



Gulf Coast Joint Venture

MISSISSIPPI RIVER COASTAL WETLANDS INITIATIVE AREA



See 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.

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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 ≥ 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.

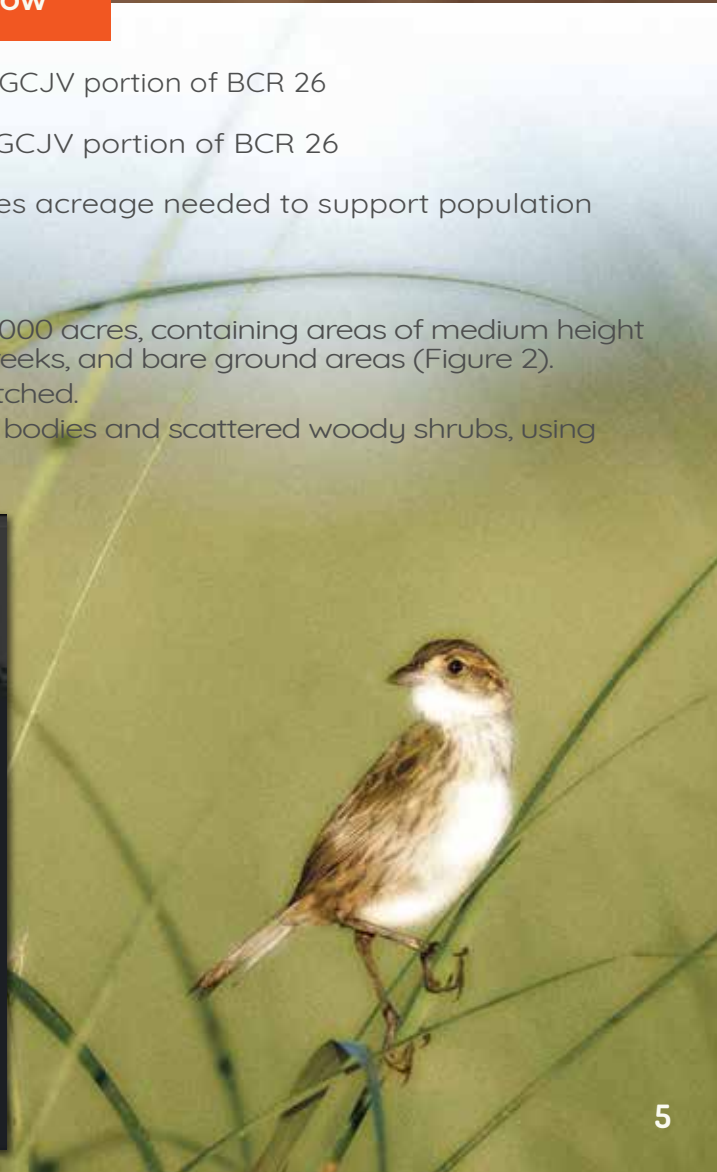
Conservation Activities:

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

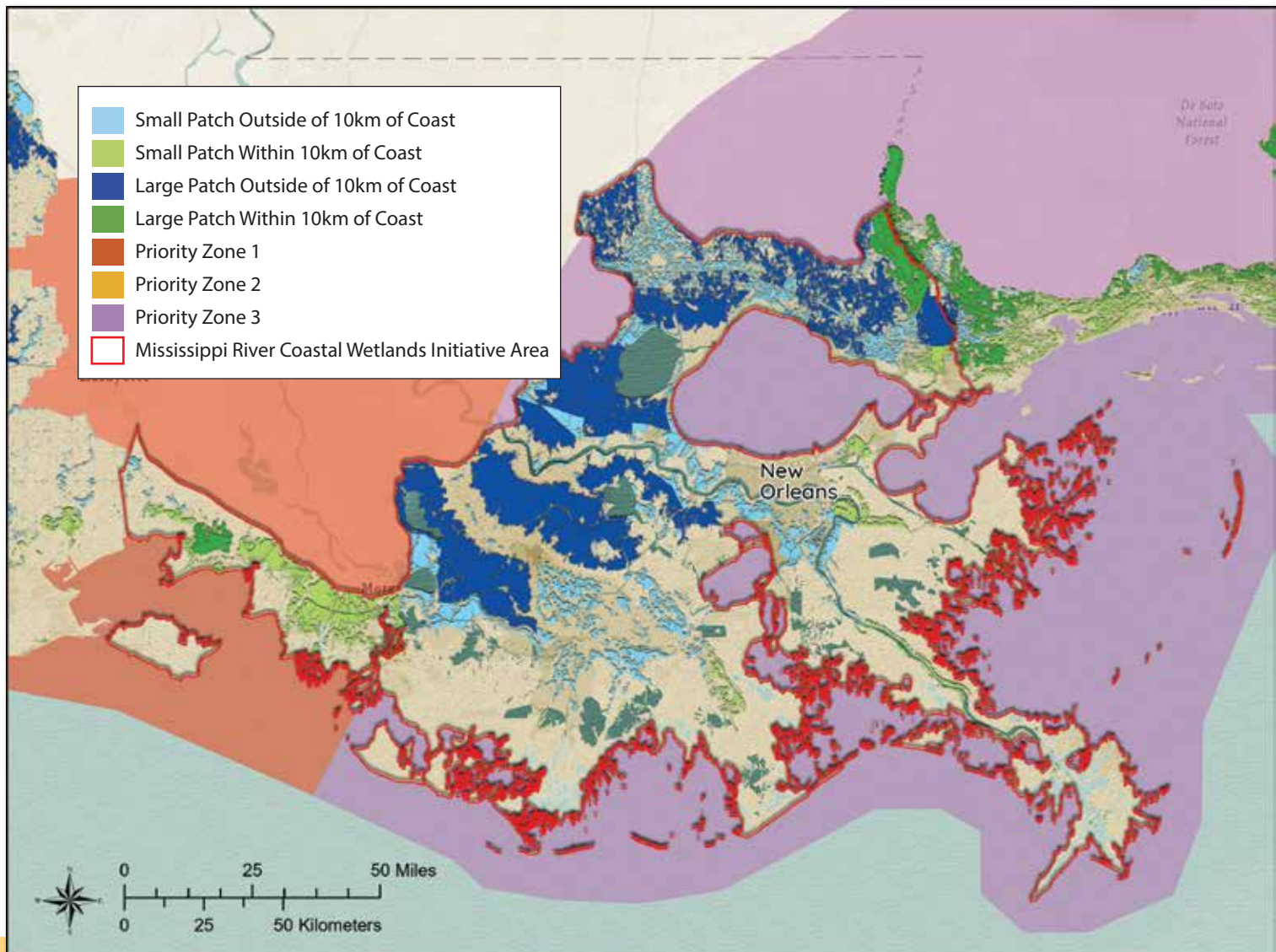
Population Objective: Not yet available

Habitat Priorities: Large forest patches ($\geq 10,000$ acres) close to the Gulf of America. 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

