February 2014 Climate Summary for Southwest Lower Michigan

Evan Webb
National Weather Service Grand Rapids, MI

Into the Top 10

February 2014 was the 8th snowiest of all Februarys on record with 29 inches in Grand Rapids.

Overview

The unusually cold and snowy January carried right over into February. February 2014 was much colder and snowier than normal across Southwest Lower Michigan. In fact, the deepest snow depth in February on record for Grand Rapids was measured this year.

Average temperatures in February were in the mid to upper teens, around *nine* degrees colder than normal for the month (Figures 1 and 2). A departure of this magnitude averaged over an entire month is very significant. Polar air frequently streamed in from Canada and resulted in the 11th coldest February on record in Grand Rapids, 16th coldest in Lansing, and 11th coldest in Muskegon (Table 1). Only four days in February saw temperatures climb above the freezing point. This stretch of warmer weather occurred February 18-21, when high temperatures soared into the 40s. However, bitterly cold air returned during the last few days of the month. Record low temperatures were recorded on the 28th in Grand Rapids and Muskegon. Grand Rapids dropped to -12, and Muskegon dropped to -7. Lansing dropped to -11, which was the second coldest low temperature for the 28th of February. Many locations across West Michigan dropped to as low as 10 to 20 degrees below zero on the morning of the 28th.

February 2014 was much snowier than normal (Figure 6). Southwest Lower Michigan received 3-6 inches of snow on the 4th and 5th of February from a storm that tracked to our south. The snow caused numerous accidents and resulted in some highways being closed, including I-94 and US-131. Unfortunately, these were just two of several days in February featuring hazardous driving conditions. On February 17th, an area of low pressure tracked through Northern Indiana and resulted in a large swath of 4-7 inches of snow across Southwest Lower Michigan, with locally higher amounts in Central Lower Michigan. This winter system pushed the snow depth in Grand Rapids up to 24 inches, a new record for the month of February. This is the 2nd deepest snow depth all-time for Grand Rapids, second only to 27 inches in January 1978 after the Blizzard of 1978.

Another significant weather event occurred during the brief warm-up. Multiple hazards impacted the area on the 20th and 21st of February. The 20th featured mixed precipitation, thundersnow, and then heavier rainfall in the afternoon toward Jackson. The rainfall resulted in some reports of urban flooding. Bigger impacts were realized on the 21st. Moderate to heavy snowfall and winds gusting to 45-60 mph created blizzard conditions at times. Significantly reduced visibilities and strong winds resulted multiple traffic accidents and a closure of US-127 in Isabella County.

Yet another blast of arctic air, strong winds, and lake-effect snow resulted in blizzard conditions on the 27th of February. Blowing snow resulted in very poor conditions for the morning commute. Grand Rapids received 3.9 inches of snow, which makes the winter of 2013-2014 the second snowiest winter on record.

February 2014 Climate Summary for Southwest Lower Michigan

TABLE 1. Reported temperature and snowfall amounts for February 2014 at primary climate stations in Southwest Lower Michigan and how this February ranks all-time.

Location		Average Temperature (°F)	Snowfall (inches)
Grand Rapids	Observed	17.7	29.0
	Departure from Normal	- 9.1	+ 14.2
	February Rank (since 1892)	11th	8th
Lansing	Observed	16.7	18.0
	Departure from Normal	- 9.2	+ 6.4
	February Rank (since 1863)	16th	17th
Muskegon	Observed	18.3	27.1
	Departure from Normal	- 8.8	+ 7.8
	February Rank (since 1896)	11th	16th

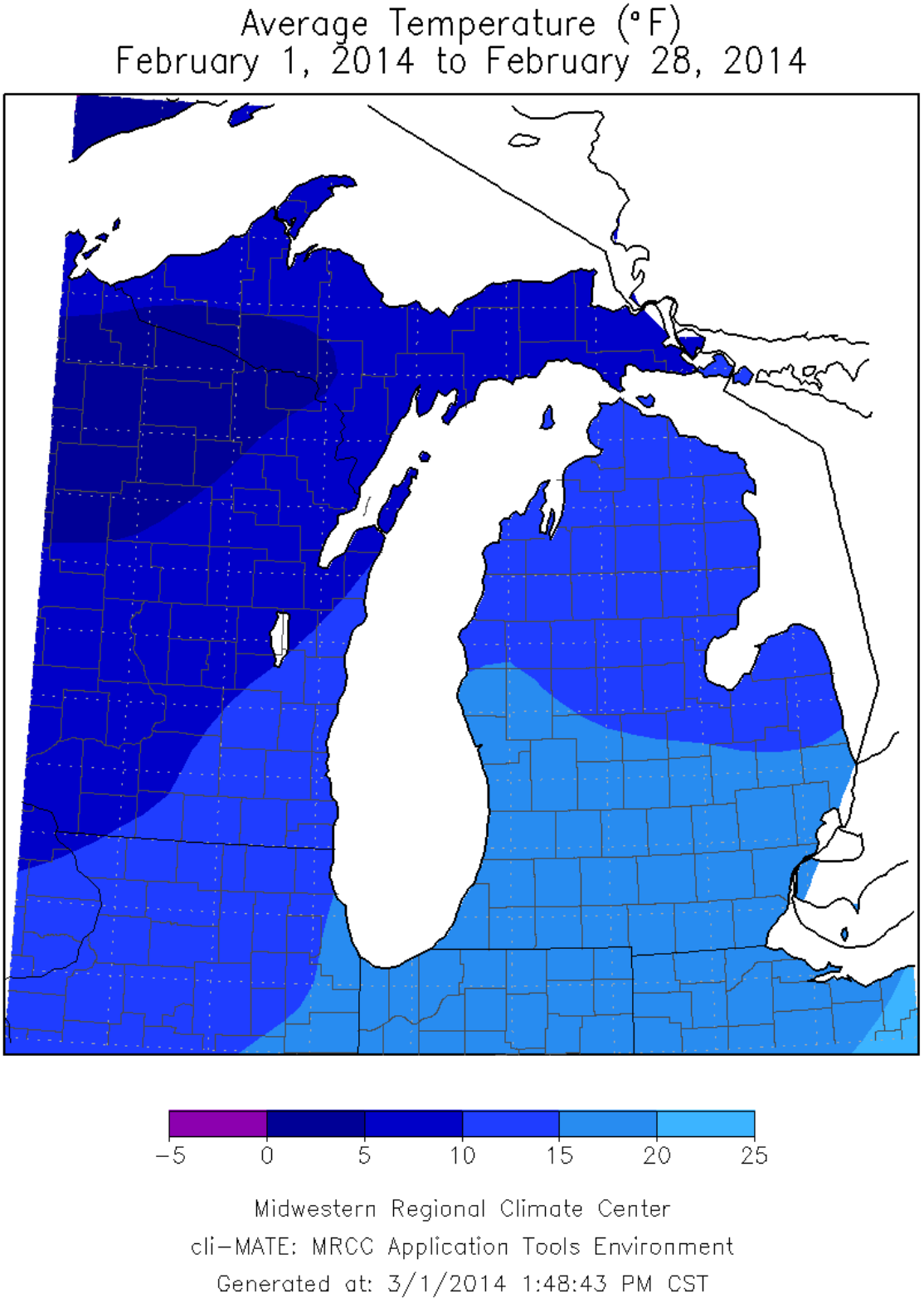

Figure 1. Average temperature (°F) for February 2014.

