U.S. Billion-Dollar Weather and Climate Disasters in 2025

An annual report of impacts across the country

March 9, 2026

Summary

Research by Climate Central shows that during 2025, there were 23 individual weather and climate disasters with at least $1 billion in damages. This was the third-highest count of billion-dollar disasters (inflation-adjusted to 2025 dollars) since 1980, trailing only 2023 and 2024, with 28 and 27 events, respectively. The total, direct cost of these 23 events in 2025 was approximately $115.0 billion, with 276 direct and indirect fatalities.

This report summarizes the costliest events of 2025 and puts them in the context of historical trends in billion-dollar disasters since 1980. We also explore the influence of our growing exposure, vulnerability, and climate change on the increasing trend of these expensive and deadly disasters.

➔ Explore the U.S. Billion-Dollar Weather and Climate Disasters database

Research that tracks and evaluates the impacts of U.S. weather events

This analysis uses data from the U.S. Billion-Dollar Weather and Climate Disasters dataset, which tracks and evaluates weather and climate events in the U.S. that have significant economic and societal impacts. It provides critical insights into the growing costs of extreme weather in a changing climate.

The billion-dollar disaster analysis demonstrates the economic impact of extreme weather and climate events in Consumer Price Index (CPI) inflation-adjusted dollars, helping communicate the real-world consequences of climate change to communities, policymakers, and the public.

This research seeks to quantify the costs of weather and climate disasters in 2025 that led to more than $1 billion in collective damages per event. These cost totals for 2025 are based on analysis through January 8, 2026, and may rise by an additional several billion dollars, as new data become available. All prior-year cost estimates are adjusted for inflation to 2025 dollars using the Consumer Price Index (CPI).

Climate Central manages and maintains this U.S. Billion-Dollar Weather and Climate Disaster dataset. This research builds on the foundational work of NOAA's National Centers for Environmental Information, developed over several decades. The relaunch of this research in 2025 is a direct continuation with the same longtime experts, data sources, and methods to develop the analysis.

RESULTS

The billion-dollar disasters in 2025 represented multiple hazard types (see figure 1).

- One **wildfire event**, the Palisades and Eaton Fires in Los Angeles, that resulted in an unprecedented cost in destroyed homes, vehicles, businesses, and other infrastructure
- One **drought and heat wave event** that caused impacts across the western U.S.
- Six **tornado outbreaks** across the central and southeastern U.S.
- Five **severe hail events** across the southern and southeastern U.S.
- 10 **severe storm- and derecho-type events** that impacted the eastern two-thirds of the country

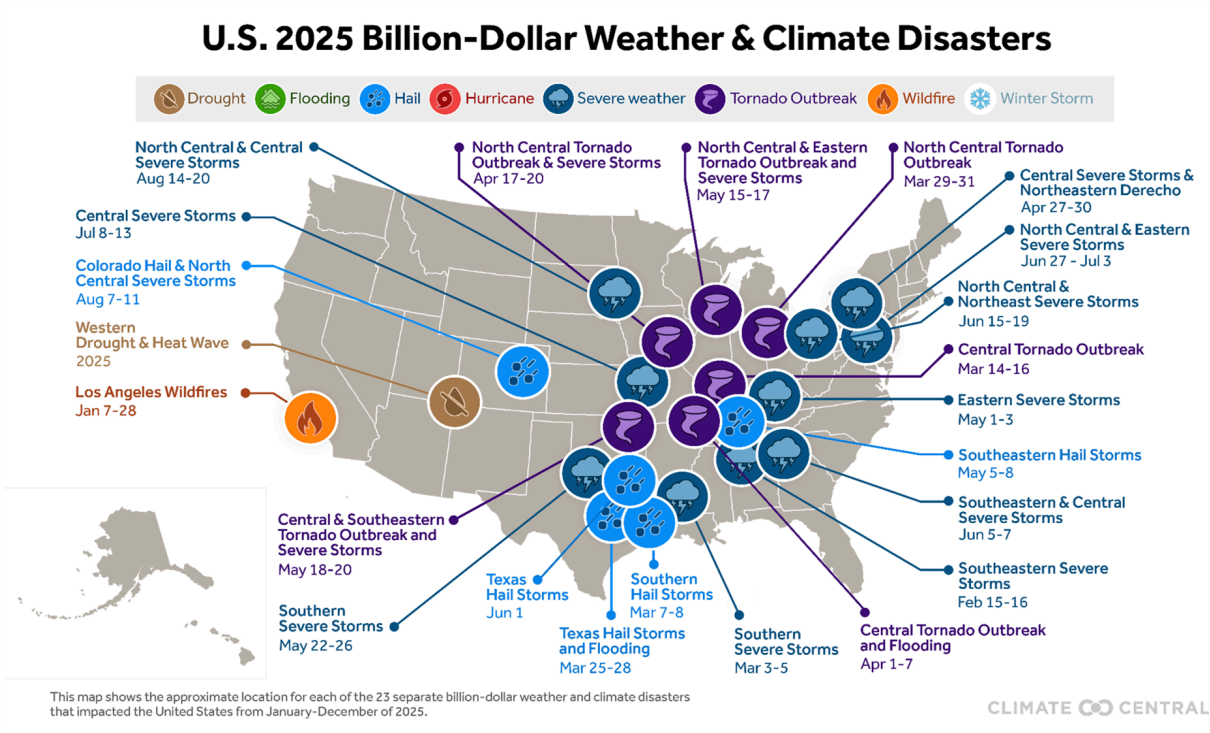

Figure 1. U.S. map showing the approximate location for the 23 separate weather or climate disasters that each resulted in at least $1 billion in damages.

