

Brian Zachry, Ph.D.

Storm Surge Specialist National Hurricane Center

Brian Zachry, Ph.D., is a storm surge specialist in the Storm Surge Unit at NOAA's National Hurricane Center in Miami, Florida.

Dr. Zachry is a Florida native, earning his Bachelor of Science degree in Atmospheric Science / Meteorology from Florida Institute of Technology in Melbourne, FL. After graduation, he worked as a research assistant, studying sea-breeze frontogenesis and Florida coastal showers. He was selected as a prestigious National Science Foundation Integrative Graduate Education and Research Traineeship Fellow and earned his Doctoral degree in Wind Science and Engineering / Meteorology from Texas Tech University. His research focused on wind-wave interaction in the nearshore environment during hurricanes. He has an extensive multidisciplinary background that includes wind loading of structures, damage assessment, ocean waves, field instrumentation, and storm surge.

During his research, Dr. Zachry served as a visitor scholar at the University of Florida where he deployed storm surge and meteorological sensors into notable land-falling hurricanes including Gustav and Ike in 2008. These data were analyzed to better forecast storm surge flooding and evaluate wind load standards along the hurricane prone coastline. His research was used to better understand Ike's forerunner storm surge and damage along the Bolivar Peninsula. He also worked in a wind tunnel to study simulated wind flow from hurricanes over stationary wave forms. His work has provided valuable contributions to the research community.



Prior to his role at NHC, Dr. Zachry worked for AIR Worldwide as a storm surge expert and atmospheric scientist. He led development of the proprietary storm surge model, and worked closely with development of the tropical cyclone and winter storm models. He also evaluated sea level rise and storm surge risk performed damage surveys, and helped produce real-time insured loss estimates from landfalling tropical cyclones.

Dr. Zachry joined the NHC Storm Surge Unit in February 2013. He is responsible for performing real-time storm surge forecasts for tropical cyclones, providing scientific and technical support to advance the SLOSH model and P-Surge, and participating with outreach, education, and training. In addition, Dr. Zachry has led the technical advancement of the next-generation SLOSH basins, has assisted with development of the Experimental Potential Storm Surge Flooding Map that was first released during Hurricane Arthur in 2014, and has provided technical support for the new Storm Surge Watch/Warning. Dr. Zachry is also serving as Project Manager for the Coastal Inundation Forecasting Demonstration Project for the Caribbean (CIFDP-C), which includes Haiti and the Dominican Republic.

Dr. Zachry has authored numerous publications related to hurricanes and storm surge and serves as a reviewer for many scientific journals. He has also given invited presentations to various organizations and is a member of the American Meteorological Society.

