

Gulf Saver® Bags & HESCO® Units Wetland & Habitat Restoration



Restore
the Earth
FOUNDATION



An Innovative Combination for Early Project Success!

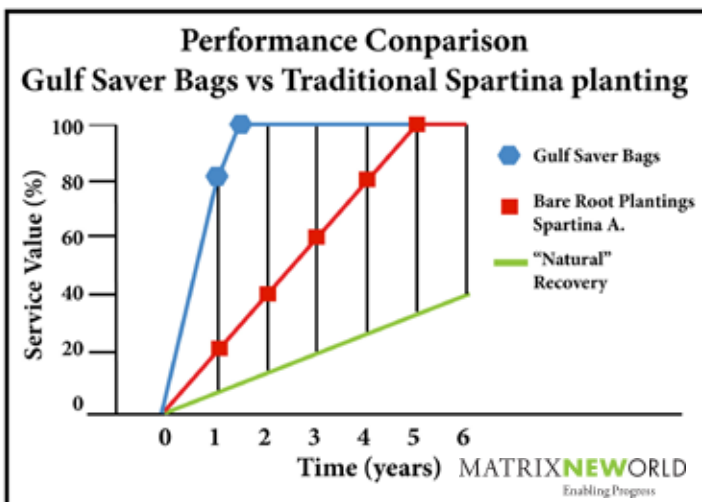


Gulf Savers® is an initiative of Restore the Earth Foundation Inc., a 501c3 not-for-profit, that has proven to be a successful innovative approach to marsh creation for stabilization and restoration of wetlands and habitats.

The Gulf Saver Bag is a biodegradable, self contained package of native plants with its own site specific custom mixed supply of natural nutrients to support, feed, and protect the native vegetation. The bag is a stability kit that jump starts growth and survivability in the face of storm surge, wave action and rapid erosion, unlike traditional methods of planting plugs.

The Gulf Saver Bag, creates a supportive environment for accretion by slowing down water, allowing sediment to build, and adding nutrient rich biomass to the soil. Oil eating microbes can also be introduced to the custom mix for added protection against oil impacted sites.

Bags are 14" x 26"



Benefits of Gulf Saver Bags & Initiatives

- Reduces erosion
 - Stabilizes and accelerates native re-vegetation
 - Prevents interior marsh breaching
 - Remediate soil and organic matter
 - Creates environment for accretion
 - Re-establishes wildlife habitat
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- Replicable/scalable
 - Provides for community engagement
 - Supports local economy
 - Provides opportunities for environmental education
 - Supported by collaborative partnerships

Gulf Saver bags® Demonstration/Pilot at Pass a Loutre, WMA, Venice, Louisiana



Bag Filling with custom mix



Gulf Saver bags at 4 months



Gulf Saver bags at 8 months

COST/BENEFIT ANALYSIS/Gulf Saver Bags vs Traditional Plug Planting

Measurements	Gulf Saver Bags	Bare Root Plugs
Cost Per Acre	\$15,990 (\$30 per bag planted)	\$ 37,850.00 (\$2 a plug planted)
Spacing	5.0 meter centers/3 bag clusters - 507 bags/acre	0.7 meter centers -10,816 plugs/acre
Survivability	95% 1st year	50% 1st & 2nd year
Anticipated Replanting	5% one time	50% year 1 / 50% year 2 (2x)
Service Value	100% in <2 years	100% in 5-10 years
Carbon Credit Value Achieved	1st year	5th year
Estimated DSAYs	16+ /acre	12+ /acre
Estimated Cost Per DSAY	\$1,000.00	\$3,154.00

COST: Excludes transportation to off shore sites. Additional 15-20% cost reduction for projects of 100,000 bags or more

Gulf Saver Bag Performance Spartina alterniflora Performance North Pass A Loutre, WMA

	8 Months	12 Months	18 Months
Percent Cover (%)	75 - 80%	65 - 90%	70-100%
Average Canopy/ Veg Height (cm)	70-85 cm	75-110 cm	90-150 cm



Regulatory Acceptance and Endorsed By:

- United States Army Corps of Engineers
- Hesco Bastion Environmental Inc.
- Natural Resource Conservation Service
- Louisiana Department of Wildlife and Fisheries
- National Oceanic & Atmospheric Administration
- United States Fish and Wildlife Services
- LSU Department of Oceanography & Coastal Science
- Southeast Louisiana University
- Gulf Future Coalition - Sunshine on the Gulf Report
- Audubon Nature Institute
- Nature Conservancy
- Center for Energy and Climate Solutions
- National Wildlife Federation
- Coalition to Restore Coastal Louisiana
- Restore Americas Estuaries
- Venice Port Complex
- Plaquemines Parish Government
- Gulf Restoration Network
- Common Ground Relief
- Gulf Coast Alliance
- Americas Wetlands
- Ducks Unlimited



Technical Support, Product Development and Monitoring Provided By:

