

Moving Forward With Surge Communication Products

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Hurricane Forecast Testing Project

Part of Larger Effort:

- To assess end users' awareness and understanding of storm surge and currently available storm surge information
- To assess whether NWS should develop new storm surge informational approaches to improve communication and decision making

Guided by HFIP Socio-Economic Task Force

- To develop and test changes or additions as indicated

Surge Product Testing Building on:

- Prior research indicating people do not understand surge:
 - The hazard itself
 - The danger associated with it
- Recommendations from geographers, communication specialists, etc. related to maps and visual communication

Research Process

STAGE ONE

- Exploratory data collection to better understand how products are interpreted by various users of hurricane forecast products
- Where changes or new products indicated, prototypes developed through an iterative process

STAGE TWO

- Empirical testing of prototypes

Stage One

- One-on-one webinars with small samples of the public, emergency managers and Warning Coordinator Meteorologists
- Informal polling of the public at Weather Fest
- Informal surveys and discussion at FEMA Hurricane Preparedness for Decision Makers workshops at the National Hurricane Center

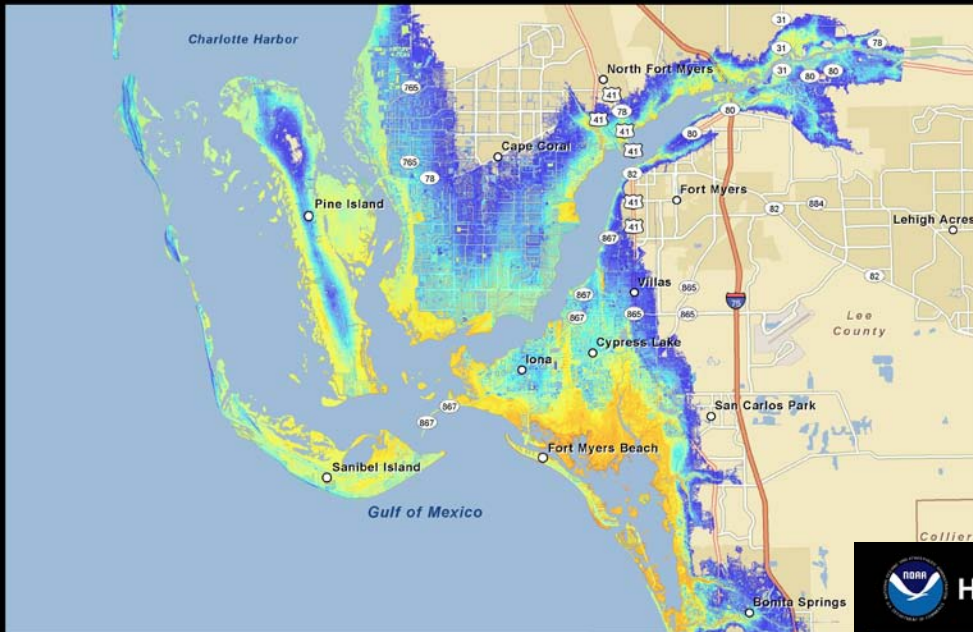
Some Early Indications About Maps:

- Local landmarks (roads, bridges, airports, etc.) needed on maps in order to locate homes
- In general the simpler, the better (smoothed rather than pixelated, etc.)
- The way color is used is very important in getting an idea across
- Tendency to not look at map legend



Hurricane ????

