

# Bolivar Ferry Beneficial Use Site: An Overnight Success after 16 years



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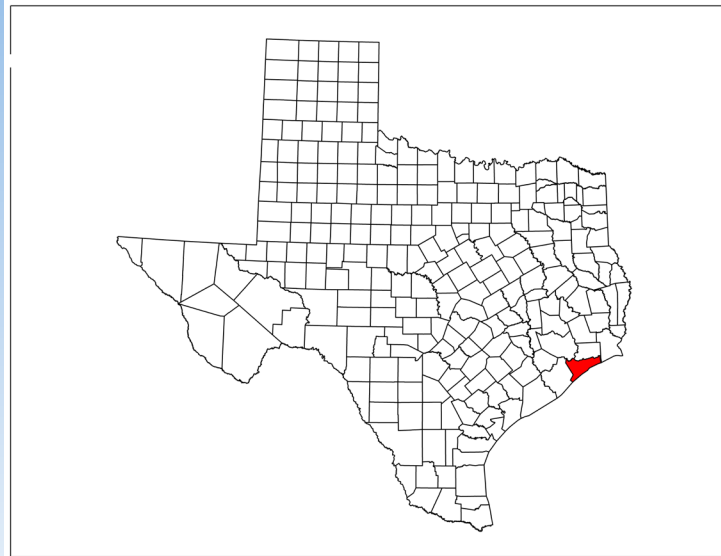
April 16, 2024

2024 SAME Water Workshop



# TxDOT Galveston-Bolivar Ferry

- TxDOT operates ferry service
- Harbor requires annual dredging
- 350,000 CY annually
- Challenging to find a Dredge Material Placement Area (DMPA)





# Dredge Placement Areas





1954 - 2019





## Permitting: NMFS, USACE, & USFWS

- TxDOT determined that this preferred Beneficial Use Site required approvals from both the United States Fish & Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS).
  - Consultation under Section 7 of the ESA with the USFWS was required due to potential impacts to nesting sea turtles.
  - Consultation with the NMFS under the Magnuson-Stevens Act was required due to mitigation for the loss of Essential Fish Habitat.



# The Endangered Species Act (ESA)

- The Endangered Species Act establishes protections for fish, wildlife, and plants that are listed as threatened or endangered; provides for adding species to and removing them from the list of threatened and endangered species, and for preparing and implementing plans for their recovery; provides for interagency cooperation to avoid take of listed species and for issuing permits for otherwise prohibited activities; and provides for cooperation with State.
  - Enforced by the USFWS and National Marine Fisheries Service (NMFS).
  - Two sections:
    - Section 7 of the ESA deals with consultations with both agencies.
      - » Either informal (May Effect – Not Likely to Adversely Effect) or formal (Adverse Effects/Take).
    - Section 10 of the ESA deals with Incidental Take permits for prohibited activities.

# Permitted BU Site

- Adjacent to Bolivar Ferry Landing

- 125 acres total
- 46 acres of beach
- 16 acres of intertidal flat
- 63 acres of tidal marsh



# Comparison

Beneficial Use Site 1	Placement Area 41
Dedicated for TxDOT use only	USACE Control and can be used by others
Adjacent to the Ferry Harbor	5 Miles from the Ferry Harbor
Used in 2020, 2021, 2022	Used in 2014 and 2017
\$6 per CY*	\$11 per CY
Results in annual saving of \$3M for typical dredge event	

\*Costs based on 2020 dredge event only



# Project Progress 2017-2023



- TGLO Lease Granted in 2019
- Used in 2020, 2021, 2022, and 2023
- Created 46 acres of beach
- Marsh currently being designed



