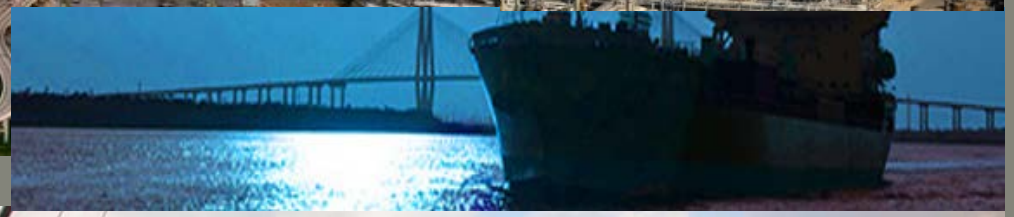
NAVIGATION STUDIES AND NEW WORK



2016 WEDA Gulf Coast Chapter Annual Conference

Byron Williams
Deputy Chief, Project Management

16 November 2016

"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."

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PRESENTATION AGENDA

- Pathways for Implementing New Dredging Projects
- Modifications planned along Texas coast

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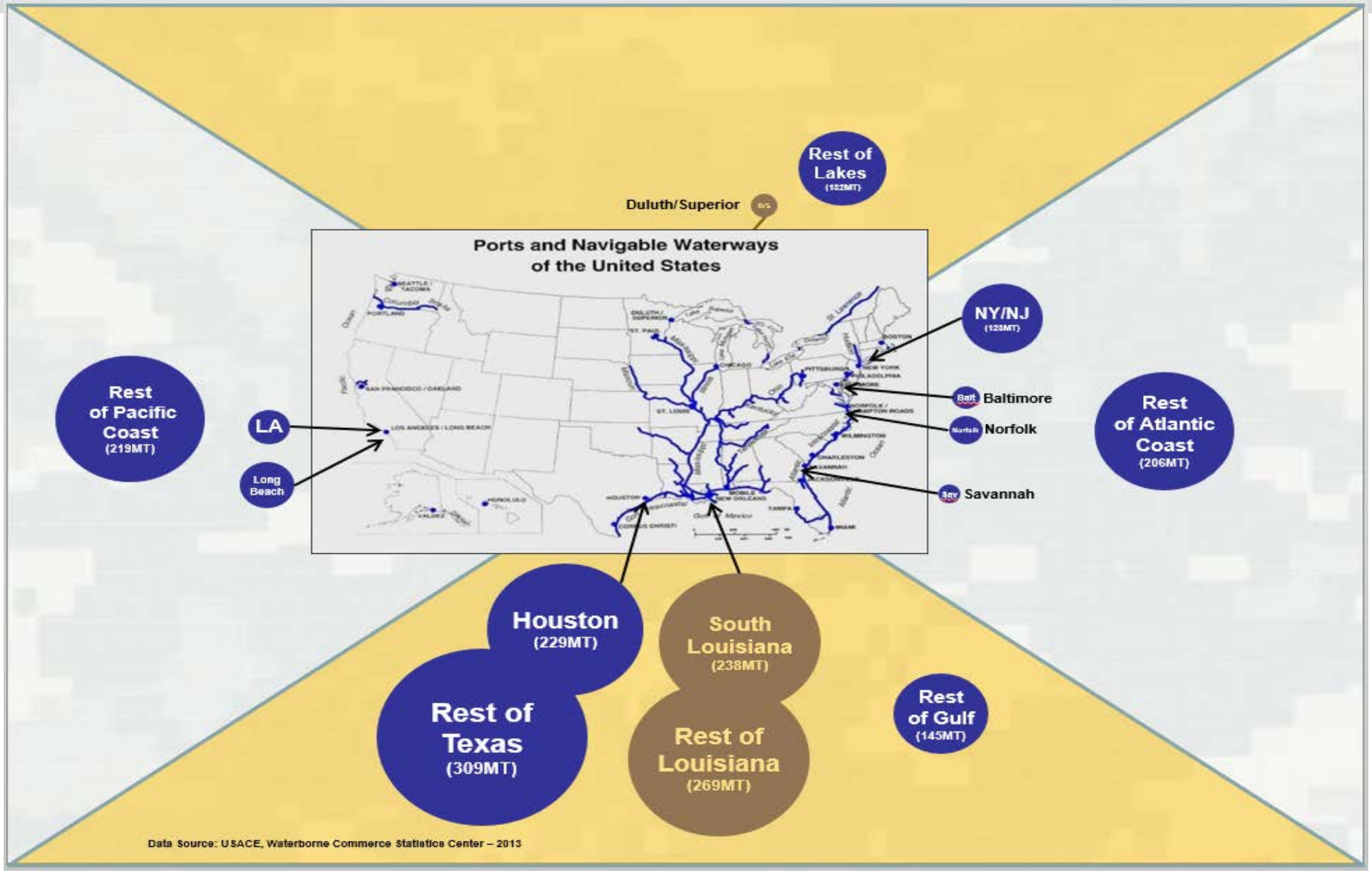
HOW TEXAS FITS IN THE NATIONAL SYSTEM



