

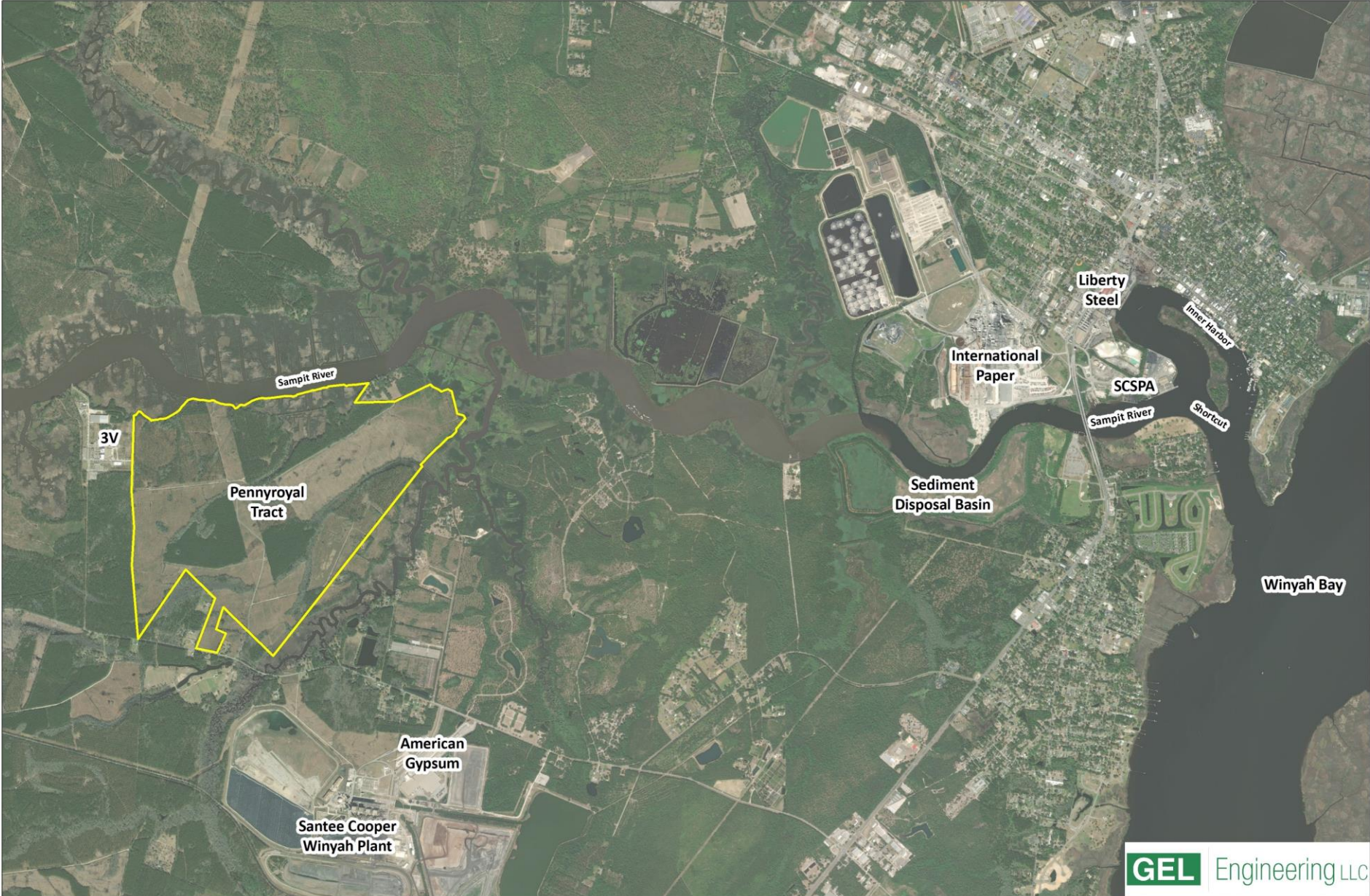


# **Project Status Update**

## **Phase II Inner Harbor Study**

### **Georgetown, South Carolina**

#### **June 14, 2022**





# GOAL

Determine most economical means to maintain navigable depths for the working waterfront while minimizing dredging in the Inner Harbor along Georgetown's historic waterfront.

# Present Needs

- Shrimp Boats
- Small and Mid-size Recreational Boats/Yachts
- Sailboats
- Need 7 feet at Mean Low Water
- Not adequate depths for megayachts or small cruise ships
- Siltation beginning to cause limitations in marinas, relief needed

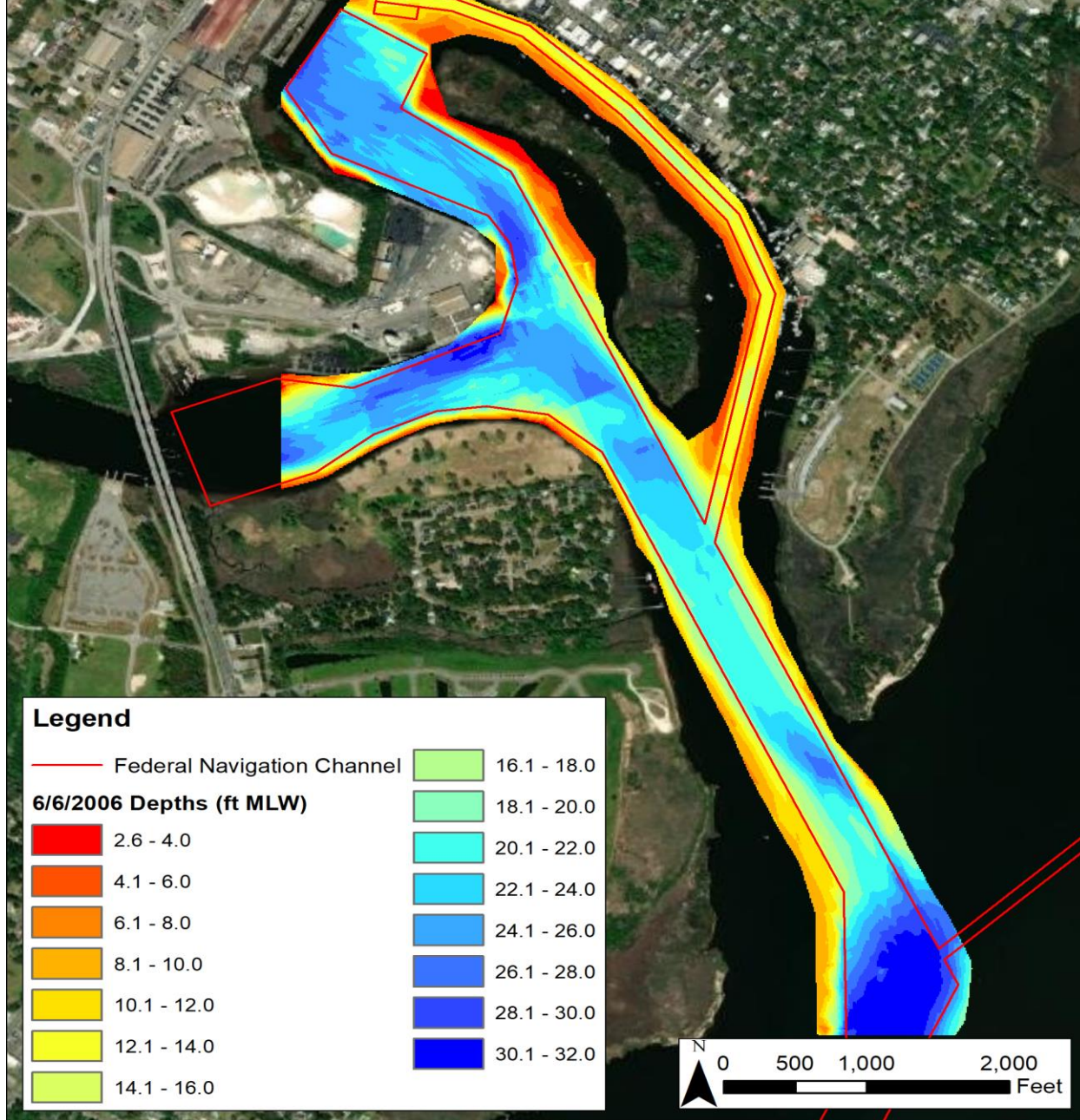
# Task 1 Findings-Best Options for Further Evaluation

