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| 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 |
| TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283 | | REPORT FOR: MONTH YEAR February 2017 |
| | | SIGNATURE /s/ Kimberly G. McMahon / GF DATE March 16, 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.

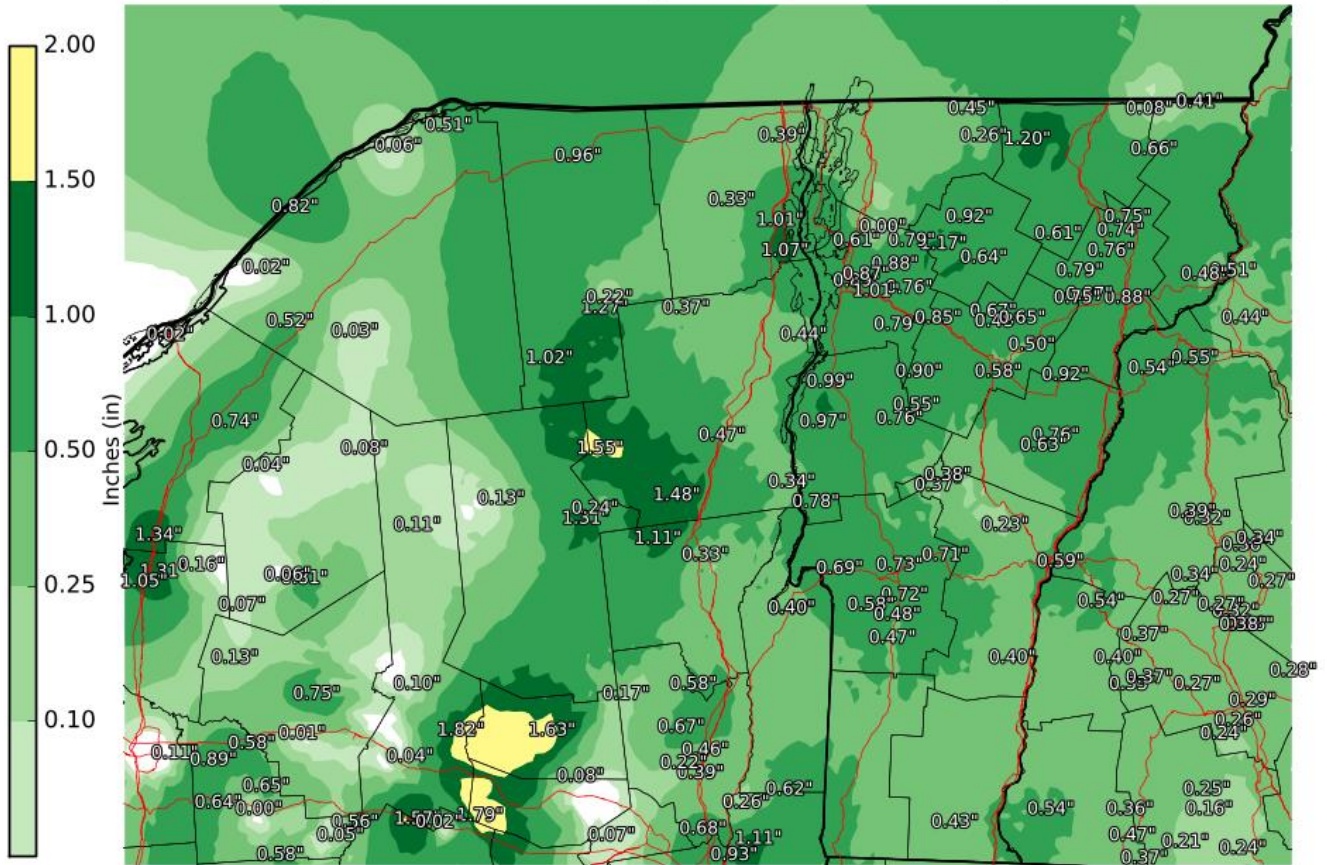
Overall February 2017 was an active month across the Burlington, VT HSA. Large temperature swings from periods of above normal to below normal and back to well above normal contributed to flooding late in the month with significant snowmelt and moderate rainfall.

February 2017 started with temperatures averaging 5-15 degrees above normal before a brief period of cold and below normal kept temperatures well below freezing. For the middle of the month, temperatures warmed to near or slightly above normal. During this period, 2 snowfall events occurred increasing the snowpack 2-6 inches February 2-8 and another 7-14 inches February 13-14. A significant warm up occurred Feb 19 through the end of the month; during which time the average departure from normal temperatures generally ranged from 10-30 degrees above normal for late February. New record high temperatures were set at several stations February 25th, before a strong cold front brought significant precipitation ahead of it (Figure 1) with many areas receiving 0.75 to 1 inch of rainfall.

