

# CLIMATE DISASTERS IN WISCONSIN

With Trump gutting FEMA and fighting with state governments, what is in store for the rest of 2020 for Wisconsin?

## TL/DR:

Trump has [failed to prepare us](#) for disasters caused by climate change. What does this mean for Wisconsin?

- Climate change is making heavy downpour events [more frequent](#) and more severe, meaning more flooding events in Wisconsin:
  - Due to [rising](#) water levels and [heavier than average](#) precipitation, it is expected that water levels will continue to overwhelm Wisconsin infrastructure that was built for different conditions.
  - In 2019, FEMA obligated \$8,276,717 to Wisconsin following severe flooding.
- In addition to flooding, Wisconsinites also face severe storms due to climate change.
  - [Severe storms have been linked to climate change](#), as hotter air carries more moisture, leading to more frequent and more intense storms.
  - The National Weather Service predicts [higher than average](#) precipitation in Wisconsin this summer, and the National Climate Assessment [projects](#) that heavy precipitation events will continue to increase across the country.
  - Since 2009, Wisconsin has [experienced](#) 7 severe storm events, causing \$10.23 billion in damages and resulted in 13 deaths
- In Wisconsin, climate change is also [spurring an increase](#) in extreme heat and drought conditions:
  - Wisconsin is projected to [experience](#) higher than average temperatures through the end of 2020.
  - Since 2009, Wisconsin has [experienced](#) 2 periods of drought and extreme heat, totaling \$45.9 Billion in damages and 176 deaths.

## HERE'S WHAT'S HAPPENING:

With Trump gutting FEMA and fighting with state governments, Wisconsinites should be asking [how ready the federal government is](#) to provide aide in a disaster at a time when climate change is already fueling major disasters that impact Wisconsin.

Wisconsin was heavily affected by the flooding that caused [\\$10.8 billion in damages](#) across the Midwest in 2019. [Emergencies were declared](#) across a wide swath of Wisconsin in the spring as major rivers reached record high levels, including the Milwaukee River near Cedarburg, the Sheboygan River at Sheboygan, and Spring Creek at Lodi. Later in the fall, heavy rains caused flooding across Northeast Wisconsin and [forced evacuations in Green Bay](#).

Although flooding has been the most significant recent climate disaster to strike the Upper Midwest, Wisconsin is not immune to the kinds of impacts that one might normally expect to see in other parts of the country. In fact in 2012 and 2013, drought impacted much of the state, with an [emergency declared](#) in 2012 that affected all 72 counties with most of the state's land area rated in [moderate-to-extreme drought conditions](#). One farmer reported milk production [down 15-20](#) percent because the high temperatures stress the cows.

# RESEARCH

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## DAMAGES FROM CLIMATE-RELATED DISASTERS IMPACTING WISCONSIN

**In The Past Decade, Wisconsin Has Experienced 13 Climate-Related Disasters Responsible For Over A Billion Dollars' Worth Of Damages.** According to NOAA's National Centers for Environmental Information, Wisconsin experienced 13 climate-related disasters that were responsible for over a billion dollars' worth of damages. These 13 disasters that occurred between 2009 and 2019 include 10 severe storms, 2 droughts, and 1 flooding event. [[ndcd.noaa.gov](https://ndcd.noaa.gov), Accessed 4/30/2020]

**Since Trump Assumed The Office Of The Presidency, Wisconsin Has Experienced Five Climate-Related Disasters Responsible For Over A Billion Dollars' Worth Of Damages.** According to NOAA's National Centers for Environmental Information, since President Trump assumed office in 2017, Wisconsin has experienced five climate-related disasters responsible for over a billion dollars' worth of damages. [[ndcd.noaa.gov](https://ndcd.noaa.gov), Accessed 4/30/2020]

## RECENT FEMA SPENDING IN WISCONSIN

**2019: FEMA Obligated \$8,276,717 To Wisconsin Following Severe Flooding.** According to data from the Federal Emergency Management Agency, Wisconsin was obligated \$8,276,717 in 2019 following severe flooding. [[FEMA.Gov](https://www.fema.gov), Accessed 5/21/2020]

