



Water-Data Report 2007

03497300 LITTLE RIVER ABOVE TOWNSEND, TN

Upper Tennessee Basin
Watts Bar Lake Subbasin

LOCATION.--Lat 35°39'52", long 83°42'41" referenced to North American Datum of 1927, Blount County, TN, Hydrologic Unit 06010201, in Great Smoky Mountains National Park, on left bank along Tennessee Highway 73, 0.3 mi upstream from Rush Branch, 0.4 mi southeast of Park entrance, 2.2 mi southeast of Townsend, and at mile 35.3.

DRAINAGE AREA.--106 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Data logger and crest-stage gage. Datum of gage is 1,106.92 ft above NGVD of 1929.

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 17	2345	*5,780	*7.42
No other peak greater than base discharge			

Minimum discharge, 17 ft³/s, Sept. 30.

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	186	219	306	920	162	261	209	177	66	45	88	70
2	165	270	256	487	164	805	254	167	68	42	88	71
3	150	222	229	377	148	514	191	160	96	43	85	40
4	139	206	211	316	135	397	343	189	120	39	59	33
5	130	194	197	319	124	327	268	306	84	38	51	28
6	272	181	187	431	134	284	238	364	75	40	47	26
7	193	192	177	388	133	252	219	272	65	38	44	24
8	171	739	162	663	122	230	200	237	60	37	40	23
9	159	893	157	544	114	211	187	216	61	35	38	22
10	147	582	151	441	107	195	176	199	56	46	37	21
11	139	451	147	366	111	185	174	184	53	50	35	22
12	133	390	141	323	108	171	230	171	52	73	33	26
13	120	329	142	291	113	162	181	161	49	44	31	24
14	112	294	133	265	161	158	182	147	50	38	30	49
15	107	403	127	246	115	156	329	137	69	35	28	125
16	104	1,310	122	260	98	507	360	136	53	33	26	49
17	515	863	118	1,530	106	414	364	151	48	37	26	37
18	385	616	114	2,730	105	330	357	123	49	56	26	32
19	270	485	111	1,080	104	290	343	115	90	62	24	29
20	378	408	108	709	108	265	313	108	164	70	23	27
21	304	345	106	834	224	246	277	102	72	71	23	25
22	261	305	231	856	247	225	254	97	55	44	30	25
23	226	279	278	750	204	211	232	92	50	39	27	24
24	202	254	197	644	187	197	218	89	48	52	23	23
25	182	236	195	527	237	185	205	86	55	93	22	22
26	169	221	222	435	247	176	205	84	62	106	21	21
27	198	208	202	216	224	168	268	83	51	69	26	20
28	459	197	186	208	211	161	215	77	57	241	29	20
29	315	187	179	179	---	156	200	73	81	167	37	18
30	270	220	177	179	---	157	186	70	53	120	137	17
31	237	---	231	161	---	146	---	67	---	90	81	---
Total	6,798	11,699	5,500	17,675	4,253	8,142	7,378	4,640	2,012	1,993	1,315	993
Mean	219	390	177	570	152	263	246	150	67.1	64.3	42.4	33.1
Max	515	1,310	306	2,730	247	805	364	364	164	241	137	125
Min	104	181	106	161	98	146	174	67	48	33	21	17
Cfsm	2.07	3.68	1.67	5.38	1.43	2.48	2.32	1.41	0.63	0.61	0.40	0.31
In.	2.39	4.11	1.93	6.20	1.49	2.86	2.59	1.63	0.71	0.70	0.46	0.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2007, BY WATER YEAR (WY)

