

03503000 LITTLE TENNESSEE RIVER AT NEEDMORE, NC

Upper Tennessee Basin
Upper Little Tennessee Subbasin

LOCATION.--Lat 35°20'11", long 83°31'37" referenced to North American Datum of 1983, Swain County, NC, Hydrologic Unit 06010202, on left bank on Secondary Road 1113, 0.8 mi downstream of DeHart Creek, 0.8 mi north of Needmore, 2.4 mi downstream of Brush Creek, 6.3 mi downstream of Tellico Creek, and at river mile 92.9.

DRAINAGE AREA.--436 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1943 to December 1981, October 1983 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,761.19 ft above NGVD of 1929 (levels by Tennessee Valley Authority). Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Considerable diurnal fluctuation caused by Porters Bend power plant at Lake Emory, 20 mi upstream. Minimum discharge for period of record also occurred Nov. 8, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of October 1898 and August 30, 1940, reached stages of about 13 ft and 11.5 ft, respectively, from flood profiles by Tennessee Valley Authority.

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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	181	243	308	795	1,670	906	914	587	467	293	223	321
2	178	241	296	658	1,480	855	904	562	490	264	212	285
3	179	239	312	555	1,020	824	876	555	439	252	199	259
4	194	231	379	530	955	2,610	893	554	421	246	188	234
5	218	226	246	508	892	5,480	1,180	531	399	245	179	216
6	214	228	278	488	906	2,170	1,380	513	385	291	172	209
7	210	227	255	467	1,160	1,960	1,140	503	378	317	163	204
8	197	225	267	448	938	2,430	1,010	501	369	274	162	199
9	189	225	277	444	857	1,830	937	574	359	416	164	218
10	186	225	278	456	790	1,610	897	580	347	350	156	250
11	179	223	271	1,470	737	1,420	865	648	343	304	152	235
12	170	221	264	1,020	710	1,300	924	698	335	274	145	222
13	170	222	265	774	757	1,190	839	562	325	316	144	223
14	175	230	272	668	731	1,140	790	525	325	338	151	216
15	175	445	276	597	674	1,310	761	529	357	280	155	202
16	173	376	525	552	658	1,990	728	661	336	251	148	195
17	175	274	448	716	708	1,380	702	595	332	247	146	196
18	180	256	352	896	1,960	1,230	683	545	303	234	159	197
19	210	248	327	751	1,200	1,470	705	600	292	223	157	190
20	287	244	317	673	1,010	2,770	707	552	286	217	147	182
21	227	241	399	579	926	1,760	648	702	284	214	137	177
22	200	447	481	591	979	1,500	630	572	317	253	128	174
23	428	490	627	661	966	1,330	615	525	326	256	132	170
24	1,190	333	856	608	889	1,200	601	630	298	222	139	164
25	595	299	572	559	851	1,110	588	516	274	210	237	156
26	383	345	496	544	1,030	1,060	588	490	263	239	1,680	155
27	316	568	462	525	1,130	1,030	585	476	270	241	3,450	162
28	284	429	515	504	953	991	760	484	291	218	907	168
29	268	362	999	498	907	1,040	734	519	321	263	563	164
30	257	338	829	737	---	994	610	472	335	310	423	157
31	249	---	1,140	646	---	931	---	455	---	245	372	---
Total	8,237	8,901	13,589	19,918	28,444	48,821	24,194	17,216	10,267	8,303	11,490	6,100
Mean	266	297	438	643	981	1,575	806	555	342	268	371	203
Max	1,190	568	1,140	1,470	1,960	5,480	1,380	702	490	416	3,450	321
Min	170	221	246	444	658	824	585	455	263	210	128	155
Cfs/m	0.61	0.68	1.01	1.47	2.25	3.61	1.85	1.27	0.78	0.61	0.85	0.47
In.	0.70	0.76	1.16	1.70	2.43	4.17	2.06	1.47	0.88	0.71	0.98	0.52

