

Water-Data Report 2011

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.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

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; --, no data; <, less than]

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)
10-12-2010	0930	Surface water	Regular	--	--	--	--	--	--
10-12-2010	0935	Surface water	Regular	757	40	6.0	69	7.0	100
10-12-2010	0940	Surface water	Regular	757	--	2.2	26	6.7	97
10-12-2010	0945	Surface water	Regular	757	--	.2	3	6.7	147
12-15-2010	0930	Surface water	Regular	--	--	--	--	--	--
12-15-2010	0935	Surface water	Regular	761	30	9.6	79	6.5	94
12-15-2010	0940	Surface water	Regular	761	--	9.5	78	6.7	94
12-15-2010	0945	Surface water	Regular	761	--	9.4	77	6.8	95
03-01-2011	0915	Surface water	Regular	--	--	--	--	--	--
03-01-2011	0920	Surface water	Regular	765	20	11.3	99	7.3	98
03-01-2011	0925	Surface water	Regular	765	--	11.2	99	7.3	98
03-01-2011	0930	Surface water	Regular	765	--	10.2	90	7.1	98
04-13-2011	0930	Surface water	Regular	--	--	--	--	--	--
04-13-2011	0935	Surface water	Regular	757	30	8.5	86	7.2	106
04-13-2011	0940	Surface water	Regular	757	--	7.2	70	7.1	107
04-13-2011	0945	Surface water	Regular	757	--	4.1	39	7.1	107
06-23-2011	0900	Surface water	Regular	--	--	--	--	--	--
06-23-2011	0905	Surface water	Regular	756	8	7.3	95	7.6	138
06-23-2011	0910	Surface water	Regular	756	--	.8	9	6.9	138
06-23-2011	0915	Surface water	Regular	756	--	.2	2	6.9	130

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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; --, no data; <, less than]

Date	Sample start time	Temperature, water, °C (00010)	Trans-parency, water, in situ, Secchi disc, m (00078)	Sampling depth, m (00098)	Dissolved solids						
					filtered, mg/L (70300)	dried at 180 °C, water, filtered, mg/L as CaCO ₃ (00900)	Hardness, water, filtered, mg/L (00915)	Calcium, water, filtered, mg/L (00925)	Magnesium, water, filtered, mg/L (00935)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)
10-12-2010	0930	--	1.10	2.2	--	--	--	--	--	--	--
10-12-2010	0935	22.1	--	1.0	65	--	--	--	--	--	--
10-12-2010	0940	21.5	--	5.0	--	--	--	--	--	--	--
10-12-2010	0945	20.5	--	10.0	--	--	--	--	--	--	--
12-15-2010	0930	--	.70	1.4	--	--	--	--	--	--	--
12-15-2010	0935	6.9	--	1.0	71	26.2	6.16	2.63	2.31	7.47	
12-15-2010	0940	6.9	--	6.0	--	--	--	--	--	--	
12-15-2010	0945	6.9	--	11.0	--	--	--	--	--	--	
03-01-2011	0915	--	1.00	2.0	--	--	--	--	--	--	
03-01-2011	0920	10.0	--	1.0	71	26.0	6.06	2.63	2.21	8.13	
03-01-2011	0925	10.0	--	4.0	--	--	--	--	--	--	
03-01-2011	0930	9.9	--	9.0	--	--	--	--	--	--	
04-13-2011	0930	--	1.10	2.2	--	--	--	--	--	--	
04-13-2011	0935	15.7	--	1.0	58	27.7	6.52	2.78	2.35	10.1	
04-13-2011	0940	13.8	--	6.0	--	--	--	--	--	--	
04-13-2011	0945	12.6	--	11.0	--	--	--	--	--	--	
06-23-2011	0900	--	2.20	4.4	--	--	--	--	--	--	
06-23-2011	0905	28.7	--	1.0	76	31.5	7.50	3.09	2.76	13.0	
06-23-2011	0910	25.3	--	5.0	--	--	--	--	--	--	
06-23-2011	0915	14.4	--	10.0	--	--	--	--	--	--	

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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; --, no data; <, less than]

Date	Sample start time	Bi-						Ammonia plus organic			
		ANC, water, unfiltered, inflection-point, incremental titration method, field, mg/L as CaCO ₃ (00419)	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)	Nitrogen, water, unfiltered, mg/L as N (00625)	Ammonia, water, filtered, mg/L as N (00608)		
10-12-2010	0930	--	--	--	--	--	--	.55	.140		
10-12-2010	0935	28.9	35.3	8.05	.11	--	3.79	--	--		
10-12-2010	0940	--	--	--	--	--	--	.55	.194		
10-12-2010	0945	--	--	--	--	--	--	1.3	.775		
12-15-2010	0930	--	--	--	--	--	--	.56	.110		
12-15-2010	0935	--	--	8.00	.10	6.89	5.64	--	--		
12-15-2010	0940	--	--	--	--	--	--	.56	.109		
12-15-2010	0945	--	--	--	--	--	--	.49	.112		
03-01-2011	0915	--	--	--	--	--	--	.56	.074		
03-01-2011	0920	25.4	30.9	9.04	.08	6.20	6.82	--	--		
03-01-2011	0925	--	--	--	--	--	--	.60	.075		
03-01-2011	0930	--	--	--	--	--	--	.66	.073		
04-13-2011	0930	--	--	--	--	--	--	.57	.120		
04-13-2011	0935	25.4	30.9	9.83	.11	5.23	7.87	--	--		
04-13-2011	0940	--	--	--	--	--	--	.52	.138		
04-13-2011	0945	--	--	--	--	--	--	.70	.253		
06-23-2011	0900	--	--	--	--	--	--	.43	<.010		
06-23-2011	0905	28.3	34.5	14.9	.10	2.20	10.1	--	--		
06-23-2011	0910	--	--	--	--	--	--	.80	.189		
06-23-2011	0915	--	--	--	--	--	--	.73	.283		

