

# Updates to Storm Surge Inundation Maps

Presentation for the  
ONE BAY Resilient  
Communities Working Group

Brady Smith, AICP, CFM  
Tampa Bay Regional Planning Council  
November 4, 2016

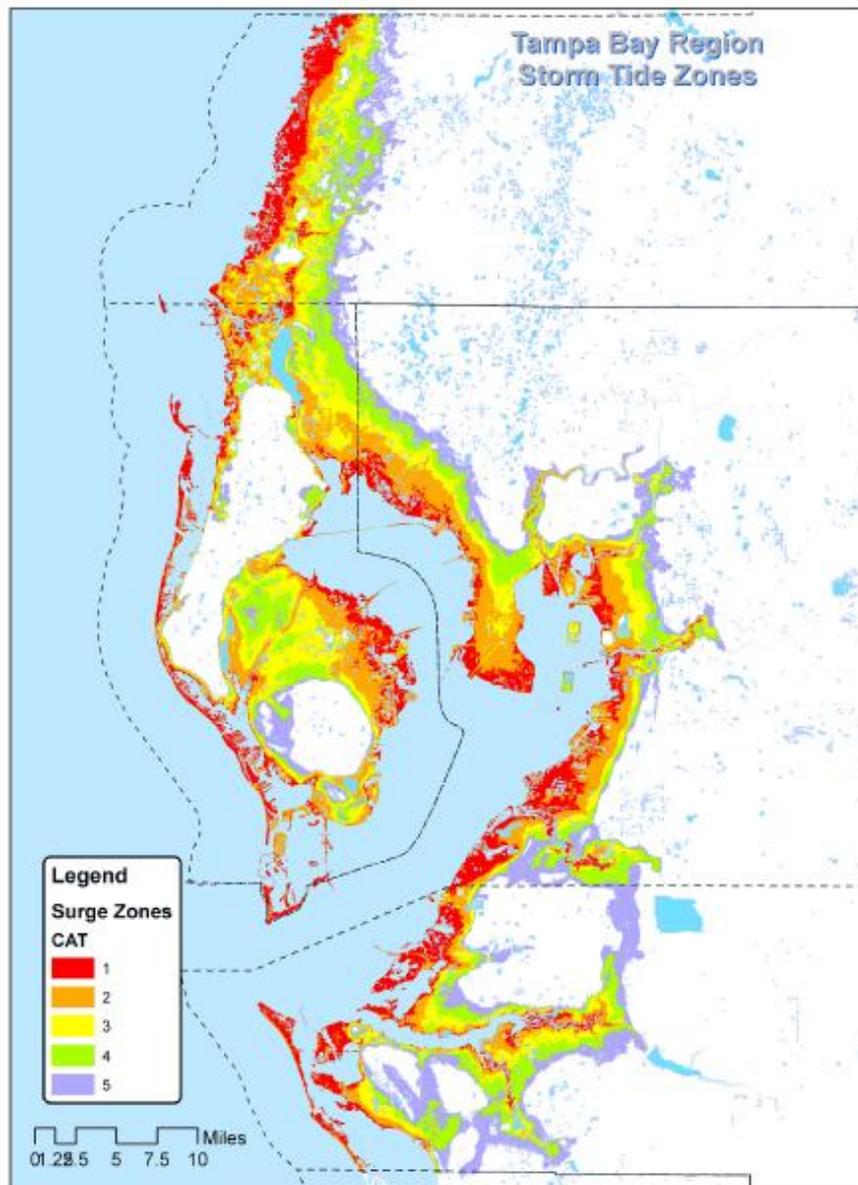


*Tampa Bay Regional Planning Council*

# Storm Surge Inundation Modeling

- Determines extent and depth of storm surge flooding
- Basis for delineating hurricane evacuation zones
- Defines coastal high-hazard area (CHHA) in Florida Statutes (163.3178, F.S.)