1. Dredging to an Inshore Open Water Placement Site in Winyah Bay
2. Agitation Dredging
3. Construct a Deflection Wall/Close Shortcut to Increase Flow in the Inner Harbor
4. Conventional Dredging in Combination with Options 1, 2, and/or 3

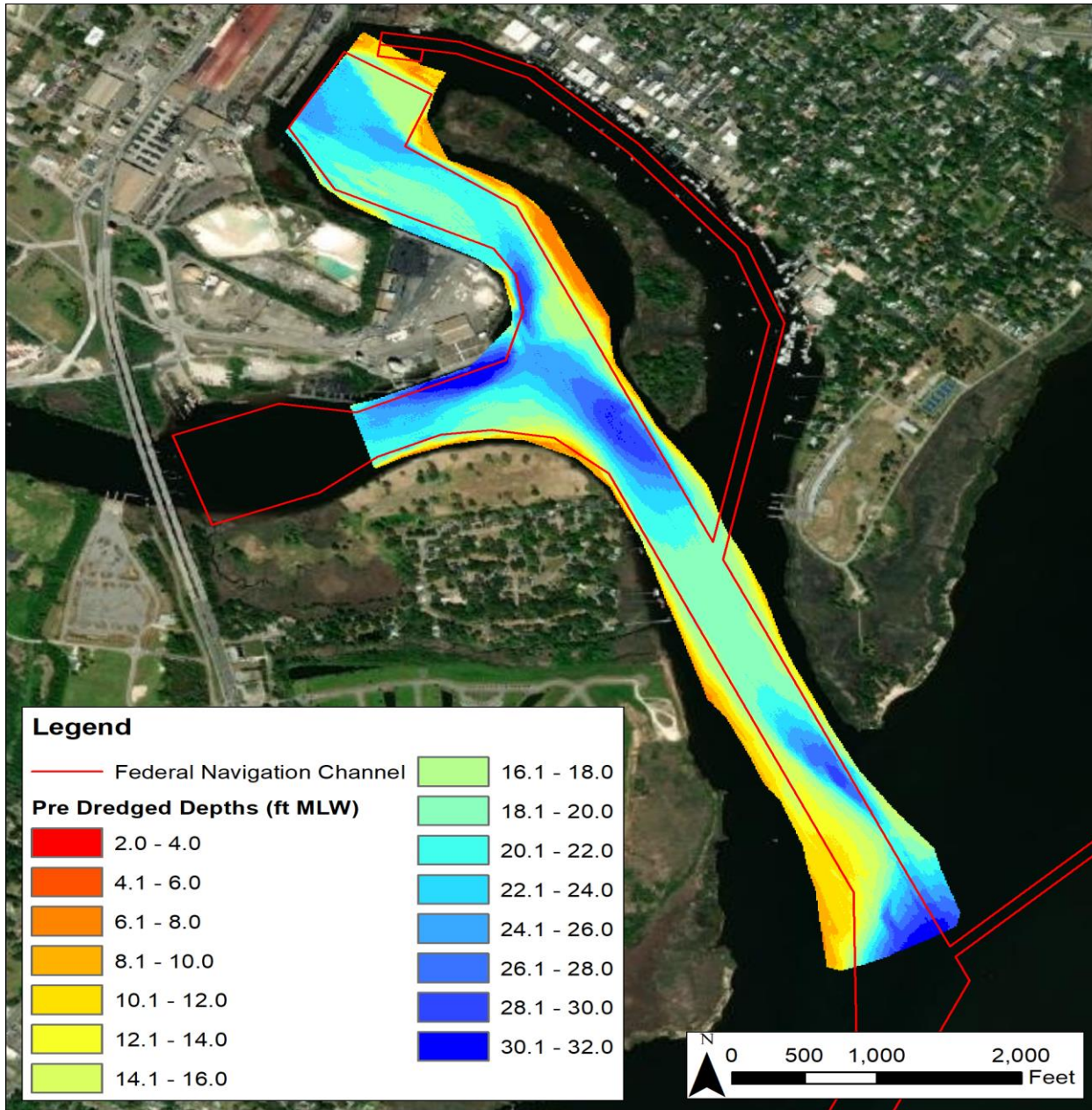
## Task II

1. Complete Sedimentation Model (*Completed*)
2. Collect Sediment Quality Chemical Screening Data (*Completed*)
3. Evaluate Alternatives in Light of 1 and 2 (*Completed*)
4. Provide Recommendations for Next Steps (*Tonight's Discussion*)

