

### ...NORTH CAROLINA HURRICANE PREPAREDNESS WEEK...

This week has been declared North Carolina's Hurricane Preparedness Week for 2010. All week long the National Weather Service will issue informative messages to help you prepare for hurricane season.

Each day we will cover a different topic. Today we will talk about the forecast process.

#### The National Hurricane Center...

The primary mission of the National Weather Service and Tropical Prediction Center is to save lives and protect property by issuing watches, warnings, forecasts, and analyses of hazardous weather conditions in the tropics. In the last 15 years hurricane track forecast error has been cut in half. Hurricane track forecasts are more reliable today than ever and more accurate forecasts mean better preparations before the storm strikes. The increase in forecast accuracy will allow the National Hurricane Center to issue Watches and Warnings a full 12 hours earlier in 2010 compared to past year providing emergency officials more time to prepare and evacuate at risk populations.

#### Observation...

When forecasting and warning for hurricanes... the National Weather Service uses all of the tools in its arsenal. Satellites...buoys...aircraft, radar and model data are all important tools used for hurricane tracking and prediction. While hurricanes are still over the open ocean, indirect measurements of the storm's intensity and behavior are made primarily via advanced satellites, although ships and buoys provide some observations. Once the storm falls within range of aircraft more direct measurements are taken by reconnaissance aircraft which drop radiosondes into the core of the storm measuring winds, pressure and even ocean temperatures. Within about 200 miles of the coast, radar provides important measurements of the storm. Computer models used to forecast storm intensity and movement require a great deal of data about the atmosphere including all the observations from satellites, aircraft, ships and radar.

#### Model Guidance...

Computer models take all the various observations and perform millions of calculations to generate predictions of hurricane behavior. The atmosphere in which the hurricane is moving is very important to hurricane intensity and motion. The output from these computer models are packaged as guidance and evaluated by hurricane specialists at the National Hurricane Center as well as local National Weather Service forecast offices.

Hurricane forecasters must look at all of the model results, which frequently give widely different pictures of the future. When the models disagree, hurricane forecasters must use their experience and judgment to decide which model is performing the best under the current conditions. A good forecaster has an extensive education in the science of meteorology and considerable experience in tropical forecasting. Forecasters recognize that conditions can change quickly. This is why forecasts talk about "probabilities" and "margin of error".

#### Product generation...

Once forecasts, watches and warnings have been coordinated along the coast between the National Hurricane Center and local National Weather Service offices the National Hurricane Center generates the hurricane forecast and warning products. Hurricane forecasts are issued 4 times a day when hurricanes are present in the Atlantic Ocean... Caribbean Sea or Gulf of Mexico at 5 am... 11 am... 5 pm... and 11 pm EDT.

Information dissemination...

All of this hurricane forecast and warning information is sent out to all media outlets for relay to everyone. Television...radio...the Internet and NOAA weather radio are some of the best means to get the most up to date hurricane information. The internet can also be a good source of information. You can visit the Raleigh National Weather Service office at <http://weather.gov/rah> to get local forecasts and hurricane forecasts and warnings.

Your local Raleigh National Weather Service office...

The role of the Raleigh National Weather Service office is to take the hurricane forecasts from the National Hurricane Center and localize the threat to central North Carolina. The local National Weather Service office closely examines the threats of wind... tornadoes... rainfall and flooding. This information is provided to local and state emergency management as well as the media. The Raleigh NWS office will issue river flood and flash flood warnings to help save lives from flood waters that occur after a hurricane drops torrential rain. Tornado warnings will also be issued by the Raleigh office as forecasters detect them on the Doppler radar.

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