

Water-Data Report 2008

0209749990 UNIVERSITY LAKE AT INTAKES NEAR CHAPEL HILL, NC

 Cape Fear Basin
 Haw Subbasin

LOCATION.--Lat 35°53'49", long 79°05'32" referenced to North American Datum of 1983, Orange County, NC, Hydrologic Unit 03030002, above dam, and 1.8 mi southwest of Chapel Hill.

DRAINAGE AREA.--30 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1989 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 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, filtrd, 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, unfiltrd field, std units (00400)
Oct									
05...	1115	Surface water, regular	70	1.0	.40	757	3.4	44	6.8
05...	1116	QC - Surface water, replicate	--	--	.40	--	--	--	--
05...	1117	QC - Surface water, replicate	--	--	.40	--	--	--	--
05...	1120	Surface water, regular	--	2.0	--	757	1.7	21	6.8
05...	1125	Surface water, regular	--	4.0	--	757	.8	8	6.7
Apr									
11...	1100	Surface water, regular	--	1.8	.90	--	--	--	--
11...	1105	Surface water, regular	50	1.0	--	755	11.3	120	7.3
11...	1110	Surface water, regular	--	4.0	--	755	2.0	19	6.4
11...	1115	Surface water, regular	--	7.0	--	755	.3	3	6.8
Jun									
27...	0930	Surface water, regular	--	1.2	.60	--	--	--	--
27...	0935	Surface water, regular	50	1.0	--	757	7.3	96	7.5
27...	0940	Surface water, regular	--	3.0	--	757	.1	2	6.8
27...	0945	Surface water, regular	--	6.0	--	757	.2	2	7.1
Aug									
01...	1100	Surface water, regular	--	1.6	.80	--	--	--	--
01...	1105	Surface water, regular	50	1.0	--	751	.3	4	7.0
01...	1110	Surface water, regular	--	3.0	--	751	.3	4	7.0
01...	1115	Surface water, regular	--	7.0	--	751	.1	2	7.2

0209749990 UNIVERSITY LAKE AT INTAKES NEAR CHAPEL HILL, 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	Specif-ic							ANC, wat unf	Bicar-bonate,			
	conduc-tance, wat unf $\mu\text{S}/\text{cm}$	Temper-ature, water, deg C	Hard-ness, water, mg/L as CaCO ₃	Calcium water, filtrd, (00900)	Magnes-ium, water, filtrd, (00915)	Potas-sium, water, filtrd, (00925)	Sodium, water, filtrd, (00935)	infl pt titr., field, CaCO ₃ (00930)	wat unf titr., field, (00419)	Chlor-ide, water, filtrd, (00450)	Fluor-ide, water, filtrd, (00940)	Silica, water, filtrd, SiO ₂ (00955)
Oct												
05...	104	28.6	35	9.12	2.98	2.44	7.17	37	42	6.82	E.10	17.2
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	118	27.9	--	--	--	--	--	--	--	--	--	--
05...	297	17.4	--	--	--	--	--	--	--	--	--	.19
Apr												
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	88	17.9	25	6.35	2.20	2.03	6.45	16	19	6.39	<.12	13.1
11...	93	13.1	--	--	--	--	--	--	--	--	--	--
11...	112	12.7	--	--	--	--	--	--	--	--	--	11.7
Jun												
27...	--	--	--	--	--	--	--	--	--	--	--	--
27...	111	28.6	36	9.35	3.07	2.37	7.25	30	37	7.41	<.12	13.8
27...	136	21.2	--	--	--	--	--	--	--	--	--	--
27...	227	14.2	--	--	--	--	--	--	--	--	--	.21
Aug												
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	113	26.2	29	7.61	2.54	2.51	5.53	25.9	31.6	6.01	E.07	11.9
01...	113	26.2	--	--	--	--	--	--	--	--	--	--
01...	325	14.9	--	--	--	--	--	--	--	--	--	.84