Potential Storm Surge Depth

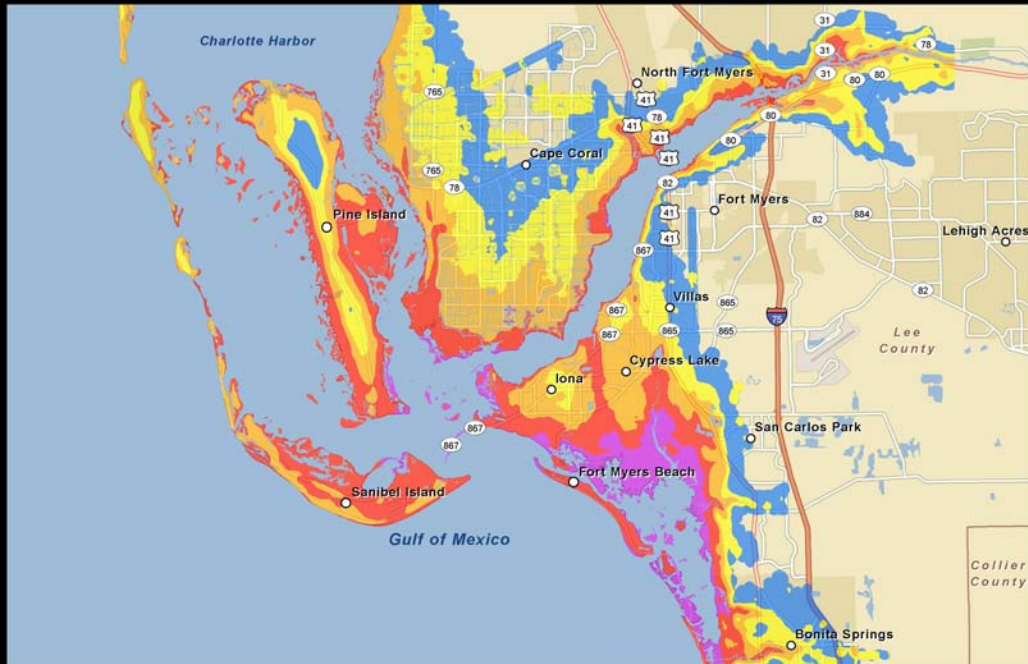


National Hurricane Center Storm Surge Unit



Hurricane ????

Potential Storm Surge Depth



National Hurricane Center Storm Surge Unit



Color Choice Is Important

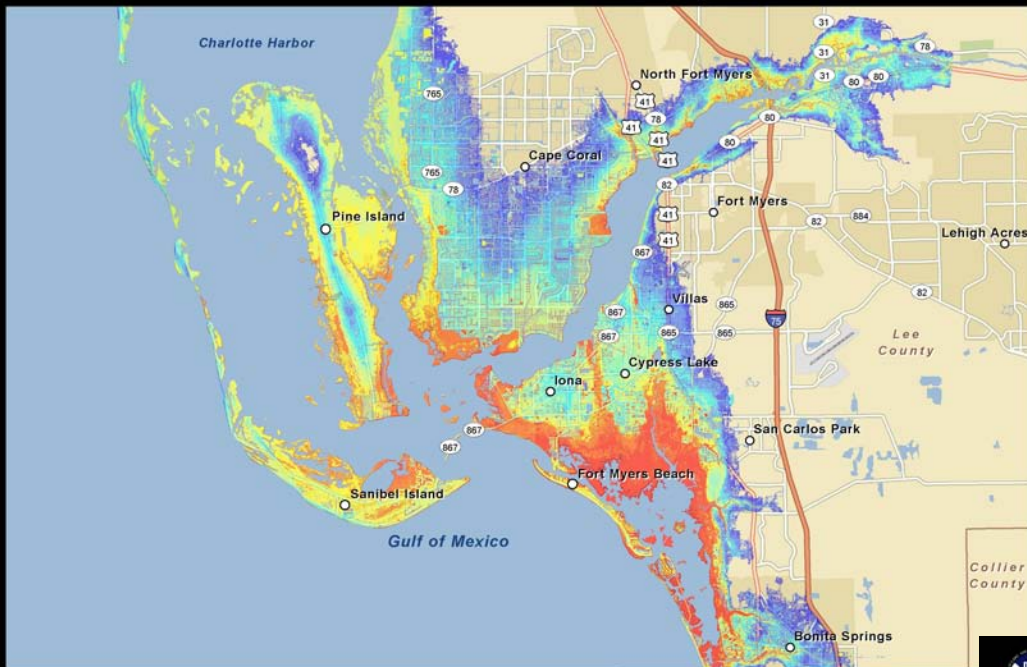


Hurricane ????

