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Introduction

The purpose of the Texas Coastal Management Program is to “preserve the natural resources of the surface estate of coastal public land.”¹ Federally approved in 1997, the Texas Coastal Management Program (CMP) is administered by the Coastal Coordination Council.² The Council is a multi-agency organization charged with adopting general rules and policies for the management of the Texas coast, reviewing agency actions, and overseeing the CMP grant programs. The Council is chaired by the Commissioner of the General Lands Office, the lead state agency. The remainder of the seats on the Council are held by representatives from the Parks and Wildlife Commission, the Texas Commission on Environmental Quality, the Texas Water Development Board, the Texas Transportation Commission, and the State Soil and Water Conservation Board. The five remaining seats are filled by the Director of Texas Sea Grant and four gubernatorial appointees. The Program is implemented by the Texas School Land Board with assistance from the General Land Office.³ The School Land Board is also authorized to lease coastal public lands to the Parks and Wildlife Department for the management of estuarine preserves.⁴

The Texas Parks and Wildlife Department manages the four Texas Coastal Preserves and coordinates Texas’s activities with regard to the Gulf of Mexico GEMS program. The GEMS Program is an initiative of the EPA’s Gulf of Mexico Program and the five Gulf States to provide a regional framework for the recognition of unique habitats or habitats ecologically significant for the production of fish, wildlife, and other natural resources in the Gulf of Mexico. TPWD nominated sixteen sites for inclusion in the GEMS program: Aransas National Wildlife Refuge, Armand Bayou Coastal Preserve, Candy Abshier Wildlife Management Area, Christmas Bay Coastal Preserve, Flower Garden Banks National Marine Sanctuary, Freeport Liberty Ship Reef Complex, Guadalupe Delta Wildlife Management Area, Laguna Atascosa National Wildlife Refuge, Matagorda Island Wildlife Management Area, Murphree Wildlife Management Area, North Deer Island Sanctuary, Padre Island National Seashore, South Bay Coastal Preserve, Sea Rim State Park, and Welder Flats Coastal Preserve.

The Texas Parks and Wildlife Department is also authorized to acquire land and water and interests in land and water for outdoor recreation areas and facilities.⁵ The Department is likewise authorized to develop, operate, and maintain such outdoor recreation acres.⁶ The TPWD may also acquire, develop, maintain, and operate wildlife management areas and may manage, along sound biological lines, wildlife and fish found on any land the department has or may acquire as a wildlife management area.⁷

General Programs

Coastal Wetlands

Texas coastal wetlands are protected by the Coastal Wetland Acquisition Act.⁸ The General Lands Office and the Parks and Wildlife Department are required to certify coastal wetlands that are most essential to the public interest. Upon certification, the Parks and Wildlife Department is authorized to acquire those lands, either by purchase or condemnation. Coastal wetlands acquired under this program are to be “managed in a manner that will preserve and protect the productivity and integrity of the land as coastal wet-

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1. Texas Natural Resources Code § 33.001 (2003).
 2. *Id.* § 33.201.
 3. *Id.* §§ 33.011 - 33.012.
 4. Texas Natural Resources Code § 33.105 (2003).
 5. Texas Parks & Wildlife Code § 13.002 (2003).
 6. *Id.*
 7. Texas Parks & Wildlife Code § 81.401 (2003).
 8. Texas Natural Resources Code §§ 33.231-33.238 (2003).

land."⁹ In 1991, the GLO and the TPWD were required to develop a State Wetlands Conservation Plan for state-owned wetlands, which must include such items as a policy framework for achieving a goal of no net loss of state-owned wetlands, an inventory of sites, mitigation policies and guidelines, and a plan for the acquisition of wetlands.¹⁰

Texas Artificial Reef Program

Under the National Fishing Enhancement Act of 1984,¹¹ permits may be issued for the siting and construction of artificial reefs if they are managed in a manner which will enhance fishery resources; facilitate access and utilization of those resources by recreational and commercial fishermen; minimize conflicts between competing uses; minimize environmental, health, and safety risks; be consistent with international law; and not create an unreasonable obstruction to navigation.¹²

The Artificial Reef Act of 1989 authorized the Texas Parks and Wildlife Department to develop and enhance the artificial reef potential in state waters, by reviewing artificial reef permit applications, overseeing placement of artificial reefs, and issuing rules and guidelines for such reefs.¹³ The Department may also apply for a federal permit and serve as permittee for an artificial reef located in state waters if the establishment of the reef complies with Texas state law and the National Fishing Enhancement Act.¹⁴ The Texas Artificial Reef Program officially began in 1990, with the adoption of the Texas Artificial Reef Plan. The TPWD maintains and enforces this plan.

There are forty-nine permitted artificial reef sites in Texas offshore waters.¹⁵ Reefs were created from a variety of materials. Pipe structures, steel buoys, concrete "reef balls," barges, tugboats, and tankers were sunk to provide habitat for fish and improve fishing and diving opportunities. In addition, seventy-two petroleum platforms have been donated by the oil and gas industry through the federally-approved Rigs to Reef Program.¹⁶ The Texas Artificial Reef Program commenced in the 1970's with the state's acquisition of twelve Liberty Ships. Five artificial reefs were created with the twelve ships: the Freeport Liberty Ship Reef, George Vancouver Liberty Ship Reef, Matagorda Island Liberty Ship Reef, Mustang Island Liberty Ship Reef, and Port Mansfield Liberty Ship Reef.

*Birds at Atkinson Island Wildlife Management Area
Courtesy of TPWD
Photograph by K. J. Lodrigue, Jr.*



9. *Id.* § 33.234.

10. Texas Parks & Wildlife Code § 14.002 (2003).

11. 33 U.S.C. §§ 2101 - 2106 (2003).

12. 33 U.S.C. § 2102 (2003).

13. Texas Parks & Wildlife Code §§ 89.002 (2003).

14. *Id.* § 89.003.

15. Correspondence from Dale Shively, Coordinator Texas Artificial Reef Program, Texas Parks and Wildlife Department to author (Sept. 23, 2003) (on file with Mississippi-Alabama Sea Grant program).

16. *Id.*

FEDERALLY-MANAGED AREAS

Anahuac National Wildlife Refuge

Authorizing Legislation: Migratory Bird Conservation Act (16 USC § 715 - 715(s)); National Wildlife Refuge System Administration Act (16 U.S.C. § 668dd)

Date of Designation: February 27, 1963

Management Agency: U.S. Fish and Wildlife Service

Management Goal: To provide wintering and migration habitat for ducks, geese, and other migratory bird species of the Central Flyway.

Site Description:

The 34,296 acre Anahuac National Wildlife Refuge is located along East Galveston Bay, approximately one and half hours east of Houston. Coastal marshes and prairies support thousands of migratory birds and abundant wildlife. American alligators, bobcats, coyotes, muskrats, nutria, and river otters are some of the common Refuge animals. Egrets, ibis, and roseate spoonbills can be seen year-round at the Refuge. The waterfowl are most common around Shoveler Pond and in the winter, visitors may see over twenty-five species of ducks. During spring migrations, the wooded areas near Shoveler Pond and Teal Slough offer the best opportunities to view migratory songbirds. Many varieties of fish live in Anahuac's waters, including bass, catfish, gar, redfish, speckled trout, and southern flounder.

Regulation:

The Fish and Wildlife Service prohibits the use of airboats, ATVs, and jet skis. Both freshwater and saltwater fishing is permitted at the Refuge in designated areas and subject to some gear restrictions. Although boats are not allowed on most inland waters, three fishing piers and two boat ramps provide fishermen access to East Bay and Oyster Bayou. Visitors with valid licenses are permitted to hunt for ducks, geese, and coots in designated areas of the Anahuac National Wildlife Refuge. Only shells containing non-toxic shot are permitted with the Refuge. Waterfowl hunters are allowed to use retriever dogs. The FWS regulations for hunting within the Refuge are located at 50 C.F.R. §§ 32.63.

Primary Information Source:

Anahuac NWR Refuge website - <http://southwest.fws.gov/refuges/texas/anahuac/index.html>



Pintails
Courtesy of USFWS
Photograph by Wyman Meinzer

Whooping Cranes
Courtesy of USFWS
Photograph by Steve Hillebrand



Aransas National Wildlife Refuge

Authorizing Legislation: Exec. Order No.7784 Establishing the Aransas Migratory Waterfowl Refuge, Texas, 3 Fed. Reg. 13 (Dec. 31, 1937); Migratory Bird Conservation Act (16 USC § 715 - 715(s))

Date of Designation: December 31, 1937

Management Agency: U.S. Fish and Wildlife Service

Management Goal: To provide habitat for and assist in the recovery of the Whooping crane.

Site Description:

Aransas National Wildlife Refuge (ANWR) comprises 58,982 acres, covering the Texas counties of Aransas, Refugio, and Calhoun. It is located 60 miles northeast of Corpus Christi. The Refuge contains many different habitats, including bluestem grasslands, live oak stands, marsh/barrier islands, redbay thickets, saltwater bays to the south and east, and tidal marshes. ANWR is a wintering grounds for the endangered Whooping Crane, and home to numerous other endangered or threatened species including the brown pelican, coastal gay-feather, Eskimo curlew, Gulf saltmarsh snake, jaguarundi, piping plover, scarlet snake, southern bald eagle, and threeflower broomweed.

The sand-covered Blackjack Peninsula makes up the majority of the refuge. ANWR hosts 850 plant species and Karankawa Indians burial grounds are scattered throughout the area. The Refuge has cooperated with area agencies to install cement mats to slow habitat-destroying erosion along the Gulf Intracoastal Waterway.

Regulation:

Hunting, fishing, wildlife observation, photography, and environmental education are allowed, subject to regulation. Special use permits are available for farming, grazing, and oil and gas activity, though only on an exceptionally limited basis.

