



# The Texas Coastal Erosion Response Program in 2007: Highlights and a Look Forward

Presented by Lorrie Council, P.G., Coastal Protection Division

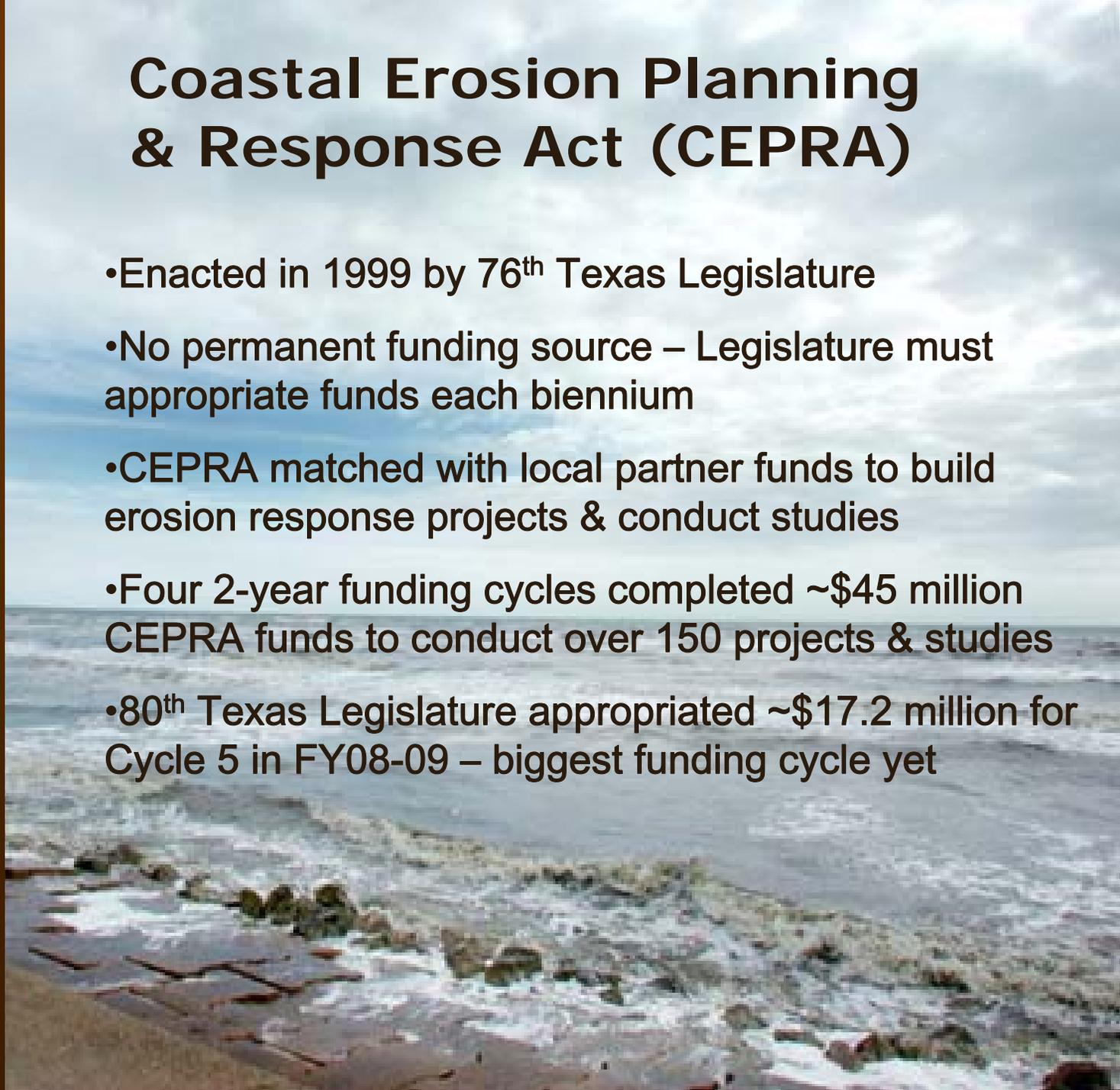
Texas General Land Office Commissioner  
Jerry Patterson





# Coastal Erosion Planning & Response Act (CEPRA)

- Enacted in 1999 by 76<sup>th</sup> Texas Legislature
- No permanent funding source – Legislature must appropriate funds each biennium
- CEPRA matched with local partner funds to build erosion response projects & conduct studies
- Four 2-year funding cycles completed ~\$45 million CEPRA funds to conduct over 150 projects & studies
- 80<sup>th</sup> Texas Legislature appropriated ~\$17.2 million for Cycle 5 in FY08-09 – biggest funding cycle yet





# CEPRA Projects

- Beach Nourishment min. 25% match required
- Dune Restoration min. 25% match
- Shore Protection min. 40% match
- Wetlands Restoration min. 40% match
- Beneficial Use of Dredged Materials (match dependent on type of project)
- Structures & Debris Removal project-specific match set by Commissioner
- Innovative technology/demonstration projects min. 40% match required





# Beach Nourishment

- Most CEPRAs projects have been limited beach “veneers” due to small budgets and scarce sand resources
- Gulf and bay beaches nourished along coast
- Many projects involved upland sand source & truck hauling
- Exceptions are beneficial use of dredged material projects w/ USACE during channel maintenance (South Padre Island & Rollover) & Packery Channel construction
- To date, few long-term sources of beach quality sand have been identified & permitted to support large-scale beach restoration projects





# Dune Restoration

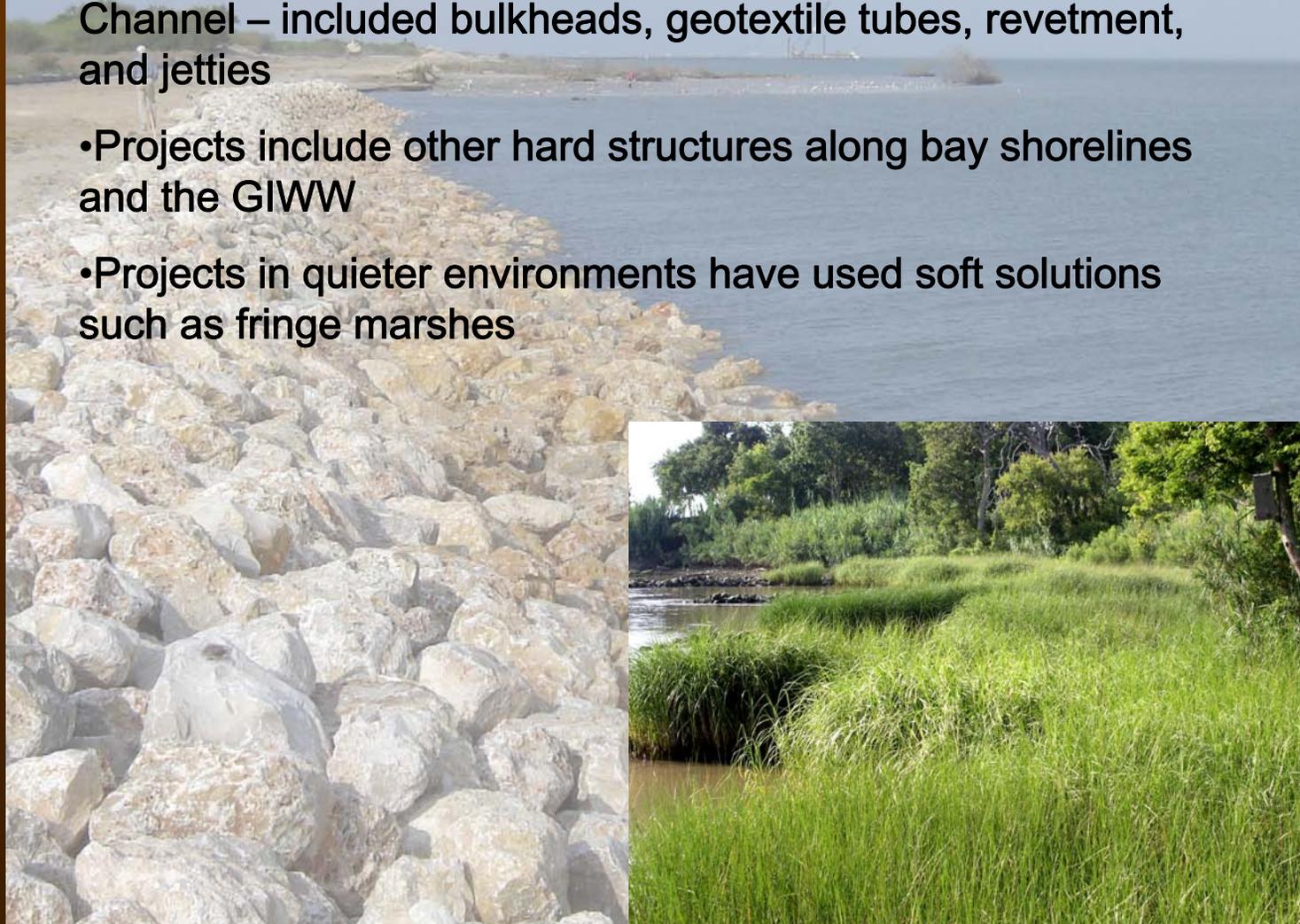
- Dune restoration projects constructed at McFaddin Beach, Jamaica Beach & Quintana Beach
- Dunes also installed as a component to beach veneer and nourishment projects at South Padre Island & West Galveston Island
- Restoring dunes is a program priority





