HISTORICAL STORM EVENTS IN THE UNITED STATES
Overview

Filter by Year

All

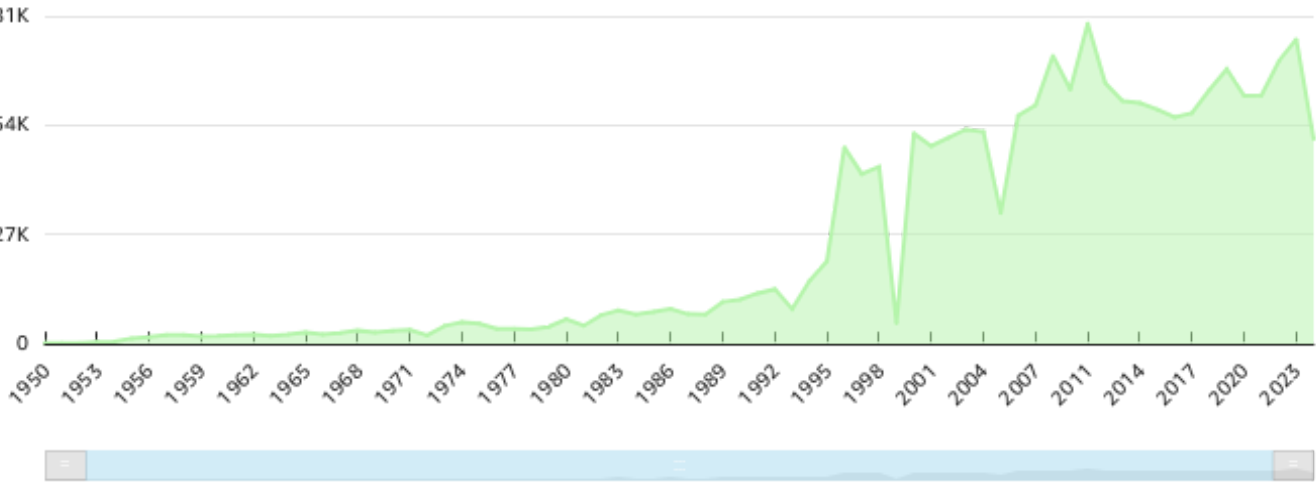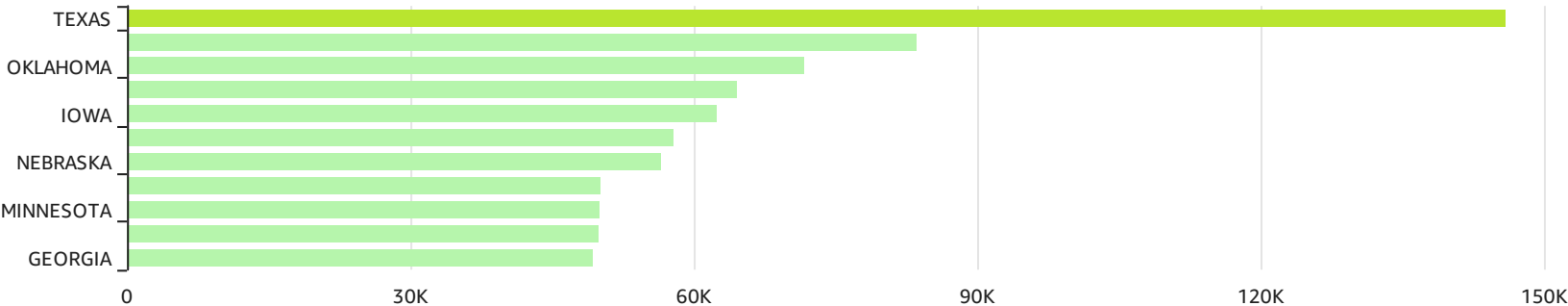| Resulting Direct Injuries	Resulting Indirect Injuries	Resulting Deaths	Damaged Property Value ($)
154.27K	14.33K	20.96K	15.46B

Trend of Storm Event Occurrence

States with Highest Number of Storm Events in 2024

- TEXAS
- OKLAHOMA
- IOWA
- NEBRASKA
- MINNESOTA
- GEORGIA

(axis: 0 – 30K – 60K – 90K – 120K – 150K)

Most Frequent Storm Events

Thunderstorm Wind, Hail, Drought, High Surf, Winter Storm, High Wind, Tornado, Flash Flood, Flood, Winter Weather, Marine Thunderstorm Wind, Lightning, Lakeshore Flood, TORNADOES, TSTM WIND, HAIL, Hurricane (Typhoon), Volcanic Ashfall, THUNDERSTORM WINDS/HEAVY RAIN, Ice Storm, Marine Dense Fog, Strong Wind, Marine Tropical Storm, Marine Hurricane/Typhoon, Sneakerwave, Hurricane, Funnel Cloud, Tropical Depression, Sleet, Coastal Flood, Debris Flow, Storm Surge/Tide, Seiche, Tsunami, Waterspout, TORNADO/WATERSPOUT, Freezing Fog, Cold/Wind Chill, Frost/Freeze, Avalanche, THUNDERSTORM WINDS/FLOODING, Marine High Wind, Dense Fog, Dense Smoke, THUNDERSTORM WIND/ TREE, Marine Lightning, Tropical Storm, HAIL FLOODING, Heavy Rain, Extreme Cold/Wind Chill, Dust Storm, Rip Current, Excessive Heat, Wildfire, THUNDERSTORM WIND/ TREES, HAIL/ICY ROADS, Volcanic Ash, Marine Hail, THUNDERSTORM WINDS HEAVY RAIN, Heat, Heavy Snow, Lake-Effect Snow, Dust Devil, Blizzard, Northern Lights, Marine Strong Wind, THUNDERSTORM WINDS/FLOOD, THUNDERSTORM WINDS/FLASH FLOOD, THUNDERSTORM WINDS LIGHTNING, Astronomical Low Tide, Marine Tropical Depression, THUNDERSTORM WINDS FUNNEL CLOU

Months with Most Storm Events

- June
- July
- May
- April
- August
- January
- March
- February
- December
- September

