

GALVESTON BAY DRIVE & DISCOVER



17330 Highway 3
Webster, Tx 77598

A Guide to Galveston Bay History and Habitats

MEET YOUR BAY

Most of us who live near Galveston Bay never think much about water and its influence on our lives. Yet we live on an estuary, a place where fresh and salt water mix. The effects of being in an estuary are felt by fishermen on the Galveston jetties and by Houston commuters stranded by a flooded creek. The Bay plays an important role in the lives of all who live near it, whether we are aware of those effects or not.

When people first came to Galveston Bay thousands of years ago, they found many distinct habitats including vast cypress swamps, enormous oyster reefs, dense forests, wide coastal prairies, expansive salt marshes, and long barrier islands. We now know that this area is the second most productive and seventh largest estuary in North America, a place where the San Jacinto and Trinity Rivers and numerous creeks and bayous merge with the Gulf of Mexico. This region is rich with natural and cultural resources and teeming with life.

The ways people have used our estuary’s habitats have changed significantly over time, and these changes have been inscribed upon and around the Bay. The Drive & Discover guide documents some of these changes and their effects on the Bay’s habitats. As such, the Drive & Discover guide blends both human and natural history around Galveston Bay. From ancient shell middens, early cattle ranches, and the first offshore oil rigs in Texas to seagrass meadows and world-renowned birdwatching sites, the Drive & Discover guide organizes these and many other interesting sites into seven areas around the Bay.

Whether you live on Galveston Bay or are just here visiting, the hope is that by visiting these sites, you’ll have fun as well as learn about Galveston Bay. We hope this guide helps pique your curiosity and provides some insight into what makes Galveston Bay such a special and vital resource to this region.

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HABITAT KEY GUIDE

Galveston Bay is an estuary -- a semi-enclosed coastal body of water which has a free connection with the open sea and within which sea water mixes with fresh water from the land. Estuaries are among the most productive ecosystems in the world. Galveston Bay is comprised of many different habitat types that support the rich diversity of plants and animals in this area. People from around the world come here to explore the diversity of Galveston Bay’s varied habitats.

Open Bay – The open-bay water is the largest of the habitats in the estuary. The open-bay water contains many different microhabitats, distinguished by varying physical, chemical, and biological factors. The open-bay bottom is the second largest habitat and hosts a vast array of benthic organisms that decompose the steady rain of dead organisms and digested materials that fall from the open-bay waters above.

Oyster Reefs – Oyster reefs form on areas of open-bay bottom that possess a hard substrate and appropriate water flow and salinity. Oysters are filter feeders (an individual oyster can filter up to 50 gallons of water a day), so large populations of oysters may influence water quality conditions. Like coral reefs, oyster reefs are extremely diverse.

Seagrass Meadows – Seagrass grows on areas of open-bay bottom with shallow, less turbid waters. The meadows serve as nursery grounds for juvenile shrimp, crab, and fish species and feeding grounds for predators and herbivores.

Mud & Sand Flats – Mud and sand flats are the outer boundaries of the bay bottom. These areas are exposed to air and appear lifeless during low tides. During high tides, however, mud and sand flats are the pathways by which aquatic creatures visit the marshes.

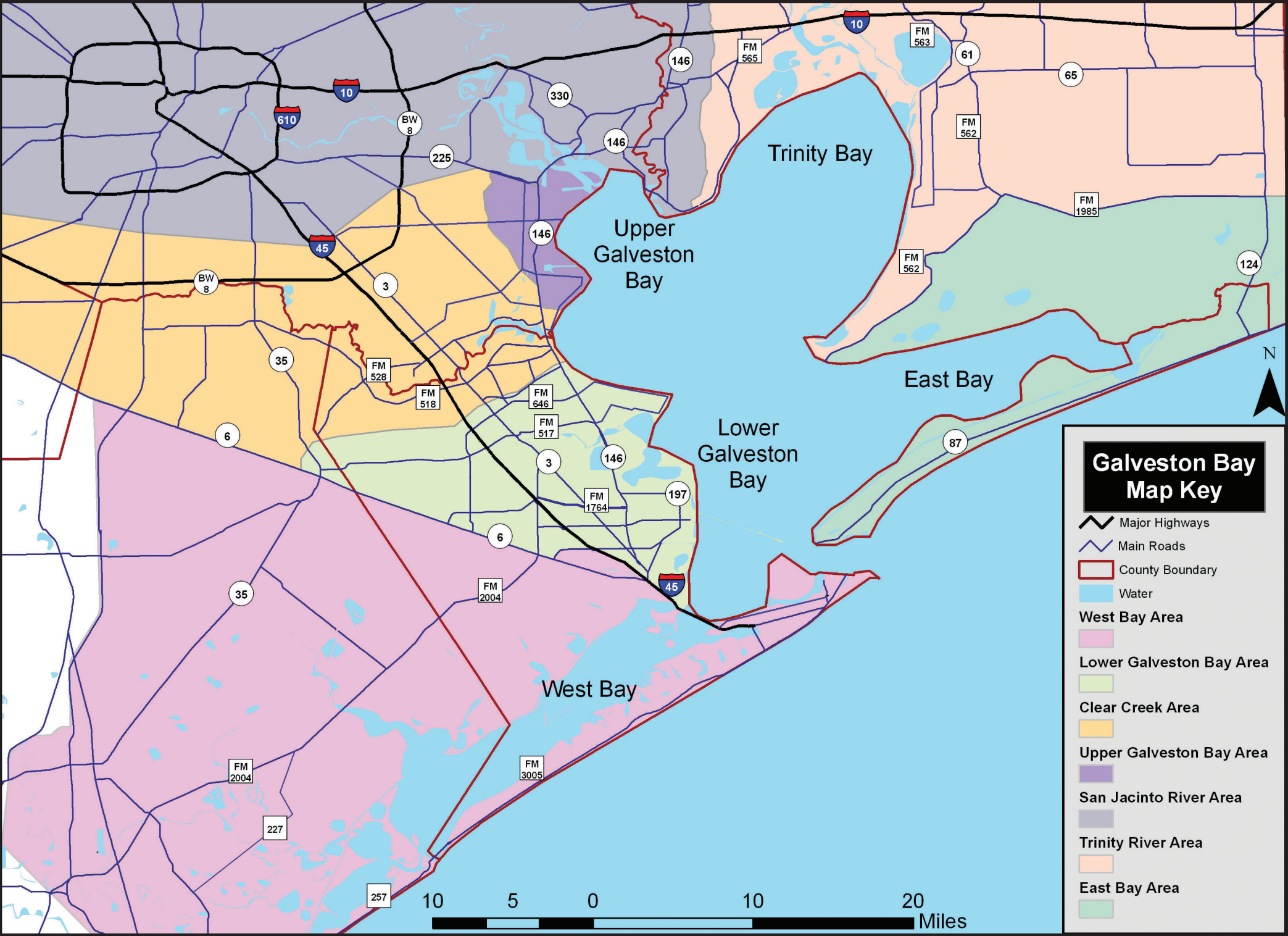
Marshes – Marshes range from salt to brackish to fresh water marshes. Salt marshes are subject to daily tidal flushing of baywater, and their inhabitants must be highly tolerant of salt and frequent changes in water levels. Fresh water marshes occur where a steady flow of fresh water, usually from a river or creek, prevents incursions from salt water. The large zones where fresh water from rivers and creeks meets salt water from tides are known as brackish marshes.

