



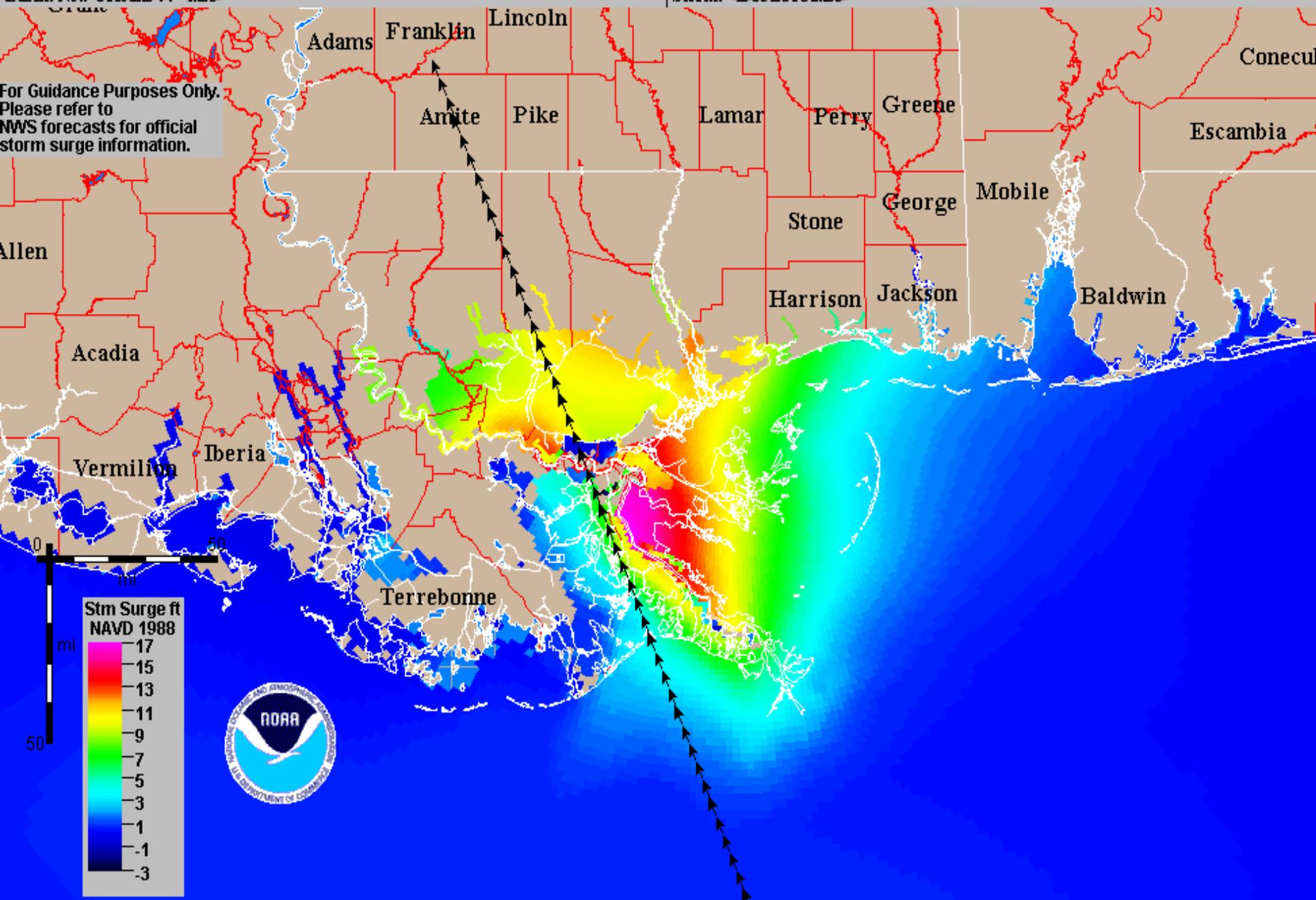
Storm Surge New Orleans

Hurricane Season 2015

All Hazards Exercise Vicksburg District

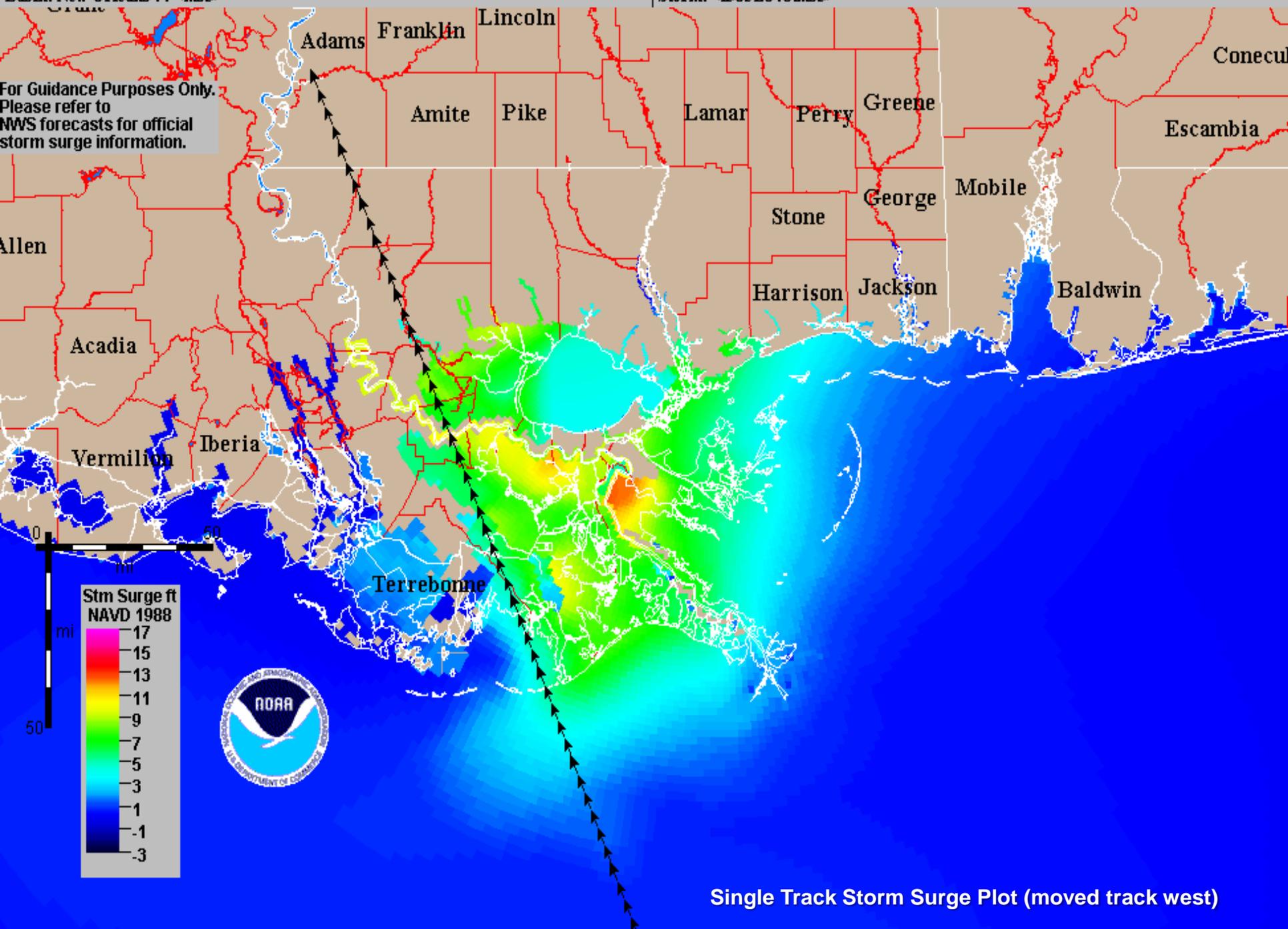
Meteorologist-in-Charge
National Weather Service
New Orleans/Baton Rouge

For Guidance Purposes Only.
Please refer to
NWS forecasts for official
storm surge information.



