

U.S. Federal Emergencies Over Time

Overview

In March of 2017, the whole East Coast braced themselves for the arrival of Stella, a formidable winter snowstorm that the National Weather Service predicted would deposit over 20 inches of snow in New York City and elsewhere.

While NYC and most major cities escaped relatively unscathed, Stella did hit blizzard status in other parts of New England and was rated a Category 3 or "major" snowstorm by NOAA earlier this week. According to the Federal Emergency Management Agency (FEMA), however, despite the NWS's dire predictions, Stella still wasn't severe enough for the Government to declare a state of emergency.

In fact, the last snowstorm that warranted federal aid deployed by FEMA was in January of 2016, during winter storm Jonas (incidentally, a Category 5 or "extreme" incident).

That got us curious. A federal disaster or emergency declaration provides federal assistance programs and funds to supplement state and local government efforts during some kind of catastrophe. We wondered if there are any interesting trends in how FEMA was deploying its resources over time.

We were able to load and analyze on Interana a public data set of emergencies and disasters declared by the President of the United States since 1953, obtained through Kaggle. Here were some things we uncovered.

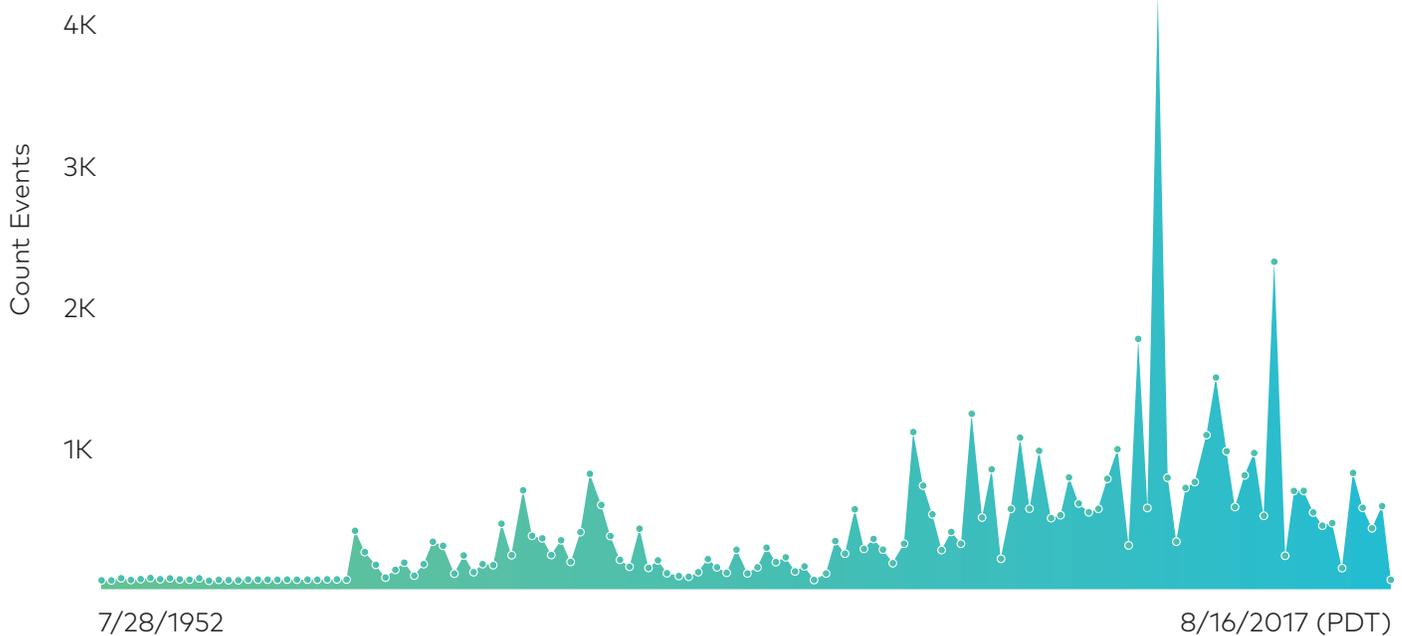


The data we looked at spanned from 1953 to March 2017. Over that period of time, there were over 45K incidents of FEMA resource deployment. Basically, this is counting every time a different U.S. county required some type of federal assistance during a certain emergency or disaster. (Note that this is not a count of the number of unique disasters over this period of time.)