# FLOODING

## Link to Climate Change

**Scientists Have Linked Increases in Flooding to Climate Change.** According to the National Climate Assessment, “Floods are caused or amplified by both weather- and human-related factors. Major weather factors include heavy or prolonged precipitation, snowmelt, thunderstorms, storm surges from hurricanes, and ice or debris jams [...] Increasingly, humanity is also adding to weather-related factors, as human-induced warming increases heavy downpours, causes more extensive storm surges due to sea level rise, and leads to more rapid spring snowmelt [...] The risks from future floods are significant, given expanded development in coastal areas and floodplains, unabated urbanization, land-use changes, and human-induced climate change” [National Climate Assessment, Extreme Weather, [2014](#)]

**Scientists Say Climate Change Played A Hand In Deadly 2019 Midwest Floods.** In March of 2019, Reuters reported: “Climate change played a hand in the deadly floods in the U.S. upper Midwest that have damaged crops and drowned livestock, scientists said on Thursday, while a Trump administration official said more homework was needed before making that link. The “bomb cyclone” that dumped rain on Nebraska, Iowa and Missouri and killed at least four people now threatens a wider region downstream of swollen rivers and smashed levees. Manmade greenhouse gases trap heat in the atmosphere, warming the oceans and making the air above them more humid, scientists said. When a storm picks up and eventually spits out that moisture, it can be devastating for people caught below. ‘The atmosphere is pretty close to fully saturated, it’s got all the water it can take,’ said Michael Wehner, a senior scientist at the Lawrence Berkeley National Laboratory.” [[Reuters. 3/21/2019](#)]

**2019: “Climate Change Is Fueling Conditions That Have Turned The Great Lakes Into The Erratic High Seas Of The Midwest.”** In August of 2019, E&E News reported from Grand Haven, Michigan: “Streets are flooded in ‘Coast Guard City, USA,’ and the maritime rescue force is responding to dangerous events not seen for decades on Lake Michigan. Boats ramming breakwalls and other objects hidden below the lake surface. People and pets nearly swept off piers by crashing waves. Swimmers fighting riptides that have drowned 30 people so far this year. Beach walkers becoming trapped between pounding surf and cliff-like dunes. Welcome to the nation’s ‘Third Coast,’ where climate change is fueling conditions that have turned the Great Lakes into the erratic high seas of the Midwest.” [[E&E News. 8/22/2019](#)]

## 2020 Season Outlook

**National Weather Service Predicted Higher Than Normal Precipitation In Wisconsin Through Summer 2020.** According to the National Weather Service, precipitation in Wisconsin has a 33-40% chance of being higher than normal from June-August 2020, placing it in the ‘likely to be above normal’ category for precipitation. [National Weather Service, [accessed 5/23/20](#)]

**Army Corps of Engineers predicted Lakes Superior and Michigan water levels to remain above average through fall 2020.** The 2020 Army Corps of Engineer forecast predicted that Lake

Michigan, which borders Wisconsin, would remain at 3-5 inches above its average level through the end of October 2020, and that Lake Superior would remain 1-2 inches above its average level. [Army Corps of Engineers, [accessed 5/23/20](#)]

**Great Lakes Water Levels Expected To Top 2019 Records In 2020. In January of 2020, Fox 2 Detroit reported: "With water levels in the Great Lakes breaking records in 2019, the U.S. Army Corps of Engineers is predicting levels to reach similar heights in 2020, with a chance of new records being set again. Projections that extend six months from the present-day estimate levels in every Great Lake, as well as Lake St. Clair will be well above the average levels, with Lakes Michigan and Huron appear the most likely to set record highs. Both came close to records in 2019."** [[Fox 2 Detroit, 1/8/2020](#)]

