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: February YEAR: 2023
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: March 14, 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).

X An X inside this box indicates that no flooding occurred within this hydrologic service area.

Overview

The month of February 2023 could be characterized as a mild and relatively dry one across most of the NWS Burlington hydrologic service area (HSA). The upper atmospheric flow pattern was generally a progressive one, with numerous, mainly weak systems affecting the region with periodic light rains and snows. Despite a brief intense cold snap during the 3rd and 4th, temperatures generally averaged above normal, leading to a rather paltry snowpack by the middle of the month as shown on NWS Burlington's daily climate maps (Fig. 1). Overall, monthly precipitation generally averaged from 1 to 3 inches, with 28-day departures as assessed from available cooperative observer, CoCoRaHS and automated station data ranging from -0.5 to -1.5 inches (Figs. 2 and 3). Only the western Adirondack Mountain region in northern New York showed slight positive departures, most notably in the Saranac Lake area. Not surprisingly, overall monthly snowfall closely mimicked these trends, with lower than normal values observed in nearly all areas. The largest negative departures occurred across the northern Green Mountains where values ranged from -12 to -18 inches by month's end (Fig. 4). Only one notable storm system affected the region, which occurred on the 22nd and 23rd when a general 2-7 inches of snow was observed (Fig. 5).

Notable Hydrology

The most notable hydrological note of February 2023 was the continued absence of any significant river ice across the hydrologic service area. Despite the brief cold snap early in the month noted above, continued mild temperatures through the majority of the month (following an extremely mild January) largely inhibited river ice formation, keeping any threat of ice jams minimal. Only far northern rivers such as the Missisquoi and Great Chazy showed any appreciable ice coverage. There was some ice movement on the latter river during the early morning of the 11th, and a Flash Flood Warning was issued for the Perry Mills and Champlain, NY areas as a precaution. However, no actual flooding of consequence was observed.

