



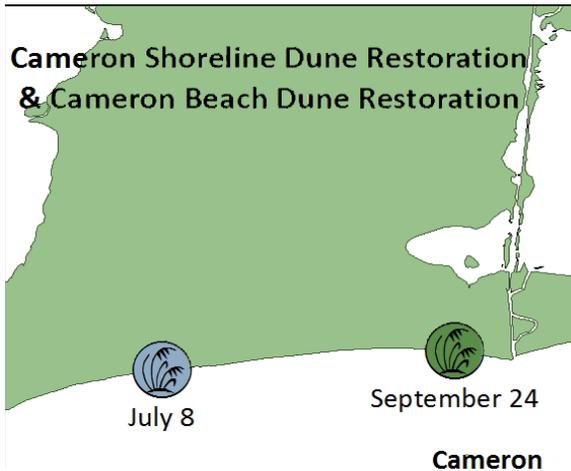
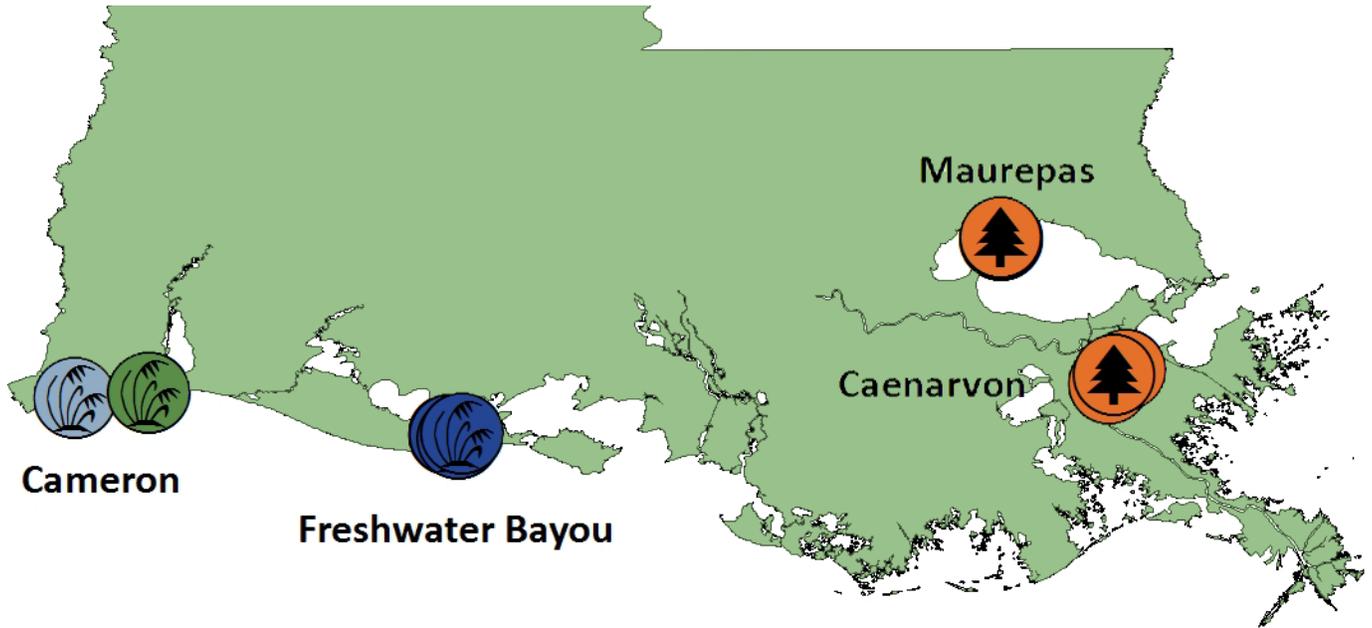
# Coalition To Restore Coastal Louisiana

## Habitat Restoration Program 2016-2017 Planting Season Report



From Cameron to Caenarvon, CRCL's Habitat Restoration Program (HRP) has advanced habitat restoration goals and spurred volunteers to action across the coast. Because we are facing unsettling sea-level rise projections and the need to build large-scale restoration projects, the average person might feel that there is little they can do to effect change. Fortunately, HRP provides an opportunity for concerned residents, stakeholders, and visitors to pull on a pair of boots and take meaningful action that has a lasting and positive impact on our coastal habitat. Through restoring coastal wetlands, CRCL volunteers help provide critical storm buffers and reduce flood risk for Louisiana's coastal and inland communities. Our volunteers also enhance the ecology of these areas, helping them function as quality habitat for fish and wildlife. Our plants and trees are thriving, and have stabilized thousands of acres of wetlands, beaches, and coastal forests. Thanks to our new scientific monitoring work, we are learning how our habitat restoration efforts can be most effective.

# 2016 - 2017 HRP Plantings



# PROJECTS



## Cameron Shoreline Dune Restoration



We kicked off the planting season with a dune grass planting on September 24, 2016, commemorating the 11th anniversary of Hurricane Rita, whose effects are still being felt in Cameron Parish. We involved 128 volunteers in planting 33,000 plugs of bitter panicum dune grass. This event marked our 3rd Annual Caring for the Coast restoration event in partnership with CITGO.



## 10,000 Trees for Louisiana



We began our third round of planting 10,000 trees to restore coastal forests in St. Bernard and Tangipahoa Parishes. This season, we hosted 16 volunteer days and added another 5,000 trees to the Big Mar (Caenarvon outfall) and Lake Maurepas areas. We have now planted 25,000 total trees under this initiative! This project is made possible by a partnership with Louisiana's Coastal Protection & Restoration Authority (CPRA), the Lake Pontchartrain Basin Foundation, and Restore the Earth Foundation.

