

## MONITORING AND FORECASTING HURRICANES

The Hurricane Center in Coral Gables, Florida, forecasts and monitors hurricanes. In addition, the National Weather Service uses maps to predict the impact of floodwaters following a hurricane. These are called Sea Lake and Overland Surges from Hurricane (SLOSH) maps. SLOSH maps use historical wind and rainfall data for estimating floodwater elevation over land and sea. These data are useful for simulating a broad range of storm situations. SLOSH maps cannot be used to predict where a hurricane will make landfall. They also do not take tides into account. Therefore the greatest use for SLOSH maps is to determine the areas most likely to be affected by a hurricane once the area where the storm will make landfall is known. Through prior planning these areas can be correlated with easily identified landmarks for local emergency management agencies to recognize and for planning evacuation and transport routes and shelter locations. In the future Geographic Information System maps may become the most versatile type of map for predicting the impact of a hurricane.

The National Hurricane Center in Miami monitors weather data and issues forecasts for hurricanes in the Atlantic Ocean, Caribbean Sea, Gulf of Mexico, and eastern Pacific Ocean. Local National Weather Service offices, as well as local and state officials, also may disseminate hurricane information.

*A hurricane advisory* tells where the storm is located, the intensity of wind speeds, and the direction of movement.

*A hurricane watch* is issued for a coastal area when there is a threat of hurricane conditions within 24 to 36 hours. In more vulnerable areas, actions for protection of life and property should begin at this point. This includes starting to evacuate large animals, such as horses and cattle, or large populations of dogs and cats (e.g., an animal shelter, boarding, or breeding kennel). Zoos also should start to move or secure their animals. Persons who own cats should locate them and put them in transport cages. Cats can often sense an approaching storm and instinctively start to search out a hiding spot. However, behavioral changes are not good indicators of the severity of storms and there are always many reasons why animals display behavioral changes that are not related to storms or other disasters. This is the time for people in safe (inland) areas to contact friends and family on the coast to ask them if they need a place to stay. This method has been shown to be highly effective for encouraging senior citizens to evacuate.

*A hurricane warning* is issued when hurricane conditions are expected in a specified coastal area in 24 hours or less. Hurricane conditions include winds of 74 mph (64 knots) or dangerously high tides and waves. Final actions for protection of life and property should be completed as quickly as possible before high winds and heavy rains arrive.



Damage to a subdivision in South Florida after Hurricane Andrew in 1992. (Photo by Rocky Bigbie.)