## 2019 Flooding

**March 2019: Missouri River And North Central Flooding Caused \$10.9 Billion In Damages And Resulted In 3 Deaths.** According to NOAA's National Centers for Environmental Information, flooding of the Missouri River and in the North Central U.S., which hit Wisconsin in March 2019, caused \$10.9 billion in damages and resulted in 3 deaths. [[ndcd.noaa.gov, Accessed 4/30/2020](#)]

- **Wisconsin Was One Of Eight States Most Affected By The Historic Midwest Flooding, Which Was One Of The Costliest U.S. Inland Flooding Events On Record.** According to NOAA's National Center for Environmental Information, "Historic Midwest flooding inundated millions of acres of agriculture, numerous cities and towns, and caused widespread damage to roads, bridges, levees, and dams. The states most affected were Nebraska, Iowa, Missouri, South Dakota, Minnesota, North Dakota, Wisconsin and Wisconsin. This flood was triggered by a powerful storm with heavy precipitation that intensified snow melt and flooding. [...] This historic flooding was one of the costliest U.S. inland flooding events on record." [[ndcd.noaa.gov, Accessed 4/30/2020](#)]
- **March 2019: State Of Emergency Declared For Flooding Across A Wide Swath Of Wisconsin As Major Rivers Reached Record High Levels.** In March of 2019, the Milwaukee Journal Sentinel reported: "Wisconsin Gov. Tony Evers declared a state of emergency Friday as a result of widespread flooding in the state. The order directs state agencies, including the Wisconsin National Guard, to provide additional personnel and resources as needed to assist in emergency response and recovery operations. The flooding was occurring across a wide swath of Wisconsin, with high water closing roads and schools and sending residents in some of the hardest-hit areas scurrying for higher ground. The Milwaukee River near Cedarburg, the Sheboygan River at Sheboygan and Spring Creek at Lodi, all reached record high levels Friday, according to the National Weather Service." [[Milwaukee Journal Sentinel, 3/15/2019](#)]

**September 2019: Heavy Rains Caused Flooding Across NE Wisconsin And Forced Evacuations In Green Bay.** In September of 2019, the Green Bay Press Gazette reported: Heavy rains swept

across the state Wednesday, causing flooding that shut down roads in parts of northeastern Wisconsin and forced evacuations in Green Bay. The situation was expected to get worse, as the National Weather Service warned residents of the region that more downpours and damaging winds were forecast through the night and into Thursday. Brown County Emergency Management ordered residents living on Monroe Road in Bellevue to evacuate. People who live between Hoffman Road and Dickinson Road were told they should evacuate south of GV/Monroe Road. [[Green Bay Press Gazette, 9/11/2019](#)]

## SEVERE STORMS

### Link to Climate Change

**Heavy Rainstorms Have Become Heavier And More Frequent In The U.S. In The Past Three To Five Decades.** According to the National Climate Assessment, “Heavy downpours are increasing nationally, especially over the last three to five decades. The heaviest rainfall events have become heavier and more frequent, and the amount of rain falling on the heaviest rain days has also increased.” [National Climate Assessment, Extreme Weather, [2014](#)]

- **The Midwest And Northeast Have Seen A 30% Increase In Very Heavy Precipitation Over The 1901-1960 Average - The Largest Increase In The Nation.** According to the National Climate Assessment, “Since 1991, the amount of rain falling in very heavy precipitation events has been significantly above average. This increase has been greatest in the Northeast, Midwest, and upper Great Plains – more than 30% above the 1901-1960 average. There has also been an increase in flooding events in the Midwest and Northeast, where the largest increases in heavy rain amounts have occurred.” [National Climate Assessment, Extreme Weather, [2014](#)]

**Scientists Have Linked An Increase in Heavy Downpours To Climate Change.** According to the National Climate Assessment, “Global analyses show that the amount of water vapor in the atmosphere has in fact increased due to human-caused warming. This extra moisture is available to storm systems, resulting in heavier rainfalls.” [National Climate Assessment, Extreme Weather, [2014](#)]

