



Water-Data Report 2010

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 1989-95, 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 2009 TO SEPTEMBER 2010

Part 1 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; m, meters; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Color, water, filtered, platinum cobalt units (00080)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, μS/cm at 25 °C (00095)
10-28-2009	0945	Surface water	Regular	--	--	--	--	--	--
10-28-2009	0946	<i>QC sample - Surface water</i>	<i>Replicate</i>	--	--	--	--	--	--
10-28-2009	0947	<i>QC sample - Surface water</i>	<i>Replicate</i>	--	--	--	--	--	--
10-28-2009	0950	Surface water	Regular	757	20	5.9	62	6.7	104
10-28-2009	0955	Surface water	Regular	757	--	5.9	63	6.7	104
10-28-2009	1000	Surface water	Regular	757	--	6.6	70	6.6	107
12-16-2009	0915	Surface water	Regular	--	--	--	--	--	--
12-16-2009	0920	Surface water	Regular	770	88	8.4	73	6.7	76
12-16-2009	0925	Surface water	Regular	770	--	8.4	73	6.7	76
12-16-2009	0930	Surface water	Regular	770	--	8.4	73	6.5	76
02-26-2010	0845	Surface water	Regular	--	--	--	--	--	--
02-26-2010	0850	Surface water	Regular	752	88	11.4	91	6.6	69
02-26-2010	0855	Surface water	Regular	752	--	11.3	90	6.6	69
02-26-2010	0900	Surface water	Regular	752	--	11.2	90	6.3	69
04-06-2010	1015	Surface water	Regular	--	--	--	--	--	--
04-06-2010	1020	Surface water	Regular	761	50	9.2	102	7.0	76
04-06-2010	1025	Surface water	Regular	761	--	8.2	79	6.7	74
04-06-2010	1030	Surface water	Regular	761	--	4.2	37	6.5	79
06-08-2010	0945	Surface water	Regular	--	--	--	--	--	--
06-08-2010	0950	Surface water	Regular	764	25	8.0	103	7.7	91
06-08-2010	0955	Surface water	Regular	764	--	1.5	18	6.7	94
06-08-2010	1000	Surface water	Regular	764	--	.2	2	6.8	104
08-11-2010	0945	Surface water	Regular	--	--	--	--	--	--
08-11-2010	0950	Surface water	Regular	758	15	8.2	111	8.3	95
08-11-2010	0955	Surface water	Regular	758	--	.1	1	6.7	100
08-11-2010	1000	Surface water	Regular	758	--	.2	2	6.7	133

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; m, meters; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Temperature, water, °C (00010)	Trans- parency, water, in situ, Secchi disc, m (00078)	Depth to 1 percent of surface light, meters (85328)	Sampling depth, m (00098)	Dissolved solids dried at 180 °C, water, filtered, mg/L (70300)					
					Hardness, water, mg/L as CaCO ₃ (00900)	Calcium, water, filtered, mg/L (00915)	Magne- sium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	
10-28-2009	--	1.10	--	2.2	--	--	--	--	--	--
10-28-2009	--	1.10	--	2.2	--	--	--	--	--	--
10-28-2009	--	1.10	--	2.2	--	--	--	--	--	--
10-28-2009	17.7	--	--	1.0	80	29.1	7.11	2.76	2.37	7.22
10-28-2009	17.7	--	--	5.0	--	--	--	--	--	--
10-28-2009	17.4	--	--	10.0	--	--	--	--	--	--
12-16-2009	--	.70	--	1.4	--	--	--	--	--	--
12-16-2009	9.6	--	--	1.0	52	20.7	5.00	1.99	2.52	5.22
12-16-2009	9.5	--	--	7.0	--	--	--	--	--	--
12-16-2009	9.5	--	--	13.0	--	--	--	--	--	--
02-26-2010	--	.70	--	1.4	--	--	--	--	--	--
02-26-2010	5.2	--	--	1.0	50	17.7	4.23	1.73	1.78	5.25
02-26-2010	5.3	--	--	4.0	--	--	--	--	--	--
02-26-2010	5.2	--	--	9.0	--	--	--	--	--	--
04-06-2010	--	1.30	--	2.6	--	--	--	--	--	--
04-06-2010	20.2	--	--	1.0	64	18.7	4.41	1.86	1.74	5.46
04-06-2010	13.5	--	--	6.0	--	--	--	--	--	--
04-06-2010	9.9	--	--	12.0	--	--	--	--	--	--
06-08-2010	--	1.10	2.2	2.2	--	--	--	--	--	--
06-08-2010	28.9	--	--	1.0	52	24.9	5.82	2.53	1.87	7.00
06-08-2010	24.2	--	--	6.0	--	--	--	--	--	--
06-08-2010	19.9	--	--	11.0	--	--	--	--	--	--
08-11-2010	--	1.70	3.4	3.4	--	--	--	--	--	--
08-11-2010	31.4	--	--	1.0	60	24.1	5.45	2.56	1.99	7.20
08-11-2010	27.9	--	--	5.0	--	--	--	--	--	--
08-11-2010	19.4	--	--	10.0	--	--	--	--	--	--