Oak Mottes – Oak mottes are small concentrations of oak trees seen along the coast. They are often found near freshwater marshes on islands and on ancient sand dunes on the mainland. The height and density of the vegetation provide shelter for many species and serve as favorite stopover spots for birds during the spring and fall migrations.

Riparian Woodlands – Riparian woodlands are tree-lined shore habitats along rivers, creeks, sloughs, and bayous. These areas can be regularly flooded during heavy rains and, in particularly wet years, may stay flooded for long periods of time. The plants and animals that live in these areas are particularly adapted to such conditions.

Coastal Prairies – Coastal prairies can be categorized into grassland prairies near the perimeters of the watershed, wet coastal prairies surrounding freshwater marshes, and salt prairies surrounding salt marshes.

Galveston Bay Drive & Discover Areas



HOW TO GET INVOLVED

Galveston Bay is the largest and most productive bay in Texas and the seventh largest in the United States. It has been named an “estuary of national significance” and as one of America’s “Great Waters.” Galveston Bay is situated among one of the most urbanized and industrialized areas in the nation. Every day our growing community’s effects on the Bay accumulate on the top of past damage, threatening the balance of nature so many people, plants, and animals depend on.

You can help. By joining in the mission of the Galveston Bay Foundation (GBF), you’ll become a working partner in the preservation and enhancement of our signature waterway--a waterway that has shown it can recover from the abuse and neglect of the past, if it’s cared for properly.

Founded in 1987, the mission of the Galveston Bay Foundation is to preserve, protect, and enhance the natural resources of Galveston Bay. Our balanced programs in advocacy, conservation, education, and research help ensure Galveston Bay remains a beautiful and productive place for generations to come. As a membership- and volunteer-based organization, your support of our programs and projects is essential to the very future of the Bay and our Gulf Coast lifestyle.

There are many, diverse ways to get involved and make a difference. Become a member of GBF, and keep informed of Galveston Bay issues and GBF activities. Volunteer at GBF’s community-based events like Marsh Mania, Bay Day, and Bike Around the Bay. Become trained as a Bay Ambassador. Join one of our committees. Assist with water quality monitoring in your area. Join GBF’s young professionals group, The Cast. Read our Green Thing tips to learn ways to live, work, and play with less impact on our environment.

For more information on GBF and our programs, visit www.galvbay.org or call (281) 332-3381.

WEST BAY AREA



1. Scenic Galveston's O'Quinn I-45 Estuarial Corridor and Virginia Point Peninsula Preserve

Along both sides of I-45 south of Bayou Vista, Scenic Galveston owns and manages approximately 3,000 acres of salt marsh and coastal prairie. This preserve provides habitat for numerous plants and animals. Birding is extremely popular.

Directions: From I-45, take exit 5 or 6 onto the feeder road. Small pull-offs along the feeder offer excellent views of the marshes.

2. TAMUG Wetlands Center

Dedicated in 2004, the TAMUG Wetlands Center is a 20-acre property that includes habitats such as salt and freshwater marshes, coastal prairie, uplands, and one-half mile of shell beach shoreline on Galveston Bay. Visitors to the property include university students and faculty, birders and nature watchers, hikers and, saltwater anglers.

Directions: From I-45, cross the Galveston Causeway and follow to 51st Street. Turn left on 51st and go through the light at Harborside Dr. and across the Pelican Island Causeway. The Wetlands Center is immediately on the left, across from Texas A&M University at Galveston's Mitchell Campus.

3. Old Port Industrial Boulevard

Once the premier port along the Texas coast, the Port of Galveston is now overshadowed by the Port of Houston facilities further up into Galveston Bay. The Port of Galveston is still active, though, and is an excellent example of what a working port looks like. A drive along Old Port Industrial Blvd. takes you past docks and warehouses receiving produce, tractors, and other goods that are loaded onto waiting railcars and trucks for distribution. The Galveston wharves, home to the historic

Mosquito Fleet, can be found along this drive, along with views of oil rigs in for service or preparing to deploy into the Gulf of Mexico.

Directions: From I-45, take the Harborside Dr. exit immediately south of the Galveston Causeway. Take the exit immediately before the Judge Smith Viaduct and follow the road under the viaduct and along Old Port Industrial Blvd.



*Birding at Virginia Point Peninsula Preserve
Photo By: Cynthia Clevenger*

4. Galveston Island - East of Ferry Rd.

The east end of Galveston is teeming with nature and wildlife viewing opportunities. There are several nature parks and preserves that provide opportunities to view and photograph wildlife, fish, hike, and enjoy the outdoors along Galveston Bay and the Gulf of Mexico. North of Seawall Blvd., the U.S. Army Corps of Engineers has created wetlands from dredge material (known as a beneficial use area) to provide habitat for native birds. South of Seawall Blvd., the Big Reef Nature Park and Appel Park host large marsh areas and tidal inlets that

provide habitat for many native species. The area is also popular with fishermen.

Directions: From the intersection of Broadway and Seawall Blvd., head east on Seawall to Ferry Rd. To reach Corps Woods, turn left on Ferry Rd. and then right on Hwy. 168. Corps Woods is on the right. For the beneficial use area, Appfel Park, and Big Reef Nature Park, continue east on Seawall Blvd. past Appfel Park Rd. The beneficial use area is north of Seawall (park on top of the upward slope of the Seawall). Big Reef and Appfel Parks are to the south and are accessible by following Seawall until it ends and turning right on Boddeker Dr. Parking is on the sides of the road.

5. East Beach and the Galveston Jetties

The jetties at Bolivar Roads were constructed to keep the channel free of sandbars. These jetties extend from the north and south sides of the channel five miles into the Gulf of Mexico. They quickened the water flow into Galveston Bay, deepening Bolivar Roads.



Juvenile brown pelican rookery in Galveston Bay
Photo By: Sheena Abernathy

Unfortunately, they also interrupted the longshore flow along the coast, reducing the amount of sand that reaches Galveston beaches. The South Jetty extends from East Beach out into the Gulf and is popular with fishermen. East Beach is a popular destination for beach activities throughout the busy season and is also host to an impressive sand castle building competition in the summer.

Directions: Follow Seawall Blvd. east until it ends, and turn right on Boddeker Rd. Follow Boddeker Rd. until it reaches the beach. There is a fee booth manned at certain times of the year. The jetty can be accessed by turning left on the beach and driving until you reach the jetty.

6. NOAA/NMFS Sea Turtle Facility

Sea turtles can be found in all of the world's oceans, and five species of sea turtles can be found in the Gulf of Mexico. All five of these species are either threatened or endangered, and the most endangered species, the Kemp's Ridley, inhabits the Texas Gulf Coast. The NOAA/NMFS Galveston Laboratory works to research threats to sea turtles as well as conservation efforts to benefit the turtles. Public tours of the facility are available by advance reservation. For more information, call (409) 766-3500.

Directions: Follow Broadway Ave. to 45th Street. Turn right (south) on 45th Street and follow to Ave. U. Turn right on Ave. U, and the facility will be on your left at 4700 Ave. U.

7. Lafitte's Cove

Galveston is rich in history, and the area known as Lafitte's Cove is full of historical significance. Though much of Galveston has been developed, there are small pockets that have been well preserved. Within Lafitte's Cove, there are areas that were once Native American burial grounds, believed to be that of the Akokisa tribe. Spanish explorer Cabeza de Vaca spent time on Galveston Island, and the French pirates Pierre and Jean Lafitte called Galveston home as well. Now several areas within Lafitte's Cove are protected as natural and cultural preserves. The largest preserve is one of the premier birding locations along Galveston Island.

