



# Gulf Coast Joint Venture

## COASTAL MISSISSIPPI-ALABAMA INITIATIVE AREA



See [www.gcjv.org](http://www.gcjv.org) for information about the Gulf Coast Joint Venture (GCJV) bird habitat conservation partnership.

This document summarizes priority bird conservation actions for the Coastal Mississippi - Alabama (CMA) Initiative Area.

Detailed descriptions and derivations are available at [https://www.gcjv.org/GCJV\\_Resources.php](https://www.gcjv.org/GCJV_Resources.php).

### Gulf Coast Joint Venture Office

📍 USGS Wetland and Aquatic Research Center  
700 Cajundome Blvd.  
Lafayette, LA 70506

☎ 337-262-7001

✉ [barry\\_wilson@fws.gov](mailto:barry_wilson@fws.gov)



# WATERFOWL

## MIGRATING AND WINTERING WATERFOWL

**Species addressed in GCJV planning:** Mallard, Northern Pintail, Gadwall, American Wigeon, Green-winged Teal, Blue-winged Teal, Northern Shoveler, Mottled Duck, Canvasback, Redhead, Ring-necked Duck, Greater & Lesser Scaup, and Wood Duck

**Population Objectives:** 47,310 ducks

	Green-winged Teal	American Wigeon	Canvasback	Gadwall	Mallard	Northern Pintail	Northern Shoveler	Redhead	Ring-necked Duck	Scaup	Wood Duck	Blue-winged Teal	Total
CMA	6,629	189	0	5,995	1,339	786	1,028	2,866	193	13,549	12,789	1,947	47,310
GCJV	872,407	292,350	99,473	909,944	353,636	1,234,195	558,322	469,561	301,867	1,412,432	325,958	1,369,053	8,199,196

### Habitat Objectives:

	Acres
Forested Wetlands	128,443
Coastal Marsh Ponds	
Fresh	764
Intermediate	740
Brackish	4,174
Saline	6,178
Total marsh	11,855
Seagrass meadows	*

\* Acre objectives not calculated for seagrass meadows in CMA



**Biological Foundation:** Bio-energetic models yield acreage of foraging habitats necessary to meet dietary demands of population objectives.

### Conservation Activities:

- Minimize saltwater intrusion and enhance productivity of coastal marsh through hydrologic restoration.
- Promote management activities to protect and restore seagrass beds.
- Create and promote expansion of coastal marsh through beneficial use of dredge material.
- Maintain, enhance, or restore resource values of forested wetlands through application of silvicultural practices and hydrologic restoration.

### Non-breeding Waterfowl Research Priorities:

Quantify movements, habitat use, and foraging ecology of scaup wintering in offshore and inshore waters.



# WATERFOWL

## BREEDING WATERFOWL

**Species Addressed in GCJV Planning:** Mottled Duck

**Population Objective:** A spring population of 211,865 individuals as measured from the Western Gulf Coast Mottled Duck Breeding Population Survey. There is no stepped-down objective for the CMA because the survey is not flown in the geography.



**Habitat Objectives:** Not yet available

**Biological Foundation:** Factors limiting recruitment are primary constraints to population growth.

**Conservation Activities:**

Create and restore large blocks of nesting habitat in coastal marsh.

Use hydrologic restoration to maintain low salinity (< 6–8 ppt) and enhance the quality of brood-rearing habitats in coastal marsh.

Remove predators in targeted locations.

**Breeding Waterfowl Research Priorities:**

Measure the effectiveness of habitat conservation actions to benefit Mottled Duck breeding productivity, including breeding propensity, nest success, and brood survival.

