

NWS 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 2015
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283	SIGNATURE /s/ Kimberly G. McMahon/ GF/ WFO BTW DATE November 10, 2015

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.

Most of October 2015 was dry, with only 8 days during the month receiving a widespread rainfall of approximately a tenth of an inch or more. Figure 1 depicts the dry month with most of the NWS Burlington Vermont Hydrologic Service Area receiving two to four inches of rainfall throughout October. To further emphasize the lack of precipitation during the month, the departure from normal shows all but a few areas in the Saint Lawrence Valley in New York were below normal (Figure 2). After experiencing a dry August and September, this month continued the below normal precipitation for the calendar year most areas are experiencing (Figure 3).

There were two moderate rainfall events, easily seen on the precipitation accumulation graph for Burlington International Airport (Figure 4). Figure 5 shows the surface weather map of a low pressure system that moved across the northeast, resulting in several areas receiving over half an inch of rainfall October 8th through 9th (Figures 6 & 7). But the bulk of the monthly precipitation came from one event in the last couple days of October. In this event, multiple low pressure systems affected the Northeast with moisture from the remnants of Hurricane Patricia (Figure 8), resulting in 1 to 2 inches of rain falling across most of the NWS Burlington HSA (Figure 9). To put it in perspective, that's about half of the monthly rainfall in one event. Rivers responded with rises of several feet, but remained well below flood stage.

These events did provide some relief to drought conditions. Figure 10 shows the drought condition of Abnormally Dry occurring across most of Vermont and Northern New York at the end of September, but by the end of October, this area has decreased to smaller portions of Northern New York and one area in the southern Champlain Valley.

