

hyNWS Form E-5
(04-2006)
(PRES. BY NWS Instruction 10-924)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

HYDROLOGIC SERVICE AREA (HSA)
Burlington VT

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:
MONTH YEAR
October 2017

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

SIGNATURE
/s/ Robert, Meteorologist

DATE
Nov 12, 2017

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.

October 2017 was an active month with moderate rainfall to start followed by a period of dry weather through the middle of the month, and ended with two rounds of heavy precipitation pushing the East Branch of the AuSable River at Au Sable Forks into flood stage (Tables 1&2). Ultimately, the rainfall of generally 2-6 inches (Figure 1) was below normal for the Burlington HSA except along the Connecticut River Valley and the Saint Lawrence River Valley (Figure 2). The net result was a continuation of the D0 Drought (Figure 3) for central Vermont at the end of the month.

October started somewhat active with rainfall reported off and on from Oct 4-10, before a period of dry weather moved into the North Country. On October 9th Post Tropical Cyclone Nate moved through the Burlington HSA and produced fairly widespread 1 to 2 inches of rain with the highest totals generally over the Saint Lawrence valley and east of the Adirondacks in northern New York. From Oct 11th through Oct 23rd general high pressure set in and the precipitation waned. By the end of the month two separate low pressure systems, one low tracking north and west of the Saint Lawrence on Oct 24th, and the other a coastal low on Oct 30th combined to produce fairly high rainfall totals (Figure 4). Across Vermont the rainfall ranged from 2 to 6 inches with the highest totals from the spine of the Greens eastward, and across northern New York the highest totals where over the southern Saint Lawrence Valley where 3 to 5 inches of rain occurred. This caused streamflows to end the month normal to slightly above normal (Figure 5) and pushed the East Branch of the AuSable River at Au Sable Forks into flood stage briefly. This rainfall also contributed to the Oswegatchie River at Heuvelton to begin flooding to start November.

Location	ID	Flood Stage (ft)	Above Flood (UTC)	Below Flood (UTC)	Crest (ft)	Crest Time (UTC)
East Branch of the AuSable River at Au Sable Forks NY	ASFN6	7	30 Oct 11:21	30 Oct 16:41	7.59	30 Oct 13:59

Table 1. River Gages exceeding Flood Stage in October 2017.

Flood/Flash Flood Warning VTEC number	Date Oct 2017	Issuance Time (UTC)	Counties, State
FLW 0017	30	12:08	Essex, NY

Table 2. Flood Warnings Issued in October 2017.