Primary Information Source:

Aransas NWR website - <http://southwest.fws.gov/refuges/texas/aransas.html>



Roseate Spoonbill
Courtesy of USFWS
Photograph by Richard Martin

Big Boggy National Wildlife Refuge

Authorizing Legislation: Migratory Bird Conservation Act (16 U.S.C. §§ 715 - 715s (2003)); National Wildlife Refuge System Administration Act (16 U.S.C. § 668dd (2003))

Date of Designation: July 8, 1983

Management Agency: U.S. Fish and Wildlife Service

Management Goals: (1) To maintain viable habitats for waterfowl; (2) regenerate forage vegetation through the use of controlled burns, and (3) control invasive species.

Site Description:

Established to provide habitat for migratory waterfowl and other bird species, Big Boggy National Wildlife Refuge is located on the north shore of East Matagorda Bay and includes Dressing Point Island, a major rookery along the Texas coast for colonial nesting birds. At 4,526 acres, the Refuge is the smallest of the Texas Midcoast Refuges Complex.

Big Boggy National Wildlife Refuge, with San Bernard NWR and Brazoria NWR, forms the Texas Mid-Coast National Wildlife Refuge Complex. The Complex protects vital coastal wetlands serving as the end point of the Central Flyway and an entry point for migrating songbirds arriving from South and Central America. The Western Hemisphere Shorebird Reserve Network has designated the Complex an internationally significant shorebird site because the Complex houses over 100,000 shorebirds during spring migrations.

Big Boggy National Wildlife Refuge consists of flat coastal prairies, salt marshes, and two large salt-water lakes. Up to 55,000 geese and 15,000 ducks visit the Refuge annually. Big Boggy also serves as a resting place for up to 30 warbler species who use the area to regain their strength after an arduous migration across the Gulf of Mexico.

Regulation:

Big Boggy National Wildlife Refuge is open to the public daily for waterfowl hunting in accordance with applicable state and federal regulations. (50 C.F.R. § 32.7). Hunters are required to use non-toxic shot. The FWS regulates hunting on the Refuge in accordance with 50 C.F.R. §§ 32.1 - 32.72.

Primary Information Source:

Big Boggy NWR website - <http://southwest.fws.gov/refuges/texas/texasmidcoast/bigboggy.htm>

Brazoria National Wildlife Refuge

Authorizing Legislation: Migratory Bird Conservation Act (16 U.S.C. §§ 715 - 715s (2003)); National Wildlife Refuge System Administration Act (16 U.S.C. § 668dd (2003))

Date of Designation: October 17, 1996

Management Agency: U.S. Fish and Wildlife Service.

Management Goal: To conserve, manage, and restore the fish, wildlife, and plant resources of Brazoria National Wildlife Refuge.

Site Description:

Located 10 miles east of Lake Jackson, Brazoria National Wildlife Refuge is part of the Mid-Coast National Wildlife Refuge Complex, along with Big Boggy and San Bernard National Wildlife Refuges. The Complex protects vital coastal wetlands serving as the end point of the Central Flyway and an entry point for migrating songbirds arriving from South and Central America. The Western Hemisphere Shorebird Reserve Network has designated the Complex an internationally significant shorebird site because the Complex houses over 100,000 shorebirds during spring migrations.

The Refuge's 5,000 acres of native bluestem prairie represent one of the last coastal prairies in Texas. The freshwater and salt marshes, ponds, and bottomland forest support a variety of plant and animal species. Alligators, bobcats, coyotes, and otters are just some of the animals present in the Refuge. Atlantic croaker, red drum, southern flounder, and speckled trout are popular targets for fishermen.

The Refuge's coastal wetlands provide food and shelter to over 300 bird species. In the winter, more than 100,000 geese, ducks, and other avian species, including sandhill cranes, arrive at Brazoria National Wildlife Refuge. During the summer months, rosette spoonbills, mottled ducks, seaside sparrows, and many other birds nest in Brazoria fertile habitats.



Alligator
Courtesy of Brazoria National Wildlife Refuge
Photograph by R. Hickner

Regulation:

Big Slough Recreation Area is open full-time to the public for hiking and other recreational activities. ATV use and off road vehicle travel is prohibited by the FWS. Hunting of coots, ducks, geese, and mergansers is permitted in designated areas of the Refuge, but pits and permanent blinds are prohibited and permits are required in certain areas. (50 C.F.R. § 32.63). Hunters are required to use non-toxic shot. Sport fishing is permitted only on Nick's Lake, Salt Lake, Lost Lake, and along Salt Lake Weir Dike and Bastrop Bayou Public Fishing Area. (50 C.F.R. § 32.63). Bastrop Bay Area is available to fishermen and crabbers 24 hours a day, but no camping is permitted.

Primary Information Source:

Brazoria NWR website - <http://southwest.fws.gov/refuges/texas/texasmidcoast/brazoria.htm>

Flower Garden Banks National Marine Sanctuary

Authorizing Legislation: Marine Protection, Research, and Sanctuaries Act of 1972 (16 U.S.C. § 1431 - 1445c-1); An Act to Provide for the Designation of the Flower Garden Banks National Marine Sanctuary, Pub. Law 102-251, 106 Stat. 60 (1992); National Marine Sanctuaries Preservation Act (Pub. Law 104-283, 110 Stat. 3363 (1996))

Date of Designation: January 17, 1992

Management Agency: National Ocean Service, National Oceanic and Atmospheric Administration

Management Goal: To protect and manage the conservation, ecological, recreational, research, educational, historic, and esthetic resources and qualities of the East and West Flower Garden Banks and Stetson Bank.

Site Description:

The Flower Garden Banks National Marine Sanctuary is located in the northwestern Gulf of Mexico. The Sanctuary consists of three distant ocean areas: the East Bank, West Bank, and Stetson Bank. The 19.20 square nautical mile East Bank is approximately 120 nautical miles south-southwest of Cameron, Louisiana. The 22.50 square nautical mile West Bank is approximately 110 nautical miles southeast of Galveston, Texas. In October 1996, Congress expanded the Sanctuary to include the small Stetson Bank, 70 miles southeast of Galveston, Texas.

The Flower Garden reefs are the northernmost living coral reefs on the United States continental shelf. Isolated from other coral reef systems by over 300 nautical miles, the East and West Banks favor hard corals and support twenty-one species. Eight species of corals are found on the Stetson Bank, where the cooler water temperatures favor non-reef forming corals and sponges. The Sanctuary is also home to the only known oceanic brine seep in continental shelf waters in the Gulf of Mexico.

Over 300 different fish species frequent Sanctuary waters and three species of sea turtles: hawksbill, leatherback, and loggerhead. Macro-algae, crustaceans, sharks, skates, rays, and a variety of sea birds thrive in the protected waters of the Flower Gardens and Stetson Bank.

Regulation:

NOAA's regulations for the Flower Garden Banks National Marine Sanctuary are located at 15 C.F.R. §§ 922.210 - 922.123. The exploration, development, and production of oil, gas, or minerals is prohibited, except outside designated no-activity zones. Vessels may not be anchored within the Sanctuary and the discharge or deposit of materials is restricted to: chum and bait associated with conventional hook and line fishing; biodegradable effluents incidental to vessel use and in accordance with the Clean Water Act; water generated by routine vessel operations, engine exhaust; and drilling cuttings and fluids discharged from drilling activities outside no-activity zones. It is illegal to drill into or alter the seabed of the Sanctuary. Visitors must not injure, remove, or possess any coral or bottom formation, coralline algae or other plant, marine invertebrate, brine-seep biota or carbonate rock. The taking of marine mammals is permitted only in accordance with the Marine Mammal Protection Act.

The Sanctuary is open to the public for a variety of recreational opportunities, including snorkeling, SCUBA diving, and fishing. Fishing is permitted, but fishermen must rely solely on conventional hook and line gear. The possession of other types of fishing gear is prohibited, as is the possession of fish, coral, or other organism harvested with prohibited gear. It is also illegal to possess or use explosives or release electrical charges within the Sanctuary.

Primary Information Source:

Flower Garden Banks NMS website - <http://www.flowergarden.nos.noaa.gov/>

Laguna Atascosa National Wildlife Refuge

Authorizing Legislation: Migratory Bird Conservation Act (16 U.S.C. §§ 715 - 715s (2003)); National Wildlife Refuge System Administration Act (16 U.S.C. § 668dd (2003))

Date of Designation: March 29, 1946

Management Agency: U.S. Fish and Wildlife Service

Management Goals: (1) To provide habitat for migrating and wintering waterfowl; (2) to preserve endangered species, and (3) to provide public use of the Refuge for interpretive and recreational purposes.

Site Description:

The Laguna Atascosa National Wildlife Refuge (LANWR) is located in Cameron and Willacy counties, on the southern portion of the Texas Gulf Coast. This 45,187 acre refuge is the southernmost waterfowl refuge in the United States. Typical of the Texas coastal plain, the refuge is virtually flat with most elevations below five feet above sea level. LANWR is a semiarid and subtropical ecosystem, representing a biological transition zone of coastal prairies, salt flats, and low vegetated ridges supporting thick brushlands composed mainly of mesquite, ebony, cacti, and yucca. At slightly higher elevations, changes in soil moisture and salinity favor thorny-brush and savanna.

LANWR supports very high biological diversity, including over 400 species of birds. Eighty percent of the North American population of redhead ducks winter in the Lower Laguna Madre area, a portion of which adjoins the refuge. Two species of endangered cats, the ocelot and the jaguarundi, are the best known of LANWR's species. Breeding of ocelots has been documented and several den sites have been located on the refuge. Two kittens were seen in the summer of 1997.

Regulation:

The U.S. Fish and Wildlife Service has management authority within the Refuge. Areas of LANWR are open to the public for wildlife-oriented recreational activities, including wildlife observation, photography, and hiking. Camping and fishing are available in Thomas County Park located on the north end of the refuge.

Primary Information Source:

Laguna Atascosa NWR website - <http://southwest.fws.gov/refuges/texas/laguna.html>

Great-tailed Grackle
Courtesy of USFWS
Photograph by John and Karen Hollingsworth





*River Otters
Courtesy of USFWS
Photograph by Jim Leopold*

McFaddin National Wildlife Refuge

Authorizing Legislation: Migratory Bird Conservation Act (16 USC § 715 - 715(s) (2003)); National Wildlife Refuge System Administration Act (16 U.S.C. § 668dd (2003))

Date of Designation: January 2, 1980

Management Agency: U.S. Fish and Wildlife Service

Management Goal: To provide wintering and migration habitat for ducks, geese, and other migratory bird species.