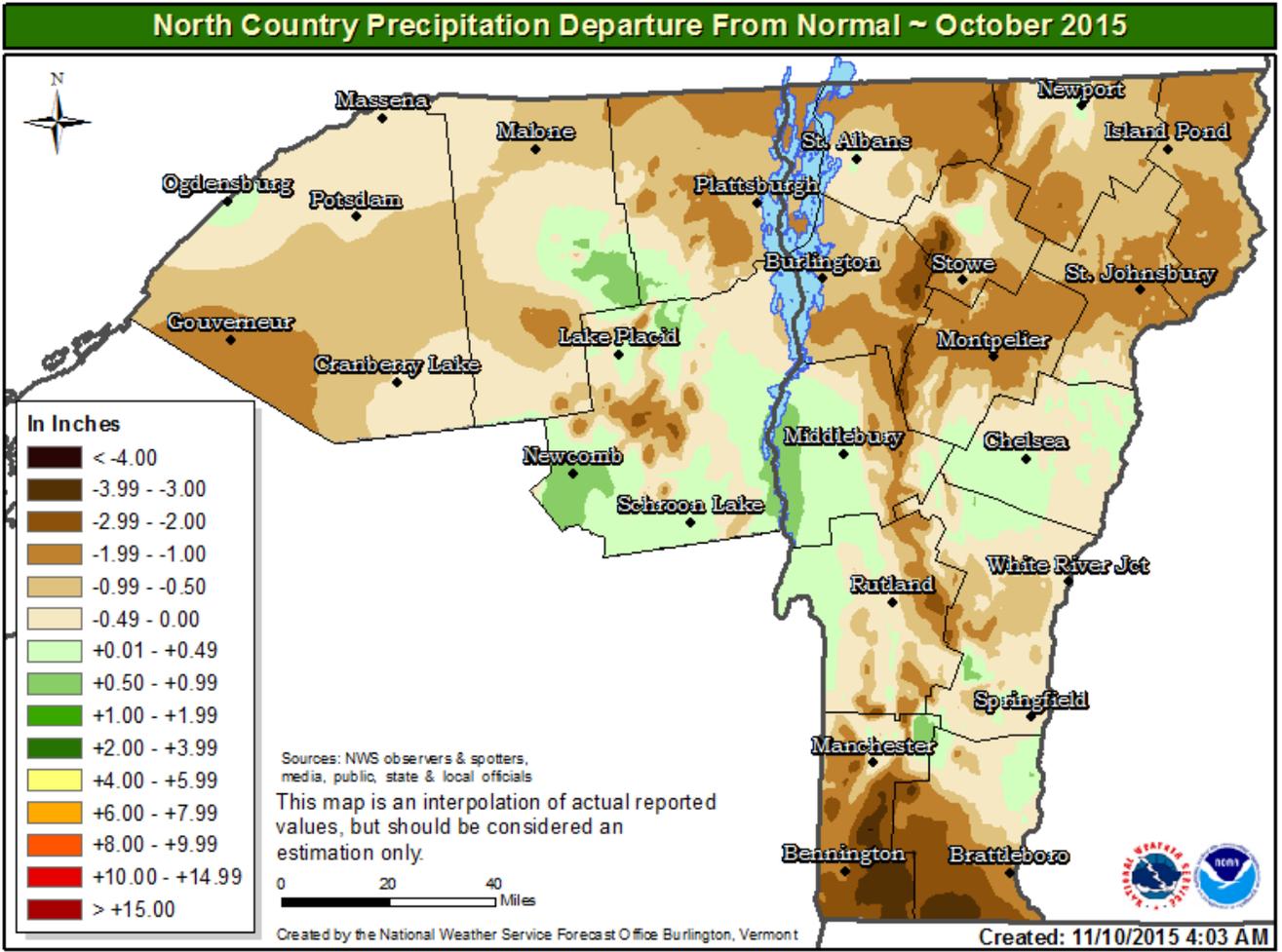


Figure 2. Departure from normal for precipitation total that occurred October 2015 for NWS Burlington HAS. Note bulk of the area is an inch inches or greater below normal.

