MRCC Product Inventory

Updated: 6/3/2025

- **AgClimate View – https://mygeohub.org/groups/u2u/purdue_acv**
  - AgClimate View provides historical climate and crop yield data for the U.S. Corn Belt. You can plot local monthly temperature and precipitation since 1980, track county crop yields, and analyze yields alongside monthly temperature, precipitation, and growing degree day (GDD50) data.
- **AWSSI Winter Index – https://mrcc.purdue.edu/research/awssi**
  - The Accumulated Winter Season Severity Index (AWSSI) lets you compare winter severity across seasons and locations in the US. View data through a regional map or single station time series, objectively quantifying the current winter's severity compared to past winters.
- **Bi-National Precipitation Tool – https://mrcc.purdue.edu/gismaps/naprecip**
  - The Bi-National Precipitation tool provides US and Canada precipitation data and maps, aiding cross-border climate analysis. It combines datasets from both countries for consistent, updated precipitation estimates and climatological departures.
- **CDMP FORTS – https://mrcc.purdue.edu/FORTS**
  - CDMP FORTS offers access to digitized historical weather data from 19th-century US military forts and voluntary observer networks. The platform provides comprehensive station metadata and various additional resources.
- **Chilling Hours (Custom) – https://mrcc.purdue.edu/ChillingHours**
  - Track winter chilling hour accumulations, essential for the development of fruit and nut crops. Users can set custom thresholds and time periods to compare chilling accumulations across different locations.
- **cli-MATE – https://mrcc.purdue.edu/CLIMATE/**
  - Cli-MATE enables users to access, analyze, and visualize historical climate data for the United States. It offers customizable data retrieval, including rankings, thresholds, growing season statistics, maps, graphs, and much more.
- **Climate Calendars – https://mrcc.purdue.edu/mw_climate/calendars/calwelcome**
  - This product shows daily climate data in a calendar format, including: normal maximum and minimum temperatures, daily heating and cooling degree days, daily precipitation, record maximum and minimum temperatures, and record daily precipitation.
- **Climate Summary Reports: Annual – https://mrcc.purdue.edu/climatesummaries/annual-summary**
  - Provides annual overviews of climate conditions, including temperature, precipitation, droughts, floods, storms, and other Midwestern-related impacts. It also offers access to the MRCC's summary of Top Annual Events.
- **Climate Summary Reports: ENSO – https://mrcc.purdue.edu/climatesummaries/enso-summary**
  - Non-regular reports summarizing how the climate in the Midwestern and Great Lakes regions is influenced by the El Niño Southern Oscillation (ENSO), along with climate outlooks for the upcoming season.
- **Climate Summary Reports: Monthly – https://mrcc.purdue.edu/climatesummaries/monthly-summary**
  - Provides monthly summaries of climate conditions, including temperature, precipitation, droughts, floods, storms, and other impacts.
- **Climate Summary Reports: Quarterly – https://mrcc.purdue.edu/climatesummaries/quarterly-summary**
  - Provides quarterly (seasonal) Midwestern and Great Lakes summaries of climate conditions, including temperature, precipitation, droughts, floods, storms, and other impacts.
- **Climate Summary Reports: Weekly – https://mrcc.purdue.edu/climatesummaries/weekly-summary**
  - Provides weekly summaries of climate conditions, including temperature, precipitation, droughts, floods, storms, and other impacts.

- **Climate Summary Tables – https://mrcc.purdue.edu/mw_climate/climatesummaries/climsumm**
  - Obtain tabular data from the U.S. Cooperative Observer Network consisting of the National Centers for Environmental Information climate normals, temperature and precipitation extremes and threshold climatologies.
- **Cooling Degree Days – https://mrcc.purdue.edu/cooling-degree-days**
  - Presents maps illustrating cooling degree day (base 65°F) totals across the Midwest from the beginning of each year, along with departures from the current normal period.
- **Corn Growing Degree Day – https://mrcc.purdue.edu/tools/corngdd**
  - The Corn Growing Degree Day (GDD) tool tracks and projects corn growth milestones based on location-specific GDD data and user-customized crop information.
