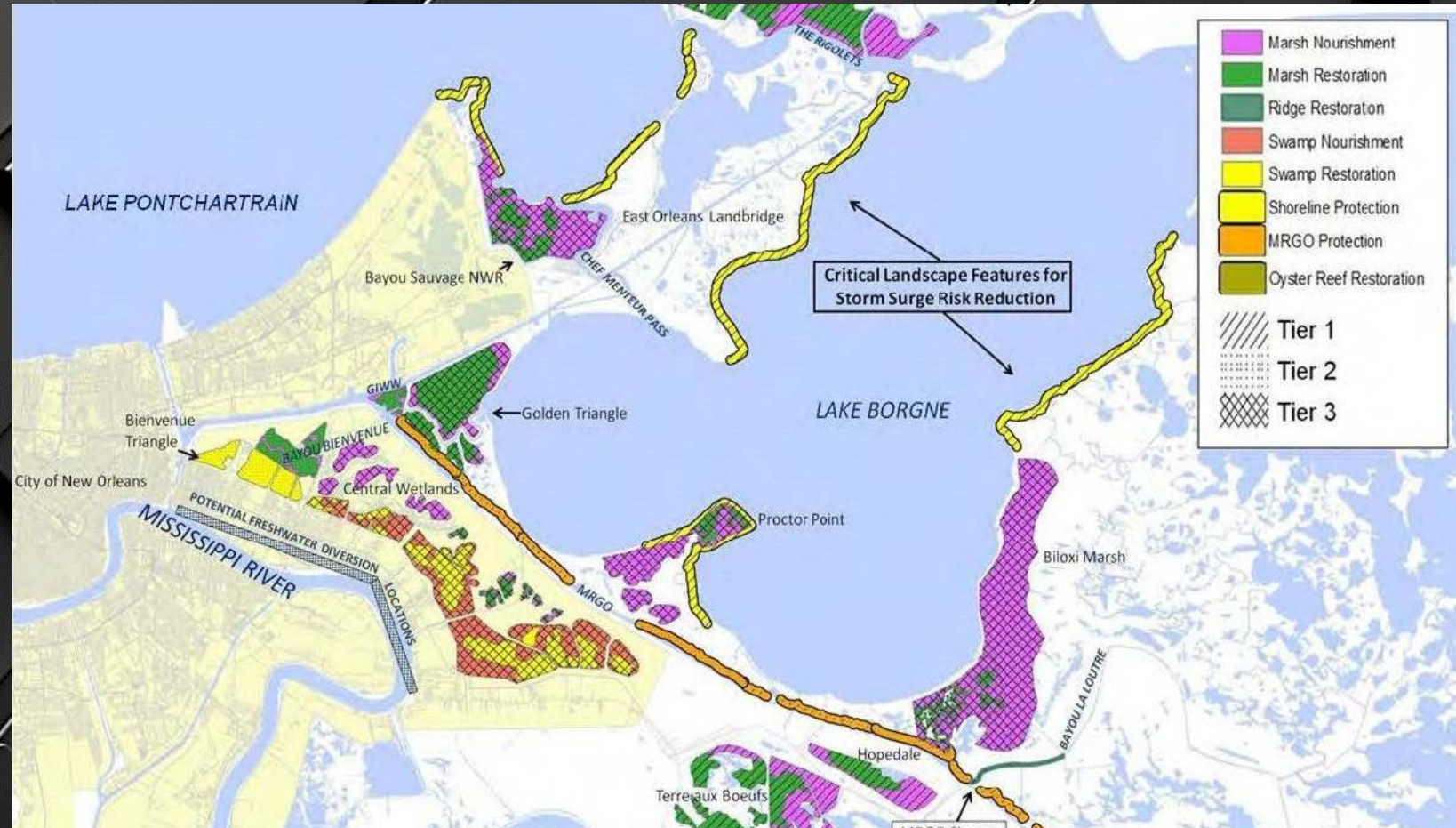




# MISSISSIPPI RIVER GULF OUTLET (MRGO) ECOSYSTEM RESTORATION PLAN

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# AGENDA

- MRGO Ecosystem Restoration Plan  
Overarching goals
- Authorized Tier 1 Features
  - Tiers 2 & 3 Features (Requires Additional Documentation)
- Timeline and Path Forward



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# MRGO Ecosystem Restoration Plan

The overarching goals of the MRGO Ecosystem Restoration Plan are as follows:

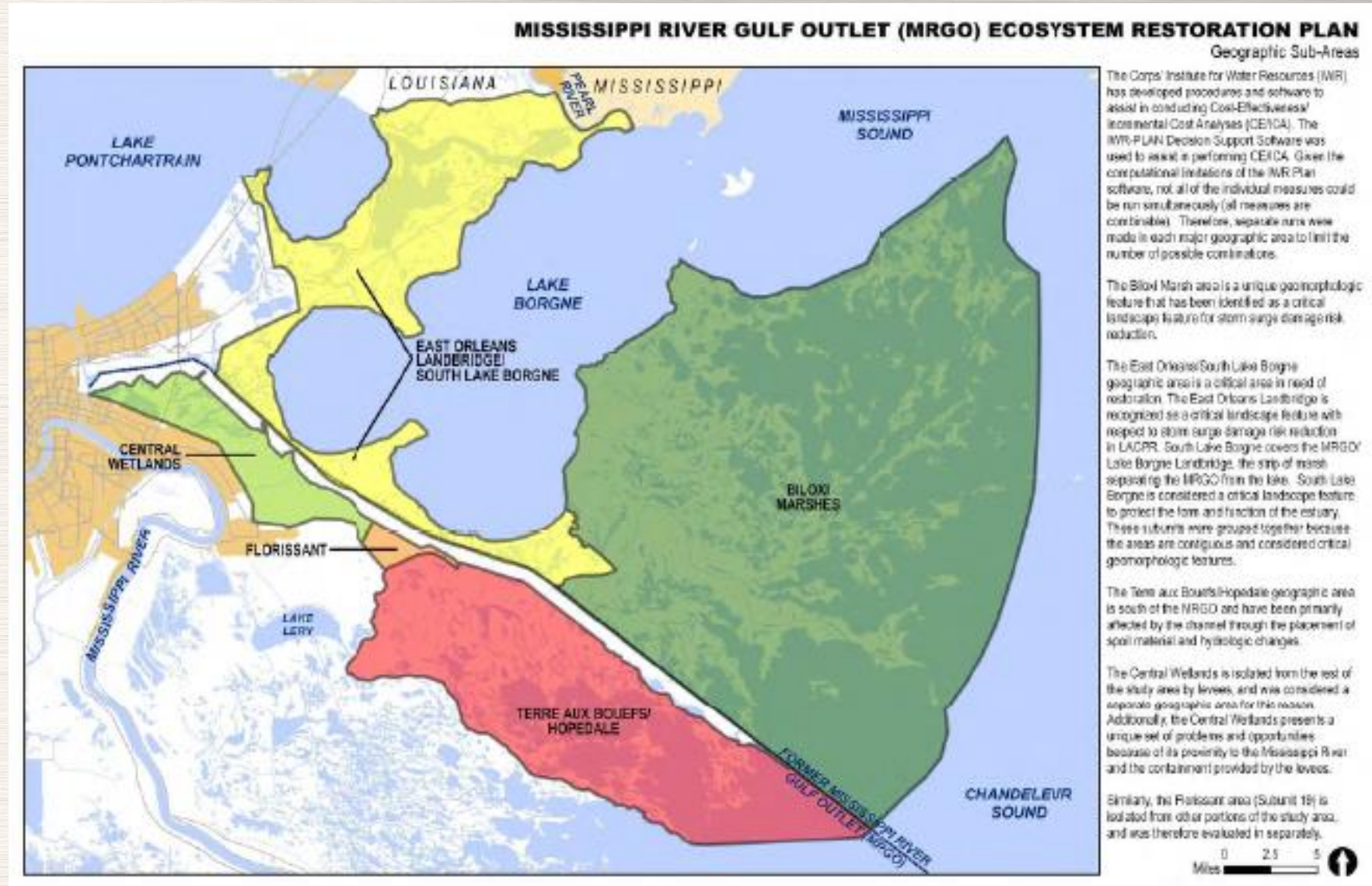
1. Restore the Lake Borgne ecosystem and the areas affected by the MRGO navigation channel.
2. Restore natural ecosystem features that reduce or prevent storm surge.
3. Achieve ecosystem sustainability to the greatest degree possible.