Severe storm events were the most common billion-dollar disasters in 2025

Severe storm events dominated in 2025, accounting for 21 events, or 91% of all billion-dollar disasters in 2025. Many of these events occurred in the spring and summer in the form of tornado outbreaks, hail, and severe storms across the central U.S. In general, they caused $1 to $10 billion in damages. The total cost of severe storm billion-dollar disasters in 2025 was approximately $50 billion, one of the most costly severe storm seasons on record (inflation-adjusted).

2025 was also the first year on record with a billion-dollar wildfire event as the costliest event of the year.

Top three costliest U.S. billion-dollar disasters of 2025

Among the many weather and climate-related disasters that affected the U.S. in 2025, the following caused the most damaging impacts.

Los Angeles Wildfires, January 7-28

Impacts: 31 deaths, $61.2 billion

The Palisades Fire as it approached the shoreline on January 8, 2025. Source: CalFire Official.

In January 2025, the Los Angeles metro region was devastated by a series of wildfires, most notably the Palisades and Eaton Fires. The conditions were highly favorable for

wildfires to start and spread, as the region was under the influence of unusually strong Santa Ana winds and extremely dry fuels.

The Palisades Fire alone burned over 23,000 acres and destroyed thousands of structures in the Pacific Palisades and Malibu areas. The Eaton Fire destroyed over 10,000 buildings in Altadena and surrounding communities. In total, more than 40,000 acres burned, and over 12,000 structures were destroyed.

These Los Angeles wildfires were the costliest 2025 event with total, direct losses exceeding $60 billion. This is nearly double the damage from the previous costliest wildfire event, the Northern California wildfires of 2018, which included the catastrophic Camp Fire.

Central Tornado Outbreak, March 14-16

Impacts: 43 deaths, $11.0 billion

Home destroyed by an EF-4 tornado in Larkin, Arkansas. Source: NOAA National Weather Service.

Between March 14 and 16, an estimated 182 preliminary tornadoes were reported in a major outbreak across many central, southeastern, and eastern states, resulting in multiple fatalities.

On March 14, the tornadoes were most concentrated across southeastern Missouri, northeastern Arkansas, southern Illinois, and southern Indiana, including some very intense tornadoes. Two violent EF-4 tornadoes struck Arkansas on March 14 - the first time the state has experienced two EF-4 tornadoes on the same day since 1997. One long-track EF-4 tornado carved a nearly 120-mile path from northern Arkansas into southeastern Missouri, while other tornadoes ripped through states including Missouri, Mississippi, and Alabama.

Widespread damage to homes, businesses, vehicles, vegetation, and other infrastructure caused over $10 billion in damage across many states.

North Central and Eastern Tornado Outbreak and Severe Storms, May 15-17:
Impacts: 29 deaths, $6.3 billion

Community devastated by an EF-3 tornado in Blodgett, Missouri. Source: NOAA National Weather Service.

Between May 15 and 17, a major tornado outbreak swept across the central and eastern U.S., spawning around 60 confirmed tornadoes. This included several violent EF-4 tornadoes, with winds estimated at up to 190 mph.

The most destructive impacts occurred on May 16, when an EF-3 tornado struck the St. Louis region. Later that night, a long-track EF-4 tornado devastated the Somerset–London area of Kentucky. The outbreak also produced widespread large

hail and severe thunderstorm winds, caused over 600,000 power outages, and was the deadliest tornado event in Kentucky since 2021.

Putting 2025 events in historical context

The year 2025 was the 15th consecutive year (2011-2025) in which 10 or more billion-dollar disaster events have impacted the U.S. The 1980–2025 annual average was 9.2 events. The annual average for the most recent 10 years (2016-2025) was 20.2 events.

Figure 2 shows the count of billion-dollar disasters as they accumulated throughout each year from 1980 to 2025. The high frequency of severe storm events in the spring and summer of 2025 pushed the year into third place.

However, the absence of landfalling hurricanes in the fall or other costly events is reflected in the plateauing 2025 event count, which trails 2023 and 2024.

