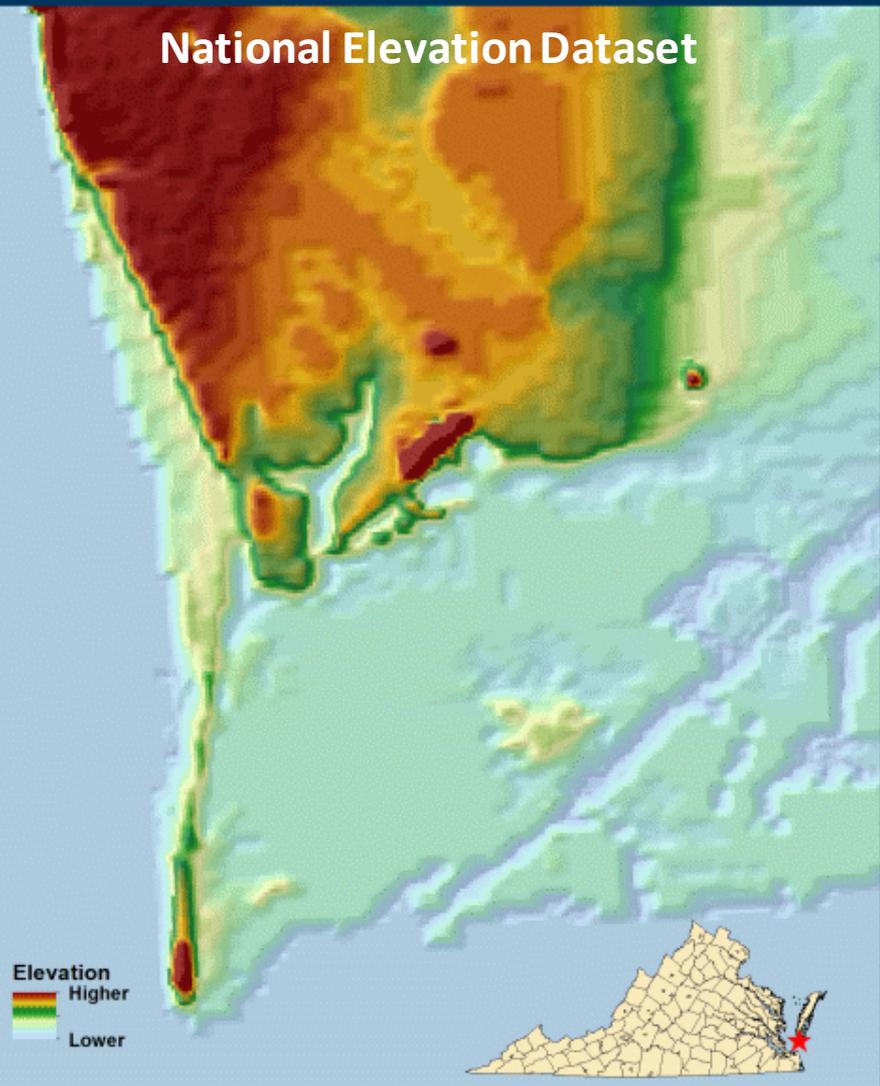


NOAA Inundation Model: Overview, Applications, and Limitations

