



# Gulf Coast Joint Venture

## MISSISSIPPI RIVER COASTAL WETLANDS 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 Mississippi River Coastal Wetlands (MRCW) Initiative Area.

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

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# 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, Wood Duck, Lesser Snow Goose, and Greater White-fronted Goose

**Population Objectives:** 3,267,365 ducks.

	Green-winged Teal	American Widgeon	Canvas-back	Gadwall	Mallard	Northern Pintail	Northern Shoveler	Redhead	Ring-necked Duck	Scaup	Wood Duck	Blue-winged Teal	Total
MRCW	303,083	103,064	70,114	506,320	108,780	254,391	131,877	69,396	218,632	735,521	156,087	610,100	3,267,365
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	392,443
Coastal Marsh Ponds	
Fresh	59,657
Intermediate	41,055
Brackish	114,396
Saline	149,283
Total marsh	364,391
Seagrass meadows	*

\* Acre objectives not calculated for seagrass meadows in MRCW

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

### Conservation Activities:

- Reduce erosion of coastal marsh through shoreline and bank stabilization.
- Minimize saltwater intrusion and enhance productivity of coastal marsh through hydrologic restoration.
- Maintain or improve levees and water-control structures on managed marshes.
- 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.
- Determine the effects of coastal marsh restoration on sustainability of waterfowl habitats.



## BREEDING WATERFOWL

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

**Population Objectives:** A spring population of 211,865 individuals as measured from the Western Gulf Coast Mottled Duck Breeding Population Survey, including 103,385 in Louisiana and 108,480 in Texas.



**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 agricultural lands and 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 Objective:** 12,673 birds for LA portion of Bird Conservation Region (BCR) 37

**Habitat Objective:** 194,150 acres for LA 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:** 120,946 birds during winter (i.e., 85,106 Resident, 35,840 Migratory) in MRCW

**Habitat Objective:** 108,274 acres in MRCW

**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).

## LECONTE'S SPARROW



**Population Objective:** 32,633 birds during winter in MRCW

**Habitat Objective:** 32,633 acres in MRCW

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

**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 Objective:** 65,000 birds in U.S. BCR 37 and GCJV portion of BCR 26

**Habitat Objective:** 650,000 acres in U.S. BCR 37 and GCJV portion of BCR 26

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

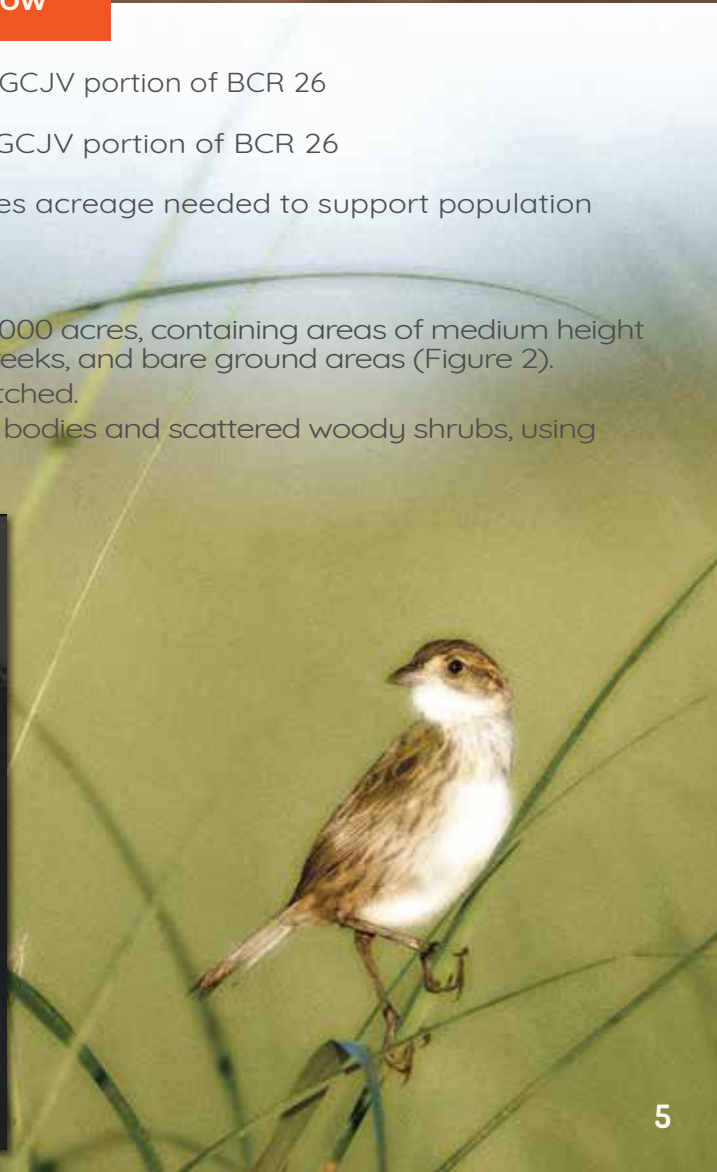
### Conservation Activities:

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. MRCW Seaside Sparrow Habitat Patches



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

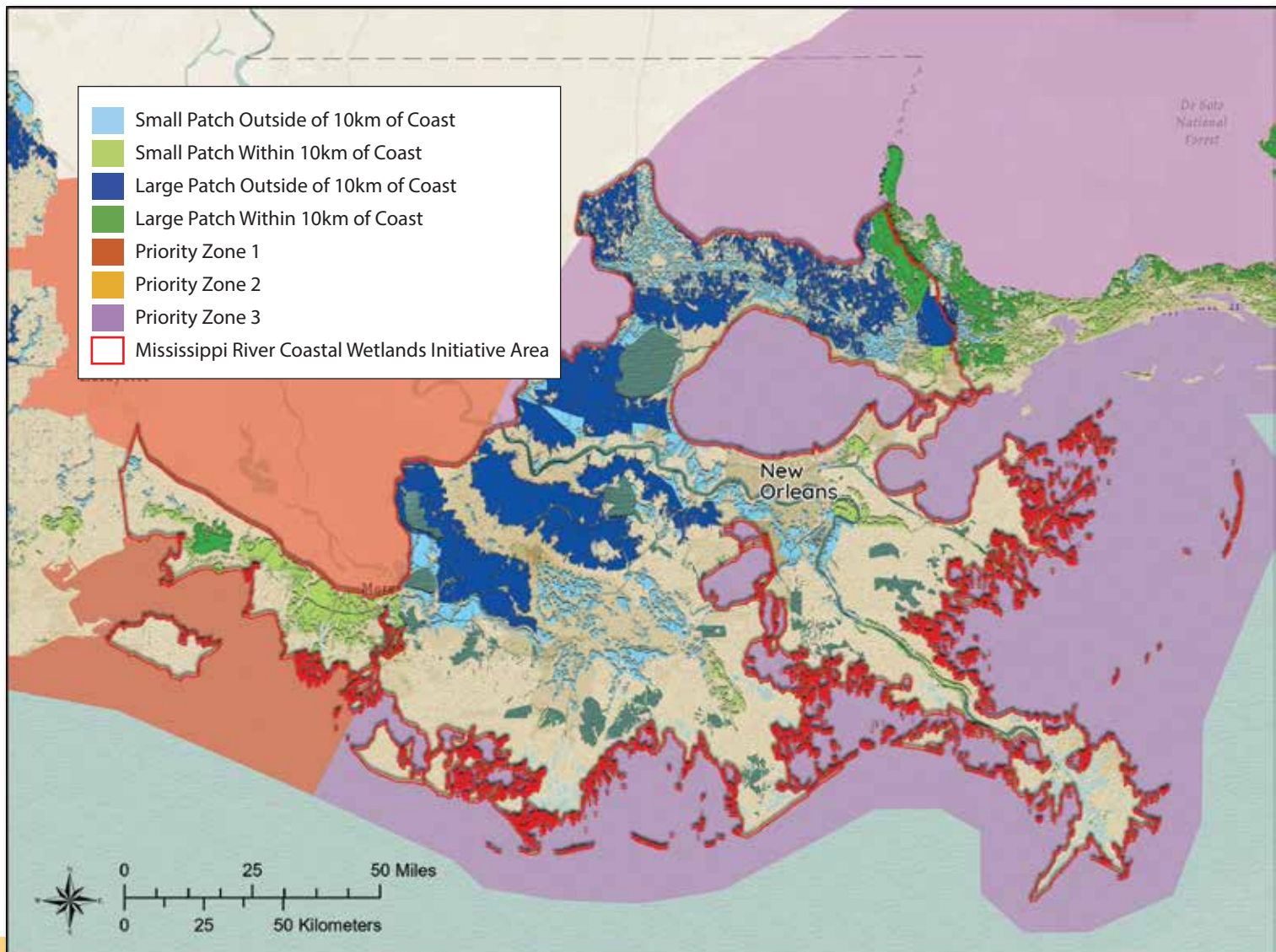
**Population Objective:** Not yet available