Potential Storm Surge Depth



Increasing →



National Hurricane Center
Storm Surge Unit

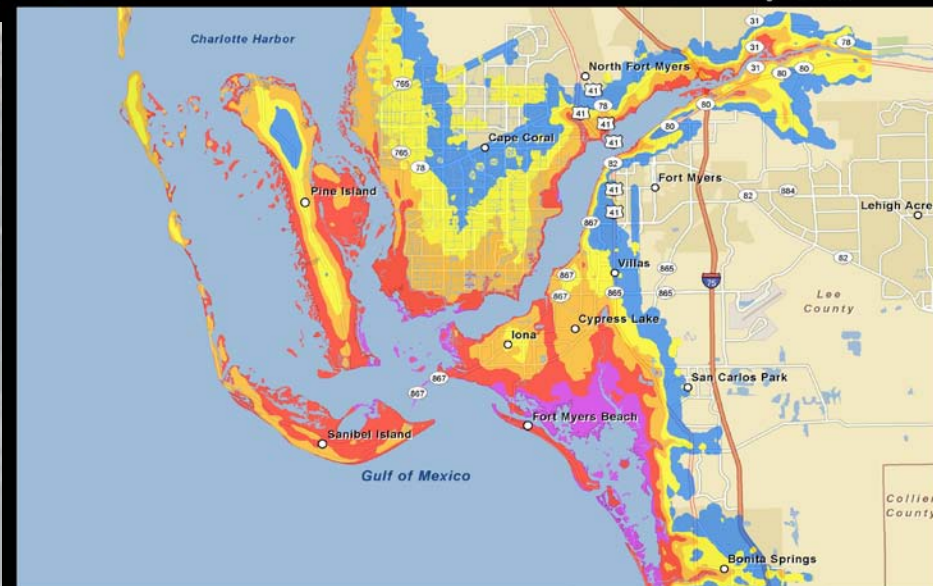


Simplify
Where
Possible



Hurricane ????

