



Sabine-Neches Waterway Channel Improvement Project



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Sabine-Neches Waterway Channel Improvement Project

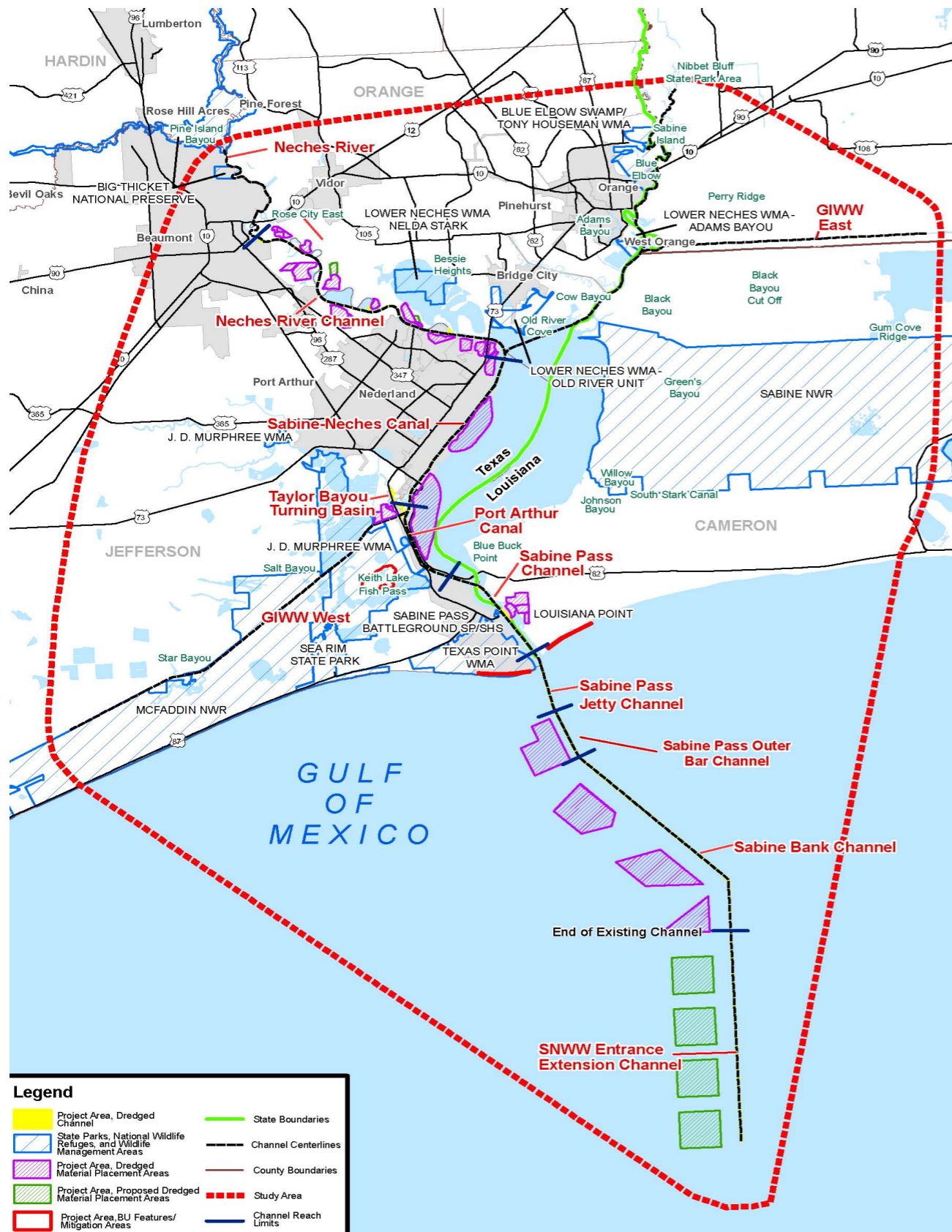


- Sabine-Neches Waterway last improved in 1962
- SNND was authorized to deepen the waterway from 40 ft. to 48 ft. in WRRDA 2014
- Channel Improvement Project is estimated to cost \$1.4 billion
- Construction of the project is estimated to take 7-10 years
- SNND & USACE signed PPA August 2019