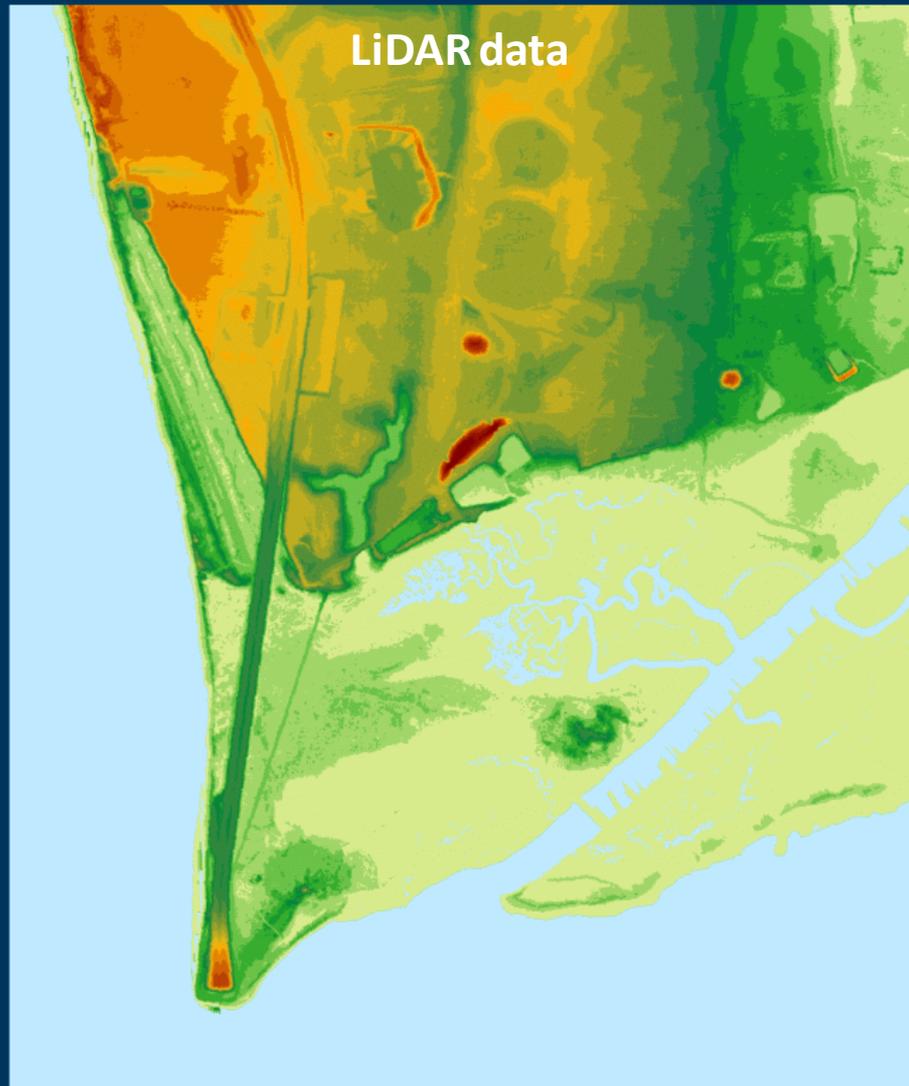
© Hal Brindley

Importance of Elevation Data

