Plan-It Marsh & Plan-It Dunes

Advancing STEM Career Skills & Restoring Coastal Habitats

Texas A&M AgriLife Extension

PLAN-IT MARSH

PLAN-IT DUNES

Program Brief

Extending Knowledge | Providing Solutions

Program Description

Plan-It Marsh and Plan-It Dunes programs provide STEM career skills to high school youth, enhance coastal habitat and water quality, and improve community resilience. These goals are achieved by partnering with high schools to provide high school students with educational training programs on marsh and dune habitats and restoration, provide skills in installation of green infrastructure through propagation and planting of native marsh and dune plants, and restoration of degraded marsh and dune habitats in their local coastal community.

Relevance

Coastal marshes and dunes provide many benefits. Economically, marshes enhance recreational and commercial fishing, thereby increasing tourism and creating returns that support coastal communities. Ecological benefits of native salt marsh and dune habitats include improved water quality, increased biodiversity, and enhancement of aquatic and terrestrial ecosystems. Furthermore, marsh and dune habitats benefit communities by mitigating impacts from storms, which are predicted to increase in intensity and frequency as global climate increases. Unfortunately, marsh and dune habitats face greater environmental impacts than inland areas due to population density and associated development in coastal areas. These negative impacts were apparent when 81% of surveyed sites along a 561 mile stretch of the Gulf Coast were categorized as medium to high-risk vulnerability. However, with adequate resources, training, and effective education, this trend could be reversed through restoration of these vulnerable and degraded coastal habitats.

FY 24 Program Highlights

IN TEXAS

271
Students at **6** high schools are participating in the Plan-It projects.

122.5
Volunteer contact hours earned harvesting & potting **1,336** native marsh & dune plants to use in the 2025 restoration field trips.

IN MISSISSIPPI

507
Students at **10** middle and high schools have improved STEM career skills and knowledge through participation in the Plan-It programs.

10
Acres of degraded marsh and dune habitat was restored increasing resiliency in **6** communities.

Texas A&M AgriLife Extension | Mississippi State University Coastal Research & Extension Center | Sea Grant Texas at Texas A&M University | Texas A&M AgriLife Research | Gulf of Mexico Alliance | EPA United States Environmental Protection Agency

Plan-It Marsh & Plan-It Dunes

Advancing STEM Career Skills & Restoring Coastal Habitats

Texas A&M AgriLife Extension

Restoration in Action

Making an impact, where it counts.

Response

Plan-It Marsh & Dunes started in 2022 in Mississippi as an EPA grant-funded program that aimed to provide high schools in the Gulf Coast & southeastern U.S. with the supplies and expertise to restore native marsh & dune habitat. In 2024, we received funding support through the Gulf of Mexico Alliance to start the Plan-It Marsh & Dunes programs here in TX.

Participating schools are provided with native plants for students to grow, teachers are given complementary lesson plans to use in class, and classes are taken on restoration planting field trips to restored degraded coastal habitat.

Results

IN Mississippi since 2022

- 507 middle & high school students at 10 schools gained STEM career knowledge and skills through direct participation in the Plan-It programs or through outreach educational events.
- 4,460 native plants were propagated to restored 10-acres of degraded marsh and dune habitat, increasing resiliency in 6 coastal communities.

IN Texas since 2024

- 271 high school students at 6 schools are participating in the Plan-It Marsh and Plan-It Dunes programs.
- 6 high school teachers received training on implementing the Plan-It programs with their students, totaling 18 educational contact hours.
- 122.5 volunteer contact hours were earned harvesting and potting 1,336 native plants that will be used in the 2025 restoration field trips.
- 128 Texans have been educated on the importance of marsh & dunes habitat at 2 community events.

Thank You!

We extend gratitude to the following organizations that donated plants and their time - providing us with valuable resources & technical advice.

Galveston Bay Foundation

Coastal Bend Bays & Estuaries Program

USDA Natural Resources Conservation Service
U.S. Department of Agriculture

Volunteer Plant Propagation Event

Project Team

These programs are a collaborative effort between Texas A&M AgriLife Extension Service, Mississippi State University Coastal Research and Extension Center, TX Sea Grant, TX A&M AgriLife Research, the Mississippi-Alabama Sea Grant Consortium, and Texas and Mississippi Gulf Coast High School Partners.

This project has been funded wholly or in part by the Gulf of Mexico Alliance and the United States Environmental Protection Agency under assistance agreement NOA_MX-02D02022-0 to Mississippi State University. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.

Stacy L. Hines
Assistant Professor and Extension Rangeland Habitat Management Specialist, Texas A&M AgriLife Extension Service
361.265.9203 | stacy.hines@ag.tamu.edu

Texas A&M AgriLife Extension Service is an equal opportunity employer and program provider.
Texas A&M AgriLife Extension Service provides equal opportunities in its programs and employment to all persons, regardless of race, color, sex, religion, national origin, disability, age, genetic information, veteran status, sexual orientation, or gender identity. The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating.