Water-Data Report 2011

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 mi^2.

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, daily discharges. WSP 823: Drainage area. WSP 1306: 1898-1929, 1933-34, maximum discharges. WSP 1336: 1898, 1900-1906, 1908-1915, 1917-1929, 1932, 1934, maximum discharges; 1906, 1915, 1916-1918, daily discharges.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,714.54 ft above National Geodetic Vertical Datum 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 streamgage.

REMARKS.--No estimated daily discharges, records good. Considerable diurnal fluctuation caused by power plants upstream from station. Flow regulated by Thorpe Lake, Cedar Cliff Lake, Bear Creek Lake, Tennessee Creek Lake, and Wolf Creek Lake, and two small reservoirs with a combined capacity of 250 ft^3/s-day. Maximum discharge for period of record, from rating curve extended above 28,000 ft^3/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 ft^3/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.

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 03513000, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/03513000.2011.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,000	577	6,830	2,750	1,200	2,540	2,110	1,830	987	926	653	425
2	756	553	2,800	3,660	3,650	1,590	1,890	1,920	1,050	1,200	616	396
3	571	751	2,170	2,340	2,290	1,320	1,820	1,690	809	1,000	632	526
4	503	914	2,000	1,920	2,010	1,210	1,860	2,010	872	944	645	644
5	484	878	1,920	1,600	2,380	1,140	4,190	1,740	932	927	606	1,480
6	469	810	1,560	1,350	1,990	6,540	2,630	1,580	727	903	678	4,080
7	452	712	1,430	1,290	1,810	4,250	2,400	1,640	745	924	595	1,040
8	503	737	1,350	1,260	1,740	3,080	2,050	1,590	770	871	513	783
9	618	632	1,320	1,260	1,570	4,900	2,160	1,490	846	1,100	546	665
10	661	605	1,070	1,230	1,540	5,550	1,860	1,510	918	959	565	611
11	548	560	999	1,140	1,450	4,330	1,780	1,320	953	908	541	621
12	477	561	991	1,070	1,190	3,570	2,320	1,230	1,000	896	474	502
13	545	564	957	1,010	1,110	3,130	2,230	1,330	1,310	861	530	421
14	557	473	1,000	1,010	1,040	2,800	2,110	1,560	842	824	869	401
15	460	626	1,010	945	1,030	2,940	2,080	1,350	1,070	1,310	532	384
16	407	1,130	1,520	873	980	2,780	6,040	1,110	1,990	908	444	380
17	401	1,270	1,530	896	966	2,540	4,020	1,190	972	778	526	407
18	396	796	1,010	944	966	2,390	3,290	897	1,110	739	535	429
19	472	683	896	1,120	1,000	2,280	2,930	952	1,990	750	617	355
20	489	621	814	1,040	954	1,970	2,790	980	1,630	770	597	356
21	488	672	813	988	945	1,710	2,590	951	1,060	826	561	519
22	396	689	1,100	925	1,070	1,690	2,320	916	1,080	774	499	594
23	499	646	1,090	877	1,010	1,480	2,110	789	2,060	854	446	589
24	466	695	1,180	877	978	1,850	1,910	971	1,540	650	523	983
25	607	718	1,180	866	1,640	1,720	1,530	939	1,300	1,080	534	644
26	834	878	1,260	1,170	1,230	1,710	1,880	1,110	1,140	1,120	481	436
27	2,000	826	1,180	1,050	1,090	2,590	2,000	1,730	1,020	807	503	407
28	1,740	761	1,130	987	1,600	2,220	2,790	1,100	955	737	417	542
29	1,070	809	1,070	956	---	2,120	2,290	1,230	986	699	371	501
30	905	3,500	991	946	---	2,620	2,140	814	1,040	761	326	468
31	614	---	977	1,030	---	2,470	---	787	---	657	389	---
Total	20,388	24,647	45,148	39,380	40,429	83,030	74,120	40,256	33,704	27,463	16,764	20,589
Mean	658	822	1,456	1,270	1,444	2,678	2,471	1,299	1,123	886	541	686
Max	2,000	3,500	6,830	3,660	3,650	6,540	6,040	2,010	2,060	1,310	869	4,080
Min	396	473	813	866	945	1,140	1,530	787	727	650	326	355

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2011[a], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	924	1,079	1,610	1,996	2,238	2,521	2,191	1,737	1,381	1,231	1,130	984
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	322	378	457	599	736	926	841	602	531	503	220	195
(WY)	(2009)	(1932)	(1940)	(1940)	(1941)	(1988)	(1986)	(1941)	(1941)	(1925)	(1925)	(1925)