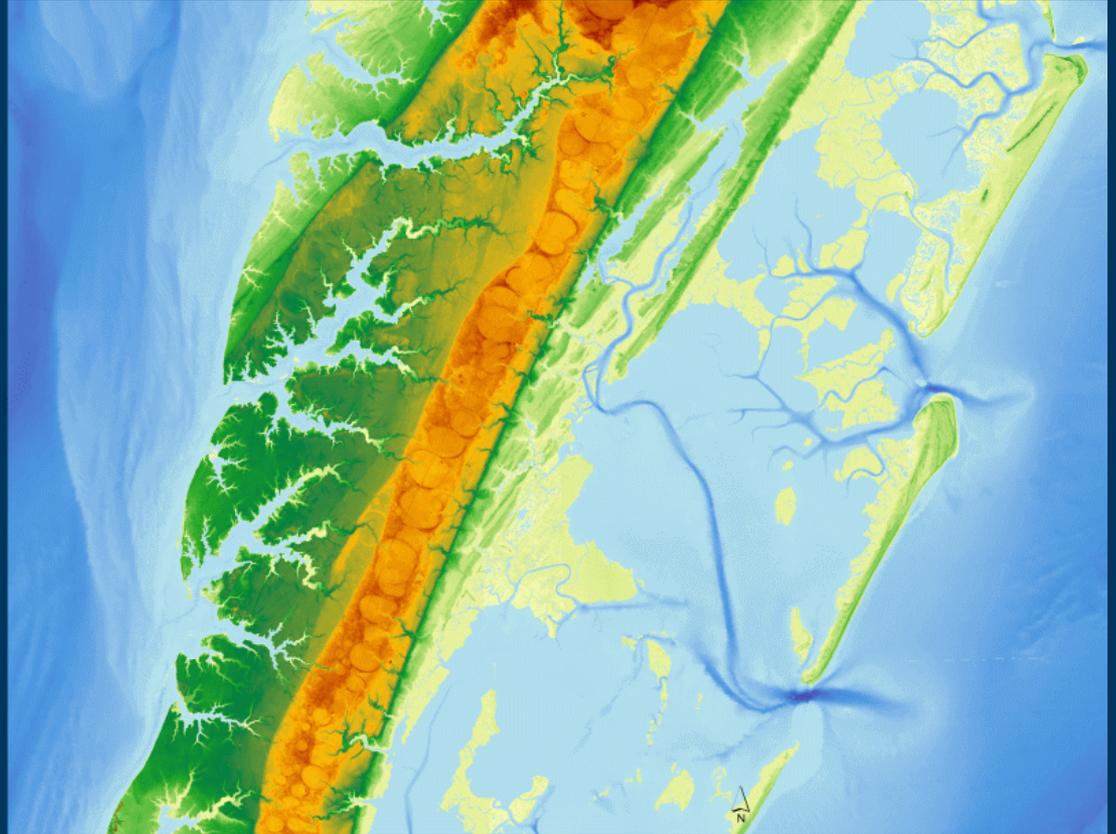
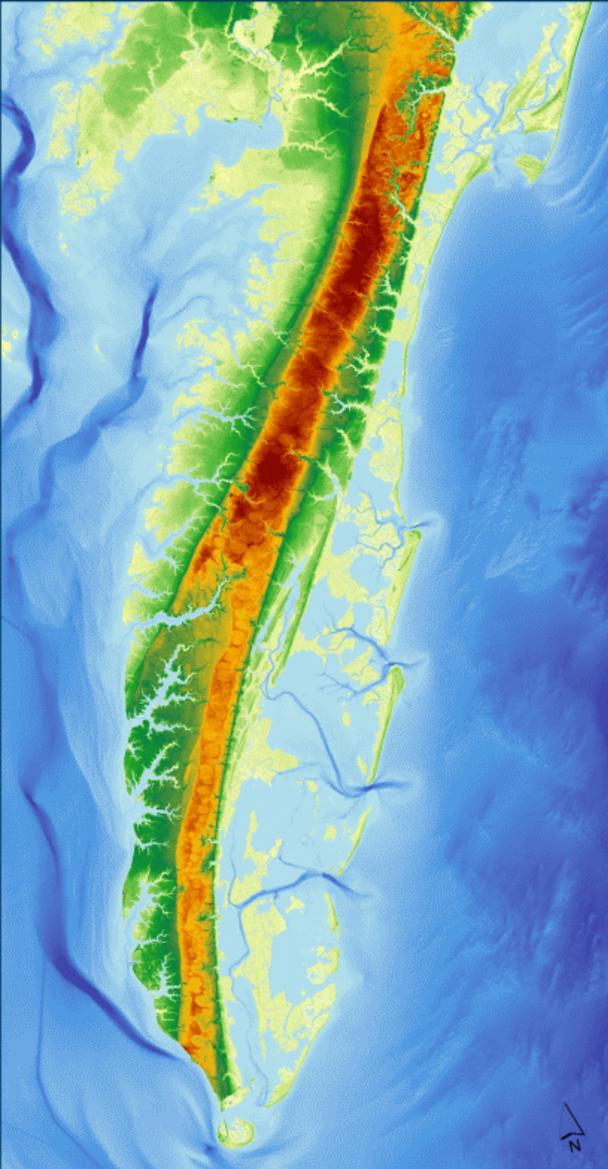
National Elevation Dataset



