

Can developed areas that are prone to flooding lead to a high cost of storm surge damage?

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Hurricane Storm Surge Depth Damage Assessment of Buildings in Monmouth County, New Jersey

- Map shows:
- Areas prone to greater flood damage
 - Greater damage near the shore and coastal waterways.
 - See Shrewsbury, Shark Rivers, Sandy Hook Bay, and Atlantic Ocean

Introduction

Emergency management coordinators should know where buildings are prone to flooding and prepare for potential hurricane storm surges.

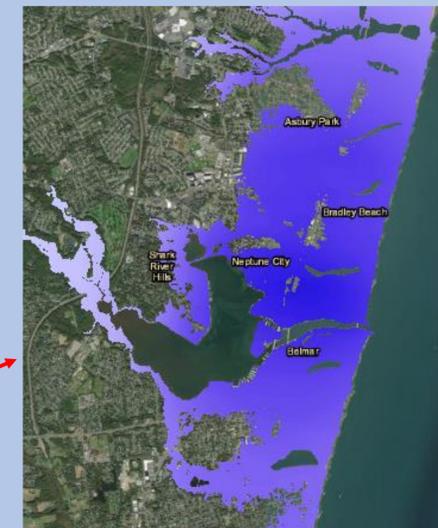
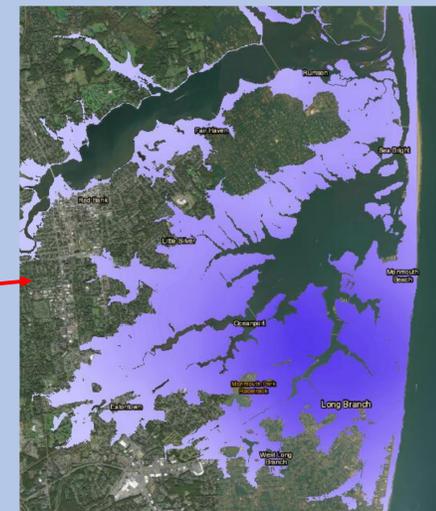
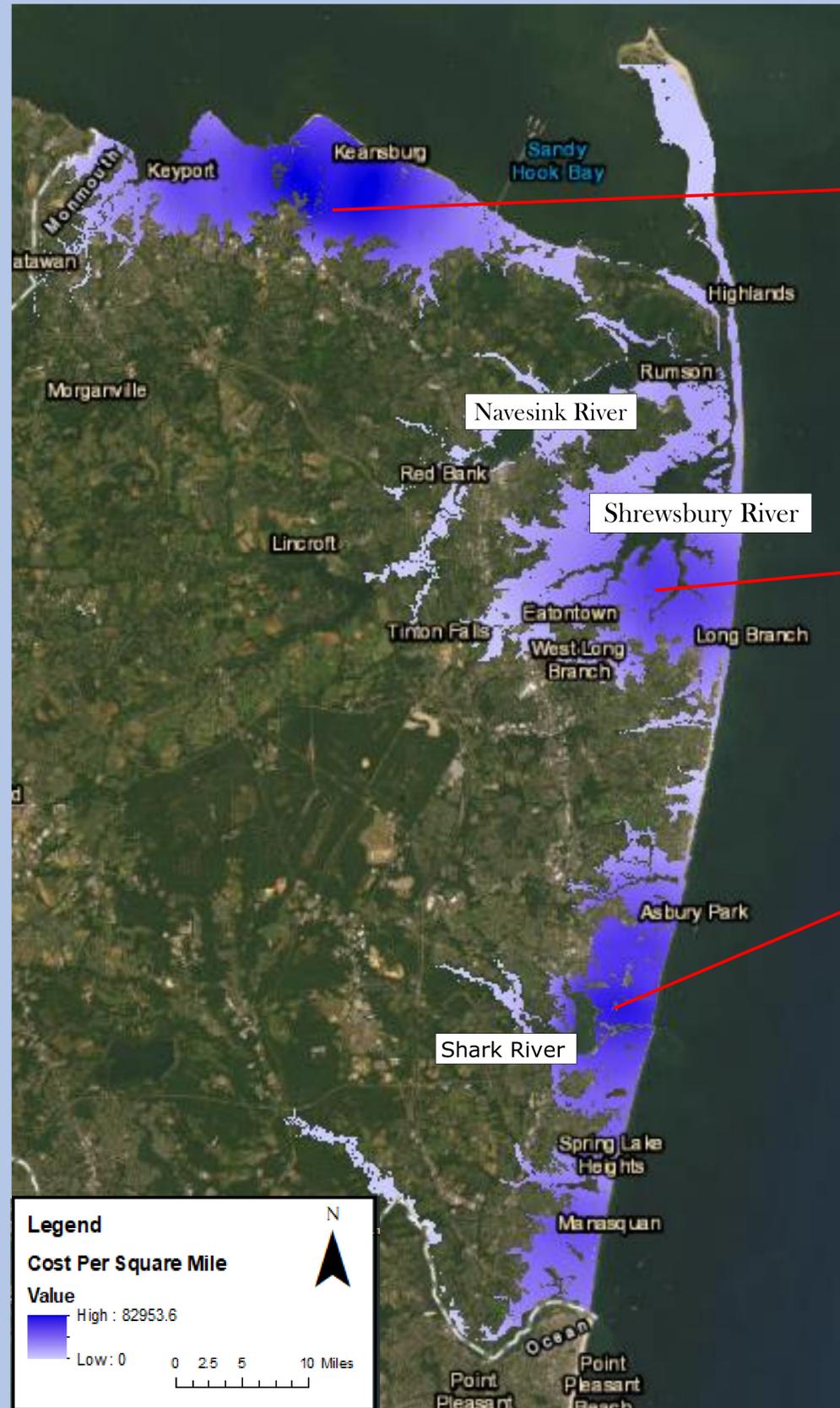
Monmouth County, New Jersey, has areas of land that have been developed and are prone to flooding, which requires an analysis of buildings that may flood in the event of a hurricane.

Methods

Modeled flood height data of hurricane storm surge and building footprints in coastal municipalities of Monmouth County.

Building data used to show buildings in flooded areas and depth of flooding in each building is used to estimate the cost of the flood damage.

Cost of flood damage follows a depth curve (US ACE), applied to color grid.



Results

Areas highlighted in need of flood mitigation measures (raised foundations) and areas where emergency managers may need to distribute resources in the event of a hurricane.