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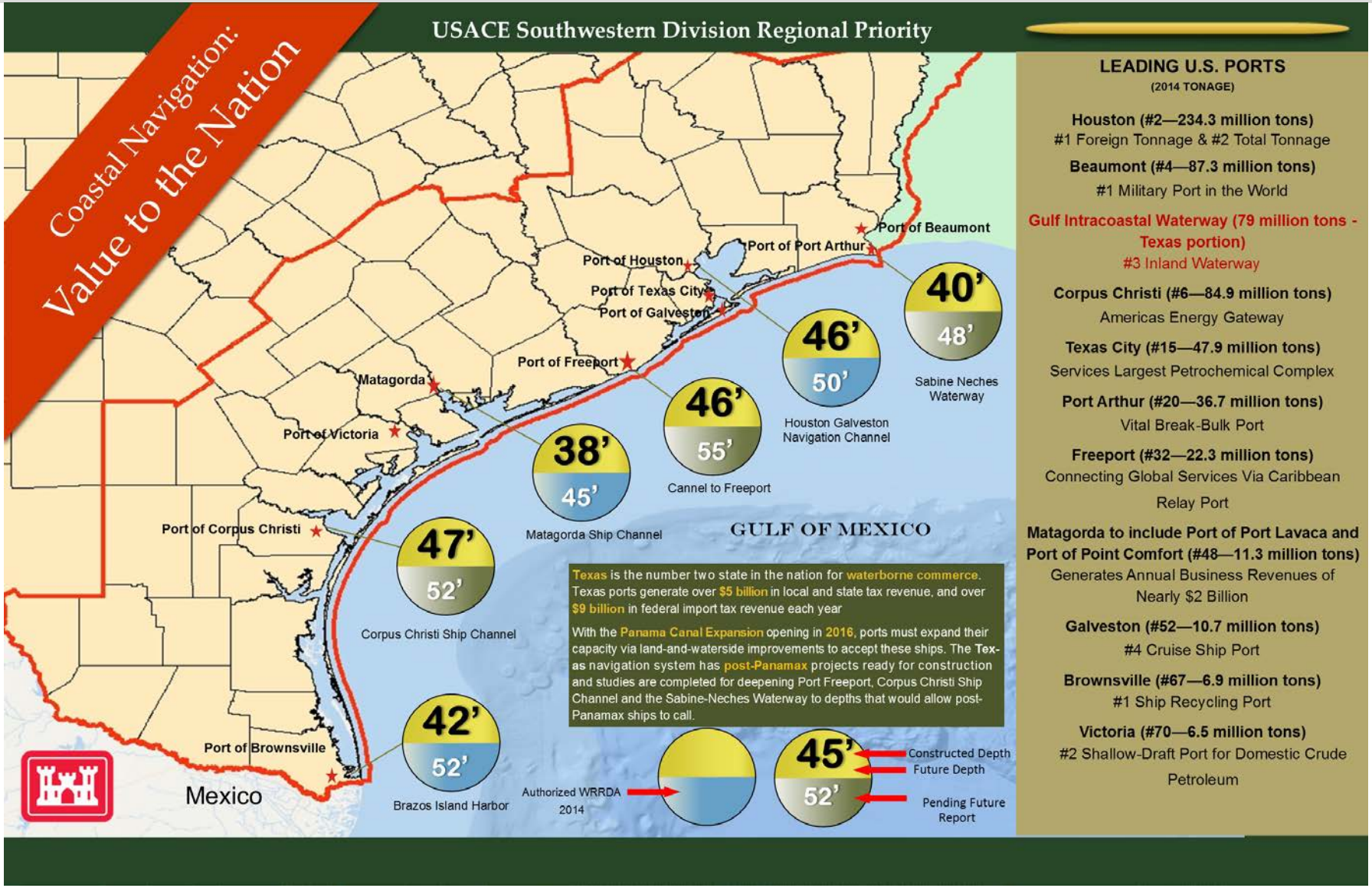
TEXAS COASTAL NAVIGATION SYSTEM



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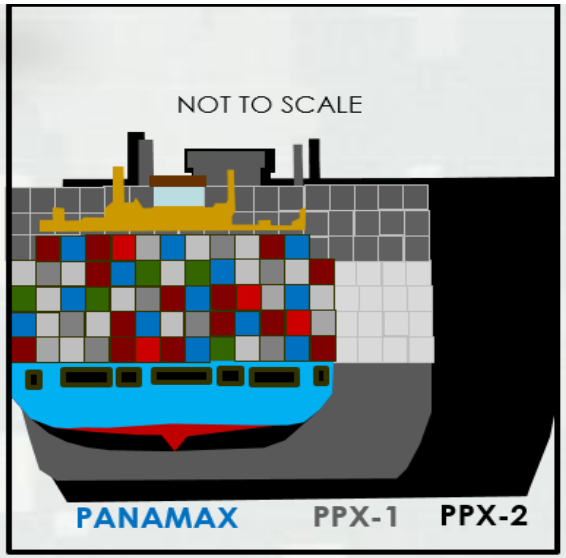
WHY IMPROVE PROJECTS?

