

## TENNESSEE RIVER BASIN

03453500 FRENCH BROAD RIVER AT MARSHALL, NC

LOCATION.--Lat 35°47'10", 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 mi<sup>2</sup>.

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 sea level (levels by Tennessee Valley Authority). Satellite and telephone telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. 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 ft<sup>3</sup>/s. Flood of Aug. 30, 1940, reached a stage of 16.6 ft; discharge, 70,000 ft<sup>3</sup>/s, from high water marks, flood profiles, and studies by Tennessee Valley Authority.

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	670	563	1070	e1010	1440	1980	4390	1300	1080	1120	1410	907
2	662	563	1010	e1000	1280	1780	3580	1260	1410	1070	1410	954
3	650	567	970	e990	1210	1710	3110	1200	1400	1070	1290	1120
4	636	573	975	e980	1170	1890	3010	1140	1160	2200	2210	1650
5	622	597	944	e971	1150	2000	2740	1110	1040	2340	1820	1570
6	610	610	911	e971	1120	1810	2500	1100	992	1400	1550	1310
7	587	602	893	e961	1100	1660	2350	1110	1000	1120	1520	1100
8	581	590	869	e951	1080	1540	2210	1070	1240	947	1500	960
9	567	846	861	e941	1060	1510	2080	1050	1200	985	1480	868
10	554	3210	840	e932	1130	1440	1960	1050	1100	913	1200	1100
11	554	2970	843	917	1120	1380	1850	1020	1260	858	1230	959
12	554	1510	835	964	1140	1350	1770	1050	1000	800	1200	953
13	574	1100	827	1030	1130	1620	2230	1030	915	770	1240	846
14	567	974	e880	1030	1350	1880	2130	975	866	1010	1250	787
15	555	877	e1200	973	1420	2070	2040	919	902	772	1280	865
16	544	837	e1500	962	1400	2880	1980	885	1180	714	1150	843
17	553	824	e3200	950	2320	2470	1800	879	989	688	968	734
18	553	831	e3500	1010	2200	2060	1680	867	823	671	932	690
19	535	844	e2400	2470	1760	1850	1600	1100	766	655	925	684
20	540	835	1840	5250	1530	1840	1530	1390	719	844	848	729
21	546	823	1570	3570	1450	3330	1480	1230	798	1100	765	1370
22	548	786	e1420	2350	1490	4270	1430	1120	811	995	710	1160
23	549	766	e1290	1890	1610	4280	1390	1370	1480	796	686	879
24	552	749	e1210	1660	1600	3560	1370	1300	1070	719	1060	1780
25	551	1000	e1170	1520	1810	3130	1390	1360	887	760	1020	2880
26	578	3180	e1150	1370	3860	2800	1400	1670	916	1790	818	1990
27	611	2430	e1130	1310	3010	2420	1310	1520	1050	1840	790	1340
28	595	1590	e1110	1250	2280	2230	1260	1220	1320	1450	955	1140
29	581	1300	1080	1230	---	2530	1210	1150	979	2550	1170	1020
30	578	1140	e1050	1310	---	6460	1180	1150	977	3230	1040	938
31	575	---	e1020	1580	---	5840	---	1040	---	1830	943	---
TOTAL	17932	34087	39568	44303	44220	77570	59960	35635	31330	38007	36370	34126
MEAN	578	1136	1276	1429	1579	2502	1999	1150	1044	1226	1173	1138
MAX	670	3210	3500	5250	3860	6460	4390	1670	1480	3230	2210	2880
MIN	535	563	827	917	1060	1350	1180	867	719	655	686	684
CFSM	.43	.85	.96	1.07	1.19	1.88	1.50	.86	.92	.88	.88	.85
IN.	.50	.95	1.11	1.24	1.23	2.17	1.67	1.00	.87	1.06	1.02	.95

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2001, BY WATER YEAR (WY)

	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
MEAN	1764	2007	2406	2919	3341	3756	3404	2653	2170	1745	1756	1523	
MAX	8172	5640	5465	6279	7373	7170	6149	5478	4191	5071	4905	3857	
(WY)	1965	1980	1962	1998	1998	1975	1983	1973	1989	1949	1994	1950	
MIN	450	651	778	715	1571	1235	1191	1066	700	708	635	384	
(WY)	1955	1955	1956	1956	1988	1988	1986	1988	1988	1986	1956	1954	

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SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1943 - 2001	
ANNUAL TOTAL	548571		493108		2449	
ANNUAL MEAN	1499		1351		3573	
HIGHEST ANNUAL MEAN					1229	
LOWEST ANNUAL MEAN					1988	
HIGHEST DAILY MEAN	9760	Apr 4	6460	Mar 30	30800	Oct 5 1964
LOWEST DAILY MEAN	535	Oct 19	535	Oct 19	292	Sep 27 1954
ANNUAL SEVEN-DAY MINIMUM	546	Oct 16	546	Oct 16	313	Sep 24 1954
MAXIMUM PEAK FLOW			6830		54000	
MAXIMUM PEAK STAGE			4.11		13.64	
INSTANTANEOUS LOW FLOW			481		193*	
ANNUAL RUNOFF (CFSM)	1.13		1.01		1.84	
ANNUAL RUNOFF (INCHES)	15.32		13.77		24.98	
10 PERCENT EXCEEDS	2650		2330		4380	
50 PERCENT EXCEEDS	1200		1120		1950	
90 PERCENT EXCEEDS	606		644		896	

e Estimated.  
 \* See REMARKS.