**Winter Storms Have Increased In Frequency And Intensity Since 1950.** According to the National Climate Assessment, “Winter storms have increased in frequency and intensity since the 1950s, and their tracks have shifted northward over the United States.” [National Climate Assessment, Extreme Weather, [2014](#)]

**Scientists Have Linked Increases In Heavy Snowfall Events to Climate Change.** According to Climate Signals (a project of the nonprofit Climate Nexus), climate change is responsible for “increasing the frequency of extreme snowfall events.” [Climate Signals, [accessed 5/21/20](#)]

## 2020 Season Outlook

**National Weather Service Predicted Higher Than Normal Precipitation In Wisconsin Through Summer 2020.** According to the National Weather Service, precipitation in Wisconsin has a 33-40% chance of being higher than normal from June-August 2020, placing it in the 'likely to be above normal' category for precipitation. [National Weather Service, [accessed 5/23/20](#)]

**Heavy Precipitation Events Projected To Increase In The Midwest.** According to the 2014 National Climate Assessment, "Projections of future climate over the U.S. suggest that the recent trend towards increased heavy precipitation events will continue. This is projected to occur even in regions where total precipitation is projected to decrease, such as the Southwest." [National Climate Assessment, [2014](#)]

**January 2020: Southeastern Tornadoes And Northern Storms And Flooding Caused \$1.1 Billion In Damages And 10 Deaths.** According to NOAA's National Centers for Environmental Information, Southeastern Tornadoes and Northern Storms and Flooding, which hit Wisconsin in January 2020, caused \$1.1 billion in damages and resulted in 10 deaths. [[ndcd.noaa.gov](http://ndcd.noaa.gov), [Accessed 4/30/2020](#)]

- **Wisconsin Was Impacted By Storms And Severe Flooding That Caused Significant Damage Along The Shoreline Of Lake Michigan And Port Milwaukee.** According to NOAA's National Centers for Environmental Information, "More than 80 tornadoes and severe storms caused damage across many southeastern states (AL, AR, GA, IL, IN, KY, LA, MS, MO, NC, OH, SC, TN, TX, VA, WI). Storms and severe flooding also impacted northern states including Michigan, Wisconsin and New York. Significant damage occurred along the shoreline of Lake Michigan to roads, the foundation of homes and to Port Milwaukee. These powerful waves were generated by high winds and a lack of seasonal ice cover." [[ndcd.noaa.gov](http://ndcd.noaa.gov), [Accessed 4/30/2020](#)]

## 2018 Severe Weather

**May 2018: Central And Northeastern Severe Weather Caused \$1.4 Billion In Damages And Zero Deaths.** According to NOAA's National Centers for Environmental Information, severe weather across Central and Northeastern U.S. that hit Wisconsin in May 2018 caused \$1.4 billion in damages and zero deaths. [[ndcd.noaa.gov](http://ndcd.noaa.gov), [Accessed 4/30/2020](#)]

## 2017 Severe Weather

**June 2017: Minnesota Hail Storm And Upper Midwest Severe Weather Caused \$2.5 Billion In Damages And Zero Deaths.** According to NOAA's National Centers for Environmental Information, a Minnesota hailstorm and severe weather across the upper Midwest that hit Wisconsin in June 2017 caused \$2.5 billion in damages and zero deaths. [[ndcd.noaa.gov](http://ndcd.noaa.gov), [Accessed 4/30/2020](#)]

## 2015 Severe Weather

**June 2015: Central And Northeast Severe Weather Caused \$1.3 Billion In Damages And One Death.** According to NOAA's National Centers for Environmental Information, Central and Northeast Severe Weather that hit Wisconsin in June 2015 caused \$1.3 billion in damages and one death. [[ndcd.noaa.gov](http://ndcd.noaa.gov), Accessed 4/30/2020]

