

# Communicating with Maps and Graphics – NWS Products and Services



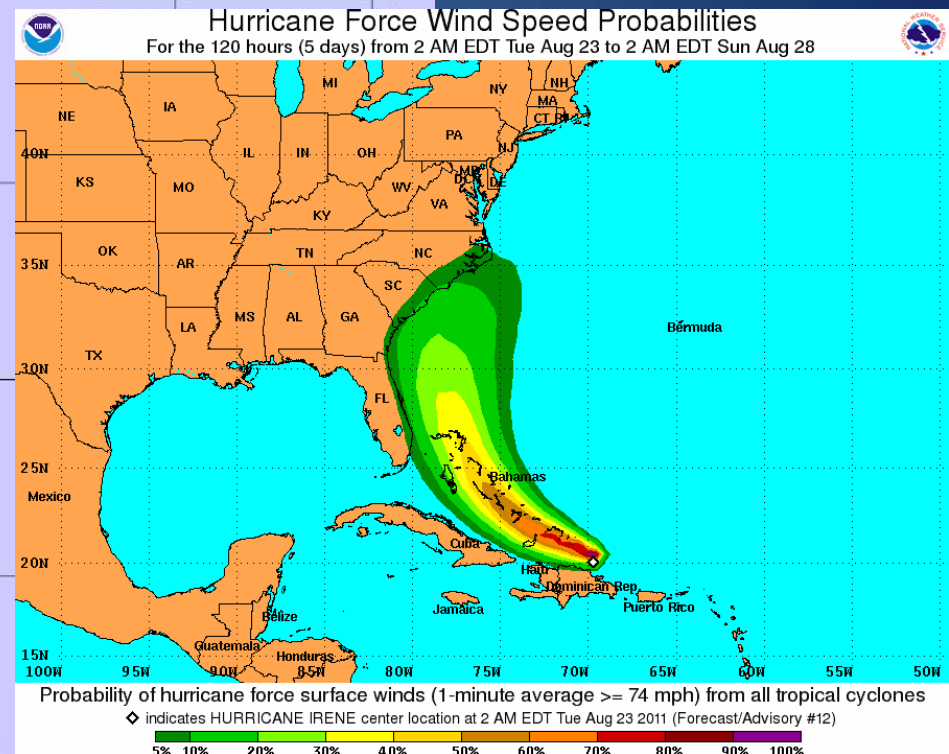
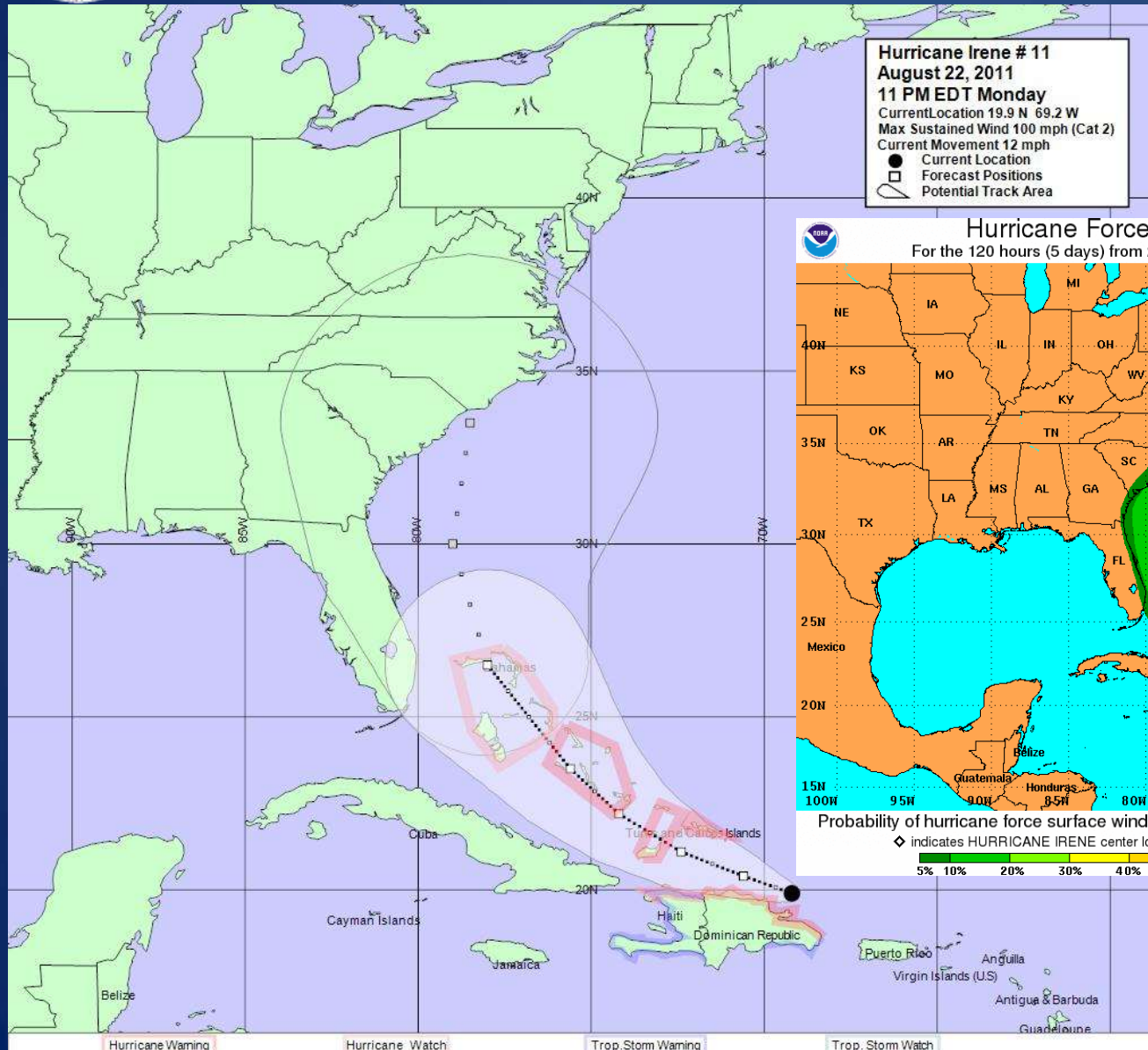
**2012 NC Hurricane Workshop**  
**May 23, 2012**

**Rich Bandy, Meteorologist-in-Charge**  
**National Weather Service**  
**WFO Newport/Morehead City, NC**



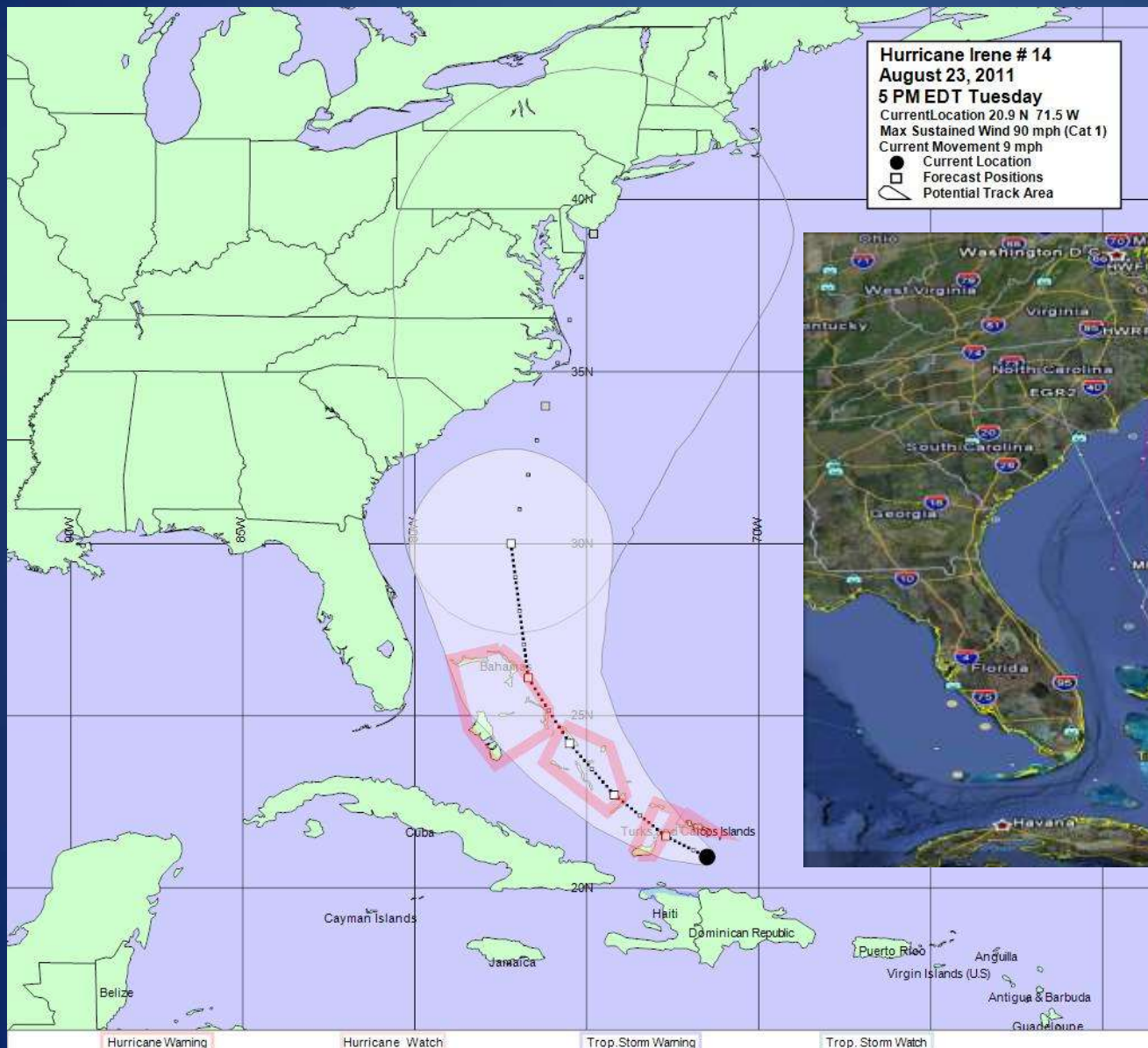


# Hurricane Irene Track Forecast



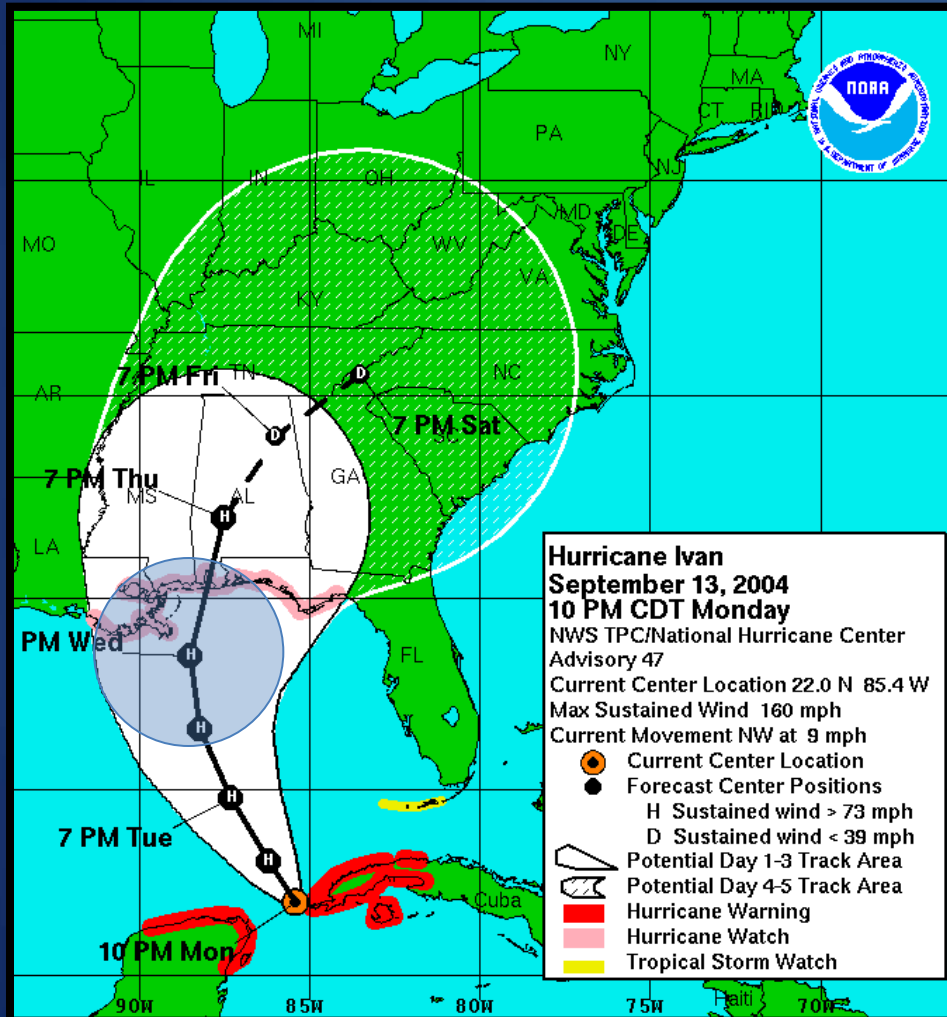


# Hurricane Irene Track Forecast





# Interpreting the Cone



- Represents the probable track of the center of the tropical cyclone.
- Formed by connecting circles centered on each forecast point (at 12, 24, 36 h, etc.)
- Size of the circles determined so that the actual storm position will be within the circle 2 out of 3 times, based on NHC statistics from the previous 5 hurricane seasons
- It is important to remember that the center of the storm will remain entirely within the cone only about 60 – 70% of the time



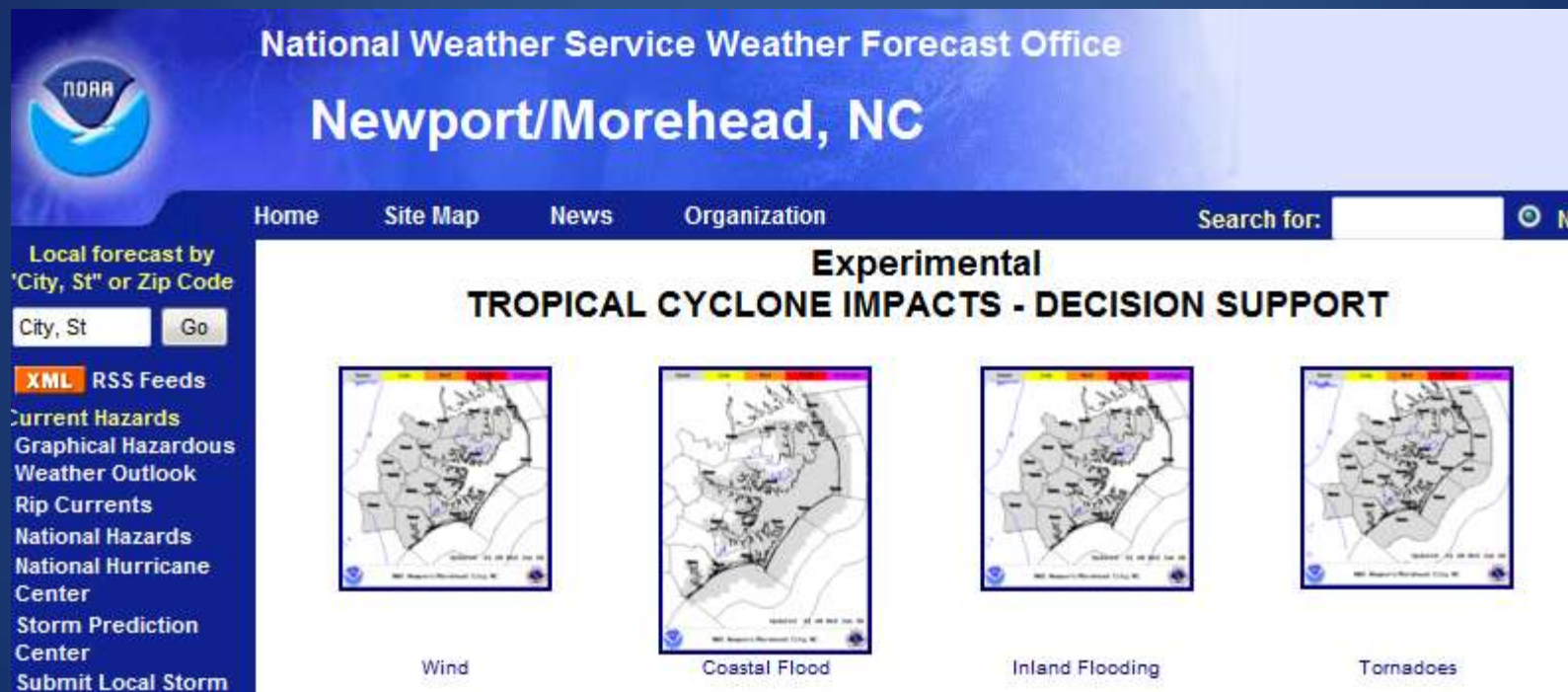
# Interpreting the Cone

The cone **only** depicts probable track of the **center** of the tropical cyclone.

- It says nothing about wind impacts
- It says nothing about storm surge impacts
- It says nothing about rainfall and/or flooding impacts
- It says nothing about tornado impacts
- It says nothing about rip currents and waves



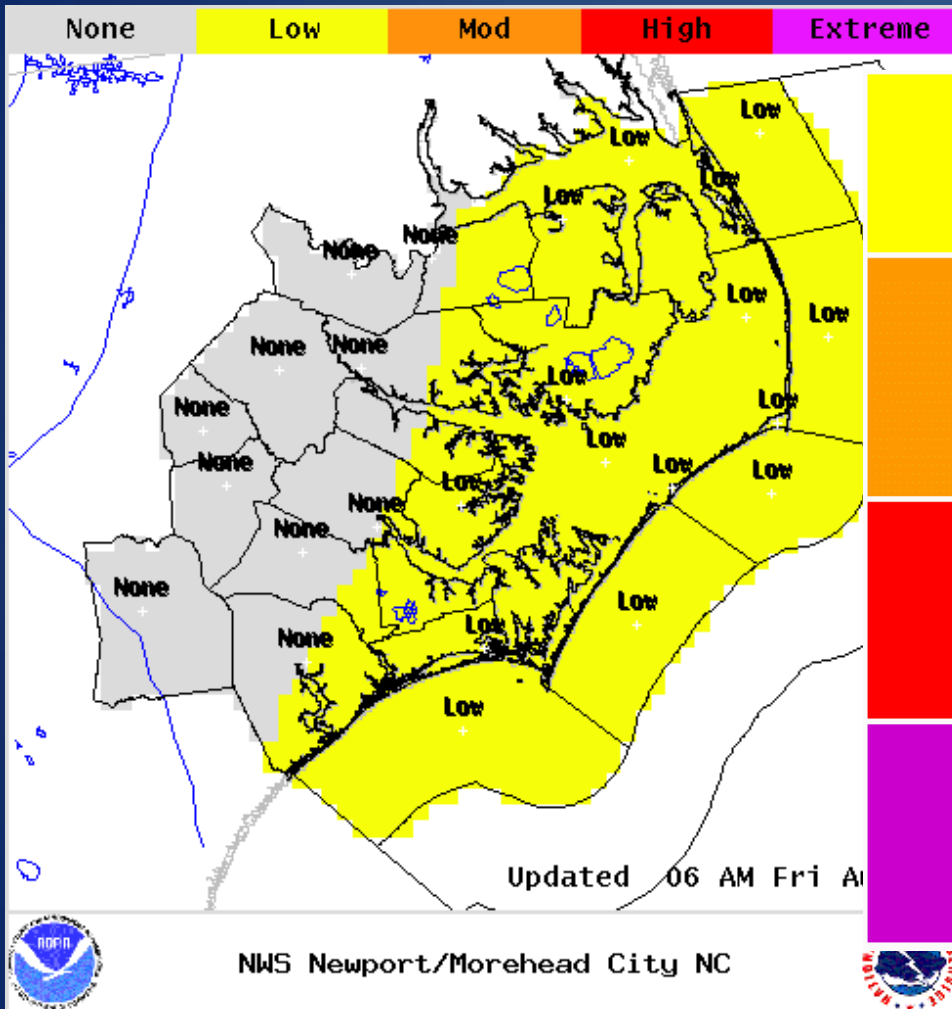
# Tropical Impact Graphics



- These graphical impact graphics become available when an area is placed under a tropical storm or hurricane watch or warning (typically 36 to 48 hours in advance of landfall.)



# Tornado Impact Graphics

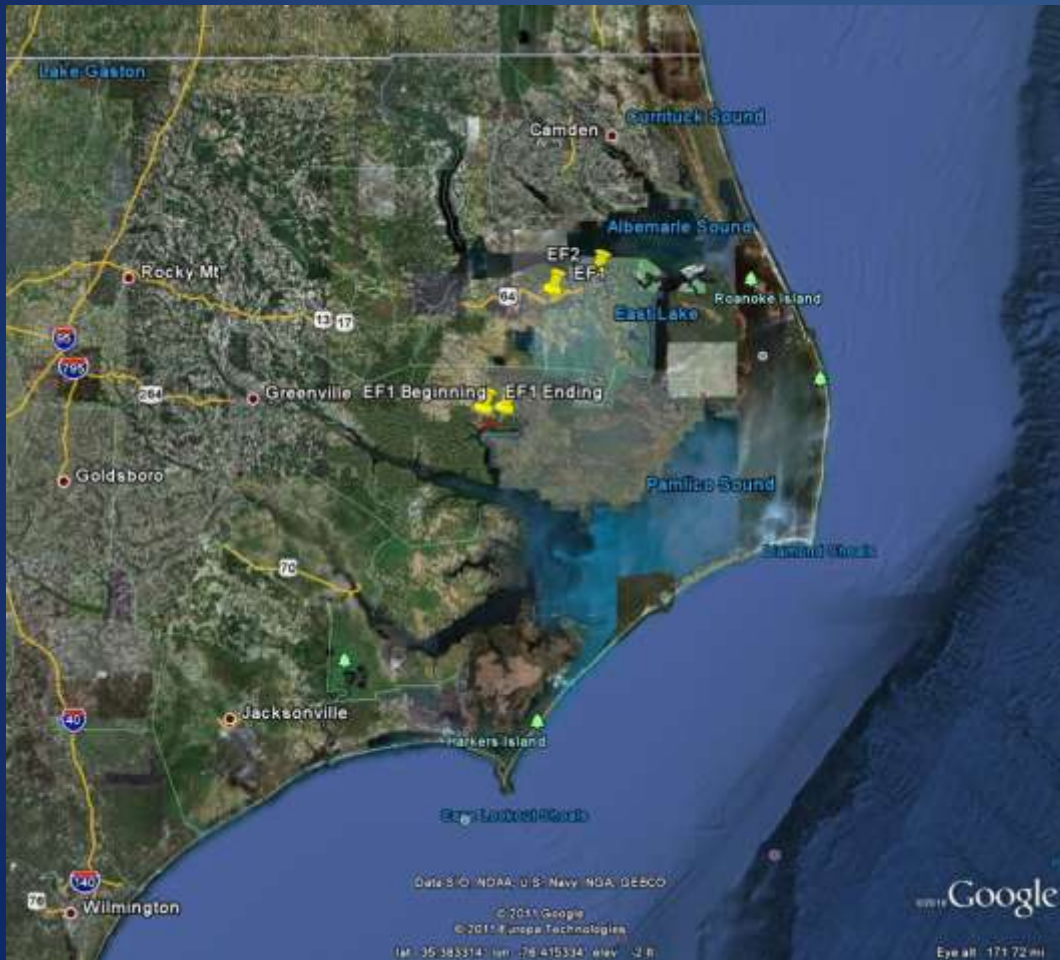


Low	<p><b>Threat</b> - An elevated threat to life and property; tornadoes and waterspouts are possible, but less likely to occur than to occur.</p> <p><b>Minimum Action</b> - Prepare for the chance of widely scattered tornadoes.</p> <p><b>Potential Impact</b> - If realized, a low but notable impact to communities within the specified area. Several locations may experience minor to moderate tornado damage.</p>
Moderate	<p><b>Threat</b> - A significant threat to life and property; tornadoes and waterspouts are possible, and more likely to occur than not to occur.</p> <p><b>Minimum Action</b> - Prepare for the chance of scattered tornadoes including isolated significant tornadoes.</p> <p><b>Potential Impact</b> - If realized, a moderate impact to communities within the specified area. A few locations may experience major tornado damage with additional locations experiencing minor to moderate damage. Some tornadoes may have longer damage tracks.</p>
High	<p><b>Threat</b> - A critical threat to life and property; tornadoes and waterspouts are likely.</p> <p><b>Minimum Action</b> - Prepare for the chance of an outbreak of tornadoes including widely scattered significant tornadoes.</p> <p><b>Potential Impact</b> - If realized, a high impact to communities within the specified area. Several locations may experience major tornado damage with additional locations experiencing minor to moderate damage. Some tornadoes may have longer and wider damage tracks.</p>
Extreme	<p><b>Threat</b> - An extreme threat to life and property; tornadoes and waterspouts are very likely.</p> <p><b>Minimum Action</b> - Prepare for the chance of an historic outbreak of tornadoes including scattered significant tornadoes.</p> <p><b>Potential Impact</b> - If realized, an extreme impact to communities within the specified area. Many locations may experience major tornado damage with additional locations experiencing minor to moderate damage. Some tornadoes may have longer and wider damage tracks.</p>





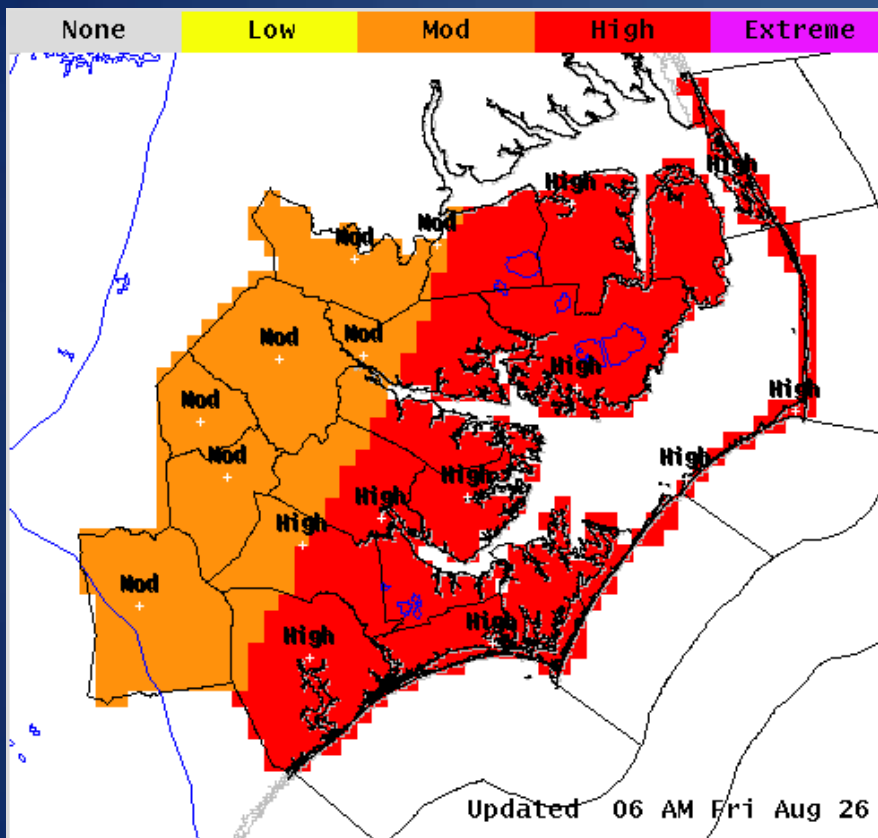
# Tornado Impacts



- Columbia, NC
  - EF Scale Rating - EF2
  - Estimated Max Winds – 130 mph
  - Maximum Width – 50 yards
  - Path Length – 0.5 miles
- Cresswell, NC
  - EF Scale Rating – EF1
  - Estimated Max Winds – 110 mph
  - Maximum Width – 50 yards
  - Path Length – 0.5 miles
- Belhaven, NC
  - EF Scale Rating – EF1
  - Estimated Max Winds – 105 mph
  - Maximum Width – 75 yards
  - Path Length – 4.40 miles



# Inland Flooding Impact Graphics



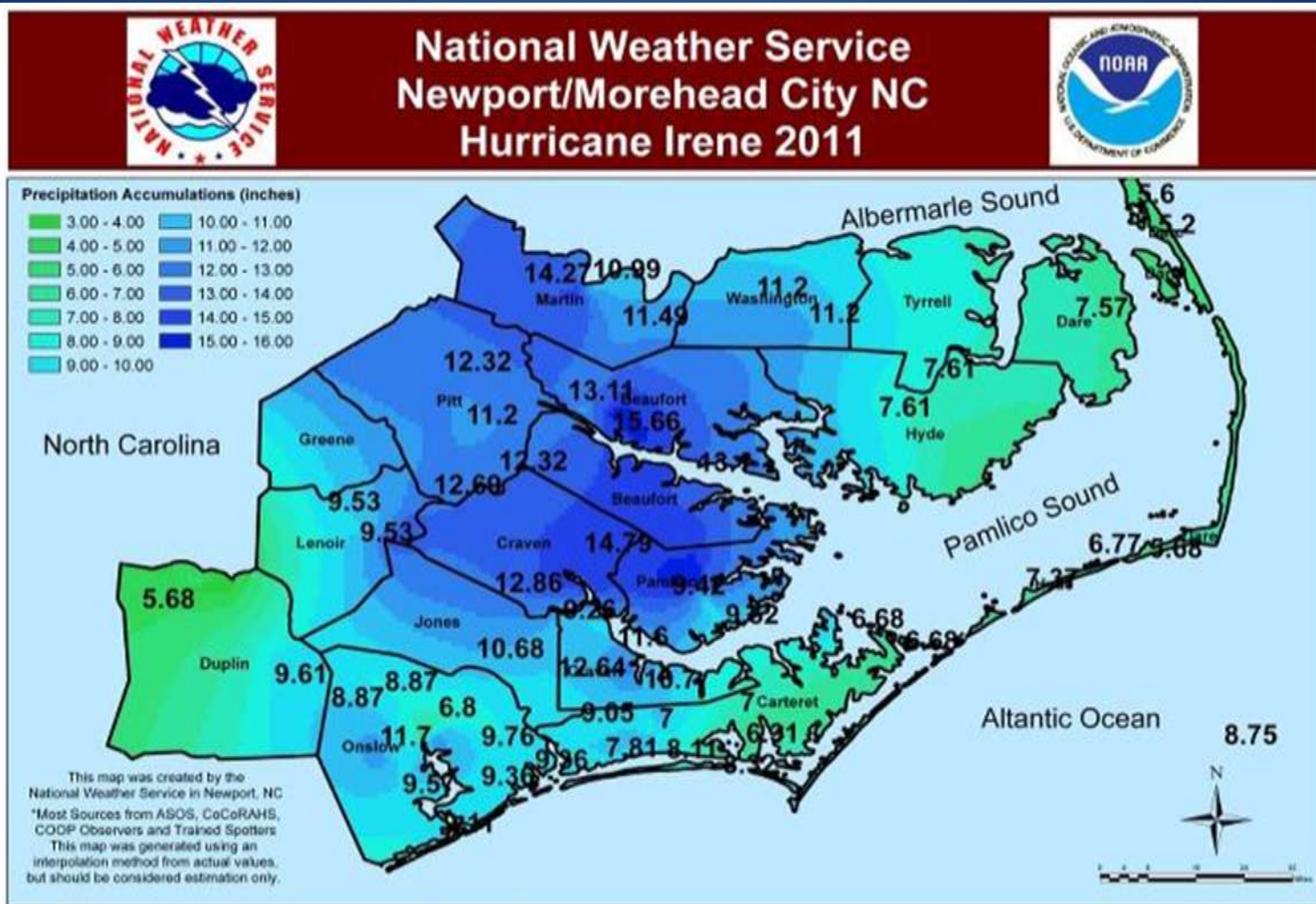
NWS Newport/Morehead City NC



None	Low	Mod	High	Extreme
	<b>Low</b> <p><b>Threat</b> - An elevated threat to life and property; the reasonable chance for highest rainfall totals to be at or slightly above amounts conducive for (flash) flooding.</p> <p><b>Minimum Action</b> - Prepare for the possibility of minor inland flooding.</p> <p><b>Potential Impact</b> - If realized, expect a low but notable impact to communities within the specified area. Several locations may experience minor inland flooding with highest (flash) flood waters capable of causing small streams, creeks, canals, and ditches to become swollen and overflow in a few places. Quick ponding of water occurs at underpasses, low-lying spots, and poor drainage areas. Storm drains and retention ponds become near-full and begin to overflow in a few places. Flood waters may prompt a few evacuations and brief road closures.</p>	<b>Moderate</b> <p><b>Threat</b> - A significant threat to life and property; the reasonable chance for highest rainfall totals to exceed amounts conducive for (flash) flooding.</p> <p><b>Minimum Action</b> - Prepare for the possibility of moderate inland flooding.</p> <p><b>Potential Impact</b> - If realized, expect a moderate impact to communities within the specified area. Several locations may experience moderate inland flooding with highest (flash) flood waters capable of causing rivers and tributaries to become swollen and overspill their banks in a few places, mainly in historically vulnerable places. Small streams, creeks, canals, and ditches overflow. Expanded areas of rapid inundation occur at underpasses, low-lying spots, and poor drainage areas. Some streets and parking lots take on moving water. Storm drains and retention ponds overflow. Flood waters may prompt several evacuations and road closures.</p>	<b>High</b> <p><b>Threat</b> - A critical threat to life and property; the reasonable chance for highest rainfall totals to well exceed amounts conducive for (flash) flooding.</p> <p><b>Minimum Action</b> - Prepare for the possibility of major inland flooding.</p> <p><b>Potential Impact</b> - If realized, expect a high impact to communities within the specified area. Several locations may experience major inland flooding with highest (flash) flood waters capable of causing rivers and tributaries to overflow their banks in several places. Small streams, creeks, canals, and ditches become dangerous rivers. Widespread rapid inundation covers both primary and secondary roads. Streets and parking lots become rivers of moving water. Flood waters may prompt many evacuations and road closures. Rescues may be necessary.</p>	<b>Extreme</b> <p><b>Threat</b> - An extreme threat to life and property; the reasonable chance for highest rainfall totals to greatly exceed amounts conducive for (flash) flooding.</p> <p><b>Minimum Action</b> - Prepare for the possibility of major inland flooding at or near record levels.</p> <p><b>Potential Impact</b> - If realized, expect an extreme impact to communities within the specified area. Several locations may experience major inland flooding at or near historic levels with highest (flash) flood waters capable of causing rivers and tributaries to significantly overflow their banks in several places. Small streams, creeks, canals, and ditches become raging rivers. Widespread rapid inundation covers both primary and secondary roads. Streets and parking lots become rivers of fast-moving water. Flood waters may prompt many evacuations and road closures. Rescues may be necessary.</p>

