

# The History and Current Status of the Sabine-Neches Waterway





# Sabine-Neches Navigation District

**Local, Non-Federal sponsor of the Sabine-  
Neches Waterway**

- Political subdivision of Texas
- Facilitate and sustain commerce on the federal ship channel
- Fund and share responsibility for waterway security
- Manage saltwater barriers and flood control structures

# Waterway History

## First Battle of Sabine Pass – 1862

- A small Confederate garrison at Fort Griffin defended the Sabine Pass, a critical waterway on the Texas-Louisiana border.
- Union forces, led by Major General William B. Franklin, attempted to capture the pass and disrupt Confederate trade routes.
- The Confederate garrison, under Lieutenant Richard W. Dowling, successfully repelled the Union fleet, including four gunboats.
- The battle demonstrated the effectiveness of well-placed artillery.

## Second Battle of Sabine Pass – 1863

- Union forces, led by Major General Nathaniel P. Banks, sought to gain control of the pass in their campaign to capture Texas.
- The Confederate garrison, now under Major Joseph D. Sayers, again successfully defended the pass, this time against a larger Union force.
- Confederate artillery, under the command of Captain Frederick Odium, inflicted heavy damage on the Union fleet.
- The second battle confirmed the strategic importance of Sabine Pass.

# Waterway History – An Unknown Phenomenon – The Sabine Pass’ Oil Pond

- An “Oil Pond” was documented to exist in between 1847 and 1910, and disappeared shortly after.
- The “Oil Pond” was described as being located 1 mile offshore and 5 miles West of the current Jetty, and was also noted as being 3 to 4 miles in length
- The Oil Pond consisted of oil believed to have leaked from an underwater salt dome, mixed with seaweed and floating silt, creating an extremely thick substance.
- Records show that in 1847 a large schooner was sailing home from the Mexican-American War and during a very bad storm the vessel had to take refuge in the Oil Pond
- A historian accounted that during our worst storms while the Gulf of Mexico had deadly waves the oil pond was calm and was able to accommodate many ships for safety and once the storm passed the ship would leave safely without taking any damage

# 1901 Oil Boom – Spindletop – Beaumont, TX

- In 1901 a well struck oil at a depth of 1,139 feet
- The well pumped out 80,000 barrels per day, making America the largest oil producer in the world
- Marked the birth of the modern oil industry
- Many oil refineries would develop, including Gulf (now Chevron) in 1901, Texaco (now Motiva) in 1902, Burt. Refining Company (now Exxonmobil) in 1903, who all still have active terminals on the Sabine Neches Waterway