- **Wisconsin Was One Of 12 Impacted By Severe Storms, Widespread Hail And High Wind Damage.** According to NOAA's National Centers for Environmental Information, "Severe storms across numerous Central and Northeast states (CO, CT, IA, IL, MD, MI, NJ, NY, PA, SD, VA, WI) with widespread hail and high wind damage." [[ndcd.noaa.gov](http://ndcd.noaa.gov), Accessed 4/30/2020]

**April 2015: Midwest/Ohio Valley Severe Weather Caused \$1.7 Billion In Damages And Two Deaths.** According to NOAA's National Centers for Environmental Information, Midwest/Ohio Valley Severe Weather that hit Wisconsin in April 2015 caused \$1.7 billion in damages and two deaths. [[ndcd.noaa.gov](http://ndcd.noaa.gov), Accessed 4/30/2020]

- **Wisconsin Was One Of Several States Impacted By Storms Across The Midwest And Ohio Valley.** According to NOAA's National Centers for Environmental Information, "Severe storms across the Midwest and Ohio Valley including the states (AR, IA, IL, IN, KS, KY, MI, MO, NC, OH, OK, PA, TN, TX, WI, WV). Large hail and high winds created the most damage across Missouri and Illinois." [[ndcd.noaa.gov](http://ndcd.noaa.gov), Accessed 4/30/2020]

## 2013 Severe Weather

**August 2013: Midwest Severe Weather Caused \$1.2 Billion In Damages And Zero Deaths.** According to NOAA's National Centers for Environmental Information, severe weather across the Midwest, which hit Wisconsin in August 2013, caused \$1.2 billion in damages and zero deaths. [[ndcd.noaa.gov](http://ndcd.noaa.gov), Accessed 4/30/2020]

- **Wisconsin Experienced Severe Weather And Large Hail That Caused Considerable Damage.** According to NOAA's National Centers for Environmental Information, "Severe weather and large hail causes considerable damage across Minnesota and Wisconsin." [[ndcd.noaa.gov](http://ndcd.noaa.gov), Accessed 4/30/2020]

## 2010 Severe Weather

**July 2010: Midwest/Northeast Severe Storms And Flooding Caused \$1.1 Billion In Damages And Zero Deaths.** According to NOAA's National Centers for Environmental Information, severe storms and flooding across the Midwest and Northeast, which hit Wisconsin in July 2010, caused \$1.1 billion in damages and zero deaths. [[ndcd.noaa.gov](http://ndcd.noaa.gov), Accessed 4/30/2020]

- **Wisconsin Was One Of Six States Impacted By Severe Storms And Flooding.** According to NOAA's National Centers for Environmental Information, "Severe storms and flooding affect the states IA, IL, MD, NY, PA, WI across the Midwest and Northeast." [[ndcd.noaa.gov](http://ndcd.noaa.gov), Accessed 4/30/2020]

# WILDFIRES

## Link to Climate Change

**Climate Change Is Increasing The Severity, Frequency, And Extent Of Wildfires.** According to a report from the EPA: "Higher temperatures and drought are likely to increase the severity, frequency, and extent of wildfires in Colorado, which could harm property, livelihoods, and human health. In 2013, the Black Forest Fire burned 14,000 acres and destroyed over 500 homes. Wildfire smoke can reduce air quality and increase medical visits for chest pains, respiratory problems, and heart problems. The size and number of western forest fires have increased substantially since 1985." [[Environmental Protection Agency, "What Climate Change Means for Colorado" August 2016](#)]

**Acres Burned By Wildfire Doubled In Recent Decades Due To Climate Change.** According to the 2018 National Climate Assessment Report: "Wildfire is a natural part of many ecosystems in the Southwest, facilitating germination of new seedlings and killing pests. Although many ecosystems require fire, excessive wildfire can permanently alter ecosystem integrity. Climate change has led to an increase in the area burned by wildfire in the western United States. Analyses estimate that the area burned by wildfire from 1984 to 2015 was twice what would have burned had climate change not occurred. Furthermore, the area burned from 1916 to 2003 was more closely related to climate factors than to fire suppression, local fire management, or other non-climate factors." [[National Climate Assessment, Chapter 25, 2018](#)]