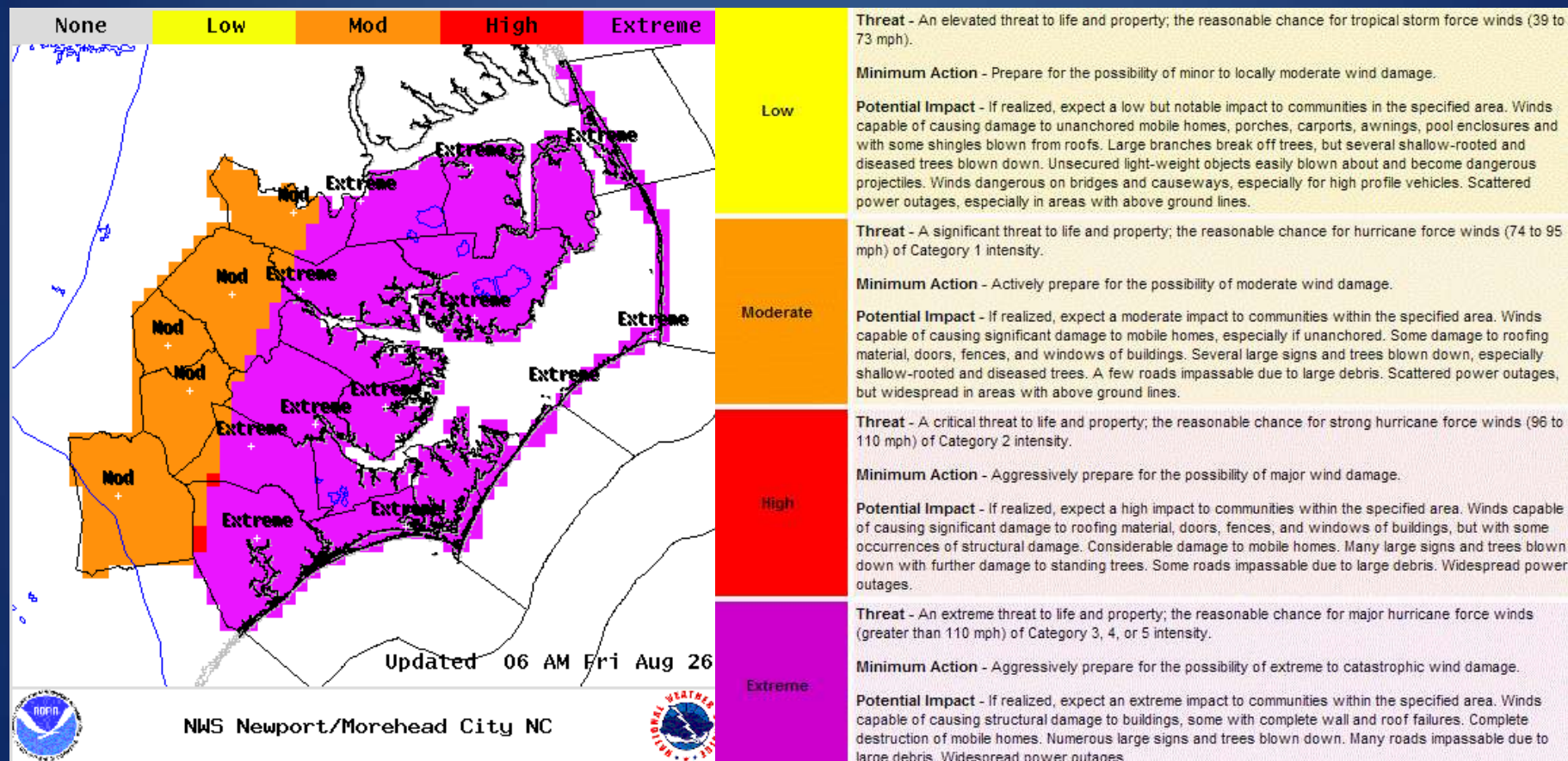


# Heavy Rainfall Impacts





# Wind Impact Graphics



24 hours prior to landfall – projection of 115 MPH hurricane



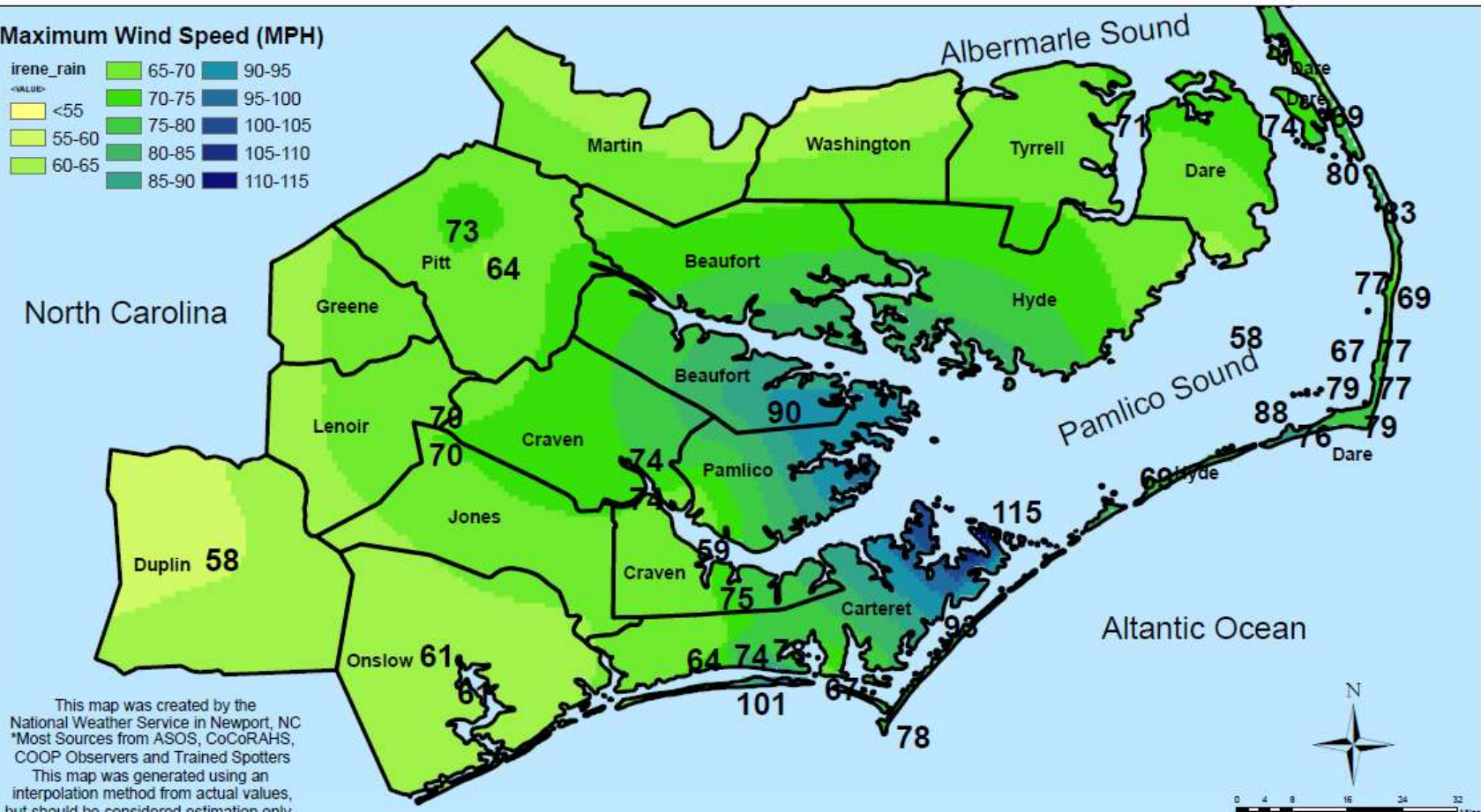
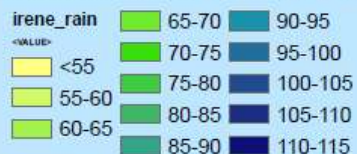
# Wind Observations



## National Weather Service Newport/Morehead City NC Hurricane Irene 2011

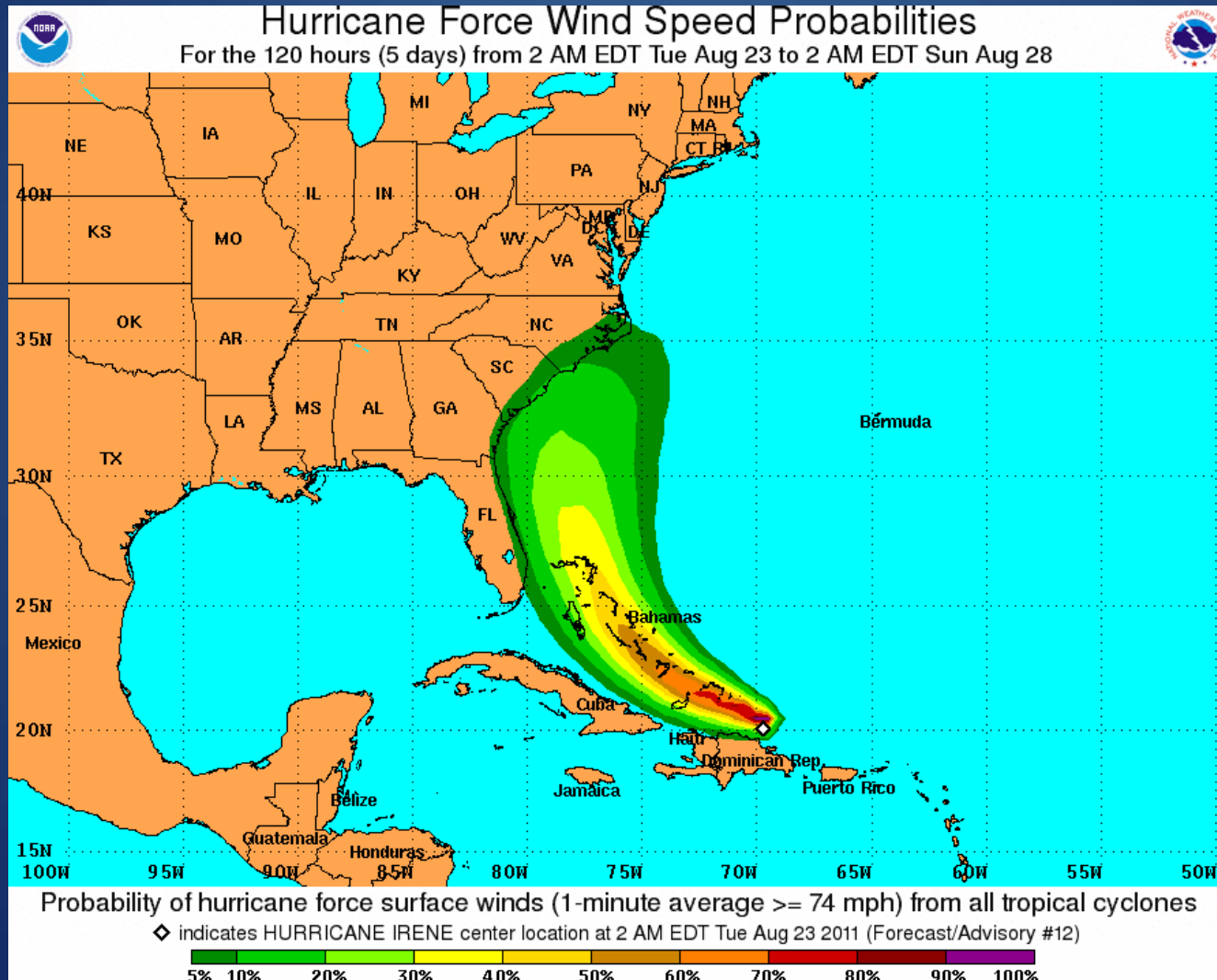


### Maximum Wind Speed (MPH)



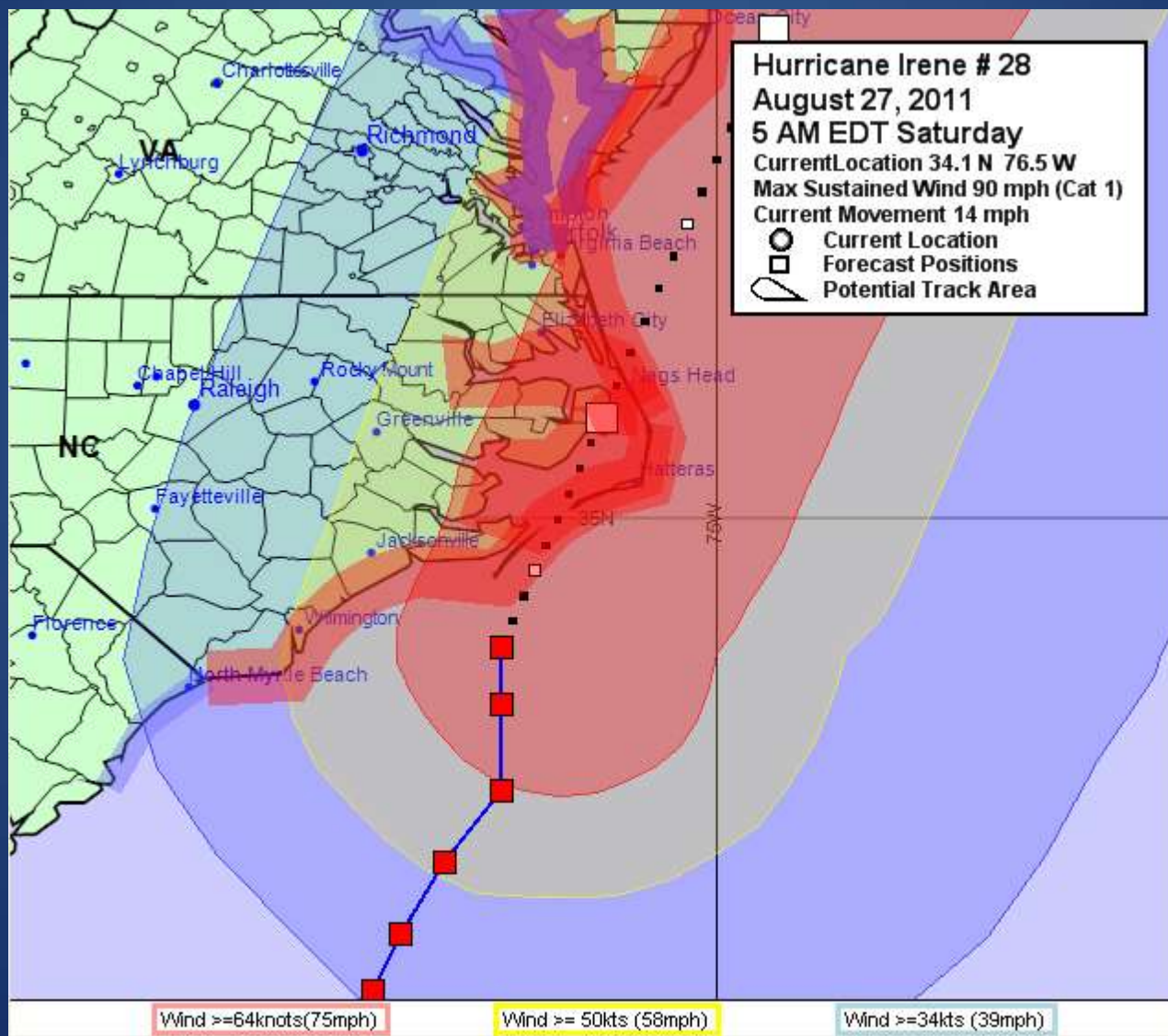


# Probabalistic Winds





# Hurricane Irene Wind Extent Graphic

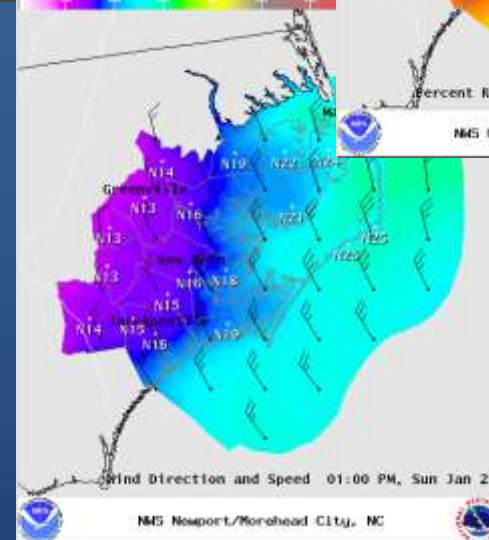
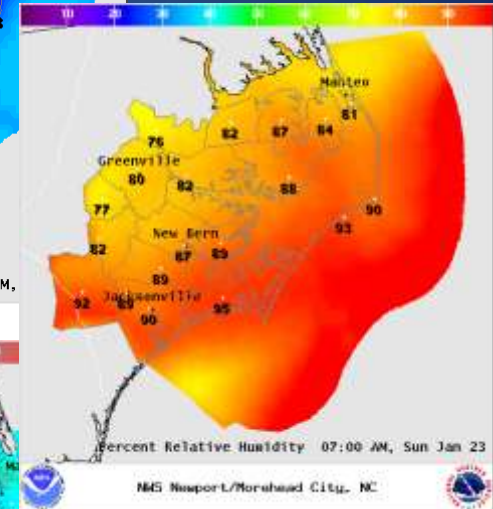
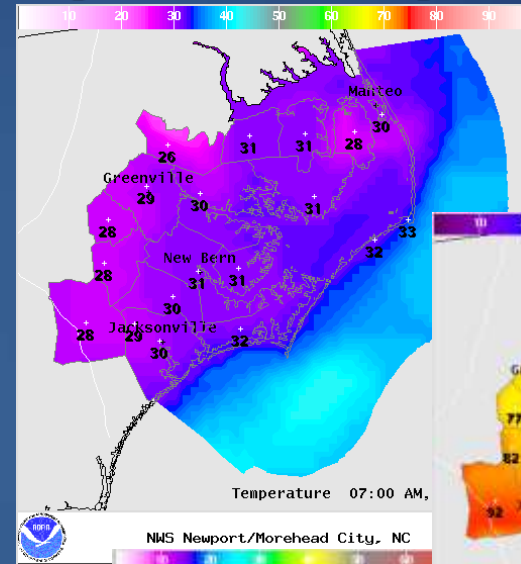




# National Digital Forecast Database (NDFD)



- On our website under “Gridded Images”
- 7-Day public, marine & fire weather forecasts
- Dozens of elements shown in graphic format: temperature, weather, sky cover, relative humidity, wind speed/direction, seas and many more!