(axis: 0 – 50K – 100K – 150K – 200K – 250K – 300K)
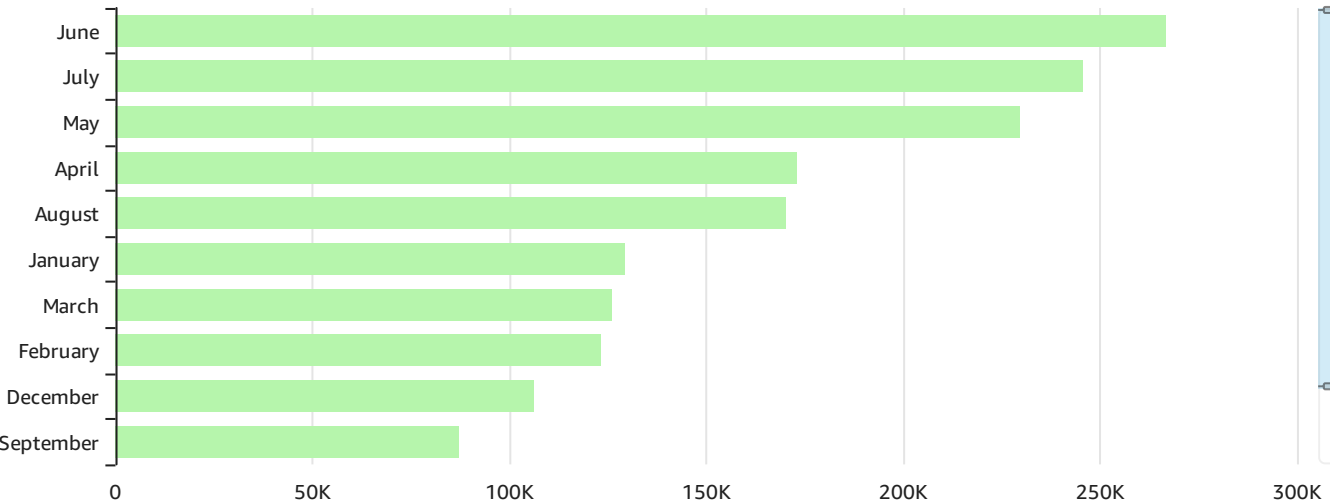
HISTORICAL STORM EVENTS IN THE UNITED STATES
Flooding
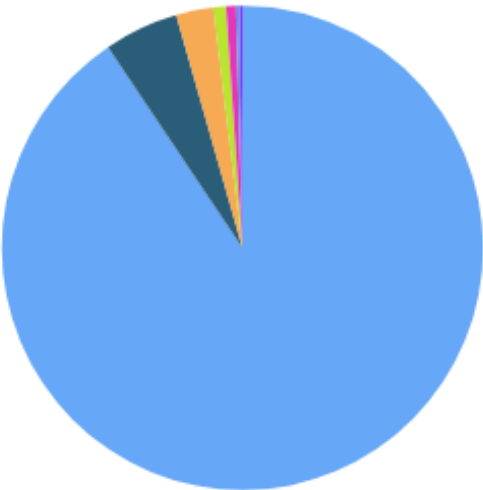
Resulting Total Injuries
8.81K

Resulting Deaths
2.41K

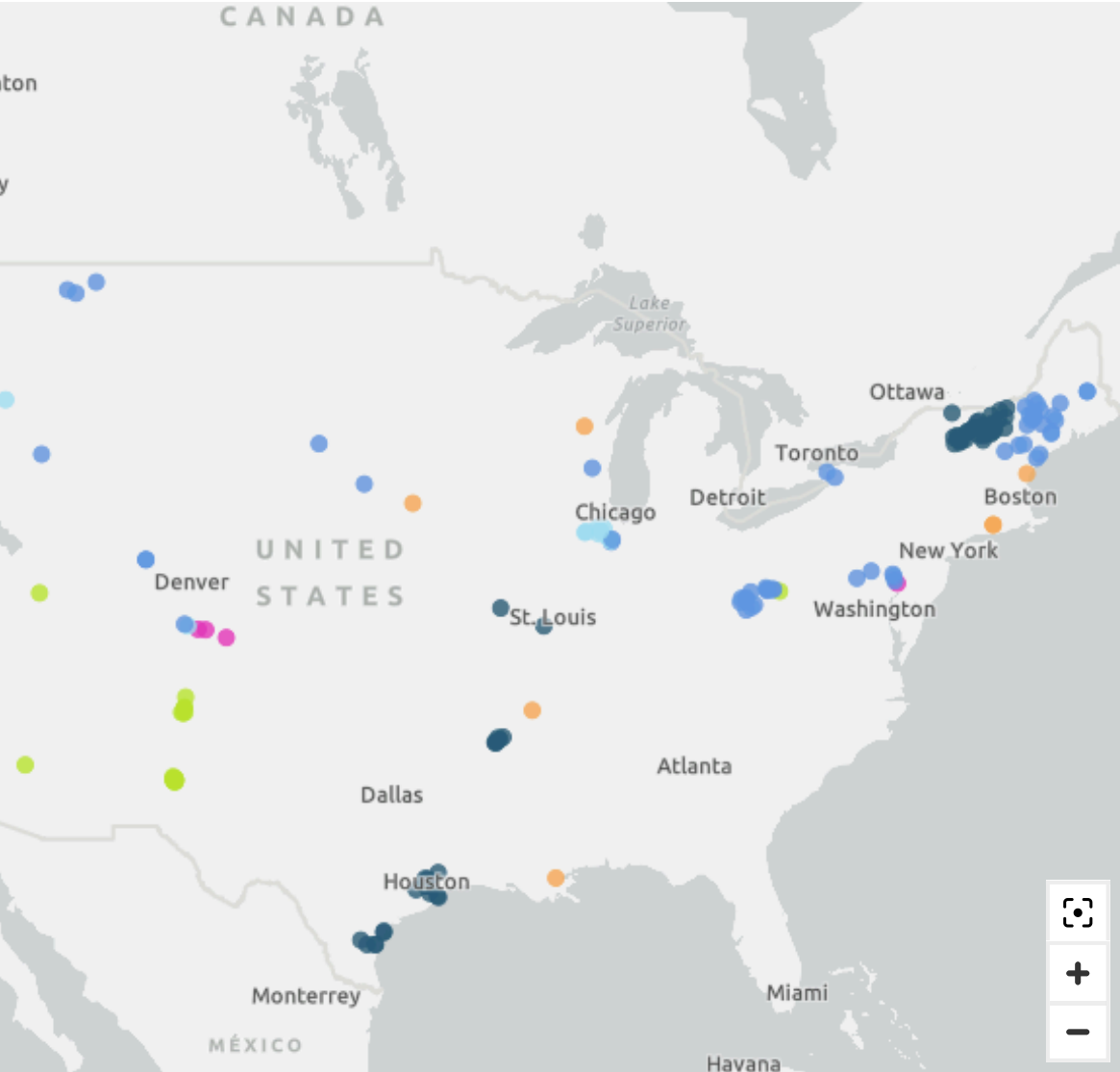### Damaged Property Value ($)
3.32B

Top Types of Flood

FLOOD CAUSE
- Heavy Rain
- Heavy Rain / Snow Melt
- Heavy Rain / Tropical Sys…
- Heavy Rain / Burn Area
- Ice Jam
- Dam / Levee Break
- Planned Dam Release