CONTAINER VESSELS



Sub-Panamax — TEU* Capacity~ 2500
LOA: 675 BEAM: 98 DRAFT: 37.6 DWT: 34,000

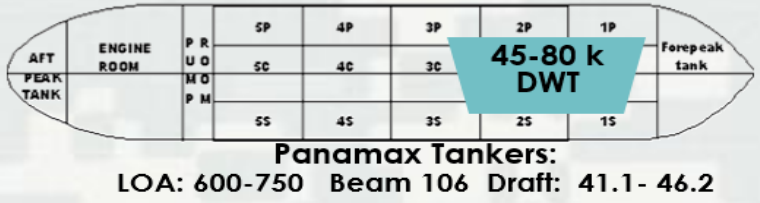
Panamax — TEU* Capacity~ 3500 - 4800
LOA: 794-845 BEAM: 106 DRAFT: 40.3-44.3 DWT: 24,000 – 65,000

Post-Panamax Gen 1 (PPX-1) — TEU* Capacity~ 6500
LOA: 960 BEAM: 131 DRAFT: 46.1 DWT: 80,600

Post-Panamax Gen 2 (PPX-2) — TEU* Capacity: ~8700
LOA: 1106 BEAM: 146 DRAFT: 47.6 DWT: 106,800

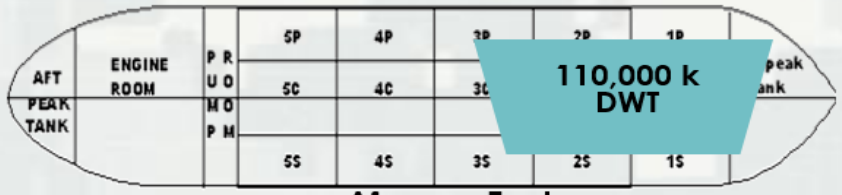
* Intermodal Shipping Container Measured as a Twenty-foot Equivalent Unit (TEU)

TANKERS



Liquid Capacity: 52,100 – 79,200 kg/m³

Panamax Tankers:
LOA: 600-750 Beam 106 Draft: 41.1- 46.2



Liquid Capacity: 120,315 kg/m³

Aframax Tankers:
LOA: 806 Beam 140 Draft: 49.1

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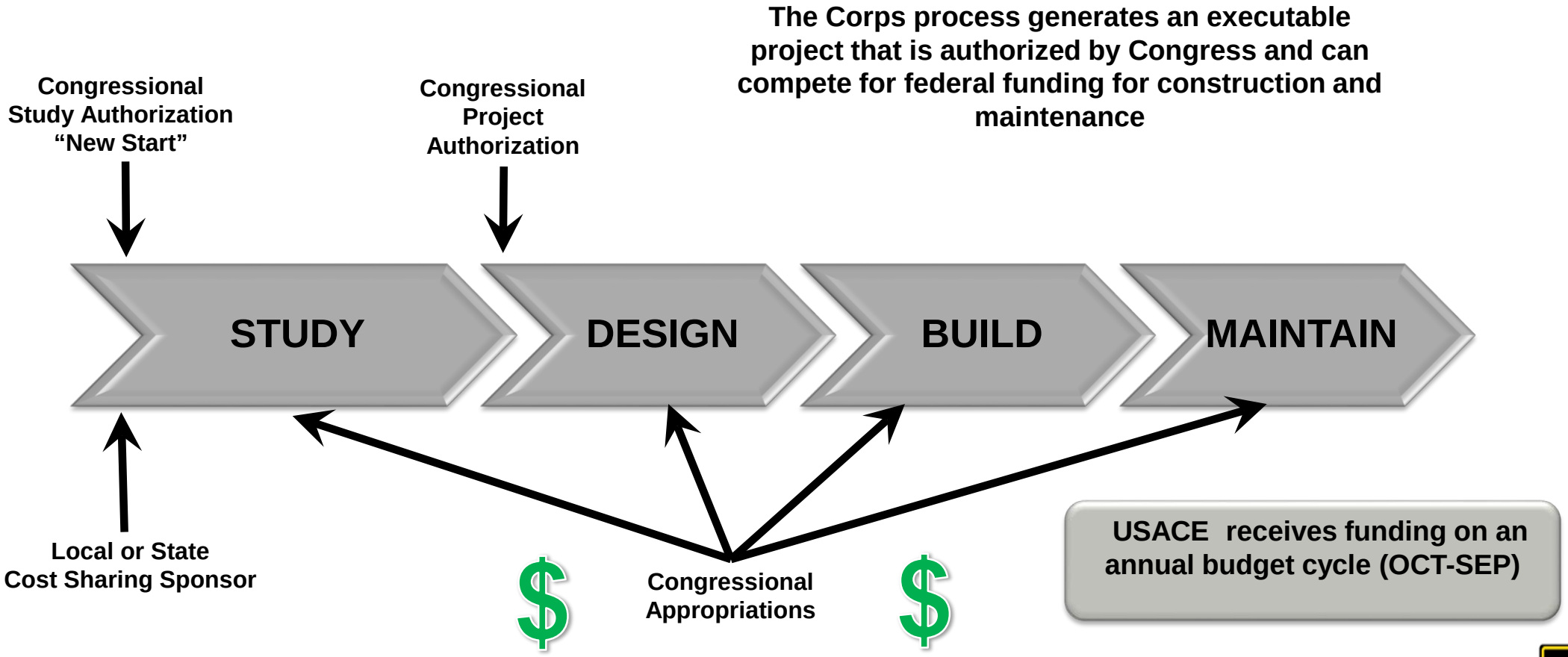
MODIFY NAVIGATION PROJECTS -BY AUTHORIZATION