Site Description:

Located near the Louisiana border, McFaddin National Wildlife Refuge is the site of one of the largest freshwater marshes on the Texas coast. This 55,000 acre refuge serves as an important resting and feeding ground for thousands of migrating and winter populations of waterfowl. Over two dozen species of ducks and thousands of geese arrive in the Refuge during the winter months. In the spring, migratory songbirds, such as buntings, grosbeaks, orioles, tanagers, warblers, and vireos, rest in the refuge after flying across the Gulf of Mexico.

McFaddin National Wildlife Refuge boasts the highest density of American alligators in the state of Texas. Bobcats, coyotes, gray foxes, musk rats, and river otters are a few of the resident mammal species at McFaddin.

Regulation:

The U.S. Fish and Wildlife Service regulates hunting on the Refuge in accordance 50 C.F.R. §§ 32.1 - 32.72. Hunting for coots, ducks, and geese is permitted in designated areas at McFaddin National Wildlife Refuge. Shotguns are the only types of firearms permitted by the Fish and Wildlife Services and non-toxic shells are required. Hunters may access the hunting areas on foot or by boat. Fishing, primarily for blue crab, catfish, flounder, and red drum, is also permitted. Boating is allowed on open water bodies, such as inland lakes and ponds.

Primary Information Source:

McFaddin NWR website - <http://southwest.fws.gov/refuges/texas/mcfaddin/index.html>

Moody National Wildlife Refuge

Authorizing Legislation: Migratory Bird Conservation Act (16 USC § 715 - 715(s) (2003)); National Wildlife Refuge System Administration Act (16 U.S.C. § 668dd (2003))

Date of Designation: Original refuge established on November 9, 1961; Transfer of fee interest to private sector and creation of easement refuge approved in 1982.

Management Agency: U.S. Fish and Wildlife Service

Management Goal: FWS does not have a management role in Moody NWR.

Site Description:

Dominated by coastal marshes, Moody National Wildlife Refuge, located near Anahuac NWR, provides essential resting areas for migrating neotropical songbirds and wintering grounds for migratory waterfowl and other bird species. Cormorants, herons, ibis, and other wading birds are seen throughout the refuge and endangered species such as bald eagles, peregrine falcons, and piping plovers are present occasionally. American alligators and river otters are common animal species.

Regulation:

Moody National Wildlife Refuge is a conservation easement refuge. The Fish and Wildlife Service owns only the development rights to the property, not the property itself. Moody NWR is not open to the public and the FWS does not have a management role. However, the FWS does monitor the area for easement violations and advises the property owners with regard to oil and gas development.

Primary Information Source: Anahuac NWR Refuge website (Moody National Wildlife Refuge does not have public access and is managed with Anahuac NWR) - <http://southwest.fws.gov/refuges/texas/anahuac/index.html>



Scarlet Tanager
Courtesy of USFWS
Photograph by Steve Maslowski

Padre Island National Seashore

Authorizing Legislation: Act to Provide for the Establishment of Padre Island National Seashore, Pub. Law. 87-712, § 1, 76 Stat. 650 (1962) (*codified at 16 U.S.C. §§ 459d - 549d-7 (2003)*).

Date of Designation: September 28, 1962

Management Agency: National Park Service

Management Goal: To save and preserve, for the purposes of public recreation, benefit, and inspiration, a portion of the diminishing seashore of the United States that remains undeveloped

Site Description:

Located near Corpus Christi, Texas, Padre Island National Seashore encompasses 130,454 acres of barrier islands, the longest section of undeveloped barrier island in the world. The designation of Padre Island as a National Seashore protects complex dune systems, coastal plains, and the Laguna Madre, a rare hypersaline lagoon. A variety of ecosystems are present within the Seashore, including grassland, marshes, mud flats, and 65.5 miles of Gulf beach.

Padre Island National Seashore is located along the Central Flyway, a major avian migration route, and is an important resting, feeding, and overwintering ground for over 350 bird species. Large numbers of colonial nesting waterbirds, including Foster's terns, great blue herons, great egrets, laughing gulls, snowy egrets, white-faced ibis, and white pelicans, breed within the Seashore's boundaries. Numerous species of shorebirds also forage within Padre Island National Seashore. Approximately 125 species of neotropical birds migrate through the park during the fall and spring migrations.

As part of the vast Laguna Madre, Padre Island National Seashore provides nursery habitat to a variety of fish species. Two longshore currents meet near the center of the island, bringing nutrients and fish to the area. Kemp's Ridley and Loggerhead sea turtles come onshore the Seashore's islands to lay their eggs.

In addition to providing food, water, and shelter to a multitude of diverse wildlife, the islands are a mecca for tourists. The Seashore receives an average of 900,000 visitors per year.

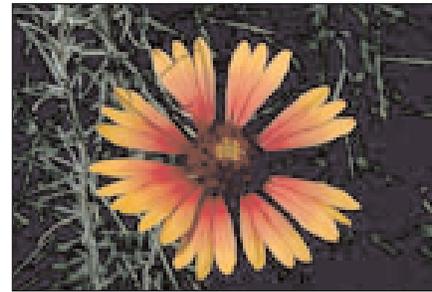
Regulation:

The Seashore is open to the public for a variety of recreational activities, including fishing, swimming, camping, and sailing. The National Park Service's regulations for the Padre Island National Seashore are located at 36 C.F.R. § 7.75. In general, hunting is prohibited. However, waterfowl hunting is allowed within the Laguna Madre during open seasons and in designated areas as prescribed by state and federal officials. Some wildlife hunting is also authorized by state and federal officials. Commercial fishing is prohibited. The Park Service also prohibits the use of personal watercraft. (36 C.F.R. 3.24).

One of the unique regulatory aspects of Padre Island National Seashore is oil and gas development. When the area was designated a National Seashore in 1962, Congress reserved the mineral rights for the original owners of the land, the State of Texas and private individuals. The National Park Service regulations, therefore, "provide for the occupation and use of so much of the surface of the land and waters within the Padre Island National Seashore - for all purposes reasonably incident to the mining and removal of oil and gas minerals . . . - in a manner that will be consistent with development of recreational facilities . . . and the area's natural features and values." (36 C.F.R. 7.75(h) (2003)). Along with several other state and federal agencies, the Park Service regulates the development of oil and gas within the Seashore to minimize the impact on the natural and cultural resources of the area.

Primary Information Source:

Padre Island National Seashore website - <http://www.nps.gov/pais/>



Indian Blanket Flower
Courtesy of USFWS
Photograph by Gary M. Stolz

San Bernard National Wildlife Refuge

Authorizing Legislation: Migratory Bird Conservation Act (16 U.S.C. §§ 715 - 715s); National Wildlife Refuge System Administration Act (16 U.S.C. § 668dd)

Date of Designation: November 7, 1968

Management Agency: U.S. Fish and Wildlife Service

Management Goal: To provide wintering and migration habitat for ducks, geese, and other migratory bird species.

Site Description:

San Bernard National Wildlife Refuge, with Big Boggy NWR and Brazoria NWR, forms the Texas Mid-Coast National Wildlife Refuge Complex. The Complex protects vital coastal wetlands serving as the end point of the Central Flyway and an entry point for migrating songbirds arriving from South and Central America. The Western Hemisphere Shorebird Reserve Network has designated the Complex as internationally significant shorebird site because the Complex houses over 100,000 shorebirds during spring migrations.

Located ten miles west of Freeport, the 24,454 acres San Bernard NWR is dominated by salt marshes and coastal prairies. The shoreline supports oyster reefs and populations of many species of shorebirds, including heron, ibis, sandpipers, and stilts. Inland waters support nesting pairs of laughing gulls and royal terns. Rarer species such as brown pelicans, roseate spoonbills, and yellow rails are sometimes spotted. American alligators, bobcats, and coyotes are a few of the mammals present in the refuge.

Regulation:

The U.S. Fish and Wildlife Service regulates hunting on the Refuge in accordance 50 C.F.R. §§ 32.20 - 32.72. Waterfowl hunting for coots, ducks, geese, and mergansers is permitted in San Bernard National Wildlife Refuge. The use of blinds is prohibited, non-toxic shot is required, and the public hunting areas may only be accessed by boat. ATVs may not be used within the Refuge. Saltwater fishing and crabbing is allowed in designated areas in accordance with applicable state and federal regulations.

Primary Information Source:

San Bernard NWR website - <http://southwest.fws.gov/refuges/texas/texasmidcoast/sanbernard.htm>

Coyote
Courtesy of USFWS





*Blue Crab
Courtesy of NOAA
Photograph by Mary Hollinger, NODC biologist*

Texas Point National Wildlife Refuge

Authorizing Legislation: Migratory Bird Conservation Act (16 USC § 715 - 715(s)); National Wildlife Refuge System Administration Act (16 U.S.C. § 668dd)

Date of Designation: December 21, 1978

Management Agency: U.S. Fish and Wildlife Service

Management Goal: To provide wintering and migration habitat for ducks, geese, and other migratory bird species.

Site Description:

Located fifteen miles south of Port Arthur adjacent to Sabine Pass, the 8,900 acre Texas Point National Wildlife Refuge is an important resting and feeding ground for migratory waterfowl and songbirds. The habitats of Texas Point range from salt marsh to wooded uplands. Over two dozen species of ducks and thousands of geese arrive in the Refuge during the winter months. In the spring, migratory songbirds, such as buntings, grosbeaks, orioles, tanagers, warblers, and vireos, rest in the refuge after flying across the Gulf of Mexico. A variety of species live in the refuge, including American alligators, bobcats, coyotes, gray foxes, musk rats, and river otters.