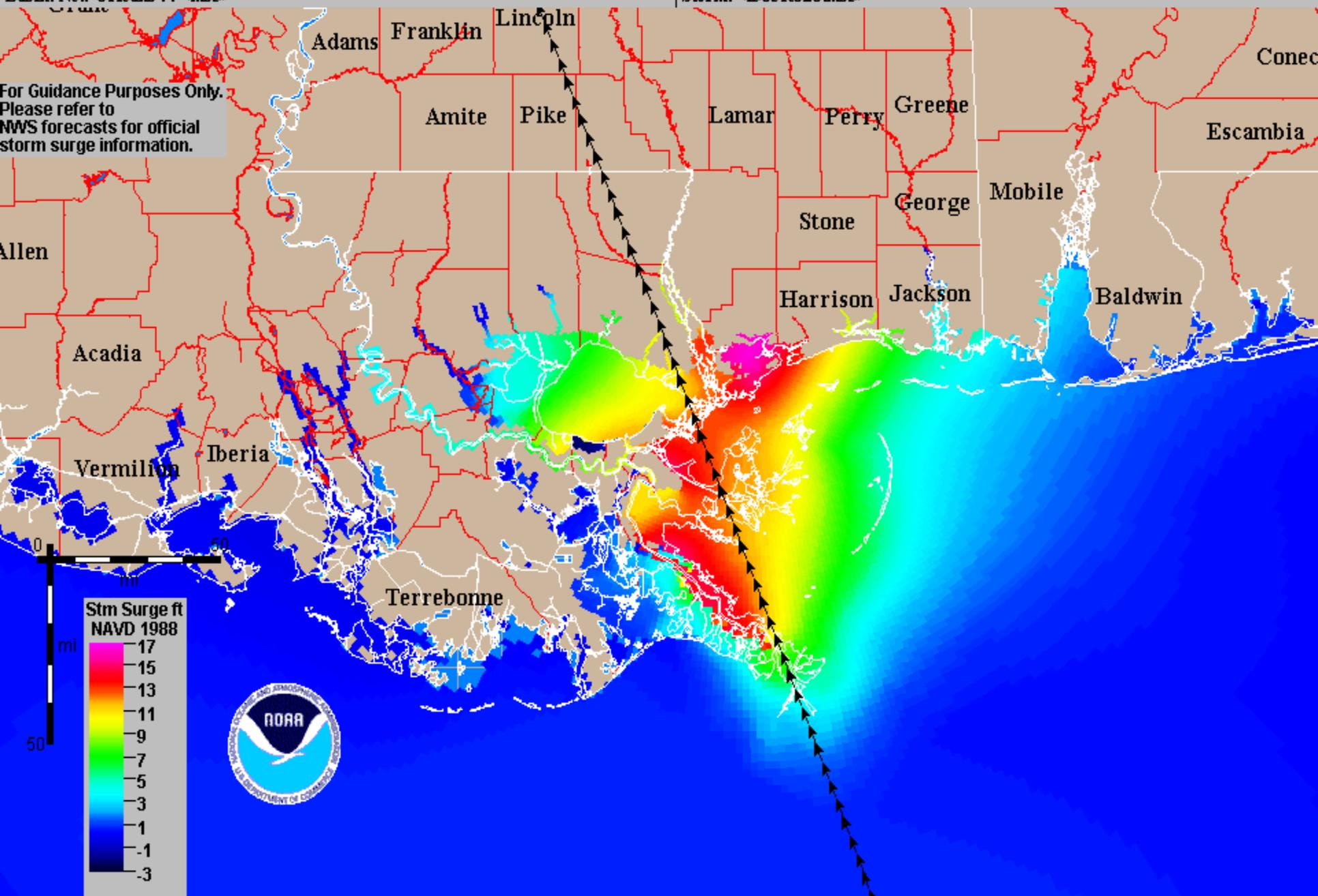
Single Track Storm Surge Plot

For Guidance Purposes Only.
Please refer to
NWS forecasts for official
storm surge information.



Single Track Storm Surge Plot (moved track west)

For Guidance Purposes Only.
Please refer to
NWS forecasts for official
storm surge information.

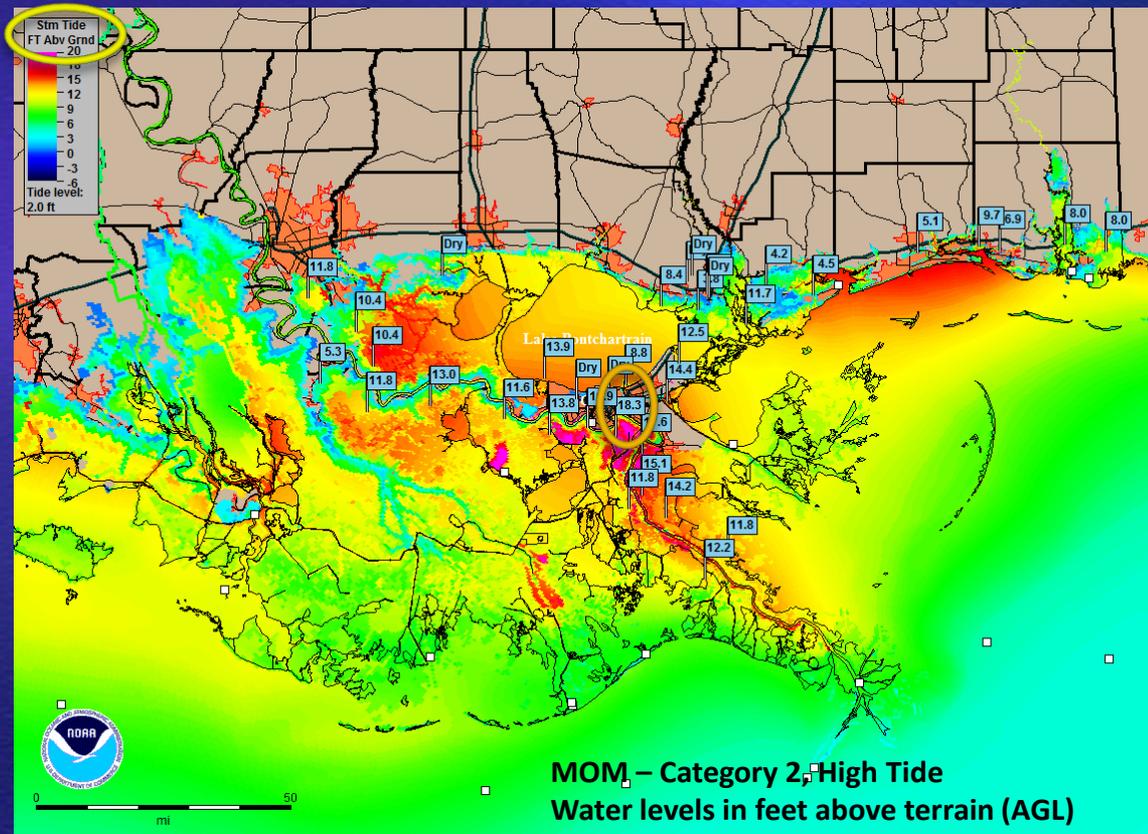


Single Track Storm Surge Plot (moved track east)