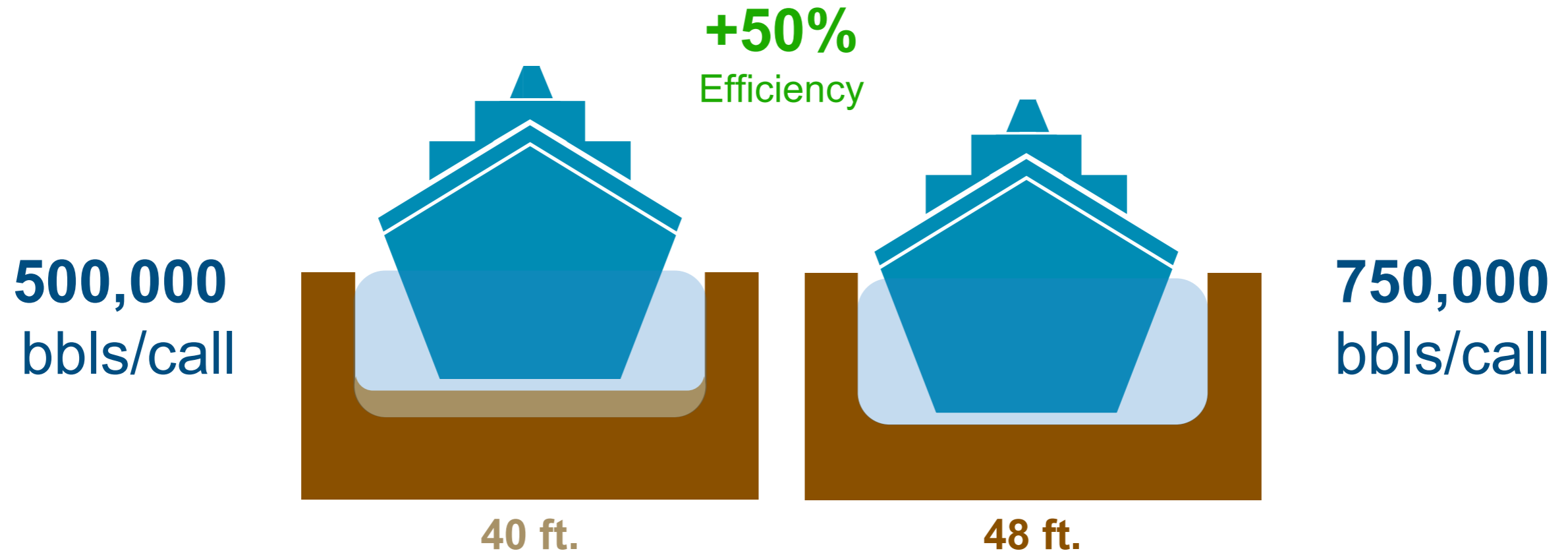
# Path to Delivery

- 1912 - Sabine Neches Waterway deepened to 25 feet, to 30 feet in 1925, and 35 feet in 1935
- 1962 - Sabine Neches Waterway deepened to 40 feet
- 1997 - Waterway Deepening and Widening study implemented
- 2011 - USACE completes Feasibility Study of Sabine Neches Waterway Channel Improvement Project
  - Deepen Waterway from 40 to 48 feet authorized depth and addition of three new anchorages and two turning basins
  - Extend the length of the channel from 64 to 77 miles long
  - \$1.2B USACE Cost Estimate
  - 30 Work group meetings with industry
- 2014 - WRRDA authorizes project

# Path to Delivery

- 2017 - SNND performs Value Engineering Study
  - Identified over \$180M in cost savings
  - Identified optimal construction sequencing
- 2018 - FY19 USACE funded “New Start Construction”
  - \$1.4B USACE cost estimate
  - SNND begins engineering for contracts
- 2020 - USACE awards first contract
- 2023 – SNND advertises first two contracts - Contract 2B, 3
- 2024 – SNND to advertise Contract 13 – Anchorage Basin 8
- 2024 – USACE to advertise Contract 6 – Second Phase – Offshore to Cheniere

# Benefits of Deeper Draft



- Increase future capability — strategic asset improvement
  - Vessels currently at 38 to 40-foot draft: avg. 500,000 bbls/call
  - Vessels with deepening 46 to 48-foot draft: avg. 750,000 bbls/call
  - Improve the cargo capacity potential of the waterway by **50%**
  - Increase export crude and refined product volume
  - Increase import volume for value added refined product export



# Benefits to the Stakeholders

- Broad impact across petroleum and chemical industries
  - 530,000 permanent jobs (Perryman Study)
  - Increase crude & petroleum product export
  - Removes physical constraint on economic growth and export growth
    - EIA export growth projections (2% to 3% annual) are not attainable without project



# The Nation's Energy Gateway

**#3**

**Largest Refining Capacity  
in the US**

**#2**

**Largest Liquid Bulk  
Petroleum Port in the US**

**#1**

**Largest Refiner of Jet and  
Military Fuels**

## Explorer Pipeline

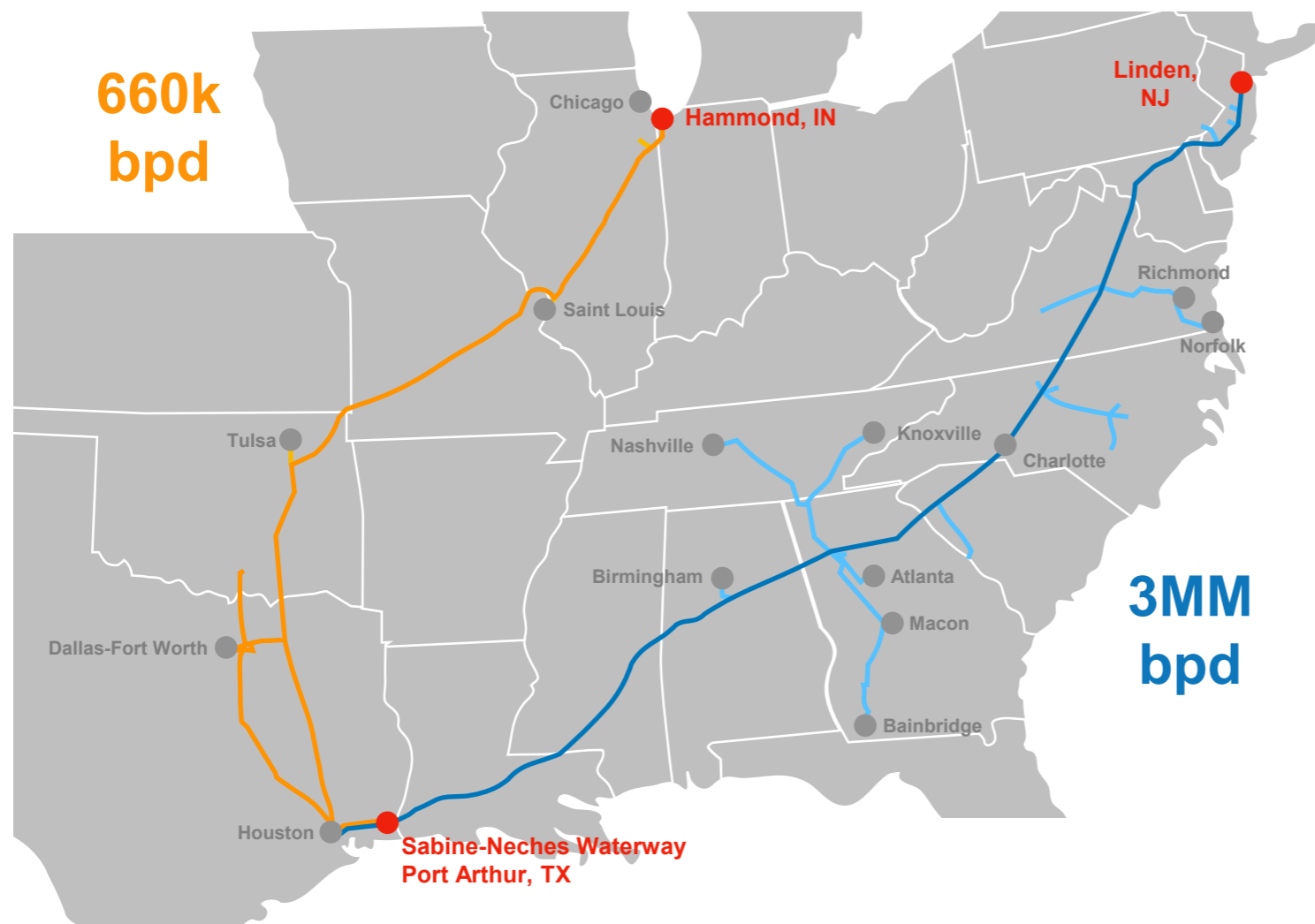
**660 thousand barrels per day**

- Originates in Port Arthur, Texas.
- Transports 660 thousand barrels of gasoline, diesel, and jet fuel every day.
- Supplies more than 70 major cities in 16 states.
- More than 350 thousand barrels a day are supplied to markets in the Midwest.

## Colonial Pipeline

**3 million barrels per day**

- The largest fuel system in the United States.
- Supplied by the Sabine-Neches Waterway refining complex, including the nation's largest refinery.
- Transports 3 million barrels of gasoline, diesel, home heating oil, and jet fuel every day.
- Directly supplies seven major airports and multiple Department of Defense installations.
- Delivers to approximately 270 marketing and shipper terminals in thirteen states and the District of Columbia.



***More than 99% of SNWW's refined petroleum products go to national and global markets***

# Industrial growth driven by exports

The SNWW has experienced unprecedented private sector investment for over a decade.

**\$78 Billion**

*in large-scale industrial projects  
completed or currently under  
construction since 2010*

**\$65.3 Billion**

*in liquefied natural gas (LNG) projects  
completed, under construction, or  
proposed on the SNWW*



# #1 Refining Complex in the Nation

Jefferson County is the largest single refining complex in the nation, with 4 refineries totaling over 1.8 million barrels per day in production

## Top 10 Refiners in the United States

Refinery	City	Capacity (k/bpd)
<b>Motiva refinery</b>	<b>Port Arthur, TX</b>	<b>~630</b>
<b>ExxonMobil</b>	<b>Beaumont, TX</b>	<b>~630</b>
ExxonMobil	Baytown, TX	584
Marathon	Garyville, LA	503
Marathon	Galveston, TX	451
Citgo	Lake Charles, LA	425
BP Whiting	Whiting, IN	415
<b>Valero</b>	<b>Port Arthur, TX</b>	<b>335</b>



*#33 Total SA Port Arthur ranked 33rd in the nation at 225 k/bpd*

# Exports & Trade Surplus Figures

**2022 Trade Surplus Value of \$41 Billion  
(3 to 1 Export/Import ratio)**

<b>Export Product</b>	<b>2022 Export Value</b>	<b>5-year Growth</b>
All Exports	\$59.2 billion	235%
Petroleum Liquid Products	\$17.3B	131%
<i>LNG</i>	<i>\$16.0B</i>	<i>1,785%</i>
Crude Oil	\$14.8B	190%
Propane	\$4.7B	222%
Butane	\$2.4B	349%
Pet Coke	\$1.4B	130%

# Delivering Energy Security

**LNG build-out on SNWW has major implications for global gas markets**

<b>Terminal</b>	<b>Export Capacity (BCM/YR)</b>	<b>Expansion*</b>
Sabine Pass LNG (Cheniere)	47	31 (Stage V)
Golden Pass LNG	18	-
Port Arthur LNG (Sempra)	13.5	13.5 (PA-II)
<b>Total</b>	<b>78.5</b>	<b>44.5</b>

