

## Midwestern Regional Climate Center

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***Beth Hall, Director***

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### **Administration**

Rami Dass and Kevin Pointer joined the MRCC staff part-time as UNIX/LINUX system administrators. They work with the University of Illinois' campus IT program.

During summer 2013, the MRCC hosted 3 summer interns; 2 from the University of Illinois, 1 from San Jose State University. The intern from San Jose State (Kayla Novak) worked in the MRCC Service Office and worked with MRCC staff to build atmospheric moisture climatologies at varying time steps using historical observational data. She will be presenting her work at the 2014 AMS Applied Climatology conference. The interns from the University of Illinois (Jason Su and Anthony Castellini) worked with the North American Regional Reanalysis dataset, build and Android native application that would access historical climate information, and examined changing climate trends for a year-round buoy site near the Apostle Islands in Lake Superior.

### **Climate Services and Products**

Over the past year, representatives from several sectors (i.e. legal, consultants, and engineers) contacted the MRCC service office regularly for climate data and special products, with over 950 offline contacts since July 2013. Including access to the MRCC online data system, MACS (now called "cli-MATE"), there have been over 66,000 page views since July 2013.

In October 2013, the online climate data access tool hosted by the MRCC – "MACS" – was made entirely free and renamed "cli-MATE (MRCC Applications Tools Environment)". In addition to all the original tools that were available with "MACS", cli-MATE was regularly getting new charting tools added along with more sector-driven degree-day tools. Since 1 October 2013, almost 2200 registered users have signed up for access to cli-MATE.

Several new resources were added to the MRCC website. Both the "Living With Weather" and "Climatology References" pages are regularly expanding with new sections and layouts. The West Nile Virus page has been updated, along with the Accumulated Winter Season Severity Index (AWSSI) page. The soil temperature monitoring page has been expanding with the addition of several new mesonets (IN-PAWS and OH-OARDC).

The MRCC's Vegetation Impact Program (VIP) has also been expanding to include additional tools such as stress degree-days and chilling hours. There have been new training videos created and posted, and the Frost/Freeze Guidance Project within VIP is now running all-year with the products being consolidated for easier navigation.

Future plans for the MRCC over the next year include:

- Continue to expand and improve the operational Frost / Freeze project to possibly provide hourly data products such as period length with below-freezing temperatures.
- Develop additional climatological tools for agriculture and other vegetation foci including products related to disease and pest impacts driven by climatology
- Human interest climatology resources such as heat index and wind chill index
- Expand value-added climate monitoring products from operational mesonet data around the region to provide online tools and resources based upon that data. Currently, soil temperature is being provided, but there has been discussion to add soil moisture, PET, and hourly data over the past 24 hours.

### **Collaboration Efforts and Outreach**

In March 2014, the MRCC hosted a region-wide workshop with climate partners. The objective was to elevate awareness of climate activities, projects, services and learn how best to coordinate these activities. Specific goals were to (1) discuss emerging climate issues within the region, (2) identify gaps and assess climate data needs, and (3) organize our interests to be positioned for funding and research opportunities. Forty participants came representing climate partnerships from federal, state, local, and tribal communities.

The MRCC continues to work closely with Illinois-Indiana Sea Grant to foster the relationship between climate and Great Lakes issues. A new project was funded Summer 2013 that will work with partners in Cook County and Chicago to help reduce the risk of flood vulnerability to critical infrastructure.

The MRCC has been actively involved in the Useful To Usable (U2U) project, which is led by Purdue University, with nine other universities and the HPRCC also collaborating. *Useful to Usable (U2U): Transforming Climate Variability and Change Information for Cereal Crop Producers*, is an integrated research and extension project that seeks to improve the resilience and profitability of farms in the North Central Region.

The MRCC engaged in 2 regional road trips in 2012 and early 2013 that brought the opportunity for MRCC personnel to go to many NWS offices, state climatologist universities and state offices, NOAA labs, private companies, state forests, and individual farmers and vineyard operators. This helped spread the word about who the MRCC is and what our mission includes.