## **Freshwater Bayou Marsh Restoration**



This planting series in Vermilion Parish is helping fortify the bank of the Freshwater Bayou Canal and helping to slow and reverse the erosion of the inland marsh that it borders. This year, 107 volunteers participated in nine volunteer days and added 46,000 California bulrush and smooth cord grass plants to enhance over 54 acres of marsh, bringing our project total up to 164 volunteers, 96,000 plants, and over 84 enhanced acres. Sponsorship for this project was provided by the National Fish & Wildlife Foundation, CPRA, the Coypu Foundation, and the Rainey Conservation Alliance.

## **Cameron Beach Dune Restoration**



In the early summer, we returned to Cameron Parish to restore dunes in a different location, Mae's Beach. The original date was postponed by two weeks due to Tropical Storm Cindy, but we still had a strong showing of 30 volunteers on July 8, 2017. These enthusiastic volunteers enhanced a mile of beach with 7,600 bitter panicum dune grass plants, helping to build up dunes that resist erosion. We were joined by Louisiana Audubon biologist Katie Barnes who explained the importance of this habitat to nesting shorebirds. Cheniere Energy and Restore America's Estuaries sponsored this project.

# IMPACTS

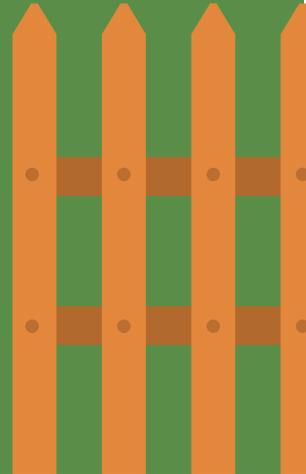
of CRCL's HRP in the  
2016-2017 Planting Season



Trees Planted  
**5,000**

**3.5**

Miles of  
Beach  
Dunes  
Planted



**86,600**

Marsh and Dune Grass  
Plugs Planted



**56**

Acres  
Enhanced

**42**

Volunteer  
Event Days

**549**

Volunteers

**4,584**

Volunteer  
Hours



CRCL Has Engaged Over

**13,500**

Volunteers since 2000



# MONITORING RESULTS

This year we initiated a new protocol to monitor all our new marsh and beach plantings across the coast. The goal of this program is to quantify the performance of our plantings so that we can make well-informed decisions regarding our habitat restoration strategies.

Working under the direction of Dr. Giovanna McClenachan, CRCL's Science Director, we developed and are implementing an ecological monitoring protocol for each marsh and dune planting. The protocols involve establishing GPS-marked monitoring plots, collecting baseline data immediately following an event, and then revisiting the plots to compare with the baseline to assess success. Most plantings will be monitored annually, and we will analyze these data and report results in future annual HRP reports.

Important data collected this season included plant species, percent cover, stem counts, soil shear strength, and dune height. We also deployed water level loggers in many sites to record water depth in the planting areas, which can help us understand the conditions affecting plant survival.

The new monitoring program has also opened the door to collaborations with others, including researchers at McNeese University. We look forward to developing similar collaborations in the future.



## **Cameron Shoreline Dune Restoration, 2016**

On April 28-29, 2017, we revisited a CITGO-sponsored dune restoration project that was planted in September 2016 with 28,000 bitter panicum plants. Our monitoring goals were:

1. Assess percent survival (with success defined as  $\geq 70\%$ )
2. Evaluate effects of plant growth form (plugs vs. bare-root)
3. Measure sediment accretion (dune height)
4. Determine causes of failure (if applicable)

Four volunteers from McNeese State University joined to assist. We analyzed these data and our preliminary results indicated an average survival of 73.37% and an average population growth rate of 0.57 (which indicates a growing population). We did not distinguish a difference in performance between the plant forms – instead, planting above the wrack line had more of an effect on whether plants survived. We were unable to assess sediment accretion, as four out of six accretion poles had been moved/removed from their original locations (for example, two had been removed and replaced at the tideline for fishing). While results are considered preliminary since it is less than one year since the planting event, the survival rate over 70% and positive population growth rate indicate that this project is on the path to success.

## **10,000 Trees for Louisiana**



Our coastal forest restoration tree plantings are already monitored through our partnership with the Lake Pontchartrain Basin Foundation. Monitoring these trees involves marking, measuring, and revisiting a subset of about 10% of trees annually. Thanks to these ongoing efforts, we know that our trees have a survival rate of about 80%, which means that they are doing very well.

# LAGNIAPPE

## **Volunteer of the Year**

We'd like to extend a special thanks to our Volunteer of the Year, Maya Lahti! Ms. Lahti is one of our most frequent and reliable volunteers. She has participated in 13 different CRCL events since 2012, with four of those in the past year alone. Maya has contributed more than 100 hours of service to CRCL. She has planted trees in Braithwaite, Maurepas, and Jean Lafitte, planted marsh grass in Jean Lafitte and Lake Hermitage, and restored dunes on Elmer's Island. Maya's service has not only planted hundreds of plants, but by being such a regular presence she has helped us build our volunteer community. Her strong work ethic and passion for coastal restoration embodies the spirit of CRCL. We are so grateful to call Maya a member of our volunteer community, and recognize her substantial impact on Louisiana's coast.





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