SLOSH Display Program - MOMs (Maximum of Maximums)

- Displays worst case for each point for a set category
- Compilation of many storms with ALL sizes, speeds and tracks
- Can choose high tide or mean tide levels
- Used before landfall speed and direction are determined or during the off season for planning purposes
- **Water level can be viewed in feet above datum (NAVD88) or above ground'**
- **Not used in briefings**



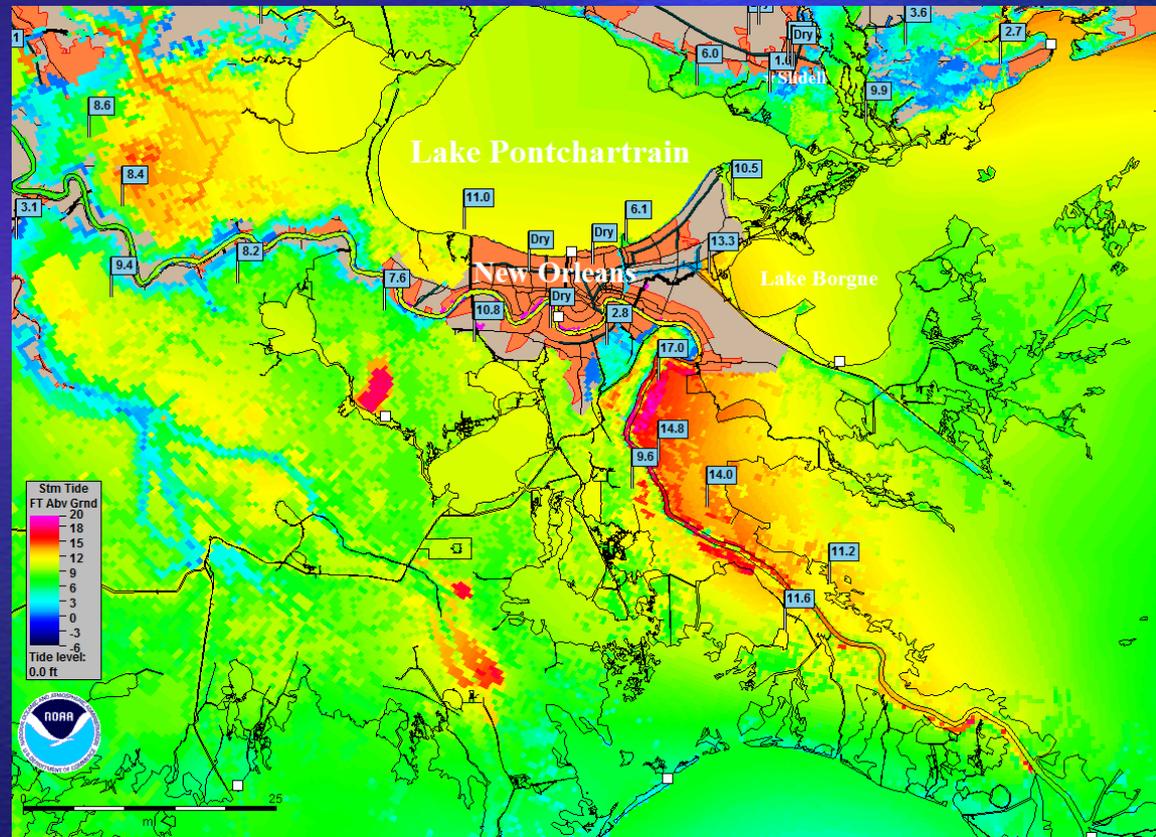
Note: Negative elevation can cause water levels to be higher once terrain is subtracted.



SLOSH Display Program - MOMs (Maximum of Maximums)

Hurricane Risk Reduction System:

- Levees ARE included
- **When overtopping occurs in the model, inundation will be shown within the system**

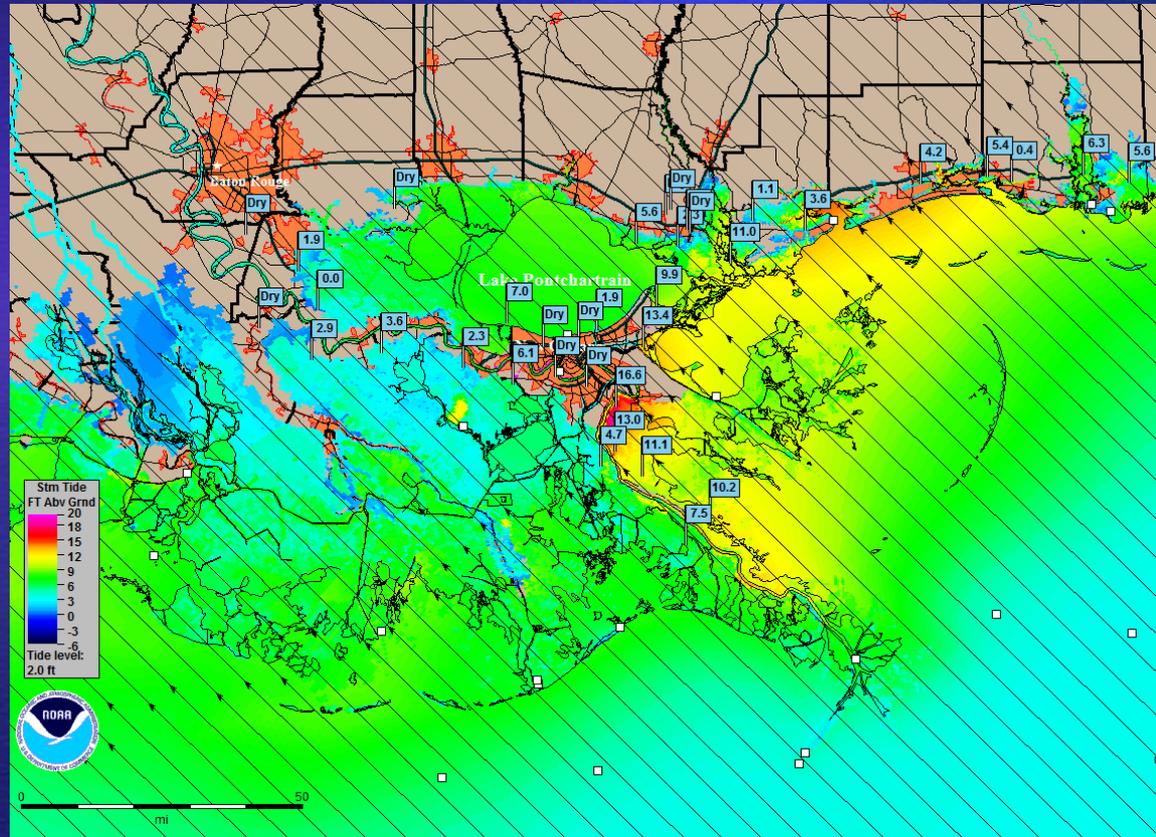


MOM – Category 2, High Tide
Water levels noted feet above terrain (AGL)



