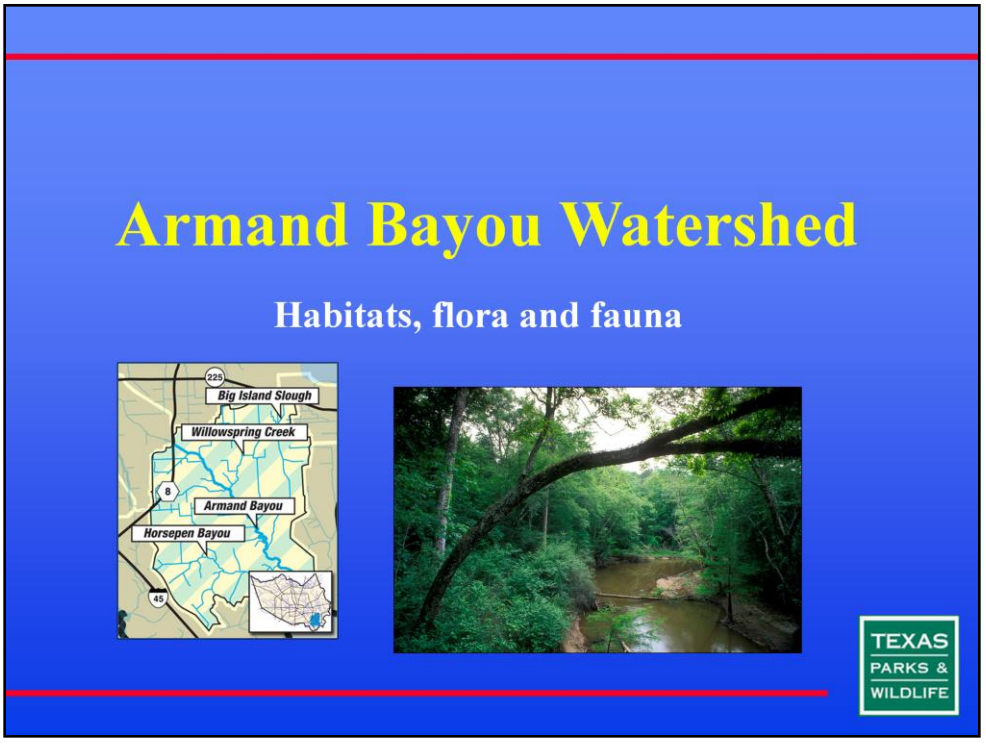
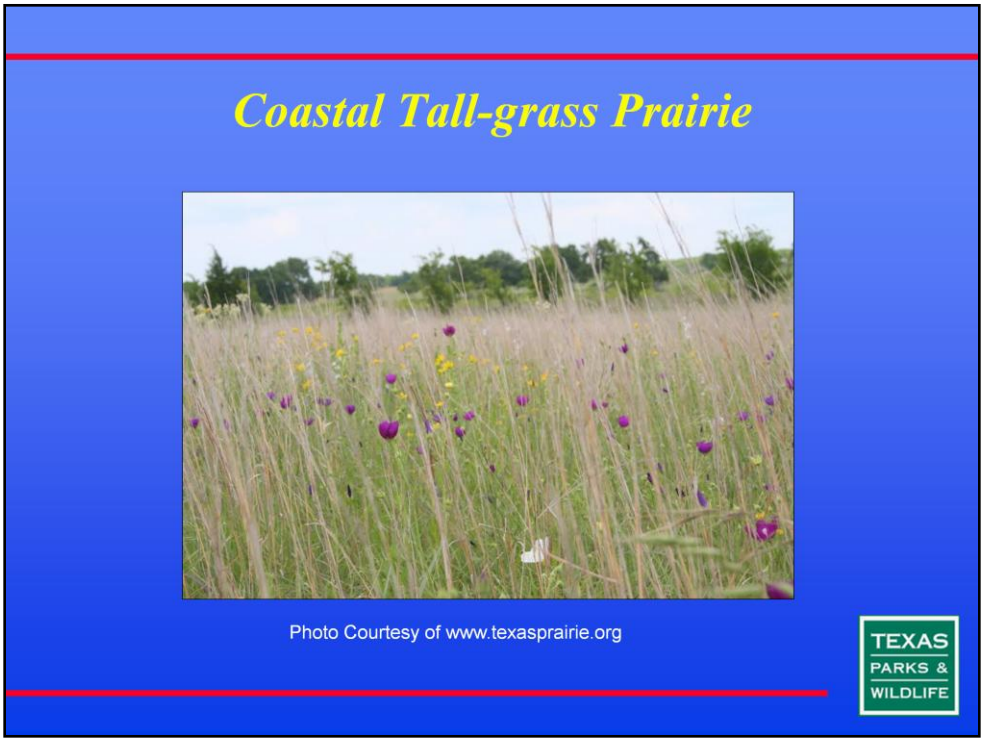


