Gulf Coast Joint Venture

TEXAS CHENIER PLAIN 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 Texas Chenier Plain (TXCHEN) Initiaitve 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, Lesser Snow Goose, and Greater White-fronted Goose

Population Objectives: 468,773 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
TXCHEN	74,584	15,339	8,381	61,072	18,586	74,414	47,559	5,197	10,154	70,720	23,908	58,858	468,773
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
Non-tidal Freshwater Wetlands	
Aug-Oct	
Harvested rice, 1st crop	1,474
Moist-soil/idle rice	4,655
Total	6,129
Nov-Mar	
Harvested rice, 2nd crop	1,218
Unharvested rice, 2nd crop	1,218
Moist-soil/idle rice	9,663
Non-ratooned rice	3,230
Total	15,328
Coastal Marsh Ponds	
Fresh	2,235
Intermediate	17,270
Brackish	18,156
Saline	1,976
Total marsh	39,637

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.
- Provide water and vegetation management on harvested and idle croplands (i.e., rice) and coastal prairie wetlands.
- Protect, enhance, and create fresh water wetlands within 10 km of seagrass beds.

Non-breeding Waterfowl Research Priorities:

- Determine the importance of distributed sanctuary in habitat conservation for wintering waterfowl and its implication for food limitation.
- Describe likely effects of water resource allocation and changing cultivation practices on rice agriculture and associated waterfowl habitats.
- 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.

Restore wetlands and ensure reliable water to provide brood-rearing habitat from mid-April through July in agricultural landscapes.

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: 103,178 birds for TX portion for Bird Conservation Region (BCR) 37

Habitat Objective: 1,580,687 acres for TX portion of BCR 37

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

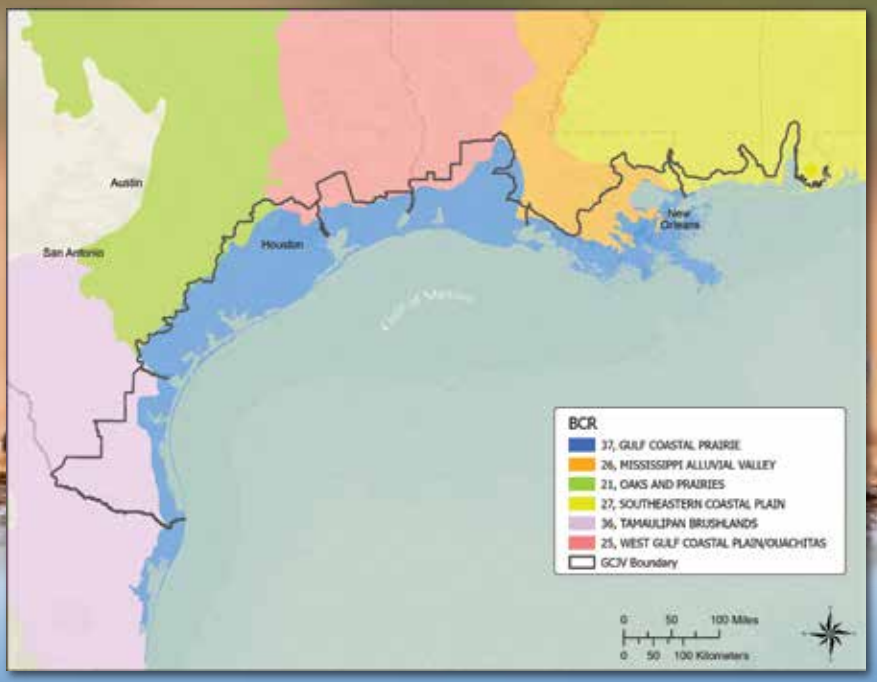
Biological Foundation: Average spring home range size dictates acres needed to support population objectives.

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: 72,842 birds during winter (i.e., 55,498 Resident, 17,344 Migratory)

Habitat Objective: 641,640 acres in TXCHEN

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: 56,264 birds during winter in TXCHEN

Habitat Objective: 56,264 acres in TXCHEN

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

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

Habitat Objective: 650,000 acres

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

Conservation Activities:

Create and/or restore marsh habitat, in blocks ≥ 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.