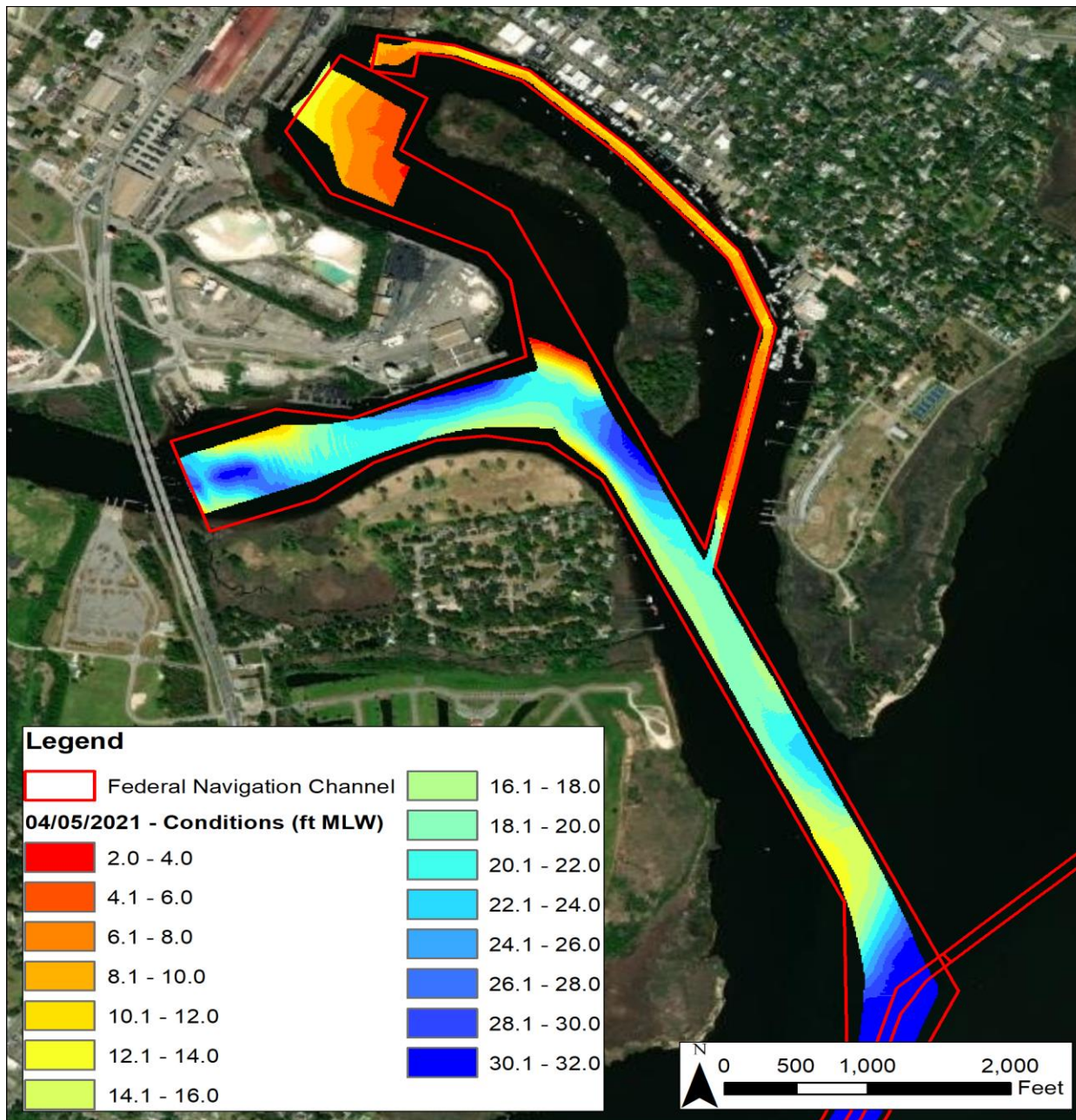




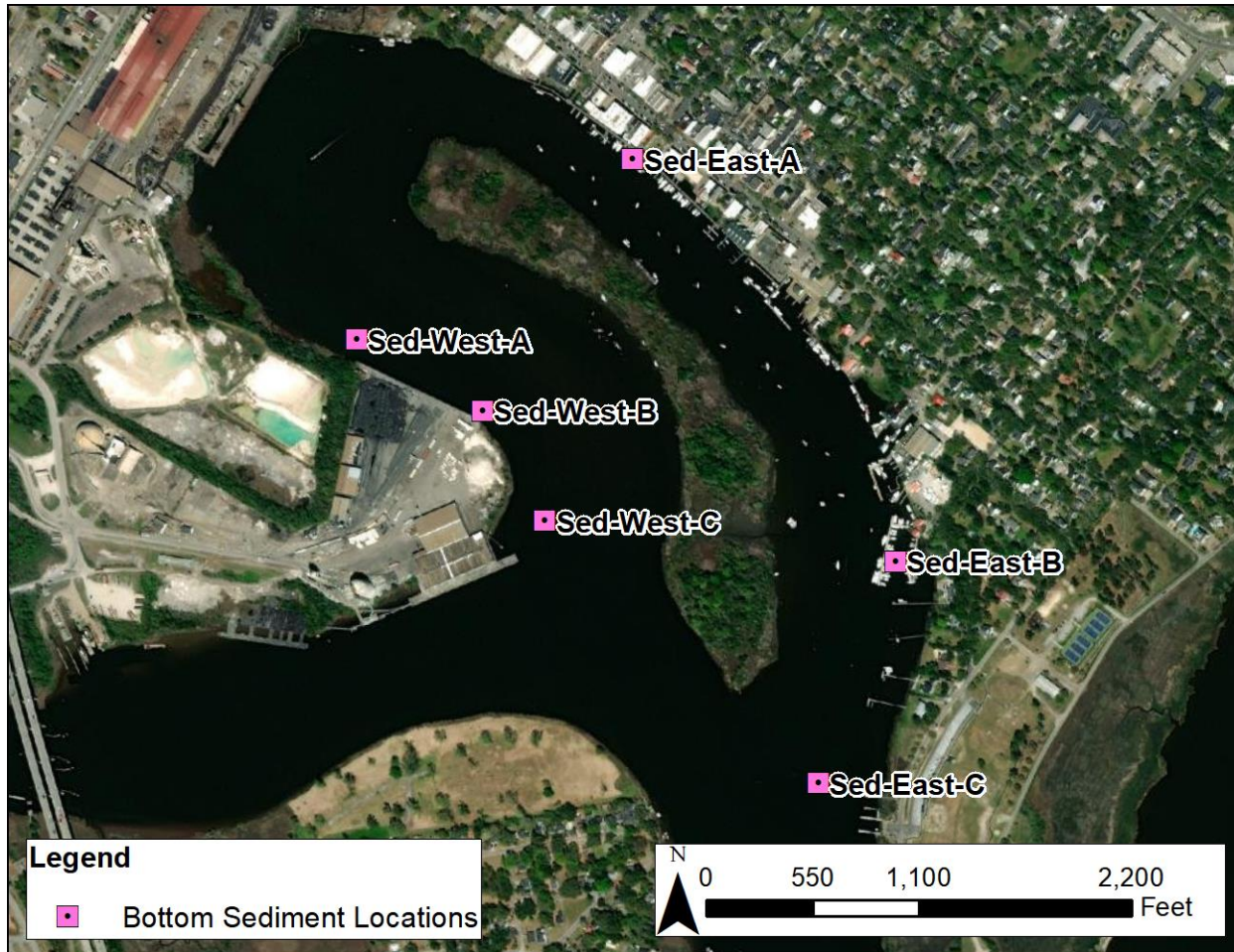
USACE June 2006 survey depths