The very warm temperatures at the end of the month resulted in all of the North Country being above normal for the month (Figure 2), but also cause ice on rivers to break up and jam downstream. A total of 8 River Flood Warnings and 3 Areal Flood Warnings were issued February 25 and 26 (Table 1). The warm temperatures allowed for significant snowmelt of the snowpack. The snowmelt combined with significant rainfall, lead to increased runoff, breaking up river ice and leading to ice jam flooding along the Missisquoi, AuSable, Winooski, Barton, Passumpsic, Lamoille Rivers and Otter Creek. See Table 2 for flooding crest information. Figures 3 through 12 show the unit hydrographs where flooding was observed. In addition to gaged river crests, ice jams were reported to have caused flooding of roads along smaller streams in northeast and east-central Vermont. For example ice jams and flooding was reported on Route 110 on the First Branch of the White River in Tunbridge, Route 5 in Ryegate, Route 25 along the Waits River near Bradford, and Marvin Road in Richford.

This event late in the month was responsible for a majority of the monthly precipitation (Figure 13) of 2 to 5 inches. Most areas across northern New York and Vermont reported above normal precipitation amounts for the month (Figure 14), helping to bring the monthly average streamflow to above normal and much above normal (figure 15). Lastly, much of the North Country saw an improvement in the Drought Monitor (Figure 16) with only a few counties in eastern Vermont remaining in moderate to severe drought into early March.

24-hr Precipitation Totals: ending at 7 AM EST February 26, 2017



National Weather Service
Burlington, VT
02/26/2017 10:41 AM EST

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Figure 1.

