

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 March	YEAR 2025
		SIGNATURE John Goff / Senior Service Hydrologist <hr/> DATE April 14, 2025	
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283			

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.

Overview

Overall, March 2025 was a very mild month across the NWS Burlington hydrologic service area (HSA). Near to slightly above normal precipitation was also observed. The weather pattern remained active with frequent low-pressure systems and their associated cold fronts bringing light to moderate precipitation in the form of mixed rains and snows. Ice-out on most area rivers occurred during the middle portions of the month when the combination of very mild temperatures along with modest rainfall led to significant river rises (see Notable Hydrology below). On average, mean monthly temperature departures ranged from 3 to 7 degrees above normal with greatest departures observed at Burlington, VT and Saranac Lake, NY where positive values of 6.8°F and 6.1°F occurred respectively (Fig. 1). Monthly precipitation totals generally ranged from 2 to 4 inches with some slight variability across elevated terrain (Fig. 2). That noted, overall precipitation distribution across the 31-day period was remarkably homogeneous with month-end departures averaging within +/- 1 inch of normal for nearly all areas (Fig. 3). Given the mild temperatures, overall snowfall was on the leaner side of normal with most observing sites seeing significant negative departures. This was most evident across the southern portions of Vermont where values averaged between 1 and 2 feet below normal (Fig. 4). As typical during the late winter melt, surface soil moisture and streamflow levels climbed over time as the month progressed. As such, there was a noticeable improvement in overall low-end drought across the NWS Burlington HSA over time (Fig. 5).

Notable Hydrology

The most notable hydrologic event during the month occurred during the period of March 16-18. During this time, low pressure passing north of the region brought unseasonably mild temperatures and modest rainfall to the region (Figs. 6 and 7). This combination led to rapid snowmelt fostering significant rises and resultant river ice breakup (Fig. 8). A few ice jams and associated flooding were observed, most notably in areas near Coventry, St. Johnsbury, Lyndon and Wolcott, VT. Additionally, several rivers exceed their minor flood stages, including the Winooski R. @ Essex Junction, Otter Creek at Center Rutland, VT, Missiquoi R. at North Troy, VT, and the East Branch of the Ausable R. at Au Sable Forks, NY (Fig. 9). NWS Burlington issued appropriate Flood Warnings and River Flood Warnings to alert for these hazards.

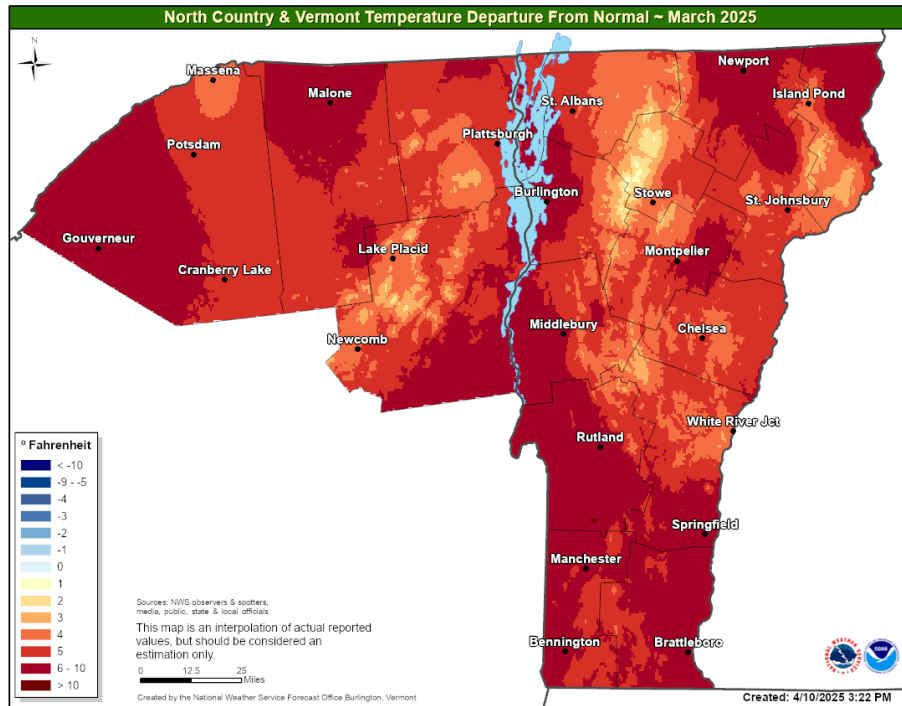


Figure 1: March 2025 monthly temperature departures across the NWS Burlington, VT HSA. On average, positive departures of 3 to 7 degrees were observed.