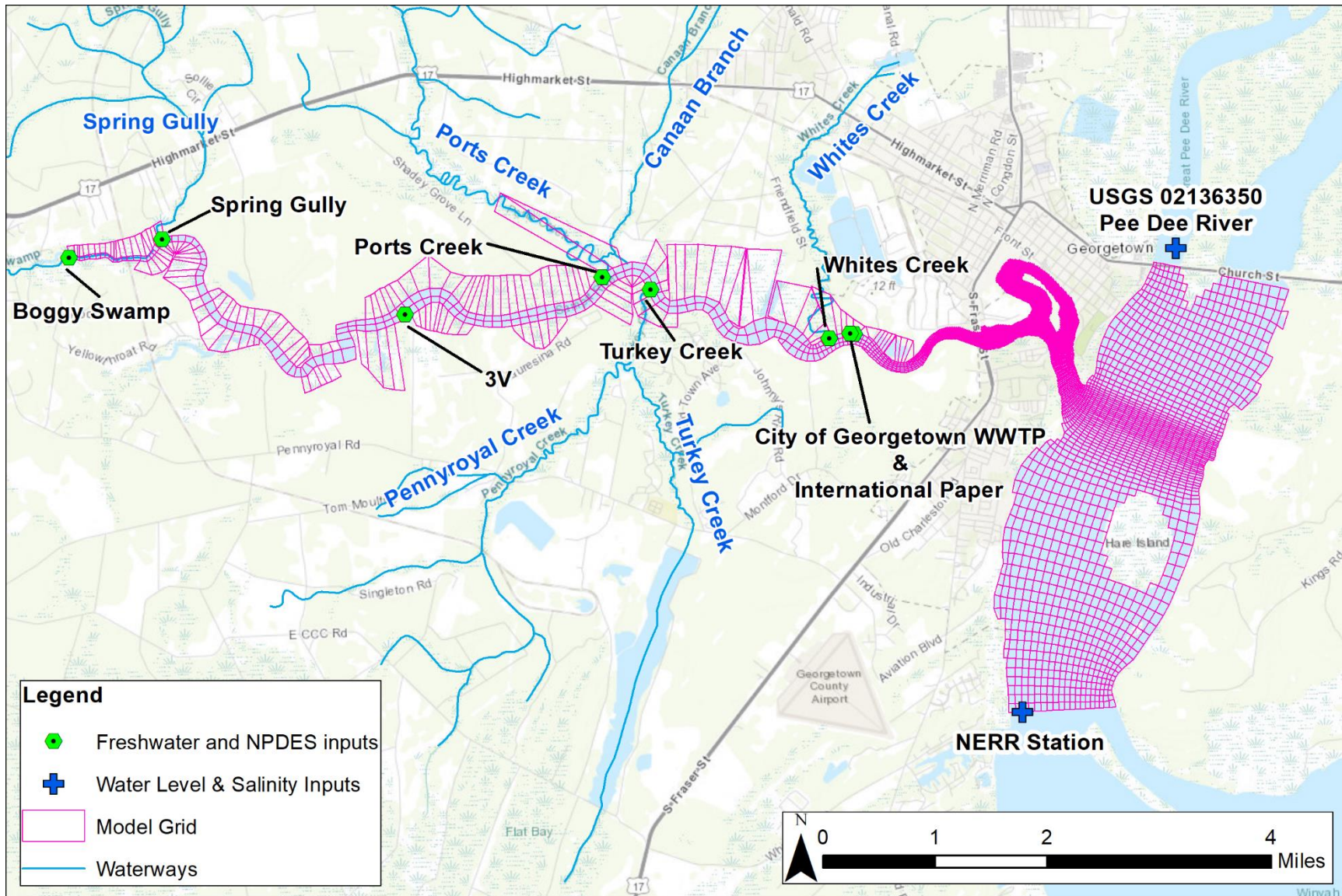
USACE June/July 2008 pre-dredge survey depths