LiDAR data

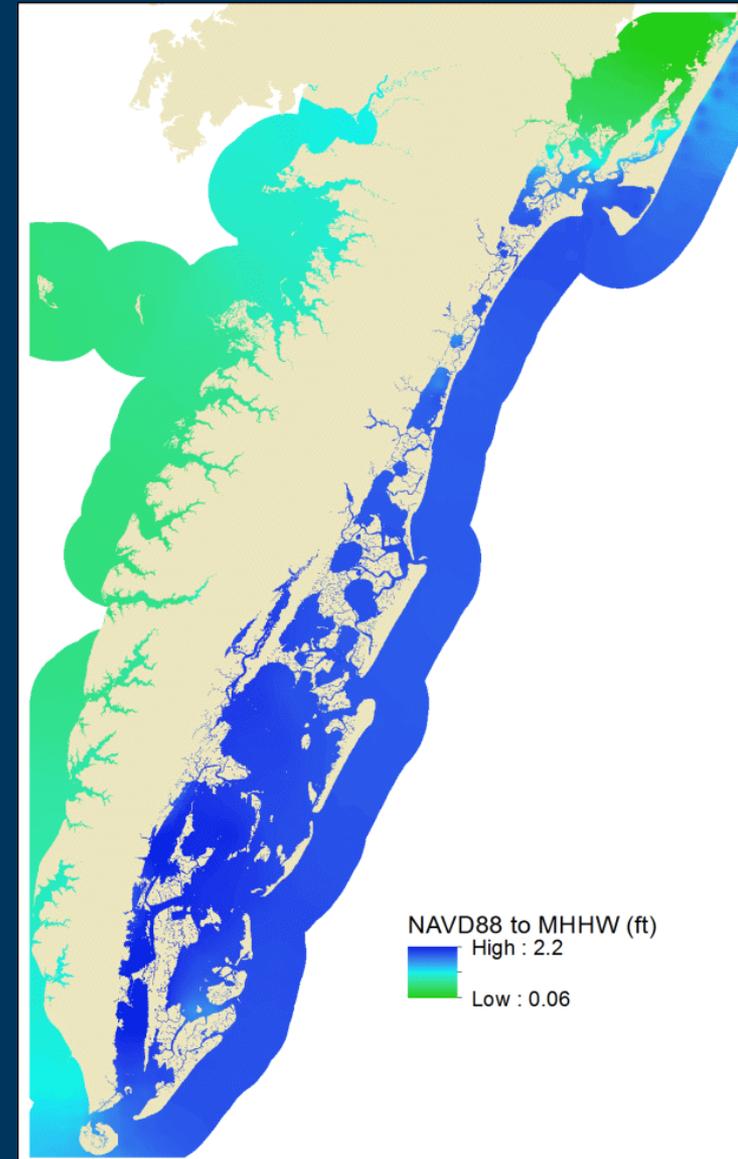


Combined Topographic/Bathymetric Data



The Ocean Is Not a Flat Surface (especially in bays and estuaries)

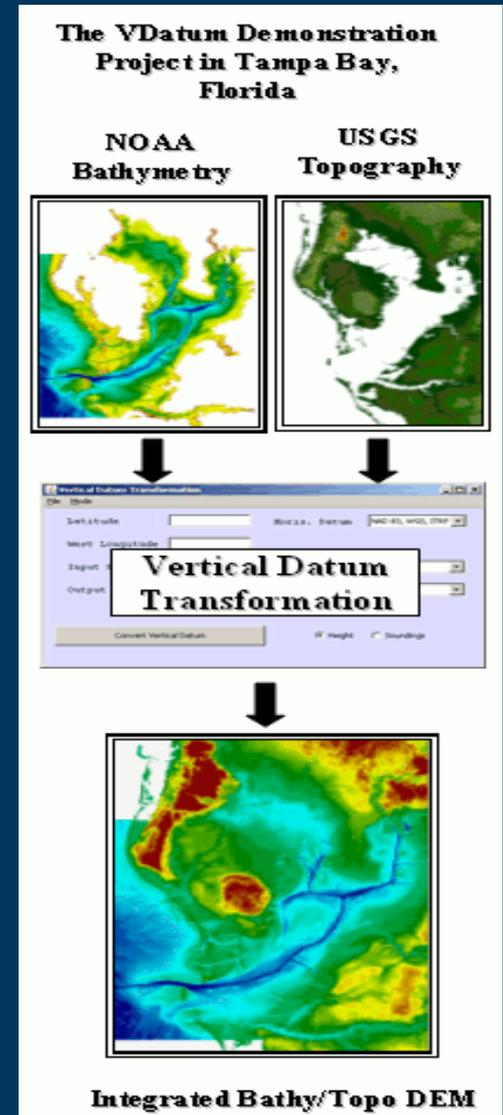
- Elevation data is tied to a fixed datum (NAVD88)
- For inundation modeling elevations are transformed to mean higher high water (MHHW), which is essentially an average of the daily high tide