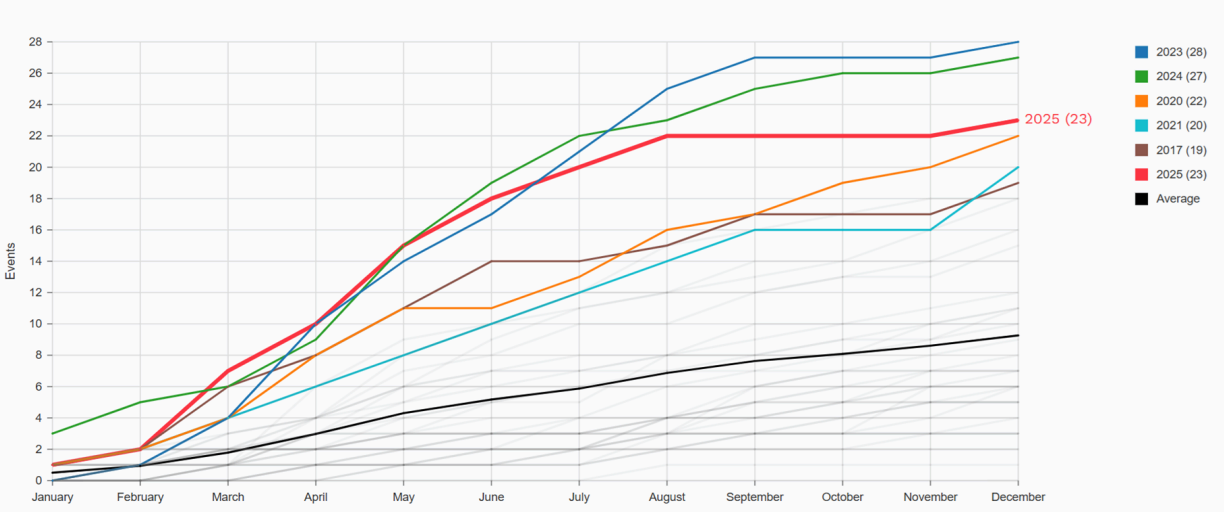

Figure 2. Month-by-month accumulation of billion-dollar disasters for each year on record (1980-2025). The colored lines represent the top six years with the most billion-dollar disasters. The black line shows the average. All other years are colored light gray. Source: Climate Central's U.S. Billion-Dollar Weather and Climate Disasters database.

The January Los Angeles wildfires started 2025 off in record territory for costs (see figure 3), well ahead of all other years on record. The costs continued to increase with an active spring and summer severe storm season.

However, the absence of landfalling hurricanes is clearly reflected in 2025 costs (see figure 3), which were well below the top five most costly years (all of which had hurricane impacts totaling tens to hundreds of billions of dollars). Major hurricanes can sharply increase the total costs for a year. In fact, each of the top-three costliest years since 1980 for the U.S. — 2017 ($405.2 billion), 2005 ($275.5 billion), and 2024 ($187.9 billion) — included high costs from hurricanes.

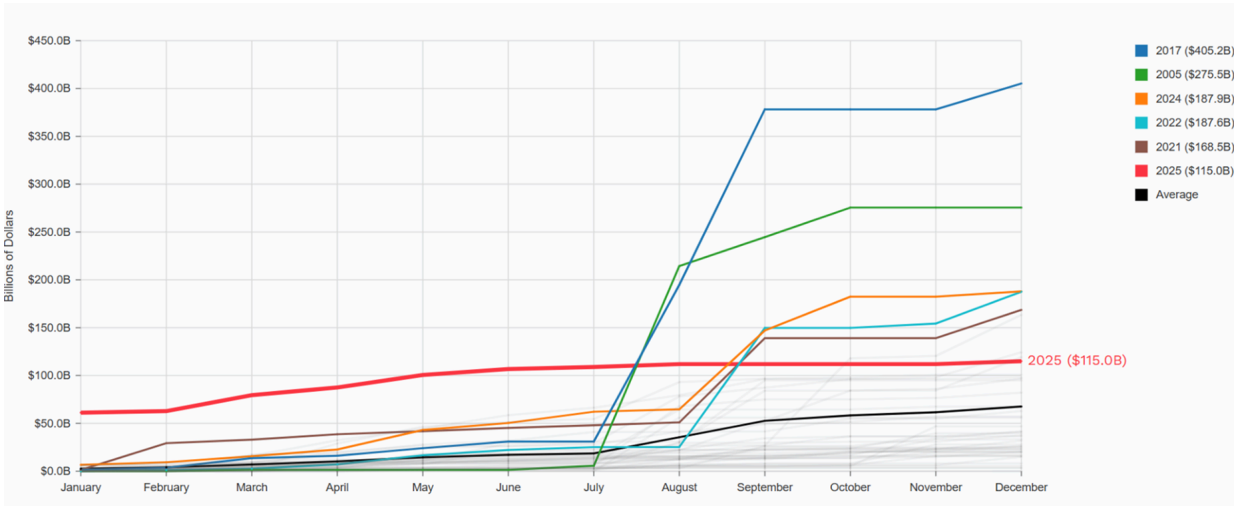

Figure 3. Month-by-month accumulation of estimated costs of each year's billion-dollar disasters (1980-2025), with colored lines showing 2025 (red) and the other top-10 costliest years. Other years are light gray. 2025 finished the year in fourth place for annual costs. Source: Climate Central's U.S. Billion-Dollar Weather and Climate Disasters database.

Increasing disasters trend: Exposure, vulnerability, and the influence of climate change

The number of billion-dollar disasters and their total costs have risen since 1980. Although the analysis adjusts for inflation, none of the highest years occurred before 2000 (see figure 4).