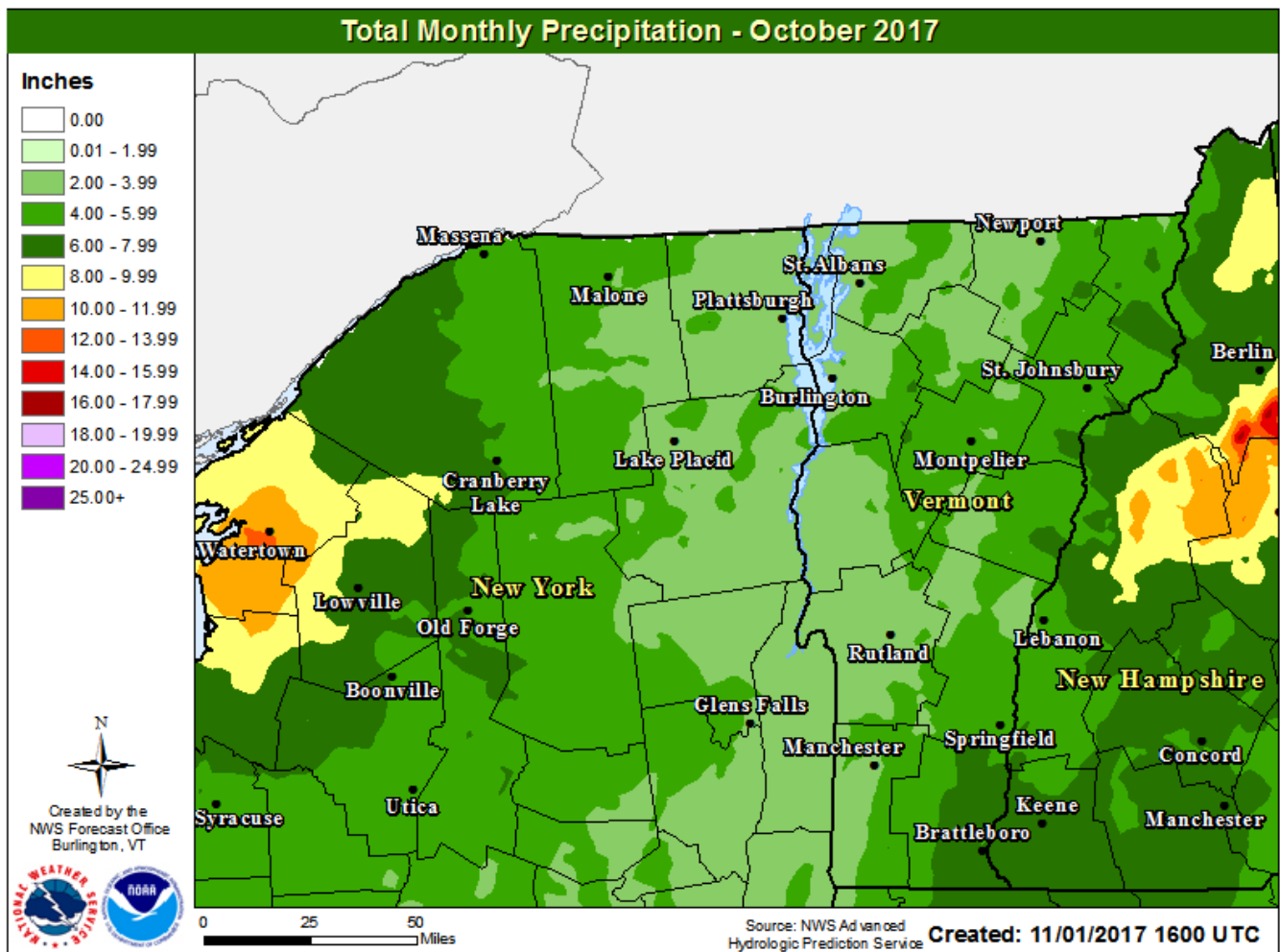


Figure 1: October rainfall totals generally averaged from 2 to 6 inches across the Burlington HSA.