# LANDBIRDS

**Priority Species:** Northern Bobwhite, Loggerhead Shrike, LeConte's Sparrow, Seaside Sparrow, Cerulean Warbler, Golden-winged Warbler, and Swainson's Warbler

## NORTHERN BOBWHITE

**Population Objectives:** 2,288 birds for AL portion of Bird Conservation Region (BCR) 27; 2,905 birds for MS portion of BCR 27; 46 birds for MS portion of BCR 37

**Habitat Objectives:** 35,052 acres for AL portion of BCR 27; 44,505 acres for MS portion of BCR 27; 705 acres for MS portion of BCR 37

**Desired Habitats:** Early successional habitat, 3,500 to 7,000 acres in size including agricultural fields, pastures, and grass-brush rangelands

**Biological Foundation:** Average spring home range size dictates acres needed to support population objectives.

### Conservation Activities:

Maintain 15-30% woody vegetation in grasslands.

Conduct disturbance (e.g., fire, disking, prescribed grazing, mowing) every 3 years.



Figure 1. GCJV Bird Conservation Regions



## LOGGERHEAD SHRIKE



**Population Objectives:** 9,638 birds; 6,868 birds during winter (i.e., 3,536 Resident, 3,332 Migratory) in MS portion of CMA; 2,770 birds during winter (i.e., 1,700 Resident, 1,070 Migratory) in AL portion of CMA

**Habitat Objectives:** 60,995 acres in CMA, with 38,427 acres in AL and 22,568 acres in MS

**Biological Foundation:** Territory size(s) dictate(s) acreage needed to support population objectives.

### Conservation Activities:

Preserve native prairie areas; maintain low, thick shrubs in fields (i.e., 3-10 shrubs or small trees per acre).

# LANDBIRDS

## LECONTE'S SPARROW



**Population Objectives:** 2,964 birds during winter; (2,748 birds in MS portion of CMA; 216 birds in AL portion of CMA)

**Habitat Objectives:** 2,964 acres; (2,748 acres in MS portion of Initiative Area ; 216 acres in AL portion of CMA)

**Biological Foundation:** Winter density estimates dictate acreage needed to support population objective.

**Conservation Activities:** Manage  $\geq 500$  acre blocks of native grassland with burned and unburned areas; prescribed burns should occur on a 3-year rotation.