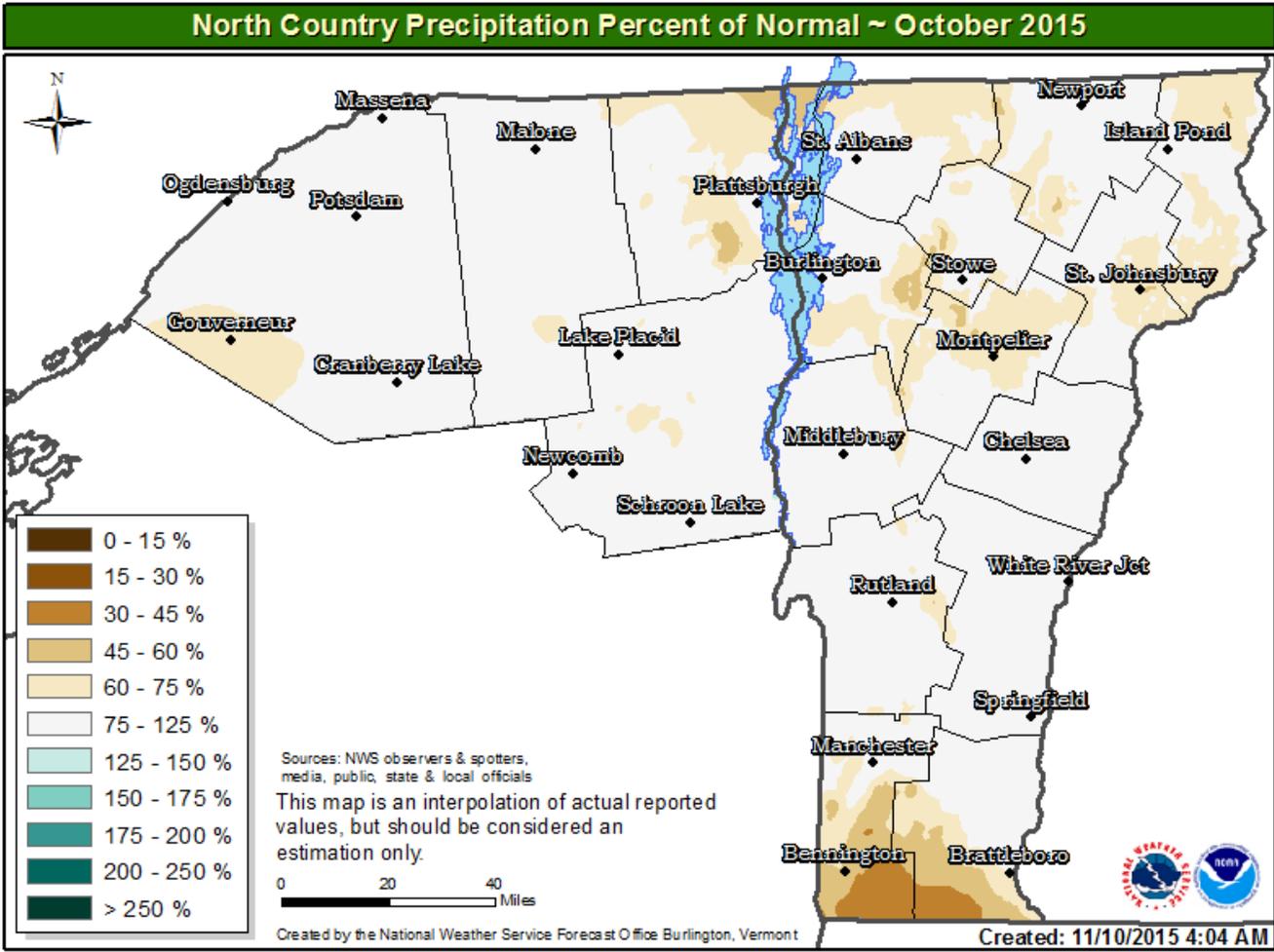


Figure 3. Percentage of normal for precipitation total that occurred during 2015 so far for NWS Burlington HSA. Note bulk of the area is less than 75 percent of normal.

