# **A Review of FEMA Buyouts** in the Delmarva Region since 1989

Tatum Casey, Dr. Laura Paul

### Introduction

- The Federal Emergency Management Agency (FEMA), created the Hazard Mitigation Grant Program in 1989. In this program, severe repetitive loss properties are targeted for buyouts, that are coordinated by local governments and funded by FEMA.
- Utilizing FEMA's Buyout database, I was able to analyze each state's total number of buyouts by identifying the types of disastrous events that caused them from 1989 - 2017.

## **Methods**

### Analysis:

I analyzed FEMA's buyout database to determine which disastrous events were responsible for causing the most buyouts within the Delmarva region of the United States (Delaware, Maryland, and Virginia). This analysis helped identify whether buyouts in the Delmarva region were primarily caused by earthquakes, explosions, flooding, hurricanes, slides, snow, storms, tidal surges, tornadoes, tropical systems, wildfires, or wind. It is important to note that a buyout could have been caused by two or more of these events, meaning that each event is not mutually exclusive.

BUYOUT LOCATIONS OF THE DELMARVA REGION FROM 1989 - 2017

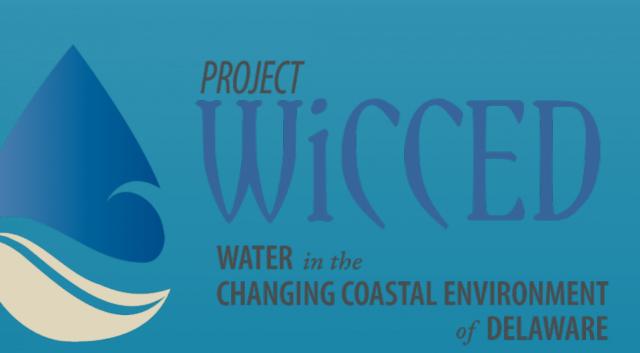
Delaware Maryland 
Virginia Fort Wayne PENNSYLVANIA OHIO Columbus NEW JERSEY INDIANA IRGINI KENTUCKY

## The University of Delaware, Center for Experimental and Applied Economics

## Results Hurricanes, storms, and flooding events were most commonly associated with **buyouts** in the **Delmarva region**. Occurrence and Type of Events Causing Buyouts in the Delmarva Region from 1989 - 2017 Flooding Hurricane Snow Storm Tornado Tropical Wind 200 š 150 110 of Numb 50 29 Virginia Marylan State Name Earthquake Flooding Hurricane Slides Delaware Maryland 29 Virginia 110 206

Note: There were zero occurrences in the categories of explosion, tidal, and wildfire in each state





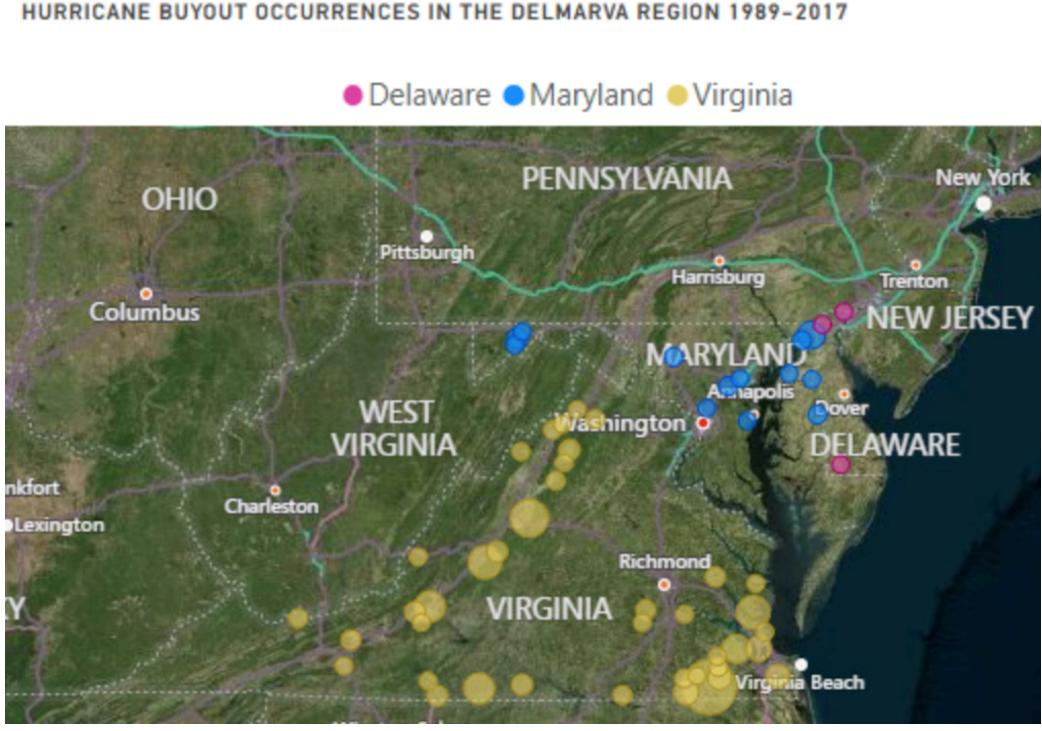


14	4 13	1	3	1 3	2	
nd Delaware						
5	Snow	Storm	Tornado	Tropical	Wind	
D	1	3	0	2	0	
-				4.0	4	
D	17	75	14	13		