# Shore Protection Projects

- Largest shore protection project conducted in four phases at Port Aransas Nature Preserve along the Corpus Christi Ship Channel – included bulkheads, geotextile tubes, revetment, and jetties
- Projects include other hard structures along bay shorelines and the GIWW
- Projects in quieter environments have used soft solutions such as fringe marshes





# Wetlands Restoration

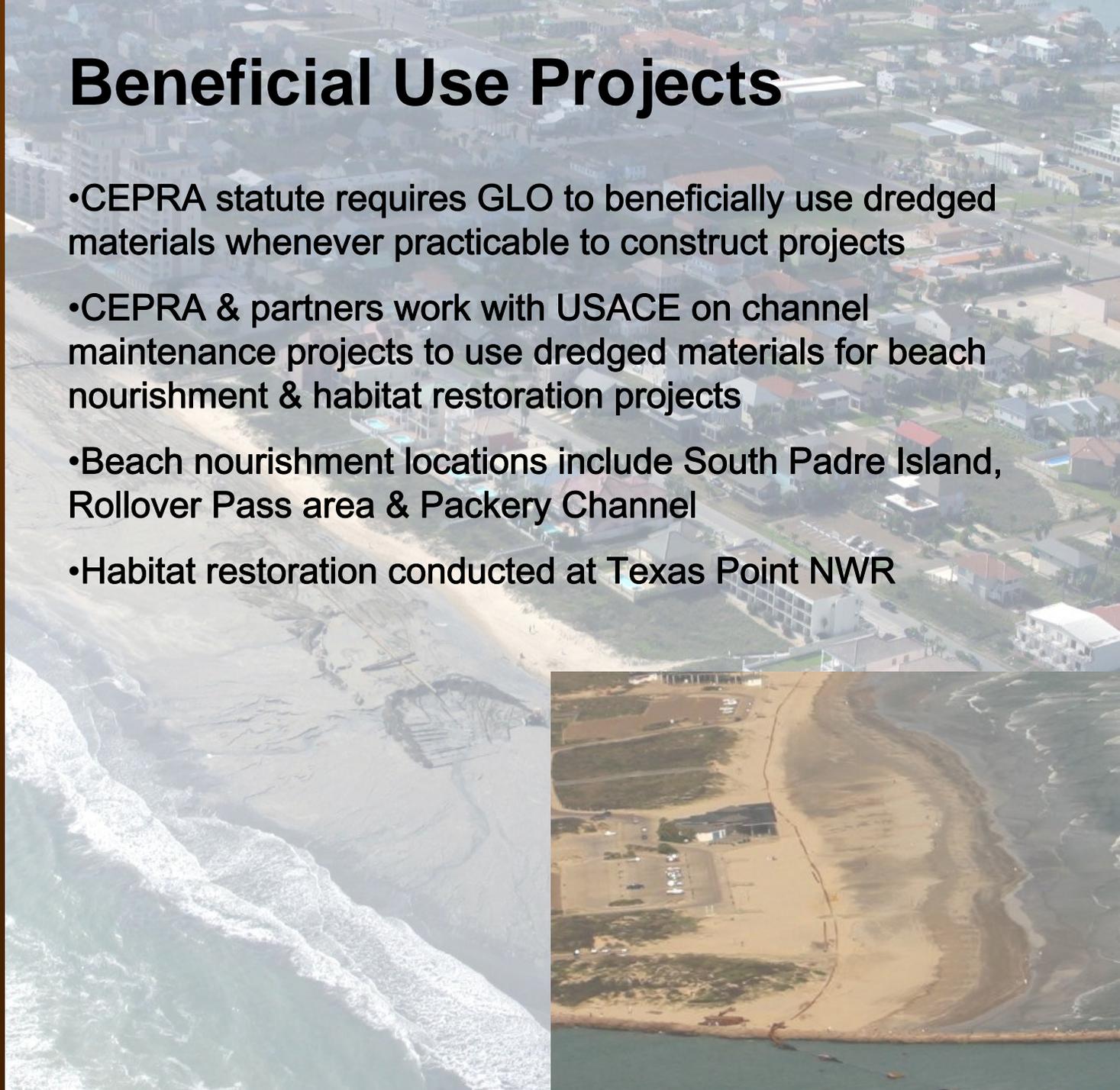
- Texas Parks & Wildlife Department has been GLO's primary partner for habitat restoration projects
- Many wetland restoration projects include both hard structures to provide wave shelters as well as sediment fill & vegetation
- Several bay islands have been protected and restored in the upper and mid-coast
- Concerns include subsidence & ability of marshlands to migrate as water levels rise