*Feasibility Phase includes **alternatives analysis and NEPA compliance** to determine best plan to provide an environmentally sustainable solution which provides economic value to the nation

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ADDITIONAL PATHWAYS

- Continuing Authority Program
- Planning Assistance to States
- Estuary Restoration Program
- Other…

(Available for further discussion after this presentation…)

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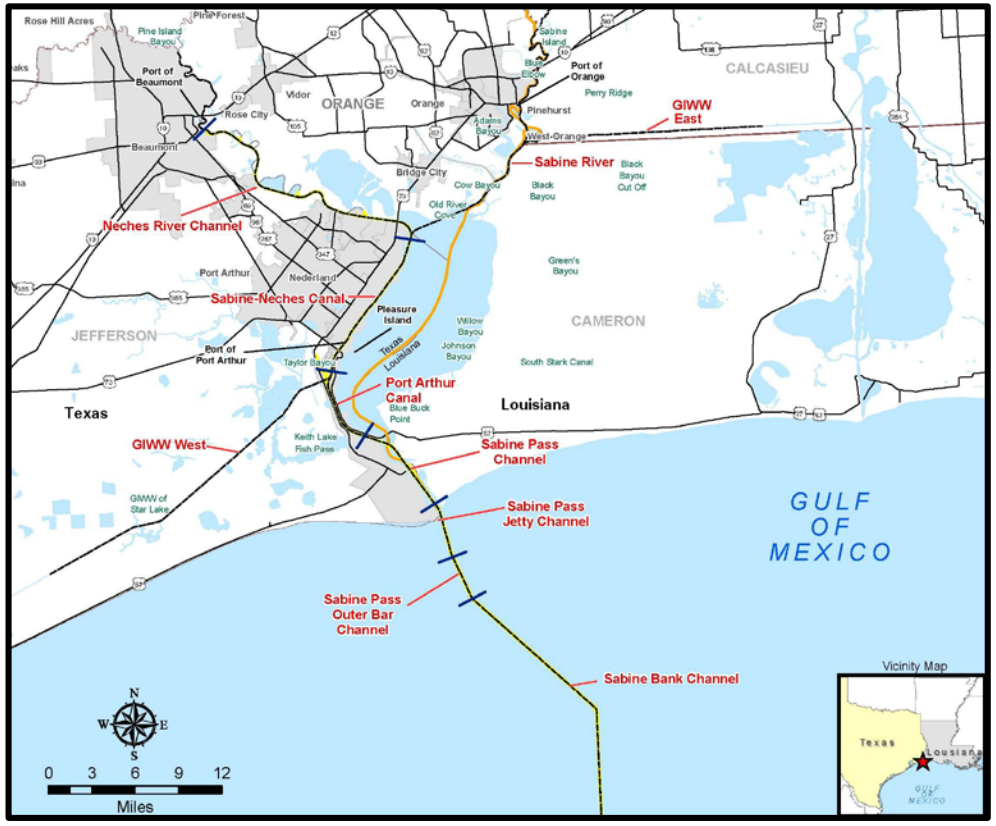
SABINE-NECHES WATERWAY (NAV)

- Status:
  - Chiefs Report Complete: 2011
  - Econ Update Complete: OCT 2016
  - Potential Construction Start: FY19
- Features
  - Est. New Work: 98 MCY
  - Deepening SNWW to Beaumont to 48 feet (50 feet in offshore channels)
  - Extending the Entrance Channel 13.2 miles
  - Deepening and widening Taylor Bayou
  - Adding/enlarging 3 turning basins and/or anchorages Bend easing on Sabine-Neches
  - Canal and Neches River Channel
  - Bridge reinforcements
  - Dredged Material Management Plan
  - Beneficial Use Plan
  - Compensatory Mitigation Plan



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HOUSTON SHIP CHANNEL (NAV)

- Status:
  - FSCA Signed NOV 2015
  - Feasibility Report Complete MAY 2019
  - Chief's Report OCT 2019

