

Vulnerability Assessment Tools for the Middle swath of the state of Florida. The tools and plans to use them for sea level rise education for the public.

# SLR Tools & Training

Tampa Bay and East Central  
Florida

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## Tampa Bay/East Central Florida

### Vulnerability Assessment

- This project will concentrate on a pilot study of the Hernando County area above Pasco County. This approach and the lessons learned will be used in a similar assessment and training on the middle, east coast of Florida.

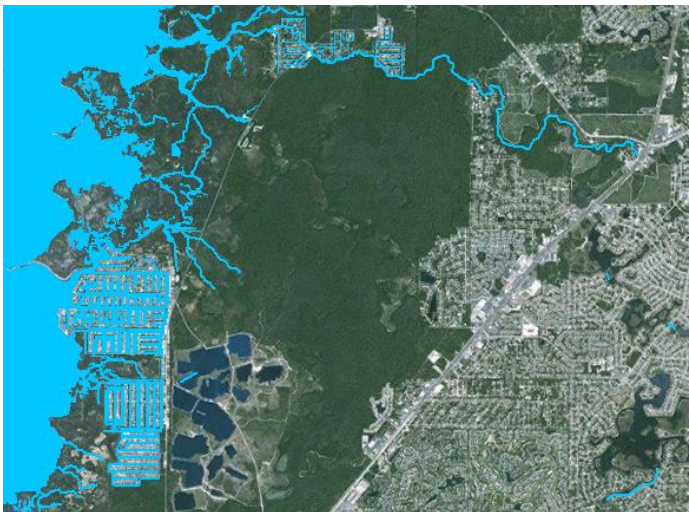
#### *Data Sources*

- Existing Studies/Reports
- Roadway Plans
- Local/State/Federal Agencies
  - Flooding History
  - Photos
- Private Citizens
- Field Data Collection



*Hernando County (June 29, 2012)* 4

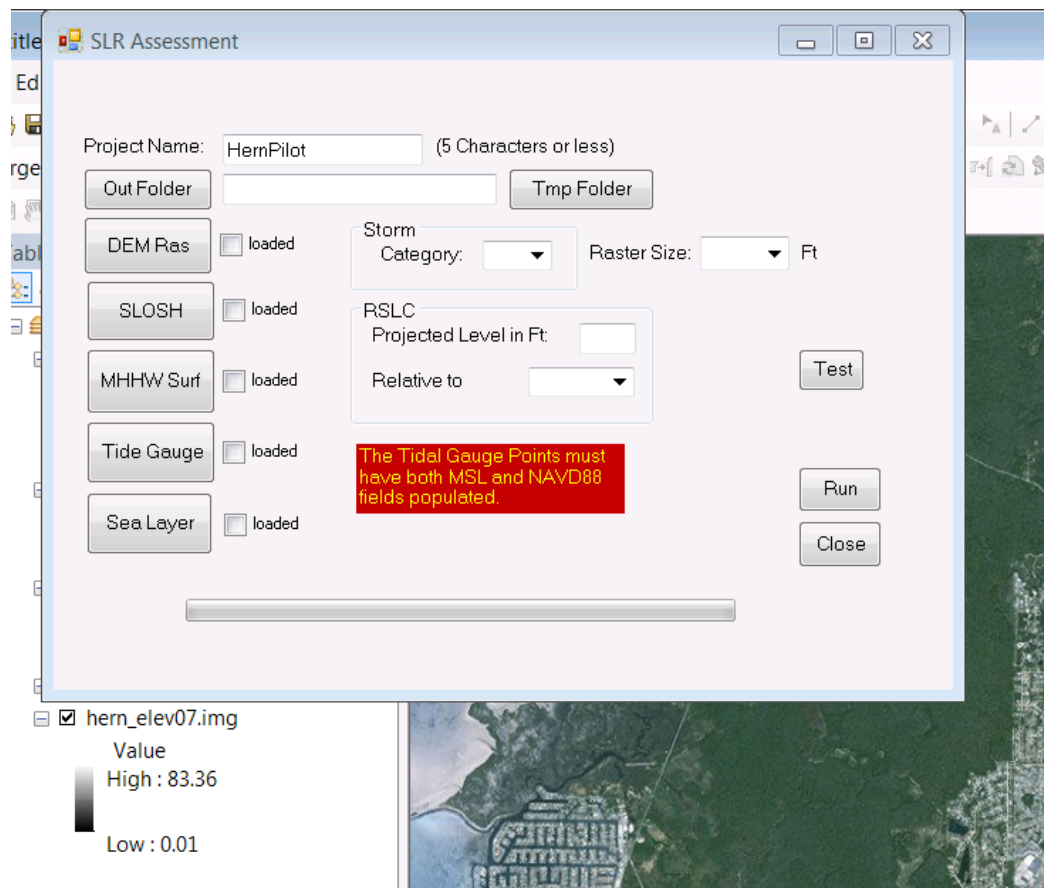
- Hernando County has a mixture of high and low areas. The coastal areas of Hernando have many land areas formed from trapped soil in the mangroves and also accretion around salt marsh and other low-lying habitat. Development has proceeded in these areas and a major and heavily traveled north-south thoroughfare rides along the coast of the county.



- General synopsis of tasks are as follows:
  - Decide upon suite of tools to use for assessment, demonstration and training
  - Run preliminary pilot vulnerability assessment on this area and report the results.
  - Develop training protocol using some, or all of the tools depending on usefulness of the results.
  - Hold an informational training session with chosen tools.