# Hourly Weather Graph

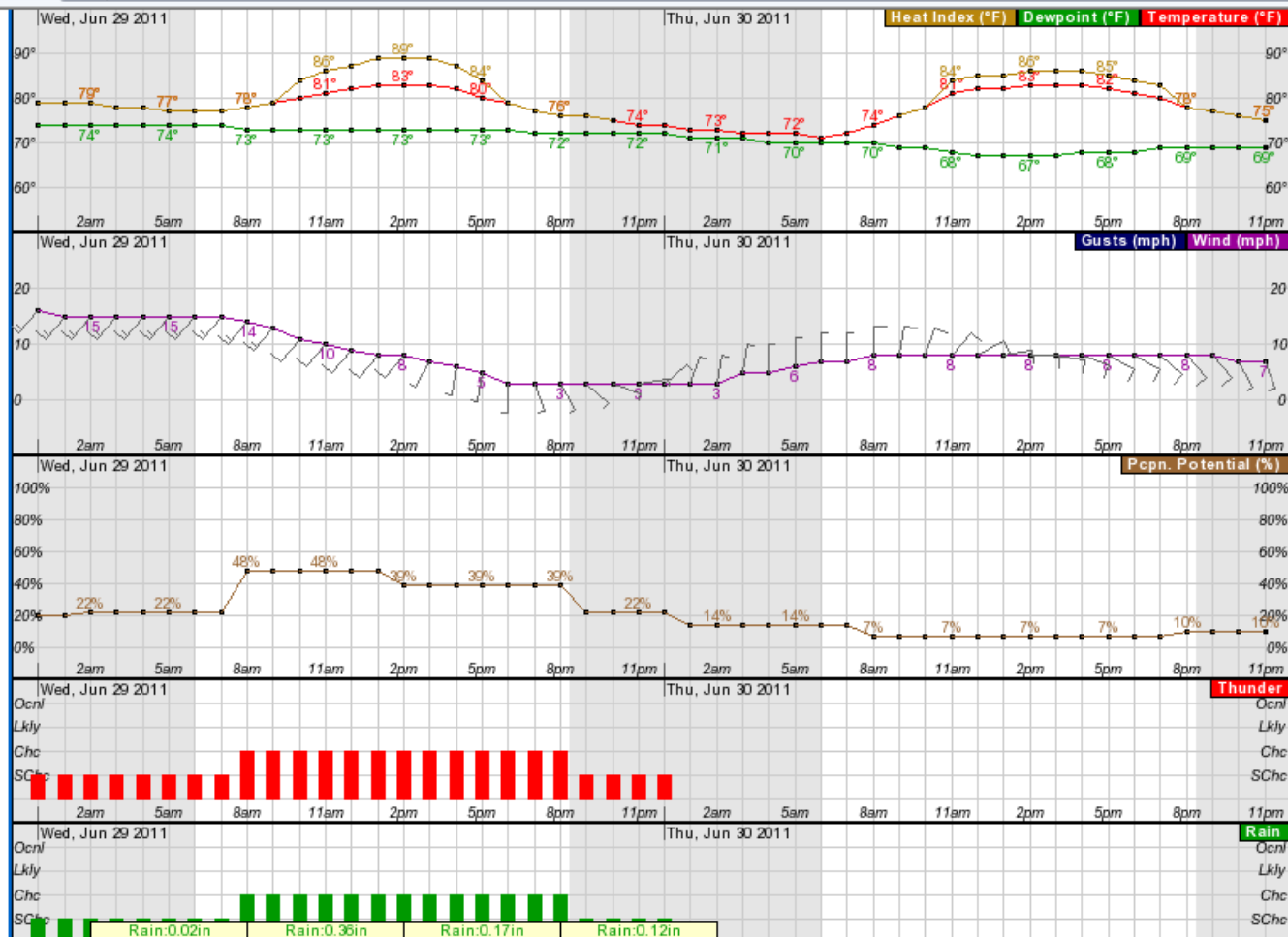


Weather Forecast for 34.71N 76.77W - Windows Internet Explorer

http://forecast.weather.gov/MapClick.php?w0=t&w1=td&w2=hi&w3=sfcwind&w3u=1&w5=pop&w7=thunder&w8=rain&AheadHour=0&Submit=Submit&Fcst=

Suggested Sites Web Slice Gallery

Weather Forecast for 34.71N 76.77W





# Potential Wind Graphic

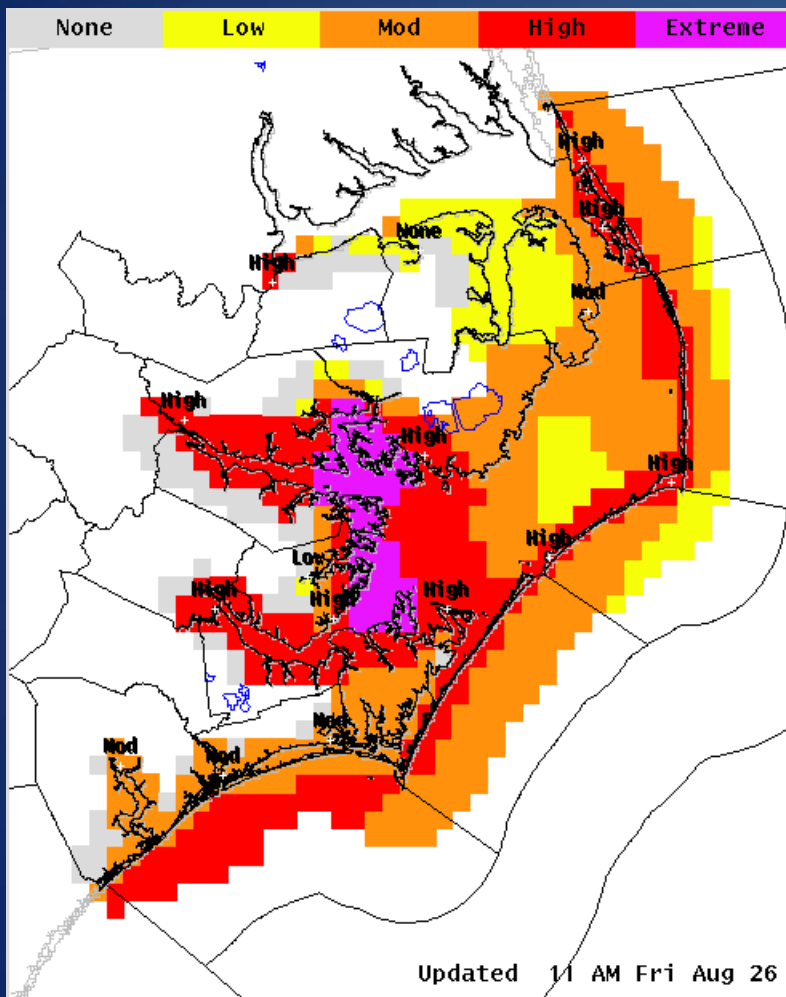


Sat 2am 115 mph

Sat 2pm 110 mph



# Coastal Flooding Impact Graphics

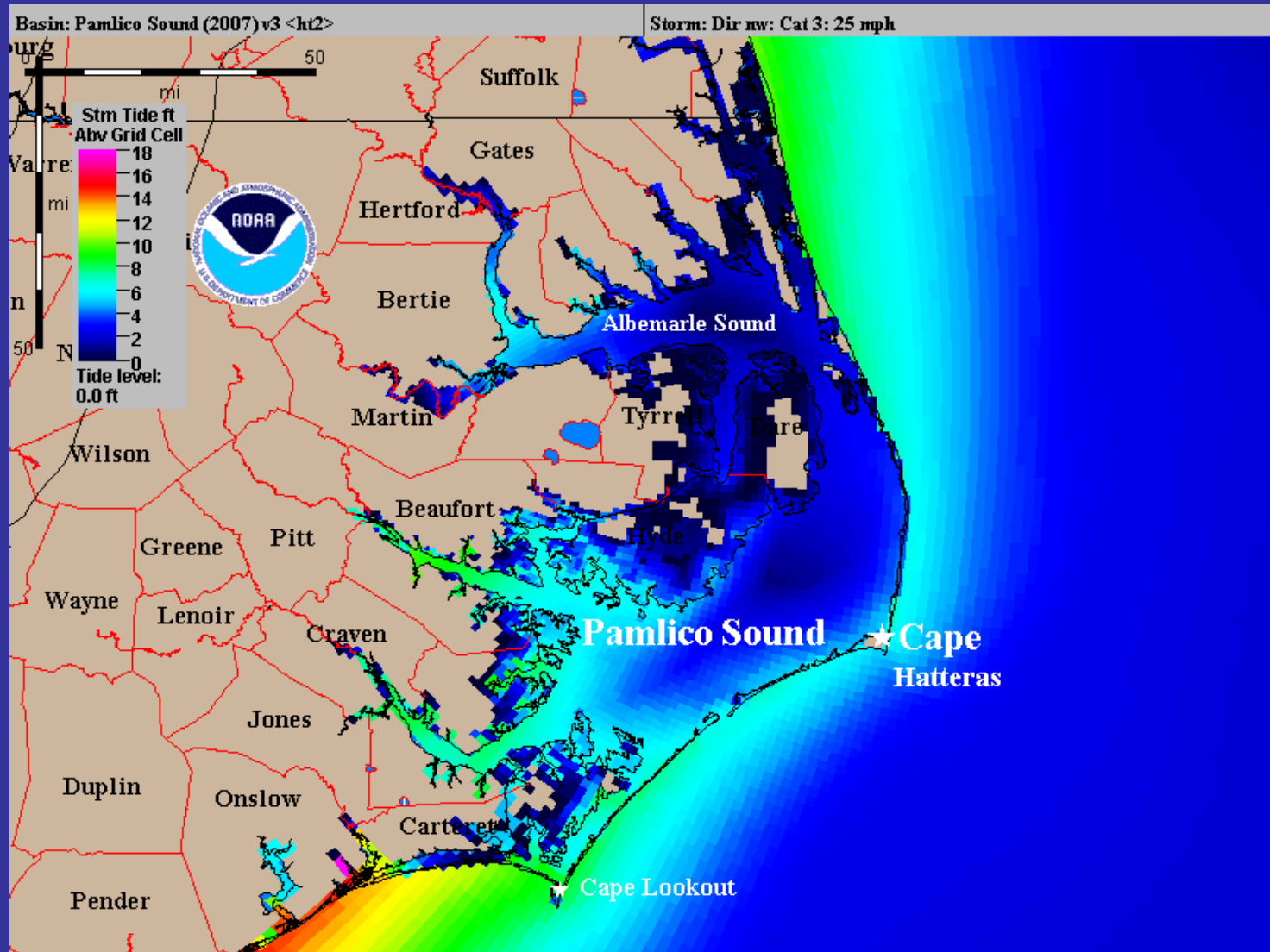


NWS Newport/Morehead City NC

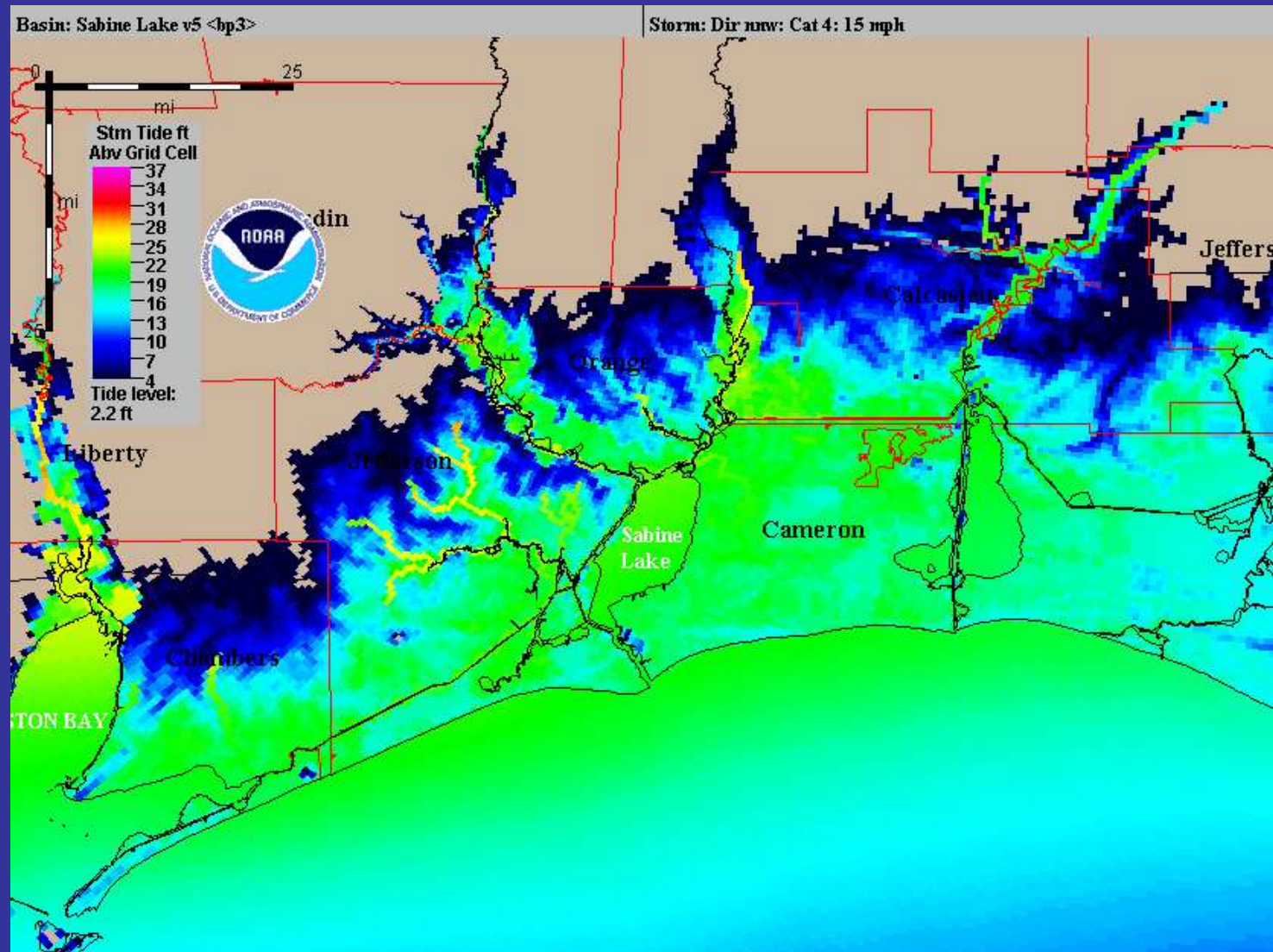
None	Low	Mod	High	Extreme
	<p><b>Low</b></p> <p><b>Threat</b> - An elevated threat to life and property; the reasonable chance for combined storm surge and tide resulting in sea water inundation of 2 to 3 feet.</p> <p><b>Minimum Action</b> - Prepare for the possibility of minor to locally moderate coastal flood damage.</p> <p><b>Potential Impact</b> - If realized, expect a low but notable impact to communities in the specified area. Coastal flood waters capable of causing partial inundation within the surge zone, especially for low-lying areas. Moderate to locally major beach erosion. Very heavy surf breaching dunes in isolated locations, mainly in historically vulnerable spots.</p>	<p><b>Moderate</b></p> <p><b>Threat</b> - A significant threat to life and property; the reasonable chance for combined storm surge and tide resulting in sea water inundation of 4 to 5 feet.</p> <p><b>Minimum Action</b> - Prepare for the possibility of moderate coastal flood damage.</p> <p><b>Potential Impact</b> - If realized, expect a moderate impact to communities in the specified area. Coastal flood waters capable of causing large areas of inundation within the surge zone. Severe beach erosion. Several sections of near-shore roads washed out and/or low-lying escape routes flooded. Scouring surge and tide waters accentuated by battering wind waves breaching dunes and seawalls in scattered locations to result in structural damage to shoreline buildings, with a few washing into the sea. Damage accentuated by floating debris. Moderate to major damage to marinas, docks, and piers. Many small craft broken away from moorings, especially in unprotected anchorages.</p>	<p><b>High</b></p> <p><b>Threat</b> - A critical threat to life and property; the reasonable chance for combined storm surge and tide resulting in sea water inundation of 6 to 7 feet.</p> <p><b>Minimum Action</b> - Prepare for the possibility of major coastal flood damage.</p> <p><b>Potential Impact</b> - If realized, expect a high impact to communities in the specified area. Coastal flood waters capable of causing large areas of inundation within the surge zone. Severe beach erosion. Several sections of near-shore roads washed out and/or low-lying escape routes flooded. Scouring surge and tide waters accentuated by battering wind waves breaching dunes and seawalls in scattered locations to result in structural damage to shoreline buildings, with a few washing into the sea. Damage accentuated by floating debris. Moderate to major damage to marinas, docks, and piers. Many small craft broken away from moorings, especially in unprotected anchorages.</p>	<p><b>Extreme</b></p> <p><b>Threat</b> - An extreme threat to life and property; the reasonable chance for combined storm surge and tide resulting in sea water inundation of 8 feet or more.</p> <p><b>Minimum Action</b> - Prepare for the possibility of extreme to catastrophic coastal flood damage.</p> <p><b>Potential Impact</b> - If realized, expect an extreme impact to communities in the specified area. Coastal flooding capable of causing widespread inundation within the surge zone, possibly reaching several miles inland. Extreme beach erosion with several new inland cuts likely created. Many large sections of near-shore roads washed out and/or low-lying escape routes flooded. Powerful scouring surge and tide waters greatly accentuated by intense battering wind waves breaching dunes and seawalls in widespread locations to result in structural damage to shoreline buildings, with several washing into the sea. Damage greatly accentuated from considerable floating debris. Extensive damage to marinas, docks, and piers. Numerous small craft broken away from moorings.</p>