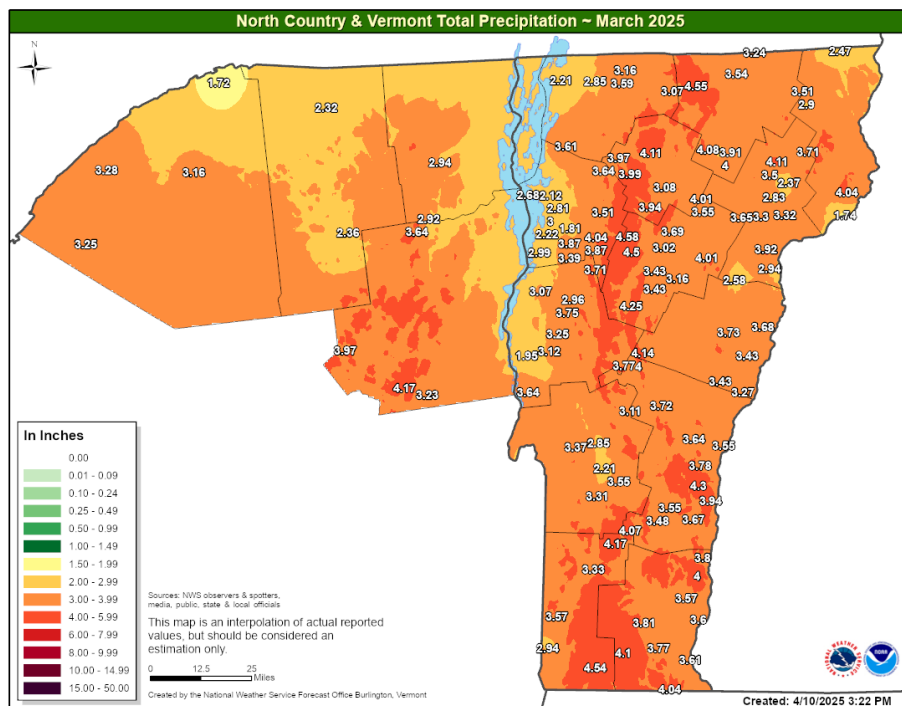


Figure 2: March 2025 monthly precipitation across the NWS Burlington, VT HSA. On average, amounts range from 2 to 4 inches with some very slight variability