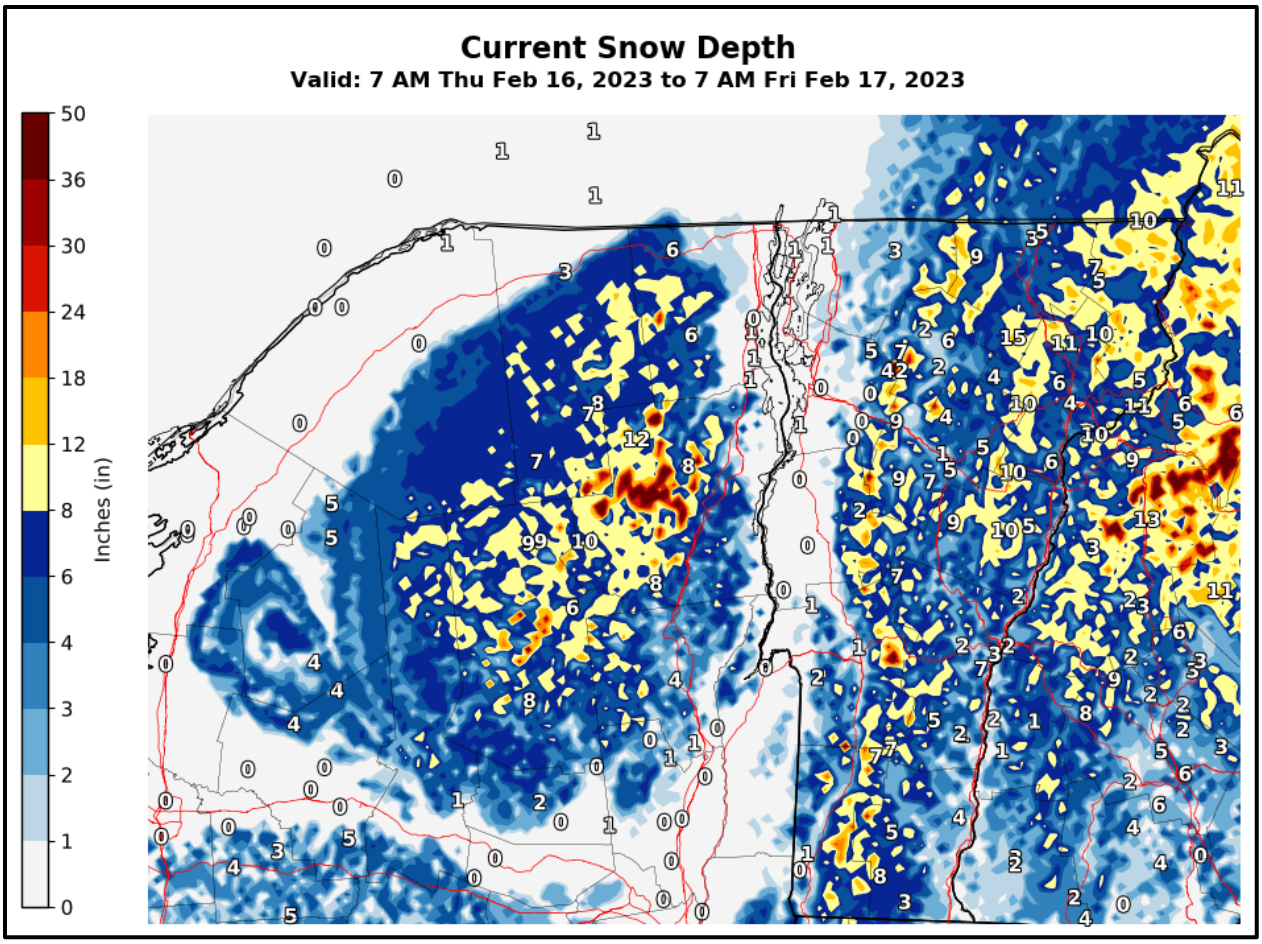

Figure 1: Snow depth across the NWS Burlington, VT HSA on February 17, 2023. Observed values were well below climatological norms for mid-February, with locations in the St. Lawrence and Champlain Valleys showing little if any snow.

