

**Cat 3 Storm Surge  
(Ike plus 15% wind speed)**

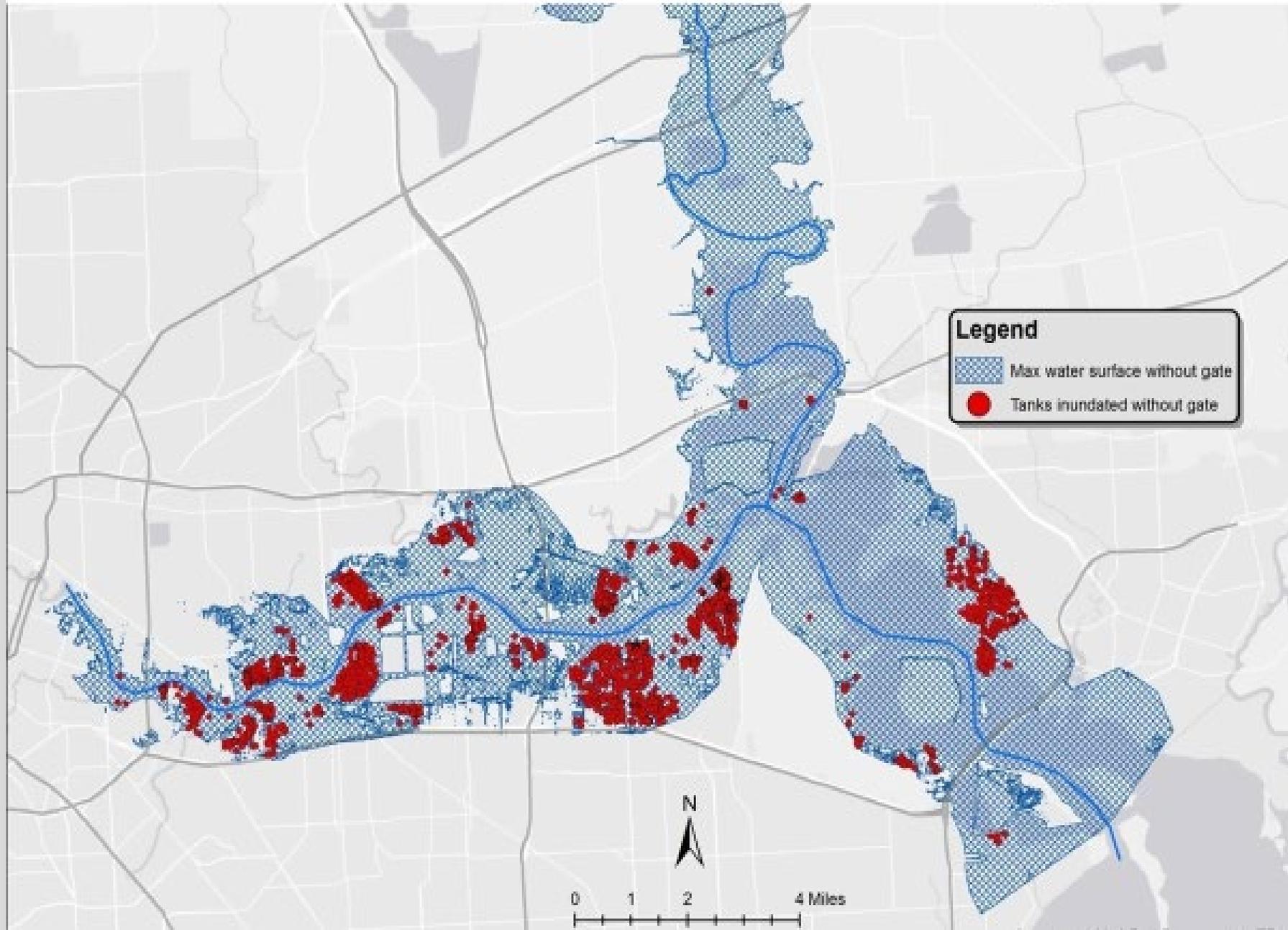
**Landfall San Luis Pass**

**25 Feet in Houston Ship  
Channel**

**Smaller Than Irma and Maria**

**Does Not Include Climate  
Change**