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 4 of 6

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Date	Sample start time	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L as P (00665)	Aluminum, water, unfiltered, recoverable, µg/L (01105)	Cadmium, water, unfiltered, µg/L (01027)	Chromium, water, unfiltered, recoverable, µg/L (01034)	Cobalt, water, unfiltered, recoverable, micrograms per liter (01037)
10-12-2010	0930	.014	< .001	< .004	.020	--	--	--	--
10-12-2010	0935	--	--	--	--	34	< .05	.23	.11
10-12-2010	0940	.013	< .001	.004	.020	--	--	--	--
10-12-2010	0945	< .008	< .001	< .020	.052	--	--	--	--
12-15-2010	0930	.268	< .001	.006	.024	--	--	--	--
12-15-2010	0935	--	--	--	--	--	--	--	--
12-15-2010	0940	.268	< .001	.005	.023	--	--	--	--
12-15-2010	0945	.268	< .003	.005	.025	--	--	--	--
03-01-2011	0915	.180	.003	.005	.021	--	--	--	--
03-01-2011	0920	--	--	--	--	--	--	--	--
03-01-2011	0925	.181	.004	.005	.026	--	--	--	--
03-01-2011	0930	.181	.004	.005	.033	--	--	--	--
04-13-2011	0930	.122	.004	.006	.024	--	--	--	--
04-13-2011	0935	--	--	--	--	234	< .05	.29	.20
04-13-2011	0940	.124	.004	.007	.023	--	--	--	--
04-13-2011	0945	.132	.006	.008	.031	--	--	--	--
06-23-2011	0900	< .008	< .001	.004	.016	--	--	--	--
06-23-2011	0905	--	--	--	--	--	--	--	--
06-23-2011	0910	< .008	< .001	.005	.030	--	--	--	--
06-23-2011	0915	< .008	< .001	.005	.019	--	--	--	--

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 5 of 6

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Date	Sample start time	Copper, water, unfiltered, recoverable, µg/L (01042)	Iron, water, unfiltered, recoverable, µg/L (01045)	Lead, water, unfiltered, recoverable, µg/L (01051)	Manganese, water, unfiltered, recoverable, µg/L (01055)	Mercury, water, unfiltered, recoverable, µg/L (71900)	m, water, unfiltered, recoverable, microgram s per liter (01062)	Molybdenum, water, unfiltered, recoverable, µg/L (01067)	Nickel, water, unfiltered, recoverable, µg/L (01077)	Silver, water, unfiltered, recoverable, µg/L (01077)	Zinc, water, unfiltered, recoverable, µg/L (01092)
10-12-2010	0930	--	--	--	--	--	--	--	--	--	--
10-12-2010	0935	<.70	280	.05	412	<.005	.3	.31	<.01	<2.4	
10-12-2010	0940	--	355	--	510	--	--	--	--	--	
10-12-2010	0945	--	2,400	--	2,940	--	--	--	--	--	
12-15-2010	0930	--	--	--	--	--	--	--	--	--	
12-15-2010	0935	--	330	--	133	--	--	--	--	--	
12-15-2010	0940	--	324	--	132	--	--	--	--	--	
12-15-2010	0945	--	335	--	134	--	--	--	--	--	
03-01-2011	0915	--	--	--	--	--	--	--	--	--	
03-01-2011	0920	--	175	--	72.3	--	--	--	--	--	
03-01-2011	0925	--	175	--	73.6	--	--	--	--	--	
03-01-2011	0930	--	218	--	75.8	--	--	--	--	--	
04-13-2011	0930	--	--	--	--	--	--	--	--	--	
04-13-2011	0935	.97	266	.17	113	<.005	.3	.72	<.01	<2.4	
04-13-2011	0940	--	295	--	127	--	--	--	--	--	
04-13-2011	0945	--	607	--	475	--	--	--	--	--	
06-23-2011	0900	--	--	--	--	--	--	--	--	--	
06-23-2011	0905	--	60	--	20.9	--	--	--	--	--	
06-23-2011	0910	--	220	--	1,400	--	--	--	--	--	
06-23-2011	0915	--	1,810	--	1,520	--	--	--	--	--	

0208718195 FALLS LAKE ABOVE DAM AT FALLS, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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; --, no data; <, less than]

Date	Sample start time	Arsenic, water, unfiltered, µg/L (01002)	Selenium, water, unfiltered, µg/L (01147)	carbon, water, unfiltered, mg/L (00680)	Organic
10-12-2010	0930	--	--	--	
10-12-2010	0935	.47	.15	6.7	
10-12-2010	0940	--	--	--	
10-12-2010	0945	--	--	--	
12-15-2010	0930	--	--	--	
12-15-2010	0935	--	--	7.3	
12-15-2010	0940	--	--	--	
12-15-2010	0945	--	--	--	
03-01-2011	0915	--	--	--	
03-01-2011	0920	--	--	6.8	
03-01-2011	0925	--	--	--	
03-01-2011	0930	--	--	--	
04-13-2011	0930	--	--	--	
04-13-2011	0935	.55	.14	6.6	
04-13-2011	0940	--	--	--	
04-13-2011	0945	--	--	--	
06-23-2011	0900	--	--	--	
06-23-2011	0905	--	--	7.6	
06-23-2011	0910	--	--	--	
06-23-2011	0915	--	--	--	