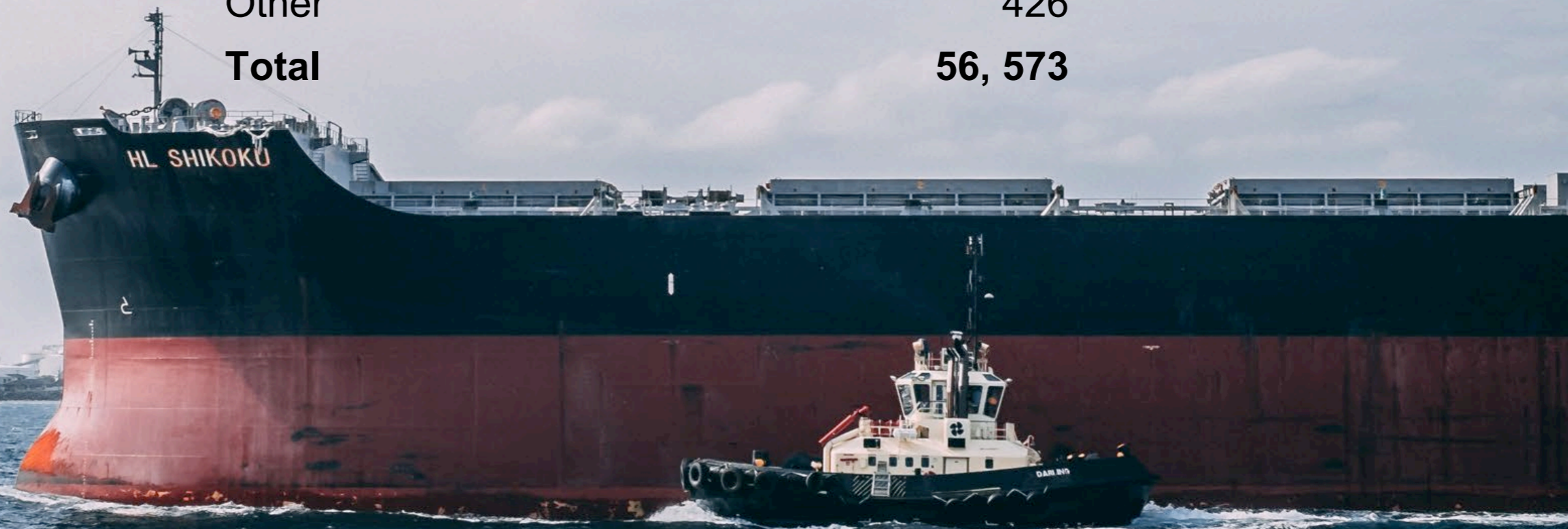
- Currently, Cheniere's Sabine Pass LNG terminal exports enough LNG to meet France's total annual natural gas consumption (43 BCM/YR).
- When fully operational (~2026), Port Arthur LNG will export enough LNG to meet Poland's total annual gas consumption (23.2 BCM/YR).
- When fully operational, Cheniere, Golden Pass LNG, and Port Arthur LNG will export enough LNG to nearly meet Germany's total annual natural gas consumption (90.5 BCM/YR).
- If all expansions are permitted and constructed, the total SNWW export capacity (~123 BCM/YR) would equal 22% of Europe's total annual gas consumption.

*European gas consumption statistics based on 2022 BP Statistical Review of World Energy*

# SNWW Total Transits 2022

## U.S. Coast Guard, Vessel Traffic Service

<b>Vessel</b>	<b>Transits</b>
Tug/Tow	47,788
Seagoing Tug	1,837
Tanker	3,644
Freighter	1,048
Gas Carrier	1,830
Other	426
<b>Total</b>	<b>56, 573</b>



# Strategic Importance

**#1**

Commercial Military  
Outload Port in the  
U.S.

**#1**

Largest Ready  
Reserve Fleet in the  
U.S.