Potential Storm Surge Hazard



National Hurricane Center
Storm Surge Unit



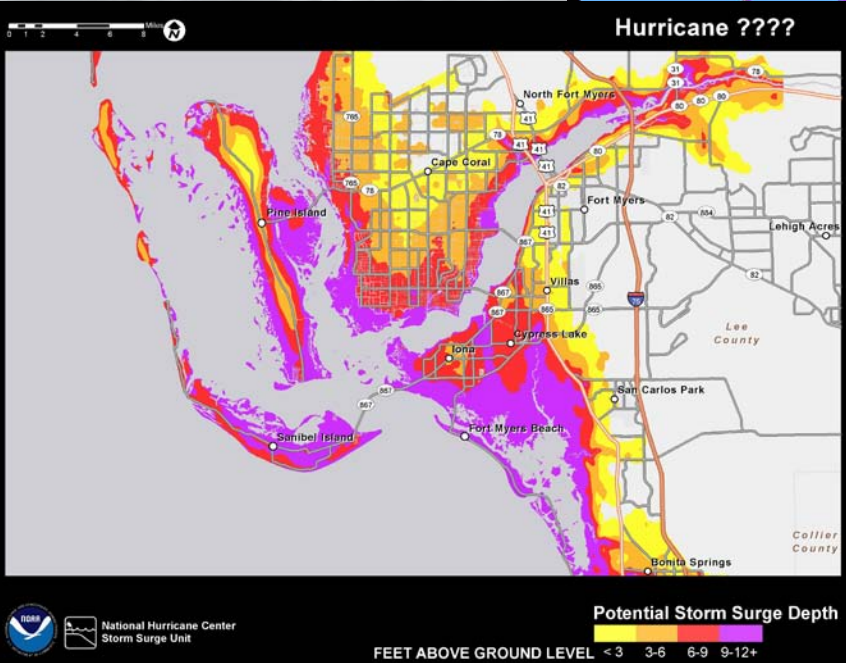
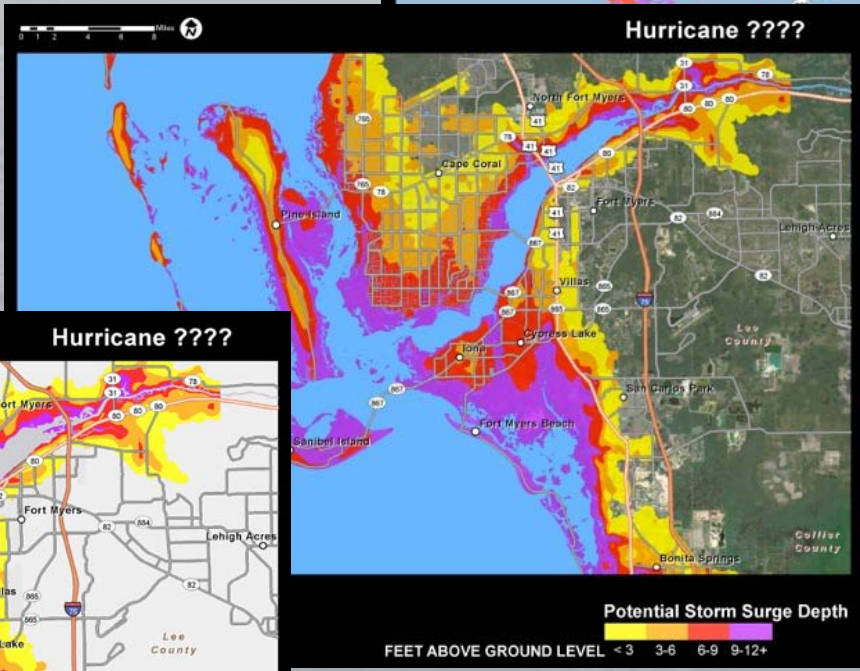
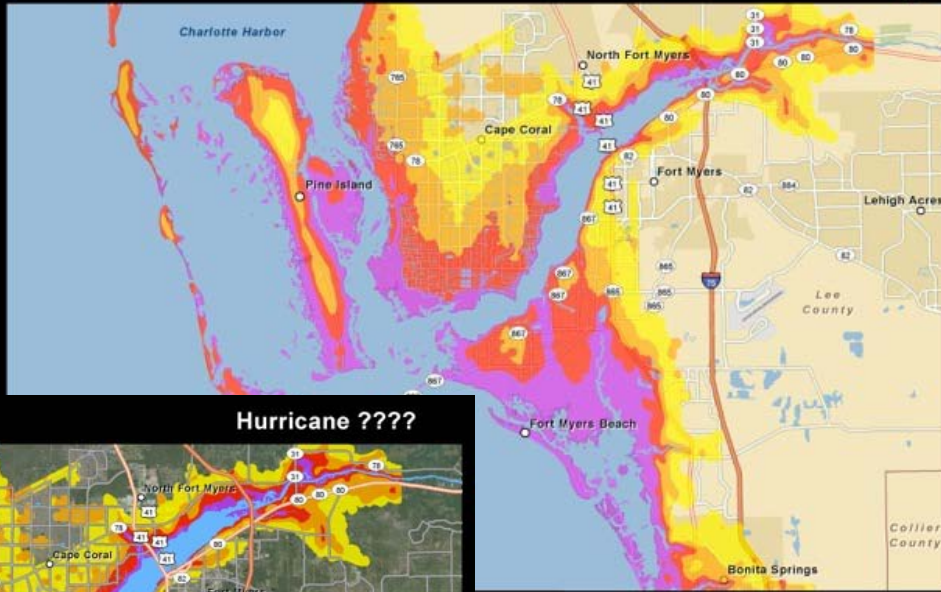


