BRIDGING THE GAP BETWEEN COASTAL RESILIENCY AND CORPORATE SUSTAINABILITY

LOUISIANA CASE STUDY

Let’s get started

Project Background

Goals and Objectives

Coastal Resiliency Techniques

Project Outcomes and Co-benefits

Project Location

The Terrebonne region spans from Morgan City to Highway 1, including the communities of Houma and Dulac.

The region is filled with an interconnected web of bayous, blackwater swamps, extensive marshes, and a series of barrier islands.

Public-Private Partnership

BHP

America's WETLAND FOUNDATION

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Climate resilience means different things to different people and places.

It is the ability of a socio-ecological system to absorb and withstand stressors such that the system maintains its same basic structure and function.

Climate resilience is the ability to anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate.

The ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions.

Resilience to climate change is defined as the capacity to prepare for, respond to, and recover from the impacts of hazardous climatic events while incurring minimal damage to societal wellbeing, the economy and the environment.

Climate resilience is about successfully coping with and managing the impacts of climate change while preventing those impacts from growing worse.

“Coastal resilience is more than restoration and protection. State agencies, parishes, municipalities, levee districts, federal partners, businesses, and individuals must work together in support of a comprehensive approach to enhance the resiliency of our communities, livelihoods, culture, and coastal environment.”

- 2023 Louisiana Comprehensive Master Plan for a Sustainable Coast

Project Components

Pointe-aux-Chenes Wildlife Management Area: Cypress Forest restoration

Bayou Terrebonne: Marsh terrace system design and installation

Goals and Objectives


Conceptual marsh terrace rendering

Wetland restoration to include carbon sequestration and water quality benefits.

Highlight valuable social and environmental private sector investment through proactive response to climate related impacts in vulnerable communities.

Demonstrate that a sound environment supports communities, habitat and a secure economy.

Engage and educate volunteers about the importance of ecological restoration and the direct and indirect benefits to the long-term survivability of local Louisiana communities.

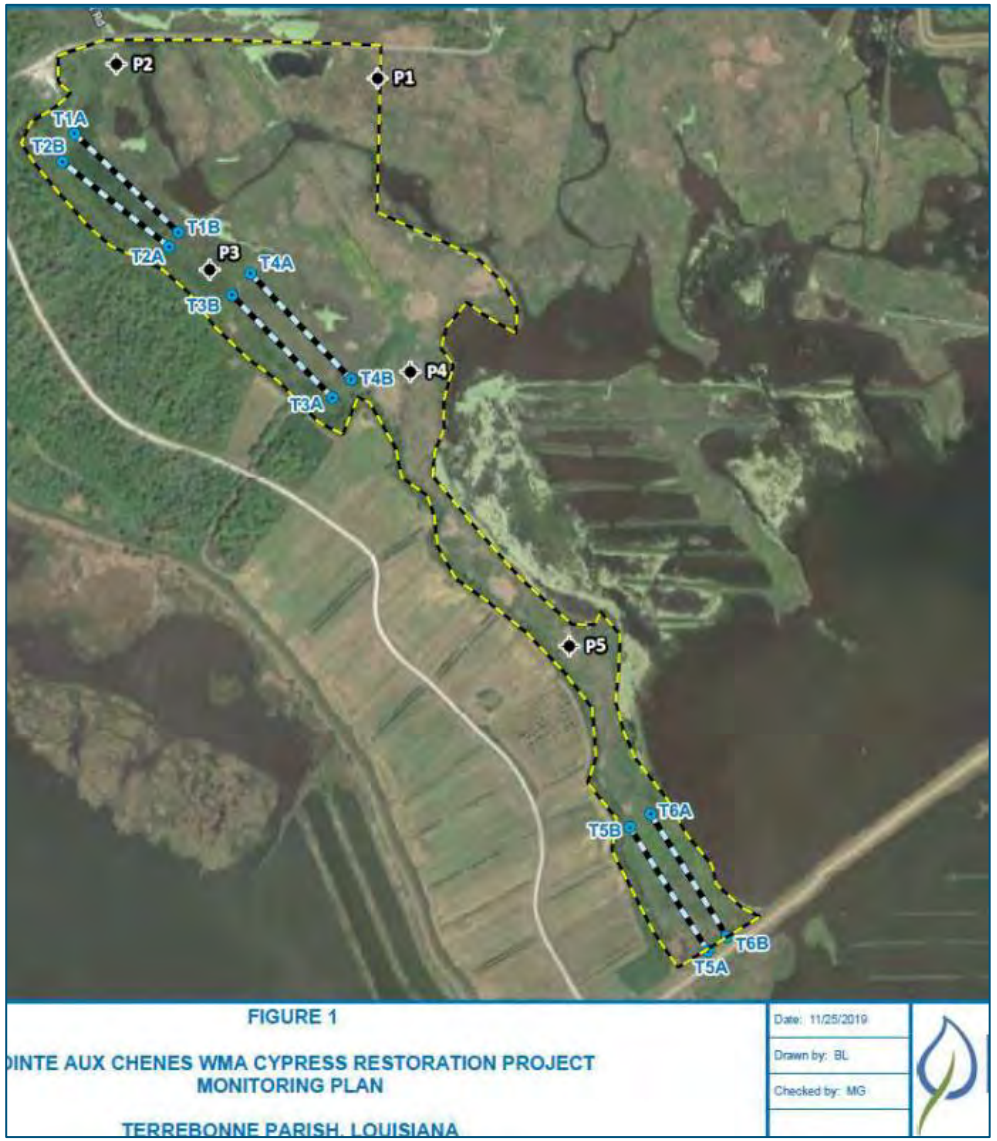
Point-Aux Chenes Wildlife Management Area

