

03451500 FRENCH BROAD RIVER AT ASHEVILLE, NC

LOCATION.--Lat 35°36'33", long 82°34'42", 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 mi².

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 28.6 ft³/s and 35.3 ft³/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 ft³/s, by logarithmic plotting; maximum gage height, 23.10, from floodmarks. Minimum discharge for period of record also occurred Sept. 14, 2002. Minimum discharge for current water year also occurred Oct. 15.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,520	910	1,250	2,620	1,430	2,600	2,260	2,430	2,400	2,160	2,970	3,000
2	1,200	835	1,210	2,920	1,360	2,440	2,150	2,970	2,270	7,870	3,040	4,040
3	1,030	785	1,190	2,760	1,310	2,280	2,070	3,210	2,300	7,770	3,030	2,910
4	889	755	1,210	2,570	1,390	2,130	2,000	2,790	2,610	6,790	3,380	2,510
5	800	768	2,050	2,350	1,480	2,040	2,190	2,930	2,490	5,020	4,990	2,280
6	757	1,310	2,850	2,210	1,380	3,670	2,290	11,300	2,230	3,690	3,330	2,030
7	700	1,470	2,100	2,070	1,420	3,840	2,880	13,500	3,280	3,220	3,040	1,890
8	668	1,100	1,760	1,990	1,420	2,910	3,820	11,400	5,780	3,060	3,400	1,830
9	647	963	1,620	1,920	1,340	2,570	3,590	9,250	4,890	2,790	2,990	1,740
10	637	929	1,550	1,850	1,340	2,360	4,690	7,420	3,290	3,090	2,770	1,670
11	659	2,090	2,680	1,750	1,400	2,190	7,890	4,600	2,830	2,810	2,920	1,610
12	661	3,940	2,740	1,680	1,360	2,080	6,510	3,800	2,790	2,450	2,790	1,570
13	636	3,150	2,770	1,640	1,310	1,990	4,600	3,350	2,660	2,410	2,610	1,520
14	602	2,260	3,890	1,610	1,340	1,920	3,750	3,090	2,580	2,680	2,530	1,500
15	775	1,800	3,010	1,580	1,720	1,860	3,260	2,990	2,550	2,680	2,510	1,660
16	3,190	3,100	2,460	1,530	1,920	2,530	2,980	2,990	2,960	2,500	2,440	1,740
17	2,910	4,750	2,180	1,550	2,180	2,520	2,790	3,050	3,120	2,760	2,350	1,530
18	1,620	3,350	1,980	e1,510	2,130	2,330	4,390	3,230	2,900	2,730	2,360	1,440
19	1,200	2,530	1,850	e1,500	1,910	2,580	4,400	3,400	3,940	3,350	2,180	1,390
20	1,020	2,170	3,370	e1,500	1,810	6,170	3,430	3,060	2,970	2,840	2,020	1,350
21	923	2,040	3,710	e1,480	1,720	7,300	3,180	2,890	2,580	2,470	2,100	1,320
22	956	2,030	2,700	e1,470	5,630	6,120	3,110	4,560	2,320	2,480	2,310	1,600
23	875	1,810	2,350	e1,440	8,820	3,950	2,840	5,430	2,160	2,500	2,170	5,330
24	796	1,660	4,650	e1,410	7,160	3,190	2,610	4,720	2,050	2,360	1,950	4,490
25	762	1,570	6,480	e1,390	4,820	2,870	2,510	4,310	1,950	2,080	1,850	2,760
26	804	1,500	5,130	1,380	3,130	2,650	2,500	3,610	1,860	1,920	1,740	2,110
27	851	1,440	3,300	1,320	2,970	2,510	2,430	3,150	1,800	1,830	1,680	1,960
28	780	1,380	2,810	1,290	2,870	2,380	2,280	2,890	1,960	1,800	1,630	2,060
29	933	1,330	2,540	1,310	---	2,290	2,180	2,770	1,910	1,960	1,750	1,860
30	1,100	1,300	2,350	1,460	---	e2,460	2,290	2,680	1,980	2,160	1,830	1,690
31	1,040	---	2,200	1,540	---	2,520	---	2,530	---	3,000	2,200	---
TOTAL	31,941	55,025	81,940	54,600	68,070	91,250	97,870	140,300	81,410	97,230	78,860	64,390
MEAN	1,030	1,834	2,643	1,761	2,431	2,944	3,262	4,526	2,714	3,136	2,544	2,146
MAX	3,190	4,750	6,480	2,920	8,820	7,300	7,890	13,500	5,780	7,870	4,990	5,330
MIN	602	755	1,190	1,290	1,310	1,860	2,000	2,430	1,800	1,800	1,630	1,320
CFSM	1.09	1.94	2.80	1.86	2.57	3.11	3.45	4.79	2.87	3.32	2.69	2.27
IN.	1.26	2.17	3.23	2.15	2.68	3.59	3.85	5.52	3.20	3.83	3.10	2.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 2003, BY WATER YEAR (WY)

MEAN	1,570	1,615	2,085	2,418	2,657	3,007	2,748	2,194	1,873	1,695	1,679	1,455
MAX	7,025	5,121	5,700	6,068	6,364	7,928	5,705	4,961	5,774	11,500	8,362	4,967
(WY)	(1965)	(1980)	(1915)	(1937)	(1998)	(1899)	(1899)	(1973)	(1909)	(1916)	(1901)	(1906)
MIN	353	507	636	548	1,083	1,037	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1896 - 2003	
ANNUAL TOTAL	485,280		942,886			
ANNUAL MEAN	1,330		2,583		2,080	
HIGHEST ANNUAL MEAN					3,671	1901
LOWEST ANNUAL MEAN					1,004	1988
HIGHEST DAILY MEAN	6,480	Dec 25	13,500	May 7	66,000	Jul 16, 1916
LOWEST DAILY MEAN	215	Sep 13	602	Oct 14	215	Sep 13, 2002
ANNUAL SEVEN-DAY MINIMUM	246	Sep 7	644	Oct 8	246	Sep 7, 2002
MAXIMUM PEAK FLOW			14,700	May 6	110,000*	Jul 16, 1916
MAXIMUM PEAK STAGE			7.70	May 6	23.10*	Jul 16, 1916
INSTANTANEOUS LOW FLOW			590*	Oct 14	215*	Sep 13, 2002
ANNUAL RUNOFF (CFSM)	1.41		2.73		2.20	
ANNUAL RUNOFF (INCHES)	19.10		37.12		29.91	
10 PERCENT EXCEEDS	2,350		4,150		3,640	
50 PERCENT EXCEEDS	1,170		2,290		1,620	
90 PERCENT EXCEEDS	441		1,210		765	

e Estimated.
 * See REMARKS.

