Project 1-Storm Data 2-11-18

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Q1: Which types of events across the United States are most harmful with respect to population health?

The events that are most harmful (according to this Data) within the United States are Tornadoes, Flash Flood, Winds (Heavy, Strong, Storm ETC), and Heat. I came to this conclusion from the many queries that are listed below. The first logical thought I had would be to total (SUM capability) the number of Fatalities and Injuries for each event type. Unfortunately, many events that are the same kind of event have different names. Rather than generate a bunch of temporary tables with combined data (I don't remember how to do this effectively), I generated queries that would group events together with the LIKE and WILDCARD capabilities. Then added the number of Fatalities and Injuries for each together. Once that is done I took the four events with the highest combined Fatalities and Injuries. (See Below for Queries)

Q2: Which types of events have the greatest economic consequences?

To answer this question, I took the same method as I did to the previous question.

The types of events that have the greatest economic consequences are Tornadoes, Wind, Flood, and Snow. Following the same thought pattern as in the above question. I used the SUM capability to find the total amount of Fatalities and Injuries while making my specifications with the LIKE and WILDCARD capabilities. Then I added together the Property Damages and Crop Damages together to find the top four events that impact these areas. Yet again since similar events had different names another approach could have been to make temporary tables with similar events totaled together. However, I was not successful in implementing this method for this project.

\* I tried to use DISTINCT to help on each of these problems but was unsuccessful in having it help me.

**Question 1:**

Unsuccessful:

SELECT FATALITIES,EVTYPE, INJURIES, PROPDMG, CROPDMG, BGN\_DATE, END\_DATE

FROM `Data`

ORDER BY FATALITIES DESC

(Returned all Event types uncombined)

* Beginning and End dates were all Zero therefore they were not helpful

Successful:

SELECT SUM(FATALITIES) AS "Heat Deaths"

FROM `Data`

WHERE EVTYPE like '%HEAT%'

* Returned the number of Fatalities related to the WILDCARD “Heat”

SELECT SUM(INJURIES) AS "Heat Injuries"

FROM Data

WHERE EVTYPE like '%HEAT%'

* Returned the number of Injuries related to the WILDCARD “Heat”

SELECT SUM(FATALITIES) AS "Tornado Deaths"

FROM `Data`

WHERE EVTYPE like '%Tornado%'

* Returned the number of Fatalities related to the WILDCARD “Tornado”

SELECT SUM(INJURIES) AS "Tornado Injuries"

FROM Data

WHERE EVTYPE like '%Tornado%'

* Returned the number of Injuries related to the WILDCARD “Tornado”

SELECT SUM(FATALITIES) AS "Flood Deaths"

FROM `Data`

WHERE EVTYPE like '%Flood%'

* Returned the number of Fatalities related to the WILDCARD “Flood”
* Did categorize some Ice Storm as well

SELECT SUM(INJURIES) AS "Flood Injuries"

FROM Data

WHERE EVTYPE like '%Flood%'

* Returned the number of Injuries related to the WILDCARD “Flood”

SELECT SUM(FATALITIES) AS "Wind Deaths"

FROM `Data`

WHERE EVTYPE like '%Wind%'

* Returned the number of Fatalities related to the WILDCARD “Wind”

SELECT SUM(INJURIES) AS "Wind Injuries"

FROM Data

WHERE EVTYPE like '%Wind%'

* Returned the number of Injuries related to the WILDCARD “Wind”

**Question 2:**

Successful:

SELECT SUM(CROPDMG) AS "Wind Crop Damage"

FROM `Data`

WHERE EVTYPE like '%WIND%'

* Returned the cost of Crop Damages related to the WILDCARD “Wind”

SELECT SUM(PROPDMG) AS "Wind Property Damage"

FROM Data

WHERE EVTYPE like '%WIND%'

* Returned the cost of Property Damages related to the WILDCARD “Wind”

SELECT SUM(CROPDMG) AS "Tornado Crop Damages"

FROM `Data`

WHERE EVTYPE like '%Tornado%'

* Returned the cost of Crop Damages related to the WILDCARD “Tornado”

SELECT SUM(PROPDMG) AS "Tornado Property Damages"

FROM Data

WHERE EVTYPE like '%Tornado%'

* Returned the cost of Property Damages related to the WILDCARD “Tornado”

SELECT SUM(CROPDMG) AS " Crop Damage"

FROM `Data`

WHERE EVTYPE like '%FLOOD%'

* Returned the cost of Crop Damages related to the WILDCARD “flood”

SELECT SUM(PROPDMG) AS "Flood Property Damage"

FROM Data

WHERE EVTYPE like '%FLOOD%'

* Returned the cost of Property Damages related to the WILDCARD “Flood”

SELECT SUM(CROPDMG) AS "Snow Crop Damages"

FROM `Data`

WHERE EVTYPE like '%Snow%'

* Returned the cost of Crop Damages related to the WILDCARD “Snow”

SELECT SUM(PROPDMG) AS "Snow Property Damages"

FROM Data

WHERE EVTYPE like '%Snow%'

* Returned the cost of Property Damages related to the WILDCARD “Snow”

Works Cited

[1] "Storm Events Database," National Centers for Environmental Information, NOAA. Retrieved from https://www.ncdc.noaa.gov/stormevents/ [date].

[2] National Climatic Data Center, "Storm Data FAQ Page," U.S. Department of Commerce. Retrieved from https://d396qusza40orc.cloudfront.net/repdata%2Fpeer2\_doc%2FNCDC%20Storm%20Events-FAQ%20Page.pdf [date].

[3] National Climatic Data Center, "StormData.csv.bz2," U.S. Department of Commerce. Retrieved from https://d396qusza40orc.cloudfront.net/repdata%2Fdata%2FStormData.csv.bz2 17 August 2016.

[4] "NATIONAL WEATHER SERVICE INSTRUCTION 10-1605," NOAA, 17 August, 2007. Retrieved from https://d396qusza40orc.cloudfront.net/repdata%2Fpeer2\_doc%2Fpd01016005curr.pdf [date].

* Also, thanks to Joe for helping with putting thoughts into a query form