

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:
 MONTH YEAR
 August 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
 September 17, 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

The wet pattern observed in July 2024 continued, albeit to a lesser extent, in August 2024 with most areas observing above average rainfall. Frequent, weak frontal and/or trough passages interacted with ample Atlantic/Gulf of Mexico moisture to produce scattered areas of showers and storms. The largest event occurred on August 9 when remnants of former TS Debby brought moderate to locally excessive rain and flash flooding to portions of the area (see below). For the month as a whole, rainfall totals generally averaged from 4 to 8 inches with higher totals of 7 to 10 inches in the St. Lawrence Valley (Figs. 1 and 2). This kept streamflows elevated across the majority of the NWS Burlington HSA on average for the 31-day period (Fig. 3).

Notable Hydrology

The most notable hydrological event for the NWS Burlington HSA occurred on August 9 when the remnants of former Tropical Storm Debby tracked through the St. Lawrence Valley of New York (Fig. 4). Along and just to the west of the storm track, a band of heavy, torrential rainfall developed in St. Lawrence County with totals of 3 to 7 inches observed (Fig. 5). This led to numerous reports of flash flooding across the county with over 100 roads damaged or destroyed, some homes flooded and a few swift water rescues needed. A State of Emergency was declared in St. Lawrence County with preliminary damage estimates of several million dollars (Fig 6). A few mainstem river gauges also reached flood, shown in Table 1.

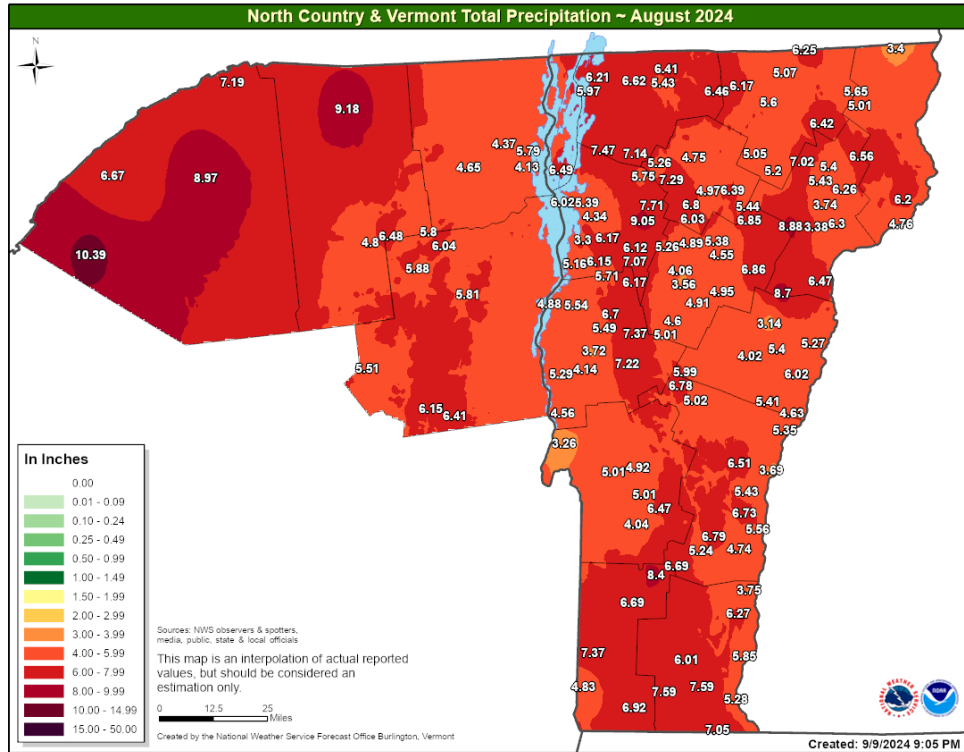


Figure 1: August 2024 precipitation across the NWS Burlington, HSA. Values generally ranged between 4 and 8 inches with higher values of 7 to in excess of 10 inches in portions of the St. Lawrence Valley of New York.