Sabine-Neches Waterway

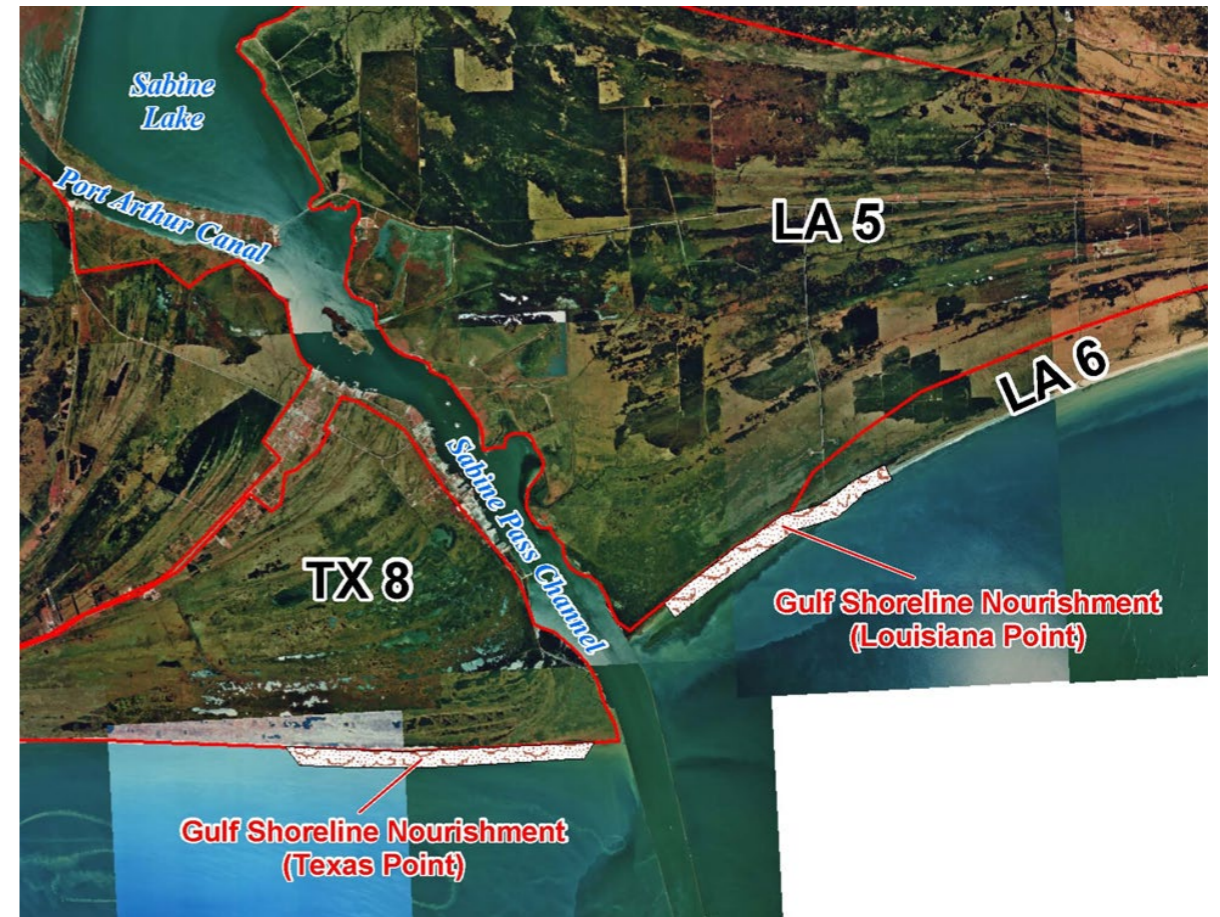
