

Terrebonne Basin Ridge and Marsh Creation Project

Bayou Terrebonne Increment (TE-0139)



PROJECT OVERVIEW

The Bayou Terrebonne Increment of the Terrebonne Basin Ridge and Marsh Creation Project is located in southeast Terrebonne Parish approximately 20 miles south by southeast of Houma. The project area has lost over half of its land to natural and human causes over the last 30 years.

This work, approved in the state's Coastal Master Plan, is part of a larger effort to restore approximately 5,000 acres of ridge and marsh habitat in the Terrebonne Basin. Its goals align with the Coastal Protection and Restoration Authority's mission to sustain coastal ecosystems that safeguard coastal communities and protect vital economic and cultural resources. Since Terrebonne Basin was damaged during the Deepwater Horizon oil spill, the engineering and design of the project have been funded through the Natural Resource Damage Assessment (NRDA) process.

The project, as presented in the preliminary design, would restore approximately 10 miles of earthen ridge and up to 1,430 acres of marsh along the east bank of Bayou Terrebonne—about 2.3 square miles of ridge and marsh habitat in total. Early conversations with people who live, work, hunt, and fish in the project area influenced the design of both features.



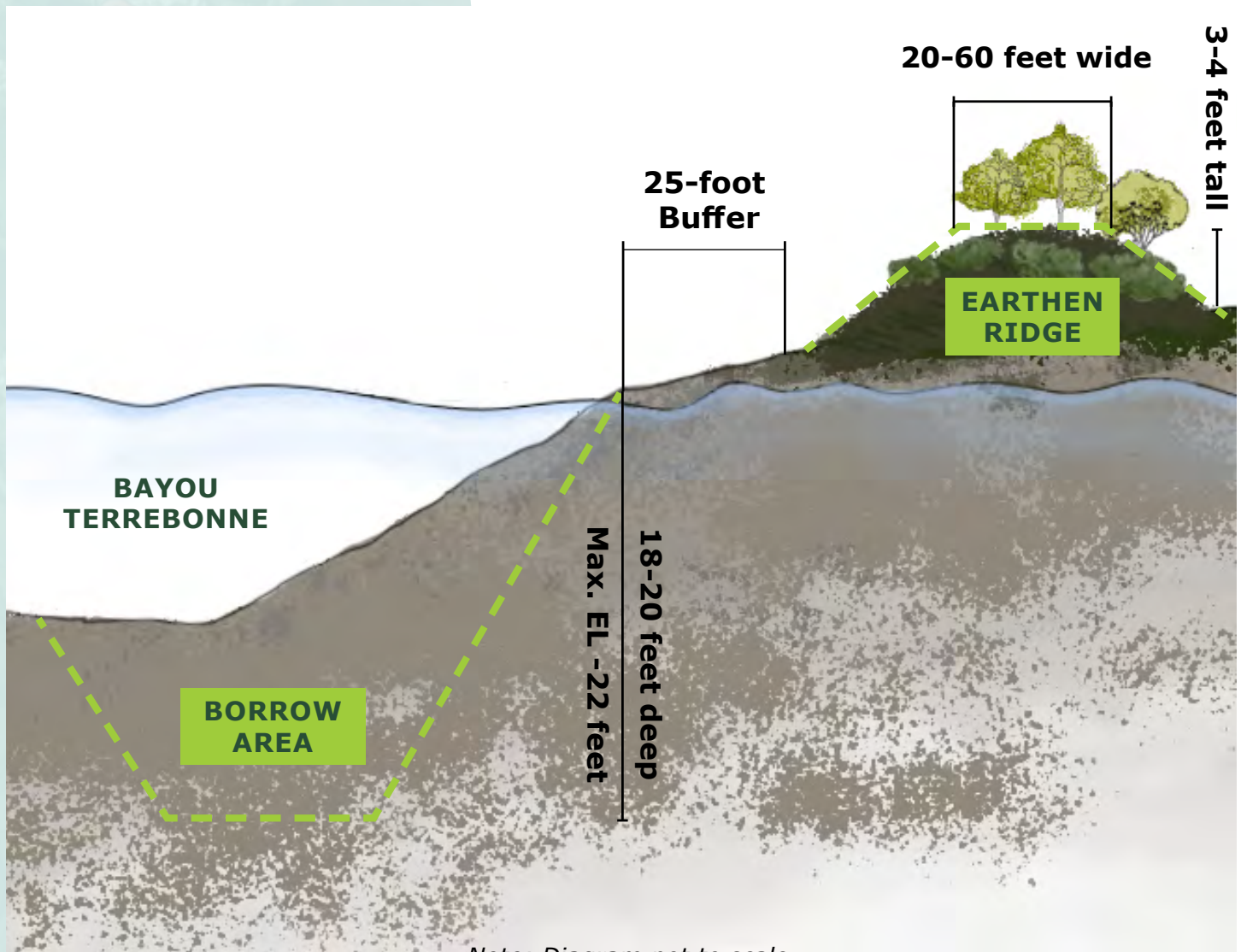
RIDGE DESIGN

Coastal ridge habitat supports woody species like trees and shrubs that need higher elevations to thrive. The current design of the project proposes to restore a ridge created by sediment deposits from the Mississippi River. The original ridge has eroded and subsided over time.

