

Iowans Are Already Dealing With Climate Change

Reports on the effects of climate change seem worlds away from us in Iowa. Yet, Iowans also are dealing with its effects. Until recently, one could predict certain weather events would happen during certain months of the year. Lately that predictability has been changing. These noticeable changes are part of a pattern called climate change. Here are some of its impacts:

- Precipitation has increased about 10 percent since the 1940s. More rain falls in the first half of the year, leading to wetter springs and difficulty completing field work. The rain comes in downpours, which leads to greater erosion.
- Stronger storms are occurring.
- Floods are more frequent and more severe. Since 2000, significant floods have occurred in all of Iowa's major rivers. Flooding inundates farm fields and creates extensive damage to creek crossings.
- Stream flows have increased since the 1940s.
- Soils remain closer to saturation points in the spring, which affects the ability to work in the fields.
- Over the last 30 years, wind speeds have declined.
- Dew-point temperatures are rising, meaning there is more moisture in the air, particularly during the summer.
- Nighttime temperatures are rising more than daytime temperatures and winter temperatures are increasing more than summer temperatures.
- There are five more frost-free days per year since 1950. The growing season has been extended. The US Department of Agriculture even updated its Plant Hardiness Zone Map to reflect Iowa's warmer temperatures.



Addressing Climate Change Creates Jobs

To avert the ever-intensifying impacts of climate change, we must transition to clean, renewable energy NOW! Investing in climate change solutions will bequeath our children and grandchildren a world that is safer, healthier, more prosperous, and more sustainable. Here are just a few of the benefits Iowans stand to gain:

- New jobs in wind and solar manufacturing and installation
- Reducing energy costs by increasing energy efficiency and fuel efficiency
- Greater energy independence by reducing our reliance on fossil fuels
- Improving public health from the reduction of fossil fuel pollutants in our air and water.

Material is compiled from:

"Iowa Climate Change Adaptation and Resilience Report," 2011, United States Environmental Protection Agency pilot project, pages 17, 41, 42 and 44

"Climate Change Impacts on Iowa, 2010," Iowa Climate Change Impacts Committee, article by Eugene "Gene" S. Takle titled "Climate Changes in Iowa," January 1, 2011, pages 8 to 13

Gene Takle Prepared Testimony, Exhibit Sierra Club-GT-1, Iowa Utilities Board, Docket No. HLP-2014-0001, In Re Dakota Access LLC, October 12, 2015

Donnelle Eller, "Study: Climate change could hammer Iowa ag, manufacturing", *Des Moines Register*, January 23, 2015

Daniel P. Finney and Yvonne Beasley, "As Iowa winters warm up, gardeners see more options," *The Des Moines Register*, January 26, 2012

Brandon Miller, "2016 was the hottest year on record – again", *CNN*, January 18, 2017



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