## SEASIDE SPARROW

**Population Objectives:** 65,000 birds in U.S. BCR 37 and GCJV portion of BCR 26; 9,000 birds in CMA

**Habitat Objectives:** 650,000 acres in U.S. BCR 37 and GCJV portion of BCR 26; 90,000 acres in CMA

**Biological Foundation:** Breeding territory size dictates acreage needed to support population objectives.

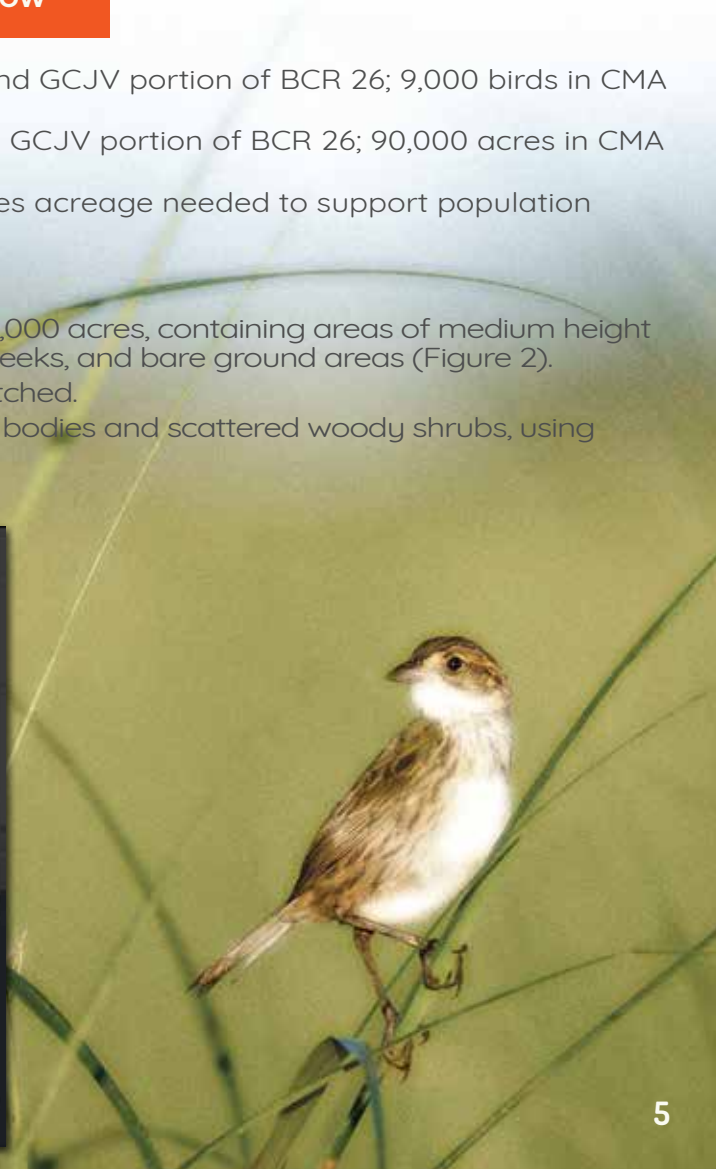
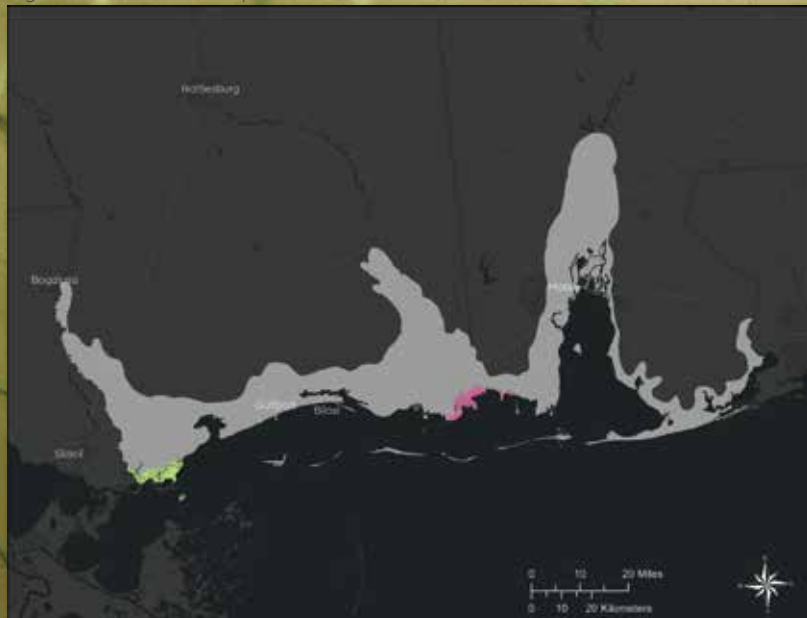
### Conservation Activities:

Create and/or restore marsh habitat, in blocks  $\geq 10,000$  acres, containing areas of medium height smooth cordgrass, interspersed with ponds, tidal creeks, and bare ground areas (Figure 2).

Plug selected ditches in marshes that have been ditched.

Create marsh-elevation islands, with shallow water bodies and scattered woody shrubs, using dredged material.