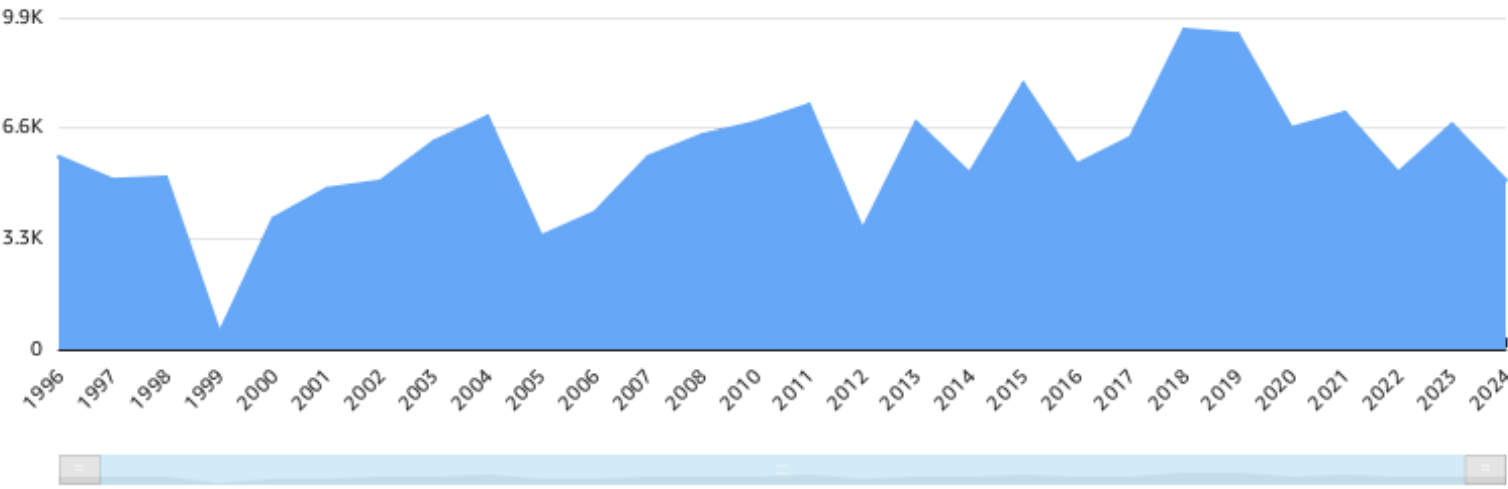### Other Flood Causes besides Heavy Rain by Location
SHOWING TOP 174 IN BEGIN_LON, BEGIN_LAT AND TOP 6 IN FLOOD_CAUSE

FLOOD CAUSE
- Dam / Levee Break
- Heavy Rain / Burn Area
- Heavy Rain / Snow Melt
- Heavy Rain / Tropical System
- Ice Jam
- Planned Dam Release