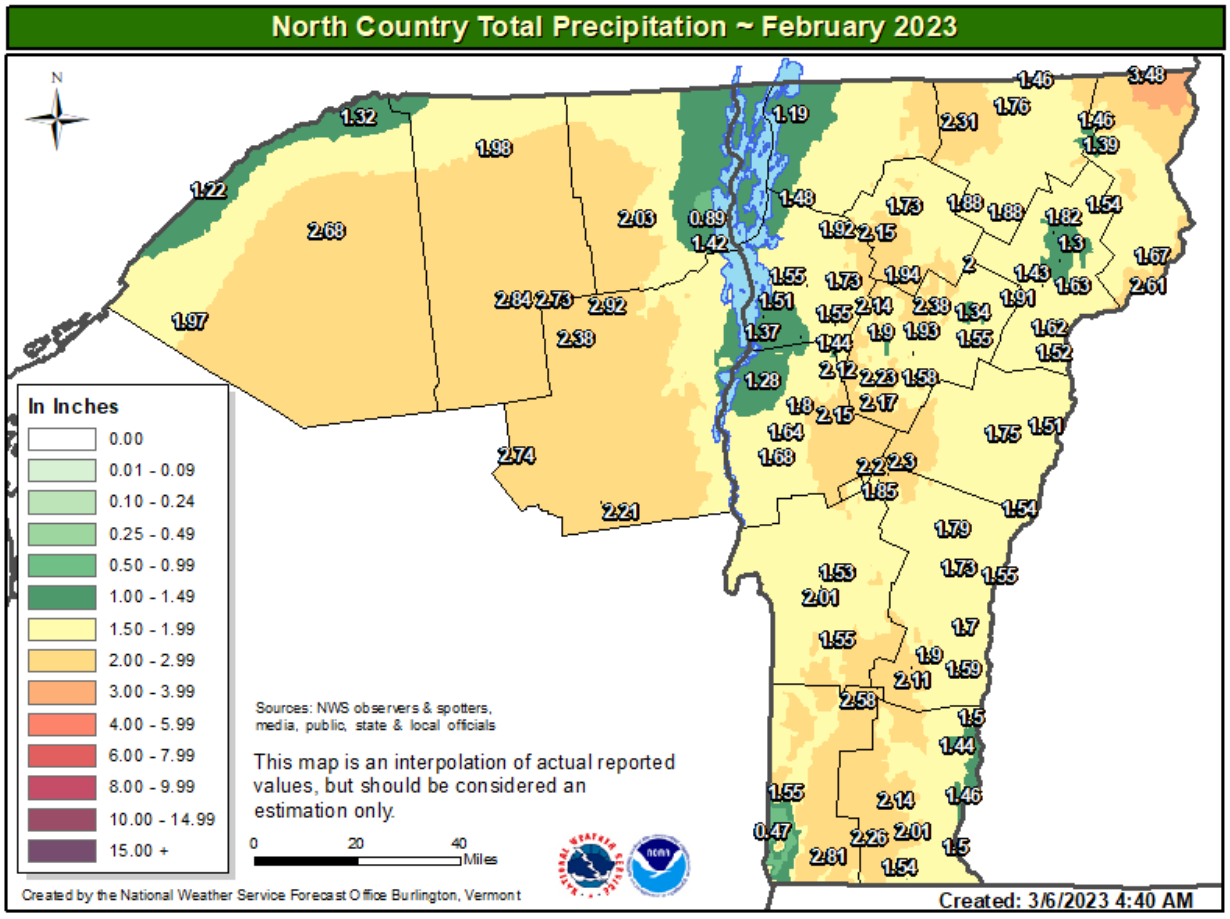

Figure 2: Monthly precipitation for February 2023 across the NWS Burlington, VT HSA. Amounts generally ranged from 1 to 3 inches with some natural variability.