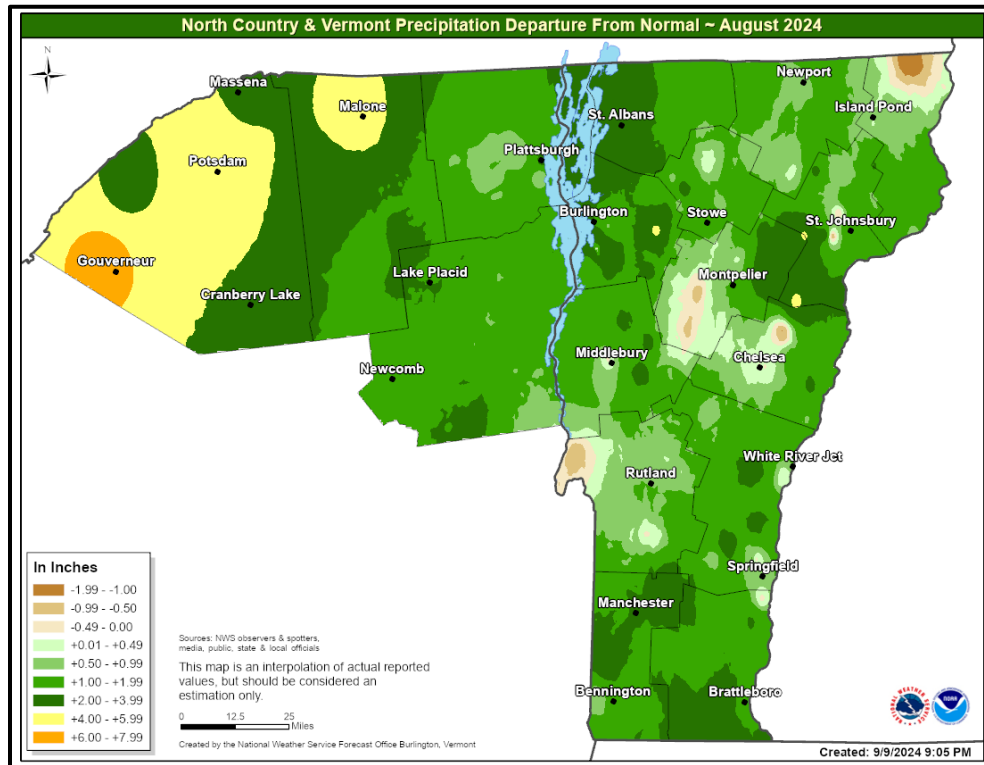


Figure 2: August 2024 precipitation departures from normal across the NWS Burlington HSA. Nearly all areas saw positive departures, with the greatest anomalies of 4 to 6 inches observed in the St. Lawrence Valley of New York.

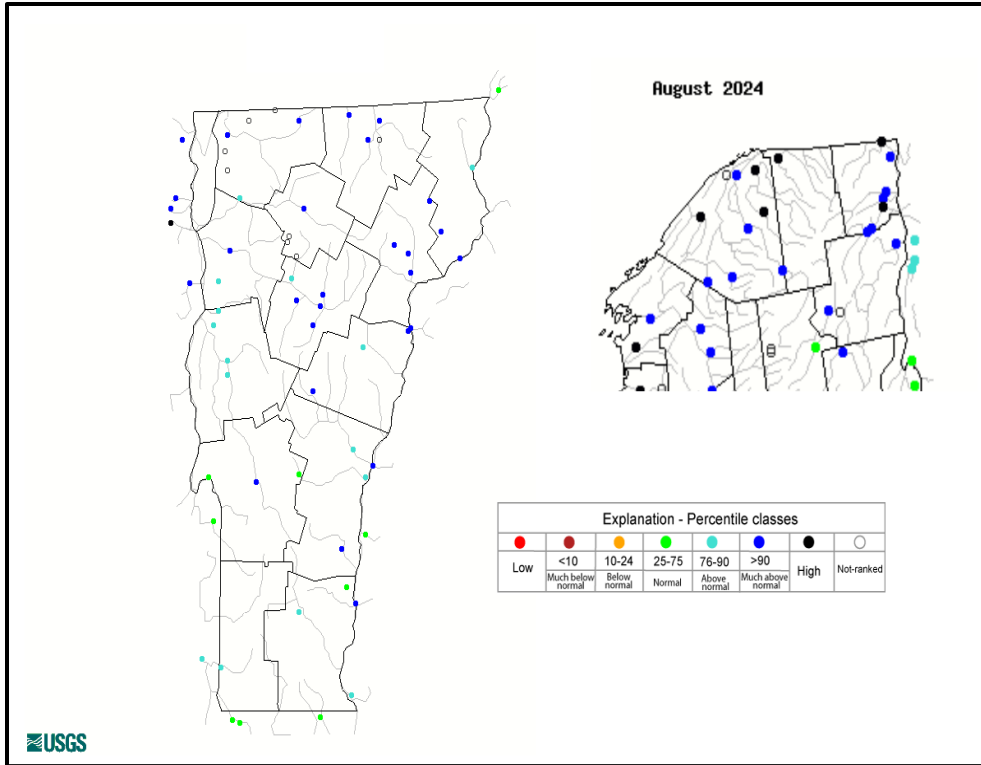


Figure 3: Monthly average streamflow for August 2024 for the NWS Burlington HSA. All gauges had average monthly values above normal, with the greatest positive departures observed across northern New York.

