

December 2022 Northern Michigan Climate Summary

Alpena

Avg Temp	Avg Temp Departure	Precip	Precip Departure	Snowfall	Snowfall Departure
29.7°F	+3.1°F	1.52"	-0.35"	9.6"	-7.3"

Houghton Lake

Avg Temp	Avg Temp Departure	Precip	Precip Departure	Snowfall	Snowfall Departure
27.1°F	+1.5°F	1.36"	-0.40"	12.1"	-3.0"

Sault Ste. Marie

Avg Temp	Avg Temp Departure	Precip	Precip Departure	Snowfall	Snowfall Departure
26.3°F	+2.5°F	4.41"	+1.61"	63.6"	+33.2"

Gaylord

Avg Temp	Avg Temp Departure	Precip	Precip Departure	Snowfall	Snowfall Departure
27.5°F	+4.9°F	3.48"	+0.52"	47.4"	+16.0"

Traverse City

Avg Temp	Avg Temp Departure	Precip	Precip Departure	Snowfall	Snowfall Departure
31.1°F	+2.0°F	1.81"	-0.86"	26.9"	+2.3"

Much of December was dominated by above normal temperatures, particularly for overnight lows, which were anywhere from three to five degrees above normal, with several overnight lows failing to reach below 30°F through much of the month. This contributed to a prolonged absence of wintry weather, with several instances of light rain mixed with snow. That's not to say the region was spared from active weather. As a matter of fact, a strong area of low pressure passed through the region on the morning of December 15th and brought several instances of wind gusts exceeding 50mph, with the highest gust occurring in Mackinaw City at 62mph! This milder trend would quickly change heading into the holiday season.

A rapidly strengthening area of low pressure passed through Ohio and into Ontario on December 22nd, putting northern lower Michigan on the colder side of the system for a change. The snowfall associated with the system itself resulted in most spots observed a general 4-8", while some spots in the hills near Grand Traverse Bay saw localized totals around or exceeding 10". The bigger story was the lake effect snow on the backside of the system. The low pressure deepened further and stalled out just southeast of James Bay. This left a cold cyclonic flow in place across the Great Lakes through Christmas, which coincided with numerous historic lake effect snow events across the lakes as a whole. By the time the system cleared, there were several places across northwest lower and eastern upper Michigan that saw totals well in excess of 20".

As a matter of fact, Gaylord saw their second highest daily snowfall with 16.8" on December 23rd, and also saw the highest two-day snowfall since records began, with 25.1" of snow falling on December 23rd and Christmas Eve. Sault Ste. Marie observed their 4th largest daily snowfall on record on Christmas Eve, with 17.6", and ultimately saw their second highest all-time two-day snowfall for an event with 25.8", only surpassed by the infamous December 1995 snowfall event. The overall maximum snowfall observed during the event was 36.7" near Mancelona. The heavy snowfall was compounded with wind gusts that reached as high as 50mph across the region, creating several hours of blizzard conditions. The blizzard resulted in numerous Christmas services being canceled, along with several instances of stranded motorists in the most impacted areas. In addition, the magnitude of this event was enough to put several locations above normal for December snowfall, despite the limited instances of appreciable snowfall.