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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 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.

## 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: &lt;, less than; E, estimated.]

Date	Time	Sample medium and type	Color, water, filtrd, 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)
<b>Oct</b>									
04...	1015	Surface water, regular	25	1.0	.90	762	8.1	96	7.7
04...	1016	<i>QC - Surface water, replicate</i>	--	--	.90	--	--	--	--
04...	1017	<i>QC - Surface water, replicate</i>	--	--	.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
<b>Dec</b>									
12...	0940	Surface water, regular	--	2.0	1.00	--	--	--	--
12...	0941	<i>QC - Surface water, replicate</i>	--	2.0	--	--	--	--	--
12...	0945	Surface water, regular	25	1.0	--	760	8.2	75	7.0
12...	0946	<i>QC - Surface water, replicate</i>	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	<i>QC - Artificial, blank</i>	--	--	--	--	--	--	--
<b>Feb</b>									
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
<b>Apr</b>									
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
<b>Jun</b>									
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
<b>Aug</b>									
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: &lt;, less than; E, estimated.]

Date	Specif-ic							ANC, wat unf	Bicar-bonate,				
	conduc-tance, wat unf $\mu\text{S}/\text{cm}$	Temper-ature, water, deg C	Hard-ness, water, mg/L as CaCO <sub>3</sub>	Calcium water, filtrd, mg/L (00900)	Magnes-iun, water, filtrd, mg/L (00915)	Potas-sium, water, filtrd, mg/L (00925)	Sodium, water, filtrd, mg/L (00935)	infl pt titr., mg/L as CaCO <sub>3</sub> (00930)	wat unf field, mg/L as CaCO <sub>3</sub> (00419)	Chlor-ide, water, filtrd, mg/L (00450)	Fluor-ide, water, filtrd, mg/L (00940)	Silica, water, filtrd, mg/L SiO <sub>2</sub> (00955)	Sulfate water, filtrd, mg/L (00945)
<b>Oct</b>													
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
<b>Dec</b>													
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
<b>Feb</b>													
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
<b>Apr</b>													
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
<b>Jun</b>													
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
<b>Aug</b>													
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: &lt;, less than; E, estimated.]

Date	Residue on evap. 180degC wat flt	Ammonia + org-N, water, mg/L (70300)	Ammonia water, mg/L (00625)	Nitrate + nitrite water filtrd, mg/L (00608)	Nitrite water, filtrd, mg/L (00631)	Ortho- phosphate, water, filtrd, mg/L (00613)	Phos- phorus, water, unfiltrd, mg/L (00671)	Organic carbon, water, filtrd, mg/L (00665)	Organic carbon, water, unfiltrd, mg/L (00681)	Chloro- phyll a, phyto- plankton, fluoro-, mg/L (70953)	Pheo- phytin a, phyto- plankton, μg/L (62360)	Alum- inum, water, unfiltrd recover- able, μg/L (01105)	Arsenic water, unfiltrd μg/L (01002)
<b>Oct</b>													
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	--	--	--	--	--
<b>Dec</b>													
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	--	--	--	--	--
<b>Feb</b>													
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	--	--	--	--	--
<b>Apr</b>													
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	--	--	--	--	--
<b>Jun</b>													
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	--	--	--	--	--
<b>Aug</b>													
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: &lt;, less than; E, estimated.]

Date	Cadmium water, unfltrd (01027)	Chromium, water, unfltrd recover -able, (01034)	Cobalt water, unfltrd recover -able, (01037)	Copper, water, unfltrd recover -able, (01042)	Iron, water, unfltrd recover -able, (01045)	Lead, water, unfltrd recover -able, (01051)	Manganese, water, unfltrd recover -able, (01055)	Mercury, water, fltrd, (71890)	Mercury, water, unfltrd recover -able, (71900)	Molybdenum, water, unfltrd recover -able, (01062)	Nickel, water, unfltrd recover -able, (01067)	Selenium, water, unfltrd recover -able, (01147)	Silver, water, unfltrd recover -able, (01077)
<b>Oct</b>													
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	--	--	--	--
<b>Dec</b>													
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	313	--	200	<.010	<.010	--	--	--	--
12...	--	--	--	--	314	--	200	<.010	<.010	--	--	--	--
12...	--	--	--	--	548	--	291	--	--	--	--	--	--
12...	--	--	--	--	670	--	399	<.010	<.010	--	--	--	--
12...	--	--	--	--	--	--	--	<.010	<.010	--	--	--	--
<b>Feb</b>													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	272	--	108	<.010	<.010	--	--	--	--
11...	--	--	--	--	263	--	106	--	--	--	--	--	--
11...	--	--	--	--	266	--	107	<.010	<.010	--	--	--	--
<b>Apr</b>													
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	--	--	--	--
<b>Jun</b>													
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	66	--	26.3	.022	.026	--	--	--	--
18...	--	--	--	--	331	--	516	--	--	--	--	--	--
18...	--	--	--	--	2,460	--	1,550	<.010	E.010	--	--	--	--
<b>Aug</b>													
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, unfltrd recover -able, μg/L (01092)	Data base number	Medium code
<b>Oct</b>			
04...	E1.4	01	WS
04...	--	04	<i>WSQ</i>
04...	--	04	<i>WSQ</i>
04...	--	01	WS
04...	--	01	WS
<b>Dec</b>			
12...	--	01	WS
12...	--	04	<i>WSQ</i>
12...	--	01	WS
12...	--	04	<i>WSQ</i>
12...	--	01	WS
12...	--	01	WS
12...	--	04	<i>OAQ</i>
<b>Feb</b>			
11...	--	01	WS
11...	--	01	WS
11...	--	01	WS
11...	--	01	WS
<b>Apr</b>			
09...	--	01	WS
09...	E1.2	01	WS
09...	--	01	WS
09...	--	01	WS
<b>Jun</b>			
18...	--	01	WS
18...	--	01	WS
18...	--	01	WS
18...	--	01	WS
<b>Aug</b>			
19...	--	01	WS
19...	--	01	WS
19...	--	01	WS
19...	--	01	WS