SLOSH Display Program - MEOWs (Maximum Envelope of Water)

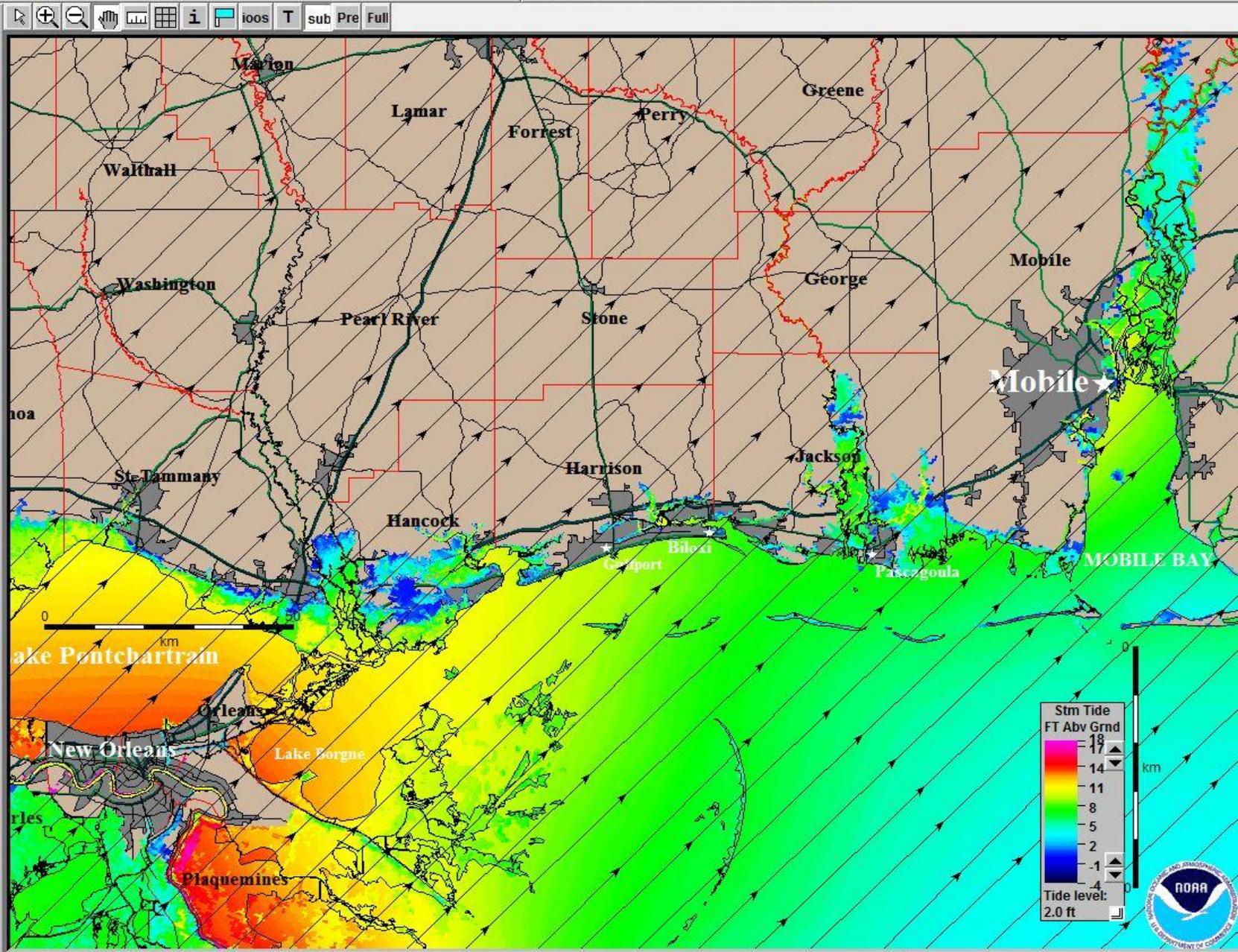
- Still shows a maximum inundation, but from a selection of fewer storms all having common direction of motion, speed, and category
- Water level can be viewed above datum (NAVD88) or above terrain (AGL)
- **Levees included, and overtopping will be shown**
- Used prior to watch issuance once angle of approach and speed can be reasonably determined
- **Used in briefings beyond 48 hours**



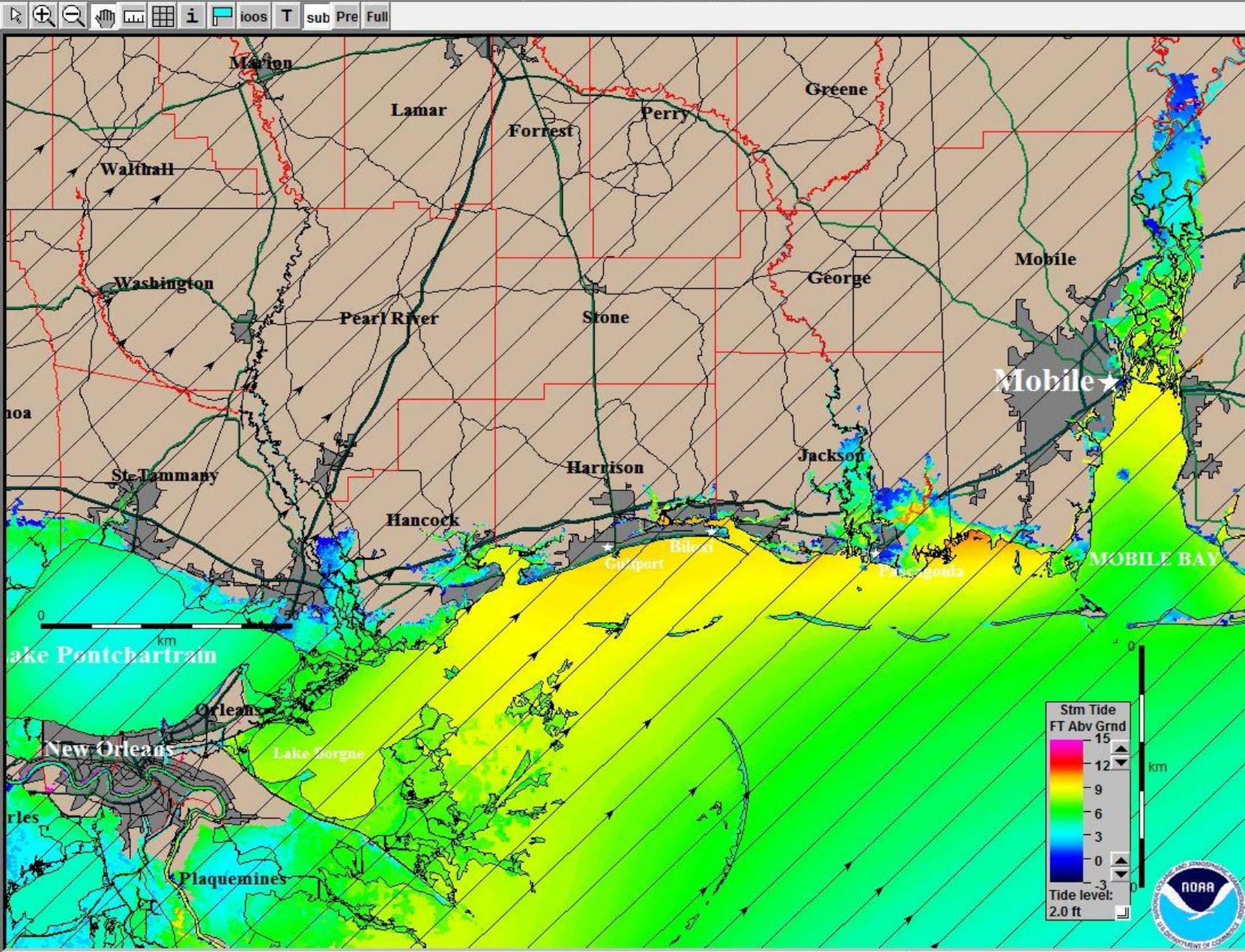
MEOW – Category 2, NW 10mph, High Tide
Water levels noted feet above terrain (AGL)

