04288000 MAD RIVER NEAR MORETOWN, VT

Lake Champlain-Richelieu River
Winooski River Subbasin

LOCATION.--Lat 44°16′38″, long 72°44′35″ referenced to North American Datum of 1927, Washington County, Hydrologic Unit 04150403, on left bank, at downstream side of Munns Road bridge, 0.4 mi downstream of Welder Brook, 2.0 mi northeast of Moretown Mountain Road and State Highway 100B intersection in Moretown, 3.2 mi west of State Highway 100B bridge across Winooski River in Middlesex, and 3.8 mi upstream from mouth.

DRAINAGE AREA.--139 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records: October 1928 to current year.

REVISED RECORDS.--WSP 744: Drainage area. WSP 854: 1934(M). WSP 1114: 1929, 1930(M), 1936-37.

GAGE.--Water-stage recorder. Concrete control since October 13, 1933. Datum of gage is 543.93 ft above National Geodetic Vertical Datum of 1929 (levels by Vermont Department of Highway). July 6 to November 4, 1910, nonrecording gage at same site at different datum. November 20, 1928 to September 27, 1930, nonrecording gage at same site at present datum.

COOPERATION.--Vermont Department of Environmental Conservation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Occasional diurnal fluctuation at low flow; much greater regulation prior to 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 23,000 ft^3/s, November 3, 1927, gage height, 19.4 ft, from floodmarks, by computation of peak flow over dam at gage heights 9.98 ft, 11.51 ft, 16.34 ft, 19.4 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,400 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 9	0200	*e3,200	*a7.48

Minimum discharge, 19 ft^3/s, July 23, gage height, 2.44 ft [e, estimated; a, ice affected].

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 04288000, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/04288000.2012.pdf