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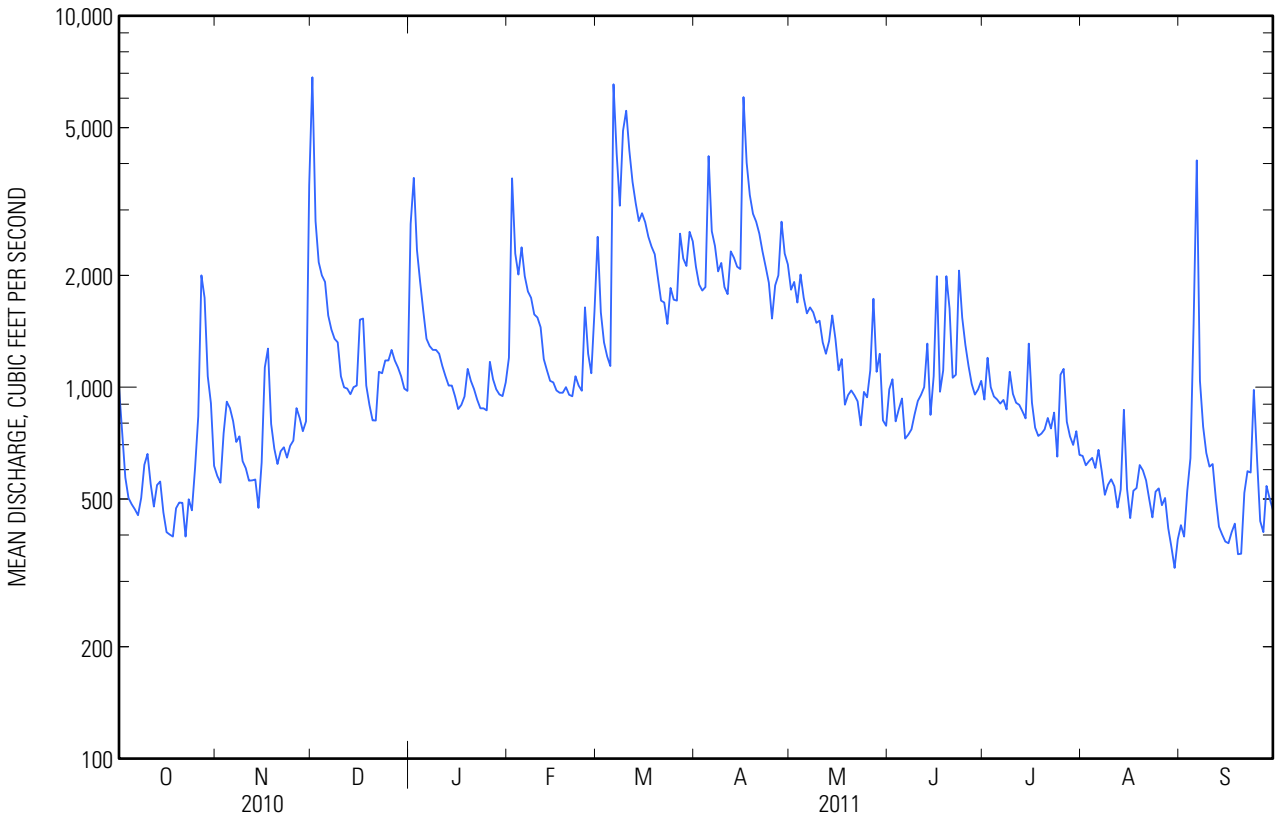
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1898 - 2011[a]	
Annual total	532,799		465,918			
Annual mean	1,460		1,276		1,581	
Highest annual mean					2,576	1899
Lowest annual mean					879	1986
Highest daily mean	8,100	Jan 25	6,830	Dec 1	28,000	Mar 4, 1917
Lowest daily mean	356	Sep 22	326	Aug 30	[b]31	Sep 9, 1925
Annual seven-day minimum	394	Sep 16	387	Sep 14	97	Sep 4, 1925
Maximum peak flow			14,600	Dec 1	[b]61,600	Aug 30, 1940
Maximum peak stage			8.82	Dec 1	15.96	Aug 30, 1940
Instantaneous low flow			293	Aug 30	[b]27	Sep 10, 1925
10 percent exceeds	2,630		2,330		2,810	
50 percent exceeds	1,130		987		1,260	
90 percent exceeds	506		499		599	