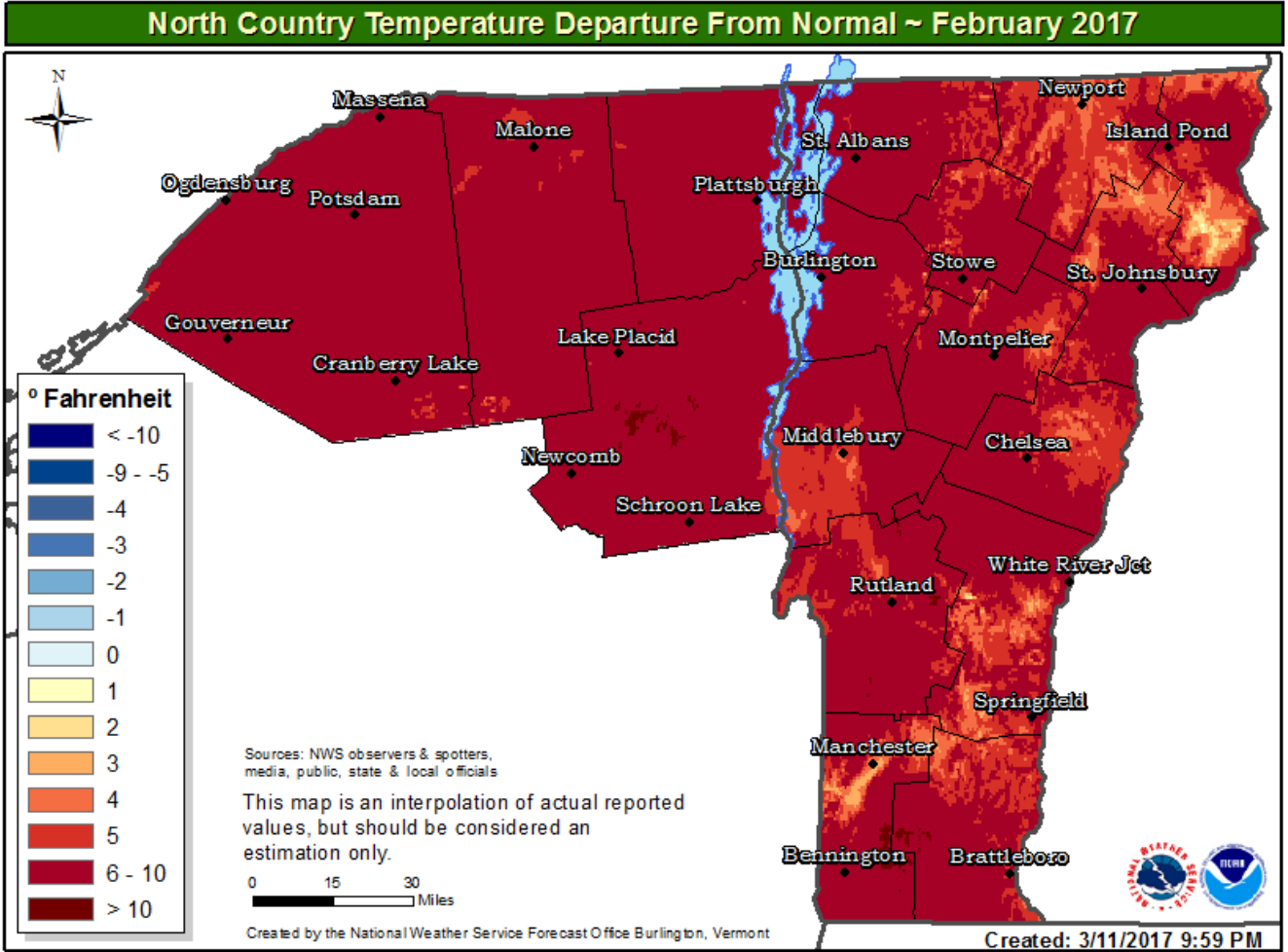


Figure 2.

| River Flood Warnings | | | |
|-----------------------------------|-----------------------|----------|----------|
| Location | NWSLI | Start | End |
| E. Branch AuSable @ AuSable Forks | ASFN6 | 28/1827Z | 26/1259Z |
| Otter Creek @ Center Rutland | CENV1 | 28/1827Z | 27/1207Z |
| Barton @ Coventry | COVV1 | 25/2155Z | 28/0242Z |
| Missisquoi @ North Troy | NTYV1 | 25/2210Z | 26/1954Z |
| Lamoille @ Jeffersonville | JLVV1 | 26/0724Z | 26/2246Z |
| Winooski @ Waterbury | WATV1 | 26/0823Z | 26/1259Z |
| Winooski @ Essex | ESSV1 | 26/0823Z | 26/2205Z |
| Passumpsic @ Passumpsic | PASV1 | 26/1108Z | 26/1749Z |
| Areal Flood Warnings | | | |
| Location | Description | Start | End |
| Franklin County VT | Ice Jams | 25/1956Z | 26/0145Z |
| Orange, S Caledonia Counties VT | Ice Jams | 26/0308Z | 26/0900Z |
| Southern Washington County VT | Small Stream Flooding | 26/0323 | 26/0915Z |