Legend Placement
May Make a
Difference

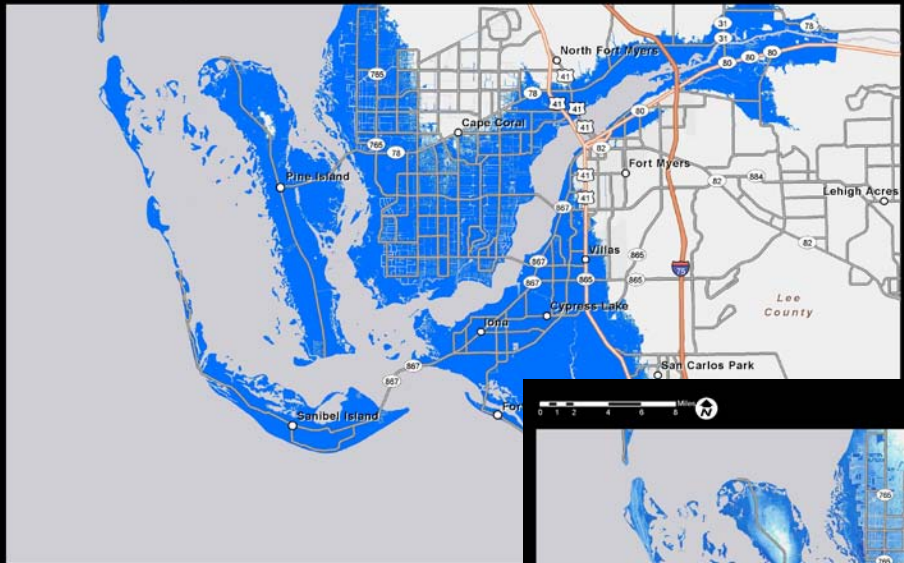
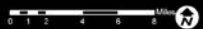




Background Color is Important



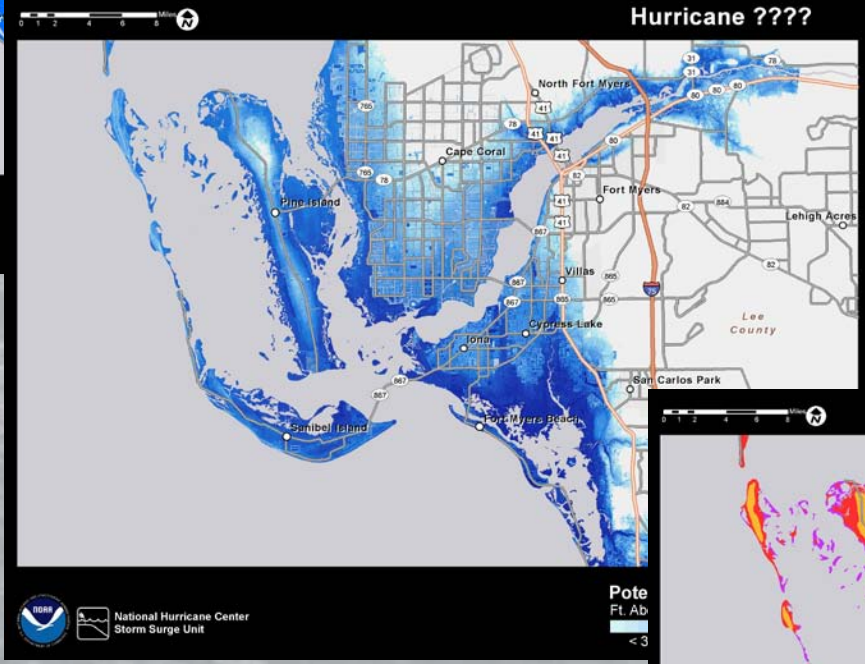
Hurricane ????



