01078000 SMITH RIVER NEAR BRISTOL, NH

Merrimack Basin
Pemigewasset Subbasin

LOCATION.--Lat 43°33′59″, long 71°44′54″ referenced to North American Datum of 1927, Merrimack County, NH, Hydrologic Unit 01070001, on right bank, 0.6 mi upstream of Borough Road bridge, 1.5 mi upstream from mouth, 1.7 mi southwest of Post Office in Bristol, and 3.8 mi northwest of Hill.

DRAINAGE AREA.--85.8 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge: May 1918 to current year.

REVISED RECORDS.--WSP 711: Drainage area. WSP 781: 1934. WSP 1231: 1919, 1920-21(M), 1922-31, 1932-33(M), 1941-43.

GAGE.--Water-stage recorder. Datum of gage is 449.80 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to November 25, 1933, nonrecording gage at site 1.5 mi upstream at different datum.

COOPERATION.--National Streamflow Information Program (NSIP).

REMARKS.--Records good except for estimated daily discharges, which are fair. Prior to 1954, some diurnal fluctuation caused by small mill upstream; greater fluctuation prior to 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1885, that of March 19, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,150 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 12	0200	1,740	6.88
Apr 17	0845	1,450	6.33
Aug 29	1200	*2,490	*8.18

Minimum discharge, 14 ft^3/s, July 25, gage height, 1.49 ft.

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 01078000, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/01078000.2011.pdf