- **Daily Climate Extremes – https://mrcc.purdue.edu/gismaps/extremes**
  - This map-based product provides daily climatological extremes for U.S. locations, including for maximum and minimum temperature, precipitation, and snowfall.
- **Days without Precip Maps – https://mrcc.purdue.edu/climate_watch/special_topics/drought/dwop-maps**
  - Access maps that track the number of days without precipitation across the Midwest, based on five daily precipitation thresholds: 0.01 inches, 0.10 inches, 0.25 inches, 0.50 inches, and 1.00 inches.
- **Days without Precip Maps: Archive – https://mrcc.purdue.edu/climate_watch/special_topics/dwoparchive**
  - Access an archive of maps that track the number of days without precipitation across the Midwest, based on five daily precipitation thresholds: 0.01 inches, 0.10 inches, 0.25 inches, 0.50 inches, and 1.00 inches.
- **ET & Water Balance Maps – https://mrcc.purdue.edu/et-and-water-balance**
  - Access evapotranspiration and water balance maps using data from the Community Collaborative Rain, Hail, and Snow Network (CoCoRaHS), which can aid in managing water resources and crop water requirements.
- **Freeze Date Tool – https://mrcc.purdue.edu/freeze/freezedatetool**
  - This tool lets you explore climatologies and trends in first/last seasonal freeze dates and growing season length across the north-central and northeastern United States.
- **Freeze Probabilities: 1981-2010 – https://mrcc.purdue.edu/gismaps/freeze_probabilities**
  - This product allows users to assess the likelihood of a freeze (32°F or 28°F) occurring on, before, or after a specified date at stations across the U.S. using the climatological normals from 1981 to 2010.
- **Freeze Probabilities: 1991-2020 – https://mrcc.purdue.edu/gismaps/freeze_probabilities_2020**
  - This product allows users to assess the likelihood of a freeze (32°F or 28°F) occurring on, before, or after a specified date at stations across the U.S. using the climatological normals from 1991 to 2020.
- **Glossary – https://mrcc.purdue.edu/resources/glossary**
  - A glossary that includes key meteorological and climatological terms.
- **Heat Index: Maps – https://mrcc.purdue.edu/clim/heatindex**
  - These climatology maps show the annual count of days, hours, and days with a minimum of three hours at a specified heat index threshold for states east of the Rocky Mountains.
- **Heat Index: Probability Curves – https://mrcc.purdue.edu/clim/heatIndex/probCurves1**
  - These probability curves are graphs that show the likelihood of a specific heat index occurring on, before, or after a certain day of the year for a specific location.
- **Heating Degree Days – https://mrcc.purdue.edu/heating-degree-days**
  - Presents maps showing heating degree day (base 65°F) totals across the Midwest starting on July 1, along with deviations from the current normal period.
- **Hours Below Freezing – https://mrcc.purdue.edu/gismaps/freeze_hourly**
  - Explore an interactive map showcasing the longest continuous freezing temperature periods for the past 24 hours, 7 days, and 30 days at various stations throughout the US.

- **Keetch-Byram Drought Index –** https://mrcc.purdue.edu/VIP/indexKBDI
  - View maps showing current KBDI values and deviations from normal, which are utilized for assessing the risk of wildfire ignition and drought.
- **Literary Resources –** https://mrcc.purdue.edu/resources/education/literary-resources
  - A historical non-fiction book listing of notable weather events, people, and science topics, including climate change, drought and heat, floods, Great Lakes weather, hurricanes and tropical storms, among others.
- **Living with Weather –** https://mrcc.purdue.edu/living_wx
  - Living with Weather is an educational explainer on 13 meteorological topics, including drought, floods, fog, hail, heatwaves, ice storms, lightning, tornadoes, winds, and more.
- **Map Run Times –** https://mrcc.purdue.edu/climate_watch/clidap_maps/info_runtimes
  - An informational page highlighting the run and lag times of various MRCC products and tools.