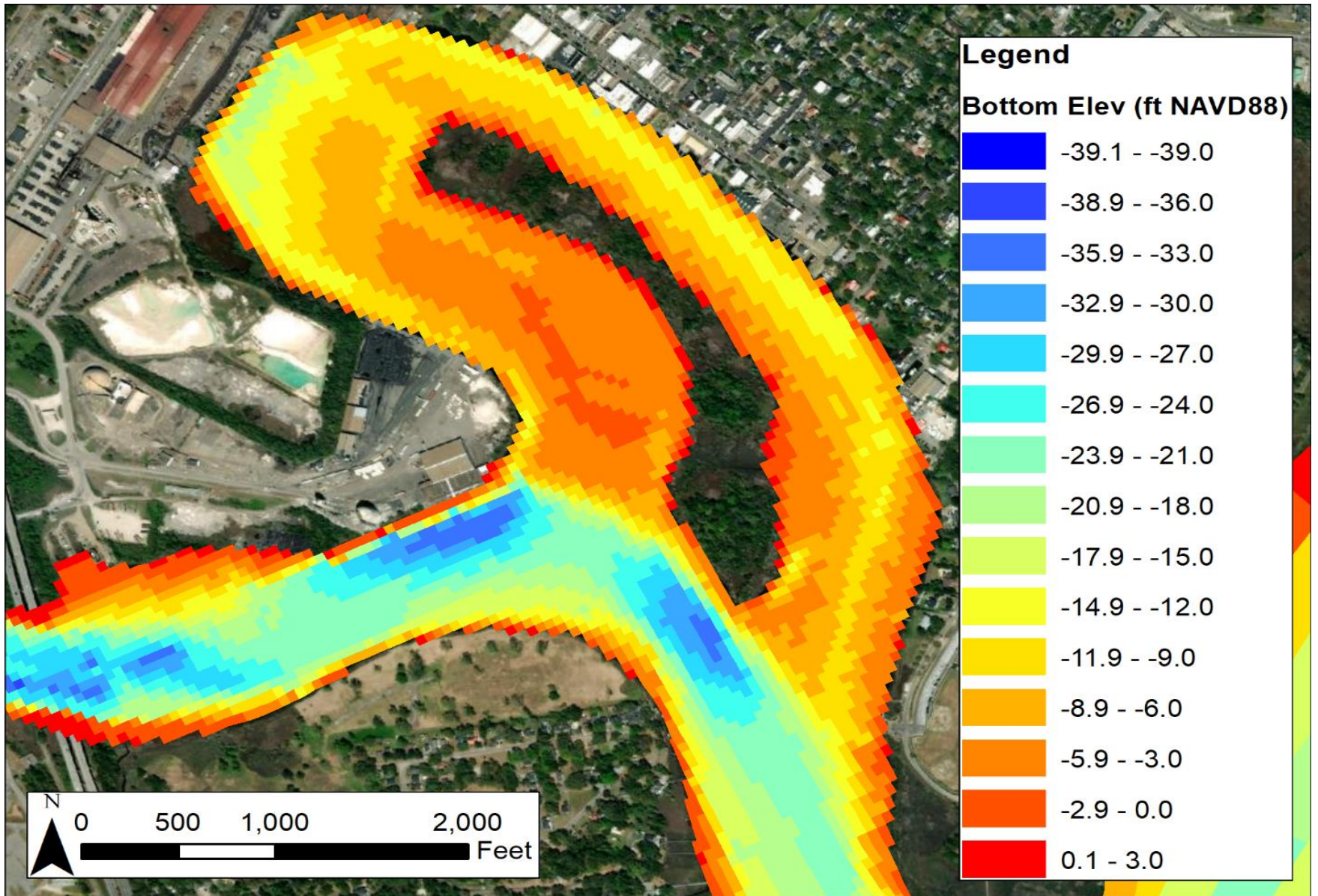
USACE 2021 condition survey depths



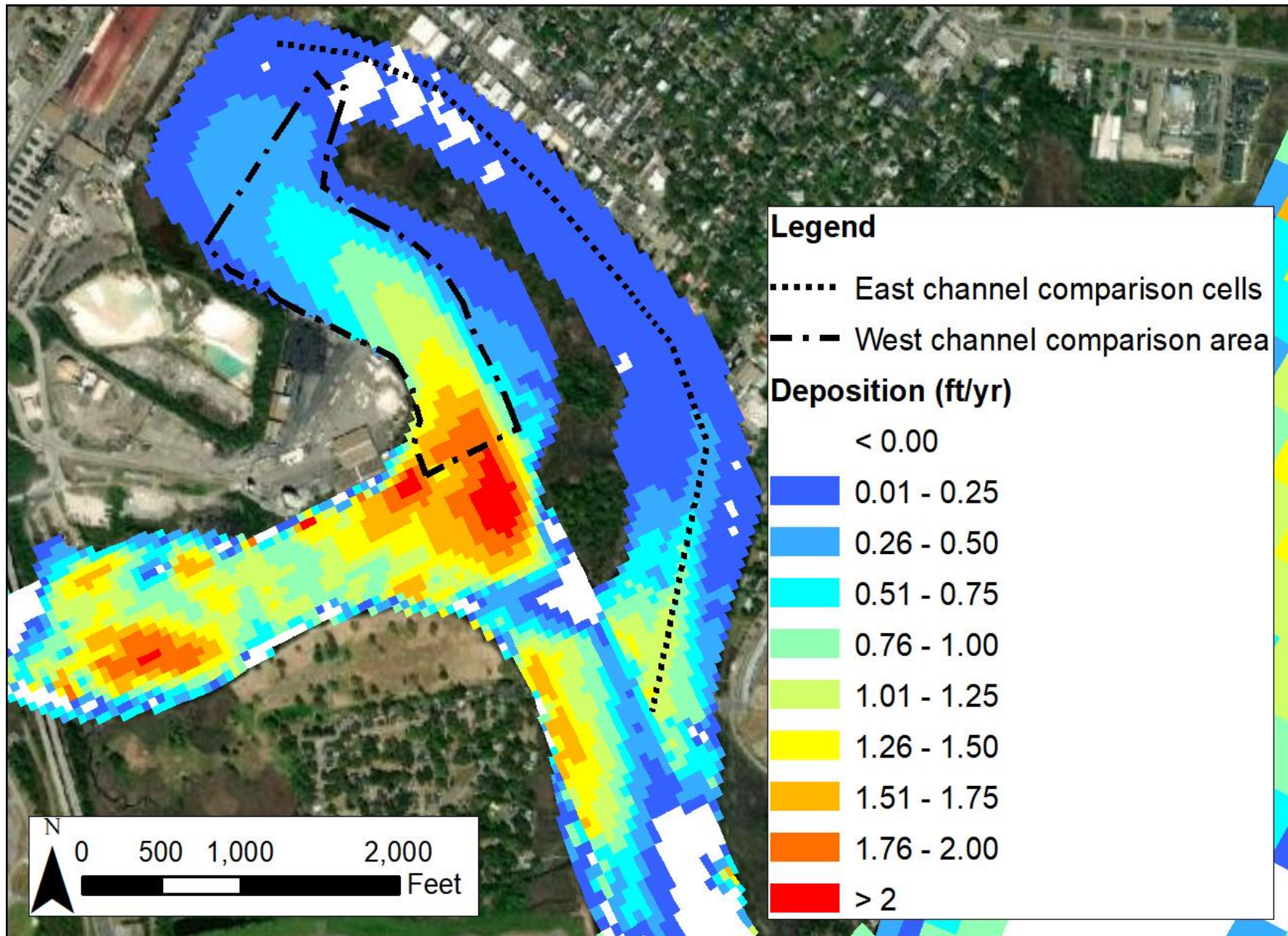
Bottom sediment core locations



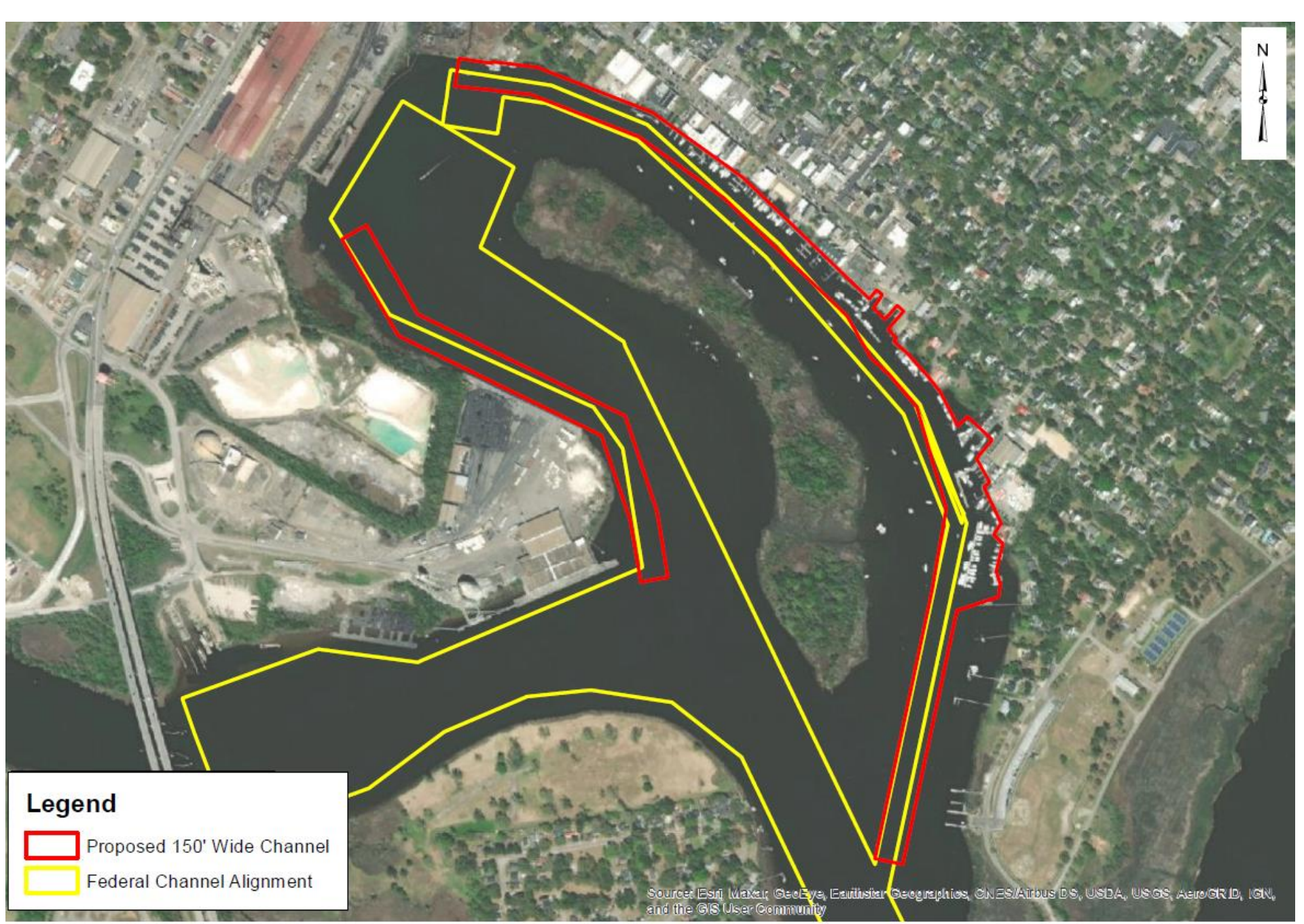
Full model domain grid



Calibrated Model grid elevations in the vicinity of the Inner Harbor



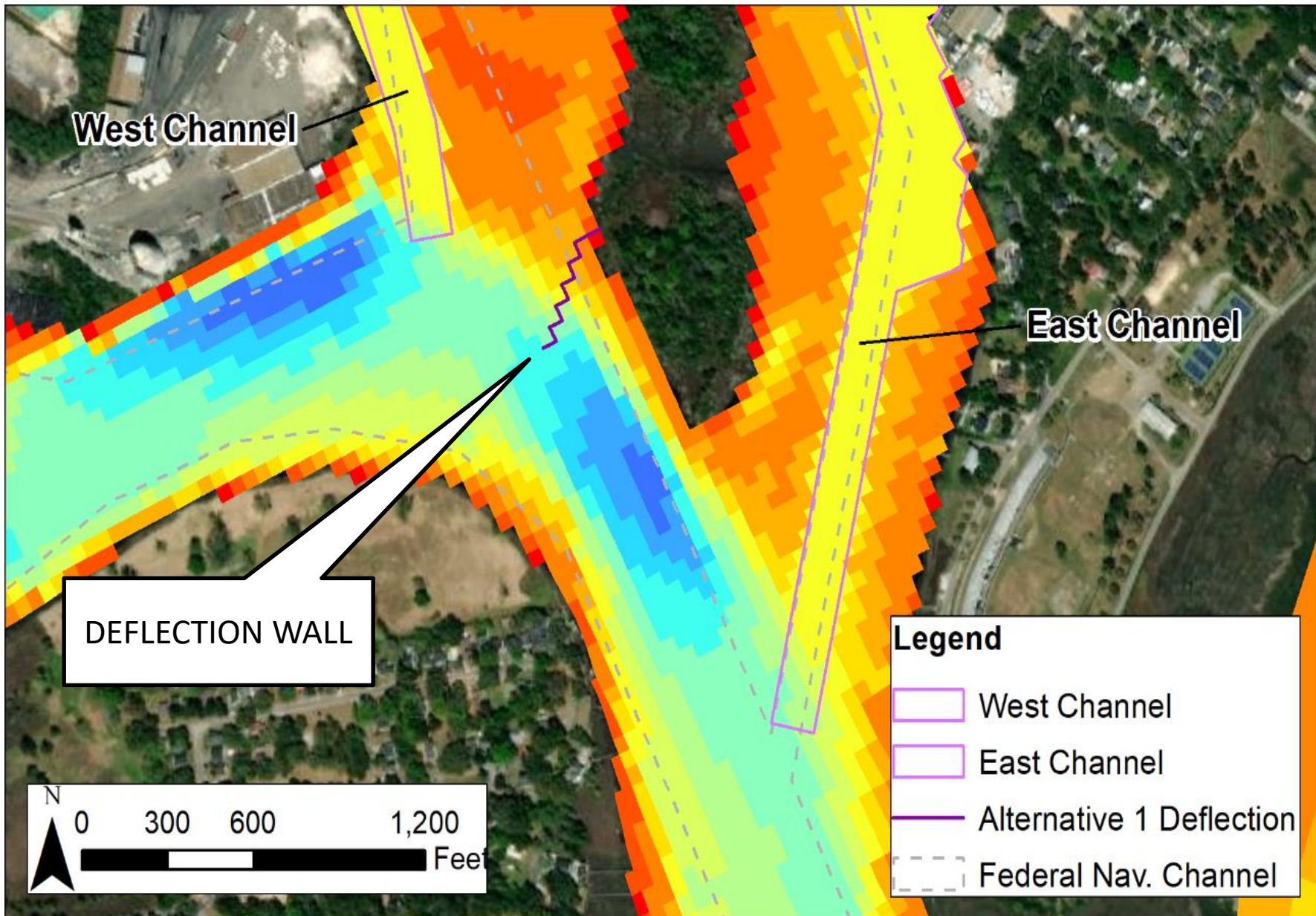
Modeled deposition rates



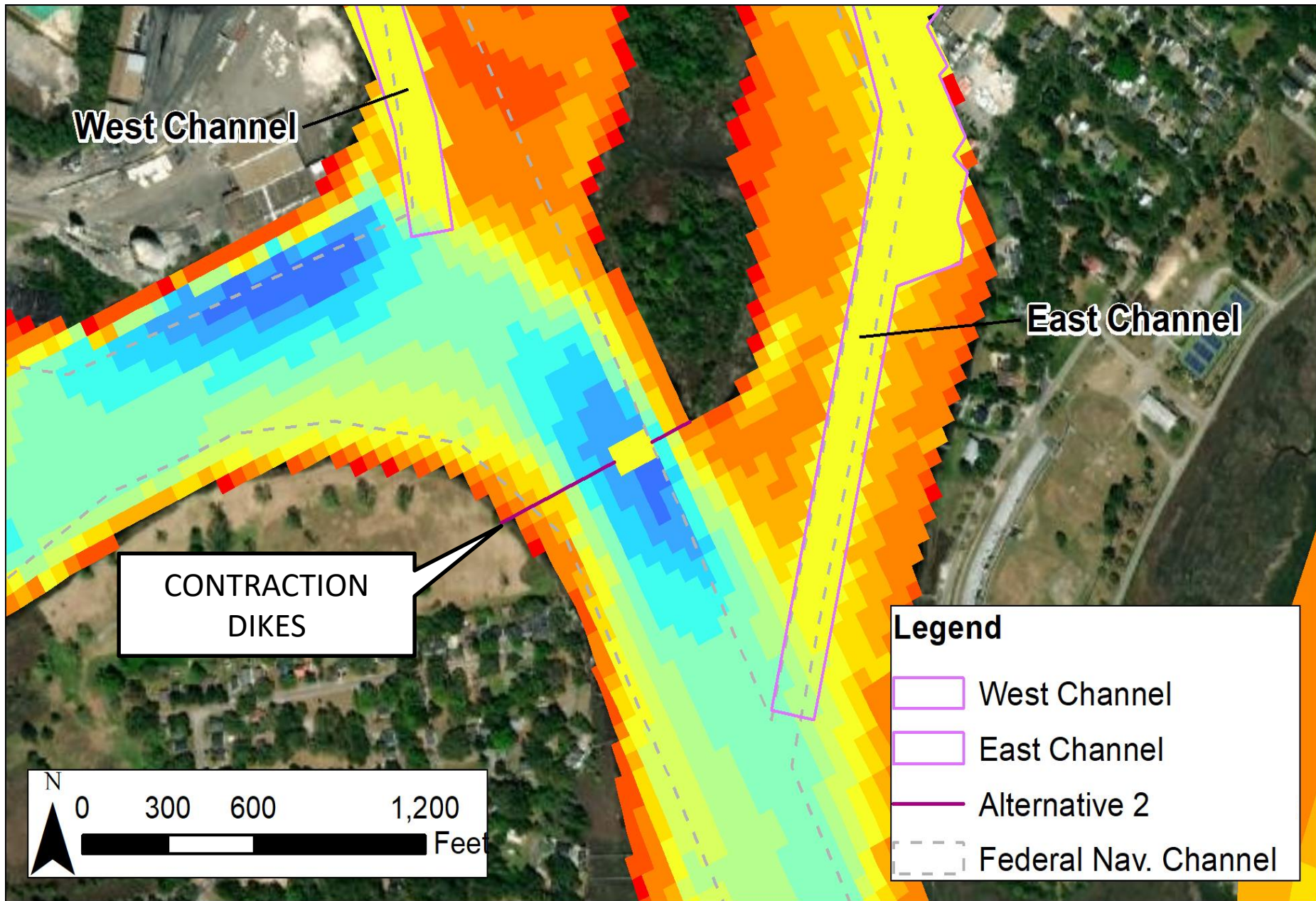
### Legend

-  Proposed 150' Wide Channel
