

Just How Cool is the Summer of 2015 so far?

- ❖ For the past 10 summers, through the 10th of July, this has been the coldest summer on record at Grand Rapids, Lansing and Muskegon.
- ❖ Looking back for the entire period of record
 - ❖ Grand Rapids, with records back to 1892, is currently in 3rd place for the coldest summer on record
 - ❖ Muskegon, with records back to 1896, is in 11th place
 - ❖ Lansing , with records back to 1863, is in 12th place

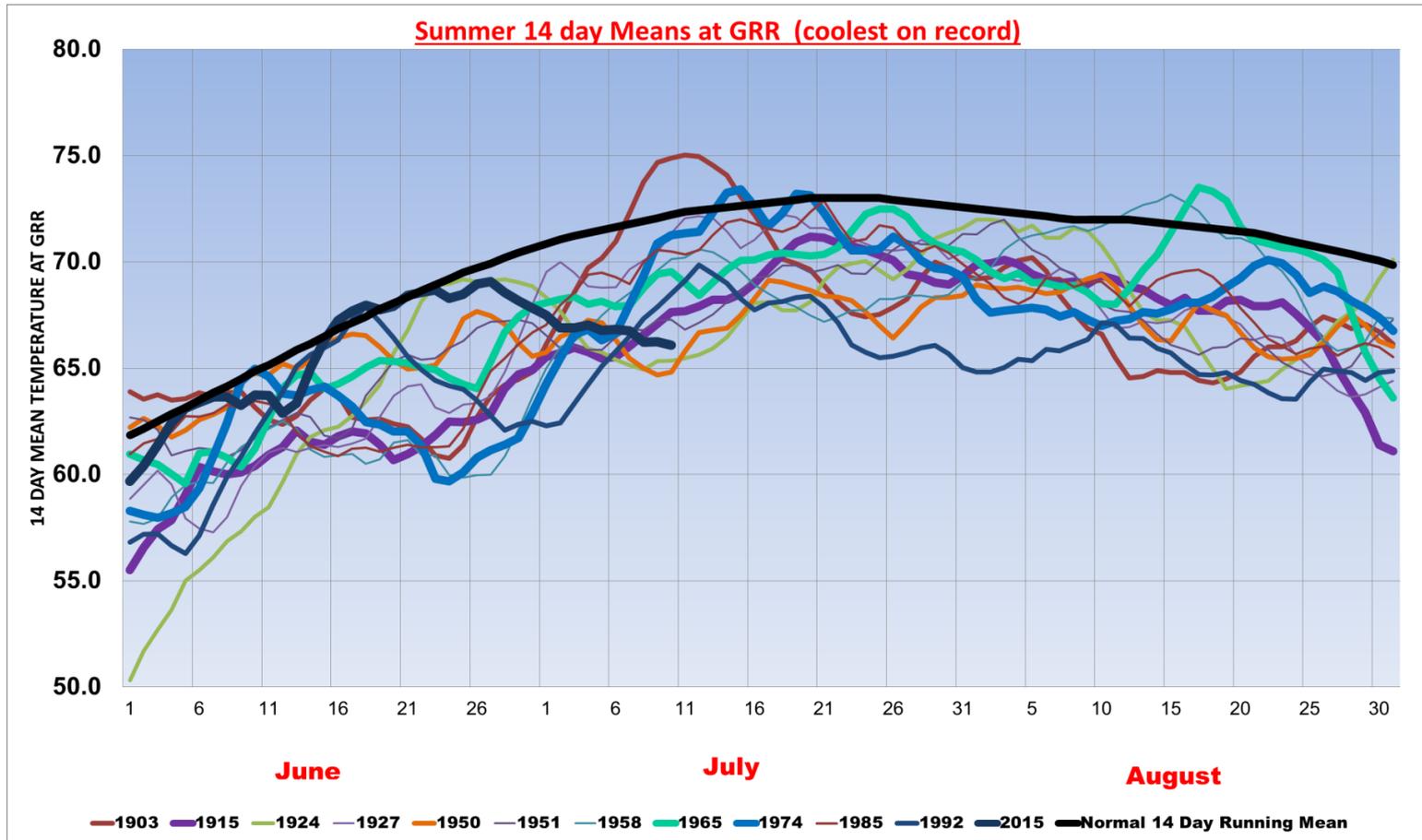


Top 10 Coldest Summers on Record

	Grand Rapids (1892> 2015)		Lansing (1863>2015)		Muskegon (1896>2015)	
Rank	Year	Mean	Year	Mean	Year	Mean
1	1992	65.5	1915	64.1	1929	63.3
2	1915	65.9	1992	64.4	1915	63.5
3	2015*	66.3	1869	64.6	1927	63.6
4	1945	66.7	1866	64.9	1917	63.8
5	1950, 1903	66.9	1903, 1863	65.0	1920	64.0
6	1927	67.0	1865	65.2	1992	64.1
7	1974,1958	67.1	1927	65.3	1924	64.3
8	1951	67.2	1902	65.5	1918	64.8
9	1985	67.3	1972	65.6	1950	64.9
10	1924	67.4	1883	65.8	1903	65.2

As of the 10th of July (a little more than 1/3 of the summer in the record books), the summer of 2015 is in 3rd place at Grand Rapids with a mean temperature of 66.3 degrees, 12th place at Lansing with a mean of 66.1 degrees and 11th place at Muskegon with a mean of 65.3 degrees.