Figure 2. CMA Seaside Sparrow Habitat Patches



# LANDBIRDS

## CERULEAN WARBLER, GOLDEN-WINGED WARBLER, SWAINSON'S WARBLER

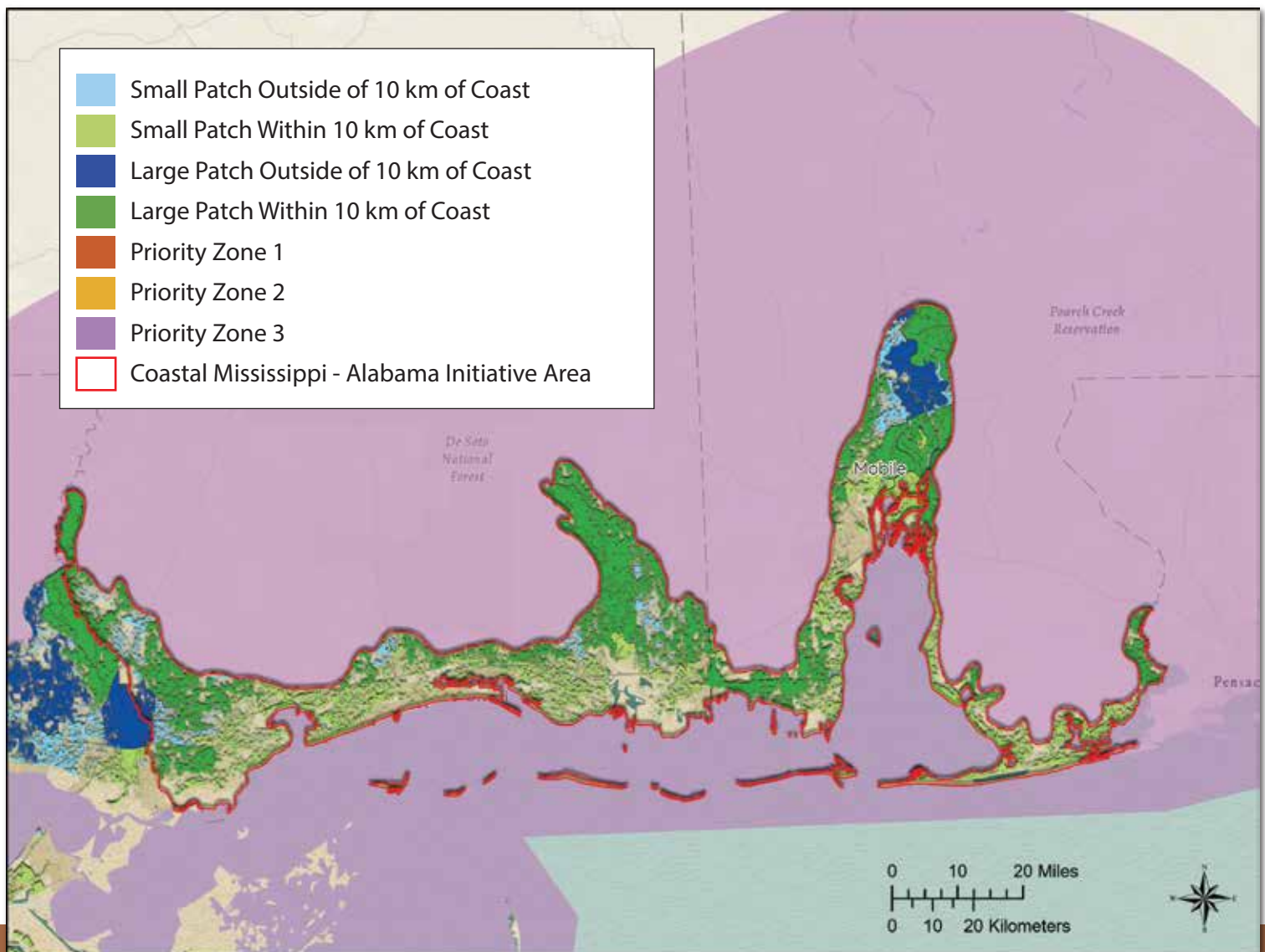
**Population Objective:** Not yet available

**Habitat Priorities:** Large forest patches ( $\geq 10,000$  acres) close to the Gulf of Mexico. Figure 3 illustrates habitat prioritization.

- Priority Zone 1 > Consistent abundant use
- Priority Zone 2 > Consistent common use
- Priority Zone 3 > Sporadic common-abundant use

Highest priority are large patches ( $\geq 10,000$  acres) within 10 km of the coast. Second priority are large patches more than 10 km from the coast. Small patches are also identified.

