

Oct. 21, 2019

## Predicting regional effects of climate change

Temperatures will continue to rise and heavy downpours will increase as global warming advances, according to the Fourth National Climate Assessment of 2018. The severity of those increases depends on how effective the world will be at curbing its carbon emissions. The assessment, an interagency study, weighed potential effects using two scenarios:

### Two scenarios for the late 21st Century

#### RCP4.5

Fossil fuel carbon emissions peak mid-century and then decrease, returning to 1980s levels by 2100.

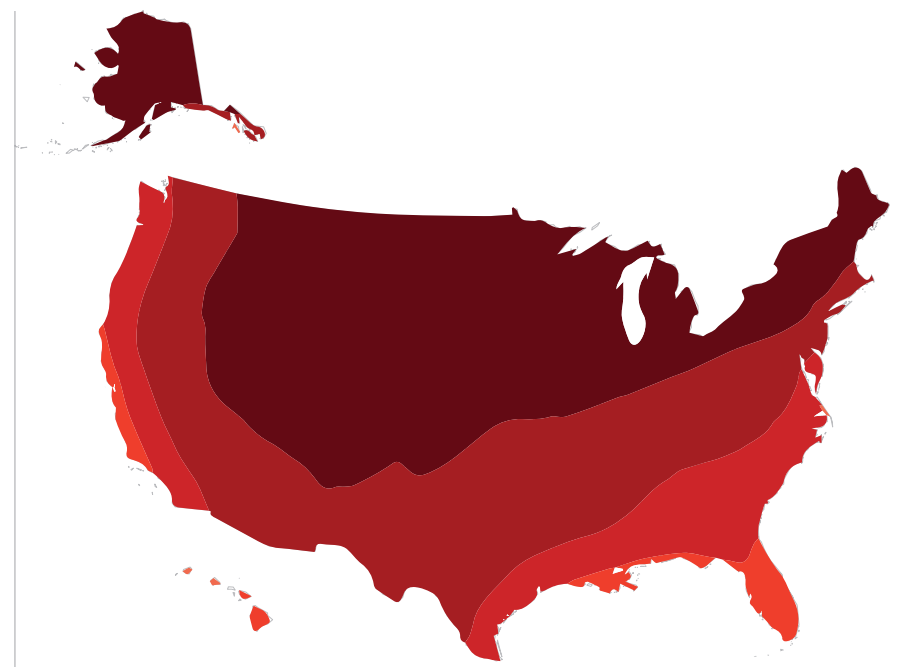
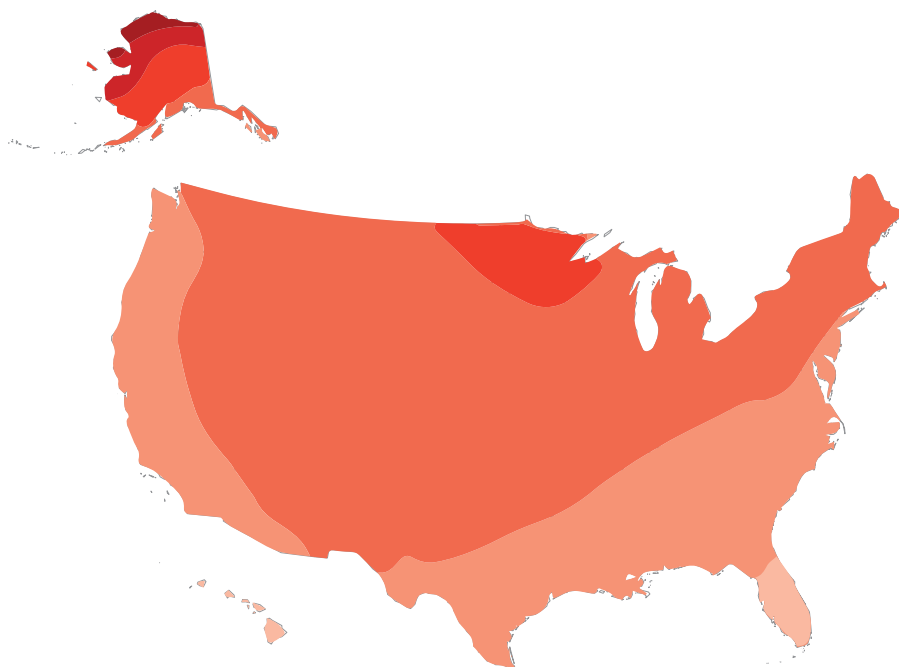
#### RCP8.5

"Business as usual," with no climate change adaptation and carbon emissions continuing to increase.