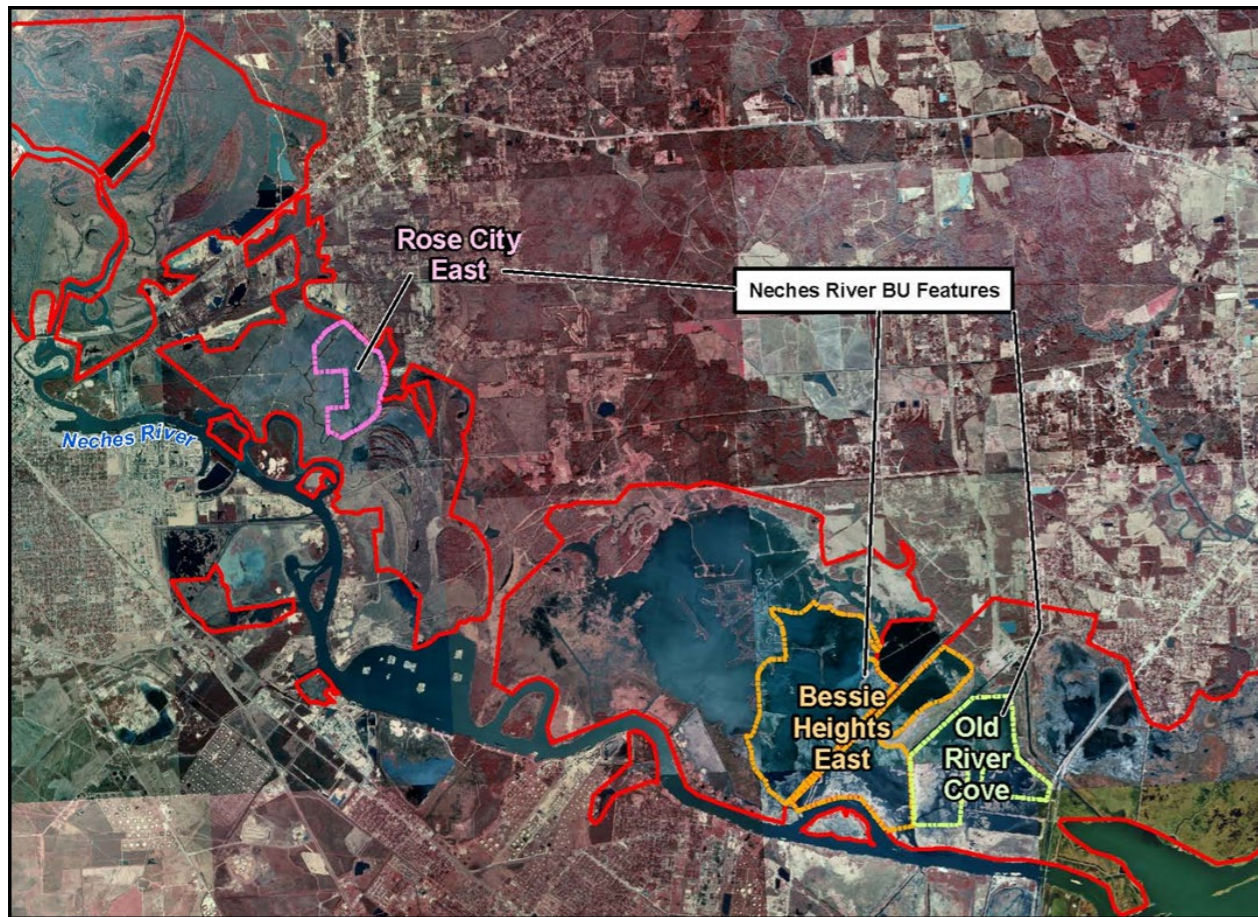