# Tanks At Risk From 25' Surge

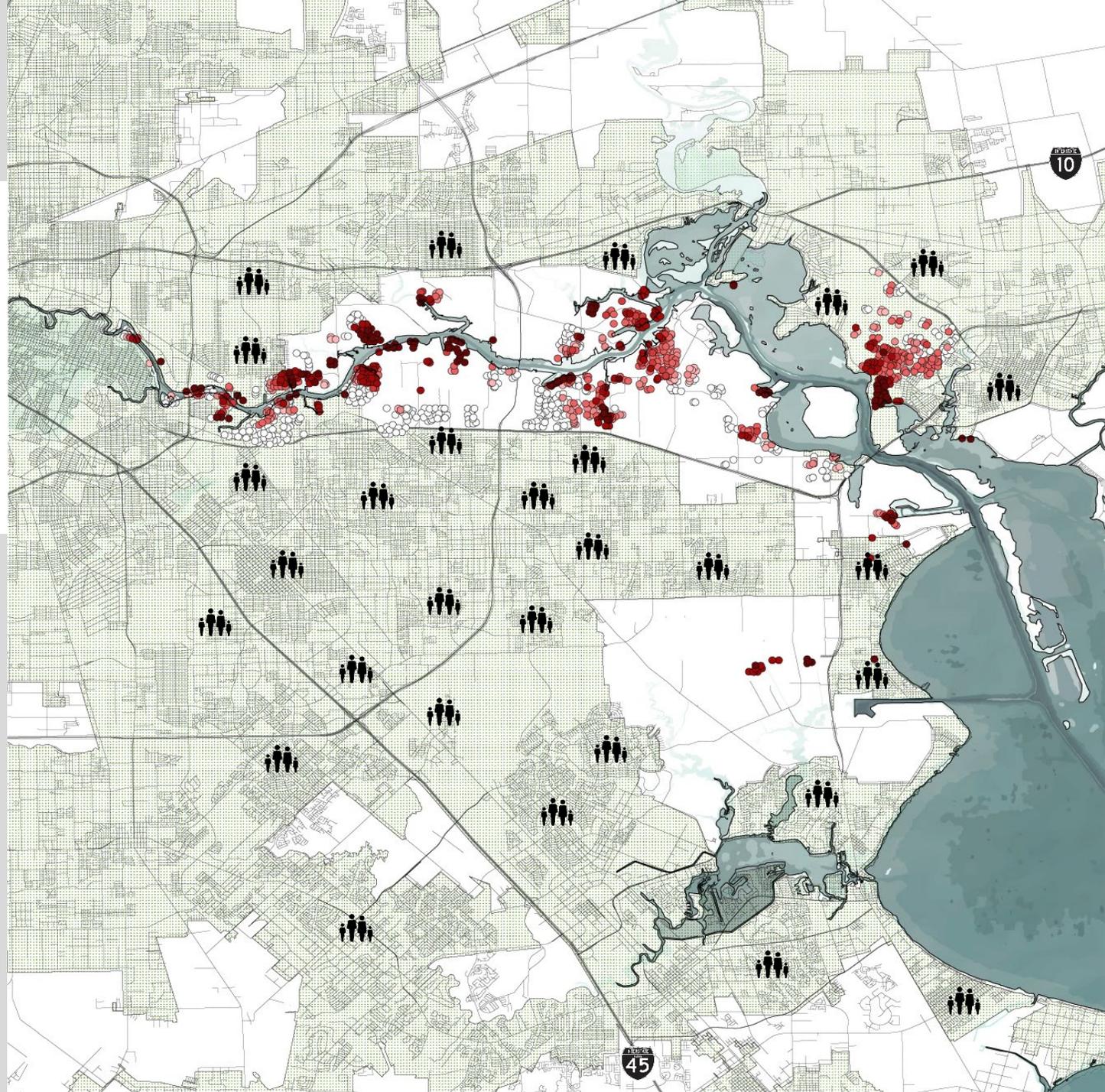


# Human Risk



BAYFRONT COMMUNITY & WORKFORCE HOUSING

EXAMPLE ASSESSMENT OF TANK FLOTATION FAILURE PROBABILITY:





# Galveston Bay Park Plan

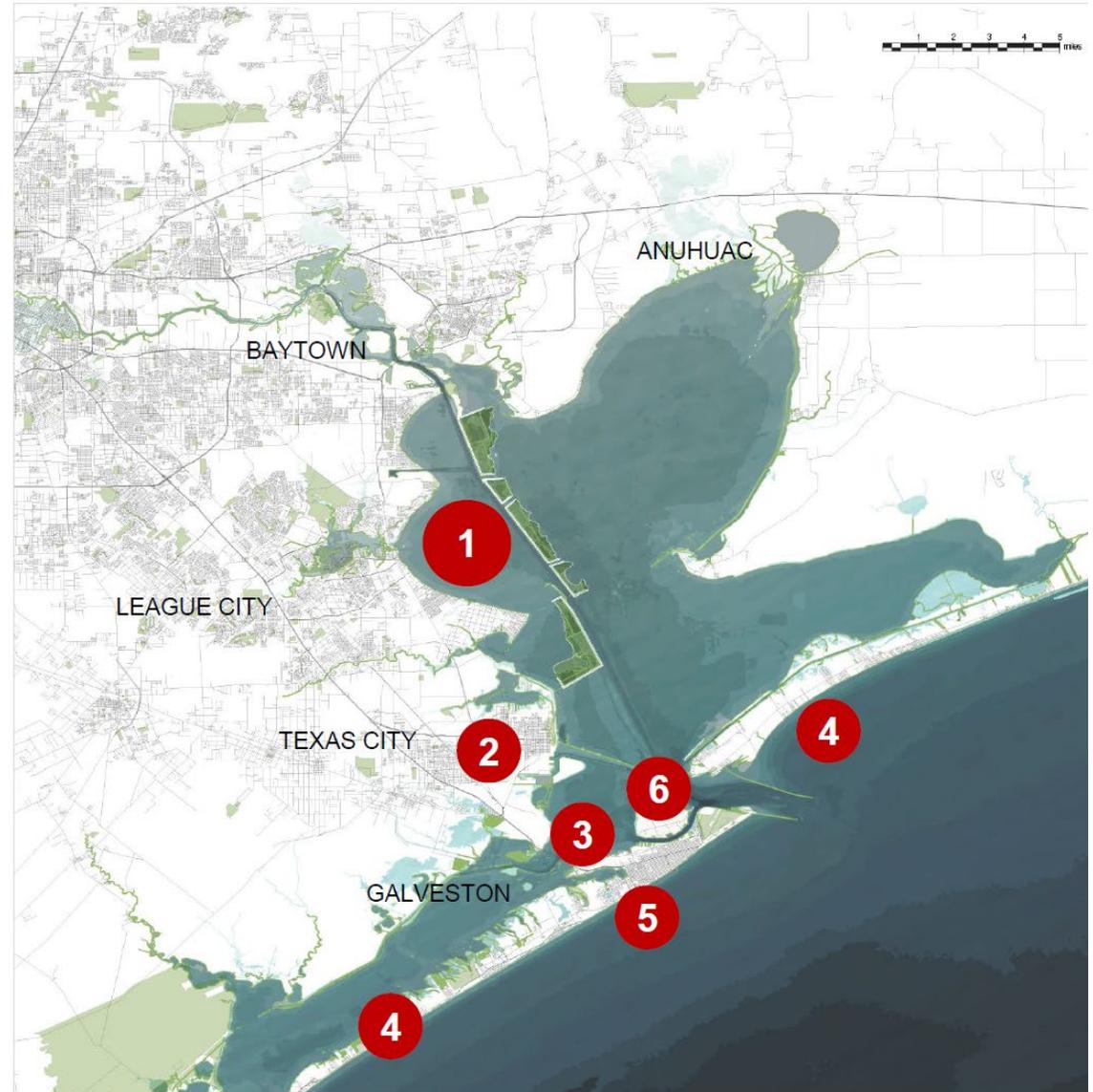


SSPEED Center

Severe Storm Prediction, Education, & Evacuation from Disasters Center

# Elements of the Galveston Bay Park Plan

- 1 Houston-Galveston industrial complex & West-side Protection to 25 Feet
- 2 Texas City Levee Raised to 25 Feet
- 3 Backside Levee around Galveston
- 4 Elevated FM 3005 and Highway 87 for Evacuation
- 5 Sand Nourishment for Beach
- 6 Possible Extension of Galveston Levee to Pelican Island



# Galveston Bay Park Plan

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- **Level of Protection** – 17 feet at City of Galveston, 25 feet at west side shoreline and Houston Ship Channel, exceeds current 100 year level of protection on west side by 10 feet

