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 May YEAR 2024
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE /s/ John Goff, Senior Service Hydrologist DATE June17, 2024

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

May 2024 was an uneventful month from a hydrological perspective across the NWS Burlington HSA. In general, conditions were slightly drier and considerably warmer than normal with frontal passages and accompanying scattered precipitation affecting the region every five to seven days on average. No significant flooding events were noted, though a localized heavy rain event in northeast Vermont did produce some elevated flows around the middle of the month (see below). Looking closer at May precipitation, monthly maps show that on average totals ranged from 1.5 to 4.5 inches area wide, with the greatest negative departures centered across portions of east-central Vermont, and positive departures in the northwestern Adirondacks and in portions of northeastern Vermont (Figs. 1 and 2). Not surprisingly, monthly average streamflows for May were the lowest in the east-central Vermont region with below to much below normal classifications common (Fig. 3). While this dryness was noted, longer-term moisture deficits in the 60 and 90 day time frames were on the wetter side of normal which eased concerns. The 90 day SPI values from mid-March onward illustrated this well (Fig. 4).

Notable Hydrology

The most notable hydrological event of the month occurred on the evening of May 15 when a cluster of slow moving showers and embedded storms moved across northeastern Vermont including portions of Orleans, Essex and Caledonia Counties. Several reliable rainfall reports of between 1 and 2.5 inches were received, and Flood Warnings were issued for this area accordingly. While no reports of flooding were received, the stage at the gauge on the East Branch of the Passumpsic River at East Haven, VT briefly exceeded its minor flood stage level, giving credence to the warning (Figs. 5 and 6).

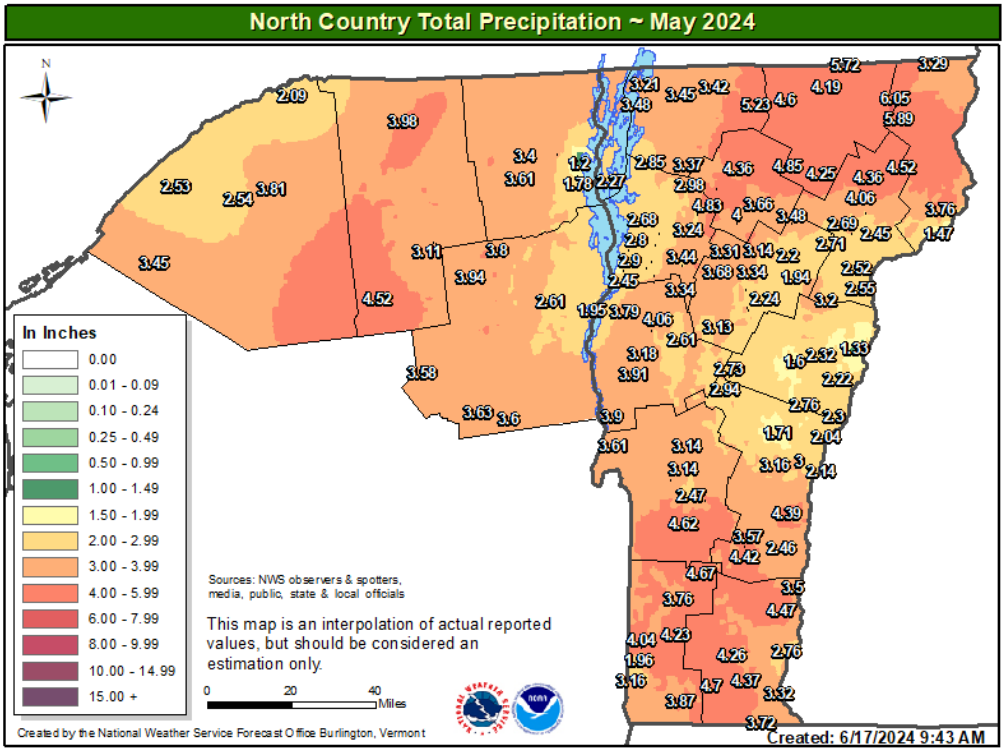

Figure 1: May 2024 precipitation across the NWS Burlington, HSA. Values generally ranged between 1.5 and 4.5 inches with some customary variability.

