

CAPE FEAR RIVER BASIN

02097314 NEW HOPE CREEK NEAR BLANDS, NC

LOCATION.--Lat 35°53'05", long 78°57'58", Durham County, Hydrologic Unit 03030002, on right bank 15 ft downstream of bridge on Secondary Road 1107, 0.5 mi southwest of Blands, and 2 mi downstream of Third Fork Creek.

DRAINAGE AREA.--75.9 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 230 ft above NGVD of 1929, from topographic map. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Considerable diurnal fluctuation at low flow. An average of 48.5 ft³/s was diverted from the Neuse River Basin for Durham municipal water supply; 20.0 ft³/s was returned to the Cape Fear River Basin, and about 11.6 ft³/s was returned to the Neuse River Basin. Maximum discharge for period of record 12,700 ft³/s, from rating curve extended above 3,500 ft³/s, by logarithmic plotting. Maximum gage height for period of record occurred as a result of backwater from B. Everett Jordan Lake; maximum gage height unaffected by backwater, 14.05 ft, Sept. 6, 1996. Minimum discharge for period of record not determined due to regulation. Minimum discharge unregulated, 4.2 ft³/s, Apr. 28, 29, May 1, 2, and July 10, 1985. Minimum discharge for current water year due to regulation.

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	15	16	18	12	40	25	255	17	14	12	12	321
2	15	16	17	12	34	26	249	17	21	12	11	210
3	14	16	17	14	29	131	90	17	20	13	17	53
4	15	18	17	14	26	149	54	17	15	10	14	28
5	15	25	17	17	23	91	40	39	15	11	12	19
6	15	19	17	24	22	48	35	24	14	11	11	16
7	19	16	17	72	83	40	31	19	14	9.5	11	14
8	19	17	16	87	233	33	30	18	13	10	10	13
9	16	18	16	69	184	30	29	18	13	10	10	13
10	15	17	17	53	130	37	39	17	13	10	10	13
11	15	17	106	45	96	30	41	16	13	13	9.7	13
12	15	17	104	40	72	28	31	15	13	21	10	12
13	14	17	41	42	57	41	28	16	12	13	11	12
14	17	17	28	44	47	41	26	28	12	10	11	14
15	147	17	23	37	42	33	26	21	11	20	11	114
16	72	17	20	31	37	29	26	17	11	15	36	132
17	25	17	19	25	33	36	25	16	11	11	20	70
18	20	17	47	23	30	111	24	16	11	10	13	26
19	18	16	25	36	29	91	22	29	11	11	15	55
20	17	19	3.7	298	27	60	23	19	11	11	14	39
21	16	19	3.0	389	27	72	23	16	11	37	12	18
22	17	17	3.1	235	27	114	22	16	10	16	11	15
23	17	15	3.4	219	25	68	21	16	9.8	12	11	14
24	17	17	3.9	527	24	45	20	15	10	49	11	13
25	18	28	4.7	397	24	39	19	15	10	147	13	13
26	17	26	6.7	250	23	35	19	14	10	107	23	13
27	16	23	8.3	165	102	132	18	14	11	48	45	13
28	16	19	9.7	117	105	88	18	15	11	19	112	14
29	17	18	11	87	---	47	19	15	25	16	40	15
30	17	19	11	64	---	36	18	15	17	14	39	13
31	17	---	11	49	---	36	---	15	---	13	195	---
TOTAL	703	550	661.5	3494	1631	1822	1321	562	392.8	721.5	780.7	1328
MEAN	22.68	18.33	21.34	112.7	58.25	58.77	44.03	18.13	13.09	23.27	25.18	44.27
MAX	147	28	106	527	233	149	255	39	25	147	195	321
MIN	14	15	3.0	12	22	25	18	14	9.8	9.5	9.7	12
CFSM	0.30	0.24	0.28	1.48	0.77	0.77	0.58	0.24	0.17	0.31	0.33	0.58
IN.	0.34	0.27	0.32	1.71	0.80	0.89	0.65	0.28	0.19	0.35	0.38	0.65

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

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	45.05	71.19	76.14	159.8	197.3	199.8	139.8	88.30	45.14	45.02	41.40	67.07								
MAX	122	371	264	509	463	493	618	411	154	156	97.8	507								
(WY)	1990	1986	1984	1991	1998	1998	1987	1997	1995	1995	1986	1999								
MIN	12.8	16.1	17.0	31.6	58.2	42.0	13.5	18.1	13.1	12.9	14.5	10.8								
(WY)	1987	1985	1989	2001	2002	1985	1985	2002	2002	1993	1997	1984								

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1983 - 2002	
ANNUAL TOTAL	23373.5		13967.5			
ANNUAL MEAN	64.04		38.27		97.44	
HIGHEST ANNUAL MEAN					156	1984
LOWEST ANNUAL MEAN					38.3	2002
HIGHEST DAILY MEAN	2000	Apr 1	527	Jan 24	6300	Sep 6 1996
LOWEST DAILY MEAN	3.0	Dec 21	3.0	Dec 21	0.39	Dec 30 1988
ANNUAL SEVEN-DAY MINIMUM	4.1	Dec 20	4.1	Dec 20	4.1	Dec 20 2001
MAXIMUM PEAK FLOW			603	Jan 24	12700*	Sep 6 1996
MAXIMUM PEAK STAGE			8.98	Jan 24	18.74*	Sep 12 1996
INSTANTANEOUS LOW FLOW			2.8	Dec 21	NOT DETERMINED	
ANNUAL RUNOFF (CFSM)	0.84		0.50		1.28	
ANNUAL RUNOFF (INCHES)	11.46		6.85		17.44	
10 PERCENT EXCEEDS	118		89		212	
50 PERCENT EXCEEDS	22		18		33	
90 PERCENT EXCEEDS	15		11		13	

* See REMARKS.

02097314 NEW HOPE CREEK NEAR BLANDS, NC--Continued