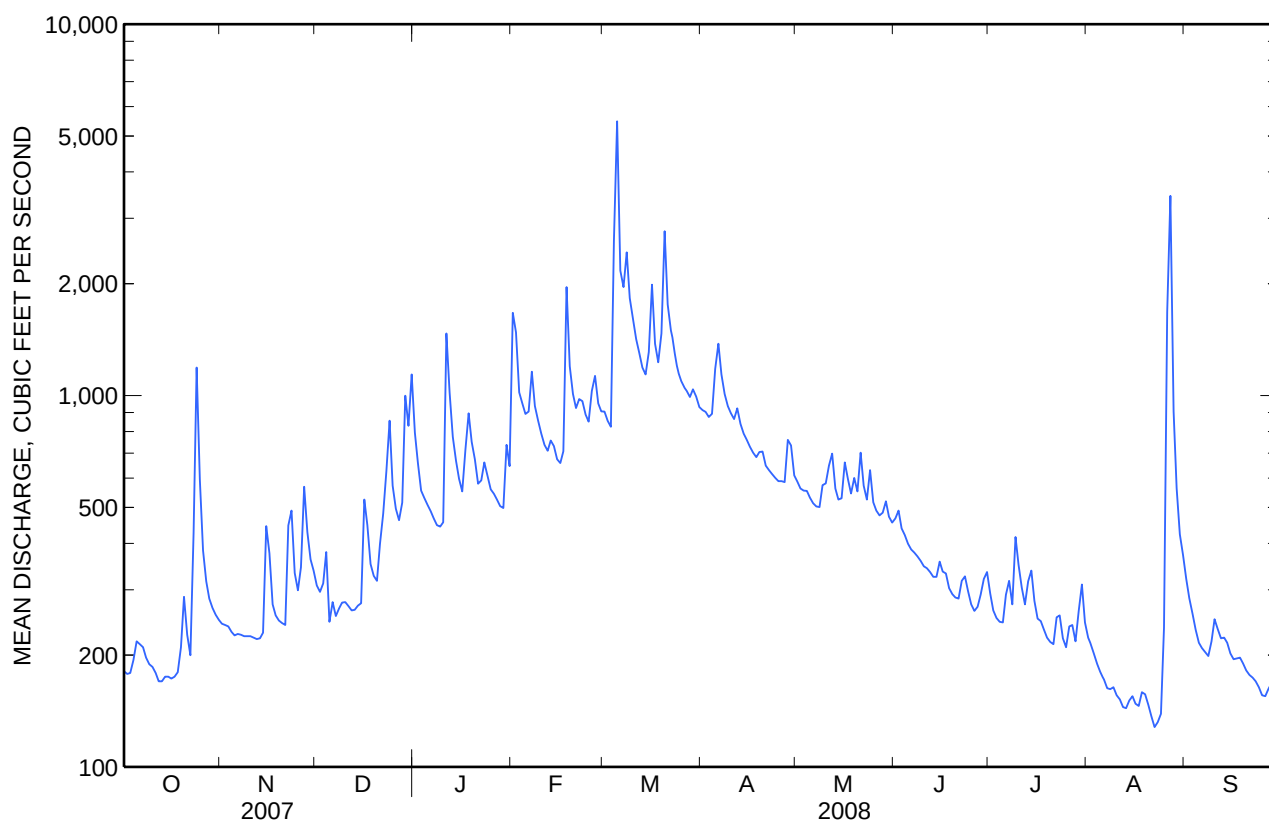
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2008^a, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	633	799	1,032	1,325	1,523	1,670	1,471	1,143	907	706	631	607
Max	2,557	2,169	2,231	2,570	3,718	3,372	2,746	2,573	2,061	2,206	1,670	2,817
(WY)	(1965)	(1980)	(1962)	(1946)	(1990)	(1990)	(1964)	(1976)	(1949)	(2005)	(1967)	(2004)
Min	192	282	368	349	660	596	553	453	342	238	213	201
(WY)	(1955)	(1955)	(1966)	(1981)	(1986)	(1988)	(1986)	(2007)	(2008)	(1986)	(1986)	(1999)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1944 - 2008 ^a	
Annual total	199,915		205,480			
Annual mean	548		561		1,037	
Highest annual mean					1,565	
Lowest annual mean					495	
Highest daily mean	4,750	Jan 1	5,480	Mar 5	17,200	Oct 5, 1964
Lowest daily mean	170	Oct 12	128	Aug 22	71	Nov 7, 1954
Annual seven-day minimum	174	Oct 11	143	Aug 18	142	Oct 2, 1986
Maximum peak flow			8,960	Mar 5	22,100	Oct 5, 1964
Maximum peak stage			7.41	Mar 5	12.87	Oct 5, 1964
Instantaneous low flow			125	Aug 22	^b 52	Nov 7, 1954
Annual runoff (cfs)	1.26		1.29		2.38	
Annual runoff (inches)	17.06		17.53		32.33	
10 percent exceeds	932		1,080		1,880	
50 percent exceeds	418		399		800	
90 percent exceeds	210		179		351	

