

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, ftrd, 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)
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	Specific conductance, wat unf $\mu\text{S}/\text{cm}$ 25 degC (00095)	Temperature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO ₃ (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 CaCO ₃ (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 SiO ₂ (00955)	Sulfate water, fltrd, mg/L (00945)
Oct													
05...	104	28.6	35	9.12	2.98	2.44	7.17	37	42	6.82	E.10	17.2	4.95
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	12.3
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	8.15
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	7.91
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. 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)
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 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 ftrd, 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 µg/L (01147)	Silver, water, unfltrd recover- able, µg/L (01077)
Oct													
05...	<.01	<.40	.37	<1.2	559	.20	712	.036	.070	.6	.16	.18	<.02
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	<.02
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	--	--	--	--

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Date	Zinc, water, unfltrd 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...	--