Figure 2. TXCHEN Seaside Sparrow Habitat Patches

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

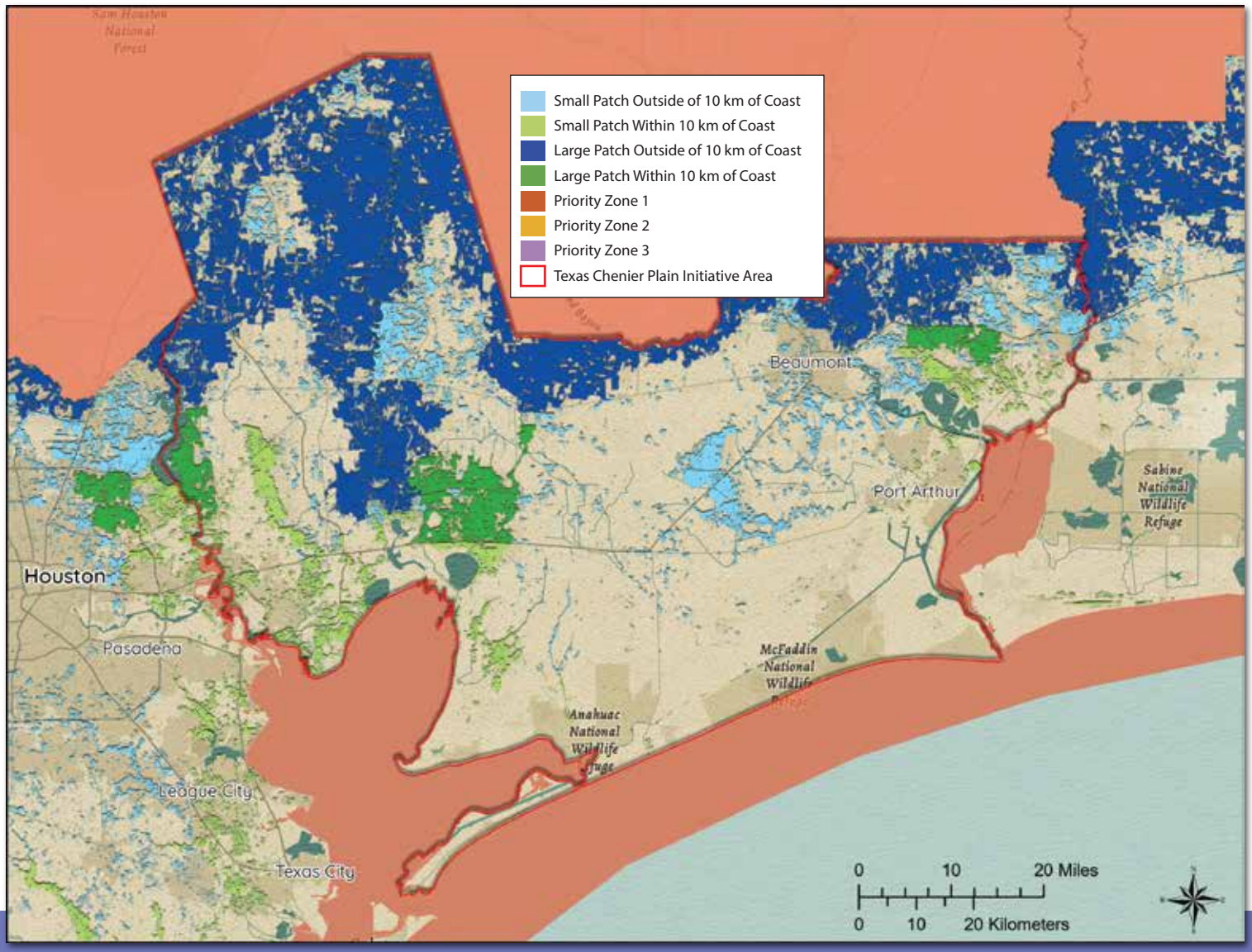
Population Objective: Not yet available

Habitat Priorities: Large forest patches (≥ 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 (≥ 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.

SHOREBIRDS

Species Addresssd 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 TXCHEN
Spring	Wilson's Plover	165	93	5	0	262
	Snowy Plover	735	340	14	0	1,089
	Long-billed Curlew	1,297	1,816	1,275	638	5,026
	Hudsonian Godwit	4	113	1,531	109	1,758
	Stilt Sandpiper	1,665	30,936	46,025	0	78,626
	Buff-breasted Sandpiper	0	19	796	1,364	2,179
	Western Sandpiper	1,761	2,619	1,593	0	5,973
	Short-billed Dowitcher	324	1,339	762	0	2,425
Fall	Wilson's Plover	162	93	10	0	265
	Snowy Plover	872	353	48	0	1,273
	Long-billed Curlew	816	755	42	21	1,635
	Hudsonian Godwit	N/A	N/A	N/A	N/A	N/A
	Stilt Sandpiper	706	12,000	22,043	0	34,749
	Buff-breasted Sandpiper	18	19	577	990	1,604
	Western Sandpiper	1,757	2,944	332	0	5,033
	Short-billed Dowitcher	435	1,296	113	0	1,843

Habitat Objectives:

	TXCHEN Acres[1]	GCJV Total Acres[1]
Fall Beach/Inlet	2,676	44,025
Fall Marsh, Flats, & Reefs	5,926	82,895
Fall Inland Saturated Soil, Shallow Water, & Flooded Grassland	5,668	146,619
Spring Inland Saturated Soil, Shallow Open Water, & Flooded Grassland	10,911	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 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.

