

03451500 FRENCH BROAD RIVER AT ASHEVILLE, NC

LOCATION.--Lat 35°36'32", long 82°34'41", 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 29.6 ft³/s and 35.2 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 Sept. 30.

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 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,020	1,810	3,130	2,530	2,090	2,890	3,350	2,270	1,500	3,640	3,110	3,990
2	4,730	1,770	3,400	2,440	1,950	2,380	3,550	2,040	3,060	3,580	2,790	2,910
3	4,030	2,120	2,930	2,370	2,200	2,130	3,830	1,900	4,090	3,280	2,510	2,530
4	3,690	4,100	2,710	2,310	2,520	2,030	3,300	1,830	3,040	3,100	2,350	2,270
5	3,420	5,540	2,540	2,270	2,260	1,990	3,010	1,790	2,570	3,500	2,330	2,120
6	3,190	3,960	2,470	2,230	2,090	1,960	2,820	1,790	2,270	3,000	2,330	1,980
7	3,040	2,880	2,870	2,180	1,990	1,900	2,710	1,750	2,570	7,390	2,670	1,870
8	2,890	2,560	3,060	2,150	1,940	2,100	3,090	1,720	2,450	9,870	4,450	1,800
9	2,790	2,330	3,510	2,190	1,920	2,210	3,390	1,690	2,940	8,020	4,030	1,750
10	2,720	2,170	5,750	2,080	1,910	2,020	2,940	1,770	2,470	4,920	3,470	1,670
11	2,650	2,090	5,170	2,020	1,830	1,910	2,700	1,850	2,760	4,650	3,130	1,590
12	2,550	3,140	3,860	1,970	1,780	1,850	2,600	1,780	3,210	7,960	2,740	1,540
13	2,690	4,600	3,310	2,030	1,760	1,790	3,140	1,670	7,750	7,970	2,610	1,510
14	2,580	3,480	2,980	5,590	1,810	1,900	3,660	1,690	7,860	7,650	2,710	1,460
15	2,420	2,850	2,760	4,960	1,920	1,890	3,250	1,750	7,240	7,420	2,380	1,420
16	2,320	2,610	2,630	3,370	1,830	1,840	2,880	1,850	6,500	6,140	2,260	1,410
17	2,190	2,460	2,530	2,870	1,750	2,100	2,660	1,710	3,870	4,840	2,430	1,540
18	2,130	2,330	2,460	2,600	1,690	2,030	2,530	1,580	3,050	4,770	3,550	1,490
19	2,190	2,230	2,390	2,450	1,630	1,860	2,430	1,550	3,000	4,250	4,100	1,350
20	2,280	2,140	2,270	2,370	1,680	1,800	2,320	2,450	3,260	4,670	2,990	1,290
21	2,170	2,090	2,180	2,310	2,540	1,750	2,230	2,500	3,420	4,860	2,870	1,270
22	2,060	2,020	2,160	2,230	3,120	1,740	2,330	2,100	2,930	4,220	2,920	1,250
23	2,040	2,180	4,570	2,130	2,550	2,800	2,650	1,830	2,630	3,900	3,340	1,230
24	2,140	3,110	6,580	1,970	2,360	3,000	2,460	1,690	2,360	3,440	3,180	1,210
25	2,080	4,900	6,270	2,010	2,320	2,450	2,210	1,580	2,180	3,100	2,590	1,180
26	1,970	4,000	4,430	1,980	2,120	2,200	2,110	1,510	2,100	2,860	2,290	1,230
27	1,920	3,170	3,360	1,930	1,990	2,190	2,140	1,470	6,540	2,890	2,650	1,310
28	1,890	3,140	3,030	1,860	2,370	6,530	2,060	1,460	9,000	3,010	2,110	1,240
29	1,960	2,950	2,850	1,840	---	7,340	2,010	1,450	6,270	3,510	1,980	1,190
30	2,030	2,660	2,730	2,140	---	5,850	2,050	1,430	4,340	3,530	4,140	1,190
31	1,920	---	2,640	2,400	---	3,720	---	1,420	---	3,320	5,460	---
TOTAL	83,700	87,390	103,530	75,780	57,920	80,150	82,410	54,870	117,230	149,260	92,470	49,790
MEAN	2,700	2,913	3,340	2,445	2,069	2,585	2,747	1,770	3,908	4,815	2,983	1,660
MAX	7,020	5,540	6,580	5,590	3,120	7,340	3,830	2,500	9,000	9,870	5,460	3,990
MIN	1,890	1,770	2,160	1,840	1,630	1,740	2,010	1,420	1,500	2,860	1,980	1,180
CFSM	2.86	3.08	3.53	2.59	2.19	2.74	2.91	1.87	4.14	5.10	3.16	1.76
IN.	3.29	3.44	4.08	2.98	2.28	3.16	3.24	2.16	4.61	5.88	3.64	1.96

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 2005, BY WATER YEAR (WY)

MEAN	1,580	1,639	2,103	2,412	2,658	2,992	2,741	2,186	1,893	1,723	1,688	1,536
MAX	7,025	5,121	5,700	6,068	6,364	7,928	5,705	4,961	5,774	11,500	8,362	10,210
(WY)	(1965)	(1980)	(1915)	(1937)	(1998)	(1899)	(1899)	(1973)	(1909)	(1916)	(1901)	(2004)
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 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1896 - 2005	
ANNUAL TOTAL	1,055,332		1,034,500		2,093	
ANNUAL MEAN	2,883		2,834		3,671	
HIGHEST ANNUAL MEAN					1,004	1901
LOWEST ANNUAL MEAN					1,004	1988
HIGHEST DAILY MEAN	34,700	Sep 8	9,870	Jul 8	66,000	Jul 16, 1916
LOWEST DAILY MEAN	894	Aug 23	1,180	Sep 25	215	Sep 13, 2002
ANNUAL SEVEN-DAY MINIMUM	986	Aug 17	1,220	Sep 24	246	Sep 7, 2002
MAXIMUM PEAK FLOW			12,200	Jul 7	110,000*	Jul 16, 1916
MAXIMUM PEAK STAGE			6.57	Jul 7	23.10*	Jul 16, 1916
INSTANTANEOUS LOW FLOW			1,160*	Sep 29	215*	Sep 13, 2002
ANNUAL RUNOFF (CFSM)	3.05		3.00		2.22	
ANNUAL RUNOFF (INCHES)	41.54		40.72		30.10	
10 PERCENT EXCEEDS	4,100		4,580		3,640	
50 PERCENT EXCEEDS	2,040		2,430		1,640	
90 PERCENT EXCEEDS	1,310		1,690		771	

* See REMARKS.

