Water-Data Report 2013

04282500 OTTER CREEK AT MIDDLEBURY, VT

St. Lawrence Basin
Otter Subbasin

LOCATION.--Lat 44°00′47″, long 73°10′06″ referenced to North American Datum of 1927, Addison County, Hydrologic Unit 04150402, on right bank, 150 ft upstream from State Highway 125 bridge in Middlebury, 0.1 mi southwest of US 7 and State Highway 125 intersection, and 3.6 mi downstream from Middlebury River.

DRAINAGE AREA.--628 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records: April 1903 to April 1907, October 1910 to January 1920, October 1928 to current year.

REVISED RECORDS.--WSP 434: 1903-04. WSP 684: 1913(M), drainage area. WSP 1114: 1913. WSP 1207: 1929, 1931.

GAGE.--Water-stage recorder. Datum of gage is 335.75 ft above National Geodetic Vertical Datum of 1929. Nonrecording gage at site 1,800 ft upstream at datum 10 ft lower, April 1, 1903 to April 30, 1907 and October 5, 1910 to January 31, 1920; nonrecording gage at present site and datum, October 1, 1928 to October 17, 1933.

COOPERATION.--Vermont Department of Environmental Conservation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Chittenden Reservoir, usable capacity, 819 million ft^3 on East Creek.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 13,600 ft^3/s, November 4, 1927, gage height, 13.3 ft, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,540 ft^3/s, July 11, gage height, 5.13 ft; minimum daily discharge, 304 ft^3/s, Sept. 30.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 04282500, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/04282500.2013.pdf