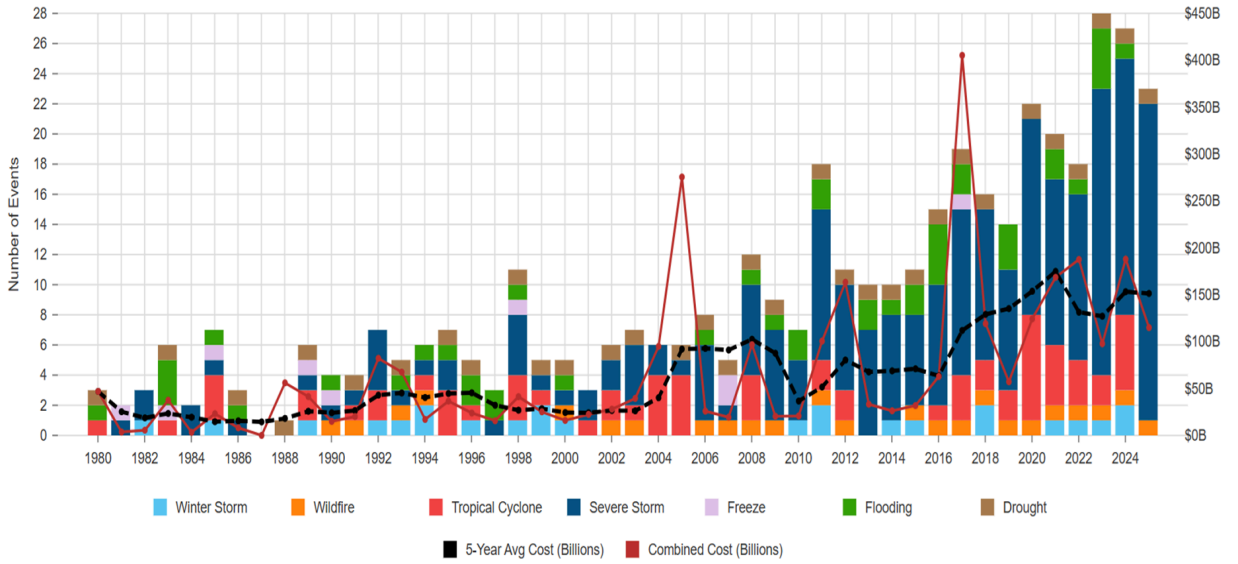

Figure 4. The history of billion-dollar disasters in the U.S. each year from 1980 to 2025, showing event type (colors), frequency (left-hand vertical axis), and cost (right-hand vertical axis) adjusted for inflation to 2025 dollars. Source: Climate Central's U.S. Billion-Dollar Weather and Climate Disasters database.

Losses from billion-dollar disasters have averaged about $150 billion per year over the last decade (2016-2025). The year 2017 was the costliest, exceeding $300 billion in damages, proportional to about 25% of the $1.3 trillion building value put in place that year.

Over the last decade, the U.S. has been impacted by 202 separate billion-dollar disasters that have killed more than 6,500 people (including direct and indirect fatalities) and cost $1.5 trillion in damage.

There are several potential explanations for these trends, including increases in exposure (i.e., more assets at risk); increases in vulnerability (i.e., the amount of damage a hazard of given intensity, such as high winds, can cause at a location); and increases in the frequency and intensity of some types of extreme events due to human-caused climate change[1].

The increases in population and material wealth are major drivers of the increased costs of extreme weather over the last several decades. In an analysis of recent disasters in the Gulf of Mexico region, the National Academies of Sciences, Engineering, and Medicine concluded, “Exposure to extreme weather and climate hazards in the Gulf of Mexico state region is increasing as a result of population growth and increased construction of public and private development in hazard-prone areas."

Much of this growth and property development has continued in high-risk areas like coasts, the fire-prone wildland-urban interface in the western states, and river floodplains. Increased building and population growth in these high-risk areas mean that more people and property are at risk, contributing to larger losses. Areas where building codes are insufficient for reducing damage from extreme events are especially vulnerable to more intense extreme weather.

Population growth, as well as how and where we build, play a big role in the increasing number and costs of billion-dollar disasters. But extreme event attribution research also shows that human-caused climate change is increasing the frequency and intensity of certain types of extreme weather that lead to billion-dollar disasters — most notably the rise in vulnerability to drought, lengthening wildfire seasons in the western states, and extremely heavy rainfall becoming more common in the eastern states. Sea level rise is worsening hurricane storm surge flooding. Given those trends, it’s likely that human-caused climate change is influencing the rising costs of billion-dollar disasters.

All of these factors help explain why the 2010s had far higher costs from billion-dollar disasters than the 2000s, 1990s, or 1980s, even after adjusting for inflation (see figure 5).

[1] For further context about the potential explanations for these trends, read: Natural Hazard Mitigation Saves (2019); the Fifth National Climate Assessment (2023); and Compounding Disasters in Gulf Coast Communities 2020-2021: Impacts, Findings, and Lessons (2024).

