National Weather Service Twin Cities

Overnight Flooding of July 6, 2015

Note: This data is considered preliminary and subject to change

Selected Accumulation Totals (as of 11am on July 6):

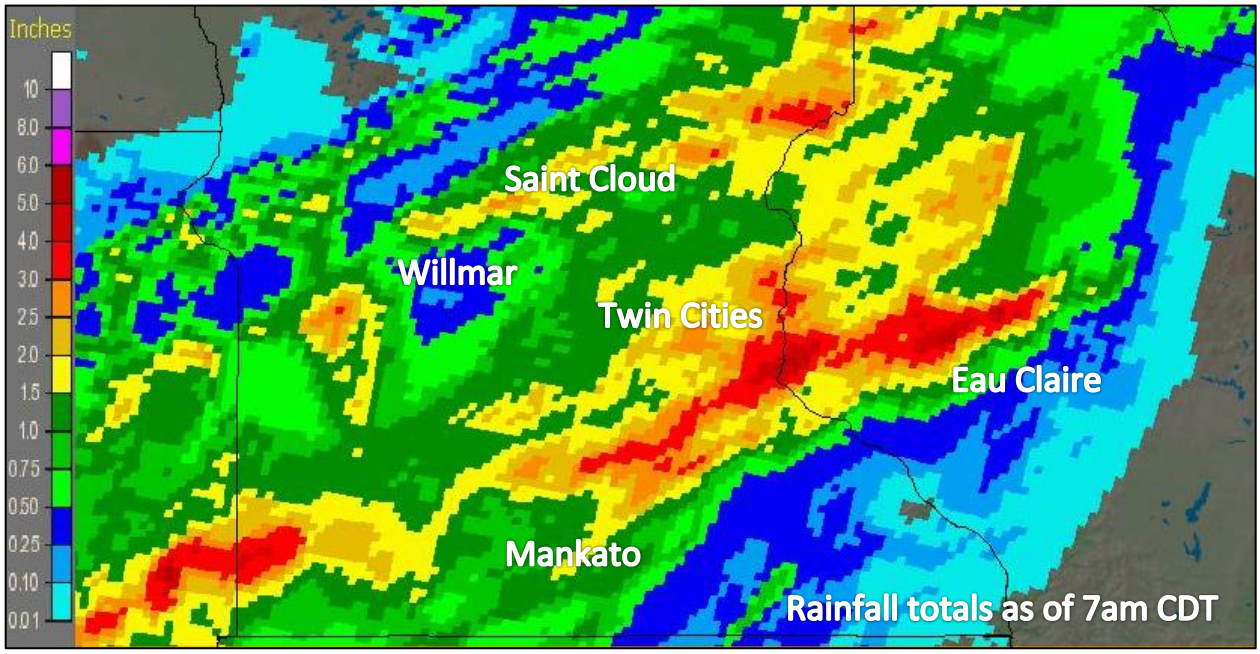
Minnesota

Burnsville- 4.73 in
Farmington- 4.60 in
Cottage Grove- 4.40 in
West St. Paul- 4.25 in
Centerville-3.20 in
Minnetonka- 2.84 in
Minneapolis-Target Field: 2.47 in
Mankato- 2.30 in

Wisconsin

River Falls- 7.31 in
St. Croix- 7.10 in
Wheeler- 4.90 in
Nye- 4.12 in
Osceola- 3.65 in

Below is a map of precipitation totals across southern Minnesota and western Wisconsin. Please note these are radar estimated rainfall amounts and some locally higher values may exist.



Overview:

Thunderstorms associated with a cold front crossing the Upper Midwest dropped fairly significant rainfall across central Minnesota and western Wisconsin, with the most significant totals found in the south metro region through west of the Eau Claire area. As the front entered central Minnesota, the front slowed down and remained nearly stationary over central Minnesota, with most of the significant rainfall ahead of the front.

