

Jean Lafitte National Historic Park and Preserve Wetland Restoration

New Orleans, Louisiana



South Louisiana is a biologically rich area of swampy bayous and marshes that teems with life and history. Unfortunately, this area has been heavily impacted by fossil fuel extraction. Over a period of decades, exploratory access canals were excavated across the region, creating dramatic changes in both the hydrology and ecology of the delta. During canal construction, rich, organic

soils were piled in long spoil mounds flanking the sides of the new waterways. Highly organic soils that had taken thousands of years to form were left to oxidize in the sun and were eventually colonized by non-native species such as Chinese tallow tree (*Sapium sebiferum*). The mounds also disrupted the surface flow of fresh water, resulting in anoxic conditions in many of the canals.

The degradation of spoil banks along decades-old oil and gas canals restores historic marsh hydrology, eradicates woody invasive species, preserves an important National Park site, and allows future generations to experience Louisiana delta ecology.

The Barataria Preserve, a 20,000-acre swath of marsh and forest south of New Orleans, is a unique component of our national park system that supplies valuable access and exposure to the Louisiana delta ecology. Biohabitats worked with the National Park Service to repair industrial damage to this landscape and restore historic marsh ecology. Our approach involved a challenging logistical operation that required specialty equipment. Floating excavators, or “marsh buggies,” removed invasive tree cover and placed excavated soil back into the canals. Unique specimens and stands of valuable oaks and bald cypress were preserved, creating “tree islands” within the marsh. Upon completion, the final grade of the spoil mounds was

at the level of the surrounding marsh, allowing the free movement of water and the eventual recolonization of these sites by emergent native vegetation.

Biohabitats completed over four linear miles of marsh restoration within the Preserve and the results were dramatic. Upon the degradation of the spoil mounds, the free movement of fresh water across surface of the marsh was restored and the existing population of Chinese tallow tree eradicated. Native marsh vegetation quickly colonized the former spoil mound sites within months of soil removal.

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