46.19K

Number of FEMA deployments over time.

The graph below shows the number of FEMA resource deployments every six months from 1/1/1953 to 3/1/2017. The general trend is that federal assistance has increased over time. The major thing that caught our eye was the huge spike reaching past 4K. What could that possibly be?



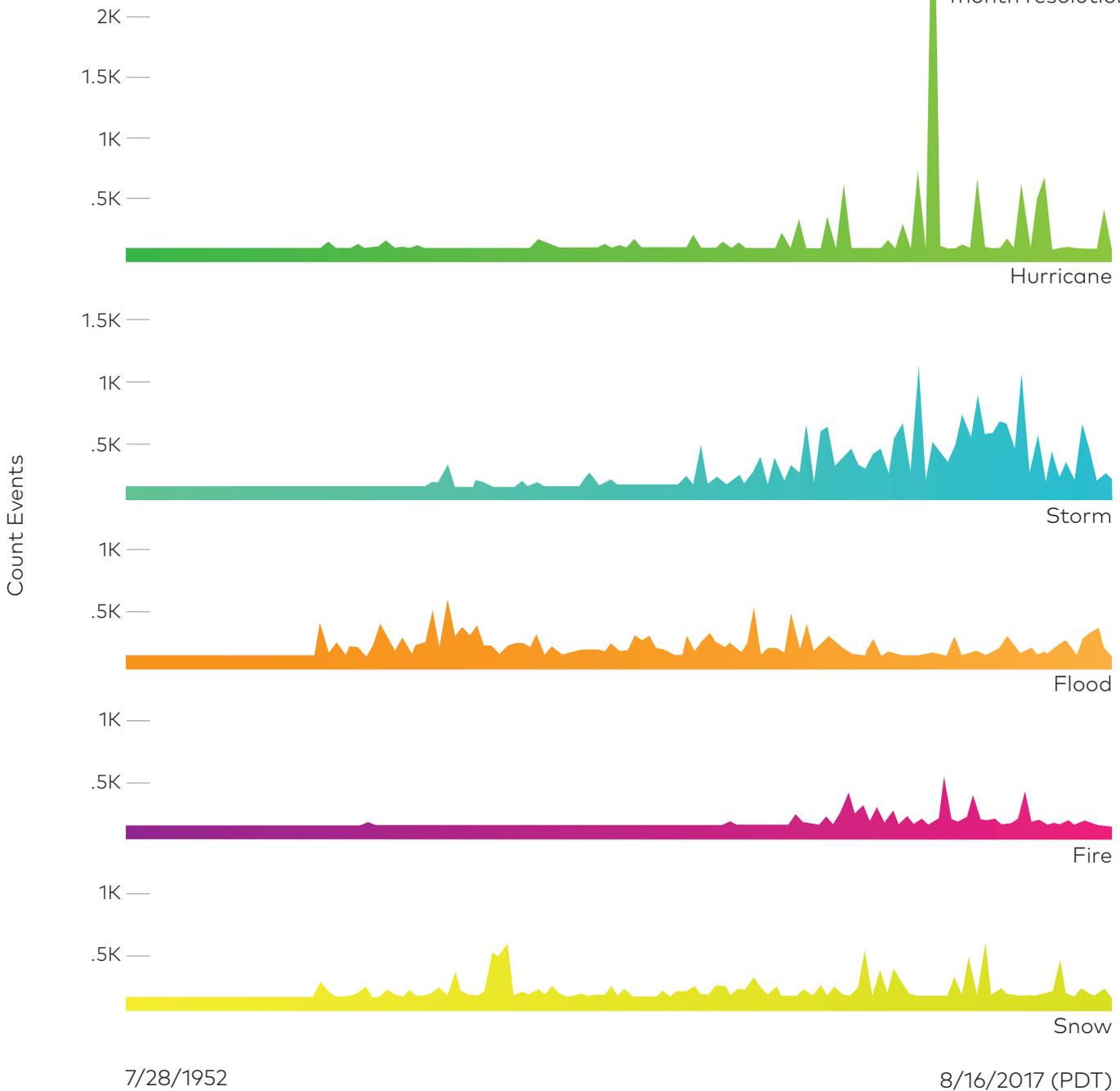
To find out what kind of disaster would have prompted such a high numbers of emergency assistance, we quickly grouped the data by Disaster Type (which you can do with just a click of a button in Interana) and took a look at those trends over time.