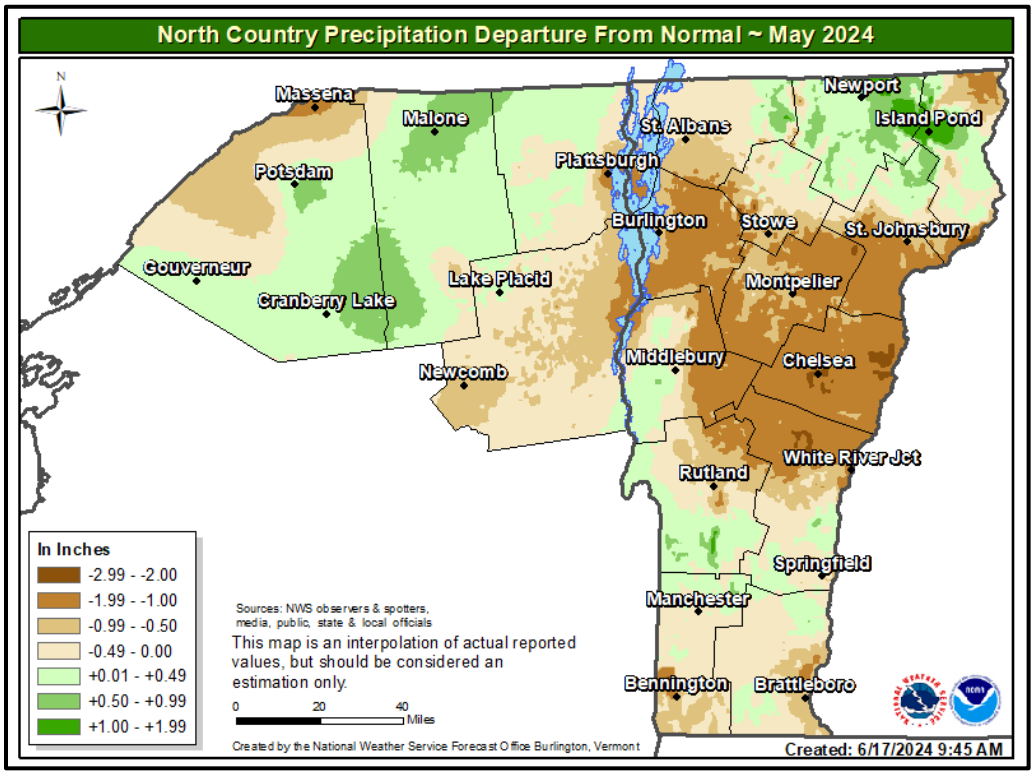

Figure 2: May 2024 precipitation departures from normal across the NWS Burlington HSA. The greatest negative anomalies occurred across central and eastern Vermont where values of -1.0 to 2.0 inches were common.

