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SWG, GIWW CCSC Intersection Shoaling Reduction, Tricia Campbell

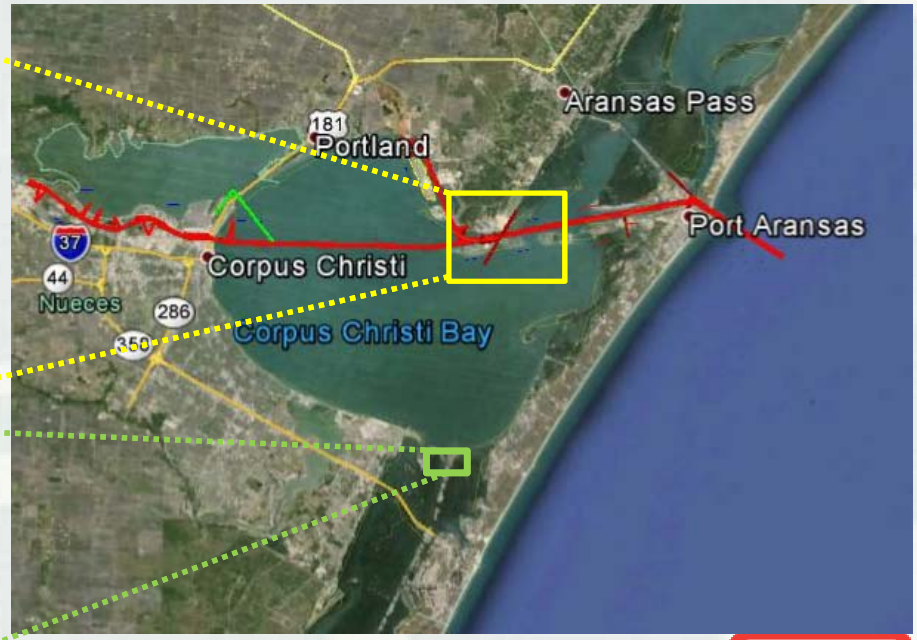
BLUF: Shoaling in the Gulf Intracoastal Waterway (GIWW) adjacent to the Corpus Christi Ship Channel (CCSC) has impacted navigation over past several years. Analysis of physical conditions and alternative dredging and/or placement practices could help to increase channel availability.

Description/Challenges

- Address two key shoaling areas and impacts to navigation
  - "Hole in the Wall" GIWW near intersection of CCSC
  - "The Spit" in South Corpus Christi Bay

Objectives

- Develop alternative approaches to managing sediment in the GIWW to better maintain navigation
- Provide general understanding of sediment movement along GIWW in Corpus Christi Bay



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"Hole in the Wall"

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"The Spit"