- The SNWW is an approximately 64-mile federally authorized and maintained 40' waterway located in Jefferson and Orange counties in southeast Texas and Cameron Parish, southwest Louisiana.
- The Federal Project is to deepen to 48' feet, construct 3 anchorage basins, channel widening and bend easings, and extend the entrance channel by 13 miles.
- \$18M in FY19 New Start Construction for turning and anchorage basins #1 and #4.
- Environmental Mitigation
 - Restore 2,783 acres of emergent marsh
 - Improve 957 acres of shallow water habitat
 - Nourish 4,355 acres of existing marsh
- 3rd Largest Waterway in the Nation by tonnage
- More than 50 USCG regulated waterfront facilities
- Imported and exported over 178 million tons of cargo in 2017 or 9% of total US vessel tonnage.





Beneficial Use (BU) Sites and Mitigation



- Three former marsh areas on the Neches River (Rose City East, Bessie Heights East, and Old River Cove) would be combined into one large management feature called the Neches River BU Feature.

- In the Gulf Shore BU Feature, maintenance material would be used to nourish Gulf shorelines at Texas and Louisiana Points.





Construction Phases

➤ Contract 1

- Phase one includes starting construction on turning basins
- Benefits of doing this first is we gain shipping efficiencies and waterway Safety immediately

➤ Following Contracts

- Deepen main channel in 2 phases
 - 1st phase: Dredge entire channel to 44 feet
 - 2nd phase: Dredge to final 48 foot depth

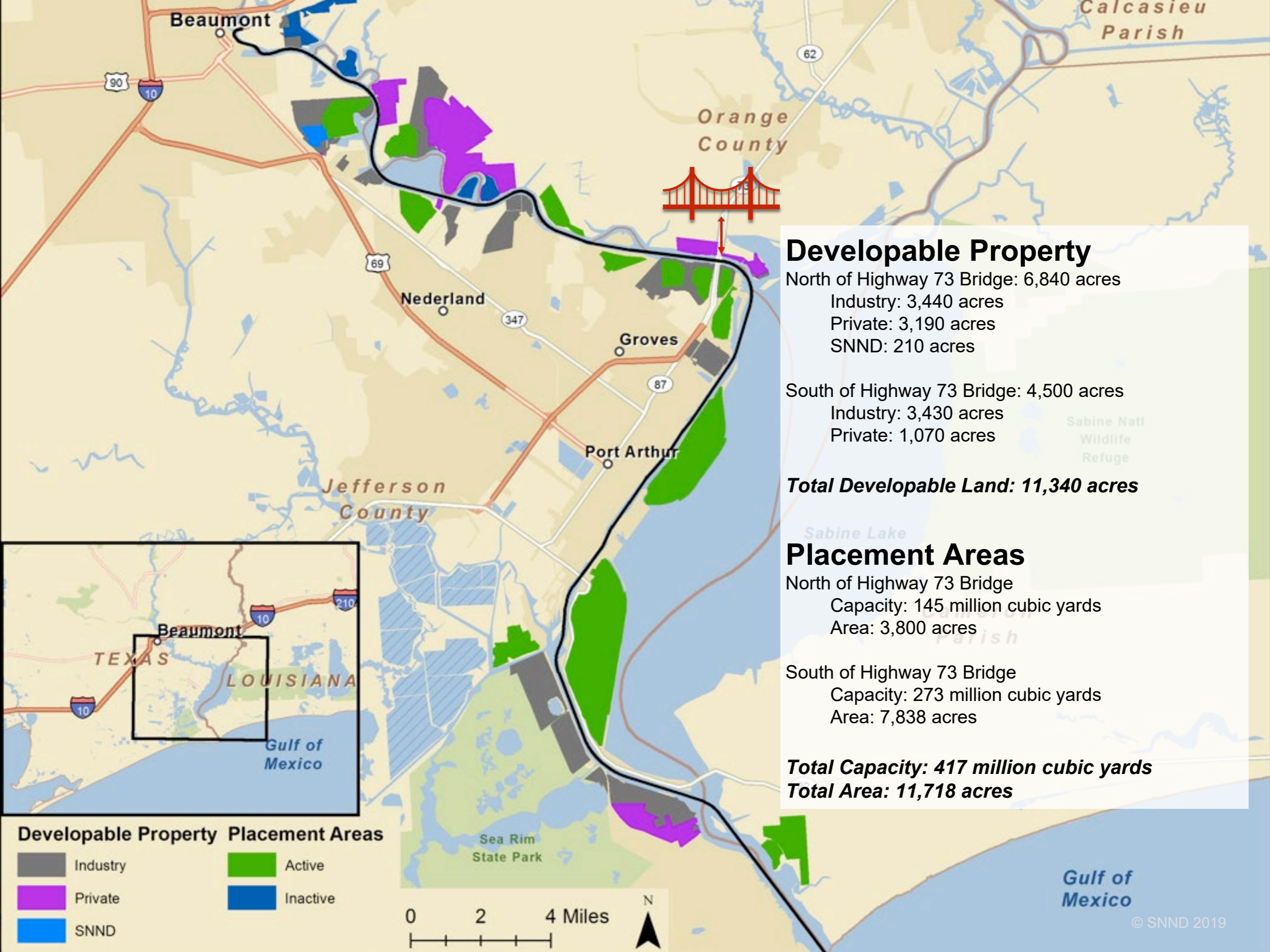


SNW Total Transits 2017

U.S. Coast Guard, Vessel Traffic Service

Vessel	Transits
Tug/Tow	53,298
Tanker	3,770
Freighter	1,389
Gas Carrier	442
Other	310
Total	59,209