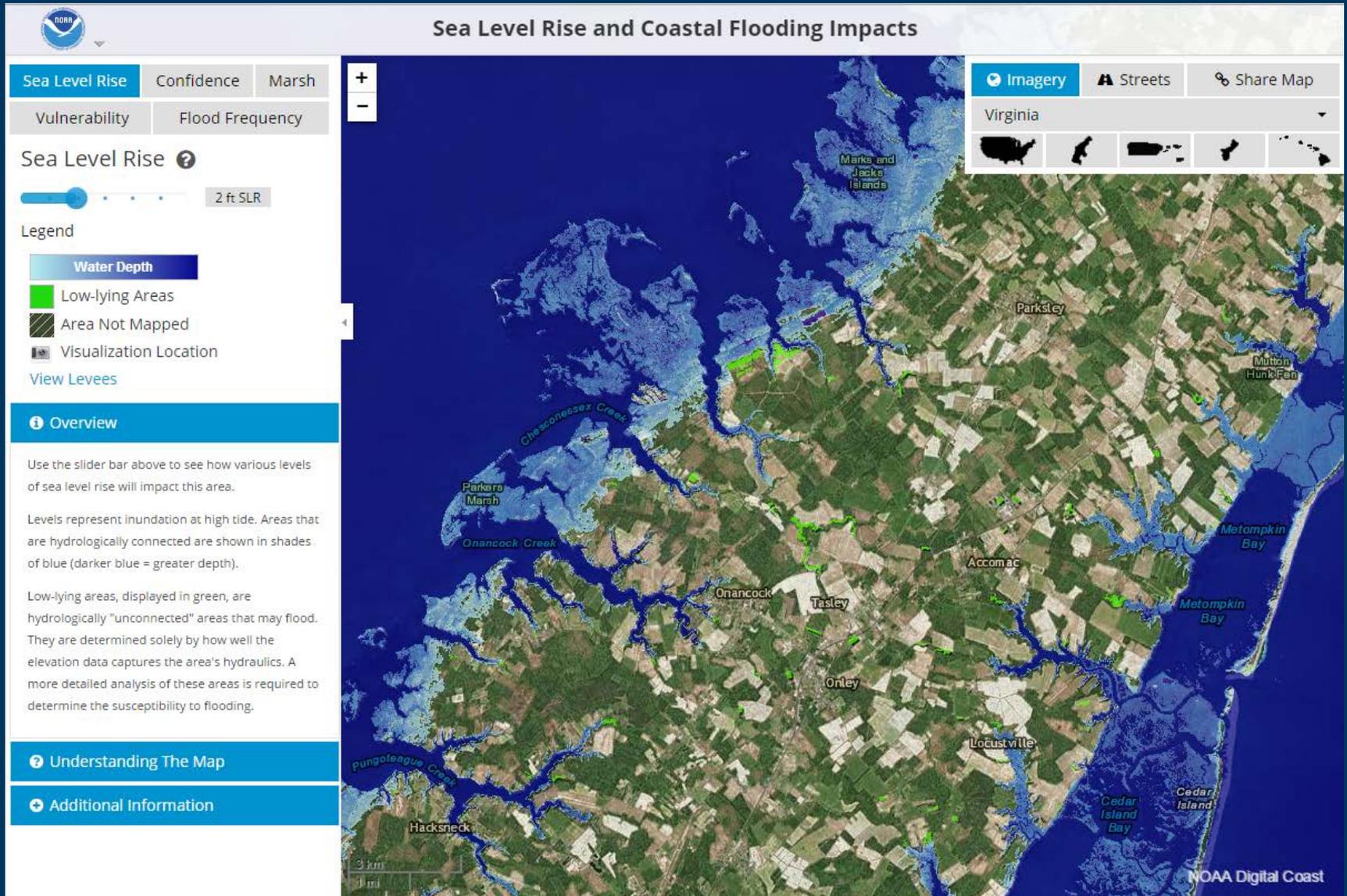


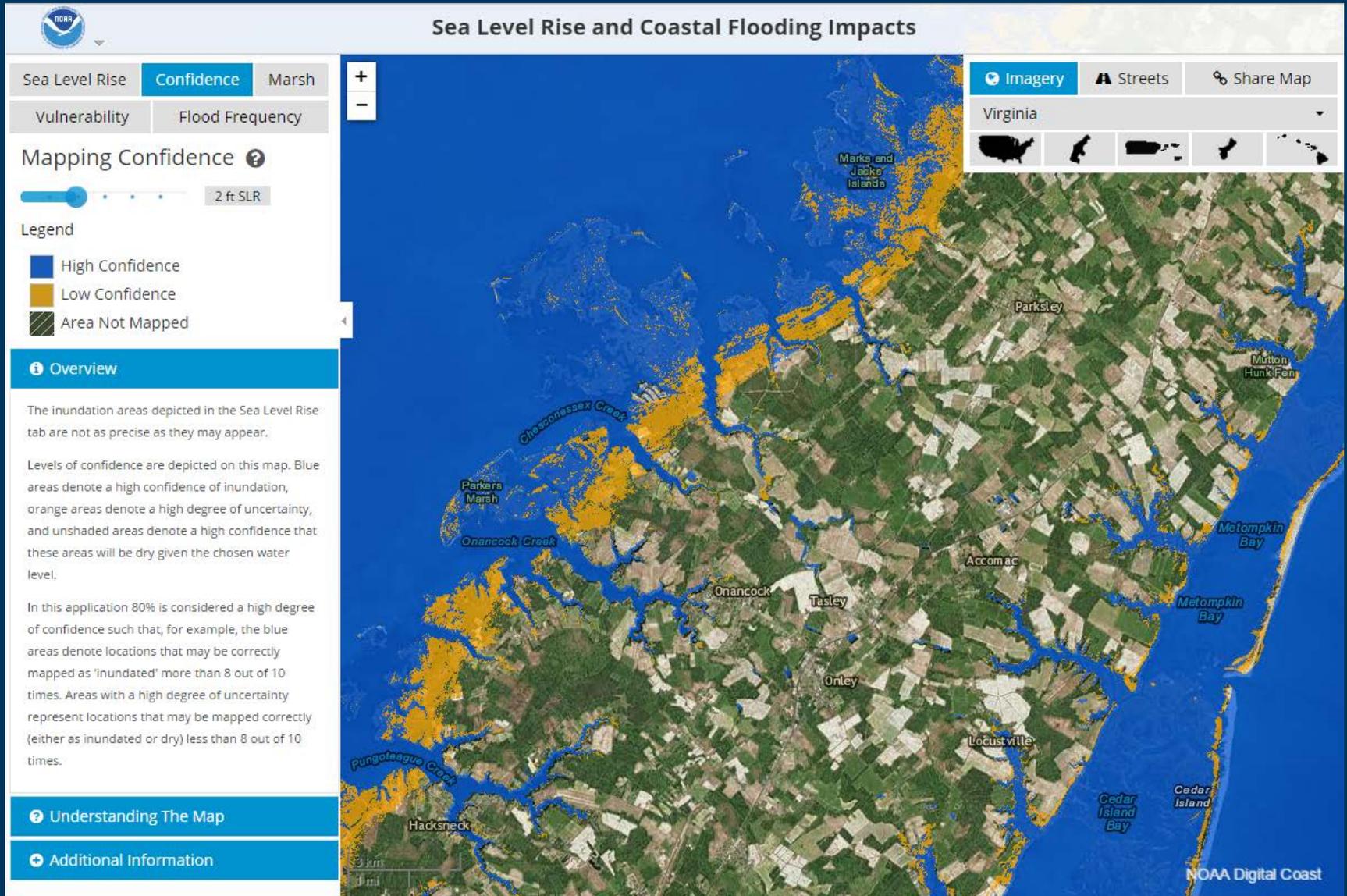
Vertical Transformation

VDatum is used to convert between tidal, orthometric, and ellipsoidal datums (vdatum.noaa.gov)

- Vertical Datum Transformation Tool
- Developed jointly by NOAA's Office of Coast Survey and the National Geodetic Survey
