Water-Data Report 2011

01152500 SUGAR RIVER AT WEST CLAREMONT, NH

Upper Connecticut Basin
Upper Connecticut-Mascoma Subbasin

LOCATION.--Lat 43°23′15″, long 72°21′45″ referenced to North American Datum of 1927, Sullivan County, NH, Hydrologic Unit 01080104, on right bank, 0.2 mi downstream from Redwater Brook, 0.7 mi southeast of Clay Hill Road and Paddy Hollow Road intersection in West Claremont, 1.6 mi northwest of City Hall in Claremont, and 2.4 mi upstream from mouth.

DRAINAGE AREA.--269 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records: May 1928 to current year. Published as "at Claremont" prior to October 1928. Peak streamflow: Water years 1929 to current year.

REVISED RECORDS.--WSP 711: 1930(M). WSP 756: Drainage area. WSP 1901: 1960 (adjusted figures only).

GAGE.--Water-stage recorder. Datum of gage is 358.78 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to October 1, 1928, nonrecording gage at site 0.8 mi upstream at different datum.

COOPERATION.--New Hampshire Department of Environmental Services.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Regulation by Sunapee Lake 25 mi upstream and occasional diurnal fluctuation at low flow by mills upstream; greater regulation by mills prior to 1971.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft^3/s, March 19, 1936, gage height, 10.92 ft, from rating curve extended above 6,700 ft^3/s on basis of computations of flow over dam at gage heights 10.49 ft and 10.92 ft; maximum gage height, 11.80 ft, March 12, 1936 (ice jam); minimum daily discharge, 13 ft^3/s, September 10, 2010.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 15	2145	3,930	5.53
Mar 7	1700	Ice jam	*10.10
Mar 18	2345	3,270	5.06
Apr 12	0830	3,670	5.35
Aug 29	0015	*6,470	6.93

Minimum daily discharge, 76 ft^3/s, July 23.

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 01152500, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/01152500.2011.pdf

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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	733	e457	e551	e345	e205	e194	742	1,010	281	271	148	832
2	890	e382	e1,570	e420	e210	e189	652	932	235	216	121	568
3	419	e351	e1,270	e500	e225	e182	724	859	207	196	100	454
4	270	e390	e900	e430	e220	e176	815	811	195	194	90	395
5	189	e1,300	e710	e375	e220	e180	1,020	925	183	177	85	515
6	159	e1,550	e580	e325	e240	e318	1,310	842	177	162	80	2,010
7	170	e1,060	e513	e320	e240	e1,710	1,140	643	160	163	101	1,700
8	189	e894	e453	e325	e240	e2,200	1,090	568	113	158	98	2,400
9	166	e1,150	e381	e305	e230	e1,970	1,120	509	156	167	86	1,860
10	149	e887	e338	e265	e220	e1,740	1,360	456	224	154	101	1,360
11	134	e711	e340	e260	e210	e1,770	2,310	421	279	140	87	1,060
12	122	e560	e559	e255	e205	e2,050	3,460	357	374	130	86	869
13	110	e463	e1,900	e285	e195	e1,860	3,020	332	332	131	83	742
14	100	e409	e1,550	e270	e195	1,580	2,750	317	352	153	81	645
15	1,590	e371	e1,070	e260	e210	1,360	2,170	484	351	132	132	510
16	2,640	e349	e804	e275	e195	1,260	1,760	1,570	295	119	511	464
17	1,230	e848	e639	e240	e200	1,370	2,030	1,070	223	112	400	420
18	811	e1,200	e551	e240	e219	2,120	2,020	901	201	129	250	367
19	540	e780	e505	e285	e271	2,800	1,650	918	199	117	189	317
20	384	e610	e463	e285	e284	1,970	1,520	1,020	181	103	157	301
21	311	e535	e440	e270	e260	1,610	1,390	1,330	162	94	156	309
22	270	e480	460	e260	e214	1,310	1,200	1,460	173	91	230	307
23	238	e470	427	e245	e197	1,100	1,140	1,220	836	76	275	350
24	218	e445	411	e230	e180	1,020	1,220	1,140	875	78	195	355
25	212	e390	e390	e235	e182	918	1,190	1,080	780	82	207	354
26	1,430	e390	e351	e240	e189	827	1,210	994	673	88	317	307
27	1,610	e415	e300	e240	e184	763	1,330	866	439	105	411	272
28	1,790	e395	e330	e235	e186	714	1,210	648	327	91	2,510	244
29	e1,080	e365	e355	e230	---	669	1,180	529	416	92	4,360	403
30	e720	e330	e335	e225	---	626	1,090	466	368	130	2,000	1,170
31	e532	---	e332	e215	---	680	---	413	---	139	1,260	---
Total	19,406	18,937	19,778	8,890	6,026	37,236	44,823	25,091	9,767	4,190	14,907	21,860
Mean	626	631	638	287	215	1,201	1,494	809	326	135	481	729
Max	2,640	1,550	1,900	500	284	2,800	3,460	1,570	875	271	4,360	2,400
Min	100	330	300	215	180	176	652	317	113	76	80	244