Developable Property

North of Highway 73 Bridge: 6,840 acres
 Industry: 3,440 acres
 Private: 3,190 acres
 SNND: 210 acres

South of Highway 73 Bridge: 4,500 acres
 Industry: 3,430 acres
 Private: 1,070 acres

Total Developable Land: 11,340 acres

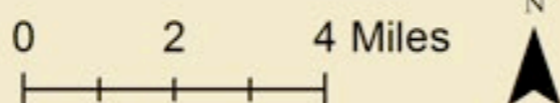
Placement Areas

North of Highway 73 Bridge
 Capacity: 145 million cubic yards
 Area: 3,800 acres

South of Highway 73 Bridge
 Capacity: 273 million cubic yards
 Area: 7,838 acres

Total Capacity: 417 million cubic yards
Total Area: 11,718 acres

- | Developable Property | | Placement Areas | |
|----------------------|----------|-----------------|----------|
| | Industry | | Active |
| | Private | | Inactive |
| | SNND | | |



Three areas of discussion



ENERGY



TRADE



NAT'L SEC.

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

#3 Crude Refining Complex

- SNWW crude refining complex is one of the largest in US
- Four major refineries
 - Motiva Port Arthur Refinery
 - ExxonMobil Beaumont
 - Valero Port Arthur Refinery
 - Total Port Arthur Refinery
- Expansions proposed by ExxonMobil and Valero would increase refining capacity by more than 300,000 barrels per day
- Largest refiner of aviation and military fuels

Top 10 Refiners in the United States

	Refinery	City	Capacity (k/bpd)	Proj. Capacity
1	Motiva Refinery	Port Arthur, TX	603	-
2	ExxonMobil	Baytown, TX	584	-
3	Marathon	Garyville, LA	543	-
4	ExxonMobil	Baton Rouge	503	-
5	Marathon	Galveston, TX	451	-
6	Citgo	Lake Charles, LA	425	-
7	BP	Whiting, IN	415	-
8	ExxonMobil	Beaumont, TX	365	~615
9	Valero	Port Arthur, TX	335	~435
10	PES	Philadelphia, PA	335	-

LNG Exports

The SNWW is the largest LNG in the nation

Terminal	Capacity (mtpa)	Status	Start Date
Sabine Pass LNG	27	Exporting	2016
Golden Pass LNG	15.6	FID February 2019	2022 (est.)
Port Arthur LNG	13.5	Seeking authorization	2023 (est.)
	56.1		



Sabine-Neches Waterway Export Figures 2018

Export Products	% of US Total
#1 LNG	85%
#2 Crude Oil	24%
#1 Petroleum Coke	18%
#2 LPG	13%
#3 Diesel and Jet Fuel	12%
#3 Gasoline	10%

Export Revenues	Increase
2016 = \$11.6B	
2017 = \$20.5B	+81%
2018 = \$30.2B	+47%



Energy Dominance

Projected Energy Export by 2026

Actual exports for 2018	\$30.2 Billion
Actual imports for 2018	\$14.4 Billion
Balance of trade surplus for 2018	\$15.8 Billion
Projected annual export by 2026	\$73.3 Billion
Less projected annual imports by 2026	\$20.1 Billion
Projected balance of trade surplus by 2026	\$53.2 Billion



Balance of Trade Analysis

U.S. Census 2018 (Billions of Dollars)

