

Burlington VT

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:
MONTH YEAR
May 2013

TO: Hydrologic Information Center, W/OS31
NOAA's National Weather Service
1325 East West Highway
Silver Spring, MD 20910-3283

SIGNATURE
/s/ John M. Goff, METEOROLOGIST WFO BTV

DATE
June 6, 2013

When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).

An X inside this box indicates that no flooding occurred within this hydrologic service area.

May 2013 could be characterized as one of extremes across the Burlington, VT HSA as unseasonably dry conditions were quickly replaced by a very wet pattern over the last 12 days of the month. During the first three weeks of the month, continental high pressure generally remained atop the region with only very light precipitation totals observed as frontal systems crossed the area with little available moisture. Indeed, the U.S. Drought Monitor continued to show much of the region in D0 drought conditions as monthly precipitation totals lagged some 1 to 2 inches below normal, and yearly negative departures ranged from 3 to as much as 6 inches.

By the 18th into the 20th signs of a major pattern change became evident as synoptic flow trended more southerly allowing moisture-laden air to push northward into the region. At the same time a semi-stationary frontal boundary became established in the area providing the focus for widespread convective rainfall. While moderate to locally heavy totals of 1 to 3 inches on the 21st and 22nd were initially beneficial given the antecedent dry conditions, the potential for additional heavy rainfall continued to exist. As a result, a Flash Flood Watch was issued on the morning of the 23rd. This proved the correct decision as during the evening of the 23rd training thunderstorms dropped excessive totals across portions of Chittenden and Lamoille counties in Vermont. Flash flood warnings were promptly issued for these areas where additional amounts of 2 to as much as 4 inches fell leading to numerous reports of road washouts along with local evacuations and isolated home damage.

As this threat subsided, the focus then shifted to mainstem river flooding as a large scale low pressure system crept northward along the New England coast from the 24th through the 26th. With additional moderate to heavy rainfall expected, a Flood Watch was issued for much of the HSA. This again was the correct call as widespread 1 to 3 inch totals were observed during this time frame, leading to substantial rises on many rivers from the Adirondack Mountains eastward from the 25th through the 26th. Several of the rivers exceeded flood stage and river flood warnings were issued accordingly. While conditions trended slightly drier by the last few days of the month, rivers and streams continued to run well above long-term climatological normal levels.

**Significant River Crests May 2013
WFO Burlington VT**

Location	ID	Date	Time (UTC)	Crest Stage (ft)	Flood Stage (ft)
E. Br. Ausable R. at Ausable, NY	ASFN6	05/25/13	1515	7.0	7.0
Great Chazy R. at Perry Mills, NY	CZRN6	05/27/13	0700	8.02	9.0
Winooski R. at Essex Jct., VT	ESSV1	05/26/13	1045	10.97	12.0
Missisquoi R. at E. Berkshire, VT	EBKV1	05/26/13	0615	12.04	13.0
Missisquoi R. at North Troy, VT	NTYV1	05/26/13	0500	9.27	9.0
Barton R. at Coventry, VT	COVV1	05/26/13	0545	9.32	8.0
Lamoille R. at Johnson, VT	JONV1	05/26/13	0215	11.52	13.0
Lamoille R. at Jeffersonville, VT	JVLV1	05/24/13 05/26/13	1600 0930	450.03 450.34	450.0
East Br. Passumpsic R. at E. Haven, VT	EHVV1	05/24/13 05/25/13	0615 1830	6.83 7.23	6.50

**Monthly Precipitation Totals and Departures
for Selected Automated Observing Sites
May 2013**

Location	ID	Total	Normal	Departure	% of Normal
Burlington, VT	KBTV	8.74	3.45	5.29	253
Montpelier, VT	KMPV	4.19	3.37	0.82	124
Springfield, VT	KVSF	4.74	3.74	1.00	127
St. Johnsbury, VT	K1V4	4.64	3.36	1.28	138
Morrisville, VT	KMVL	4.98	3.27	1.71	152
Rutland, VT	KRUT	2.73	n/a	n/a	n/a
Plattburgh, NY	KPBG	5.23	n/a	n/a	n/a
Saranac Lake, NY	KSLK	5.74	3.44	2.30	167

