Bowie National LLC.
Storm Events

Meeting the Team

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Scenario

Bowie National LLC's CEO, Dr.Stephanie Miller has sought after recommendations on if and how the agency should augment cost to consumers, add additional coverage options,and make other changes to the business. The insurance company has gathered a data science team in order to collect data of various effects from storm events to provide Bowie National with a solution to the posed questions.

Overview of the Project

This project will focus on benchmark states that have suffered the most high impact storm events. This will allow us to gauge the aftermath of storm events and analyze how this data can affect our policies. The data would include property damage, deaths related to the storms, and how much other companies have gave for storm relief.

Questions

What was the frequency of Hurricanes, Floods and Tornadoes and Wildfires?

What was the total property damages for these states ?

What is the total cost of claims paid out?

How many fatalities occurred in these states ?

The Data

NOAA Data Set

- NOAA database is a data set that contains storm event data, dating back to 1950. Our purpose of using the storm event database was to gather relevant information that would be useful to a company that offers insurance coverage. These instances would include property damage, occurrences of the storm, and deaths.

Property Damage by Storm Type, 2001-2011

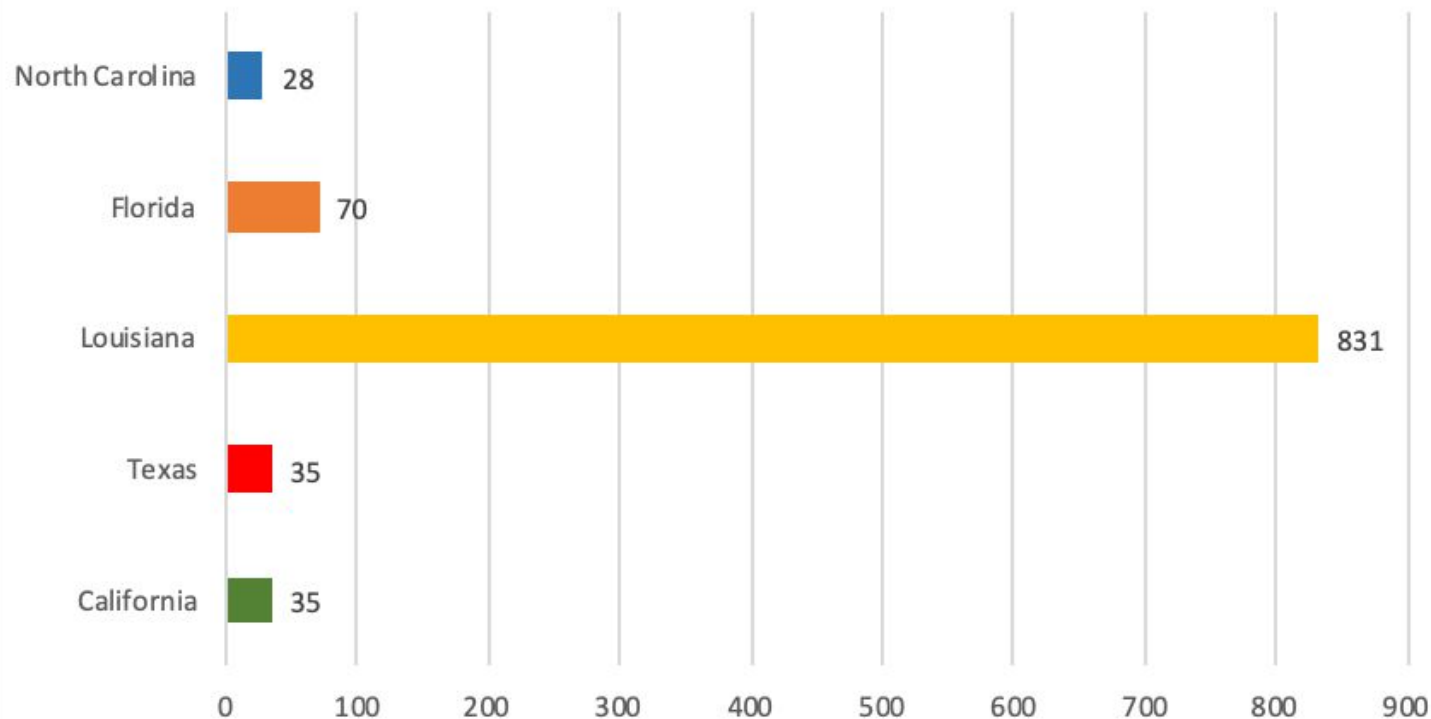| State	Tornado	Wildfire	Hurricane	Flood	Total
California	$8,084,000	$2,400,000,000	$0	$973,268,000	$3,381,352,000
Texas	$169,458,000	$113,334,000	$8,123,000,000	$73,207,000	$8,478,999,000
Louisiana	$140,265,000	$106,000	$22,328,000,000	$57,569,000	$22,525,940,000
Florida	$390,891,000	$36,812,000	$27,603,000,000	$361,874,000	$28,392,577,000
North Carolina	$65,504,000	$2,100,000	$538,752,000	$178,015,000	$784,371,000