Regulation:

The U.S. Fish and Wildlife Service regulates hunting on the Refuge in accordance 50 C.F.R. §§ 32.1 - 32.72. Hunting for coots, ducks, and geese is permitted in designated areas. Shotguns are the only types of firearms permitted by the Fish and Wildlife Service and non-toxic shells are required. Hunters may access the hunting areas on foot or by boat. Fishing, primarily for blue crab, catfish, flounder, and red drum, is also permitted. Boating is allowed on open water bodies, such as inland lakes and ponds.

Primary Information Source:

Texas Point NWR website - <http://southwest.fws.gov/refuges/texas/mcfaddin/index.html>

FEDERAL AND STATE COOPERATIVES

Coastal Bend Bay National Estuary Program

Authorizing Legislation: National Estuary Program (33 U.S.C. §1330); Texas Estuaries Act (Texas Water Code §§ 5.601 - 5.609)

In 1999, Texas recognized the significance of Texas estuaries and the cooperative efforts of the National Estuary Program. Approved NEP implementation programs are eligible to receive state funding through a grant from the Texas Natural Resource Conservation Committee (TNRCC). The TNRCC is the lead agency for the implementation of the approved Comprehensive Conservation and Management Plans developed by the management conferences. In 2002, the TNRCC changed its name to the Texas Commission on Environmental Quality.



*Coastal Bend Bay National Estuary
Courtesy of TPWD
Photograph by K. J. Lodrigue, Jr.*

Date of Designation: 1992

Management Agency: Texas Commission on Environmental Quality; Coastal Bend Bays and Estuaries Program Office

Management Goals: (1) To promote healthy and diverse economic, social, and ecological systems; (2) to facilitate public action; (3) to achieve equity among competing uses, and (4) to seek and implement sustainable solutions.

Site Description:

Originally referred to as the Corpus Christi Bay Estuary, the Coastal Bend Bay National Estuary Program now encompasses three of the seven Texas estuaries - the Aransas, Corpus Christi, and upper Laguna Madre. The Coastal Bend "bay system" extends from Mesquite Bay in San Antonio Bay to Baffin Bay in upper Laguna Madre. The Coastal Bend Bay NEP project area covers over 11,500 square miles and includes all of the water, submerged habitat, wetlands, and upland environments of a 12-county area known as the Coastal Bend. The watershed's total area is 65,987 square kilometers. The habitats of the Coastal Bend Bay NEP include barrier islands, bays, coastal prairies, pastureland, and a hypersaline lagoon, one of only three in the world.

The Coastal Bend Bays Plan, a comprehensive conservation and management plan, was issued in August 1998. The Plan identifies six focus areas: freshwater resources, habitat and living uses, human uses, such as tourism, maritime commerce and dredging, public education and outreach, and water and sediment quality. There are Action Plans for each area and a guidance document, the *Implementation Strategy for the Coastal Bend Bays Plan*. The priority issues for the Coastal Bend Bays include altered freshwater inflows into bays and estuaries, wetland loss, water quality degradation, and bay debris.

Regulation:

The Coastal Bend Bay and Estuaries Program office has no regulatory authority. The Coastal Bend Bays Plan is implemented by the Texas Commission on Environmental Quality in coordination with other state agencies with regulatory authority over coastal lands and resources, such as the General Land Office and the Texas Parks and Wildlife Department.

Primary Information Source: Coastal Bend Bay NEP website - <http://www.cbbep.org/>

Galveston Bay National Estuary Program

Authorizing Legislation: National Estuary Program (33 U.S.C. §1330); Texas Estuaries Act (Texas Water Code §§ 5.601 - 5.609)

In 1999, Texas recognized the significance of Texas estuaries and the cooperative efforts of the National Estuary Program. Approved NEP implementation programs are eligible to receive state funding through a grant from the Texas Natural Resource Conservation Committee (TNRCC). The TNRCC is the lead agency for the implementation of the approved Comprehensive Conservation and Management Plans developed by the management conferences. In 2002, the TNRCC changed its name to the Texas Commission on Environmental Quality.



*Dolphins
Courtesy of NOAA*

Date of Designation: 1988

Management Agencies: Texas Commission on Environmental Quality; The Galveston Bay Council

Management Goal: To protect and restore the health of the Galveston Bay while addressing threats to the Bay from development, pollution, and overuse.

Site Description:

The area of the Galveston Bay watershed is approximately 63,306 square miles. The Bay yields over 11 million pounds of shellfish every year. The open waters and estuaries of Galveston Bay account for almost one-third of the state's commercial fishing income and one-half of the state expenditures for recreational fishing. Encompassing industrial areas, including the Port of Houston, and densely populated residential areas, Galveston Bay is threatened by increasing development, pollution, and tourism. The highest priority management issue, however, is habitat loss.

The habitats of the Galveston Bay Estuary range from coastal wetlands and seagrass meadows to prairies and woodlands. There are also barrier islands and oyster reefs. These diverse habitats support a wide variety of species, including the American alligator, bald eagle, brown pelican, dolphins, green sea turtle, Kemp's Ridley sea turtle, leatherback sea turtle, loggerhead sea turtle, peregrine falcon, and piping plover.

Issued in 1994, the Galveston Bay Plan focuses on the lower watersheds of five Texas counties - Brazoria, Chambers, Galveston, Harris, and Liberty. The Plan identifies three main action areas: habitat destruction, competing human uses, and water and sediment quality.

Regulation:

The Galveston Bay Council has no regulatory authority. The Galveston Bay Plan is implemented by the Texas Commission on Environmental Quality in coordination with other state agencies with regulatory authority over coastal lands and resources, such as the General Land Office and the Texas Parks and Wildlife Department.

Primary Information Source: Galveston Bay NEP website - <http://gbep.tamug.edu/>

STATE-MANAGED AREAS

Armand Bayou Coastal Preserve and Nature Center

Authorizing Legislation: Texas Natural Resources Code § 33.105

Date of Designation: 1993

Management Agencies: Texas Parks and Wildlife Division; Texas General Land Office

Management Goals: (1) To protect the ecological conditions of the Preserve and (2) to achieve and maintain optimum water quality and quantity of instream freshwater for human health, biological needs, and aesthetic quality.

Site Description:

This 319 acre coastal preserve is located along Armand Bayou in Harris County. Armand Bayou is a tributary of Clear Creek and a tidewater stream component of the Galveston Bay estuarine complex. The complex encompasses some 2,800 acres and is composed of coastal prairies, riparian woodlands, fresh and saltwater lakes, marshes, aquatic grasses, loblolly pines, several varieties of nearly endangered plants, and polluted inland streams. The acidic, sandy clay soil provides little drainage, but does support one of the most extensive growths of coastal tallgrass prairie in the lower Galveston Bay watershed. The Preserve serves many sedentary and migratory species as valuable wildlife habitat in the middle of highly developed lands.

The Preserve is home to many endangered and threatened species, including the alligator snapping turtle, American alligator, bald eagle, brown pelican, osprey, and paddlefish, along with substantial native prairie populations, including big bluestem, little bluestem, Indiangrass, and little bluestem-brownseed paspalum. Armand Bayou is also a breeding ground for birds, mammals, reptiles, and amphibians, as well as a nursery for finfish and shellfish. Many Native American archaeological sites are also found within the Preserve.

Regulation:

The General Land Office leases the public lands of the South Bay to the Texas Parks and Wildlife Department for management as a preserve. Research, educational activities, recreation, fishing, crabbing, hiking, bird watching, and some minimal logging and hay cutting, as part of prairie restoration efforts, are allowed, subject to state and federal regulations. No boats with gasoline powered motors are allowed.

Primary Information Source:

Texas Coastal Preserves website - <http://www.glo.state.tx.us/coastal/coastpres.html>



Osprey with Prey
Courtesy of TPWD
Photograph by Ann Brinly



*Atkinson Island Wildlife Management Area
Courtesy of TPWD
Photograph by K. J. Lodrigue, Jr.*

Atkinson Island Wildlife Management Area

Authorizing Legislation: Texas Parks & Wildlife Code § 81.401 (2003).

Date of Designation: Land donated in 1990.

Management Agency: Texas Parks and Wildlife Department

Management Goals: To preserve the wildlife of Atkinson Island.

Site Description:

Atkinson Island Wildlife Management Area is located on the southern end of Atkinson Island in Galveston Bay, east of Morgan's Point and the Houston Ship Channel. Three miles long and less than a half-mile wide, Atkinson Island contains forty acres composed mainly of hackberry and yaupon, ninety acres of brackish marsh, and twenty acres of dredged spoils from a channel dredging project.

A variety of waterfowl and migrating raptors and neotropical songbirds use Atkinson Island to feed, rest, and breed, including horned larks, Nelson's sharp-tailed sparrows, and white-tailed kites. In September, large numbers of hummingbirds arrive in the area.

Regulation:

Atkinson Island WMA is open year round, but the area may only be accessed by boat. Visitors over 17 must possess one of the following: an Annual Public Hunting Permit, a Limited Public Use Permit, or a Texas Conservation Passport. Fishing is permitted with a valid license and the park is open to the public for wildlife observation.

Primary Information Source:

Atkinson Island WMA website - http://www.tpwd.state.tx.us/wma/find_a_wma/list/?id=57

Boca Chica State Park

Authorizing Legislation: Texas Parks & Wildlife Code § 13.002 (2003).

Date of Designation: May 1994

Management Agency: Texas Parks and Wildlife Department

Management Goals: To protect the geological structure and the flora and fauna of the area in its natural state.

Site Description:

This 1,055 acre state park is located in southeastern Cameron County near Brownsville. Boca Chica State Park includes the northern end of Boca Chica Island, the western shore of Boca Chica Bay, the southern shore of South Bay, and a flat upland area, Mesa De Gavilan. A wide range of habitats are present, from salt-tolerant vegetative areas to newly-forming sand dunes. The South Bay is an important nursery area for fish and shellfish and dolphins frequent the adjacent waters of the Gulf of Mexico. A variety of rare and endangered birds are found within the park, including brown pelicans, ospreys, reddish egrets, roseate spoonbills, and snowy plovers. The park is also a wintering ground for peregrine falcons and piping plovers.