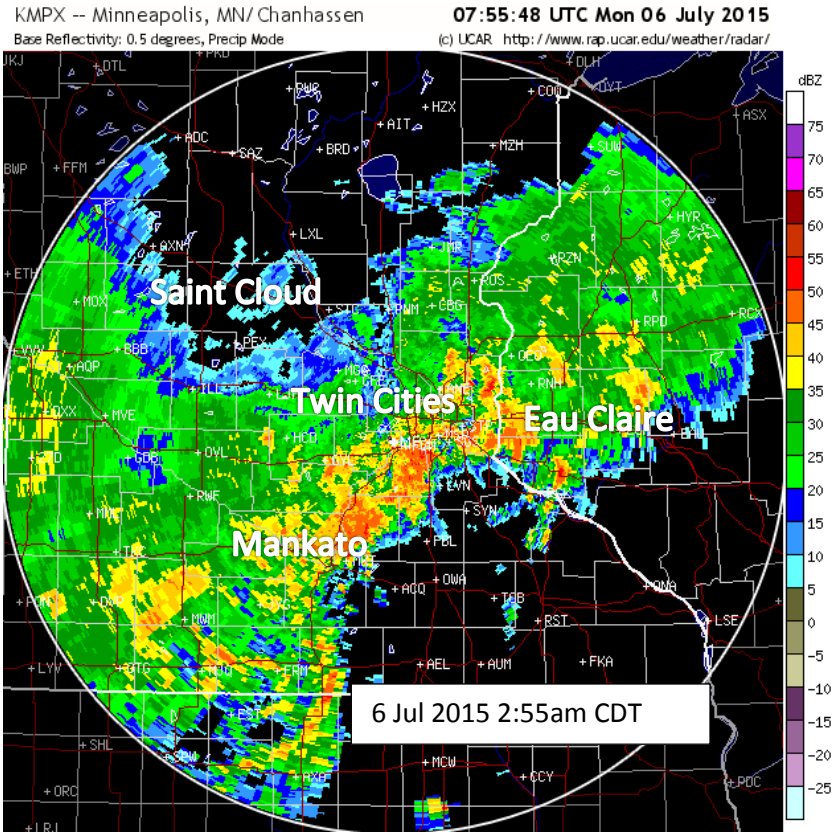
According to METAR data, rainfall began at Minneapolis-St. Paul International Airport around 12:40am. Throughout the nighttime hours, the heavy rain reduced visibility to less than two miles overnight. The system caused frequent lightning strikes and heavy rainfall through the Monday morning commute. Most of the significant rainfall was out of the metro region between 8:30 and 9:00am, with additional showers throughout the late morning hours through midday.

According to METAR data, rainfall began in the Eau Claire region around 3:30am. Rainfall was significant, particularly to the west of Eau Claire. Visibility was less than a mile at the Eau Claire airport at 6:00am. Frequent lightning was also reporting throughout the night in the Eau Claire region. The rainfall continued in the Eau Claire and western Wisconsin region continued through the late morning hours.

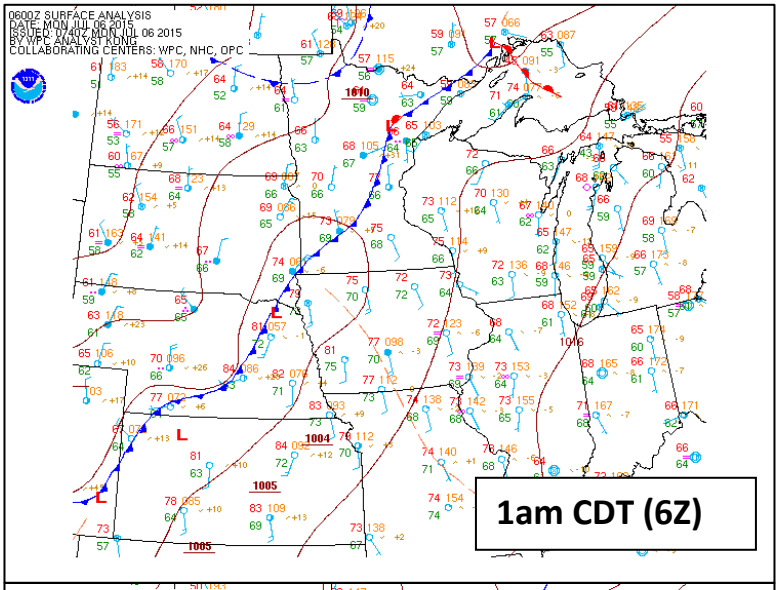
In addition to the rainfall, the cold front brought cooler temperatures as the morning progresses. A temperature of 80 degrees was recorded as Minneapolis-St. Paul International Airport just before midnight. While by 1pm, temperatures were only in the mid-60s.

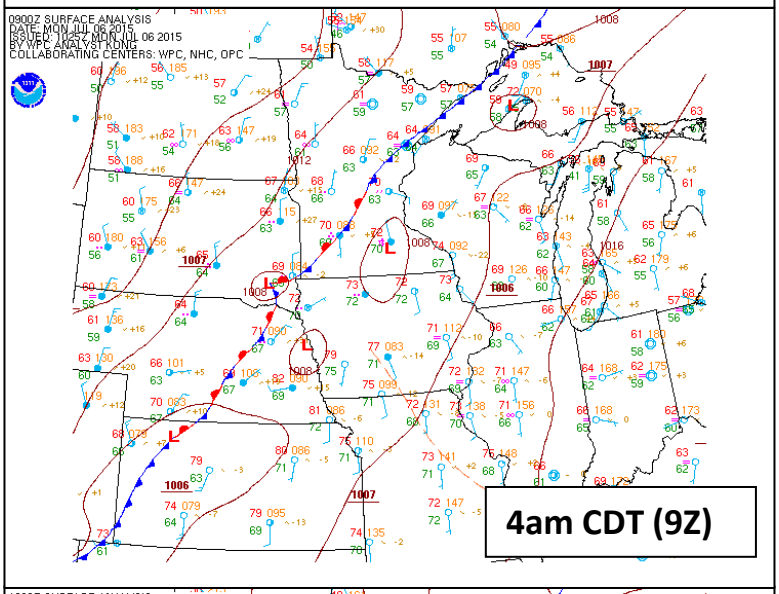
Radar:

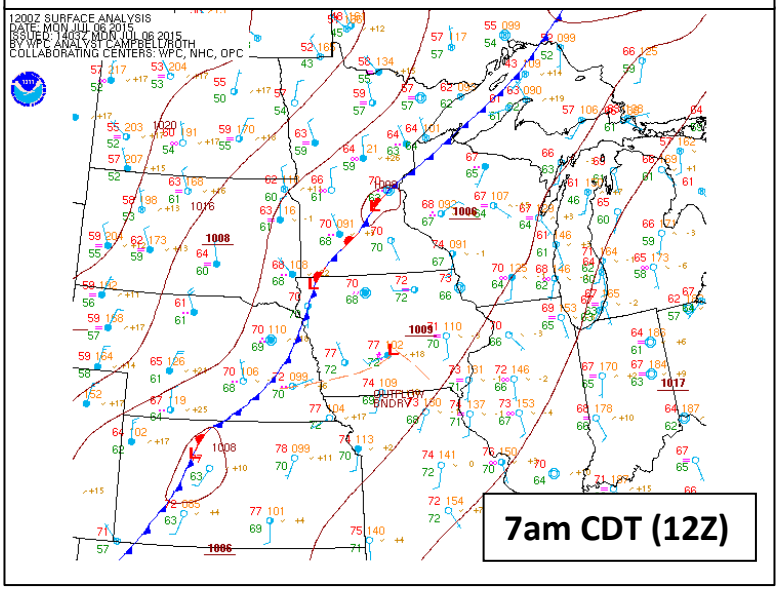
This radar image from 2:55am CDT shows a concentration of heavy rain from Mankato through the south Metro through the Wisconsin-Minnesota line.

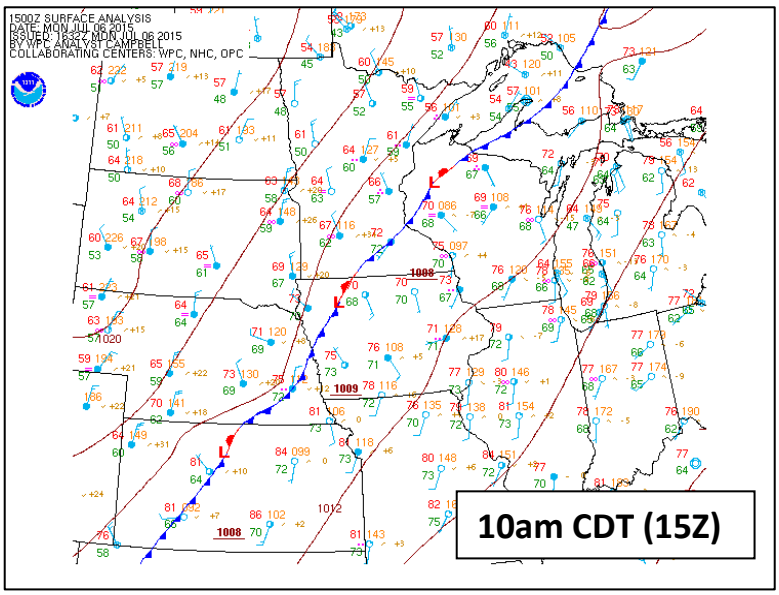


Surface Analyses (courtesy of the Weather Prediction Center):









Surface analyses throughout the overnight hours into this morning show the nearly stationary cold front across central Minnesota. Behind the cold front in North Dakota and western South Dakota, temperatures were 10-15 degrees cooler than in the Twin Cites! The heavy rainfall was associated with this cold front, and the lingering rainfall was due to the front's limited movement. By midday, most of the heavy rainfall was concentrated to the south and southwest, largely across eastern Iowa.

Impact:

Most of the impact from this system came for localized flooding. A Flash Flood Watch was in effect across central Minnesota and western Wisconsin for throughout the evening. A Flash Flood Warning was issued for parts of western Wisconsin around 3am, until expiring in the late morning hours. There were numerous road closures, particularly across western Wisconsin and the southeast Metro region. In addition, the Kinnickinnic River, near River Falls, WI, rose nearly seven feet over the course, cresting at just less than eighteen feet! There was no severe weather reported with this system.