# Beneficial Use Projects

- CEPRA statute requires GLO to beneficially use dredged materials whenever practicable to construct projects
- CEPRA & partners work with USACE on channel maintenance projects to use dredged materials for beach nourishment & habitat restoration projects
- Beach nourishment locations include South Padre Island, Rollover Pass area & Packery Channel
- Habitat restoration conducted at Texas Point NWR





# Structure & Debris Removal

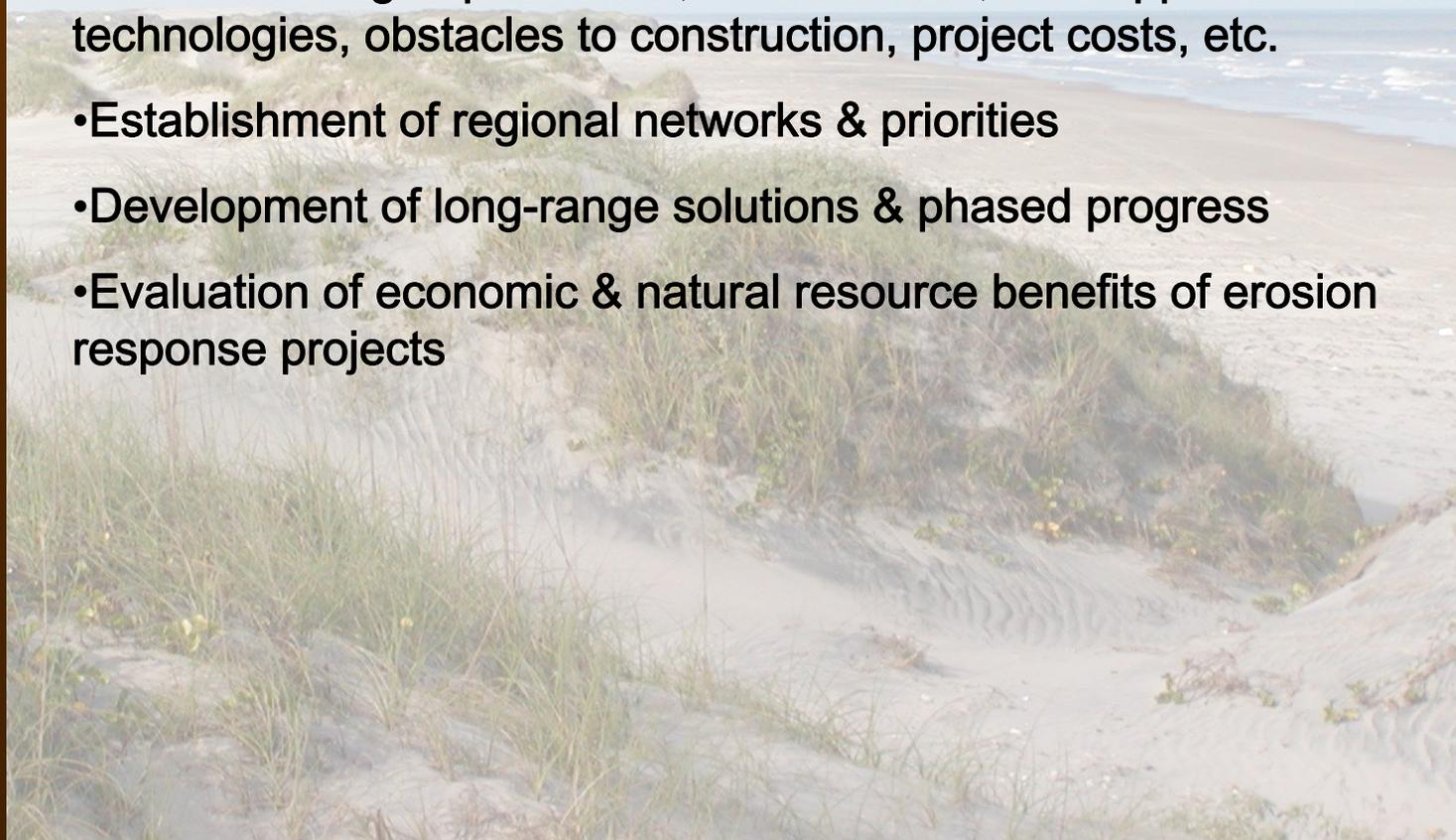
- The 79<sup>th</sup> Texas Legislature expanded CEPRRA to include removal of debris & removal/relocation of structures from the public beach easement
- Most work of this type has been at Surfside Beach with limited work at Treasure Island & West Galveston Island
- Intent is to remove public safety & access obstacles & clear a template for beach restoration projects to be constructed