The Armand Bayou Watershed drains about 38,000 acres in Harris County by way of Armand Bayou itself, manmade drainage ditches and major tributaries (I.e. Big Island Slough, Willow Springs Bayou, Spring Gully, and Horsepen Bayou). The watershed includes the cities of Deer Park, LaPorte, Pasadena, Houston and Taylor Lake Village.

In spite of heavy impacts from development, the watershed retains ecologically valuable habitat (ABWPlan). Three main habitats within the watershed are coastal flatwoods, coastal tallgrass prairie, estuarine and freshwater streams.

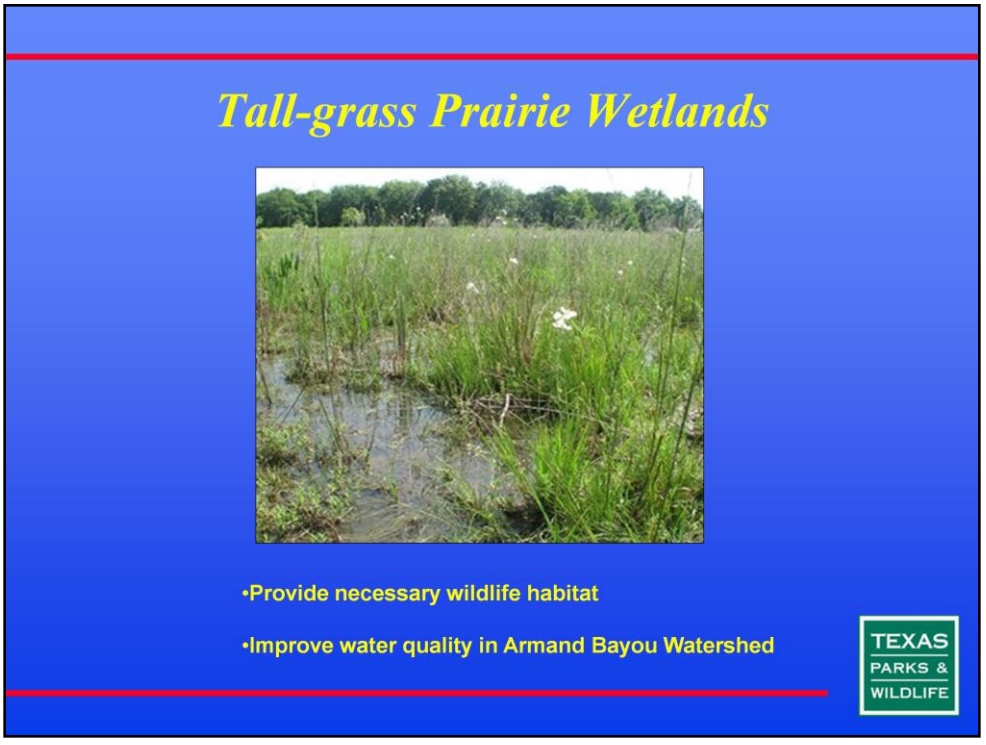
Each habitat type provides a variety of ecological and economic functions and has unique management requirements.

These habitats are unique and ecologically significant, which is why Armand Bayou is a Coastal Preserve and ABNC have been designated “Gulf Ecological Management Sites” (GEMS) by a joint initiative of the EPA Gulf of Mexico Program, Gulf of Mexico Foundation and five Gulf of Mexico states. As a result, these areas are considered high priority for protection, restoration and conservation.



Coastal Tall grass prairie was Historically the dominant habitat within this watershed and now only 1% remains.

Dominated by Little blue stem, yellow Indian grass, brown seed paspalum, gulf muhley and switchgrass with hundreds of herbaceous species (wine-cup, coreopsis), and also clusters of oaks called oak mottes or maritime woodlands.