04288000 MAD RIVER NEAR MORETOWN, VT—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

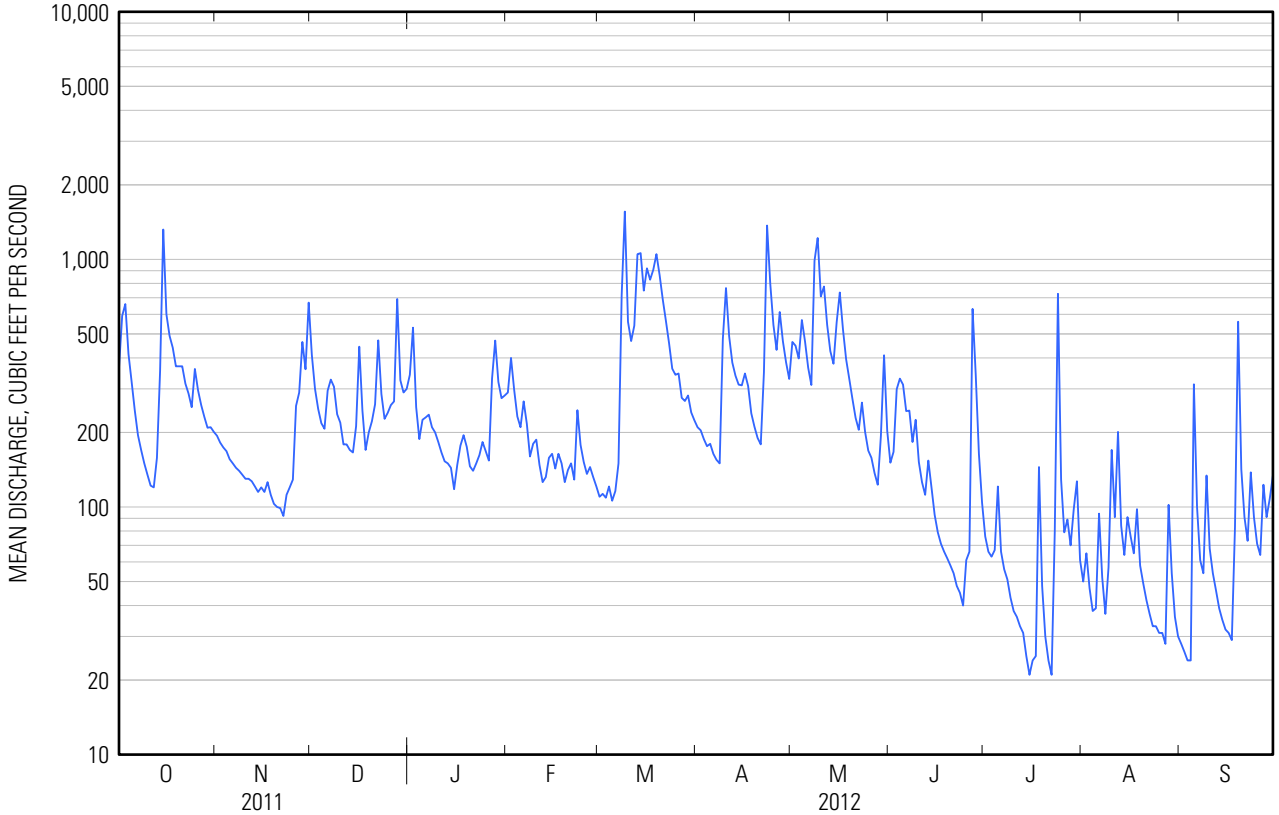
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	365	194	411	342	e290	e110	210	464	151	76	50	28
2	591	182	300	530	e400	e113	204	448	167	66	65	26
3	e660	174	249	e253	e297	e109	188	398	299	63	47	24
4	e415	168	218	e188	e232	e121	176	569	330	67	38	24
5	e320	156	207	e225	e210	e106	180	466	312	121	39	313
6	e245	150	295	e230	e267	e116	164	365	244	66	94	100
7	e195	144	327	e236	e217	e150	155	311	245	56	52	61
8	e170	140	306	e210	e160	e715	150	987	183	51	37	54
9	e150	135	237	e200	e180	e1,560	476	1,220	225	43	57	134
10	e135	130	219	e183	e187	e560	766	709	152	38	170	68
11	e122	130	179	e166	e148	468	489	777	126	36	91	54
12	e120	127	e179	e153	e126	540	383	544	112	33	201	46
13	e158	121	e170	e150	e132	1,050	339	426	154	31	84	39
14	355	115	166	e144	e158	1,060	312	379	120	25	64	35
15	1,320	120	212	e118	164	748	310	556	93	21	91	32
16	600	115	444	e148	143	920	346	735	79	24	76	31
17	491	126	e245	e177	164	828	308	522	71	25	65	29
18	e440	112	e170	e195	150	908	239	395	66	145	98	83
19	e370	103	e200	e175	e126	1,050	211	329	62	48	58	560
20	e370	100	e222	e146	e141	865	190	273	58	30	49	142
21	e370	99	e260	e140	e150	689	179	229	54	24	42	91
22	315	92	471	e150	129	564	350	205	48	21	37	73
23	287	112	e286	e162	246	458	1,370	264	45	80	33	138
24	253	120	e227	e183	178	362	799	201	40	726	33	91
25	361	129	e240	e168	152	342	544	169	61	129	31	71
26	296	256	e258	e154	e136	346	431	158	66	79	31	64
27	258	290	e267	e330	e145	276	613	137	631	89	28	123
28	231	464	692	e470	e132	268	467	123	341	70	102	91
29	209	360	e325	e320	e121	282	384	194	164	98	54	108
30	210	669	e290	e275	---	241	329	410	104	127	36	134
31	201	---	e300	e282	---	224	---	203	---	61	30	---
Total	10,583	5,333	8,572	6,803	5,281	16,149	11,262	13,166	4,803	2,569	1,983	2,867
Mean	341	178	277	219	182	521	375	425	160	82.9	64.0	95.6
Max	1,320	669	692	530	400	1,560	1,370	1,220	631	726	201	560
Min	120	92	166	118	121	106	150	123	40	21	28	24
Cfsm	2.46	1.28	1.99	1.58	1.31	3.75	2.70	3.06	1.15	0.60	0.46	0.69
In.	2.83	1.43	2.29	1.82	1.41	4.32	3.01	3.52	1.29	0.69	0.53	0.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	199	268	249	204	176	393	793	433	190	117	112	104
Max	756	596	705	608	956	1,324	1,415	1,114	840	474	734	588
(WY)	(2006)	(2006)	(1974)	(1998)	(1981)	(1936)	(1969)	(1940)	(1947)	(2009)	(1976)	(1938)
Min	22.1	65.5	73.0	35.9	40.8	76.9	258	142	46.2	22.8	20.6	22.5
(WY)	(1964)	(1954)	(1948)	(1981)	(1931)	(1956)	(1995)	(1941)	(1965)	(1933)	(2001)	(1963)

04288000 MAD RIVER NEAR MORETOWN, VT—Continued

SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1929 - 2012	
Annual total	155,717		89,371			
Annual mean	427		244		270	
Highest annual mean					486	2011
Lowest annual mean					133	1965
Highest daily mean	[e]6,840	Aug 28	[e]1,560	Mar 9	[e]6,840	Aug 28, 2011
Lowest daily mean	30	Aug 6	21	Jul 15[a]	2.9	Aug 18, 1929
Annual seven-day minimum	33	Aug 1	28	Jul 11	4.6	Aug 17, 1929
Maximum peak flow			[e]3,200	Mar 9	[b]24,200	Aug 28, 2011
Maximum peak stage			[c]7.48	Mar 9	[d]19.26	Aug 28, 2011
Instantaneous low flow			19	Jul 23	1.4	Oct 1, 1930
Annual runoff (cfsm)	3.07		1.76		1.94	
Annual runoff (inches)	41.67		23.92		26.37	
10 percent exceeds	939		533		603	
50 percent exceeds	222		170		143	
90 percent exceeds	93		47		40	

[e] Estimated.
[a] Also July 22, 2012.
[b] From rating curve extended above 7,700 ft³/s on basis of computation of flow over dam at gage-heights 9.98 ft, 11.51 ft, 16.34 ft, and 19.4 ft.
[c] Ice affected.
[d] From floodmarks.