Directions: From 61st St. and Seawall, head west on Seawall (FM 3005). Follow FM 3005 to 12 Mile Rd. and turn right on 12 Mile Rd., then right on Stewart Rd. Turn left on Eckert Dr. to enter Lafitte's Cove. Parking for the nature preserve is on the right.



Freshwater marsh on Galveston Island
Photo By: Andrew Hancock

8. Galveston Island State Park

Encompassing over 2,000 acres, Galveston Island State Park provides an excellent opportunity to see the many different habitats found on the island. Coastal prairie, oak mottes, freshwater ponds, saltmarsh, and beach and dune habitats can all be found within the park. Camping and day use facilities are available at the site, and staff and volunteers regularly lead nature programs on the weekends.

Directions: The park is located on both sides of FM 3005 between Pirate's Beach and Jamaica Beach. The park is well marked by signs.



Fishing
Photo By: Jim Olive

9. San Luis Pass County Park

San Luis Pass is one of the major connections between Galveston Bay and the Gulf of Mexico. On the western shore of the pass lies the county park, which has day use

and overnight facilities and an interpretive center. The park is also a popular fishing and birding destination.

Directions: From Galveston, follow FM 3005 west and cross the San Luis Pass toll bridge. The park is on the right. From Surfside, follow CR 257 east; the park is on the left, just before the toll bridge.

10. Follets Island and the Christmas Bay Coastal Preserve

Follets Island stretches from San Luis Pass to Surfside, and compared to many areas along the upper Texas Coast, it has limited development on it. Hurricane Ike severely damaged the road along Follets Island, and until it was repaired, traffic was actually diverted onto the beach in certain areas. Christmas Bay lies just to the north of Follets Island. The Christmas Bay Coastal Preserve is leased by TPWD and is a great example of what Galveston Bay looked like prior to subsidence and development.

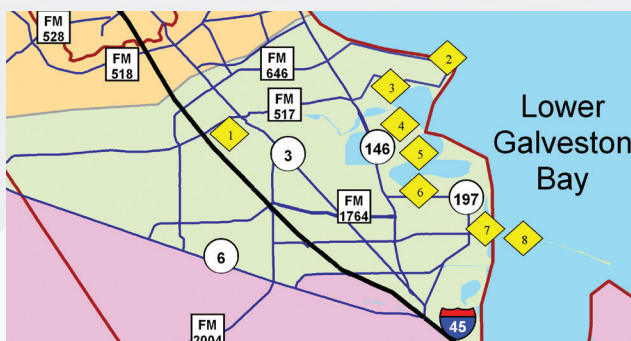
Directions: County Road 257 (Bluewater Highway) runs along Follets Island from Surfside to San Luis Pass. Many of the side roads heading north from CR 257 provide good views of Christmas Bay.

11. Brazoria National Wildlife Refuge (NWR)

Brazoria NWR is one of the last large areas of native coastal prairie along the Texas coast. Approximately 43,000 acres make up this refuge, which is home to a variety of birds (over 200 species), mammals, reptiles, amphibians, insects, and plants. Amenities include an interpretive center, walking trails, a boat ramp, and driving tour.

Directions: From the intersection of Hwy. 288 and FM 523 in Angleton, take FM 523 to FM 2004 intersection. Continue on 523 for 5.5 miles to County Road 227. Turn left on CR 227 and proceed 1.7 miles to the refuge entrance and Big Slough public use area. The refuge office is located 5 miles northeast of the intersection of FM 523 and FM 2004 on FM 2004.

LOWER GALVESTON BAY



1. Paul Hopkins Community Park

This small community park is nestled along the shores of Dickinson Bayou. Amenities include a nature trail, picnic area, pier, and canoe launch.

Directions: From I-45, take FM 517 east. The park is on the right before you reach Hwy. 3.

2. Eagle Point

Eagle Point has a long history of a variety of human uses. From Native Americans and, later, the first commercial fishing fleet of Galveston Bay to, in present times, a combination of residential homes and commercial properties, people continue to inhabit this spit of land into Galveston Bay. Commercial fisheries such as oysters, fish, shrimp, and crabs are operated out of Eagle Point. Due east, Redfish Island is a small remnant of what was historically an extensive series of oyster reefs that stretched from Eagle Point to Smith Point. In fact, the old oyster bar was shallow enough at times to allow ranchers to drive cattle across the Bay, rather than around it.

Directions: From SH 146, take either FM 646 or FM 517 east to Eagle Point. Several local seafood restaurants operate in Eagle Point, and Redfish Island is visible at low tides from shore.

3. Dickinson Bay and Bayou

Dickinson Bay is an ecologically-important secondary bay within the Galveston Bay system. With headwaters near Alvin, Dickinson Bayou contributes significant freshwater runoff into this system from the southwest corner of the Bay. This bay and bayou system are the sites of several important habitat restoration projects, some completed and some ongoing. The removal of marine debris from this area has been a focus since 2005, when work began

to extract dozens of abandoned vessels from both the bay and bayou. The construction of Dickinson Bay Island was completed in 2007, near the site of a remnant island that historically served as critical nesting habitat for a host of colonial waterbird species in Dickinson Bay. More habitat restoration is in the planning stages for both Dickinson Bay and Dickinson Bayou.

Directions: Both Dickinson Bay and Dickinson Bayou can concurrently be viewed from atop the SH 146 bridge between Dickinson and Texas City. From the bridge, the bayou lies to the west and the bay to the east. Dickinson Bay can also be seen from the southern ends of many of the numerically named streets in San Leon.



Armadillo

Courtesy of USDA Natural Resources Conservation Service

4. Texas City Prairie Preserve

Established in 1995, The Nature Conservancy's Texas City Prairie Preserve is a 2,303-acre preserve consisting of coastal prairie and marshlands and situated between Moses Lake and Dickinson Bay and Bayou. In order to mitigate the impacts of excessive land subsidence and restore the preserve's surrounding marshlands and coastal prairie, the Conservancy has undertaken a series of habitat protection and marsh restoration projects along its Moses Lake shoreline. The lack of suitable habitat is one of the biggest threats to the recovery of endangered species native to habitats like these, such as the Attwater's prairie chicken. From 1995 to 2010, Texas City Prairie Preserve was one of only a few locations where wild birds still existed and where captive-bred Attwater's prairie chickens were reintroduced into the wild. Though the species is no longer found on the preserve today, the preserve

still plays an important role in the long term recovery of the species by implementing coastal and land management techniques that serve as best practices for other preserves.

Directions: The preserve is located on the east side of SH 146, 0.25 miles south of the caution light at at Attwater Ave.

5. Moses Lake

Named for the father of Stephen. F. Austin, Moses Lake is a two-mile wide by four-mile long tidally influenced lake bordered by Galveston Bay on the north and the city of Texas City on the south. Its inlet from Galveston Bay features a tidal control gate that helps protect Texas City from storm surges. Subsidence and erosion result in a loss of over three feet of the lake's shoreline annually. This erosion not only eats away valuable marsh, but can start cutting into coastal prairie habitat on the Texas City Prairie Preserve, which borders the lake. Historically, much more of the lake's interior featured estuarine emergent marsh, which has since subsided, drowned, and transitioned to open water habitats. A series of shoreline protection and marsh restoration work has been successfully accomplished on the Moses Lake shoreline of the Texas City Prairie Preserve, and marsh restoration is also planned for the interior of the lake.

Directions: Moses Lake is visible from SH 146 north of Texas City.