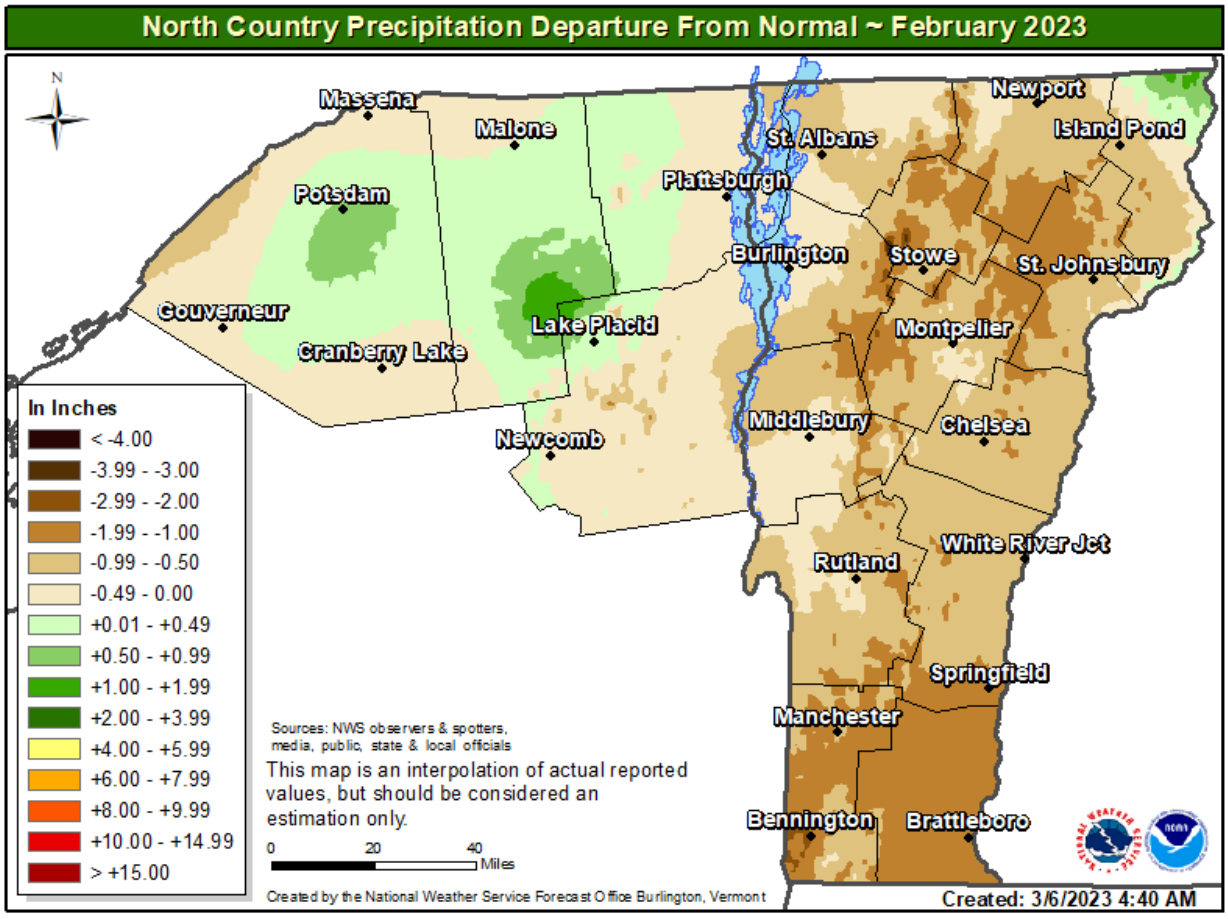

Figure 3: Monthly precipitation departures from normal for February 2023 for the NWS Burlington, VT HSA. Values in general ranged from -0.5 to -1.5 inches below normal, with only the western Adirondack Mountain region showing near to slightly above normal precipitation.