Yearly Trend of Flood Events

HISTORICAL STORM EVENTS IN THE UNITED STATES
Wildfire and Excessive Heat

Resulting Total Injuries
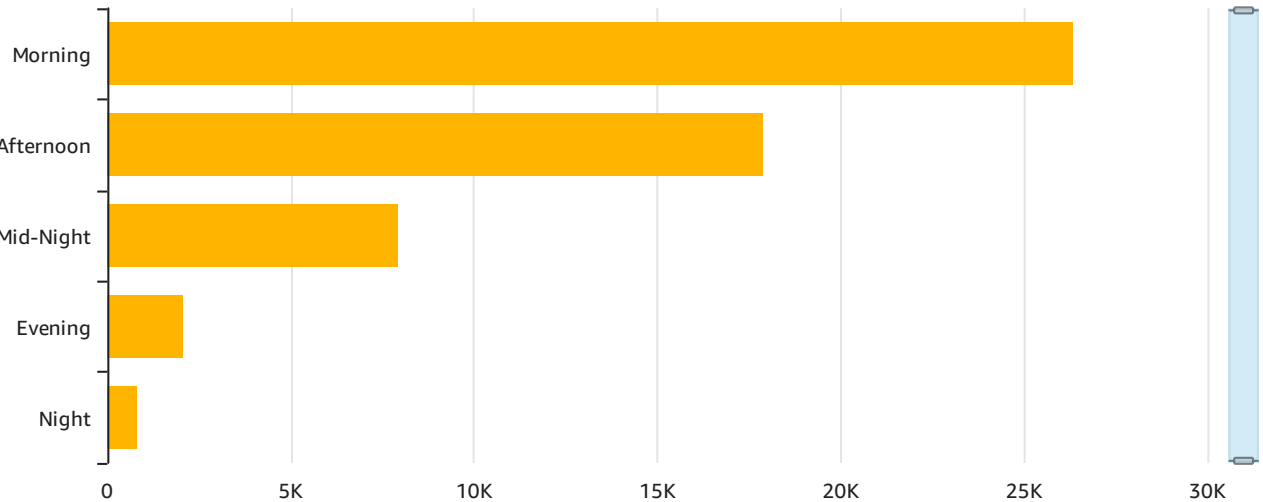
18.78K

Resulting Deaths

4.59K

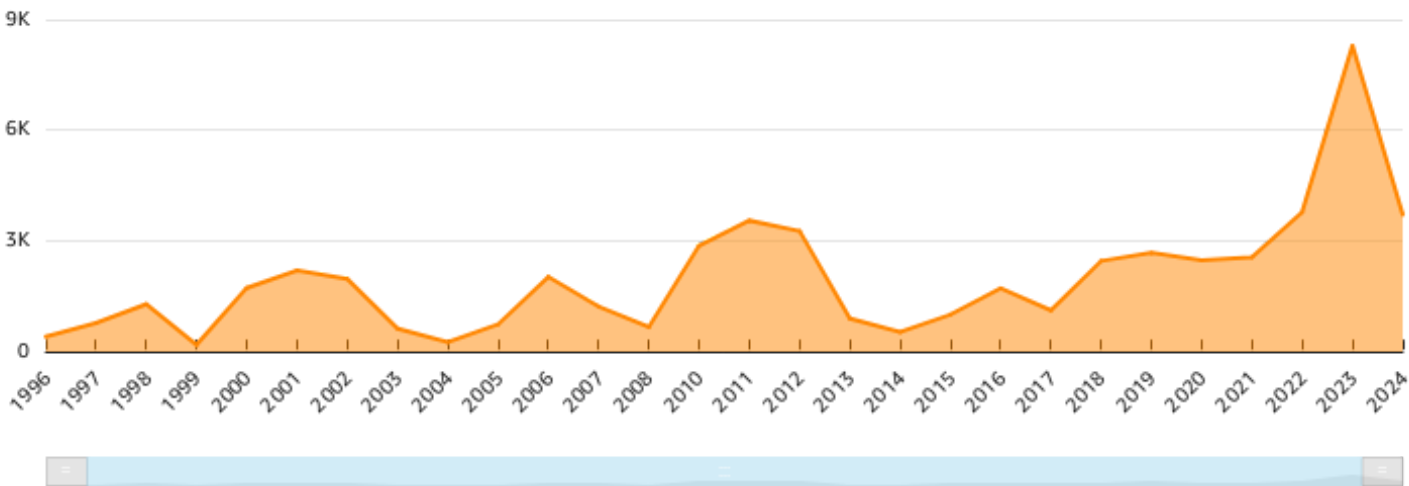**Damaged Property Value ($)**

245.08M

Number of Wildfire and Extreme Heat Events per State
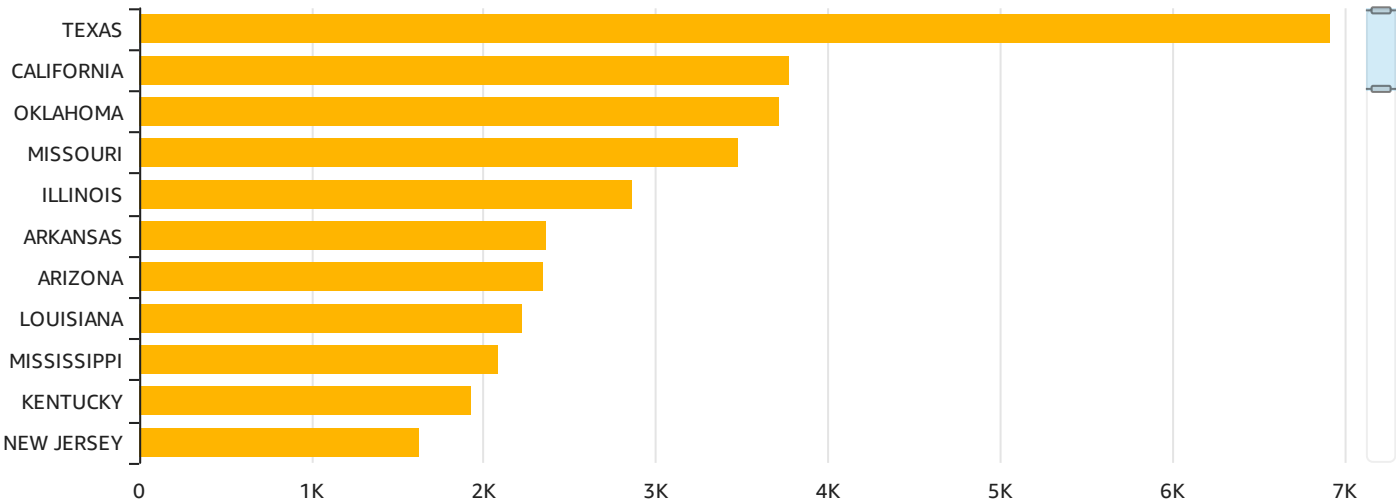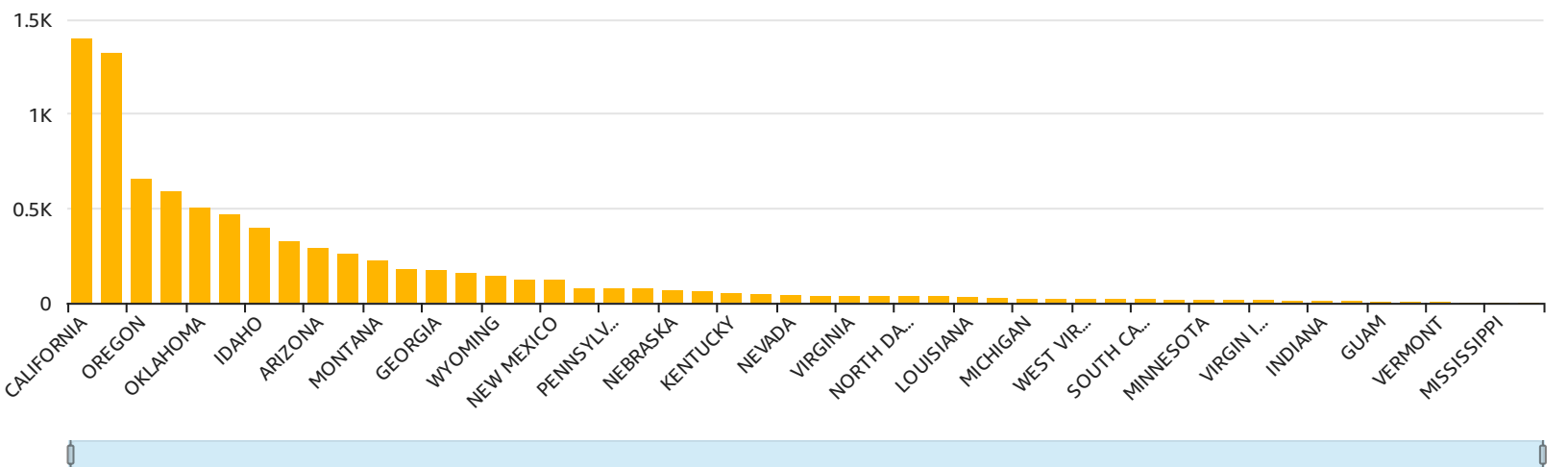