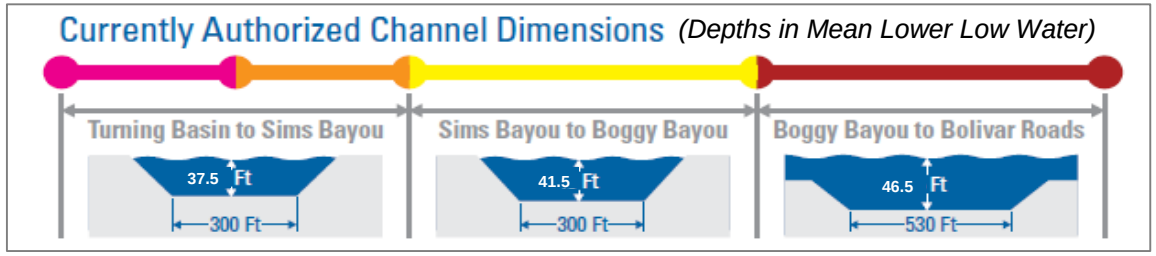
- Features:
  - Deepening (upstream of Boggy Bayou)
  - Selective Widening (Two-Way Vessel Meeting)
  - Bend Easings
  - Flare Modifications
  - Turning Basins
  - Moorings & Anchorage Areas
  - Jetty Structures (shoaling)

Bay

- Bolivar Roads to Boggy Bayou
- Bayport Ship Channel
- Barbours Cut Channel

Bayou

- Boggy Bayou to Sims Bayou
- Sims Bayou to I-610 Bridge
- I-610 Bridge to Main Turning Basin



Depth (feet)	
MLT	MLLW
45	46/46.5
40*	41.5
36	37.5

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GALVESTON HARBOR CHANNEL EXTENSION (NAV)

- Status:
  - FCSA signed: Jan 2016
  - Study Complete: FY17
  - Potential Construction Start: FY19

- Features
  - Extending the Galveston Harbor Channel 2,571 ft and deepening from 41 to 46 ft MLLW

PM: Andrea Catanzaro

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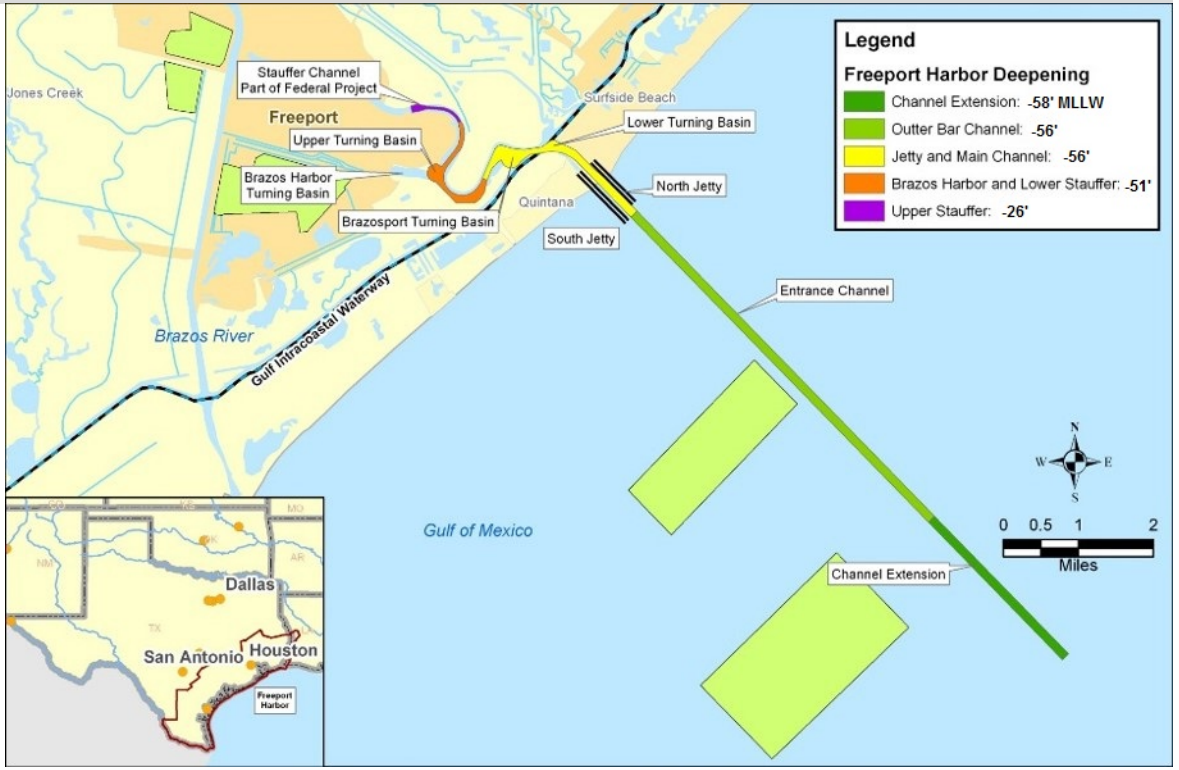
FREEPORT HARBOR (NAV)

- Status:
  - Chiefs Report Complete: 2013
  - GRR Complete: April 2018
  - Potential Construction Start: FY18- 21

- Features
  - Est. New Work: 16.2 MCY
  - Deepen Freeport Harbor Channel to 56 feet (58 feet in offshore channel)
  - Extend the Outer Bar Channel 7,000 feet
  - Enlarge Brazosport Turning Basin to 1,200 feet
  - Deepen Brazosport Turning Basin through the Upper Turning Basin to 51 ft
  - Deepen and widen the Lower Stauffer Channel to 300 feet wide by 51 feet deep
  - Deepen Upper Stauffer Channel to 26 feet



