

Understanding How Climate Change Affects Nebraska and Agriculture

Tyler Williams
Extension Educator,
Lancaster County

Climate change is a challenging subject to understand, discuss openly and interpret how it will influence our daily lives.

Global Warming or Climate Change

The terms “global warming” and “climate change” are commonly used interchangeably, but people often have different responses to each term. Essentially, global warming is exactly what it says: the globe is warming. This does not mean every town or county in the world is warming, but, as a whole, the globe is warming.

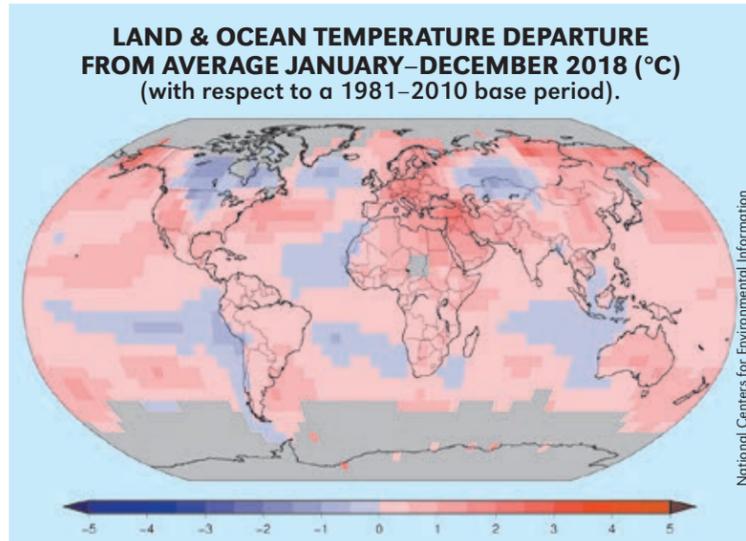
The average temperature of the globe in 2018 was 1.42°F above the last century average, making it the 42nd consecutive year the global average land and ocean temperature was above the 20th century average. The climate has changed many times in the past, but this rate of change is the main cause for concern, limiting our ability to adapt.

The term climate change is the term of choice used by many people when describing the impacts from a warming world. This does a better job of being able to describe the potential local impacts. For example, warming temperatures in one area may influence the upper level jet stream pattern, which may cause a cool and wet pattern to persist in another area. Using the term climate change can include more than “warming temperatures,” which is a more accurate way to describe how changes in climate may impact your area. The scientific community continues to learn more about these feedback mechanisms and how the earth will respond.

Why the Confusion on Climate Change?

The Yale Program on Climate Change Communication conducts surveys across the country to get a handle on

what people think about climate change and why. According to their 2018 poll, 64% of Nebraskans think global warming is happening (6% below national average), with a state high of 72% in Lancaster County, to a state low of 53% in Lincoln County. Only 51% of Nebraskans think it is caused mostly by human activities, with a state high of 66% in Lancaster and Douglas Counties and a state low of 44% in Lincoln County. This split on what is causing the changes — or even believing it to be true — often creates some anxiety or dismissiveness when discussing the issue.

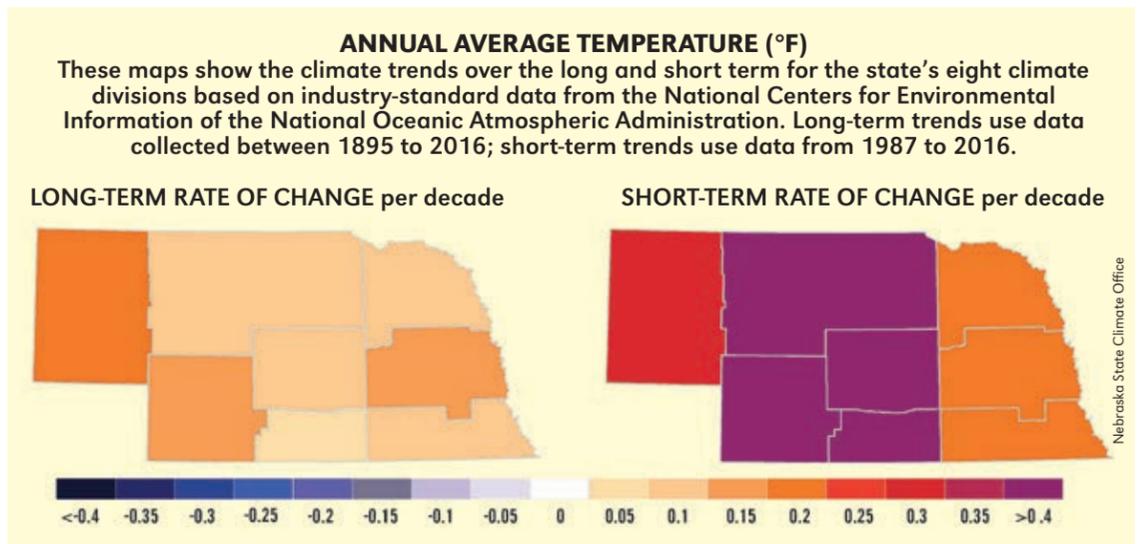


Getting accurate and non-biased climate change information can be a challenge. Many people have a news source of choice, which likely only provides one side of the climate change story and it probably aligns with the beliefs of its largest viewership. People also have a tendency to seek out the information they want to be true or information that aligns with their beliefs.

Finding reputable, non-biased sources is the key when trying to analyze climate change information and learn more about this topic.

Latest Climate Science

At the end of 2018, the U.S. Global Change Research Program released the 4th National Climate Assessment.



The hidden detail in the data is the consistent increase in minimum temperatures, which is outpacing the rise in maximum temperatures by a factor of two.

The precipitation trends in Nebraska are highly variable in time and location. On average, every 25 miles you go west in Nebraska, you lose one inch of annual precipitation, so when we say Nebraska is getting “wetter” (1.3-inch increase in 20th century), it means something completely different in Scottsbluff compared to Falls City. Seasonal differences are also quite important. Over the last 30 years, our spring precipitation has been increasing at a rate of 0.9 inches per decade and is a relatively consistent trend across the state.

Projections: Models are used to help project what the

future of our climate looks like. The projections in Nebraska for the next 75 years are similar to the trends we have seen over the last 30 years, with a few exceptions. It is projected to have longer growing seasons, warmer summers and more extreme hot days (current trend is decreasing). There is also an expectation to continue to see more precipitation; however, this is projected to come in less frequent, heavier events, so much of it may runoff causing other challenges and reducing infiltration into the soil. Even though there is this expected increase in precipitation, the increase in temperatures, especially during the growing season, would likely increase evaporation and put stress on water resources.

see CLIMATE on p. 3

EXTENSION RESOURCES

flood.unl.edu
email floodresponse@unl.edu



Families & Individuals



Homeowners



Businesses & Communities



Agriculture

CONNECT WITH US

Nebraska Extension in Lancaster County
444 Cherrycreek Road, Suite A
Lincoln, NE 68528
402-441-7180
<http://lancaster.unl.edu>



IN THIS ISSUE

- Food & Health 2
- Farm & Acreage 3
- Pests & Wildlife 4
- Horticulture 5
- Early Childhood 5
- 4-H & Youth 6–7