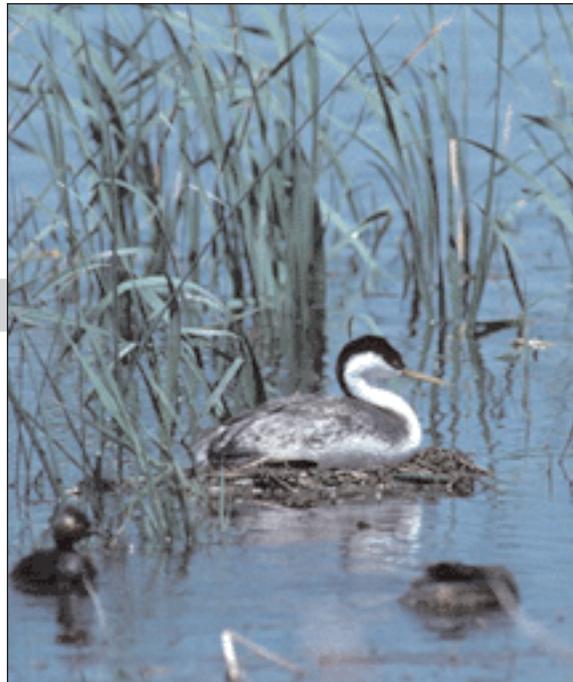
Regulation:

General regulations for visitor activities within Texas state parks are located at 31 Texas Admin. Code § 59.134. The TPWD permits birding, fishing, swimming, and surfing on the Del Mar and Boca Chica Beaches, adjacent to Boca Chica State Park. Vehicles are prohibited on all roads and public beaches within the park boundaries.

Primary Information Source:

Boca Chica State Park website - <http://www.tpwd.state.tx.us/park/boca/>

Western Grebe with Chicks
Courtesy of National Resources Conservation Service
Photography by Tim McCabe





Wild Rose Thicket
Courtesy of TPWD
Photograph by K. J. Lodrigue, Jr.

Candy Cain Abshier Wildlife Management Area

Authorizing Legislation: Texas Parks & Wildlife Code § 81.401 (2003).

Date of Designation: 1989

Management Agency: Texas Parks and Wildlife Department

Management Goals: To preserve the coastal prairie and oak woodlot habitat vital to wildlife, with a special emphasis on enhancing habitat utilized by neotropical migratory birds.

Site Description:

This 208 acre wildlife management area is located approximately seventy miles southeast of Houston along Galveston and Trinity Bays. The habitat of the area is mostly coastal plain with several freshwater ponds and a 60 acre live oak stand.

A variety of migratory birds and raptors, such as red-tail hawks, stop at Candy Cain Abshier WMA during their annual migrations. Visitors can annually see broad-wing hawks, doves, hummingbirds, kestrels, merlins, Mississippi kites, peregrine falcons, swallows, and wood storks. The rare Texas diamondback terrapin can also be found in the WMA.

Five petroleum leases and one cattle grazing lease exist within the area. The TPWD uses the cattle grazing as a management tool for the control of woody vegetation.

Regulation:

The area is open to the public year-round. Bird watching, research, and public tours are common visitor activities. Visitors over 17 must possess one of the following: an Annual Public Hunting Permit, a Limited Public Use Permit, or a Texas Conservation Passport.

Primary Information Source:

Candy Cain Abshier WMA website - http://www.tpwd.state.tx.us/wma/find_a_wma/list/?id=36

Christmas Bay Coastal Preserve

Authorizing Legislation: Texas Natural Resource Code § 33.105

Date of Designation: 1993

Management Agencies: Texas Parks and Wildlife Division; Texas General Land Office

Management Goal: To protect the unique coastal areas and fragile biological communities, including important colonial bird nesting sites, of Christmas Bay.

Site Description:

Christmas Bay Coastal Preserve is located in the southwestern portion of Galveston Bay adjacent to Brazoria National Wildlife Refuge. Also known as Oyster Bay, the Preserve encompasses 5,660 acres in Texas' Galveston Bay estuarine complex. It is separated from the Gulf of Mexico only by Follets Island. The Preserve is made up of many freshwater and salt marshes, prairies, tidal flats and marshes, rare sea-grasses like turtle-grass, and significant smooth cordgrass populations. Its location adjacent to Brazoria National Wildlife Refuge helps to protect Christmas Bay's better-than-average water quality. The Bay averages less than four feet in depth, and the ample seagrasses provide valuable nursing and feeding areas for a plethora of species, as well as reducing soil erosion. The large areas of widgeon-grass are important for providing food for the Bay's baby ducks. Three of the four Christmas Bay seagrass species are found nowhere else in Galveston Bay.

142 bird types are recognized in the Preserve, as well as fifty-one species of fish, twenty-three types of crustaceans, fifty-two types of mollusks, and many varieties of algae. The Attwater greater prairie chicken, brown pelican, bald eagle, and interior least tern are a few of the endangered species that call Christmas Bay home, as do the threatened wood stork, white-tailed hawk, alligator snapping turtle and timber rattlesnake. Both resident and migratory waterfowl and shorebirds rely on the resources and habitats of Christmas Bay.



Attwater's Prairie Chicken
Courtesy of USFWS
Photograph by Gary Halvorsen

Regulation:

The General Land Office leases the public lands of the South Bay to the Texas Parks and Wildlife Department for management as a preserve. Fishing, boating, waterfowl hunting, education, bird watching, scientific research, light recreation, and the construction of private and public fishing cabins are allowed uses in the Preserve, subject to state and federal regulation. No trawling, netting, shell fishing, or boats with motors are allowed in the seagrass beds. Wheeled and tracked vehicles are also prohibited on marshes and submerged grassbeds. No permanent waterfowl blinds are allowed. Mineral, oil and gas exploration and development is also allowed, subject to special use restrictions.

Primary Information Source:

Texas Coastal Preserves website - <http://www.glo.state.tx.us/coastal/coastpres.html>



*Fulvous Whistling Duck
Courtesy of USFWS
Photograph by Milton Friend*

D. R. Wintermann Wildlife Management Area

Authorizing Legislation: Texas Parks & Wildlife Code § 81.401 (2003).

Date of Designation: 1995

Management Agency: Texas Parks and Wildlife Department

Management Goal: The area is managed primarily to allow students and landowners to observe wetlands management in action.

Site Description:

This 246 acre wildlife management area is located in Wharton County. The 37 acres of wetlands located within the D. R. Wintermann WMA were created using water from the Colorado River. The remaining land is mainly coastal prairie. Dominant vegetation includes bluestem, duck potato, Indian grass, marsh elder, paspalum, smartweed, spike rush, and switchgrass.

A variety of migratory bird species are attracted to the WMA, including bald eagles, doves, ibis, sand-hill cranes, and teal. Black-bellied whistling, fulvous, and mottle ducks nest in the WMA.

Regulation:

The general public has limited access to D. R. Wintermann WMA. Visitors can schedule wildlife observation sessions with the area manager to learn more about the wetlands and the species which rely on them. Visitors over 17 must possess one of the following: an Annual Public Hunting Permit, a Limited Public Use Permit, or a Texas Conservation Passport.

Primary Information Source:

D.R. Wintermann WMA website - http://www.tpwd.state.tx.us/wma/find_a_wma/list/?id=44

Freeport Liberty Ship Reef Complex

Authorizing Legislation: National Fishing Enhancement Act (33 U.S.C. § 2102 (2003)); Texas Parks & Wildlife Code §§ 89.001 - 89-061 (2003)

Date of Designation: 1976

Management Agency: Texas Parks and Wildlife Department

Management Goals: To promote, develop, maintain, monitor, and enhance the artificial reef potential in state waters and federal waters adjacent to Texas to enhance fishery resources and commercial and recreational fishing (and diving) opportunities.

Site Description:

This .5 square mile "hard bottom artificial reef structure" off the coast of Texas near Brazoria County consists of six different reefs constructed from a variety of materials. The six reefs are the *V. A. Fogg*, a sunken ship, HL&P Reef, consisting of 300 one ton coal-ash blocks, Star Reef, made up of six rigs, Conoco/Galveston County Reef, a pipe structure, and two Liberty Ship Reefs, the *B. F. Shaw* and *William F. Allen*. The Mineral Management Service holds the lease to the lands upon which the artificial reefs are located and the Texas Parks and Wildlife Department serves as the permittee for the reef under the National Fisheries Enhancement Act.

The water depth at the reef is 100-102 feet. The artificial reef structure provides substrate for natural encrusting organisms. The Freeport Liberty Ship Reef Complex supports a biota and reef fish community similar to those of natural reefs. The Complex has become a breeding/nursing habitat for reef fish, including red snapper, grouper, gag/scamp/rock hind, butterflyfish, cocoa damsel, juvenile blue angel, french angel, amberjack, blue runner, and triggerfish. It also serves as an important feeding area for whale sharks, sharks, turtles, and dolphins.

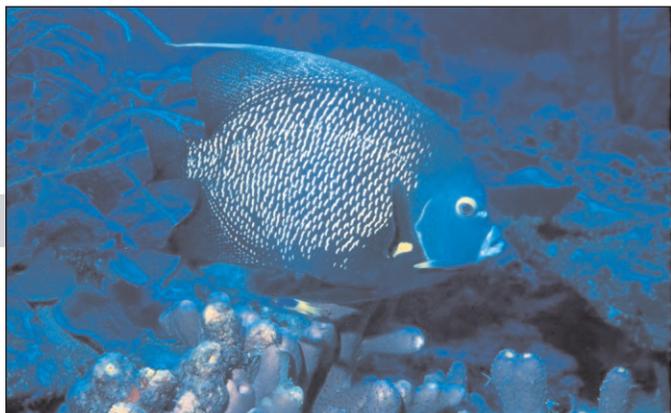
Regulation:

The Texas Parks and Wildlife Department monitors the area and controls placement of materials into the reef. The materials used to build the Liberty Ship Reef Complex are owned by the state of Texas. The reef complex is open for diving, fishing, and photography. Commercial fishing for red snapper is permitted within the area. Federal fishing regulations also apply.