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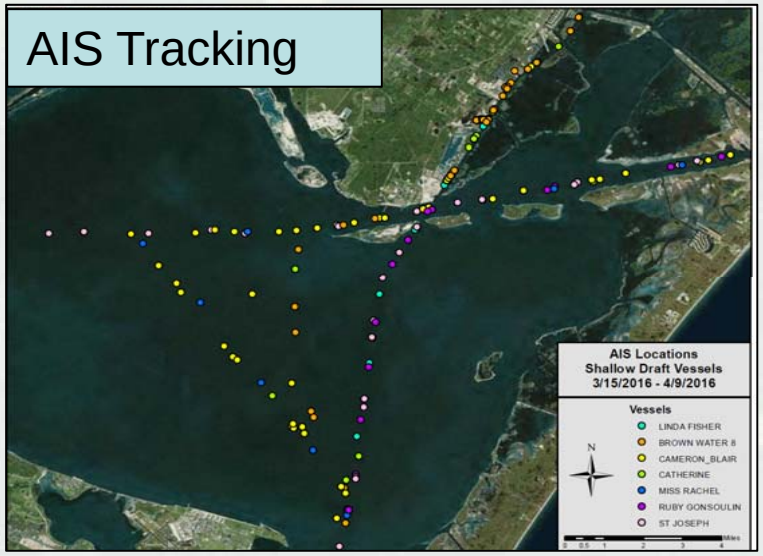
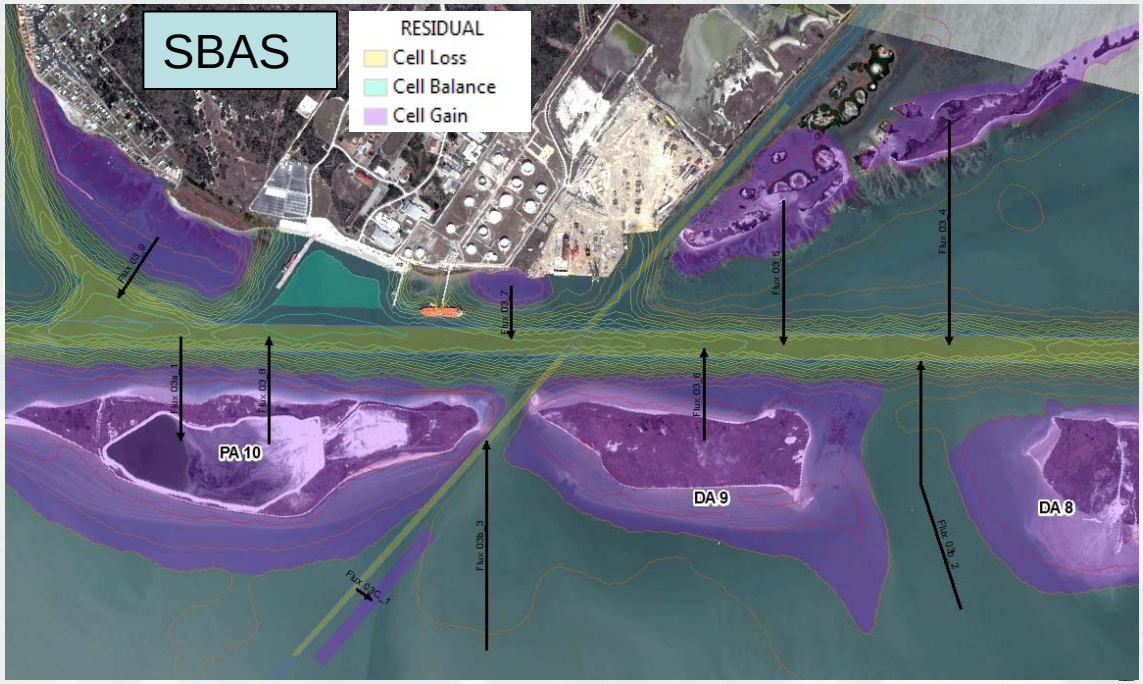
Approach

- Determine impacts to Navigation
- Determine how sediment is moving in system
- Update existing CMS model
- Brainstorm Alternatives
- Model Alternatives in CMS and quantify shoaling reduction or other benefits



Deliverables

- Descriptions of Alternatives: 4/26/16
- CSAT Update: 5/20/16
- eHydro Update: 5/20/16
- Complete Alternative Analysis: 7/1/16
- Draft Technical Note: 8/31/16
- Update ArcGIS and Tools: 8/31/16
- Update Web Maps & Enterprise Database: 8/31/16
- CHETN and newsletter submittal: 9/30/16



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Accomplishments/Benefits/Lessons Learned/Actions-construction