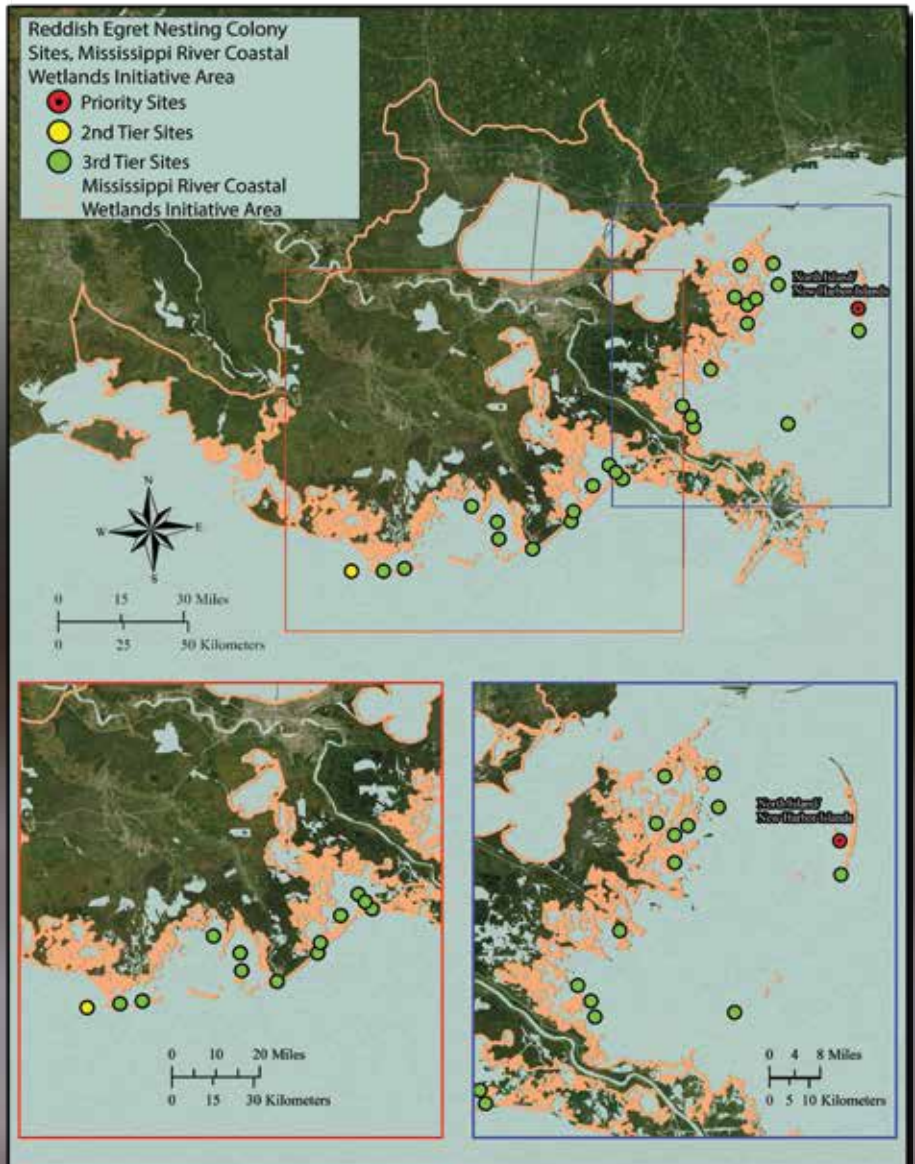
Habitat Objective: Not yet available

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 ¹ | GCJV Total Acres ¹ |
|---|-------------------------|-------------------------------|
| 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 |

¹ 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

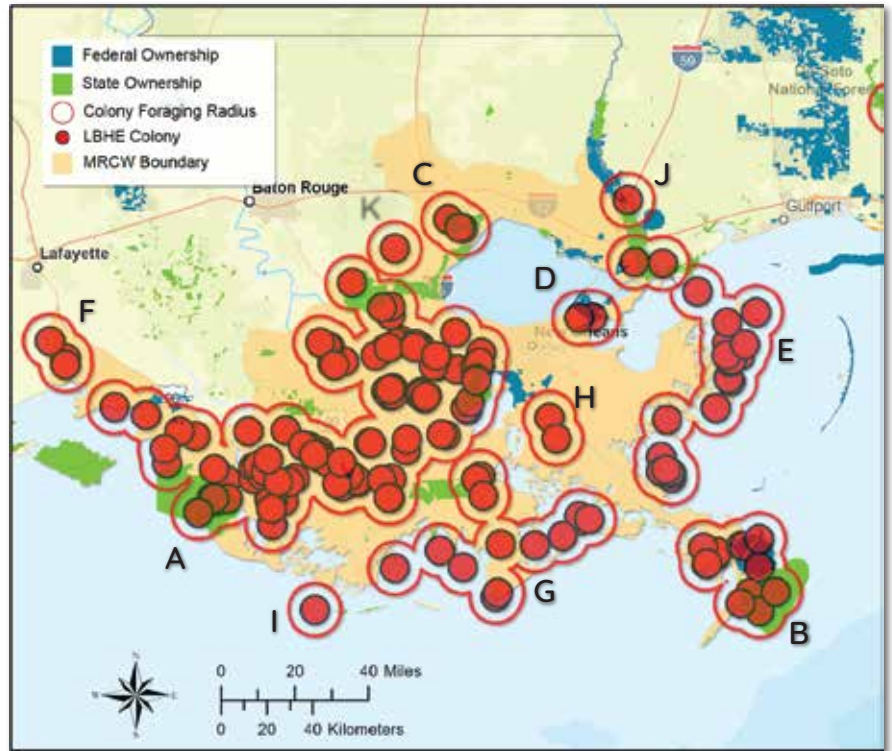
Habitat Priorities:

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.