Configure Layers

- User Profiles
- Units
-
- Scales
- Probe Flag
- IOOS Observation Sit
- Locations
- Tracks
- SLOSH Surge
- LIX_Roads.shp
- LIX_Counties.shp
- lakes.shp
- roads_limitedac
- roads_highway.
- roads_other.shp
- rivers.shp
- urbanareas.shp
- States/Counties
- Lat/Lon Grid



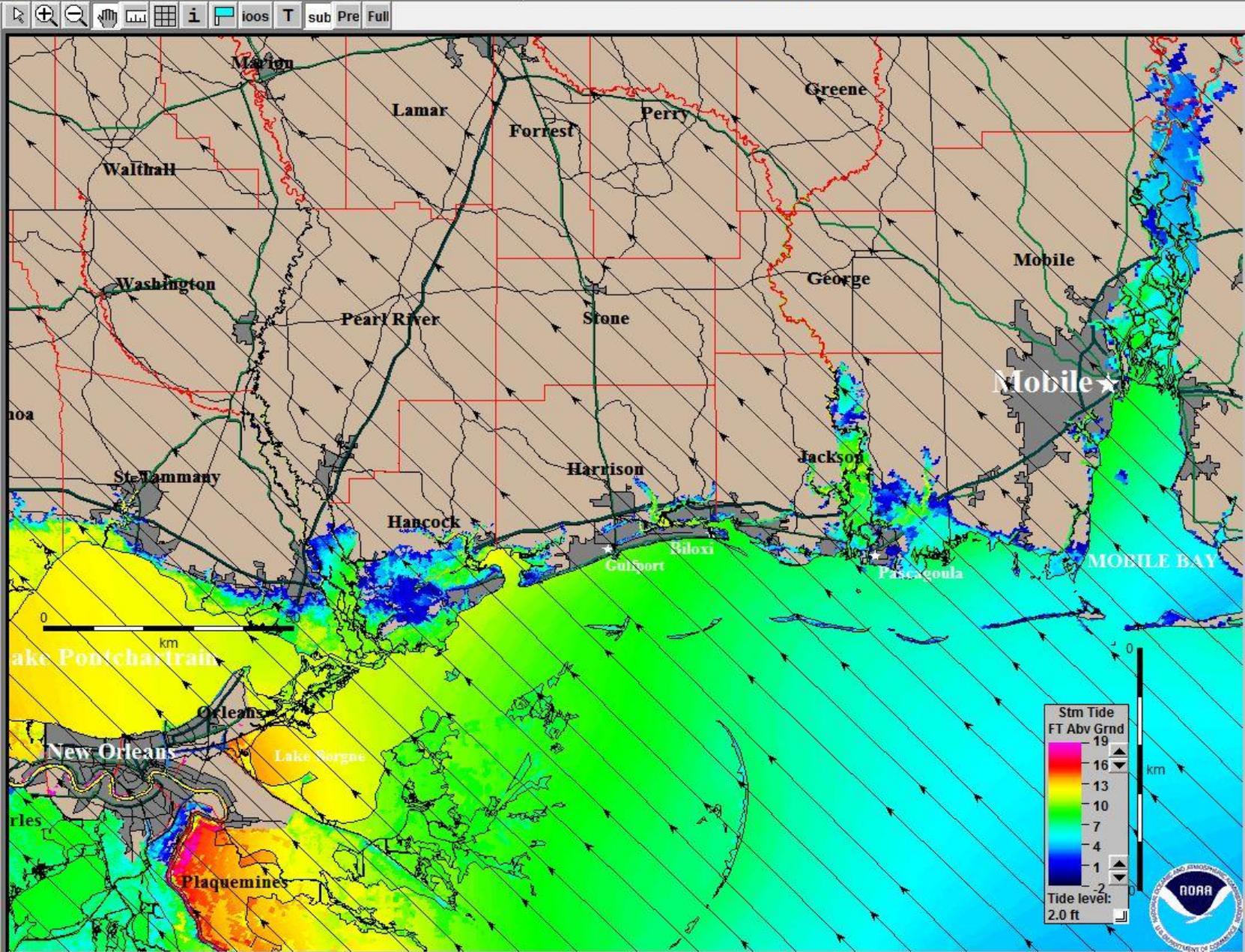
- Configure Layers
- User Profiles
 - Units
 - =====
 - Scales
 - Probe Flag
 - IOOS Observation Site
 - Locations
 - Tracks
 - SLOSH Surge
 - LIX_Roads.shp
 - LIX_Counties.shp
 - lakes.shp
 - roads_limitedac
 - roads_highway.
 - roads_other.shp
 - rivers.shp
 - urbanareas.shp
 - States/Countries
 - Lat/Lon Grid