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: 2,000 breeding pairs in TX 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.

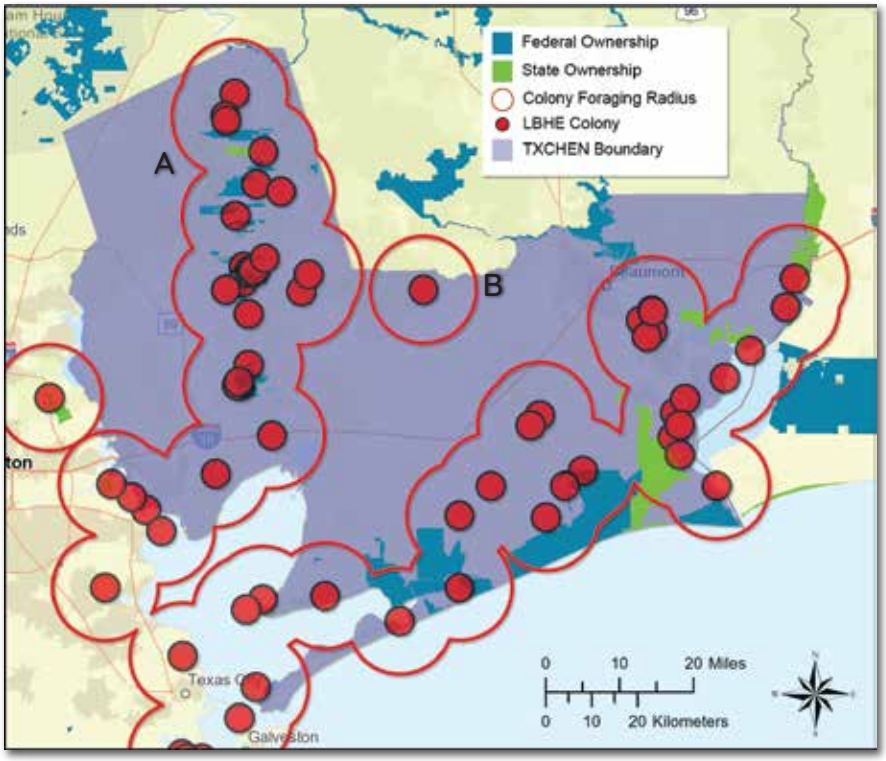
Figure 4. TXCP Reddish Egret nesting colonies.

LITTLE BLUE HERON

Population Objective: 8,562 breeding pairs in TXCHEN

Habitat Priorities:

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



Important Foraging Habitats by Colony Cluster

A. Sabine-Trinity-San Bernard Chenier Plain Portion: PFW, PEW, EEW, USOW, RC
B. Mann-Merchant Road: PEM, PFW, RC

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

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

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

KING RAIL

Population Objective: 14,825 individuals in TXCHEN

Habitat Objectives: 11,095 acres of new intermediate marsh converted from brackish and/or saline marsh
Figure 6 depicts areas of brackish marsh with good structural and hydrological qualities 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 99,753 acres of open water that meet this criteria.

