



Water-Data Report 2010

**02087588 LAKE WHEELER ON SWIFT CREEK NEAR RALEIGH, NC**

Neuse Basin  
Upper Neuse Subbasin

LOCATION.--Lat 35°41'40", long 78°41'38" referenced to North American Datum of 1983, Wake County, NC, Hydrologic Unit 03020201, 0.05 mi above dam, 6.8 mi southwest of Raleigh.

DRAINAGE AREA.--35.8 mi<sup>2</sup>.

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 2005 to current year.

REMARKS.--Station operated to define water quality as part of a regional surface-water quality assessment. 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 2009 TO SEPTEMBER 2010**

Part 1 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, 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; 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)
10-15-2009	0930	Surface water	Regular	--	--	--	--	--	--
10-15-2009	0931	<i>QC sample - Surface water</i>	<i>Replicate</i>	--	--	--	--	--	--
10-15-2009	0932	<i>QC sample - Surface water</i>	<i>Replicate</i>	--	--	--	--	--	--
10-15-2009	0935	Surface water	Regular	753	62	4.9	54	6.8	81
10-15-2009	0940	Surface water	Regular	753	--	4.8	54	6.8	81
10-15-2009	0945	Surface water	Regular	753	--	4.7	53	6.9	81
04-15-2010	0915	Surface water	Regular	--	--	--	--	--	--
04-15-2010	0920	Surface water	Regular	771	30	8.0	84	7.0	91
04-15-2010	0925	Surface water	Regular	771	--	7.1	75	6.9	91
04-15-2010	0930	Surface water	Regular	771	--	.3	3	6.4	107
06-10-2010	0815	Surface water	Regular	--	--	--	--	--	--
06-10-2010	0820	Surface water	Regular	758	35	8.0	102	7.9	94
06-10-2010	0825	Surface water	Regular	758	--	7.5	96	7.8	94
06-10-2010	0830	Surface water	Regular	758	--	.2	2	7.2	161
08-12-2010	0845	Surface water	Regular	--	--	--	--	--	--
08-12-2010	0850	Surface water	Regular	755	40	7.4	102	8.3	93
08-12-2010	0855	Surface water	Regular	755	--	.8	11	6.7	88
08-12-2010	0900	Surface water	Regular	755	--	.2	3	7.4	215

## 02087588 LAKE WHEELER ON SWIFT CREEK NEAR RALEIGH, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 2 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, 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; 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 <sub>3</sub> (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)	
10-15-2009	--	.80	--	1.6	--	--	--	--	--	--
10-15-2009	--	.80	--	1.6	--	--	--	--	--	--
10-15-2009	--	.80	--	1.6	--	--	--	--	--	--
10-15-2009	20.1	--	--	1.0	68	23.4	6.34	1.84	2.71	4.58
10-15-2009	20.1	--	--	3.0	--	--	--	--	--	--
10-15-2009	20.1	--	--	5.0	--	--	--	--	--	--
04-15-2010	--	.80	--	1.6	--	--	--	--	--	--
04-15-2010	18.3	--	--	1.0	53	19.9	5.35	1.59	2.10	8.08
04-15-2010	18.2	--	--	3.0	--	--	--	--	--	--
04-15-2010	14.0	--	--	6.0	--	--	--	--	--	--
06-10-2010	--	1.00	2.0	2.0	--	--	--	--	--	--
06-10-2010	27.8	--	--	1.0	--	22.5	5.96	1.84	2.18	8.04
06-10-2010	27.7	--	--	3.0	--	--	--	--	--	--
06-10-2010	17.9	--	--	6.0	--	--	--	--	--	--
08-12-2010	--	.60	1.2	1.2	--	--	--	--	--	--
08-12-2010	31.7	--	--	1.0	54	22.5	5.98	1.85	2.49	7.31
08-12-2010	29.2	--	--	3.0	--	--	--	--	--	--
08-12-2010	21.7	--	--	6.0	--	--	--	--	--	--

## 02087588 LAKE WHEELER ON SWIFT CREEK NEAR RALEIGH, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 3 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, 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; E, estimated]

Date	ANC, water, unfiltered, inflection- point, incremental titration method, field, mg/L as CaCO <sub>3</sub> (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 <sub>2</sub> (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)
	10-15-2009	--	--	--	--	--	--	1.1	.269
10-15-2009	--	--	--	--	--	--	--	--	--
10-15-2009	--	--	--	--	--	--	--	--	--
10-15-2009	26.3	32.0	5.67	E .07	6.54	2.54	--	--	--
10-15-2009	--	--	--	--	--	--	.82	.266	.020
10-15-2009	--	--	--	--	--	--	.80	.268	.021
04-15-2010	--	--	--	--	--	--	.45	.028	< .016
04-15-2010	16.1	19.6	13.8	< .08	3.49	5.40	--	--	--
04-15-2010	--	--	--	--	--	--	.46	.026	< .016
04-15-2010	--	--	--	--	--	--	.72	.220	E .012
06-10-2010	--	--	--	--	--	--	.48	.023	< .016
06-10-2010	21.2	25.9	11.9	E .06	3.14	4.21	--	--	--
06-10-2010	--	--	--	--	--	--	.51	E .019	< .016
06-10-2010	--	--	--	--	--	--	1.5	.900	< .016
08-12-2010	--	--	--	--	--	--	1.0	< .020	< .016
08-12-2010	19.1	23.3	10.9	E .07	7.07	3.80	--	--	--
08-12-2010	--	--	--	--	--	--	.92	E .012	< .016
08-12-2010	--	--	--	--	--	--	2.1	1.48	< .016