Overview: Restoration of historic Cypress-Tupelo Swamp to develop a diverse and self-sustainable ecosystem, while providing educational opportunities for the public on the importance of wetland loss in Louisiana.

The functional benefit to the watershed includes an increase in the quantity and quality of forested wetland habitat for resident and migratory wildlife and provides a buffer during storm events to the surrounding local communities.

Scope:

- 100 acres; 30 trees/acre
- 30,000 restorative cypress trees
- 5 years monitoring & aerial mapping
- Invasive species management



Estimated economic value of $792,700 per year

Carbon sequestration of 153 to 168 tons per year

Water quality improvements
via nutrient elimination:

Bayou Terrebonne Marsh Terrace

Overview: The marsh terrace project was needed to re-establish the structural integrity and value of the marsh habitat being lost.

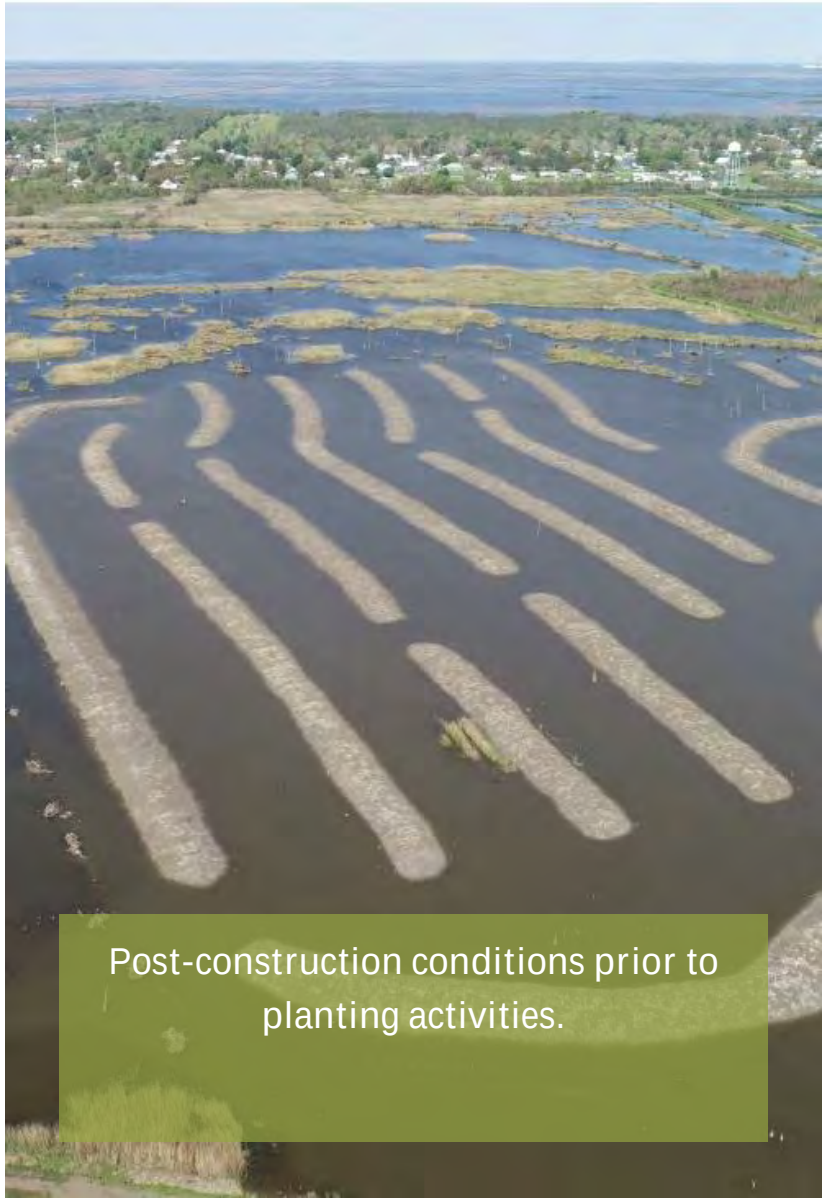
Marsh terrace construction is a common wetland restoration technique in coastal Louisiana. Using soil dredged from the project site, engineers build long segments of marsh. Marsh terrace creation immediately reduces the open water area and serves as a breakwater structure; consequently, reducing fetch and wave height, which allows for a reduction in the erosion of the shoreline in the marsh behind the terrace.

