

COASTAL PROTECTION AND RESTORATION AUTHORITY

2026 JANUARY 21

Marsh Creation Design Overview and CPRA's Design Guidelines

CPRA BOARD MEETING
JANUARY 21, 2026

ADAM D. LINSON, P.E., CPRA ENGINEER MANAGER



Overview

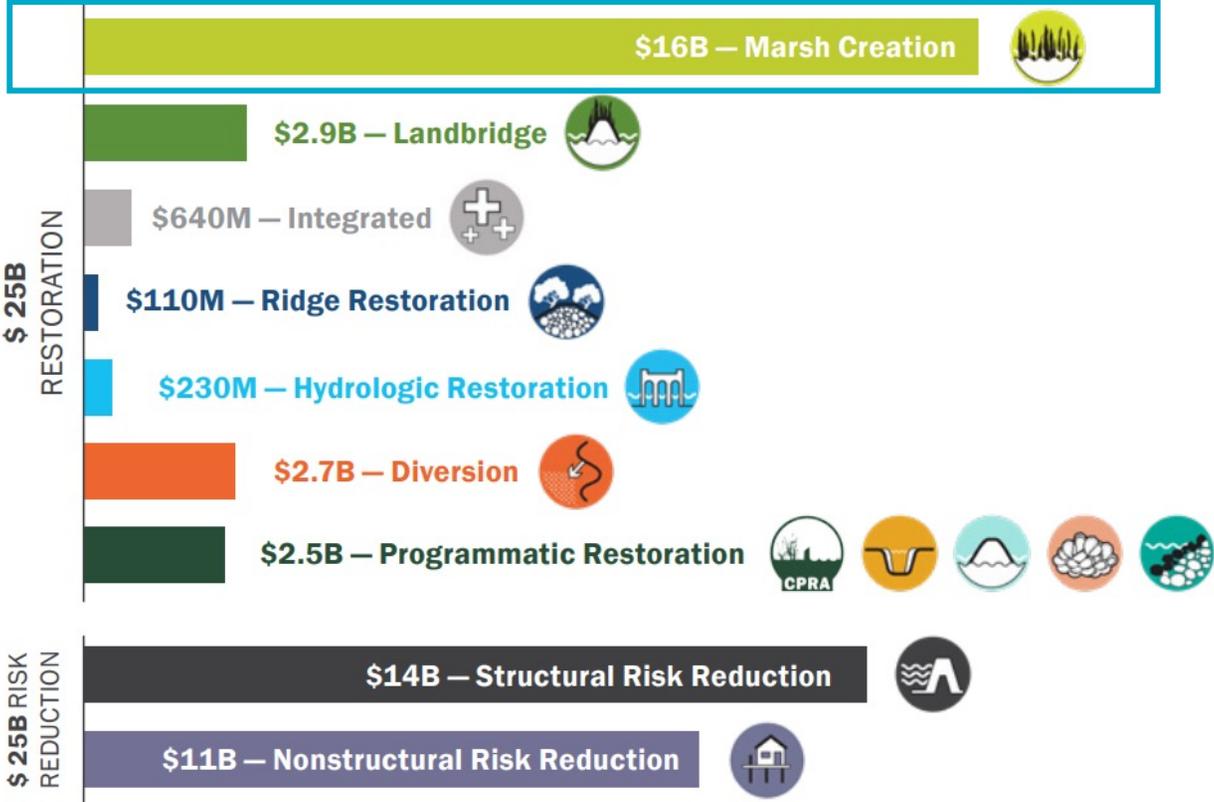
- Marsh Creation Overview
 - Project Components
 - Construction & Equipment

- CPRA's Marsh Creation Design Guidelines
 - Purpose & History
 - Planned Updates
 - Improvements to the Guidelines

Marsh Creation Overview



CPRA's Coastal Master Plan (2023)