PM: Nick Laskowski

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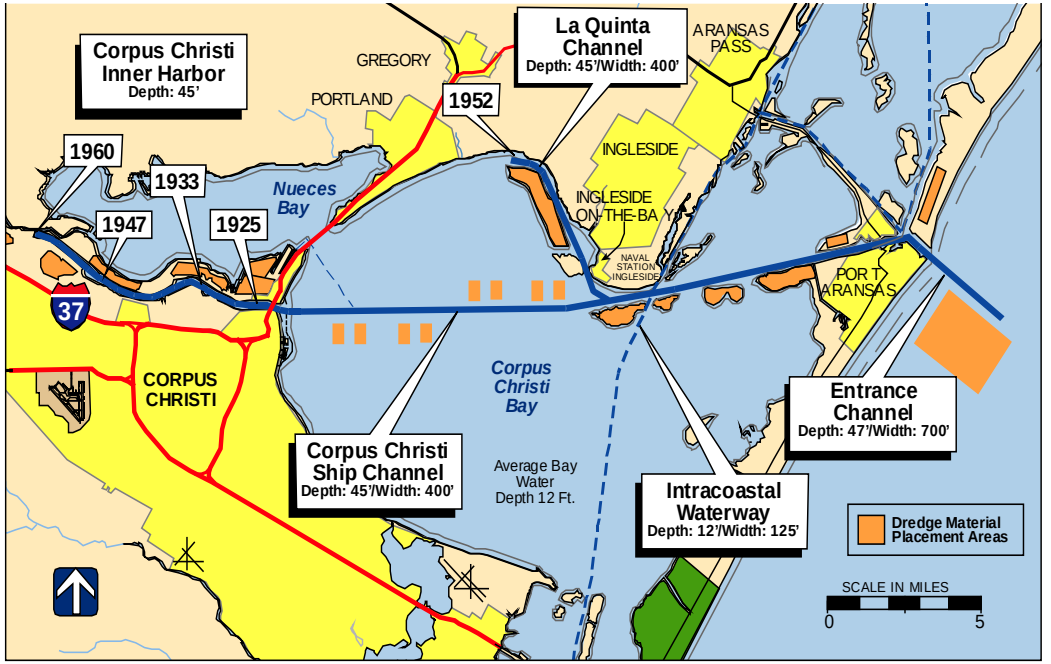
CORPUS CHRISTI SHIP CHANNEL (NAV)

- Status:
  - Chiefs Report Complete: 2003
  - LRR Complete: Dec 2015
  - Potential Construction Start: FY17-FY18
- Features
  - Est. New Work: 32 MCY
  - Four Separable Elements: Navigation (3) and Ecosystem Restoration (1)
  - Deepen CCSC from 45 feet to 52 feet and widen segment of main channel to 530 feet
  - Construct Barge Shelves adjacent to CCSC
  - Construct two ecosystem restoration features (construction complete)
  - Deepen extension of La Quinta Channel to 39 feet (construction complete)



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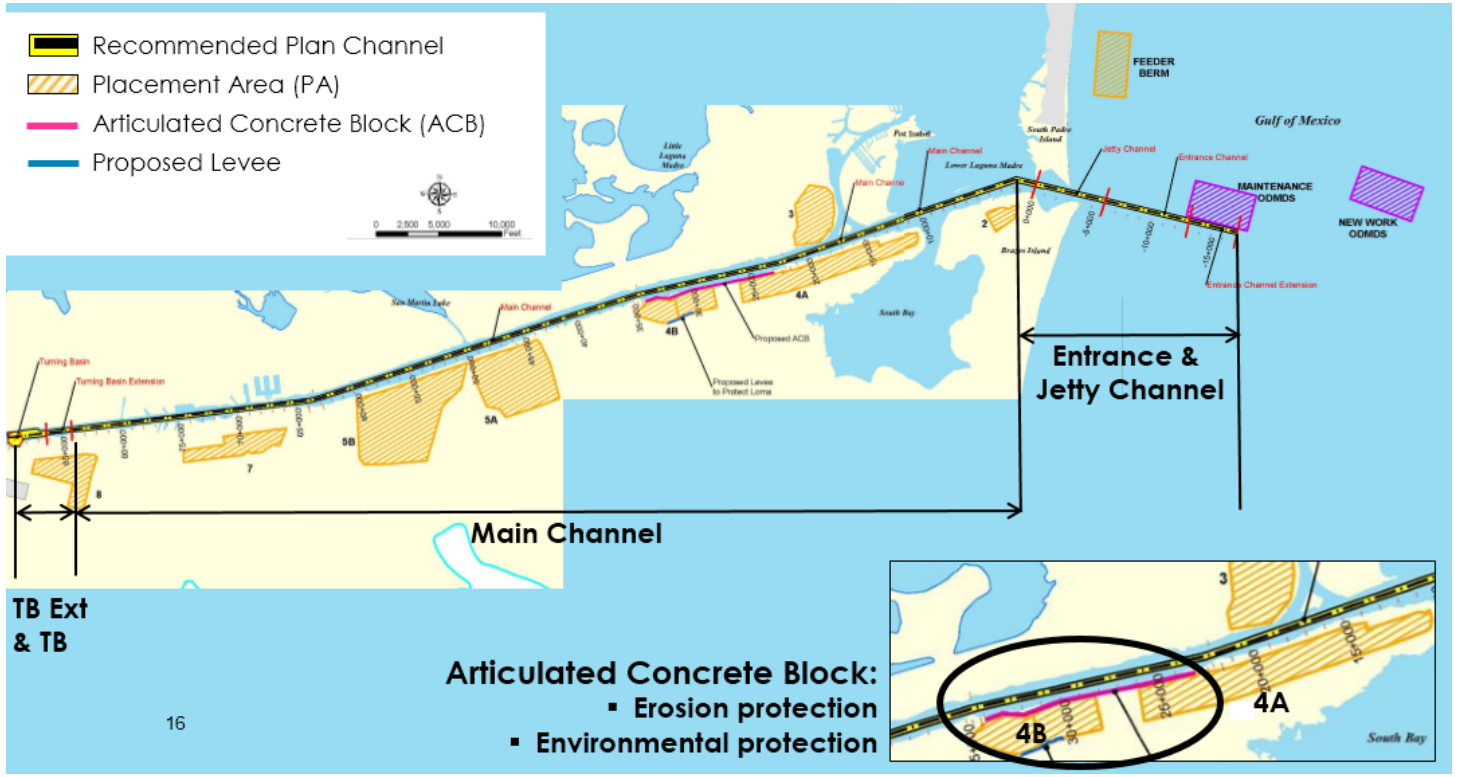
BRAZOS ISLAND HARBOR (NAV)