Occurrences of Each Storm Event, 2001-2011
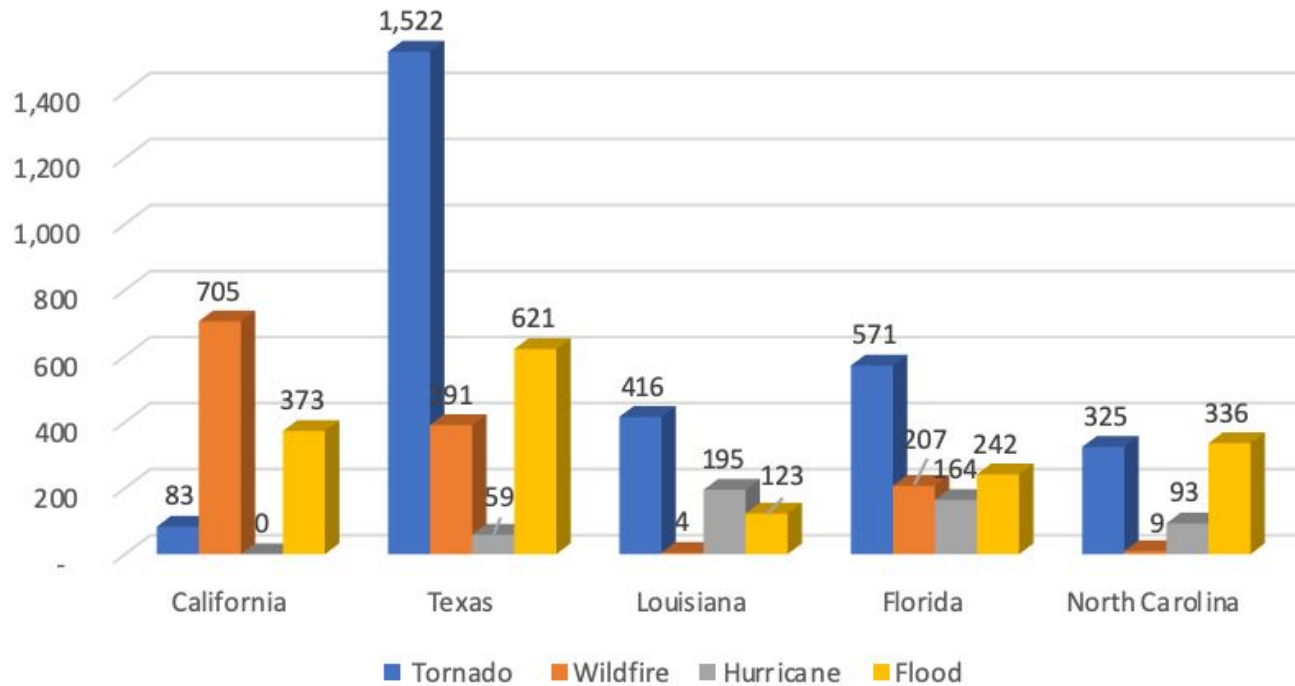
Occurrences of Each Storm Event(Cont.)

