

Water-Data Report 2008

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC

Neuse Basin
Upper Neuse Subbasin

LOCATION.--Lat 35°56'29", long 78°35'01" referenced to North American Datum of 1983, Wake County, NC, Hydrologic Unit 03020201, 0.05 mi above dam, 0.5 mi northwest of Falls.

DRAINAGE AREA.--771 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.

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 1 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Time	Sample medium and type	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)
Oct									
04...	1015	Surface water, regular	25	1.0	.90	762	8.1	96	7.7
04...	1016	QC - Surface water, replicate	--	--	.90	--	--	--	--
04...	1017	QC - Surface water, replicate	--	--	.90	--	--	--	--
04...	1020	Surface water, regular	--	4.0	--	762	3.1	37	7.0
04...	1025	Surface water, regular	--	8.0	--	762	.2	2	6.9
Dec									
12...	0940	Surface water, regular	--	2.0	1.00	--	--	--	--
12...	0941	QC - Surface water, replicate	--	2.0	--	--	--	--	--
12...	0945	Surface water, regular	25	1.0	--	760	8.2	75	7.0
12...	0946	QC - Surface water, replicate	25	1.0	--	--	--	--	--
12...	0950	Surface water, regular	--	4.0	--	760	6.5	57	6.9
12...	0955	Surface water, regular	--	8.0	--	760	6.3	56	6.9
12...	1218	QC - Artificial, blank	--	--	--	--	--	--	--
Feb									
11...	1000	Surface water, regular	--	2.0	1.00	--	--	--	--
11...	1005	Surface water, regular	20	1.0	--	769	10.7	92	7.2
11...	1010	Surface water, regular	--	3.0	--	769	10.6	91	7.2
11...	1015	Surface water, regular	--	7.0	--	769	10.4	89	7.2
Apr									
09...	0915	Surface water, regular	--	2.4	1.20	--	--	--	--
09...	0920	Surface water, regular	25	1.0	--	764	10.7	105	7.9
09...	0925	Surface water, regular	--	5.0	--	764	10.2	100	7.5
09...	0930	Surface water, regular	--	11.0	--	764	4.2	40	6.8
Jun									
18...	0945	Surface water, regular	--	3.4	1.70	--	--	--	--
18...	0950	Surface water, regular	30	1.0	--	754	7.9	104	7.7
18...	0955	Surface water, regular	--	4.0	--	754	1.0	12	6.5
18...	1000	Surface water, regular	--	9.0	--	754	.2	2	6.6
Aug									
19...	1015	Surface water, regular	--	3.4	1.70	--	--	--	--
19...	1020	Surface water, regular	18	1.0	--	760	7.6	96	7.3
19...	1025	Surface water, regular	--	5.0	--	760	.4	5	6.7
19...	1030	Surface water, regular	--	10.0	--	760	.2	2	6.7

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Specific conductance, wat unf μS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf infl pt titr., field, mg/L as CaCO3 (00419)	Bicarbonate, wat unf infl pt titr., field, mg/L (00450)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L as SiO2 (00955)	Sulfate water, fltrd, mg/L (00945)
Oct													
04...	107	24.3	32	7.98	2.93	2.30	7.43	31	38	7.62	.12	6.90	4.93
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	108	23.2	--	--	--	--	--	--	--	--	--	--	--
04...	151	17.0	--	--	--	--	--	--	--	--	--	--	<.18
Dec													
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	116	11.1	31	7.78	2.91	2.63	8.44	34	41	8.97	.13	8.43	6.03
12...	--	--	32	7.87	2.94	2.72	8.52	32	39	8.97	.14	8.29	6.07
12...	116	9.8	--	--	--	--	--	--	--	--	--	--	--
12...	116	9.7	--	--	--	--	--	--	--	--	--	--	6.15
12...	--	--	--	E.03	<.020	<.02	<.12	--	--	<.12	<.12	.05	<.18
Feb													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	117	9.0	30	7.17	2.88	2.86	10.3	28	34	10.5	E.11	8.84	9.28
11...	117	8.9	--	--	--	--	--	--	--	--	--	--	--
11...	117	8.9	--	--	--	--	--	--	--	--	--	--	9.20
Apr													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	129	14.5	29	6.86	2.83	2.95	12.6	25	30	12.2	.12	6.12	12.6
09...	126	14.3	--	--	--	--	--	--	--	--	--	--	--
09...	130	13.2	--	--	--	--	--	--	--	--	--	--	12.3
Jun													
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	115	29.4	28	6.61	2.69	2.61	8.71	21	25	9.34	E.11	1.43	13.3
18...	112	25.2	--	--	--	--	--	--	--	--	--	--	--
18...	147	15.7	--	--	--	--	--	--	--	--	--	--	10.2
Aug													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	107	27.5	27	6.31	2.64	2.51	8.26	22.2	27.1	8.42	E.10	1.98	11.0
19...	111	25.7	--	--	--	--	--	--	--	--	--	--	--
19...	148	16.3	--	--	--	--	--	--	--	--	--	--	5.08