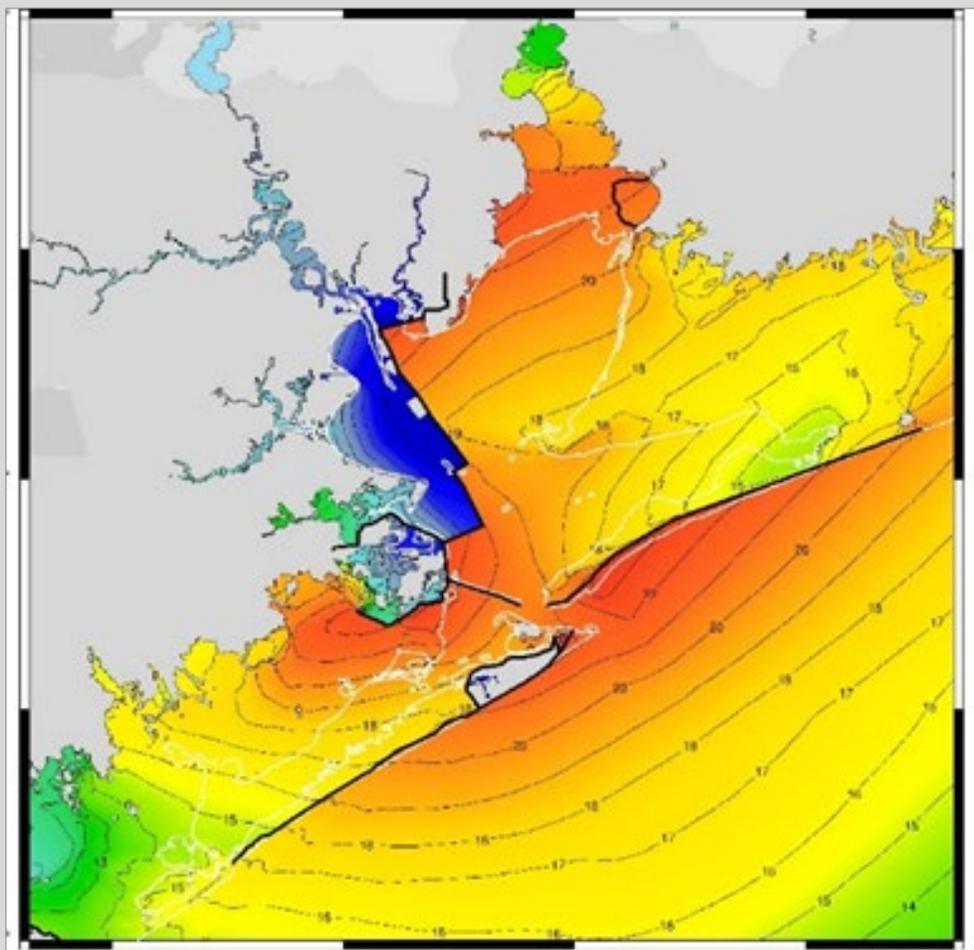


**WHY GALVESTON BAY PARK?**

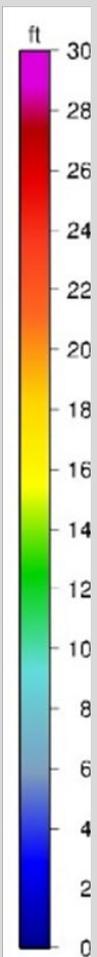
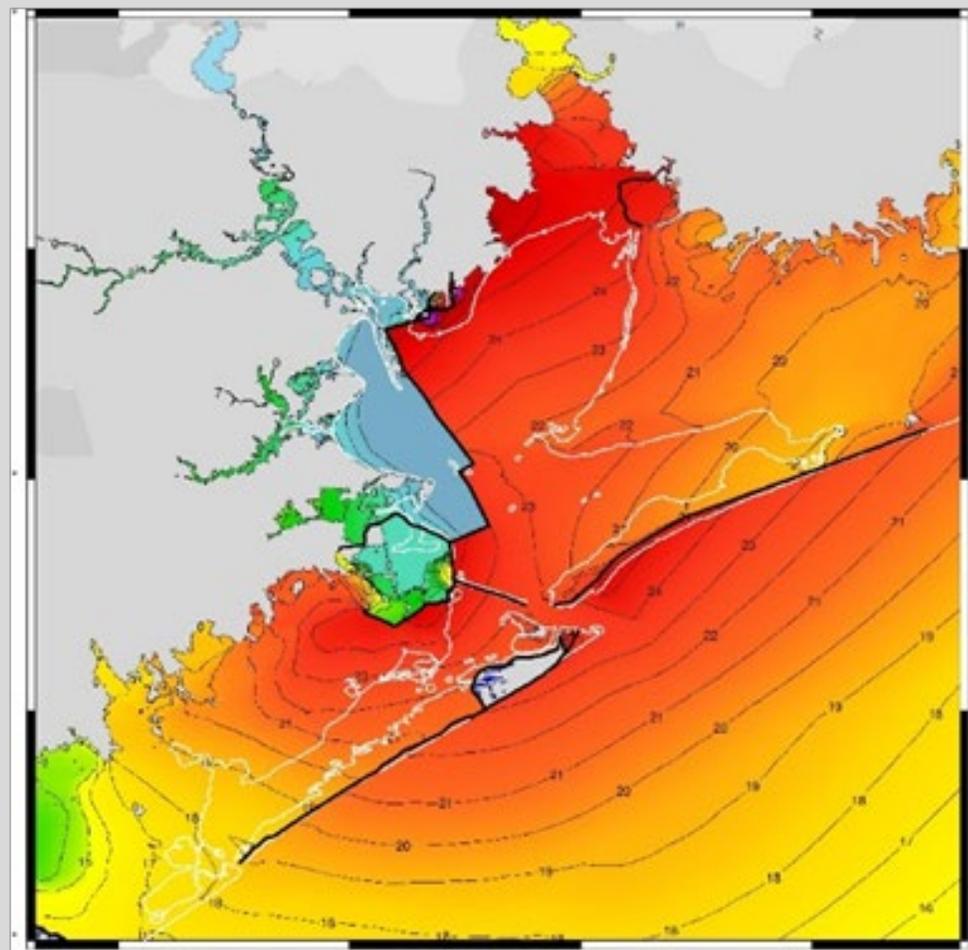
**Year Round Benefits**

**Navigation – Recreation – Protection – Ecology**

FEMA 36  
250-yr Storm  
(According to Pier 21 Data)