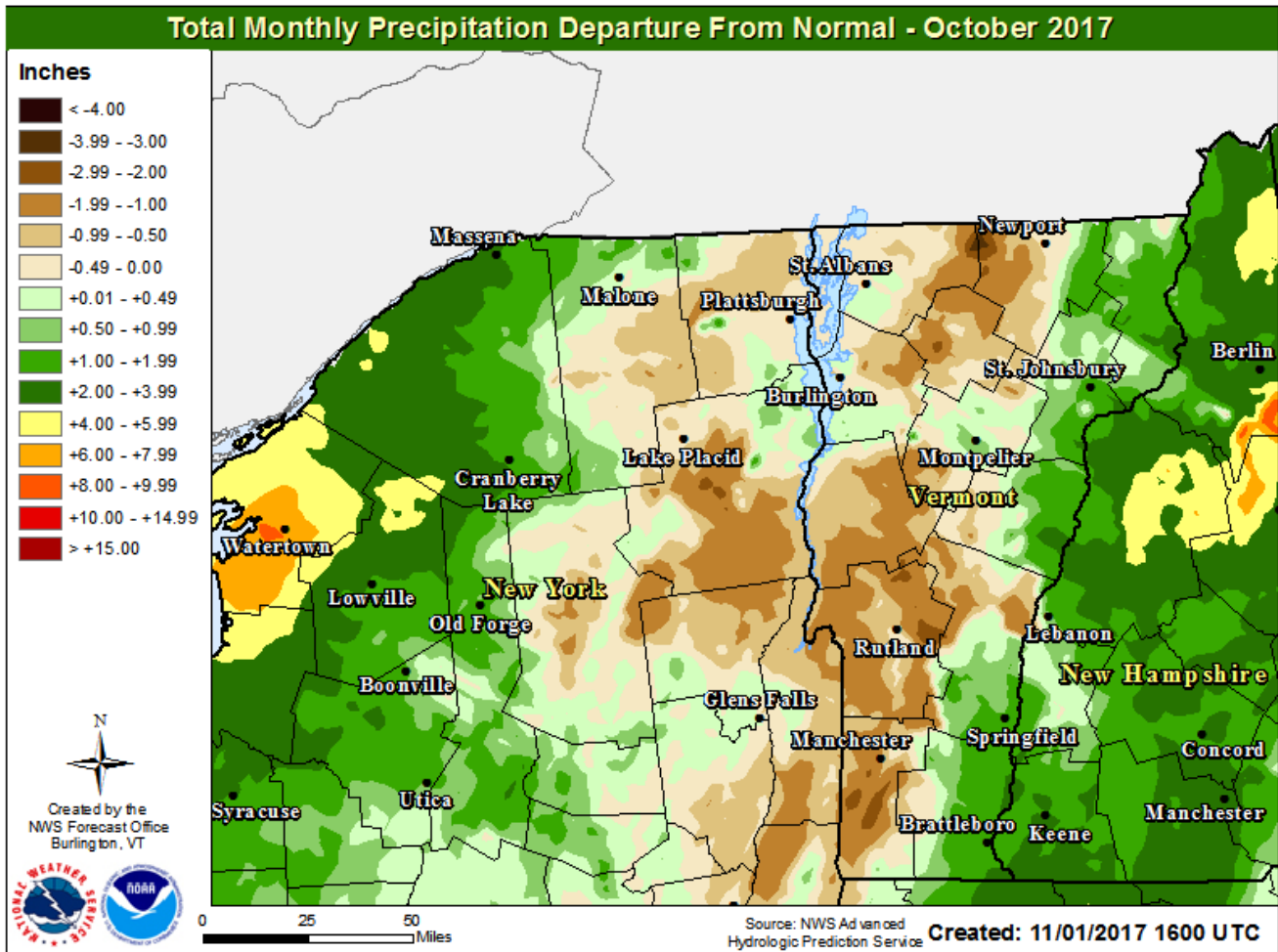
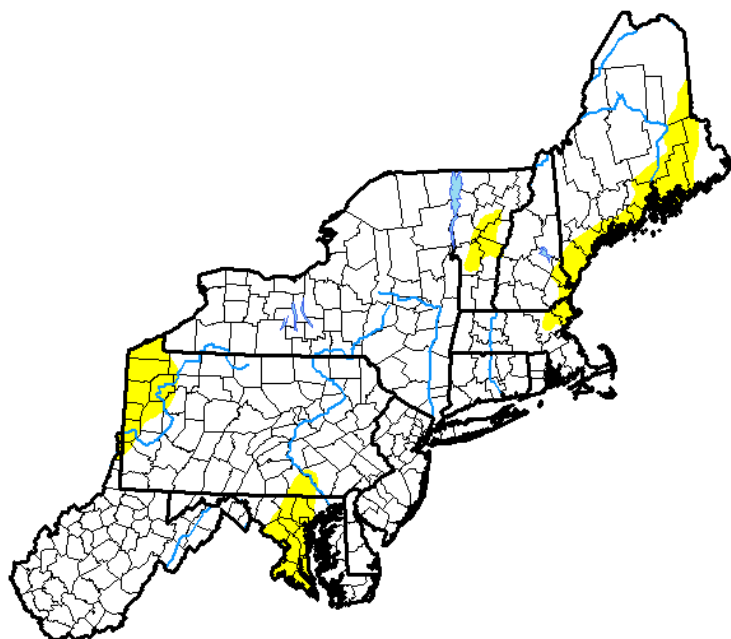


Figure 2: Precipitation departures averaged from 2 to 3 inches above normal for the western portion of the Burlington HSA and from 1 to 2 inches above across the Vermont/New Hampshire border. In the Adirondacks and across the Champlain Valley much of the area was below normal ranging from half an inch to three inches below.

U.S. Drought Monitor Northeast

October 31, 2017
(Released Thursday, Nov. 2, 2017)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	89.64	10.36	0.00	0.00	0.00	0.00
Last Week 10-24-2017	36.76	63.24	12.33	0.00	0.00	0.00
3 Months Ago 08-01-2017	90.33	9.67	1.57	0.00	0.00	0.00
Start of Calendar Year 01-03-2017	30.54	69.46	43.67	11.68	1.39	0.00
Start of Water Year 09-26-2017	77.60	22.40	3.93	0.00	0.00	0.00
One Year Ago 11-01-2016	31.31	68.69	51.24	19.86	1.37	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

David Miskus
NOAA/NWS/NCEP/CPC



<http://droughtmonitor.unl.edu/>

Figure 3 U.S. Drought Monitor data from October 31, 2017 shows the effect that drier than normal conditions in August through October has had on the Burlington HSA. Much of Vermont has been added to the “Abnormally Dry” area on the map.