18 hours prior to landfall

# Height Above Ground Refer (in redation)

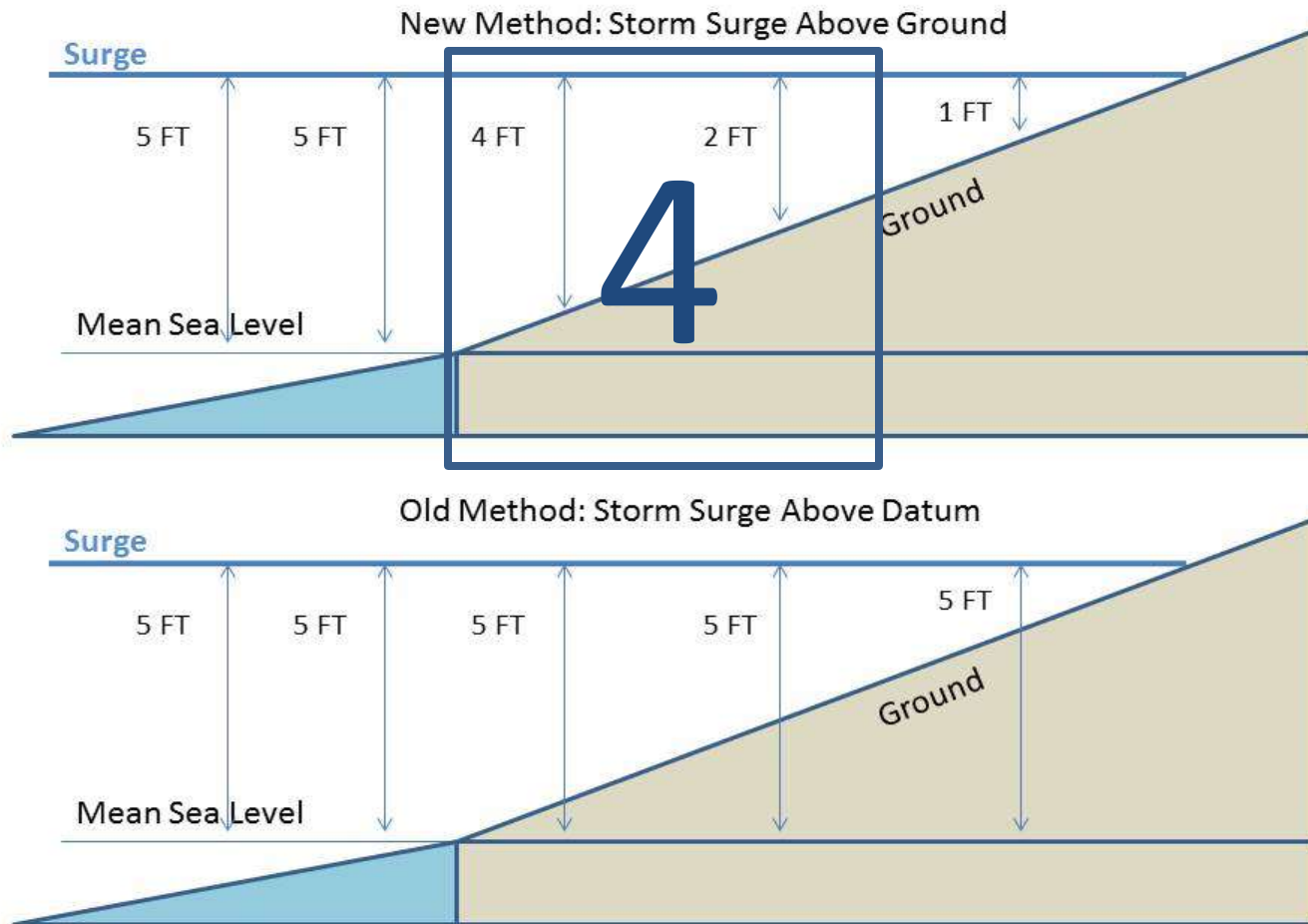


# Height Above Ground Reef (emulation)



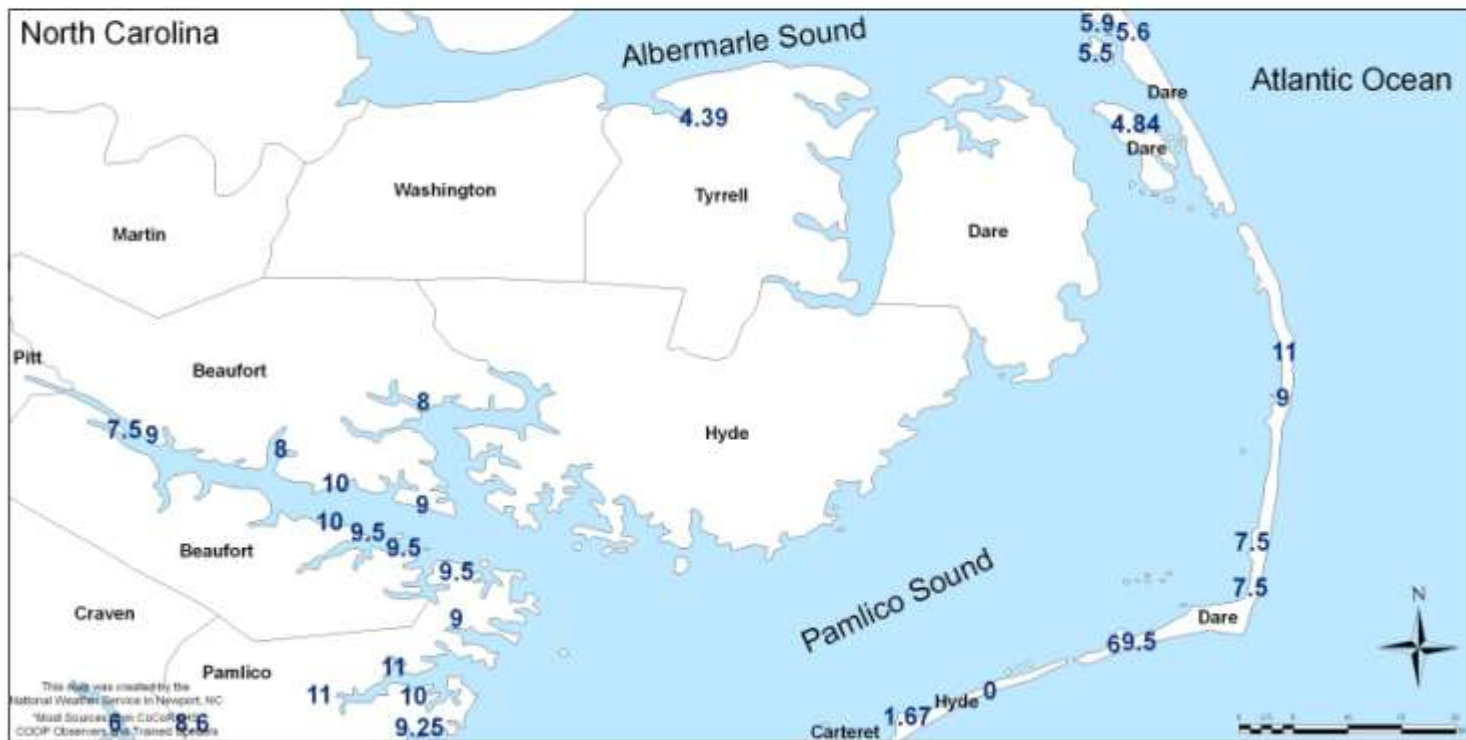


# Surge Referenced Above Ground





# Storm Surge Observations (Above Normal High Tide)



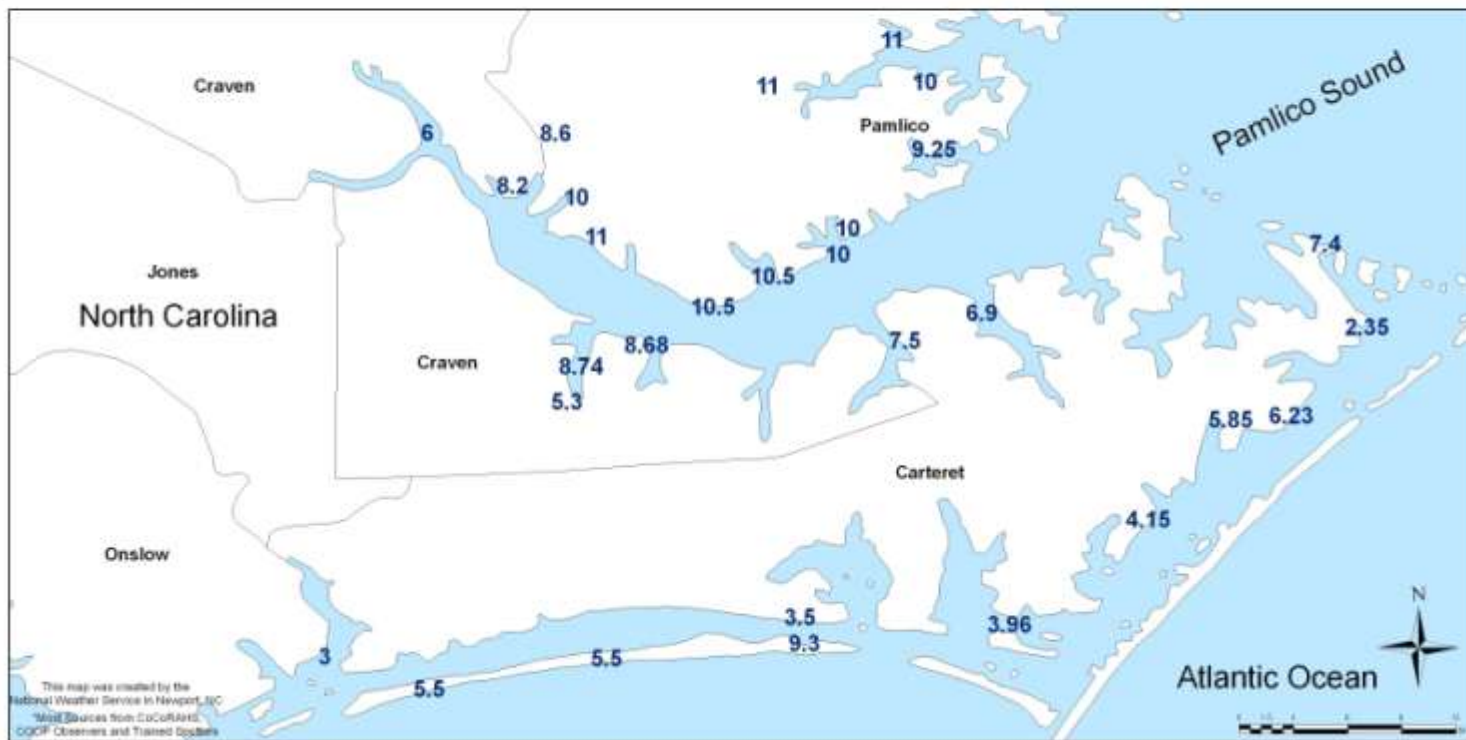




# Storm Surge Observations (Above Normal High Tide)



## National Weather Service Newport/Morehead City NC





# Storm Surge Observations (Above Ground Level)



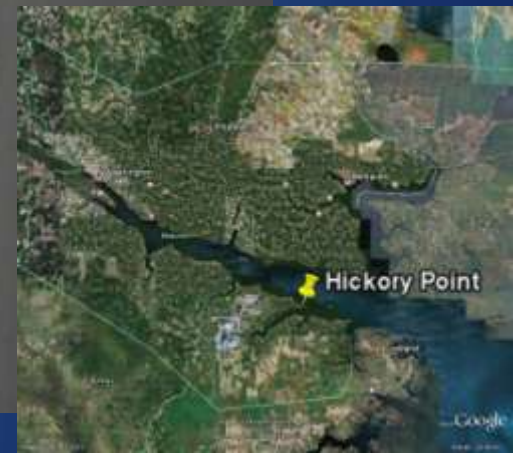


# Hickory Point

On the Pamlico River, Beaufort County, at the height of Irene.



Courtesy Williamson Family



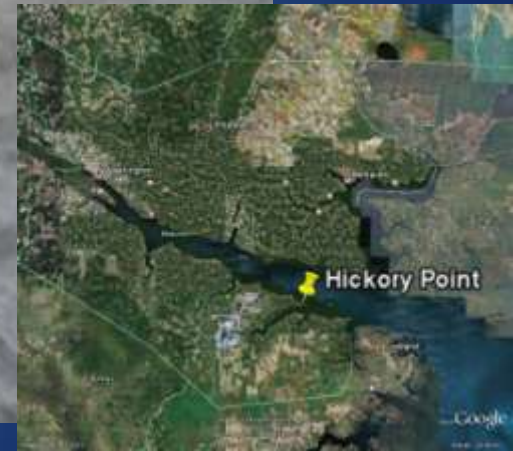


# Hickory Point

On the Pamlico River, Beaufort County, at the height of Irene.



Courtesy Williamson Family

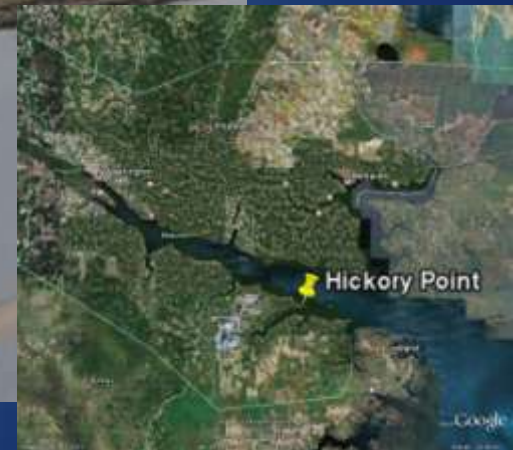




# Hickory Point

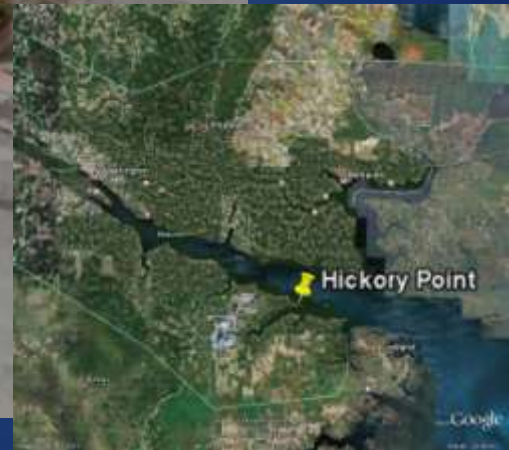


Older homes wiped clean off the foundation and off the peninsula entirely.





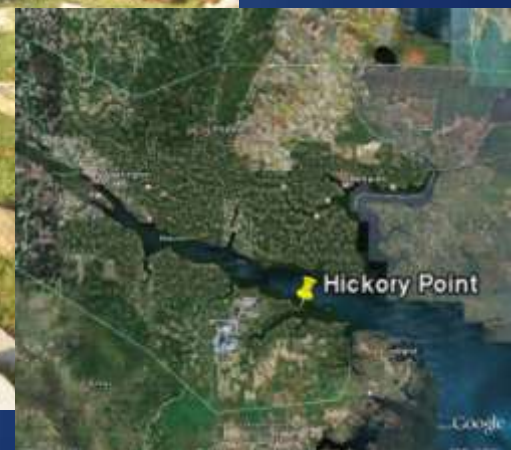
Many homes pushed off their foundation.