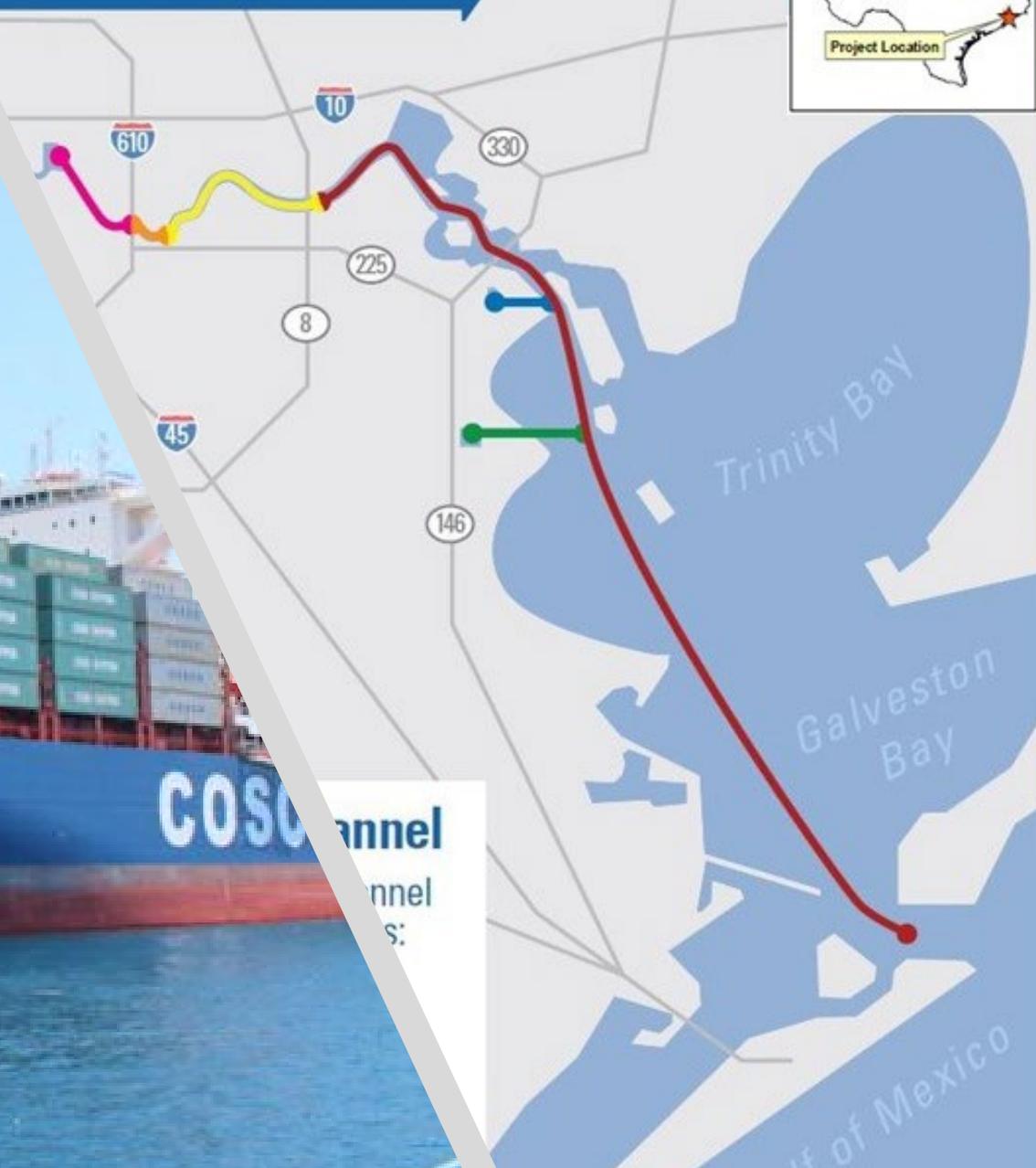


FEMA 36 + Relative  
SLR in 2085

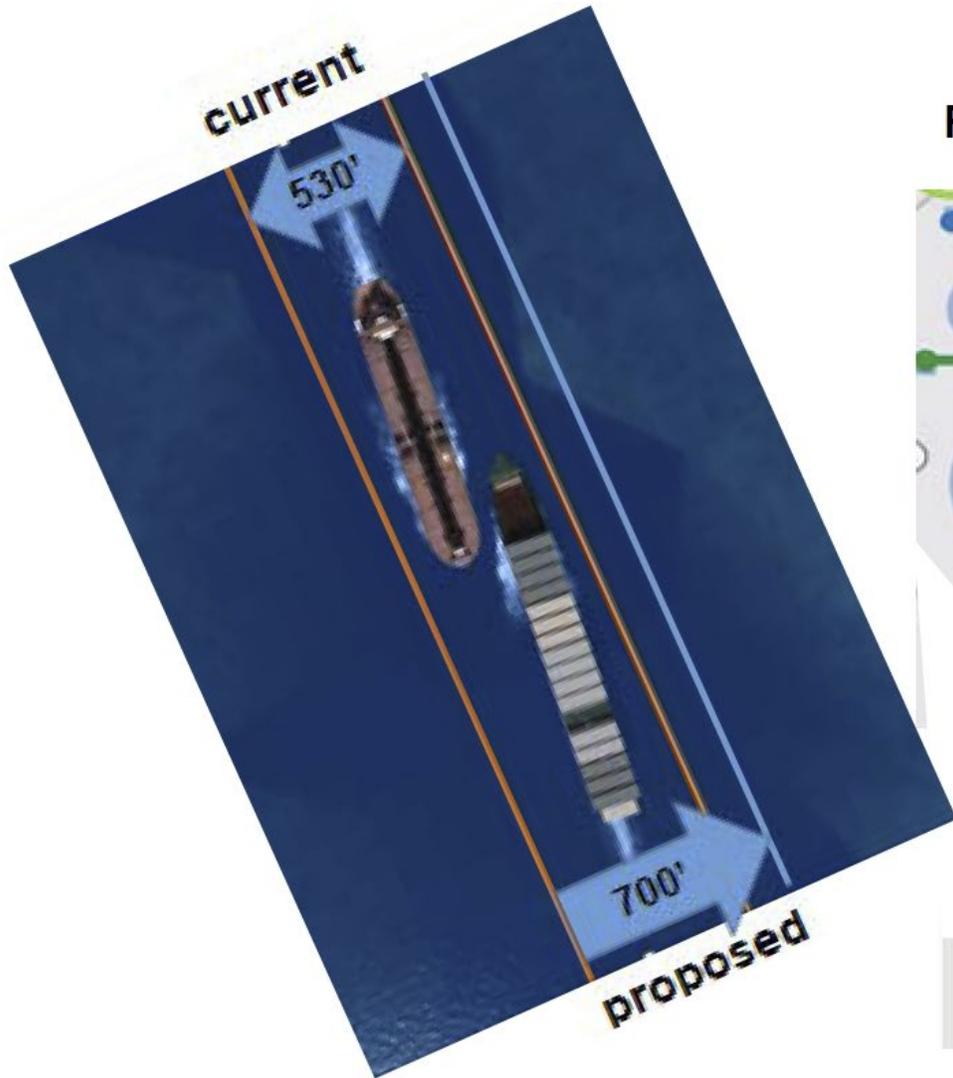




# The Study Area



Channel  
s:



### Federal Recommended Plan



**Widening is necessary for safety and