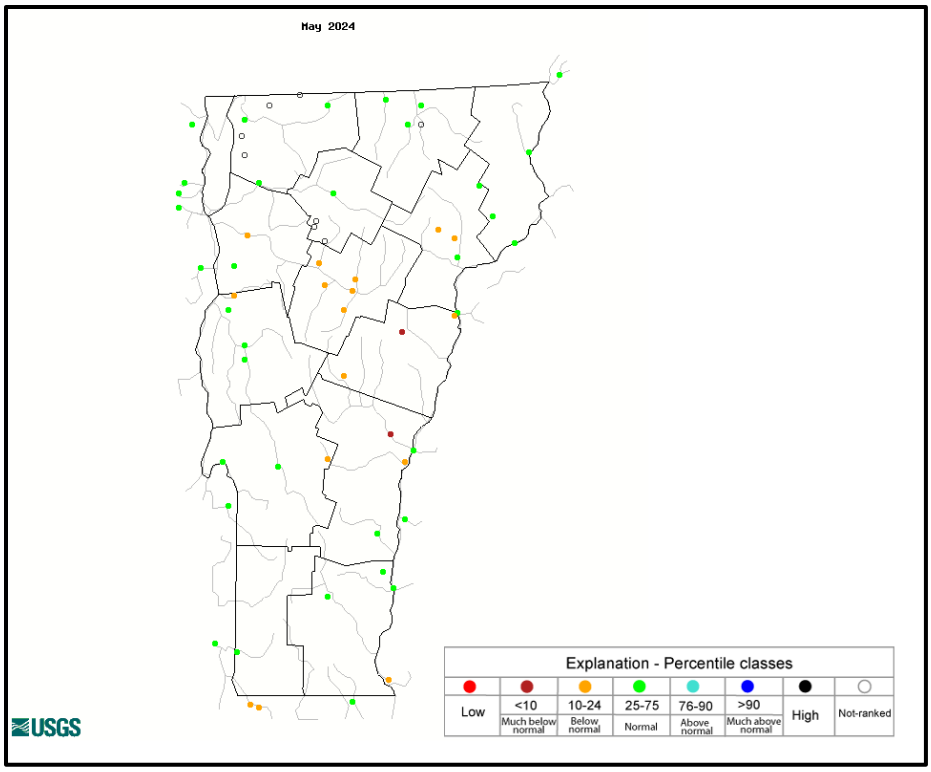

Figure 3: Monthly average streamflow for May 2024 in Vermont. Note the prevalence of below to much below normal values across much of east-central Vermont.

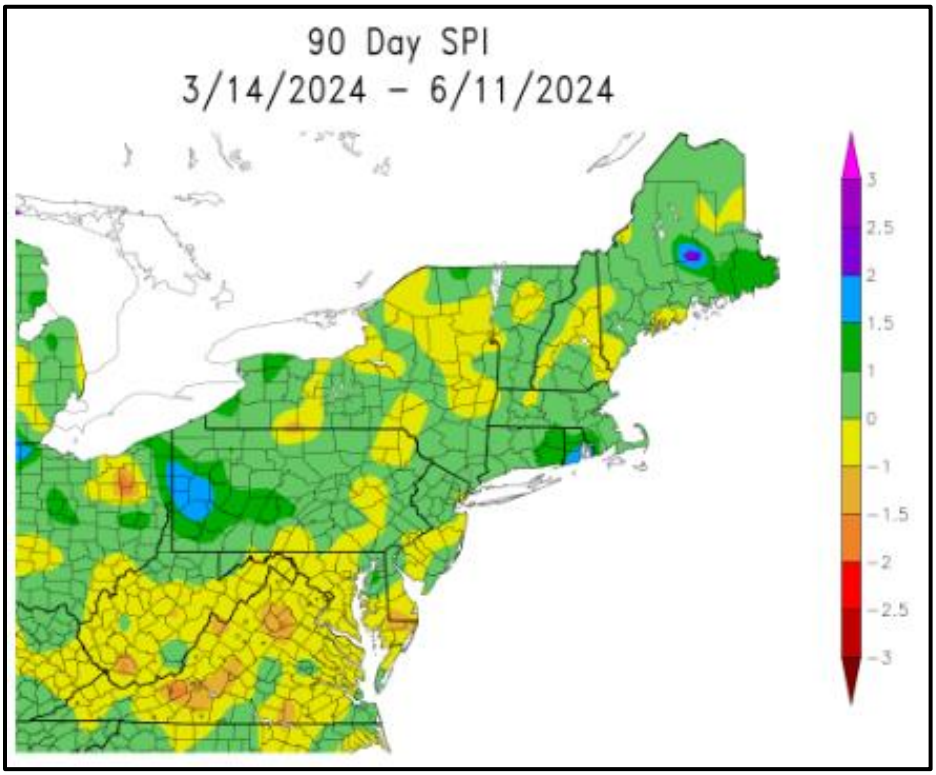

Figure 4: 90-day SPI values beginning in mid-March 2024. Longer term moist conditions in late winter/early spring lessened overall dryness concerns across east-central Vermont (see Fig. 3 above).