# Hickory Point

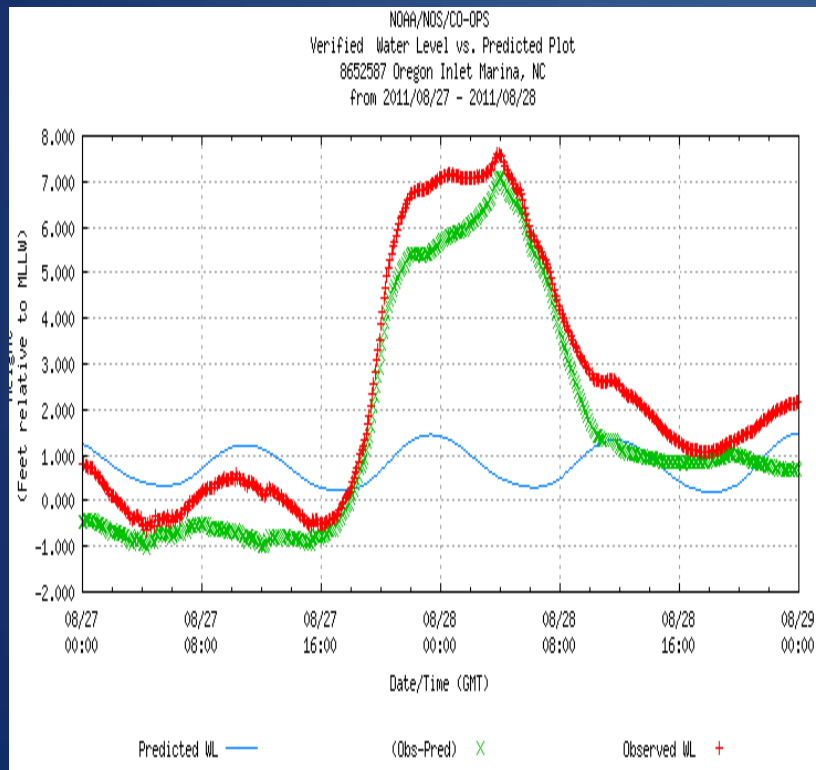
Rip-rap from seawall carried inland/home damage.



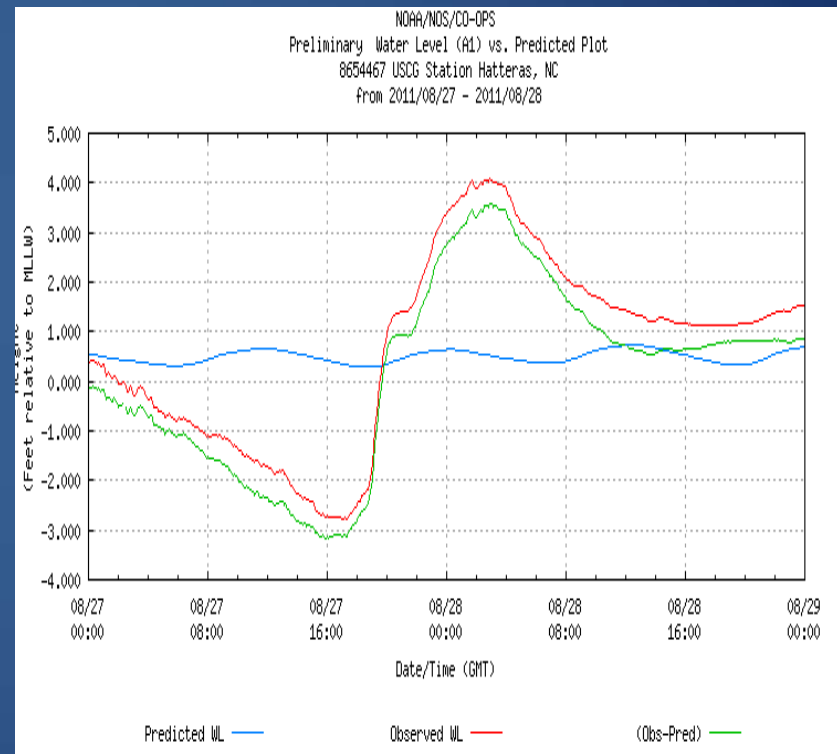


# Irene Outer Banks Sound Side Surge

## Oregon Inlet



## USCG Cape Hatteras





# Pea Island Cut

Left: 2011 after Irene/Right: 1993

Note: Highway 12 was on the coast side of the maintenance buildings in 1993.



August 30, 2011



May 6, 2008



August 30, 2011



35° 41.07N 75° 28.5W

Pea Island: Images from USGS



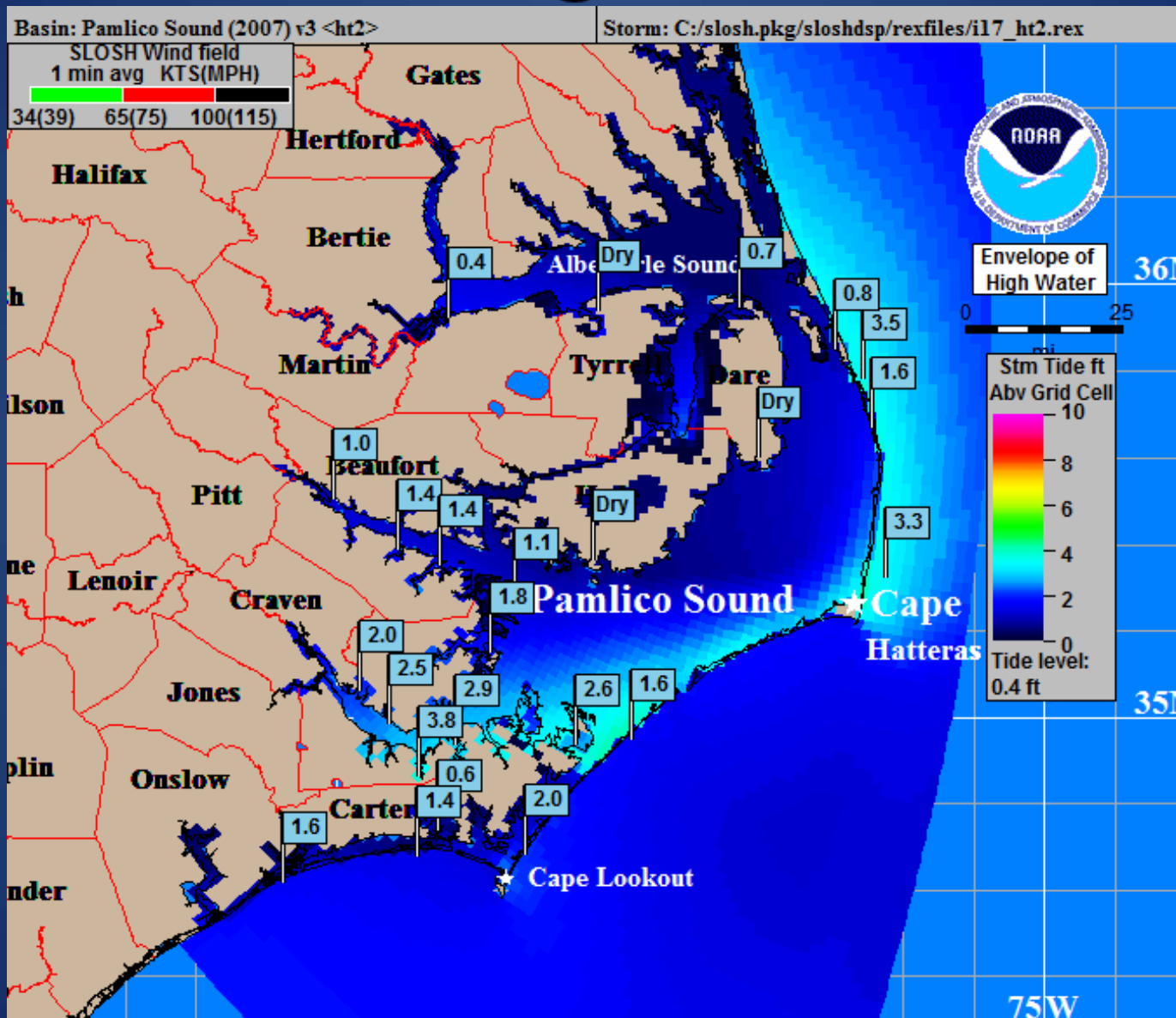
# Rodanthe S-Curves

Dune breach/Inlet cut at Mirlo Beach.





