



Reactions to Dual Disasters in the Florida Panhandle



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Background

Florida counties have different ways of dealing with natural disasters and public health emergencies, whether they enforce evacuation, provide shelters, or provide resources. The way people choose to react to disasters depends a lot on their circumstances and what their county provides for them. This research aims to look at Census data taken in 2020 and look at the correlation between how people act during a natural disaster and their living circumstances.

Introduction

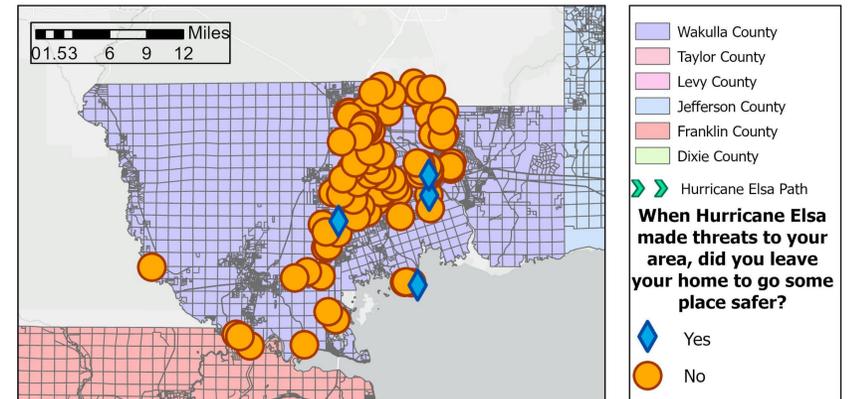
Various factors determine how a family will react to dual disasters: a natural disaster and pandemic. For this project, we looked at different answers from a survey given to people in Franklin, Wakulla, Jefferson, Taylor, Dixie, & Levy counties in the Florida panhandle. The survey questions consisted of demographic information including household income, property type, education and number of household members, as well as how the households dealt with COVID-19 and Hurricane Elsa, which landed on Taylor County in July 2021. These factors were compiled into ArcGIS to make a map that would show correlation of property type to the willingness to evacuate of each household in each county.

Methods & Materials

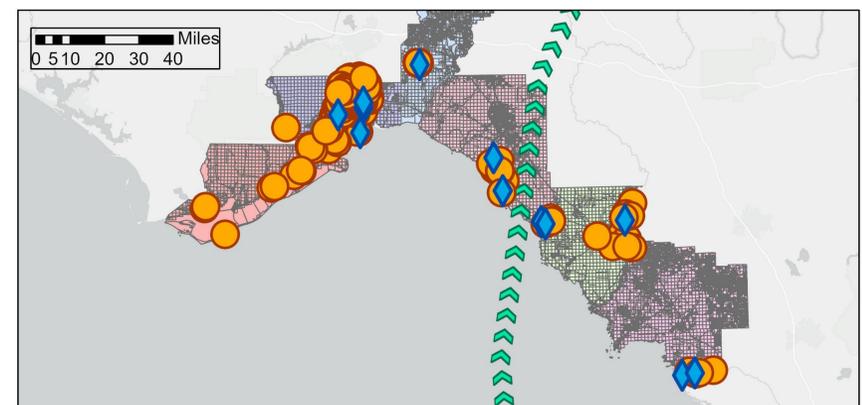
- Compared 2020 property tax data from the Florida Department of Revenue with 2021 survey data compiled by Dr. Minna Jia
- Dr. Jia's survey was sent to various households in six Florida Panhandle counties (Franklin, Wakulla, Jefferson, Taylor, Dixie, & Levy) and was also available online, asking questions about residents' willingness to evacuate during a natural disasters and what factors motivated their decision
- We focused on question #4 from the survey: "When Hurricane Elsa made threats to your area, did you leave your home to go some place safer?"
- Uploaded parcel data from the FL Department of Revenue and shapefiles of data from Dr. Jia's survey into ArcGIS to view the results of question #4 over the Florida panhandle
- Used Microsoft Excel to create graphs to show the relationship between property type data (e.g. single family home, mobile home) from the FL D.O.R. and the answer to question #4 of the survey
 - Future research will explore the impacts of COVID-19 on residents' willingness to evacuate their home, particularly using question #9 of the survey: "If another hurricane threatens your area this year (2021), and the COVID-19 pandemic is still present, how likely would you evacuate if the government issues an evacuation order for your area?"

Florida Panhandle Hurricane Elsa Evacuation

Close-up of Wakulla County

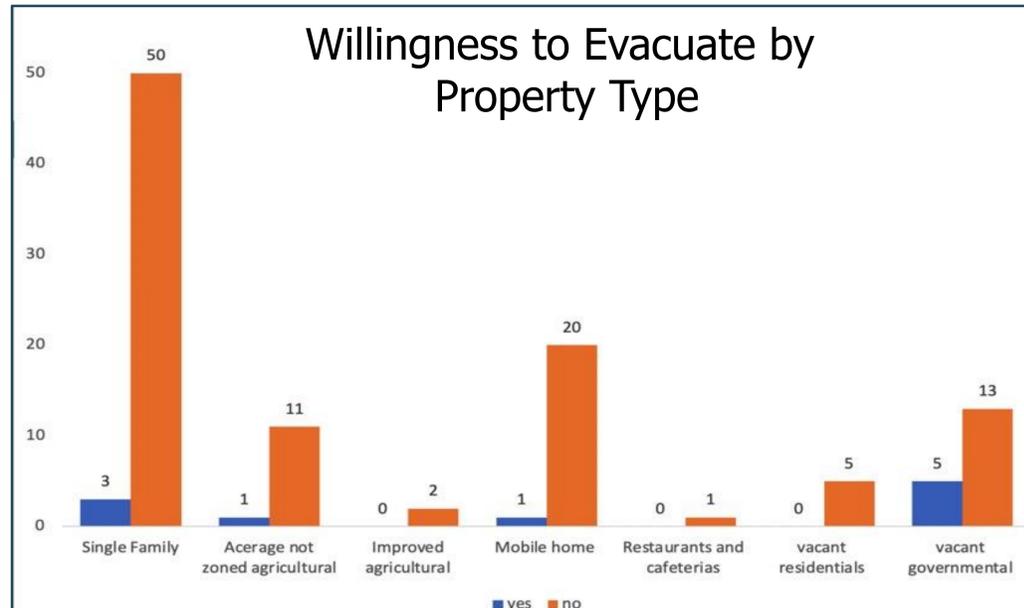


Franklin, Wakulla, Jefferson, Taylor, Dixie & Levy Counties



Map projection: NAD 1983 StatePlane Florida North FIPS 0903 (US Feet)
Source: Florida Department of Revenue, NOAA, Dr. Minna Jia
Created by: Flora Domitrovic, Gabriela de Jesus

Willingness to Evacuate by Property Type



Conclusion

Research is still ongoing, but most people in any property type were not likely to evacuate their homes in the event of a hurricane. Further research in the field seeks to uncover whether effects of the COVID-19 pandemic contribute to one's decision to evacuate during a hurricane. Such factors resulting from COVID-19 could include a fear of contracting COVID-19 or another sickness at a hurricane shelter or distrust of the government's emergency management. Additional research will also likely explore the correlation between the availability and quality of emergency shelters in each county and residents' willingness to evacuate their home.

References



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