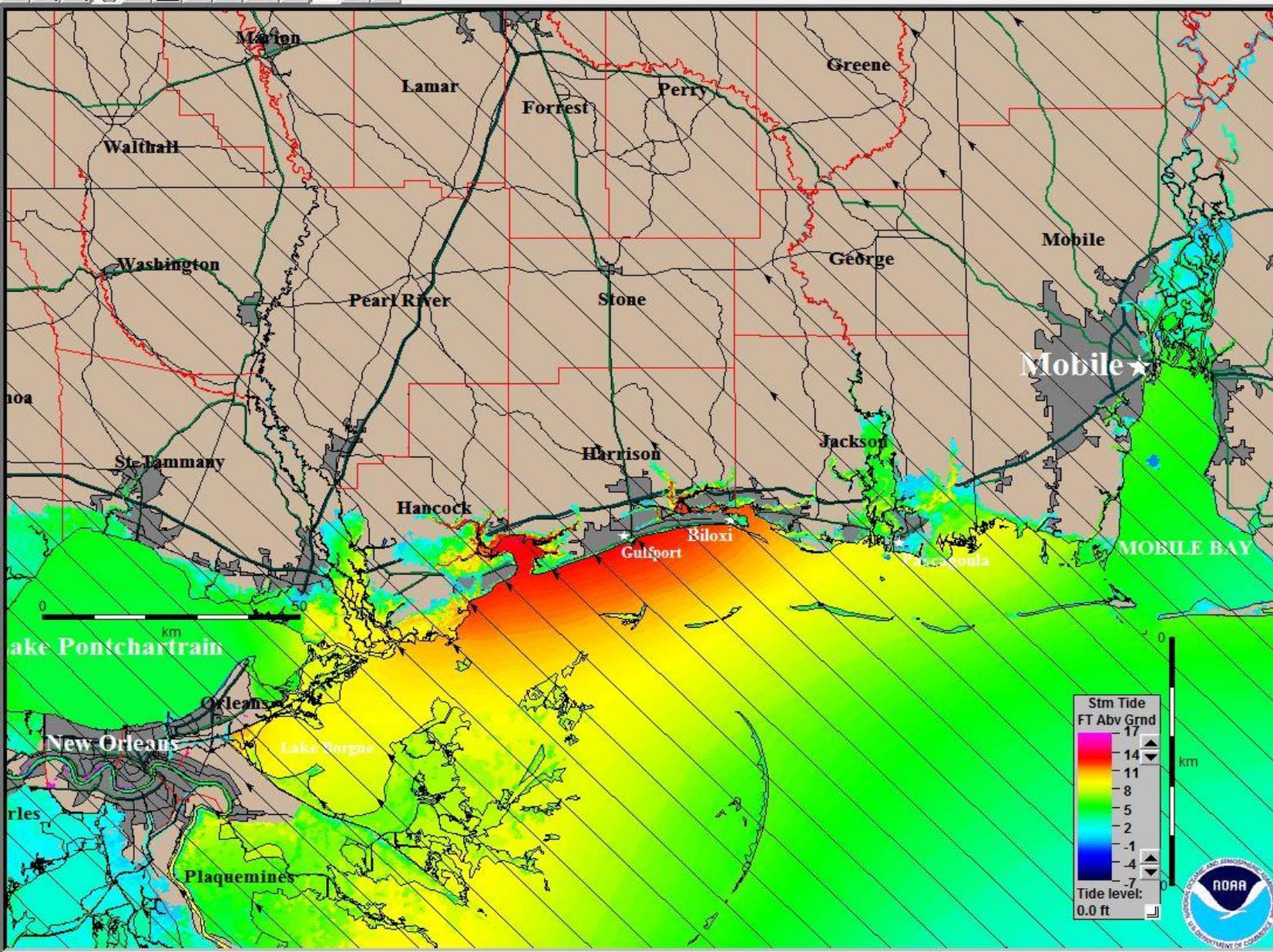
Basin: New Orleans (2013) v10 <ms8>

Storm: Dir nw: Cat 2: 02 mph High Tide

- Configure Layers
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 - Scales
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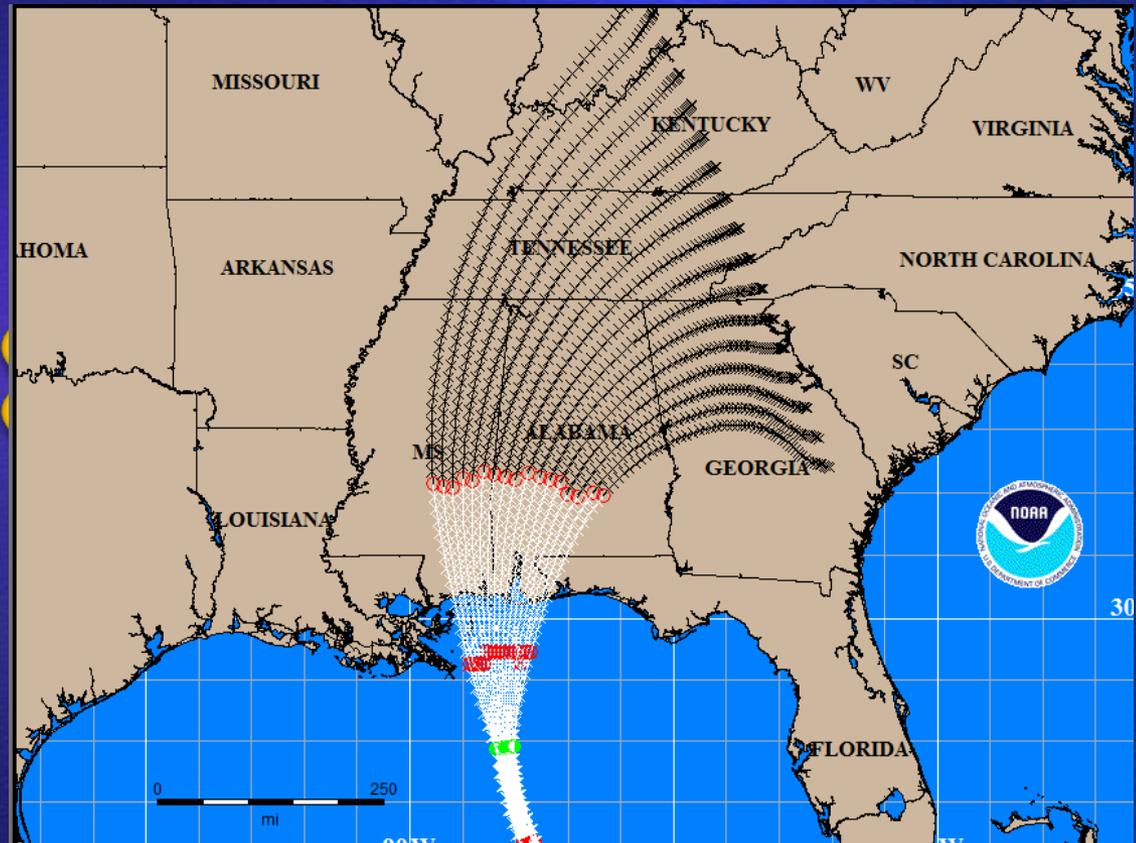
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P-Surge

- Initiated when Watches and Warnings are in effect (48 hrs prior to onset of TS winds)
- Based on the current storm
 - Accounts for errors in speed, direction, intensity, and size
 - Accounts for tide
- Available approximately 60 minutes after each advisory is issued
- Can use interface to change the forecast probability
- Can view water levels as above datum (NAVD88) or above ground

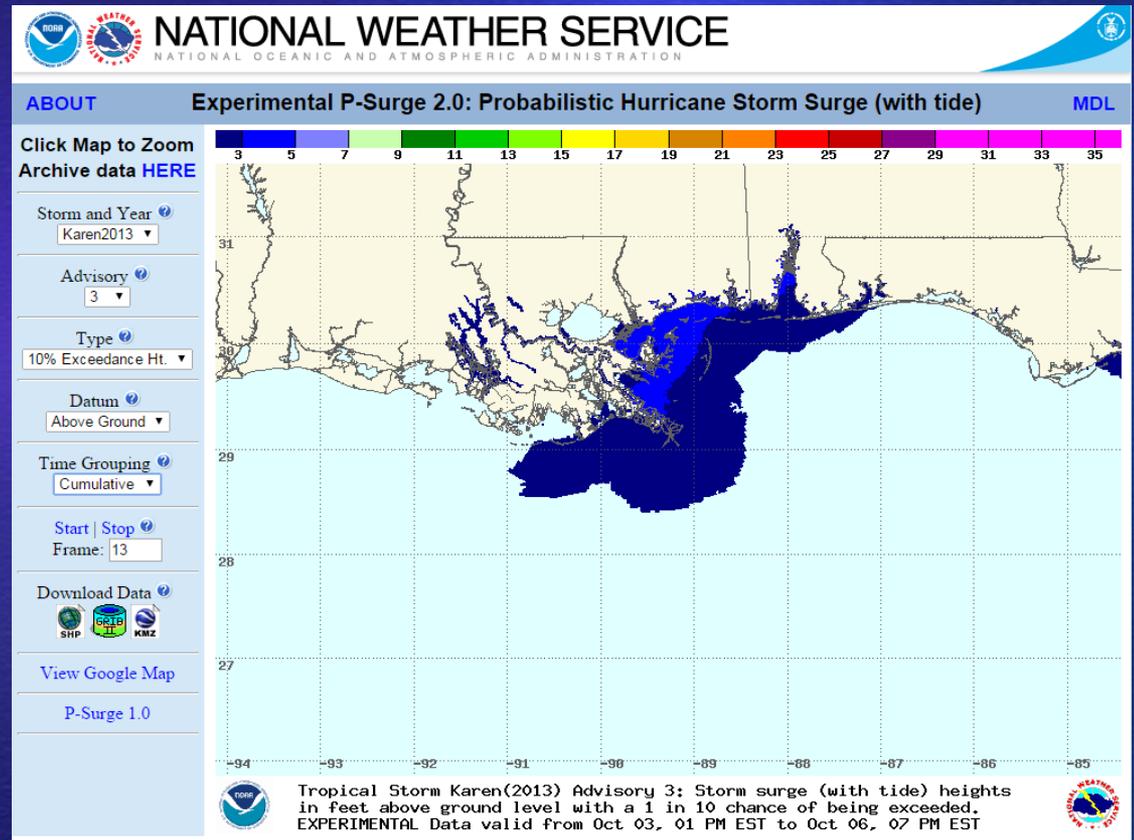




P-Surge

Risk Reduction System:

- Levees are included
- **Will show overtopping of Risk Reduction System**
- Uses 2012 basin due to computational issues with the large/dense 2013 version. However, the surge barrier, outfall canal gates, and west bank structure are included

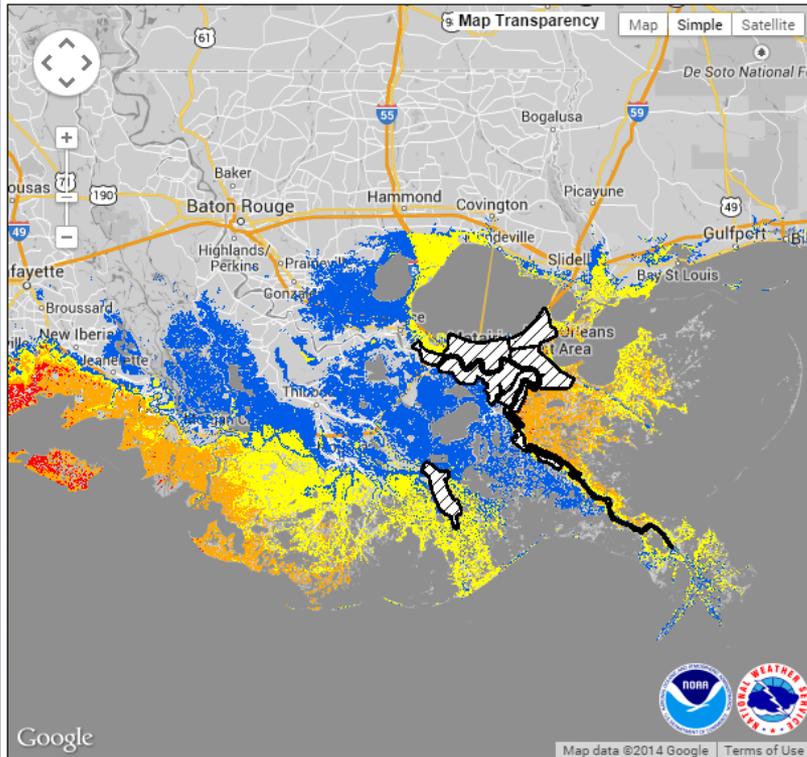




Experimental Potential Storm Surge Flooding Map (Inundation)

Experimental Potential Storm Surge Flooding Map (Inundation)

NHC Experimental Potential Storm Surge Flooding Map
Hurricane TEST (2014) Advisory 1



Potential Storm Surge Flooding*

- Up to 3 feet above ground
- Greater than 3 feet above ground
- Greater than 6 feet above ground
- Greater than 9 feet above ground
- Levee protected area
Consult local officials for flood risk

*Displayed flooding values indicate the water depth that has about a 1-in-10 (10%) chance of being exceeded.

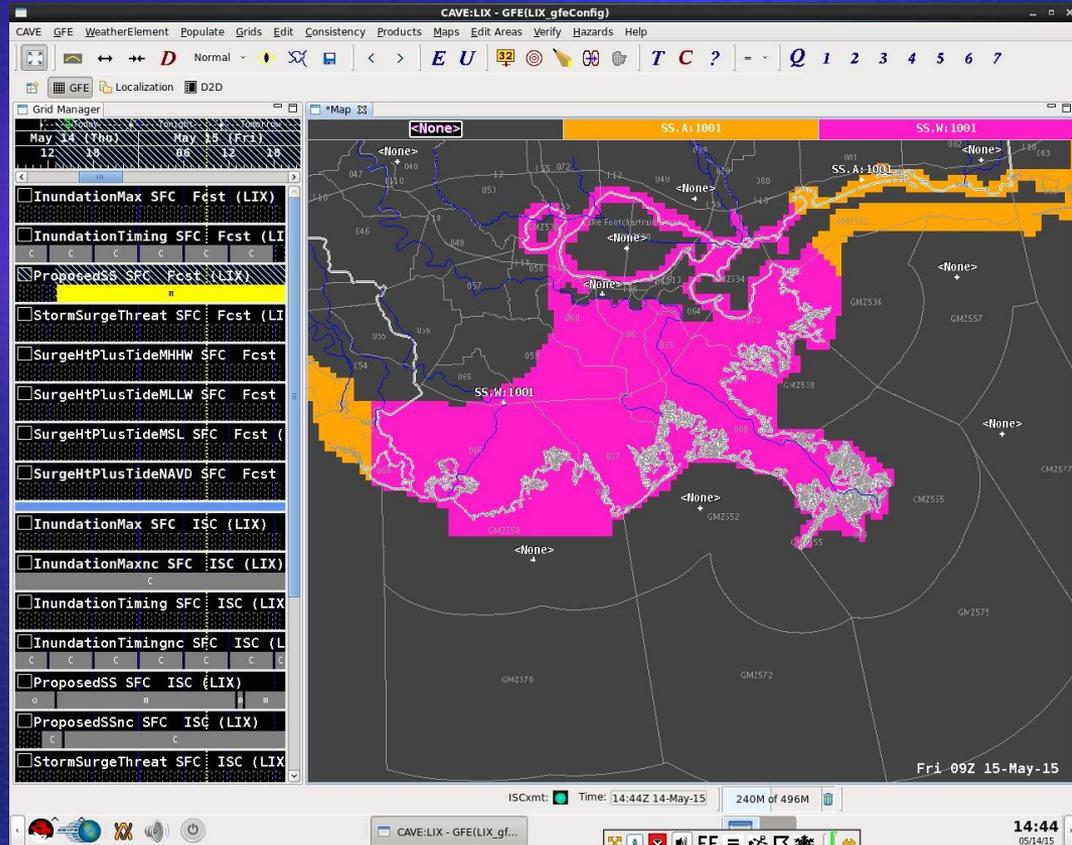
The potential storm surge hazard is not depicted within certain levee-protected areas, such as the Hurricane and Storm Damage Risk Reduction System in Louisiana. A diagonal hatch pattern is used to display these areas on the map. These areas are highly complex, and local officials are best equipped to forecast and monitor the threat of storm surge flooding inside these areas. Customers are asked to consult local officials for flood risk inside these leveed areas.