Restoration Overview

- Restore about 10 miles of degraded ridge
- Increase ridge height by approximately three to five feet in most locations
- Increase ridge width to approximately 20 feet at the top, creating a total of 64 acres of habitat

To create additional habitat, the project team is considering a wider ridge of up to 60 feet in some locations that are not suitable for new marsh creation because of their deep water depths.



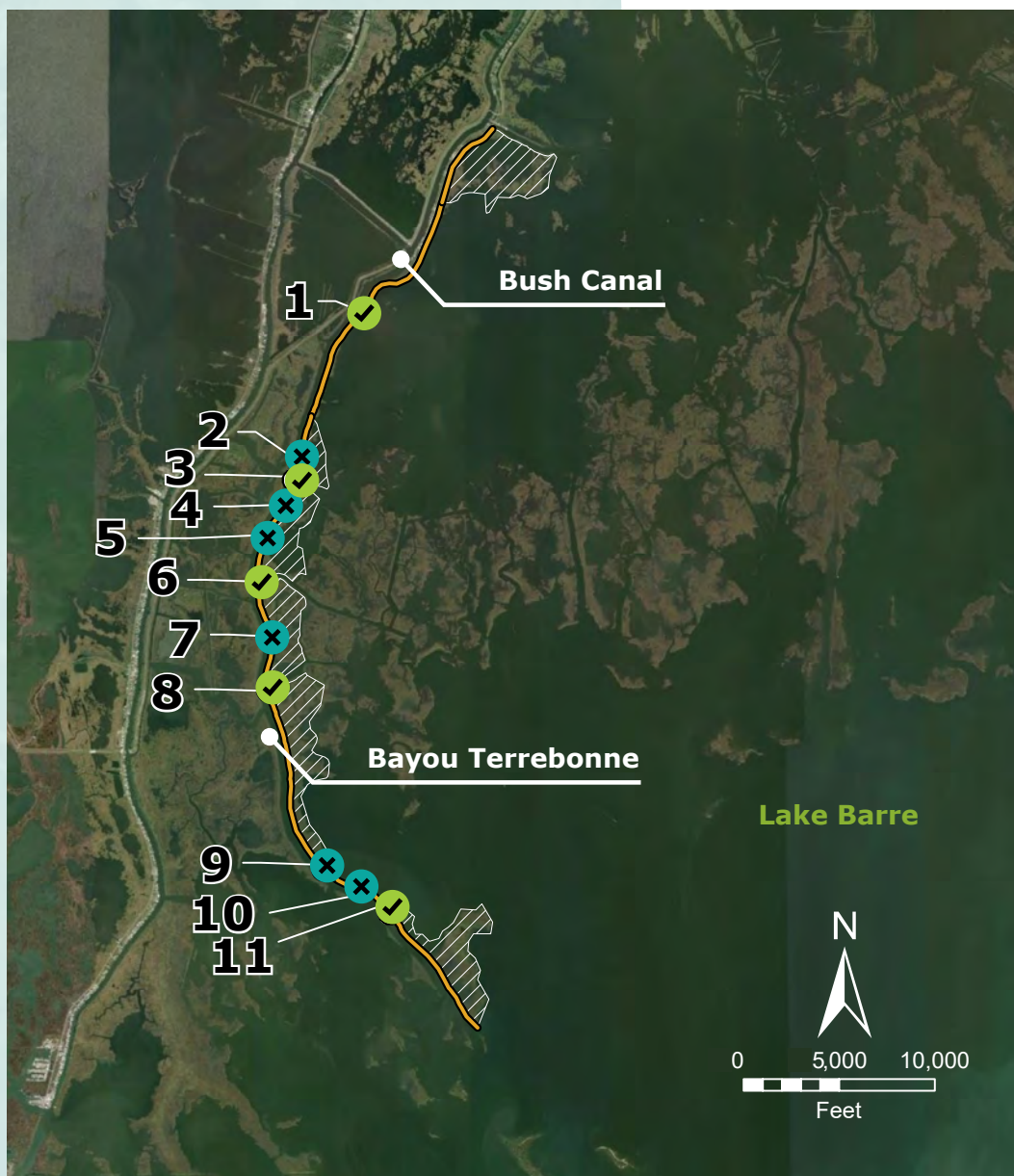
Ridge Alignment

In most places, the current design places the ridge along the east bank of Bayou Terrebonne to match its original location. However, homes and camps exist along the bayou's east bank near Bush Canal. To avoid the buildings and preserve their dock access to the bayou, the preliminary design shifts the northern part of the ridge farther east to follow the edge of the marsh instead.

