

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 mi².

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 2007 TO SEPTEMBER 2008

Part 1 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Time	Sample medium and type	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)
Nov									
01...	1145	Surface water, regular	70	1.0	.50	762	5.4	55	6.8
01...	1146	QC - Surface water, replicate	--	--	.50	--	--	--	--
01...	1147	QC - Surface water, replicate	--	--	.50	--	--	--	--
01...	1150	Surface water, regular	--	2.0	--	762	4.8	49	6.7
01...	1155	Surface water, regular	--	4.0	--	762	4.6	47	6.8
Apr									
28...	1230	Surface water, regular	--	2.0	1.00	--	--	--	--
28...	1235	Surface water, regular	25	1.0	--	754	5.8	66	6.8
28...	1240	Surface water, regular	--	2.0	--	754	4.2	47	6.7
28...	1245	Surface water, regular	--	4.0	--	754	.3	3	6.6
Jun									
25...	1200	Surface water, regular	--	1.6	.80	--	--	--	--
25...	1201	QC - Surface water, replicate	--	1.6	--	--	--	--	--
25...	1205	Surface water, regular	50	1.0	--	766	8.8	118	8.2
25...	1206	QC - Surface water, replicate	50	1.0	--	--	--	--	--
25...	1210	Surface water, regular	--	2.0	--	766	1.4	18	6.8
25...	1215	Surface water, regular	--	4.0	--	766	.1	1	7.0
Aug									
21...	1115	Surface water, regular	--	1.0	.50	--	--	--	--
21...	1120	Surface water, regular	50	1.0	--	764	4.9	61	7.1
21...	1125	Surface water, regular	--	2.0	--	764	4.5	56	7.0
21...	1130	Surface water, regular	--	4.0	--	764	.7	9	6.9

02087701 LAKE BENSON AT DAM NEAR GARNER, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Specific conductance, wat unf μ S/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf infl pt titr., field, mg/L as CaCO3 (00419)	Bicarbonate, wat unf infl pt titr., field, mg/L (00450)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L as SiO2 (00955)	Sulfate water, fltrd, mg/L (00945)
Nov													
01...	74	16.7	21	5.18	1.88	3.23	4.81	19	24	5.40	E.08	7.83	4.88
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	74	16.5	--	--	--	--	--	--	--	--	--	--	--
01...	74	16.4	--	--	--	--	--	--	--	--	--	--	4.88
Apr													
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	79	20.7	21	5.37	1.87	2.34	5.18	19	23	5.85	E.07	7.69	5.46
28...	78	20.2	--	--	--	--	--	--	--	--	--	--	--
28...	85	17.5	--	--	--	--	--	--	--	--	--	--	5.48
Jun													
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	86	31.0	24	6.07	2.24	2.74	5.76	24	30	6.19	E.08	8.39	4.02
25...	--	--	24	6.05	2.24	2.74	5.75	25	30	6.16	E.08	8.44	3.96
25...	87	27.9	--	--	--	--	--	--	--	--	--	--	--
25...	120	25.5	--	--	--	--	--	--	--	--	--	--	3.88
Aug													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	83	26.2	23	5.72	2.19	2.74	5.71	24	30	6.09	E.10	10.9	3.36
21...	83	26.1	--	--	--	--	--	--	--	--	--	--	--
21...	87	25.9	--	--	--	--	--	--	--	--	--	--	3.23