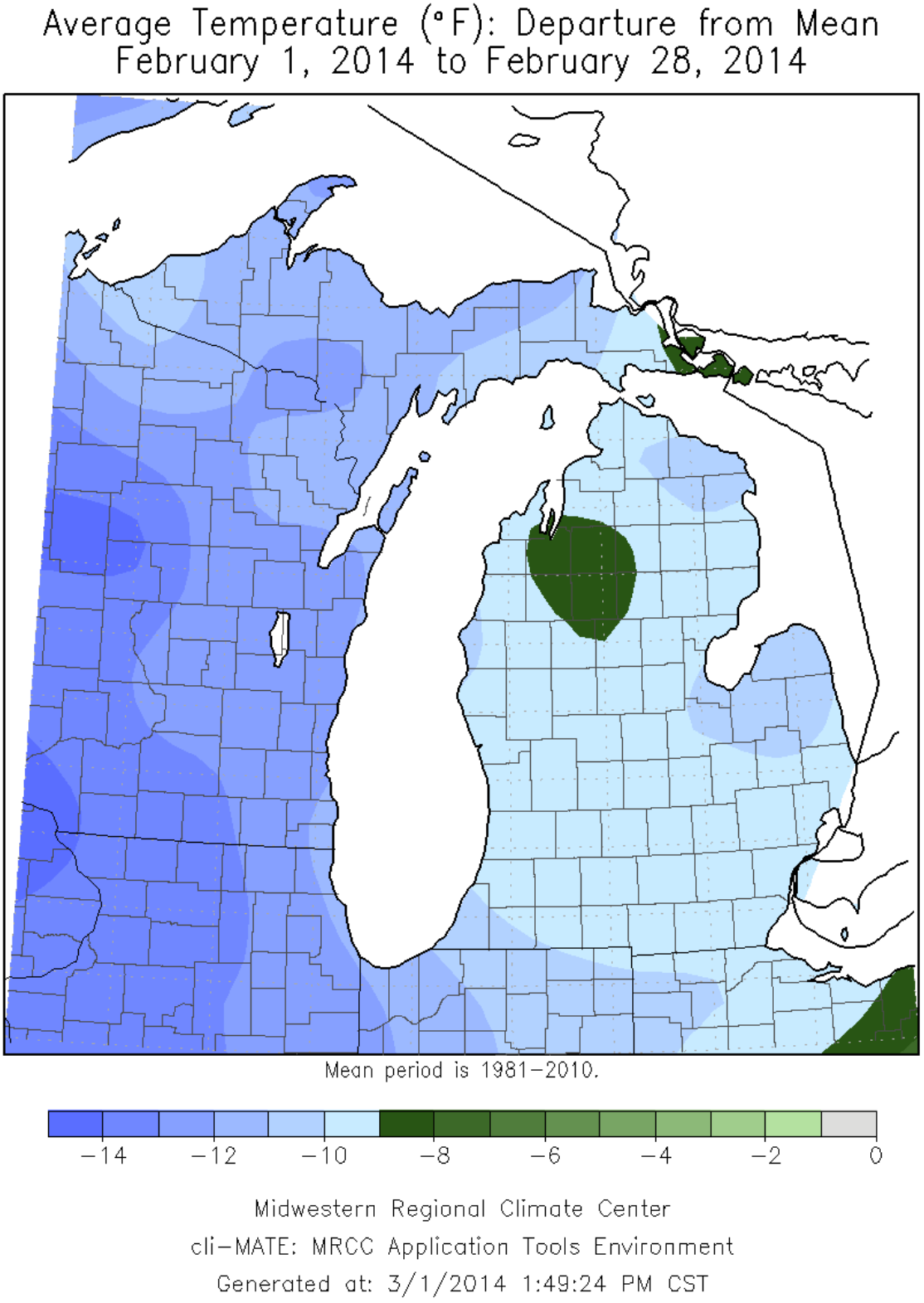

Figure 2. Average temperature departure from normal (°F) for February 2014.