-  Federal Channel Alignment

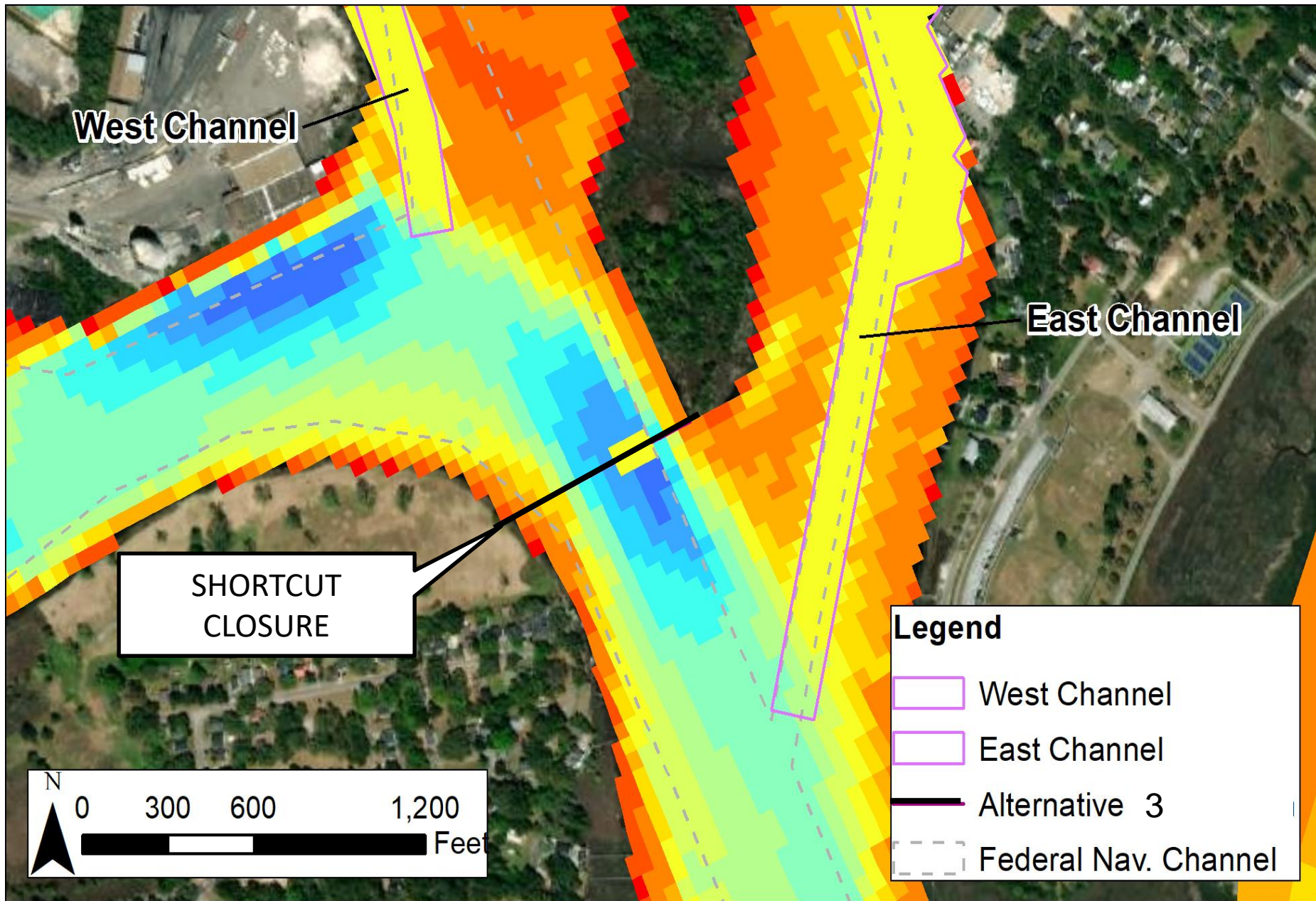
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Model setup for Alternative 1, a single deflection wall



Model setup for Alternative 2, two contraction dikes



Model setup for Alternative 3, Shortcut closure

# Model Predictions of Closing Goat Island Cut

1. Slight Closure – Increases Sediment in Inner Harbor Loop by About 33%
2. Mostly Closed – Reduces Sediment in Inner Harbor Loop by about 55%
3. Completely Closed – Reduces Sediment in Inner Harbor Loop by about 85%

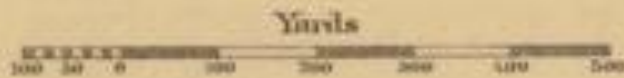
# Alternatives 2 & 3

## Issues for Further Evaluation

- Possible contaminants in the sediments
- Long-term impacts on tide range and wetland areas
- Possible impacts to permitted discharge limits
- Impacts to use of Pennyroyal Site
- Could create other areas to dredge

