

Water-Data Report 2011

**02086569 LAKE BUTNER AT DAM NEAR BUTNER, NC**

Neuse Basin  
Upper Neuse Subbasin

LOCATION.--Lat 36°10'01", long 78°46'20" referenced to North American Datum of 1983, Granville County, NC, Hydrologic Unit 03020201, above dam, 2.1 mi northwest of Butner.

DRAINAGE AREA.--29.4 mi<sup>2</sup>.

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 2007 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.

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

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]

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)
10-08-2010	0900	Surface water	Regular	--	--	--	--	--	--
10-08-2010	0905	Surface water	Regular	759	25	7.6	83	7.0	50
10-08-2010	0910	Surface water	Regular	759	--	.2	2	6.1	57
10-08-2010	0915	Surface water	Regular	759	--	.2	2	6.0	46
04-21-2011	1100	Surface water	Regular	--	--	--	--	--	--
04-21-2011	1105	Surface water	Regular	758	40	8.4	91	6.7	54
04-21-2011	1110	Surface water	Regular	758	--	6.5	60	6.2	53
04-21-2011	1115	Surface water	Regular	758	--	3.5	31	6.0	54
06-15-2011	1215	Surface water	Regular	--	--	--	--	--	--
06-15-2011	1220	Surface water	Regular	754	30	7.5	98	7.4	59
06-15-2011	1225	Surface water	Regular	754	--	1.0	10	6.2	56
06-15-2011	1230	Surface water	Regular	754	--	2.7	24	6.3	54

## 02086569 LAKE BUTNER AT DAM NEAR BUTNER, NC—Continued

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

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]

Date	Sample start time	Temperature, °C (00010)	Trans- parency, water, in situ, Secchi disc, m (00078)	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)	
10-08-2010	0900	--	2.00	4.0	--	--	--	--	--	--
10-08-2010	0905	19.8	--	1.0	40	14.6	3.40	1.50	1.23	3.43
10-08-2010	0910	14.6	--	5.0	--	--	--	--	--	--
10-08-2010	0915	8.1	--	10.0	--	--	--	--	--	--
04-21-2011	1100	--	1.20	2.4	--	--	--	--	--	--
04-21-2011	1105	18.9	--	1.0	47	15.4	3.55	1.59	1.27	3.78
04-21-2011	1110	11.7	--	6.0	--	--	--	--	--	--
04-21-2011	1115	9.4	--	11.0	--	--	--	--	--	--
06-15-2011	1215	--	2.20	4.4	--	--	--	--	--	--
06-15-2011	1220	29.1	--	1.0	47	16.9	3.90	1.73	1.30	3.74
06-15-2011	1225	13.7	--	5.0	--	--	--	--	--	--
06-15-2011	1230	9.9	--	10.0	--	--	--	--	--	--

## 02086569 LAKE BUTNER AT DAM NEAR BUTNER, NC—Continued

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

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]

Date	Sample start time	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)
10-08-2010	0900	--	--	--	--	--	--	.424	< .010
10-08-2010	0905	12.2	14.9	3.13	.061	5.81	3.42	--	--
10-08-2010	0910	--	--	--	--	--	--	.499	< .010
10-08-2010	0915	--	--	--	--	--	--	.385	.0752
04-21-2011	1100	--	--	--	--	--	--	.414	.0213
04-21-2011	1105	11.7	14.3	3.74	.045	7.49	4.97	--	--
04-21-2011	1110	--	--	--	--	--	--	.378	.0254
04-21-2011	1115	--	--	--	--	--	--	.366	< .010
06-15-2011	1215	--	--	--	--	--	--	.429	.0224
06-15-2011	1220	14.0	17.1	4.06	< .04	5.60	4.52	--	--
06-15-2011	1225	--	--	--	--	--	--	.382	.0128
06-15-2011	1230	--	--	--	--	--	--	.314	.0176

## 02086569 LAKE BUTNER AT DAM NEAR BUTNER, NC—Continued

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

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]

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)
10-08-2010	0900	<.008	<.0030	<.004	.0131	--	--	--	--
10-08-2010	0905	--	--	--	--	29.5	<.05	.293	.132
10-08-2010	0910	<.008	<.0010	.00483	.0302	--	--	--	--
10-08-2010	0915	.165	.00111	.0102	.0360	--	--	--	--
04-21-2011	1100	.141	.00186	.00696	.0205	--	--	--	--
04-21-2011	1105	--	--	--	--	116	<.05	.499	.122
04-21-2011	1110	.173	.00169	.00706	.0190	--	--	--	--
04-21-2011	1115	.265	<.0010	.00773	.0197	--	--	--	--
06-15-2011	1215	<.008	.00123	.00408	.0112	--	--	--	--
06-15-2011	1220	--	--	--	--	--	--	--	--
06-15-2011	1225	.156	.0024	.00532	.0175	--	--	--	--
06-15-2011	1230	.270	.00142	.00596	.0177	--	--	--	--

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

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]

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)	Molybdenum, water, unfiltered, recoverable, micrograms per liter (01062)	Nickel, water, unfiltered, recoverable, µg/L (01067)	Silver, water, unfiltered, recoverable, µg/L (01077)	Zinc, water, unfiltered, recoverable, µg/L (01092)
10-08-2010	0900	--	--	--	--	--	--	--	--	--
10-08-2010	0905	.84	164	.046	105	.0130	.055	<.12	<.015	2.48
10-08-2010	0910	--	411	--	1,320	--	--	--	--	--
10-08-2010	0915	--	2,380	--	604	--	--	--	--	--
04-21-2011	1100	--	--	--	--	--	--	--	--	--
04-21-2011	1105	1.25	478	.264	47.4	<.005	<.05	.40	<.015	<2.4
04-21-2011	1110	--	519	--	54.2	--	--	--	--	--
04-21-2011	1115	--	694	--	310	--	--	--	--	--
06-15-2011	1215	--	--	--	--	--	--	--	--	--
06-15-2011	1220	--	514	--	22.5	--	--	--	--	--
06-15-2011	1225	--	475	--	348	--	--	--	--	--
06-15-2011	1230	--	650	--	347	--	--	--	--	--

**02086569 LAKE BUTNER AT DAM NEAR BUTNER, NC—Continued****WATER-QUALITY DATA****WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

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]

<b>Date</b>	<b>Sample start time</b>	<b>Arsenic, water, unfiltered, µg/L (01002)</b>	<b>Selenium, water, unfiltered, µg/L (01147)</b>	<b>Organic carbon, water, unfiltered, mg/L (00680)</b>
10-08-2010	0900	--	--	--
10-08-2010	0905	.659	.144	8.41
10-08-2010	0910	--	--	--
10-08-2010	0915	--	--	--
04-21-2011	1100	--	--	--
04-21-2011	1105	.399	.092	9.00
04-21-2011	1110	--	--	--
04-21-2011	1115	--	--	--
06-15-2011	1215	--	--	--
06-15-2011	1220	--	--	9.09
06-15-2011	1225	--	--	--
06-15-2011	1230	--	--	--