Primary Information Source:

Texas GEMS - Freeport Liberty Ship Reef Complex website - <http://www.tpwd.state.tx.us/texaswater/txgems/freeport/freeport.phtml>

*French Angelfish
Courtesy of OAR/National Undersea
Research Program (NURP)
Photograph by Reese*



Galveston Island State Park

Authorizing Legislation: Texas Parks & Wildlife Code § 13.002 (2003).

Date of Designation: Land acquired in 1969; Park opened in 1975

Management Agency: Texas Parks and Wildlife Department

Management Goals: (1) To manage and conserve the natural and cultural resources of Texas, and (2) to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations.

Site Description:

Galveston Island State Park is located on the western end of Galveston Island. Encompassing 2,013 acres, this state park offers over four miles of mountain biking and hiking trails. Within the boundaries of the park, opportunities abound for wildlife viewing. A variety of wading and shore birds, such as egrets, sandpipers, skimmers, and spoonbills, can be seen in the park. Other wildlife includes armadillos, coyotes, marsh rabbits, raccoons, and tree frogs. The waters surrounding the western end of Galveston Island teem with black drum, croaker, flounder, redfish, sandtrout, and spotted seatrout.

Regulation:

General regulations for visitor activities within Texas state parks are located at 31 Texas Administrative Code § 59.134. The TPWD permits camping, fishing, and swimming in Galveston Island State Park.

Primary Information Source:

Galveston Island State Park website - <http://www.tpwd.state.tx.us/park/galvesto/>



Armadillo
Courtesy of USFWS
Photograph by John and Karen Hollingsworth

*Canada Geese and Broods
Courtesy of USFWS*



Goose Island State Park

Authorizing Legislation: Texas Parks & Wildlife Code § 13.002 (2003).

Date of Designation: Land acquired from 1931-1935

Management Agency: Texas Parks and Wildlife Department

Management Goals: (1) To manage and conserve the natural and cultural resources of Texas and (2) to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations.

Site Description:

Surrounded by Aransas and St. Charles Bays at the southern tip of Lamar Peninsula, this 321.4 acre state park is home to the "Big Tree." The official website for Goose Island State Park states that the "Big Tree," a live oak (*Quercus virginiana*), may be over 1,000 years old. With a circumference of thirty-five feet and height of forty-four feet, the "Big Tree" is thought to be one of the biggest in the United States.

Goose Island State Park encompasses a variety of habitats, including live oak stands, marshes, meadows, open bays, and shoreline. Due to its location along the great Central Flyway, bird watching is the main attraction at the park. During winter months, American white pelicans, common loons, double-crested cormorants, gadwalls, geese, goldeneyes, shovelers, teals, and whooping cranes frequent the waters around the park. Some of the birds who nest within the park boundaries are: clapper rails, egrets, herons, inca doves, scissor-tailed flycatchers, and spoonbills.

Regulation:

General regulations for visitor activities within Texas state parks are located at 31 Texas Administrative Code § 59.134. Swimming is prohibited in Goose Island State Park. The TPWD permits camping, fishing, wildlife observation, and boating, both motorized and non-motorized.

Primary Information Source:

Goose Island State Park website - <http://www.tpwd.state.tx.us/park/galvesto/>



Indigo Bunting
Courtesy of USFWS
Photograph by Dave Menke

Guadalupe Delta Wildlife Management Area

Authorizing Legislation: Texas Parks & Wildlife Code § 81.401

Date of Designation: Land purchased from 1985-1994.

Management Agency: Texas Parks & Wildlife Department

Management Goals: (1) To develop and manage habitats for indigenous and migratory species, with special emphasis on waterfowl, and (2) to expand and improve the WMA facilities to accommodate intensive research and management activities to gain a complete understanding of coastal ecosystem functions.

Site Description:

In 1997, the Texas Parks and Wildlife Department identified the wetlands of the Guadalupe Delta as a high priority for acquisition. The 6,594 acre Guadalupe WMA is located in Calhoun, Refugio, and Victoria counties. The WMA is basically a freshwater marsh subject to flooding from the Guadalupe River and its adjacent bayous. It consists of three units, Mission Lake Unit (4,447.62 acres), Hynes Bay Unit (1007.72 acres), and San Antonio River unit (700 acres).

The Guadalupe Delta has formed a diverse environment of lakes, fresh, brackish, and saline marshes, and riparian areas. Riparian areas along the numerous small bayous form "corridor forests" of American elm, black willow, cedar, hackberry, green ash, and pecan and provide excellent forage area for neotropical songbirds. White-faced ibis, white-tailed hawks, and peregrine falcons can be observed foraging in the WMA.

The estuary at the upper end of San Antonio Bay provides valuable spawning and nursery habitat for Atlantic croaker, blue crab, brown shrimp, red drum, spotted seatrout, white shrimp, and other marine species.

Regulation:

Recreational hunting and fishing are allowed in the WMA, except in Zone C of the Guadalupe River Unit, on a seasonal basis. Hiking and wildlife viewing is permitted, as well as commercial freshwater fishing and crabbing.

Primary Information Source:

Guadalupe Delta WMA website - http://www.tpwd.state.tx.us/wma/find_a_wma/list/?id=37

J.D. Murphree Wildlife Management Area

Authorizing Legislation: Texas Parks & Wildlife Code § 81.401 (2003)

Date of Designation: Big Hill Unit - 1958; Lost Lake Unit - 1983; Hillebrandt Unit - 1987; Salt Bayou Unit - 1997

Management Agency: Texas Parks and Wildlife Department

Management Goal: To provide suitable winter waterfowl habitat

Site Description:

The 12,267 acre J.D. Murphree Wildlife Management Area, located to the southwest of Port Arthur, Texas in Jefferson County, is part of the Texas Chenier Plain, the westernmost geologic delta of the Mississippi River. The WMA consists of three distinct units: the Big Hill Unit (8,312 acres), the Hillebrandt Unit (591 acres), and the Salt Bayou Unit (11,231 acres). The Lost Lake Unit (4,074) is encompassed by the Salt Bayou Unit.

The WMA is a highly diverse coastal wetland community, with freshwater, intermediate, brackish, and saline wetlands. The freshwater wetlands, unfortunately, support expanding populations of exotic and noxious wetlands plants. The WMA is also a nesting and breeding area for black-bellied, fulvous, mottled, and whistling ducks. Numerous mammals make their homes in the WMA including the American alligator, armadillo, bobcat, cotton rat, coyote, eastern cottontail, mink, muskrat, nutria, opossum, raccoon, rice rat, river otter, striped skunk, swamp rat, and white-footed mouse. The American alligator is the key predator in the area.

The Big Hill Unit is primarily a freshwater marsh divided by levees. Bass, bream, catfish, and crappie are the predominant fish species. Unlike the Big Hill Unit, the Salt Bayou Unit does not have levees. Flounder, redfish, and speckled trout are the primary fish species in that unit. Blue crabs are also plentiful.

Regulation:

The WMA is a wildlife viewing area on the Great Texas Coastal Birding Trail. In general, the Texas Parks and Wildlife Department permits public hunting for alligator, gallinule, rail, snipe, and waterfowl. Waterfowl hunts are scheduled by the TPWD and the construction of permitted blinds is prohibited. Use of dogs is discouraged because of alligator activity. An Annual Public Hunting Permit is required to fish within the WMA, unless all activity is confined to a boat within navigable waters. No commercial fishing or crabbing is permitted in the WMA, except in Keith Lake. Airboats are prohibited in the Murphree WMA, except in Taylors, Hillebrandt, Big Hill, and Blind Bayous, and on Keith Lake. On the Salt Bayou Unit, airboats cannot have a motor of more than ten horsepower and may only be used by permitted waterfowl hunters.

The Big Hill Unit is open to hunters on designated days and to fishermen during daylight hours from March 1 to August 31. Big Hill Bayou is open to fishermen until October 31. The Unit is open to the public for wildlife viewing on any non-hunting day. The Hillebrandt Unit is open to hunters on designated days and for wildlife viewing on non-hunting days. The Salt Bayou Unit is open to hunters on designated days and to fishermen during daylight hours from March 1 to August 31. Keith Lake, Johnson Lake and Salt Bayou are open to fishing 24 hours a day year-round. The unit is also open to the public for wildlife viewing on any non-hunting day.

Camping is available at adjacent Sea Rim State Park and Sabine Pass Battleground State Park and Historic Site.

Primary Information Source:

J.D. Murphree WMA website - http://www.tpwd.state.tx.us/wma/find_a_wma/list/?id=40

Gadwall Duck with Duckling
Courtesy of USFWS
Photograph by Dave Menke



Laguna Madre

Authorizing Legislation: Because it encompasses such a large area, the Laguna Madre has no specific legislative designation.

Date of Designation: N/A

Management Agency: While no agency has authority over the entire area, the U.S. Fish and Wildlife Service manages the National Wildlife Refuges located with the Laguna Madre and the Texas General Lands Office owns and manages some areas.

Management Goal: (1) To control the significant quantities of agricultural pesticides and other environmental contaminants from the Arroyo Colorado; (2) to control oil spills from barges and address threats posed by the high volume of commercial activities taking place on Laguna Madre; and (3) to control and prevent the accidental release of exotic shrimp and effluent from commercial shrimp farms.

Site Description:

Located near Cameron, Willacy, Kenedy, Kleberg, and Nueces counties, the Lagune Madre is a large body of shallow water separating Padre Island from the South Texas mainland. It covers 609 square miles consisting of estuarine and coastal marine systems. Approximately 20,000 acres of the Laguna Madre fall within Padre Island National Seashore.

A 110-mile long saltwater lagoon, a unique ecological community, exists in Laguna Madre. The lagoon supports marshes and a variety of seagrasses. Shoal grass is the key species of the bay habitat. It is the principal winter food for ducks, particularly redheads, and serves as a spawning, foraging, and nursery area for fish and shrimp. Broad killifish, pinfish, skipjacks, and striped mullet forage in the shoal grass areas. Mollusks and crustaceans as also plentiful.

