HABITAT ATLAS
COASTAL BEND BAYS & ESTUARIES PROGRAM

Prepared for
Coastal Bend Bays & Estuaries Program, Inc.

Prepared by
Anchor QEA, LLC
720 Olive Way, Suite 1900
Seattle, WA  98101

August 2012
WATERSHEDS
Aransas County
Calhoun County
Refugio County
San Patricio County
Nueces County

NOAA Habitat Assessment
- Annelid Reef
- Bivalve Reef
- Continuous SRV
- Emergent Marsh
- Land
- Mangroves
- Patchy SRV
- Reef/Hardbottom
- Submersed Aquatic Vegetation
- Tidal Marsh
- Tidal Swamp
- Unconsolidated Sediments
- Unknown Benthic Habitat

Source: Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal Services Center (CSC)
Aransas County
Refugio County
San Patricio County
Nueces County

County Outline

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COASTAL HABITATS – BIRDS
Aransas County
Calhoun County
Refugio County
San Patricio County
Nueces County

ARANSAS NATIONAL WILDLIFE REFUGE

County Outline
Fish and Wildlife Service Refuge Boundaries
Whooping Crane
Colonial Waterbird Rookery Areas

Critical Habitat
Piping Plover
Whooping crane

Source: Fish and Wildlife Service Critical Habitat
Refugio County
San Patricio County
Nueces County
County Outline
Fish and Wildlife Service Refuge Boundaries
Whooping Crane
Colonial Waterbird Rookery Areas
Small
Medium
Large
Very Large
Critical Habitat
Piping Plover
Whooping crane
Source: Fish and Wildlife Service Critical Habitat
Aransas County
San Patricio County
Kleberg County
Nueces County

Source: Fish and Wildlife Service Critical Habitat
COASTAL FLOOD MAPPING
Coastal Flood Mapping
CBBEP Habitat Atlas

Source: Federal Emergency Management Agency (FEMA)
County Outline

FEMA Q3 Flood Hazard Zones
- 100-year floodplain
- 100-year floodplain, with base flood elevation determined
- 100-year floodplain, with velocity hazard
- 100-year floodplain, with velocity hazard, base flood elevation determined
- Outside 100- and 500-year floodplains

Source: Federal Emergency Management Agency (FEMA)
FEMA Q3 Flood Hazard Zones

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Source: Federal Emergency Management Agency (FEMA)
ENVIRONMENTAL SENSITIVITY
Oyster Harvest Beds - Assessment Units

- Major Rivers
- Bathymetry
- County Outline

Environmental Sensitivity Index Shoreline
- Wave-cut clay platforms
- Sheltered tidal flats
- Sheltered scarps
- Exposed tidal flats
- Exposed riprap structures
- Walls and other solid structures
- Sheltered riprap structures
- Coarse-grained sand beaches
- Fine-grained sand beaches
- Gravel or shell beaches
- Mixed sand and gravel or shell beaches
- Scarps/steep slopes in sand

Source: Texas General Land Office/University of Texas Bureau of Economic Geology
Aransas County
Refugio County
Calhoun County

Oyster Harvest Beds - Assessment Units
Major Rivers
Bathymetry
County Outline

Environmental Sensitivity Index Shoreline
- Wave-cut clay platforms
- Sheltered tidal flats
- Scarps/steep slopes in clay
- Sheltered riprap structures
- Freshwater marshes (herbaceous vegetation)
- Coarse-grained sand beaches
- Freshwater swamps (predominantly woody vegetation)
- Fine-grained sand beaches
- Sheltered rocky or karst shores
- Salt and brackish marshes
- Exposed tidal flats
- Exposed riprap structures
- Scarp/steep slopes in sand
- Mixed sand and gravel or shell beaches
- Gravel or shell beaches
- Salt and brackish marshes
- Exposed tidal flats
- Exposed riprap structures

Source: Texas General Land Office/University of Texas Bureau of Economic Geology
Oyster Harvest Beds - Assessment Units

