

Water-Data Report 2008

02102500 CAPE FEAR RIVER AT LILLINGTON, NC

Cape Fear Basin
Upper Cape Fear Subbasin

LOCATION.--Lat 35°24'22", long 78°48'48" referenced to North American Datum of 1983, Harnett County, NC, Hydrologic Unit 03030004, on right bank 60 ft downstream of bridge on U.S. Highway 401, 1,860 ft downstream of Southern Railway bridge, 0.5 mi north of Lillington, 1 mile downstream of Neal Creek, and at river mile 178.

DRAINAGE AREA.--3,464 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--December 1923 to current year.

REVISED RECORDS.--WSP 1002: 1930(M). WSP 1032: 1942(m). WSP 1303: 1944(M). WSP 1333: 1945. WSP 1383:

GAGE.--Water-stage recorder. Datum of gage is 104.62 ft above NGVD of 1929. December 6, 1923 to October 7, 1927, nonrecording gage and October 8, 1927 to December 2, 1975, water-stage recorder at site 60 ft upstream at bridge pier at same datum. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Some regulation at high flows, December 1972 to August 1981, caused by temporary storage in B. Everett Jordan Lake. Flow regulated since September 1981 by B. Everett Jordan Lake (station 02098197). Diurnal fluctuation and slight regulation at low flow caused by power plants upstream from station. Fluctuation and regulation by Buckhorn Reservoir, 13 mi upstream from station, ended in December 1962. Prior to regulation, maximum discharge: 150,000 ft³/s, September 19, 1945, from rating curve extended above 76,000 ft³/s; gage height: 33.19 ft, from floodmark; minimum discharge: 11 ft³/s, October 14, 15, 1954; gage height: -0.17 ft. Minimum discharge for period of record also occurred on August 7, 2002. Minimum discharge for current water year also occurred October 10, November 11.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	268	487	301	5,690	494	1,060	3,030	3,290	764	595	650	5,750
2	251	394	304	2,420	822	897	3,600	2,000	593	589	597	4,300
3	226	329	308	1,290	1,710	707	3,530	1,550	586	613	573	1,970
4	221	337	305	855	1,500	627	4,160	1,270	581	606	586	1,140
5	216	325	259	741	991	5,100	7,440	1,080	572	640	538	531
6	229	296	250	629	794	8,880	11,500	971	541	691	576	11,400
7	235	279	283	527	685	4,140	8,680	868	658	888	581	19,900
8	227	248	303	527	568	11,100	6,310	818	686	1,150	610	6,900
9	206	253	309	450	572	8,180	5,100	804	676	934	577	6,260
10	202	271	295	473	548	4,650	4,460	821	605	813	583	9,310
11	206	241	291	456	511	3,590	4,010	786	599	716	590	9,620
12	212	234	318	443	459	5,660	3,960	988	591	522	580	10,400
13	207	234	364	418	773	4,180	3,840	2,290	569	545	606	8,830
14	205	240	351	434	2,130	4,010	3,660	4,880	590	539	525	8,130
15	206	256	359	372	1,670	3,910	3,640	4,560	792	562	587	7,250
16	206	274	573	368	1,290	5,410	3,530	4,400	630	561	672	2,210
17	206	258	477	406	969	6,980	3,400	4,200	568	544	604	1,320
18	208	279	391	470	902	5,050	3,260	3,620	534	589	519	1,300
19	220	280	398	533	1,020	3,080	3,240	3,740	558	683	514	2,310
20	225	283	446	840	1,430	2,810	3,280	3,650	609	687	478	2,350
21	214	284	413	904	1,030	2,820	3,430	1,590	599	593	473	2,120
22	210	285	391	825	839	2,950	3,640	1,480	613	583	489	1,960
23	213	280	349	710	773	2,650	2,930	1,370	632	681	489	1,010
24	227	274	374	613	799	2,350	2,680	1,320	612	787	463	847
25	342	322	368	564	782	2,280	2,190	1,190	595	671	448	668
26	414	325	437	518	727	2,200	1,340	1,060	570	691	465	971
27	3,760	331	511	515	1,020	2,060	1,090	647	598	641	702	1,360
28	5,190	308	441	495	1,980	2,100	1,280	655	611	629	6,820	1,490
29	1,980	296	468	465	1,530	2,050	5,990	729	595	616	6,920	1,650
30	991	336	873	457	---	2,020	6,980	607	612	524	4,680	1,770
31	634	---	4,870	433	---	2,130	---	808	---	794	5,680	---
Total	18,557	8,839	16,380	24,841	29,318	115,631	125,180	58,042	18,339	20,677	39,175	135,027
Mean	599	295	528	801	1,011	3,730	4,173	1,872	611	667	1,264	4,501
Max	5,190	487	4,870	5,690	2,130	11,100	11,500	4,880	792	1,150	6,920	19,900
Min	202	234	250	368	459	627	1,090	607	534	522	448	531
Cfsm	0.17	0.09	0.15	0.23	0.29	1.08	1.20	0.54	0.18	0.19	0.36	1.30
In.	0.20	0.09	0.18	0.27	0.31	1.24	1.34	0.62	0.20	0.22	0.42	1.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2008^a, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,862	2,098	2,840	4,679	5,574	6,833	4,915	2,398	2,189	1,667	1,684	2,082
Max	6,442	7,919	8,595	11,750	16,440	15,710	14,780	7,784	12,510	5,694	7,075	13,920
(WY)	(1990)	(1986)	(1984)	(1998)	(1998)	(1993)	(2003)	(1989)	(1982)	(1995)	(2003)	(1996)
Min	469	295	528	707	1,011	1,083	969	642	551	360	274	366
(WY)	(2006)	(2008)	(2008)	(2001)	(2008)	(2006)	(1985)	(2002)	(1999)	(2002)	(2002)	(2007)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1982 - 2008 ^a	
Annual total	718,827		610,006			
Annual mean	1,969		1,667		3,222	
Highest annual mean					7,146	2003
Lowest annual mean					1,013	2002
Highest daily mean	16,300	Apr 16	19,900	Sep 7	41,400	Sep 6, 1996
Lowest daily mean	202	Oct 10	202	Oct 10	155	Aug 6, 2002
Annual seven-day minimum	206	Oct 9	206	Oct 9	206	Oct 9, 2007
Maximum peak flow			28,800	Sep 7	51,800	Sep 7, 1996
Maximum peak stage			13.73	Sep 7	18.97	Sep 7, 1996
Instantaneous low flow			^b 200	Oct 9	^b 141	Aug 6, 2002
Annual runoff (cfs)	0.569		0.481		0.930	
Annual runoff (inches)	7.72		6.55		12.64	
10 percent exceeds	5,710		4,490		9,220	
50 percent exceeds	580		640		1,230	
90 percent exceeds	273		274		581	

^aRegulated period only (1981-2008). See Remarks.^bSee Remarks.