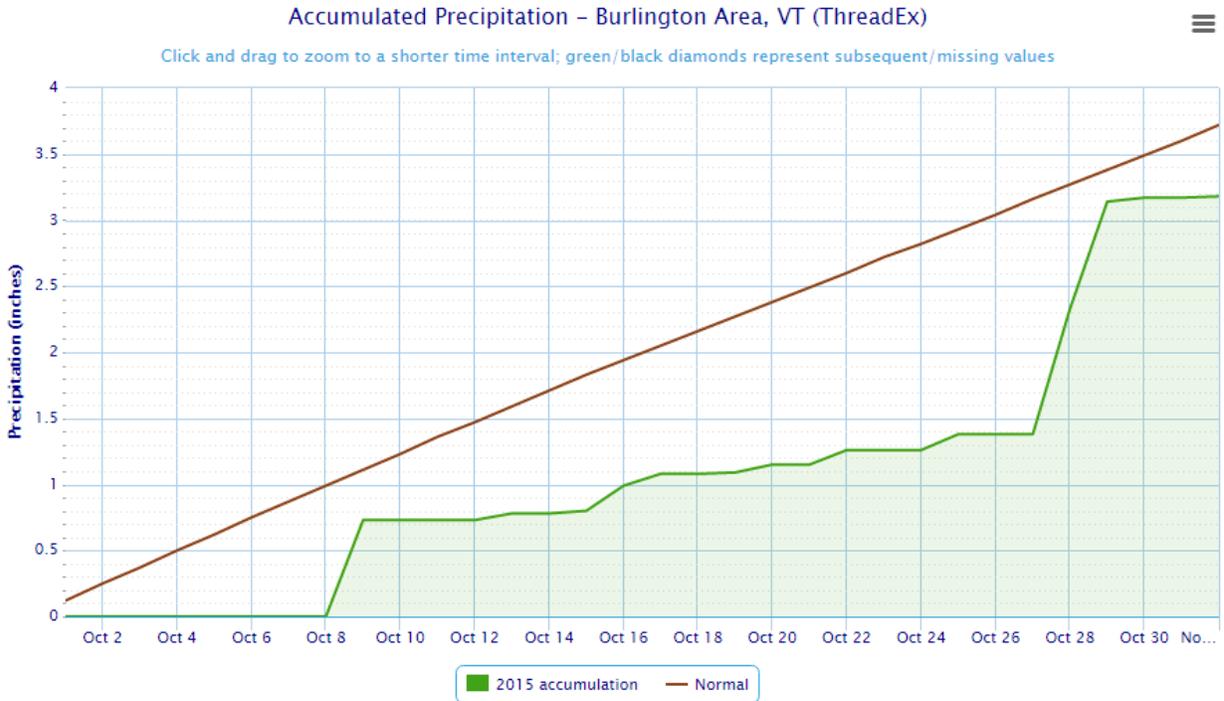
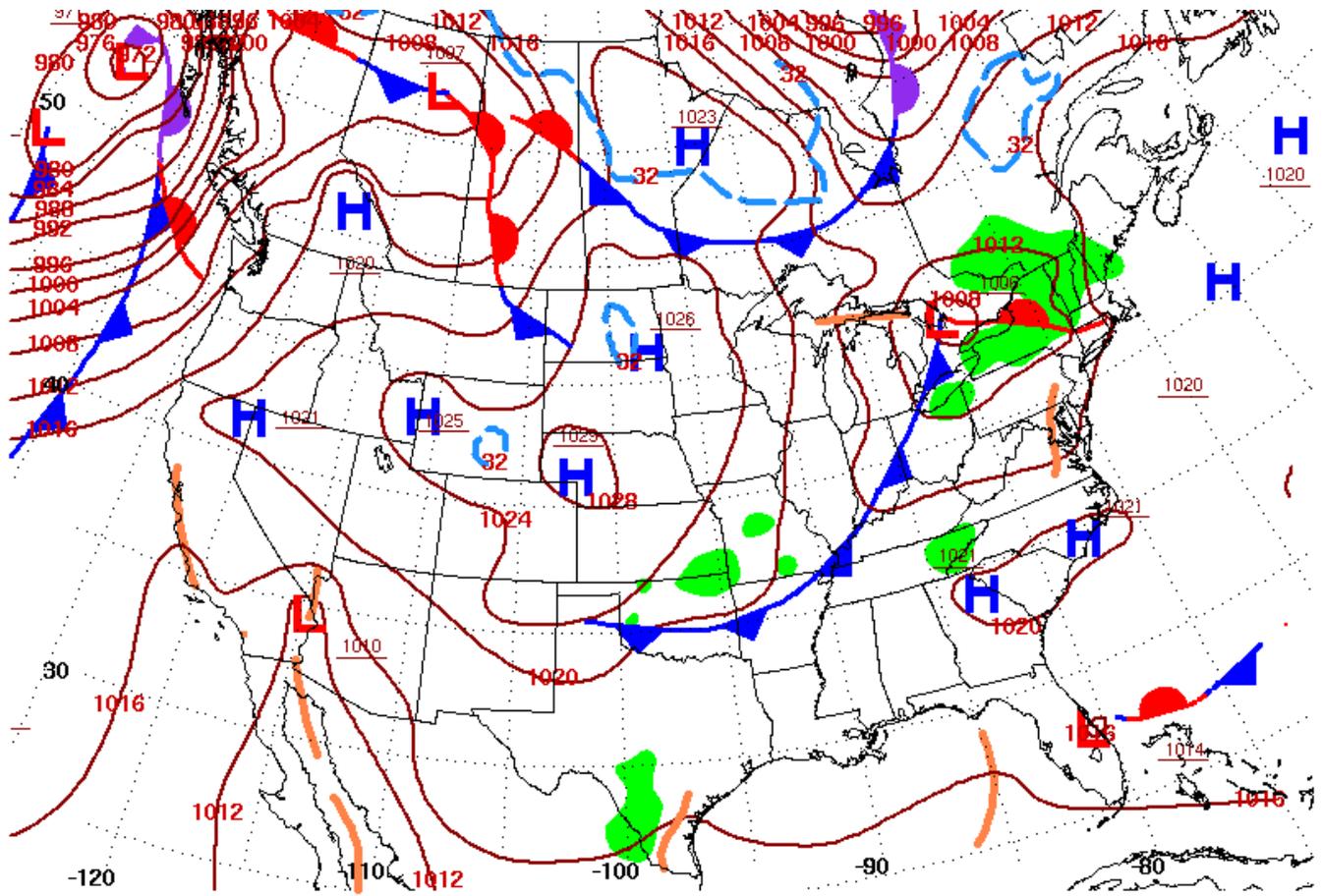