Comparing the summer of 2015 (through the 10 of July) to the top 10 Coldest Summers for Grand Rapids using a 14 day running mean temperature to see how this area is trending this summer so far...



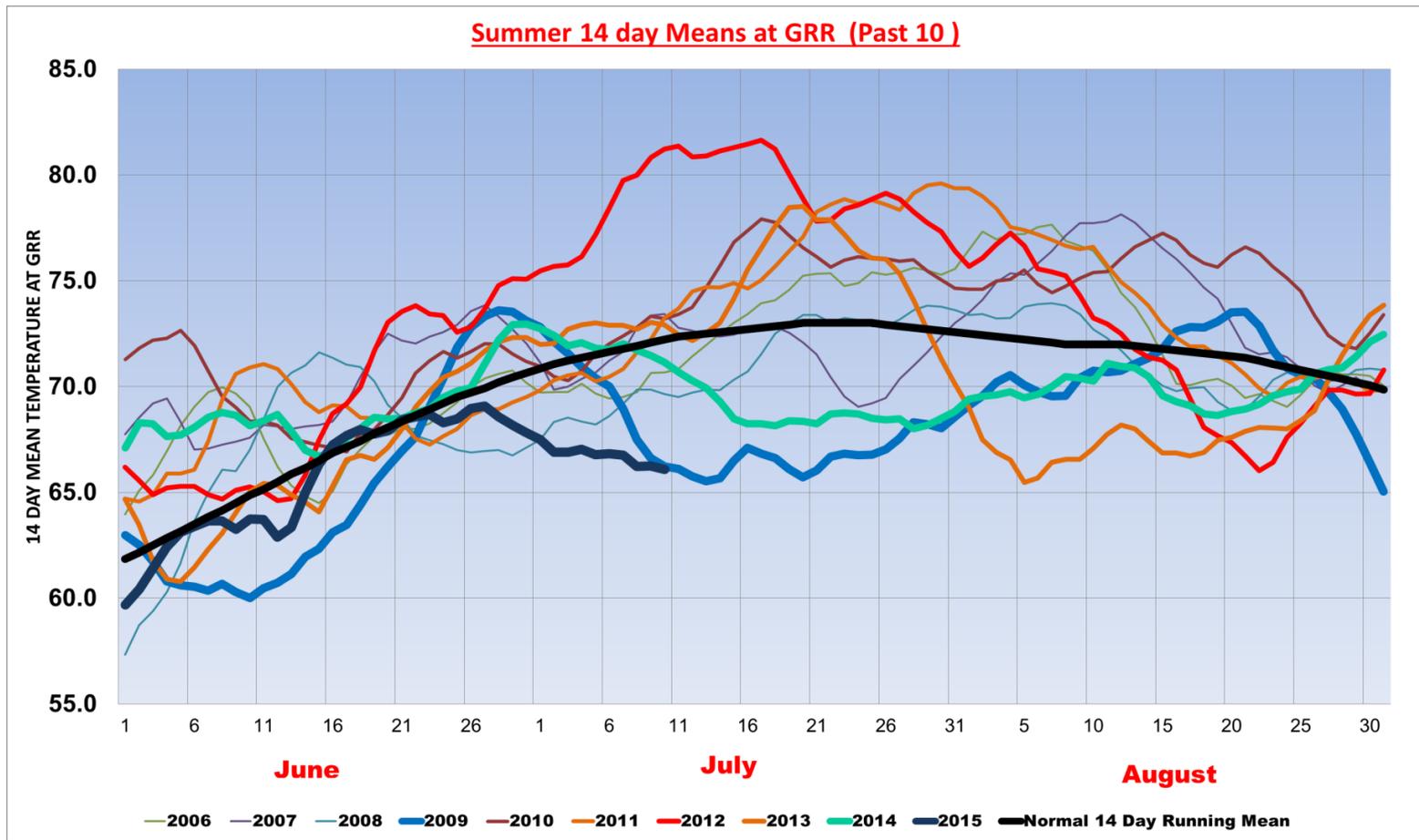
Note that for most of these summers, once established, the coolness relative to normal continued through the rest of the summer.

Top 10 Coldest Summers of the past 10 year

	Grand Rapids		Lansing		Muskegon	
Rank	Year	Mean	Year	Mean	Year	Mean
1	2015	66.5	2015	66.1	2015	65.3
2	2009	67.9	2009	66.9	2009	66.6
3	2014	69.9	2014	68.5	2014	68.0
4	2013	70.4	2013	69.4	2008	68.0
5	2008	70.5	2008	69.4	2013	69.1
6	2006	71.2	2006	70.0	2007	69.3
7	2007	72.0	2007	70.2	2006	70.0
8	2011	72.6	2011	71.4	2011	71.3
9	2010	73.2	2010	72.4	2012	72.3
10	2012	73.6	2012	72.6	2010	72.5

If our cool weather pattern does continue, all three of our climate sites are on track for the coolest summer in the past 10 years.