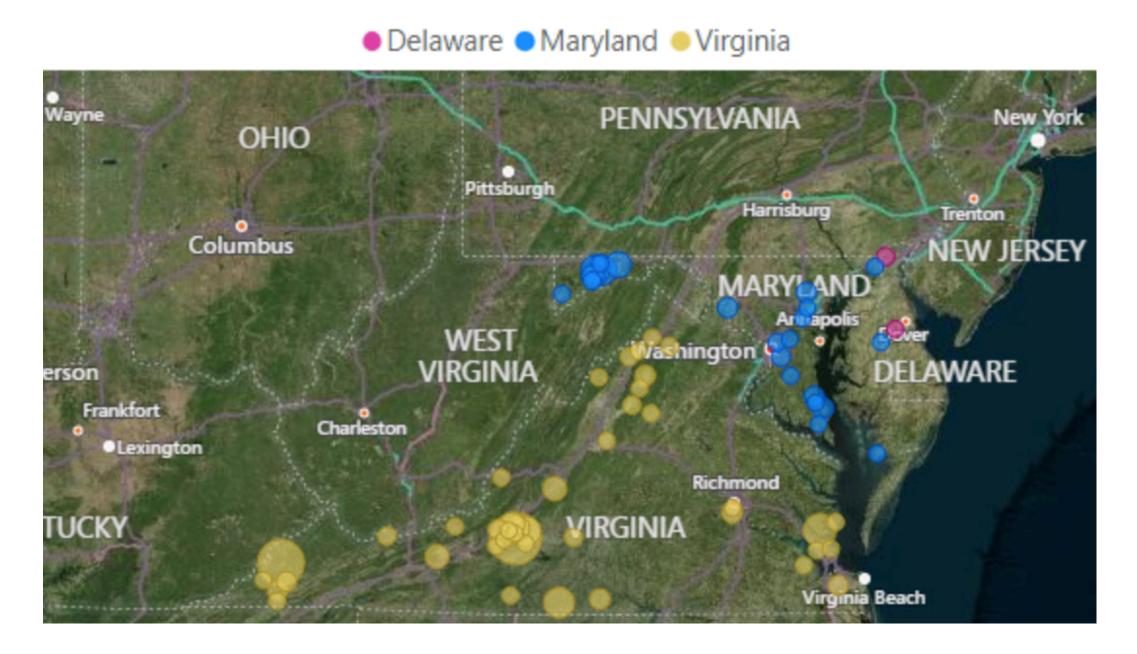


## Conclusion

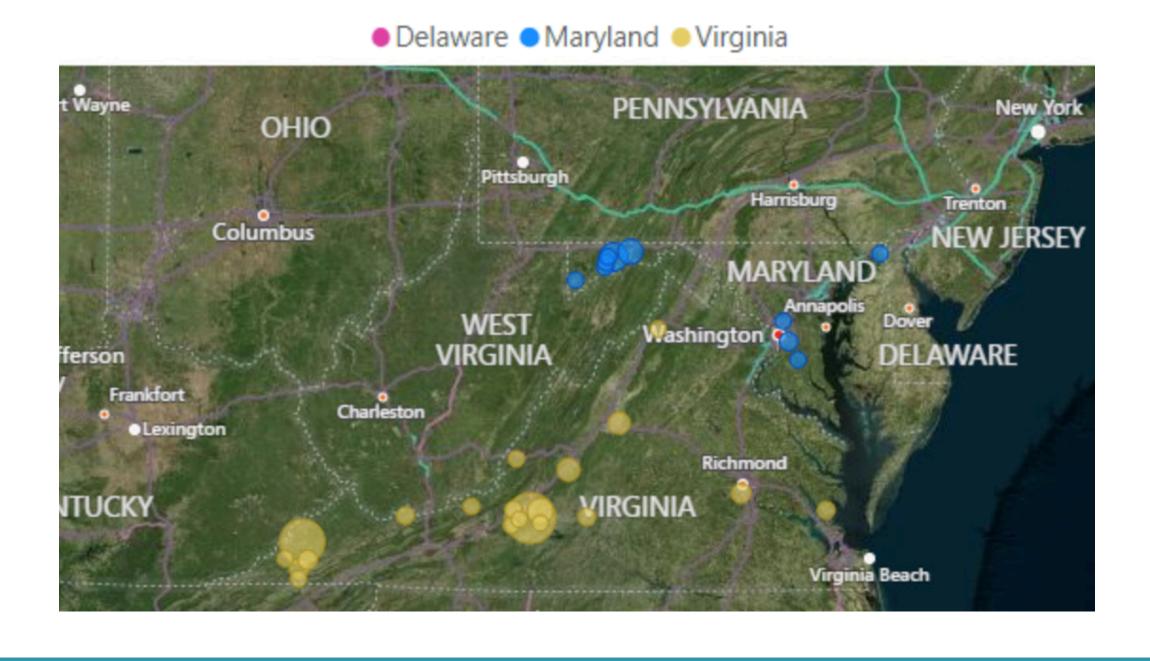
A significant number of buyouts within the Delmarva region are caused by hurricanes, storms, and flooding events. Understanding these trends enables states in the Delmarva region to better predict buyout patterns, identify at-risk homes and areas, and determine where costs will need to be allocated in the future. Delaware, a state with a very small number of buyouts, will especially benefit from these findings, that will better equip them to predict, identify, and prepare for a larger volume of buyouts in the future.



YOUT OCCURRENCES IN THE DELMARVA REGION 1989-2017



FLOODING BUYOUT OCCURRENCES IN THE DELMARVA REGION 1989-2017



Acknowledgments Thank you to the UD Project WiCCED Program, my advisor Dr. Laura Paul, the UD CEAE, and all those who have supported me in furthering my research experience.