**PROJECT GOALS & OBJECTIVES**

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**Goals**

**Coastal Storm Risk Management (CSRM)**
Develop and evaluate coastal storm damage risk reduction measures for coastal Texas residents, industries and businesses which are critical to the nation’s economy.

**Ecosystem Restoration (ER)**
Increase the net quantity and quality of coastal ecosystem resources by maintaining, protecting, and restoring coastal Texas ecosystems and fish and wildlife habitat.

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**Objectives**

- **Reduce economic damage** from coastal storm surge flooding to business, residents and infrastructure through 2085.
- **Reduce risk to critical infrastructure** (e.g. medical centers, government facilities, universities, and schools) from coastal storm surge flooding to the maximum extent practical and reduce emergency costs.
- **Reduce risk to public health and safety** from storm surge.
- **Increase the resilience** of communities, the economy, coastal ecosystems, and infrastructure, including existing coastal storm risk reduction systems, from sea level rise and coastal storm surge.
- **Enhance and restore coastal landforms** along Galveston Island and Bolivar Peninsula that contribute to reducing the risks of coastal storm surge damages.
- **Improve hydrologic connectivity** of area wetlands in the Texas-Louisiana coastal marshes, mid-coast barrier islands and coastal marshes.
- **Improve and sustain coastal marshes and bay shorelines** on barrier island and estuarine systems.
THE TENTATIVELY SELECTED PLAN (TSP)

Coast-wide system of ecosystem restoration and storm-risk management features

TSP supports the resilience of coastal communities and natural habitats in Coastal Texas

**Coastwide:**
Large scale ER features which focus on critical landscape features and areas of threatened biologically diverse ecosystems

**Lower Coast:**
CSRM Dune and beach restoration project on South Padre Island

**Upper Coast:**
CSRM surge barrier system to protect the Houston-Galveston Region (Coastal Spine)
OPTIONAL ALIGNMENTS

ALT A: COASTAL BARRIER

ALT B: MODIFIED BARRIER (TX CITY)

ALT C: MID-BAY BARRIER

ALT D1: UPPER BAY (SH 146)

ALT D2: BAY RIM
OPTIONAL ALIGNMENTS

ALT A: COASTAL BARRIER
ECOSYSTEM RESTORATION MEASURES IN REGION 1

G28
Bolivar Peninsula and West Bay GIWW Shoreline and Island Protection

B12
Bastrop Bay, Oyster Lake, West Bay, and GIWW Shoreline Restoration

G5
Bolivar Peninsula/Galveston Island Gulf and Beach Dune Restoration

Follets Island Gulf Beach and Dune Restoration
ANTICIPATED RELATIVE SEA LEVEL CHANGES

Upper Texas Coast
Break Point in Sea Level Change (about 3.5 feet)

Year 2300 (Low)
Year 2130 (Intermediate)
Year 2075 (High)
COASTAL STORM RISKS

Present Day

With Sea Level Rise
PLAN EVALUATION & COMPARISONS

Without Project

Max. Water Surface Elevations (Run_0356_CTX41E01)

Plan A: Coastal Barrier

Max. Water Surface Elevations (Run_0356_CTX01P01A)
TSP TOTAL PROJECT COST

Estimated total cost for TSP:
$23B - $32B

- **Lower Coastwide CSRMeasures**
  - South Padre Island (Reaches 3 & 4) = $71.6M – $83.1M

- **Upper Coastwide CSRMeasures**
  - Alternative A (Coastal Barrier) = $14.2B – $19.9B

- **Coastwide ER Measures**
  - ER (Alt 1-2) = $8.9B – $11.9B
ENVIRONMENTAL IMPACTS & MITIGATION

• Direct Impacts
  Alt A (TSP): 4,525.3 acres
  South Padre: 365.8 acres

• Indirect Impacts:
  • Altered tidal exchange
  • Reduced velocities in Galveston Bay

• Ecosystem Restoration Benefits
  • 160,000 acres of marsh, islands, dunes, beaches & oyster reefs

TOTAL MITIGATION COST RANGE:
$676 M – $906 M
Based on public comments we are now:
- Evaluating moving the barrier to the beach and re-aligning the Galveston ring barrier
- Exploring the utility of gates Clear Creek and Dickinson

In addition:
- We have met with Rice University (SSPEED Center) & Texas A&M at Galveston to understand the differences between the proposals
- GLO is establishing Community Working Groups

Over the remaining study process we will:
- Host an International Gate Design Workshop
- Conduct additional storm modeling
- Evaluate non-structural measures on the west side of upper Galveston Bay
- Continue Natural Resource Agency coordination
- Evaluate a second Public Review and comment period
WHERE WE ARE IN THE STUDY PROCESS

- **Identify Problems & Opportunities**
- **Scoping**
- **Alternatives Formulation**
- **Draft Report**
- **Recommend Plan**
- **Final Report**

**SCOPING**
- Identify Problems & Opportunities
- Get Public Input

**ALTERNATIVES FORMULATION**
- Identify Tentatively Selected Plan
- Conduct Analysis

**DRAFT REPORT**
- Complete Final Analysis
- Public Review & Comment

**RECOMMEND PLAN**
- Tentatively Selected Plan (TSP) May 2018
- Agency Decision Milestone (ADM) Apr 2019
- 2nd Release & Public Review?

**FINAL REPORT**
- Tentatively Selected Plan (TSP) May 2018
- Chief's Report Feb 2021
- Provide Recommendation to Congress
NEXT STEPS

ESTIMATED PROJECT SCHEDULE

STUDY

WE ARE HERE

Study Complete - Request Congressional Authorization for Project(s) 2021

DESIGN

2-5 Years AFTER Authorization (Estimated)

BUILD

10-15 Years Dependent on Congress (Estimated)

MAINTAIN

50+ Years (Project Life)

Local Sponsor(s) Maintain Project

Congressional Appropriations for Authorized Projects
The U.S. Army Corps of Engineers, in partnership with the Texas General Land Office, began an examination in November 2015 of the feasibility of constructing projects for coastal storm risk management and ecosystem restoration along the Texas coast.

The Coastal Texas Protection and Restoration Feasibility Study, also known as the Coastal Texas Study, will involve engineering, economic and environmental analyses on large-scale projects, which may be considered by Congress for authorization and funding.

The feasibility study and report will be complete in 2021. The Coastal Texas Study recommendations will enhance resiliency in coastal communities and improve our capabilities to prepare for, resist, recover and adapt to coastal hazards.