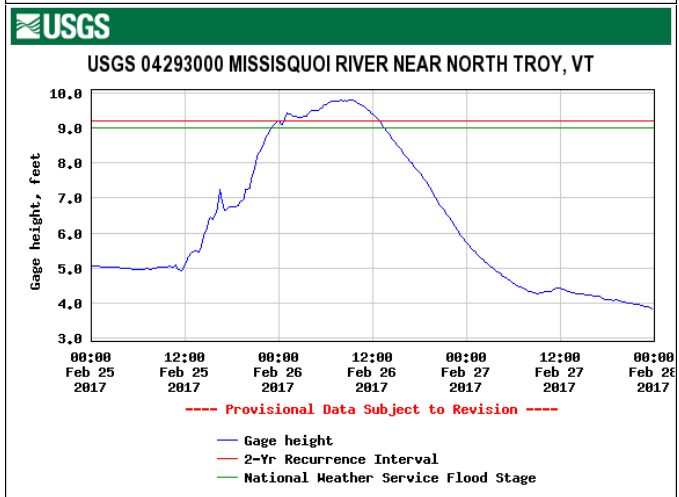
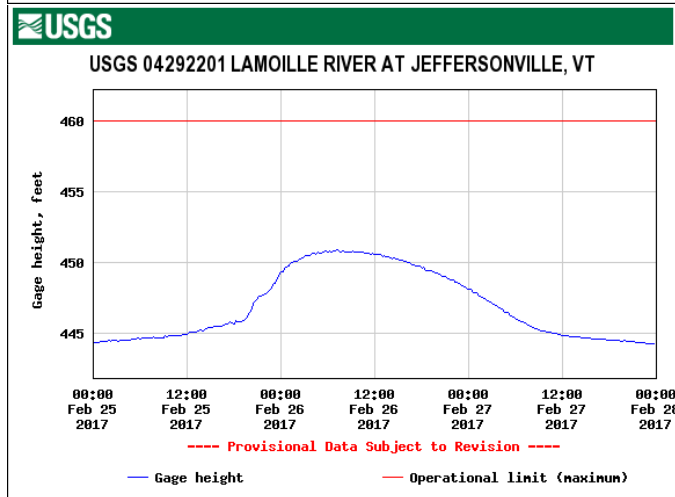
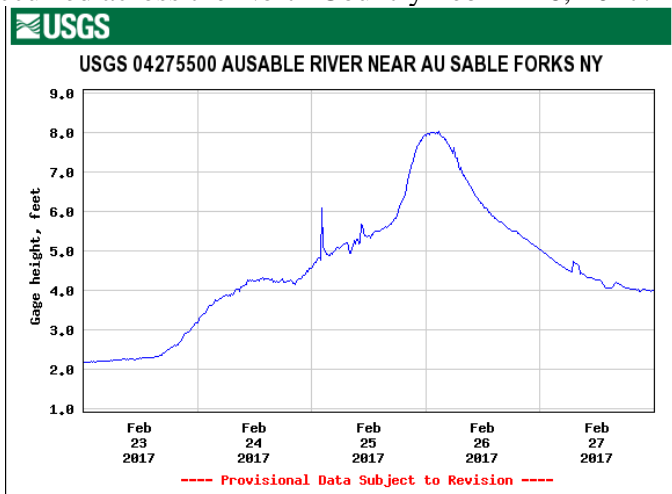
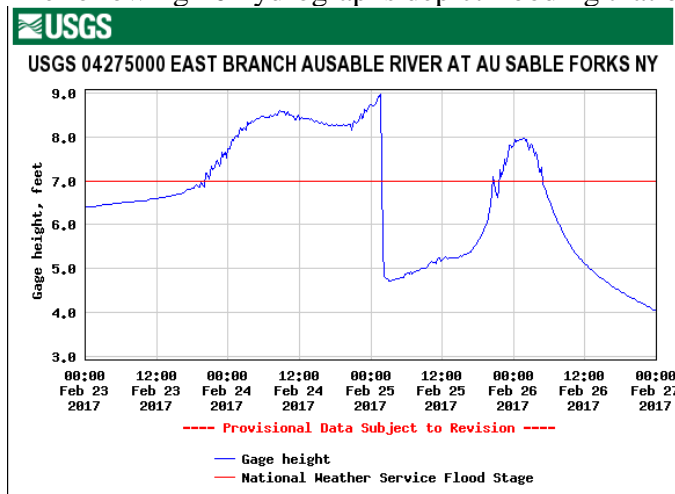
Table 1.

