

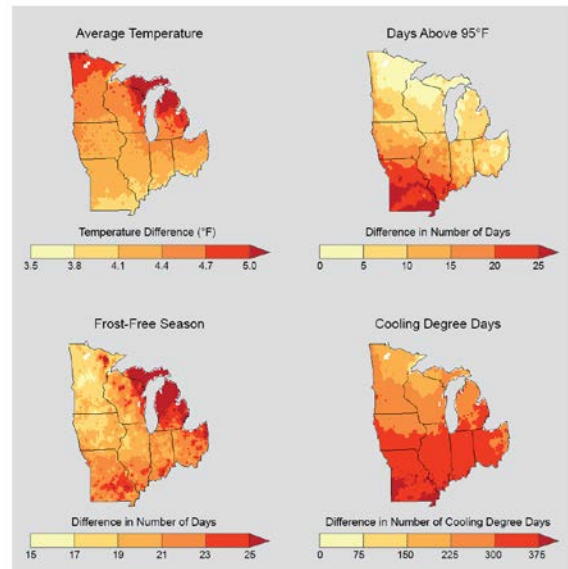
NOAA Product Highlight: Midwest and Great Plains Regional Resources

According to the [third National Climate Assessment](#), the Midwest region is particularly susceptible to extreme heat, heavy downpours, and flooding that will be exacerbated by climate change and increase stress on plants, crops, and ecosystems. Additionally, the Great Plains region is likely to see more frequent and more intense heat waves, droughts, and severe rainfall events that will also be exacerbated by climate change and increase competition for natural resources and water.

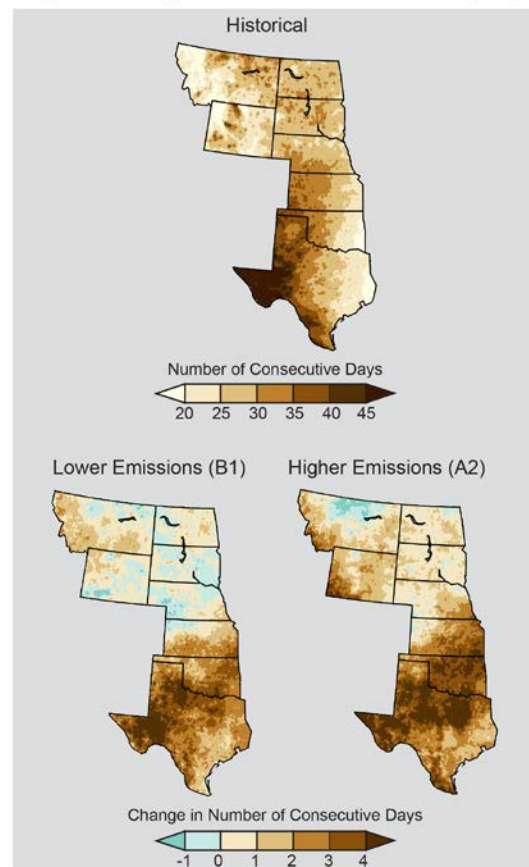
In the Midwest, the negative effects of climate change on many plants will likely be intensified by changes in pests and disease prevalence, competition from non-native species, atmospheric pollutants, and ecosystem disturbances. Additionally, earlier occurrence of the last spring freeze has lengthened the Midwest's growing season by almost two weeks since 1950, increasing the yields of some crops. However, springtime cold air outbreaks are projected to continue to occur throughout this century, posing a potentially devastating threat to plants that have already budded. Some of the plants that are most vulnerable to climate change in the Midwest include those existing in isolated habitats, living near their physiological tolerance limits, having specific habitat requirements, and depending on interactions with specific other species for survival.

In the Great Plains, large regional diversity will cause climate change impacts to vary from extreme heat to extreme cold and from drought to flood-producing rainfall. Much of the region is particularly susceptible to drought as annual precipitation is often lower than annual water loss due to evaporation and transpiration by plants. As in the Midwest, the Great Plains is also projected to see a longer growing season as well as warmer winters that will allow for increases in pests and invasive weeds.

Projected Mid-Century Temperature Changes in the Midwest



Projected Change in Number of Consecutive Dry Days



More information on climate change impacts in the region is available in the National Climate Assessment's [Midwest](#) and [Great Plains](#) chapters.

NOAA's Regional Resources

NOAA has a wide range of resources that can help public gardens in the Midwest and Great Plains respond to and mitigate the effects of climate change in the regions.

- [U.S. Climate Resiliency Toolkit](#)
The U.S. Climate Resilience Toolkit provides scientific tools, information, and expertise to help people manage their climate-related risks and opportunities, and improve their resilience to extreme events. The site offers a variety of information including a five-step process for becoming more resilient to climate-related hazards, real-world case studies describing how communities and businesses are facing climate challenge, a catalog of freely available tools, federally developed training courses, and explanations on how climate variability and change can impact particular regions.
- [Central Regional Climate Services Director](#)
NOAA's Central Regional Climate Services Director provides the data, tools, and information that help private and public sector constituents in the central United States reduce their risk and improve their resiliency to the impacts of climate variability and change. Central region resources are available for Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin, and Wyoming.
- [Southern Regional Climate Services Director](#)
NOAA's Southern Regional Climate Services Director provides the data, tools, and information that help private and public sector constituents in the southern United States reduce their risk and improve their resiliency to the impacts of climate variability and change. Southern Region resources are available for Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, New Mexico, Oklahoma, Tennessee, and Texas.
- [High Plains Regional Climate Center](#)
The High Plains Regional Climate Center carries out applied climate studies, develops improved climate information products, and provides climate services in the High Plains Region, which is comprised of Colorado, Kansas, Nebraska, North Dakota, South Dakota, and Wyoming.
- [Midwestern Regional Climate Center](#)
The Midwestern Regional Climate Center provides practical solutions to specific climate problems, develops information for the region on climate-sensitive issues such as agriculture and risk management, and offers products and services to better explain climate and its impacts on the Midwest region, which is comprised of Illinois, Indiana, Iowa, Kentucky, Michigan,

Minnesota, Missouri, Ohio, and Wisconsin.

- [Southern Regional Climate Center](#)

The Southern Regional Climate Center provides personalized services and outreach, conducts research and development to promote a better understanding of the interaction between climate information and societal needs, and enhances and delivers climate data and products to the citizens and industries in the Southern Region, which is comprised of Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas.

- [Regional Integrated Sciences and Assessments Program](#)

NOAA's Regional Integrated Sciences and Assessments program supports research teams that conduct interdisciplinary and regionally relevant research to inform resource management, planning, and public policy in various regions across the United States.

- [American Association of State Climatologists](#)

The American Association of State Climatologists is a professional scientific organization that provides climate services for 47 states across the nation through integration of data quality control, communication among sectors, and coordinated referral of customer inquiries.

- [National Weather Service Central Region Headquarters](#)

The National Weather Service Central Region Headquarters oversees a multitude of technological developments, manages meteorological and climatological programs, and conducts outreach and educational programs throughout the Central Region, which is comprised of Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin, and Wyoming.

- [National Weather Service Southern Region Headquarters](#)

The National Weather Service Southern Region Headquarters oversees a multitude of technological developments, manages meteorological and climatological programs, and conducts outreach and educational programs throughout the Southern Region, which is comprised of New Mexico, Texas, Oklahoma, Arkansas, Louisiana, Mississippi, Tennessee, Alabama, Georgia, and Florida as well as Puerto Rico and the U.S. Virgin Islands.