

Water-Data Report 2008

03513000 TUCKASEGEE RIVER AT BRYSON CITY, NC

Upper Tennessee Basin
Tuckasegee Subbasin

LOCATION.--Lat 35°25'39", long 83°26'49" referenced to North American Datum of 1983, Swain County, NC, Hydrologic Unit 06010203, on left bank 400 ft downstream of bridge on Secondary Road 1364, Everett Street, in Bryson City, 0.6 mi downstream of Deep Creek, and at river mile 12.6.

DRAINAGE AREA.--655 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1897 to December 1981, October 1983 to January 1995, April 1996 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 523: 1916, 1918-20. WSP 823: Drainage area. WSP 1306: 1898-1913. WSP 1336: 1907, 1915(M), 1916-20, 1921-29(M), 1933-34(M).

GAGE.--Water-stage recorder. Datum of gage is 1,714.54 ft above NGVD of 1929 (levels by Tennessee Valley Authority). November 7, 1897 to February 2, 1914, and May 18, 1920 to June 27, 1927, nonrecording gage at bridge 400 ft upstream at datum of 1,716.54 ft. February 3, 1914 to May 17, 1920, water-stage recorder at site 200 ft upstream at datum of 1,716.54 ft. June 28, 1927 to September 30, 1960, water-stage recorder at present site at datum of 1,716.54 ft. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Considerable diurnal fluctuation caused by power plants upstream from station. Flow regulated by Thorpe Reservoir, Cedar Cliff Lake, Bear Creek Lake, East Fork Lake and Wolf Creek Lake (Tennessee Creek Project lakes), and two small reservoirs with a combined capacity of 250 ft³/s-day. Maximum discharge for period of record, from rating curve extended above 28,000 ft³/s on basis of slope-area measurement of peak flow. Minimum discharge for period of record and minimum daily discharge for period of record also occurred September 10, 1925, caused by filling reservoir on Oconaluftee River. Minimum daily discharge during normal regulation: 186 ft³/s, October 13, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1840, Mar. 6, 1867, and June 1876 reached stages of 22, 19, and 19 ft, respectively, present site and datum, from studies by Tennessee Valley Authority; discharge not determined. The flood in May 1840 exceeded all other observed floods at this location.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	278	370	535	1,480	2,790	1,390	1,410	1,040	944	537	611	1,060
2	303	445	588	1,260	2,590	1,350	1,350	881	722	493	523	614
3	315	427	730	1,100	1,980	1,340	1,330	847	665	479	452	656
4	334	352	625	868	1,940	4,760	1,560	934	707	438	388	658
5	396	393	528	763	2,030	5,310	2,190	870	697	498	447	614
6	320	448	585	791	2,520	3,350	2,720	854	624	558	523	621
7	330	394	563	779	2,350	3,050	1,910	829	605	511	528	591
8	320	364	567	775	1,880	3,260	2,040	791	744	461	484	508
9	336	356	660	906	2,090	2,710	1,340	956	558	754	489	513
10	374	356	742	1,070	1,880	2,450	1,550	1,100	590	760	469	482
11	346	309	615	3,980	1,630	2,270	1,360	1,120	696	737	408	439
12	328	307	427	2,160	1,200	2,130	1,660	1,340	653	592	399	331
13	264	310	458	1,640	1,300	2,010	1,170	972	598	546	529	352
14	280	327	536	1,440	1,220	1,950	1,180	1,080	598	667	486	332
15	239	1,440	553	1,290	1,110	2,330	1,190	1,010	649	549	470	338
16	266	613	1,230	1,130	1,090	2,500	1,290	1,350	507	588	450	308
17	273	425	953	1,090	1,200	2,280	1,180	1,140	485	604	649	294
18	271	399	731	1,050	3,080	2,090	1,060	1,010	517	481	398	284
19	374	571	672	863	2,190	2,860	1,190	1,020	520	464	419	270
20	375	535	638	768	2,010	3,690	1,070	1,050	476	428	426	288
21	295	453	797	682	1,580	2,840	1,060	1,080	513	375	439	303
22	292	858	733	912	1,440	2,420	991	981	507	547	345	252
23	354	646	1,320	906	1,370	2,200	833	881	452	515	386	244
24	1,370	529	1,540	794	1,310	1,840	796	1,090	443	480	339	299
25	795	498	1,140	729	1,300	1,690	927	915	486	412	509	282
26	773	740	1,010	771	1,690	1,620	919	875	480	608	2,150	287
27	542	906	804	947	1,920	1,590	1,210	859	568	583	3,200	274
28	351	530	1,870	961	1,580	1,490	1,840	1,100	530	412	1,550	299
29	310	457	3,320	958	1,720	1,640	1,610	883	620	616	1,300	247
30	378	495	1,790	1,510	---	1,720	1,080	772	622	618	1,150	232
31	376	---	1,930	1,060	---	1,400	---	851	---	514	1,060	---
Total	12,158	15,253	29,190	35,433	51,990	73,530	41,016	30,481	17,776	16,825	21,976	12,272
Mean	392	508	942	1,143	1,793	2,372	1,367	983	593	543	709	409
Max	1,370	1,440	3,320	3,980	3,080	5,310	2,720	1,350	944	760	3,200	1,060
Min	239	307	427	682	1,090	1,340	796	772	443	375	339	232