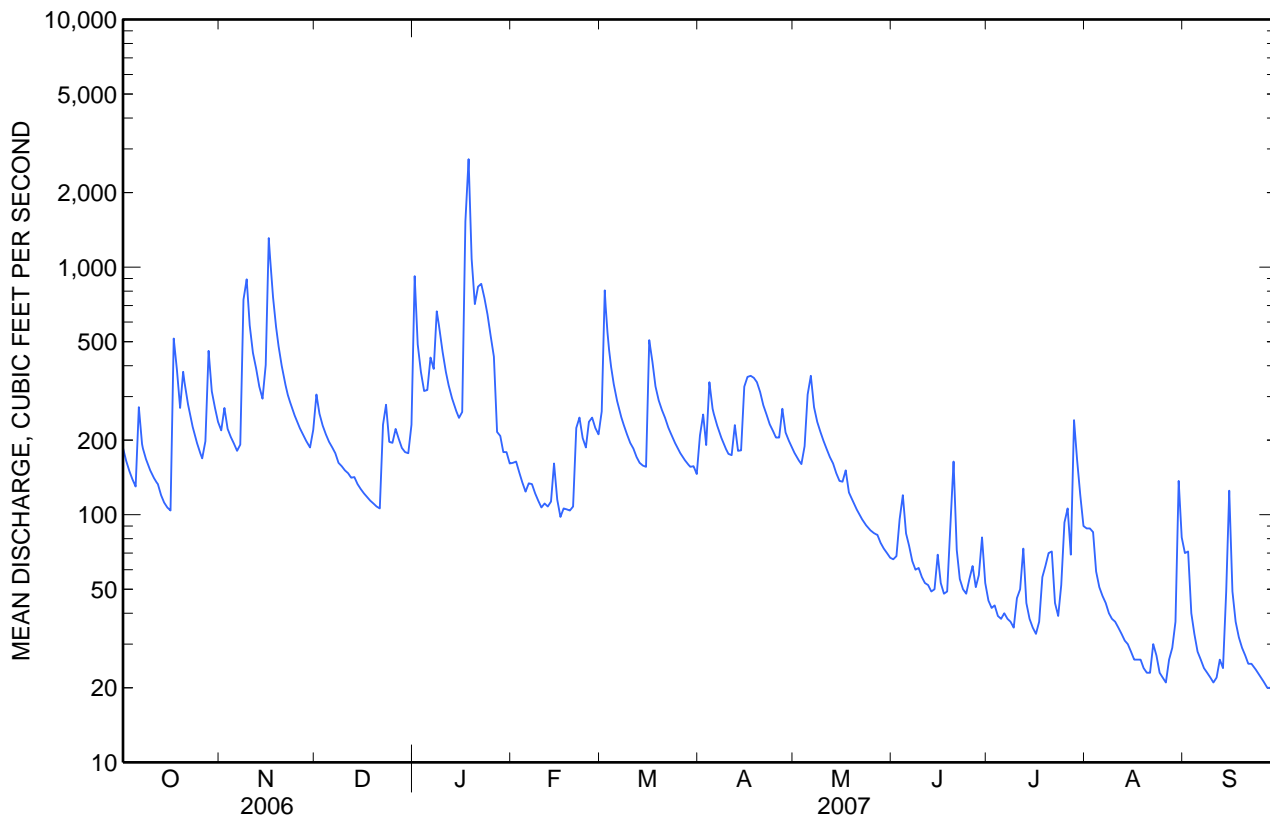
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	122	219	335	415	439	493	387	288	218	196	162	125
Max	373	472	725	796	857	1,195	818	774	648	815	530	496
(WY)	(1973)	(2005)	(1992)	(1996)	(1990)	(1994)	(1998)	(1984)	(1989)	(1971)	(1966)	(2004)
Min	28.9	36.0	58.8	72.7	152	185	141	124	50.4	63.8	40.5	31.9
(WY)	(1988)	(1988)	(1966)	(1981)	(2007)	(1988)	(1995)	(1986)	(1988)	(1993)	(1987)	(1998)

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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1964 - 2007	
Annual total	105,056		72,398			
Annual mean	288		198		283	
Highest annual mean					460	1994
Lowest annual mean					141	1988
Highest daily mean	2,820	Jan 18	2,730	Jan 18	9,000	Mar 28, 1994
Lowest daily mean	61	Aug 10	17	Sep 30	17	Sep 30, 2007
Annual seven-day minimum	78	Aug 4	20	Sep 24	20	Sep 24, 2007
Maximum peak flow			5,780	Jan 17	27,100	Mar 27, 1994
Maximum peak stage			7.42	Jan 17	^a 15.75	Mar 27, 1994
Instantaneous low flow			17	Sep 30	17	Sep 30, 2007
Annual runoff (cfsm)	2.72		1.87		2.67	
Annual runoff (inches)	36.87		25.41		36.21	
10 percent exceeds	515		381		551	
50 percent exceeds	230		159		196	
90 percent exceeds	104		31		60	

^a From flood mark in gage house.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1963 to September 1981.

INSTRUMENTATION.--Temperature recorder from October 1963 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 26.0°C, June 23, 1964, July 3, 1970; minimum, 0.0°C, on several days during winter periods.

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 2

[Remark codes: <, less than.]