Period when Wildfire/Heat Events Begin

Wildfire and Excess Heat Events Trend

Number of Wildfire Events per State

HISTORICAL STORM EVENTS IN THE UNITED STATES
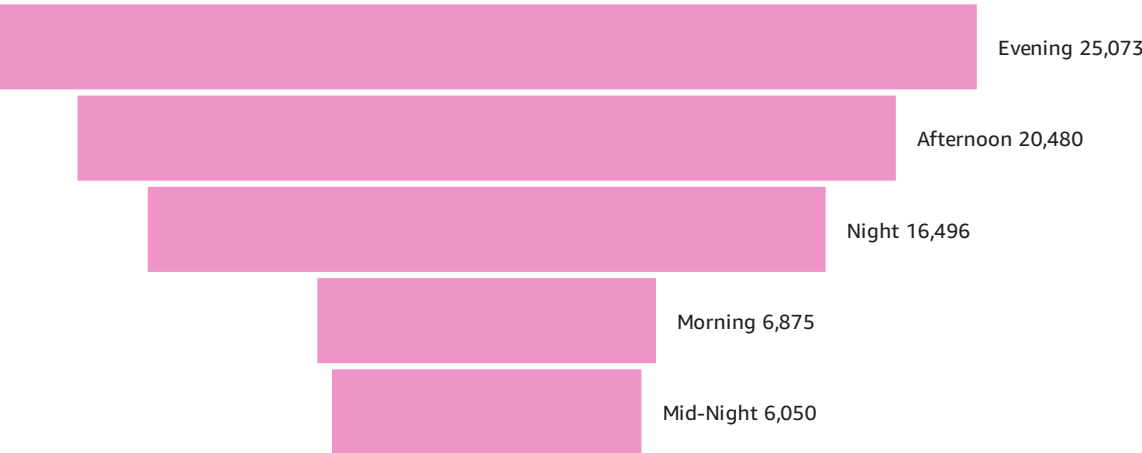## Tornadoes

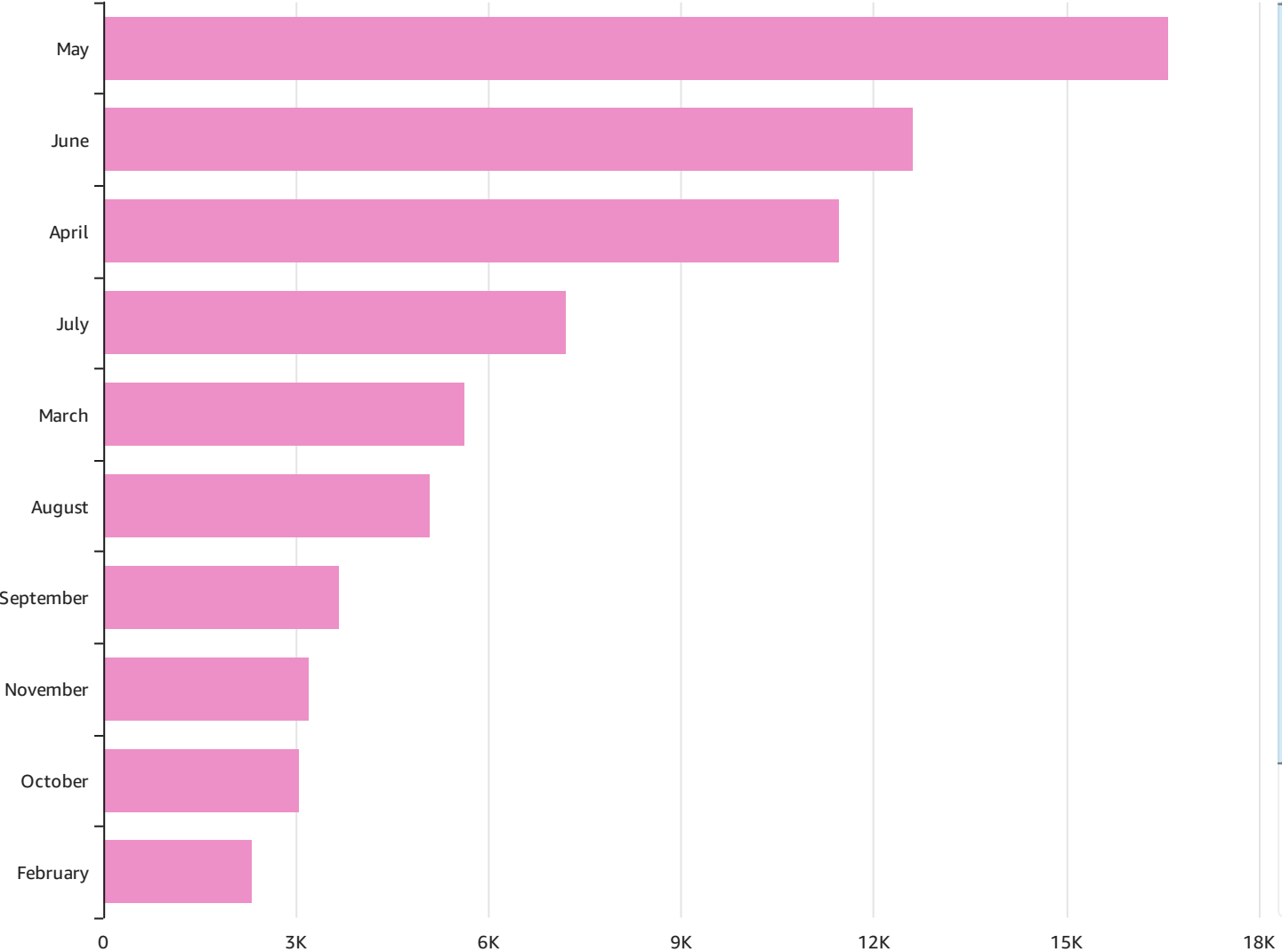**Resulting Total Injuries**

96.7K
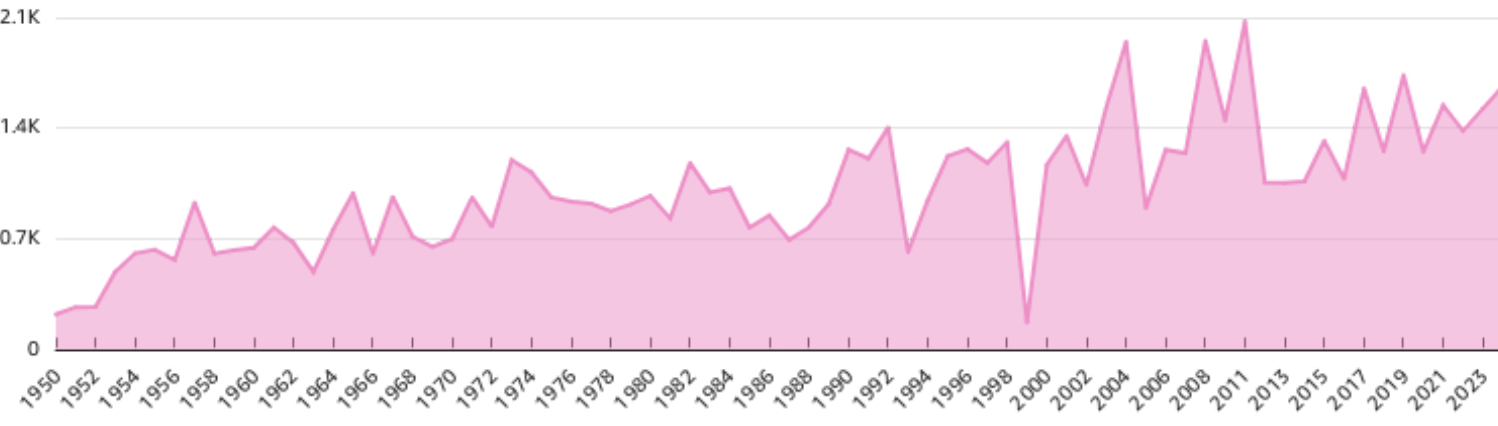
Resulting Deaths

6.16K

Damaged Property Value ($)

