

02097517 MORGAN CREEK NEAR CHAPEL HILL, NC

LOCATION.--Lat 35°53'36", long 79°01'11", 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 12.6 ft³/s for water supply upstream of station, and an average of 12.4 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. Minimum discharge for current water year also occurred June 21.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	24	16	12	13	32	53	37	15	16	19	75
2	18	22	16	12	13	32	41	175	12	14	18	39
3	18	22	16	12	65	31	33	142	12	15	20	30
4	17	22	20	12	58	30	31	79	35	16	14	24
5	17	23	34	15	35	29	29	45	22	11	17	21
6	17	25	19	16	46	31	27	32	18	11	18	41
7	18	25	17	13	130	29	27	25	18	10	12	67
8	20	25	17	13	58	29	27	19	17	12	11	286
9	27	23	17	14	45	28	25	17	16	11	11	147
10	25	22	116	14	39	30	24	17	14	9.4	10	54
11	27	21	75	13	36	27	24	16	13	13	8.7	36
12	23	22	35	13	56	26	40	18	16	29	25	29
13	22	24	23	13	56	26	36	21	14	25	39	26
14	26	22	140	13	44	26	37	20	14	17	102	25
15	31	20	64	13	42	49	29	20	14	14	50	31
16	22	21	32	12	48	73	23	19	20	12	50	27
17	19	23	31	12	42	78	20	21	20	12	31	36
18	19	23	28	17	39	64	18	19	16	33	23	42
19	19	53	23	14	37	66	18	19	12	17	16	27
20	19	28	20	13	35	47	17	19	10	15	17	21
21	19	20	17	13	34	41	15	18	11	13	36	19
22	19	18	15	13	31	36	15	16	13	15	59	18
23	18	16	15	12	30	32	15	27	14	21	27	17
24	17	17	16	12	29	31	15	17	22	15	19	17
25	17	17	15	12	29	30	14	16	16	13	16	17
26	21	16	14	12	28	29	16	15	30	13	15	17
27	25	15	13	13	38	28	19	16	20	32	15	19
28	29	19	13	14	33	28	16	14	18	42	15	33
29	66	20	13	15	33	27	13	14	35	97	15	21
30	35	16	13	16	---	27	13	19	21	33	377	18
31	26	---	13	15	---	32	---	14	---	24	133	---
TOTAL	714	664	916	413	1,222	1,124	730	966	528	630.4	1,238.7	1,280
MEAN	23.0	22.1	29.5	13.3	42.1	36.3	24.3	31.2	17.6	20.3	40.0	42.7
MAX	66	53	140	17	130	78	53	175	35	97	377	286
MIN	17	15	13	12	13	26	13	14	10	9.4	8.7	17
CFSM	0.56	0.54	0.72	0.32	1.03	0.88	0.59	0.76	0.43	0.50	0.97	1.04
IN.	0.65	0.60	0.83	0.37	1.11	1.02	0.66	0.88	0.48	0.57	1.12	1.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)

MEAN	25.6	34.4	37.5	64.9	77.1	95.8	60.0	33.3	25.7	22.0	23.1	34.3
MAX	54.9	141	105	184	206	226	194	91.2	84.9	53.8	65.0	272
(WY)	(2003)	(1986)	(1984)	(1998)	(1998)	(1993)	(2003)	(1990)	(1992)	(2003)	(1985)	(1999)
MIN	12.9	10.5	12.9	13.3	17.2	18.0	17.5	14.5	11.1	8.93	12.1	8.77
(WY)	(1999)	(1983)	(1989)	(2004)	(1991)	(1988)	(1986)	(1986)	(1986)	(1988)	(1988)	(1983)

CAPE FEAR RIVER BASIN

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004	
ANNUAL TOTAL	25,478		10,426.1		43.7	
ANNUAL MEAN	69.8		28.5		80.2	
HIGHEST ANNUAL MEAN					21.7	2003
LOWEST ANNUAL MEAN					1988	
HIGHEST DAILY MEAN	1,600	Apr 10	377	Aug 30	2,600	Sep 6, 1996
LOWEST DAILY MEAN	13	Dec 27	8.7	Aug 11	0.60	Nov 26, 1982
ANNUAL SEVEN-DAY MINIMUM	13	Dec 25	11	Jul 5	2.1	Nov 22, 1982
MAXIMUM PEAK FLOW			799	May 2	4210*	Sep 6, 1996
MAXIMUM PEAK STAGE			8.93	May 2	16.18*	Sep 6, 1996
INSTANTANEOUS LOW FLOW			3.8*	Jun 3	NOT DETERMINED	
ANNUAL RUNOFF (CFSM)	1.70		0.695		1.07	
ANNUAL RUNOFF (INCHES)	23.12		9.46		14.47	
10 PERCENT EXCEEDS	122		45		80	
50 PERCENT EXCEEDS	32		20		20	
90 PERCENT EXCEEDS	19		13		12	

* See REMARKS.

