

CAPE FEAR RIVER BASIN

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 sea level. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. The City of Chapel Hill diverted an average of 15.6 ft³/s for water supply upstream of station, and an average of 14.1 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	17	19	21	24	36	438	24	354	15	16	25
2	25	18	18	22	24	34	262	22	285	16	15	22
3	25	18	18	21	23	40	133	22	75	17	15	19
4	24	17	18	22	23	134	104	23	46	21	16	20
5	24	18	19	22	27	110	85	22	34	37	15	20
6	25	19	19	21	24	79	74	22	26	21	15	19
7	24	19	19	22	24	56	66	22	24	18	15	18
8	24	19	19	24	24	48	59	22	22	42	15	17
9	25	20	19	23	24	43	55	20	20	24	15	18
10	25	19	18	23	24	38	49	20	19	22	35	20
11	25	18	18	23	24	36	40	20	19	20	165	19
12	25	18	18	22	30	34	38	32	17	19	78	18
13	25	18	18	22	32	36	34	23	40	18	22	18
14	24	27	19	22	28	33	31	20	53	17	20	16
15	24	20	18	22	28	45	29	21	40	16	17	15
16	24	19	23	23	26	42	31	62	24	17	16	16
17	24	19	61	23	177	37	29	26	17	16	15	17
18	23	18	26	23	111	35	33	36	14	16	16	17
19	23	21	25	26	69	34	31	25	14	17	22	16
20	20	24	26	60	53	60	31	23	12	16	18	19
21	18	21	23	29	47	406	30	22	11	14	16	20
22	19	19	22	26	50	123	30	24	37	14	15	18
23	18	17	21	25	46	79	30	37	48	15	14	17
24	19	17	20	24	41	61	26	21	15	24	35	71
25	21	36	19	24	48	51	45	20	192	19	16	26
26	19	30	19	23	48	47	37	36	56	18	14	18
27	19	21	20	23	42	43	30	26	31	92	15	18
28	19	19	21	23	38	40	27	25	22	24	15	17
29	19	19	22	23	---	295	26	25	18	21	15	16
30	17	19	21	28	---	1000	26	21	16	21	84	16
31	16	---	21	25	---	204	---	21	---	17	41	---
TOTAL	688	604	667	760	1179	3359	1959	785	1601	684	841	606
MEAN	22.2	20.1	21.5	24.5	42.1	108	65.3	25.3	53.4	22.1	27.1	20.2
MAX	26	36	61	60	177	1000	438	62	354	92	165	71
MIN	16	17	18	21	23	33	26	20	11	14	14	15
CFSM	.54	.49	.52	.60	1.03	2.64	1.59	.62	1.30	.54	.66	.49
IN.	.62	.55	.61	.69	1.07	3.05	1.78	.71	1.45	.62	.76	.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2001, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	24.2	35.2	35.5	69.7	78.5	97.9	56.8	32.9	25.6	20.6	22.2	35.1							
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 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1983 - 2001

ANNUAL TOTAL	13439	13733	
ANNUAL MEAN	36.7	37.6	43.6
HIGHEST ANNUAL MEAN			75.6
LOWEST ANNUAL MEAN			21.7
HIGHEST DAILY MEAN	759	Jul 24	1000
LOWEST DAILY MEAN	10	Jul 20	11
ANNUAL SEVEN-DAY MINIMUM	11	Jul 16	15
MAXIMUM PEAK FLOW			1840
MAXIMUM PEAK STAGE			11.95
INSTANTANEOUS LOW FLOW			7.2
ANNUAL RUNOFF (CFSM)	.90	.92	1.06
ANNUAL RUNOFF (INCHES)	12.19	12.46	14.45
10 PERCENT EXCEEDS	65	55	84
50 PERCENT EXCEEDS	25	23	19
90 PERCENT EXCEEDS	15	16	12

* See REMARKS.

02097517 MORGAN CREEK NEAR CHAPEL HILL, NC--Continued