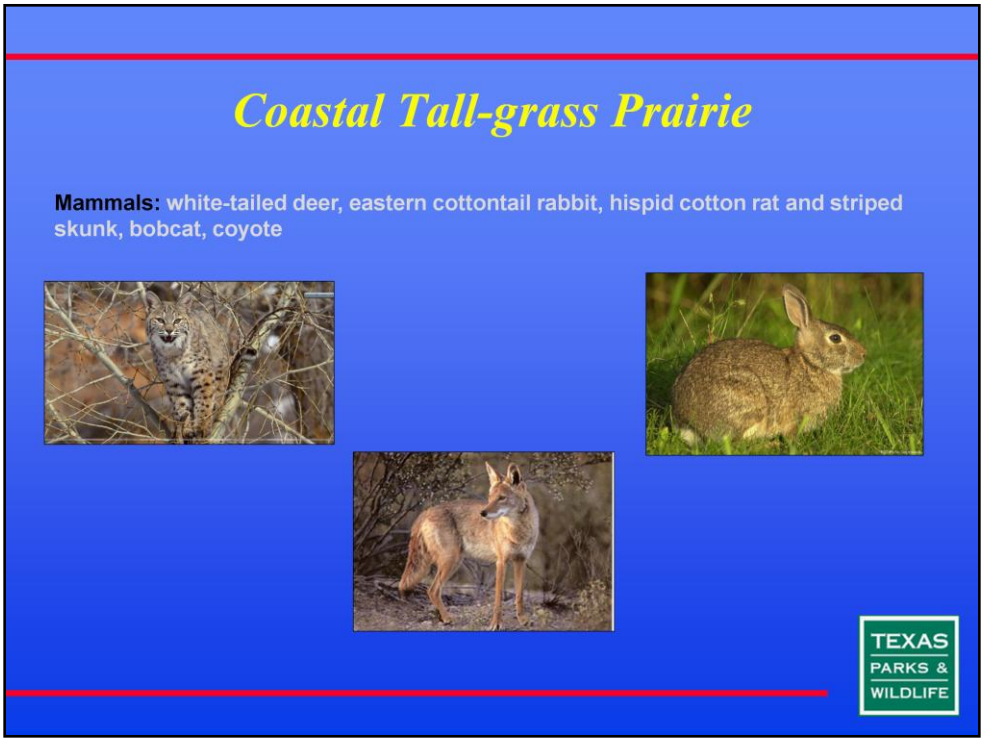


Tall-grass prairie wetlands also referred to as “pothole wetlands” are low areas within the prairie that hold rainwater runoff.

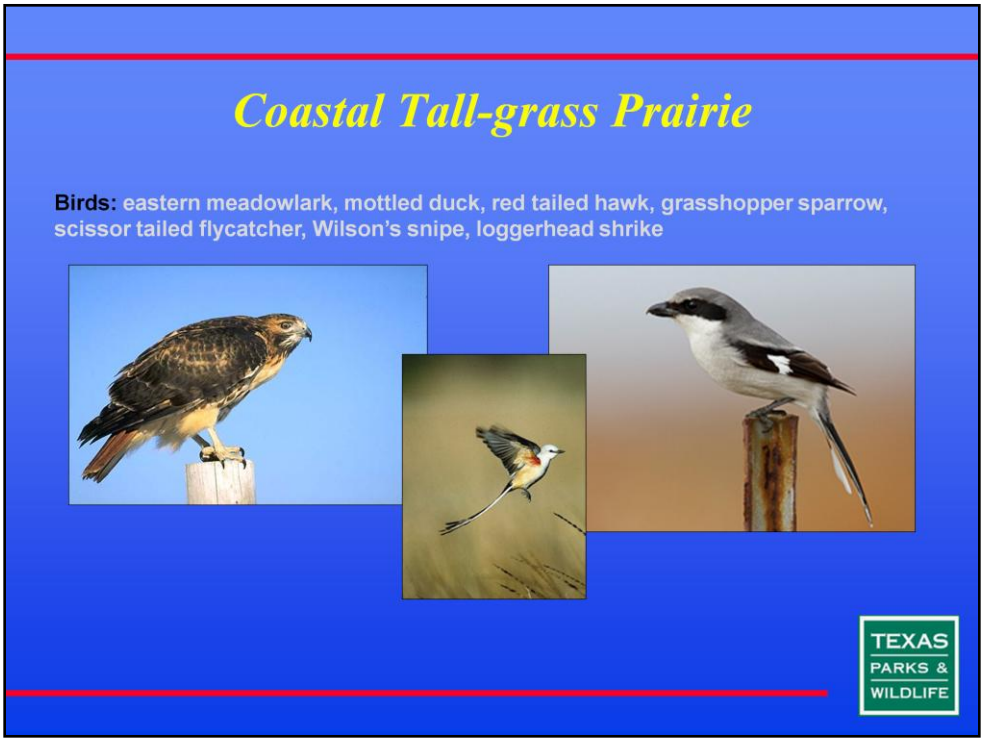
Prairie wetlands and adjacent habitats provide necessary feeding, sources of freshwater and nesting habitat for many migratory and non-migratory bird species including mottled ducks.