#### CHANGE IN AVERAGE ANNUAL TEMPERATURE

Relative to 1986–2015

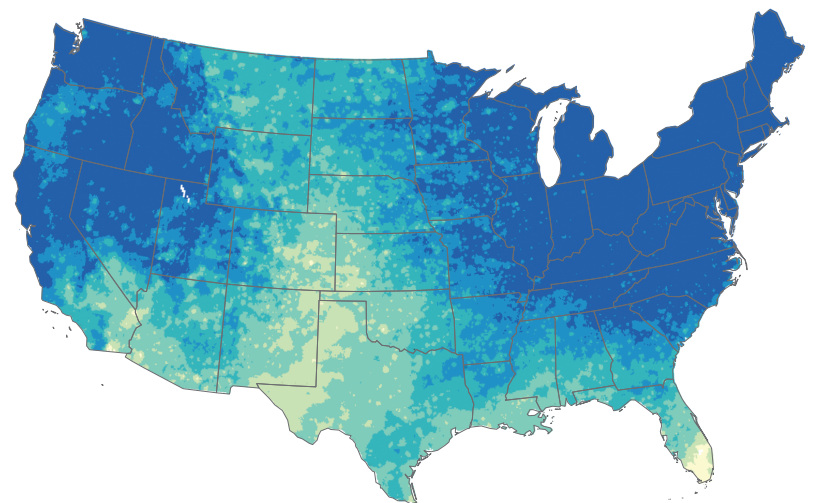
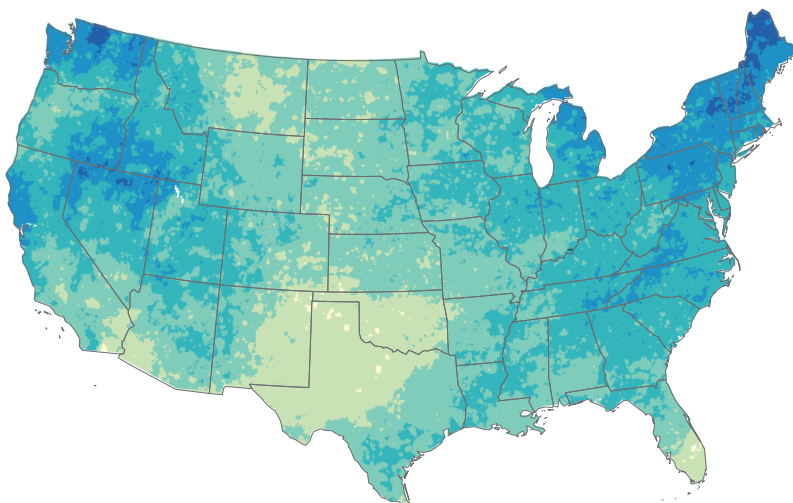
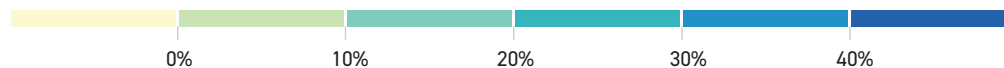
Regardless of any mitigation efforts, the annual average temperature of the contiguous U.S. is projected to increase by at least 2.2 degrees Fahrenheit.



#### CHANGE IN HEAVY PRECIPITATION EVENTS

Events above the 99th percentile of daily values

In a warmer climate increasing evaporation rates would lead to more frequent and intense precipitation extremes.



Sources: "Fourth National Climate Assessment," U.S. Global Change Research Program

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