103 ACTIVE PROJECTS

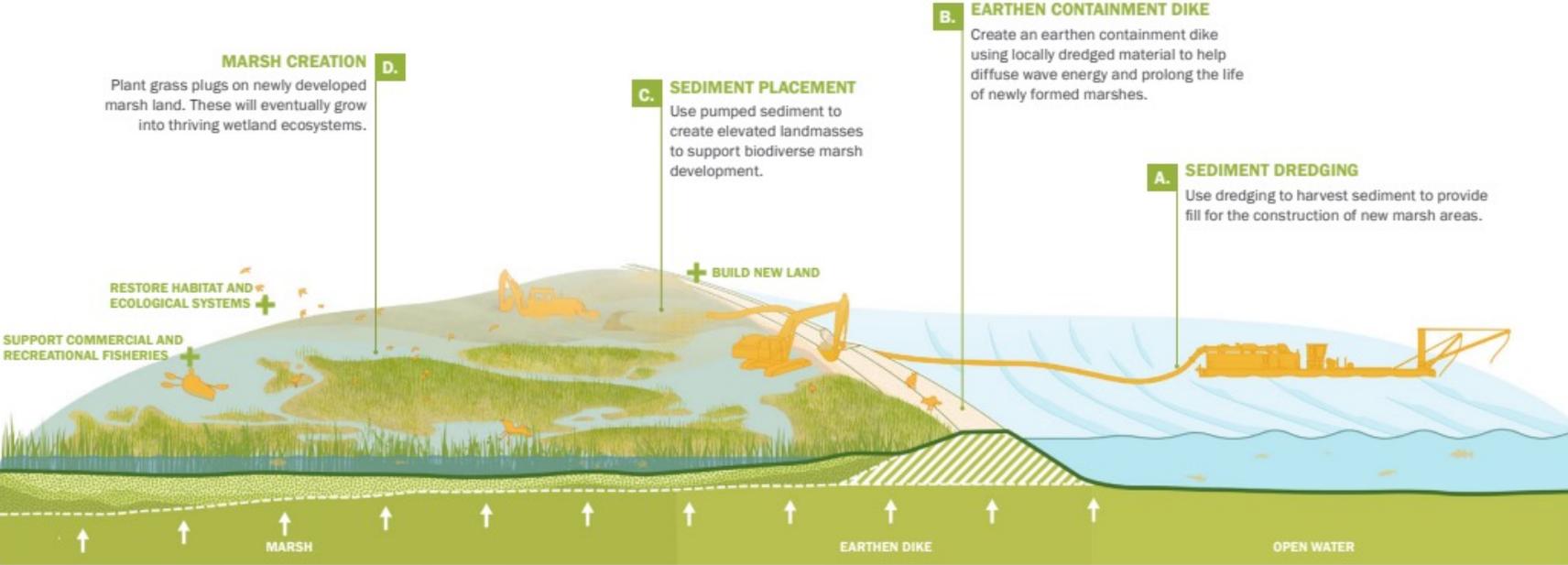
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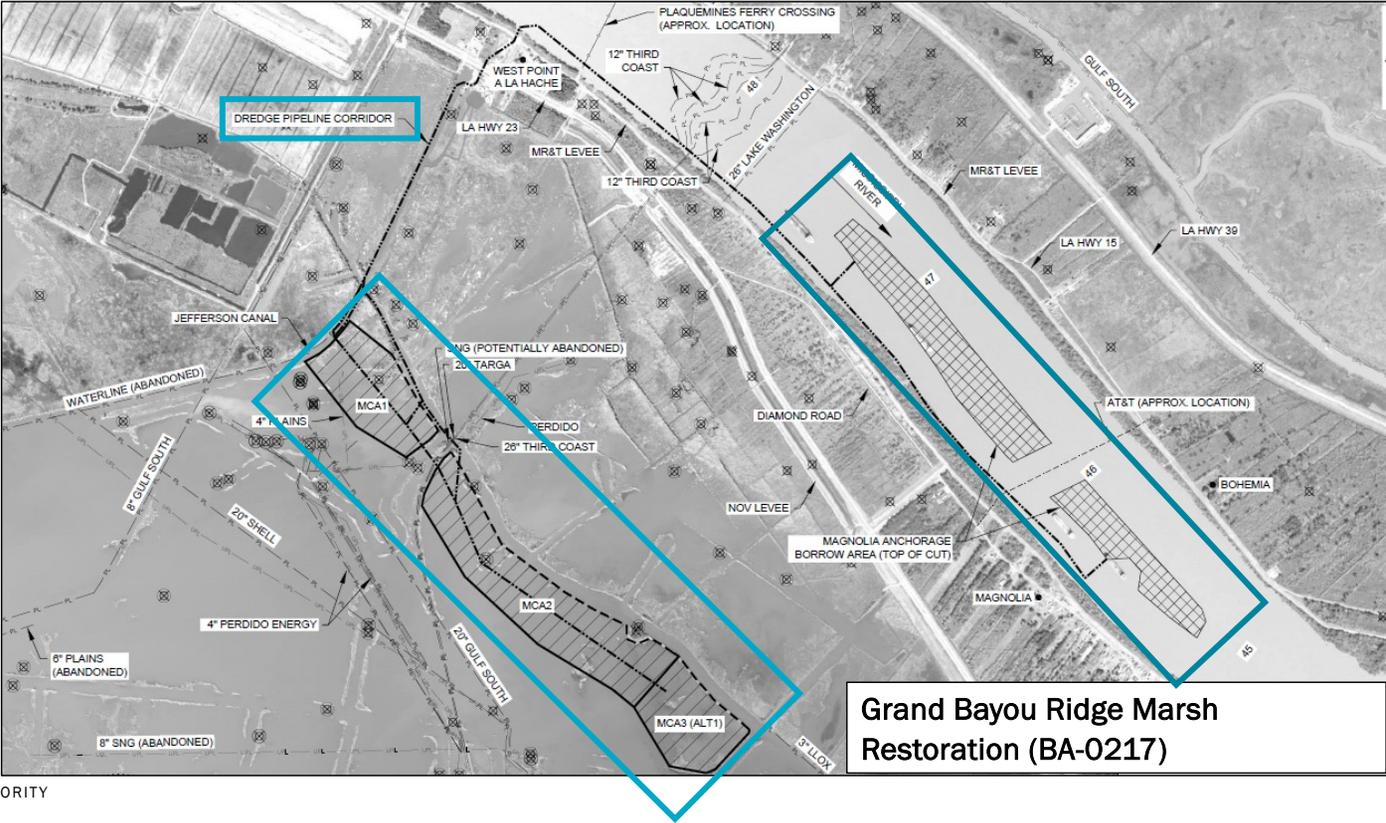
PROJECT TYPE	CONSTRUCTION	E & D	PLANNING
HURRICANE PROTECTION (39)	14	23	2
MARSH CREATION (32)	6	26	
BANK STABILIZATION (1)		1	
RIDGE RESTORATION (2)		2	
SHORELINE PROTECTION (5)	2	3	
BARRIER ISLANDS/HEADLANDS (4)	1	3	
DIVERSIONS (1)	1		
HYDROLOGIC RESTORATION (7)	2	5	
EARTHEN TERRACES (1)		1	
RECREATIONAL USE (3)	3		
OTHER (8)	3	4	1