- Provides a method to accurately combine topographic (orthometric) and bathymetric (tidal) elevation data
- Application is limited to the region it was developed for







Coastal Resilience Tool for the Eastern Shore

COASTAL RESILIENCE EASTERN SHORE OF VIRGINIA

GET STARTED TOUR GO TO ▼ The Nature Conservancy Partners Legal Disclosure

Search by Address

Imagery ▼

Map Layers

Flood & Sea Level Rise

Community Planning

Switch To Map 2

Split View

Save & Share

Export Page

Flood & Sea Level Rise

NOAA SLR Data ▼

Choose SLR

Current 1 ft 2 ft 3 ft 4 ft 5 ft 6 ft

Layer Properties: 🔍

Opaque Transparent

View Full Report

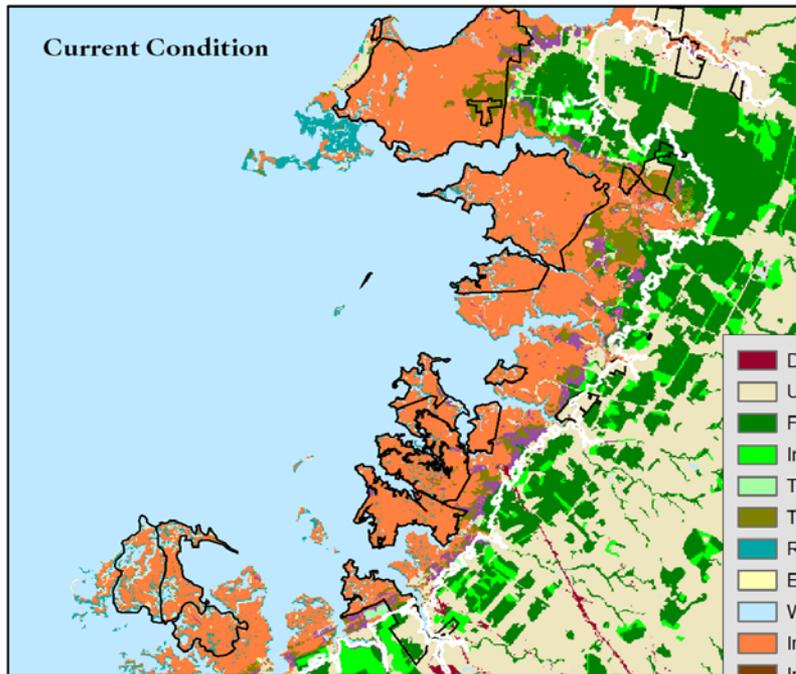
POWERED BY esri

Limitations: “The data, maps, and information provided should be used only as a screening-level tool.”

