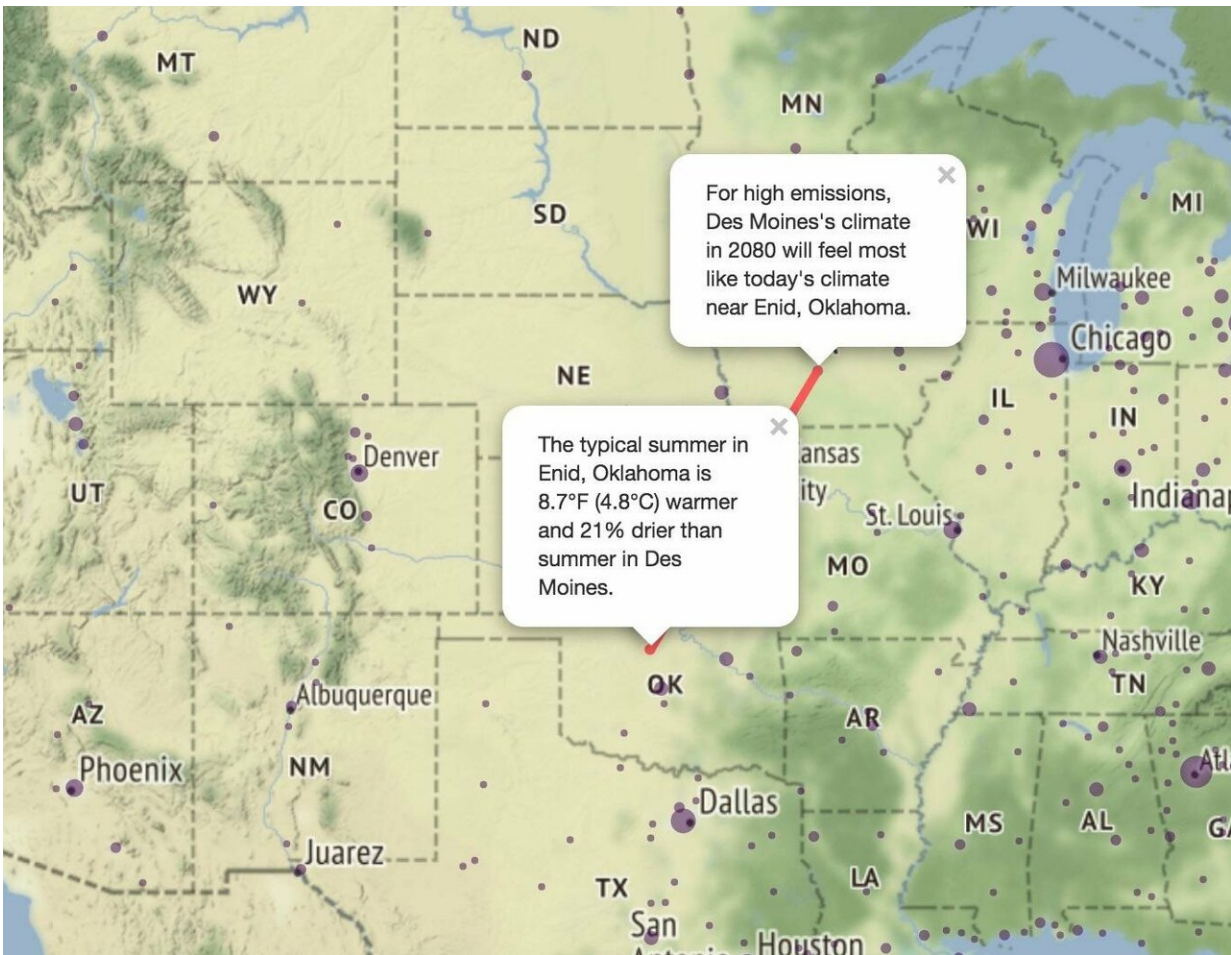


# Climate change could make Iowa temps feel like Oklahoma cities by 2080

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The study shows if emissions aren't reduced, the climate in Des Moines in 2080 will feel like Enid, Oklahoma feels today. Screenshot of <https://fitzlab.shinyapps.io/cityapp/>. Credit: Iowa State University

A new study suggests what the climate in several major Iowa cities could feel like by 2080.

Researchers from University of Maryland and North Carolina State University analyzed urban areas in North America and matched them with places where today's climate feels like the climate expected in cities in 60 years.

They included seven Iowa cities: Cedar Rapids, Davenport, Des Moines, Dubuque, Iowa City, Sioux City and Waterloo.

"All of the cities are basically trending to a southwest direction and they're becoming more like places further to the south that are warmer and drier," said Matt Fitzpatrick, a professor from University of Maryland's Center for Environmental Science who co-authored the study.

The study used two emissions scenarios to show the difference if cities limit emissions or do nothing at all to reduce them.

It shows that with no emissions reductions, Cedar Rapids will feel like today's Ponca City, Oklahoma, which is about 9.3 degrees warmer and 18 percent drier than Cedar Rapids in summer. Under the same scenario, Sioux City's climate in 2080 will feel like Enid, Oklahoma feels today, where summers are about 8 degrees warmer. Davenport will feel like Cape Girardeau, Missouri, where the typical summer is an average of 5.4 degrees warmer.

"These are still pretty high magnitude changes that infrastructure is going to have to deal with, [natural systems](#) are going to have to deal with and of course, agriculture is going to have to deal with," Fitzpatrick said.

But things look a little better if we do reduce emissions. Under one

scenario, Cedar Rapids would feel like Atchison, Kansas, where summers are 4.5 degrees warmer. Sioux City's climate would feel like climate near Salina, Kansas, where summers are typically 6.2 degrees warmer.

Gene Takle, an emeritus agronomy professor at Iowa State University, said the study has value in offering a glimpse into the substantial differences [climate change](#) will create in the future.

"We can envision, if we've driven through or spent some time in a place like Oklahoma, I can get a sense of what that feels like and how it differs from Iowa," Takle said.

Takle co-authored the Midwest chapter for the Fourth National Climate Assessment. He said Iowa cities shouldn't base their long-term planning and infrastructure decisions off of the new study's climate analogs.

"We shouldn't do our planning saying 'well we're going to take Oklahoma precipitation patterns and we'll design our bridges based on the precipitation of Oklahoma in the 20th century'," Takle said. "That's not going to work for us."

The study looked at 540 urban areas across North America. Fitzpatrick said he hopes the local connections in the study will give people a relatable picture of [climate](#) change.

**More information:** What will climate feel like in 60 years?  
[fitzlab.shinyapps.io/cityapp/](http://fitzlab.shinyapps.io/cityapp/)

Provided by Iowa State University

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