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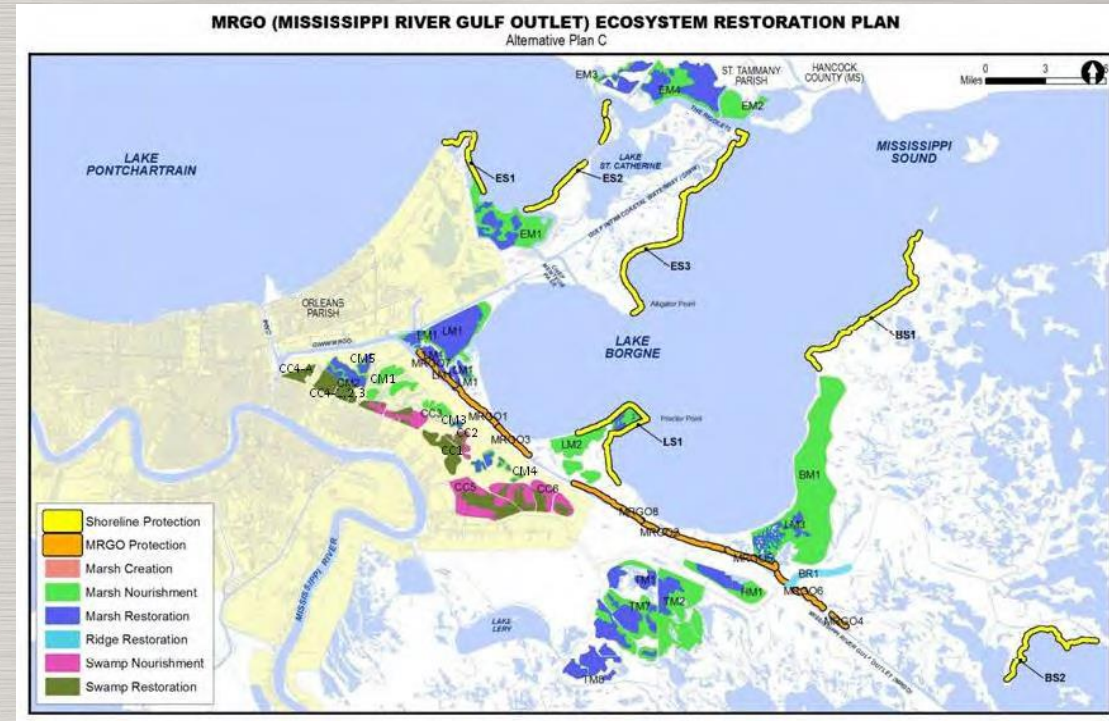




Measure	Description
<b>TIER 1 RECOMMENDED FOR CONSTRUCTION (CONTINGENT UPON IDENTIFICATION OF NON-FEDERAL SPONSOR)</b>	
Total Investment Cost: \$1,308,000,000	
Total Average Annual Costs: \$54,591,000	
Total MAMP Costs: \$104,131,000	
Total OMRR&R Costs: \$209,503,000	
Average Annual OMRR&R Costs: \$3,141,000	
Total Benefits: 2,414 AAHUs	
October 2011 Price Levels	

LS1	45,000 linear feet (8.5 miles) of shoreline protection beginning at the terminus of the Bayou Dupre supplemental shoreline project, extending around Proctor Point to the West of Shell Beach supplemental funding shoreline protection.
MRGO1	3,850 feet (0.75 miles) of new foreshore protection between MRGO miles 56.6 and 57.4. This stone protection feature is embedded within the limits of MRGO7.
MRGO6	8,132 linear feet (1.5 miles) of new, non-continuous foreshore protection between MRGO miles 36.0 and 34.4, immediately east of the existing stone closure of the MRGO. MRGO6 ties into an existing foreshore dike immediately downstream.
BS1	Approximately 50,637 linear feet (9.5 miles) of protection along the southeast shore of Lake Borgne from the Biloxi Marsh Shoreline Protection Project (PO-72) south of Point aux Marchettes extending north to Malheureax Point.
BS2	Approximately 30,750 linear feet (5.8 miles) of artificial oyster reef development between Eloi Point and the mouth of Bayou La Loutre.
ES1	20,530 linear feet (3.8 miles) of shoreline protection from the south shore of Lake Pontchartrain to the existing Bayou Chevee shoreline protection feature.
ES2	30,750 (5.8 miles) linear feet of shoreline protection in Lake Pontchartrain between Chef Menteur Pass and The Rigolets.
ES3	69,900 linear feet (13.2 miles) of foreshore protection along Lake Borgne between Alligator Point and The Rigolets.
BR1	Approximately 54.1 acres of ridge restoration on the south bank of Bayou La Loutre. 400,000 cubic yards of silty sand material would be required.
EM2	1,095 acres of marsh nourishment on Hog Island, located between the west and east mouth of the West Pearl River using 1.3 million cubic yards of dredged material.
EM3	861 acres of marsh restoration and 180 acres nourishment bounded by Highway 433, Little Lagoon, Salt Bayou and Highway 90 using 4.1 million cubic yards of material.
EM4	2,625 acres of marsh restoration and 1,455 acres of nourishment bounded by Salt Bayou, the West Pearl River, the Rigolets, and Highway 80. Approximately 9.2 million cubic yards of material would be required.
HM1	757 acres of marsh restoration and nourishment of 973 located in the Hopedale area using 4.5 million cubic yards of dredged material.
TM1	798 acres of marsh restoration and 223 acres of marsh nourishment south of Bayou La Loutre in the Terre aux Boeufs area using 3.8 million cubic yards of material.
TM2	770 acres of marsh restoration and 3,396 acres of marsh nourishment in the vicinity of Lake Ameda. Approximately 8.8 million cubic yards of material would be required.
TM7	2,255 acres of marsh restoration and 2,144 acres of adjacent marsh nourishment to the east of Bayou Terre aux Boeufs using 12.4 million cubic yards of material.