- Based on P-Surge 2.0 10% exceedance (90% of solution this value or lower)
- **“Reasonable” worst case scenario**
- **Used in briefings when watches/warnings are in effect (begin @48 hrs prior to onset of TS winds, same as p-surge)**
- Will be available approximately 80 minutes after each advisory
- New map generated for each advisory – some subtle changes possible
- Colors match those on the storm surge risk web site
- **Risk Reduction System included**
 - **Outside of system: values will match p-surge**
 - **Inside of system: hatched area with no overtopping shown**



Prototype Storm Surge Watch/Warning

- Will be a prototype for the 2015
- Highlights where risk of storm surge greater than or equal to 3ft above ground level is possible
- Collaborative process
- Capability to separate East and West Banks
- We will issue within the Risk Reduction System when necessary based on p-surge/SLOSH
- Collaborated with partners
 - Corps of Engineers
 - Local Levee Boards
 - Emergency Managers





Prototype Storm Surge Watch/Warning

Hurricane X Advisory #00

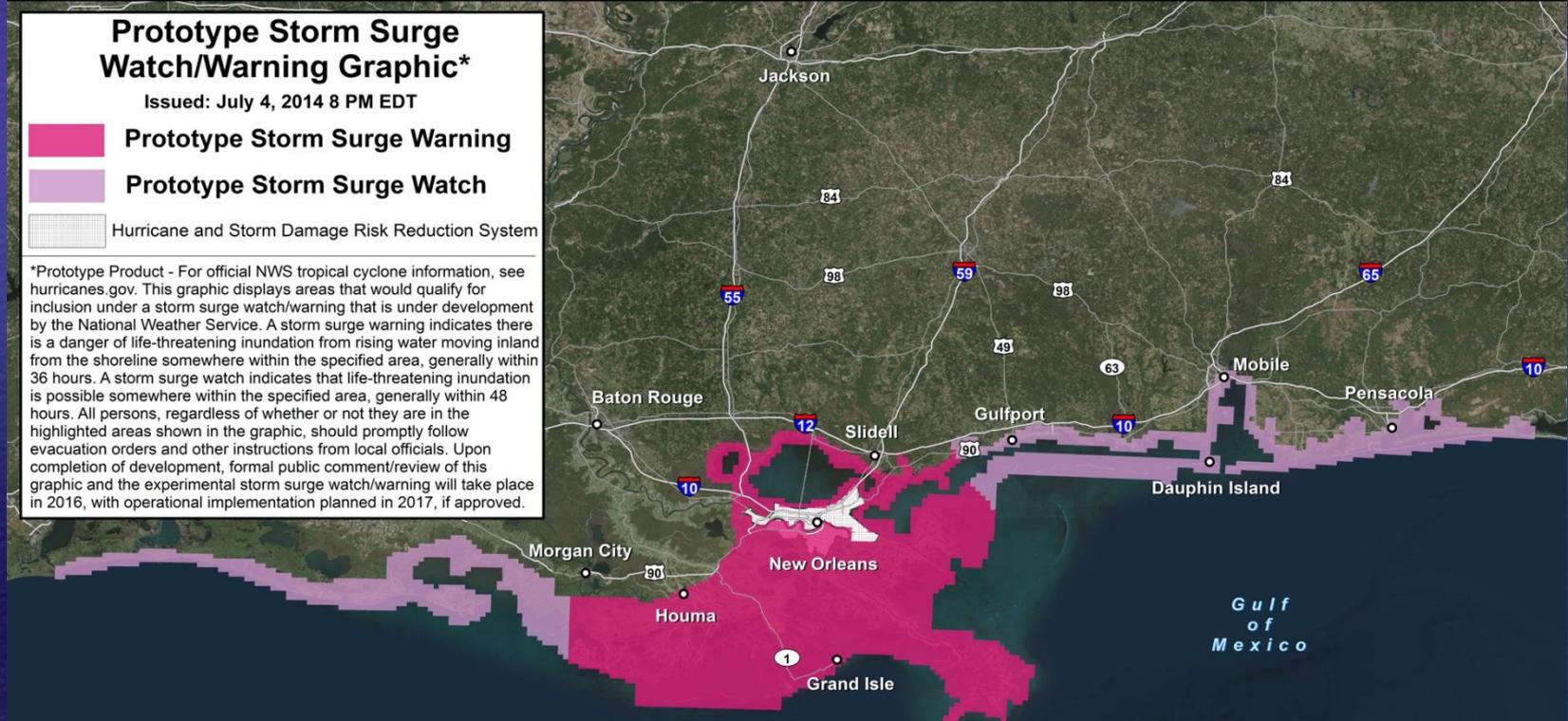


Prototype Storm Surge Watch/Warning Graphic*

Issued: July 4, 2014 8 PM EDT

-  Prototype Storm Surge Warning
-  Prototype Storm Surge Watch
-  Hurricane and Storm Damage Risk Reduction System

*Prototype Product - For official NWS tropical cyclone information, see hurricanes.gov. This graphic displays areas that would qualify for inclusion under a storm surge watch/warning that is under development by the National Weather Service. A storm surge warning indicates there is a danger of life-threatening inundation from rising water moving inland from the shoreline somewhere within the specified area, generally within 36 hours. A storm surge watch indicates that life-threatening inundation is possible somewhere within the specified area, generally within 48 hours. All persons, regardless of whether or not they are in the highlighted areas shown in the graphic, should promptly follow evacuation orders and other instructions from local officials. Upon completion of development, formal public comment/review of this graphic and the experimental storm surge watch/warning will take place in 2016, with operational implementation planned in 2017, if approved.





NWS New Orleans Contact Info



- Website –

www.weather.gov/neworleans