Marsh Creation Overview



Marsh Creation Project Components

- BORROW AREA
- DREDGE PIPELINE CORRIDOR
- MARSH CREATION AREAS
- ACCESS ROUTES



Grand Bayou Ridge Marsh Restoration (BA-0217)

Grand Bayou Project

BA-0217 (MCA 1)

April 2025



Baird.
Innovation Engineered.



Earthen Containment Dike Construction

- Most marsh creation sites are fully contained.
- Constructed with track or barge-mounted equipment.



Hydraulic Dredge

- Excavates material from a borrow source and is pumped to the marsh creation areas through a dredge pipeline.



Dredge Pipeline

- Placed along the dredge pipeline corridor from the borrow area to the marsh creation area.



Marsh Creation Project Construction



DURING CONSTRUCTION

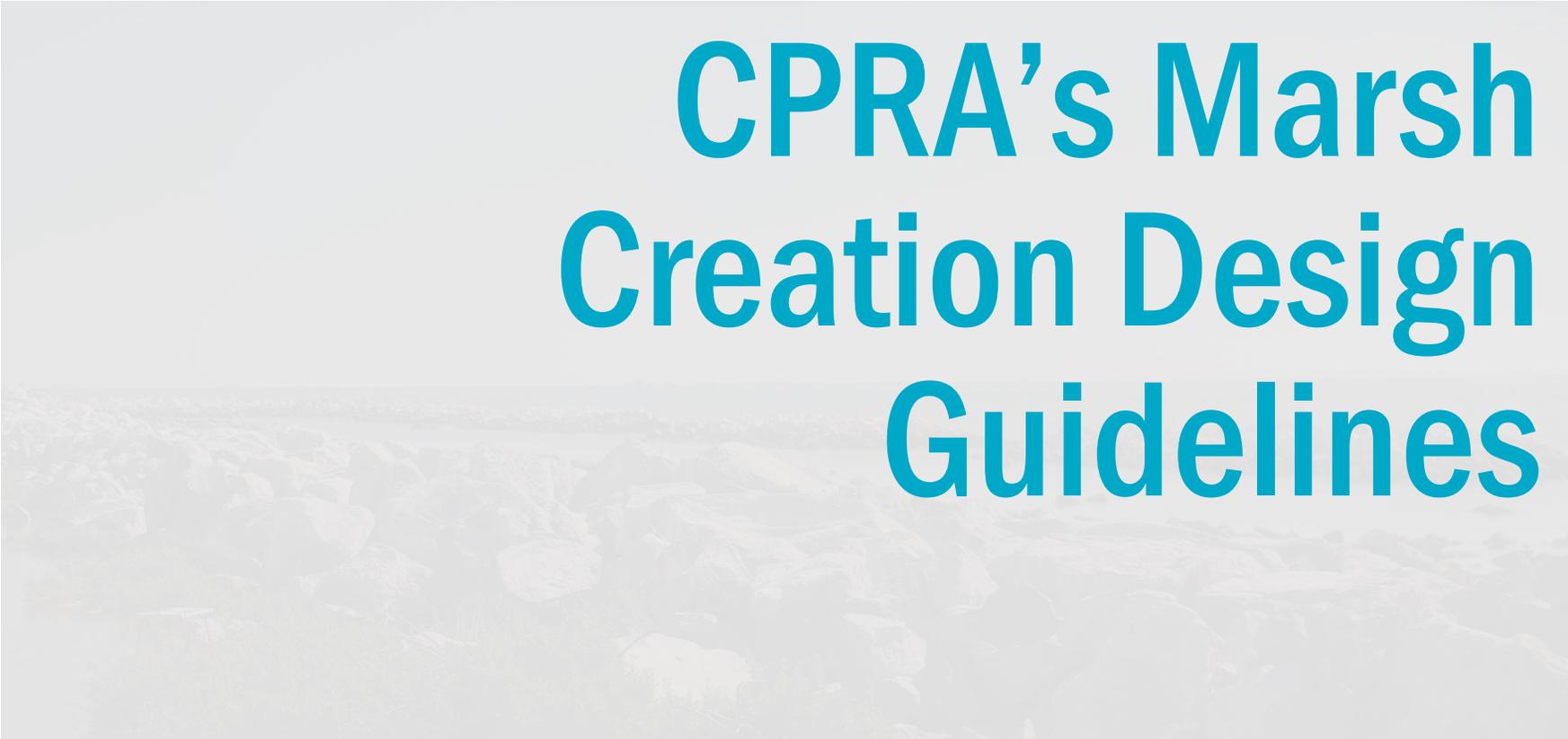


CONSTRUCTION COMPLETE



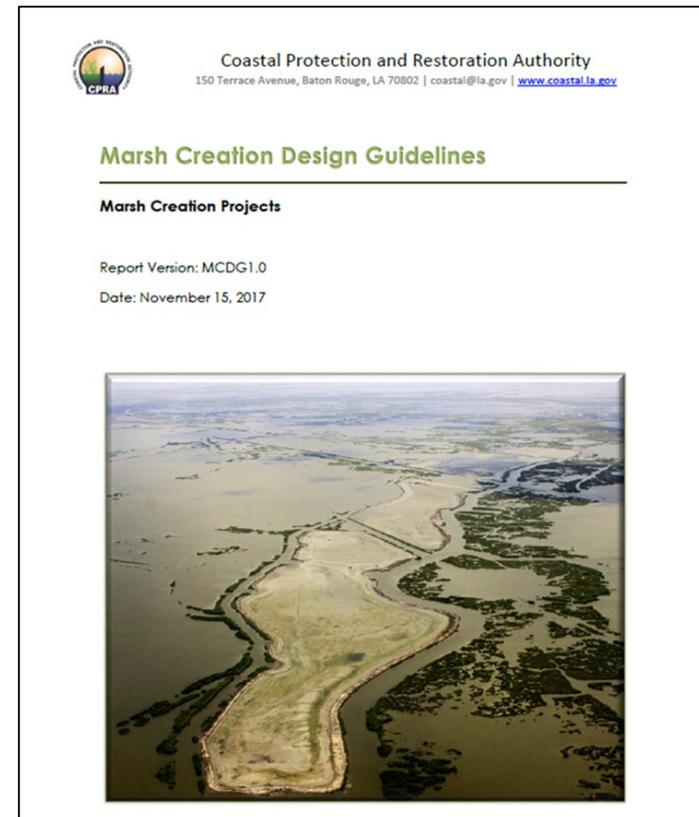
1-3 YEARS LATER

CPRA's Marsh Creation Design Guidelines



CPRA's Marsh Creation Design Guidelines – Purpose & History

- Created to serve as the minimum design standards for the design and construction of marsh creation projects within the Louisiana Coastal Zone
- Published in November 2017.
- Developed based on decades of project implementation experience and collaboration between CPRA, construction contractors, engineering consultants, federal sponsors, and local sponsors.
- Provide consistent design protocol and increase efficiency pertaining to marsh creation project implementation,

