United States Wildfires and Climate Change

The map below features the average rate of temperature increase in each climate division within the U.S., as well as the average percent increase of acres burned per state. Many hypothesize that the increasing temperatures are a major factor in the recent severity of wildfires.

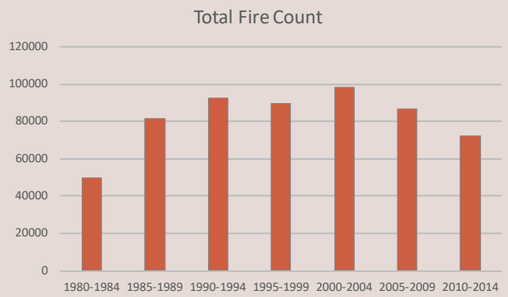
The midwest has the largest amout of wildfires in the U.S., and California fires alone burned almost 15 million acres of land between 1980 and 2014. Due to these inflated numbers, the percent increase for acres burned is relatively smaller in this area.

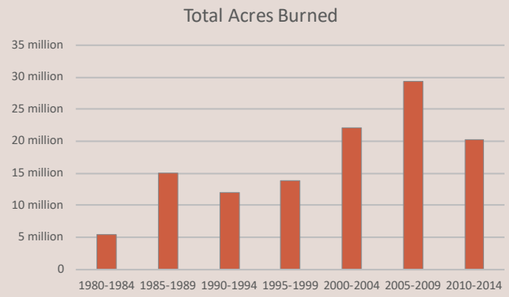
The amount of wildfires in the midwest is mainly due to the weather and shape of the land in the area. Hot temperatures and drought dry out vegetation, providing fuel for wildfires, and rough terrain helps a wildfire spread.

The northeast U.S. has shown a strong temperature increase, as well as a large increase in the number of acres burned per year, showing there may be a correlation between the two variables.

Interestingly, some of the southeast U.S. has actually seen a decrease in temperature. These lower rates of temperate increase may explain why some areas in the southeast have shown a slower increase in acres burned over time.

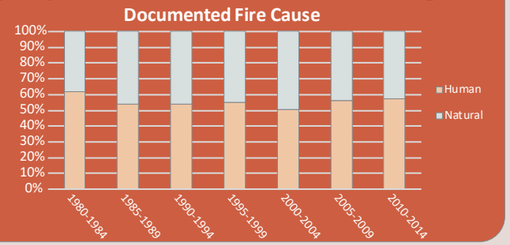
The Effects of Climate Change on Wildfires:





While the total amount of wildfires in the US has somewhat plateaued, the total acres burned is significantly increasing. This implies that wildfires are burning stronger and harder than before, and a major contributor to this trend is likely the increasing temperature caused by climate change. Hotter summers leads to drier vegetation, which means that if a wildfire does occur, it has plenty of fuel to keep it going.

In 2011, Texas experienced its worst wildfire to date. The Bastrop County Complex Fire burned nearly 35,000 acres of land, the cause of which was a simple damaged powerline. In fact, the majority of all wildfires have a human origin.



Average Rate of Temperature Increase: 1901-2015

- 2.30% - 3.36%
- 1.70% - 2.30%
- 1.00% - 1.70%
- 0.40% - 1.00%
- 0.00% - 0.40%
- -0.68% - 0.00%

Average Percent Increase of Acres Burned: 1980-2015

- 2550% - 12150%
- 700% - 2550%
- 375% - 700%
- 320% - 375%
- 0% - 320%

Cartographer: Joe Marks, Last edited: 12-12-2018, Projection: U.S. Albers Equal Area, U.S. map source: EarthData, Wildfire dataset source: USGS, Rate of temperature change source: EPA, Wildfire information source: national geographic