**#1**

Access point to 57%  
of Strategic  
Petroleum Reserves



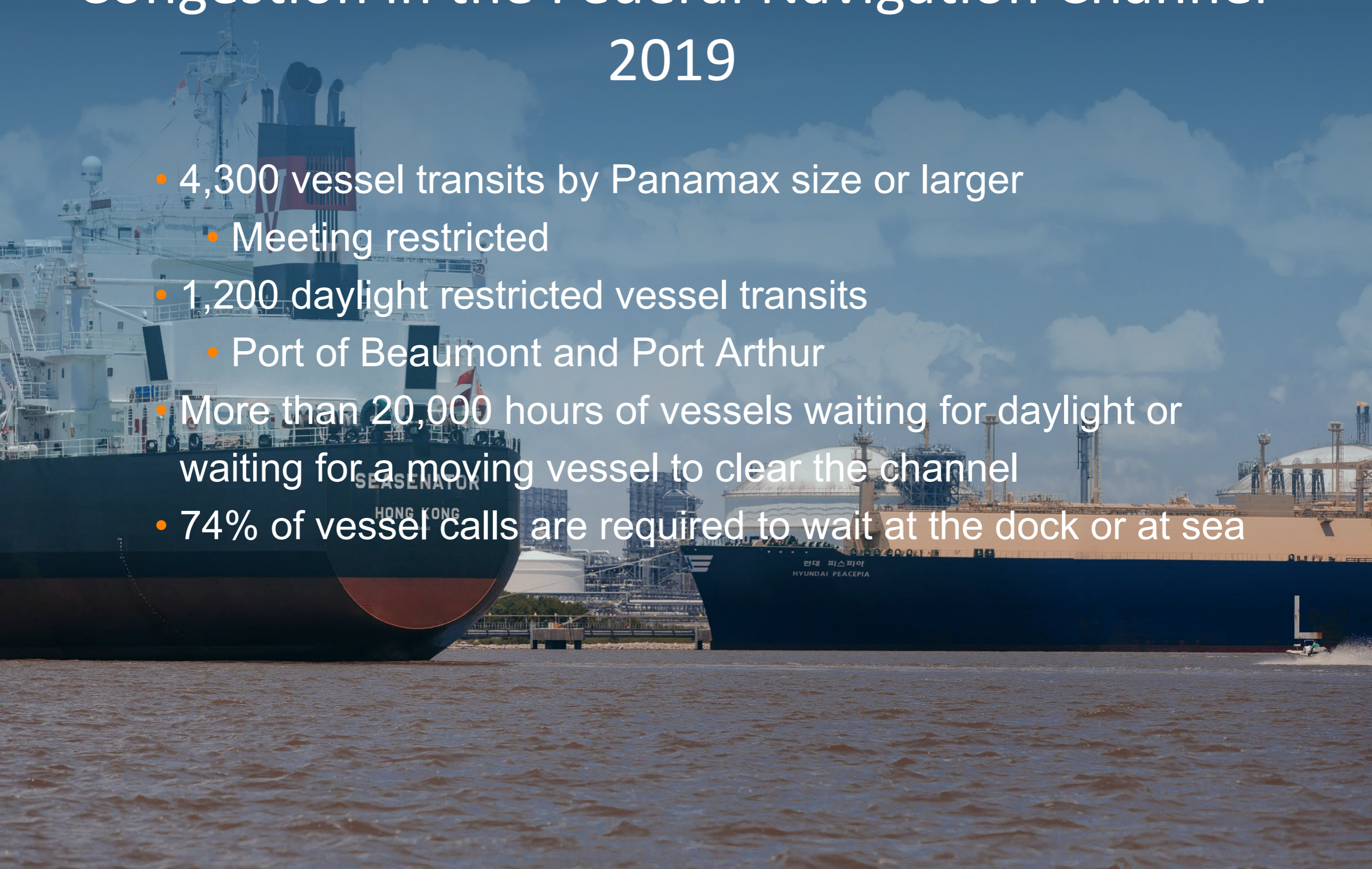
# Upcoming Projects

## Sabine Neches Navigation Improvement Project (Widening)



# Congestion in the Federal Navigation Channel 2019

- 4,300 vessel transits by Panamax size or larger
  - Meeting restricted
- 1,200 daylight restricted vessel transits
  - Port of Beaumont and Port Arthur
- More than 20,000 hours of vessels waiting for daylight or waiting for a moving vessel to clear the channel
- 74% of vessel calls are required to wait at the dock or at sea





## Section 203 of WRDA 86 as amended

- 1) SNND as non-Federal sponsor performs the Feasibility Study of Navigation Improvements
- 2) USACE performs technical assistance and inherently governmental functions