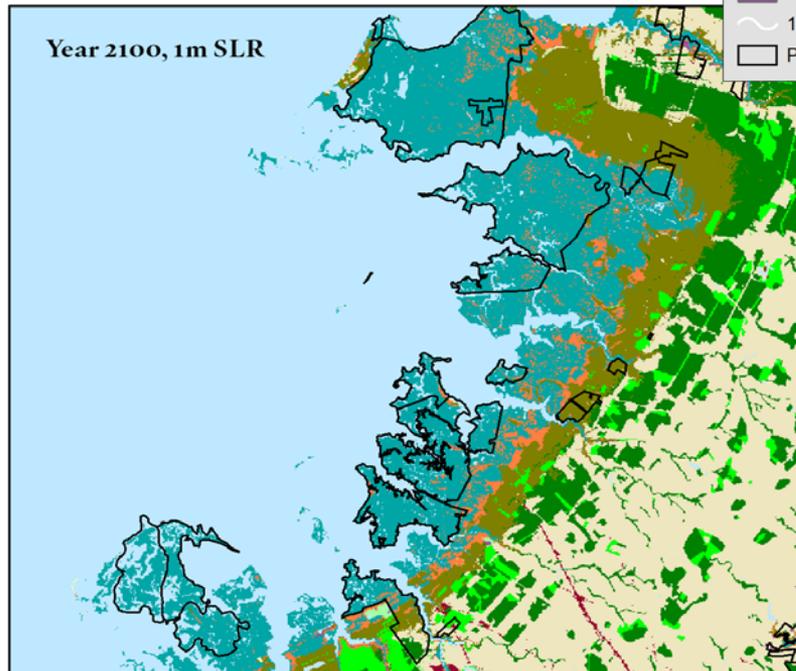
- Accuracy of elevation data (vertical accuracy = 0.53 ft)
- May not completely capture the area’s hydrology, such as canals, ditches, and stormwater infrastructure.
- Potential management actions are not considered.
- Natural processes such as erosion and marsh migration are not considered



SLAMM Results Preview

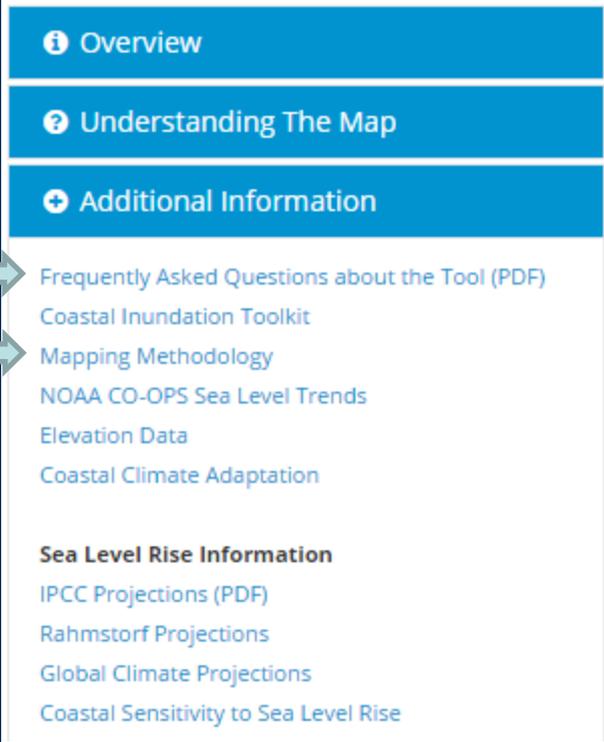


- Developed Dry Land
- Undeveloped Dry Land
- Forested Wetland (Swamp)
- Inland Fresh Marsh
- Tidal Fresh Marsh
- Transitional Salt Marsh
- Regularly Flooded Marsh
- Estuarine Beach
- Water
- Irregularly Flooded Marsh
- Inland Shore
- Tidal Swamp
- 1 Meter Contour
- Protected Lands



cbruce@tnc.org

<http://coast.noaa.gov/slr/>



- Overview
- Understanding The Map
- Additional Information
 - Frequently Asked Questions about the Tool (PDF)
 - Coastal Inundation Toolkit
 - Mapping Methodology
 - NOAA CO-OPS Sea Level Trends
 - Elevation Data
 - Coastal Climate Adaptation
- Sea Level Rise Information**
 - IPCC Projections (PDF)
 - Rahmstorf Projections
 - Global Climate Projections
 - Coastal Sensitivity to Sea Level Rise