

Midwest Climate Hub 5-Year Review

In June 2013, the USDA announced the launch of the “Regional Hubs for Risk Adaptation and Mitigation to Climate Change” (Climate Hubs). The Climate Hubs Charter mandates a performance review of the program every five years. The purposes of this review are to: (1) evaluate and assess the efforts of the Climate Hubs from January 2014 to December 2018, as they relate to the Hubs’ mission, vision, approach, and functions as stated in the Charter, and (2) evaluate the Hubs’ ability to adapt to the changing needs of their internal and external stakeholders over the past five years.

Hub's Mission and Vision

- **Vision:** Robust and healthy agricultural production and natural resources under increasing climate variability and climate change
- **Mission:** Develop and deliver science-based, region-specific information and technologies to agricultural and natural resource managers, and communities, that enable climate-smart decision-making, and to provide assistance to implement those decisions

The Midwest Climate Hub

The Midwest Climate Hub (MCH) serves an eight-state region in the heart of the corn and soybean area. In addition to these row crops, MCH continues to serve a wider variety of specialty cropping systems in the region. The MCH has established itself as a regional leader in collaboration and information hub. Some of **our notable accomplishments** are below.

MCH became fully staffed (at 3) in the fall of 2016. Some **challenges of note** in fulfilling our mission are lack of operational funding and a small # of staff to both meet the multiple climate needs of the region and address misconceptions surrounding climate change.

Assessments & Synthesis

- *Provide periodic regional assessments of risk and vulnerability.*
- *Support applied research and development and innovation partnerships for risk management and climate change response.*
- *Be a source of user-friendly information developed from a wide variety of sources.*



Research and Publications

- Wrote **7 peer review journal articles and 1 book chapter** (Modeling weed and pest risks under current and future climate change, Specialty Crop Climate/Weather Vulnerability Assessment).
- Authored **2 trade magazine articles** (American Vegetable Grower and American Fruit Grower)
- Co-authored the **3rd and 4th National Climate Assessment**
- **10 oral presentations** at Scientific Conferences
- Awarded **\$100K matched by more than \$50K by 9 states** to increase coordination/monitoring of temperature inversions impacting herbicide drift

Outreach & Education

- Provide outreach and education to farmers and ranchers on science-based risk management.
- Educate natural and agriculture resource managers on the latest understanding of climate science and the effects of climate change on working lands.
- Engage with stakeholders and partners in innovative and interactive ways to help lower the barriers to adaptation, manage risk, and enhance rural productivity.

"This is excellent...The way the information is packaged enables him to easily re-purpose it."
-Ag & Hort Educator
University of Wyoming

"Presence of the USDA Climate Hub presents an entry point for NWS to support those who support agriculture."
-NOAA NWS Employee

Technical Support

- Deliver science-based agriculture tools and strategies for responding to impacts of a changing climate.
- Improve access to usable regional data and climate change projections and forecasts in support of risk management and climate adaptation planning.
- Provide coordinated technical support to supplement USDA agriculture and land management program delivery, especially to under-served and vulnerable communities.

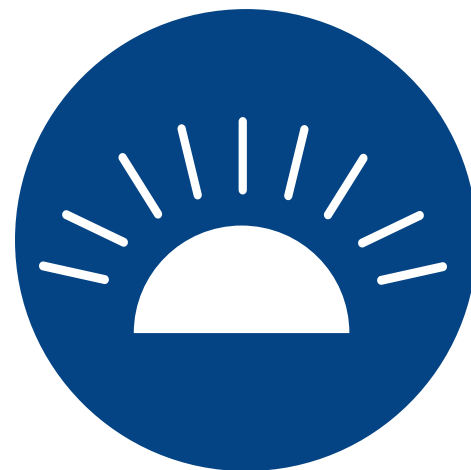
Website, Social Media & Outreach Materials



Ensured stakeholders maintain easy access to usable information via many types of outlets and formats:

- Up-to-date **website**
- Twitter - Over **3K Followers**
- **Over a dozen outreach materials** have been produced, including project/tool web-pages and 2-pagers
- **Outreach email list of ~1K** persons in the region
- **100+ media inquiries** serving as regional climate ag specialist

Outlooks, Webinars & Education



Regional climate summaries, webinars and outreach materials put local conditions and outlooks into perspective for producers. These are conducted regularly and when needed/requested by stakeholders.

- **40+** North Central U.S. Climate and Drought Update Webinars
- **32+** Midwest Ag-Focus Outlooks
- **4** Midwest Drought Updates
- **5+** Special Weather Event Webinars/Resources
- Over **5K people** reached in targeted and general climate talks in all **8 states** of the MCH region

Regional Engagement



- MAC-T (Midwest Agriculture Climate Team): Extension and climate specialists that share issues/resources to inform producers of conditions. MCH has facilitated: **30+ parleys, 4 state climate services meetings, several updates to regional tools, and requests for special weather event resource guides.**
- Built and maintained **dozens of USDA, other federal, land grant university, and ag- industry partnerships** crucial to establishing communication/coordination among land managers and the research community.

Adaptation Workbook



The **Adaptation Resources for Agriculture Workbook was developed** by the Hubs and NRCS to support stakeholders. Producers utilize the workbook to document management choices to ameliorate climate change impacts to their operations. Recent efforts have led to the production of **2 Midwest Case Studies.**

Tribal Resources Table



Accumulated with partners over **145 USDA programs and resources** to assist Tribes with Adaptation to Climate Change into a **searchable table** that has been reviewed and approved by the USDA Office of Tribal Relations.

Re-Carbonizing Row Crop Farms



Have engaged over **300 people, including farmers, CCAs, and 5+ other agencies/orgs** with the Integrated Erosion Tool to better understand and model the impacts of climate on cropping systems.