- 3) SNND submits a completed Feasibility Study & Environmental Assessment to ASA(CW)
- 4) ASA reviews study and, if approved
- 5) ASA recommends that Congress authorize the project

# Section 203 Integrated Feasibility Study and Environmental Assessment DMA, HDR, & Others

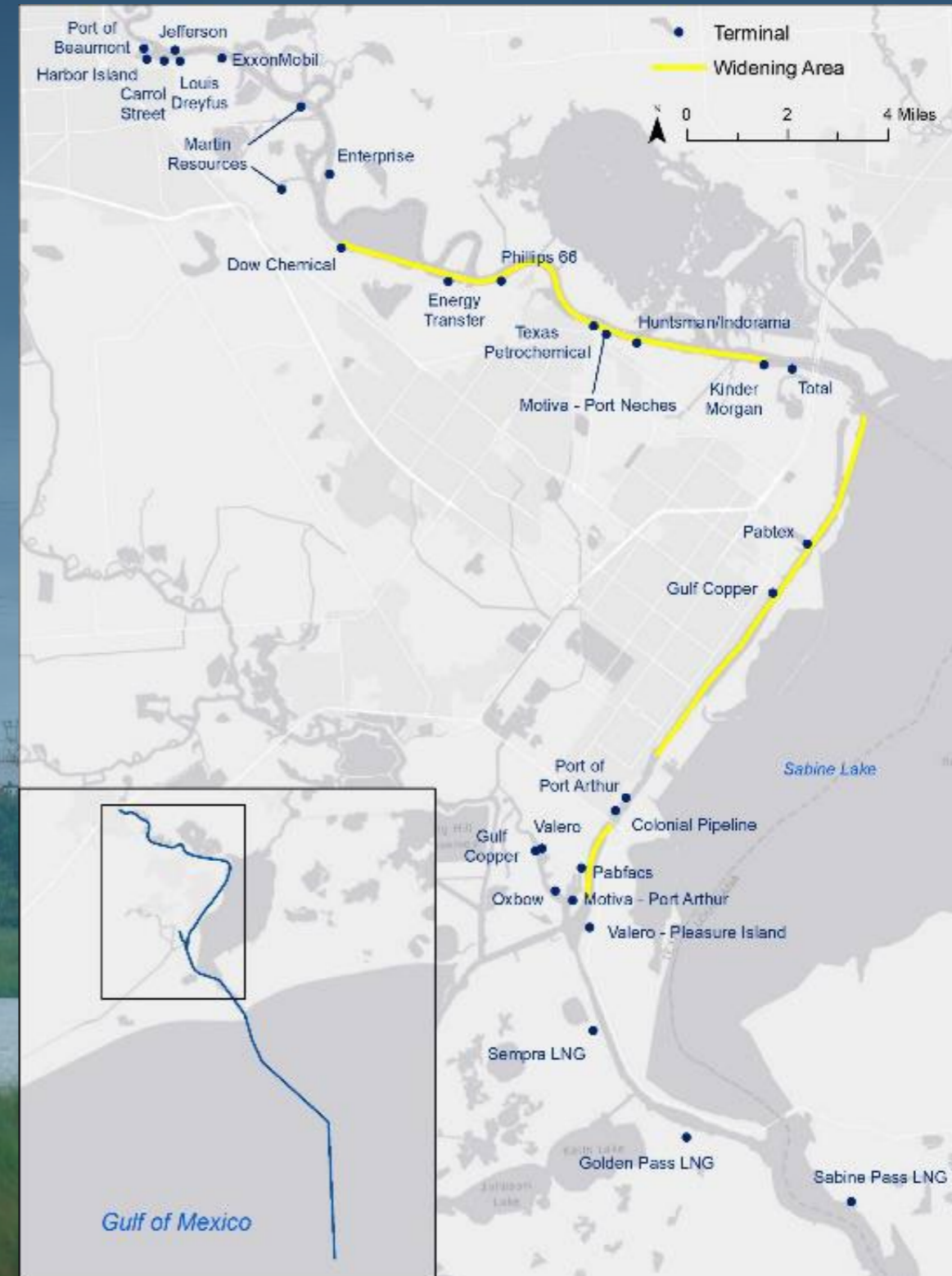
- **Mimics the Federal Feasibility Study Process**
- **Technical work has been completed**
  - **ready for USACE review and certification**
- **Environmental Assessment**
  - **USACE to perform Resource Agency Consultation for environmental compliance**
  - **SNND will provide draft coordination & consultation materials**
- **Feasibility Study must be complete (FONSI ready for signing) prior to submittal to ASA**