Number of FEMA deployments by disaster type.

The green line shows that the spike in federal assistance in fall of 2005 was due to a hurricane — Hurricane Katrina. A quick look at the raw data shows us that Hurricane Katrina warranted the most number of emergency and disaster declarations by the Federal Government out of any other disaster in the past 60 years.

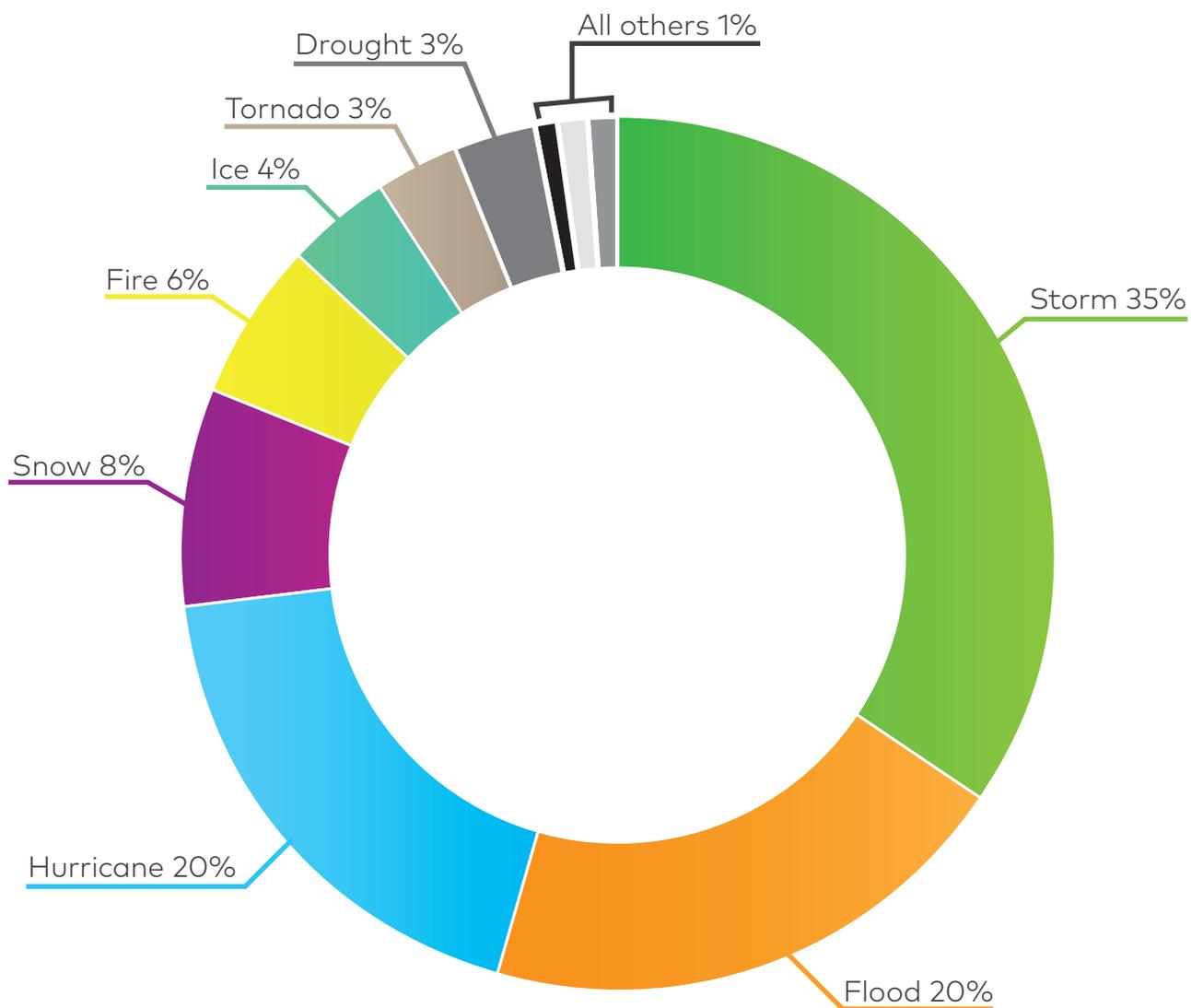
Hurricane
Time ending 12:00am (PDT) on 10/18/2005
3,694 events in 6 month resolution.