## 2020 Season Outlook

**National Interagency Fire Center Predicts 'Normal' Risk of Wildland Fire In Wisconsin Through the End of Summer 2020.** According to data from the National Interagency Fire Center, Wisconsin is forecast to have a 'normal' risk of wildland fire through August 2020. [National Interagency Fire Center, [accessed 5/25/20](#)]

**National Weather Service Outlook Forecasts 33-40% Chance Of Higher Than Average Temperatures In Wisconsin June-August 2020.** According to data from the National Weather Service, Wisconsin is likely to have higher than average temperatures between June and August 2020, with odds of higher than average temperatures at 33-40%. [National Weather Service, [accessed 5/23/20](#)]

**National Weather Service Outlook Forecasts 40-50% Chance Of Higher Than Average Temperatures In Wisconsin September-November 2020.** According to data from the National Weather Service, Wisconsin is likely to have higher than average temperatures between September and November 2020, with odds of higher than average temperatures at 40-50%. [National Weather Service, [accessed 5/23/20](#)]

**The National Climate Assessment Has Found That The Number Of Wildfires Is Likely To Increase As The Climate Warms And Could Induce "Profound Changes To Certain Ecosystems."**

In August of 2018, The Atlantic reported: “As if there wasn’t enough evidence of that. Last year, the National Climate Assessment—written by a panel of scientists in the military, federal civilian agencies, and private universities—reviewed the complete scientific literature on climate change and wildfires. They concluded that the number of large blazes had increased since the early 1980s. They also said the number of wildfires ‘is projected to further increase in those regions as the climate warms.’ They warned this could induce ‘profound changes to certain ecosystems.’” [The Atlantic, [8/10/18](#)]

## 2019 Fire Season

**In 2019, 1,198 Acres Of Land Were Burned Due To Wildfire In Wisconsin.** According to the National Interagency Fire Center’s 2019 report, 1,198 acres of land were burned in 710 fires across Wisconsin in 2019. [[National Interagency Fire Center, National Report of Wildland Fires and Acres Burned by State, 2019 Report](#)]

## 2018 Fire Season

**In 2018, 1,678 Acres Of Land Were Burned Due To Wildfire In Wisconsin.** According to the National Interagency Fire Center’s 2018 report, 1,678 acres of land were burned in 825 fires across Wisconsin in 2018. [[National Interagency Fire Center, National Report of Wildland Fires and Acres Burned by State, 2018 Report](#)]

## 2017 Fire Season

**In 2017, 661 Acres Of Land Were Burned Due To Wildfire In Wisconsin.** According to the National Interagency Fire Center’s 2017 report, 661 acres of land were burned in 696 fires across Wisconsin in 2017. [[National Interagency Fire Center, National Report of Wildland Fires and Acres Burned by State, 2017 Report](#)]

# DROUGHT & EXTREME HEAT

## Link to Climate Change

**Scientists Have Linked Prolonged Heat Waves To Climate Change.** According to the 2014 National Climate Assessment Report: “Analyses show that human-induced climate change has generally increased the probability of heat waves.” [National Climate Assessment, Extreme Weather, [2014](#)]

**Recent Heat Waves “Unprecedented” Since Records Began Over One Hundred Years Ago.**

According to the 2014 National Climate Assessment Report: “prolonged (multi-month) extreme heat has been unprecedented since the start of reliable instrumental records in 1895.” [National Climate Assessment, Extreme Weather, [2014](#)]

**National Climate Assessment Showed That Climate Change Is Affecting Us Now, Not Just In The Future.** According to CNN, “An analysis by the environmental advocacy group the Sierra Club, released Monday, found nine instances in which Wheeler's statements about the delayed impact of climate change were directly contradicted in the National Climate Assessment, a government-sponsored climate analysis authored by scientists from 13 federal agencies that was released in November. (there is no link to this analysis because they gave it to us exclusively)” [CNN, [4/22/19](#)]