Marsh Mania volunteers along the Moses Lake shoreline of the Texas City Prairie Preserve

Photo By: Galveston Bay Foundation

6. Angel of Peace Memorial Park

On April 16, 1947, the French S.S. *Grandcamp* was anchored at the Texas City port terminal. The ship was full of ammonium nitrate fertilizer that caught fire and caused the ship to explode violently and suddenly, which led to other fires and explosions. A total of 576 individuals were killed and 4,000 more injured. Texas City has overcome the economic and human disaster and uses the phoenix as a symbol of its rise from the ashes of the explosion to become a town of parks and deep civic pride. This park recognizes those lost during the tragedy, and the anchor from the S.S. *Grandcamp* resides at the park as well.

Directions: From SH 146, take 25th Avenue (Loop 197) east. The park is on the left just before the intersection of 25th Avenue and 29th Street.



Great blue heron bathing
Photo By: Andrew Hancock

7. Bay Street Park

Running along the eastern side of Texas City, Bay Street Park has many attractions, including sports and picnic facilities and hike and bike trails. The Thomas S. Mackey Nature Center stands at the northern end of the park and features several nature trails and observation areas. Driving north from the Mackey Nature Center eventually takes you to Skyline Drive, a levee road dividing Dollar Bay and Galveston Bay. Most drivers go slowly on Skyline, so bicycling is a good option here. The park is also home to a replica of the Halfmoon Shoal Lighthouse that was located approximately 2.5 miles off the shore of Texas City. The lighthouse was in service from 1855 to 1900, when a ship broke free from its moorings in the 1900 hurricane and destroyed the lighthouse.

Directions: The park is generally bounded by Bay Street to the west, the hurricane protection levee to the east, 25th Avenue to the north, and the Dike Road to the south. From SH 146, head east on FM 1764 and follow until it intersects Bay Street. The park is directly ahead.

8. Texas City Dike, Seawall, and Levees

To reduce Bay sedimentation from the Trinity and San Jacinto Rivers into the Texas City channel, a dike was initiated in 1913, which was reinforced with timber pilings. Eventually U.S. Army Corps of Engineers assumed control of the project. By 1934, the dike extended five miles into the Bay. The Texas City Dike has had profound effects on the movement of water and resources within the Bay, significantly altering local habitats and reducing freshwater distribution to West Bay. The dike is a popular fishing and wind surfing site, and you can drive to its end. Depending on the time of year, there is a fee to access the dike. In 1961, Hurricane Carla flooded most of Texas City with four feet of water. In response to this, Texas City began construction of a 23-foot seawall on the bay side of the city and levees around much of the community. Construction lasted from 1962 to 1987, and upon completion, levees protected much of the city, and large pumps work to draw water past the seawall during storms.

Directions: To reach the Texas City Dike from SH 146, head east on FM 1764 and follow until it intersects Bay Street. Turn right on Bay Street, then immediately left onto Texas City Dike Rd. The levees can be seen all around the city, and the Seawall can be seen near the dike and Bay Street Park.



Nesting black skimmers
Photo By: Sheena Abernathy

CLEAR CREEK



1. *Kemah and Seabrook*

These towns sit between Clear Lake and the Bay on either side of the mouth of Clear Creek. On the north shore lays the Point, a part of the town of Seabrook. Seabrook is an old shrimping town that has retained a traditional economic base with a fleet and mostly locally owned restaurants, stores, and seafood markets. It places a strong emphasis on nature tourism. On the south shore lies Kemah, a small town once based on shrimping and mining local shell middens. The 14-acre waterfront area began changing in the mid-1990s, however, when restaurateur and real estate developer Tillman Fertitta created the Boardwalk, a tourist center with many restaurants, a hotel, stores, and theme-park activities. The Kemah Boardwalk has substantially changed the local economy.

Directions: Seabrook is accessed from SH 146 and NASA Road 1, and Kemah from SH 146 and FM 2094.

2. *Clear Lake Park*

Located between the north shore of Clear Lake and Armand Bayou, Clear Lake Park has excellent views of the lake and contains the Bay Area Museum (specializing in regional history), which itself is housed in the former Webster Presbyterian Church. The church building dates to 1901 and replaced an 1896 structure destroyed by the 1900 hurricane. For many years, it was the only church in Webster, and the Presbyterians shared space (and a choir) with local Baptists, Methodists, and Quakers. Many nearby Japanese rice farmers attended services. The congregation outgrew this sanctuary and, in 1976, donated it for use as a museum.

Directions: From I-45, take the NASA Road 1 or NASA Bypass exits and follow NASA Road 1 east. The park is on both sides of NASA Road 1 past the bridge over Clear Lake/Mud Lake.

3. NASA Johnson Space Center/Space Center Houston

Created after the USSR launched the first artificial satellite into orbit, NASA quickly began working to put people into space. The Manned Spacecraft Center (eventually the Lyndon B. Johnson Space Center) was established in 1961 as the engineering and management brain for these projects. Its location in the Clear Lake community pushed industrial development in this area away from petrochemicals and toward engineering and high-tech fields. Space Center Houston is a non-governmental visitor center with educational exhibits and attractions for all ages. In June 2012, Space Center Houston became home to a full-size replica of the Space Shuttle Explorer.

Directions: From I-45 NASA Road 1 exit, drive east several miles to the complex. Space Center Houston is located at 1601 NASA Road 1.



*Rocket Park
Photo By: Jim Olive*

4. Bay Area Park

Owned by Harris County Precinct 2, Bay Area Park is a popular canoe launch and an easy place to park, sit, picnic, and watch birds and animals along Armand Bayou and its marshes and woodlands. One of the newer amenities at the site is a public dog park.

Directions: From the Bay Area Blvd. exit on I-45, drive east along Bay Area Blvd. until you cross a bridge over Armand Bayou. The park entrance is just past the bridge on the right.



*NASA Mission Control
Photo By: Jim Olive*

5. Armand Bayou Nature Center

The 2,500 acres of the Armand Bayou Nature Center (ABNC) constitutes one of the largest urban wilderness areas in the U.S. Major habitats include freshwater and salt marshes, coastal prairie, and riparian woodlands. A total of five miles of nature trails pass through the varying habitats, including one segment that crosses a well-restored prairie that retains some of its original potholes and pimple mounds. ABNC also features an interpretive center, bird blind, bison observation deck, 1890s era farmhouse and garden, and children's discovery area and offers pontoon boat and guided canoe tours. There is a small entrance fee.

Directions: From the Bay Area Boulevard exit on I-45, drive east along Bay Area Boulevard across the bridge over Armand Bayou and past Bay Area Park. The entrance to ABNC is on the right, before you reach Red Bluff Road.

6. Dr. Ned and Fay Dudney Nature Center

The first phase of this 148-acre nature center opened in 2008. It contains a variety of plants and animals and has

abundant wetland habitats along Clear Creek. Current amenities include a multi-use trail, bird blinds, restrooms, barbeque grills, and a pavilion.

Directions: From I-45, take the FM 518 exit and head east on 518. Turn left on FM 270 (Egret Bay Blvd.). Dudney Nature Center is on the right before FM 270 crosses Clear Creek.

7. Walter Hall County Park

This community park was designed for a wide range of uses. A nature trail along Clear Creek offers good wildlife viewing opportunities.

Directions: Access is from the FM 518 exit off I-45. Drive east along FM 518 (West Main Street/Friendswood Road) and turn north on Hwy. 3. The park is on the left.

8. Challenger 7 Memorial Park

Named in honor of the seven NASA astronauts who lost their lives in the Space Shuttle Challenger explosion of 1986, this park has a network of trails and boardwalks through its riparian woodlands, pavilions and picnic areas, playgrounds, a canoe launch, and a memorial to those for whom the park is named. Fishing and birdwatching are popular here. Natural history classes are offered at a learning center.

