



Break the Cycle 14 Symposium

Natural Disasters Overview:

The last few years have seen a set of natural disasters in the USA and around the world that have had devastating effects on the environment on the built environment and on people resulting in a death toll, a disease and disability toll, destruction of buildings and homes, and degradation of the environment incurring a significant cost.

These are the natural disasters that can and do occur in the USA:

- Heat Waves. ...
- Drought. ...
- Floods. ...
- Earthquakes. ...
- Thunderstorms. ...
- Wildfire. ...
- Winter Weather. ...
- Tornadoes.

The following natural disasters are the most common disasters that occur in the United States, yet most are situated in specific regions.

Heat Waves:

Heat Waves are brought on by incredibly hot weather mixed in with unbearable humidity, for good measure. The eastern United States are typically hit with scorching humidity, which starts in the Gulf of Mexico, combined with hot air masses from Mexico's desert. As recently as March 2012, an intense heat wave broke temperature records across the country. While heat wave-related deaths are lower in the U.S. compared to the rest of the world, even minor heat waves have been the cause of dozens of deaths per year.



Drought

Droughts have plagued the U.S. in the past, most famously in the "dust bowl." Severe droughts affect the country's farming industry. Droughts are still such a common problem that the National Integrated Drought Information System (NIDIS) was enacted in 2006 to forecast and warn states of droughts. Starting that same year, California suffered through a five-year drought. This is just one of the dozen major droughts that took place over the last decade.

Floods

Floods are surprisingly one of the most common natural disasters. Floods do not play favorites in terms of where they lay. They are also rank among the highest in terms of property damage. The after-effects of Hurricane Katrina led to the floods in Mississippi and Louisiana, where 1,836 people lost their lives and many more lost their homes and businesses. Sometimes flooding occurs in unusual locations, like when Colorado was afflicted by a long-lasting flood during September 2013.

Earthquakes

Earthquakes are not as widely reported as they once were. This may be due to their seismic strength or location. If you were to hear about an earthquake in California, you may think, "It must be Tuesday." In the past five years, the United States was hit with an average of four earthquakes a year ranging over a 5.5 on the Richter scale. Earthquakes may be common for Californians, but they surprise other states like Alabama and Illinois on occasion as well. Thankfully, the loss of life due to Earthquakes in the United States has been minimal.

Thunderstorms

Thunderstorms are more damaging and dangerous than you'd expect. An estimated 10,000 severe thunderstorms hit the Midwest and Central United States per year. High winds can cause massive damage to homes, signs and businesses. Hail damages crops and has the potential of seriously injuring anyone unlucky to be outside during a hailstorm. Lightning itself causes about 80 fatalities per year, and lead to our next natural disaster.



Wildfire

Wildfires, also known as brush fires and forest fires, are known for their size and speed of ignition. These commonly destroy several thousands of acres in just a few days. These fires are quite common in the western United States. California has seen more than its fair share recently and other dry states like New Mexico, Nevada and Utah expect multiple wildfires each summer.

Winter Weather

Snow and Ice are all too common along the Great Lakes states and the northeastern states. Ice Storms and Blizzards hit with the combination of high wind speeds, blinding snow and several days of nonstop snowfall. It doesn't take much ice to affect traffic, airports and general daily life as evidence in the Groundhog Day Blizzard of 2011. Total damages from that three-day storm were valued at \$1 billion.

Tornadoes

Tornadoes favor the United States more than any other country. This is one thing we wish we didn't lead the world in. The hardest hit areas are definitely in Tornado Alley: Kansas, Nebraska, Iowa, Missouri and South Dakota. However, that doesn't mean tornadoes only affect that area.

Volcanoes

Volcanic eruption doesn't sound like a large threat. However, in the past 100 years, there have been around three dozen eruptions from volcanoes in the United States alone. One of the most memorable recent volcanic activity was the eruption of Mt. St. Helens in Washington on May 18, 1980. Volcanoes don't seem like a huge threat, considering most of them lie dormant, but they can quickly cause immense damage and destruction. The majority of these volcanoes lie along the western coast, Alaska's coast and Hawaii. People living on the east coast should feel safe about Volcanoes, but perhaps not about our next disaster.



Hurricanes

Hurricanes and cyclones form over the ocean while evaporating water from the ocean into its saturated clouds. Fortunately, these storms don't always make landfall, but their destructive paths are closely watched each summer along the Gulf of Mexico and the Atlantic coast. An average of 15 to 20 major hurricanes per decade hit the coastal regions of the U.S., causing a tremendous amount of damage to homes, businesses and the environment.

Costs of Natural Disasters: (from Voice of America website)

Three major hurricanes pushed the bill for natural disasters to record levels last year, according to the [U.S. National Oceanic and Atmospheric Administration](#).

A total of 16 disasters caused an estimated \$306 billion in damage in 2017.

Hurricane Harvey was the most costly. Up to a meter and a half of rain flooded Houston and other parts of Texas, leaving \$125 billion worth of destruction. Only 2005's Hurricane Katrina did more damage.

Hurricanes Irma and Maria added another \$140 billion, making 2017 the most expensive hurricane season on record.

https://av.voanews.com/Videoroot/Pangeavideo/2018/01/c/cb/cb19d712-c98b-4d24-808b-97f73cc0f95b_manifest.mpd

It was also the most expensive year for wildfires. Blazes in California and other western states racked up another \$18 billion in damage.

In all, three Category-4 hurricanes (Harvey, Irma and Maria) made landfall in the U.S. and its territories, a record for a single year. ... In all, tornadoes killed 34 Americans from January to May. Here are some of the notable disasters of 2017. Unless noted, all damage estimates and fatalities are from NOAA. Oct 18, 2017

BREAK THE CYCLE OF CHILDREN'S ENVIRONMENTAL HEALTH DISPARITIES

BREAK THE CYCLE 14

PROMOTING HEALTH EQUITY FOR ALL CHILDREN

In a report from USA Today October 2017 it was stated:

So far this year, 15 separate weather and climate disasters have each caused at least \$1 billion in damages in the U.S., according to the National Oceanic and Atmospheric Administration. Initial estimates from AccuWeather put the damage from the northern California wildfires at well over \$1 billion. If so, 2017 would tie 2011 for the most billion-dollar disasters, according to NOAA.



SOURCE NOAA; USA TODAY research