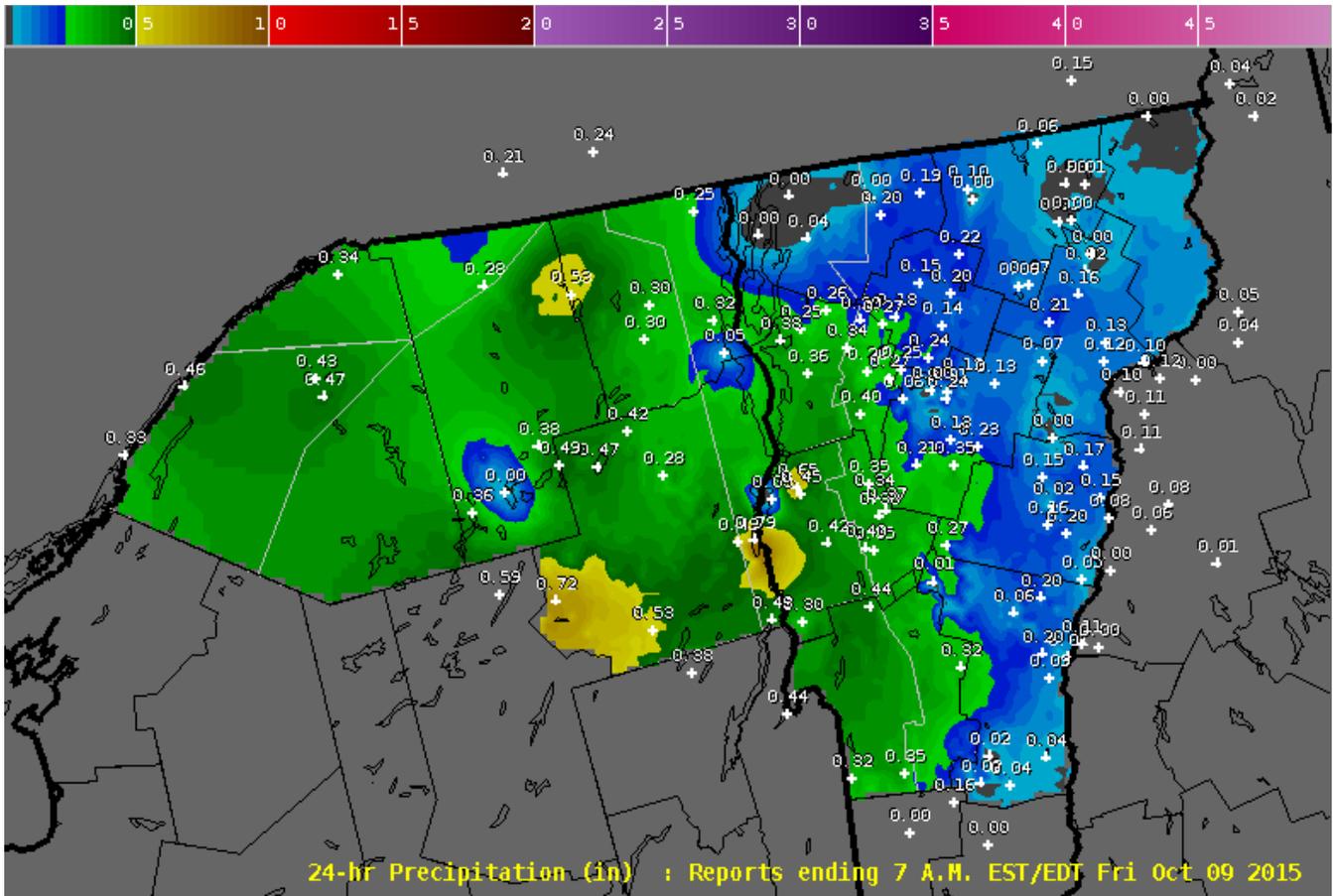