Directions: Take FM 528 west of I-45, then turn left onto W. NASA Rd. Turn left on Grissom Rd. to enter the park.

9. Heritage Park

This 10.3-acre site has picnic areas, multi-use trails, a bird observation platform, and a canoe launch. Educational signs along the trails provide information about the park.

Directions: From I-45, take the FM 528 exit and head west on 528. Turn right on Bay Area Blvd., and then right on Fife, and Heritage Park will be on your left.



*Zero gravity training aircraft
Photo By: Jim Olive*

10. Clear Creek and FM 2351

This area contains several notable parks with access to or views of Clear Creek. 1776 Memorial Park's 12 acres are mostly riparian woodlands that line the banks of Clear Creek. The park is a good place to launch a canoe and explore the upper reaches of Clear Creek. Almost directly across FM 2351, the larger Frankie Carter Randolph County Park has jogging and walking trails, picnic facilities, tennis courts, open fields for group sports, and bathrooms.

Directions: 1776 Memorial Park is on the south side of FM 2351 to the west of I-45. Randolph Park is on the north side of FM 2351 to the west of I-45.

11. Ellington Field

Planes first began landing at Ellington Field in 1917, when it was established as a military training field. Military (and eventually NASA) usage has continued off and on since. The City of Houston began managing Ellington in 1984, when civilian flights started here as well. Ellington Field is also home to the annual Wings Over Houston Airshow.

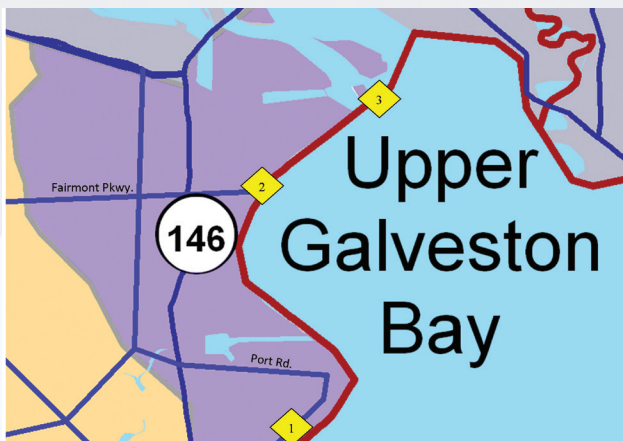
Directions: Ellington is accessible from I-45 by driving east from the FM 1959 exit. Sylvan Rodriguez Park, which is a calm place to watch the planes of Ellington, stands just to the south of Ellington Field on Clear Lake City Blvd., about 0.2 miles east of its intersection with Hwy. 3.

12. Pine Brook Wetlands

Nestled in the Pine Brook subdivision of Clear Lake City, this 8.3-acre site has a 3.3-acre prairie pothole wetland area and one acre of native prairie grasses. The residents of Pine Brook, with the assistance of various organizations, removed non-native and invasive Chinese tallow trees and planted numerous native plants to benefit the site and local wildlife. A series of trails leads through the wetlands.

Directions: From I-45, exit Clear Lake City Blvd. and head east. The wetlands lie both north and south of Clear Lake City Blvd. in the Pine Brook subdivision. Parking is available by turning right on Park Center Dr.

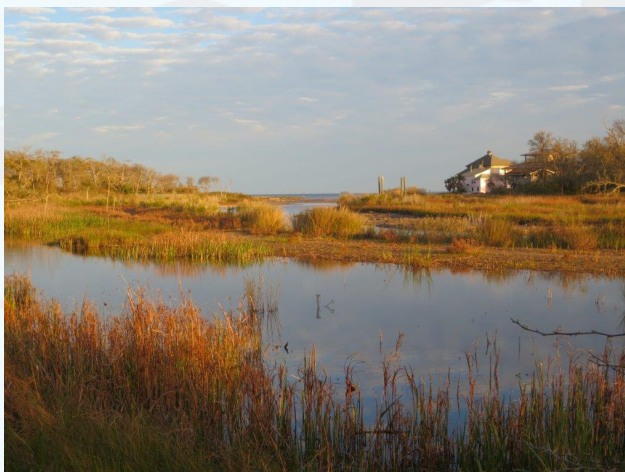
UPPER BAY AREA



1. Todville Road

The City of Seabrook features an entire system of parks and trails running along Todville Road. Along with a multi-use trail, other recreation opportunities include wildlife watching, fishing, picnic and barbeque facilities, canoe launches, and observation decks.

Directions: From I-45, take NASA Road 1 east to SH 146. Cross SH 146 to 2nd Street. At Todville Rd., head south to reach McHale Park on the waterfront. Heading north on Todville, Hester Garden Park and Robinson Park are on the left, and Pine Gully Park is on the right.



Pine Gully at dusk
Photo By: Charlene Bohanon

2. Sylvan Beach Park

Sylvan Beach Park is a 31.4-acre park located just east of SH 146 in La Porte. Along with conventional park amenities, the park hosts a skate park, boat ramp, and a pay-to-fish pier. Enjoy the two pristine white sand beaches, swim in Galveston Bay, and watch ships and barges as they traverse the Houston Ship Channel in the distance. This historic park, once known as the Grove, has been a driving force for the city's economy since 1893.

Directions: To reach Sylvan Beach Park, exit SH 146 onto Fairmont Pkwy. and drive east to the park entrance.



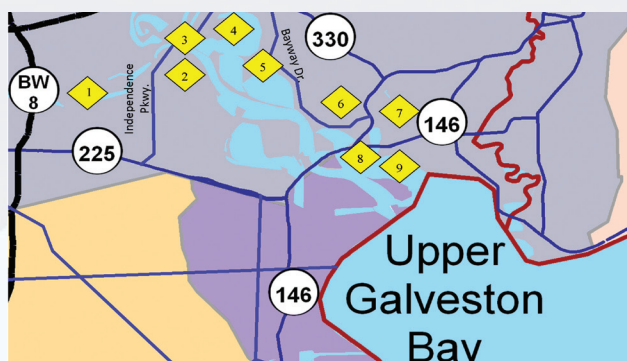
Sylvan Beach Park
Photo By: Matthew Abernathy

3. Atkinson Island

Atkinson Island sits just east of Morgan's Point, where the San Jacinto River enters the northwestern corner of the Bay. Originally part of the mainland (as the eastern tip of Morgan's Point), Atkinson Island was created and then extended by the Houston Ship Channel. Conoco donated the northern tip to the Texas Parks and Wildlife Department. In 1993, a coalition of organizations tested the economic and environmental feasibility of using spoils from dredging the Houston Ship Channel to create healthy new marsh at a site on the east side of Atkinson Island. In all, 815 acres of marsh were successfully established. The project marked a significant change in the history of the management of the Bay's resources.

Directions: Atkinson Island is visible from the Hartman Bridge and the eastern and southern shores of Morgan's Point.

SAN JACINTO



1. Houston Ship Channel

Until 1914, the only access for large ships in the Bay area was the port at Galveston Island. The establishment of a deepwater facility near Houston eventually led the city to become the second largest port in the U.S. by tonnage. At 40 to 45 feet deep and 50 miles long (from Bolivar Roads to well within the 610 Loop), the channel required extensive dredging of the Bay, the San Jacinto River, and Buffalo Bayou. Long ridges of dredge material line much of the channel in the Bay. The channel has profoundly changed the movement of water and biological resources throughout the Bay.

