

## TENNESSEE RIVER BASIN

03451500 FRENCH BROAD RIVER AT ASHEVILLE, NC

LOCATION.--Lat 35°36'33", long 82°34'43", Buncombe County, Hydrologic Unit 06010105, on right bank 27 ft upstream from Pearson Bridge (Secondary Road 1348) at Asheville, 1.4 mi downstream of bridge on U.S. Highways 19 and 23, 3.2 mi downstream of Swannanoa River, and at mile 145.8.

DRAINAGE AREA.--945 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1895 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1895-1909, 1901(M), 1914-15(M), 1917(M), 1920-22(M),

GAGE.--Water-stage recorder. Datum of gage is 1,950.28 ft above NGVD of 1929. Sept. 17, 1895, to Dec. 31, 1901, nonrecording gage at present site at different datum. Mar. 19, 1903, to July 15, 1916, and Jan. 1, 1917, to Sept. 30, 1922, nonrecording gage at Smith Bridge 1.5 mi upstream at datum 1961.80 ft. Oct. 1, 1922, to Aug. 9, 1930, nonrecording gage at present site and datum. Satellite and telephone telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Many small diversions from tributaries upstream from station for water supply. Diversions by City of Asheville and others from upstream tributaries in the Swannanoa River basin (station 03451000) totaled about 27.7 ft<sup>3</sup>/s and 29.5 ft<sup>3</sup>/s was discharged 4 mi downstream from station as treated effluent. Slight diurnal fluctuation and occasional slight regulation at low flow caused by power plant 46 mi upstream and small reservoirs upstream from station. Maximum discharge for period of record, from rating curve extended above 43,000 ft<sup>3</sup>/s, by logarithmic plotting; maximum gage height, 23.10, from floodmarks. Minimum discharge for period of record and current water year also occurred Sept. 14, 2002.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed since at least 1791, that of July 16, 1916, and flood of June 17, 1876, reached a stage of 18 ft, from studies by Tennessee Valley Authority.

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	890	773	1070	923	1470	951	2240	1640	773	705	429	397
2	854	756	1040	887	1420	1060	2020	1780	865	685	413	392
3	803	695	918	e875	1340	2460	1810	1520	724	705	431	375
4	788	675	861	e862	1280	2190	1690	2100	709	662	401	359
5	771	655	812	e862	1200	1580	1580	3080	1360	645	392	344
6	747	649	800	1060	1180	1410	1510	2280	1520	577	372	311
7	762	669	799	1540	1660	1320	1440	1750	1570	526	343	280
8	751	677	787	1300	2290	1250	1400	1520	1070	488	327	272
9	709	677	779	1130	1840	1220	1440	1360	862	457	316	257
10	680	643	864	1080	1630	1210	2030	1290	760	447	307	244
11	685	635	1550	1020	1560	1190	2030	1360	700	612	303	230
12	720	631	1540	994	1450	1170	1720	1220	662	621	306	223
13	781	651	1280	957	1380	1760	1710	1220	649	784	295	215
14	1080	674	1290	932	1330	2380	1740	1470	651	912	281	282
15	2190	649	1270	906	1290	1860	1710	1350	651	1110	282	797
16	1600	632	1190	872	1250	1670	1640	1100	619	1010	396	1270
17	1140	610	1170	857	1220	2000	1550	1010	588	765	612	970
18	984	604	1770	860	1170	2450	1680	1250	568	661	585	611
19	920	604	1810	1190	1130	2120	1620	1250	547	601	549	499
20	875	603	1480	2250	1110	1900	1550	1010	521	560	605	451
21	859	600	1300	2150	1180	2090	1480	943	510	532	491	657
22	836	596	1190	1900	1170	2200	1400	914	488	535	401	1340
23	811	618	1150	2300	1100	1890	1330	861	481	497	350	1760
24	806	1000	1200	3260	1060	1720	1270	816	501	484	360	1120
25	794	1650	1350	3440	1040	1620	1490	784	541	573	379	822
26	768	1550	1190	2980	1020	1620	1440	749	605	747	409	1810
27	754	1260	1130	2320	995	1910	1290	855	1680	593	789	4710
28	736	1050	1080	1980	974	1710	1250	1480	1920	789	799	5310
29	734	999	1030	1770	---	1550	1220	1040	978	662	603	4540
30	733	1020	998	1630	---	1850	1150	829	812	539	457	2420
31	738	---	964	1530	---	2190	---	766	---	457	413	---
TOTAL	27299	23505	35662	46617	36739	53501	47430	40597	24885	19941	13396	33268
MEAN	880.6	783.5	1150	1504	1312	1726	1581	1310	829.5	643.3	432.1	1109
MAX	2190	1650	1810	3440	2290	2460	2240	3080	1920	1110	799	5310
MIN	680	596	779	857	974	951	1150	749	481	447	281	215
CFSM	0.93	0.83	1.22	1.59	1.39	1.83	1.67	1.39	0.88	0.68	0.46	1.17
IN.	1.07	0.93	1.40	1.84	1.45	2.11	1.87	1.60	0.98	0.78	0.53	1.31

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 2002, BY WATER YEAR (WY)

MEAN	1575	1613	2080	2424	2659	3007	2743	2172	1865	1682	1671	1448
MAX	7025	5121	5700	6068	6364	7928	5705	4961	5774	11500	8362	4967
(WY)	1965	1980	1915	1937	1998	1899	1899	1973	1909	1916	1901	1906
MIN	353	507	636	548	1083	1037	973	852	547	559	328	346
(WY)	1955	1932	1956	1956	1931	1988	1986	2001	1988	1986	1925	1954

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SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1896 - 2002	
ANNUAL TOTAL	412023		402840			
ANNUAL MEAN	1129		1104		2076	
HIGHEST ANNUAL MEAN					3671	1901
LOWEST ANNUAL MEAN					1004	1988
HIGHEST DAILY MEAN	5410	Mar 30	5310	Sep 28	66000	Jul 16 1916
LOWEST DAILY MEAN	469	Jun 20	215	Sep 13	215	Sep 13 2002
ANNUAL SEVEN-DAY MINIMUM	589	Jun 15	246	Sep 7	246	Sep 7 2002
MAXIMUM PEAK FLOW			5600		Sep 28	110000*
MAXIMUM PEAK STAGE			4.11		Sep 28	23.10*
INSTANTANEOUS LOW FLOW			215*		Sep 13	215*
ANNUAL RUNOFF (CFSM)	1.19		1.17		2.20	
ANNUAL RUNOFF (INCHES)	16.22		15.86		29.84	
10 PERCENT EXCEEDS	1820		1850		3630	
50 PERCENT EXCEEDS	933		970		1620	
90 PERCENT EXCEEDS	653		441		762	

e Estimated.  
 \* See REMARKS.