The Laguna Madre is an important overwintering, feeding, resting, and breeding ground for many aquatic and migratory birds. Shallow areas of the Laguna Madre provide excellent feeding grounds for winter duck populations which can number in the thousands.

Regulation:

Recreational and commercial fishing is permitted within Laguna Madre. The Texas General Lands Office operates fishing cabins as well as camping sites on the spoil islands.

Primary Information Source:

Laguna Madre Coastal Preserve website -
<http://www.tpwd.state.tx.us/texaswater/txgems/lagmadr/lagmadr.phtml>

Lower Neches Wildlife Management Area

Authorizing Legislation: Texas Parks & Wildlife Code § 81.401 (2003)

Date of Designation: Land donated from 1987 - 1993

Management Agency: Texas Parks and Wildlife Department

Management Goal: The area is managed for wildlife and public recreation.

Site Description:

Located near Bridge City, Lower Neches WMA consists of 7,888 acres of coastal plains surrounding rivers, bayous, and the shoreline. Sabine Lake forms the eastern border of the WMA and the Neches River in the north. Intermediate and brackish marshes dominated the area. Man-made canals and ditches criss-cross the area. Lower Neches WMA is divided into three units: the Adam Bayou Unit, the Nelda Stark Unit, and the Old River Unit.

In October, monarch butterflies migratory through Lower Neches WMA. In the Nelda Stark Unit, common wildlife include migratory waterfowl, colonial waterbirds, shorebirds, alligators, hawks, minks, muskrats, raccoons, and river otters. Alligators, minks, muskrats, raccoons, and river otters are also present in the Old River Unit.

Regulation:

The TPWD requires all visitors over 17 years old to possess one of the following permits: an Annual Public Hunting Permit, a Limited Public Use Permit, or a Texas Conservation Passport. The Old River Unit is open to the public year-round, but the use of airboats and horses is prohibited. The TPWD permits fishing for black drum, flounder, and redfish with a valid license.

The TPWD manages the Nelda Stark Unit as a wildlife sanctuary. In this unit, airboats are permitted only in non-vegetative areas and the use of ATVs and horses is prohibited. During hunting season, portions of the Nelda Stark Unit are closed to non-hunters.

Primary Information Source:

Lower Neches WMA website - http://www.tpwd.state.tx.us/wma/find_a_wma/list/?id=58

*Lower Neches Wildlife Management Area
Courtesy of TPWD
Photograph by K. J. Lodrigue, Jr.*



Mad Island Wildlife Management Area

Authorizing Legislation: Texas Parks & Wildlife Code § 81.401 (2003)

Date of Designation: Land purchased in 1987-1992

Management Agency: Texas Parks and Wildlife Department

Management Goal: To preserve coastal wetlands for wintering waterfowl.

Site Description:

Located on the upper Texas coast, Mad Island Wildlife Management Area is 7,200 acres of fresh to brackish marshland with some coastal prairie environments. The Gulf of Mexico and the Gulf Intercoastal Waterway serve as the southern boundary of the WMA.

Among the many species found within the WMA are alligators, armadillos, bobcats, mottled ducks, sandhill cranes, and swamp rabbits. Numerous birds may be spotted including comorants, doves, egrets, herons, ibis, quail, sandhill cranes, and warblers.

Regulation:

Mad Island is only open to the public during hunting season and scheduled wildlife tours. The TPWD schedules special hunts for alligators, feral hogs, and waterfowl. Camping and open fires are prohibited.

Primary Information Source:

Mad Island WMA website - http://www.tpwd.state.tx.us/wma/find_a_wma/list/?id=39



Marsh
Courtesy of TPWD
Photograph by K. J. Lodrigue, Jr.

Matagorda Island Wildlife Management Area and State Park

Authorizing Legislation: Texas Parks & Wildlife Code §§ 22.201, 81.401 (2003)

Matagorda Island Wildlife Management Area and State Park was established by § 22.201 of the Texas Parks & Wildlife Code under the authority of the Texas Parks and Wildlife Department. The Park consists of all land, including tideland, submerged land, and beaches, on Matagorda Island in Calhoun County owned or acquired by the TPWD.

Date of Designation: December 1984

Management Agency: Texas Parks and Wildlife Department

Management Goals: To provide habitat for wildlife and plants and public recreational opportunities.

Site Description:

The 38 mile long Matagorda Island, located off the central coast of Texas at Port O'Connor, is separated from the Texas mainland by San Antonio and Espiritu Santo Bays. 43,893 acres of the Island is public land (24,893 - state, 19,000 - federal), while the remaining 11,500 acres is privately owned. The Matagorda Island State Park encompasses approximately 7,325 acres.

The Island's primary habitats are gulf dunes, island prairies, sand dunes, sand flats, and salt marshes. Dominate vegetation includes marshhay cordgrass, dewberry vine, and macartney rose. Trees are scarce, although honey mesquite, Mexican persimmon, and salt cedar are present. Wildflowers, including white daises and prickly pear, bloom in abundance during spring months.

The Island is a foraging area for deer and neo-tropical migratory birds and a breeding and nursery ground for fish. Endangered species are present throughout the Wildlife Management Area, including the brown pelican, piping plover, whooping crane, and five species of sea turtles. Wild turkeys are stocked by the U.S. Fish and Wildlife Service.



Wild Turkeys
Courtesy of USDA NRCS, Photograph by Lynn Betts

Regulation:

Matagorda Island is jointly managed by the TPWD and the FWS. In 1983, all state lands on Matagorda Island were added to the National Wildlife Refuge System and all federal lands became part of the Matagorda Island WMA and State Park. (Pub. Law 98-66, 97 Stat. 368 (Aug. 4, 1983)). Under a 1990 Memorandum of Understanding, the TPWD has primary responsibility for public use and the FWS is responsible for wildlife and habitat management.

A variety of recreational activities are permitted on the Island, including camping, fishing, hiking, hunting, and swimming.

Primary Information Sources:

Matagorda Island State Park website - <http://www.tpwd.state.tx.us/park/matagisl/> and

Matagorda Island WMA website - http://www.tpwd.state.tx.us/wma/find_a_wma/list/?id=48



*Raccoon
Courtesy of USFWS
Photography by John and Karen Hollingsworth*

Mustang Island State Park

Authorizing Legislation: Texas Parks & Wildlife Code § 13.002 (2003).

Date of Designation: Texas acquired the land for Mustang Island State Park in 1972; Park opened to the public in 1979

Management Agency: Texas Parks and Wildlife Department

Management Goals: (1) To manage and conserve the natural and cultural resources of the park and (2) to provide hunting, fishing and outdoor recreation opportunities.

Site Description:

This 3,954 acre state park located in Nueces County includes five miles of beaches. Mustang Island is a coastal barrier island boasting sand dunes with an average height of fifteen to twenty feet. The dunes are stabilized primarily by beach panic grass, sea oats, and soilbind morning glory. Although a small coyote population is present on the Island, small mammals, such as opossums, pocket gophers, rabbits, raccoons, and spotted ground squirrels, dominate. Numerous shorebirds and waterfowl frequent the park, as well as migratory species of hawks and songbirds. Hundreds of fish species are present in the waters surrounding Mustang Island.

Regulation:

General regulations for visitor activities within Texas state parks are located at 31 Texas Administrative Code § 59.134. A variety of recreational activities are permitted at Mustang Island State Park, including camping, fishing, hiking, and swimming.

Primary Information Source:

Mustang Island State Park website - <http://www.tpwd.state.tx.us/park/mustang/>

North Deer Island Sanctuary

Authorizing Legislation: None, the Sanctuary's only designation is as a Texas GEMS

Date of Designation: N/A

Management Agency: N/A

Management Goal: To prevent disturbance of nesting sites to ensure breeding success of the wide variety of birds that inhabit the Sanctuary.

Site Description:

This 10 acre natural island, located in West Galveston Bay, is privately-owned. North Deer Island habitats range from salt marshes to uplands. The practice of depositing dredged spoils on the island has resulted in two types of upland communities. Dredged spoils have been deposited on approximately one-third of the island. These areas support cactus, cedars, and grasses. The unspoiled uplands are dominated by cactus, lantana, mesquite, mulberry, paloverde, and prickly ash.

The island is an important nesting area for colonial waterbirds, including reddish egrets, roseate spoonbills, and white-faced ibis and a wintering ground for migratory waterfowl. Between 10,000 to 30,000 pairs of birds nest annually on North Deer Island. The salt marshes on the island's southeastern side serves as nursery areas for fish and shellfish.

Regulation:

Two-thirds of North Deer Island is owned by the National Audubon Society and the Houston Audubon Society. These non-profit organizations have designated North Deer Island as a bird sanctuary. Houston Audubon Society posts "No Trespassing" signs and removes predators. One-third of North Deer Island, however, remains in private hands.

The general public, does have access to North Deer Island. Fishing is permitted in the surrounding waters subject to state and federal regulations. Although not permitted to dock and walk around, bird watchers may approach the island by boat to view the many species of waterbirds. In addition, educational field trips to the island are available during nesting season.

Primary Information Source:

North Deer Island Sanctuary website -
<http://www.tpwd.state.tx.us/texaswater/txgems/northde/northde.phtml>



*Prickly Pear Cactus
Courtesy of USFWS
Photograph by Gary M. Stolz*

Peach Point Wildlife Management Area

Authorizing Legislation: Texas Parks & Wildlife Code § 81.401 (2003).

Date of Designation: 1987

Management Agency: Texas Parks and Wildlife Department

Management Goals: To provide for sound biological conservation of the wildlife resources within the central coast of Texas for the common benefit of the public, through habitat management, research activities, facility improvement, and public outreach and recreation.

Site Description:

This 11,938 acre wildlife management area is located between the San Bernard and Brazos Rivers near Jones Creek in Brazoria County. Representative of the Gulf Coast Prairies and Marshes Ecoregion, Peach Point WMA contains a variety of environments including marshes and tidal flats. Trees dominate the entrance area, with stands of live oak, water oak, pecans, hack berries, elms, and Chinese tallow. The brackish marshes support cordgrass, saltgrass, and bulrushes. Freshwater ponds contain sedges, millet, senna bean, and cattails. The coastal prairies support Gulf cordgrass, seacoast bluestem, little bluestem, switchgrass, tallow trees, and pepper vines.