# Widening Study Next Steps - Update

- SNND has Provided
  - Internal Scoping Document
  - Technical Appendices
- USACE review of Technical Appendices completed
- USACE completing back check of revised Appendices and Scoping Document
- USACE to initiate Resource Agency Coordination in Fall 2023

Up Front  
Tentatively Selected Plan  
NED Plan

- Widen channel reaches from Taylor Bayou to MARAD Basin from 400 to 500 feet
- Avoid widening where vessel meeting would not occur
  - Port Arthur and Neches River Bend
- Widen only on the “red side” of the channel
- Avoid impacting existing infrastructure
- Likely environmental effects have been identified and are not significant
  - “Paving the side of the road”





U.S. ARMY

# SABINE-NECHES WATERWAY CHANNEL IMPROVEMENT PROJECT FY 24 UPCOMING CONTRACTS



## Sabine Neches Navigation District Award

- Sabine Bank Channel to Sabine Pass Channel
- Port Arthur Canal, Taylor's Bayou Half Depth

## Galveston District Award

- Sabine Extension Channel to Sabine Outer Bar, Jetty Channel and Sabine Pass
- Placement Area 11 Improvements





U.S. ARMY



## SNWW- SABINE BANK CHANNEL TO SABINE PASS (HALF DEPTH)

**LOCATION:** Sabine Bank Channel to Sabine Pass Channel

**DREDGE TYPE:**  
Hopper/Mechanical/Pipeline

**PLACEMENT:** ODMDS

**QUANTITY:** 12.5 MCY

**DEPTH:** 46 ft. + 2 ft.

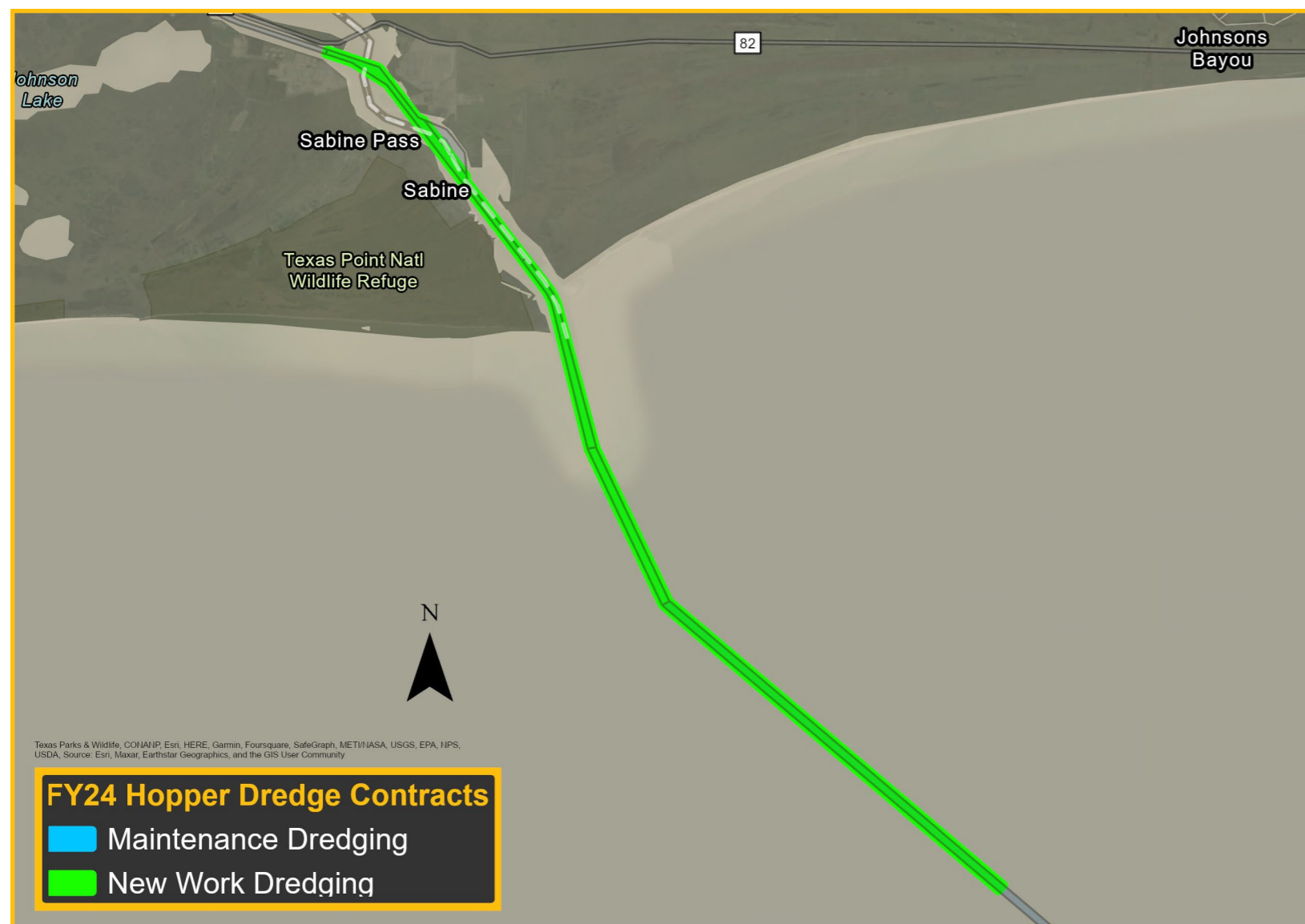
**ADVERTISE:** 10/25/23

**BID OPENING:** 11/27/23

**COMMENCE DREDGING:** 01/05/24

**DREDGING COMPLETE:** 12/20/24

**WORK RESTRICTIONS/WINDOW:**  
Seasonal PA Restrictions







U.S. ARMY

# SNWW- SABINE EXTENSION CHANNEL TO SABINE PASS OUTER BAR, JETTY CHANNEL, SABINE PASS (FULL DEPTH)



**LOCATION:** Sabine Extension to Sabine Pass, Outer Bar, Jetty Channel, Sabine Pass

**DREDGE TYPE:** Hopper/Mechanical/Pipeline

**PLACEMENT:** ODMDS

**QUANTITY:** 30 MCY

**DEPTH:** 52 ft. + 2 ft.

**ADVERTISE:** 05/24/24

**BID OPENING:** 06/25/24

**COMMENCE DREDGING:** 08/30/24

**DREDGING COMPLETE:** 04/02/29

**WORK RESTRICTIONS/WINDOW:** NA





U.S. ARMY



# SNWW- PORT ARTHUR CANAL, TAYLOR'S BAYOU (HALF DEPTH)

**LOCATION:** Port Arthur Canal, Taylor's Bayou

**DREDGE TYPE:** Pipeline

**PLACEMENT:** Upland

**QUANTITY:** 5 MCY

**DEPTH:** 44 ft. + 2 ft.

**ADVERTISE:** Dec 2023

**BID OPENING:** Feb 2024

**COMMENCE DREDGING:** Feb 2024

**DREDGING COMPLETE:** Dec 2024

**WORK RESTRICTIONS/WINDOW:** NA



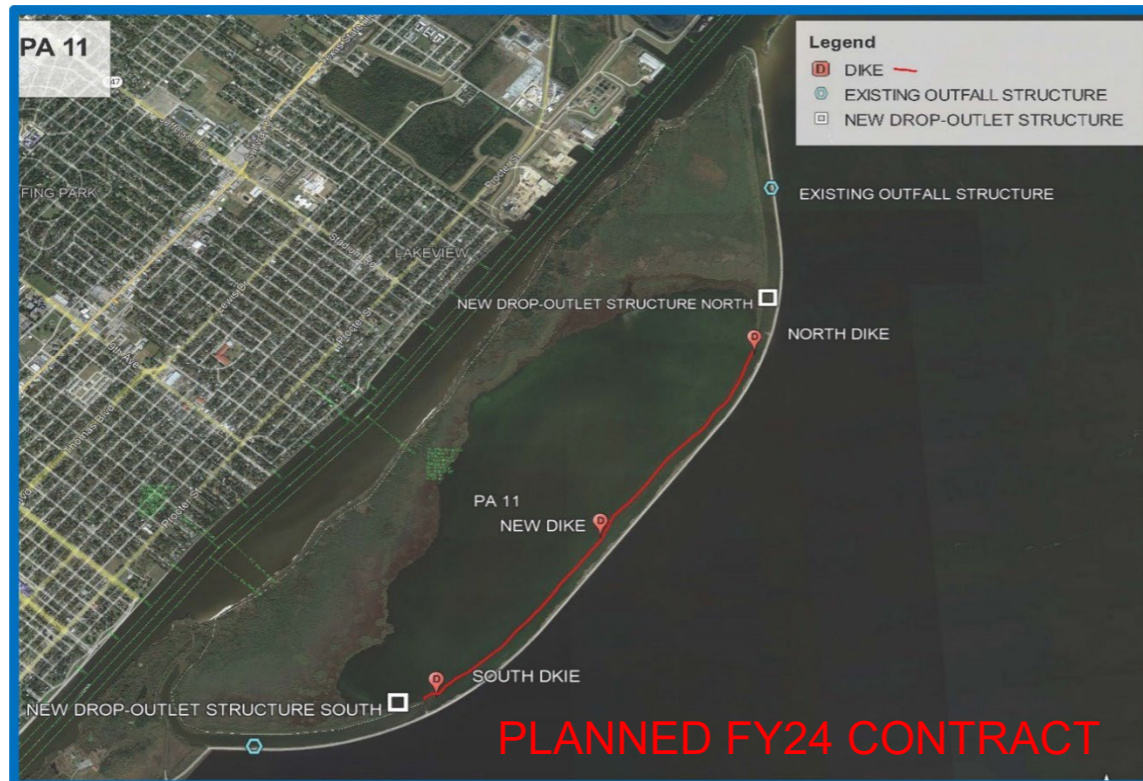