Figure 4. October precipitation accumulation remained below normal at Burlington, VT with bulk of rainfall occurring in two events: October 8th-9th and 27th-28th.



Surface Weather Map at 7:00 A.M. E.S.T.

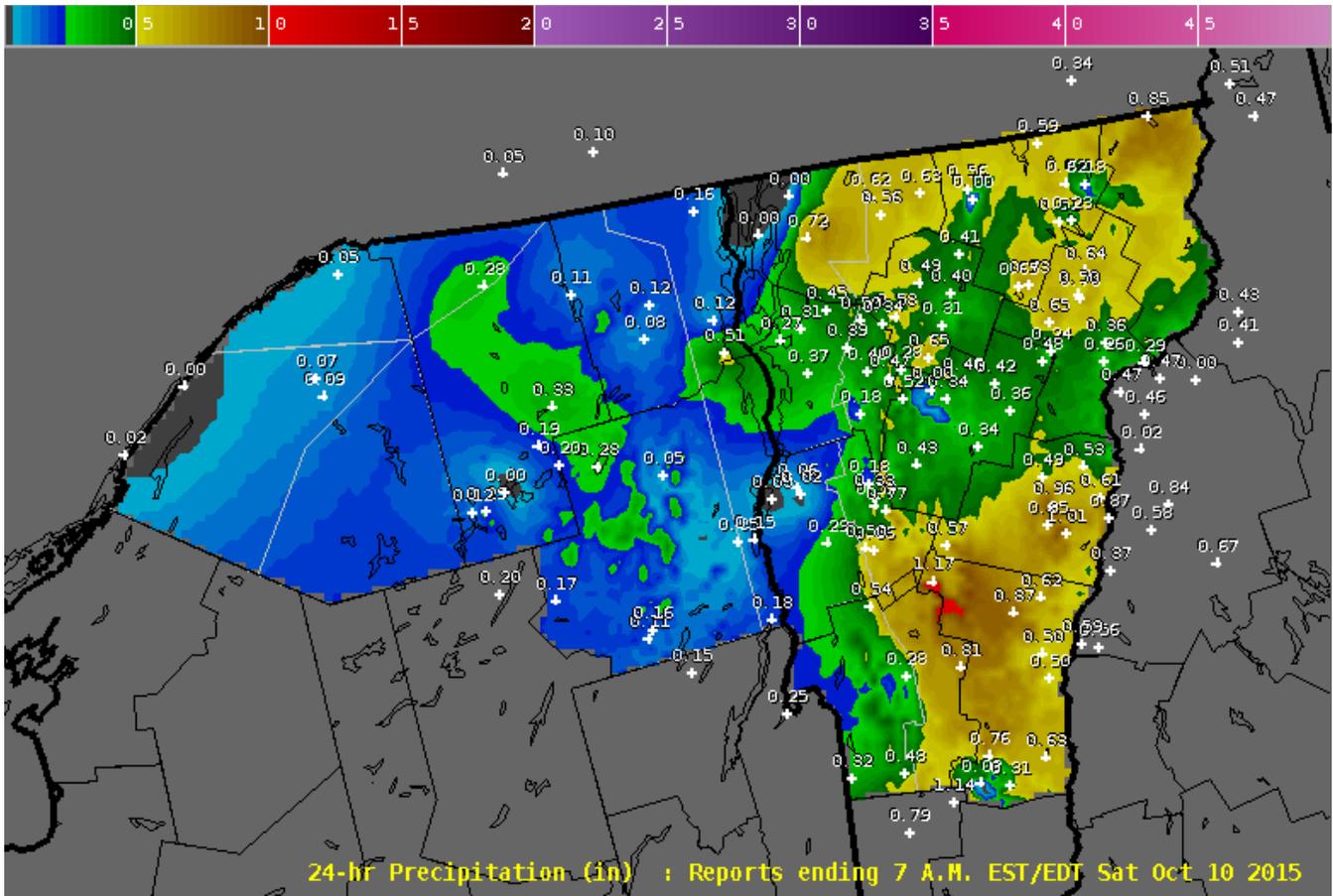
Figure 5. A low pressure system moved across the northeast, resulting in several areas receiving over half an inch of rainfall October 8th through 9th.