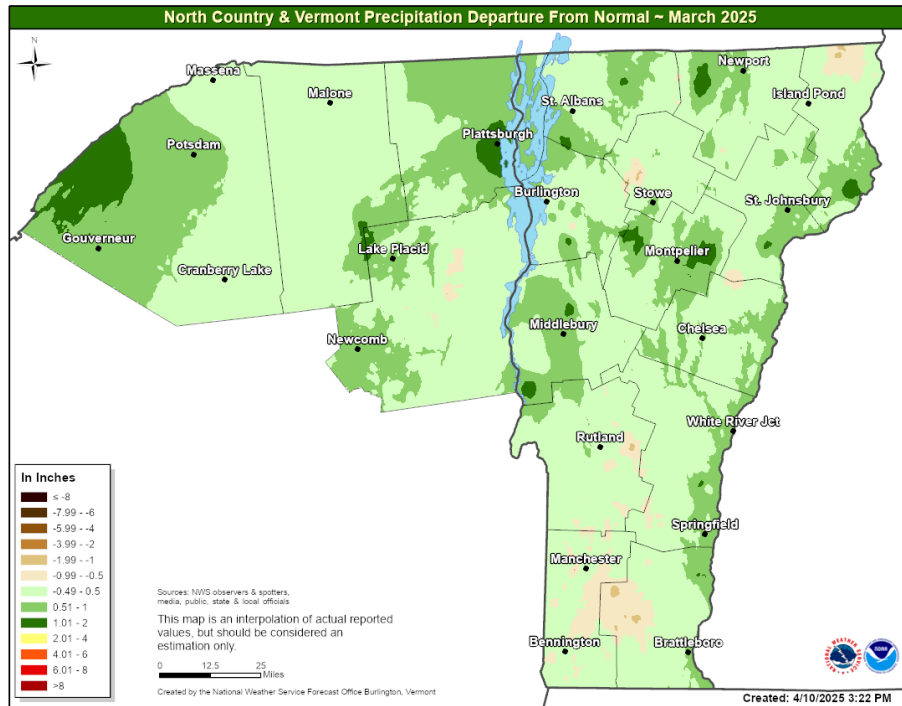


Figure 3: March 2025 monthly precipitation departure from normal across the NWS Burlington, VT HSA. A remarkable degree of homogeneity was observed with nearly all areas averaging within an inch of normal.

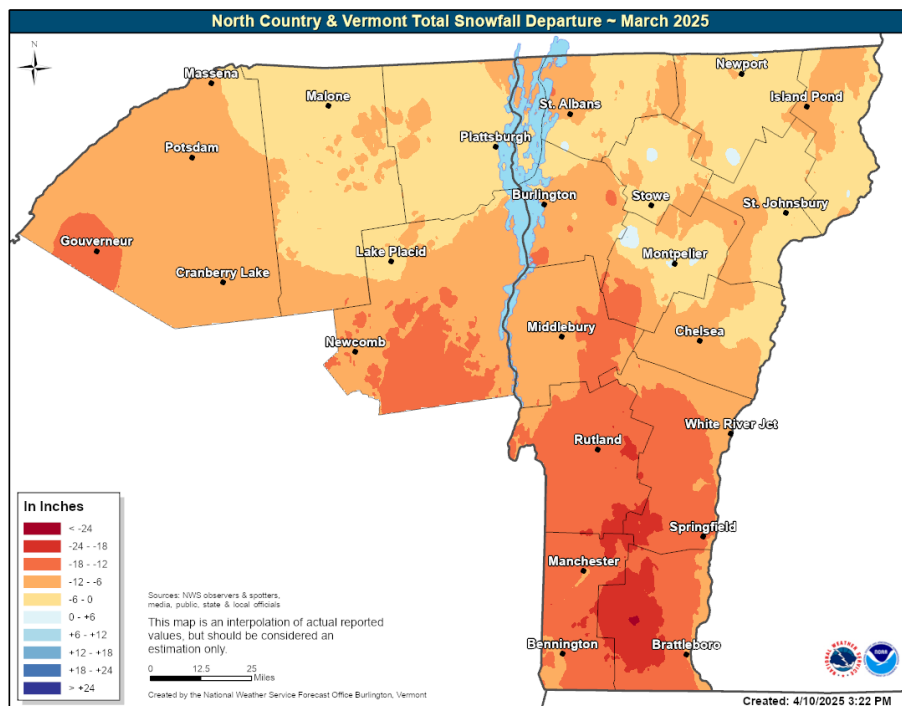


Figure 4: March 2025 snowfall departure from normal across the NWS Burlington, VT HSA. Most locations saw below normal values with largest negative departures of 1 to 2 feet observed across the southern portions of Vermont.