Figure 3. Bird Conservation Region 37 Forest Habitat within Priority Zones by Patch Size and Distance from Coast



### Landbird Research Priorities:

Estimate seasonal survival rates for Seaside Sparrow and determine the significance of winter survival and habitat needs in limiting GCJV populations.

Simulate Seaside Sparrow population response to predicted habitat changes, such as projected sea level changes.

Identify the habitat components of ideal forest landbird migration stopover habitat.

Test and refine assumptions of LeConte's Sparrow habitat-population model.

Determine primary limiting factors and desired habitat characteristics for Loggerhead Shrikes in the Gulf Coast Joint Venture region.

# WATERBIRDS

**Priority Species:** Reddish Egret, Little Blue Heron, Wood Stork, King Rail, Black Rail, Gull-billed Tern, and Black Skimmer. Population and habitat objectives for Wood Stork, Black Rail, Gull-billed Tern, and Black Skimmer are not yet available.

## REDDISH EGRET

**Population Objective:** 100 breeding pairs in LA, MS, and AL portion of the GCJV

**Habitat Objective:** Not yet available

**Biological Foundation:** Estimation of breeding population impacts of specific management treatments applied to specific colonies.

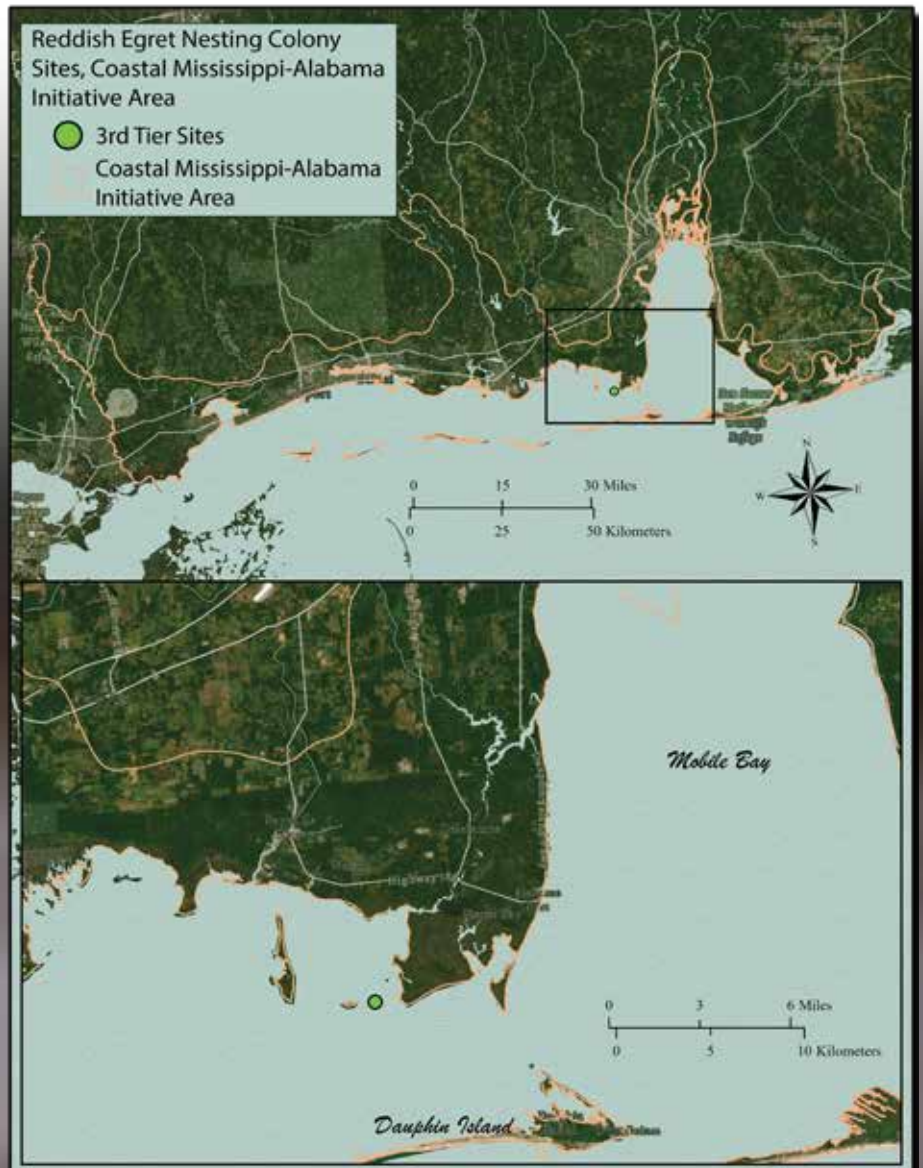
### Conservation Activities:

Apply colony-specific management actions.

Create/improve alternate colony sites.

Improve foraging habitat within 10 km of existing colonies.

Figure 4. CMA Reddish Egret Nesting Colony



# SHOREBIRDS

**Species Addressed in GCJV Planning:** Wilson’s Plover, Snowy Plover, Long-billed Curlew, Hudsonian Godwit (Spring only), Western Sandpiper, Stilt Sandpiper, Buff-breasted Sandpiper, and Short-billed Dowitcher

## Population Objectives:

		Coastal Marsh (Including Impounded), Flats and Reefs				Inland Saturated Soil, Shallow Open Water, & Flooded Grassland		Inland Dry Grassland		Population Objective CMA
		Beach/Inlet								
Spring	Wilson’s Plover	314	177	0	0	0	0	0	491	
	Snowy Plover	1,239	308	0	0	0	0	0	1,547	
	Long-billed Curlew	0	0	0	0	0	0	0	0	
	Hudsonian Godwit	0	0	0	0	0	0	0	0	
	Stilt Sandpiper	550	595	0	0	0	0	0	1,145	
	Buff-breasted Sandpiper	0	0	0	0	0	0	0	0	
	Western Sandpiper	14,364	9,113	0	0	0	0	0	23,476	
	Short-billed Dowitcher	3,378	2,387	30	0	0	0	0	5,795	
Fall	Wilson’s Plover	492	344	0	0	0	0	0	836	
	Snowy Plover	1,098	282	0	0	0	0	0	1,379	
	Long-billed Curlew	0	0	0	0	0	0	0	0	
	Hudsonian Godwit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Stilt Sandpiper	906	2,333	334	0	0	0	0	3,573	
	Buff-breasted Sandpiper	16	5	8	14	14	14	14	44	
	Western Sandpiper	21,185	12,739	87	0	0	0	0	34,010	
	Short-billed Dowitcher	3,923	2,675	18	0	0	0	0	6,615	

## Habitat Objectives

	CMA Acres <sup>1</sup>	GCJV Total Acres <sup>1</sup>
Fall Beach/Inlet	5,545	44,025
Fall Marsh, Flats, & Reefs	3,918	82,895
Fall Inland Saturated Soil, Shallow Water, & Flooded Grassland	1,101	146,619
Spring Inland Saturated Soil, Shallow Open Water, & Flooded Grassland	1,046	128,635

<sup>1</sup> Acreages represent need for available/open foraging habitat, which varies depending on habitat type.

**Biological Foundation:** Bio-energetic models yield acreage of foraging habitats necessary to meet the demand of population objective.

**Conservation Activities:** Provide inland habitat ranging from shallow, flooded fields to mudflats; restore and conserve marshes, tidal flats, oyster reefs, beaches and inlets.

## Shorebird Research Priorities:

Determine if Gulf Coast Snowy and Wilson’s Plover breeding populations are more limited by adult survival or productivity; if productivity limits population growth, determine levels of reproductive success needed for population stability.

Improve estimates of carrying capacity/prey density of shorebird habitat in marsh ponds, tidal flats, delta splays, grasslands, beaches, agricultural fields, moist-soil units and other important foraging habitats; determine how prey base availability is affected by cultivation practices, management, chemical amendments and other human activities.