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 3 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	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)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L as P (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)
Oct													
04...	70	.54	<.020	<.016	<.002	<.006	.022	5.6	8.2	26.9	6.8	25	E.48
04...	--	--	--	--	--	--	--	--	--	29.3	5.4	--	--
04...	--	--	--	--	--	--	--	--	--	30.9	5.2	--	--
04...	--	.54	<.020	<.016	<.002	E.003	.022	--	--	--	--	--	--
04...	--	1.2	.798	<.016	.003	<.006	.026	7.9	--	--	--	--	--
Dec													
12...	--	.91	.328	.026	.002	<.006	.032	--	--	9.5	6.2	--	--
12...	--	.93	.331	.026	.002	<.006	.032	--	--	11.4	6.1	--	--
12...	81	--	--	--	--	--	--	5.9	6.6	--	--	--	--
12...	79	--	--	--	--	--	--	5.9	7.3	--	--	--	--
12...	--	.93	.351	.026	.002	<.006	.033	--	--	--	--	--	--
12...	--	1.0	.379	.030	.002	<.006	.050	5.9	--	--	--	--	--
12...	--	--	<.020	<.016	<.002	<.006	--	E.2	--	--	--	--	--
Feb													
11...	--	.92	.296	.128	.004	E.003	.034	--	--	14.9	8.3	--	--
11...	83	--	--	--	--	--	--	5.8	6.8	--	--	--	--
11...	--	.90	.296	.128	.004	E.003	.033	--	--	--	--	--	--
11...	--	.90	.297	.129	.004	E.003	.034	5.8	--	--	--	--	--
Apr													
09...	--	.68	E.015	.184	.005	<.006	.033	--	--	43.2	12.5	--	--
09...	87	--	--	--	--	--	--	5.4	9.0	--	--	53	E.41
09...	--	.67	.021	.185	.005	<.006	.031	--	--	--	--	--	--
09...	--	.85	.311	.163	.007	<.006	.033	5.4	--	--	--	--	--
Jun													
18...	--	.49	<.020	<.016	<.002	<.006	.016	--	--	7.5	2.3	--	--
18...	81	--	--	--	--	--	--	8.0	9.2	--	--	--	--
18...	--	.56	<.020	<.016	<.002	<.006	.028	--	--	--	--	--	--
18...	--	1.2	.714	<.016	<.002	E.003	.033	7.5	--	--	--	--	--
Aug													
19...	--	.41	<.020	<.016	<.002	<.006	.014	--	--	7.2	2.4	--	--
19...	79	--	--	--	--	--	--	7.1	8.2	--	--	--	--
19...	--	.43	<.020	<.016	<.002	E.003	.017	--	--	--	--	--	--
19...	--	1.3	.789	<.016	E.001	E.004	.022	7.6	--	--	--	--	--

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 4 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Cadmium water, unfltrd recover- able, 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)	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 recover- able, µg/L (01147)	Silver, water, unfltrd recover- able, µg/L (01077)
Oct													
04...	E.01	<.40	.13	<1.2	97	E.04	153	<.010	.033	.5	.33	.15	<.02
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	89	--	296	--	--	--	--	--	--
04...	--	--	--	--	9,790	--	3,270	<.010	E.008	--	--	--	--
Dec													
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	313	--	200	<.010	<.010	--	--	--	--
12...	--	--	--	--	314	--	200	<.010	<.010	--	--	--	--
12...	--	--	--	--	548	--	291	--	--	--	--	--	--
12...	--	--	--	--	670	--	399	<.010	<.010	--	--	--	--
12...	--	--	--	--	--	--	--	<.010	<.010	--	--	--	--
Feb													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	272	--	108	<.010	<.010	--	--	--	--
11...	--	--	--	--	263	--	106	--	--	--	--	--	--
11...	--	--	--	--	266	--	107	<.010	<.010	--	--	--	--
Apr													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
09...	.03	E.25	.17	E.76	91	.10	48.9	<.010	<.010	.4	.83	.18	E.02
09...	--	--	--	--	112	--	49.3	--	--	--	--	--	--
09...	--	--	--	--	272	--	426	<.010	<.010	--	--	--	--
Jun													
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	66	--	26.3	.022	.026	--	--	--	--
18...	--	--	--	--	331	--	516	--	--	--	--	--	--
18...	--	--	--	--	2,460	--	1,550	<.010	E.010	--	--	--	--
Aug													
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	56	--	40.1	E.007	.014	--	--	--	--
19...	--	--	--	--	72	--	81.5	--	--	--	--	--	--
19...	--	--	--	--	4,510	--	2,030	E.010	.019	--	--	--	--

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO
SEPTEMBER 2008

Part 5 of 5

[QC, quality control sample. Remark codes:
 <, less than; E, estimated.]

Date	Zinc, water, unfiltrd recover -able, µg/L (01092)	Data base number	Medium code
Oct			
04...	E1.4	01	WS
04...	--	04	WSQ
04...	--	04	WSQ
04...	--	01	WS
04...	--	01	WS
Dec			
12...	--	01	WS
12...	--	04	WSQ
12...	--	01	WS
12...	--	04	WSQ
12...	--	01	WS
12...	--	01	WS
12...	--	04	OAQ
Feb			
11...	--	01	WS
11...	--	01	WS
11...	--	01	WS
11...	--	01	WS
Apr			
09...	--	01	WS
09...	E1.2	01	WS
09...	--	01	WS
09...	--	01	WS
Jun			
18...	--	01	WS
18...	--	01	WS
18...	--	01	WS
18...	--	01	WS
Aug			
19...	--	01	WS
19...	--	01	WS
19...	--	01	WS
19...	--	01	WS