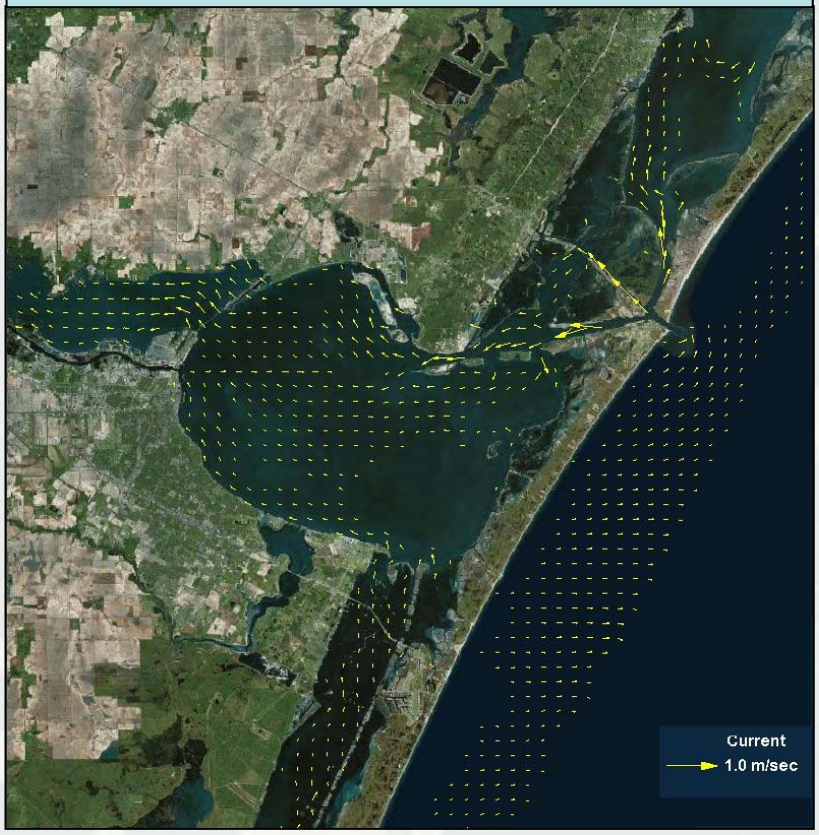
Progress to date:

- SBAS
- CSAT and eHydro update
- Alternative “Brainstorming Meeting”
- CMS:
  - Updated existing condition wave and wind models
  - Incorporating Alternatives to model at “Hole in the Wall” (not modeling “The Spit”)

Alternatives to model “Hole in the Wall” only:

- Increased Advance Maintenance Dredging
- Shoreline Stabilization
- Widen GIWW
- Change slope of GIWW

CMS Model - Flood current



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What is working? Ups? Success?

- Information available from other reports
- Existing Model for Corpus Christi Bay
- Updated dredging history database
- Obtained AIS data to verify problems
- SBAS and CMS– eventually will have for each Bay system and TX coast

What is not working? Downs? Issues?

- Team Availability (Flood events, other studies, personnel spread thin)
- Lack of Data
- Geospatial Library – working to improve sharing and accessing of data, but still needs improvement
- Turnover– loss of institutional knowledge, training of new personnel

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District/Other USACE PDT Members

- Tricia Campbell, RSM Operations Manager
- Kathy Skalbeck, Planning Lead
- Eric Wood, H&H Lead Engineer
- Brad Burrows, H&H Engineer
- Steven Howard, CCSC Operations Manager
- Seth Jones, GIWW Operations Manager
- Leslie Olson, Project Engineer
- Bob Koch, Cartographer
- Lihwa Lin, Research Civil Engineer
- Lauren Dunkin, Research Civil Engineer
- Coraggio Maglio, Chief H&H Branch
- Rob Thomas, Chief Project Management

Stakeholders and Partners

- Gulf Intracoastal Canal Association (GICA)
- Users of Gulf Intracoastal Waterway

Leveraging/Collaborative Opportunities

- Coastal Inlets Research Program
- Coastal Modeling System
- 2003 Corpus Christi Ship Channel Feas. Study
- GIWW Port O'Conner to Corpus Christi Feasibility Study

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Value to the Nation

- Cost savings by less frequent dredging events
  - Less frequent mobilization costs
  - Better unit costs of dredging
- Information available for future studies
  - Consolidates information and reduces future information gathering efforts
  - Provides common operating picture
- Transportation savings
  - Reduces time to transport cargo
  - Provides more direct route to/from destination
  - Reduces risk to vessels (groundings)
- Identifies sediment sources for potential Beneficial Use projects
  - Rookeries
  - Beaches