Time Period ▲	Billion-Dollar Disasters	Events/Year	Cost	Percent of Total Cost	Cost/Year	Deaths	Deaths/Year
1980–1989	33	3.30	$225.5 billion	7.3%	$22.5 billion	2,994	299.40
1990–1999	57	5.70	$344.2 billion	11.1%	$34.4 billion	3,075	307.50
2000–2009	67	6.70	$638.6 billion	20.5%	$63.9 billion	3,102	310.20
2010–2019	131	13.10	$1.0 trillion	32.8%	$102.0 billion	5,227	522.70
2020–2025	138	23.00	$881.1 billion	28.3%	$146.8 billion	2,796	466.00
All Years	426	9.26	$3.1 trillion	100.0%	$67.6 billion	17,194	373.78
Last 3 Years (2023–2025)	78	26.00	$400.7 billion	12.9%	$133.6 billion	1,336	445.33
Last 5 Years (2021–2025)	116	23.20	$756.8 billion	24.3%	$151.4 billion	2,534	506.80
Last Year (2025)	23	23.00	$115.0 billion	3.7%	$115.0 billion	276	276.00

Figure 5. Summary statistics of billion-dollar disasters by decade and by the latest one-, three-, and five-year periods. Costs over the last complete decade, the five-year average, and the three-year average are all higher than the costs of the 1980s, 1990s, and 2000s. Source: Climate Central's U.S. Billion-Dollar Weather and Climate Disasters database.

Billion-dollar disasters on record: 1980-2025

Costs and fatalities by disaster type

Tropical cyclones caused the most damage from 1980 to 2025, exceeding $1.6 trillion in damage. Severe storms ($578 billion), drought ($381 billion), wildfires ($213 billion), and inland flooding ($208 billion) also caused considerable damage (see figure 6).

Severe storms account for the highest number of billion-dollar disaster events over this time period (224), but they have the lowest average event cost ($2.6 billion). Tropical cyclones and flooding are the second and third most frequent event types (67 and 45, respectively).

Tropical cyclones are responsible for the highest number of deaths (7,211) from 1980 to 2025, followed by drought/heat wave events (4,747) and severe storms (2,301).

Disaster Type	Events	Events/Year	Percent Frequency	Total Costs	Percent of Total Costs	Cost/Event	Cost/Year	Deaths	Deaths/Year
Severe Storm	224	4.87	52.6%	$578.2 billion	18.6%	$2.6 billion	$12.6 billion	2,301	50.02
Tropical Cyclone	67	1.46	15.7%	$1.6 trillion	50.9%	$23.6 billion	$34.4 billion	7,211	156.76
Flooding	45	0.98	10.6%	$208.7 billion	6.7%	$4.6 billion	$4.5 billion	742	16.13
Drought	33	0.72	7.7%	$381.0 billion	12.3%	$11.5 billion	$8.3 billion	4,747	103.20
Wildfire	24	0.52	5.6%	$213.4 billion	6.9%	$8.9 billion	$4.6 billion	568	12.35
Winter Storm	24	0.52	5.6%	$107.3 billion	3.4%	$4.5 billion	$2.3 billion	1,463	31.80
Freeze	9	0.20	2.1%	$38.3 billion	1.2%	$4.3 billion	$833.0 million	162	3.52
All Disasters	**426**	**9.26**	**100.0%**	**$3.1 trillion**	**100.0%**	**$7.3 billion**	**$67.6 billion**	**17,194**	**373.78**

Figure 6. A breakdown, by hazard type, of the 426 billion-dollar weather and climate disasters assessed since 1980. Severe storms are by far the most frequent type of billion-dollar disaster. Source: Climate Central's U.S. Billion-Dollar Weather and Climate Disasters database.

Disasters by U.S. region and state

The southern, central, and southeastern regions of the U.S., along with the Caribbean U.S. territories, have suffered the highest cumulative damage costs. This highlights the combined exposure and vulnerability of these regions to a range of costly weather and climate hazards.