- **Midwest Climate Watch –** https://mrcc.purdue.edu/climate_watch
  - Access a portal that provides Midwestern climate maps for different time spans, featuring temperature, precipitation, snowfall, degree days, and other variables.
- **Midwest Climate Watch: Agriculture –** https://mrcc.purdue.edu/climate_watch/special_topics/agriculture
  - Access a portal that offers Midwestern climate maps for various time periods, essential for weather observation and agricultural monitoring.
- **Midwest Climate Watch: Drought –** https://mrcc.purdue.edu/climate_watch/special_topics/drought
  - Access a portal that offers Midwestern climate maps for various time periods, essential for weather observation and drought monitoring.
- **Midwest Climate Watch: ENSO –** https://mrcc.purdue.edu/climate_watch/special_topics/el-nino-southern-oscillation
  - Examine past ENSO data and its effects on Midwestern weather, and access ENSO monitoring resources.
- **Midwest Climate Watch: Great Lakes –** https://mrcc.purdue.edu/climate_watch/special_topics/greatlakes
  - Access a list of weather and climate monitoring resources for the Great Lakes, as well as temperature and precipitation maps covering the Midwest region.
- **Midwest Climate Watch: Temperature Inversions –** https://mrcc.purdue.edu/climate_watch/special_topics/tempinversion
  - Access a compilation of resources on temperature inversions, along with links to state-level monitoring networks.
- **Midwest Climate Watch: Urban Climate –** https://mrcc.purdue.edu/climate_watch/special_topics/urban-climate
  - Explore climate tracking tools relevant to urban environments, including Cooling Degree Days, Heating Degree Days, Air Quality, extreme heat, precipitation, and more.
- **Midwest Climate Watch: Winter –** https://mrcc.purdue.edu/climate_watch/special_topics/winter
  - View winter-related climate resources for monitoring and climatologies, including snowfall and snow depth maps, the accumulated winter season severity index (AWSSI), first and last snow maps, spring and fall freeze maps, heating degree days, and Great Lakes ice cover maps.
- **Modified Growing Degree Days –** https://mrcc.purdue.edu/modified-growing-degree-days
  - Provides maps of modified growing degree day (50°F/86°F) accumulations across the Midwest beginning on both April 1 and May 1, also showing departures from the current normal period.
- **MRCC Newsletter –** https://mrcc.purdue.edu/resources/newsletter
  - A landing page for the MRCC's quarterly newsletter, "The Climate Observer."
- **Regional Mesonet Program: Soil Temp and PET –** https://mrcc.purdue.edu/RMP
  - The Regional Mesonet Program is a multi-state initiative that creates maps using merged mesonet data for soil temperature and evapotranspiration. Available maps include 2-inch and 4-inch soil temperature, and PET data for 24-hour and 7-day accumulations.

- **Regional Mesonet Program: Soil Temp and PET Archive – https://mrcc.purdue.edu/RMP/historical**
    - This is an archive of maps using merged mesonet data for soil temperature and evapotranspiration. Available maps include 2-inch and 4-inch soil temperature, and PET data for 24-hour and 7-day accumulations.
- **Seasonal Freeze Maps: Current Season – https://mrcc.purdue.edu/VIP/frz_maps/freeze_maps**
    - View maps of current season freeze events (28°F and 32°F), including the date of the first freeze, days since the most recent freeze, GDDs from the most recent freeze, freeze climatologies, and various others.
- **Seasonal Freeze Maps: End of Season Summaries Archive – https://mrcc.purdue.edu/VIP/archive_maps/archive**
    - View an archive of end-of-season freeze maps: date of the first and last 28°F freeze, date of the first and last 32°F freeze, lowest minimum temperature (10°F to 50°F), and lowest minimum temperature (-38°F to 10°F).
- **Snowfall Climatology Toolbox – https://mrcc.purdue.edu/resources/climateTools/snowfallclimatology**
    - This tool offers access to high-quality historical snowfall data across the US, including typical totals, annual days with at least 1 inch of snowfall, average first or last snowfall dates, the greatest single-day snowfall, and other snow stats.