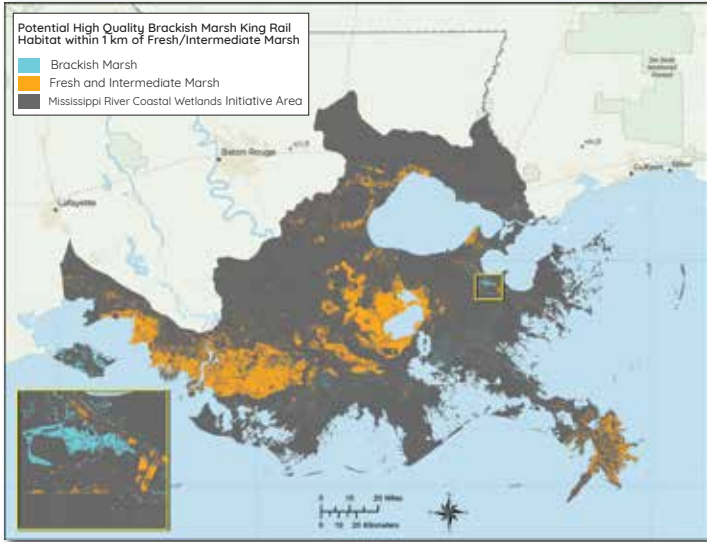
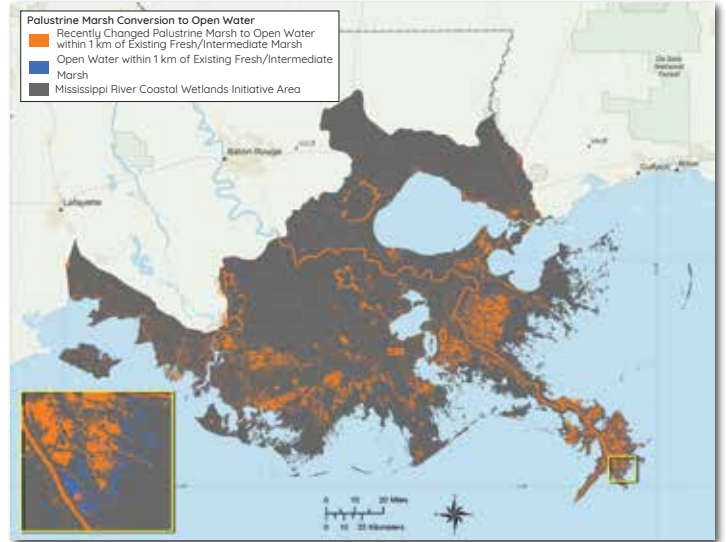


Figure 7. Open water within 1 km of fresh/intermediate marsh.

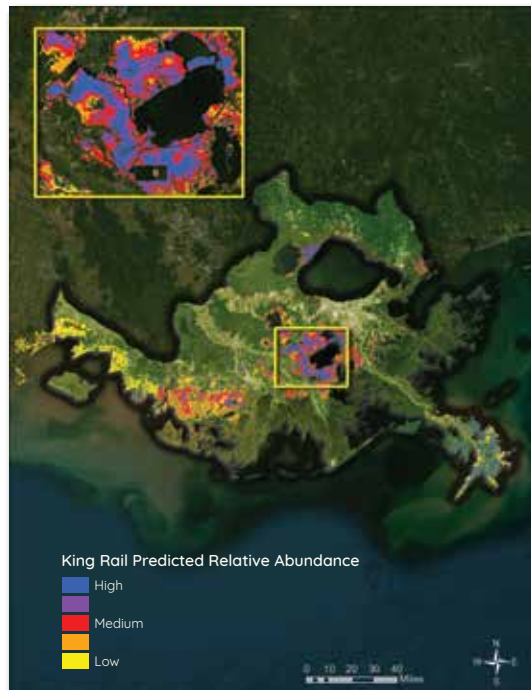


Biological Foundation: Population density estimates dictate acreage needed to support population objectives.

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.