efficiency**











Storm surge barrier in Delft, Netherlands



Seabrook Gate, New Orleans, LA

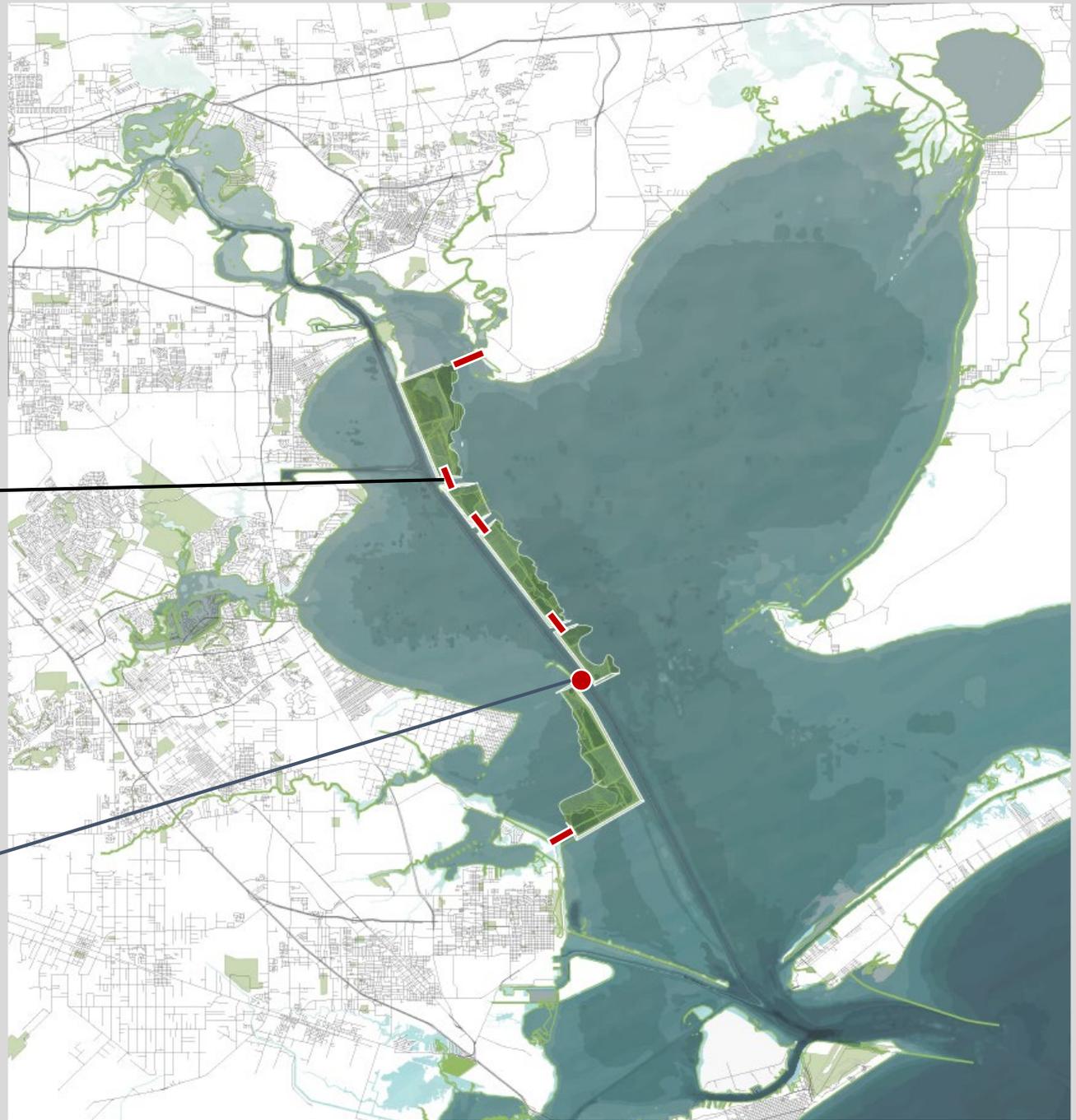
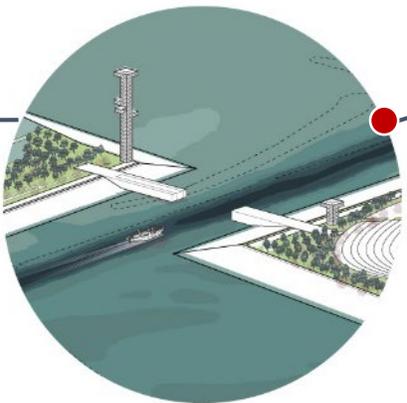
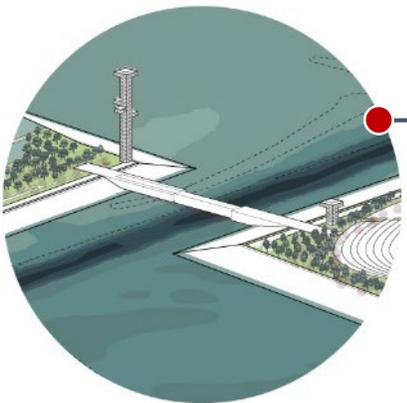
# TECHNOLOGY