- **Higher Temperatures.** According to CNN, “Between 1901 and 2016, the global average temperatures ‘have increased by 1.8 degrees Fahrenheit,’ and there is no evidence that the rise in temperature has been caused by any ‘natural explanation,’ according to the report. ‘The evidence consistently points to human activities, especially emissions of greenhouse or heat-trapping gases, as the dominant cause,’ the report states.” [CNN, [4/22/19](#)]
- **Hotter Years.** According to CNN, “Each decade has been the hottest on record in succession over the past 30 years. Seventeen of the 18 hottest years on record have occurred since 2001, according to the report.” [CNN, [4/22/19](#)]

**NASA Research Showed Human Activity Has Been Influencing Global Patterns Of Drought, With Increased Drought Occurring In Response To Greenhouse Gas Emissions.** According to NASA, “Warming temperatures and changing precipitation patterns can lead to droughts, and NASA research shows that humans have been influencing global patterns of drought for nearly a century. Kate Marvel and Ben Cook, researchers at NASA's Goddard Institute for Space Studies and Columbia University in New York City, investigated humans' influence on 20th-century drought patterns using historical weather data and drought maps calculated from tree rings. They found that a data ‘fingerprint’ – a drying and wetting pattern predicted to occur in response to greenhouse gas emissions – was visible as far back as the early 1900s.” [[climate.nasa.gov](http://climate.nasa.gov), 6/13/2019]

**Climate Change Is Already Affecting Global Patterns Of Drought, And Such Trends Are Expected To Continue.** According to NASA, “Demonstrating that humans influenced global drought patterns in the past is an important part of understanding how we may influence them in the future, said Cook. ‘Climate change is not just a future problem,’ he said. ‘This shows it's already affecting global patterns of drought, hydroclimate, trends, variability — it's happening now. And we expect these trends to continue, as long as we keep warming the world.’” [[climate.nasa.gov](http://climate.nasa.gov), 6/13/2019]

## 2020 Season Outlook

**National Weather Service Outlook Predicted Wisconsin Would Not Experience Seasonal Drought In The Summer Of 2020.** According to data from the National Weather Service's Drought Outlook, Wisconsin is not expected to experience seasonal drought in the summer of 2020. [National Weather Service, [accessed 5/26/20](#)]

**National Weather Service Outlook Forecasts 33-40% Chance Of Higher Than Average Temperatures In Wisconsin June-August 2020.** According to data from the National Weather Service, Wisconsin is likely to have higher than average temperatures between June and August 2020, with odds of higher than average temperatures at 33-40%. [National Weather Service, [accessed 5/23/20](#)]

**National Weather Service Outlook Forecasts 40-50% Chance Of Higher Than Average Temperatures In Wisconsin September-November 2020.** According to data from the National Weather Service, Wisconsin is likely to have higher than average temperatures between September and November 2020, with odds of higher than average temperatures at 40-50%. [National Weather Service, [accessed 5/23/20](#)]

## Past Drought Events

**Spring – Fall 2013: Western Plains Drought And Heatwave Caused \$11.7 Billion In Damages And 53 Deaths.** According to NOAA's National Centers for Environmental Information, droughts and heatwaves across the Western Plains, that impacted Wisconsin in the Spring and Fall of 2013, caused \$11.7 billion in damages and 53 deaths. [[ncdc.noaa.gov](http://ncdc.noaa.gov), Accessed 4/30/2020]

- **Wisconsin Was One Of 22 States That Experienced Moderate To Extreme Drought.** According to NOAA's National Centers for Environmental Information, "The 2013 drought slowly dissipated from the historic levels of the 2012 drought, as conditions improved across many Midwestern and Plains states. However, moderate to extreme drought did remain or expand into western states (AZ, CA, CO, IA, ID, IL, KS, MI, MN, MO, ND, NE, NM, NV, OK, OR, SD, TX, UT, WA, WI, WY). In comparison to 2011 and 2012 drought conditions the US experienced only moderate crop losses across the central agriculture states." [[ncdc.noaa.gov](http://ncdc.noaa.gov), Accessed 4/30/2020]