2020







2020

2019



2022



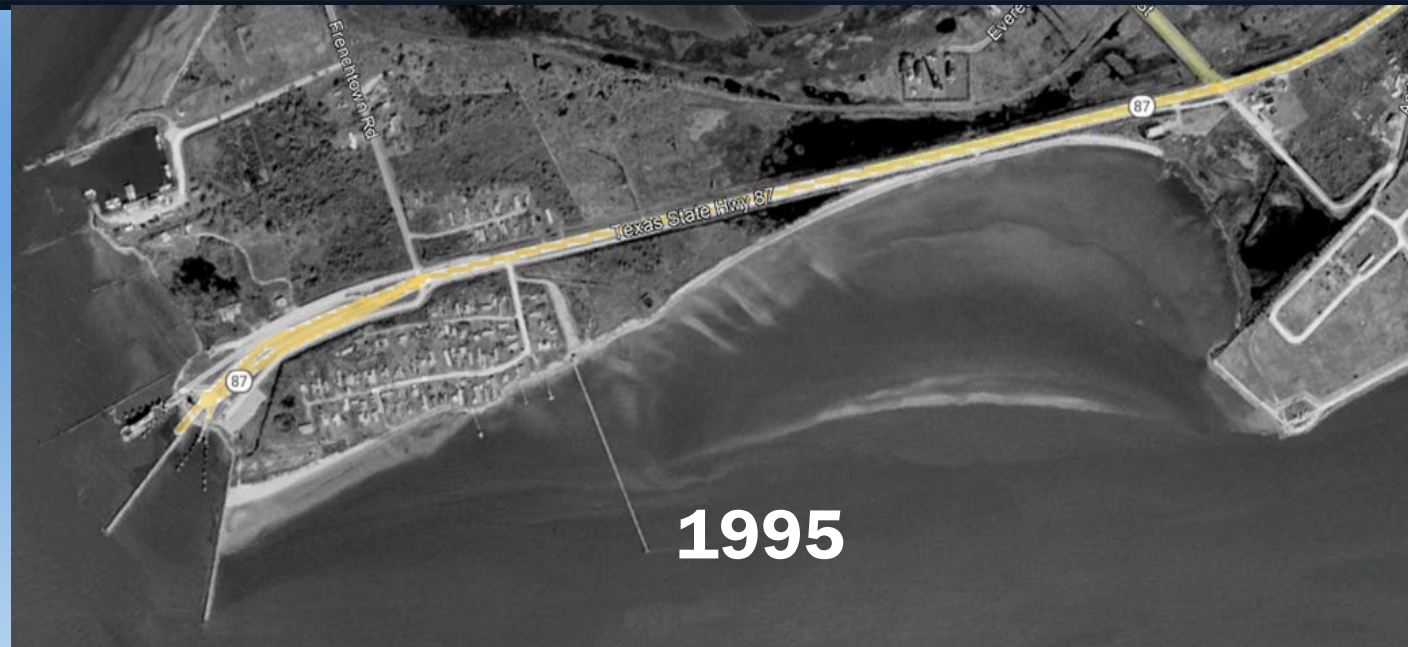


2023



# Benefits

- Cost Savings
- Protect SH 87 and TxDOT Infrastructure
- Reverse Decades of Erosion
- TxDOT can control its own placement area
- Recreation
- Habitat Creation





# Birds Observed Using the BU Site



American Oystercatcher



Reddish Egret



Semipalmated Plover



Herring Gull



Sanderling



Willet



Black-bellied Plover



Least Sandpiper



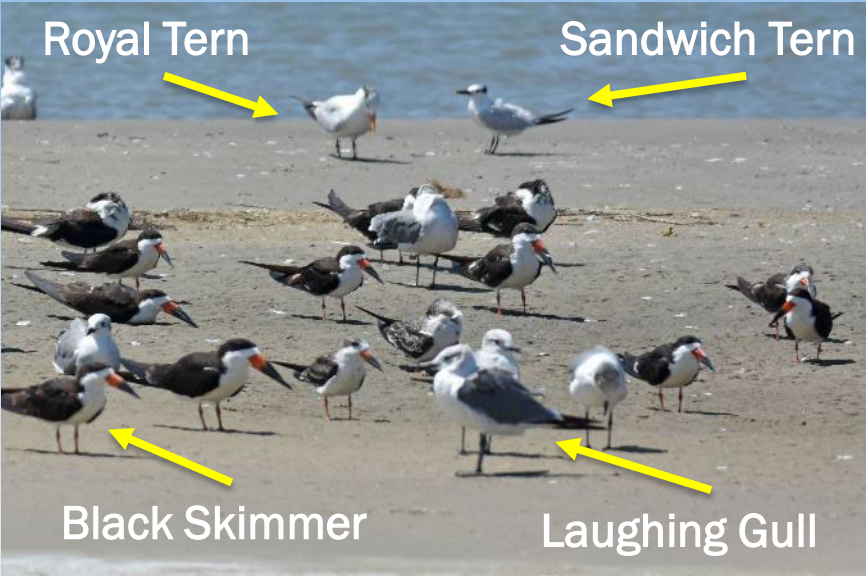
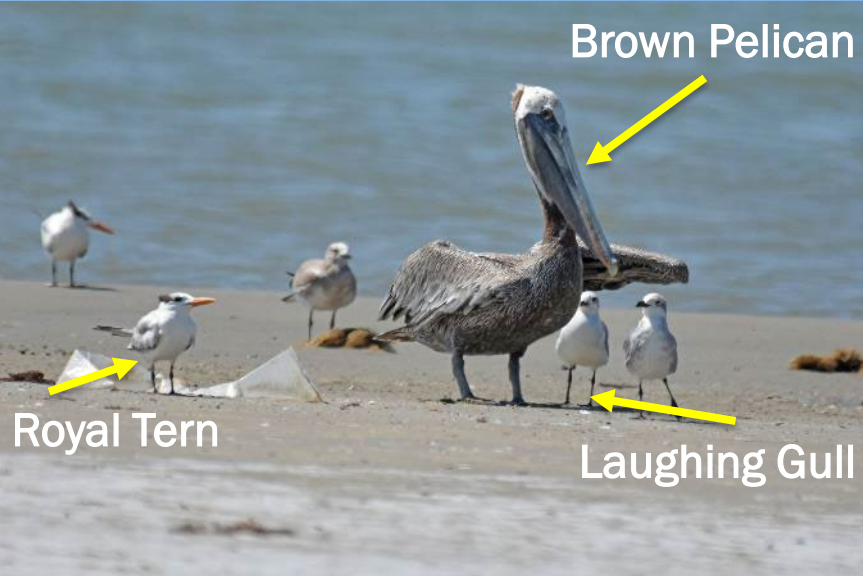
Ruddy Turnstones



