Water-Data Report 2007

01075000 PEMIGEWASSET RIVER AT WOODSTOCK, NH

Merrimack Basin
Pemigewasset Subbasin

LOCATION.--Lat 43°58′34″, long 71°40′48″ referenced to North American Datum of 1927, Grafton County, NH, Hydrologic Unit 01070001, on right bank 300 ft upstream of southern State Highway 175 bridge, 0.2 mi east of Woodstock, 0.7 mi upstream from Eastman Brook, and 4.8 mi south of Town Hall in Lincoln.

DRAINAGE AREA.--193 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records: October 1939 to 1977, October 2001 to current year. Partial-record station: October 1977 to September 2001. Peak streamflow: Water years 1940 to 1980, 1985 to current year. Miscellaneous discharge measurements: Water years 1978 to 2001. Water-quality records: Water years 1970-73.

REVISED RECORDS.--WSP 1701: 1942(M).

GAGE.--Water-stage recorder. Datum of gage is 616.44 ft above National Geodetic Vertical Datum of 1929.

COOPERATION.--National Streamflow Information Program and the U.S. Army Corps of Engineers, New England District.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Prior to 1978, some diurnal fluctuation caused by power plants upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,100 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 20	2300	9,870	9.04
Oct 28	2230	10,400	9.21
Nov 17	0815	*11,700	*9.60

Minimum discharge, 71 ft^3/s, Sept. 8, 9, gage height, 2.17 ft.

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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	215	1,020	735	346	e201	e124	422	2,150	819	123	119	128
2	244	960	2,280	388	e203	e119	546	1,570	666	123	111	105
3	244	797	911	326	e205	e121	501	1,380	551	125	104	93
4	204	660	686	309	e197	e131	440	1,160	586	116	97	83
5	348	575	554	318	e184	e123	388	1,050	1,360	154	89	77
6	295	520	492	1,720	e177	e117	335	957	928	145	154	74
7	226	475	477	1,610	e168	e112	298	901	657	149	266	75
8	195	490	422	1,070	e167	e124	271	1,120	539	171	606	72
9	173	1,710	414	1,020	e162	e119	258	1,770	466	350	517	140
10	159	1,080	386	700	e161	e122	241	2,110	544	740	249	345
11	149	775	362	e485	e161	e146	234	2,160	493	356	189	266
12	782	706	336	546	e152	e151	257	1,730	412	1,370	164	475
13	571	1,390	343	553	e147	e142	249	1,150	354	535	154	254
14	358	1,760	415	495	e144	e185	248	878	320	369	141	177
15	282	1,410	398	452	e143	e755	264	890	288	302	130	856
16	242	999	408	e390	e153	978	2,120	1,730	264	275	145	690
17	221	5,840	386	e280	e152	518	1,850	1,820	265	222	146	367
18	989	2,020	379	e310	e152	380	1,610	1,120	246	220	128	272
19	687	1,260	336	e385	e146	277	1,650	898	217	495	120	226
20	2,000	977	293	e330	e142	228	1,640	1,850	209	658	110	195
21	3,370	791	281	e274	e142	200	1,800	1,960	201	441	103	175
22	1,130	682	260	e295	e139	210	1,980	1,070	200	322	97	160
23	1,190	605	1,060	e271	e139	616	2,790	860	260	253	93	149
24	1,220	545	1,150	e257	e135	550	4,100	787	207	225	119	134
25	865	487	634	244	e135	450	2,280	826	186	198	123	130
26	713	443	558	e234	e132	432	1,470	759	187	177	252	120
27	594	412	527	e231	e130	618	1,400	635	164	163	170	127
28	2,870	385	418	e241	e128	e1,100	1,530	667	154	154	123	125
29	4,000	374	326	e229	---	726	2,010	573	138	152	109	121
30	1,480	356	300	e220	---	517	2,480	481	127	146	104	115
31	1,050	---	335	e210	---	461	---	485	---	131	168	---
Total	27,066	30,504	16,862	14,739	4,397	10,852	35,662	37,497	12,008	9,360	5,200	6,326
Mean	873	1,017	544	475	157	350	1,189	1,210	400	302	168	211
Max	4,000	5,840	2,280	1,720	205	1,100	4,100	2,160	1,360	1,370	606	856
Min	149	356	260	210	128	112	234	481	127	116	89	72
Cfsm	4.52	5.27	2.82	2.46	0.81	1.81	6.16	6.27	2.07	1.56	0.87	1.09
In.	5.22	5.88	3.25	2.84	0.85	2.09	6.87	7.23	2.31	1.80	1.00	1.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1977 and 2002 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	414	579	447	265	212	420	1,325	1,336	499	268	217	264
Max	1,854	1,428	1,693	823	670	1,699	2,087	2,448	1,263	668	696	1,212
(WY)	(2006)	(1960)	(1974)	(2006)	(1973)	(1953)	(2002)	(1972)	(1973)	(1973)	(2003)	(1954)
Min	65.9	122	77.7	55.9	57.3	65.7	554	403	159	94.8	76.1	64.4
(WY)	(1948)	(1948)	(1948)	(1948)	(1940)	(1940)	(1965)	(1941)	(1953)	(1953)	(1942)	(1948)