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	255	379	395	341	333	693	1,275	637	326	187	149	140
Max	1,834	1,125	1,146	1,093	1,343	2,490	2,746	1,657	1,173	921	952	1,269
(WY)	(2006)	(2007)	(1997)	(2006)	(1981)	(1936)	(1969)	(1940)	(2006)	(2006)	(1990)	(1938)
Min	39.2	66.9	92.9	84.7	74.5	108	359	179	67.5	26.2	29.3	32.2
(WY)	(1984)	(1972)	(1948)	(1948)	(1942)	(1940)	(1995)	(1965)	(1965)	(1965)	(1999)	(2010)

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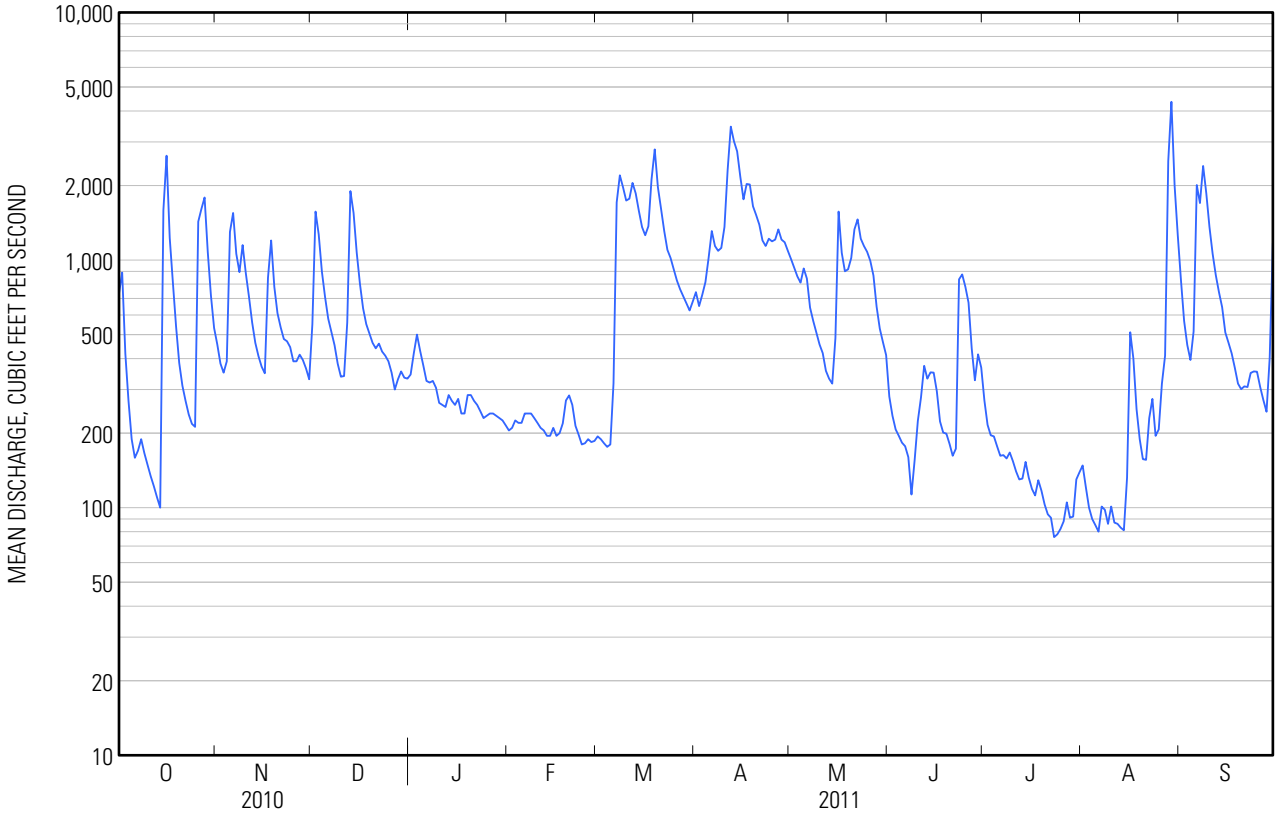
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1928 - 2011	
Annual total	176,180		230,911			
Annual mean	483		633		425	
Highest annual mean					867	2006
Lowest annual mean					139	1965
Highest daily mean	3,840	Mar 24	4,360	Aug 29	11,200	Mar 19, 1936
Lowest daily mean	13	Sep 10	76	Jul 23	13	Sep 10, 2010
Annual seven-day minimum	22	Sep 21	87	Jul 22	21	Aug 22, 1965
Maximum peak flow			6,470	Aug 29	[a]14,000	Mar 19, 1936
Maximum peak stage			[b]10.10	Mar 7	[b]11.80	Mar 12, 1936
10 percent exceeds	1,210		1,550		1,010	
50 percent exceeds	330		374		220	
90 percent exceeds	35		133		69	

[a] From rating curve extended above 6,700 ft³/s on basis of computations of flow over dam at gage heights 10.49 ft and 10.92 ft
[b] Ice jam