3.76B

Day Period with Most Tornado Events

- Evening 25,073
- Afternoon 20,480
- Night 16,496
- Morning 6,875
- Mid-Night 6,050

Months with Most Frequent Tornadoes

Tornado Events Trend

HISTORICAL STORM EVENTS IN THE UNITED STATES
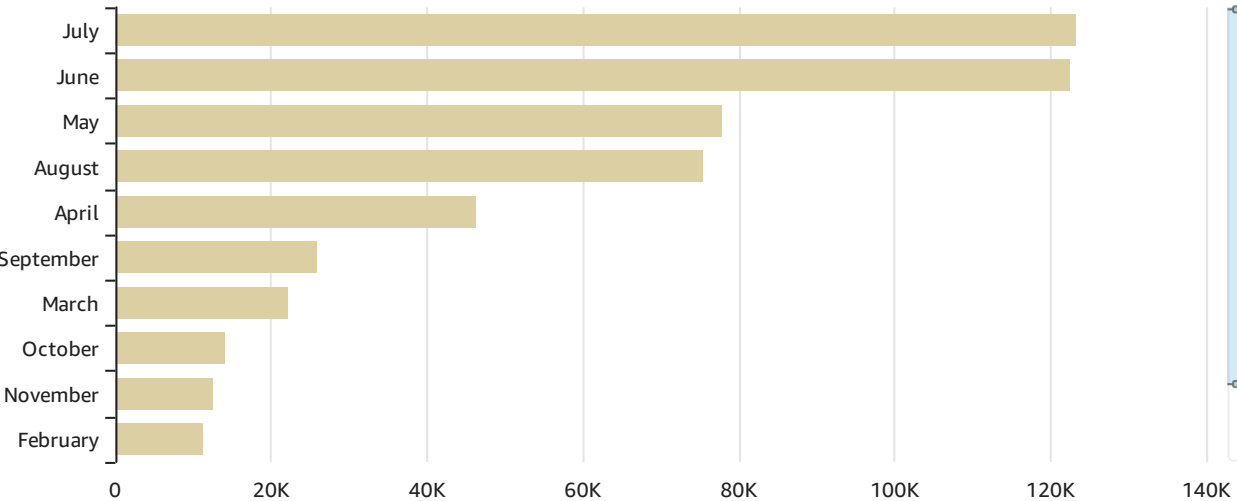## Thunderstorm