**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

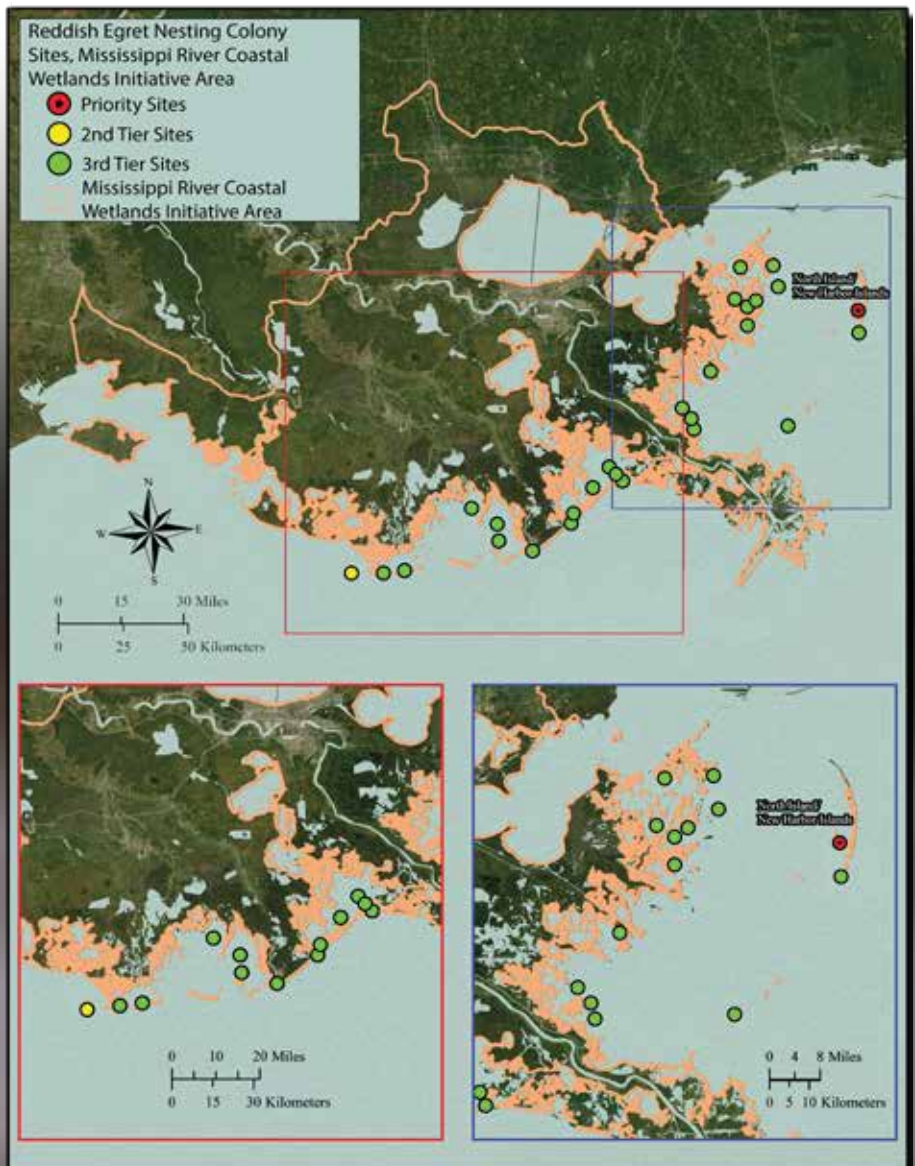
**Habitat Objective:** Not yet available

**Biological Foundation:** Estimation of breeding population impacts of specific management treatments applied to specific colonies. (Figure 4)

### Conservation Activities:

- Apply colony-specific management actions.
- Create/improve alternate colony sites.
- Improve foraging habitat within 10 km of existing colonies.

Figure 4. MRCW Reddish Egret nesting colonies.