**2012: Nationwide Droughts And Heatwaves Caused \$34.2 Billion In Damages And 123 Deaths.** According to NOAA's National Centers for Environmental Information, drought and heatwaves across the U.S. in 2012 caused \$34.2 billion in damages and 123 deaths. [[ndcd.noaa.gov](http://ndcd.noaa.gov), Accessed 4/30/2020]

- **The 2012 Drought Impacted Over Half Of The U.S. And Was The Most Extensive Drought In America Since The 1930s.** According to NOAA's National Centers for Environmental Information, "The 2012 drought is the most extensive drought to affect the U.S. since the 1930s. Moderate to extreme drought conditions affected more than half the country for a majority of 2012. The following states were affected: CA, NV, ID, MT, WY, UT, CO, AZ, NM, TX, ND, SD, NE, KS, OK, AR, MO, IA, MN, IL, IN, GA. Costly drought impacts occurred across the central agriculture states resulting in widespread harvest failure for corn, sorghum and soybean crops, among others. The associated summer heatwave also caused 123 direct deaths, but an estimate of the excess mortality due to heat stress is still unknown." [[ndcd.noaa.gov](http://ndcd.noaa.gov), Accessed 4/30/2020]

### **Wisconsin Dairy Farmer reported Milk Production Down 15-20 Percent During 2012**

**Wisconsin Drought.** In July of 2012, E&E News reported on the drought impacting Wisconsin: "Take farming. Yesterday, Rick Roden, a 28-year-old dairy farmer from West Bend, Wis., said a sequence of above 90-degree-Fahrenheit days in July, combined with little moisture in soil, could slash his profits by 30 to 40 percent. Roden manages 400 dairy cows and 2,000 acres of soybean, corn and alfalfa plots at Rob-n-Cin Farms. He said the drought is by far "the worst I've ever seen" and is prompting him to try and cool down cows in barns with fans and misting equipment. The cows produce less milk once the temperature rises above 75 degrees because of high stress, he said. He has not yet lost any animals but said he worries that could happen if the drought worsens. Milk production is down about 15 to 20 percent since the beginning of the summer drought, he said." [[E&E Climatewire, 7/20/2012](#)]

### **State Of Emergency Was Declared For All 72 Wisconsin Counties Because Of 2012 Drought.**

In July of 2012, E&E News reported "Wisconsin Gov. Scott Walker heads on a drought tour today as his state continues to grapple with fish kills, dying crops and water emergencies amid raging heat. On Wednesday, the Republican governor declared a state of emergency in all of Wisconsin's 72 counties because of abnormally dry conditions. Currently, 18.7 percent of the state is experiencing "severe" drought, particularly in its southern half near Milwaukee, according to the U.S. Drought Monitor. The Wisconsin Department of Natural Resources released a detailed list of drought impacts, ranging from blue-green algae outbreaks to the concentration of waterfowl in areas known to have outbreaks of botulism." [[E&E Climatewire, 7/20/2012](#)]

### **By Early October, 2012, 87.5 Percent Of Wisconsin's Land Area Was In A Moderate-To-Extreme Drought.**

On October 18, 2012, Wisconsin Radio Network reported: "Despite heavy rain last weekend in many parts of the state, Wisconsin's drought conditions persist. The US Drought Monitor said Thursday that almost 84 percent of the state's land area is still in a moderate-to-extreme drought, only down slightly from 87.5 percent last week. The northern part of Door County is still the only place in Wisconsin that's not abnormally dry or worse, but the places with extreme drought conditions shrunk a bit. An extremely dry patch in west central Wisconsin was reduced and now only covers most of Jackson County, plus small parts of Clark and Monroe counties." [[Wisconsin Radio Network, 10/18/2012](#)]