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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
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
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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
### 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