

Port Aransas Conservancy

Protecting Our Environment & Economy



54' Corpus Christi Ship Channel Improvement Project (CCSCIP)



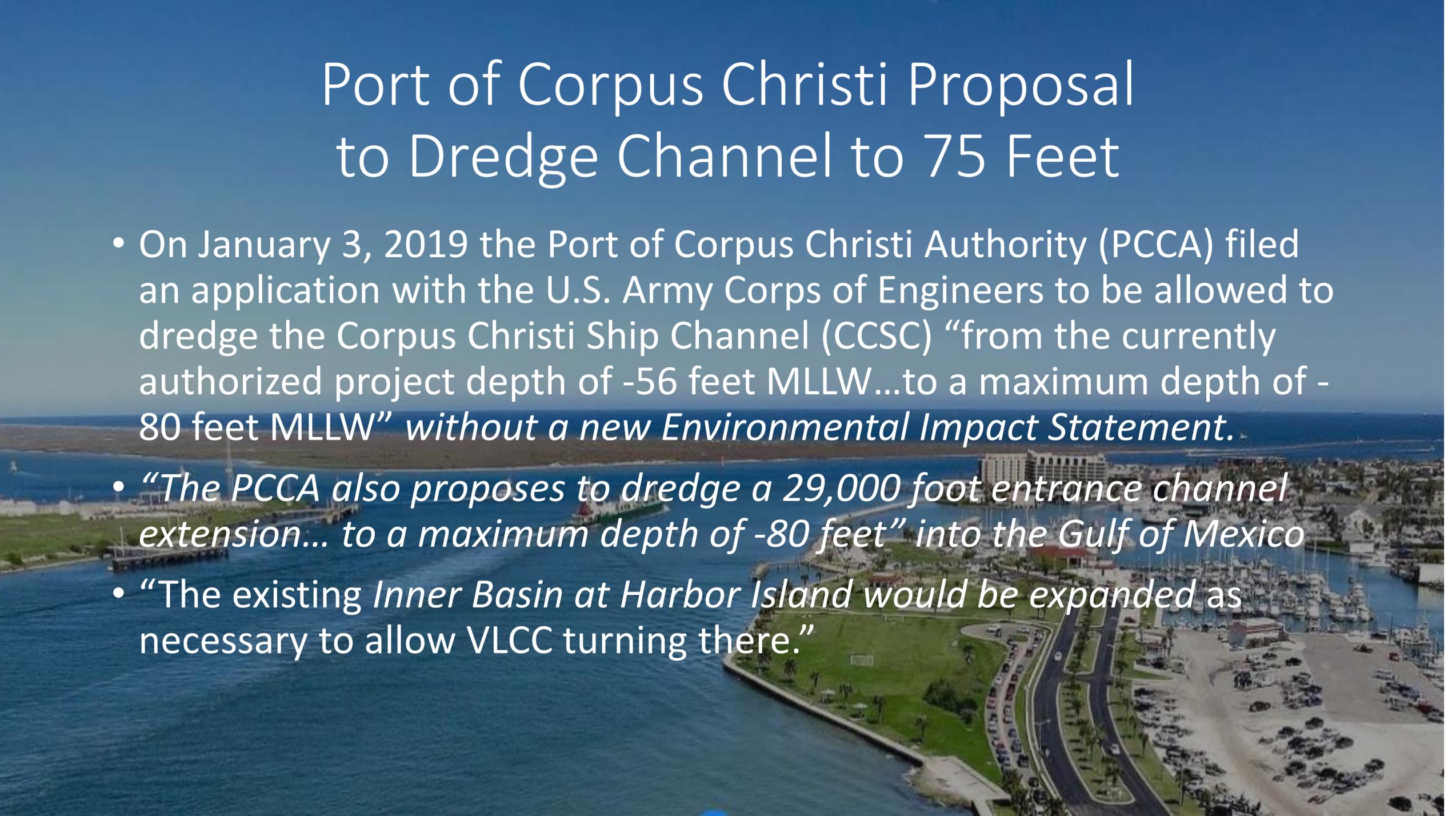
54' CCSCIP Project



- Dredge ship channel from 47' MLLW to 54'
- Dredge entrance channel out 10,000'
- 200' barge shelves either side of the channel
- 35 million cubic yards to be dredge spoil to be disposed of

Port of Corpus Christi Proposal to Dredge Channel to 75 Feet

- On January 3, 2019 the Port of Corpus Christi Authority (PCCA) filed an application with the U.S. Army Corps of Engineers to be allowed to dredge the Corpus Christi Ship Channel (CCSC) “from the currently authorized project depth of -56 feet MLLW...to a maximum depth of -80 feet MLLW” *without a new Environmental Impact Statement.*
- “The PCCA also proposes to dredge a 29,000 foot entrance channel extension... to a maximum depth of -80 feet” into the Gulf of Mexico
- “The existing Inner Basin at Harbor Island would be expanded as necessary to allow VLCC turning there.”