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

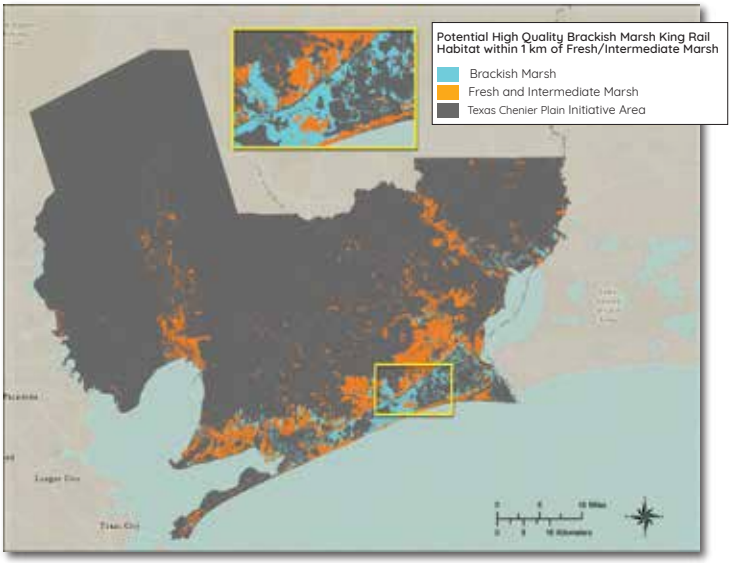
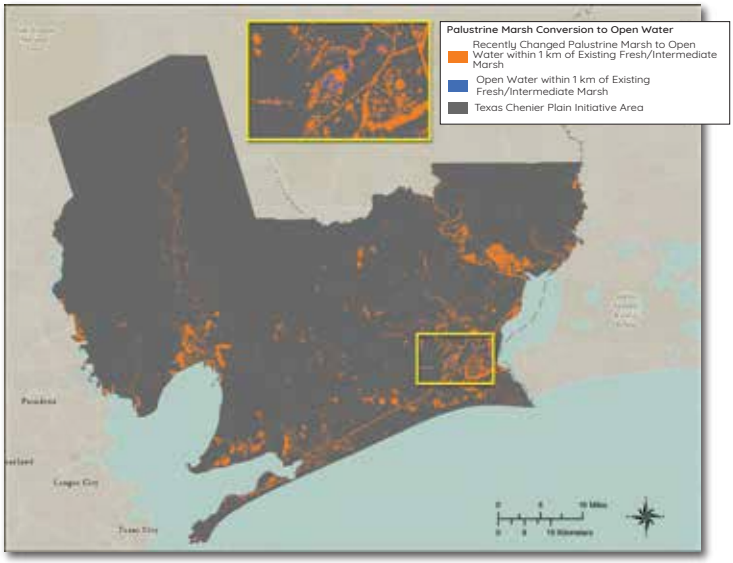


Figure 7. Open water within 1 km of fresh/intermediate marsh.



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.

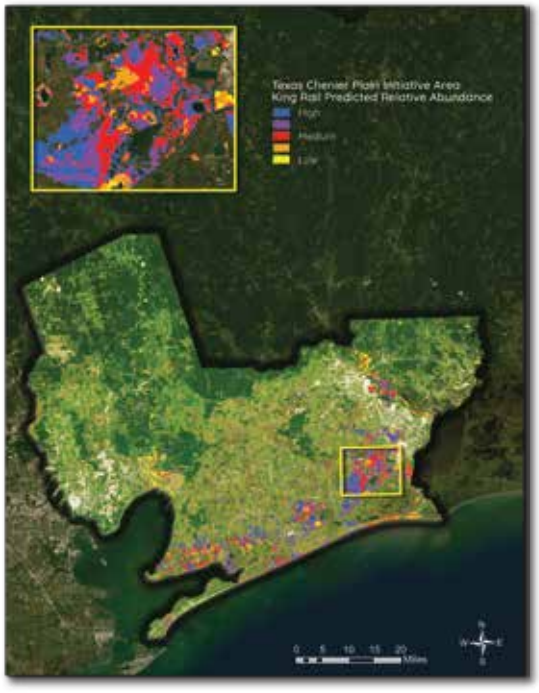
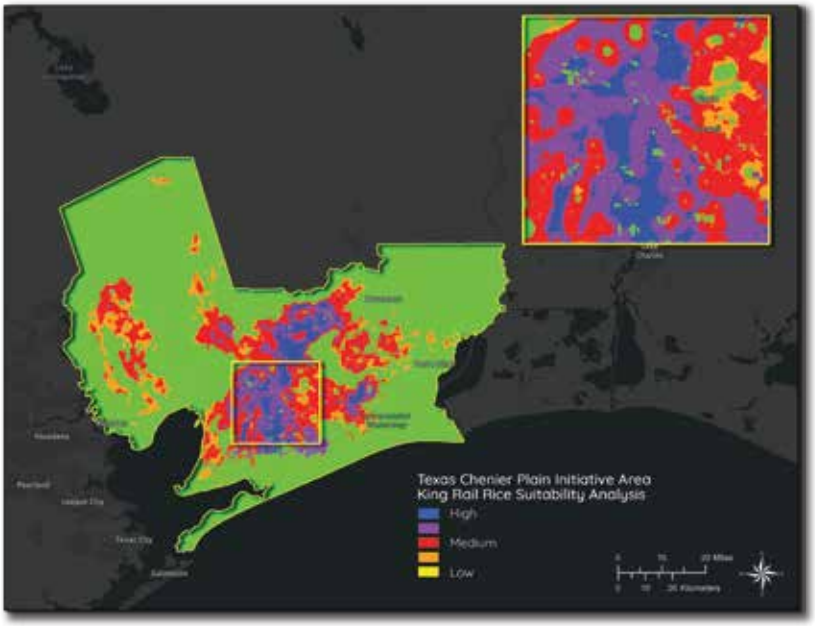


Figure 9. King Rail habitat suitability index in rice fields in TXCHEN.



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.