# MRGO



Measure	Description
TM8	1,511 acres of marsh restoration on the east side of Bayou Terre aux Boeufs in the vicinity of Delacroix. 9.7 million cubic yards of material would be required.
MRGO2	One time repair of approximately 21,630 linear feet (4.1 miles) of existing foreshore protection between Mile 44.5 and 40 of the MRGO.
MRGO3	One time repair of approximately 26,650 linear feet (5 miles) of existing foreshore protection between approximately Mile 56 to 51 of the MRGO.
MRGO4	One time repair of approximately 11,770 linear feet (2.2 miles) of existing retention dike between MRGO Miles 36.6 to 37.1 and MRGO Miles 33.9 to 32.9.
SHELL BEACH	Recreation feature to be constructed following repair of MRGO2. 343 lf of boardwalk into the MRGO, 805 lf of shoreline boardwalk, 5 picnic shelters (two handicap accessible), interpretive signage, bathrooms, parking, solar lighting and plantings.



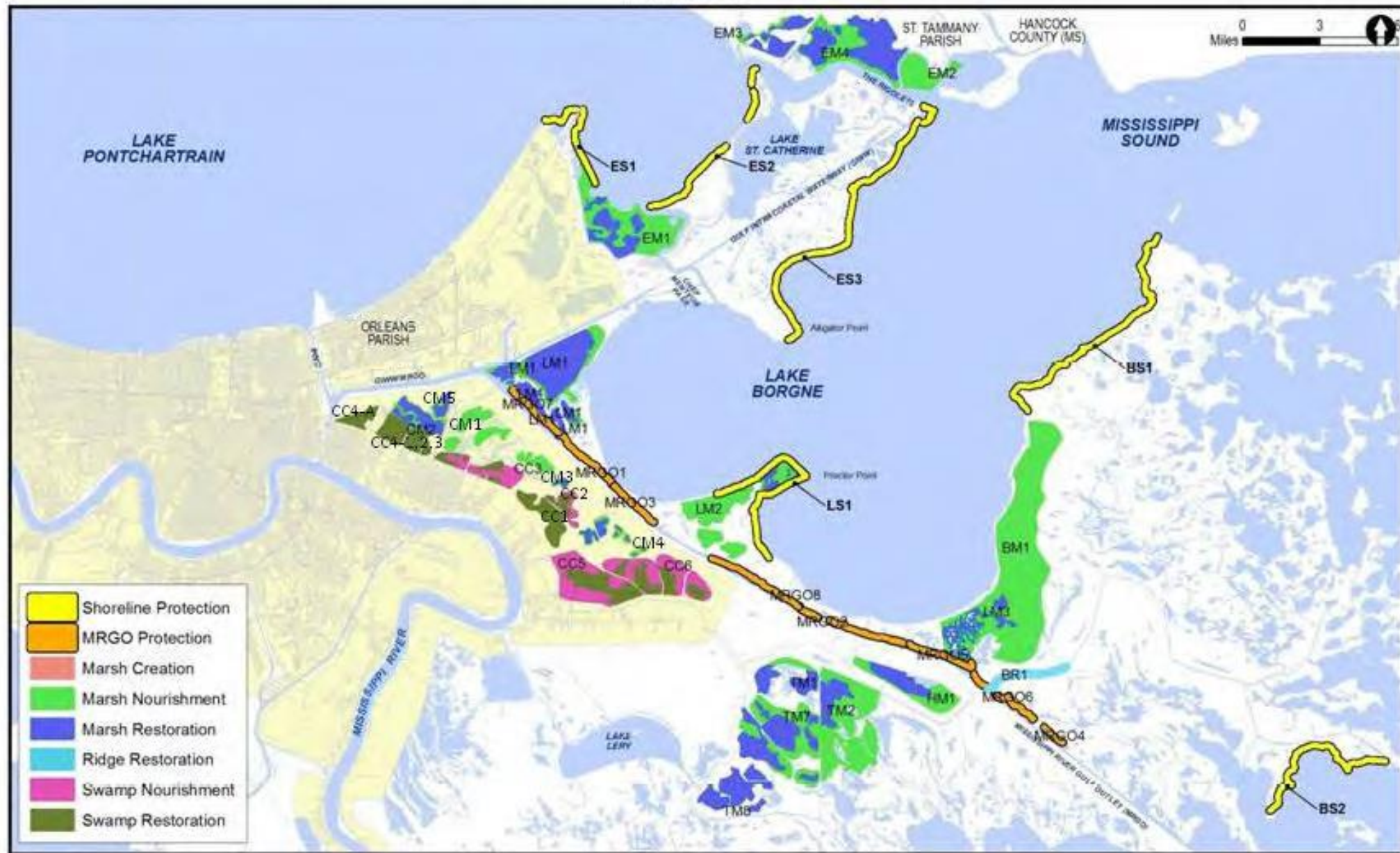
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# MRGO (MISSISSIPPI RIVER GULF OUTLET) ECOSYSTEM RESTORATION PLAN