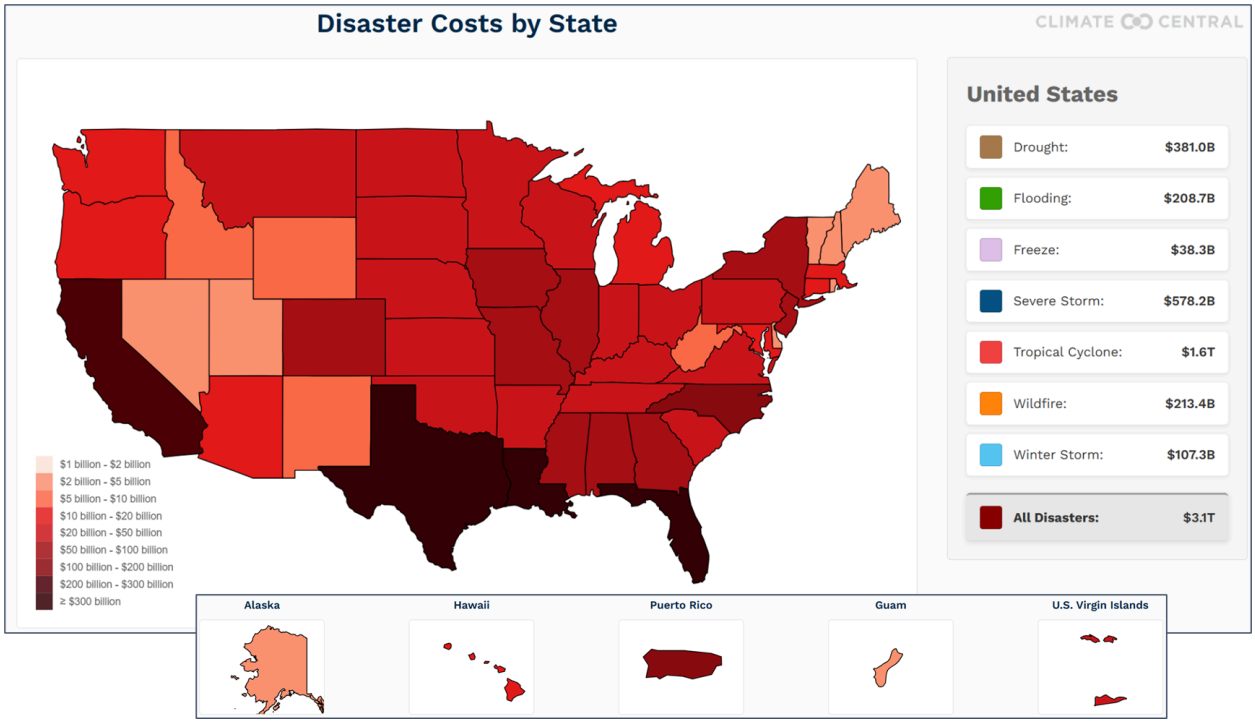

Figure 6. Total estimated cost borne by each state from billion-dollar weather and climate events from 1980-2025. Source: Climate Central's U.S. Billion-Dollar Weather and Climate Disasters database.

Disasters by month and season

The 46-year climatology of U.S. billion-dollar disasters offers a view of risk from extreme events, which are often seasonal in nature (see figure 8). For example, during the spring months (March, April, and May), severe storms (including tornadoes, hail, and high winds) often occur in many central and southeastern states, but they taper off in the second half of the year.

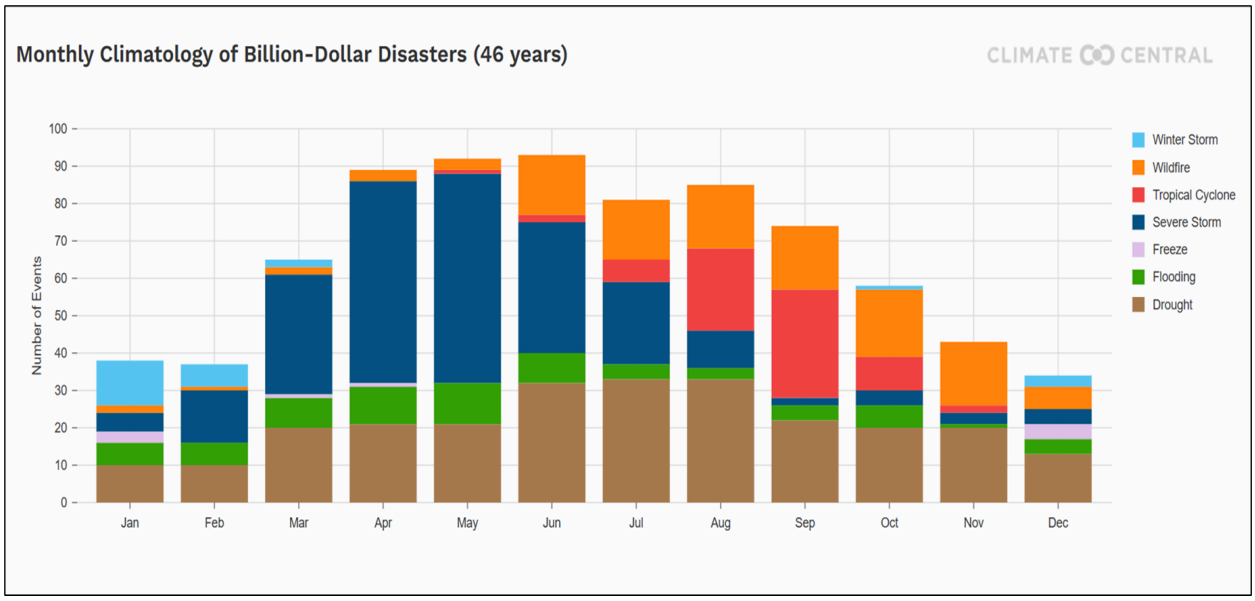

Figure 8. The monthly climatology of U.S. billion-dollar weather and climate disasters from 1980 to 2025, showing which months have the greater frequency of disasters (height of bar) and which types of events (colors) are most likely to occur in a given month. Source: Climate Central's U.S. Billion-Dollar Weather and Climate Disasters database. During spring, there is also greater potential for major river flooding. U.S. springtime flooding from snowmelt and/or heavy rainfall is a persistent hazard that affects many towns and agricultural regions within the Missouri and Mississippi River basins, among others. During the fall season, Gulf and Atlantic coast states must be vigilant about hurricane season, particularly during August and September (see figure 8).

In the spring and early summer, billion-dollar flood events often occur, and a warming atmosphere from climate change has increased the potential for extreme rainfall and costly flooding events. There were more billion-dollar flood events (26) over the last 16 years (2010-2025) than the 19 events over the preceding 30 years (1980-2009), all CPI-adjusted to 2025 dollars. The growth in property exposure in the floodplains is a big driver of losses. But a warming atmosphere holds more water vapor and has increased potential to produce heavy rainfall that can result in flooding.