These areas are also important to many species of reptiles, amphibians, arthropods and small and large mammals who utilize the area as breeding, nursery, feeding and cover habitat.

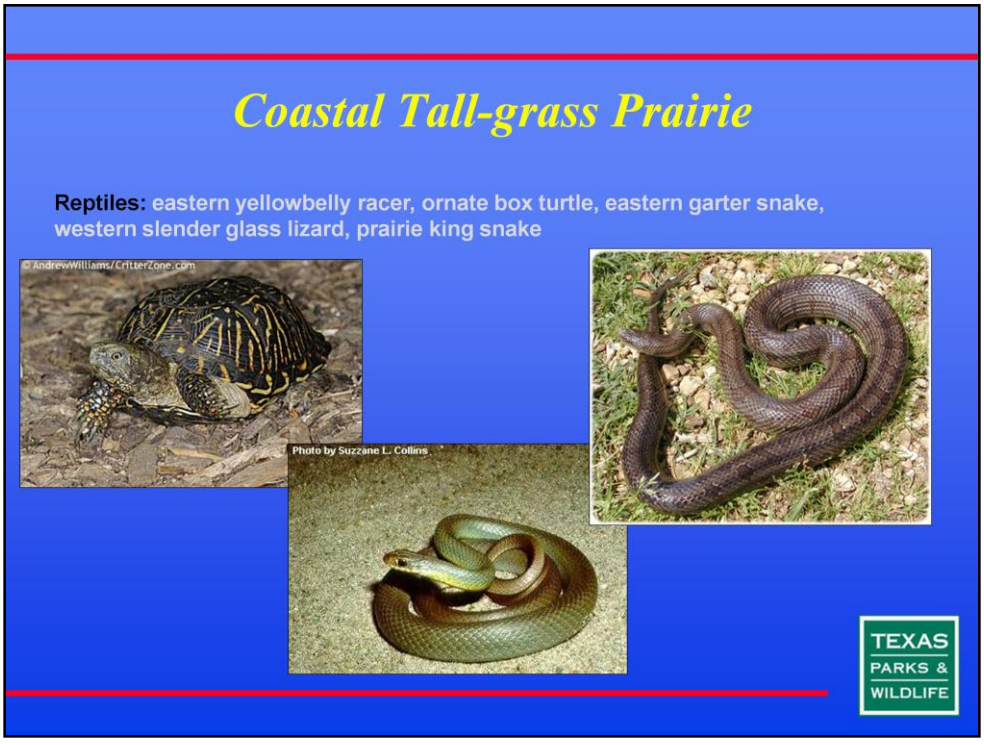
These Tall-grass prairie wetlands improve the water quality within the Armand Bayou Watershed; slowing down flood waters ; providing natural filtration of nutrients, bacteria and sediment loaded waters.



Some of the large and small mammals that can still be found in the Armand Bayou watershed prairies are:



Avian species


Coastal Tall-grass Prairie
Reptiles: eastern yellowbelly racer, ornate box turtle, eastern garter snake, western slender glass lizard, prairie king snake
© AndrewWilliams/CritterZone.com
Photo by Suzzane L. Collins
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Reptiles


