

HAZUS User Group Success Story

Incorporating HAZUS-MH Methodologies to Assist with Mitigation Planning and Hurricane Operations

Jessica Phillips, Dare County, North Carolina Emergency Management Office Support Specialist and HAZUS-MH Program Manager, used HAZUS-MH to assist in the update to Dare County's hazard mitigation plan. Ms. Phillips used HAZUS-MH to show the potential damages to infrastructure and buildings and potential economic impacts to Dare County during wind related events.



Using HAZUS-MH proved to have benefits beyond the update to the mitigation plan. Ms. Phillips was able to demonstrate to Dare County leaders the capabilities of HAZUS-MH and how effective it could be prior to and during the many natural hazard disasters such as a hurricane to which the County may be exposed. One important factor that Ms. Phillips was able to demonstrate was how HAZUS-MH can be used to illustrate sheltering needs, a critical concern for County leaders.

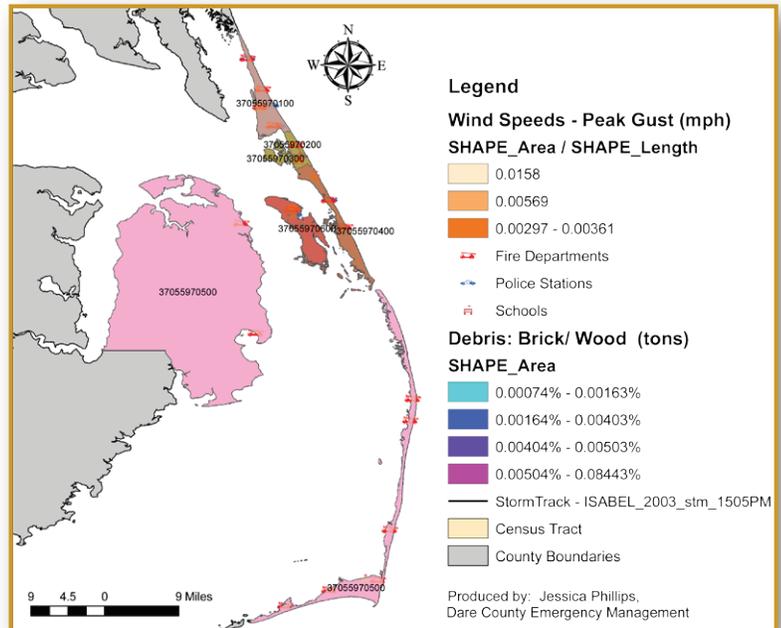
Background

Dare County is along the northern portion of North Carolina commonly known as "The Outer Banks." It is comprised of a string of sandy barrier islands approximately 120 miles long that bow out into the Atlantic Ocean, and a portion of land located on the western side of the mainland. Dare County consists of 800 square miles including 391 square miles of land and 409 square miles of water. The population of Dare County and its six municipalities is approximately 35,000, however average daily population during peak visitation months (June through September) can increase to 300,000.

Mitigation Planning

The use of HAZUS-MH was incorporated into the county hazard mitigation plan to demonstrate the possible losses that may be associated with hurricanes. In the future, the County may utilize HAZUS-MH as part of their planning efforts for emergency response and recovery. The data used in the recent studies came pre-packaged into HAZUS-MH MR3 Patch 2 and is based upon 2000 Census tract data for demographics and building stock inventories. To improve the Essential Facilities data, Ms. Phillips updated the Essential Facilities inventories in HAZUS-MH to include an accurate listing of schools, hospitals, fire and police stations. The updated data was imported from a Microsoft® Excel® file that was created by the County in 2008.

Ms. Phillips prepared HAZUS-MH "what-if" scenarios for Hurricane Isabel (2003), Hurricane Floyd (1999), and Hurricane Gloria (1985) to show potential damages and to demonstrate the usefulness of HAZUS-MH in mitigation planning. The sample table below shows economic losses from Hurricane Isabel. Although Hurricane Isabel did not pass directly over the county, it did cause significant damage to the area. Using HAZUS-MH, Ms. Phillips helped decision makers see a larger picture, the possible impact on the county, and the need for detailed hazard analysis and hazard mitigation planning.



Building-Related Economic Loss Estimates

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Property Damage						
	Building	20,229.93	1,141.14	144.70	125.14	21,640.91
	Content	805.22	267.19	76.04	28.32	1,176.77
	Inventory	0.00	8.05	18.29	1.52	27.87
	Subtotal	21,035.15	1,416.38	239.03	154.99	22,845.54
	Income	0.00	309.71	2.29	5.13	317.12
	Relocation	1,104.63	256.87	12.91	22.13	1,396.54
	Rental	939.46	138.58	1.68	2.30	1,082.03
	Wage	0.00	201.92	3.81	180.50	314.22
	Subtotal	2,044.09	907.08	20.69	138.06	3,109.92
	Total	23,079.24	2,323.45	259.73	293.04	25,955.46

Networking with the NCHUG

In order to continue her work within the HAZUS community, Ms. Phillips has begun to network with the newly formed North Carolina HAZUS User Group (NCHUG) and has participated in NCHUG conference calls. The mission of the NCHUG is to encourage partnerships between local and state government, the private sector, and centers of higher-education throughout the State of North Carolina. The NCHUG fosters mutually beneficial alliances with the ultimate aim of promoting the development of “disaster-aware” communities. Ms. Phillips has achieved one of the NCHUG objectives by being “a conduit for communication of hazard mitigation efforts and best management practices.” Ms. Phillips work has provided an example for the members of the NCHUG on how to incorporate HAZUS-MH into their emergency plans.

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Future Hurricane Operations

Ms. Phillips intends to incorporate the HAZUS-MH methodologies to assist with operations before, during and after a hurricane or other disasters to support Dare County Emergency Management. Ms. Phillips looks forward to supporting Damage Assessment Teams in her area to identify where significant damages may occur.