Directions: Good views can be had from SH 134, the Hartman Bridge, and the channel bridges on Loop 610 and Beltway 8.

2. San Jacinto Battleground State Historic Site

San Jacinto is well known as the location of the 1836 battle resulting in the independence of Texas from Mexico. Today, the site is also home of the Battleship *TEXAS* and the last large marsh on the lower San Jacinto River. Sadly, it also suffered some of the worst subsidence in the Bay area, losing 10 feet of elevation since the 1930s. As a result, the salt marshes lining the park transitioned to open water. Extensive habitat restoration work was conducted beginning in 1996 to raise the elevations of the drowned marshes and restore them. A boardwalk through the marshes is an excellent place to watch wildlife.

Directions: The site can be reached from Independence Parkway, either from the south from SH 225 or from the north from I-10 and the Lynchburg Ferry.

3. Lynchburg Ferry

In 1822, Nathaniel Lynch began operating a pay ferry where the San Jacinto River met Buffalo Bayou just south of the town of Lynchburg. His flatboat ferry was one of many in the area necessary for traversing the marshlands around the Bay. In 1837, Harris County began setting ferry rates, and in 1890, the ferry became a free service.

Directions: From the south, the ferry is accessible from SH 225 by exiting north onto Independence Parkway and passing through the San Jacinto Battleground State Historic Site. From I-10, drive south along Independence Parkway, just east of the San Jacinto River until you reach the ferry.



*Fred Hartman Bridge
Photo By: Jim Olive*

4. Burnet Bay and Lynchburg Reservoir

Traveling 22 miles from the Trinity River, the Lynchburg Reservoir's 1.5 billion gallons quench the residents of Harris County, industries in Mont Belvieu, Deer Park, and Baytown, and several Chambers County rice farmers. Built in the 1970s, the large and deep Lynchburg Reservoir reflects our growing thirst. To reach Houston residents, the water is pumped through three 102-inch wide water lines that pass underneath the Houston Ship Channel to a City of Houston water treatment facility. Directly across from the reservoir lies Burnet Bay, a sub-bay in which extensive uplands and wetlands once existed but were lost due to the extremely high historic levels of subsidence in this area. In 2009 Galveston Bay Foundation began restoring estuarine marsh within Burnet Bay and to-date has restored over 30 acres of marsh-open water complex.

Directions: Both the reservoir and Burnet Bay are visible from Independence Parkway, just north of the Lynchburg Ferry and San Jacinto Battleground State Historic Site. The

reservoir lies on the north side of the road and Burnet Bay and its marsh restoration project are easily visible to the south of the road.

5. Baytown Nature Center

The Baytown Nature Center now stands on the former home of the 360-acre Brownwood residential subdivision. This area of the Bay felt the effects of the most severe subsidence in the area, with some areas sinking as much as 12 feet since the 1930s. Subsidence and severe storm surges forced the homes here to be abandoned by 1983. Habitat restoration began in 1995 as mitigation for an Environmental Protection Agency Superfund site upriver. This initial 65-acre restoration was opened as the Baytown Nature Center in 2002, and now encompasses approximately 450 acres. Extensive marshes as well as oak mottes are now significant habitat types in this area. Bald eagles, peregrine falcons, and osprey have been seen here. Close to 100 acres of marsh have been created. The Center also features fishing piers, walking trails, a butterfly garden, children's nature area, picnic tables, and pavilions.

Directions: To reach the Baytown Nature Center, exit from Spur 330 onto Bayway Drive and drive south. The Nature Center entrance is on the right.



Battleship TEXAS
Photo By: Jim Olive

6. Baytown Refinery

Following the successful development of the large Goose Creek oilfield by 1920, Humble Oil (now ExxonMobil) completed its primary refinery near Goose Creek in Baytown in 1921. More heavy industry soon followed in the Baytown area. For many years it remained the largest petroleum refinery in the world, and its massive size can be

appreciated from the Hartman Bridge and while driving along Spur 330 near the West Main Street exit. Just as the Goose Creek oilfield permanently changed the aquatic habitats of Tabbs Bay just offshore, the refinery forever changed the economy and habitats in the Baytown area.

Directions: From Spur 330, take the exit for Bayway Drive. Follow Bayway Drive, and after approximately three miles, the refinery will be visible north of the roadway.

7. Eddie V. Gray Wetlands Education and Recreation Center

In 1992, Eddie Gray, a member of the City of Baytown's Goose Creek Stream Greenbelt Development Committee, brokered the purchase of an abandoned bowling alley on six acres along Goose Creek. The Eddie V. Gray Wetlands Education and Recreation Center, a 14,000 square-foot building with staff offices, meeting rooms, a science lab, a computer lab, and a 9,000 square-foot exhibit area, opened in January 1998. Since then, the center has added several environmental education exhibits, including Gator World, Coastal Connections, Animals of the Night, and Honeybee Hotel. The Wetlands Center offers ongoing educational programs with support from local industry, the Goose Creek Consolidated Independent School District, and Lee College.

Directions: From Spur 330, the Wetlands Center can be reached by driving south until Spur 330 becomes Decker Drive; the road will curve to the right and change to Market Street. The Center sits across from the Lee High School auditorium. From SH 146, exit onto Decker Drive and drive northeast on Decker/Market.

8. Bayland Park

Bayland Park is notable for its fishing facilities and marina, but is also known for its extensive salt marsh and sand and mud flats. Part of the salt marsh was destroyed in the process of building the marina, so a new marsh was created to mitigate that loss. The park offers good views of Tabbs Bay.

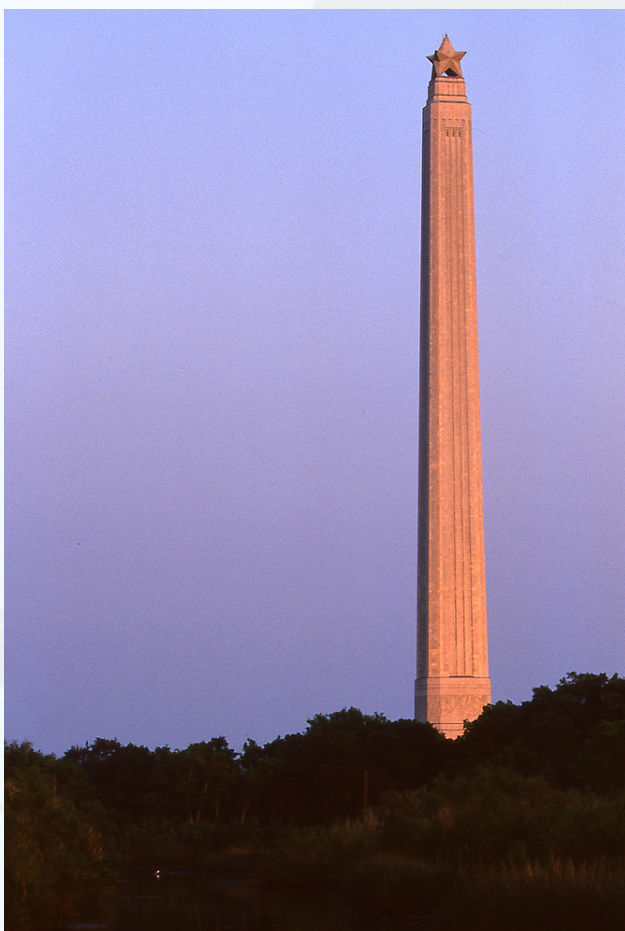
Directions: The park is accessible from the first exit on the Baytown side of the Hartman Bridge on SH Business 146.