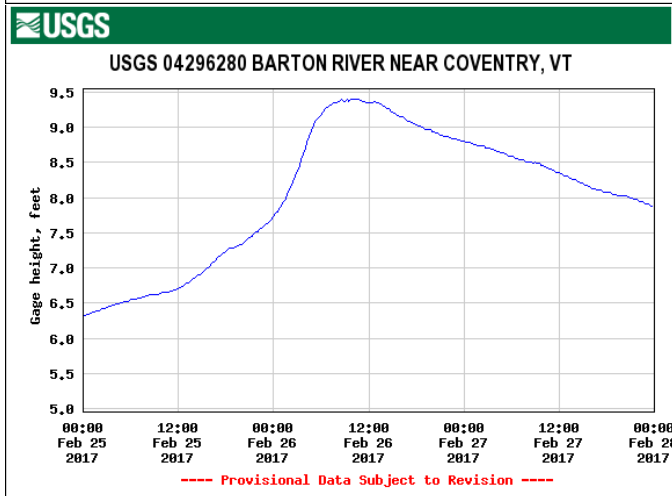
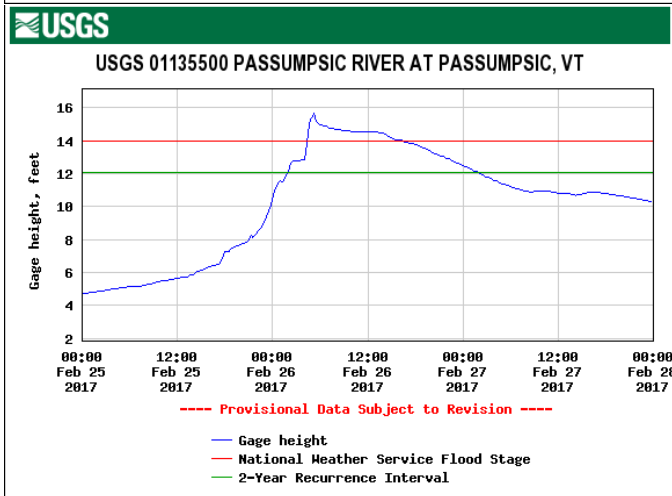
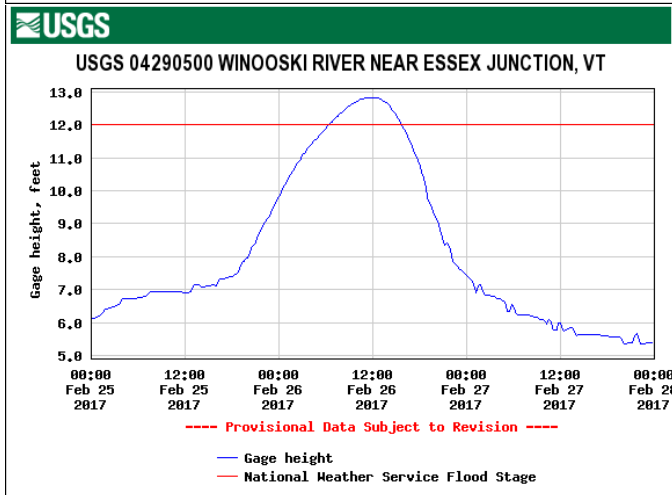
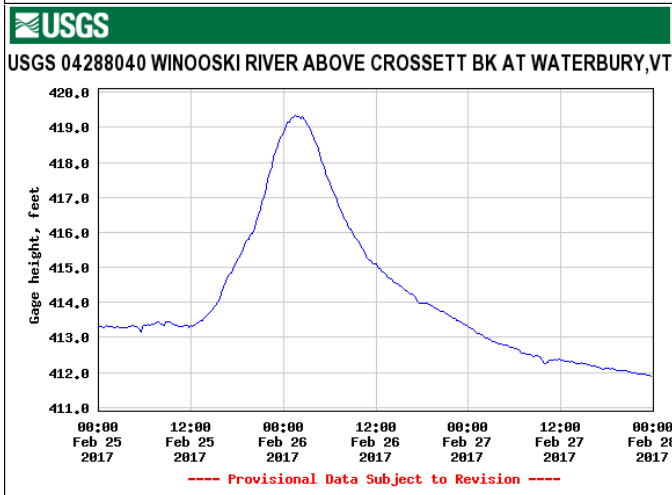
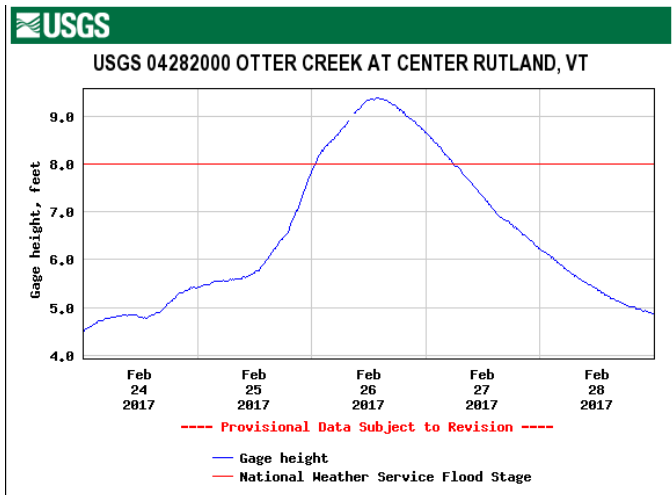
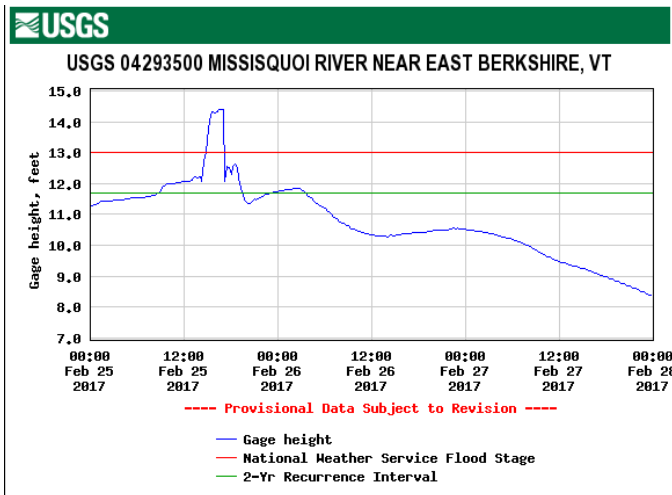
Table of Significant River Crests

