



Water-Data Report 2007

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 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, water, deg C (00010)	Hard-ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)
Oct													
27...	1245	30	1.0	.50	757	6.1	60	6.7	106	14.4	33	8.71	2.71
27...	1250	--	3.0	--	757	5.5	54	6.6	107	14.2	--	--	--
27...	1255	--	7.0	--	757	6.2	60	6.3	108	13.6	--	--	--
Apr													
13...	0945	30	1.0	.90	757	8.4	83	6.5	83	14.9	30	7.68	2.58
13...	0950	--	4.0	--	757	4.2	40	6.0	85	13.4	--	--	--
13...	0955	--	8.0	--	757	1.1	10	6.3	129	10.4	--	--	--
Jun													
01...	1245	35	1.0	1.00	759	7.5	95	7.5	98	27.1	31	8.04	2.62
01...	1250	--	3.0	--	759	.5	6	6.3	96	22.2	--	--	--
01...	1255	--	7.0	--	759	.6	6	6.4	166	12.6	--	--	--
Aug													
31...	1345	60	1.0	.40	755	--	--	--	104	28.6	30	7.54	2.76
31...	1350	--	3.0	--	755	--	--	--	252	21.3	--	--	--
31...	1355	--	6.0	--	755	--	--	--	345	14.9	--	--	--

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

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 4

[Remark codes: <, 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)
Oct													
27...	2.78	6.12	33	40	6.34	E.08	12.3	6.79	78	.75	.120	.029	.002
27...	--	--	--	--	--	--	--	--	--	.67	.127	.028	E.002
27...	--	--	--	--	--	--	--	--	--	.69	.143	.018	E.002
Apr													
13...	1.80	6.61	24	29	6.66	<.10	11.7	7.10	62	.44	<.020	<.016	<.002
13...	--	--	--	--	--	--	--	--	--	.45	.069	.028	E.002
13...	--	--	--	--	--	--	--	--	--	1.2	.587	<.016	.002
Jun													
01...	1.92	6.31	27	33	5.95	E.06	13.8	6.23	79	.63	<.020	<.016	<.002
01...	--	--	--	--	--	--	--	--	--	.93	<.020	E.014	<.002
01...	--	--	--	--	--	--	--	--	--	1.7	.878	<.016	.003
Aug													
31...	2.23	7.00	29	36	6.79	E.08	16.6	5.19	93	1.6	<.020	<.016	<.002
31...	--	--	--	--	--	--	--	--	--	2.0	.650	<.016	<.002
31...	--	--	--	--	--	--	--	<.18	--	7.0	5.19	<.016	.011

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

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 4

[Remark codes: <, 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)
Oct													
27...	E.003	.047	--	7.8	26.6	25.0	56	.77	<.02	.60	.380	E.9	504
27...	E.004	.040	--	--	--	--	--	--	--	--	--	--	530
27...	E.004	.061	--	--	--	--	--	--	--	--	--	--	926
Apr													
13...	E.004	.034	--	6.5	13.2	6.4	59	.34	<.02	<.60	.21	E1.1	465
13...	E.004	.035	--	--	--	--	--	--	--	--	--	--	669
13...	.030	.195	--	--	--	--	--	--	--	--	--	--	6,940
Jun													
01...	E.004	.045	--	9.1	21.0	6.9	--	--	--	--	--	--	324
01...	E.004	.051	--	--	--	--	--	--	--	--	--	--	348
01...	.095	.162	--	--	--	--	--	--	--	--	--	--	8,720
Aug													
31...	.009	.083	7.2	13.5	90.8	12.6	--	--	--	--	--	--	276
31...	E.006	.099	--	--	--	--	--	--	--	--	--	--	1,310
31...	.269	.12	16.8	--	--	--	--	--	--	--	--	--	40,700

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 4

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

Date	Lead,	Mangan-		Mercury	Molyb-	Nickel,		Silver,	Zinc,
	water,	ese,	Mercury	water,	denum,	water,	Selen-	water,	water,
	unfltrd	water,	unfltrd	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)
Oct									
27...	.17	223	--	.242	.3	1.04	.17	<.02	4
27...	--	251	--	--	--	--	--	--	--
27...	--	370	--	--	--	--	--	--	--
Apr									
13...	.20	130	--	<.010	.2	.21	.11	<.02	3.7
13...	--	408	--	--	--	--	--	--	--
13...	--	2,290	--	--	--	--	--	--	--
Jun									
01...	--	142	--	--	--	--	--	--	--
01...	--	660	--	--	--	--	--	--	--
01...	--	3,840	--	--	--	--	--	--	--
Aug									
31...	--	350	<.010	.011	--	--	--	--	--
31...	--	2,700	--	--	--	--	--	--	--
31...	--	7,820	<.010	E.008	--	--	--	--	--