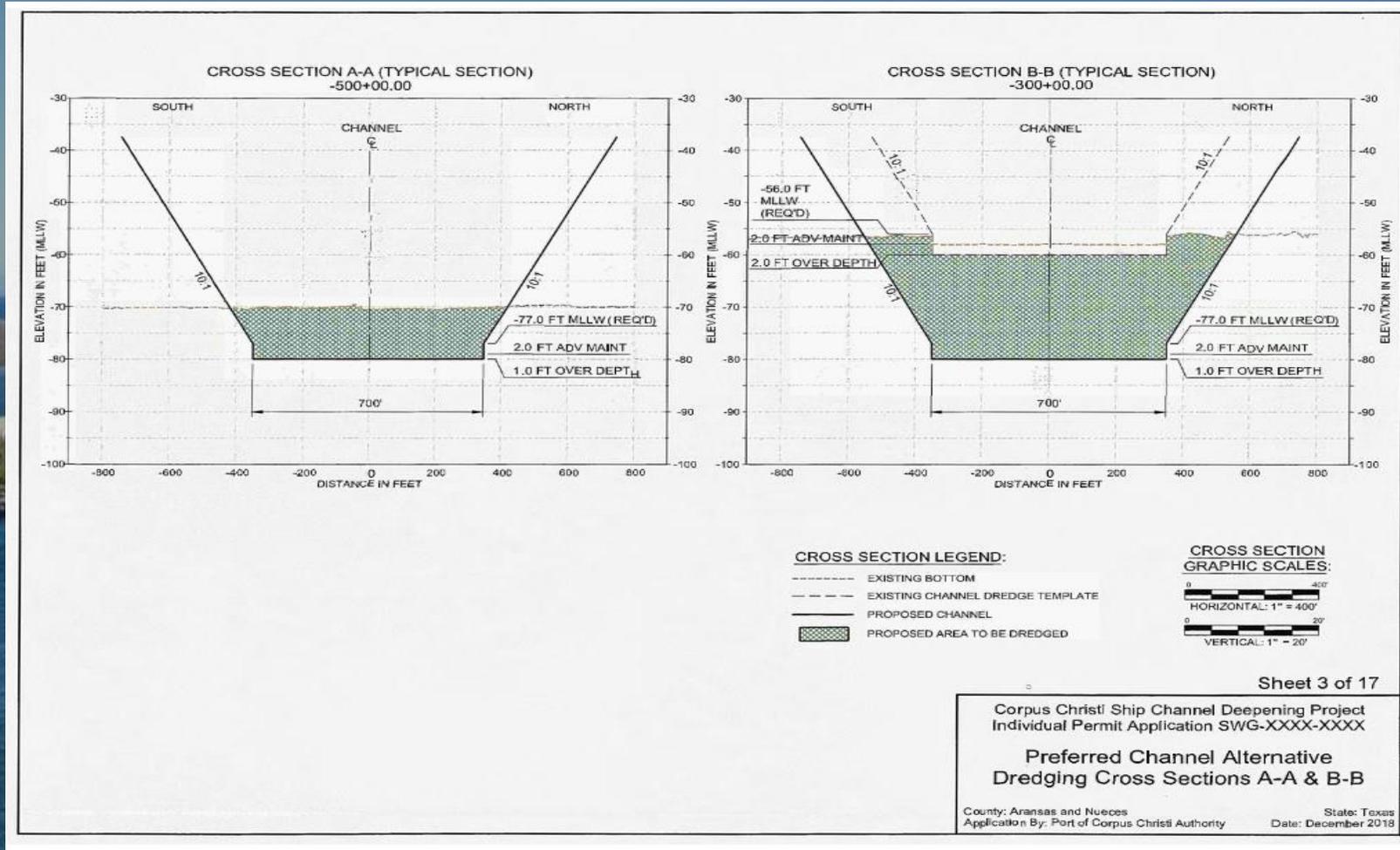


Port of Corpus Christi Proposal to Dredge Channel to 75 Feet

- Dredged materials includes 56.7 million cubic yards of dredge spoil
- In addition 1,764.3 acres open waters would be dredged for a proposed channel and turning basin
- Maintenance dredging of 1,083,000 cubic yards per year



Port of Corpus Christi Proposal to Dredge Channel to 75 Feet



CITY OF CORPUS CHRISTI

Port of Corpus Christi Proposal to Dredge Channel to 75 Feet

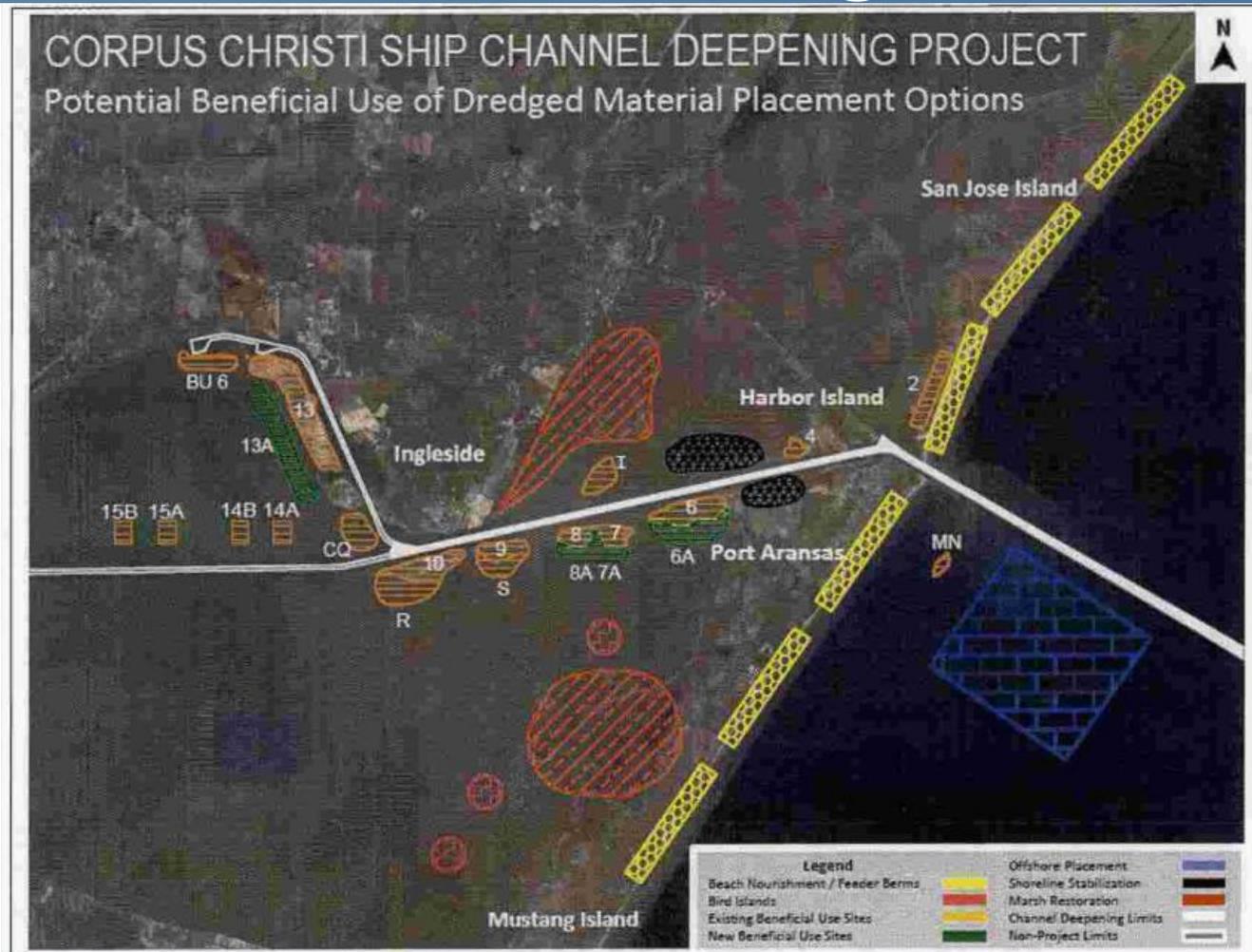
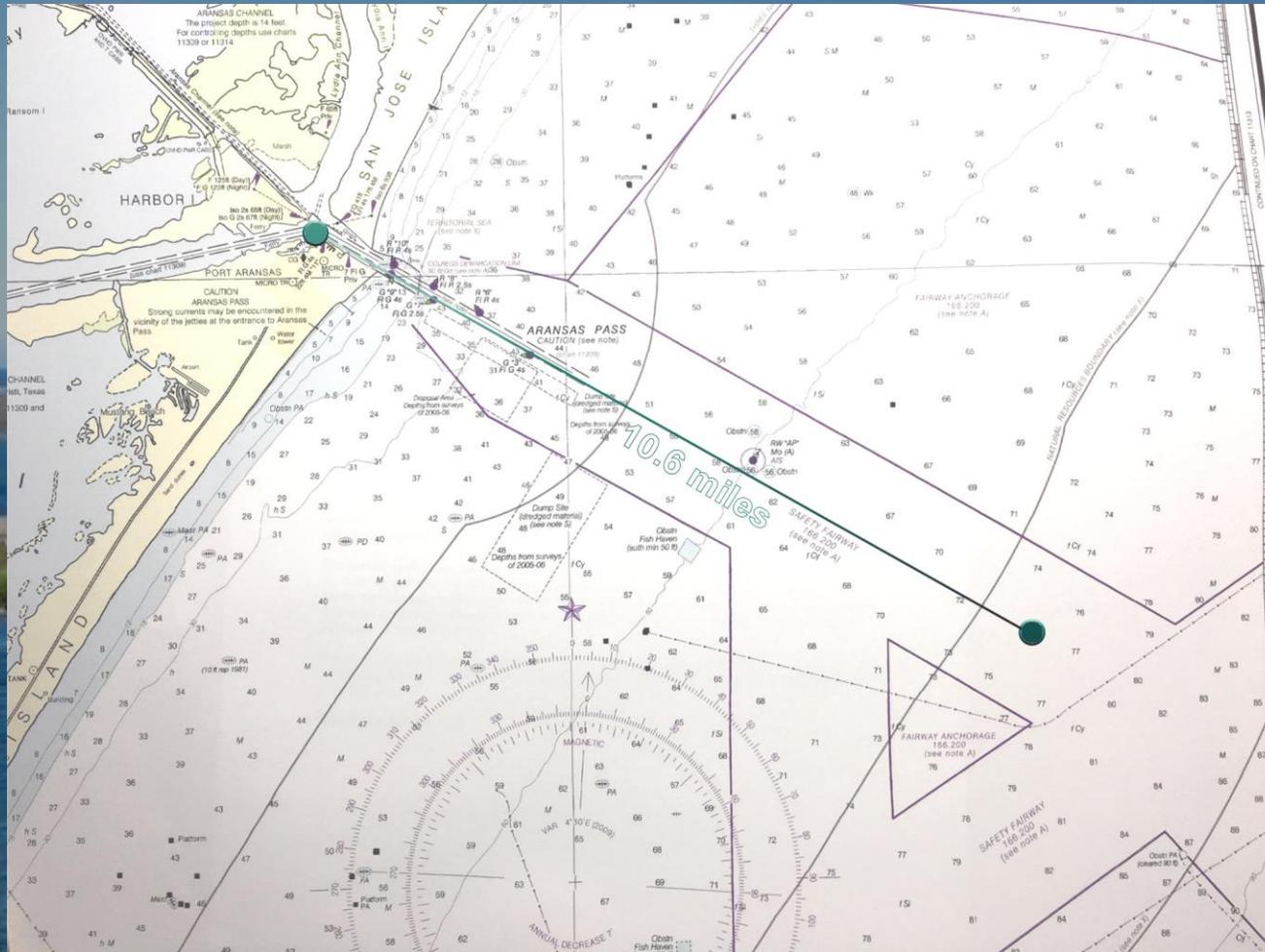


Figure 5.1: Initial Dredged Material Placement Concepts

- **Yellow** = Beach “nourishment”
- **Orange** = Marsh restoration
- **Brown** = Existing beneficial uses
- **Green** = New beneficial uses
- **Black** = Shoreline stabilization
- **Blue** = Offshore placement



Port of Corpus Christi Proposal to Dredge Channel to 75 Feet



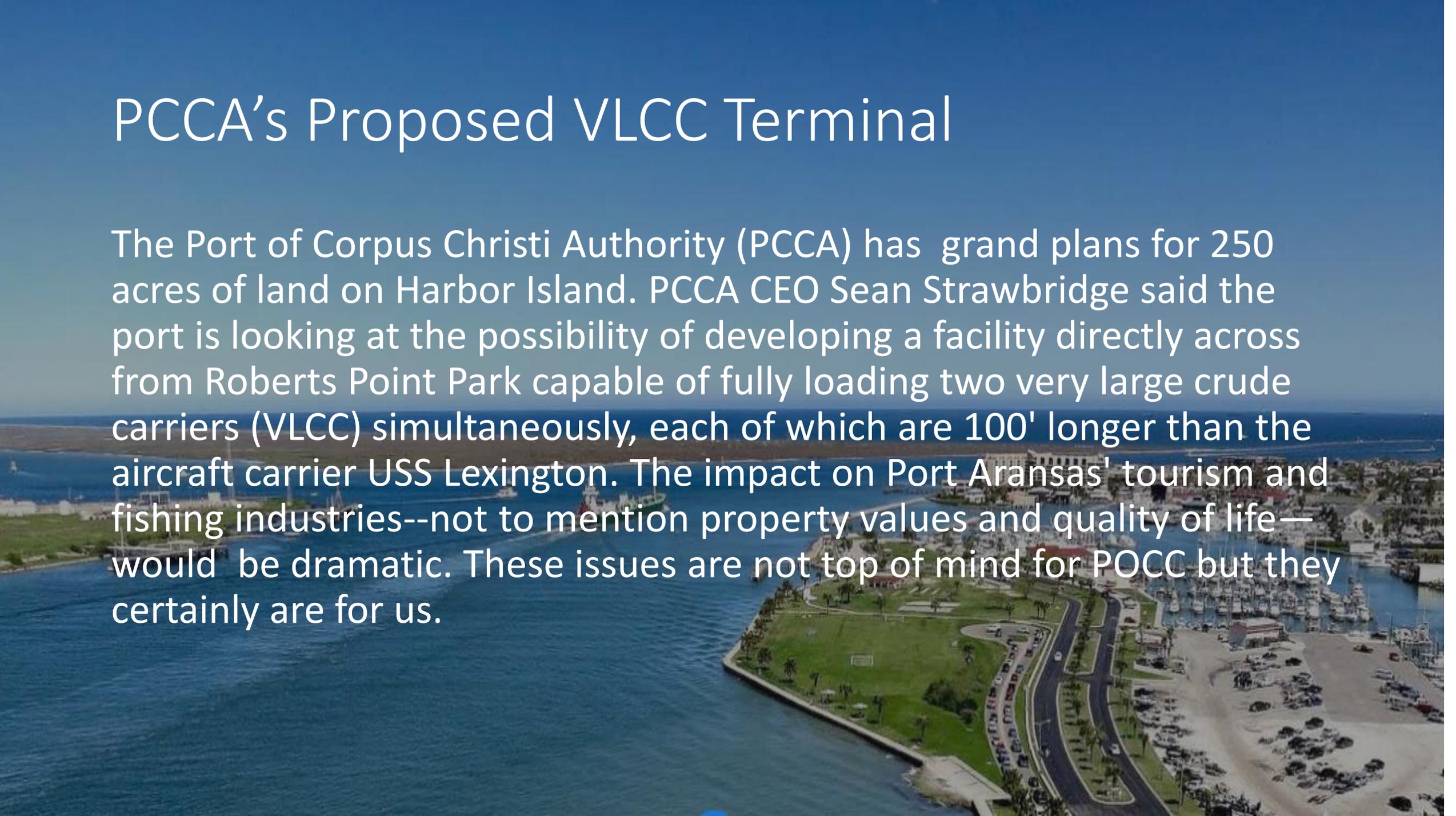
- Must dredge out 10.6 miles to hit the 75 foot line (per NOAA Chart 11307)
- Must dredge both the Eastern and Southern safety fairways
- Frequent dredging would be necessary and a traffic hazard, causing **MAJOR shipping congestion!**

PCCA's PROPOSED VERY LARGE CRUDE CARRIER (VLCC) TERMINAL



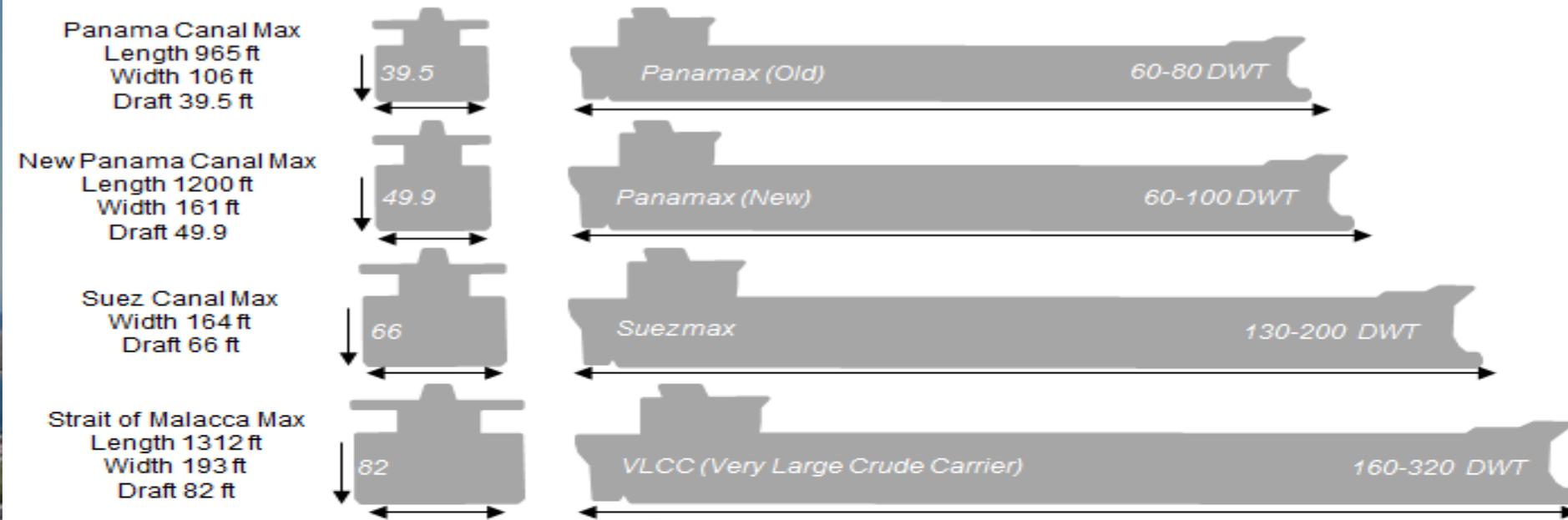
PCCA's Proposed VLCC Terminal

The Port of Corpus Christi Authority (PCCA) has grand plans for 250 acres of land on Harbor Island. PCCA CEO Sean Strawbridge said the port is looking at the possibility of developing a facility directly across from Roberts Point Park capable of fully loading two very large crude carriers (VLCC) simultaneously, each of which are 100' longer than the aircraft carrier USS Lexington. The impact on Port Aransas' tourism and fishing industries--not to mention property values and quality of life—would be dramatic. These issues are not top of mind for POCC but they certainly are for us.

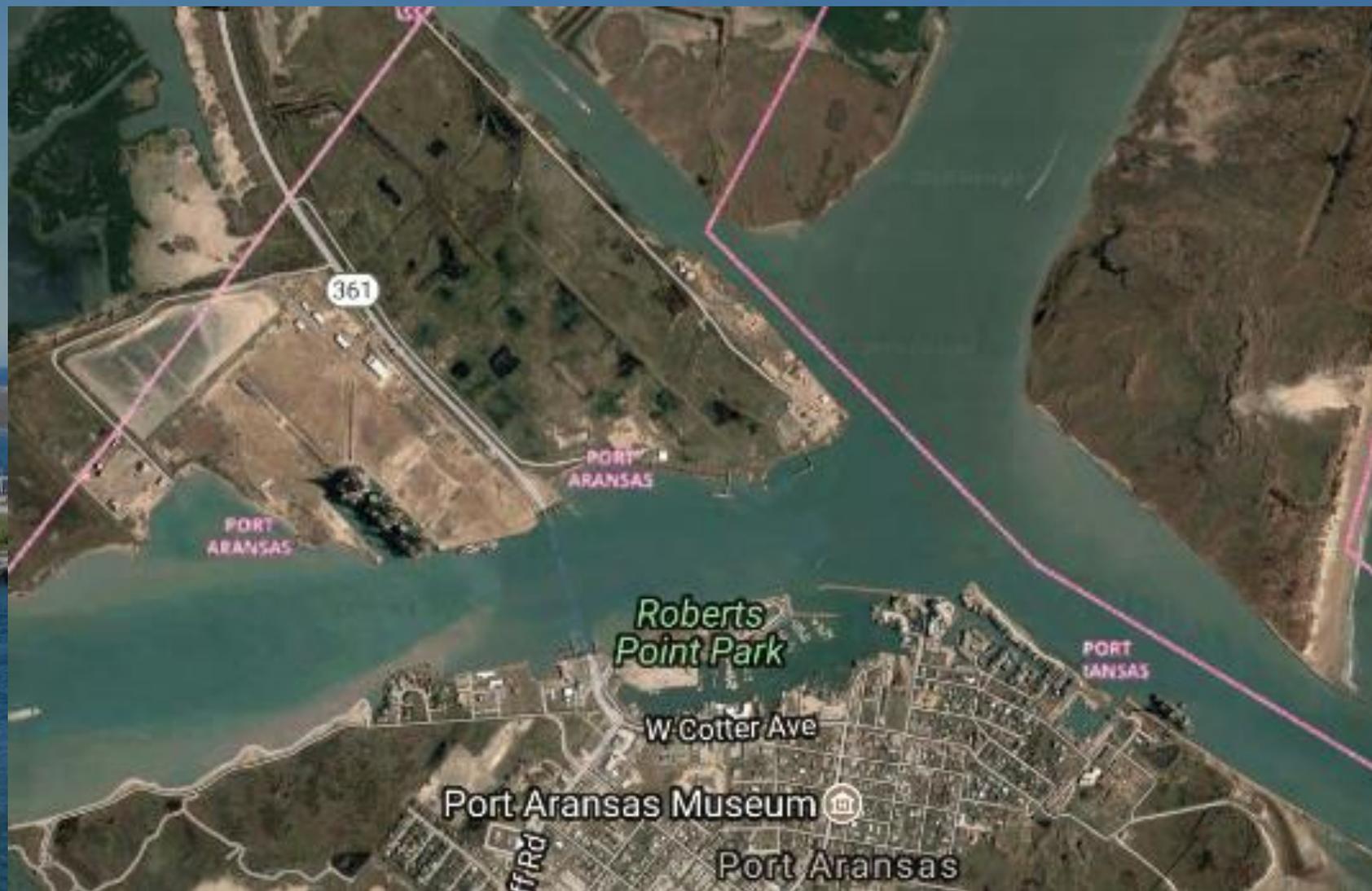


Tanker Sizes

Maximum ship sizes for the Panama and Suez Canals, Strait of Malacca



Harbor Island--Now



Harbor Island—PCCA's Vision



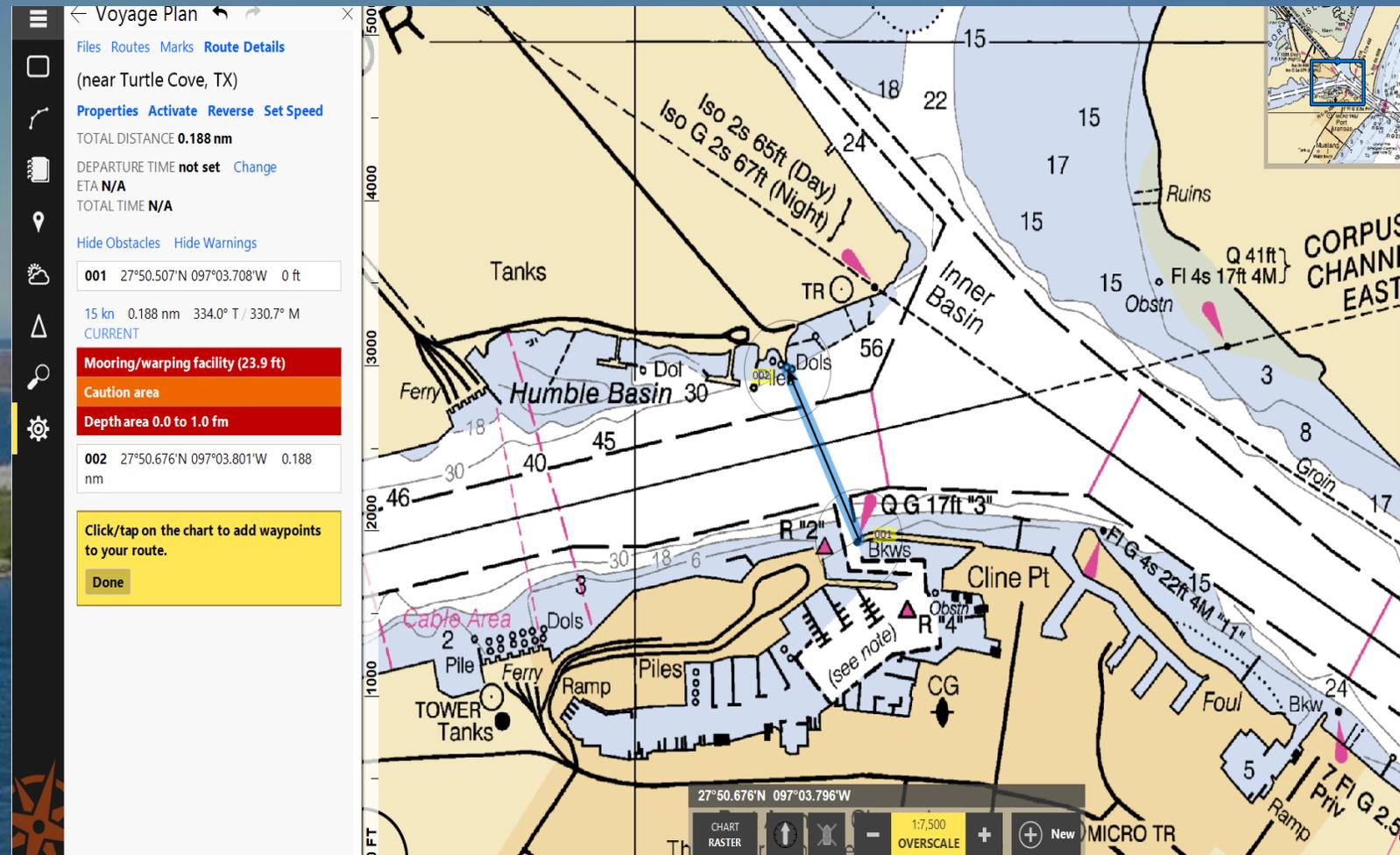
VLCC Nasiriyah Docking in Ingleside

Note the muddy prop wash from both the ship and the six tugs. Tidal currents will move this material into shallow water and smother seagrasses.



Harbor Congestion

- Channel width shown = 0.188 nm = 1,142 feet
- CCSCIP channel = 530 feet
- Two barge shelves @ 200 feet each = 400 feet
- Width of VLCC = 193 feet
- $530 + 400 + 193 = 1,123$ feet
- $1,142 - 1,123 = 19$ feet
- **MAJOR harbor congestion!**



Harbor Congestion

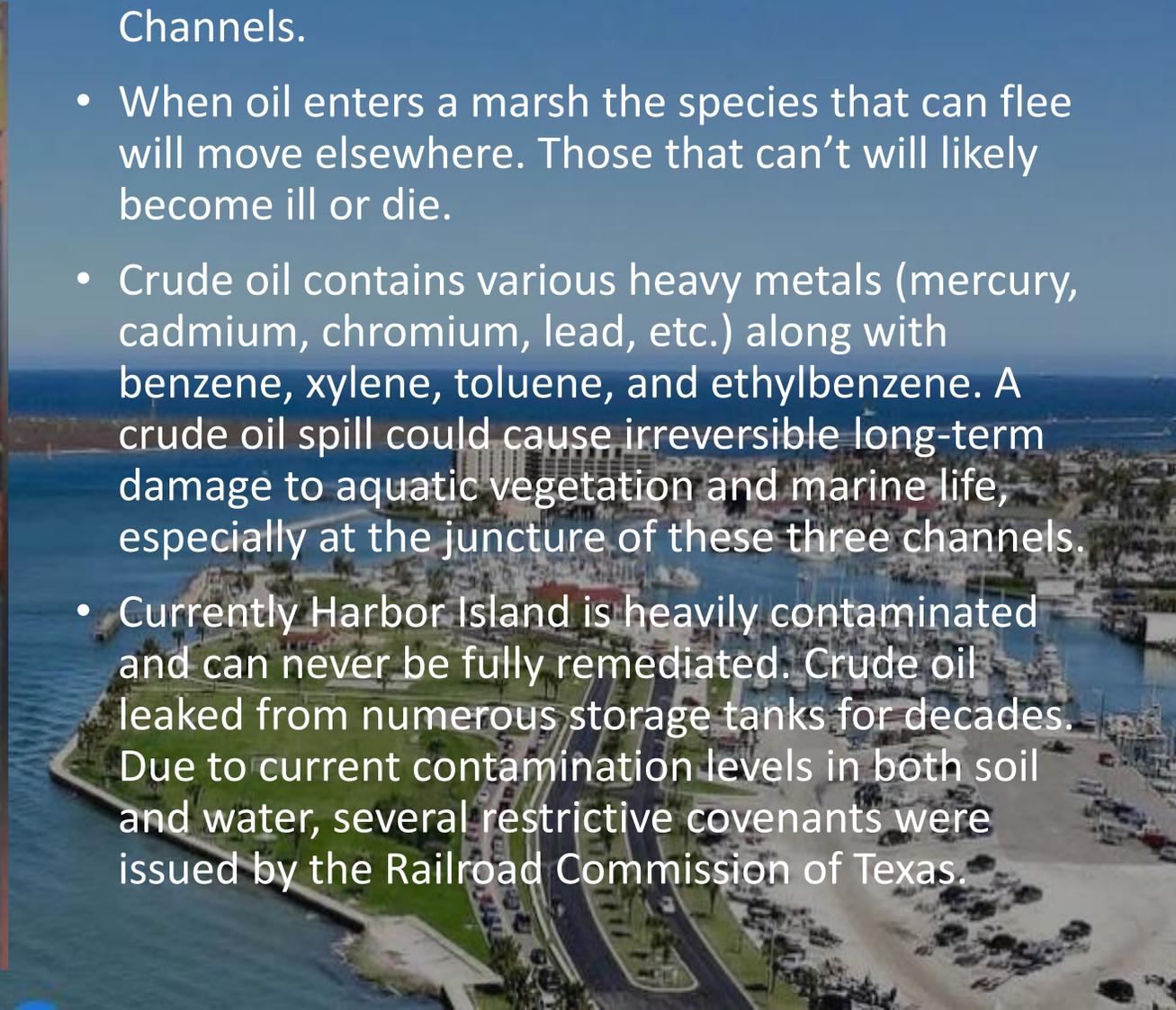
Where is the space for six tugs to turn one of these behemoths around?



Redfish, Aransas and Corpus Christi Bay Systems



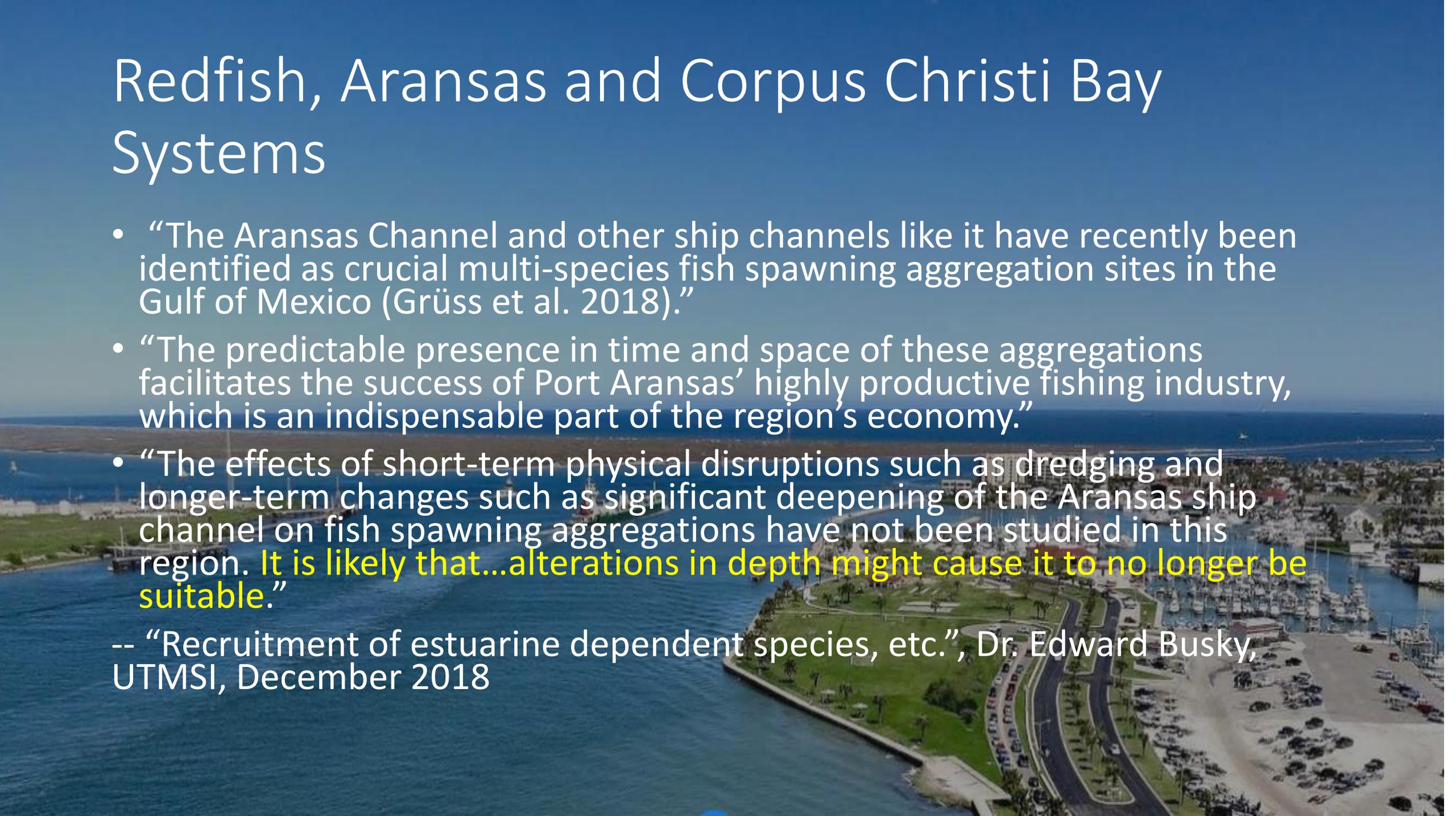
- The Redfish Bay Scientific Research Area is one of the most productive on the Gulf Coast. Larval transport to Redfish Bay is through the Corpus Christi Ship Channel to the Lydia Ann and Aransas Channels.
- When oil enters a marsh the species that can flee will move elsewhere. Those that can't will likely become ill or die.
- Crude oil contains various heavy metals (mercury, cadmium, chromium, lead, etc.) along with benzene, xylene, toluene, and ethylbenzene. A crude oil spill could cause irreversible long-term damage to aquatic vegetation and marine life, especially at the juncture of these three channels.
- Currently Harbor Island is heavily contaminated and can never be fully remediated. Crude oil leaked from numerous storage tanks for decades. Due to current contamination levels in both soil and water, several restrictive covenants were issued by the Railroad Commission of Texas.