A variety of bird species depend on Peach Point for food and shelter, including Canada geese, gadwalls, pintails, shovelers, snow geese, white-fronted geese, and widgeons. Mottled ducks are the primary game species. Saltwater intrusion is a significant problem at Peach Point because the area's natural drainage patterns were altered to improve transportation and flood control and to construct the Gulf Intercoastal Waterway.

Regulation:

Portions of Peach Point WMA are open year-round for public recreation. Fishing and waterfowl and feral pig hunting is permitted with the proper permits. Camping is available at the Bryon Beach Unit.

Primary Information Source:

Peach Point WMA website - http://www.tpwd.state.tx.us/wma/find_a_wma/list/?id=41



*Snow Geese and Sandhill Cranes
Courtesy of USFWS
Photograph by Gary M. Stolz*

Avocets Landing
Courtesy of USFWS



Redhead Pond Wildlife Management Area

Authorizing Legislation: Texas Parks & Wildlife Code § 81.401 (2003)

Date of Designation: 1990's

Management Agency: Texas Parks and Wildlife Department

Management Goal: To protect freshwater wetland habitat for wintering waterfowl and other avian species.

Site Description:

Redhead Pond Wildlife Management Area is located in Flour Bluff, Nueces County near Corpus Christi. Although the entire WMA is classified as a wetland, the only permanent water feature is a 7.8 acre pond, which is an important freshwater source of the area's wildlife. Along the center of the pond are small islands.

As one of the viewing sites along the Great Texas Coastal Birding Trail, bird watching opportunities abound. Black-crowned night herons, common goldeneyes, grebes, hooded mergansers, and redheads are a few of the species which frequent the area. Wading and shorebirds include avocets, black-necked stilts, egrets, herons, roseate spoonbills, and sandpipers.

Regulation:

Redhead Pond WMA is open to the public for wildlife observation, hunting, and fishing. Visitors over 17 must possess one of the following: an Annual Public Hunting Permit, a Limited Public Use Permit, or a Texas Conservation Passport.

Primary Information Source:

Redhead Pond WMA website - http://www.tpwd.state.tx.us/wma/find_a_wma/list/?id=42



*Sea Rim State Park
Courtesy of TPWD
Photograph by K. J. Lodrigue, Jr.*

Sea Rim State Park

Authorizing Legislation: Texas Parks & Wildlife Code § 13.002 (2003)

Date of Designation: Property acquired in 1973; officially opened to the public in 1977

Management Agency: Texas Parks and Wildlife Department

Management Goal: To restore and maintain the diversity and productivity of the natural plant and animal communities.

Site Description:

Sea Rim State Park is located in Jefferson County, ten miles west of Sabine Pass. The 15,109 acre park extends west to McFaddin Beach and east to Minyak Corporation Road. Sea Rim State Park is divided into two units: the D. Roy Harrington Beach Unit and the Marshlands Unit. The Beach Unit contains two miles of open beach primitive camping and six miles of open beaches for recreation. The Marshlands Unit is accessible only by boat. The Unit has primitive camping platforms and observation blinds. Fishing is permitted during the day.

Sea Rim State Park contains 5.2 miles of coastline. Along 2.2 miles of that coast, tidal marshes directly meet the Gulf waters. The remaining three miles are made up of sand beaches separated from marshlands by small dunes. The Marshlands Unit is comprised of tidal saltmarshes and shallow lakes. American alligators, bald eagles, bobcats, coyotes, river otters, shrimp, crabs, and a variety of sport fish are found within the Park. Sea Rim State Park is located along the Greater Texas Coastal Birding Trail and is a critical resting and feeding area for migratory birds traveling the Central Flyway, including buntings, flycatchers, grosbeaks, swallows, vireos, and warblers. The mottled duck is the only avian species that remains in the park year-round.

Regulation:

Sea Rim State Park is open to the public for a variety of recreational activities. Camping, fishing, hiking, kayaking, and swimming are all permitted. Subject to certain restrictions, waterfowl hunting is permitted during open seasons designated by the TPWD. (Texas Parks & Wildlife Code § 62.0631; 31 Texas Admin. Code. § 59-.201 - 59.215).

Primary Information Source: Sea Rim State Park website - <http://www.tpwd.state.tx.us/park/searim/>

South Bay Coastal Preserve

Authorizing Legislation: Texas Natural Resources Code § 33.105

Date of Designation: February 26, 1986

Management Agency: Texas Parks and Wildlife Division

Management Goal: To protect the unique coastal areas and fragile biological communities, including important colonial bird nesting sites, of South Bay.

Site Description:

Part of the vast Laguna Madre, South Bay is the southernmost bay in Texas. Located near Port Isabel in Cameron County, this 3,400 acre Coastal Preserve is bordered by the riparian edge of the Rio Grande in the south, the Brownsville Ship Channel in the north, and Brazos Island in the east.

A wide variety of habitat types are found within the Preserve. Algal flats, black mangrove swamps, oyster reefs, seagrass beds, and tidal sand and mud flats all contribute to the productivity of South Bay, home to forty-one species of finfish and nine species of shellfish. The South Bay ecosystem supports the largest concentration of oysters in the Lower Laguna Madre. The area also serves as an important feeding, resting, and overwintering ground for migratory and resident bird species, such as brown pelicans, cormorants, gadwalls, green-winged teals, redheads, and white pelicans.

Regulation:

The General Land Office leases the public lands of the South Bay to the Texas Parks and Wildlife Department for management as a preserve. The Coastal Preserve is open to the public for fishing, hunting, and recreation. Commercial oyster harvesting is also permitted in the Preserve.

Primary Information Source:

Texas Coastal Preserves website - <http://www.glo.state.tx.us/coastal/coastpres.html>



*Immature Brown Pelicans
Courtesy of USFWS
Photography by John Turner*

Tony Houseman Wildlife Management Area

Authorizing Legislation: Texas Parks & Wildlife Code § 81.401 (2003)

Date of Designation: Land purchased in the mid-1990's

Management Agency: Texas Parks and Wildlife Department

Management Goals: The area is managed for wildlife and public recreation.

Site Description:

Tony Houseman WMA is located in Orange County on the Louisiana border where the Sabine River joins the Gulf of Mexico. 80 percent of the WMA is covered with bald cypress - water tupelo swamp. Sandbanks support pines and water oaks. Numerous canals are present throughout the WMA from industrial logging activities. Common species include feral hogs, mallards, minks, rabbits, raccoons, squirrels, white-tailed deers, and wood ducks. Raptors, neo-tropical songbirds, and wading birds are also numerous.

Regulation:

Tony Houseman WMA is open to the public for camping, fishing, hiking, and hunting. Visitors over 17 must possess one of the following: an Annual Public Hunting Permit, a Limited Public Use Permit, or a Texas Conservation Passport. Hunting is permitted for waterfowl, feral pigs, and small game. Fishing is permitted with a valid license. A 600-foot boardwalk provides easily accessible wildlife viewing opportunities. The TPWD prohibits the use of ATVs, airboats, and horses.

Primary Information Source:

Tony Houseman WMA website - http://www.tpwd.state.tx.us/wma/find_a_wma/list/?id=38



*Tony Houseman Wildlife Management Area
Courtesy of TPWD
Photograph by K. J. Lodrigue, Jr.*

Whooping Cranes
Courtesy of USFWS



Welder Flats Coastal Preserve

Authorizing Legislation: Texas Natural Resource Code § 33.105

Date of Designation: June 7, 1988

Management Agency: Texas Parks and Wildlife Department

Management Goals: To protect the unique coastal areas and fragile biological communities, including important colonial bird nesting sites, of Welder Flats.

Site Description:

Located on the eastern shore of middle San Antonio Bay in Calhoun County near Aransas National Wildlife Refuge, this 1,480 acre preserve contains submerged aquatic vegetation, saltwater marshes, mud flats, ponds, and lagoons. The estuary ranges in elevation from sea level to 1.2 meters. Thirty-nine marine species are present in the Welder Flats ecosystem. The Preserve provides vital habitat for a variety of wading and shore birds, including the endangered whooping crane.

Regulation:

The General Land Office leases the public lands of Welder Flats to the Texas Parks and Wildlife Department for management as a preserve. The Coastal Preserve is open to the public for fishing, hunting, and recreation.

Primary Information Source:

Texas Coastal Preserves website - <http://www.glo.state.tx.us/coastal/coastpres.html>



Spiderwort
Courtesy of TPWD
Photograph by K. J. Lodrigue, Jr.

Welder Flats Wildlife Management Area

Authorizing Legislation: Texas Parks & Wildlife Code § 81.401 (2003).

Date of Designation: 1988

Management Agency: Texas Parks and Wildlife Department

Management Goals: (1) To maintain the ecological integrity and (2) to manage the natural resources of Welder Flats.

Site Description:

The Welder Flats Wildlife Management Area consists of 1480 acres of submerged coastal wetlands in San Antonio Bay. The WMA extends approximately 1.5 miles along the Victoria Barge Canal and 4.5 miles along the Gulf Coast Intercoastal Canal. The WMA's dominant vegetation includes shoal grass and wideon grass. A variety of waterfowl and wading and shore birds can be found within the WMA, including the endangered whooping crane which is present in December and January. Welder Flats WMA is designated critical habitat for the whooping crane, because of the birds' use of the area as a wintering ground. San Antonio Bay is stocked with red drum and spotted sea trout from state fish hatcheries and provides food and shelter to many bird species, such as pelicans, ducks, and geese.

Regulation:

The TPWD manages the state-owned tidelands under a lease from the Texas General Lands Office. The Welder Flats WMA is open year-round, but may only be accessed by boat. Saltwater fishing is permitted with a valid license and saltwater stamp.

Primary Information Source:

Welder Flats WMA website - http://www.tpwd.state.tx.us/wma/find_a_wma/list/?id=43