Reddish Egret Colony Site	Recommended Action		
	Predator Control	Disturbance Management	Habitat Action
North Island Complex	X		X



# 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:

		Beach/Inlet	Coastal Marsh (Including Impounded), Flats and Reefs	Inland Saturated Soil, Shallow Open Water, & Flooded Grassland	Inland Dry Grassland	Population Objective MRCW
Spring	Wilson’s Plover	1,458	2,220	0	0	3,679
	Snowy Plover	161	129	0	0	290
	Long-billed Curlew	0	0	0	0	0
	Hudsonian Godwit	0	0	33	2	35
	Stilt Sandpiper	154	4,164	30,935	0	35,253
	Buff-breasted Sandpiper	0	0	15	25	40
	Western Sandpiper	34,481	71,571	3,325	0	109,377
	Short-billed Dowitcher	6,702	20,019	379	0	27,099
Fall	Wilson’s Plover	1,586	2,643	31	0	4,260
	Snowy Plover	551	628	0	0	1,178
	Long-billed Curlew	249	419	1	1	670
	Hudsonian Godwit	N/A	N/A	N/A	N/A	N/A
	Stilt Sandpiper	232	8,752	82,591	0	91,574
	Buff-breasted Sandpiper	28	39	36	61	164
	Western Sandpiper	34,677	89,598	9,763	0	134,038
	Short-billed Dowitcher	6,567	24,277	572	0	31,417

## Habitat Objectives

	MRCW Acres <sup>1</sup>	GCJV Total Acres <sup>1</sup>
Fall Beach/Inlet	8,172	44,025
Fall Marsh, Flats, & Reefs	23,634	82,895
Fall Inland Saturated Soil, Shallow Water, & Flooded Grassland	12,426	146,619
Spring Inland Saturated Soil, Shallow Open Water, & Flooded Grassland	10,718	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 production, 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.





## LITTLE BLUE HERON

**Population Objective:** 5,345 breeding pairs in Texas Mid-Coast

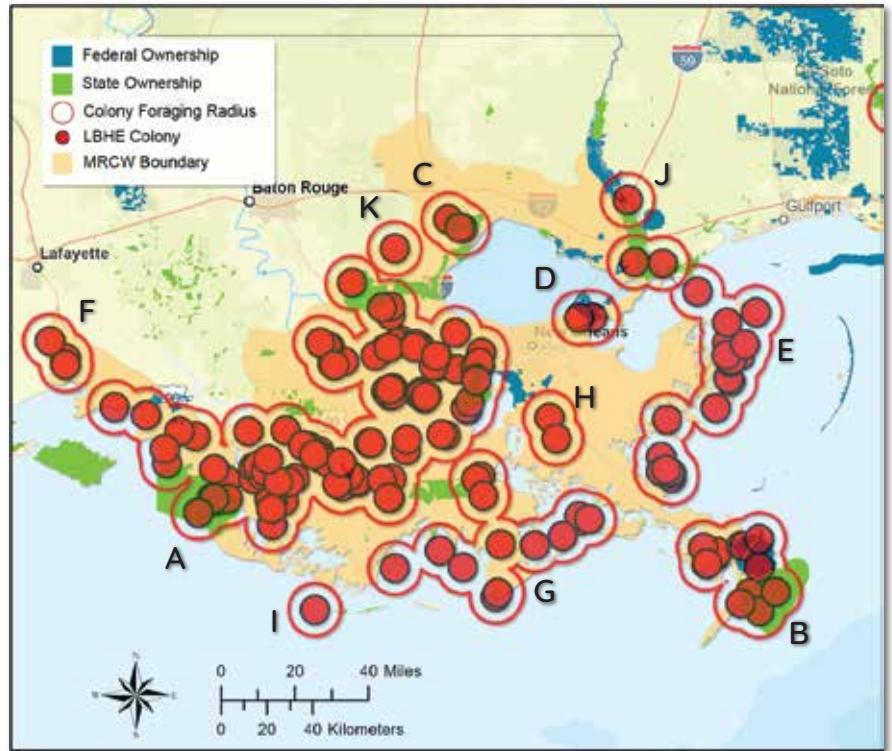
**Habitat Priorities:**

### Important Foraging Habitats by Colony Cluster

- A. Deltaic Plane Large : PFW, PEW, PSS, USOW,
- B. Mississippi Birdfoot Delta: PEW, EEW, USOW
- C. Joyce: PFW, PSS, PEW, EEW
- D. Bayou Sauvage: EEW, PEW, USOW, PFW
- E. Chandeleur Sound: EEW, PFW, PSS, PEW, USOW
- F. Avery Island: PEW, PFW, EEW
- G. Barataria-Terrebonne: EEW, USOW
- H. Naomi-Myrtle Grove: EEW, USOW
- I. Raccoon Island: EEW, USOW
- J. Bogue Chitto: PSS, PFW, PEW
- K. West Maurepas: PEW, PFW, USOW

- EEW = Estuarine Emergent Wetland
- PEW = Palustrine Emergent Wetland
- PFW = Palustrine Forested Wetland
- PSS = Palustrine Shrub/Scrub Wetland
- RC = Rice/crawfish
- USOW = Unconsolidated Shore/Open Water Ecotone

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:** 37,172 individuals in MRCW

**Habitat Objectives:** 30,806 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 551,554 acres of open water that meet this criteria.