Preference for
More Detail
About Surge
Levels

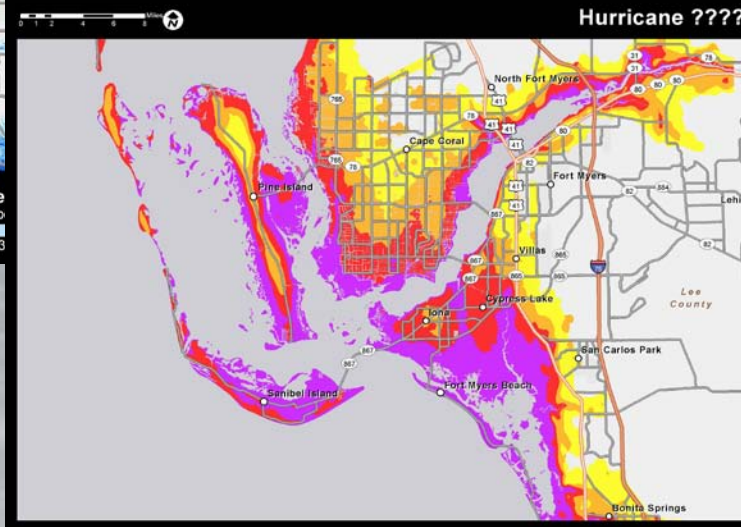


Hurricane ????



Pote
Ft. Ab
< 3

Hurricane ????

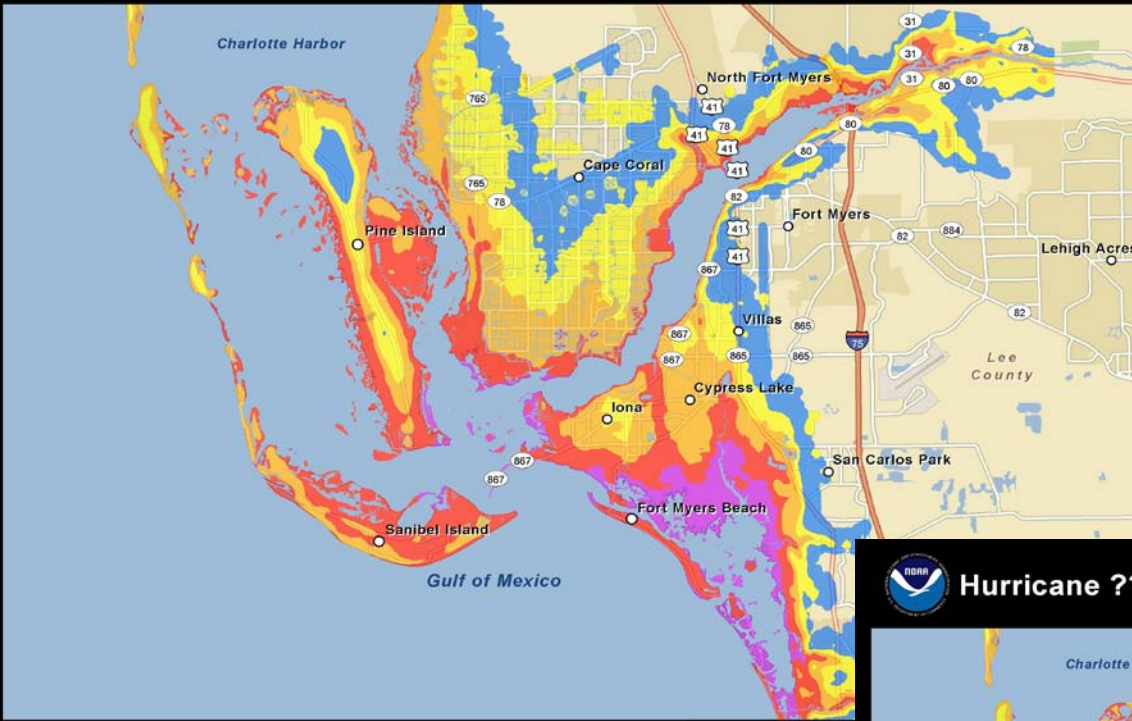
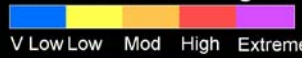


Potential Storm Surge D
FEET ABOVE GROUND LEVEL < 3 3-6 6-9 9-12+



Hurricane ????