1895  
GEORGETOWN  
HARBOR

Scale 1/10000

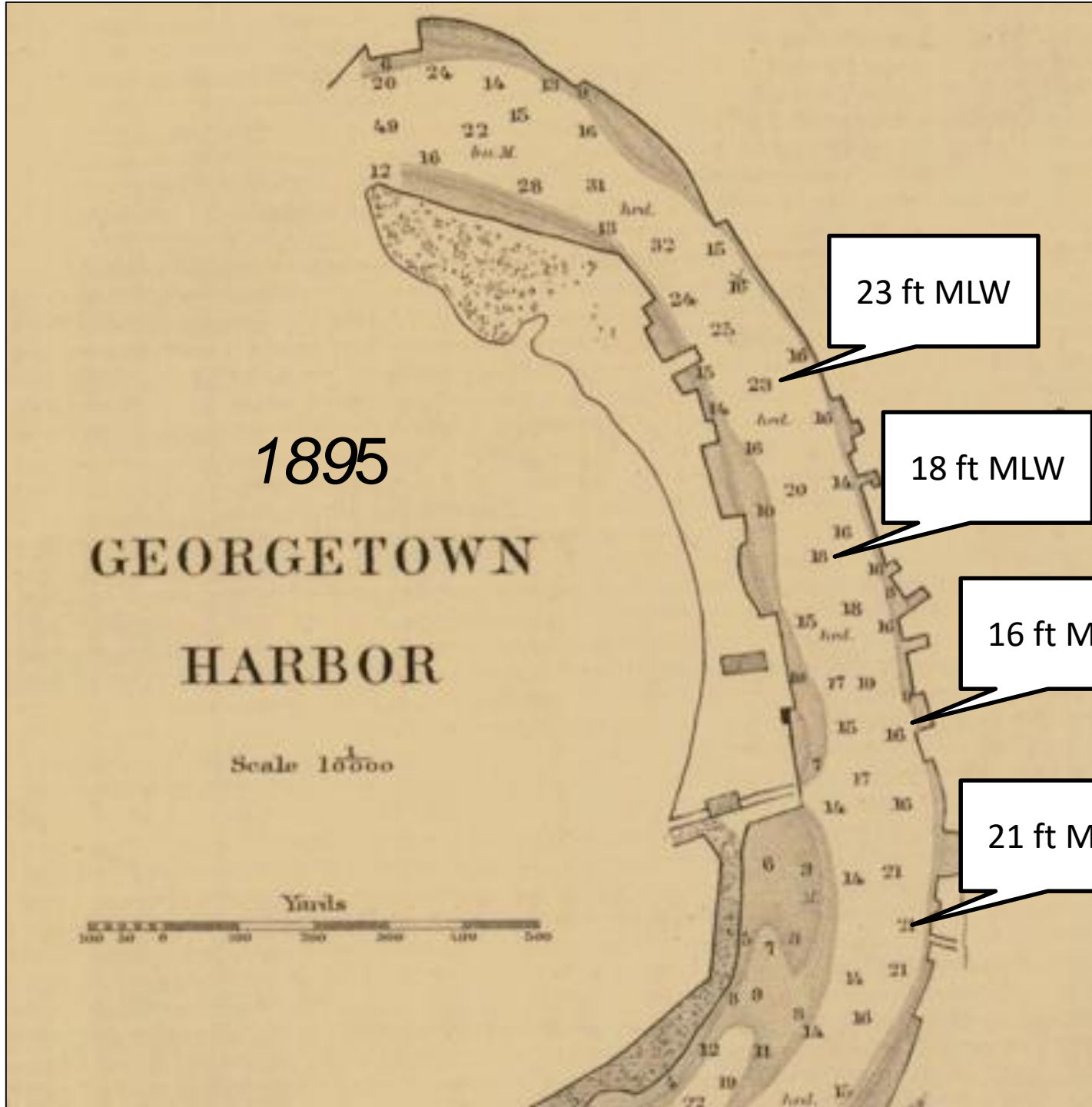


23 ft MLW

18 ft MLW

16 ft MLW

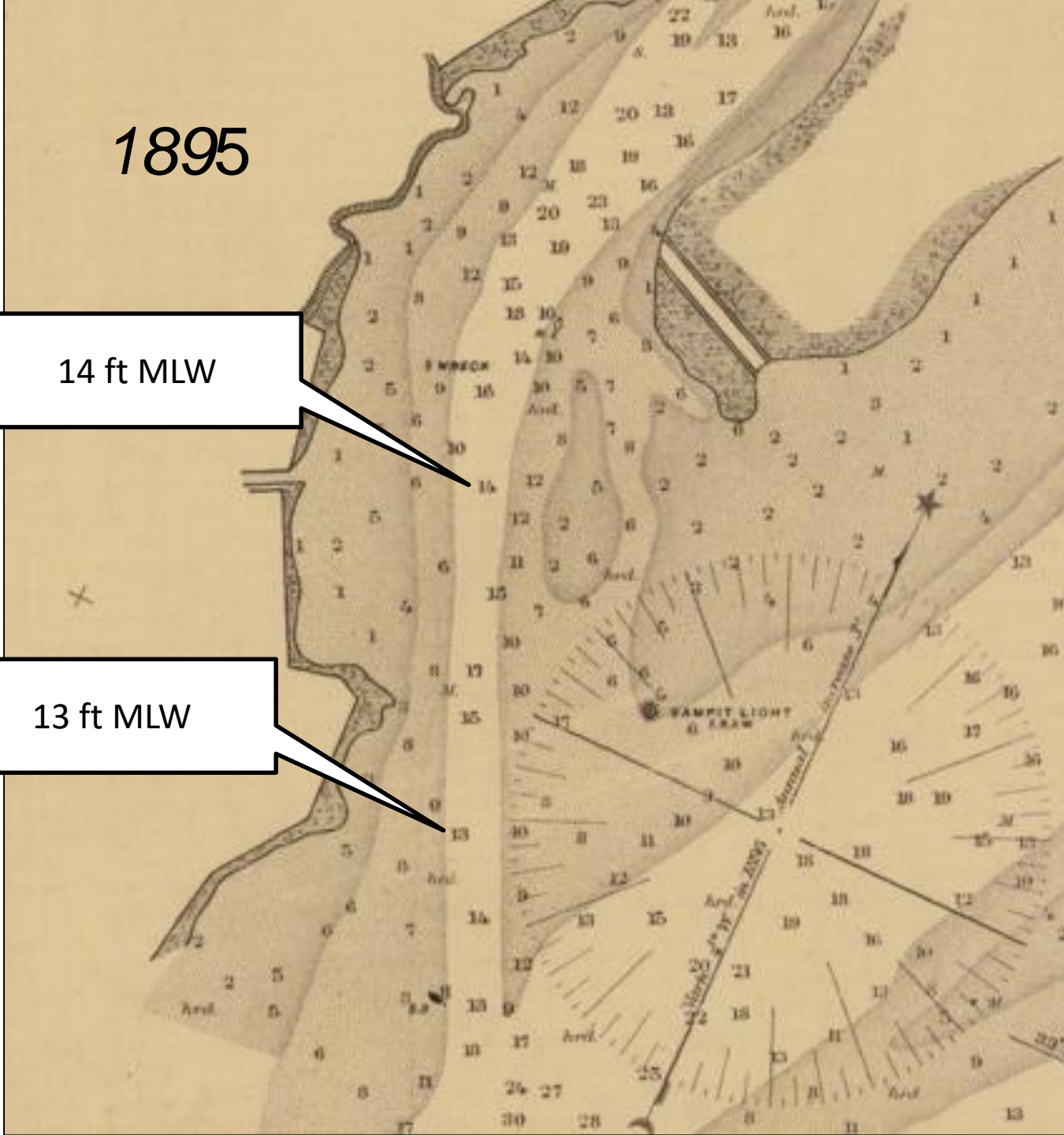
21 ft MLW



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14 ft MLW

13 ft MLW



# Present Needs

- Shrimp Boats
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# Summary of Findings

- Little to no dredging needed for typical barge traffic – Sampit River to US Hwy 17 Bridge
- Shortcut would need to be completely closed to significantly reduce dredging
- Closing Shortcut would require detailed evaluation and be a long-term undertaking
- Sediment quality needs further evaluation relative to Inshore Open Water Disposal or Agitation Dredging

## Summary of Findings (cont.)

- The Corps dredge areas are not appropriate for Georgetown's current or anticipated needs
- **Initial dredging of Inner Harbor required under any scenario to maintain present uses**
- Conventional dredging of east and west channels (12 ft x 150 ft) estimated to be \$2,750,000 and \$1,700,000, respectively
- A narrower channel and reliance on low density mud could reduce costs

# Recommendations

- Survey Inner Harbor Loop – current conditions and calculate dredge volumes (Summer 2022)
- Conduct sediment sampling required for permit and further evaluation of open water disposal (Fall 2022)
- Apply for a conventional dredge permit with a generous dredge area relative to present needs (Fall 2022)

# Recommendations

- Secure SCPA Disposal Basin, become Project Sponsor, and Evaluate condition of Basin (Summer-Fall 2022)
- Obtain state and federal dredge permits (January 2024)
- Conduct dredging Fall 2024-Winter 2025
- Better define current & potential future needs; feasibility to close Shortcut (ongoing)