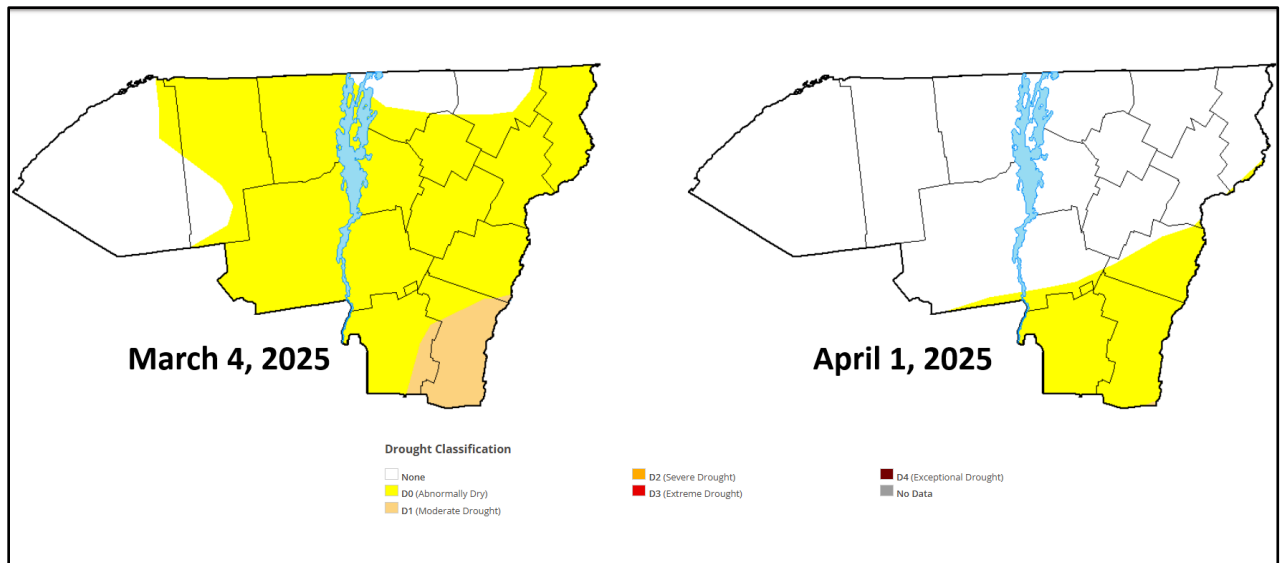


Figure 5: U.S Drought Monitor 4-week change from March 4 to April 1, 2025. Notable improvement was noted due to surface moisture recharge from snowmelt and modest precipitation.

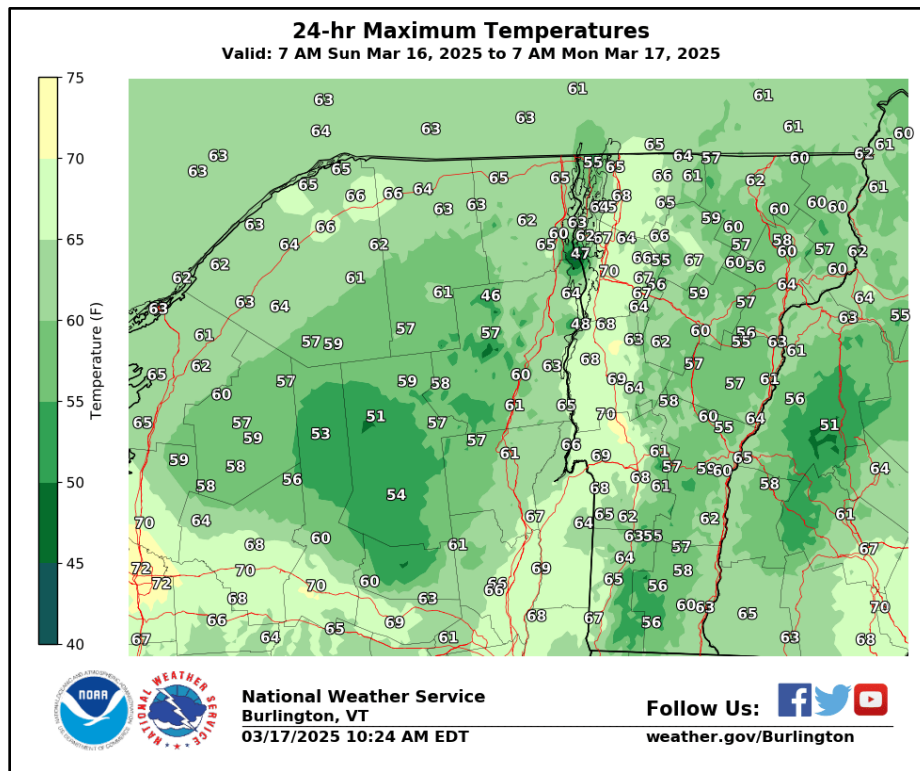


Figure 6: Maximum temperatures on March 16, 2025. Mild readings in the 50s and 60s led to rapid snowmelt across the region.