9. Tabbs Bay and the Goose Creek Oilfield

In 1903, John I. Gaillard noticed natural gas bubbling near the mouth of Goose Creek, inspiring the first offshore oil drilling in Texas in Tabbs Bay. When indications came in 1916 that there was a large oilfield here, massive exploration and development followed. Annual production

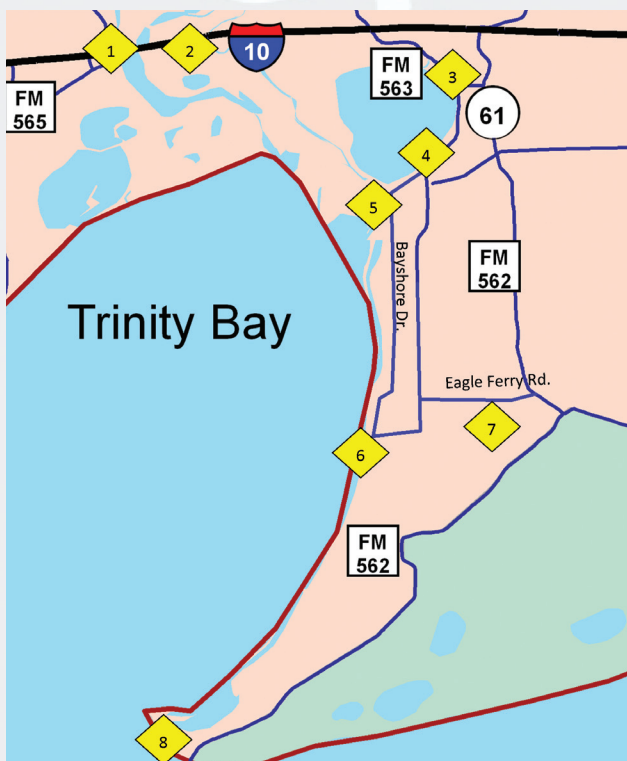
reached nine million barrels by 1918. Production continues on- and offshore in the Goose Creek oilfield today.

Directions: There are good views of Goose Creek and Tabbs Bay along SH Business 146 near Bayland Park. The Goose Creek shoreline can be explored by way of a nature trail at Britton Park, which is just across SH 146 from Bayland Park and which can be reached by driving north on Wyoming Street and turning right on Missouri Street into the parking lot. To see more of Tabbs Bay, drive east of Bayland Park and turn south onto Causeway Road; turn again almost immediately onto Evergreen Road, which traces the shoreline.



*San Jacinto Monument
Photo By: Jim Olive*

TRINITY RIVER



1. Wallisville Lake Project

The Wallisville Lake Project is a large area of protected wetlands, swamp forest, and bottomland hardwood forest created by the U.S. Army Corps of Engineers for salinity control, navigation, water supply, recreation, and fish and wildlife enhancement. The project stretches along both sides of the Trinity River and both north and south of Interstate 10 about half way between Houston and Beaumont. It consists of two parks (Cedar Hill Park and Hugo Point Park), and two recreation areas (Trinity River Island Recreation Area and J.J. Mayes Wildlife Trace) are open for public use.

Directions: Cedar Hill Park – Take exit 810 off I-10 and head north on FM 563. Turn left on Lake Charlotte Rd. Cedar Hill Park is on the left.

Hugo Point Park – Take exit 803 off I-10 and follow FM 565 south. Turn left on Gou Hole Rd., and follow to the gate at the end of the road. Turn left into the park.

Trinity River Island Recreation Area – Take exit 807 off I-10 to the feeder and turn south at the brown Army Corps sign. Follow Lock and Dam road to the recreation area.

J.J Mayes Wildlife Trace – Take exit 805 off I-10 to the

feeder and turn south through the gate leading to the Wildlife Trace.

2. Wallisville Heritage Park

Settlers officially founded Wallisville in 1854. Ships docking here carried cotton, rice, and logs from nearby riparian woodlands down the Trinity River, and local lumber was used in the town's large shipyards. Wallisville grew rapidly and became politically and commercially central to the county, but Anahuac's establishment as the new county seat in 1906 and damage from the 1915 hurricane started an economic and political decline. In 1979, local groups formed the Wallisville Heritage Park to protect and restore what remained after acquisition of the town by the U.S. Army Corps of Engineers for the Wallisville Lake Project.

Directions: Exit at Wallisville from I-10, and follow the signs along the southern frontage road. Other remnants of the town exist on some of the quiet backroads south of Wallisville Heritage Park.

3. Texas Chenier Plain Refuges Complex Visitor Center

Dedicated in 2011, the Texas Chenier Plain Refuges Complex Visitor Center provides visitor's services for four national wildlife refuges (NWR) on the Texas Gulf Coast -- Anahuac NWR, Moody NWR, McFaddin NWR, and Texas Point NWR. The 16,100-square foot visitor center features an environmental education classroom, nature store, and exhibit hall complete with an airboat theater that simulates a ride on an airboat through the local wetlands. A quarter-mile long ADA compliant boardwalk leads down through the cypress swamp to the shoreline of Lake Anahuac behind the center. *The visitor center is open Wed. - Sun., 10am - 5pm.*

Directions: The Refuge visitor center is located two miles south of I-10 and can be reached by taking exit 810 and heading south on FM 563.

For information on visiting Anahuac NWR, see the East Bay section of this guide.

4. Lake Anahuac

The Anahuac Pumping Station at this site marks the beginning of the Lone Star Canal, which is used for irrigation, as well as the southern boundary of Turtle Bay. Now called Lake Anahuac, Turtle Bay was once deep enough for large ships to sail north past this point. But the Trinity River's gradual deposition of sediment made the mouth of Turtle Bay unnavigable by 1902. Salty tide-driven bay water still mixed with the Trinity's freshwater, however, threatening local irrigation dependent agriculture.

Temporary dams were built to limit the tidal influence, but in 1954, a more permanent dam was constructed. Turtle Bay was then renamed Lake Anahuac to reflect its closure and predominantly freshwater character.

Directions: To reach the site, exit onto FM 563 from I-10 and drive south to SH 61. Drive west into downtown Anahuac. When the road makes a sharp left-hand bend, continue straight on the smaller road. You can park below the bluff and follow the levee trail along the shore of Lake Anahuac. There is good birding here.

5. Fort Anahuac Park

The newly independent Mexican government created a fort and town at this site in 1830 to regulate trade and Anglo immigration. The fort and the Mexican authority it represented became a source of conflict in 1832 and 1835 and played a direct role in mobilizing residents to agitate for the independence of Texas from Mexico. Hiking and driving trails (including the 1.9 mile Fort Anahuac Park Levee Road and a boardwalk into the marshes), picnic facilities, ball fields, a lighted fishing pier, historical markers, and restrooms are within the park. Anahuac's annual Gatorfest is held here every year, and many alligators can be found along the trails. Swimming is not advisable.

Directions: The park is about one mile south of Anahuac on South Main Street.

6. Job Beason Park

Located in Oak Island and named for the one-time keeper of the Double Bayou Lighthouse, this park is a good place to bird, fish from shore, and watch shrimpers. Oak Island's name refers to the presence of several large oak mottes in the area.

Directions: From Anahuac, head south on South Main Street, then continue onto West Bayshore Road. The park is on the left at the end of the road.

7. Double Bayou Park

Double Bayou's relative distance from the Bay explains its more established forest habitats and large oak mottes, but tides still influence both branches of Double Bayou. Nearby was the center of the 26,000 acre Jackson Ranch, founded by James Jackson in 1847. Cotton, sugar cane, and cattle were long the bases of the economy. As few roads existed in the area, boats served as the primary means of transportation well into the twentieth century. Double Bayou was a significant African-American community in the Bay area.