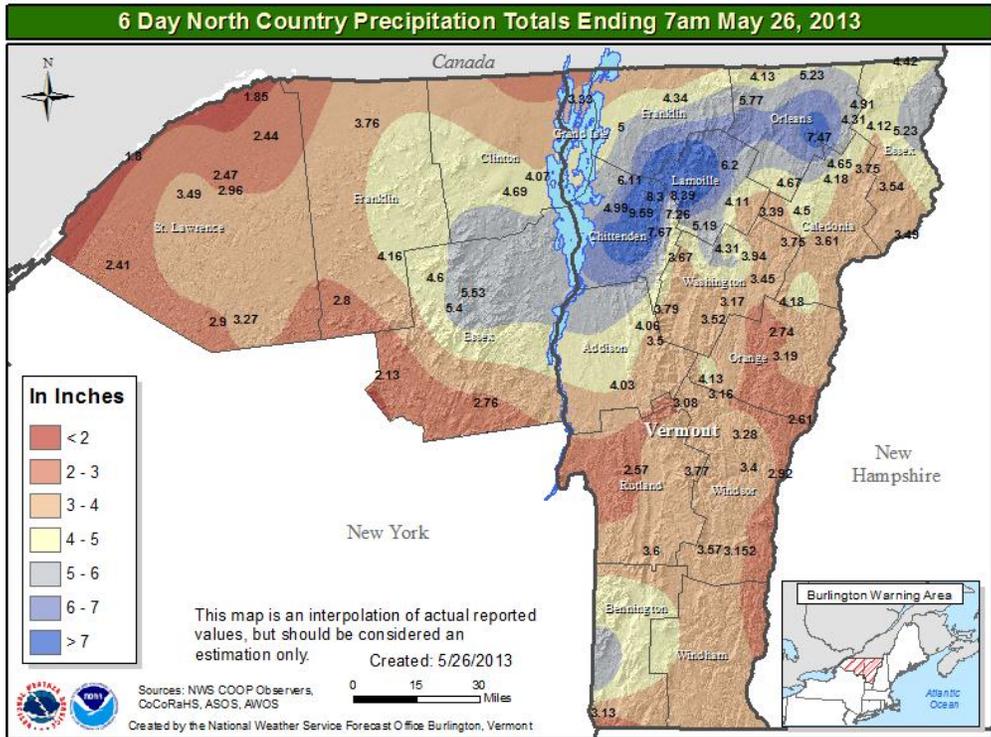


Figure 1. 6-day precipitation totals ending 7am, 26 May, 2013. Note the excessive totals across portions of Chittenden, Lamoille and Orleans counties in Vermont. Nearly half of this rainfall occurred during a 3 to 5 hour period on the evening of 23 May, 2013.

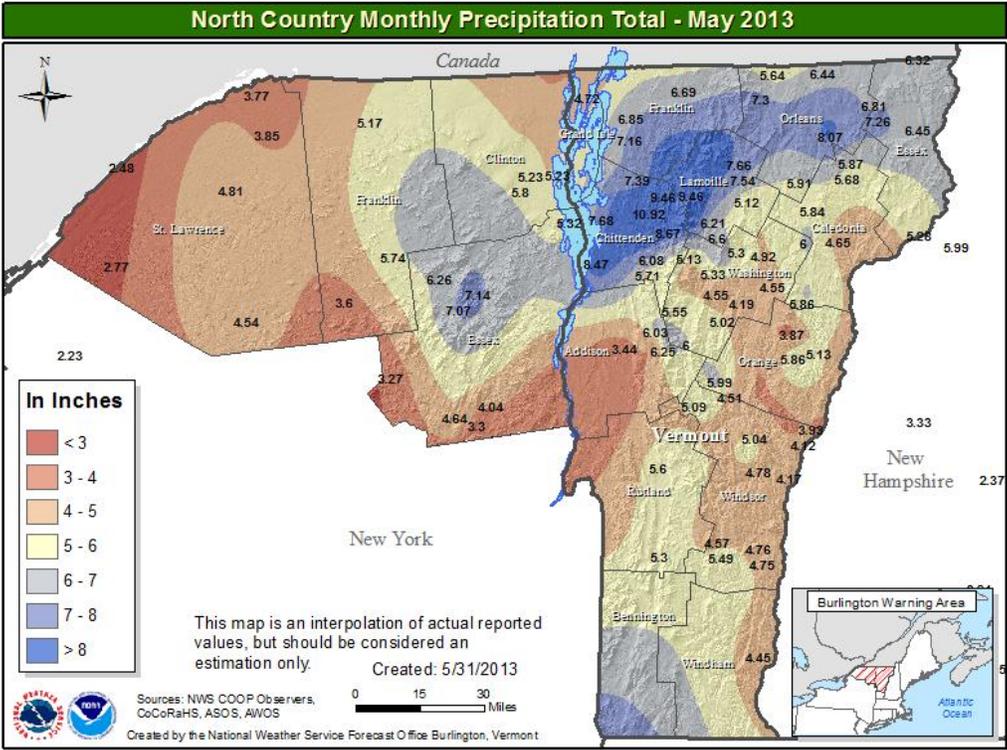


Figure 2. Precipitation totals for the Burlington HSA for May 2013. Most of this rainfall occurred during the last 10 days of the month as the existent long-term dry pattern was quickly erased.



Figure 3. One of the numerous road washouts (approx. 20-30) across eastern Chittenden and western Lamoille counties during flash flooding on the evening of 23 May, 2013.



Figure 4. Two vehicles which drove into a small drainage pond in Essex, VT during the flash flooding event of 23 May, 2013. The pond had been concealed by high water. An elderly woman was rescued from the vehicle on the left.