

Water-Data Report 2007

**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 mi<sup>2</sup>.

**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.--Records fair except those for estimated daily discharges, which are poor. 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 and 11.5 ft, respectively, from flood profiles by Tennessee Valley Authority.

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**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**  
**DAILY MEAN VALUES**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	369	579	1,400	4,750	805	863	771	540	333	355	756	340
2	359	568	1,110	1,740	823	3,630	838	520	424	472	475	290
3	339	526	836	1,190	809	1,970	777	511	390	411	587	241
4	339	498	774	1,060	e787	1,420	850	523	357	347	485	225
5	331	487	757	1,080	e772	1,160	794	582	329	317	383	210
6	369	477	754	1,360	e755	1,040	761	666	312	298	411	200
7	330	538	737	1,170	736	983	749	561	300	326	354	193
8	314	937	701	2,740	724	960	738	523	293	486	325	190
9	319	710	678	1,720	706	938	719	502	297	383	303	187
10	317	638	662	1,390	693	921	709	498	288	742	284	182
11	321	619	646	1,190	680	907	704	498	275	564	271	179
12	408	655	633	1,090	678	884	726	531	289	623	259	180
13	329	583	641	1,040	681	865	683	530	368	424	251	181
14	299	555	627	1,020	793	848	681	481	351	383	244	430
15	297	760	599	973	711	837	906	459	518	358	234	960
16	309	4,150	585	980	674	1,600	787	402	384	369	226	374
17	1,440	1,870	573	926	661	1,310	725	457	351	355	225	286
18	1,720	1,230	570	901	665	1,020	705	434	344	351	218	252
19	788	992	560	907	646	938	690	417	418	351	215	234
20	886	880	558	869	644	906	659	408	829	360	208	223
21	748	826	552	902	744	883	643	398	453	345	202	215
22	649	784	948	1,520	721	867	634	392	355	339	200	217
23	588	747	1,290	1,070	663	849	615	385	321	508	193	214
24	533	712	808	970	647	832	607	379	304	376	233	206
25	509	680	847	928	786	820	602	374	361	378	372	198
26	488	651	967	884	859	806	597	368	347	429	271	195
27	545	627	829	868	761	791	639	360	358	1,110	353	190
28	1,090	610	809	853	727	777	589	349	332	606	308	188
29	771	601	789	826	---	768	569	335	580	537	247	179
30	666	781	770	816	---	773	554	329	468	442	238	173
31	613	---	851	801	---	752	---	320	---	449	346	---
<b>Total</b>	17,383	25,271	23,861	38,534	20,351	32,918	21,021	14,032	11,329	13,794	9,677	7,532
<b>Mean</b>	561	842	770	1,243	727	1,062	701	453	378	445	312	251
<b>Max</b>	1,720	4,150	1,400	4,750	859	3,630	906	666	829	1,110	756	960
<b>Min</b>	297	477	552	801	644	752	554	320	275	298	193	173
<b>Cfsm</b>	1.29	1.93	1.77	2.85	1.67	2.44	1.61	1.04	0.87	1.02	0.72	0.58
<b>In.</b>	1.48	2.16	2.04	3.29	1.74	2.81	1.79	1.20	0.97	1.18	0.83	0.64

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2007 <sup>a</sup>, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	639	807	1,041	1,337	1,532	1,671	1,482	1,153	916	713	635	613
<b>Max</b>	2,557	2,169	2,231	2,570	3,718	3,372	2,746	2,573	2,061	2,206	1,670	2,817
<b>(WY)</b>	(1965)	(1980)	(1962)	(1946)	(1990)	(1990)	(1964)	(1976)	(1949)	(2005)	(1967)	(2004)
<b>Min</b>	192	282	368	349	660	596	553	453	351	238	213	201
<b>(WY)</b>	(1955)	(1955)	(1966)	(1981)	(1986)	(1988)	(1986)	(2007)	(1988)	(1986)	(1986)	(1999)