Snowy Plover



# Birds Observed Using the BU Site (Cont.)



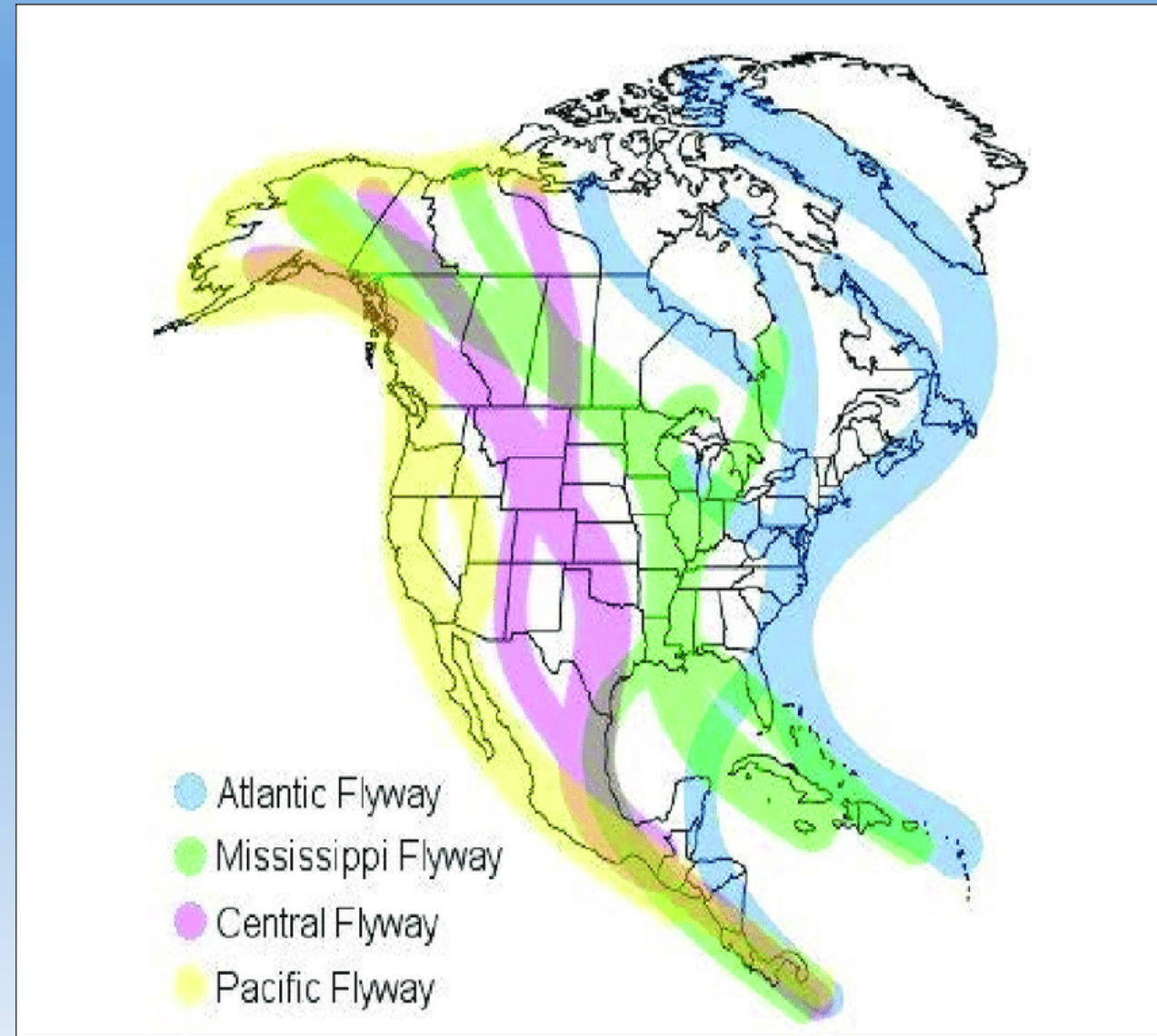


# Build it and They Will Come: A Success Story With a Twist

- Current USACE Section 404 Standard Permit (SP) Dredge Window: May Through July (60 days)
  - Dredge window during sea turtle nesting season.
    - Triggers Endangered Species Act (ESA) Compliance.
  - Migratory birds have been documented breeding prior to last dredge cycle.
    - Migratory birds are protected under the Migratory Bird Treaty Act (MBTA).
      - Migratory bird nesting season runs from February 15 – September 30.
        - » Project now required to comply with the MBTA Act.

