

## Multi-scale Analysis of August 11<sup>th</sup> 2014 Metro Detroit Flash Flooding

On August 11, 2014 the Metro Detroit area experienced a historic rainfall that brought 4 to 6.5 inches of rain to parts of Wayne, Oakland, and Macomb Counties with most of it occurring during a four hour period in the evening. Total damage estimated to be around \$1.8 billion with a Presidential Disaster Declaration being issued for the three counties mentioned above. Because of the huge impact and historical implications, it is typical to do further analysis on events like this. RUC- reanalysis data along with radar data was used to further analyze the event to help understand how and why the moisture, lift, and instability evolved as it did to lead to flash flooding. The primary focus of this research is the interaction between the synoptic and mesoscale features that led to the event.