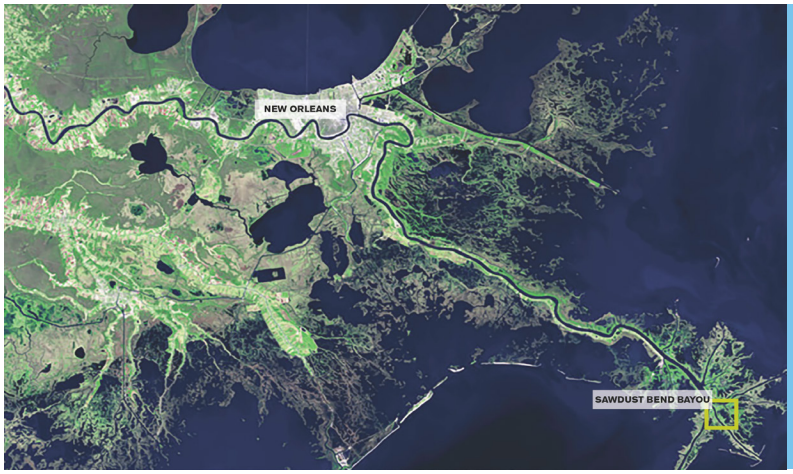
Restore the Earth FOUNDATION

PASS A LOUTRE

SAWDUST BEND BAYOU



QUICK FACTS

LOCATION: Sawdust Bend Bayou
Pass a Loutre Wildlife Management Area, Louisiana

DATE: Phase I: March 2005
Phase II: February 2013

PROJECT ATTRIBUTES:

- Freshwater sediment diversion
- Soil acretion & erosion prevention
- Land creation & stabilization

PROJECT BACKGROUND

This inner marsh wetland restoration was part of the Delta Splays Project at Pass a Loutre Wildlife Management Area in Venice, Louisiana. In 2008, the first phase of the Project cut a crevasse into the interior marsh of Sawdust Bend Bayou to build land from the diverted sediment. The funding partners of the first phase included Shell Oil Company, Ducks Unlimited, Louisiana Department of Wildlife & Fisheries (LDWF) and Freeport-McMoRan. The second phase of the project occurred in February 2013.

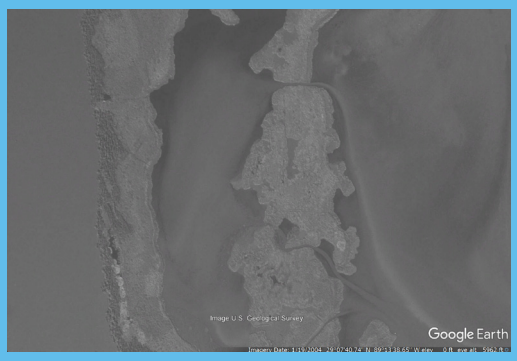
Photo of completed crevasse taken in March 2005

Restore the Earth Foundation in partnership with Shell Oil company planted Restore the Earth's EKOgrown® native trees and Gulf Saver Bags to jump start the vegetation on the newly created site to prevent erosion and stabilize the land.

SITE BACKGROUND

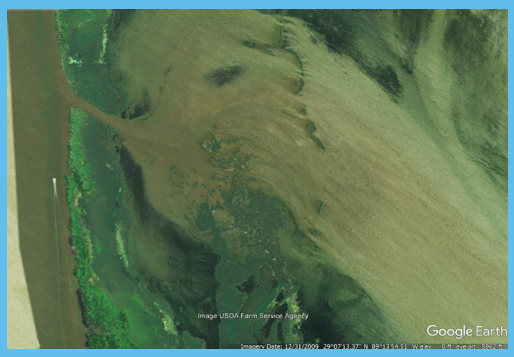
This was one of the only sites in the inner marsh that was not dominated by Phragmites, an invasive plant that has taken over critical wildlife habitat. This area of critical habitat was once a willow and cypress dominated area but had been decimated by storms, dredging and erosion. After several years of land building through soil acretion, the site was approved for planting.