# The Migratory Bird Treaty Act (MBTA)

- The Migratory Bird Treaty Act (MBTA) prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service.
- Migratory bird nesting season is generally from February 15 – September 30<sup>th</sup>.
- Two types of take: Purposeful and Non-purposeful.
  - Non purposeful take includes harassment of birds to the extent that they abandon an active nest.





# New Project Challenge: Breeding Birds & the MBTA

- This project has been such a success that dunes are starting to naturally form on the earliest dredge placement areas.
    - Birds are using this new habitat to breed.
    - Migratory Wilson's Plover and Least Terns have been documented breeding as well as resident Killdeer (*Charadrius vociferus*).
      - Wilson's Plover occur in this area from March through September.
      - Killdeer occur in this area year round.
      - Least Terns occur in this area from Mid-March through early October.
- » These species are protected under the MBTA.



# Current USACE Section 404 SP Dredge Window and Its Challenges

- The current dredge window in the verified USACE Section 404 SP for this project is May through July (60 days).
  - This is squarely within sea turtle nesting season and the MBTA nesting season.
  - This project is required to comply with both the ESA and the MBTA.
    - » To comply with the MBTA the corridor the dredge pipe would be placed in would have to be negotiated and field verified by the USFWS and the corridor and dredge placement area will need to be monitored daily by a competent professional biologist.
    - » The risk for take is very high due to the immobility of the eggs and nestlings.



# New Dredge Window and its Effect on Project Execution

- Would put the dredge window outside of sea turtle and MBTA nesting season.
  - Project would still have to comply with the MBTA, however at this time the nestlings of protected migratory species have fledged and can forage for themselves and are very mobile. All nesting activities should have ceased and there should no longer be any active nests.
    - The risk for take under the MBTA is significantly diminished.
- Provides for a longer dredge window.

# New Constraints

- The new dredge window could affect additional federally listed species under the ESA.
  - Piping Plover occurs from August through April.
  - Red Knot occurs from March through May and August through October.





# Pros and Cons for New Dredge Window

## ■ Pros:

- Would not be during sea turtle or the MBTA nesting season.
  - Sea turtle monitoring would no longer be required.
  - Consultation with the USFWS for dredge pipe location would no longer be required.
- Less risk for adverse effect and/or take to federally listed species and MBTA protected bird species.
- Provides for a longer dredge window.

## ■ Cons:

- BMPs/VCMs for avoidance or minimization of effects to Piping Plovers and Red Knots are more rigorous than for the sea turtles.

## Next Steps (Cont.)

- Dredging planned for 2024
- Marsh Creation planned for 2025
- Additional BU sites or upland placement areas added to USACE permit
- Continue to use BU site every 5-7 years



# Project Timeline



**2007**

TxDOT Began  
Evaluating Beneficial  
Use Sites

**2010**

Beneficial Use  
Site included in  
Standard Permit

**2017**

Standard Permit  
re-verified

**2019**

TxDOT Leases  
Land for  
Beneficial Use  
Site from the  
TGLO

**Mid  
2020**

First Dredge Cycle

**2023**

Standard Permit re-  
verified to change  
dredge window

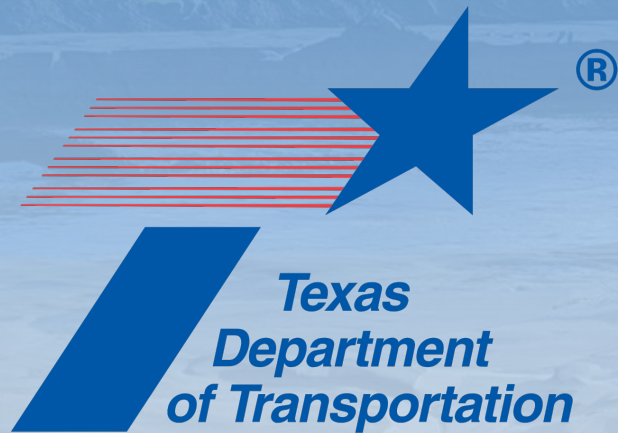
**2025**

Tidal Marsh  
Creation to  
begin

**2027**

Completion of  
Beneficial Use  
Site

# Project Progress



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