



Vermont State Climate Office
Climate Impacts Summary
January 2011

Dr. Lesley-Ann Dupigny-Giroux
Stephen Hogan

January 2011 began with unusually mild weather, followed by a quick return to snowy and cold conditions.

Temperature summary

Across much of western and southeast Vermont, January 1st was marked by daily maximum temperatures were in the low 50°F, with readings in the 40°F range across northeast Vermont. On the next day, a cold front moved across the state ushering in colder air, with temperatures dipping back to the 20°F range and low 30°F by the 3rd.

Towards the end of the month, a number of stations recorded top ten coldest minimum temperatures on the 24th and 25th. In particular, record minima were set at the stations in Table 1.

Table 1: Record daily minimum temperatures observed across Vermont in January 2011

STATION	DATE	MINIMUM TEMPERATURE (°F)
Barre/Montpelier airport	24 January	-22
Mt. Mansfield (summit)	24 January	-30
Danby 4 Corners	24 January	-27
North Hartland Lake	24 & 25 January	-24
Union Village Dam	25 January	-27
Plainfield	25 January	-33

The rest of the month was punctuated by three distinct outbreaks of cold weather, each progressively colder than the last. These were observed on January 6-9, 15-18, and 22-26.

Overall for the month of January, the coldest area was northeast Vermont. Montpelier and St. Johnsbury averaged 1.8°F and 1.5°F respectively below the 1971-2000 normals. In the west, Burlington averaged 0.2°F above the 1971-2000 normal. The monthly temperature extremes in western Vermont ranged from a high of 51°F on 1 January to a low of -19°F on the 24th in

Burlington. Across northeast Vermont, Montpelier recorded a monthly high of 46°F on the 1st and 2nd, a monthly minimum of -22°F on the 24th. Further north, St Johnsbury reported 41°F on the 1st and -26°F on the 24th. Finally, in southeast Vermont, Springfield registered 50°F on 2 January and -21°F on the 24th.

Precipitation summary

Statewide, snowfall totals across Vermont translated into a liquid precipitation equivalent of 1.99" (50.55 mm), making January 2011 the 28th driest January on record since 1895 (with 1981 and 1979 being the driest and wettest Januaries on record respectively).

January saw snowfall return to the New England region with the passage of several coastal storms. Across Vermont, snowy periods were observed on 4-5th, 7-9th, 11-12th, 14th-16th, 18-21st. Statewide, the heaviest snow fell on the 11th and 12th, as a coastal storm moved to Cape Cod on the 12th and then into the Canadian Maritimes. Burlington set a 24-hour record snowfall of 9.3 inches on the 12th. Elsewhere across the state, 12-20 inches were observed in southeastern Vermont, 6-13 inches in the northeast and 8-15 inches in the west, with heaviest snowfall along the spine and western slopes of the Green Mountains respectively. Snow totaled 6-12" across the state during January 18-21. Figure 2 summarizes the monthly totals compared to the most recent averages (1971-2000 at most stations, with others having a 1985-2000 averaging period).

Figure 1: Snow-covered streets of Montpelier, 12 January, 2011. Photo credit: Burlington Free Press weather blog.

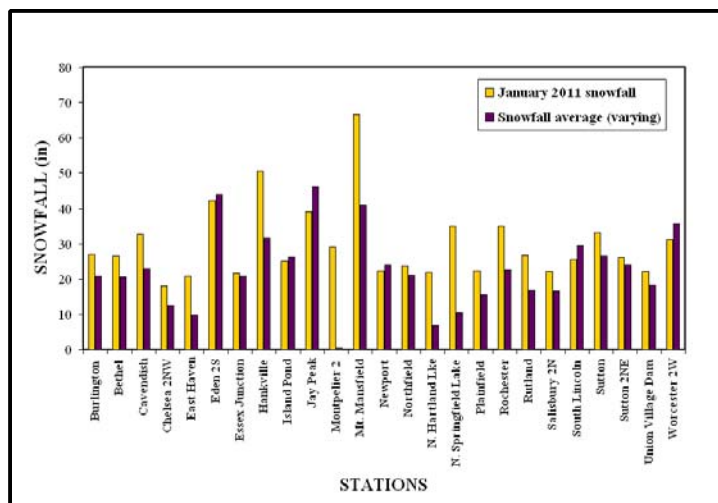


Figure 2: January 2011 totals at Vermont stations relative to their most recent averaging period (1971-2000 in most cases)