

# Minnesota's Climate is Already Changing

Minnesota's climate is already changing rapidly and will continue to do so into the foreseeable future.

These changes are impacting Minnesota's wildlife, plants, waters, historic resources, infrastructure, and available outdoor recreation activities.

We have a responsibility to adapt to these changes.

We take mitigation steps to reduce our carbon dioxide and other greenhouse gas emissions.

We need your help to adapt to the changing climate and reduce its impact on Minnesota's resources and people.

Action starts with you.

Find out more!  
[mndnr.gov/climate](http://mndnr.gov/climate)



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## more damaging rains

20%  
increase in the number  
of 1" rains

65%  
increase in the number  
of 3" rains

13%  
increase in  
the size of the  
heaviest rainfall  
of the year.

since 2000  
widespread rains of more  
than 6" are 4x more  
frequent than in the  
previous three decades.

The length of the frost-free season is increasing over time and is expected to continue to increase through the century.

## our climate is becoming warmer and wetter

Nights have warmed  
**55%**  
faster than days  
since 1970.

Average temperatures in Minnesota have warmed by nearly 3°F since 1895.



The 10 warmest and wettest years on record have all occurred in the past 20 years.

Increases in temperature and precipitation are expected to continue through the century.

## winter is warming

much faster than summer with fewer days and nights of extreme cold.

## What We're Seeing

Here are some examples of how Minnesota Department of Natural Resources (DNR) employees and others are experiencing climate change impacts on natural resources in their professional and personal lives:



**Bryan Lueth of North Branch**  
Deer hunter and DNR Wildlife Habitat Manager

says delayed winter freeze-up prevents access to state wildlife management areas where he has hunted for many years. The ice fishing season is also becoming shorter, with “ice out” typically occurring more than a week earlier than it did in the 1940s.



**Jon Hansen of Minneapolis**  
DNR Fisheries Management Consultant

notes projections that walleye will fade from smaller, warmer lakes, as higher temperatures lead to a loss of natural walleye reproduction. The warmer conditions are causing largemouth bass populations to thrive.



**Chris Heeter of Bloomington**  
Nature guide

believes warmer weather has made northern Minnesota more hospitable to deer, to the detriment of native moose populations. Heeter says it has now been several decades since she has seen a moose in the wild.



**Scott Roemhildt of Elysian**  
Maple syruper and DNR Regional Director

says warmer winters and earlier springs have changed typical sap-running time from mid-March to early February or even late January. Roemhildt says he has his equipment ready to go a full six weeks earlier than his grandfather did 50 years ago.



**Adam Munstenteiger of Roseau**  
DNR Regional Forestry Manager

compares old photos of tamarack forests to the same areas today. “Within a few years, the same area is just brown. You can just see the mortality” from the Eastern larch beetles that thrive due to warmer winters.



## What We're Doing

We have a responsibility to adapt to climate change. The DNR also takes mitigation steps to reduce our carbon dioxide and other greenhouse gas emissions. For example, the DNR has installed 40 renewable energy systems across the state, we're planting tree species that will thrive in a warmer and wetter climate, and we're working with partners on culverts designed to protect resources while handling increased quantities of water.

The DNR is part of a group of state agencies working on climate change adaptation and mitigation. We also collaborate with other partners, such as universities, federal agencies, local governments, and tribes, on climate change issues.

Find out more!  
[mndnr.gov/climate](https://mndnr.gov/climate)  
select Climate Change