

ABSTRACT

THESIS: Examining Post-Evacuation Plans for Hurricane Evacuees Using Westerly, Rhode Island as a Test Case

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This thesis presents hypothetical return plans for hurricane evacuees who have previously evacuated their residence in southern Rhode Island. Using Geographic Information Systems software, appropriate time tables for evacuees to return to their homes are generated. Two case scenarios based on Category 3 and 4 intensity hurricanes making landfall in Westerly, Rhode Island were simulated. Over the last century, population and especially home values in coastal Rhode Island have increased leaving great risk to those in the area. Statistically, hurricanes are less likely to strike Rhode Island than the Gulf Coast or the Southeastern United States. However, within the last century dangerous and damaging hurricanes have affected Rhode Island. This lower frequency of hurricanes decreases awareness and emphasizes the need for further research. Reentry zones for each scenario are defined and ranked by severity of damage using debris, building damage, potential economic loss and population displacements with HAZUS software. Results from both Category 3 and Category 4 test cases show

that the downtown census tract experiences the greatest amount of damage and longest return times for evacuees.