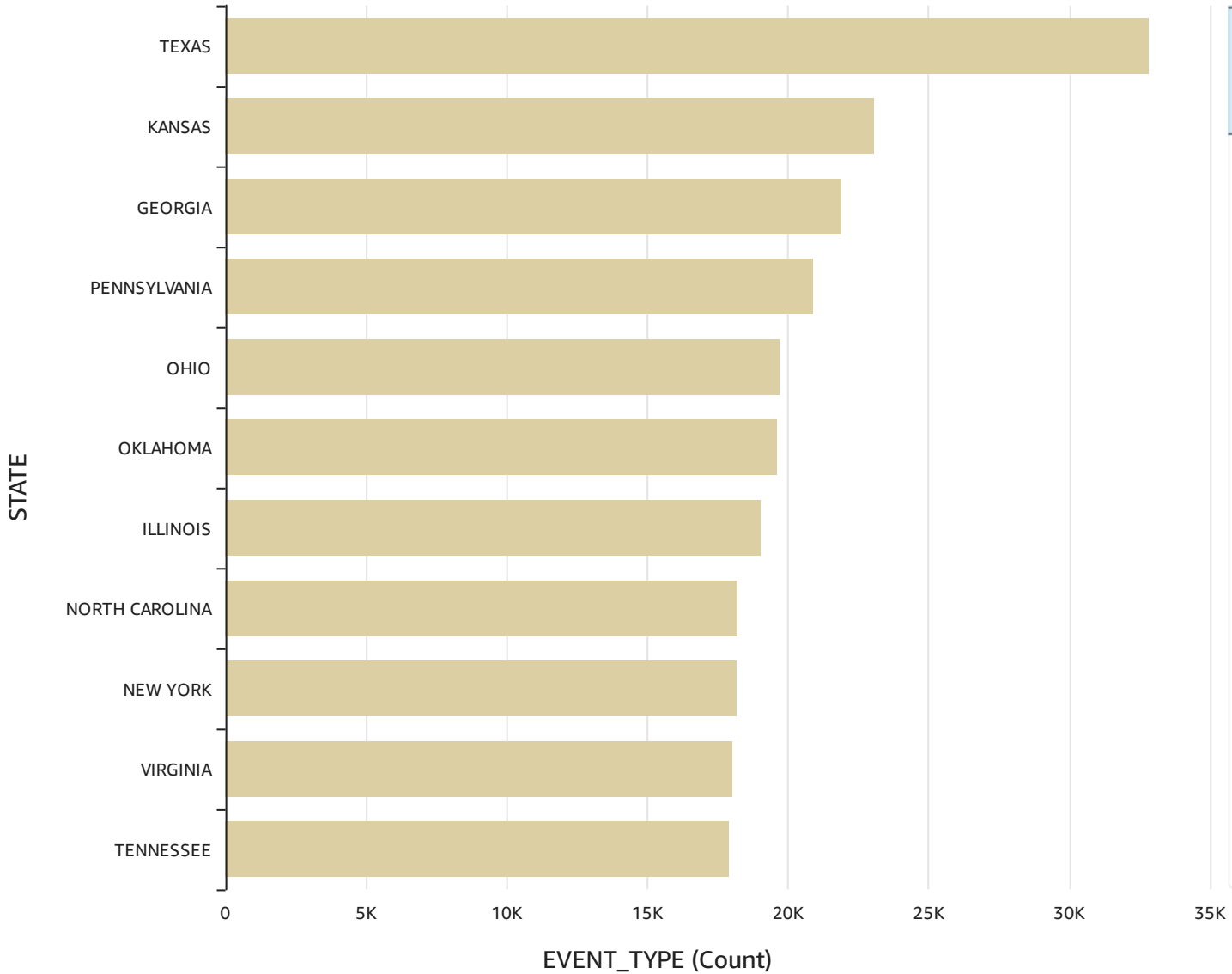**Resulting Total Injuries**

11.04K

Resulting Deaths
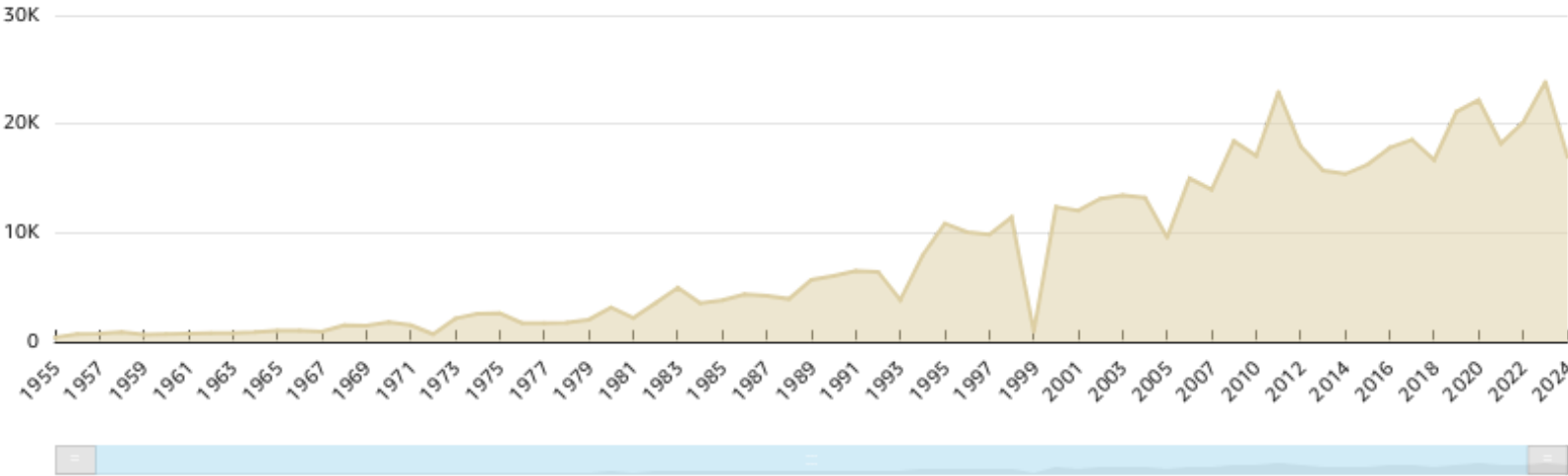
1.11K

Damaged Property Value ($)

3.75B

Count of Event_type by Month_name

Tornado Events Trend

Count of Event_type by State

HISTORICAL STORM EVENTS IN THE UNITED STATES
Carbon Emissions

Carbon Emissions by State ('million MT)

STATE (vertical axis)

- TEXAS
- CALIFORNIA
- PENNSYLVANIA
- OHIO
- ILLINOIS
- NEW YORK
- FLORIDA
- INDIANA
- LOUISIANA
- MICHIGAN
- GEORGIA

Carbon Emission (Sum): 0, 5K, 10K, 15K, 20K, 25K, 30K, 35K
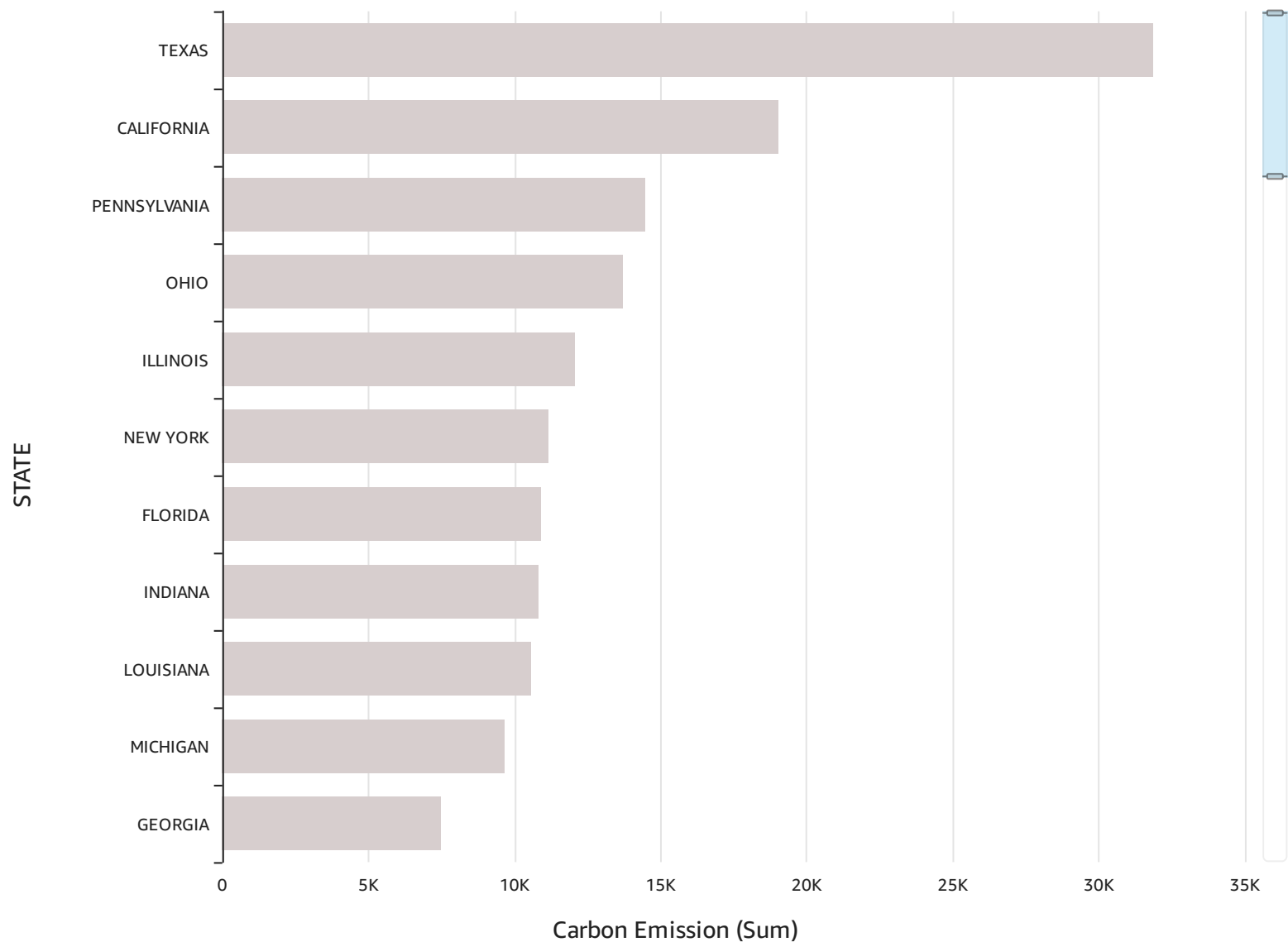
Trend of Total Carbon Emissions ('million MT)