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	pH, water, lab, std units (00403)	Specific conductance, wat unf μ S/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, water, unfltrd Gran titr., ueq/L (00409)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)
Nov													
01...	1010	2.05	217	--	22	.7	--	--	--	--	--	--	--
05...	1000	1.98	--	6.7	--	5.1	1.27	.38	.43	.77	77	.4	2.56
08...	0145	2.13	--	6.9	--	--	1.52	.44	.57	.92	104	.5	2.43
08...	1850	2.96	--	6.9	--	--	1.79	.53	.60	.96	120	.4	2.53
08...	2110	3.64	--	6.8	--	--	1.86	.55	.63	.96	109	.4	2.73
08...	2330	4.08	--	6.8	--	--	1.70	.51	.61	.97	97	.4	2.90
09...	0930	3.58	--	6.9	--	--	1.65	.49	.58	.99	107	.5	3.03
09...	2325	3.16	--	7.1	--	--	2.08	.64	.60	1.12	155	.5	3.34
Apr													
25...	0900	2.03	--	6.8	--	13.9	1.45	.43	.50	.92	98	.5	2.15
25...	0920	2.03	--	6.7	--	13.9	1.49	.44	.87	.92	93	.4	2.15
Jun													
03...	0445	1.76	--	7.0	--	18.4	2.79	1.00	.64	.98	190	.4	2.96
04...	0255	1.88	--	6.9	--	18.6	1.82	.50	.59	.91	103	.4	2.84
19...	0814	1.63	95	--	23	20.0	--	--	--	--	--	--	--
Jul													
17...	1120	--	--	7.1	--	--	2.81	.87	.62	1.17	207	.4	2.72
17...	1955	1.25	--	6.8	--	24.2	2.98	.91	.76	1.16	209	.5	2.53
18...	0010	1.39	--	6.9	--	23.4	2.71	.84	.74	1.12	194	.5	2.47
20...	2055	1.59	--	6.9	--	22.8	2.77	.83	.67	1.09	191	.5	2.80
21...	0325	1.65	--	6.9	--	21.7	3.16	1.04	.69	1.09	213	.4	2.90
21...	2105	1.43	--	6.9	--	22.8	3.21	1.06	.68	1.16	240	.4	2.79
24...	2240	1.49	--	6.9	--	20.1	3.28	1.22	.69	1.10	242	.4	3.14
25...	0930	1.56	--	6.8	--	19.1	2.51	.87	.64	1.00	173	.4	3.02
25...	2230	1.77	--	6.8	--	20.1	2.27	.71	.61	1.00	153	.4	2.88
25...	2240	1.98	--	6.9	--	20.1	3.57	1.22	.93	1.22	271	.7	2.93
26...	0230	1.77	--	7.0	--	19.4	3.22	1.18	1.09	1.17	255	.6	3.16
30...	0505	1.93	--	6.6	--	--	1.50	.49	.79	.75	63	.5	2.53
Aug													
01...	0806	1.50	74	--	25	21.0	--	--	--	--	--	--	--
07...	0310	2.09	--	6.8	--	--	1.30	.40	.52	.80	67	.4	2.88
11...	0220	1.47	--	6.8	--	--	1.32	.41	.49	.79	76	.4	2.82
11...	0700	2.14	--	6.8	--	--	1.82	.42	.54	.79	69	.5	2.72
23...	0840	1.20	28	--	31	23.5	--	--	--	--	--	--	--
23...	1020	1.20	--	7.2	--	23.5	3.09	.95	.66	1.17	229	.5	2.56

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 2

[Remark codes: <, less than.]

Date	Sulfate water, flt'd, mg/L (00945)	Ammonia water, unflt'd mg/L as N (00610)	Nitrate water, flt'd, mg/L as N (00618)	Organic carbon, water, flt'd, mg/L (00681)	Alum- inum, water, flt'd, µg/L (01106)	Organic mono- meric alum- inum, wat unf µg/L (49288)
Nov						
01...	--	--	--	--	--	--
05...	1.8	<.028	.12	1.0	<27	<40
08...	1.7	.095	.15	1.5	<27	<40
08...	2.0	.147	.21	1.1	<27	<40
08...	2.0	<.028	.33	1.4	<27	<40
08...	2.1	.076	.21	1.5	<27	<40
09...	2.2	.179	.20	1.1	<27	<40
09...	1.6	.061	.20	1.2	<27	<40
Apr						
25...	1.8	<.028	.15	.9	<27	<40
25...	1.8	<.028	.15	1.0	<27	<40
Jun						
03...	2.0	.040	.19	2.5	<27	<40
04...	2.0	<.028	.18	3.0	35	<40
19...	--	--	--	--	--	--
Jul						
17...	1.6	<.028	.11	1.1	<27	<40
17...	1.9	<.028	.14	2.3	<27	<40
18...	1.8	.039	.17	1.7	<27	<40
20...	2.1	.030	.10	1.8	<27	<40
21...	2.1	.056	.19	1.7	<27	<40
21...	1.8	<.028	.09	1.9	<27	<40
24...	1.9	.039	.24	1.7	<27	<40
25...	1.7	.033	.22	2.1	<27	<40
25...	2.1	<.028	.15	2.0	<27	<40
25...	1.9	<.028	<.03	3.4	<27	<40
26...	2.0	<.028	<.03	2.7	<27	<40
30...	2.2	<.028	.39	2.6	48	<40
Aug						
01...	--	--	--	--	--	--
07...	1.7	.030	.18	.9	<27	<40
11...	1.8	.068	.17	1.0	<27	<40
11...	1.9	<.028	.33	1.3	202	<40
23...	--	--	--	--	--	--
23...	1.7	<.028	.15	1.1	<27	<40