^aSee Period of Record.^bSee Remarks.

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PERIOD OF RECORD.--October 1998 to current year.

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

REMARKS.--Gage is operated in cooperation with Tennessee Valley Authority. 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	0.81	0.01	0.28	0.00	0.34	---	---	---
2	0.00	0.00	0.10	0.00	0.00	0.00	0.01	0.00	0.00	---	---	---
3	0.00	0.00	0.03	0.00	0.25	0.00	0.20	0.02	0.00	---	---	---
4	1.04	0.00	0.00	0.00	0.33	1.62	0.61	0.00	0.00	---	---	---
5	0.00	0.01	0.01	0.00	0.00	0.00	0.72	0.00	0.00	---	---	---
6	0.00	0.07	0.00	0.01	0.27	0.00	0.00	0.00	0.24	---	---	---
7	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	---	---	---
8	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.38	0.00	---	---	---
9	0.00	0.00	0.31	0.12	0.00	0.01	0.00	0.23	0.84	---	---	---
10	0.00	0.00	0.01	1.10	0.00	0.00	0.00	0.01	0.01	---	---	---
11	0.00	0.00	0.00	0.20	0.00	0.00	0.22	0.49	0.00	---	---	---
12	0.00	0.00	0.00	0.00	0.01	0.00	0.19	0.01	0.00	---	---	---
13	0.00	0.03	0.12	0.00	0.23	0.00	0.00	0.00	0.00	---	---	---
14	0.00	1.41	0.00	0.00	0.00	0.39	0.00	0.01	0.17	---	---	---
15	0.00	0.21	0.57	0.00	0.00	1.02	0.00	0.29	0.00	---	---	---
16	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.02	0.00	---	---	---
17	0.00	0.00	0.00	0.60	1.20	0.00	0.00	0.00	0.00	---	---	---
18	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.25	0.00	---	---	---
19	0.49	0.00	0.02	0.01	0.00	0.89	0.31	0.00	0.00	---	---	---
20	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.53	0.00	---	---	---
21	0.00	0.59	0.26	0.00	0.04	0.00	0.00	0.00	0.00	---	---	---
22	0.06	0.39	0.07	0.24	0.05	0.00	0.00	0.00	---	---	---	---
23	0.39	0.00	0.28	0.00	0.00	0.00	0.00	0.00	---	---	---	---
24	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	---	---	---	---
25	0.00	0.01	0.02	0.00	0.00	0.00	0.02	0.00	---	---	---	---
26	0.00	0.30	0.01	0.00	0.66	0.00	0.33	0.07	---	---	---	---
27	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.04	---	---	---	---
28	0.00	0.00	1.25	0.00	0.00	0.00	0.68	0.11	---	---	---	---
29	0.00	0.00	0.01	0.53	0.20	0.49	0.00	0.00	---	---	---	---
30	0.00	0.00	0.42	0.07	---	0.05	0.00	0.00	---	---	---	---
31	0.00	---	0.00	0.18	---	0.01	---	0.00	---	---	---	---
Total	2.21	3.02	3.69	3.35	4.13	5.21	3.74	2.46	---	---	---	---

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