<u>Port Name</u>	<u>Exports</u>	<u>Imports</u>	<u>Gain/Loss</u>	<u>Margin %</u>
1 Houston	\$90.2	\$69.1	+ \$21.1	23%
2 Sabine-Neches Waterway	\$30.2	\$14.4	+ \$15.8	52%
3 Corpus Christi	\$22.3	\$7.2	+ \$15.1	68%
4 New Orleans	\$31.7	\$21.7	+ \$10.0	32%
5 Oakland	\$19.3	\$29.9	- \$10.6	
6 Charleston	\$26.0	\$46.7	- \$20.7	
7 Norfolk	\$24.4	\$49.2	- \$24.8	
8 Long Beach	\$34.2	\$75.0	- \$40.8	
9 Savannah	\$27.1	\$74.1	- \$47.0	
10 New York/New Jersey	\$44.8	\$162.0	- \$117.2	
11 Los Angeles	\$35.9	\$261.1	- \$225.2	

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

Military Outload Ports

- The waterway is home to two Department of Defense designated military outload ports — the Port of Beaumont and the Port of Port Arthur
- The Port of Beaumont is the largest commercial military outload port in the nation, and sometimes the world
- The Port of Beaumont is home to the U.S. Army's 842nd Transportation Battalion headquarters
- Direct rail to Fort Hood (TX) and Fort Polk (LA)

Ready Reserve Fleet

- Maritime Administration (MARAD) Ready Reserve Fleet located south of the Port of Beaumont
- \$32 million investment to upgrade dock infrastructure to accommodate new vessels
- Accommodates up to 11 of the largest class naval cargo vessels



Strategic Petroleum Reserves

- SNWW is the primary access point to two Strategic Petroleum Reserves, totaling 57% of the nation's crude oil reserve capacity (or nearly 400 million barrels)
 - Big Hill (pictured) = 170 million barrel capacity
 - West Hackberry = 227 million barrel capacity



Unprecedented Growth

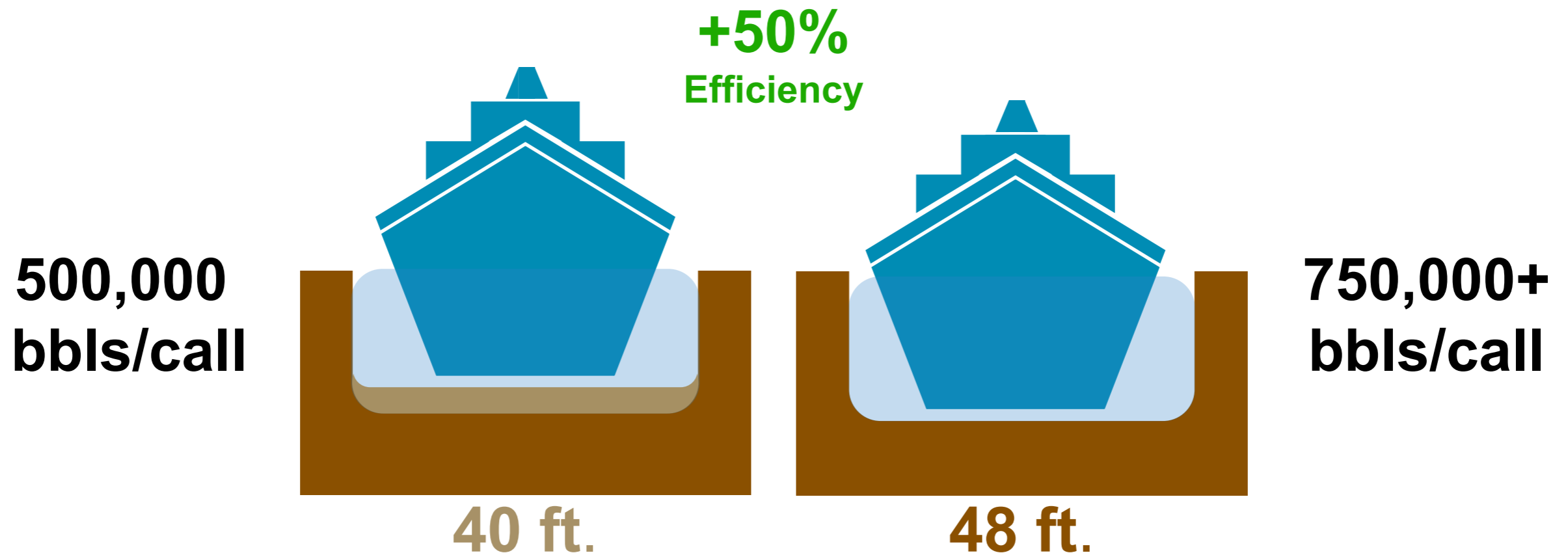
Total 2017 ACOE Waterborne Statistics Center
Commerce Data
178.5 million short tons (3rd in the Nation)