- Status:
  - Chiefs Report Complete: 2014
  - Ongoing 408/204 report to allow NFS to construct themselves (JAN 2017)
  - Potential Construction Start: TBD
- Features
  - Est. New Work: 14 MCY
  - Deepening main channel to 52 ft and entrance channel to 54 ft



PM: Nick Laskowski

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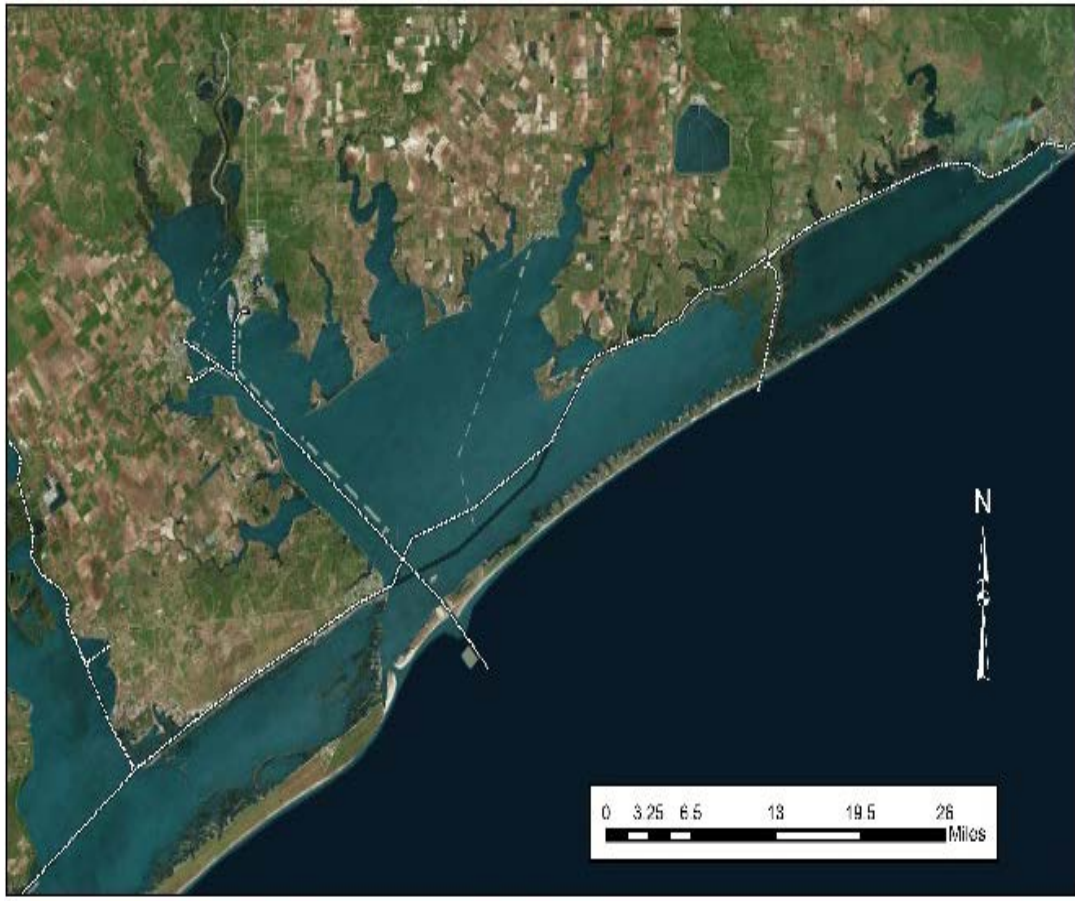
(NEW)MATAGORDA SHIP CHANNEL (NAV)