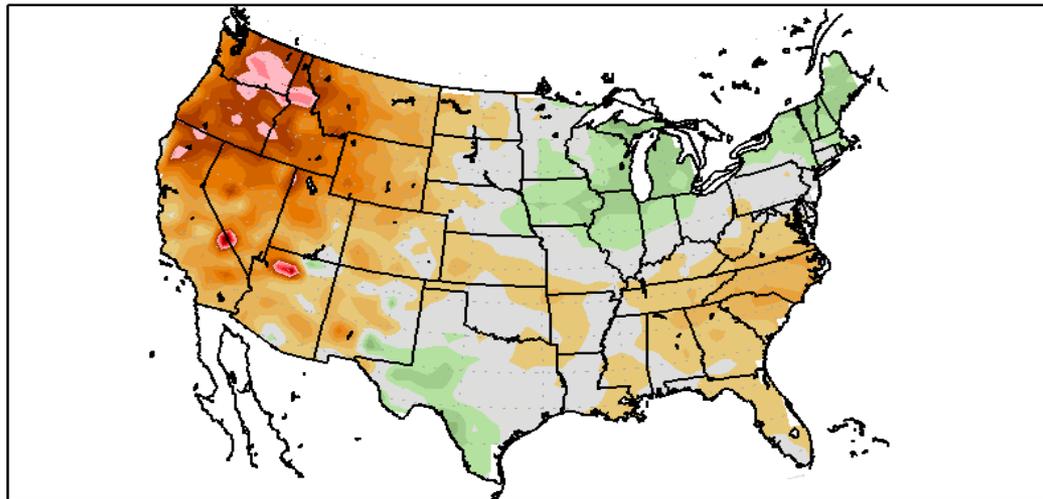
Comparing 2015 to the last 10 Summers for Grand Rapids



Of the past 10 summer, 2014 and 2009 were the only summers that were cooler than normal.

CONUS Departure from Normal Since June 1st 2015

Average Temperature (°F): Departure from Mean
June 1, 2015 to July 10, 2015



Mean period is 1981–2010.



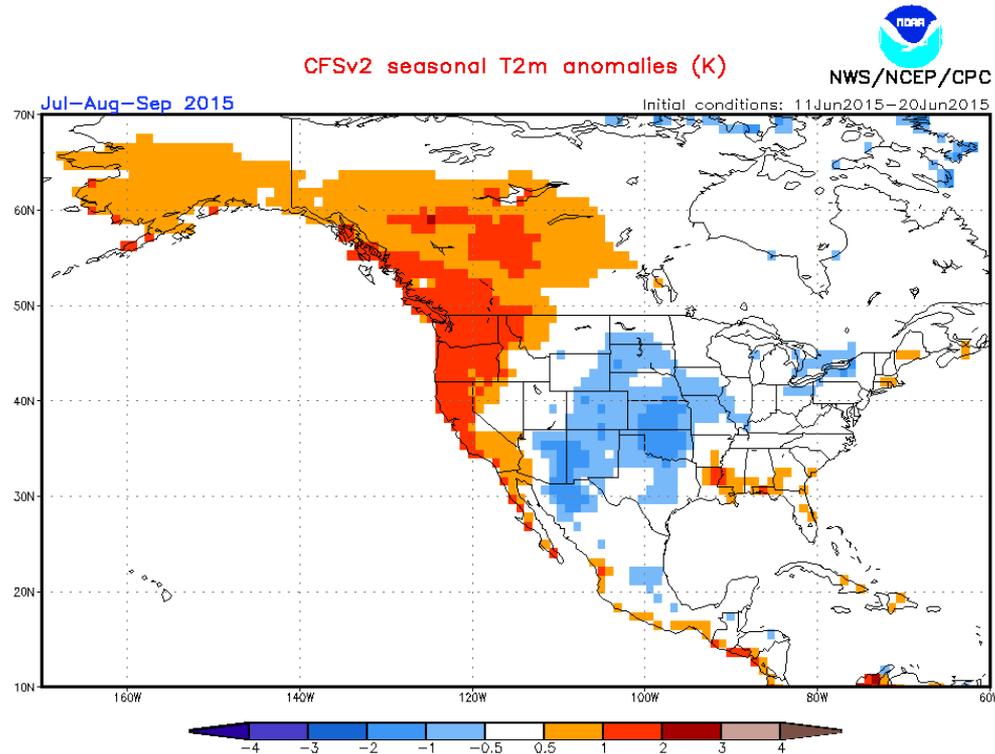
Midwestern Regional Climate Center

cli-MATE: MRCC Application Tools Environment

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As far as the regional coverage of the cool temperatures, note most of the northeastern CONUS has been cooler than normal.

The Climate Prediction Center Climate Model Forecast (CFSv2) for July through September



The cool weather is expected to expand to our southwest over the next few months. Southwest Lower Michigan is expected to be near normal.