

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	
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		REPORT FOR: MONTH YEAR	January 2017
		SIGNATURE /s/ Gregory Hanson, Service Hydrologist	DATE 02/09/2017

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.

January 2017 was characterized by very mild temperatures and near normal precipitation. In Burlington Vermont the month ranked as the third warmest, behind 1906 and 1990 and was 6 to 10 degrees above normal (Figure 1). Total precipitation for January across the Hydrologic Service Area was two to three inches (Figure 2), which was near normal except below normal for far northeast New York and the northern Lake Champlain Valley (Figures 3 & 4). Despite the normal precipitation totals, much of it fell in liquid form. Snowfall ranged from just a few inches in the Lake Champlain Valley to nearly two feet in the High Peaks Region of the Adirondacks and in Vermont's Northeast Kingdom (Figure 5). Monthly snowfall was one to two feet below normal for much of the area (Figure 6) and was 50% of normal or less except for the Adirondacks and Northeast Kingdom areas (Figure 7).

River flows for January were near or above normal (Figure 8), owing to the persistent above normal temperatures generating snowmelt and liquid precipitation. Rivers were mostly ice free during this period as well, allowing the USGS to continue to compute discharge.

The only hydrologic event of note was a period of warming temperatures and light rain around mid-month, following a period of cold below normal temperatures. River ice formed in the January 4-9 when nighttime lows dipped below zero in Vermont and northern New York. A warm front lifted temperatures above freezing late in the day on the 10th, where they remained until the 13th. Light rain fell across the region while in the warm air, and most rivers saw small rises of only 1 to 3 feet. However for some rivers this was enough to break up and move the newly formed river ice, and ice jams created high water levels.

The East Branch of the Ausable at Ausable Forks NY saw sharp rises the morning of January 13, rising above the 7 ft flood stage to a peak height of 8.15. An Areal Flood Warning was issued at 8:36 am EST January 13 and was cancelled at 508 pm the same day when no flooding was occurring. Backwater from the jam kept levels above flood stage through the 15th, and the gage level hovered near Action Stage of 6.0 feet for the rest of the month (Figure 9). In Vermont, an ice jam that had formed on the Missisquoi at East Berkshire the previous December renewed its effects with the warmer temperatures with a peak stage of 12.42 feet on January 13 but remaining below flood stage of 13 feet.

Temperatures were well above normal for the last half of the month, continuing snowmelt and a trend toward liquid precipitation events. Cold air returned the last two days of January, with near normal temperatures.

The liquid precipitation and snowmelt benefited Lake Champlain, with a small rise in lake levels through the month. The lake rose about a quarter foot in January, and remained about a half foot below normal (Figure 10).

Because of long term dryness much of Vermont and the Lake Champlain Valley of New York remained in the D1, Moderate Drought category, and northeast Vermont, and Franklin & western Essex Counties in New York were D0, abnormally dry (Figure 11).

Regularly scheduled Winter/Spring Flood Outlooks were issued with a near to below normal flood threat assessment due to the below normal snow pack and river ice extent.