Potential Storm Surge Hazard

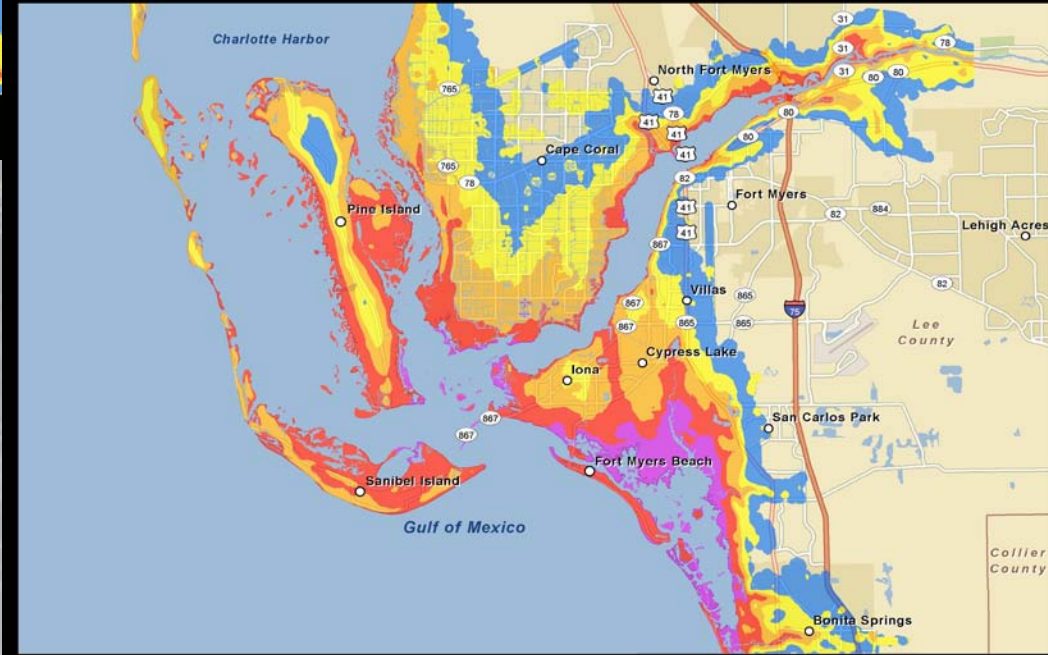


Preference for Expressing Depth in Feet, Not Just Categories



Hurricane ????

