

03453500 FRENCH BROAD RIVER AT MARSHALL, NC

LOCATION.--Lat 35°47'11", long 82°39'39", Madison County, Hydrologic Unit 06010105, on right bank 0.7 mi upstream from Hayes Creek, 1.0 mi downstream of Ivy River, 1.5 mi southeast of Marshall, and at mile 126.7.

DRAINAGE AREA.--1,332 mi².

PERIOD OF RECORD.--October 1942 to current year.

REVISED RECORDS.--WSP 1436: 1954(M).

GAGE.--Water-stage recorder. Datum of gage is 1,646.79 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Satellite and telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Small diversions from tributaries for water supply. Slight diurnal fluctuation and occasional slight regulation at low flow caused by small reservoirs upstream from station. Prior to July 1963, some regulation by Weaver plant of Carolina Power and Light Company 15 mi upstream, after November 1986 the same power plant was operated by the Metropolitan Sewage Treatment Plant. Minimum discharge for period of record also occurred Sept. 14, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed since at least 1791: 22.0 ft, July 16, 1916; discharge: 115,000 ft³/s. Flood of Aug. 30, 1940, reached a stage of 16.6 ft; discharge, 70,000 ft³/s, from high water marks, flood profiles, and studies by Tennessee Valley Authority.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,570	2,110	3,610	2,910	2,450	3,550	4,100	2,730	1,710	4,160	3,620	4,750
2	5,420	2,050	4,000	2,810	2,280	3,130	4,870	2,540	2,810	3,930	3,210	3,390
3	4,600	2,300	3,450	2,720	2,430	2,730	5,590	2,350	4,480	3,590	2,890	2,890
4	4,210	4,530	3,140	2,660	2,860	2,570	4,730	2,240	3,450	3,340	2,700	2,580
5	3,880	6,160	2,930	2,620	2,630	2,490	4,170	2,170	2,750	3,770	2,600	2,410
6	3,600	4,740	2,860	2,580	2,430	2,430	3,770	2,160	2,530	3,290	2,660	2,240
7	3,410	3,330	3,280	2,540	2,330	2,360	3,480	2,100	2,670	7,280	2,890	2,130
8	3,240	2,940	3,530	2,480	2,280	2,660	3,750	2,050	2,750	10,100	4,800	2,040
9	3,110	2,660	4,230	2,530	2,250	2,800	4,200	2,000	3,160	8,330	4,960	1,970
10	3,020	2,480	6,700	2,440	2,250	2,590	3,650	2,250	2,780	5,650	4,060	1,900
11	2,930	2,370	6,300	2,330	2,170	2,450	3,290	2,380	2,870	4,930	3,610	1,830
12	2,810	3,540	4,940	2,290	2,100	2,360	3,100	2,170	3,170	7,680	3,160	1,770
13	3,020	5,400	4,160	2,320	2,090	2,270	3,850	2,000	7,310	7,980	2,860	1,720
14	2,910	4,250	3,670	7,270	2,180	2,280	5,440	1,990	7,910	7,940	3,470	1,680
15	2,700	3,380	3,320	6,270	2,270	2,390	4,540	2,220	7,190	7,720	2,710	1,640
16	2,580	3,040	3,110	4,410	2,210	2,270	3,840	2,220	6,670	6,550	2,530	1,650
17	2,450	2,830	2,980	3,620	2,110	2,550	3,430	2,040	4,460	5,510	2,750	1,750
18	2,380	2,680	2,870	3,170	2,030	2,550	3,200	1,910	3,270	5,550	4,120	1,750
19	2,560	2,560	2,790	2,940	1,970	2,360	3,030	1,840	3,280	5,170	5,070	1,600
20	2,620	2,470	2,650	2,830	1,980	2,260	2,860	2,770	3,690	5,680	3,540	1,520
21	2,480	2,400	2,550	2,760	3,810	2,190	2,740	2,980	3,830	5,690	3,240	1,500
22	2,350	2,320	2,520	2,660	4,920	2,130	2,970	2,520	3,230	4,850	2,860	1,480
23	2,290	2,460	4,730	2,540	3,800	3,670	3,470	2,190	2,850	4,420	4,130	1,450
24	2,420	4,320	7,110	2,360	3,210	4,020	3,190	2,030	2,540	3,880	3,670	1,440
25	2,370	6,210	6,820	2,390	3,080	3,260	2,840	1,900	2,350	3,450	3,010	1,400
26	2,250	5,090	5,340	2,340	2,790	2,860	2,680	1,790	2,220	3,160	2,640	1,460
27	2,200	3,950	4,050	2,300	2,560	2,720	2,690	1,750	5,300	2,960	2,830	1,560
28	2,190	3,790	3,580	2,210	2,770	6,800	2,580	1,720	8,800	3,560	2,550	1,510
29	2,340	3,520	3,330	2,180	---	8,090	2,540	1,700	7,050	3,820	2,240	1,430
30	2,370	3,150	3,180	2,370	---	7,000	2,540	1,660	4,850	3,980	4,140	1,430
31	2,200	---	3,040	2,750	---	4,750	---	1,640	---	3,720	6,220	---
TOTAL	94,480	103,030	120,770	90,600	72,240	98,540	107,130	66,010	121,930	161,640	105,740	57,870
MEAN	3,048	3,434	3,896	2,923	2,580	3,179	3,571	2,129	4,064	5,214	3,411	1,929
MAX	7,570	6,210	7,110	7,270	4,920	8,090	5,590	2,980	8,800	10,100	6,220	4,750
MIN	2,190	2,050	2,520	2,180	1,970	2,130	2,540	1,640	1,710	2,960	2,240	1,400
CFSM	2.29	2.58	2.92	2.19	1.94	2.39	2.68	1.60	3.05	3.91	2.56	1.45
IN.	2.64	2.88	3.37	2.53	2.02	2.75	2.99	1.84	3.41	4.51	2.95	1.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2005, BY WATER YEAR (WY)