Directions: To reach the park, drive south of I-10 along FM 562 about 15 miles and turn right (west) onto Eagle Ferry Road. The park is a short distance away on the south side of the road.



Great egret feeding
Photo By: Andrew Hancock

8. Smith Point

Smith Point has been a significant landmark for humans and animals for thousands of years. Commercial fishers still launch from here. Ranchers drove cattle between Smith and Eagle Points from the 1700s until the 1880s. Migratory birds, dragonflies, and butterflies follow the same path, flying over the Bay at its narrowest width. The exhausted birds and insects often touch down here as soon as they reach land. The Candy Cain Abshier Wildlife Management Area is particularly known for its hawk watch and tall observation platform. James H. Robbins Park has an observation tower overlooking Trinity Bay.

Directions: From I-10, drive south to the end of FM 562 (about 40 miles). From the convenience store in Smith Point, continue driving west about one mile. Turn to the right on Hawkins Camp Road towards the RV park, go past the RV park's driveway around the turn, and proceed until you see the metal tower at Robbins Park. To reach the Abshier observation platform, proceed about 0.1 mile past Hawkins Camp Road and turn left. The platform will be soon visible.

EAST BAY



1. Anahuac National Wildlife Refuge

Anahuac National Wildlife Refuge was established in February of 1963 and includes about 35,000 acres of wetlands and prairies. Refuge staff protect and manage multiple types of habitat for the benefit of migrating, wintering, and breeding waterfowl, shorebirds, and waterbirds, and neotropical migratory songbirds. The Refuge is host to a diversity of wildlife, including American alligators, all six species of North American rail, bobcats, river otters, and much more.

Directions: ANWR is accessible from FM 1985 between FM 562 (from Anahuac) and SH 124 (from High Island and I-10). The East Bay Bayou Tract entrance has a nature trail. The main ANWR entrance leads to driving and hiking trails. Near the first right turn after the main entrance is a well-regarded birding site called the Willows.

2. Gulf Intracoastal Waterway

Beneath the SH 124 bridge (just north of High Island) lies the Gulf Intracoastal Waterway (GIWW). Constructed during the 1920s and 1930s, the GIWW enters the Bay system just east of here, traces the northern edge of Bolivar Peninsula, passes underneath the Galveston Causeway, and proceeds west along the mainland shore of West Bay. Altogether, the GIWW now stretches from Brownsville, Texas, to Fort Myers, Florida, averaging several hundred feet in width and 12 feet in depth. The GIWW is strategically important to the Bay's economy. The GIWW has also affected the Bay by crosscutting the natural transitions between

the Bay, marshes, and rivers with a river of salty water. The wave energy of passing vessels has also eroded the GIWW's shores, and shoreline protection measures have also been constructed along portions of this shoreline to reduce erosion. Rock breakwaters can be viewed from the SH 124 bridge over the GIWW looking west.

Directions: The GIWW is visible from the SH 124 bridge just north of High Island as well as many other places, including the Galveston Causeway and the Bolivar Ferry.

3. High Island

Occasionally the overlying weight of rock deposits causes a lower layer of salt to flow upward through the subsurface, raising the ground into a large mound or dome. High Island is one of these salt domes, and its 38-foot elevation is the highest point on the Gulf coast between the Yucatan and Alabama. Plants and animals consider the area an “island” of habitats normally found far inland. Migratory species often rest in Boy Scout Woods, S. E. Gast Red Bay Sanctuary, or Smith Oaks, all maintained by the Houston Audubon Society.

Directions: Smith Oaks is on the north side of town, west of SH 124; turn on Weeks Avenue and then onto Winnie Street. Boy Scout Woods and the S. E. Gast Sanctuary are east of SH 124 on Fifth and Seventh Streets, respectively.



*SH 87 along the Bolivar Peninsula
Photo By: Cynthia Clevenger*

4. Rollover Pass

Formerly a very narrow portion of the Bolivar Peninsula rather than a channel, the “Rolling-over Place” was first visited by smugglers evading the Spanish customs house

on Galveston Island. Smuggling continued through the Prohibition Era of the 1930s. The Texas Game and Fish Commission cut a channel in 1955 measuring 200 feet wide and 1,600 feet long. Rollover Pass increased the salinity of East Bay, and its strong currents may have caused beach erosion along the peninsula. Rollover Pass is a world-class fishing destination and supports the colorful economies Gilcrest and Rollover.

Directions: The pass is well marked on SH 87 southwest of High Island.

5. Bolivar Flats Shorebird Sanctuary

Managed by the Houston Audubon Society, Bolivar Flats stands just southwest of Crystal Beach and is a reliable four-season wildlife viewing area. Gulf beach, dunes, and salt marsh habitat can all be found here.

Directions: From SH 87, turn south onto Loop 108/ Rettilon Road and drive to the beach, then turn right at the beach and proceed carefully to the flats. Parking is available near the wooden dome posts that block vehicle traffic from going past this point. There are also good views of the North Jetty (discussed with the Galveston Jetties in the West Bay Area), which is nearby.



Marsh birds
Photo By: Andrew Hancock

6. Fort Travis Seashore Park

Point Bolivar has been the site of Mexican, French, Confederate, and U.S. forts since at least 1816, but Fort Travis dates to 1898. The federal government actively maintained the fort during both world wars and then sold the property in 1949. Galveston County acquired Fort Travis in 1976 and developed it as a park.

Directions: Ft. Travis Seashore Park is located approximately 1.3 miles east of the ferry landing just south of SH 87 on 10th Street. Signs mark the location from SH 87.



Point Bolivar Lighthouse
Photo By: Gene Fisseler

7. Point Bolivar and Bolivar Roads

Operating between 1873 and 1933, the Point Bolivar Lighthouse guided boat traffic through Bolivar Roads, the 1.5-mile-wide pass between the Gulf and the Bay and one terminus of the Galveston and Houston ship channels. Bolivar Roads is also the primary entrance and exit for water and waterborne life in the Bay. Ferry service between Galveston Island and Point Bolivar began here in the 1930s. Riding the ferry is a great way to see marine mammals like bottlenose dolphins and ocean-going flyers like boobies and frigatebirds.

Directions: From points east of Houston, take SH 124 south from Winnie through High Island to the intersection with SH 87. Head west on SH 87 to reach Point Bolivar, Bolivar Roads, and the North Jetty. From Galveston, take Broadway Ave. until it intersects Seawall Blvd. Turn left on Seawall Blvd. and then left on Ferry Rd. (SH 87). Follow Ferry Rd. to the ferry landing and take the ferry to Point Bolivar.

ACKNOWLEDGEMENTS

The Galveston Bay Estuary Program, a program of the Texas Commission on Environmental Quality, works to implement the Galveston Bay Plan, which is a comprehensive conservation and management plan for the Bay. The Back the Bay campaign, developed by the Estuary Program, is an educational campaign that encourages people to protect the Bay through water conservation, habitat preservation, and improving water quality. Learn how you are connected at www.backthebay.org.

The Galveston Bay Foundation is a local nonprofit organization whose mission is preserve, protect, and enhance the natural resources of the Galveston Bay estuarine system and its tributaries for present users and for posterity. Its programs in advocacy, conservation, education, and research strive to ensure that Galveston Bay remains a beautiful and productive place for generations to come. To learn more about the Galveston Bay Foundation, visit www.galvbay.org.

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