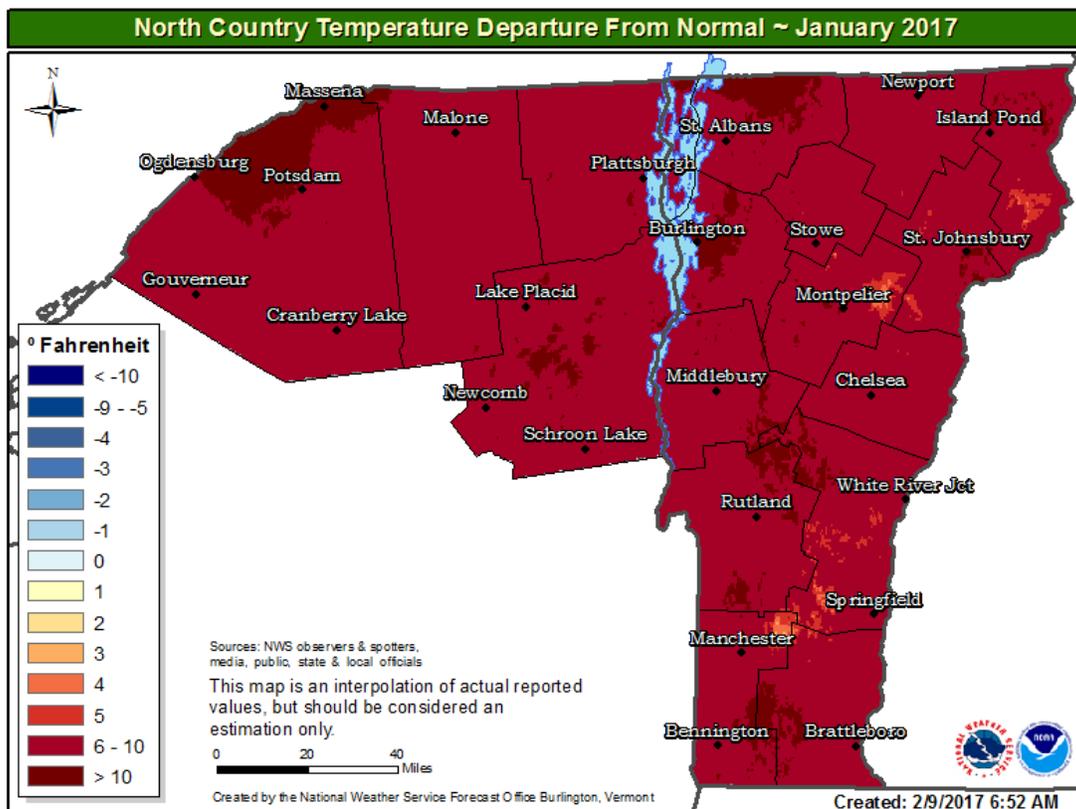


Figure 1

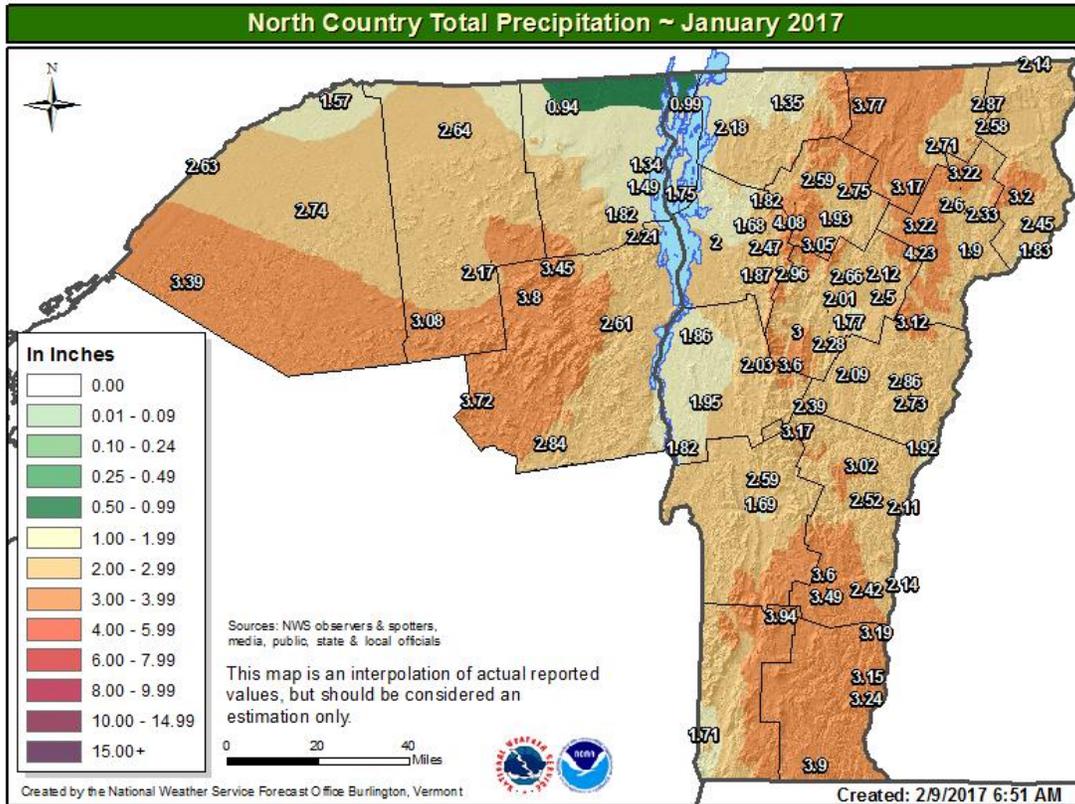


Figure 2

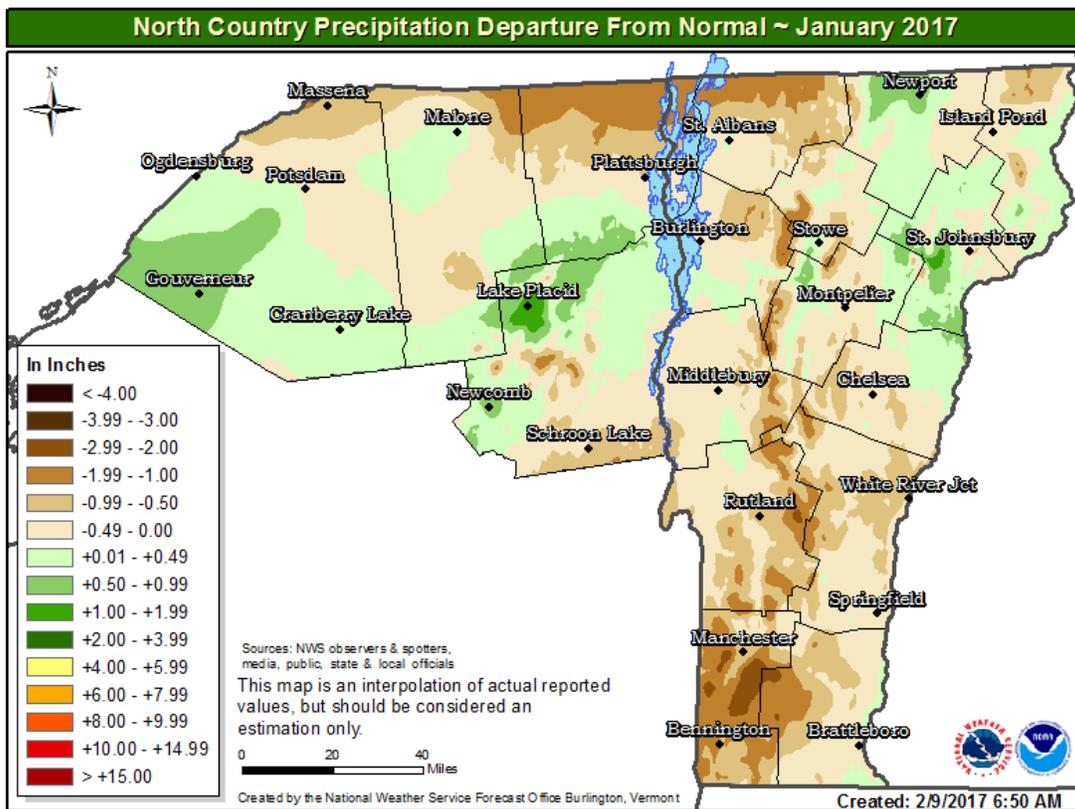