- California has not had a hurricane touch its soil since 2001. A direct result of the states location near cold sea water
- Texas has had the most tornadoes and floods, California has the most wildfires, and Louisiana has had the most hurricanes.
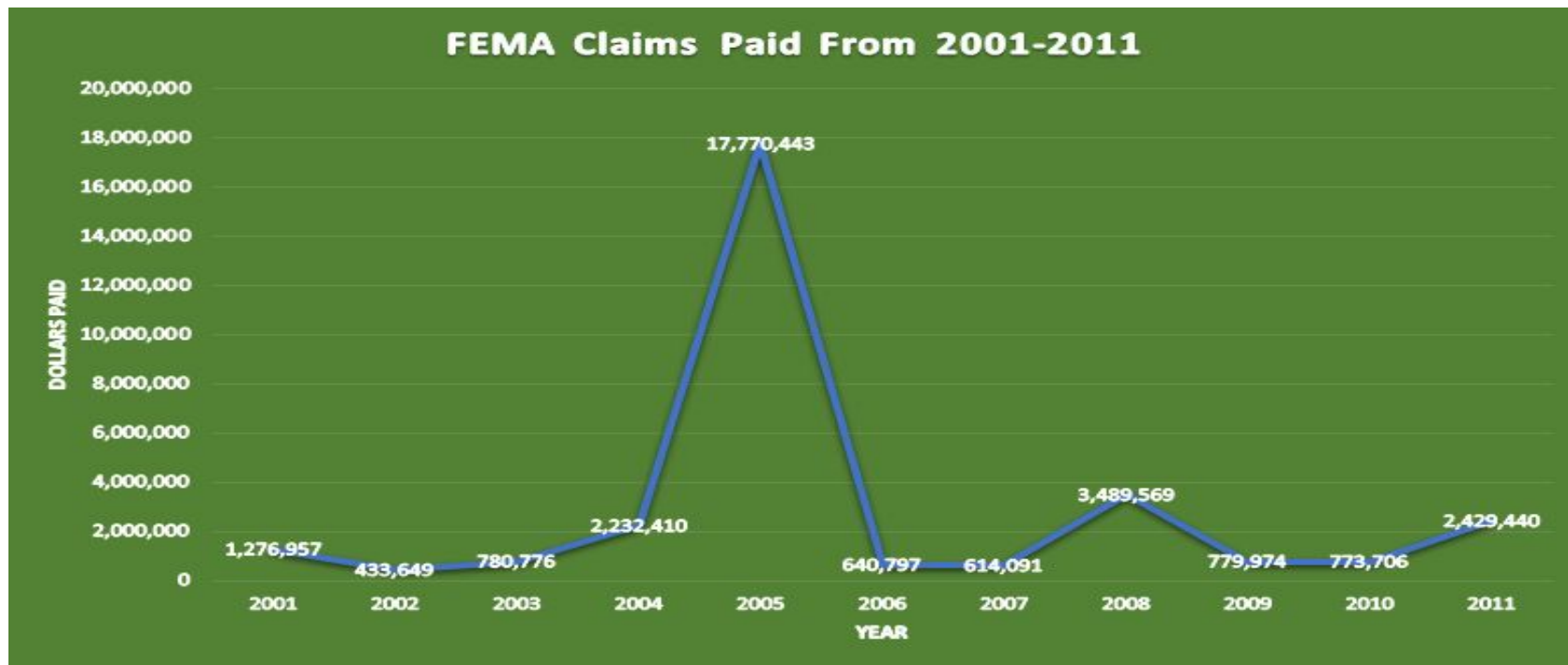
Total Deaths Caused by Storms Combined(Cont.)

- The storm events we chose did not have high death rates over a 10 year period. These relatively low number are consistent across all states.
- Louisiana was an outlier to our data set because of Hurricane Katrina.
- Storm related deaths do not seem to be a major issue.

FEMA Data Set

The FEMA data set was used to figure out the the dollar amount of claims made and claims paid out. This information will provide us with knowledge that will help us better understand how much of storm damages are already covered before we can step in and assist.

Insurance Claims

FEMA Claims Paid From 2001-2011

YEAR	DOLLARS PAID
2001	1,276,957
2002	433,649
2003	780,776
2004	2,232,410
2005	17,770,443
2006	640,797
2007	614,091
2008	3,489,569
2009	779,974
2010	773,706
2011	2,429,440

FEMA Data (Cont.)

- The lowest claim paid during the period was $433,649 in 2002.

- 2005 is an outlier in the data with claims totaling $17,770,443. This is due to the category 5 hurricane that year, Hurricane Katrina.

Video About How the Insurance Industry Should Respond to Natural Disasters

https://www.insurancejournal.tv/videos/17006/

Data Insights

- After careful research, we believe that Bowie National LLC should keep their premiums the same. FEMA covers a great deal of damages done.
- Suggestions for future research would be to prepare to work long hours on cleaning data. Clean data is the most important aspect of any research assignment, it will help organize thoughts and help come up with more useful questions.
- While the data was plentiful, data that would have been useful to this research project would be more Insurance claims besides floods. Also, a more in depth filter engine for the NOAA database site would have been crucial in speeding up the information gathering process.

Data Science Discussion

- The data science process is tedious but rewarding after the information begins to fall into place.
- We enjoyed learning the process of creating an effective data science report. We did not enjoy how time consuming the process was.

Questions ?