Scope:

- 48 acres; project area includes accretionary area between terraces
- 11,871 linear feet of Marsh Terraces
- 5,000 Restorative cypress trees
- 35,000 Marsh grass plugs
- 5 years of monitoring & aerial mapping

Marsh Terrace Evolution

Construction of the marsh terraces began in December 2018. Aerial image displays pre-construction conditions.



Post-construction conditions prior to planting activities.

Terrace planting occurred in spring of 2019. Aerial image displays Year 3 conditions.

Project Benefits

Estimated economic value of $380,496 per year

Carbon sequestration of 111 to 114 tons per year

Water quality improvements
via nutrient elimination:

The natural infrastructure enhancement provides critical flooding protection from hurricanes, storm surges and rising tides among vulnerable communities in the Terrebonne Parish.

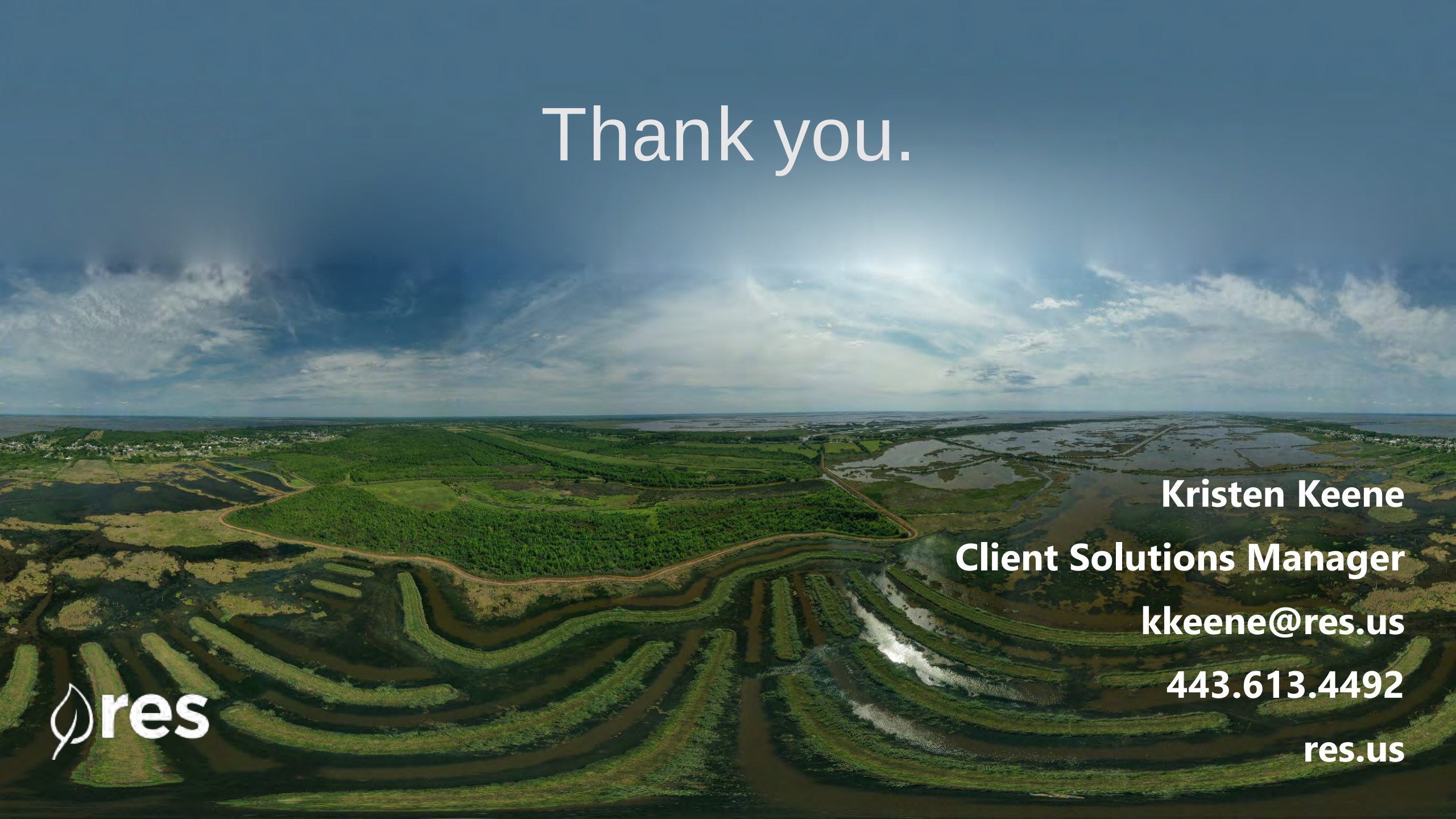
The protection and stabilization of the levee systems also provides resiliency to Parish citizens.

Overall, the project boasts an estimated annual economic value of $1.2M.

Community Engagement

- Project announcement and press conference
- Coastal Wetland and Communities Adaptation Leadership Forum
- Stakeholder Summit on the Master Plan and Beyond
- Volunteer planting (200+ hours)
- Community stakeholder and elected official briefings
- Press releases, newsletters and social media posts

Thank you.



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