Figure 3

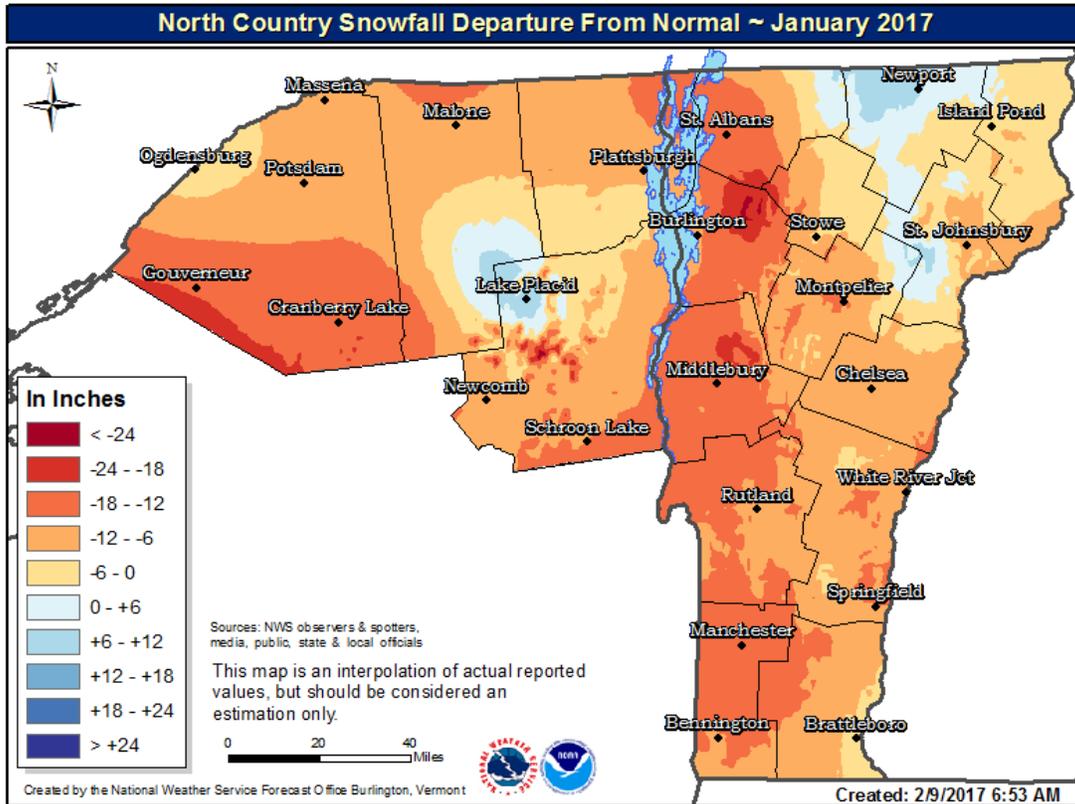


Figure 6

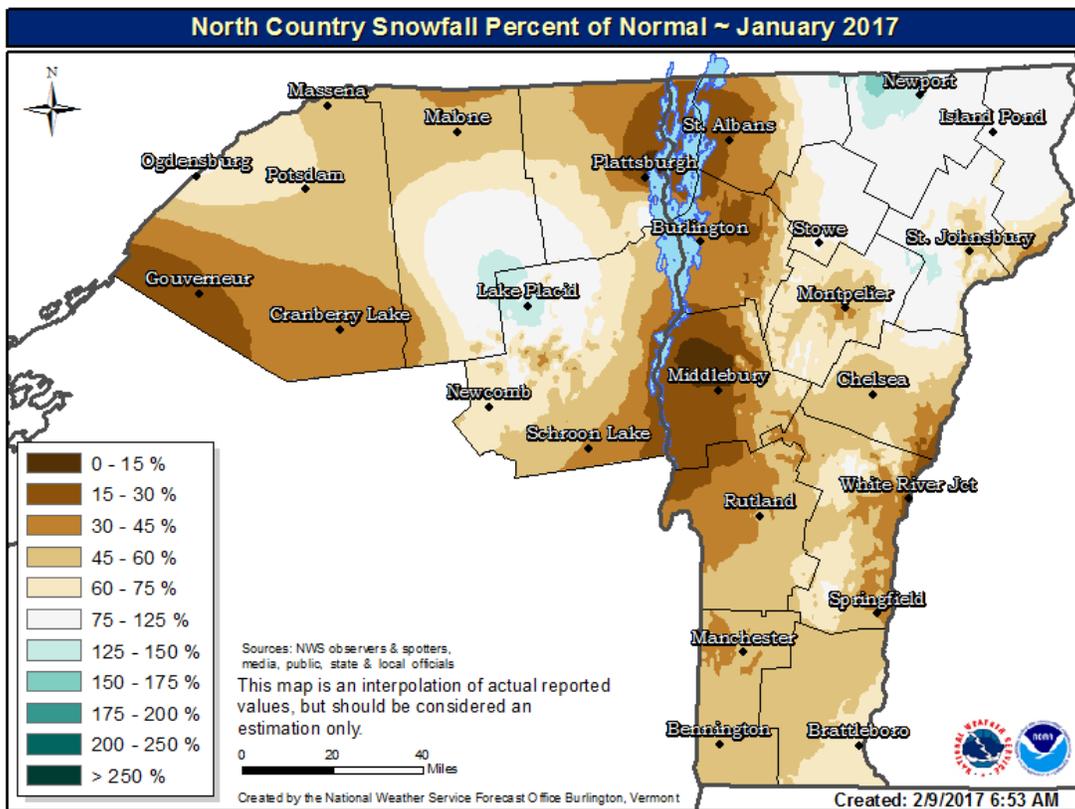


Figure 7