# Progress Toward Long-Term Program Initiatives

- ID & prioritization of erosion response needs & projects
- Development of working relationships w/ project partners
- Understanding of processes, erosion rates, best application of technologies, obstacles to construction, project costs, etc.
- Establishment of regional networks & priorities
- Development of long-range solutions & phased progress
- Evaluation of economic & natural resource benefits of erosion response projects





# Cycle 5 (FY08-09) Highlights

- 80<sup>th</sup> Legislature appropriated ~ \$17.2 million for CEPRA projects in FY08-09, to be leveraged w/ partner funds
- Four larger-scale construction projects included:
  - West Galveston Island Beach Restoration (3-mile long feeder beach using submerged sand resource)
  - South Padre Island Beach Restoration (large-scale restoration using submerged sand resource)
  - Surfside Beach Restoration (Phase 1 sand renourishment & ID of funds for long-term solution)
  - City of La Porte Sylvan Beach Restoration (shore protection revetment with pocket beaches)
- Medium-size & smaller construction projects
- Starter projects (engineering alternatives phase)
- Studies (economic evaluation, air photos, sand source permitting, & update of critical erosion rate maps)



# CEPRA Program Challenges

- Increased tropical storm activity in Gulf brings erosion from high tides as well as from potential direct hits
- Low-lying Gulf coastal plain susceptible to subsidence, inundation, landform conversion & erosion
- Two-year lifespan of appropriated funding mixed with challenges such as permits & turtle-nesting season creates difficult project schedules
- CEPRA has no dedicated, permanent funding source, must request funding from Legislature each biennium
- Limited partner match funding





# CEPRA Program Positives

- While program is new, GLO has learned from more established erosion response programs in other states
- CEPRA offers partners the option to have GLO manage the project, providing technical project managers, engineering consultants, up-front funding, & construction management
- Project successes such as Port Aransas Nature Preserve shoreline protection, South Padre Island beach nourishment w/ BUDM, & Goose Island State Park protection & marsh restoration provide good press & help get new funds
- Future projects will benefit from partners using Coastal Impact Assistance Program funds for the project match
- Development pressure is focused on only ~ 60 miles of developable Gulf shoreline along the 367-mile Gulf Coast, allowing easier project funding prioritization



# CEPRA Program Points of Contact

Jody Henneke - Coastal Resources Deputy Commissioner  
jody.henneke@glo.state.tx.us

Eddie Fisher – Coastal Protection Director  
eddie.fisher@glo.state.tx.us

Lorrie Council, P.G. – CEPRA Team Leader  
lorrie.council@glo.state.tx.us

Thomas Durnin – Coastal Planner, Project Manager  
thomas.durnin@glo.state.tx.us

Matthew Mahoney, P.G. – CEPRA Project Manager  
matthew.mahoney@glo.state.tx.us

Ray Newby, P.G. – CEPRA Project Manager  
ray.newby@glo.state.tx.us

Dennis Rocha – CEPRA Project Manager  
dennis.rocha@glo.state.tx.us

[www.glo.state.tx.us/coastal/erosion.html](http://www.glo.state.tx.us/coastal/erosion.html)

1800-998-4GLO