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

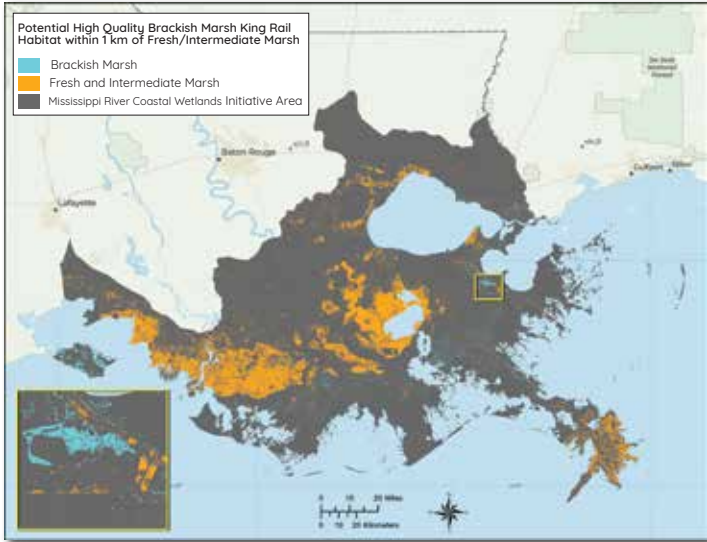
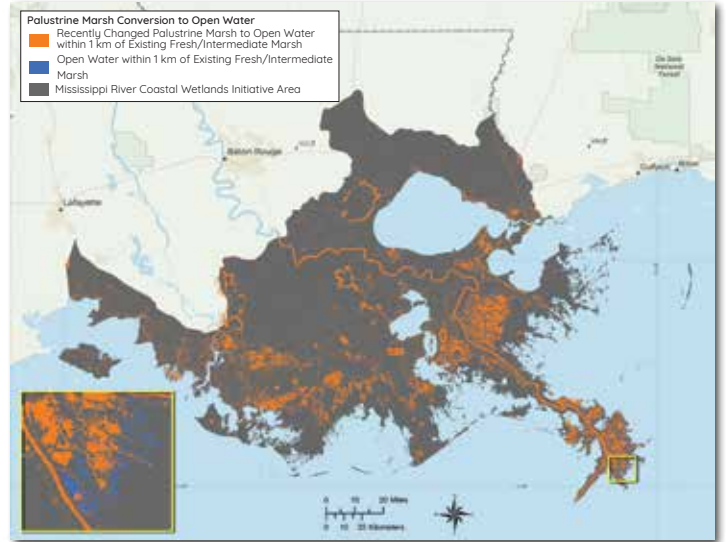


Figure 7. Open water within 1 km of fresh/intermediate marsh.

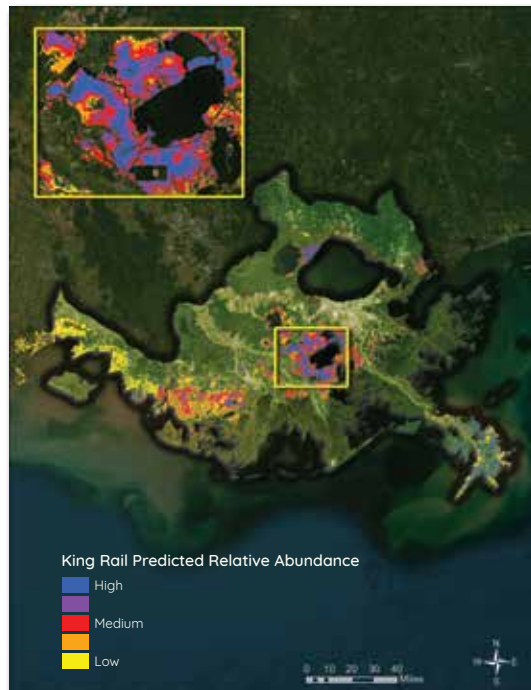


**Biological Foundation:** Population density estimates dictate acreage needed to support population objectives.

**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.
- Maintain complexes of ricelands and associated wetland features that support populations.

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



## KING RAIL

### 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.