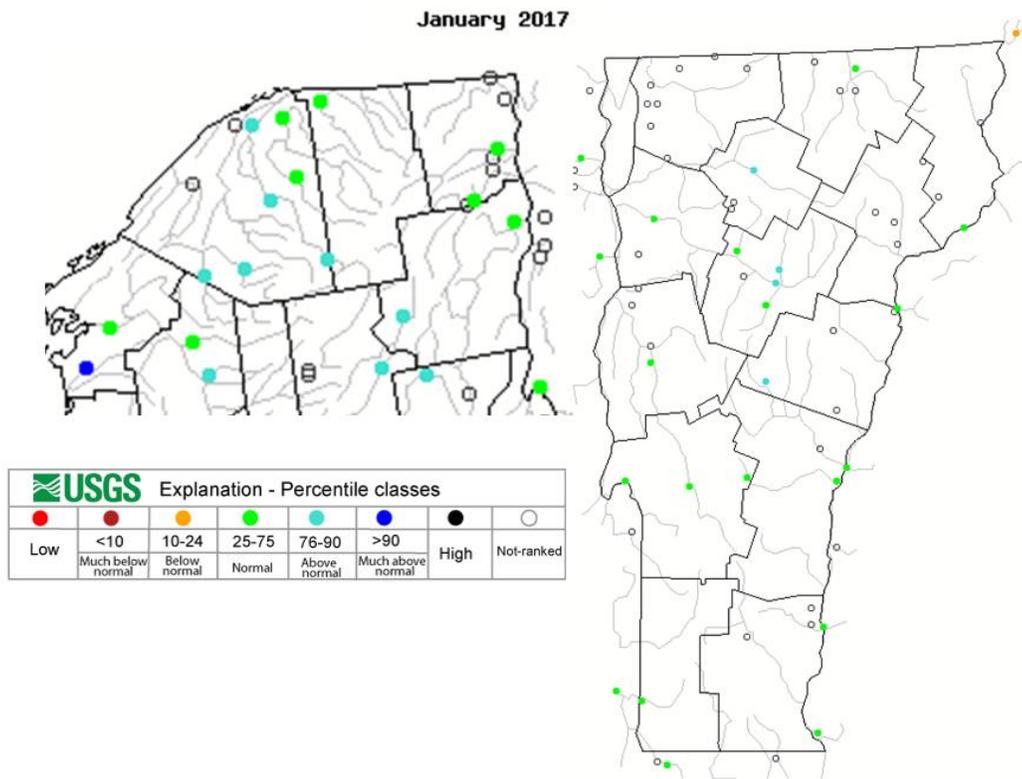


Figure 8, Mean Monthly Streamflow January 2017

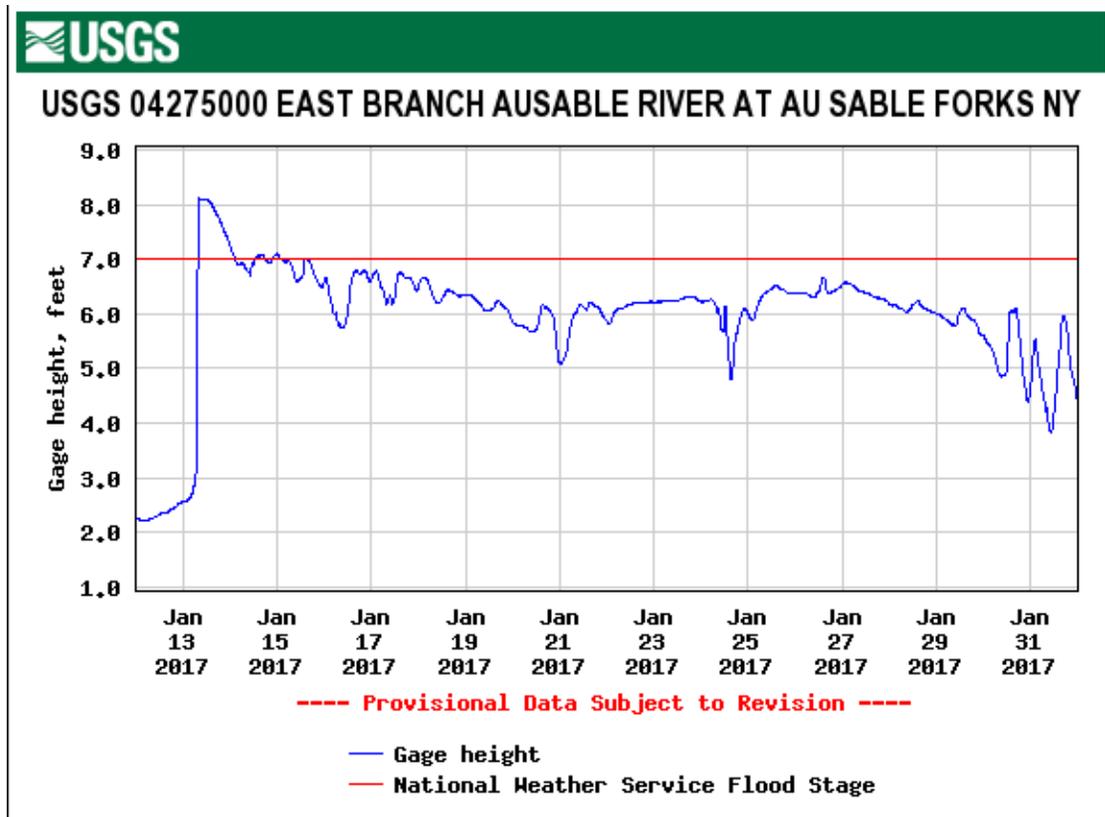