Assess effectiveness of marsh and beach creation through sediment deposition in providing habitat used by shorebirds with abundant prey.

Develop and quantitatively assess best management practices for breeding Wilson’s and Snowy Plovers in the GCJV region, including predator removal or exclusion and disturbance management.





# WATERBIRDS

## LITTLE BLUE HERON

**Population Objective:** 96 breeding pairs in CMA

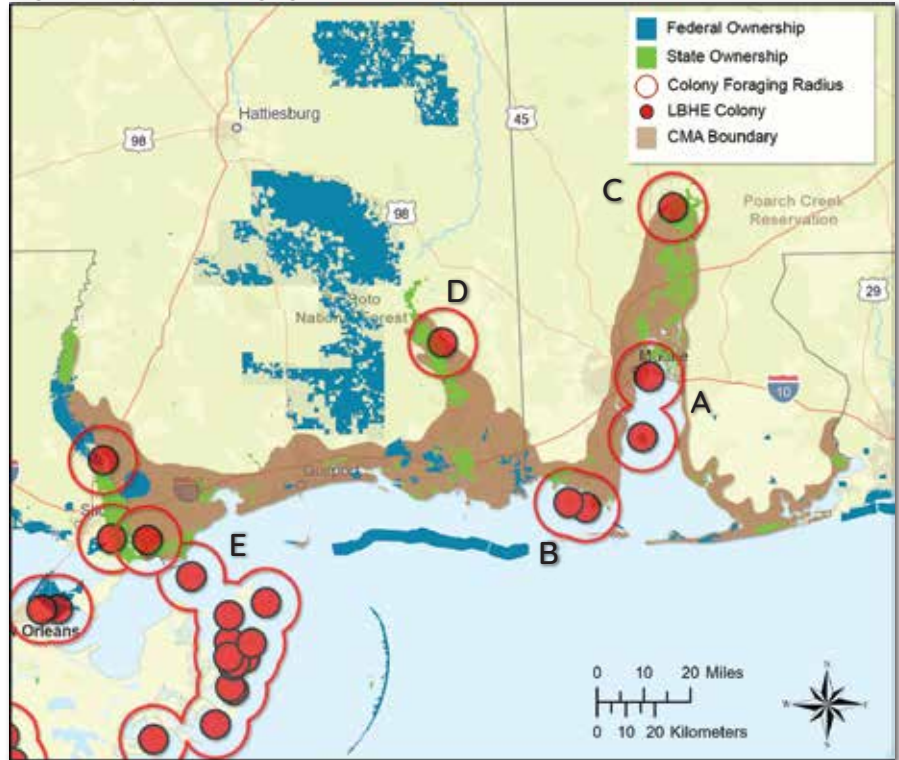
**Habitat Priorities:**

### Important Foraging Habitats by Colony Cluster

- A. Gaillard-Goat Island: USOW, EEW, PFW, PSS
- B. Cat-Terrapin Island: USOW, EEW, PFW, PSS
- C. Clearwater Lake: PSS, PFW
- D. Boneyard Lake: PEW, PSS, PFW
- E. White Kitchen-Grand Island MS: USOW, EEW, PFW, PSS

EEW=Estuarine Emergent Wetland  
PEW=Palustrine Emergent Wetland  
PFW=Palustrine Forested Wetland  
PSS=Palustrine Scrub/Shrub Wetland  
USOW=Unconsolidated Shore-Open Water Ecotones

Figure 5. Important foraging habitats identified for each Initiative Area cluster:



**Biological Foundation:** Population is limited by availability of suitable foraging habitat proximal to suitable nesting habitat.

### Conservation Activities:

Apply specific management actions to colonies, or clusters of colonies, and associated foraging habitat.