Ridge Breaks

In its current state, the ridge has 11 openings that allow water to flow between Bayou Terrebonne and Lake Barre. Some of the breaks will be closed so the ridge can serve as a retaining wall for the marsh creation areas on its eastern side.

The current design proposes to close six of the existing breaks and leave the remaining five open for local navigation.



✓ Leave Open:
1, 3, 6, 8, 11

✗ Close:
2, 4, 5, 7, 9, 10

To rebuild the ridge, the project will transport sediment from a borrow area in the bayou. A 25-foot buffer between the foot of the ridge and the edge of the borrow area will keep the ridge stable.

MARSH DESIGN

The preliminary design of the project also includes the restoration and creation of up to 1,430 acres of marsh beside the rebuilt ridge, which exceeds the project's original goal of 1,370 acres. When planning for the project began in 2018, the project team met with property owners in the area to gather feedback for the design concept. Local residents asked the project team to extend the project's boundary for ridge restoration past its initial endpoint near Bush Canal. In response, the project team collected data in the original and expanded study areas to find out which locations could support new marsh.

LEGEND

▨ Marsh Creation Areas
— Ridge Segments

Ridge Breaks:

✓ Leave Open
✗ Close

Marsh Study Findings

- Most of the study areas have the right conditions to support marsh creation
- Deep water in three portions of the study area makes marsh creation too difficult and expensive to complete



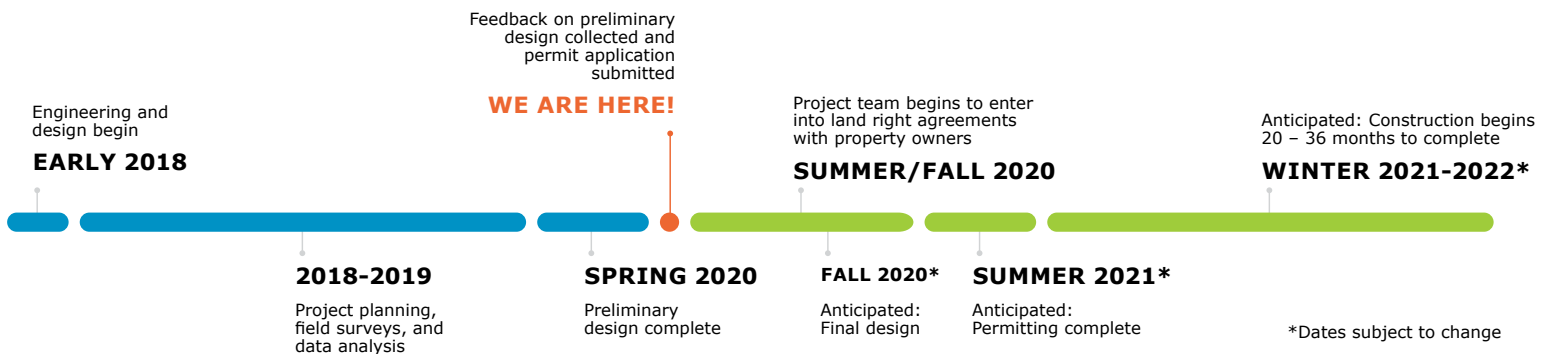
The proposed marsh creation areas are shown with white lines in the previous map.

The fill material for the marsh creation and restoration will likely come from nearby Lake Barre. Two proposed bay borrow areas were carefully selected for this project. The two areas avoid oil and gas wells and pipelines, have water deep enough for a dredging vessel, and minimize disturbances to natural habitat.

Once the marsh fill material has been dredged, temporary pipelines would transport it to the marsh creation areas. The dredge pipeline routes were selected to minimize environmental impacts and avoid existing oil and gas pipelines as much as possible. The dredge pipeline would float over oil and gas infrastructure when avoiding it is not possible.


The dredged material would be placed into areas contained by the newly restored ridge on the west and earthen containment dikes along their other boundaries.


ANTICIPATED TIMELINE




QUESTIONS OR COMMENTS?

Do you live near the project area? Do you frequently spend time in it? Are you interested in restoring Louisiana's coast? Please send your questions and comments to the project team. We are accepting feedback between June 24 and July 15, 2020.

 coastal.la.gov/terrebonne-basin-ridge-and-marsh-creation/

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