Redfish, Aransas and Corpus Christi Bay Systems

- “The Aransas Channel and other ship channels like it have recently been identified as crucial multi-species fish spawning aggregation sites in the Gulf of Mexico (Grüss et al. 2018).”
- “The predictable presence in time and space of these aggregations facilitates the success of Port Aransas’ highly productive fishing industry, which is an indispensable part of the region’s economy.”
- “The effects of short-term physical disruptions such as dredging and longer-term changes such as significant deepening of the Aransas ship channel on fish spawning aggregations have not been studied in this region. **It is likely that...alterations in depth might cause it to no longer be suitable.**”

-- “Recruitment of estuarine dependent species, etc.”, Dr. Edward Busky, UTMSI, December 2018



Importance of Tourism to Port Aransas

- Tourism provides 2,745 full and part-time jobs, generating \$57.9 million in wages for Port Aransans (2012)
- Estimated economic impact is \$162.2 million
 - City sales tax of \$2,560,300
 - City hotel occupancy tax of \$3,157,300
- Central focus for visitors was the beach and/or fishing
- Nearly all “indicated things are fine the way they were in Port Aransas”



Importance of Tourism to Port Aransas



- Tourism is the second largest private employer in the Coastal Bend, second only to the health care industry
- Port A visitors come for the beach, fishing, and birding
- The Port A economy depends on a healthy coastal environment
- Pre-Harvey tourism approaching 6 million visitors/year
- Forecast for 2024/2026: 10 million visitors/year!

Impact on Port A Tourism



What's Wrong With This Kind of Development?

- Impacts of dredge spoil placement
- Unknown geological effects to the walls of the ship channel due to deep dredging
- Locating large oil storage tanks in a storm surge prone area
- Increased erosion damages caused by larger tanker wakes
- Interruption of ferry service by proximity of a tanker turning basin
- Greater risk of a large spill / toxic pollution
- Increased storm surge levels and intensity because of a deeper channel
- Seagrass damages caused by sediment suspension / light attenuation. Suspended solid concentrations over 20mg/l adversely affect the growth of seagrasses (Gacia et al, 1999)
- Negative impacts upon the migration of larval fish and crustaceans
- Negative impacts upon the tourism economic sector
- Spill risks from pipelines in bay waters
- Increased chronic health issues related to oil and gas industry facilities
- Issues related to the creation of a security zone near the ferry landing / exclusion of recreational boating
- Negative impacts upon Port Aransas property values

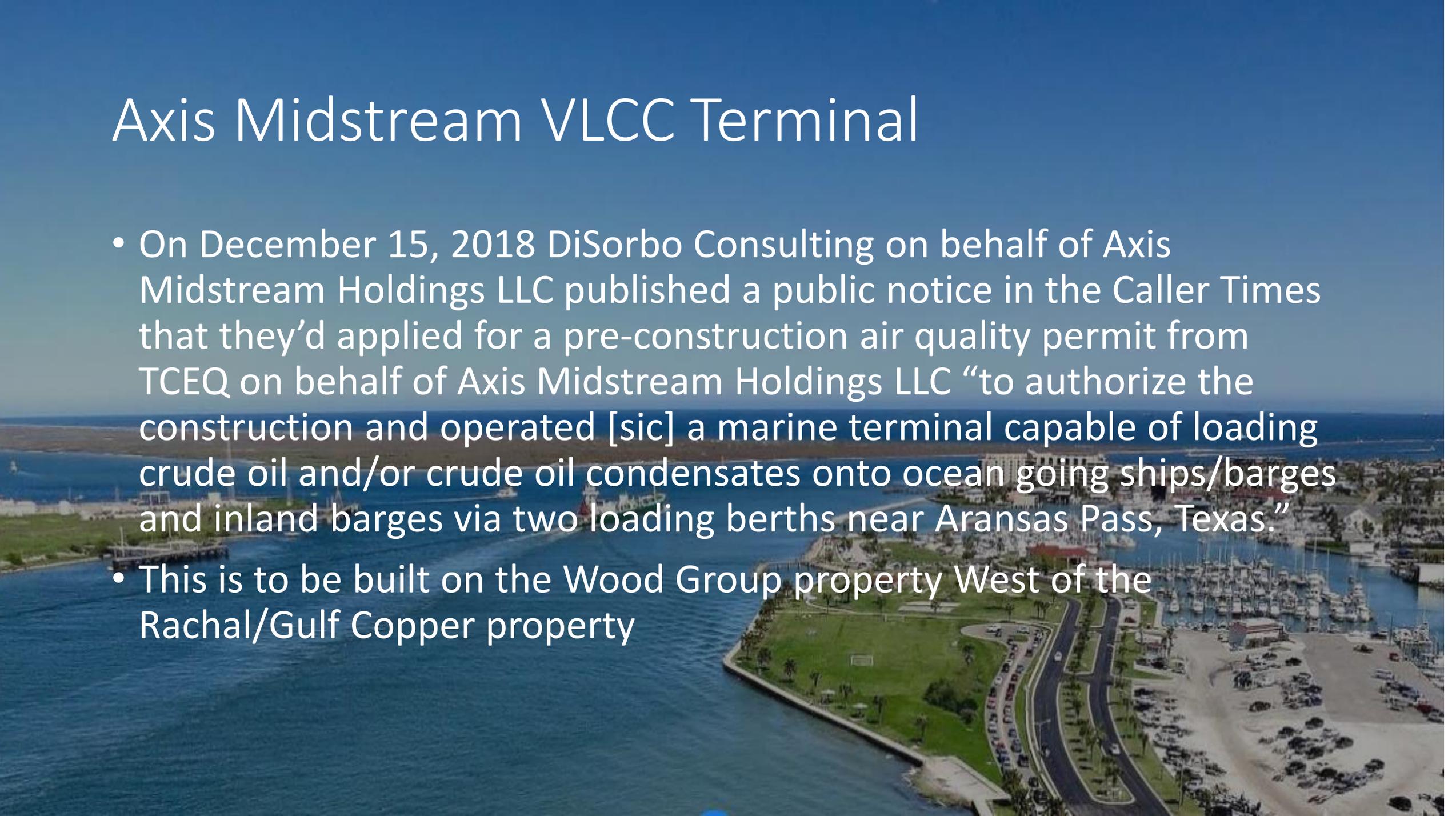


Axis Midstream VLCC TERMINAL



Axis Midstream VLCC Terminal

- On December 15, 2018 DiSorbo Consulting on behalf of Axis Midstream Holdings LLC published a public notice in the Caller Times that they'd applied for a pre-construction air quality permit from TCEQ on behalf of Axis Midstream Holdings LLC "to authorize the construction and operated [sic] a marine terminal capable of loading crude oil and/or crude oil condensates onto ocean going ships/barges and inland barges via two loading berths near Aransas Pass, Texas."
- This is to be built on the Wood Group property West of the Rachal/Gulf Copper property