01078000 SMITH RIVER NEAR BRISTOL, NH—Continued

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

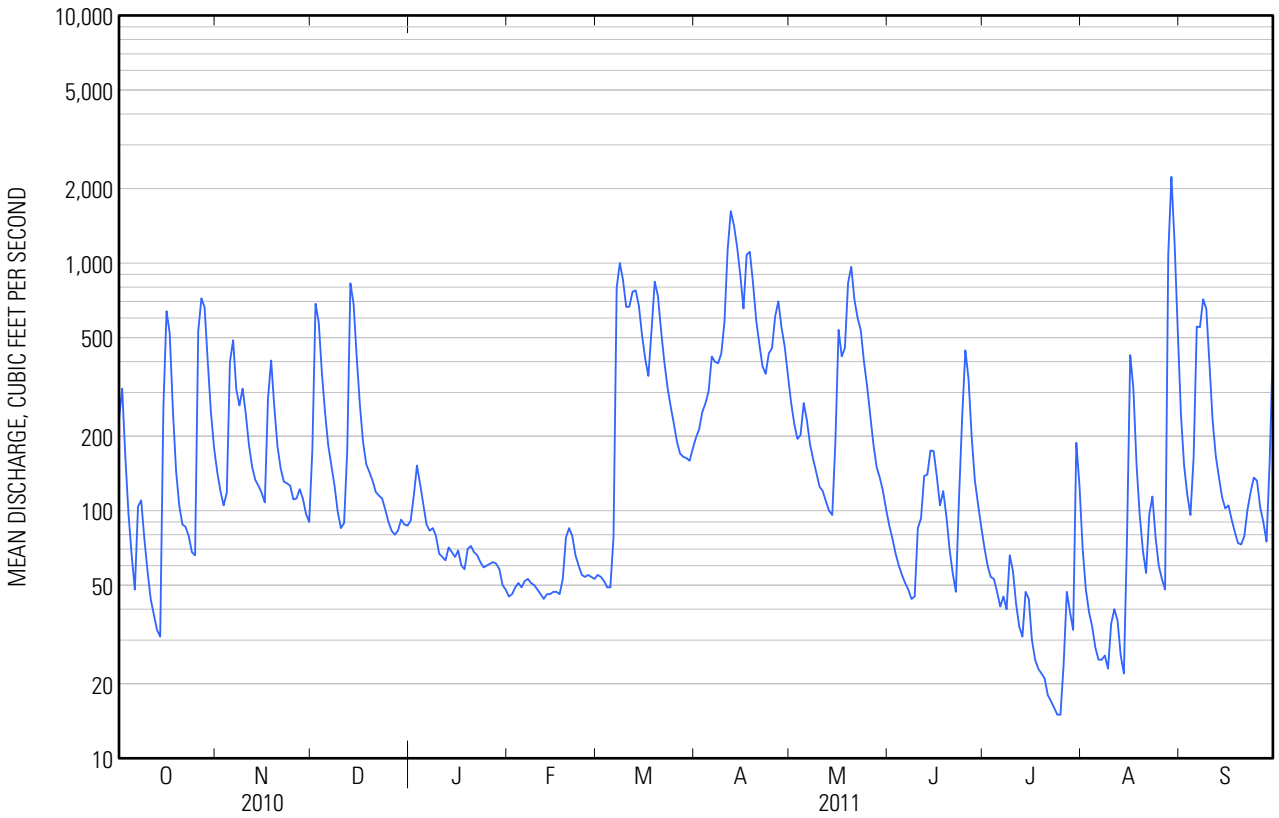
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	234	143	177	91	e45	55	197	275	87	71	70	245
2	311	120	685	115	e46	54	213	225	77	60	48	152
3	165	105	577	152	e49	52	250	195	67	54	39	116
4	97	118	361	128	e51	49	271	202	60	53	34	96
5	66	399	249	e106	e49	49	303	272	55	47	28	164
6	48	488	184	e88	e52	78	419	232	51	41	25	554
7	104	309	152	e83	e53	e795	399	185	48	45	25	551
8	110	266	126	e85	e51	e1,000	394	161	44	40	26	714
9	77	311	99	e79	e50	853	431	142	45	66	23	653
10	57	246	85	e67	e48	665	578	125	85	57	35	391
11	44	184	89	e65	e46	666	1,130	120	93	42	40	231
12	38	150	175	e63	e44	766	1,620	109	138	34	36	166
13	33	133	828	e71	46	775	1,420	100	140	31	26	136
14	31	126	685	e68	46	672	1,160	96	175	47	22	113
15	261	118	415	e65	47	511	892	191	174	44	79	102
16	639	108	e267	e69	47	410	655	537	137	30	425	105
17	520	283	e189	e60	46	e350	1,080	420	105	25	311	92
18	255	404	e154	e58	53	535	1,110	454	120	23	153	82
19	145	262	e143	e70	78	841	832	831	95	22	96	74
20	105	182	132	e72	85	737	590	965	70	e21	69	73
21	88	148	e119	e68	79	535	471	713	56	e18	56	79
22	86	131	e115	e66	66	402	383	600	47	e17	96	101
23	79	129	112	e62	60	317	357	535	113	e16	114	119
24	68	126	101	e59	55	265	432	400	240	e15	78	136
25	66	111	e90	e60	54	226	453	318	444	e15	60	132
26	533	112	e83	e61	55	e190	610	242	340	24	53	103
27	720	122	e80	e62	54	e170	700	185	197	47	48	90
28	662	112	83	e61	53	e165	549	150	132	39	1,080	75
29	400	97	92	58	---	163	460	136	106	33	2,230	159
30	250	90	88	e50	---	159	354	120	86	188	1,200	461
31	179	---	87	e48	---	178	---	101	---	126	532	---
Total	6,471	5,633	6,822	2,310	1,508	12,683	18,713	9,337	3,627	1,391	7,157	6,265
Mean	209	188	220	74.5	53.9	409	624	301	121	44.9	231	209
Max	720	488	828	152	85	1,000	1,620	965	444	188	2,230	714
Min	31	90	80	48	44	49	197	96	44	15	22	73
Cfsm	2.43	2.19	2.56	0.87	0.63	4.77	7.27	3.51	1.41	0.52	2.69	2.43
In.	2.81	2.44	2.96	1.00	0.65	5.50	8.11	4.05	1.57	0.60	3.10	2.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	84.1	137	140	105	98.3	252	482	227	108	58.0	41.6	43.2
Max	571	379	393	314	578	1,242	1,077	666	391	387	340	457
(WY)	(2006)	(1928)	(1974)	(2006)	(1981)	(1936)	(1969)	(2006)	(1998)	(1973)	(1990)	(1938)
Min	8.45	20.1	22.3	19.2	20.6	29.7	134	71.5	20.5	9.00	4.54	7.36
(WY)	(1948)	(2002)	(1923)	(1940)	(1980)	(1940)	(1995)	(1941)	(1964)	(1965)	(1965)	(2002)

01078000 SMITH RIVER NEAR BRISTOL, NH—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1918 - 2011	
Annual total	57,042.1		81,917			
Annual mean	156		224		148	
Highest annual mean					290	2006
Lowest annual mean					64.7	1965
Highest daily mean	1,240	Mar 24	2,230	Aug 29	6,890	Mar 19, 1936
Lowest daily mean	[e]7.5	Sep 12[a]	[e]15	Jul 24[b]	2.7	Aug 2, 1933
Annual seven-day minimum	8.0	Sep 8	18	Jul 19	3.2	Sep 20, 1939
Maximum peak flow			2,490	Aug 29	[c]8,100	Mar 19, 1936
Maximum peak stage			8.18	Aug 29	[d]16.09	Mar 19, 1936
Instantaneous low flow			14	Jul 25	2.7	Aug 2, 1933
Annual runoff (cfsm)	1.82		2.62		1.72	
Annual runoff (inches)	24.73		35.52		23.42	
10 percent exceeds	403		594		358	
50 percent exceeds	89		112		70	
90 percent exceeds	13		44		17	

[e] Estimated.
[a] Also on Sep 13, 2010.
[b] Also on Jul 25.
[c] From rating extended above 2,700 ft³/s on basis of contracted opening measurement of peak flow.
[d] From floodmarks.