NOAA / National Weather Service Burlington, Vermont
 Graphic created: Fri Oct 09 2015 11:11 AM EDT



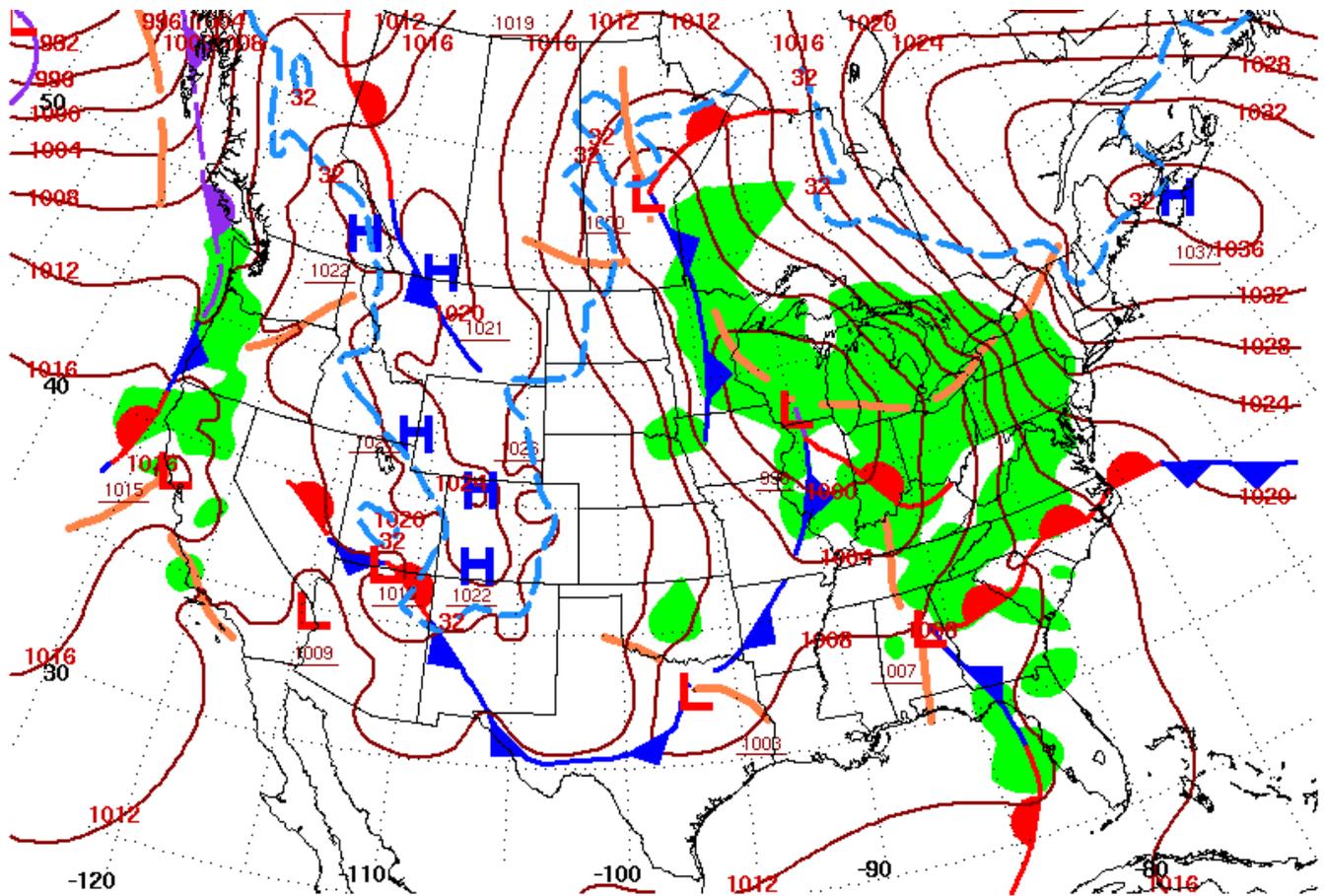
Figure 6. 24 hour rainfall amounts ending 7AM October 9, 2015 ranging from a few hundredths to approximately three-quarters of an inch.