Major Rivers

Bathymetry

County Outline

Environmental Sensitivity Index Shoreline

- Wave-cut clay platforms
- Sheltered tidal flats
- Sheltered scarps

- Sheltered rocky or beet shorelines
- Scarps/steep slopes in clay
- Freshwater marshes (herbaceous vegetation)
- Freshwater swamps (predominantly woody vegetation)
- Mangroves or woody vegetation in salt water
- Salt and brackish marshes
- Exposed tidal flats
- Exposed riprap structures

- Walls and other solid structures
- Sheltered riprap structures
- Coarse-grained sand beaches
- Fine-grained sand beaches
- Gravel or shell beaches
- Mixed sand and gravel or shell beaches
- Scarps/steep slopes in sand

Source: Texas General Land Office/University of Texas Bureau of Economic Geology
Oyster Harvest Beds - Assessment Units

Major Rivers
Bathymetry
County Outline

Environmental Sensitivity Index Shoreline
- Wave-cut clay platforms
- Sheltered tidal flats
- Sheltered scarps

Walls and other solid structures
- Sheltered riprap structures
- Coarse-grained sand beaches
- Fine-grained sand beaches
- Gravel or shell beaches
- Mixed sand and gravel or shell beaches
- Scarps/steep slopes in sand

Source: Texas General Land Office/University of Texas Bureau of Economic Geology
Environmental Sensitivity

Source: Texas General Land Office/University of Texas Bureau of Economic Geology
Oyster Harvest Beds - Assessment Units

Major Rivers
Bathymetry
County Outline

Environmental Sensitivity Index Shoreline
- Wave-cut clay platforms
- Sheltered tidal flats
- Sheltered scarps
- Low-lying muddy marshes
- Freshwater marshes (herbaceous vegetation)
- Freshwater swamps (predominantly woody vegetation)
- Mangroves or woody vegetation in salt water
- Salt and brackish marshes
- Exposed tidal flats

Walls and other solid structures
- Sheltered riprap structures
- Coarse-grained sand beaches
- Fine-grained sand beaches
- Gravel or shell beaches
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- Scarps/steep slopes in sand

Source: Texas General Land Office/University of Texas Bureau of Economic Geology
Oyster Harvest Beds - Assessment Units

- Major Rivers
- Bathymetry
- County Outline

Environmental Sensitivity Index Shoreline
- Wave-cut clay platforms
- Sheltered tidal flats
- Sheltered scarps

- Sheltered rocky or karst shores
- Scarps/steep slopes in clay
- Freshwater marshes (herbaceous vegetation)
- Freshwater swamps (predominantly woody vegetation)
- Mangroves or woody vegetation in salt water
- Salt and brackish marshes
- Exposed tidal flats
- Exposed riprap structures
- Walls and other solid structures
- Sheltered riprap structures
- Coarse-grained sand beaches
- Fine-grained sand beaches
- Gravel or shell beaches
- Mixed sand and gravel or shell beaches
- Scarps/steep slopes in sand

Source: Texas General Land Office/University of Texas Bureau of Economic Geology
GEOLOGY
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<tr>
<th>Geology</th>
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<td>clay or mud</td>
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Source: U.S. Geological Survey
Geology

- clay or mud
- gravel
- mudstone
- sand
- sandstone
- silt
- siltstone
- terrace

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Source: U.S. Geological Survey
Geology:
- clay or mud
- gravel
- mudstone
- sand
- sandstone
- silt
- siltstone
- terrace

Source: U.S. Geological Survey
INFRASTRUCTURE
Landcover:
- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land (Rock/Sand/Clay)
- Deciduous Forest
- Evergreen Forest
- Mixed Forest—Areas
- Shrub/Scrub
- Grassland/Herbaceous
- Pasture/Hay
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands

Source: USDA/NRCS - National Geospatial Management Center
Brooks County

Duval County

Jim Wells County

Kleberg County

Kenedy County

County Outline

Landcover

Open Water
Developed, Open Space
Developed, Low Intensity
Developed, Medium Intensity
Developed, High Intensity
Barren Land (Rock/Sand/Clay)
Deciduous Forest

Evergreen Forest
Mixed Forest—Areas
Shrub/Scrub
Grassland/Herbaceous
Pasture/Hay
Cultivated Crops
Woody Wetlands
Emergent Herbaceous Wetlands

Source: USDA/NRCS - National Geospatial Management Center
WETLANDS
Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Source: U.S. Fish & Wildlife Service