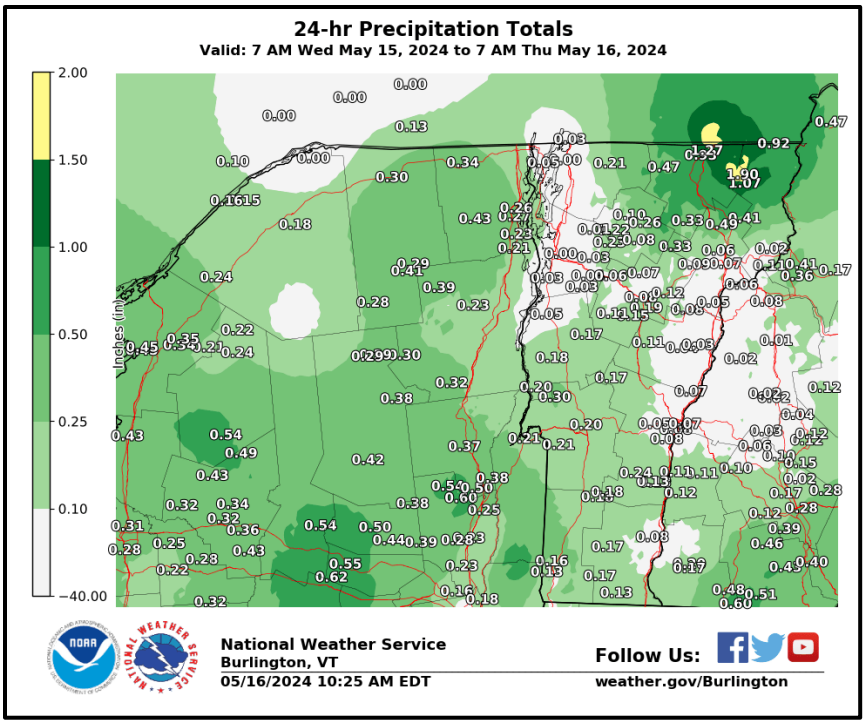

Figure 5: 24-hour precipitation ending at 7:00 AM EDT, May 16, 2024 across the NWS Burlington HSA. Note the small area of heavier precipitation in northeastern Vermont which caused locally elevated flows and some minor flooding.

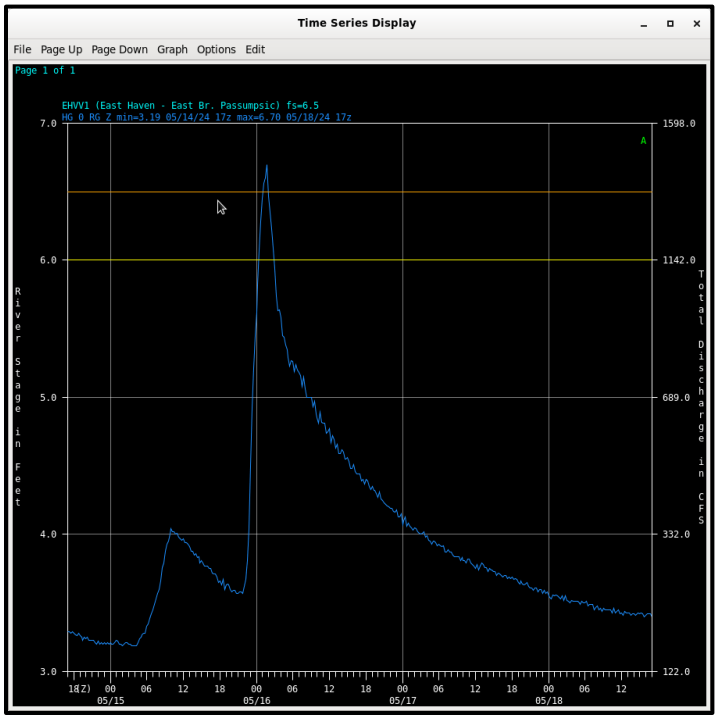

Figure 6: Hydrograph trace of the gauge on the E. Branch of the Passumpsic R. at East Haven, VT. Slow moving showers and storms produced locally heavy rainfall in the vicinity of the gauge, causing it to briefly spike above minor flood stage on the evening of May 15, 2024.