													
12...	--	--	--	--	--	--	--	--	--	1.0	.287	.036	E.002
12...	2.84	10.1	32	39	10.2	.14	8.61	7.90	93	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	1.0	.287	.030	E.002
12...	--	--	--	--	--	--	--	12.4	--	1.1	.341	.029	E.002
Feb													
11...	--	--	--	--	--	--	--	--	--	1.0	.188	.176	.004
11...	3.25	14.8	29	35	14.7	.13	7.81	14.2	91	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	.99	.190	.177	.004
11...	--	--	--	--	--	--	--	13.9	--	1.0	.210	.179	.004
Apr													
09...	--	--	18	22	--	--	--	--	--	.73	.023	.143	.004
09...	3.01	12.1	--	--	11.9	E.12	4.18	18.5	79	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	.73	.083	.139	.004
09...	--	--	--	--	--	--	--	17.1	--	1.0	.409	.128	.007
Jun													
18...	--	--	--	--	--	--	--	--	--	.55	<.020	<.016	<.002
18...	2.50	7.86	20	24	8.25	E.10	1.26	12.3	74	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	.62	.081	<.016	<.002
18...	--	--	--	--	--	--	--	7.62	--	1.7	1.18	<.016	E.001
Aug													
19...	--	--	--	--	--	--	--	--	--	.53	<.020	<.016	<.002
19...	2.50	8.02	22.4	27.4	7.97	E.10	2.80	9.59	83	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	.50	E.014	<.016	<.002
19...	--	--	--	--	--	--	--	1.61	--	2.2	1.66	E.013	E.002

0208708905 FALLS LAKE AT NORTH CAROLINA HIGHWAY 98 NEAR BAYLEAF, 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 recover-able, µg/L (01105)	Arsenic water, unfltrd µg/L (01002)	Cadmium water, unfltrd µg/L (01027)	Chromium, 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)
Oct													
04...	<.006	.029	5.9	9.0	23.7	3.9	29	E.58	<.01	<.40	.13	<1.2	102
04...	E.003	.049	--	--	--	--	--	--	--	--	--	--	429
04...	<.006	.065	8.7	--	--	--	--	--	--	--	--	--	17,900
Dec													
12...	<.006	.036	--	--	15.6	7.0	--	--	--	--	--	--	--
12...	--	--	6.0	7.1	--	--	--	--	--	--	--	--	240
12...	<.006	.039	--	--	--	--	--	--	--	--	--	--	267
12...	<.006	.049	6.5	--	--	--	--	--	--	--	--	--	434
Feb													
11...	<.006	.043	--	--	18.7	10.4	--	--	--	--	--	--	--
11...	--	--	6.2	9.0	--	--	--	--	--	--	--	--	256
11...	<.006	.045	--	--	--	--	--	--	--	--	--	--	282
11...	E.003	.041	6.4	--	--	--	--	--	--	--	--	--	302
Apr													
09...	<.006	.041	--	--	40.0	13.1	--	--	--	--	--	--	--
09...	--	--	6.7	11.1	--	--	70	E.44	.02	E.29	.17	1.3	146
09...	<.006	.039	--	--	--	--	--	--	--	--	--	--	167
09...	<.006	.047	6.1	--	--	--	--	--	--	--	--	--	369
Jun													
18...	<.006	.024	--	--	12.9	5.2	--	--	--	--	--	--	--
18...	--	--	8.7	10.0	--	--	--	--	--	--	--	--	88
18...	<.006	.033	--	--	--	--	--	--	--	--	--	--	1,020
18...	E.006	.045	8.2	--	--	--	--	--	--	--	--	--	3,730
Aug													
19...	E.003	.021	--	--	13.0	3.9	--	--	--	--	--	--	--
19...	--	--	7.8	9.2	--	--	--	--	--	--	--	--	59
19...	E.003	.027	--	--	--	--	--	--	--	--	--	--	132
19...	.008	.043	8.2	--	--	--	--	--	--	--	--	--	6,940

0208708905 FALLS LAKE AT NORTH CAROLINA HIGHWAY 98 NEAR BAYLEAF, 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									
04...	E.06	134	.012	.016	.6	.52	.17	<.02	<2.0
04...	--	1,320	--	--	--	--	--	--	--
04...	--	3,570	<.010	<.010	--	--	--	--	--
Dec									
12...	--	--	--	--	--	--	--	--	--
12...	--	136	<.010	<.010	--	--	--	--	--
12...	--	146	--	--	--	--	--	--	--
12...	--	224	<.010	<.010	--	--	--	--	--
Feb									
11...	--	--	--	--	--	--	--	--	--
11...	--	88.4	<.010	<.010	--	--	--	--	--
11...	--	95.5	--	--	--	--	--	--	--
11...	--	104	<.010	<.010	--	--	--	--	--
Apr									
09...	--	--	--	--	--	--	--	--	--
09...	.14	62.5	<.010	<.010	.4	.89	.17	<.02	E1.2
09...	--	69.1	--	--	--	--	--	--	--
09...	--	613	<.010	<.010	--	--	--	--	--
Jun									
18...	--	--	--	--	--	--	--	--	--
18...	--	34.2	.015	.034	--	--	--	--	--
18...	--	677	--	--	--	--	--	--	--
18...	--	1,770	<.010	E.010	--	--	--	--	--
Aug									
19...	--	--	--	--	--	--	--	--	--
19...	--	39.6	E.006	.018	--	--	--	--	--
19...	--	704	--	--	--	--	--	--	--
19...	--	2,230	<.010	.020	--	--	--	--	--