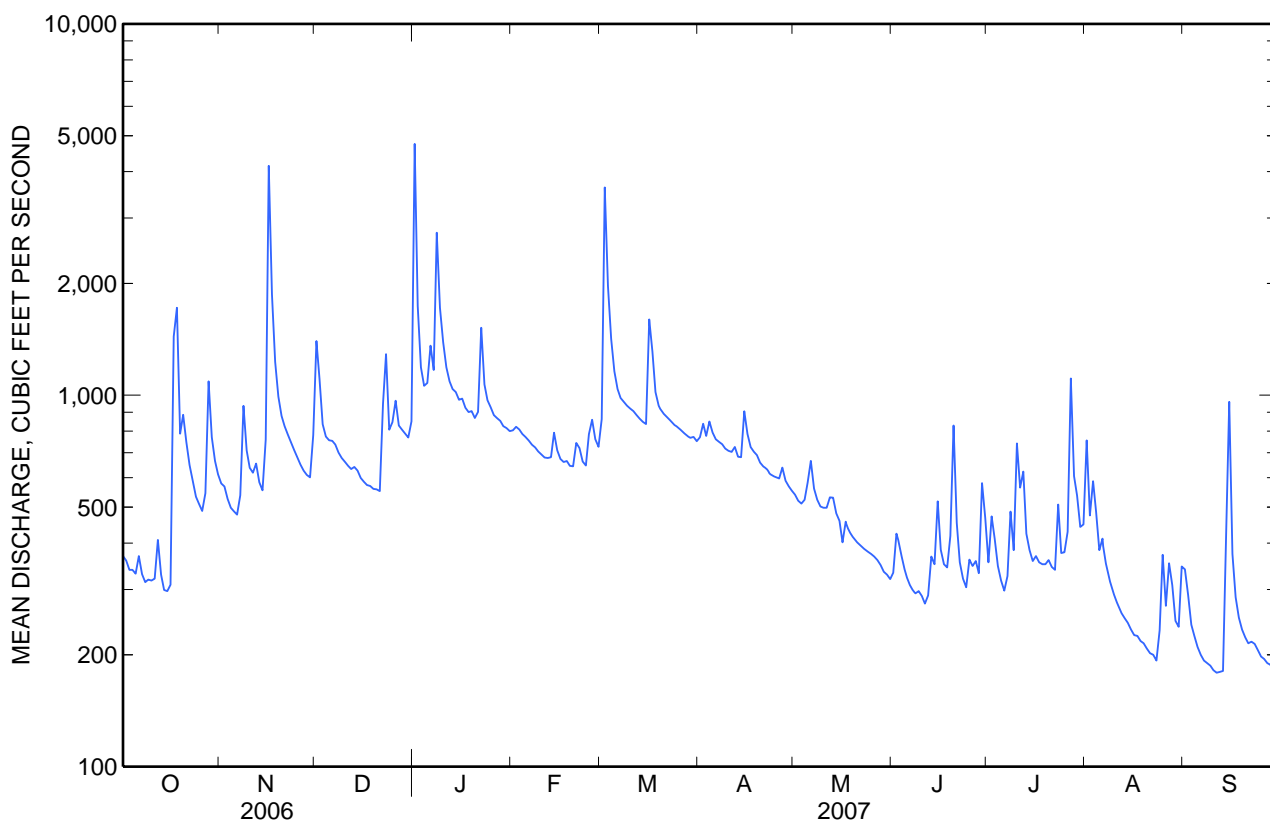
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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1944 - 2007 <sup>a</sup>	
<b>Annual total</b>	245,146		235,703			
<b>Annual mean</b>	672		646		1,045	
<b>Highest annual mean</b>					1,565	1973
<b>Lowest annual mean</b>					495	1986
<b>Highest daily mean</b>	5,500	Jan 18	4,750	Jan 1	17,200	Oct 5, 1964
<b>Lowest daily mean</b>	208	Aug 10	173	Sep 30	71	Nov 7, 1954
<b>Annual seven-day minimum</b>	224	Aug 5	185	Sep 7	142	Oct 2, 1986
<b>Maximum peak flow</b>			6,840	Jan 1	22,100	Oct 5, 1964
<b>Maximum peak stage</b>			6.51	Jan 1	12.87	Oct 5, 1964
<b>Instantaneous low flow</b>			171	Sep 30	<sup>b</sup> 52	Nov 7, 1954
<b>Annual runoff (cfsm)</b>	1.54		1.48		2.40	
<b>Annual runoff (inches)</b>	20.92		20.11		32.57	
<b>10 percent exceeds</b>	1,100		981		1,890	
<b>50 percent exceeds</b>	606		588		807	
<b>90 percent exceeds</b>	297		249		358	

<sup>a</sup> See Period of Record.

<sup>b</sup> See Remarks.



## 03503000 LITTLE TENNESSEE RIVER AT NEEDMORE, NC—Continued

## CLIMATOLOGICAL RECORDS

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 2006 TO SEPTEMBER 2007**  
**DAILY SUM VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.18	0.14	0.36	0.01	0.03	1.21	0.56	0.00	1.43	0.00	0.04	0.00
2	0.00	0.08	0.00	0.00	0.21	0.01	0.01	0.00	0.00	0.38	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.04	0.01	0.00	0.00	0.00
5	0.36	0.00	0.00	0.41	0.00	0.00	0.00	1.04	0.01	0.00	0.00	0.00
6	0.10	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	1.04	0.00	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.04	0.00	0.01	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00
9	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
11	0.48	0.26	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.83	0.00	0.02
12	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
13	0.00	0.00	0.13	0.00	0.10	0.00	0.00	0.00	0.00	0.02	0.00	0.00
14	0.00	0.00	0.00	0.00	0.06	0.01	0.32	0.00	0.17	0.00	0.00	1.75
15	0.00	1.63	0.00	0.05	0.00	0.31	0.05	0.00	0.44	0.00	0.00	0.00
16	0.45	0.33	0.00	0.01	0.01	1.45	0.00	0.07	0.00	0.08	0.00	0.00
17	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
18	0.00	0.00	0.00	0.05	0.03	0.00	0.00	0.00	0.77	0.05	0.00	0.00
19	0.38	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.97	0.25	0.00	0.00
20	0.01	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.05	0.00	0.00
21	0.00	0.00	0.00	0.90	0.55	0.00	0.00	0.00	0.00	0.00	0.17	0.00
22	0.05	0.00	0.90	0.01	0.01	0.00	0.00	0.00	0.00	0.03	0.00	0.00
23	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.01	0.37	0.00	0.00
25	0.00	0.00	0.65	0.00	0.60	0.00	0.01	0.00	0.46	0.55	0.00	0.00
26	0.00	0.00	0.10	0.00	0.00	0.00	0.19	0.00	0.00	3.02	0.00	0.00
27	0.84	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
28	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	1.56	0.00	0.00
29	0.00	0.04	0.00	0.00	---	0.06	0.00	0.00	0.00	0.00	0.12	0.00
30	0.00	0.42	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.03	0.00
31	0.00	---	0.87	0.00	---	0.00	---	0.00	---	0.14	0.00	---
<b>Total</b>	4.48	3.98	3.07	2.51	1.72	3.05	2.07	1.17	4.86	7.40	0.36	1.77

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