geographics, and the GIS User Community | Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin, FourSquare, SafeGraph, GeoTechnologies, Inc. Powered by



U.S. ARMY



# SNWW- PLACEMENT AREA 11 IMPROVEMENTS



**LOCATION:** Placement Area 11

**RFP Acquisition**

**ADVERTISE:** Summer 2024

**BID OPENING:** Summer 2024

**CONSTRUCTION START:** Fall 2024

**CONSTRUCTION COMPLETE:**  
Summer 2026

**PLANNED CONSTRUCTION:**

- New levee on north side; entire upland placement area
- Cut off lake inflow – allows for PA drying
- Create capacity
- Install two new drop-outlet structures
- Install new outflow drainage structures to the canal side



# Deepening Project Contracts

<u>Contract Number</u>	<u>Color</u>	<u>Contract Name</u>	<u>Owner of Contract</u>	<u>Award Year</u>
1	N/A	DREDGE ANCHORAGE BASIN #1	USACE	FY 20
2A	Red	DREDGE OFFSHORE CHANNEL TO SABINE BANK CHANNEL	USACE	FY 21
2B	Green	DREDGE SABINE BANK CHANNEL TO SABINE PASS CHANNEL	SNND	FY 23
3	Orange	DREDGE SABINE PASS CHANNEL TO TEXACO ISLAND & TAYLORS BAYOU	SNND	FY 24
4	Blue	DREDGE TEXACO ISLAND TO PORT NECHES PARK	SNND	TBD
5	Yellow	DREDGE PORT NECHES PARK TO PORT OF BEAUMONT	SNND	TBD
6	Red	DREDGE OFFSHORE CHANNEL TO SABINE PASS CHANNEL	USACE	FY 24
7	Orange	DREDGE SABINE PASS CHANNEL TO TEXACO ISLAND & TAYLORS BAYOU	USACE	TBD
8	Blue	DREDGE TEXACO ISLAND TO PORT NECHES PARK	USACE	TBD
9	Yellow	DREDGE PORT NECHES PARK TO PORT OF BEAUMONT	USACE	TBD
10	N/A	MITIGATION WEST BLACK BAYOU, LA	TBD	TBD
11	N/A	MITIGATION EAST BLACK BAYOU, LA	TBD	TBD
12	N/A	MITIGATION WILLOW BAYOU, LA	TBD	TBD
13	N/A	DREDGE ANCHORAGE BASIN #8	SNND	FY 24
14	N/A	DREDGE ANCHORAGE BASIN #4	SNND	FY 25

NOTE: CONTRACTS 6 THROUGH 9 REPRESENT FINAL HALF DEPTH CUT

# Questions?

**Kyle Reed**  
**Project Manager**  
**Sabine–Neches Navigation District**  
**409–729–4588**  
**[kreed@navigationdistrict.org](mailto:kreed@navigationdistrict.org)**

**Franchelle Craft Nealy**  
**Project Manager**  
**Galveston District Corps of Engineers**  
**409–766–3187**  
**[Franchelle.E.Nealy@usace.army.mil](mailto:Franchelle.E.Nealy@usace.army.mil)**