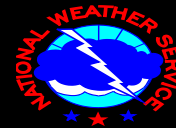


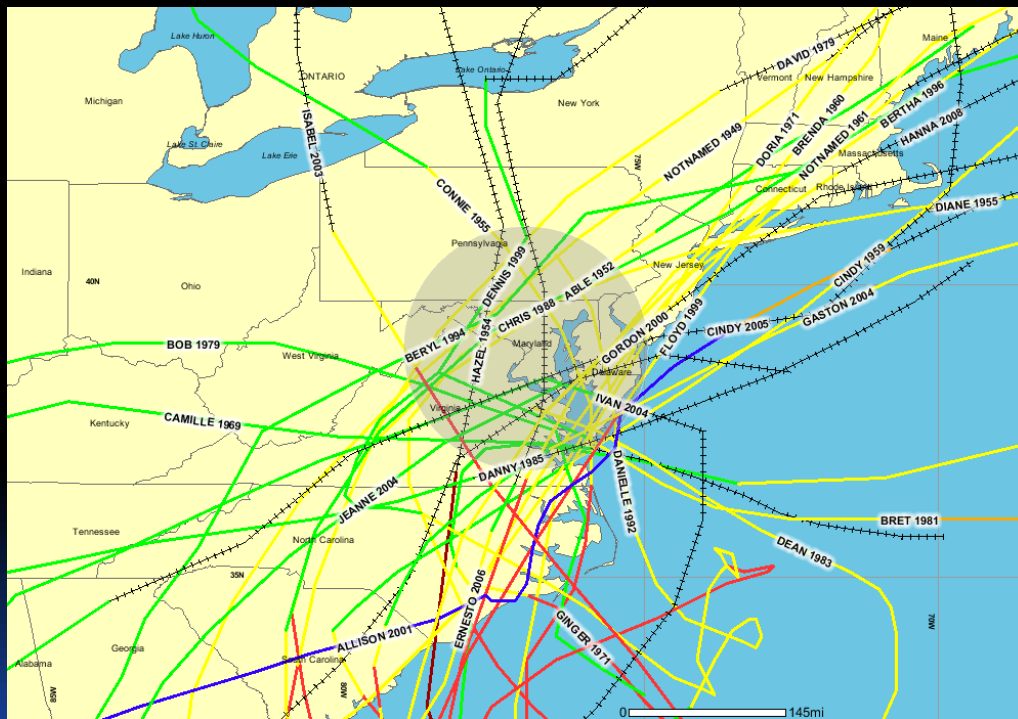
Hurricane Season

June 1 – November 30





What's the concern?



All tropical systems passing within 125nm of central MD since 1950



Mid-Atlantic Hurricanes

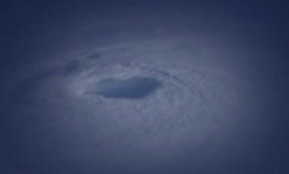
Greatest Risk: August 15 to October 15

However...

- June (Agnes 1972)
- July (Bertha 1996)
- November (Gordon 1994)

So, windy, right?

- First thing most think of is *WIND*
 - *One of the biggest problems for safety*
 - *Wind is often not the main threat*



**A tropical storm/hurricane
can bring 4 threats**



The 4 Threats

- Inland Flooding
- Tidal Flooding
- Winds <- Saffir-Simpson Wind Scale
- Tornadoes

* Each storm has its own mix of these 4 threats

The 4 Threats

- Hurricane or Remnant, threats are same...

The 4 Threats

- Hurricane or Remnant, threats are same...
- **Flooding** from Torrential Rain

The biggest inland killer

Often from:

- Driving into flooded areas
- Kids playing w/ swollen streams
- Towns/Camps along flash flood streams



Flooding



The 4 Threats

- Hurricane or Remnant, threats are same...
- Flooding from Torrential Rain
- **Tidal Flooding** from Surge



BNVN.com For GeoffMackley.com



The 4 Threats

- Hurricane or Remnant, threats are same...
- Flooding from Torrential Rain
- Tidal Flooding from Surge
- **Tornados**



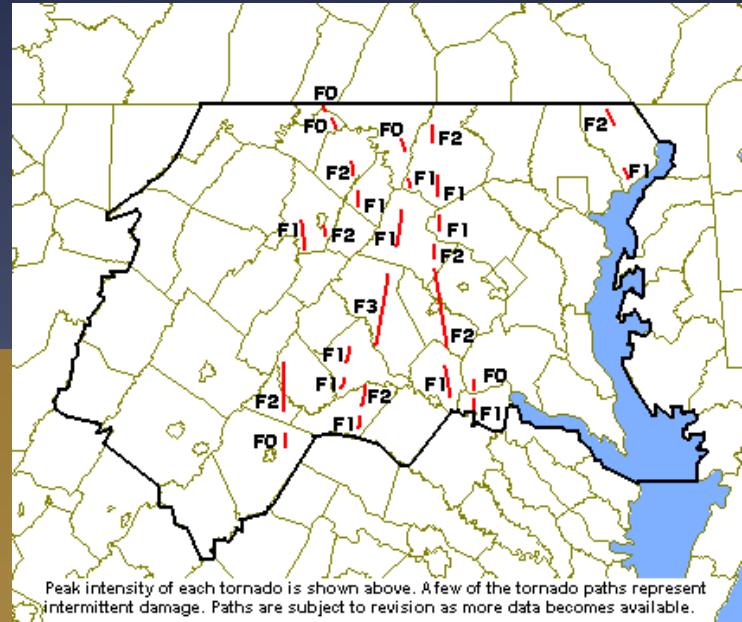


National Hurricane Center (Dan Brown)

Tornadoes

- Tornado production can occur for days after landfall
- Any time of day/night

Remnants of Ivan produced the worst Mid Atlantic tornado outbreak (35 tornadoes) in recent history (Sept 17, 2004).

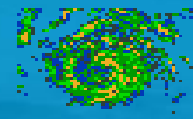


The 4 Threats

- Hurricane or Remnant, threats are same...
- Flooding from Torrential Rain
- Tidal Flooding from Surge
- Tornados
- **Winds**



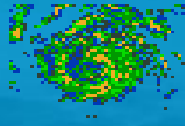
What's New ?



- **Storm Surge Watches & Warnings**
- **Potential Storm Surge Flooding Map**
- **Updated look & feel of NHC maps**
- **Time of Arrival of Tropical Storm force winds**
 - **Most-likely**
 - **Reasonable worst case**



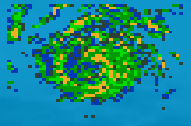
Storm Surge Watch/Warning



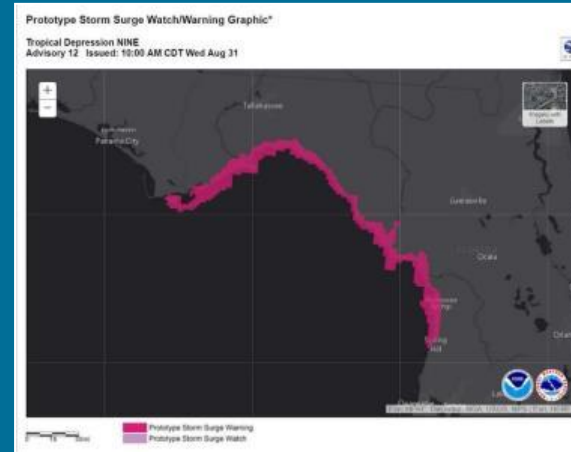
Significant risk of life-threatening inundation from storm surge.

- General rule is 3' (or more) above ground
- Watch (potential), Warning (expectation)

Storm Surge Watch/Warning



- W/W graphic will be communicated using:
 - **Graphic on NHC website**
 - **Watch/Warning section of the NHC Public Advisory using coastal breakpoints**
 - **Our Hurricane Local Statements (HLS)**
 - **National Digital Forecast Database (NDFD)**

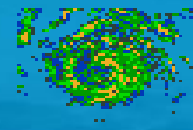


Summary of Watches and Warnings in Effect:

A Hurricane Warning is in effect for:

A Storm Surge Warning is in effect for:

Storm Surge Values in NHC Public Advisory



- **Peak surge inundation expected somewhere within the specified area**
 - not location specific
- **Introduced when a watch or warning is issued.**
 - generally 36-48 hrs before onset

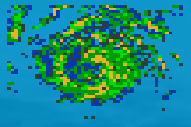
HAZARDS AFFECTING LAND

Storm Surge: The combination of a dangerous storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline.

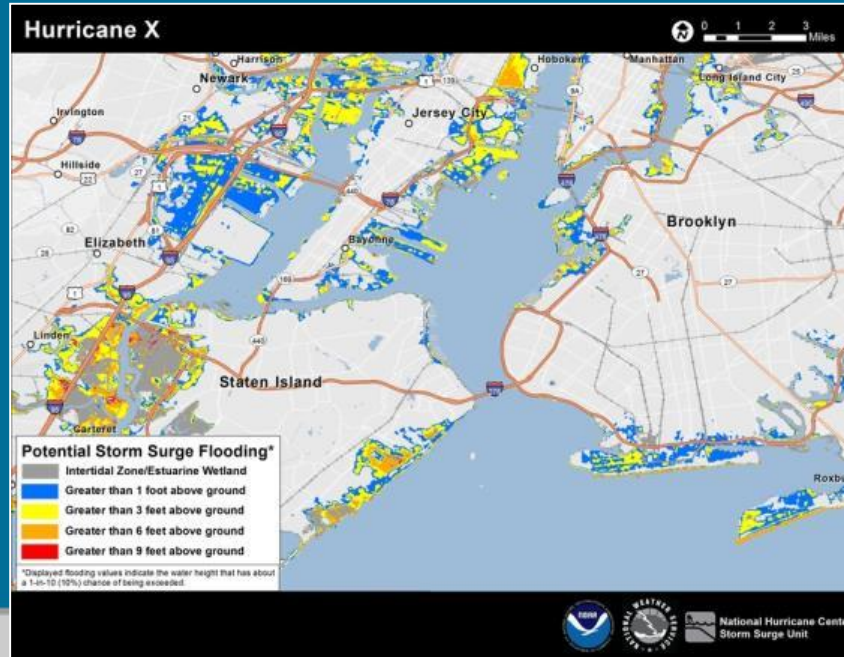
The water could reach the following heights above ground if the peak surge occurs at the time of high tide...

Destin to Indian Pass...1 to 3 feet
Indian Pass to Chassahowitzka...4 to 7 feet
Chassahowitzka to Aripeka...2 to 4 feet
Aripeka to Bonita Beach...1 to 3 feet
Florida-Georgia line to Cape Fear...1 to 3 feet

Potential Storm Surge Flooding Map

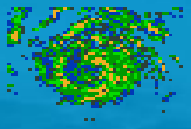


- **Reasonable worst case** - NOT expectation
- Identifies areas at risk for life-threatening inundation.
- Best used by Emergency Management for evacuation decisions

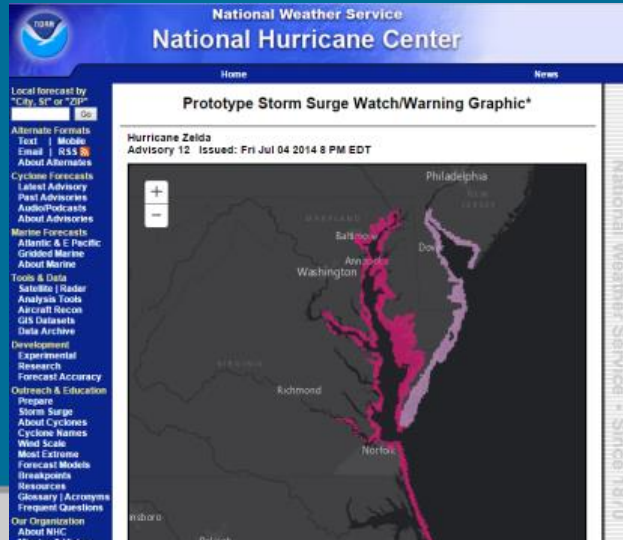


Potential Storm Surge Flooding Map

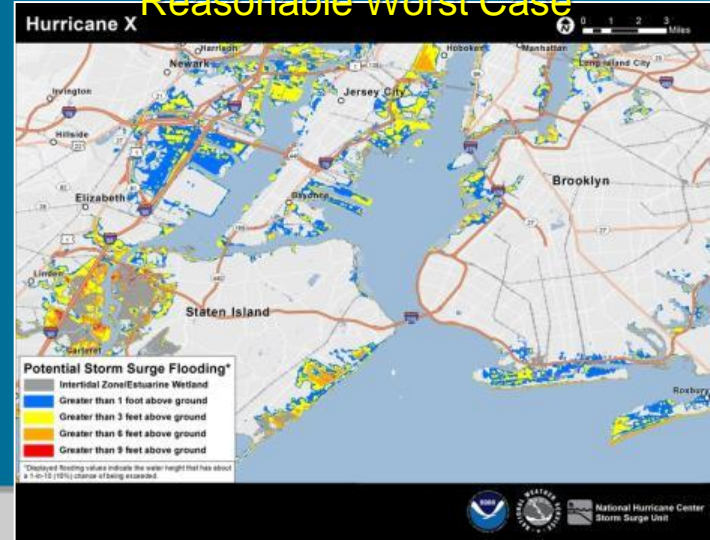
How does this differ from S.S. Watch/Warning?



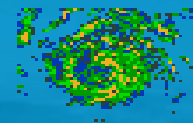
Watch/Warning
Public
Where is life-threatening surge?



Potential S.Surge Flooding
Map
Best for EMs
Reasonable Worst Case



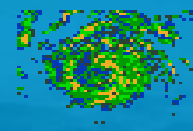
NHC Graphical Products



- Updated the look & feel
- Storm size information (initial wind speed) can now be toggled onto the cone graphic.
- *Reinforces that hazardous conditions occur outside the cone.*



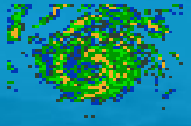
Time of Arrival of T.S. winds



- A critical planning threshold
- Two new graphics
 - **Most-likely** estimate of T.S. onset
 - **Reasonable Worst-Case** (Earliest Reasonable Arrival Time)
 - Safely assume will be free from tropical-storm-force winds.



Hurricane Local Statement



- A **concise summary** of significant potential impacts from a tropical cyclone for the forecast area of responsibility.
- A **good source of information for the media and others who require a big picture.**
- Provided by your local NWS forecast office
 - See our tropical webpages
 - Start with watches/warnings