NOAA / National Weather Service Burlington, Vermont
 Graphic created: Sat Oct 10 2015 4:49 PM EDT

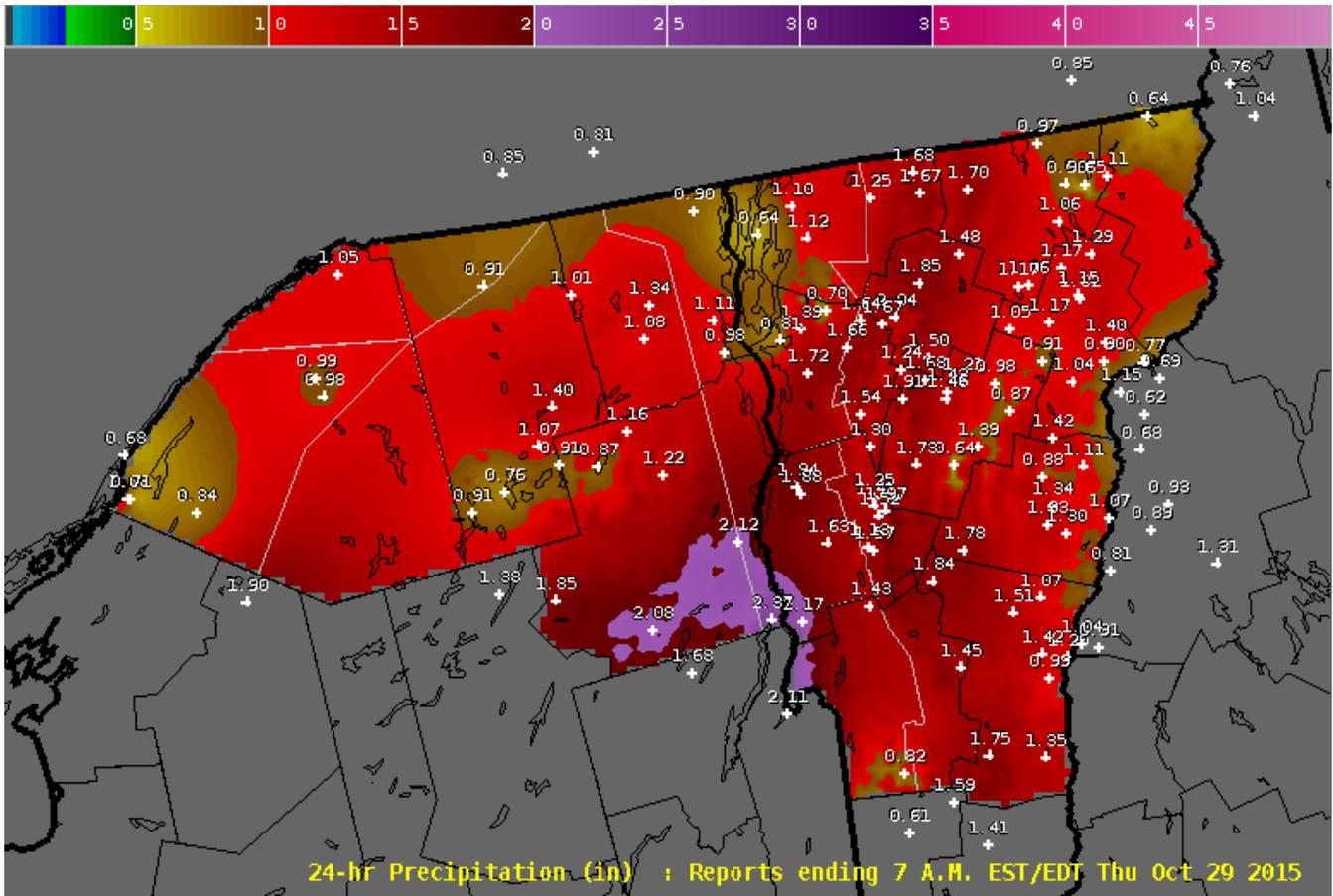


Figure 7. Additional rainfall from 7AM October 9 through 7AM October 10, where some areas received over one inch of additional rainfall.



Surface Weather Map at 7:00 A.M. E.S.T.

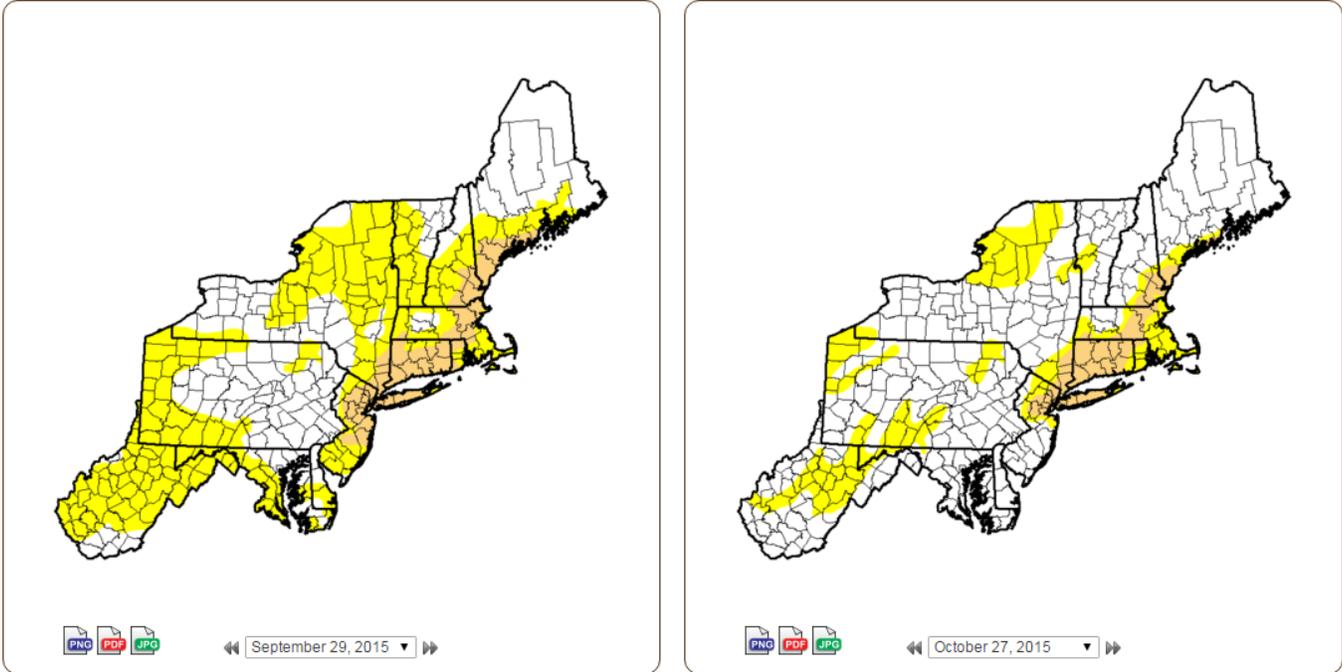
Figure 8. Surface Weather map for October 28, 2015, depicting multiple low pressure systems that produced several inches of rainfall across the NWS Burlington HSA.



NOAA / National Weather Service Burlington, Vermont
 Graphic created: Thu Oct 29 2015 10:57 AM EDT



Figure 9. 24 hour rainfall amounts ending 7AM October 29, 2015. Most areas received over one inch of rainfall, while the Southern Champlain Valley measured over two inches. Up to an additional third of an inch of rainfall occurred through 7AM October 30, 2015.



Statistics Comparison

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2015-09-29	42.41	57.59	9.00	0.00	0.00	0.00
2015-10-27	72.64	27.36	6.39	0.00	0.00	0.00

Figure 10. Drought monitor released the end of September, which was quite dry, on the left; versus conditions released the end of October on the right.