04-2006) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	HYDROLOGIC SERVICE AREA (HSA) Burlington VT	
MONTHLY REPORT OF HYDROLOGIC CONDITIONS	REPORT FOR: MONTH December	YEAR 2024
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283	DATE	enior Service Hydrologist nuary 15, 2025
When no flooding occurs, include miscellaneous river conditions below the small be stages, ice conditions, snow cover, droughts, and hydrologic products issued (NW) An X inside this box indicates that no flooding occurred within this hydro	S Instruction 10-9	924).

Overview

Overall, December 2024 was a fairly quiet month from a hydrological perspective in the NWS Burlington HSA with only a few exceptions (see below). Monthly precipitation totals generally ranged from 1.5 to 3.5 inches with some slight variability (Fig. 1). On average, these values were near to slightly above normal for the northwestern slopes of the Adirondacks into the St. Lawrence Valley where positive departures of up to 0.5 inches were observed. Slightly drier conditions were observed from the Adirondack High Peak region eastward into much of Vermont, but departures weren't overwhelmingly concerning as values generally ran within an inch of normal (Fig. 2).

That said, given the persistent, longer term dryness in the 60-90 day period, the U.S. Drought Monitor degraded most areas east of the Green Mountains into D1, or moderate drought conditions by month's end (Fig. 3). No water supply or agricultural impacts were noted, however.

Notable Hydrology

There were two notable hydrological events of the month, both minor. The first event was a large precipitation maker which affected the region during the 11th and 12th. During this time a series of low pressure systems traversed the region along a slow moving cold front producing moderate to locally heavy rainfall. 24-hour totals ending at 7:00 AM EST on December 12 averaged from 1 to 2.5 inches of rain from the Champlain Valley eastward, with slightly lower totals in the Adirondacks and St. Lawrence Valley of New York (Fig. 4). Fortunately, the early season snowpack across the region was not fully ripe, limiting the overall melt. However, a few flood warnings were issued, namely for the Otter Creek at Center Rutland, VT, and along portions of the Passumpsic River and Ottauquechee Rivers (Table 1).

The other event occurred on December 30-31 during a multi-day thaw during which temperatures climbed into the 50s to locally around 60 across much of the area. This fostered some movement of early season river ice and a few instances of ice jam flooding were reported, namely on the East Branch of the Ausable River at Au Sable Forks, NY and along a stretch of the Passumpsic River in St. Johnsbury, VT. Flood warnings were issued accordingly, though mainly minor, nuisance flooding was observed and no structures were known to be impacted (Table 1, Fig. 5).

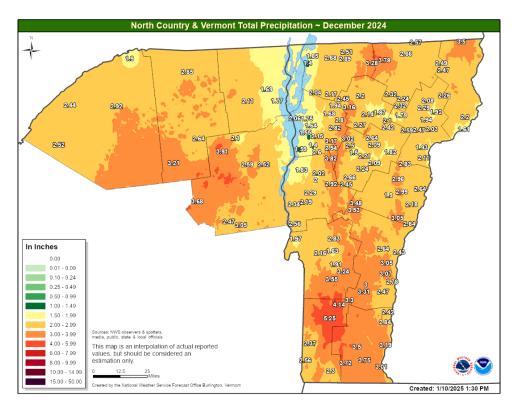


Figure 1: December 2024 monthly precipitation totals observerd across the NWS Burlington HSA. Totals, on average ranged from 1.5 to 3.5 inches with some slight variability.

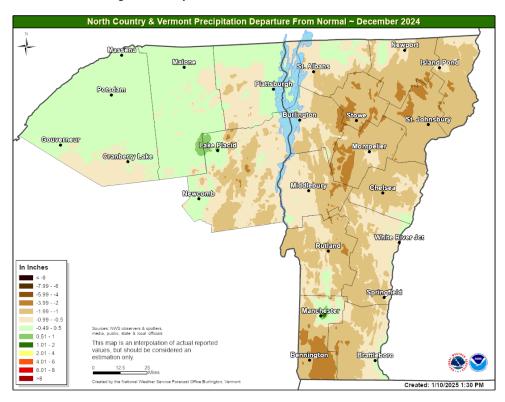


Figure 2: December 2024 precipitation departures from normal across the NWS Burlington HSA. Departures generally ran at or slightly above normal for much of northern New York and slightly below normal for Vermont.

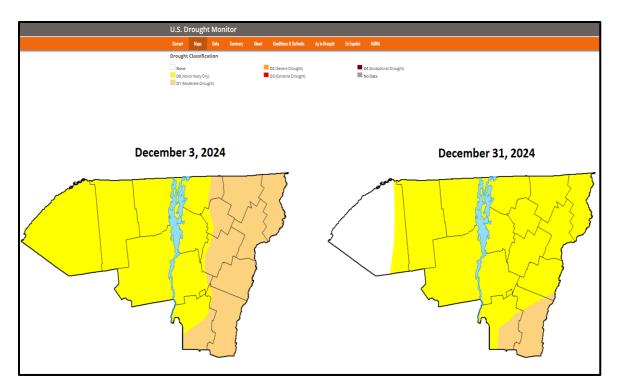


Figure 3: U.S. Drought monitor maps from December 3 and 31, 2024 showing some deterioration into D1, or moderate drought conditions across much of eastern Vermont by month's end.

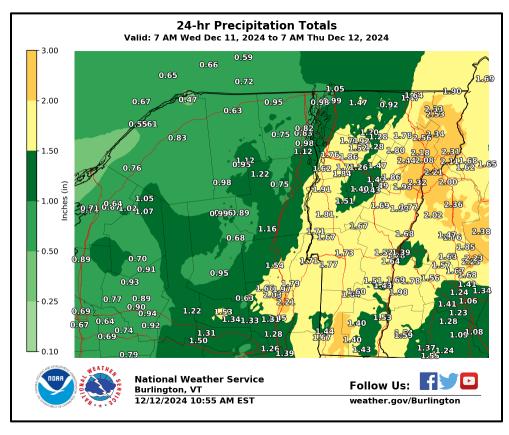


Figure 4: 24-hour rainfall amounts across the NWS Burlington HSA, ending 7:00 AM EST on December 12, 2024. Widespread totals from 1.5 to 2.5 inches were observed from the Adirondacks eastward, leading to a few reports of minor flooding.



Figure 5: An ice jam affects portions of US Route 5 in St. Johnsbury, VT on December 31, 2024 where some minor flooding and road closures were noted. (Photo courtesy the Caledonian Record)

PRODUCT	CONDITIONS	DATE	AREA
Flood Watch	Heavy rain/snowmelt	12/10-12/24	Adirondacks/Vermont
River Flood Warning	Heavy rain/snowmelt	12/12/24	Otter Creek (CENV1)
Flood Warning	Heavy rain/snowmelt	12/12/24	Passumpsic R.
Flood Warning	Heavy rain/snowmelt	12/12/24	Ottauquechee R.
Flood Warning	Ice jam	12/30/24	E. Br. Ausable R.
Flood Warning	Ice jam	12/31/24	Passumpsic R.

Table 1: Listing of hydro Watch/Warning products issued by NWS Burlington during December 2024.