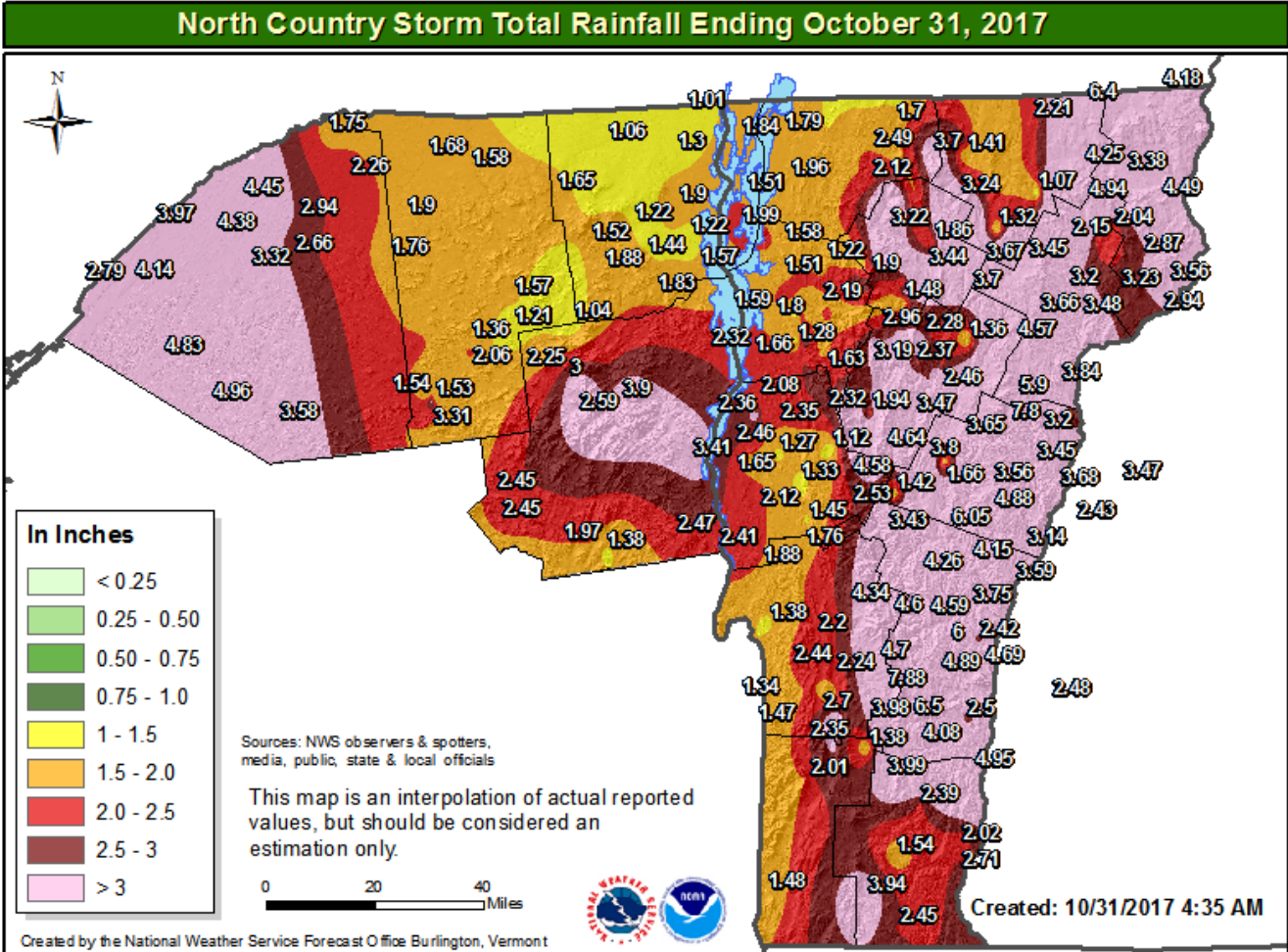


Figure 4 Storm Total rainfall from Oct 24th through Oct 30th. The heavy rainfall caused the East Branch of the AuSable River to rise into flood stage briefly and set the stage for the Oswegatchie River at Heuvelton to rise into flood stage to begin November.