[a] See Period of Record.
[b] See Remarks



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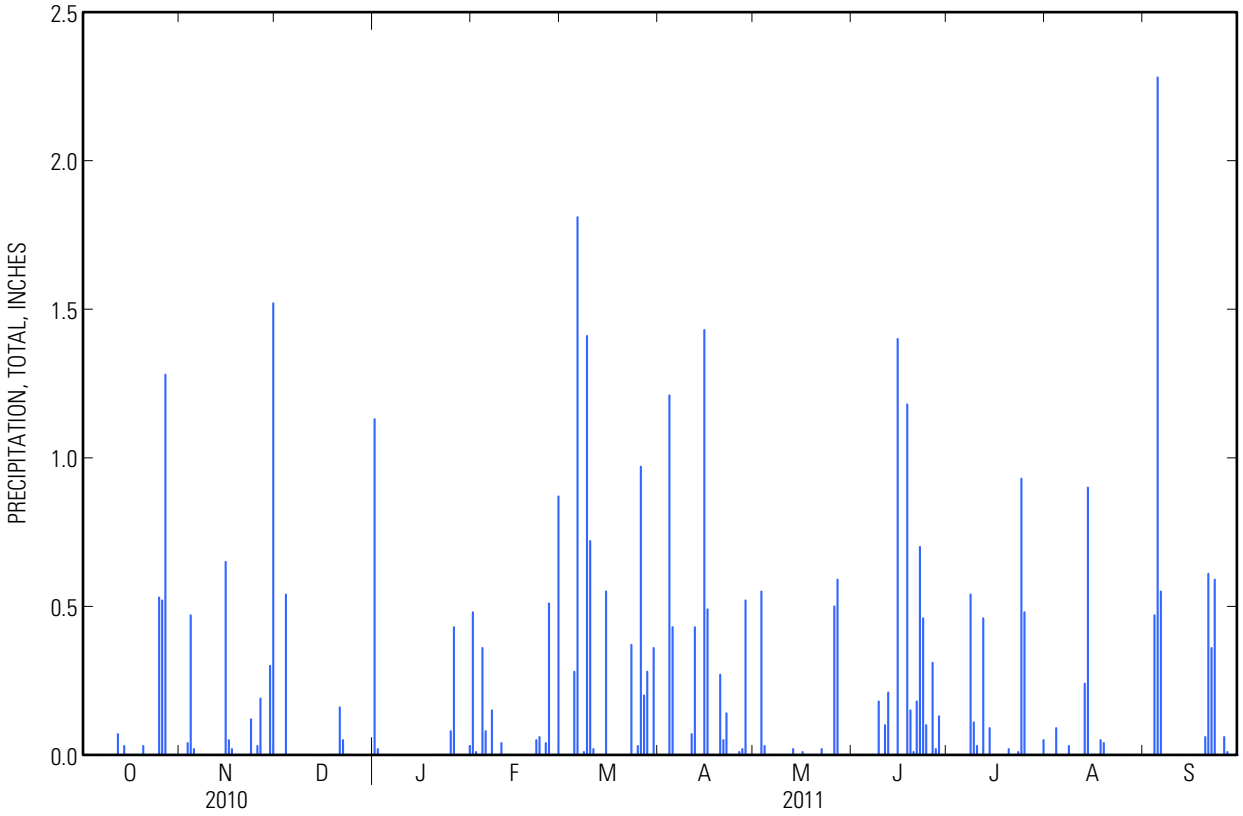
CLIMATOLOGICAL RECORDS

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.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY SUM VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	0.00	0.00	1.13	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00
4	0.00	0.47	0.54	0.00	0.36	0.00	1.21	0.03	0.00	0.00	0.09	0.47
5	0.00	0.02	0.00	---	0.08	0.28	0.43	0.00	0.00	0.00	0.00	2.28
6	0.00	0.00	0.00	---	0.00	1.81	0.00	0.00	0.00	0.00	0.00	0.55
7	0.00	0.00	0.00	---	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	---	0.00	0.01	0.00	0.00	0.00	0.54	0.03	0.00
9	0.00	0.00	0.00	---	0.00	1.41	0.00	0.00	0.18	0.11	0.00	0.00
10	0.00	0.00	0.00	---	0.04	0.72	0.00	0.00	0.00	0.03	0.00	0.00
11	0.00	0.00	0.00	---	0.00	0.02	0.07	0.00	0.10	0.00	0.00	0.00
12	0.07	0.00	---	---	0.00	0.00	0.43	0.00	0.21	0.46	0.00	0.00
13	0.00	0.00	---	---	0.00	0.00	0.00	0.02	0.00	0.00	0.24	0.00
14	0.03	0.00	---	---	0.00	0.00	0.00	0.00	0.00	0.09	0.90	0.00
15	0.00	0.65	---	---	0.00	0.55	1.43	0.00	1.40	0.00	0.00	0.00
16	0.00	0.05	---	---	0.00	0.00	0.49	0.01	0.00	0.00	0.00	0.00
17	0.00	0.02	---	---	0.00	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	1.18	0.00	0.05	0.00
19	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.15	0.00	0.04	0.00
20	0.03	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.01	0.02	0.00	0.06
21	0.00	0.00	0.16	0.00	0.05	0.00	0.05	0.00	0.18	0.00	0.00	0.61
22	0.00	0.00	0.05	0.00	0.06	0.00	0.14	0.02	0.70	0.00	0.00	0.36
23	0.00	0.12	0.00	0.00	0.00	0.37	0.00	0.00	0.46	0.01	0.00	0.59
24	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.10	0.93	0.00	0.00
25	0.53	0.03	---	0.08	0.51	0.03	0.00	0.00	0.00	0.48	0.00	0.00
26	0.52	0.19	---	0.43	0.00	0.97	0.01	0.50	0.31	0.00	0.00	0.06
27	1.28	0.00	---	0.00	0.00	0.20	0.02	0.59	0.02	0.00	0.00	0.01
28	0.00	0.00	---	0.00	0.87	0.28	0.52	0.00	0.13	0.00	0.00	0.00
29	0.00	0.30	---	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	1.52	---	0.00	---	0.36	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	0.03	---	0.00	---	0.00	---	0.05	0.00	---
Total	2.46	3.41	---	---	2.65	7.01	5.07	1.72	5.13	2.72	1.35	4.99

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