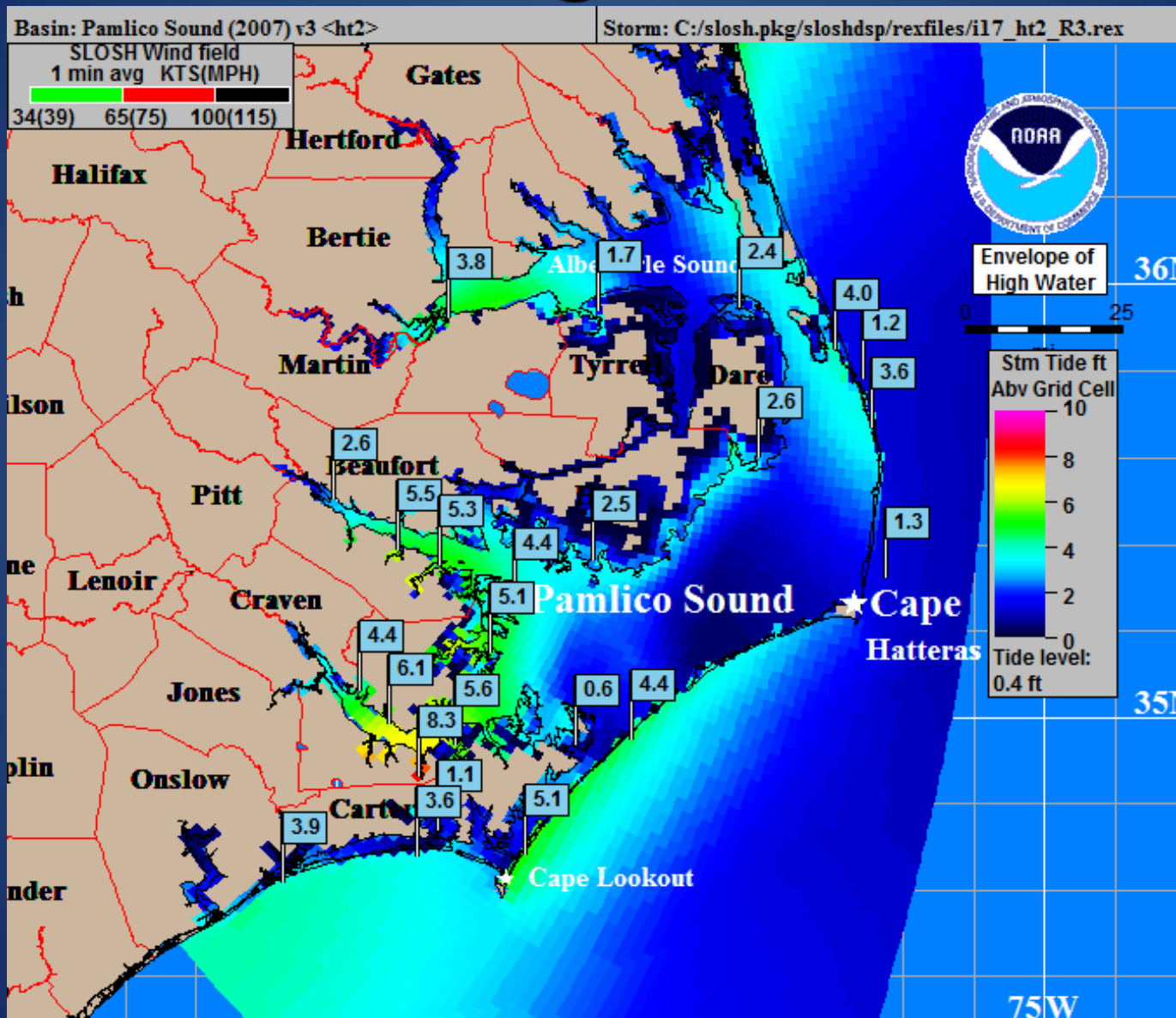
# Storm Surge Guidance



SLOSH Along Forecast Track Run



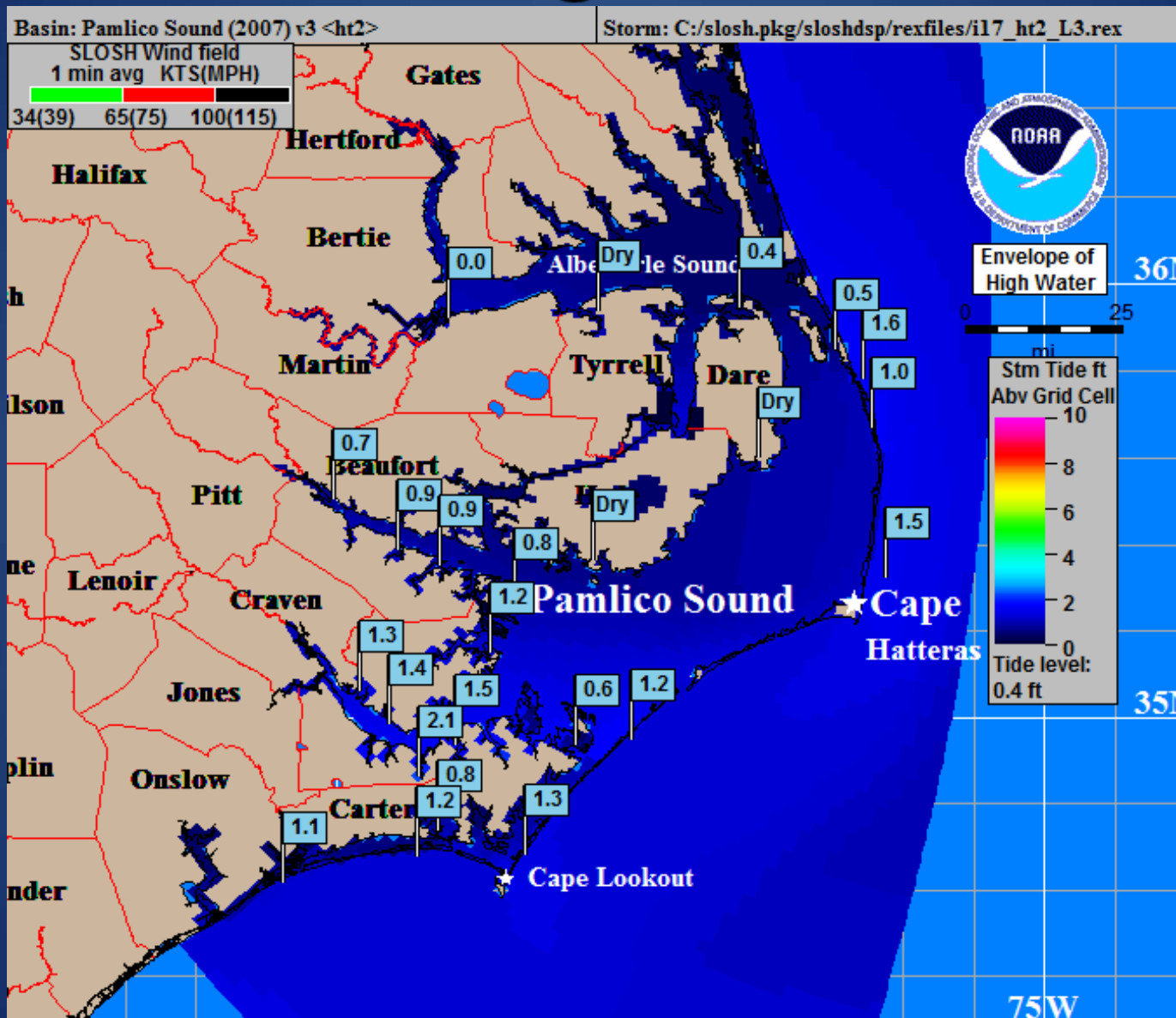
# Storm Surge Guidance



SLOSH Left of Forecast Track Run



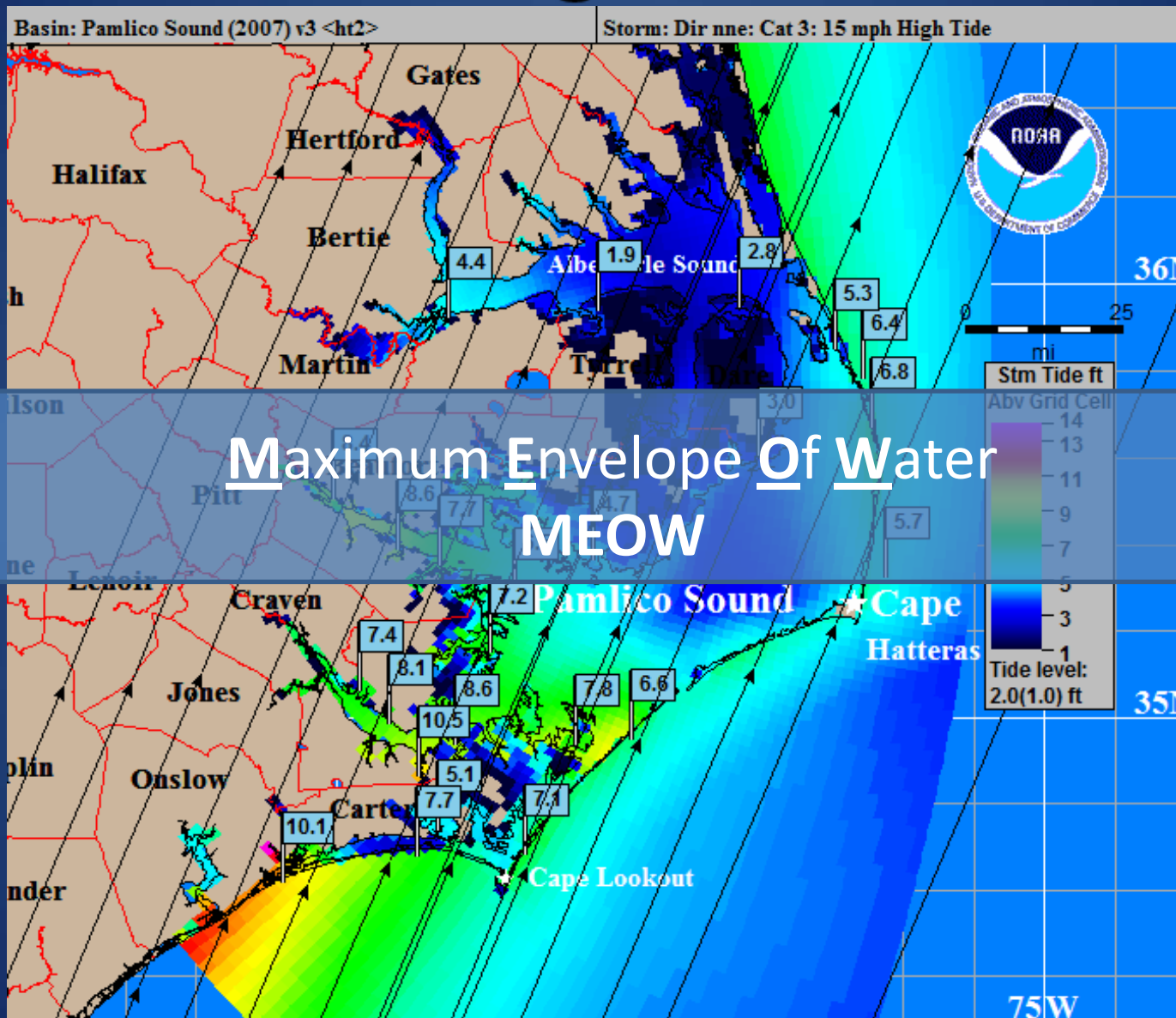
# Storm Surge Guidance



SLOSH Right of Forecast Track Run



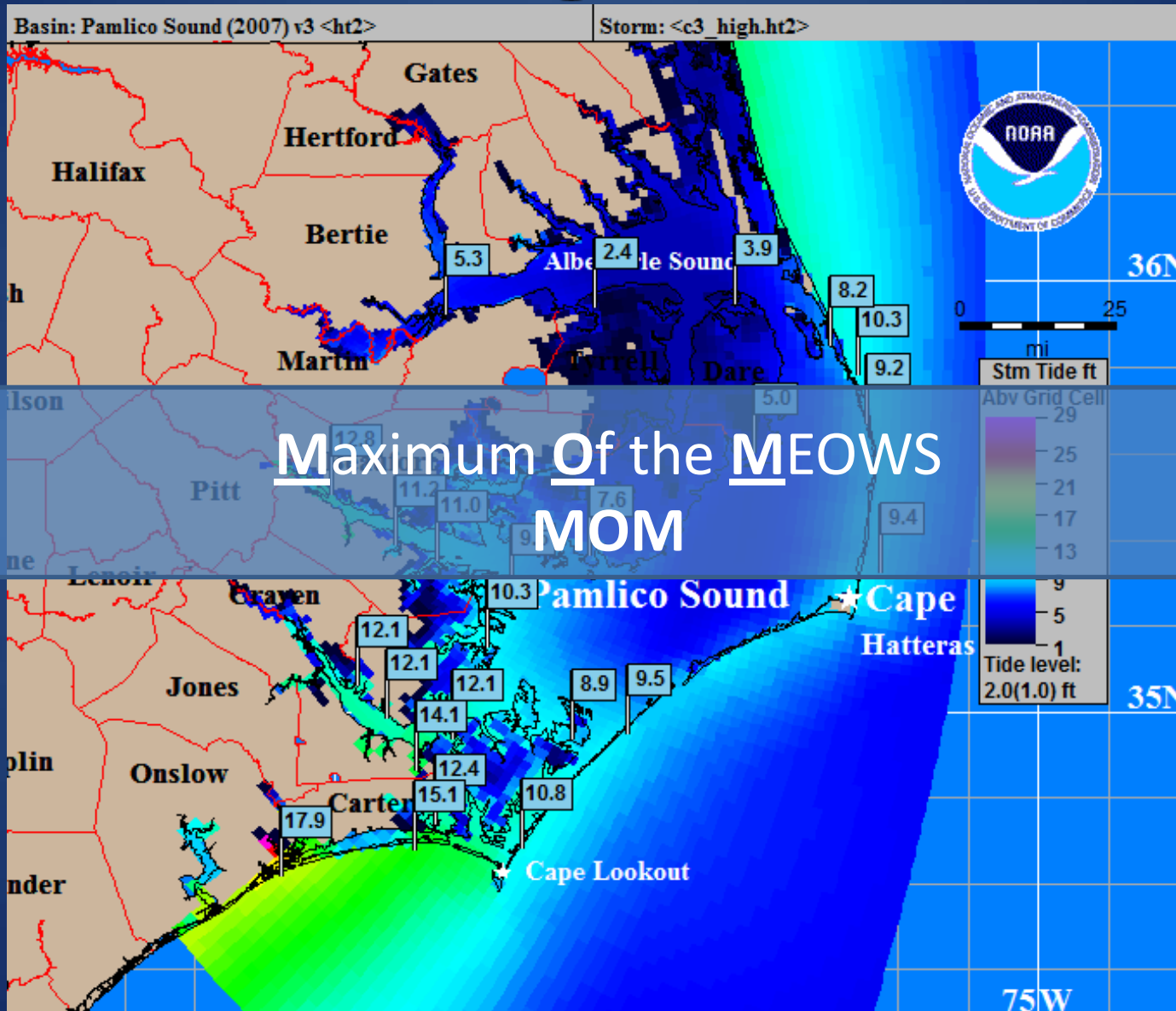
# Storm Surge Guidance



Aggregate of Tracks for a CAT 3 Moving NNE at 15 mph at High Tide



# Storm Surge Guidance



Aggregate of Tracks for a CAT 3 of All Directions and Speed at High Tide



# Probabilistic Storm Surge Guidance



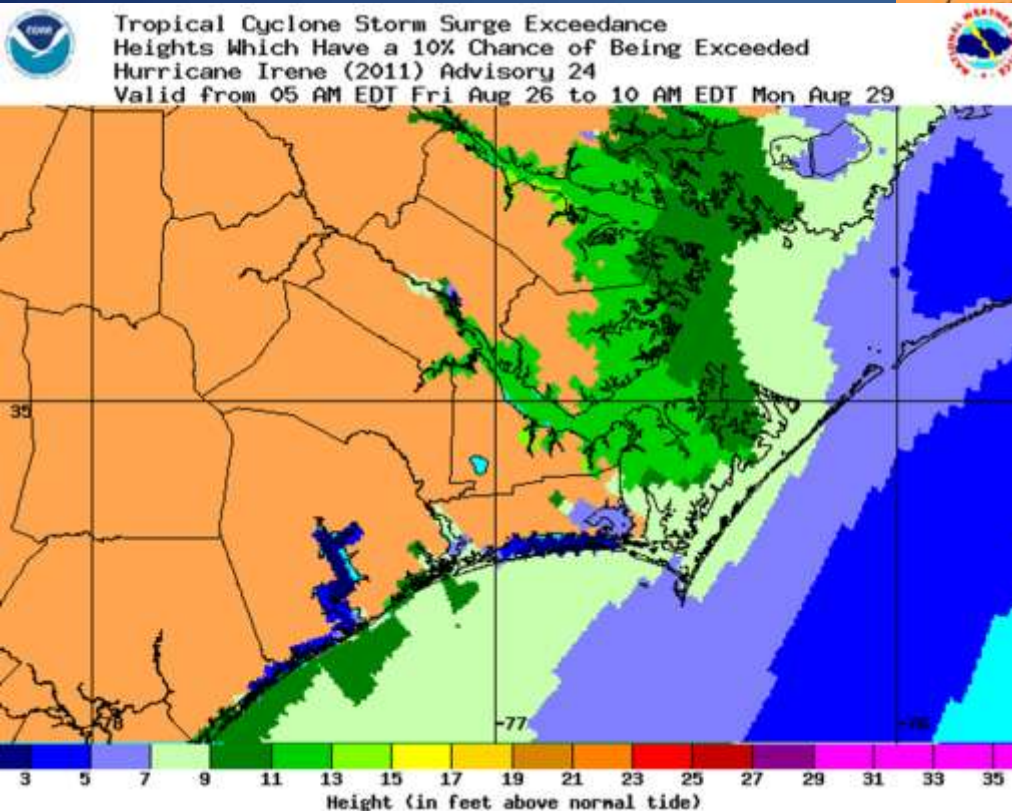
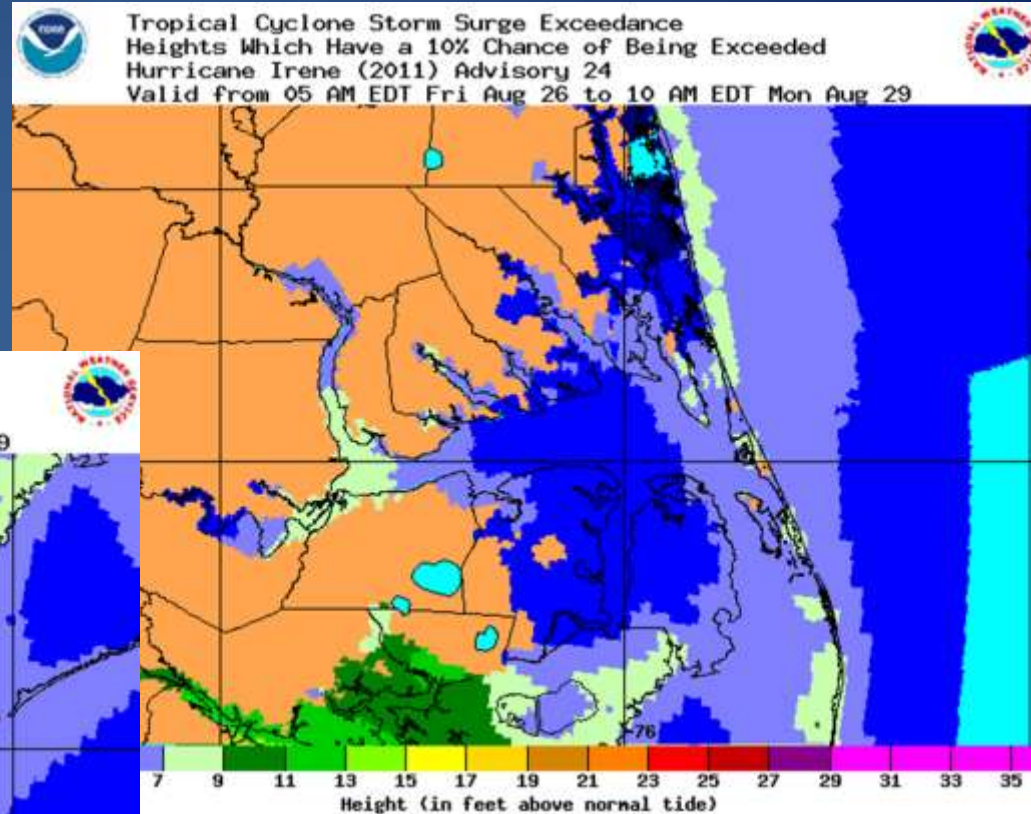
- Takes into account actual NHC Track Forecast and statistics of NHC error including: timing, location, intensity, and size of storm.
- Uses an ensemble of SLOSH runs to create probabilistic storm surge (p-surge)
  - Different directions of motion
  - Different landfall locations
  - Different intensities
  - Different storm sizes
  - Different forward speeds



# Probabilistic Storm Surge Guidance



- Available when the NHC issues a hurricane watch or warning for the continental US.
- Can be utilized to assess potential surge based on uncertainties in forecast.



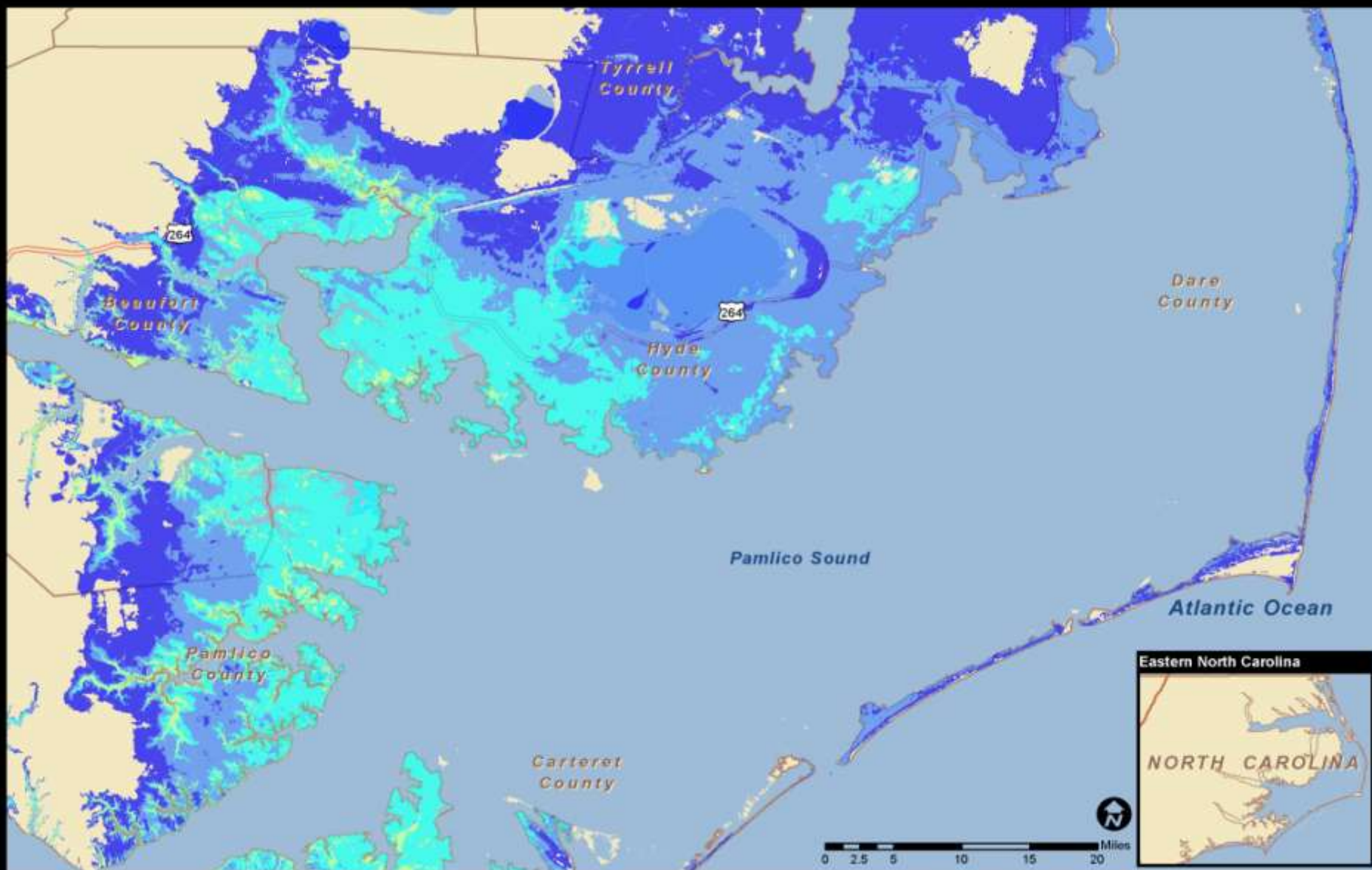
- Used to assist in generating coastal flooding impact graphics and surge forecasts in NHC and local NWS office text products.