| Location | NWSLI | Flood Stage (ft) | Crest (ft) | Time (Z) |
|-----------------------------------|-------|------------------|------------|----------|
| AuSable @ AuSable Forks | AUSN6 | 7.0 | 8.04 | 26/0746 |
| E. Branch AuSable @ AuSable Forks | ASFN6 | 7.0 | 8.96 | 25/0600 |
| E. Branch AuSable @ AuSable Forks | ASFN6 | 7.0 | 7.96 | 26/0601 |
| Otter Creek @ Center Rutland | CENV1 | 8.0 | 9.38 | 26/1830 |
| Barton @ Coventry | COVV1 | 8.0 | 9.4 | 26/1500 |
| Missisquoi @ North Troy | NTYV1 | 9.0 | 9.8 | 26/1330 |
| Missisquoi @ East Berkshire | EBKV1 | 13.0 | 14.42 | 25/2145 |
| Lamoille @ Jeffersonville | JVLV1 | 450.0 | 450.89 | 26/1215 |
| Winooski @ Waterbury | WATV1 | 419.0 | 419.34 | 26/0630 |
| Winooski @ Essex | ESSV1 | 12.0 | 12.83 | 26/1645 |
| Passumpsic @ Passumpsic | PASV1 | 14.0 | 15.67 | 26/1015 |

Table 2.

The following 10 hydrographs depict flooding that occurred across the North Country Feb 22-26, 2017.





Figures 3-12 .