## 02087588 LAKE WHEELER ON SWIFT CREEK NEAR RALEIGH, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 4 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, 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; E, estimated]

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)
10-15-2009	E .001	< .008	.040	22.6	11.2	--	--	--	--
10-15-2009	--	--	--	23.1	11.5	--	--	--	--
10-15-2009	--	--	--	23.0	11.5	--	--	--	--
10-15-2009	--	--	--	--	--	38	< .04	< .42	.14
10-15-2009	E .001	< .008	.038	--	--	--	--	--	--
10-15-2009	E .001	< .008	.039	--	--	--	--	--	--
04-15-2010	< .002	E .004	.035	13.7	5.4	--	--	--	--
04-15-2010	--	--	--	--	--	110	< .04	E .22	.14
04-15-2010	< .002	E .004	.039	--	--	--	--	--	--
04-15-2010	.004	.009	.083	--	--	--	--	--	--
06-10-2010	< .002	E .004	.020	11.2	E 4.3	--	--	--	--
06-10-2010	--	--	--	--	--	--	--	--	--
06-10-2010	E .001	E .005	.026	--	--	--	--	--	--
06-10-2010	.004	.037	.079	--	--	--	--	--	--
08-12-2010	< .002	E .005	.027	27.4	E 2.9	--	--	--	--
08-12-2010	--	--	--	--	--	--	--	--	--
08-12-2010	< .002	E .005	.030	--	--	--	--	--	--
08-12-2010	E .002	E .008	.043	--	--	--	--	--	--

## 02087588 LAKE WHEELER ON SWIFT CREEK NEAR RALEIGH, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 5 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, 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; E, estimated]

Date	Copper, water, unfiltered, recover- able, μg/L (01042)	Iron, water, unfiltered, recover- able, μg/L (01045)	Lead, water, unfiltered, recover- able, μg/L (01051)	Manganes e, water, unfiltered, recover- able, μg/L (01055)	Mercury, water, unfiltered, recover- able, μg/L (71900)	Molybdenu m, water, unfiltered, recoverabl e, microgram s per liter (01062)	Nickel, water, unfiltered, recover- able, μg/L (01067)	Silver, water, unfiltered, recover- able, μg/L (01077)	Zinc, water, unfiltered, recover- able, μg/L (01092)	Arsenic, water, unfiltered, μg/L (01002)
10-15-2009	--	--	--	--	--	--	--	--	--	--
10-15-2009	--	--	--	--	--	--	--	--	--	--
10-15-2009	--	--	--	--	--	--	--	--	--	--
10-15-2009	< 1.4	358	.12	326	< .010	.3	< .36	< .02	E 1.4	1.5
10-15-2009	--	360	--	306	--	--	--	--	--	--
10-15-2009	--	350	--	301	--	--	--	--	--	--
04-15-2010	--	--	--	--	--	--	--	--	--	--
04-15-2010	E 1.3	406	.24	105	.014	.1	E .34	< .02	< 2.0	.53
04-15-2010	--	420	--	104	--	--	--	--	--	--
04-15-2010	--	2,170	--	936	--	--	--	--	--	--
06-10-2010	--	--	--	--	--	--	--	--	--	--
06-10-2010	--	194	--	83.2	--	--	--	--	--	--
06-10-2010	--	193	--	84.2	--	--	--	--	--	--
06-10-2010	--	7,380	--	2,910	--	--	--	--	--	--
08-12-2010	--	--	--	--	--	--	--	--	--	--
08-12-2010	--	162	--	57.5	--	--	--	--	--	--
08-12-2010	--	166	--	62.2	--	--	--	--	--	--
08-12-2010	--	4,850	--	4,530	--	--	--	--	--	--

## 02087588 LAKE WHEELER ON SWIFT CREEK NEAR RALEIGH, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO**  
**SEPTEMBER 2010**

Part 6 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; P, phosphorus; SiO<sub>2</sub>, 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; E, estimated]

Date	Selenium, water, unfiltered, µg/L (01147)	Organic carbon, water, unfiltered, mg/L (00680)
10-15-2009	--	--
10-15-2009	--	--
10-15-2009	--	--
10-15-2009	.12	6.2
10-15-2009	--	--
10-15-2009	--	--
04-15-2010	--	--
04-15-2010	.12	6.3
04-15-2010	--	--
04-15-2010	--	--
06-10-2010	--	--
06-10-2010	--	7.3
06-10-2010	--	--
06-10-2010	--	--
08-12-2010	--	--
08-12-2010	--	9.1
08-12-2010	--	--
08-12-2010	--	--