Carbon Emission (Sum): 0, 1K, 2K, 3K, 4K, 5K, 6K

Year: 1970, 1972, 1974, 1976, 1978, 1980, 1982, 1984, 1986, 1988, 1990, 1992, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018, 2020, 2022, 2024
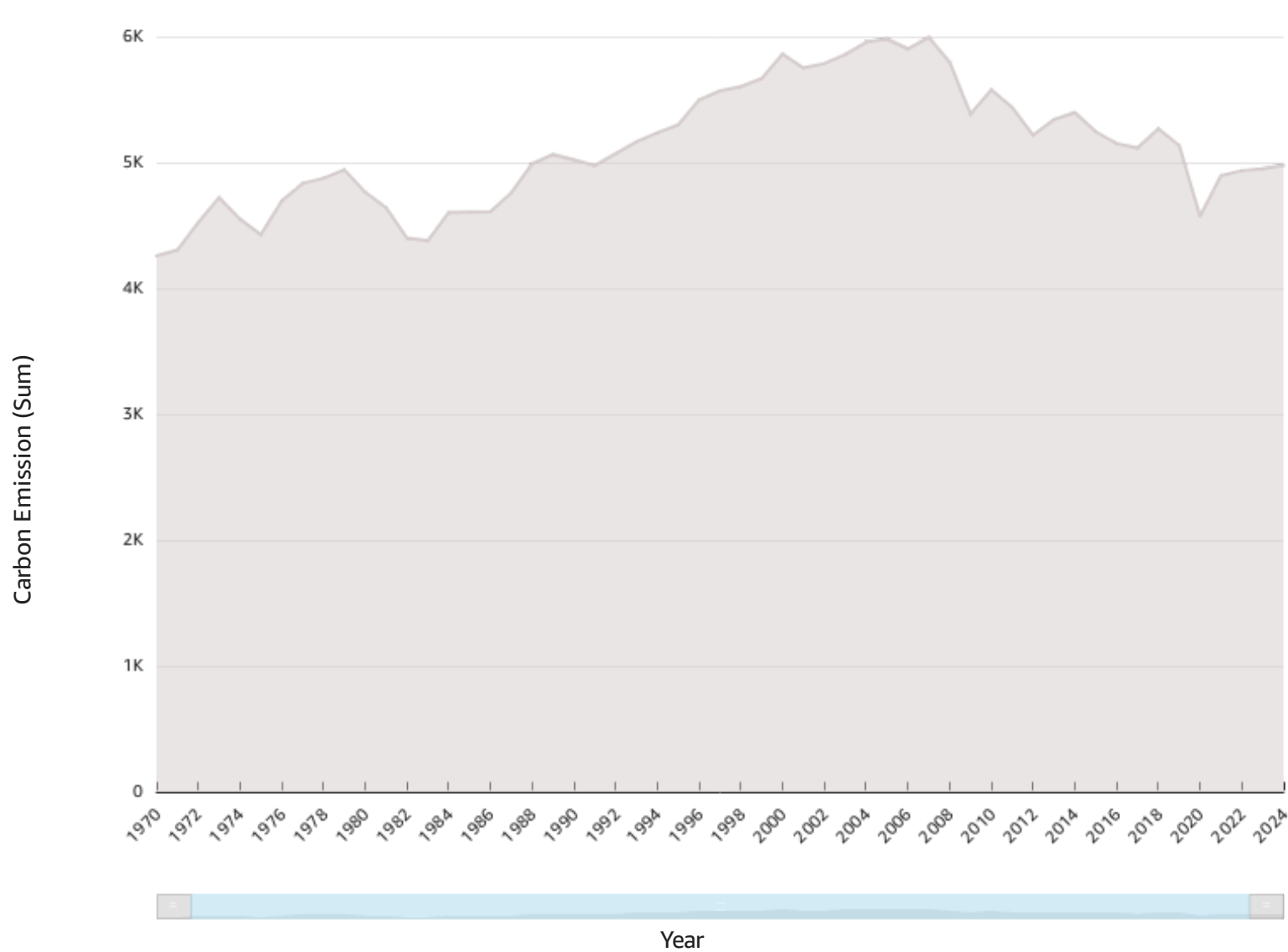
HISTORICAL STORM EVENTS IN THE UNITED STATES
Information Page

Description

In this visualization analysis, I examine the weather events across all the states in the USA and present the results in a 6-page dashboard. The analysis covers a timeline from 1970 upto July 2024. More recent weather events that occurred after July 2024 are not included in the analysis.

The trend of Carbon emissions across the states in the US were also examined from 1970 to 2024. Data from the Energy Information Administration was provided up to 2022. Therefore, *I projected the data for 2023 and 2024* based on the observable trends.

The Overview page presents an aggregate summary of storm events including a word map of the more frequent storm events as well as their impacts on life and property.

The next four pages including Flooding, Wildfire, Tornadoes, and Thunderstorm drills down further to examine specific weather events over the years, the states of most frequent occurences, and the time of the year when they occur the most.

Finally, the Carbon Emissions page presents the trend of annual carbon emission in the US and the emissions for each state.

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Glossary

I attempted to make this report easy to understand, with minimal technical terms. Some terms in the dataset/used in the visuals are defined as follows.

STATE - The state name where the event occurred.
STORM EVENTS - The weather event for which that record is inserted e.g. Tornado, Flood etc.
MONTH - The month in which the event occurred.
RESULTING INJURIES - The number of injuries to humans attributable to the storm event. Could be DIRECT INJURIES or INDIRECT INJURIES.
DAMAGED PROPERTY - An estimated amount of damage to property incurred by the weather event
FLOOD CAUSE - In the case of flooding, the reasons that let to the flood, e.g. heavy rainfall.

An exhaustive list of definitions of terms is available at https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/Storm-Data-Bulk-csv-Format.pdf