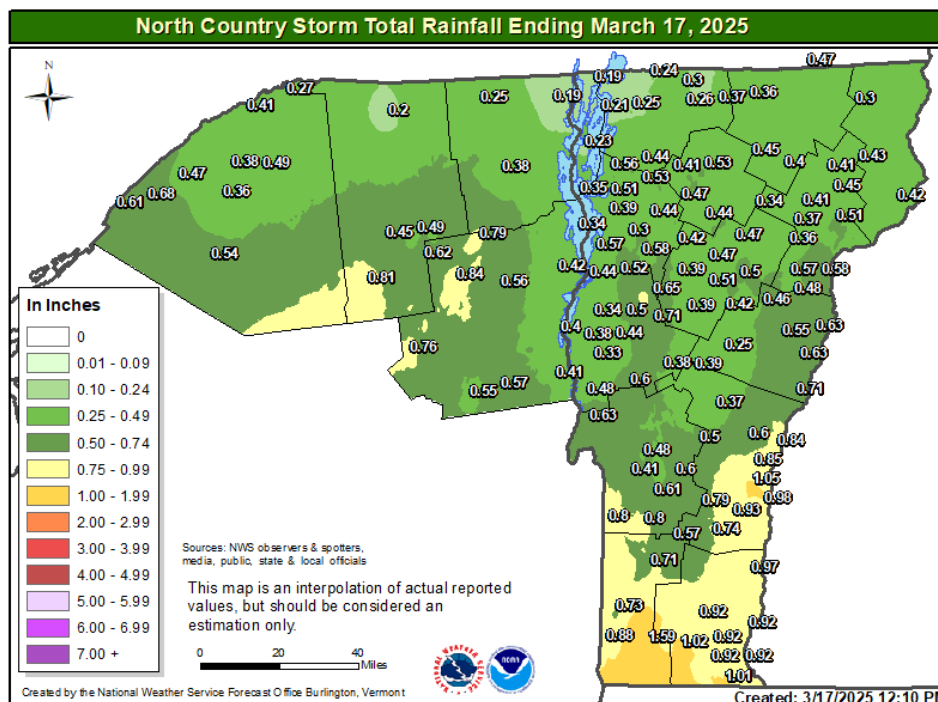


Figure 7: Storm total rainfall for the March 16-18, 2025 flooding event. While amounts were not excessive, these values in combination with rapid snowmelt led to sharp river rises and resultant flooding.

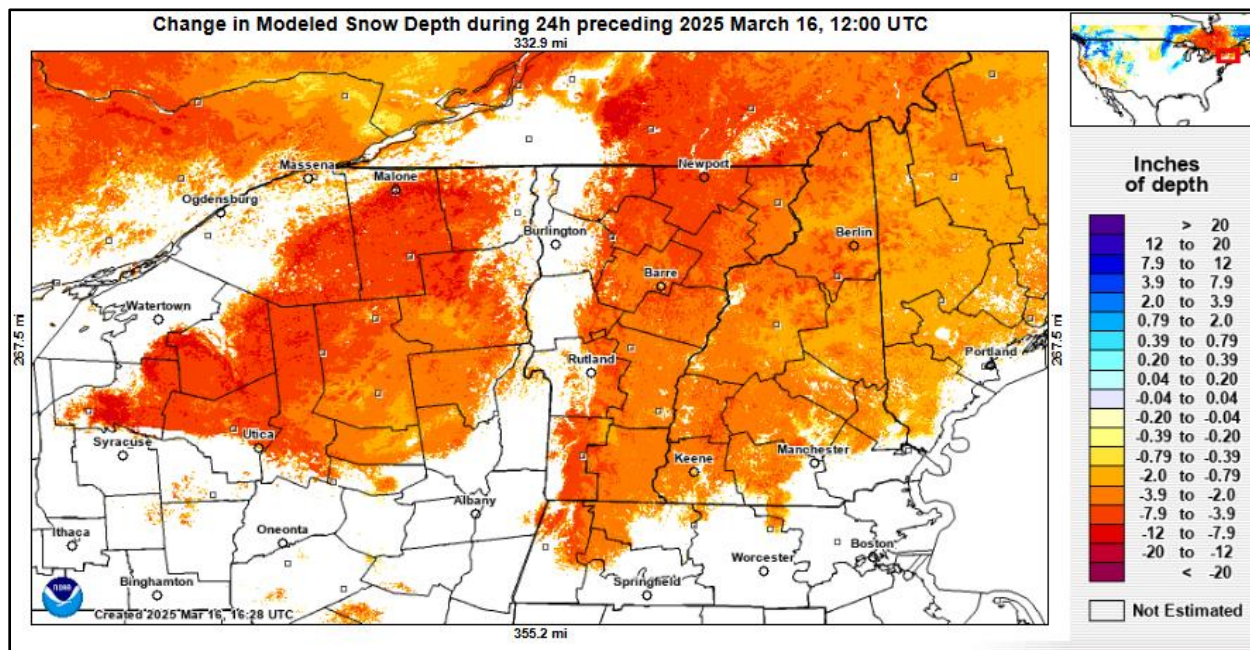


Figure 8: Modeled snow depth loss from March 15-16, 2025 (data courtesy NOAA's National Hydrologic Remote Sensing Center). This snowmelt, combined with modest rainfall led to sharp river rises and resultant river and ice jam flooding in the NWS Burlington, VT HSA.

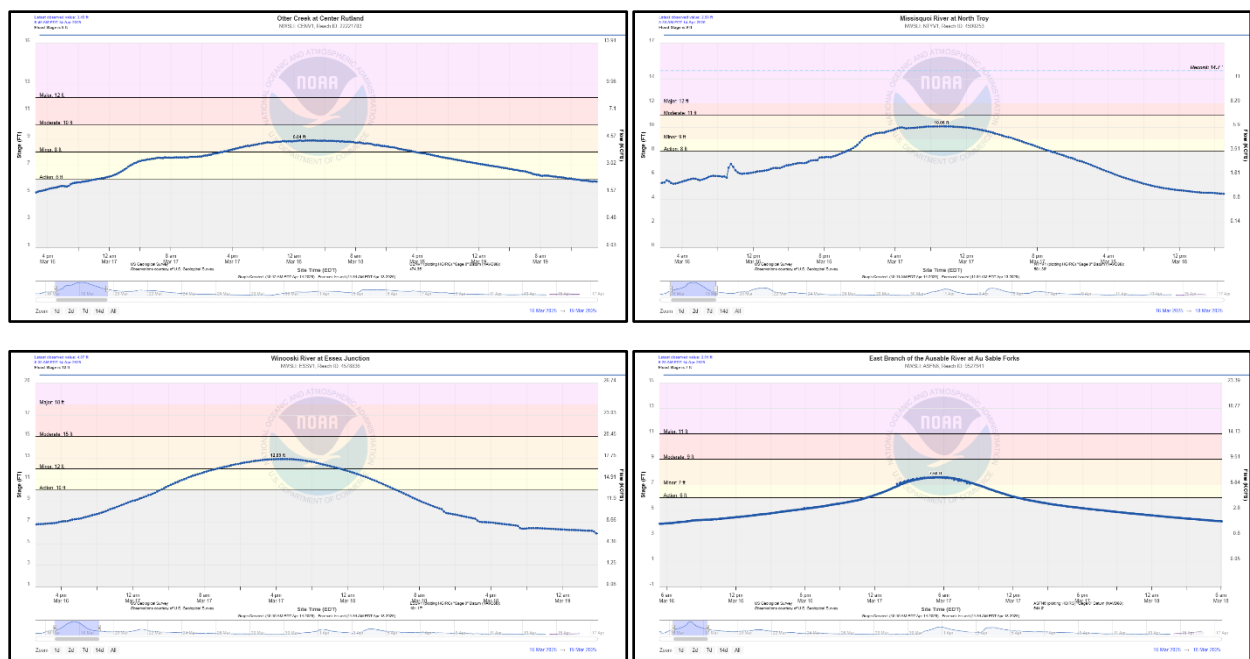


Figure 9: A selection of hydrographs that exceeded minor flood stage during the March 16-18, 2025 flooding event in the NWS Burlington, VT HSA. Clockwise from upper left, Otter Cr. at Center Rutland, VT, Missisquoi R. at North Troy, VT, Winooski R. at Essex Jct., VT and East Br. Ausable R. at Au Sable Forks, NY.