# Tampa Bay Region Storm Tide Zones



# SLOSH

- Sea, Lake, and Overland Surge from Hurricanes
- Model run and used by NOAA/NHC for storm surge forecasting
- For planning purposes, Maximum of Maximums (MoMs) conveys a worst-case scenario for each location

# SLOSH

- Does not account for waves on top of surge
- Does not account for rainfall
- Margin of error is roughly +/- 20%

# SLOSH vs. FIRM

- SLOSH modeling is completely separate and independent from flood mapping for FEMA FIRMs
- “Coastal high-hazard area” has two completely different definitions
  - FEMA FIRM – CHHA = Velocity zone (V-zone)

# Coastal High-Hazard Area (CHHA)

- Florida Statutes require “Designation of coastal high-hazard areas and the criteria for mitigation for a comprehensive plan amendment in a coastal high-hazard area...”

s.163.3178(6)(h), F.S.

# Coastal High-Hazard Area (CHHA)

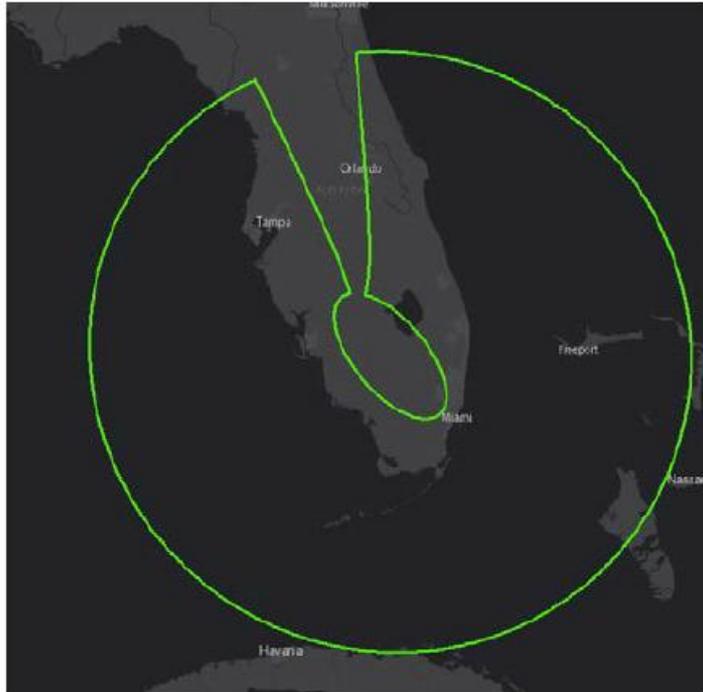
- **“The coastal high-hazard area is the area below the elevation of the category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model.”**

s.163.3178(6)(h), F.S.

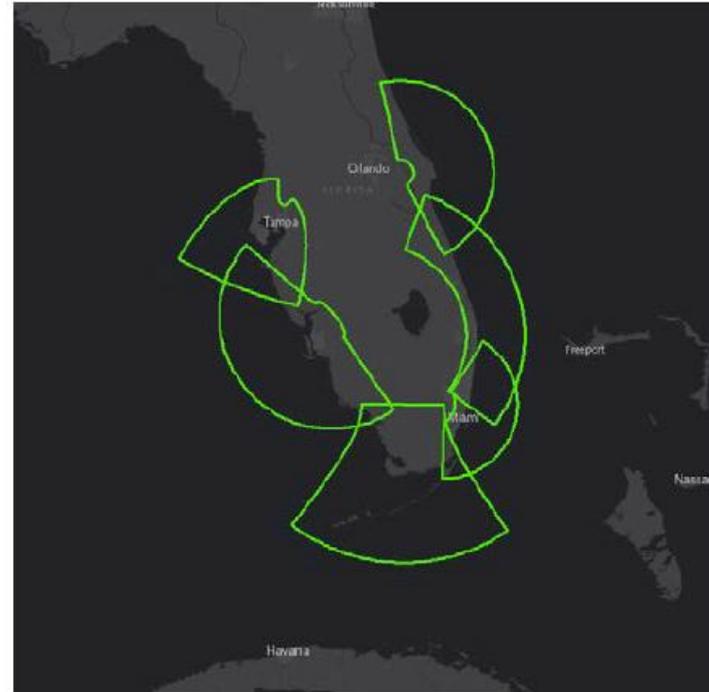
# Latest SLOSH model

- Improved resolution
- Simulation of “buffering” effect of mangroves is improved
- Model accounts for coastal Kelvin wave