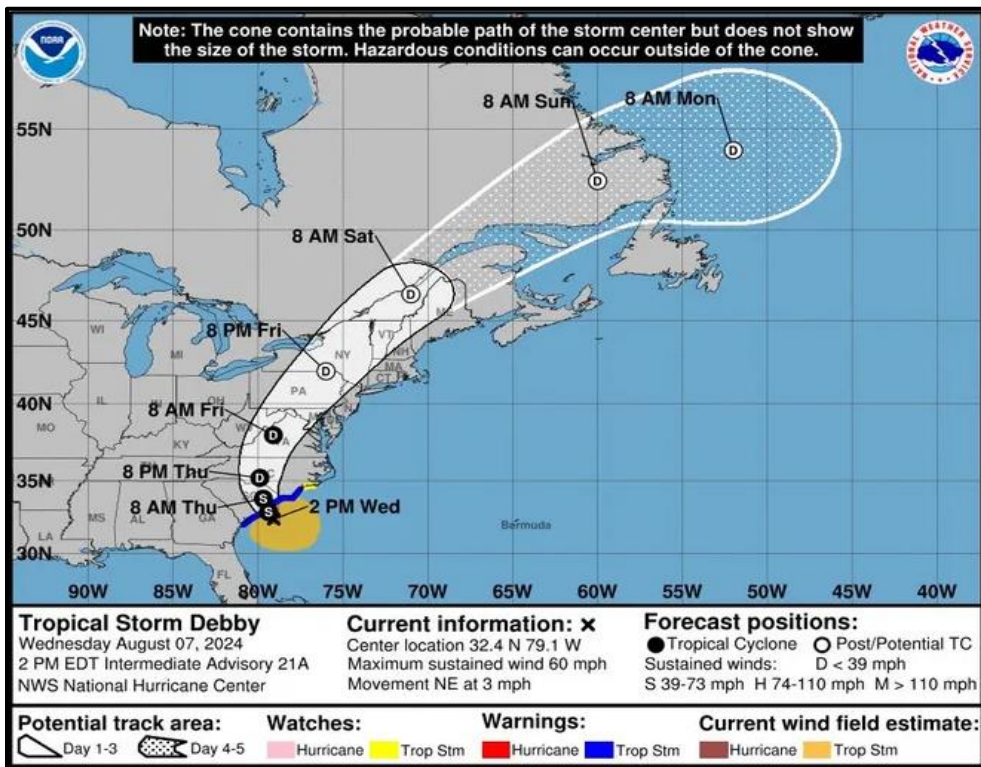


Figure 4: NOAA/National Hurricane Center's unofficial, final track of Tropical Storm Debby.

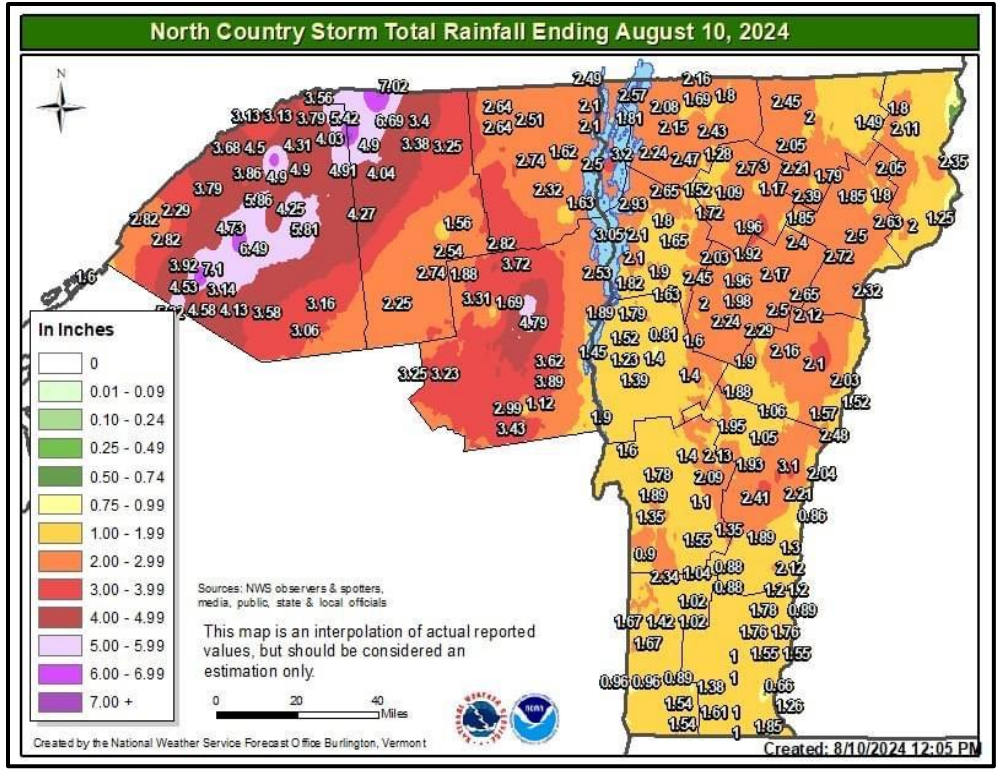


Figure 5: Storm total rainfall associated with the remnants of TS Debby on August 9-10, 2024. The heaviest totals of 4 to 7 inches occurred in a 50-75 mile track across St. Lawrence County, NY.



Figure 6: Cars lie submerged on US Route 11 in Canton, NY after severe flash flooding from the remnants of TS Debby on August 9, 2024. (Photo courtesy WWNY-TV)