



Water-Data Report 2007

02086920 FALLS LAKE AT U.S. INTERSTATE 85 NEAR REDWOOD, NC

Neuse Basin
Upper Neuse Subbasin

LOCATION.--Lat 36°04'11", long 78°46'45" referenced to North American Datum of 1983, Durham County, NC, Hydrologic Unit 03020201, at bridge on U.S. Interstate 85, 1.7 mi north of Redwood.

DRAINAGE AREA.--512 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 April 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 25 degC (00095)	Temper-ature, 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													
11...	0930	38	1.0	.40	754	9.2	101	7.8	164	19.6	32	8.14	2.82
11...	0935	--	2.0	--	754	6.8	74	6.7	160	18.7	--	--	--
11...	0940	--	4.0	--	754	4.2	44	6.5	161	17.7	--	--	--
Apr													
24...	0945	50	1.0	.30	761	8.3	89	6.1	89	18.9	26	6.30	2.38
24...	0950	--	2.0	--	761	7.7	82	6.0	97	18.2	--	--	--
24...	0955	--	5.0	--	761	3.2	32	5.8	98	15.2	--	--	--
Jun													
13...	0945	150	1.0	.20	758	5.3	67	6.8	152	26.4	34	8.55	3.14
13...	0950	--	2.0	--	758	5.1	63	6.7	148	26.2	--	--	--
13...	0955	--	4.0	--	758	3.6	45	6.7	149	25.9	--	--	--
Aug													
15...	1030	150	1.0	.20	756	1.9	25	7.0	262	27.4	46	11.9	3.94
15...	1035	--	2.0	--	756	2.2	28	7.0	256	26.9	--	--	--
15...	1040	--	3.0	--	756	2.1	26	7.0	256	26.4	--	--	--

02086920 FALLS LAKE AT U.S. INTERSTATE 85 NEAR REDWOOD, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

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 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)
Oct													
11...	3.68	16.7	35	43	15.2	.18	5.72	13.6	105	1.1	E.010	.026	.005
11...	--	--	--	--	--	--	--	--	--	1.0	E.014	.052	.005
11...	--	--	--	--	--	--	--	--	--	1.1	.134	.049	.004
Apr													
24...	1.96	5.92	21	25	5.92	E.07	8.69	6.05	81	.81	<.020	.074	.004
24...	--	--	--	--	--	--	--	--	--	.61	<.020	.144	.005
24...	--	--	--	--	--	--	--	--	--	.90	.142	.124	.004
Jun													
13...	3.29	14.2	35	42	12.9	.18	5.63	10.9	93	1.2	<.020	<.016	<.002
13...	--	--	--	--	--	--	--	--	--	.86	<.020	<.016	<.002
13...	--	--	--	--	--	--	--	--	--	1.0	.039	<.016	<.002
Aug													
15...	5.29	29.9	53	65	28.1	.33	8.93	18.9	158	1.8	.073	<.016	<.002
15...	--	--	--	--	--	--	--	--	--	1.7	.045	<.016	<.002
15...	--	--	--	--	--	--	--	18.6	--	1.9	.045	<.016	<.002

02086920 FALLS LAKE AT U.S. INTERSTATE 85 NEAR REDWOOD, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

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 (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Chlorophyll a phyton, fluoro, µg/L (70953)	Pheophytin a, phyton, 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													
11...	E.004	.125	--	11.6	60.8	30.3	253	.83	<.02	.76	.964	2.7	805
11...	E.003	.136	--	--	--	--	--	--	--	--	--	--	944
11...	E.004	.137	--	--	--	--	--	--	--	--	--	--	1,090
Apr													
24...	E.004	.109	--	11.8	44.8	17.9	424	.58	E.01	.64	.84	2.6	1,090
24...	.007	.114	--	--	--	--	--	--	--	--	--	--	1,240
24...	E.004	.106	--	--	--	--	--	--	--	--	--	--	1,050
Jun													
13...	E.005	.167	--	12.0	47.9	29.7	--	--	--	--	--	--	1,320
13...	E.005	.169	--	--	--	--	--	--	--	--	--	--	1,410
13...	E.006	.200	--	--	--	--	--	--	--	--	--	--	2,130
Aug													
15...	.010	.315	9.5	14.7	68.9	49.4	--	--	--	--	--	--	2,460
15...	.007	.338	--	--	--	--	--	--	--	--	--	--	2,810
15...	.007	.359	10.2	--	--	--	--	--	--	--	--	--	2,860

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Part 4 of 4

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

Date	Lead,	Mangan-		Mercury	Molyb-	Nickel,		Silver,	Zinc,
	water,	ese,	Mercury	water,	denum,	water,	Selen-	water,	water,
	unfltrd	water,	water,	unfltrd	water,	unfltrd	ium,	unfltrd	unfltrd
	recover	recover	water,	recover	recover	recover	water,	recover	recover
	-able,	-able,	fltrd,	-able,	-able,	-able,	unfltrd	-able,	-able,
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	(01051)	(01055)	(71890)	(71900)	(01062)	(01067)	(01147)	(01077)	(01092)
Oct									
11...	1.24	261	--	.012	1.2	1.32	.20	E.01	4
11...	--	306	--	--	--	--	--	--	--
11...	--	386	--	--	--	--	--	--	--
Apr									
24...	1.26	257	--	.040	.3	.95	.16	E.01	4.6
24...	--	255	--	--	--	--	--	--	--
24...	--	286	--	--	--	--	--	--	--
Jun									
13...	--	563	--	--	--	--	--	--	--
13...	--	571	--	--	--	--	--	--	--
13...	--	855	--	--	--	--	--	--	--
Aug									
15...	--	1,050	.027	.034	--	--	--	--	--
15...	--	1,090	--	--	--	--	--	--	--
15...	--	1,090	E.006	.017	--	--	--	--	--