### Hybrid Tool Suite

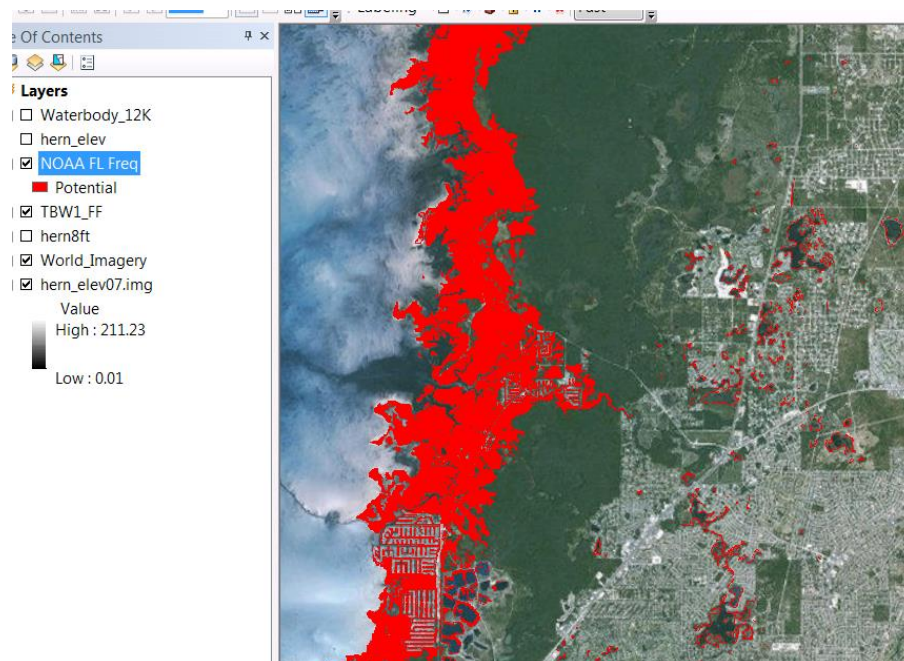
We have developed a custom tool that will use some of the data produced by NOAA. In this regard, it will eliminate varying interpolation results from the fundamental portion of the dataset. This particular data used in the tool is the MHHW interpolated surface. Along with current tidal gauge points, a process has been automated to derive static sea level rise results based on either NOAA curve values in Mean Sea Level (MSL) domain or straight NAVD88 datum. By using the MHHW surface, we eliminate the 'bathtub' type model of just using level surface rise. All processing is done in NAVD88, with results depicting the said input value in MHHW in relation to NAVD88 (Which the NOAA surface is calculated in).



This tool will also have ability to add the effects of Storm Tide surge from a storm based on the SLOSH model. If one storm is depicted in a SLOSH basin with typical field names, that storm can be model with future sea level inundation.

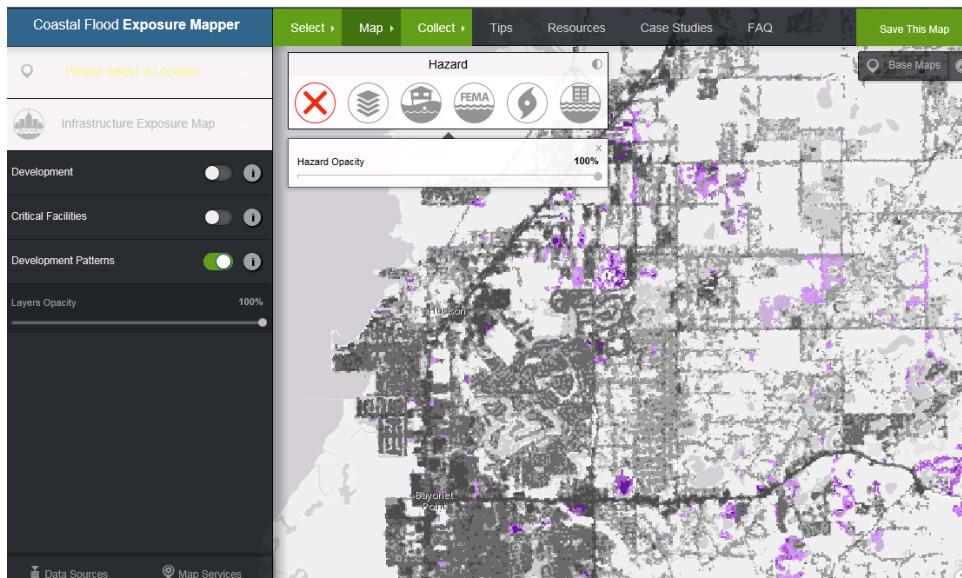
The tool can be used by anyone who has ArcGIS 10.2 and above, as it is an Add-In. It may be available for the training, but it would not be as easy as the web-based tools.

Although not built into the tool at this time, it will have the ability to process the NOAA flood frequency layer (sometimes referred to as the 'tipping point' layer).



This frequency layer (above) has been pre-calculated by NOAA, but can be blended into a model for further assessment purposes.

The second major tool of the suite will be the NOAA Flood Exposure Mapper. We chose this tool because it has features that go beyond standard physical flood depictions. It has links and layers referencing infrastructure as well as social implications. It is a nicely rounded out assessment tool which can be used directly from a web-browser. This tool will definitely be used in the training of others for multi-faceted assessments related to flooding from sea level rise.



*Coastal Flood Exposure Tool*