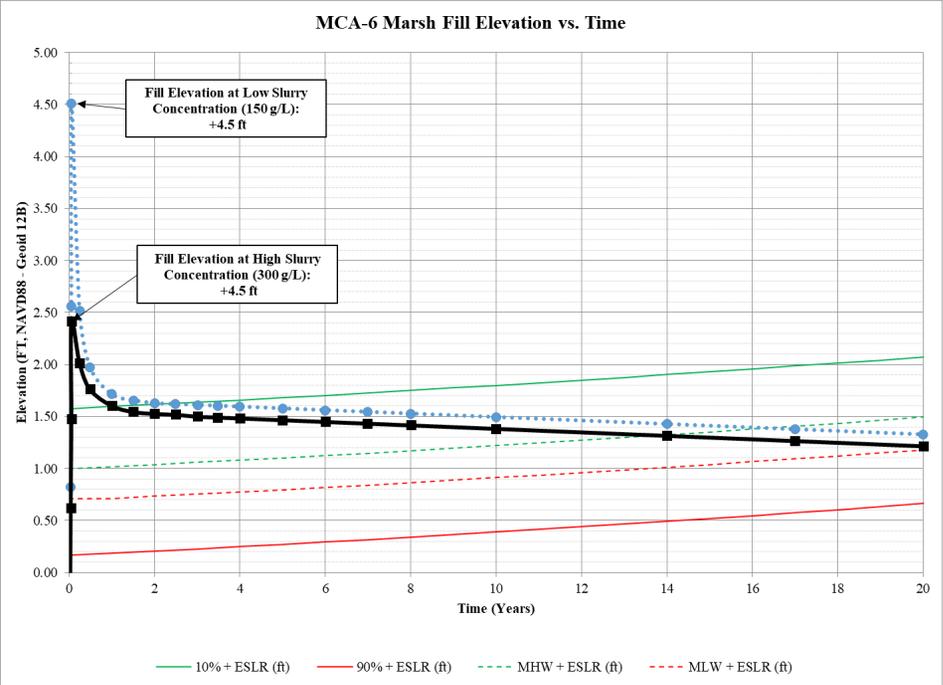


CPRA's Marsh Creation Design Guidelines – Overview

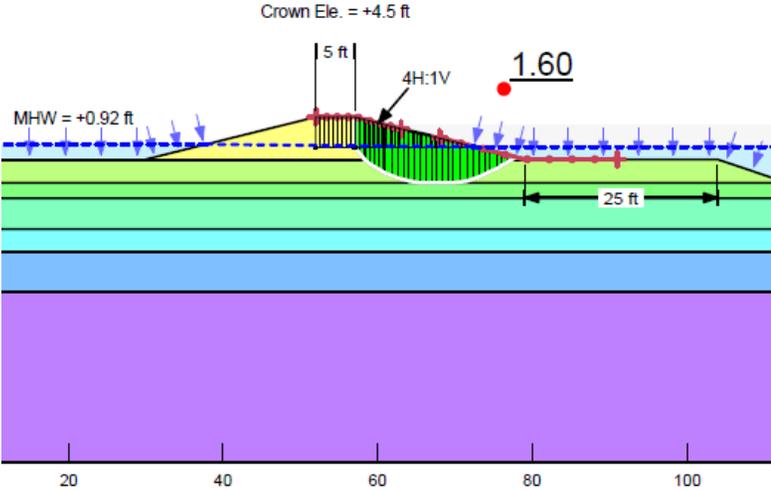
- Cultural Resource Investigations
- Landrights Investigations
- Survey and Geotechnical Data Acquisition
 - Survey Standards of Practice
 - Geotechnical Standards
- Marsh Creation Area Design
- Borrow Area Design
- Dredge Pipeline Corridor Design
- Permitting
- Construction



CPRA's Marsh Creation Design Guidelines – Marsh Settlement and ECD Stability



- Two major components of marsh creation design, that are dependent upon on the other.



CPRA's Marsh Creation Design Guidelines – Next Steps and Future Improvements

- Wholesale updates to the design guidelines utilizing last 10 years of marsh creation project design and construction experience in collaboration with construction contractors, federal/local sponsors, and engineering consultants.
 - Data collection methods
 - Design guidance
 - Construction



CPRA's Marsh Creation Design Guidelines – Next Steps and Future Improvements

- Updates to A Contractor's Guide to the Standards of Practice – Survey to meet industry standards.
- Location of pipelines, wellheads, etc., including updates to the guidelines pertaining to safe construction around pipelines and design considerations.



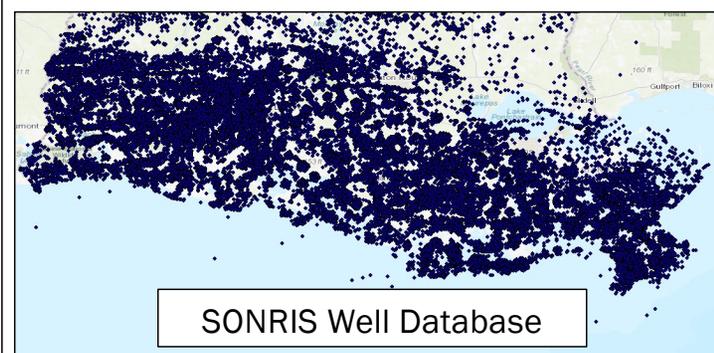
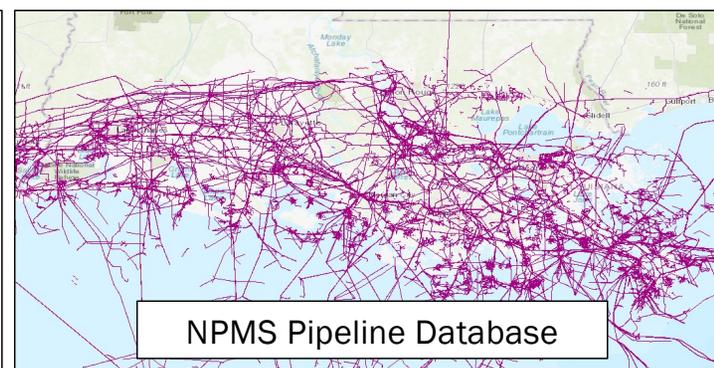
A Contractor's Guide to the Standards of Practice

For CPRA Contractors Performing Topographical, Construction, Monitoring Surveys, and Determining GPS Derived Orthometric Heights within the Louisiana Coastal Zone

Prepared by the Coastal Protection and Restoration Authority of Louisiana

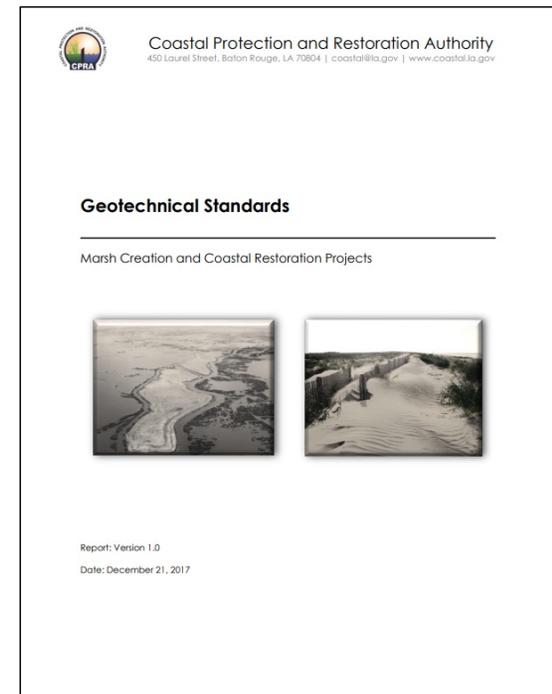


March 2017 Version



CPRA's Marsh Creation Design Guidelines – Next Steps and Future Improvements

- Construction Guidance
 - Dredging production, duration, instrumentation, testing, and quality assurance
- Updating the *Geotechnical Standards* and relevant project component sections
 - Earthen containment dike design (stability and settlement)
 - Borrow area (soil properties)
 - Marsh creation site design (volumetric and sensitivity analysis)



Thank You



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