So what about snowstorms like Stella and Jonas? Is there a history of federal emergencies being declared in the case of severe winter weather? First we took a look at the total percentage of emergencies that were declared due to winter weather disasters.

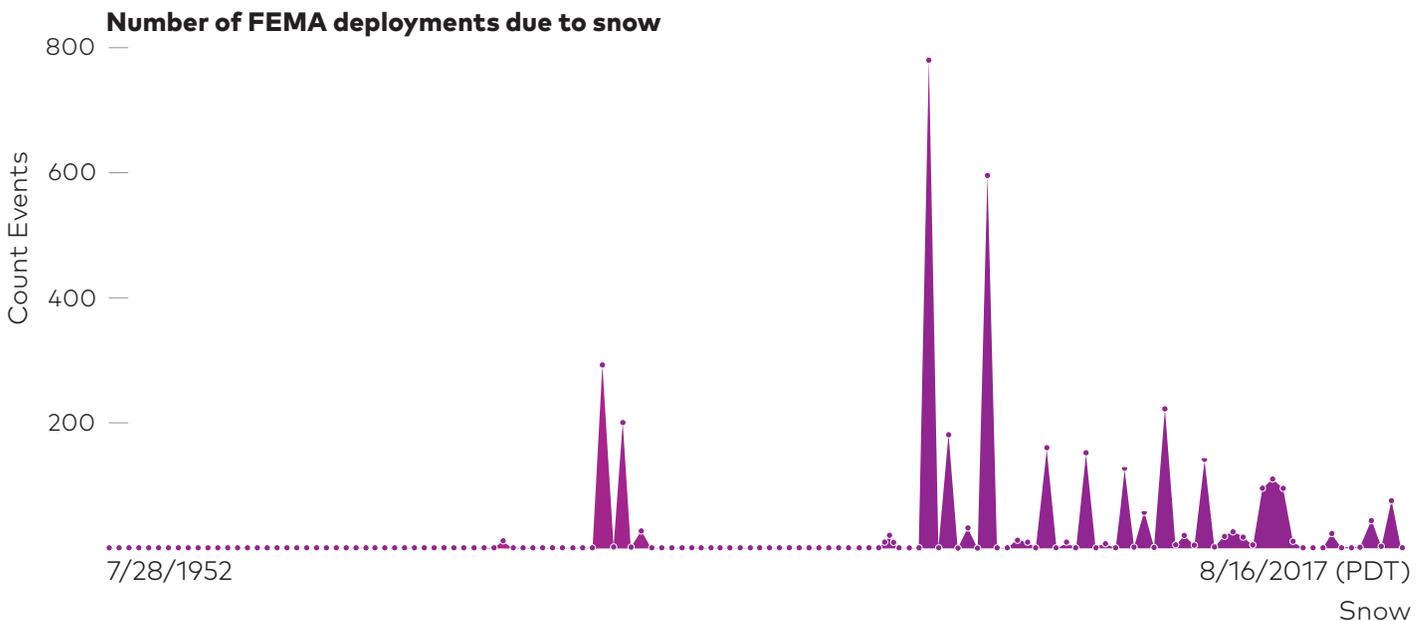
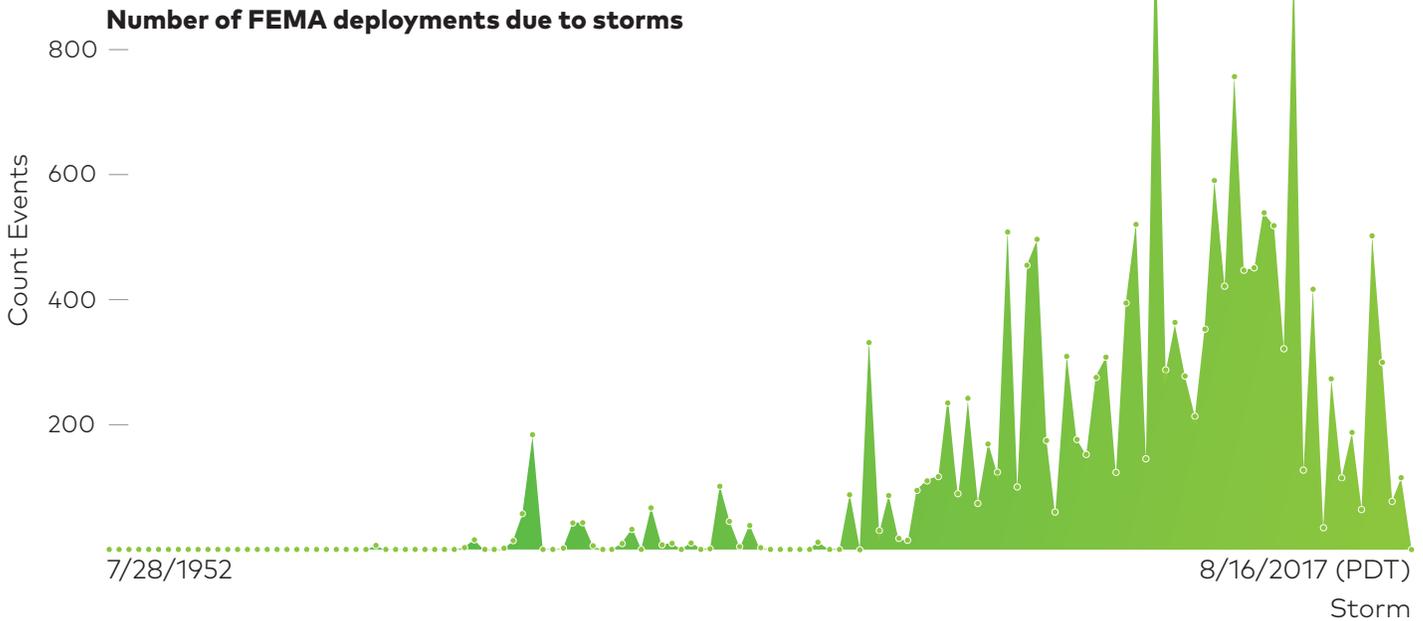
Since 1953, snow and ice incidents only made up about 12% of the total number of FEMA resource deployments, while storms made up 35%. If we compare deployments due to snow vs. storm incidents over time, we get a graph like this:

Percentage of FEMA resource deployments by disaster type



Compared to storm emergencies, we haven't had any major snow-related emergencies in recent years. In fact, the most number of federal emergency declarations due to a snow incident was back in 1993 — that was most likely caused by the 1993 Storm of the Century.

Curious to learn more about how we used Interana to analyze this data set? Get in touch with us or check out our live demo to play with this data set yourself!



About Interana

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