



NATIONAL CLIMATE ASSESSMENT: THE SOUTHWEST

The National Climate Assessment is the most comprehensive report on climate change impacts in the United States. Here are a few things we learned from the assessment about impacts in the Southwest region: California, Nevada, Utah, Colorado, Arizona, and New Mexico.

Heat

- Climate change is happening now, and is primarily caused by carbon pollution from fossil fuels like coal, oil, and gas. How much the climate changes in the future is up to us.
- The Southwest is the hottest, driest part of the United States. Climate change is making the region even hotter, and increasing competition for the most precious resource: water.
- The last decade was the hottest on record in the region. If carbon pollution continues to go up, average temperatures could increase 9 degrees Fahrenheit by the year 2100.
- Across the Southwest, heat waves are expected to become longer, more intense, and more lethal. Arizona already has the highest rate of deaths from heat stress in the United States.
- More than 90 percent of the Southwest's population lives in urban areas. And cities are especially vulnerable to heat waves, when spikes in air conditioning use can lead to blackouts.

Drought and Fires

- Drought is expected to become more frequent, intense, and longer-lasting in the region's major river basins.
- Snow is already melting earlier, with less late-season snow than before. These trends are expected to continue. Reduced snowmelt puts the region's water supply at risk.
- Climate change has contributed to a dramatic spike in forest fires, leading to billions of dollars in damages.
- Warm winter temperatures have led to pine beetle outbreaks, which kill trees. Since 1984, pine beetles and forest fires have together killed 20 percent of the trees in Arizona and New Mexico.
- The Southwest produces more than half the country's high-value crops like fruits, vegetables, and nuts. These are very sensitive to water shortages and temperature extremes.
- The frost-free season is now 21 days longer than it was in the early 20th century. Fewer days with frost can dry out soils and result in lower crop yields.

Sea Level Rise

- Over the past century, sea level has already risen by up to 8 inches along the Southwest coast. Flooding has already damaged infrastructure like California's Highway 101.
- Sea level rise poses a threat to infrastructure like highways, bridges, power plants, and sewage treatment. It also poses a threat to the region's ports, which handle half the country's incoming shipping containers.