Potential Storm Surge Depth

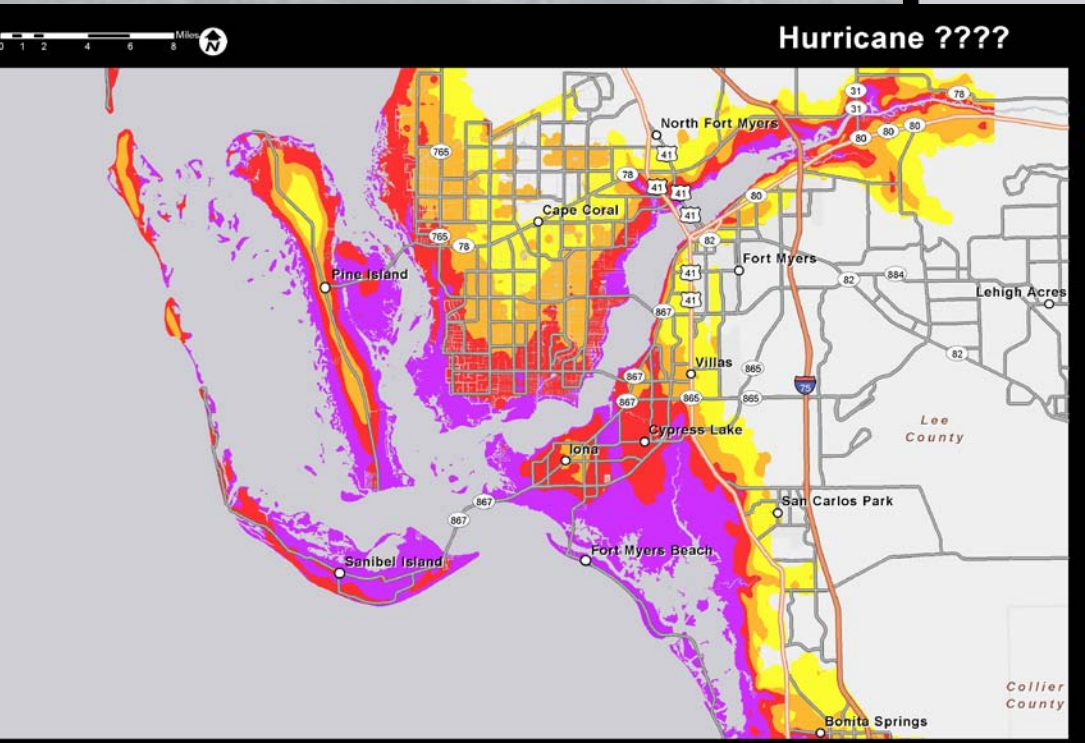
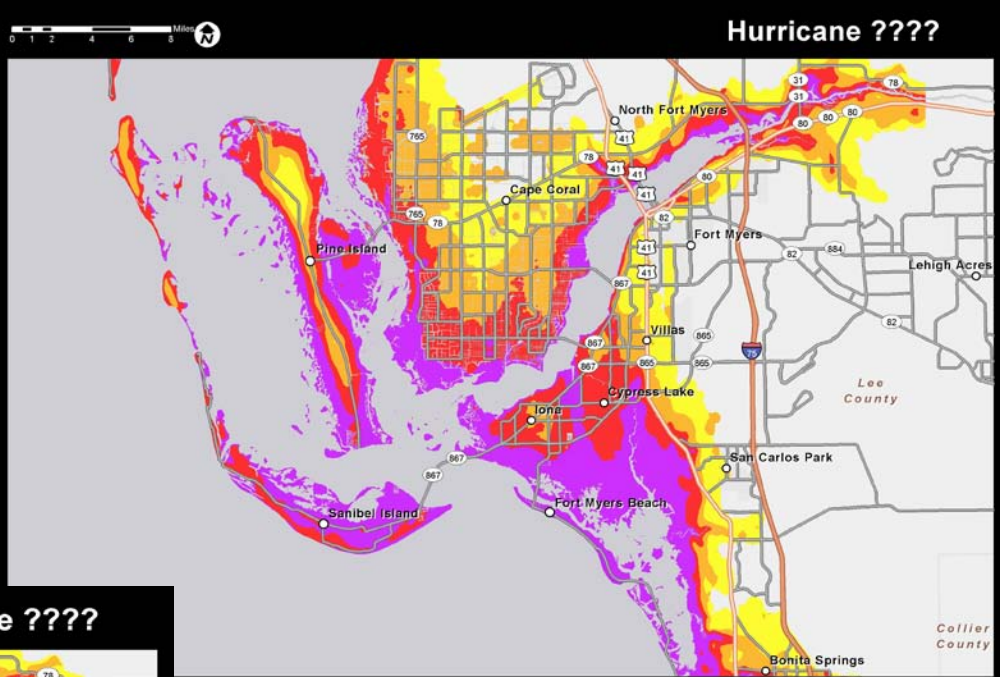


National Hurricane Center Storm Surge Unit



National Hurricane Center Storm Surge Unit





Hurricane Center
Surge Unit

Potential Storm Surge Hazard
Low Med High Extreme

Preference For
Numbers Over
Categories

Some Early Indications About Text

- Confusion about term “inundation”
- Confusion about what “feet above ground level means”
- Need to avoid descriptors like “very low”

Stage Two

- Selection of Prototype Maps For Testing
- Selection of Text To Be Tested
 - Definition of Storm Surge Warning
 - Ways to Express Surge Depth
 - How to Distinguish Surge From Rainfall Flooding

Stage Two

- Survey of emergency managers at the National Hurricane Conference
 - Exhibit booth with visuals
 - Text choices using Poll Everywhere
- Internet survey of random sample of coastal residents from ME to TX
- Internet survey of broadcast meteorologists in coastal markets

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