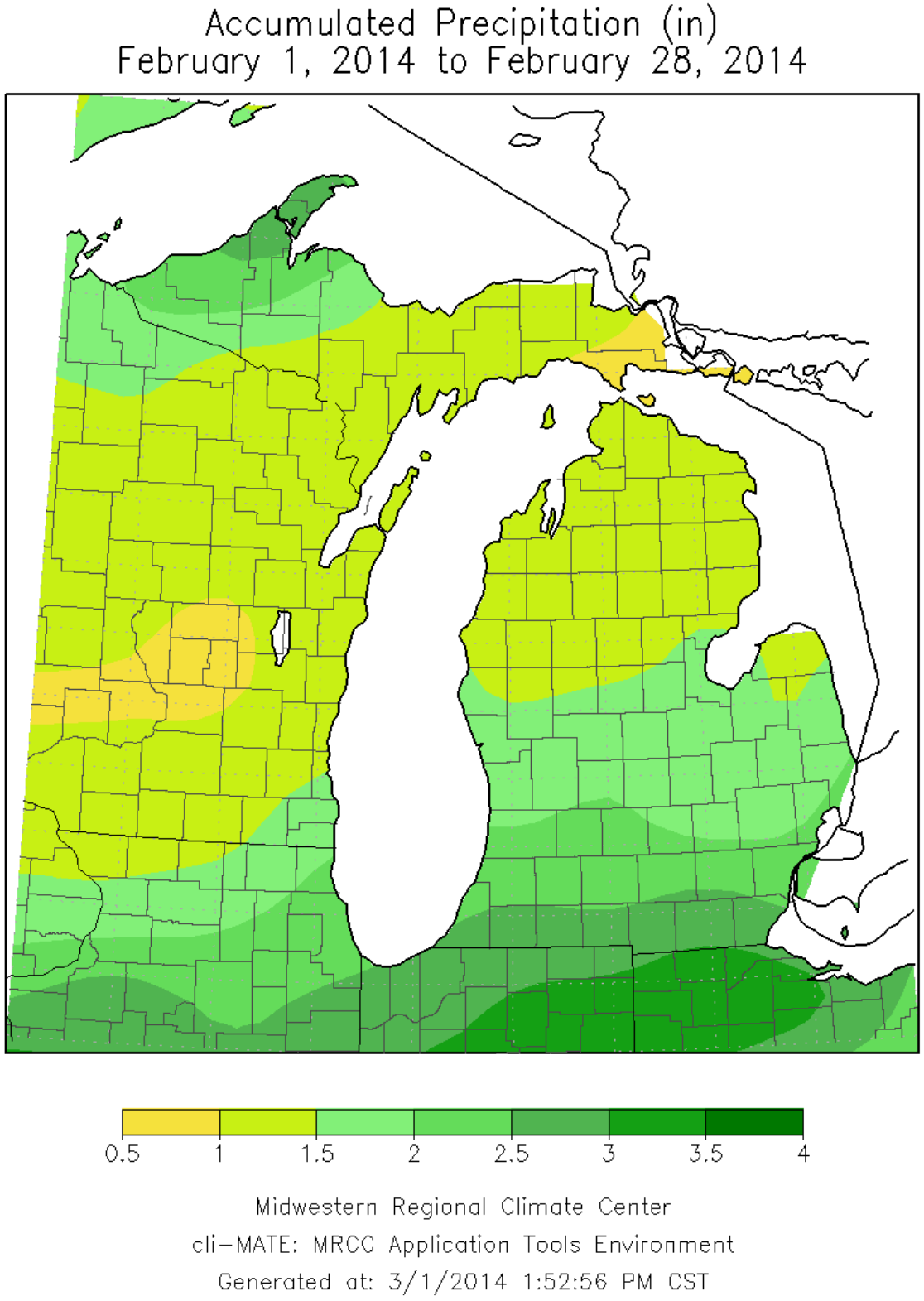

Figure 3. Total precipitation (in inches) for February 2014.