North Country Total Precipitation ~ February 2017

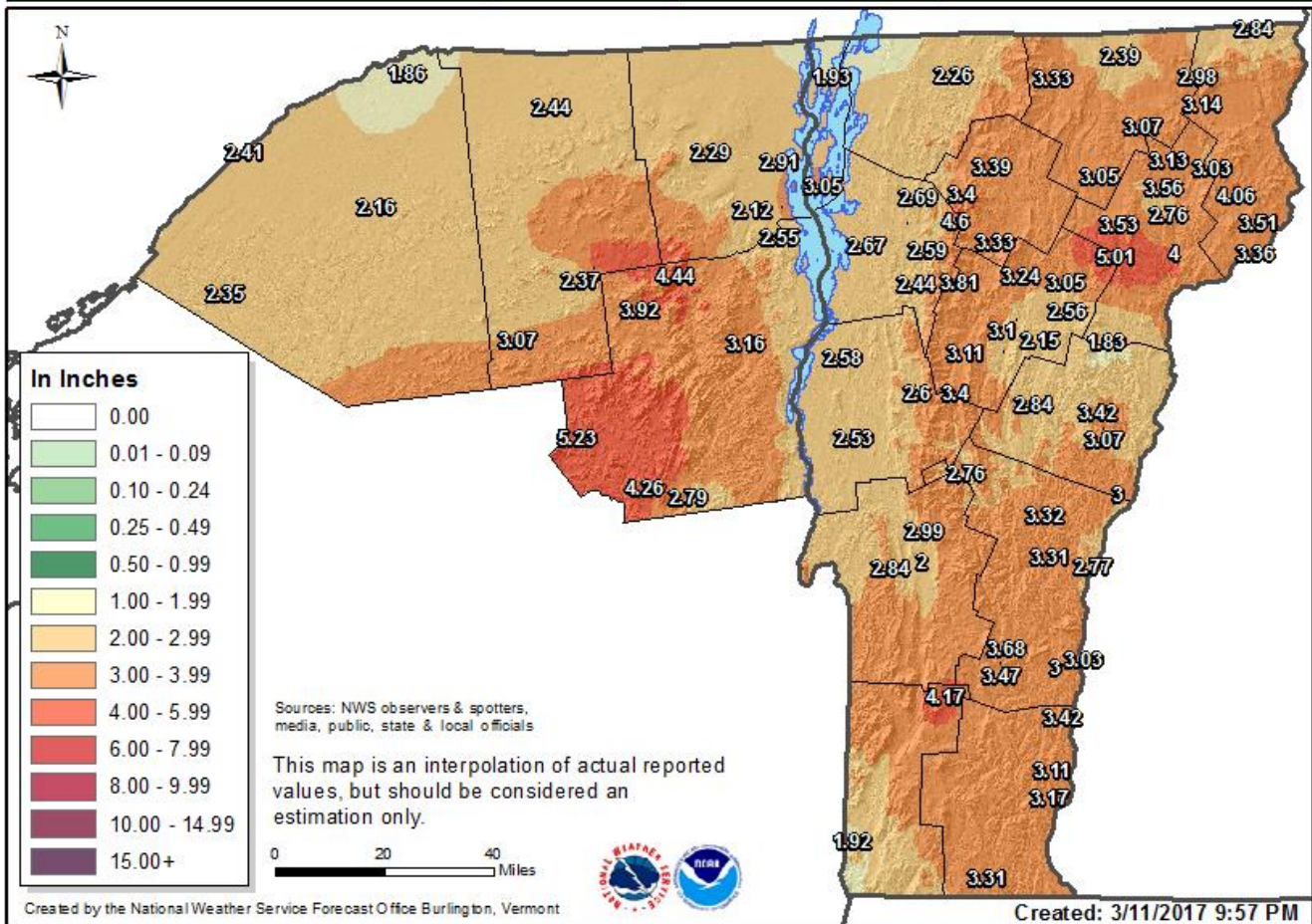


Figure 13.

North Country Precipitation Departure From Normal ~ February 2017

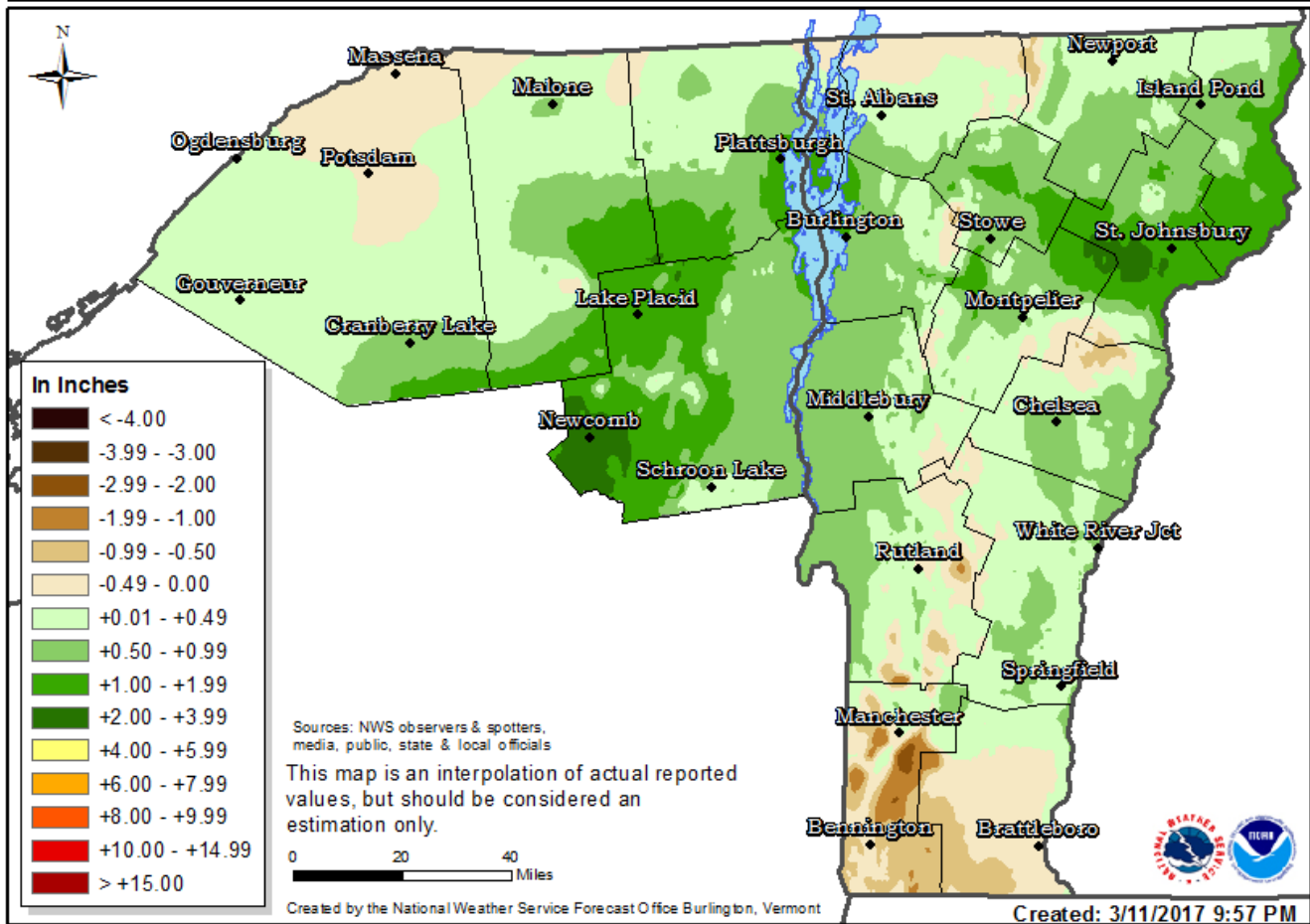


Figure 14.