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 3 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; m, meters; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	ANC, water, unfiltered, inflection- point, incremental titration method, field, mg/L as CaCO ₃ (00419)	Bi- carbonate, water, unfiltered, inflection- point, incremental titration method, field, mg/L (00450)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N (00625)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)
	10-28-2009	--	--	--	--	--	--	.86	.372
10-28-2009	--	--	--	--	--	--	--	--	--
10-28-2009	--	--	--	--	--	--	--	--	--
10-28-2009	32.3	39.4	7.28	E .08	6.62	4.53	--	--	--
10-28-2009	--	--	--	--	--	--	.87	.379	.027
10-28-2009	--	--	--	--	--	--	.88	.402	.024
12-16-2009	--	--	--	--	--	--	.69	.100	.162
12-16-2009	17.5	21.3	5.75	E .05	8.24	6.90	--	--	--
12-16-2009	--	--	--	--	--	--	.69	.099	.162
12-16-2009	--	--	--	--	--	--	.70	.095	.170
02-26-2010	--	--	--	--	--	--	.57	.040	.280
02-26-2010	13.0	15.9	7.77	E .04	8.39	6.23	--	--	--
02-26-2010	--	--	--	--	--	--	.57	.039	.281
02-26-2010	--	--	--	--	--	--	.55	.041	.282
04-06-2010	--	--	--	--	--	--	.47	.043	.199
04-06-2010	13.2	16.1	8.21	E .04	7.13	5.71	--	--	--
04-06-2010	--	--	--	--	--	--	.43	.054	.200
04-06-2010	--	--	--	--	--	--	.68	.248	.193
06-08-2010	--	--	--	--	--	--	.52	E .017	< .016
06-08-2010	20.6	25.1	8.79	E .07	2.81	6.55	--	--	--
06-08-2010	--	--	--	--	--	--	.56	.139	.023
06-08-2010	--	--	--	--	--	--	.80	.381	E .011
08-11-2010	--	--	--	--	--	--	.39	E .017	< .016
08-11-2010	21.0	25.6	8.59	.10	3.38	5.99	--	--	--
08-11-2010	--	--	--	--	--	--	.41	.025	< .016
08-11-2010	--	--	--	--	--	--	1.5	.976	< .016

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 4 of 6

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Date	Nitrite, water, filtered, mg/L as N (00613)	Orthophos- phate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L as P (00665)	Chloro- phyll a, phytoplank ton, chromatog raphic- fluorometri c method, μg/L (70953)	Pheo- phytin a, phyto- plankton, μg/L (62360)	Aluminum, water, unfiltered, recover- able, μg/L (01105)	Cadmium, water, unfiltered, μg/L (01027)	Chromium, water, unfiltered, recover- able, μg/L (01034)	Cobalt, water, unfiltered, recoverabl e, microgram s per liter (01037)
10-28-2009	.004	E .005	.025	11.3	6.1	--	--	--	--
10-28-2009	--	--	--	11.8	6.1	--	--	--	--
10-28-2009	--	--	--	12.8	6.5	--	--	--	--
10-28-2009	--	--	--	--	--	46	< .04	< .42	.13
10-28-2009	.004	E .005	.024	--	--	--	--	--	--
10-28-2009	.003	E .005	.028	--	--	--	--	--	--
12-16-2009	.006	E .005	.051	6.8	9.6	--	--	--	--
12-16-2009	--	--	--	--	--	--	--	--	--
12-16-2009	.006	E .005	.052	--	--	--	--	--	--
12-16-2009	.006	E .005	.053	--	--	--	--	--	--
02-26-2010	.004	.009	.048	6.1	E 4.5	--	--	--	--
02-26-2010	--	--	--	--	--	--	--	--	--
02-26-2010	.004	.008	.048	--	--	--	--	--	--
02-26-2010	.004	.011	.048	--	--	--	--	--	--
04-06-2010	.004	E .006	.040	E 3.9	E 1.9	--	--	--	--
04-06-2010	--	--	--	--	--	229	.04	.44	.17
04-06-2010	.003	E .007	.028	--	--	--	--	--	--
04-06-2010	.006	E .008	.057	--	--	--	--	--	--
06-08-2010	E .001	E .005	.024	5.8	E 2.1	--	--	--	--
06-08-2010	--	--	--	--	--	--	--	--	--
06-08-2010	.005	E .005	.031	--	--	--	--	--	--
06-08-2010	.003	E .007	.035	--	--	--	--	--	--
08-11-2010	< .002	E .005	.015	5.3	E .7	--	--	--	--
08-11-2010	--	--	--	--	--	--	--	--	--
08-11-2010	< .002	E .005	.032	--	--	--	--	--	--
08-11-2010	.002	E .005	.024	--	--	--	--	--	--