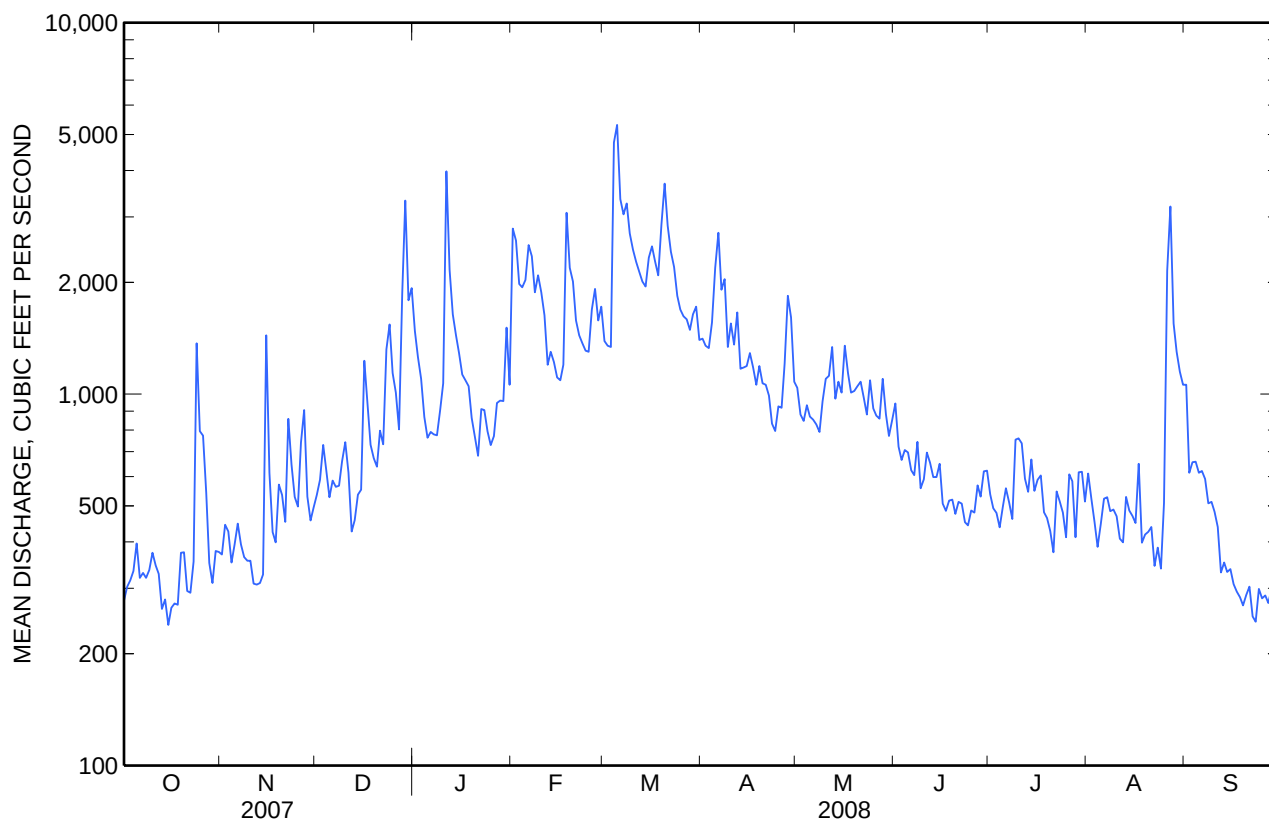
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2008^a, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	923	1,074	1,594	1,997	2,248	2,533	2,196	1,736	1,387	1,242	1,142	983
Max	3,654	2,899	3,704	4,819	5,847	6,504	4,843	3,988	3,199	3,379	4,251	4,561
(WY)	(1899)	(1907)	(1933)	(1937)	(1899)	(1899)	(1920)	(2003)	(1909)	(1916)	(1901)	(2004)
Min	347	378	457	599	736	926	841	602	531	503	220	195
(WY)	(1932)	(1932)	(1940)	(1940)	(1941)	(1988)	(1986)	(1941)	(1941)	(1925)	(1925)	(1925)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1898 - 2008 ^a	
Annual total	322,550		357,900			
Annual mean	884		978		1,584	
Highest annual mean					2,576	1899
Lowest annual mean					879	1986
Highest daily mean	5,100	Jan 1	5,310	Mar 5	^b 28,000	Mar 4, 1917
Lowest daily mean	239	Oct 15	232	Sep 30	^b 31	Sep 9, 1925
Annual seven-day minimum	264	Sep 7	274	Sep 24	97	Sep 4, 1925
Maximum peak flow			11,600	Mar 4	61,600	Aug 30, 1940
Maximum peak stage			7.76	Mar 4	15.96	Aug 30, 1940
Instantaneous low flow			224	Sep 30	^b 27	Sep 10, 1925
10 percent exceeds	1,540		1,990		2,810	
50 percent exceeds	697		732		1,260	
90 percent exceeds	326		332		600	