Axis Midstream VLCC Terminal



Magellan Midstream VLCC TERMINAL



Magellan Midstream VLCC Terminal

- Magellan Midstream Partners LP “is considering a potential export terminal on Harbor Island in Corpus Christi, Texas, capable of loading VLCCs.”—Oil & Gas 360, November 2, 2018
- Magellan is reportedly investigating a site on Gulf Copper property
- CEO “said the company is early in the development process of the project, but that there would be enough space for a significant amount of storage and docks that could handle two VLCC tankers.”— Caller-Times, November 2, 2018



Magellan Midstream VLCC Terminal

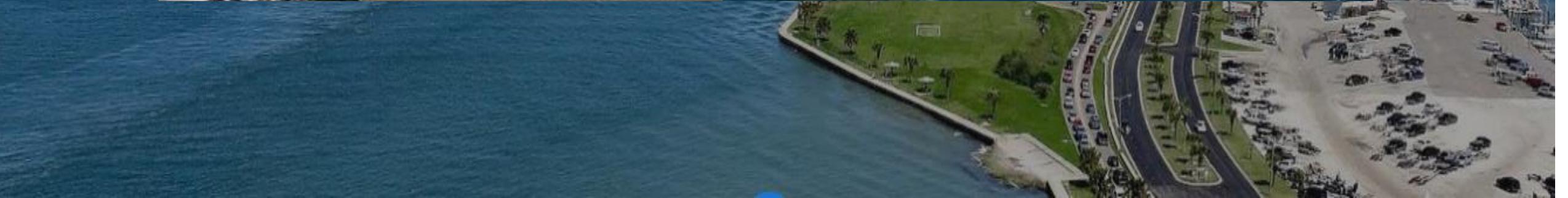
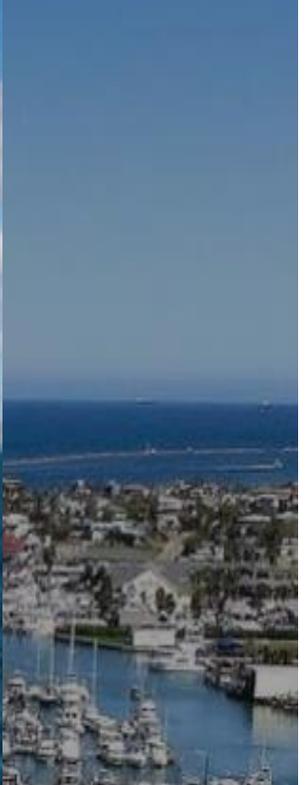


Alternatives

“ 6.17 Offshore facilities. Offshore terminals have been developed in many parts of the world for loading and unloading crude oil and other bulk materials. *Pipeline transshipment to shore is generally more economical than dredging close to shore, and reduces harbor congestion.*” —Army Corps Deepport Environment Impact Statement, 1978, pp. 249-250.



Onshore vs Offshore Terminals



Offshore Terminals—LOOP



Louisiana Offshore Oil Port (LOOP)

- For over three and a half decades, LOOP has safely and successfully received, stored and delivered more than twelve billion barrels (1.91 billion m³) of crude oil to U.S. refineries while protecting the communities and natural environment of southern Louisiana. *There have been no major oil spills at LOOP since operations began in 1981.*
- Originally built for import, *LOOP has successfully loaded VLCCs for export—recently 3 in 7 days*
- The port consists of three single-point mooring (SPM) buoys located 18 miles offshore; storage is 25 miles inland
- Set up offshore to avoid massive dredging to Louisiana coastal marshes

Offshore Terminals—LOOP Safety Features

- A **real time computer based leak detection system** capable of identifying the size and location of any leak in terms of leak rate, barrels lost and location
- **Periodic in line inspections** of its crude oil pipeline utilizing a “Smart Pig”
- **Weekly integrity checks by divers** of marine hoses
- **Weekly overflights** for visual inspections of the pipeline corridor
- **Visual inspections within the pipeline** using a robotic system with remote video monitoring capabilities
- **Maintaining an array of oil containment, recovery and remediation equipment** capable of responding to an incident or oil release
- **Working closely with federal, state and local agencies** during annual drills and throughout the year to integrate resources and plan responses to theoretical accidents

Proposed Texas Offshore Terminals

- **Houston**: Enterprise Products Partners has started front-end engineering and design (“FEED”) for an offshore terminal
- **Freeport**: of Enbridge Inc., Kinder Morgan Inc., and Oiltanking plan for two offshore monobuoys each of which can load a VLCC. Completion est’d in 2020.
- **Corpus Christi**: Trafigura plans a single monobuoy to load VLCCs
- **Brownsville**: JupiterMLP LLC has started engineering, permitting and design for a project known as the Jupiter Offshore Loading Terminal (JOLT) six miles off the coast of Brownsville where it can service VLCCs.

Fact Checking PCCA's Objections to Offshore

1. "Less flexible in accommodating different grades of crude"
2. Adding capacity would be expensive
3. "More safety and spill risks"
4. "More hoteling and pumping emissions"
5. "No beneficial use of dredge materials"

1. You're only going to be exporting West Texas Intermediate (WTI)
2. Adding berths on Harbor Island is a non-starter
3. Far greater risk from a spill next to an estuary than 12 miles offshore
4. It's possible to keep such emissions offshore
5. A small price to pay for avoiding dredging 38.8 million cubic yards of sand and clay and dumping them on our beaches

Inshore vs Offshore Terminals

Inshore

- Extreme tides
- Close proximity to fragile estuaries and larvae/fish transport channels into bay
- Spill seconds away from estuaries, impossible to clean up
- Huge impacts from dredging and management dredging
- Location in highly congested area: ferries, ships, barges and recreational vessels
- Proximity to wildlife and endangered species
- Port A becomes less desirable

Offshore

- Currents 10 times slower than inshore rip tides
- Miles away from fragile estuaries
- No dredging, no congestion
- LOOP safety record—it works!
- Easy access to any spill
- Barrier islands are Mother Nature's booms!
- Ship safety
- Federal oversight



Economy *and* Ecology

- The Port Aransas Conservancy wants to be perfectly clear that *we're not anti business, we're pro environment*. We support the Port of Corpus Christi's goal of increasing America's energy independence and bringing more jobs to the area. But our goal is to see this achieved with as little environmental disruption as possible—which is why *we far prefer an offshore oil export terminal instead of the environmental and—for Port Aransas—probable economic disaster that PCCA's proposed onshore terminal would entail*.



Port Aransas Conservancy

Questions?