Total 2026 Projected Waterborne Commerce
Greater than **210 million short tons**

EXPORTS - *Increased tonnage driving job creation, economic growth, and trade balance*

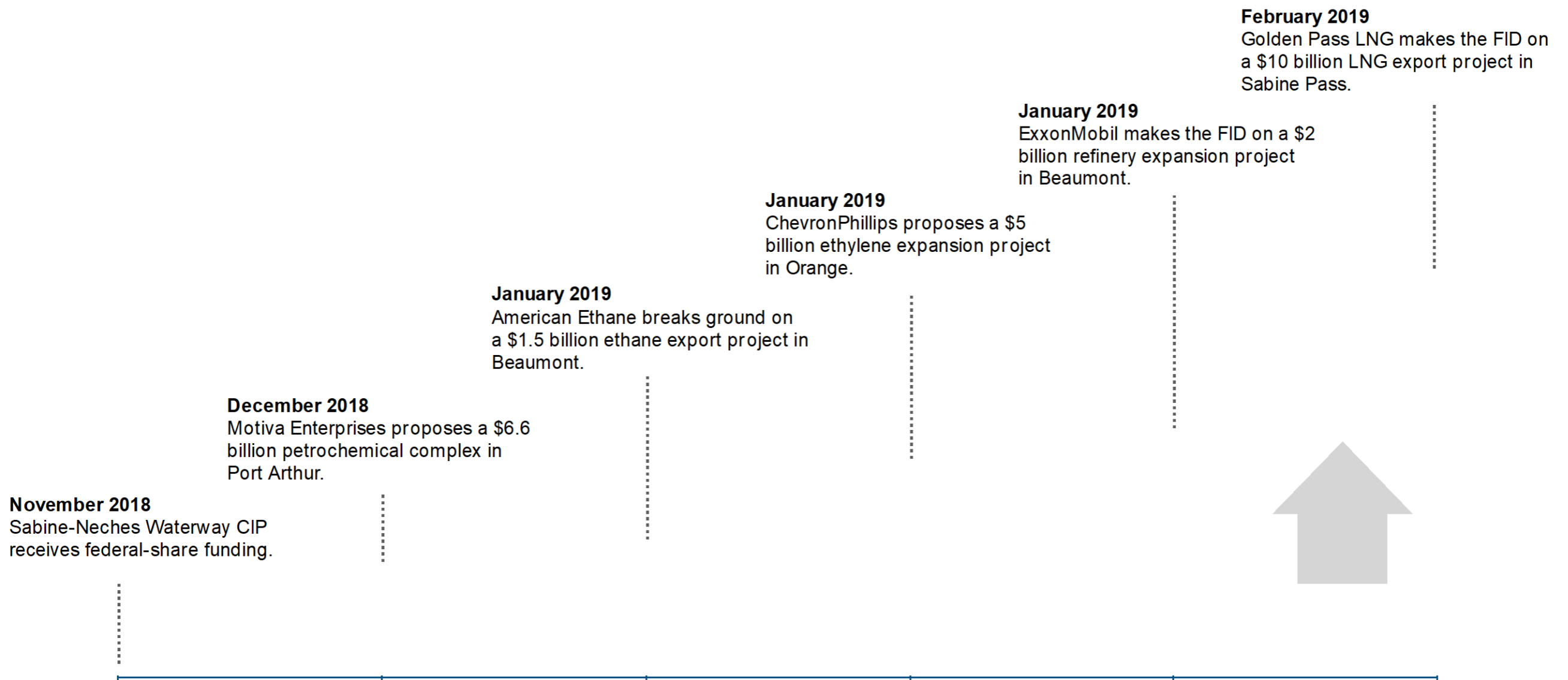
Benefits to the Nation

- 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



Industry Responds Favorably to Federal-Share Funding of the Sabine-Neches Waterway Channel Improvement Project

Since receiving \$18 million in federal-share funding to start construction of the Sabine-Neches Waterway Ship Channel Improvement Project (CIP), approximately \$25 billion in large-scale industrial projects have been proposed, reached final investment decisions (FID), or started construction.