Alternative Plan C



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# MRGO Ecosystem Restoration Plan Tiers 2 and 3

**TIER 2 RECOMMENDED FOR CONSTRUCTION IF CONDITIONS FAVORABLE FOR ECOLOGICAL SUCCESS AND SUSTAINABILITY ARE DOCUMENTED**

Total Investment Cost: \$390,232,700  
 Total Average Annual Costs: 15,531,700  
 Total MAMP Costs: \$45,701,000  
 Total OMRR&R Costs: \$18,318,000  
 Average Annual OMRR&R Costs: \$251,700  
 Total Benefits: 5,694 AAHUs  
 October 2011 Price Levels

**TIER 3 RECOMMENDED FOR FURTHER STUDY**

Estimated Total Investment Costs for Tier 3B: \$1,194,150,000  
 Estimated Total MAMP Costs for Tier 3B: \$36,561,000  
 Estimated Total OMRR&R Costs for Tier 3B: \$198,806,000  
 Estimated Average Annual OMRR&R Costs: \$2,618,000  
 Estimated Total Benefits for Tier 3B: 29,872 AAHUs  
 Estimated costs do not include construction of the Violet, Louisiana Freshwater Diversion.  
 October 2011 Price Levels

CC4-A	400 acres of cypress restoration in the Bienvenue Triangle. Approximately 2.6 million cubic yards of material to be obtained from Mississippi River.
CC4 (Sites 2,3,4)	1,065 acres of cypress swamp restoration in the open water areas adjacent to the Forty Arpent Levee north of Paris Road using 7.8 million cubic yards of material.
CM2	795 acres of marsh restoration and 190 acres of marsh nourishment north of Paris Road using approximately 4.7 million cubic yards of material.
CM5	245 acres of marsh restoration and 70 acres of nourishment in the area north of Bayou Bienvenue and Paris Road using 1million cubic yards of material.
LM4	225.5 acres of marsh restoration and nourishment of 54.8 acres in the portion of the Golden Triangle bordered by the GIWW, the IHNC Surge Barrier, and the MRGO. Approximately 1.2 million cubic yards of material are required.
BAYOU REC	Recreation feature associated with CC4-A. 100 linear feet of platform, 995 linear feet of boardwalk into the swamp, 4 picnic shelters, interpretive signage, bathrooms, parking, solar lighting and vegetative plantings in the Bienvenue Triangle.



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# MRGO Ecosystem Restoration Plan Timeline and Path Forward



- Completed
- Delayed
- On Track
- Decision Points
- Not Started