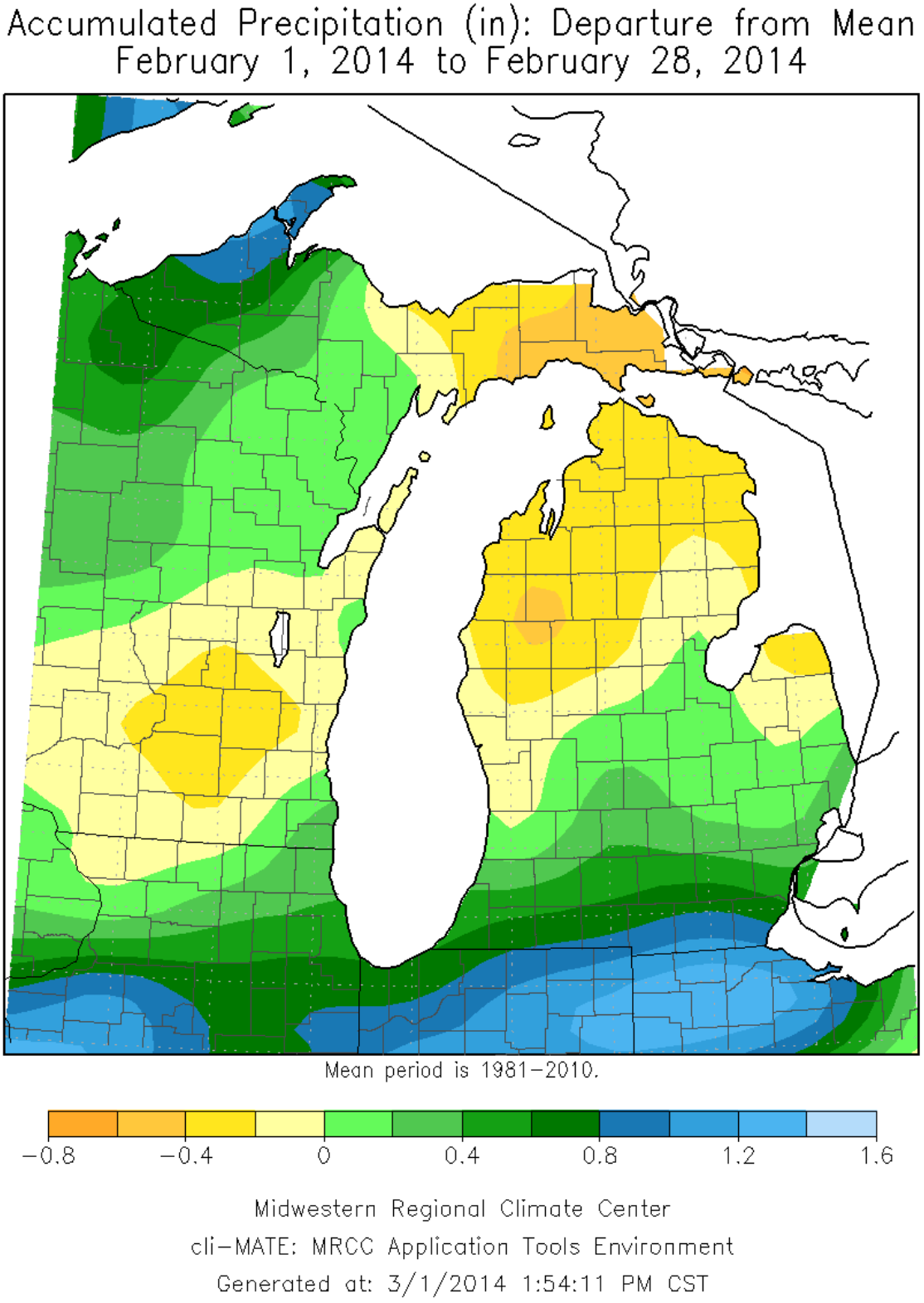

Figure 4. Average precipitation departure from normal (in inches) for February 2014.

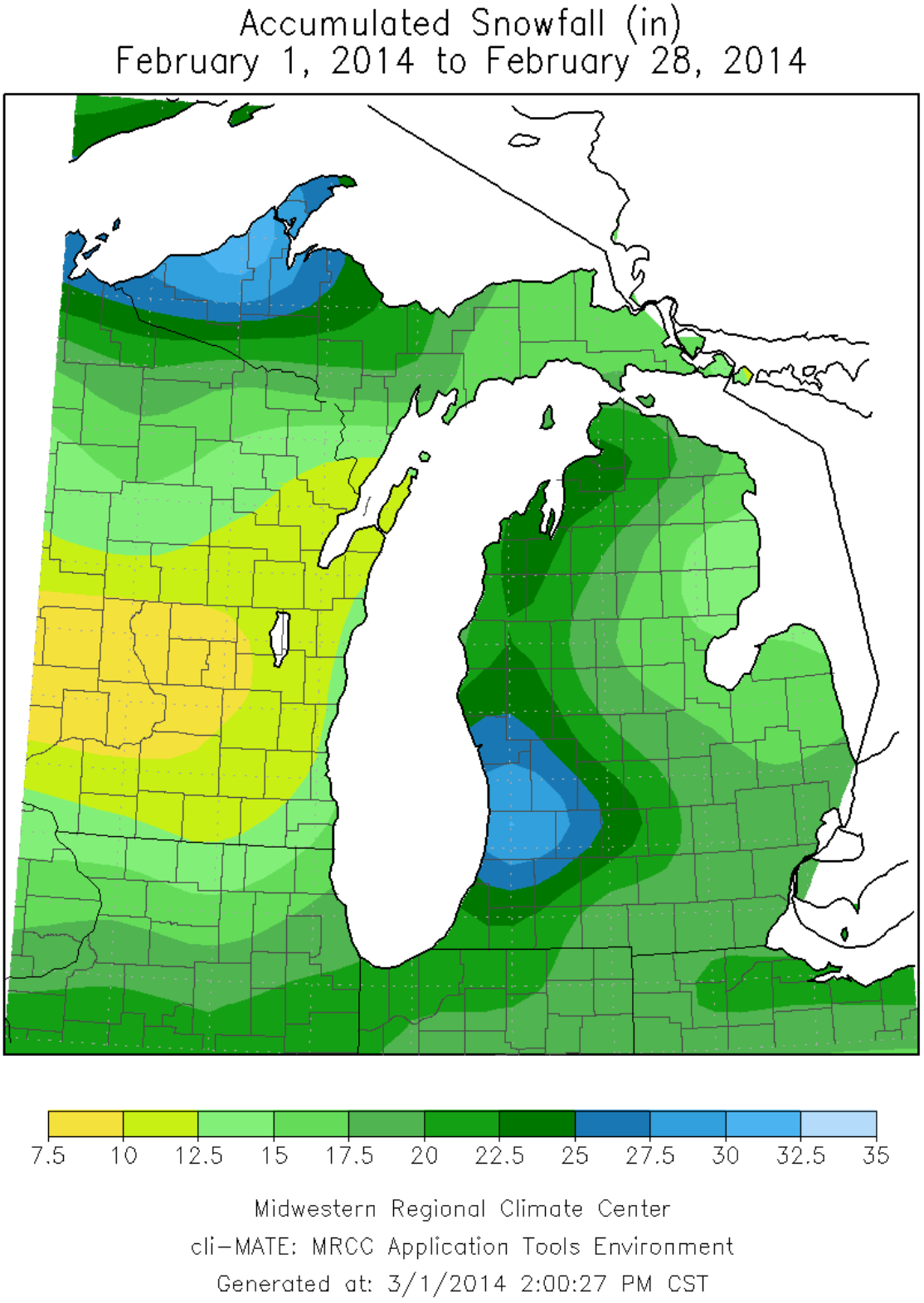

Figure 5. Total snowfall (in inches) for February 2014.

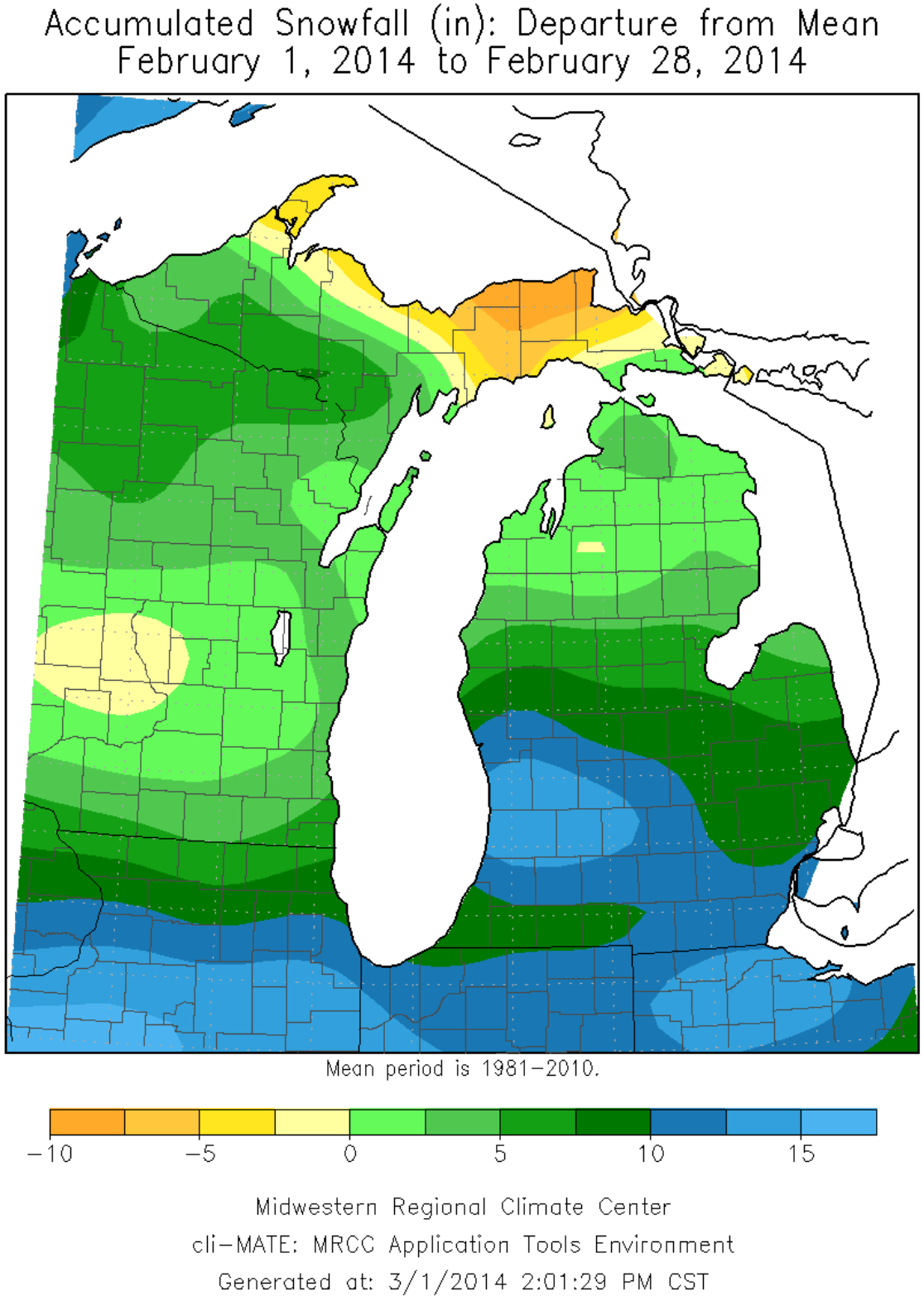

Figure 6. Total snowfall departure from normal (in inches) for February 2014.