New Industrial Projects and Expansions on the Sabine-Neches Waterway (2011 - Present)

Completed	Date	Investment	Under Construction	Investment	Proposed	Investment	
Motiva Refinery Expansion	2012	\$10 Billion	Sabine Pass LNG (Export)	\$18 Billion	Motiva Refinery Expansion	\$12 Billion	
Total Petrochemicals	2011	\$2.2 Billion	ExxonMobil Expansion	\$2 Billion	Port Arthur LNG (Export)	\$8 Billion	
Golden Pass LNG (Import)	2011	\$2 Billion	Natgasoline LLC (G2X)	\$1.2 Billion	Total Petrochemicals	\$1.7 Billion	
Valero Refinery Expansion	2012	\$1.5 Billion	Phillips 66	\$400 Million	Valero Refinery Expansion	\$900 Million	
Jefferson Energy	2014	\$450 Million	Beaumont Marine Terminal	\$340 Million	Arkema	\$400 Million	
Air Products	2013	\$400 Million	Sunoco Logistics	\$300 Million	Colonial Pipeline Expansion	\$300 Million	
Praxair	2013	\$222 Million	Invista Sabine River Works	\$250 Million	BASF Corporation	\$250 Million	
German Pellets	2013	\$178 Million	Air Liquide	\$117 Million	Enterprise Products	\$200 Million	
Huntsman Corporation	2016	\$150 Million	DuPont Orange	\$100 Million	BASF Total (JV)	\$130 Million	
GT OmniPort	2012	\$90 Million	ExxonMobil Expansion	\$2 Billion	Chevron Phillips	\$5.8 Billion	
Valero Refinery Dock	2015	\$75 Million	Golden Pass LNG (Export)	\$10 Billion			
Lucite International	2013	\$65 Million	Jefferson Energy	\$150 Million			
Pandora Methanol (OCI)	2012	\$58 Million	Howard Energy Partners	\$650 Million			
		\$17.4 Billion			\$35.5 Billion		
					\$29.7 Billion		

Completed	+	Under Construction	=	\$52.9 Billion		
Completed	+	Under Construction	+	Proposed	=	\$82.6 Billion



The Sabine-Neches Waterway Meets Trump Administration's Demand for Energy Dominance

- #1 exporter of liquefied natural gas (LNG) with two more LNG export projects on the way
- Leading exporter of crude oil that will grow by fifty-percent capacity with the deepening project
- Home to America's leading refining capacity and growing — supplying the US eastern seaboard states daily
- Leading producer of all military fuels and over sixty-percent of commercial jet fuel
- Home to more than fifty-five percent of US Strategic Petroleum Reserves
- The gateway for all major US oil and shale production — connected by midstream infrastructure across the Nation

The Sabine-Neches Waterway New-Start Construction Channel Improvement Project would benefit all Americans

- **Generating Widespread Economic Benefits** — The Sabine-Neches Waterway Channel Improvement Project would generate hundreds of thousands of direct and indirect jobs, hundreds of billions in economic activity, and billions in gross product across the nation.
- **Generating Significant Return on Investment** - The channel improvement project would deliver \$10 billion annually in federal revenues over the life of the project.
- **Working to Balance the Trade Deficit** -The Sabine-Neches Waterway's balance of trade surplus is projected to increase forty-seven percent to \$12.5 billion in 2018 and increase almost five-fold to \$61.7 billion by 2026.
- **Improving Resiliency** — Greater capacity to help the Nation in the face of domestic disasters by supporting US energy product suppliers.
- **Improving Military Efficiency** — Dramatic resilience and throughput capacity for the largest commercial military outload port in the Nation.
- **Delivering Geopolitical Strengths** — Strategic investment in American geopolitical strength supporting our Nation's ability to combat foreign interests that use energy as a weapon.