MEAN	1,762	2,032	2,435	2,873	3,301	3,695	3,381	2,664	2,201	1,818	1,780	1,681
MAX	8,172	5,640	5,465	6,279	7,373	7,170	6,149	5,585	4,191	5,214	4,905	10,430
(WY)	(1965)	(1980)	(1962)	(1998)	(1998)	(1975)	(1983)	(2003)	(1989)	(2005)	(1994)	(2004)
MIN	450	651	778	715	1,547	1,235	1,191	1,066	700	708	577	384
(WY)	(1955)	(1955)	(1956)	(1956)	(2002)	(1988)	(1986)	(1988)	(1988)	(1986)	(2002)	(1954)

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SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1943 - 2005	
ANNUAL TOTAL	1,166,330		1,199,980		2,464	
ANNUAL MEAN	3,187		3,288		3,573	
HIGHEST ANNUAL MEAN					1,229	1949
LOWEST ANNUAL MEAN					1,229	1988
HIGHEST DAILY MEAN	32,400	Sep 8	10,100	Jul 8	32,400	Sep 8, 2004
LOWEST DAILY MEAN	1,200	Aug 23	1,400	Sep 25	292	Sep 27, 1954
ANNUAL SEVEN-DAY MINIMUM	1,310	Aug 17	1,460	Sep 24	313	Sep 24, 1954
MAXIMUM PEAK FLOW			12,900	Jul 7	54,000	Nov 6, 1977
MAXIMUM PEAK STAGE			5.92	Jul 7	13.64	Nov 6, 1977
INSTANTANEOUS LOW FLOW			1,210	Sep 18	193*	Sep 13, 1954
ANNUAL RUNOFF (CFSM)	2.39		2.47		1.85	
ANNUAL RUNOFF (INCHES)	32.57		33.51		25.13	
10 PERCENT EXCEEDS	4,740		5,360		4,390	
50 PERCENT EXCEEDS	2,280		2,830		1,970	
90 PERCENT EXCEEDS	1,570		2,000		898	

* See REMARKS.