## KING RAIL

**Population Objective:** 919 individuals in CMA

**Habitat Objectives:** 936 acres of new intermediate marsh converted from brackish and/or saline marsh  
 Figure 6 depicts areas of brackish marsh within 1 km of existing fresh and intermediate marsh. Another management option is to create intermediate marsh in open water areas within 1 km of existing fresh and intermediate marsh. Figure 7 shows the 45,978 acres of open water that meet this criteria.

Figure 6. Brackish marsh within 1 km of fresh/intermediate marsh.

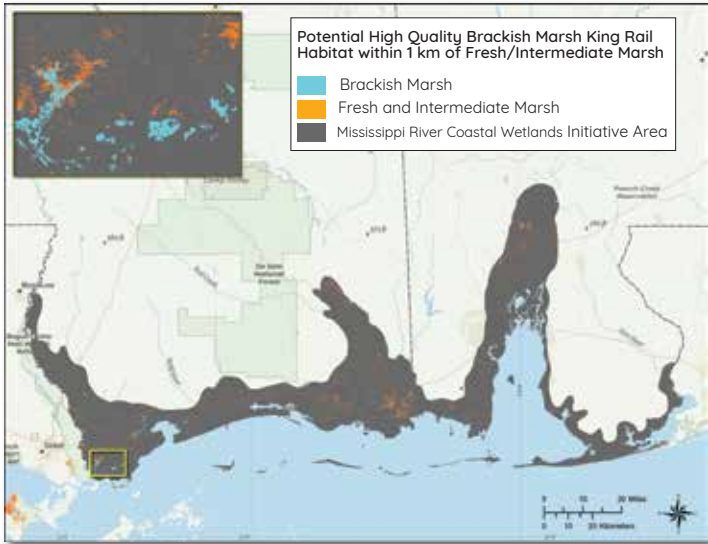
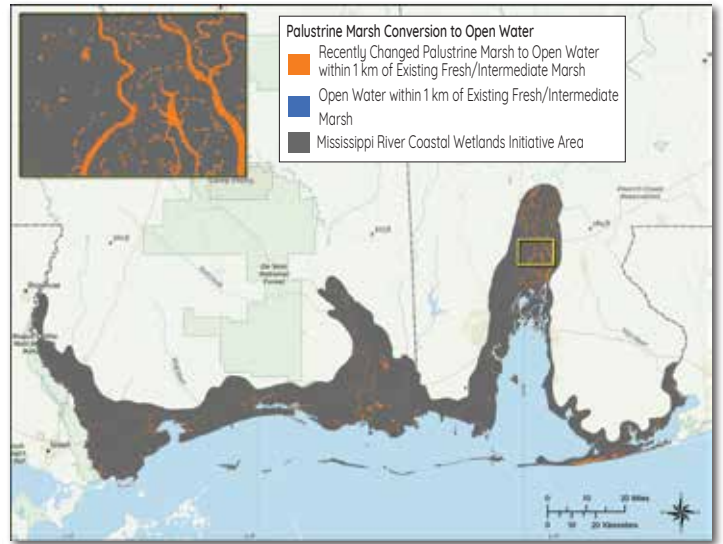


Figure 7. Open water within 1 km of fresh/intermediate marsh.



**Biological Foundation:** Population density estimates dictate acreage needed to support population objectives.

**Conservation Activities:**

- Reduce salinities of high quality brackish marsh within 1 km of existing fresh to intermediate marshes.
- Restore or create intermediate marsh in open water areas within 1 km of existing fresh to intermediate marshes.

Figure 8. Predicted relative abundance of King Rail in Intermediate and Fresh Coastal Marsh.



# WATERBIRDS

## Waterbird Research Priorities:

Validate population response of priority colonial nesting waterbirds (e.g., Black Skimmer, Gull-billed Tern, Reddish Egret and Little Blue Heron) to colony site management measures, including erosion control, dredged material placement, vegetation management, disturbance minimization and predator control.

Assess status and distribution of Little Blue Heron in the GCJV region, employing a standard repeatable methodology incorporating detection probabilities.

