(04-2006) NATIONAL OCEANIC AND ATMOSPHERIC AD		U.S. DEPARTMENT OF COMMER		HYDROLOGIC SERVICE AREA (HSA)	
		NATIONAL WEATHER SERVI	D	lington VT	
MONTHLY REPORT OF HYDR		LOGIC CONDITIONS	REPORT FOR: MONTH	YEAR	
			December	2022	
TO:	Hydrologic Information Center, W/OS31 NOAA's National Weather Service		SIGNATURE /s/ John Goff, Se	SIGNATURE /s/ John Goff, Senior Service Hydrologist	
	1325 East West Highway Silver Spring, MD 20910-3283		DATE Janu	ary 10 , 2023	

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

December 2022 could be characterized as a very mild month with generally above normal precipitation across the NWS Burlington HSA. Indeed, positive temperature departures averaged between 2 and 6 degrees for the 30 day period leading to the month being tied for the ninth warmest December on record (Figure 1). Precipitation was fairly evenly distributed throughout the month as frequent frontal passages and weak low pressure systems brought moderate to occasionally heavy amounts. Month-end totals averaged from 3 to 7 inches across the area with some normal variability, leading to positive departures generally in the +0.5 to 2.5 inch range (Figures 2 and 3). The most impactful weather event occurred from the 23rd into 25th when rapidly deepening low pressure tracked immediately west of the NWS BTV service area. Widespread wind damage, heavy rainfall, a flash freeze with modest to locally heavy snowfall, and some minor flooding all occurred with this event. The area was fortunate to have a relatively minor snowpack in place prior to this event, otherwise more significant flooding would likely have occurred.

Notable Hydrology

From the 23rd to the 25th, the combination of moderate to heavy rainfall and snowmelt led to runoff that resulted in minor flooding on stretches of a few main stem rivers like the Mad River at Moretown, VT and the Barton River at Coventry, VT. The Browns River in Essex, VT also experienced minor flooding. Several other reports of water on roads or overflowing banks were received, most notably along Belvidere Pond, Mud Creek and Lake Dunmore in Vermont. Locally heavy rainfall also prompted issuance of a Flood Warning for portions of Rutland and Windsor Counties, where Doppler estimates of 1.50 to 2.50 inches occurred on the afternoon of the 23rd. For the multi-day event, rainfall totals generally ranged from 0.75 to 1.75 inches, with locally higher totals to near 2.50 inches in portions of the Green and Adirondack Mountains (Figure 4).

While isolated in nature, additional flooding occurred along a small stretch of the Raquette River in the Town of Pierrepont, NY during the late morning and afternoon of the 25th. Here, ice flowing downstream slowed and jammed behind the Hannawa Falls Dam causing water to quickly rise and flood four residences to the first floor level. Evacuations were performed, but fortunately no injuries occurred.

While also minor in nature, lingering longer term dryness (USDM D0) also persisted across portions of eastern Vermont. This was largely due to precipitation deficits from earlier in the summer and fall of 2022 (Figure 5).

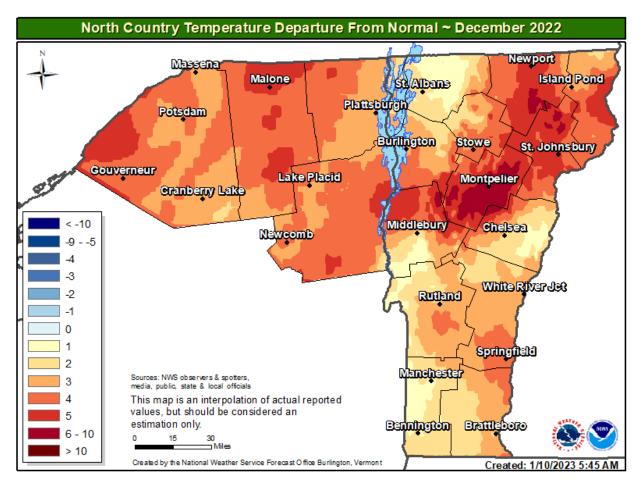


Figure 1: Temperature departures from normal for December 2022 for the NWS Burlington area. Positive departures, on average ranged from +2 to +6 °F, leading to the month being tied for the second warmest November on record.

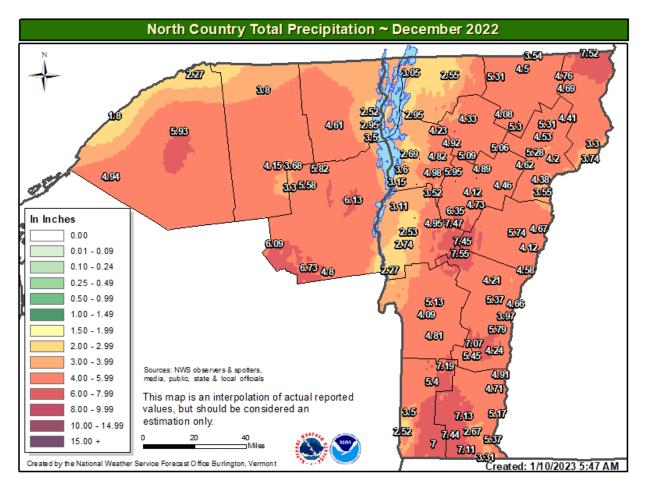


Figure 2: Monthly precipitation totals for December 2022 across the NWS Burlington, VT area. Amounts averaged from 3 to 7 inches across the area with some slight variability.

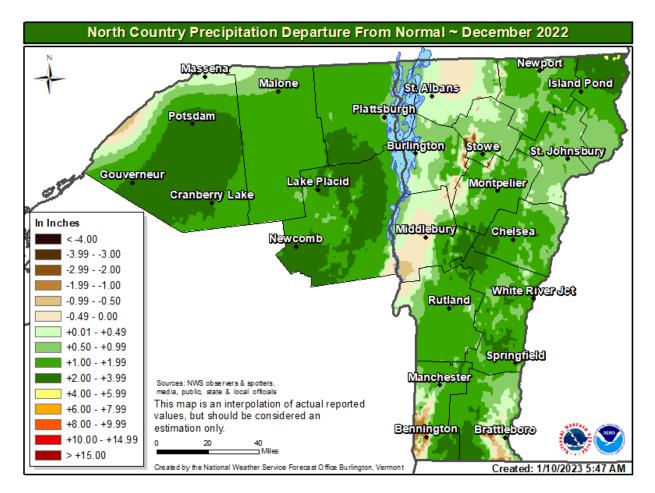


Figure 3: Monthly precipitation departures for December 2022 for the NWS Burlington, VT area. Positive departures averaged from 0.5 to 2.5 inches across the HSA with some natural variability.

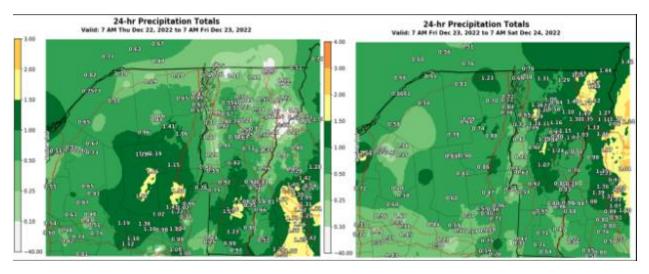


Figure 4: Multi-day rainfall totals from December 22-24, 2022, showing widespread moderate to locally heavy rainfall across the NWS Burlington HSA.

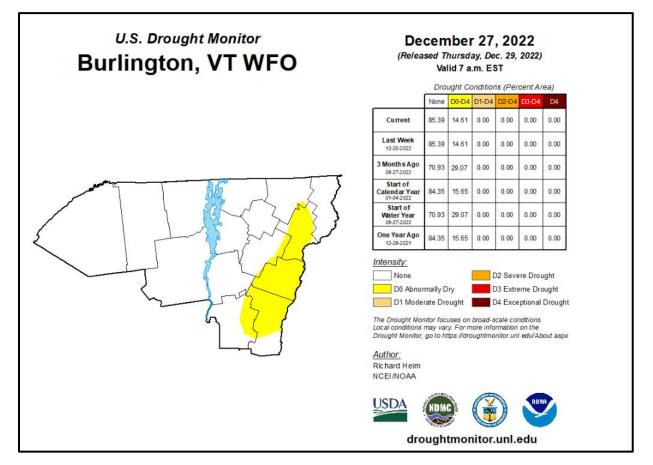


Figure 5: U.S. Drought Monitor map from December 27, 2022, showing lingering longer term dryness across portions of eastern Vermont in the NWS Burlington, VT HSA. This area saw no significant change in areal coverage of abnormally dry conditions (D0) through the month.