^aSee Period of Record.^bSee Remarks.

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PERIOD OF RECORD.--October 1999 to current year.

INSTRUMENTATION.--Tipping-bucket raingage and electronic datalogger. Satellite telemetry at station.

REMARKS.--Gage is operated in cooperation with Tennessee Valley Authority and the North Carolina Department of Environment and Natural Resources.
Precipitation data collected during freezing periods may not be accurately reflected in daily record; consequently, winter record is poor.**PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY SUM VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	0.00	0.00	0.00	0.77	0.09	0.07	0.00	0.30	0.00	0.00	0.00
2	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.02	0.00	0.22	0.00	0.14	0.02	0.00	0.00	0.00	0.00
4	0.22	0.00	0.00	0.00	0.40	1.42	0.49	0.00	0.00	0.00	0.00	0.00
5	0.01	0.10	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.20	0.00	0.00
6	0.00	0.24	0.00	0.01	0.31	0.00	0.01	0.00	0.00	0.09	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.02	0.00	0.00	0.08	0.00	0.33	0.00	0.13	0.00	0.00
9	0.00	0.00	0.43	0.04	0.00	0.00	0.00	0.01	0.00	0.20	0.00	0.14
10	0.00	0.00	0.00	1.05	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00
11	0.00	0.00	0.00	0.18	0.00	0.00	0.11	0.56	0.00	0.00	0.00	0.00
12	0.00	0.00	0.05	0.00	0.00	0.00	0.07	0.03	0.00	0.37	0.00	0.00
13	0.00	0.11	0.03	0.00	0.14	0.00	0.00	0.00	0.00	0.19	0.00	0.00
14	0.00	1.05	0.00	0.00	0.00	0.20	0.01	0.02	0.01	0.00	0.00	0.19
15	0.00	0.28	0.54	0.00	0.00	0.92	0.00	0.35	0.00	0.00	0.00	0.23
16	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.51	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00
19	0.90	0.00	0.02	0.01	0.00	0.72	0.20	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.09	0.00	0.00	0.01	0.00	0.25	0.00	0.00	0.00	0.00
21	0.00	0.66	0.23	0.00	0.02	0.00	0.00	0.00	0.05	0.03	0.00	0.00
22	0.02	0.31	0.04	0.26	0.08	0.00	0.00	0.00	0.00	0.08	0.00	0.00
23	0.50	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
24	0.30	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.75	0.00
26	0.00	0.23	0.00	0.00	0.85	0.00	0.04	0.00	0.00	0.64	1.78	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.01	0.02	0.00	0.04	0.00
28	0.00	0.00	1.31	0.00	0.00	0.00	0.71	0.34	0.17	0.95	0.01	0.00
29	0.00	0.00	0.01	0.46	0.24	0.31	0.00	0.00	0.21	0.04	0.00	0.00
30	0.00	0.00	0.37	0.05	---	0.04	0.00	0.00	0.01	0.00	0.00	0.00
31	0.00	---	0.00	0.25	---	0.06	---	0.53	---	0.01	0.00	---
Total	1.95	2.99	3.65	2.82	4.05	4.30	2.70	2.92	0.77	2.95	3.58	0.56

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