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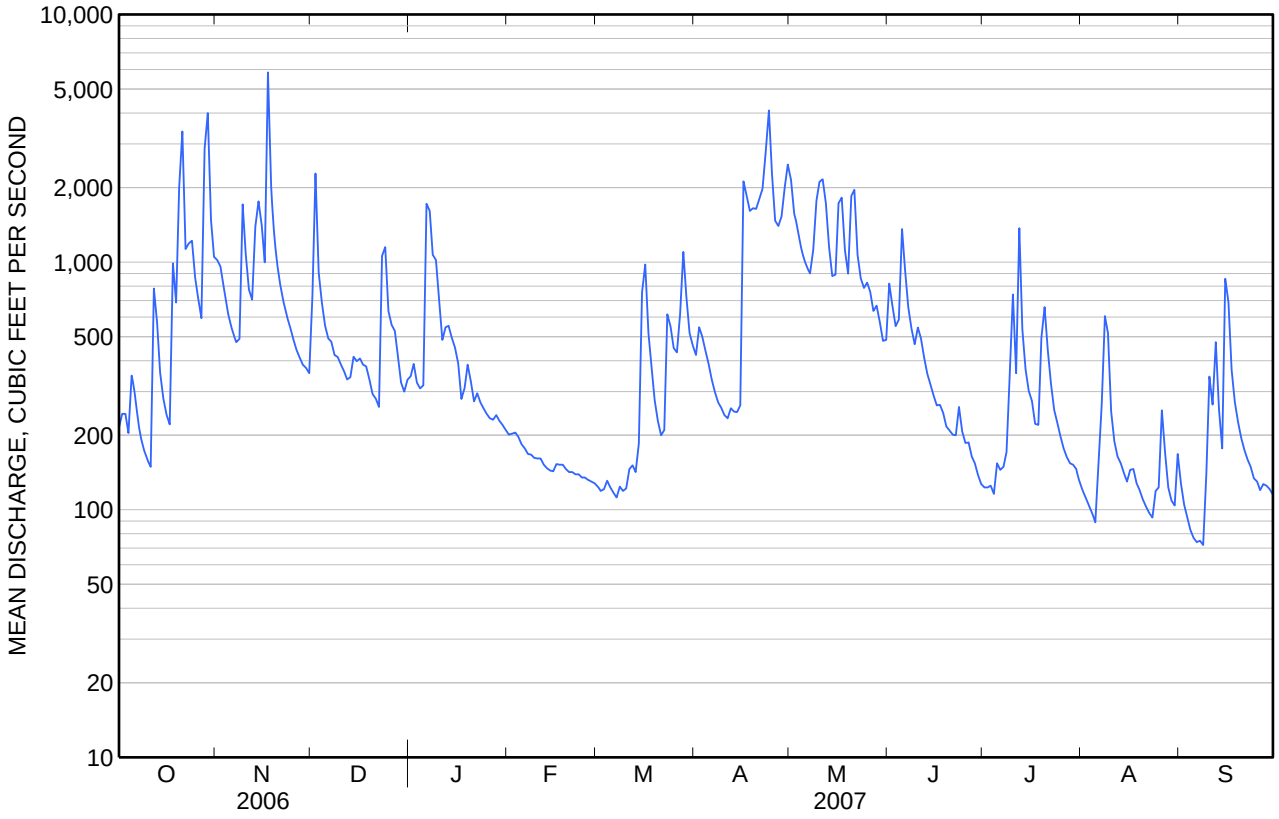
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1940-77, 2002-07	
Annual total	233,921		210,473			
Annual mean	641		577		521	
Highest annual mean					729	2006
Lowest annual mean					335	1965
Highest daily mean	5,840	Nov 17	5,840	Nov 17	16,900	Oct 24, 1959
Lowest daily mean	101	Sep 19	72	Sep 8	37	Sep 10, 2002
Annual seven-day minimum	114	Sep 13	83	Sep 2	40	Sep 5, 2002
Maximum peak flow			11,700	Nov 17	[a,b]47,000	Oct 24, 1959
Maximum peak stage			9.60	Nov 17	[b]16.13	Oct 24, 1959
Annual runoff (cfsm)	3.32		2.99		2.70	
Annual runoff (inches)	45.09		40.57		36.70	
10 percent exceeds	1,260		1,430		1,230	
50 percent exceeds	408		330		252	
90 percent exceeds	152		124		96	

[a] From rating curve extended above 14,000 ft³/s on basis of contracted-opening measurement of peak flow.
[b] Water years 1940-80, 1985-present.