| Explanation - Percentile classes | | | | | | | |
|----------------------------------|-------------------|--------------|--------|--------------|-------------------|------|------------|
| ● | ● | ● | ● | ● | ● | ● | ○ |
| Low | <10 | 10-24 | 25-75 | 76-90 | >90 | High | Not-ranked |
| | Much below normal | Below normal | Normal | Above normal | Much above normal | | |

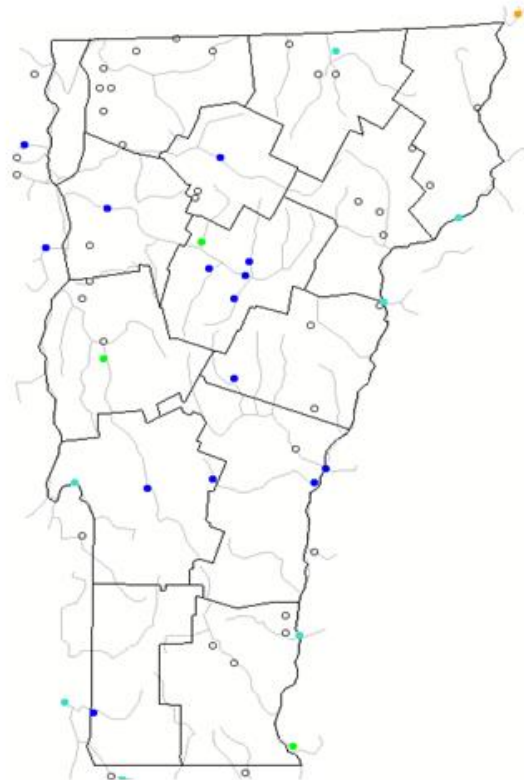
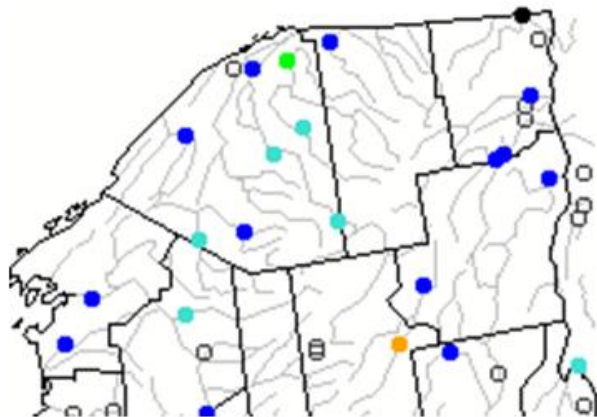
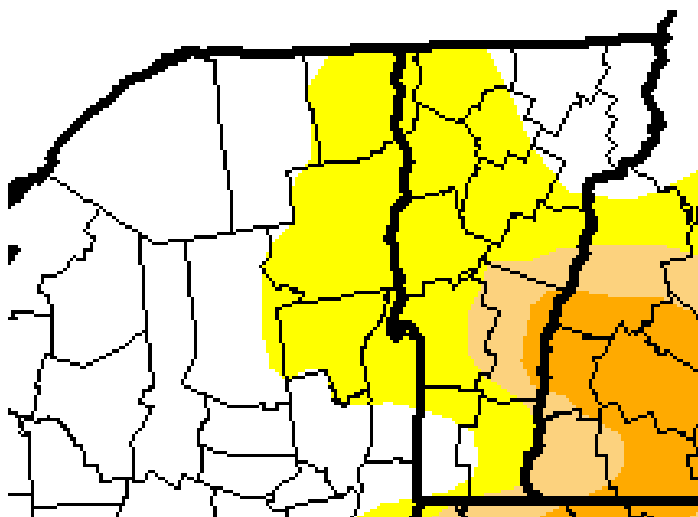


Figure 15.



Drought Monitor: March 7, 2017

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.

Figure 16.