02087701 LAKE BENSON AT DAM NEAR GARNER, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 3 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	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)	Nitrate + nitrite water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L as P (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Chloro- phyll a phyto- plank- ton, fluoro, µg/L (70953)	Pheo- phytin a, phyto- plank- ton, µg/L (62360)	Alum- inum, water, unfltrd recover- able, µg/L (01105)	Arsenic water, unfltrd µg/L (01002)
Nov													
01...	63	.75	.067	.099	.004	E.003	.060	6.6	7.1	12.5	7.0	202	.88
01...	--	--	--	--	--	--	--	--	--	16.9	9.8	--	--
01...	--	--	--	--	--	--	--	--	--	11.7	6.6	--	--
01...	--	.69	.075	.103	.004	<.006	.060	--	--	--	--	--	--
01...	--	.73	.088	.103	.004	<.006	.061	7.0	--	--	--	--	--
Apr													
28...	--	.58	<.020	<.016	<.002	E.003	.039	--	--	15.1	7.9	--	--
28...	60	--	--	--	--	--	--	5.2	7.4	--	--	66	E.46
28...	--	.61	E.013	E.010	<.002	E.003	.048	--	--	--	--	--	--
28...	--	.61	.029	<.016	<.002	E.003	.047	5.2	--	--	--	--	--
Jun													
25...	--	.74	<.020	<.016	<.002	E.004	.038	--	--	24.4	9.6	--	--
25...	--	.81	<.020	<.016	<.002	E.004	.046	--	--	24.4	9.1	--	--
25...	65	--	--	--	--	--	--	7.0	9.8	--	--	--	--
25...	58	--	--	--	--	--	--	6.9	9.7	--	--	--	--
25...	--	.73	<.020	<.016	<.002	E.003	.040	--	--	--	--	--	--
25...	--	.81	.131	<.016	<.002	E.004	.044	6.7	--	--	--	--	--
Aug													
21...	--	1.0	<.020	<.016	<.002	E.004	.075	--	--	69.4	31.1	--	--
21...	69	--	--	--	--	--	--	6.3	11.1	--	--	--	--
21...	--	.97	<.020	<.016	<.002	.006	.070	--	--	--	--	--	--
21...	--	1.0	.070	<.016	<.002	E.005	.075	6.0	--	--	--	--	--

02087701 LAKE BENSON AT DAM NEAR GARNER, NC—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 4 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Cadmium water, unfltrd recover- able, µg/L (01027)	Chrom- ium, 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)	Lead, water, unfltrd recover- able, µg/L (01051)	Mangan- ese, water, unfltrd recover- able, µg/L (01055)	Mercury water, unfltrd recover- able, µg/L (71890)	Mercury water, unfltrd recover- able, µg/L (71900)	Molyb- denum, water, unfltrd recover- able, µg/L (01062)	Nickel, water, unfltrd recover- able, µg/L (01067)	Selen- ium, water, unfltrd recover- able, µg/L (01147)	Silver, water, unfltrd recover- able, µg/L (01077)
Nov													
01...	<.01	E.27	.30	E1.1	735	.42	172	<.010	.013	.2	.34	.13	<.02
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	642	--	181	--	--	--	--	--	--
01...	--	--	--	--	699	--	191	.071	.013	--	--	--	--
Apr													
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	<.01	E.28	.14	E1.1	335	.17	101	E.006	.012	.1	.36	.12	<.02
28...	--	--	--	--	560	--	159	--	--	--	--	--	--
28...	--	--	--	--	608	--	517	<.010	E.006	--	--	--	--
Jun													
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	267	--	186	.022	.065	--	--	--	--
25...	--	--	--	--	264	--	185	.023	.073	--	--	--	--
25...	--	--	--	--	280	--	194	--	--	--	--	--	--
25...	--	--	--	--	470	--	691	E.009	E.009	--	--	--	--
Aug													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	431	--	255	<.010	<.010	--	--	--	--
21...	--	--	--	--	439	--	272	--	--	--	--	--	--
21...	--	--	--	--	676	--	663	<.010	<.010	--	--	--	--

02087701 LAKE BENSON AT DAM NEAR GARNER, NC—Continued

Date	Zinc, water, unfltrd recover -able, µg/L (01092)
Nov	
01...	E1.6
01...	--
01...	--
01...	--
01...	--
Apr	
28...	--
28...	E1.9
28...	--
28...	--
Jun	
25...	--
25...	--
25...	--
25...	--
25...	--
25...	--
Aug	
21...	--
21...	--
21...	--
21...	--