0209749990 UNIVERSITY LAKE AT INTAKES NEAR CHAPEL HILL, 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. 180degC wat flt	Ammonia + org-N, water, mg/L (70300)	Ammonia + water, fltrd, mg/L (00625)	Nitrate + nitrite water, fltrd, mg/L (00608)	Nitrite water, fltrd, mg/L (00631)	Ortho- phosphate, water, fltrd, mg/L (00613)	Phos- phorus, water, unfltrd mg/L (00671)	Organic carbon, water, fltrd, mg/L (00665)	Organic carbon, water, unfltrd mg/L (00681)	Chloro- phyll a, phyto- plankton, fluoro- ton, mg/L (00680)	Chloro- phyll a, phyto- plankton, fluoro- ton, μg/L (70953)	Pheo- phytin a, phyto- plankton, fluoro- ton, μg/L (62360)	Alum- inum, water, unfltrd recover- able, μg/L (01105)	Arsenic water, unfltrd μg/L (01002)
Oct														
05...	87	1.4	<.020	<.016	<.002	E.005	.093	5.9	11.5	96.0	25.1	56	.91	
05...	--	--	--	--	--	--	--	--	--	82.5	19.3	--	--	
05...	--	--	--	--	--	--	--	--	--	86.9	22.3	--	--	
05...	--	1.6	.201	<.016	<.002	.009	.134	--	--	--	--	--	--	
05...	--	9.8	8.01	<.016	.011	.006	.141	10.1	--	--	--	--	--	
Apr														
11...	--	.93	E.012	<.016	<.002	E.004	.092	--	--	21.2	9.3	--	--	
11...	67	--	--	--	--	--	--	6.5	9.2	--	--	108	E.37	
11...	--	.49	E.016	.030	.002	E.006	.046	--	--	--	--	--	--	
11...	--	.96	.355	<.016	.002	.014	.095	7.0	--	--	--	--	--	
Jun														
27...	--	.68	<.020	E.009	<.002	<.006	.044	--	--	--	--	--	--	
27...	85	--	--	--	--	--	--	7.2	8.7	--	--	--	--	
27...	--	.65	<.020	<.016	<.002	<.006	.053	--	--	--	--	--	--	
27...	--	1.7	.856	<.016	.004	.053	.116	13.2	--	--	--	--	--	
Aug														
01...	--	.93	<.020	<.016	<.002	.008	.053	--	--	39.4	14.3	--	--	
01...	94	--	--	--	--	--	--	7.8	11.2	--	--	--	--	
01...	--	1.1	.073	<.016	<.002	.008	.064	--	--	--	--	--	--	
01...	--	2.9	1.92	<.016	E.004	.065	.148	15.2	--	--	--	--	--	

0209749990 UNIVERSITY LAKE AT INTAKES NEAR CHAPEL HILL, 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	Chromium, water, unfltrd	Cobalt water, unfltrd	Copper, water, unfltrd	Iron, water, unfltrd	Lead, water, unfltrd	Manganese, water, unfltrd	Mercury, water, unfltrd	Molybdenum, water, unfltrd	Nickel, water, unfltrd	Selenium, water, unfltrd	Silver, water, unfltrd
	µg/L (01027)	µg/L (01034)	µg/L (01037)	µg/L (01042)	µg/L (01045)	µg/L (01051)	µg/L (01055)	µg/L (71890)	µg/L (71900)	µg/L (01062)	µg/L (01147)	µg/L (01077)
Oct												
05...	<.01	<.40	.37	<1.2	559	.20	712	.036	.070	.6	.16	.18
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	597	--	992	--	--	--	--	--
05...	--	--	--	--	47,300	--	9,670	<.010	E.005	--	--	--
Apr												
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	<.01	E.24	.19	1.5	411	.19	71.0	<.010	E.008	.2	.39	.13
11...	--	--	--	--	741	--	323	--	--	--	--	--
11...	--	--	--	--	2,650	--	2,140	<.010	<.010	--	--	--
Jun												
27...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	260	--	154	<.010	<.010	--	--	--
27...	--	--	--	--	1,130	--	5,420	--	--	--	--	--
27...	--	--	--	--	24,900	--	6,090	<.010	<.010	--	--	--
Aug												
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	249	--	120	<.010	<.010	--	--	--
01...	--	--	--	--	338	--	1,080	--	--	--	--	--
01...	--	--	--	--	30,000	--	7,880	<.010	<.010	--	--	--

0209749990 UNIVERSITY LAKE AT INTAKES NEAR CHAPEL HILL, NC—Continued

Date	Zinc, water, unfiltrd recover -able, µg/L (01092)
Oct	
05...	3.1
05...	--
05...	--
05...	--
05...	--
Apr	
11...	--
11...	3.0
11...	--
11...	--
Jun	
27...	--
27...	--
27...	--
27...	--
Aug	
01...	--
01...	--
01...	--
01...	--