LAND BUILDING AT SAWDUST BEND BAYOU



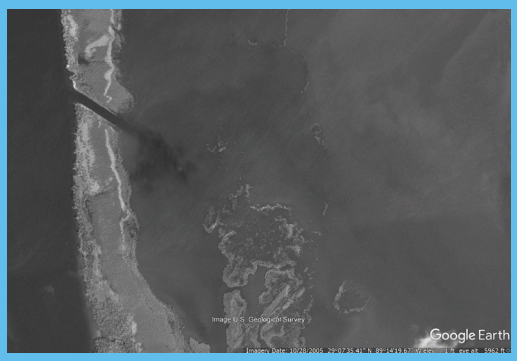
JANUARY 2004

This satelite image was taken before the crevassse was dug.



DECEMBER 2009

After Hurricanes Gustav and Ida in 2008, then Hurricane Ike in 2009, some previously built up sediment eroded.

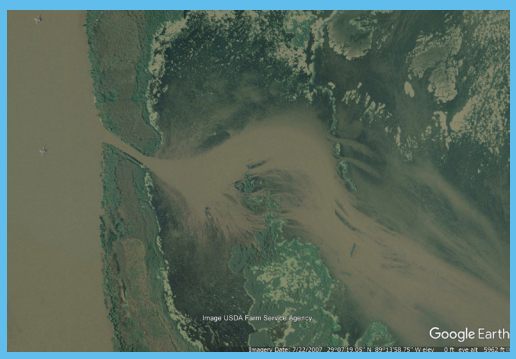


OCTOBER 2005
7 MONTHS AFTER PHASE I

Following Hurricanes Katrina and Rita, much of the exisiting land eroded.

OCTOBER 2012
4 MONTHS BEFORE PHASE II

After a few years of relatively calm Gulf activity, emergent vegetation began to appear on newly created land, signalling the appropriate conditions for planting.



JULY 2007

After just two years, a significant amount of soil builds up as a result of the crevasse.

NOVEMBER 2016
3 YEARS, 9 MONTHS AFTER PHASE II

Significant vegetation present at the project site demonstrates effectiveness of Restore the Earth's planting to jump start growth and stabilize land.

PROJECT BENEFITS

This restoration project capitalized on the accreting sediment at the discharge of this established crevasse splay. The restoration has helped continue to stabilize and build land to diversify the predominantly homogeneous landscape for valuable vegetative and aquatic habitat, creating new habitat for nesting birds and other wildlife.

ACTIVITIES

- **Volunteers**

  35 local and national volunteers participated in this event, taking the hour-long boat ride from Venice to the planting site at Sawdust Bend Bayou, where the Mississippi River splinters off and outlets in to the Gulf of Mexico.

- **Planting of 2,500 Black Willow and 350 Cypress 1-5 gallon EKOgrown® Trees**

  Native trees were either planted with shovels directly into the marsh sediment or were plugged into Gulf Saver bags staked, wrapped with tree guards and buried into the mud.

- **Deployment of Gulf Saver Bags**

  The bags are biodegradable, self-contained packages of native plants/trees with their own site specific custom mixed supply of natural nutrients to support, feed and protect the vegetation. The bag is a stability kit that jump starts growth and survivability in the face of storm surge, wave action and rapid erosion.

OUTCOMES

PROJECT SITE - 2012

PROJECT SITE - 2015

The objectives of this project were two-fold. The first objective from phase I was to build land, and the second objective from phase II was to stabilize that land through vegetation and promote the accretion and build up of additional land as a result. Both phases were successful in achieving their respective objectives.

As an early succession species, the black willows that were planted helped to jump-start the growth of vegetation and encourage the succession of more diverse species at the project site. These willows helped pave the way for the more ecologically valuable cypress which were planted interspersedly with the willows. Cypress are more critical to the long term sustainability of the project because they have deeper root systems and sequester more carbon over their lifetime. Both the willow and cypress have thrived at this project site with ~90% survivability.

PROJECT SIGNIFICANCE

The project site is positioned at a critical location, serving as the first line of defense against potential threats from storms in the Gulf of Mexico. As a functioning wetland, this tract of land acts as a barrier that absorbs storm surge and excess water, protecting communities and industry assets upriver.

This project is also significant because it exemplifies the potential when the public, private and NGO sectors collaborate to successfully rebuild and stabilize wetlands. This project can serve as a template for future collaborations to rebuild critical habitats in vulnerable locations across coastal Louisiana and beyond.