# Latest SLOSH model



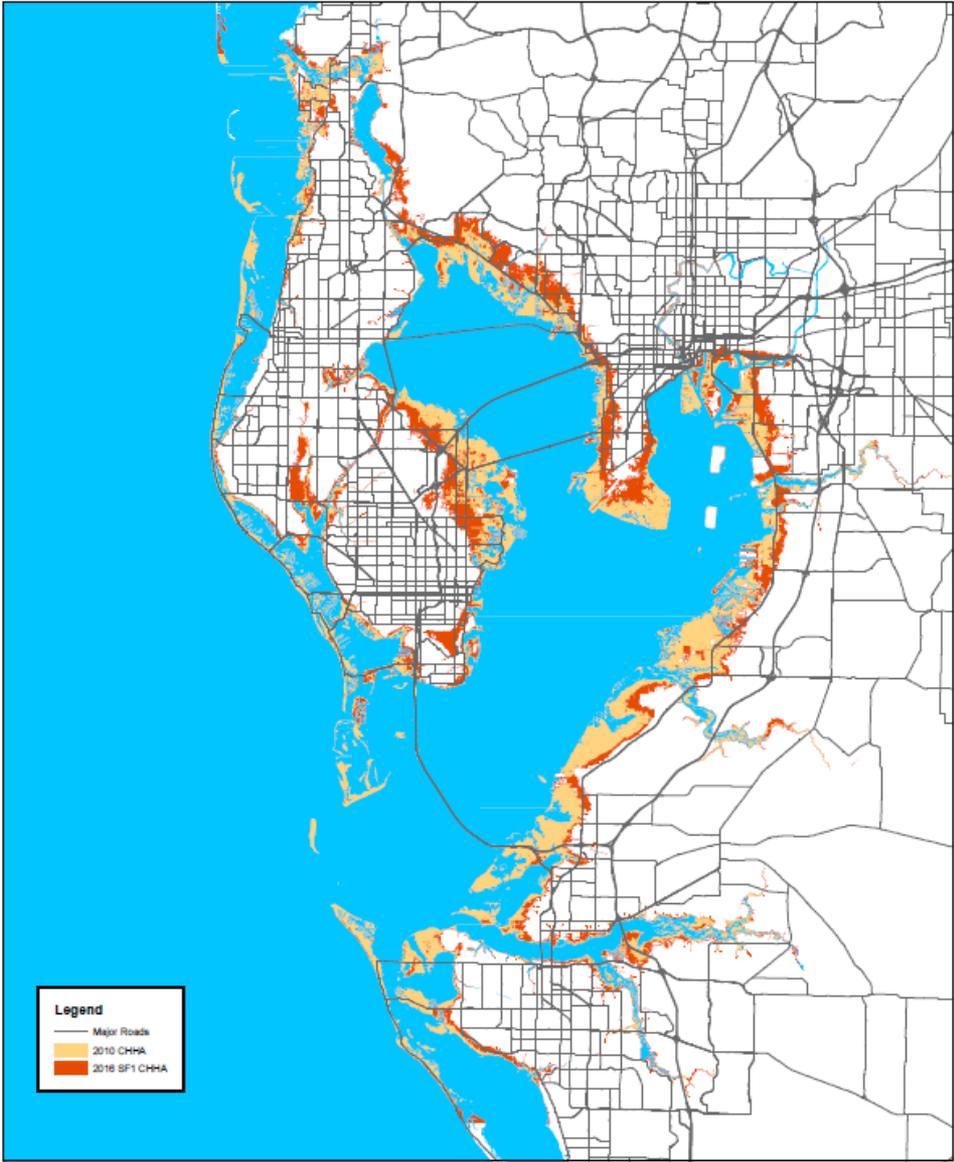
New "superbasin"



Previous basins (6)

# New model = new inundation areas

- Most significant change in the Tampa Bay region is the increase in areal extent of the CHHA



2016 Increase in CHHA in Tampa Bay Area

# New SLOSH results released to county emergency managers

- Citrus: No new SLOSH
- Hernando: ??? (November 2016)
- Hillsborough: July 28, 2016
- Manatee: August 9, 2016
- Pasco: October 12, 2016
- Pinellas: July 28, 2016

# Effects of new SLOSH results

- New CHHA as defined in Florida Statutes
- New evacuation zones may be drawn
- New evacuation clearance times will need to be calculated if evac zones change (TIME model)

# Questions?

Brady Smith, AICP, CFM  
Principal Planner  
Tampa Bay Regional Planning Council  
727.570.5151 x42  
brady@tbrpc.org

