

02097517 MORGAN CREEK NEAR CHAPEL HILL, NC

LOCATION.--Lat 35°53'36", long 79°01'10", Orange County, Hydrologic Unit 03030002, on left bank 2.5 mi southeast of Chapel Hill, and 3.8 mi downstream of U.S. Highway 501.

DRAINAGE AREA.--41.0 mi²

PERIOD OF RECORD.--November 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 239.02 ft above NGVD of 1929. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. The City of Chapel Hill diverted an average of 16.0 ft³/s for water supply upstream of station, and an average of 12.6 ft³/s was returned as treated effluent upstream of station. Considerable diurnal fluctuation and occasional slight regulation caused by small reservoir and treated effluent outfall upstream from station. Maximum discharge for period of record from rating curve extended above 1,700 ft³/s, by logarithmic plotting; maximum gage height, 16.18 ft, from floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	24	19	20	28	20	85	16	16	17	12	39
2	18	24	19	21	28	50	53	16	17	35	12	13
3	17	24	19	23	27	44	36	17	16	23	11	12
4	17	24	19	24	28	27	28	21	15	18	12	11
5	18	26	19	25	26	25	23	19	15	19	11	9.7
6	21	25	19	51	26	25	22	17	14	16	9.7	10
7	19	25	20	41	131	24	21	16	15	15	11	9.9
8	18	25	19	32	88	23	21	16	13	16	9.9	10
9	18	25	19	28	54	22	20	16	13	15	9.7	11
10	17	24	25	28	42	22	24	16	14	16	9.4	12
11	18	23	69	30	39	20	20	15	13	16	8.8	11
12	18	23	28	27	33	22	19	15	14	15	10	13
13	17	24	27	33	30	23	20	16	14	14	9.7	11
14	60	24	24	27	29	22	19	17	15	23	8.4	46
15	37	24	23	25	30	22	19	16	14	18	9.7	32
16	26	20	23	25	27	20	19	15	13	16	14	26
17	23	18	26	24	26	32	18	16	14	15	11	17
18	22	17	34	23	26	35	19	16	16	15	10	15
19	21	18	24	146	24	31	20	16	16	15	12	14
20	22	18	23	90	24	26	20	16	15	33	11	14
21	21	16	24	53	24	34	18	16	14	19	9.5	13
22	23	15	21	40	22	32	18	15	15	16	8.8	12
23	24	16	21	227	20	25	17	15	14	16	9.4	13
24	25	22	21	206	19	23	17	15	16	34	8.8	12
25	26	20	20	115	19	22	17	14	16	38	9.7	12
26	25	20	20	73	19	23	16	13	16	22	11	13
27	23	20	21	52	20	33	15	15	24	17	28	14
28	23	19	21	44	19	22	15	15	45	15	24	14
29	24	19	21	39	---	21	16	16	36	15	11	13
30	24	19	21	35	---	21	16	16	17	14	26	12
31	24	---	21	29	---	37	---	16	---	14	71	---
TOTAL	705	641	730	1656	928	828	691	494	505	590	429.5	464.6
MEAN	22.74	21.37	23.55	53.42	33.14	26.71	23.03	15.94	16.83	19.03	13.85	15.49
MAX	60	26	69	227	131	50	85	21	45	38	71	46
MIN	16	15	19	20	19	20	15	13	13	14	8.4	9.7
CFSM	0.55	0.52	0.57	1.30	0.81	0.65	0.56	0.39	0.41	0.46	0.34	0.38
IN.	0.64	0.58	0.66	1.50	0.84	0.75	0.63	0.45	0.46	0.54	0.39	0.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2002, BY WATER YEAR (WY)

	2000	1986	1984	1998	1998	1993	1984	1990	1992	1984	1985	1999
MEAN	24.15	34.48	34.90	68.90	76.22	94.33	55.14	32.02	25.14	20.49	21.78	34.08
MAX	50.7	141	105	184	206	226	131	91.2	84.9	51.5	65.0	272
(WY)	2000	1986	1984	1998	1998	1993	1984	1990	1992	1984	1985	1999
MIN	12.9	10.5	12.9	15.2	17.2	18.0	17.5	14.5	11.1	8.93	12.1	8.77
(WY)	1999	1983	1989	1989	1991	1988	1986	1986	1986	1988	1988	1983

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1983 - 2002

ANNUAL TOTAL	13850	8662.1	
ANNUAL MEAN	37.95	23.73	42.55
HIGHEST ANNUAL MEAN			75.6
LOWEST ANNUAL MEAN			21.7
HIGHEST DAILY MEAN	1000	Mar 30	227
LOWEST DAILY MEAN	11	Jun 21	8.4
ANNUAL SEVEN-DAY MINIMUM	15	Aug 2	9.4
MAXIMUM PEAK FLOW			490
MAXIMUM PEAK STAGE			7.65
INSTANTANEOUS LOW FLOW			2.4
ANNUAL RUNOFF (CFSM)	0.93		0.58
ANNUAL RUNOFF (INCHES)	12.57		7.86
10 PERCENT EXCEEDS	56		34
50 PERCENT EXCEEDS	23		19
90 PERCENT EXCEEDS	16		12
			4210*
			16.18*
			NOT DETERMINED
			1.04
			14.10
			78
			19
			12

* See REMARKS.

02097517 MORGAN CREEK NEAR CHAPEL HILL, NC--Continued