The U.S. mainland has been impacted by landfalling Category 4 or 5 hurricanes in six of the last nine years. This includes Hurricanes Harvey, Irma, Maria, Michael, Laura, Ida, Ian, and Helene. In 2025, three category 5 hurricanes formed in the Atlantic basin — the highest number of category 5 hurricanes since 2005. The U.S. was fortunate that none of these category 5 hurricanes made landfall, as hurricanes are historically

the costliest billion-dollar disaster type on record. In fact, 2025 was the first year in a decade that did not see any landfalling U.S. hurricanes despite the formation of 13 named storms, which is near average for the Atlantic hurricane season.

The peak of the western U.S. wildfire season occurs during the fall months of September, October, and November (see figure 8). California, Oregon, Washington, Idaho, Montana, and Colorado often experience enhanced wildfire risk and related poor air quality for weeks to months.

Western wildfire damage during the 2017 to 2021 period was historic, exceeding $90 billion in 2025 dollars compared to approximately $60 billion in combined damage for the other 18 BDD wildfire events since 1980. The multi-year, “D4-exceptional” western drought (2014-2016) and the continual growth of the built environment along the wildland-urban interface likely contributed to the catastrophic wildfires from 2017 to 2021. The combined Palisades and Eaton wildfires in January 2025 shattered the previous most costly California wildfires of 2018, which included the Camp, Mendocino Complex, Carr, and Woolsey fires. The severity of the January 2025 wildfires was unprecedented: for the first time on record, a wildfire was the costliest billion-dollar disaster of the year, surpassing all other types of natural hazards in total damages.

Each U.S. region faces a unique combination of recurring hazards, and billion-dollar disaster events have affected every state since 1980. The combined historical risk of U.S. severe storms and river flooding events places the spring and summer seasons in the high-risk category for simultaneous extreme weather and climate events. During the fall season, hurricanes, wildfires, and drought have the highest frequency and cost across the U.S.

Compound extremes

The increase in disasters creates “compound extremes” (e.g., billion-dollar disaster events that occur at the same time or in sequence), which are an increasing problem for recovery (see figure 9).

As noted in the recent Fifth National Climate Assessment (2023), "Climate change is also increasing the risk of multiple extremes occurring simultaneously in different locations that are connected by complex human and natural systems.”

For instance, simultaneous megafires across multiple western states and back-to-back Atlantic hurricanes in 2020, 2022, and 2024, or numerous tornado outbreaks can create high demand on local, state, and federal emergency response resources.

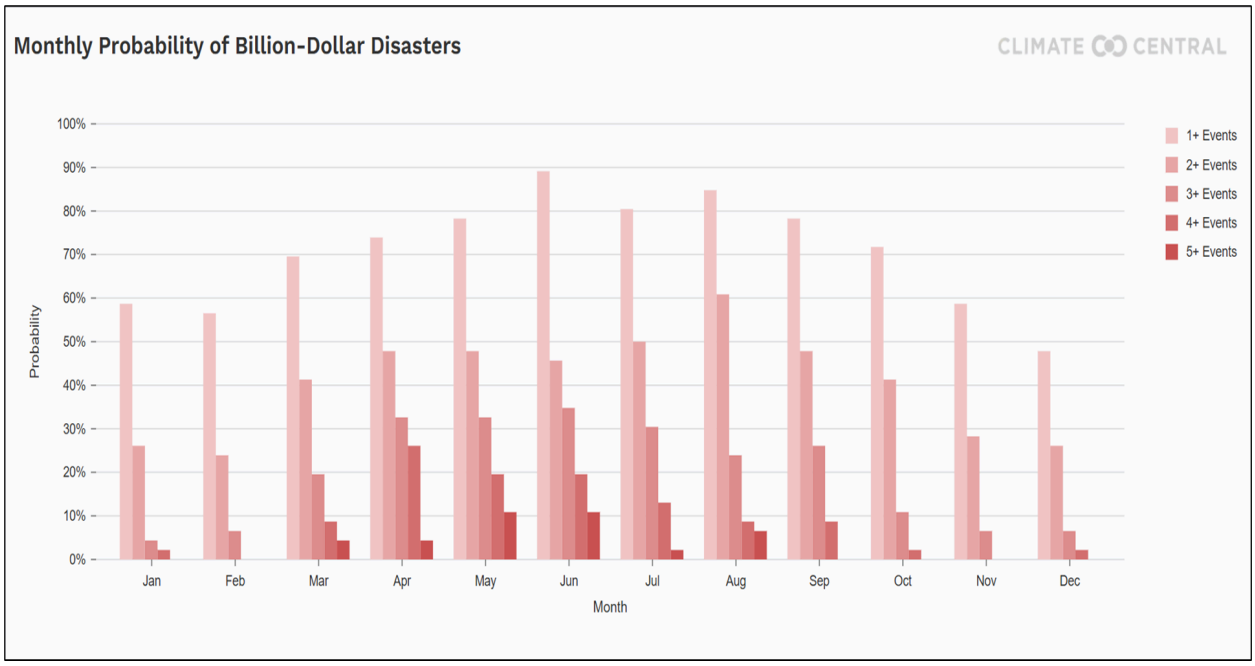

Figure 9. Frequency of a given month having at least one billion-dollar disaster (light pink bars), two or more events (medium pink bars), three or more (red), four or more (darker red), or five or more (darkest red). Billion-dollar weather and climate disasters occur in all months, but during the spring and summer (March to August), multiple, concurrent disasters are more likely. A second peak occurs in the fall, driven by tropical cyclones. Source: Climate Central's U.S. Billion-Dollar Weather and Climate Disasters database.

