



Water-Data Report 2007

**02087701 LAKE BENSON AT DAM NEAR GARNER, NC**

Neuse Basin  
Upper Neuse Subbasin

LOCATION.--Lat 35°39'45", long 78°36'41" referenced to North American Datum of 1983, Wake County, NC, Hydrologic Unit 03020201, at dam, 1.5 mi below Reedy Branch, 3.3 mi south of Garner.

DRAINAGE AREA.--66.30 mi<sup>2</sup>.

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1990 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 April 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, sample for chlorophyll *a* were analyzed using a high-performance liquid chromatography method.

**WATER-QUALITY DATA  
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 1 of 4

[Remark codes: <, less than; E, estimated.]

Date	Time	Color, water, fltrd, 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)	Specif-ic conduc-tance, wat unf 25 degC (00095)	Temper-ature, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)
<b>Oct</b>													
26...	1200	30	1.0	.50	753	8.0	80	6.6	61	14.9	17	4.20	1.61
26...	1205	--	2.0	--	753	7.6	75	6.5	61	14.7	--	--	--
26...	1210	--	4.0	--	753	7.2	72	6.4	61	14.6	--	--	--
<b>Apr</b>													
26...	1130	30	1.0	1.10	757	7.9	91	6.0	77	21.6	21	5.37	1.79
26...	1135	--	2.0	--	757	6.6	72	5.7	76	19.5	--	--	--
26...	1140	--	4.0	--	757	3.2	32	5.5	77	15.5	--	--	--
<b>Jun</b>													
21...	1330	50	1.0	.80	761	6.7	85	7.2	85	27.4	26	6.73	2.25
21...	1335	--	2.0	--	761	.6	8	6.4	84	26.2	--	--	--
21...	1340	--	4.0	--	761	.2	3	6.7	114	23.2	--	--	--
<b>Aug</b>													
29...	1115	35	1.0	.70	761	--	--	--	84	29.0	25	6.30	2.27
29...	1120	--	2.0	--	761	--	--	--	84	28.9	--	--	--
29...	1125	--	4.0	--	761	--	--	--	241	24.2	--	--	--

## 02087701 LAKE BENSON AT DAM NEAR GARNER, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 2 of 4

[Remark codes: &lt;, less than; E, estimated.]

Date	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Bicar- bonate, wat unf incrm. titr., field, mg/L (00450)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
<b>Oct</b>													
26...	2.50	3.83	18	22	4.13	.12	9.62	3.78	52	.72	E.010	<.016	<.002
26...	--	--	--	--	--	--	--	--	--	.67	<.020	<.016	<.002
26...	--	--	--	--	--	--	--	--	--	.78	<.020	<.016	<.002
<b>Apr</b>													
26...	2.28	4.75	19	23	5.40	<.10	7.49	4.90	58	.65	<.020	<.016	<.002
26...	--	--	--	--	--	--	--	--	--	.67	<.020	<.016	<.002
26...	--	--	--	--	--	--	--	--	--	.61	.047	E.011	<.002
<b>Jun</b>													
21...	2.49	5.78	27	33	5.53	E.08	8.65	3.75	67	.81	<.020	<.016	<.002
21...	--	--	--	--	--	--	--	--	--	.74	.042	<.016	<.002
21...	--	--	--	--	--	--	--	--	--	1.2	.625	<.016	<.002
<b>Aug</b>													
29...	3.06	5.22	24	31	5.10	E.09	10.3	2.73	62	.93	.022	<.016	<.002
29...	--	--	--	--	--	--	--	--	--	.94	E.018	<.016	<.002
29...	--	--	--	--	--	--	--	.94	--	3.3	1.89	<.016	.002

## 02087701 LAKE BENSON AT DAM NEAR GARNER, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 3 of 4

[Remark codes: &lt;, less than; E, estimated.]

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Chlorophyll a phyton, fluoro, µg/L (70953)	Pheophytin a, phyton, µg/L (62360)	Aluminum, water, unfltrd recover-able, µg/L (01105)	Arsenic, water, unfltrd µg/L (01002)	Cadmium, water, unfltrd µg/L (01027)	Chromium, water, unfltrd recover-able, µg/L (01034)	Cobalt, water, unfltrd recover-able, µg/L (01037)	Copper, water, unfltrd recover-able, µg/L (01042)	Iron, water, unfltrd recover-able, µg/L (01045)
<b>Oct</b>													
26...	E.003	.060	--	8.3	36.4	21.2	95	.98	<.02	E.49	.322	E1.0	730
26...	<.006	.057	--	--	--	--	--	--	--	--	--	--	695
26...	<.006	.115	--	--	--	--	--	--	--	--	--	--	2,280
<b>Apr</b>													
26...	<.006	.045	--	E7.5	9.5	4.1	50	.48	.34	<.60	.20	1.6	383
26...	<.006	.044	--	--	--	--	--	--	--	--	--	--	437
26...	<.006	.044	--	--	--	--	--	--	--	--	--	--	658
<b>Jun</b>													
21...	E.004	.048	--	10.3	29.4	13.0	--	--	--	--	--	--	264
21...	E.004	.059	--	--	--	--	--	--	--	--	--	--	418
21...	E.004	.052	--	--	--	--	--	--	--	--	--	--	2,130
<b>Aug</b>													
29...	E.005	.056	5.5	9.7	38.7	15.2	--	--	--	--	--	--	291
29...	E.003	.056	--	--	--	--	--	--	--	--	--	--	308
29...	E.003	.079	8.1	--	--	--	--	--	--	--	--	--	9,810

## 02087701 LAKE BENSON AT DAM NEAR GARNER, NC—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 4 of 4

[Remark codes: &lt;, less than; E, estimated.]

Date	Lead,	Mangan-		Mercury	Molyb-	Nickel,		Silver,	Zinc,
	water,	ese,	Mercury	water,	denum,	water,	Selen-	water,	water,
	unfltrd	water,	water,	unfltrd	water,	unfltrd	ium,	unfltrd	unfltrd
	recover	recover	water,	recover	recover	recover	water,	recover	recover
	-able,	-able,	fltrd,	-able,	-able,	-able,	unfltrd	-able,	-able,
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	(01051)	(01055)	(71890)	(71900)	(01062)	(01067)	(01147)	(01077)	(01092)
<b>Oct</b>									
26...	.36	167	--	.662	.2	.38	.11	<.02	E1
26...	--	188	--	--	--	--	--	--	--
26...	--	272	--	--	--	--	--	--	--
<b>Apr</b>									
26...	.21	91.4	--	<.010	.1	.26	.12	E.01	E1.7
26...	--	112	--	--	--	--	--	--	--
26...	--	332	--	--	--	--	--	--	--
<b>Jun</b>									
21...	--	--	--	--	--	--	--	--	--
21...	--	520	--	--	--	--	--	--	--
21...	--	3,170	--	--	--	--	--	--	--
<b>Aug</b>									
29...	--	335	<.010	E.007	--	--	--	--	--
29...	--	334	--	--	--	--	--	--	--
29...	--	4,880	<.010	E.010	--	--	--	--	--