Figure 9

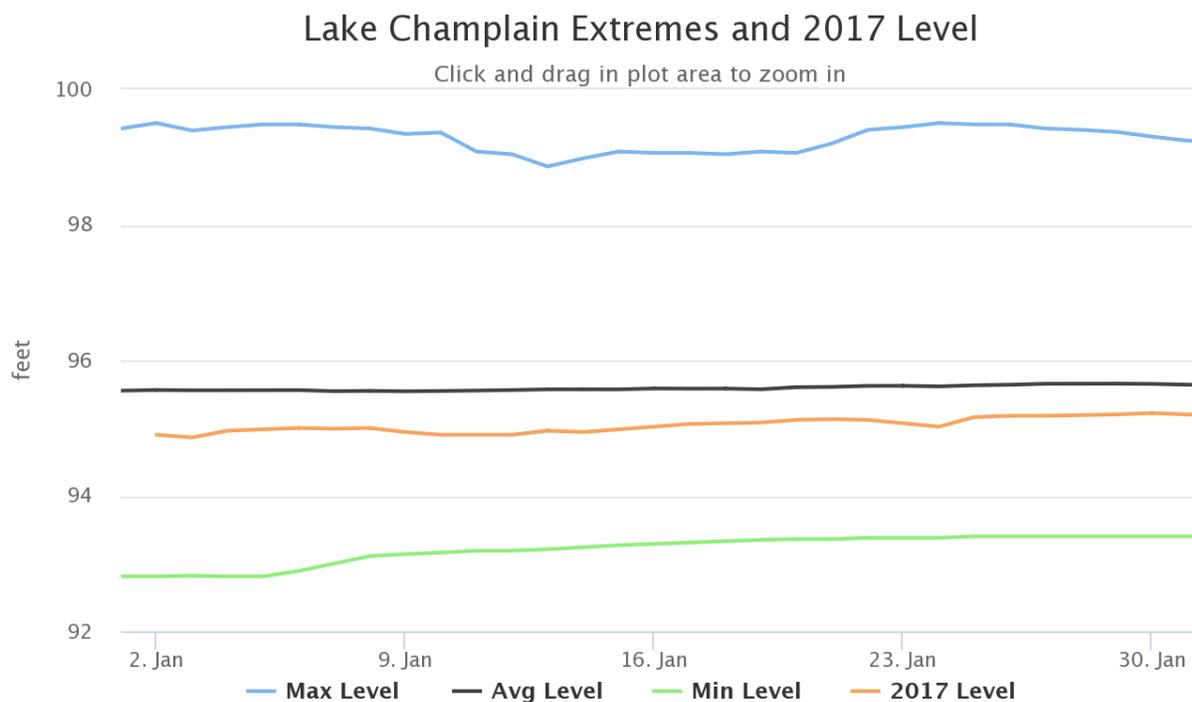


Figure 10, January 2017 Lake Champlain Levels

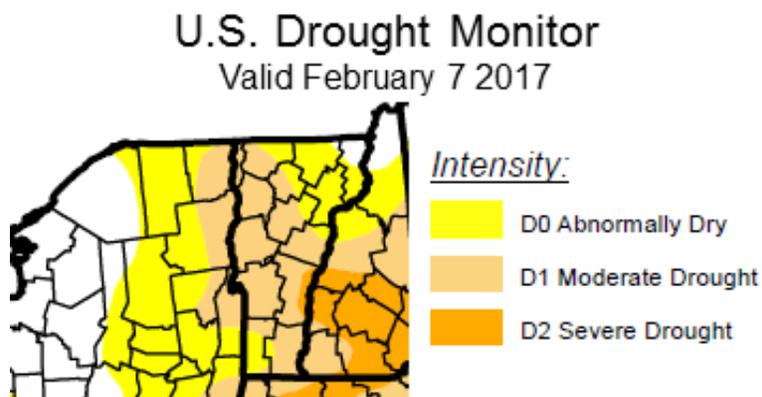


Figure 11

Significant River Crests

Location	NWSLI	Flood Stage (ft)	Crest (ft)	Time (UTC) & Date
East Branch Ausable at Ausable Forks NY	ASFN6	7.0	8.15	13:15 01/13/2017
Missisquoi River near East Berkshire VT	EBKV1	13.0	12.42	11:45-13:15 01/13/2017