# Hurricane Irene

Potential Inundation (10% exceedence)  
Advisory #24  
Thursday August 26, 2011  
5 AM EDT

Feet Above Ground Level

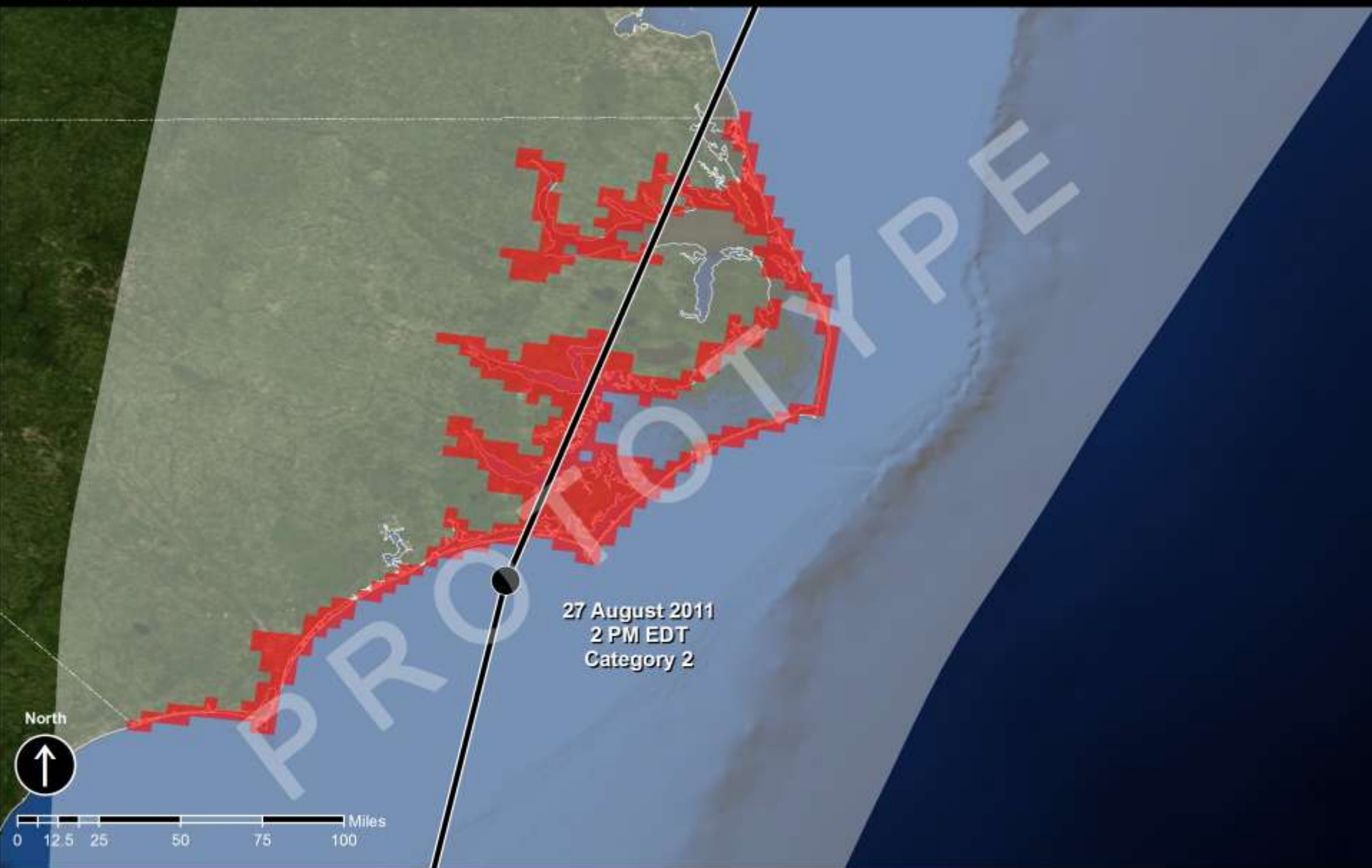


National Hurricane Center  
Storm Surge Unit

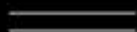


# Hurricane Irene, Advisory #22

Storm Surge Warning PROTOTYPE



National Hurricane Center  
Storm Surge Unit



Hurricane Irene Adv #22 Forecast Track



NWS/NHC Storm Surge Warning

URGENT - IMMEDIATE BROADCAST REQUESTED  
HURRICANE IRENE LOCAL STATEMENT  
NATIONAL WEATHER SERVICE NEWPORT/MOREHEAD CITY NC  
1158 PM EDT FRI AUG 26 2011

# Overview of HLS for entire region

...IRENE MOVING NORTH-NORTHEASTWARD TOWARD CAROLINA...TROPICAL STORM CONDITIONS LASHING

.NEW INFORMATION...  
**TORNADO WATCH HAS BEEN ISSUED FOR MUCH OF E**

.AREAS AFFECTED...  
THIS LOCAL STATEMENT PROVIDES IMPORTANT INFORMATION FOR RECOMMENDED ACTIONS FOR PEOPLE AND MARINE INTERESTS IN LOCATIONS AND COASTAL WATER LEGS OF EASTERN NC AND ADJACENT COASTAL WATERS.

.WATCHES/WARNINGS...  
A HURRICANE WARNING CONTINUES FOR THE FOLLOWING LOCATIONS: MARTIN...PITT...WASHINGTON...TYRRELL...MAINLAND...BEAUFORT...MAINLAND HYDE...DUPLIN...LENOIR...JONES...PAMLICO...CARTERET...ONslow...OUTER BANKS DARE...HYDE.

FOR MARINE INTERESTS...A HURRICANE WARNING COASTAL WATERS INCLUDING ALBEMARLE AND CURRITUCK COUNTIES.

A **FLOOD WATCH** IS IN EFFECT FOR ALL OF EASTERN NC. PLEASE LISTEN CLOSELY FOR ANY FLOOD WARNINGS THAT MIGHT BE IN EFFECT FOR YOUR AREA.

A **TORNADO WATCH** IS IN EFFECT FOR PORTIONS OF EASTERN CAROLINA AND ADJACENT COASTAL WATERS. PLEASE LISTEN FOR ANY TORNADO WARNINGS THAT MIGHT BE IN EFFECT FOR YOUR AREA.

.STORM INFORMATION...  
AT 11 PM EDT...THE CENTER OF HURRICANE IRENE WAS LOCATED AT LATITUDE 32.6N...LONGITUDE 76.9W. THIS WAS ABOUT 150 MILES SOUTH-SOUTHWEST OF BUXTON NC...OR ABOUT 150 MILES SOUTH OF MOREHEAD CITY NC. STORM MOTION WAS NNE OR 20 DEGREES. STORM INTENSITY WAS 100 MPH.

.SITUATION OVERVIEW...  
WHEN MAKING DECISIONS...**DO NOT FOCUS ON THE EXACT FORECAST TRACK.**

DUE TO THE SIZE OF THE STORM, PRECAUTIONARY/PREPAREDNESS ACTIONS...  
**STORM SURGE... AS IRENE AFFECTS THE AREA, PREPARATIONS FOR THE PROTECTION OF LIFE AND PROPERTY SHOULD BE COMPLETED AT THIS TIME. EVACUATE IF DIRECTED TO DO SO BY LOCAL OFFICIALS...OR IF YOUR HOME IS VULNERABLE TO HIGH WINDS OR FLOODING.**  
SMALL CRAFT SHOULD REMAIN IN PORT AND WELL SECURED.  
FOR ADDITIONAL PRECAUTIONARY AND PREPAREDNESS INFORMATION... PLEASE REFER TO THE DETAILED RECOMMENDATIONS RELATIVE TO YOUR LOCATION AS FURTHER DESCRIBED BY YOUR LOCAL NATIONAL WEATHER SERVICE OFFICE AND LOCAL EMERGENCY MANAGEMENT.  
&&

A **5 TO 9 FEET OF SURGE IS EXPECTED ACROSS THE WARNED AREA.** AREAS THAT WILL BE HARDEST HIT WILL BE ADJACENT TO THE PAMLICO SOUND INCLUDING THE LOWER REACHES OF THE NEUSE AND PAMLICO RIVERS...OCEANSIDE AREAS SOUTH OF CAPE HATTERAS...AND SOUNDSIDE OUTER BANKS DARE AND HYDE COUNTIES. THESE WATER LEVELS WILL PRODUCE MODERATE TO MAJOR FLOODING OF HOMES...ROADS...AND PROPERTIES.

10 TO 15 FOOT BREAKERS WILL PRODUCE SEVERE BEACH EROSION...OCEAN OVERWASH...AND LIFE THREATENING RIP CURRENTS.

A **TORNADO WATCH** IS IN EFFECT FOR MUCH OF THE AREA. ISOLATED TORNADOES ARE LIKELY TONIGHT AND DURING THE DAY SATURDAY MAINLY ALONG THE IMMEDIATE COAST. ANY TORNADOES THAT OCCUR WILL BE BRIEF AND VERY DIFFICULT TO SEE. PLEASE LISTEN FOR ANY TORNADO WARNINGS THAT MIGHT BE ISSUED FOR YOUR AREA.

# HLS for Coastal Counties

FOR DAR  
VISITORS  
THROUGH  
VIRGINIA  
COUNTY.  
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MIDDLE..  
  
FOR CAR  
RESIDENT  
BEACH B  
BOGUE B  
FOLLOW  
HIGH...A  
SMITHFIE

**FOR HYDE COUNTY...**THERE ARE MANDATORY EVACUATION  
OCRACOKE ISLAND AND MAINLAND  
OPEN AT INGLEWOOD BAPTIST CHU  
SHELTER IS OPEN AT RALEIGH ROAD  
MORE INFORMATION PLEASE CALL T  
252 926 4368.

**FOR BEAUFORT COUNTY...**THERE ARE  
LIVING IN LOW LYING AREAS.

**FOR TYRRELL COUNTY...**THERE ARE  
LIVING IN LOW LYING AREAS AND M

&&

...PROBABILITY OF TROPICAL STORM  
THE CHANCE FOR **HURRICANE CON**  
ALSO...THE CHANCE FOR TROPICAL S  
TO 100 PERCENT.

...STORM SURGE AND STORM TIDE..  
AN EXTREMELY DANGEROUS STORM  
MUCH AS **6 TO 11 FEET ABOVE GRO**  
AREA IN NORTH CAROLINA...**INCLUD**  
**SOUNDS**. NEAR THE COAST...**THE SU**  
**LARGE...DESTRUCTIVE...AND LIFE-T**

AS HURRICANE IRENE APPROACHES  
CHANCE FOR COMBINED STORM SU  
TO **9 FEET ABOVE MEAN SEA LEVEL**  
RESULTING **IN WORST CASE FLOOD**  
**GROUND LEVEL** SOMEWHERE WITH

THE LOCATIONS MOST LIKELY TO RE  
INCLUDE THE OUTER BANKS....DOWNEAST CARTERET COUN  
ADJACENT TO THE PAMLICO AND ALBEMARLE SOUNDS...TH

PAMLICO RIVERS...AND  
FORECAST...THERE IS A  
**ASTRONOMICAL TIDE**  
AREAS CLOSER TO THE  
**INUNDATION OF 6 TO**  
SURGE ZONE. **MAXIMI**  
**CARTERET COUNTY AL**  
**NEUSE AND PAMLICO**  
**SURGE IS LIKELY WITH**  
**POTENTIAL DUNE BRE**  
AT TOPSAIL BEACH. AL  
MOST LIKELY PERIOD C  
EVENING.

THERE IS A SIGNIFICAN  
**FLOODING...**POTENTIAL  
THE CHANCE OF MAJO  
SURGE ZONE...**RESULT**  
**INUNDATION**. IF REAL  
FAILED TO HEED OFFIC  
PLACED THEIR LIVES IN  
STAYING BEHIND IN VU  
BUSINESSES NEAR THE  
PRONE AREAS.

SEVERAL COASTAL CO  
STRUCTURES NOT RAIS  
SIGNIFICANT FLOODIN  
AND POUNDING SURF  
LOCATIONS. FLOOD W  
CARS WILL LIKELY BE S

SUBSTANTIAL BEACH EROSION WILL OCCUR. **MANY ROADS WILL LIKELY BE  
DAMAGED OR WASHED OUT BY THE FLOOD WATERS...LEAVING SECTIONS OF  
COASTAL COMMUNITIES IN FLOOD PRONE AREAS TEMPORARILY CUT OFF.**  
ROADWAY TRAVEL MAY BE DANGEROUS WITH SEVERAL ROADS CLOSED.

...INLAND FLOODING...  
A **FLOOD WATCH** IS IN EFFECT FOR ALL OF EASTERN NORTH CAROLINA.  
RAINFALL WILL INCREASE IN INTENSITY AS HURRICANE IRENE MOVES  
TOWARD THE COAST EARLY SATURDAY. **RAINFALL AMOUNTS OF 6 TO  
10 INCHES WITH LOCALLY HIGHER AMOUNTS AS MUCH AS 12 INCHES COULD  
OCCUR DURING THIS EVENT**. THE HEAVIEST RAINFALL IS EXPECTED TO  
OCCUR EAST OF HIGHWAY 17. PLEASE LISTEN FOR ANY FLOOD WARNINGS  
THAT MIGHT BE IN EFFECT FOR YOUR AREA.

...WINDS...  
AS HURRICANE IRENE MOVES THROUGH THE AREA...**MAXIMUM WINDS ARE  
FORECAST TO BE IN THE 45 TO 65 MPH RANGE WITH GUSTS TO 100 MPH.**

DAMAGING WINDS ARE EXPECTED. POORLY ANCHORED MOBILE HOMES MAY BE  
DESTROYED...ALONG WITH THOSE OF OLD OR POOR CONSTRUCTION. SOME  
WELL ANCHORED MOBILE HOMES WILL HAVE SUBSTANTIAL DAMAGE TO  
ROOFS...WALLS...AND WINDOWS...AND COULD BECOME UNINHABITABLE.  
SOME HOMES OF FRAME CONSTRUCTION WILL SUSTAIN PARTIAL WALL AND  
ROOF FAILURE...AND POSSIBLY BLOWN OUT WINDOWS. LOOSE OUTDOOR  
ITEMS WILL BECOME PROJECTILES...CAUSING ADDITIONAL DAMAGE AND  
POSSIBLE INJURY. MANY AREAS WILL EXPERIENCE POWER OUTAGES WITH  
SOME DOWNED POWER POLES. NUMEROUS LARGE BRANCHES OF HEALTHY TREES  
WILL SNAP. SOME TREES WILL BE UPROOTED...ESPECIALLY WHERE THE  
GROUND IS SATURATED.

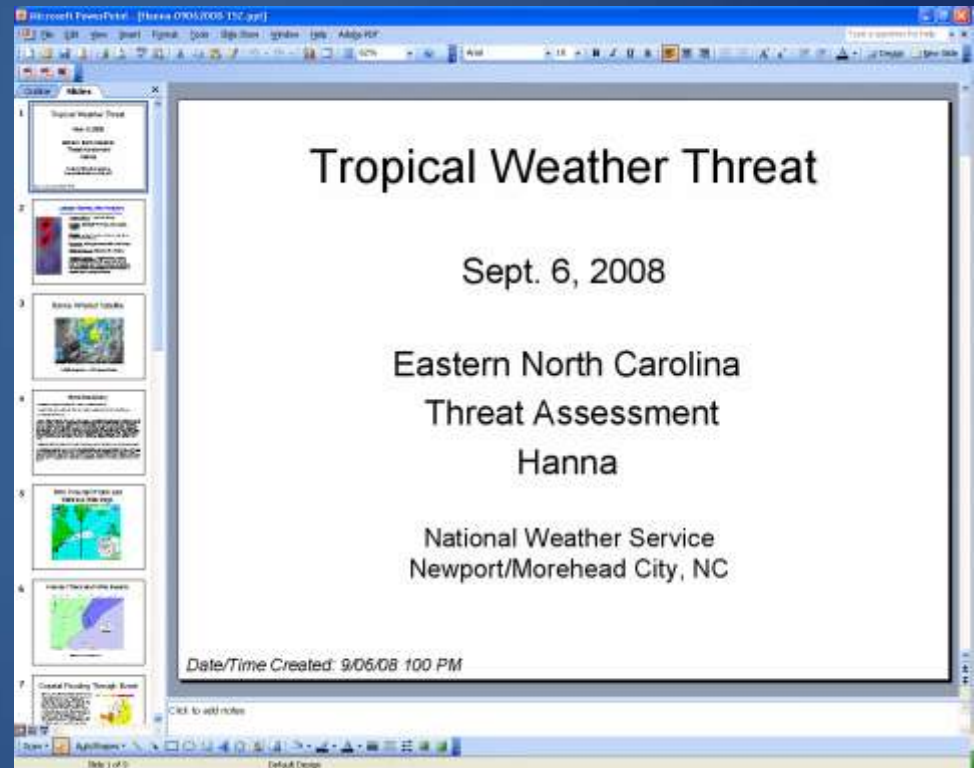
...COASTAL HAZARDS...  
THERE WILL BE A HIGH RISK OF RIP CURRENTS ALONG AREA BEACHES  
TODAY. LARGE BREAKING WAVES AND ROUGH SURF WILL ALSO BE A THREAT.  
DUE TO RIP CURRENTS AND VERY ROUGH SURF...BEACH GOERS ARE URGED  
TO STAY OUT OF THE WATER.



# Threat Assessment Briefings



- WFO MHX began issuing PowerPoint briefing presentations to the emergency management community via e-mail in the Spring of 2008.
- Free form presentations containing graphics and explanations of threats associated with potential significant weather events that will affect life and property.
- Initially used to support significant severe weather outbreaks, the program was expanded to support Tropical Operations.
- In 2010 the briefings were expanded to the media.
- In 2011 for Irene, we began disseminating them to the public, posing them on our Top News of the Day on the website and on Facebook.





# Social Media



Find us on  
**Facebook**

Click on the above image to "Like" us on Facebook!!

We now have a local Facebook page to stay connected with users via social media. This page will have all Threat Assessment Briefings, and short text status updates. This is a great tool for the public to stay informed, especially through mobile technology. It is also a great way to submit reports to the NWS. Search for National Weather Service Newport to "Like" us!



# Commemorating High Water Marks



- Placed commemorating Irene:
  - Downtown Manteo, NC
  - Downtown Columbia, NC
- Placed commemorating Floyd:
  - Trenton, NC
  - Kinston, NC
  - Greenville, NC
  - Belhaven, NC
- Educational reminders to all of the need to be prepared and resilient.



# Thanks!