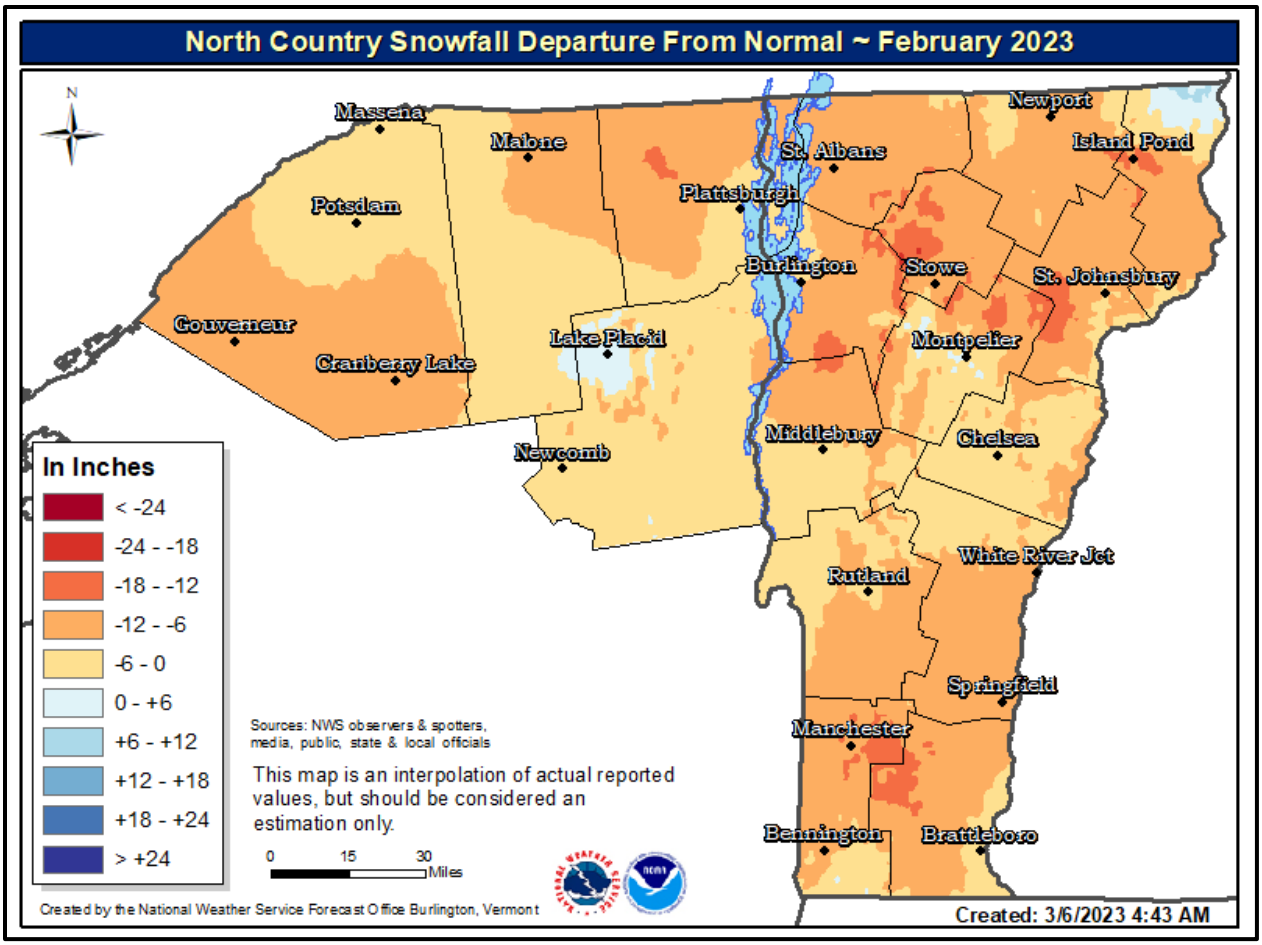

Figure 4: Snowfall departure from normal for the month of February 2023 in the NWS Burlington, VT HSA. Most areas saw below normal values, especially in the northern Green Mountains.

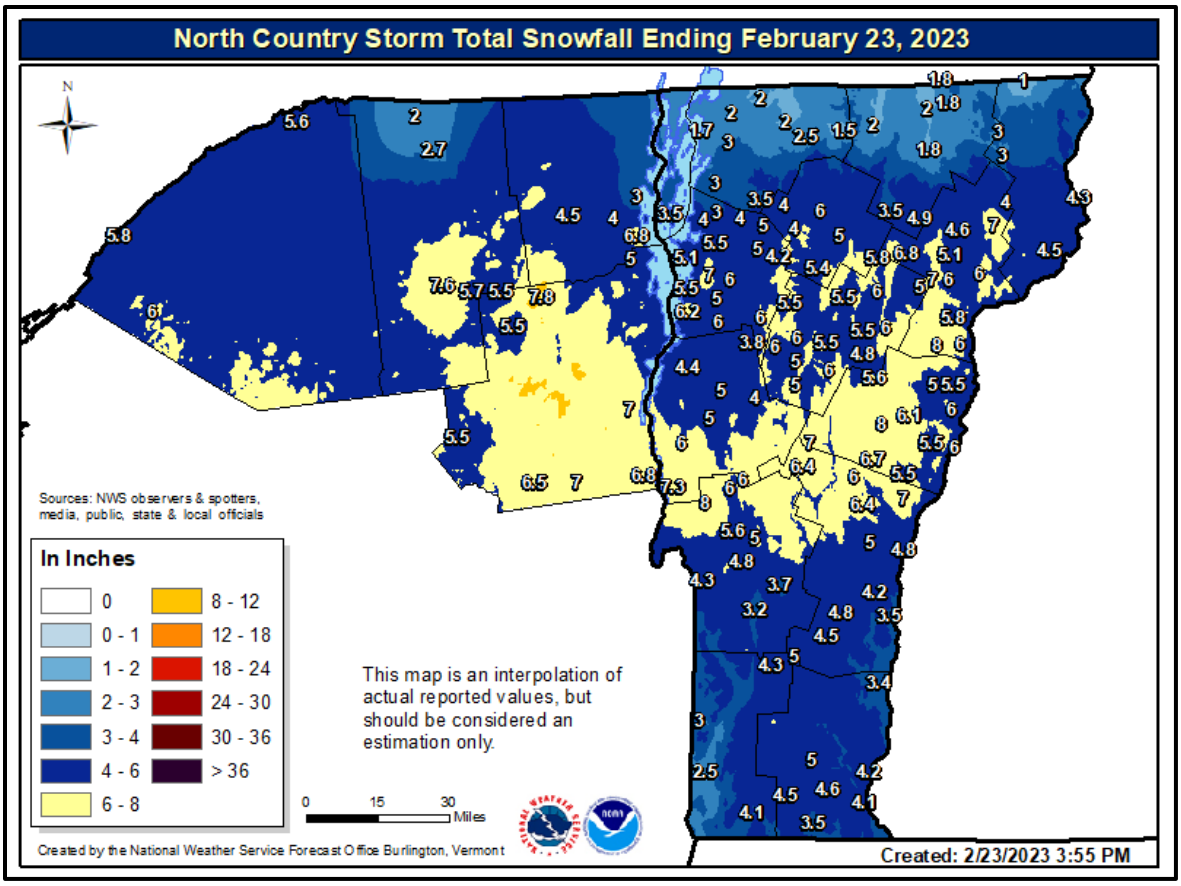

Figure 5: Storm total snowfall ending February 23, 2023 for the NWS Burlington HSA. While only modest amounts from 2 to 7 inches were observed, this was the largest storm event for the month.