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 5 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; m, meters; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μ S/cm, microsiemens per centimeter; μ g/L, micrograms per liter; <, less than; E, estimated]

Date	Copper, water, unfiltered, recover- able, μ g/L (01042)	Iron, water, unfiltered, recover- able, μ g/L (01045)	Lead, water, unfiltered, recover- able, μ g/L (01051)	Manganes e, water, unfiltered, recover- able, μ g/L (01055)	Mercury, water, unfiltered, recover- able, μ g/L (71900)	Molybdenu m, water, unfiltered, recoverabl e, microgram s per liter (01062)	Nickel, water, unfiltered, recover- able, μ g/L (01067)	Silver, water, unfiltered, recover- able, μ g/L (01077)	Zinc, water, unfiltered, recover- able, μ g/L (01092)	Arsenic, water, unfiltered, μ g/L (01002)
10-28-2009	--	--	--	--	--	--	--	--	--	--
10-28-2009	--	--	--	--	--	--	--	--	--	--
10-28-2009	--	--	--	--	--	--	--	--	--	--
10-28-2009	< 1.4	201	.10	174	E .008	.4	.47	< .02	E 1.6	.51
10-28-2009	--	202	--	168	--	--	--	--	--	--
10-28-2009	--	338	--	350	--	--	--	--	--	--
12-16-2009	--	--	--	--	--	--	--	--	--	--
12-16-2009	--	495	--	77.2	--	--	--	--	--	--
12-16-2009	--	498	--	77.9	--	--	--	--	--	--
12-16-2009	--	522	--	79.6	--	--	--	--	--	--
02-26-2010	--	--	--	--	--	--	--	--	--	--
02-26-2010	--	608	--	50.7	--	--	--	--	--	--
02-26-2010	--	603	--	51.0	--	--	--	--	--	--
02-26-2010	--	604	--	50.9	--	--	--	--	--	--
04-06-2010	--	--	--	--	--	--	--	--	--	--
04-06-2010	1.6	426	.32	25.1	< .010	.1	.71	< .02	E 1.7	.31
04-06-2010	--	438	--	27.1	--	--	--	--	--	--
04-06-2010	--	916	--	511	--	--	--	--	--	--
06-08-2010	--	--	--	--	--	--	--	--	--	--
06-08-2010	--	184	--	44.8	--	--	--	--	--	--
06-08-2010	--	314	--	89.2	--	--	--	--	--	--
06-08-2010	--	1,340	--	838	--	--	--	--	--	--
08-11-2010	--	--	--	--	--	--	--	--	--	--
08-11-2010	--	39	--	22.5	--	--	--	--	--	--
08-11-2010	--	161	--	402	--	--	--	--	--	--
08-11-2010	--	5,870	--	1,780	--	--	--	--	--	--

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued**WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO
SEPTEMBER 2010**

Part 6 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; m, meters; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; <, less than; E, estimated]

Date	Selenium, water, unfiltered, μg/L (01147)	Organic carbon, water, unfiltered, mg/L (00680)
10-28-2009	--	--
10-28-2009	--	--
10-28-2009	--	--
10-28-2009	.15	6.4
10-28-2009	--	--
10-28-2009	--	--
12-16-2009	--	--
12-16-2009	--	10.3
12-16-2009	--	--
12-16-2009	--	--
02-26-2010	--	--
02-26-2010	--	8.3
02-26-2010	--	--
02-26-2010	--	--
04-06-2010	--	--
04-06-2010	.12	7.2
04-06-2010	--	--
04-06-2010	--	--
06-08-2010	--	--
06-08-2010	--	6.3
06-08-2010	--	--
06-08-2010	--	--
08-11-2010	--	--
08-11-2010	--	6.0
08-11-2010	--	--
08-11-2010	--	--