LEVERAGE EXISTING TECHNOLOGIES

# Gates At Galveston Bay Park



- MAIN GATE
- MECHANICAL GATE





GATE HOUSE

EVENT/DINING

CAMPING

OBSERVATION  
TOWER

EVENT

MARINA

FISHING

CAMPING



Visualization of the type of park space that will exist on Galveston Bay Park

# **GALVESTON BAY PARK BELONGS TO THE PEOPLE**

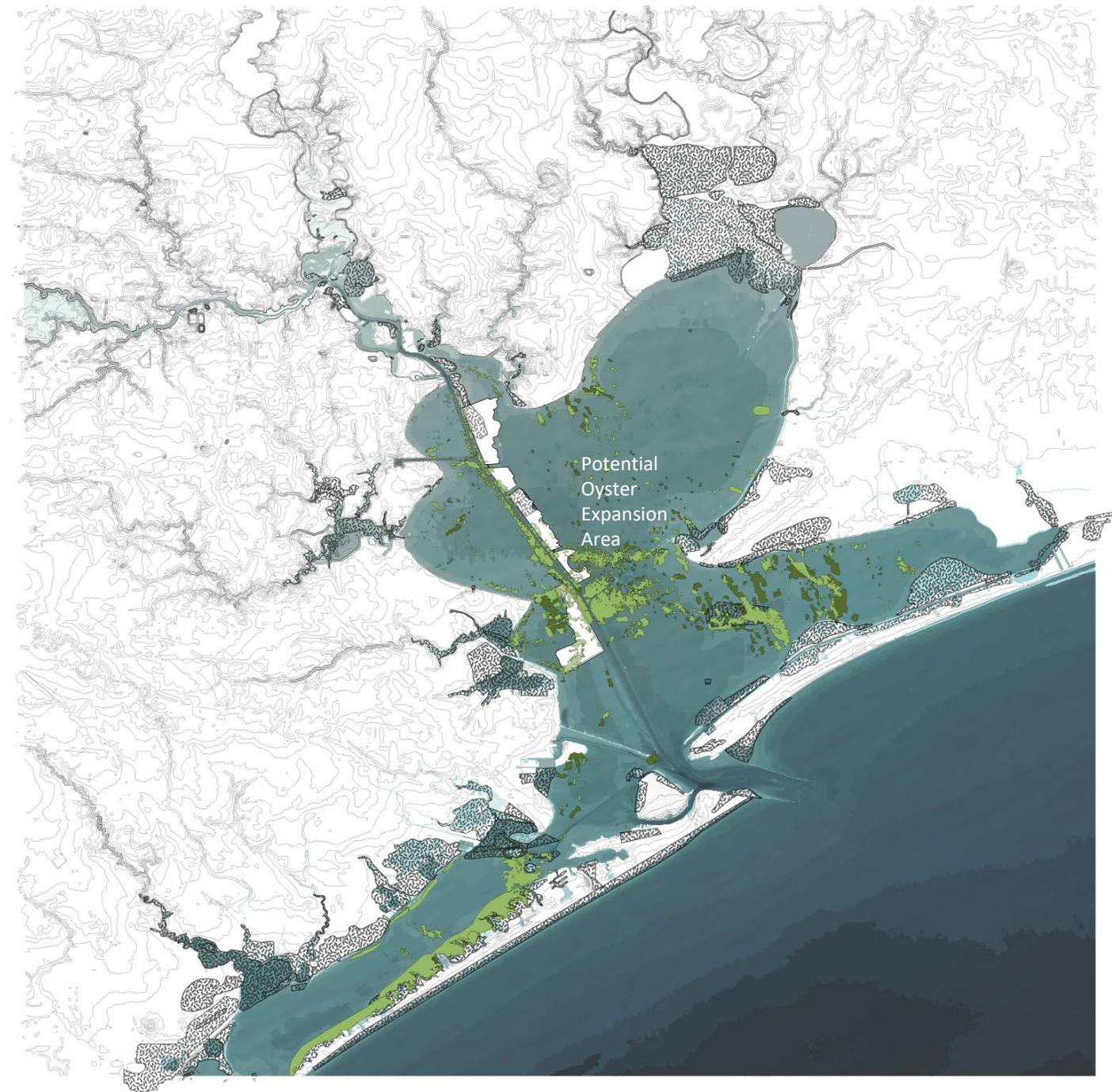
# Shared Cost Opportunities

- Highway Funds – Raising FM 3005 & SH 87
- Houston Ship Channel Maintenance Funds
- Potential Channel Widening
- Potential Land Leases for Recreational Use



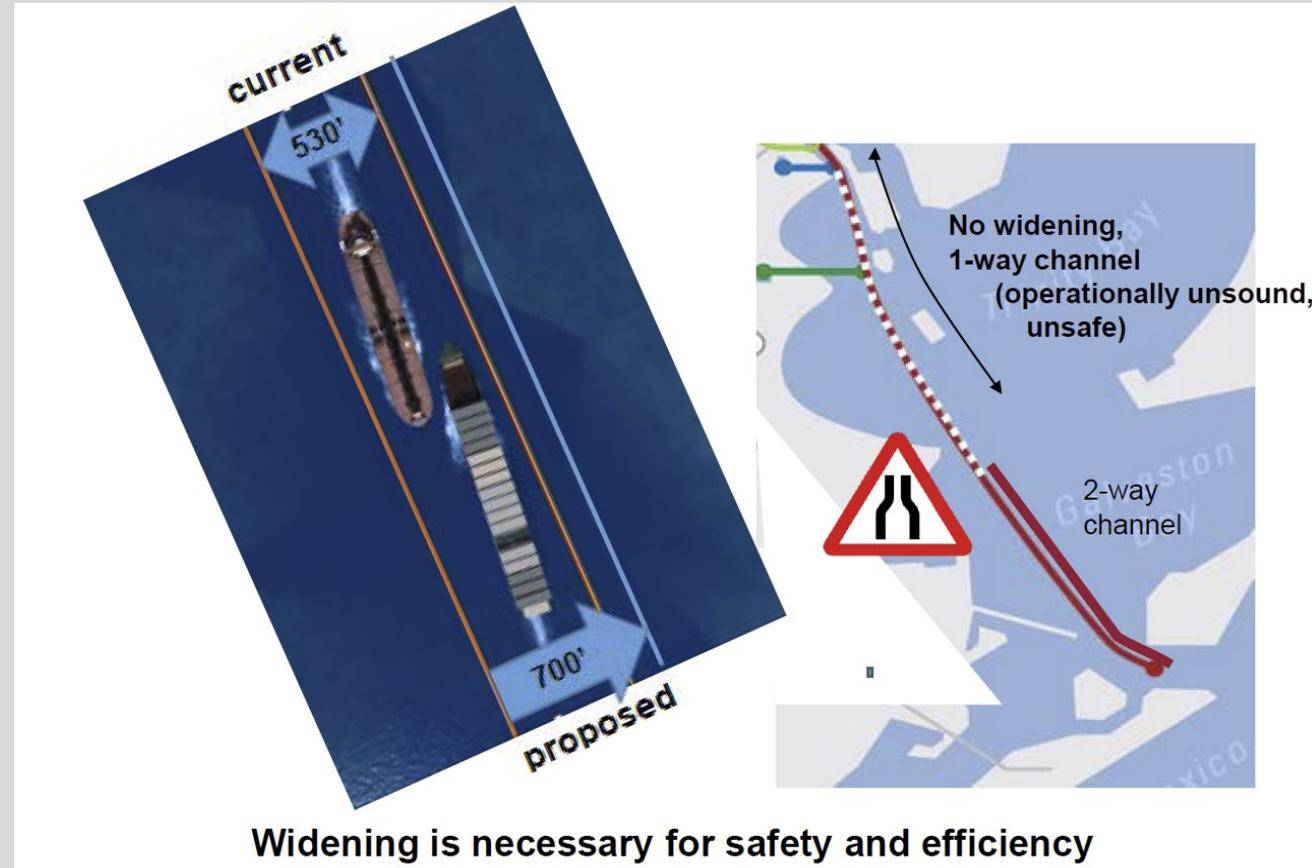
# Oyster Reef Mitigation/ Expansion

- CURRENT OYSTER REEFS
- HISTORIC OYSTER REEFS
- PRIORITY PROTECTION HABITATS



# Alternative Procedural Scenarios to Construct Galveston Bay Park Plan

- Prepare Feasibility Study Under Section 1043(a)(1) of WRRDA 2014 for Joint Hurricane Damage Abatement and Navigation Improvement Work
  - Not sure if provision has been utilized previously
  - Would involve multiple parties



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- Submit Separate Section 10 and Section 404 Permit Application along with necessary environmental clearance documents



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- **Endorsed By Bayou City Initiative citizens group**



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