Fewer days between disasters

In addition, there are fewer days between these disasters across the U.S. Over the last 10 years (2016-2025), there were just 16 days on average between billion-dollar disasters, compared to 82 days in the 1980s.

Shorter time intervals between disasters often mean less time and resources available to respond, recover, and prepare for future events. This increased frequency of events produces cascading impacts that are particularly challenging to socioeconomically vulnerable populations.

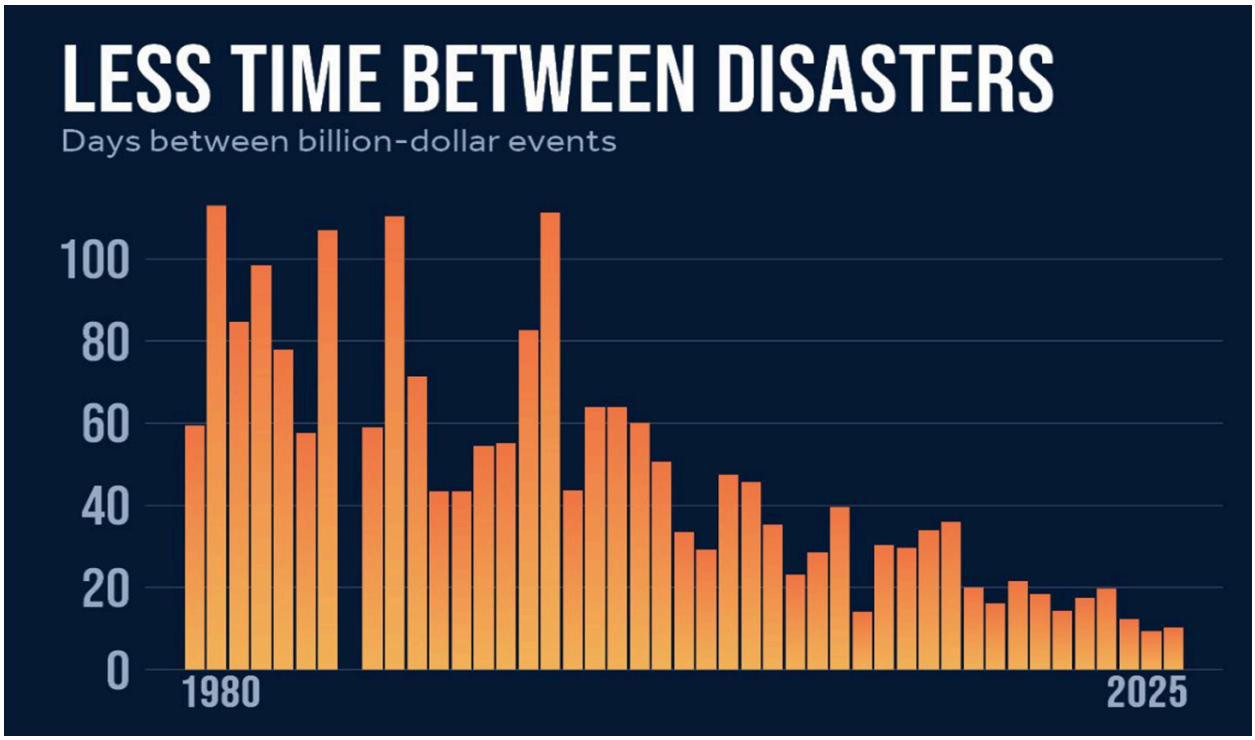

Figure 10. The average number of days between individual billion-dollar disaster events around the U.S. (1980-2025).

Upcoming new research from Climate Central

Given the increase in both compound extreme events and their impacts, Climate Central is developing a series of enhancements to this disaster-cost research.

Several research initiatives that we will develop and make public in 2026 include:

- Examining and summarizing all weather and climate events with at least $100 million in damages (1980-present) to augment the historical billion-dollar disaster database.
- Analyzing the primary cost driver for all severe storm events — better defining if they are tornado, hail, or high wind/derecho-type events.
- Separating and individually quantifying all U.S. wildfire events down to the $100 million level, which is a departure from the aggregate, season-long impacts of billion-dollar wildfires examined in previous years.
- Continuing to enhance our research website tools and offering additional layers of information, including how power outages correspond with these disaster events over space and time.

Methodology

All billion-dollar disaster cost estimates are adjusted for inflation using the Consumer Price Index (CPI). U.S. billion-dollar disaster data and analysis for 2025 (including CPI-adjustments) reflects the latest available data as of December 31, 2025.

See the full methodology.

Read the Frequently Asked Questions on Climate Central's U.S. Billion-Dollar Weather and Climate Disasters database.

Report contributors

Analyst and writer: Adam Smith
Editors: Raina DeFonza, Jen Brady, Kelly Van Baalen
Design: Megan Martin

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