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### Weather Hazards

Weather hazards impact the entire country, with enormous effects on the economy and public safety. Since 1980, weather/climate disasters have cost the U.S. economy more than \$1.5 trillion. In an average year, the United States will be affected by six billion-dollar weather/climate disasters, but this number has increased in recent years: from 2013-2017 the average was 11.6 events.

### Basics



Weather hazards include hurricanes, tornadoes, thunderstorms, lightning, hail, winds, and winter weather. Many of these phenomena are related to atmospheric conditions that can be monitored and forecast. Read more

## Frequently Asked Questions

How does El Niño affect my area? National Oceanic and Atmospheric Administration What is the evidence that our present-day climate is changing? American Geosciences Institute How might global warming change hurricane intensity, frequency, and rainfall? National Oceanic and Atmospheric Administration How does the damage from hurricanes compare to that of tornadoes? National Oceanic and Atmospheric Administration How many tornadoes have there been in my state or county? National Oceanic and Atmospheric Administration

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#### Climate

Climate has an enormous impact on society, with wide-ranging effects on public safety and health, the economy, transportation, infrastructure, and agriculture. Geoscientists investigate our climate's past and present to better understand how it may change in the future.



#### Drought

Since 1980 the United States has experienced more than 24 major droughts, resulting in almost 3,000 deaths and economic impacts exceeding \$225 billion. All areas of the U.S. have some drought risk.



#### Floods

Flooding is the most common and costliest natural hazard facing the United States. Each year, flooding causes billions of dollars in damages and dozens of deaths nationwide.



#### Hazards

Natural hazards such as earthquakes, landslides, hurricanes, floods, and wildfires endanger public health and safety, threaten critical infrastructure, and cost our economy billions of dollars each year. Geoscientists study these hazards to provide information and warnings to populations at risk.



#### Landslides

Landslides affect all 50 states and U.S. territories, where they cause 25 to 50 deaths and more than \$1 billion in damages each year. Geoscientists study and monitor landslides to identify at-risk areas, prepare populations, and improve our understanding of why, when, and where landslides happen.



#### Sinkholes

Sinkholes have both natural and artificial causes. They tend to occur most often in places where water can dissolve the bedrock (especially limestone) below the surface, causing overlying rocks to collapse. Florida, Texas, Alabama, Missouri, Kentucky, Tennessee, and Pennsylvania are most sinkhole-prone.



#### Wildfires

Wildfires are causing more frequent and wider-ranging societal impacts, especially as residential communities continue to expand into wildland areas. Since 2000, there have been twelve wildfires in the United States that have each caused damages exceeding \$1 billion; cumulatively, these twelve wildfires have caused a total of \$44 billion in damages.

### Maps & Visualizations



Interactive map of real-time flood information for Texas U.S. Geological Survey

The U.S. Geological Survey's Water On The Go app provides real-time information on stream flows, lake levels, and rainfall in Texas. The app automatically finds data near your current location (or any chosen location in Texas) for rapid access to water information. Special icons indicate rapidly...

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Remote Sensing Supports Emergency Management Response to Tornados

Remote sensing imagery is used by researchers at the University of Wisconsin–Madison to support recovery efforts after a tornado. Defining the Problem Following a tornado, first responders need maps of the width and location (swath) of the damage area. The biggest challenge when integrating remote...

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# Webinars & Forums



#### Planning for Coastal Storm and Erosion Hazards

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