October 2017

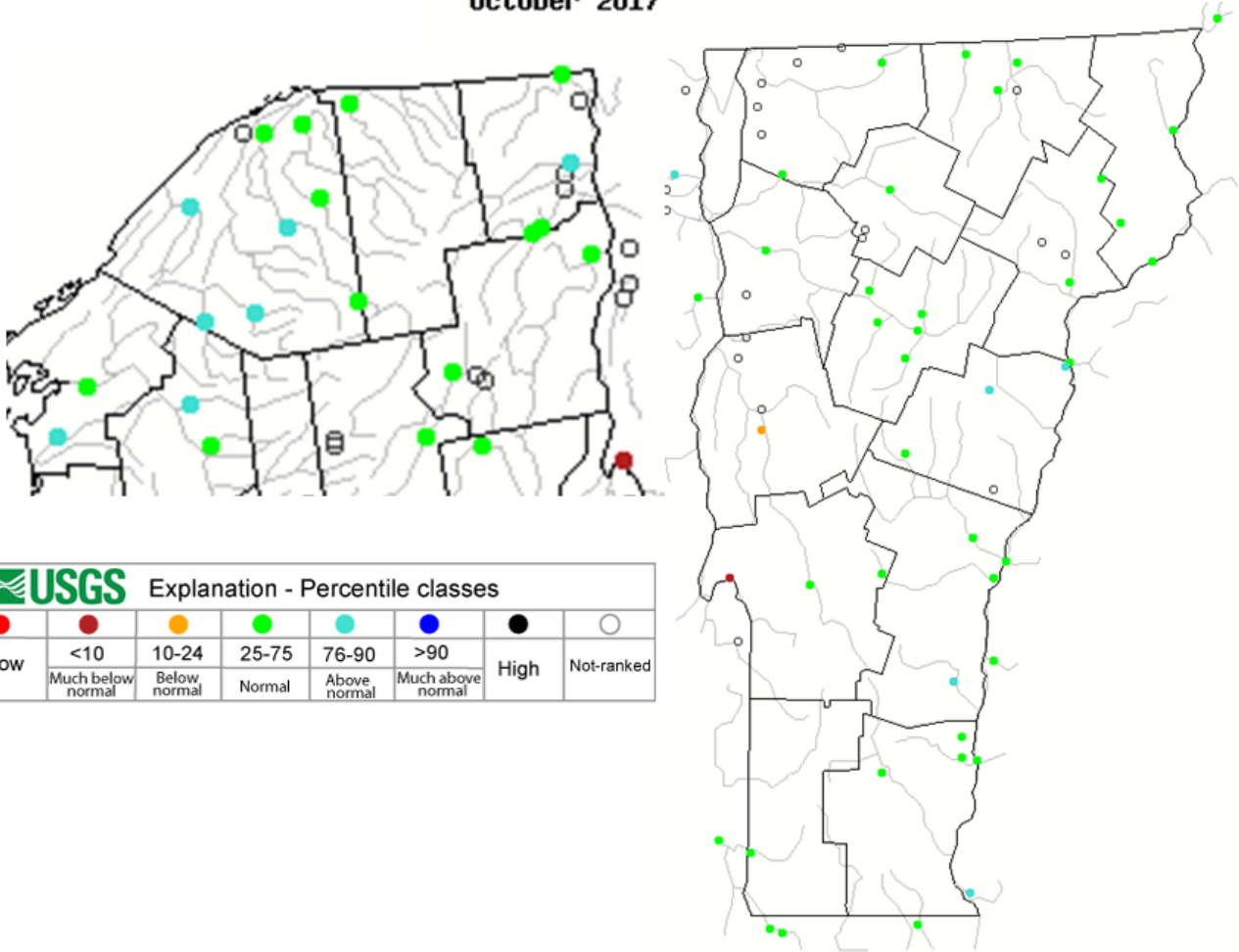


Figure 5: Monthly average streamflow for September 2017 showing average to above average levels compared to historical normal.