04282500 OTTER CREEK AT MIDDLEBURY, VT—Continued

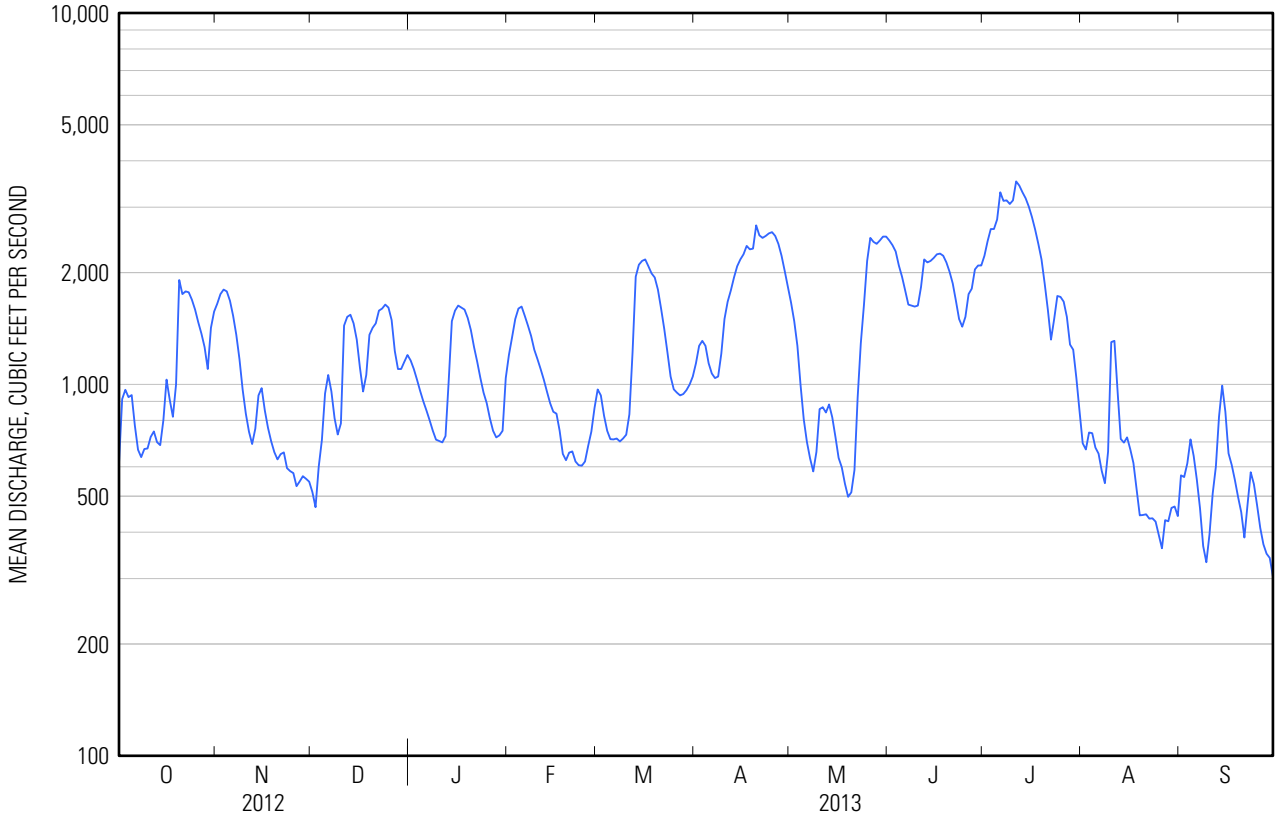
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	613	1,650	513	e1,160	e1,200	969	1,140	1,660	2,440	2,220	694	569
2	913	1,750	467	e1,100	e1,340	934	1,270	1,480	2,370	2,430	668	563
3	967	1,800	600	e1,030	e1,500	824	1,310	1,270	2,280	2,620	742	613
4	924	1,780	708	e960	e1,600	750	1,270	995	2,090	2,620	739	711
5	936	1,680	945	e900	e1,620	712	1,140	806	1,950	2,780	676	642
6	775	1,530	1,060	e850	e1,530	711	1,070	700	1,790	3,290	651	554
7	667	1,360	957	e800	e1,440	715	1,040	632	1,640	3,120	585	464
8	637	1,170	811	e750	e1,350	702	1,050	583	1,630	3,130	542	367
9	670	969	733	e710	e1,240	715	1,210	658	1,620	3,060	659	332
10	672	835	785	704	e1,170	732	1,500	858	1,630	3,130	1,300	395
11	722	746	1,440	698	e1,100	831	1,670	868	1,830	3,520	1,310	508
12	747	691	1,520	726	1,030	e1,220	1,790	840	2,170	3,430	958	600
13	699	760	1,540	1,020	956	e1,950	1,940	883	2,130	3,290	713	819
14	686	934	1,460	1,480	890	e2,100	2,080	815	2,150	3,170	697	992
15	801	977	1,320	1,580	844	e2,150	2,170	722	2,190	3,010	720	844
16	1,030	851	1,110	1,630	834	e2,170	2,240	634	2,240	2,820	669	652
17	910	764	957	e1,610	e750	e2,080	2,360	598	2,250	2,610	614	607
18	818	703	1,060	e1,590	e650	e1,990	2,310	540	2,220	2,390	522	553
19	1,000	657	1,360	1,510	e625	e1,940	2,320	498	2,130	2,170	444	498
20	1,910	628	1,420	1,400	e655	1,800	2,680	512	2,010	1,870	445	453
21	1,750	649	1,460	e1,260	e660	1,600	2,520	588	1,870	1,590	447	387
22	1,780	656	1,580	e1,150	e620	1,410	2,480	920	1,680	1,320	435	475
23	1,770	595	1,600	e1,040	606	1,220	2,510	1,290	1,500	1,500	436	580
24	1,690	584	1,640	e950	604	1,050	2,550	1,640	1,430	1,730	427	539
25	1,590	577	1,610	e890	620	970	2,570	2,150	1,520	1,720	393	473
26	1,470	532	1,490	e810	683	950	2,510	2,480	1,750	1,670	362	411
27	1,370	548	1,230	e750	746	934	2,390	2,420	1,810	1,520	431	371
28	1,260	566	1,100	e720	864	942	2,220	2,390	2,040	1,280	428	350
29	1,100	557	e1,100	729	---	965	2,020	2,440	2,090	1,240	465	341
30	1,420	547	e1,150	e750	---	999	1,830	2,500	2,090	1,040	469	304
31	1,570	---	e1,200	e1,040	---	1,050	---	2,500	---	847	442	---
Total	33,867	28,046	35,926	32,297	27,727	38,085	57,160	37,870	58,540	72,137	19,083	15,967
Mean	1,092	935	1,159	1,042	990	1,229	1,905	1,222	1,951	2,327	616	532
Max	1,910	1,800	1,640	1,630	1,620	2,170	2,680	2,500	2,440	3,520	1,310	992
Min	613	532	467	698	604	702	1,040	498	1,430	847	362	304
Cfsm	1.74	1.49	1.85	1.66	1.58	1.96	3.03	1.95	3.11	3.71	0.98	0.85
In.	2.01	1.66	2.13	1.91	1.64	2.26	3.39	2.24	3.47	4.27	1.13	0.95

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	691	929	987	931	866	1,536	2,542	1,538	862	593	504	499
Max	2,396	2,675	2,610	2,509	2,414	4,538	4,500	3,717	3,025	2,327	2,624	3,003
(WY)	(2011)	(2004)	(1984)	(1949)	(1981)	(1936)	(1960)	(1996)	(1947)	(2013)	(1976)	(2011)
Min	166	241	246	205	229	384	885	370	208	126	129	168
(WY)	(2002)	(2002)	(1948)	(1948)	(1980)	(1940)	(1995)	(1903)	(1965)	(1965)	(1965)	(1982)

04282500 OTTER CREEK AT MIDDLEBURY, VT—Continued

SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1903 - 2013	
Annual total	339,904		456,705			
Annual mean	929		1,251		1,040	
Highest annual mean					1,912	2011
Lowest annual mean					397	1965
Highest daily mean	2,450	May 16	3,520	Jul 11	11,000	Mar 21, 1936
Lowest daily mean	169	Sep 4	304	Sep 30	86	Sep 9, 2002
Annual seven-day minimum	207	Aug 21	398	Sep 24	102	Sep 3, 2002
Maximum peak flow			3,540	Jul 11	11,000	Mar 20, 1936
Maximum peak stage			5.13	Jul 11	10.30	Mar 20, 1936
Annual runoff (cfsm)	1.48		1.99		1.66	
Annual runoff (inches)	20.13		27.05		22.49	
10 percent exceeds	1,720		2,290		2,370	
50 percent exceeds	738		1,040		670	
90 percent exceeds	304		541		262