

The Virgin Islands Consortium

Storm Surge, Not Strong Winds, Is The Deadliest Threat From Hurricanes, NOAA Says

Weather Updates / **Published On May 14, 2019 10:49 AM /**

Staff **May 14, 2019**



The 2019 hurricane season starts in two weeks, and the National Hurricane Center has been honing in on ways to help those most likely to be affected get prepared. One way is understanding what are the deadliest threats from a hurricane: while the strong winds do wreak havoc, storm surges are even more deadly.

According to the National Oceanic and Atmospheric Administration (NOAA), when people hear about hurricanes most immediately think of high winds. But it's the water that's responsible for nearly 90 percent of fatalities – and half of those are due to [storm surge](#).

NOAA said thanks to improved computer modeling, several years of experimentation, and social science research, the [National Hurricane Center](#) has an interactive web tool, the [National Storm Surge Hazard Maps](#) to help interested person learn about this risk. The first version was issued in 2014 and covered the U.S coastline from Texas to Maine. Puerto Rico was added in 2017. This year the system has expanded to include the Hawaiian Islands, U.S. Virgin Islands, and Hispaniola.

These [storm surge hazard mapsoffsite link](#) enable people living in hurricane-prone coastal areas to evaluate their risk of coastal flooding due to storm surge. NOAA reminded tat storm surge is not just a beachfront problem. The hazard extends many miles inland from the immediate coastline in some areas. Understanding this risk gives you the time to take action when emergency managers tell you to evacuate.

One of the key components in developing this tool is a computer model appropriately named SLOSH, the [Sea, Lake, and Overland Surges from Hurricanes](#), according to NOAA. Scientists at the hurricane center use SLOSH to simulate hundreds of thousands of hypothetical hurricanes and the potential storm surges are calculated.

Composites of the resulting storm surges are created and high-resolution inundation maps are created using local topography. In locations that have a steep and narrow continental shelf, such as islands, waves can be a substantial contributor to the total water level rise observed during a tropical cyclone. For these areas, SLOSH has been coupled with a wave model to enable a more complete and accurate analysis of flood risk.

If you live in or visit a location that may be affected by a tropical cyclone, know the hazards ahead of time and have a hurricane plan in place to implement at a moment's notice. For more information visit NOAA's [National Hurricane Center](#).