- **Soil Temperature Climatology – https://mrcc.purdue.edu/clim/Soil-T**
    - This climatology assists users in identifying the typical dates when the 7-day average soil temperatures reach various temperature thresholds. It also provides information on the earliest and latest recorded dates for soil temperatures crossing these thresholds, as well as the distribution of dates for this occurrence.
- **Sorghum Growing Degree Days – https://mygeohub.org/groups/u2u/sorghum_gdd**
    - The Sorghum Growing Degree Day (GDD) tool computes and illustrates growing degree days (50°F/100°F) by using user-provided planting dates, projecting GDD accumulations for the year, and identifying date ranges for key crop development stages.
- **Spanish Resources: Glosario – https://mrcc.purdue.edu/resources/glosario**
    - Un glosario que incluye términos clave de meteorología y climatología.
- **Spanish Resources: Preguntas Frecuentes – https://mrcc.purdue.edu/resources/preguntas-frecuentes-sobre-el-clima**
    - Una lista de preguntas frecuentes sobre el clima y el tiempo.
- **Spanish Resources: Viviendo con el Clima – https://mrcc.purdue.edu/viviendo-con-el-clima**
    - Vivir con el tiempo es un explicador educativo sobre 13 temas meteorológicos, como sequías, inundaciones, niebla, granizo, olas de calor, tormentas de hielo, rayos, tornados, vientos y mucho más.
- **Stress Degree Days – https://mrcc.purdue.edu/VIP/indexSDD**
    - Displays maps of accumulated stress degree days (86°F) across the Midwest, helping producers assess crop heat stress during periods when temperatures surpass 86°F. Departure from normal maps are also provided.
- **Tornado Tracks Tool – https://mrcc.purdue.edu/gismaps/cntytorn**
    - This mapping tool provides users with access to tornado data dating back to 1950 from the National Weather Service Storm Prediction Center. It includes details about the start and end points of tornado touchdowns, along with their intensity. Additionally, users can filter this data based on injuries and fatalities.
- **Vegetation Freeze Susceptibility Guidance – https://mrcc.purdue.edu/files/VIP/frz_maps/images/US_freeze_cnty.png**
    - A map that shows vegetation susceptibility to freeze damage, integrating input from weather forecasters, university extension, state climatologists, and other vegetation experts via Vegetation Freeze Guidance Reports.

- **Vegetation Impact Program – https://mrcc.purdue.edu/VIP**
    - The Vegetation Impact Program (VIP) is a monitoring and networking initiative by the Midwestern Regional Climate Center. It combines online climate data and stakeholder feedback to offer resources that minimize negative vegetation impacts, mitigate climate variability, and develop adaptation plans for extreme environmental conditions.
- **Weather Calculators – https://mrcc.purdue.edu/resources/weathercalcs**
    - A calculator for converting temperature and wind speed units, calculating wind chill, heat index, relative humidity, wet bulb temperature, and station pressure.
- **Weather FAQ – https://mrcc.purdue.edu/resources/weatherfaq**
    - A list of frequently asked weather and climate questions.
- **Weather on Your Event – https://mrcc.purdue.edu/weather-on-your-event**
    - This fun product enables users to generate a certificate displaying the weather on a user-selected day. Certificates can be customized for your significant life event, including adoption day, anniversary, birthday, and high school graduation, to name just a few.
- **Webinars – https://mrcc.purdue.edu/webinars**
    - A landing page for the North Central US Climate and Drought Update and Outlook webinars.
- **Weed Emergence Scouting Tool – https://mrcc.purdue.edu/WEST-Desktop**
    - This tool offers county-level estimates of first and peak emergence dates for Giant ragweed and Waterhemp in the Midwest, based on the relationship between weed phenology and growing degree day accumulations.
- **Wind Chill – https://mrcc.purdue.edu/clim/windchill**
    - These climatology maps show the annual count of days, hours, and days with a minimum of three hours at a specified wind chill threshold for states east of the Rocky Mountains.