- Status:
  - Study Kickoff: August 2016
  - Chiefs Report Complete: July 2019
- Features
  - May Include
    - Deepening/Widening of Existing Channel
    - Substantial Dredging, depending on plan



PM: Sheri Willey

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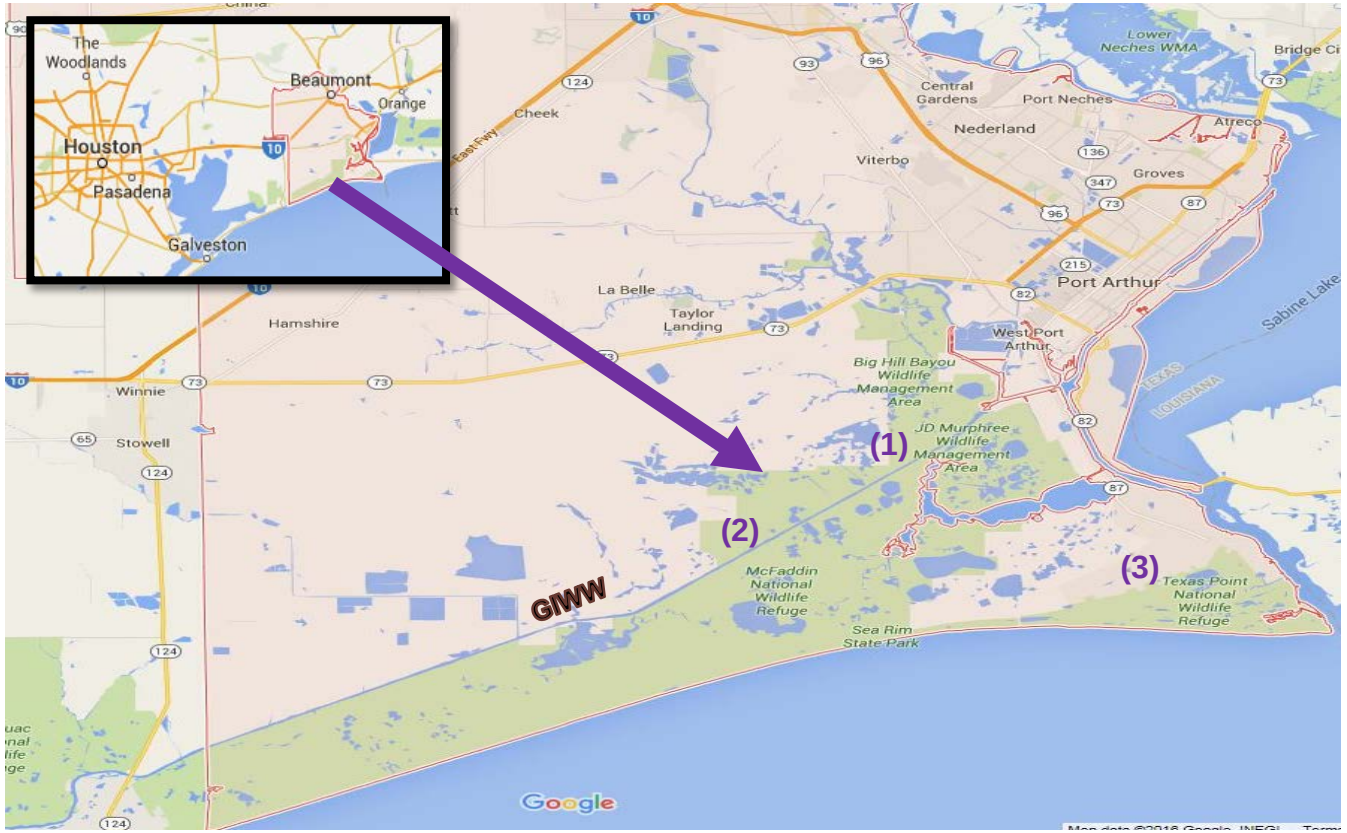
(NEW)JEFFERSON COUNTY STUDY (ER)

- Status:
  - Kick-off Meeting – 3 NOV, 2016
  - Chiefs Report Complete: FY 19
- Features
  - Coastal shoreline restoration
  - Use of sediment material from dedicated dredging to construct a marsh
  - Beneficial use of dredged material



PM: Alicia Rea, Dennis Thomas

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COASTAL TEXAS (CSRM/ER)

- Status:
  - TSP: May 2018
  - Chiefs Report Complete: April 2021
- Features
  - May include
    - Coastal Barrier(s)
    - Major navigation structures
    - Large scale beach nourishment
    - Large ecosystem restoration projects

PM: Sheri Willey, Eddie Irigoyen

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