Coastal Tall-grass Prairie
Amphibians: Gulf coast toad, southern crawfish frog, southern leopard frog
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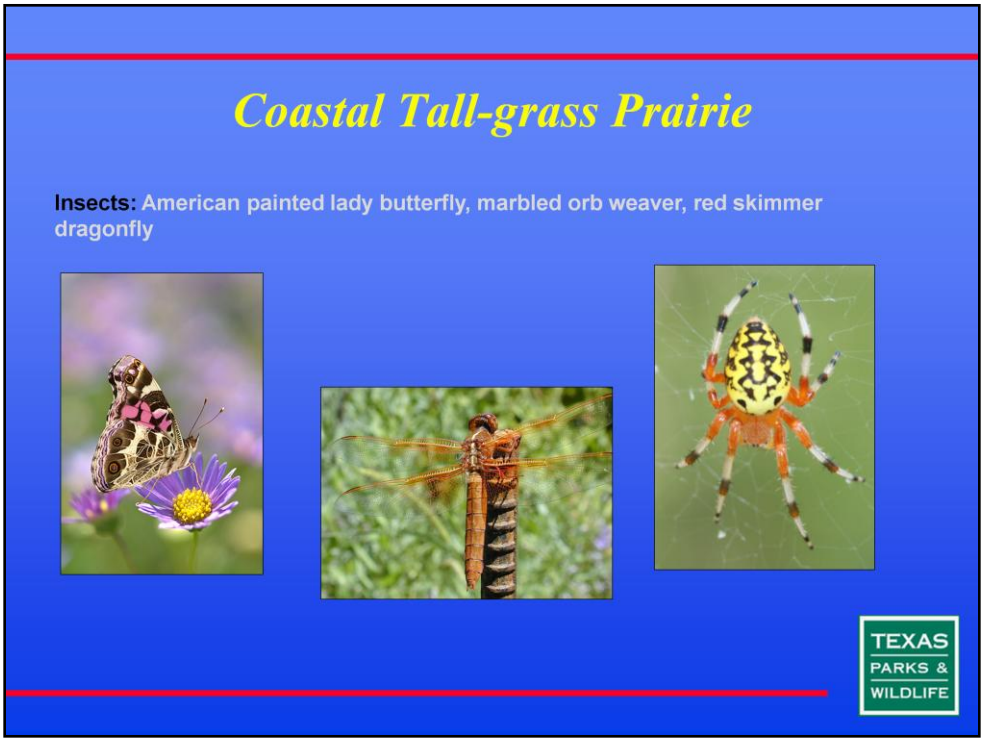
Amphibians


Coastal Tall-grass Prairie
Insects: American painted lady butterfly, marbled orb weaver, red skimmer dragonfly
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Insects

Streams and bayous of the Armand Bayou Watershed historically had extensive patches of coastal flatwood forest.

This habitat occurs on poorly drained flats between rivers on the coastal plain and can be dominated by loblolly pines or hardwood species such as willow, laurel, and water oak, sweetgum and green ash.

Coastal Flatwoods also contain Dwarf palmetto, yaupon, wax myrtle, osage orange common in the understory.

And turk's cap, wood sorrel, green briar and dew berry in the herbaceous layer.

Coastal flat-woods provide habitat for migrating neo-tropical songbirds, allowing the birds to rest and feed before resuming migration.

Canopy and mid-story vegetation provide perches for hawks, owls and woodpeckers. And provide feeding and cover for wildlife species.

The herbaceous layer provides important cover and feeding habitat for small mammals (squirrel and other rodents, rabbit, skunk, opossum, armadillo and raccoon) large mammals (red fox, bobcat, coyote and white-tailed deer), reptiles, amphibians, and many birds including the neo-tropicals.

Coastal flat-woods improve water quality; slowing down flood waters; providing natural filtration of nutrients, bacteria and sediment loaded waters.

Coastal flat-woods in this watershed have been reduced to small segments within Horsepen Bayou, Big Island Slough and Armand Bayou.

Streams of the Armand Bayou watershed were historically narrow, shallow, sinuous waterways.

In-stream habitats include pools, riffles, root mats, aquatic plants, undercut banks, submerged logs, overhanging vegetation and leaf litter.

human activities such as development, channelization Vegetation clearing, ground water withdrawal have resulted in subsidence, erosion and increased turbidity and have eliminated much of the in-stream habitats in the watershed.

In-stream habitats are vital for organisms that spend their entire life in the water: fish (sunfish, largemouth bass, catfish, killifish), or spend part of their life in or around water: insects (damselfly, dragonfly, Dobson fly, stonefly), amphibians (frog, salamander, siren), reptiles (turtle, snake) and those that depend on water for their main food source: which includes egrets, herons, and ducks.

The riparian zone of a stream or bayou consists of vegetation growing on the bank and forested portions of the floodplain.

The riparian forest provides habitat for migrating neo-tropical songbirds, allowing the birds to rest and feed before resuming their migration.

The canopy and mid-story vegetation provide perches for heron, egret, osprey and kingfisher while feeding and cover for wildlife species.

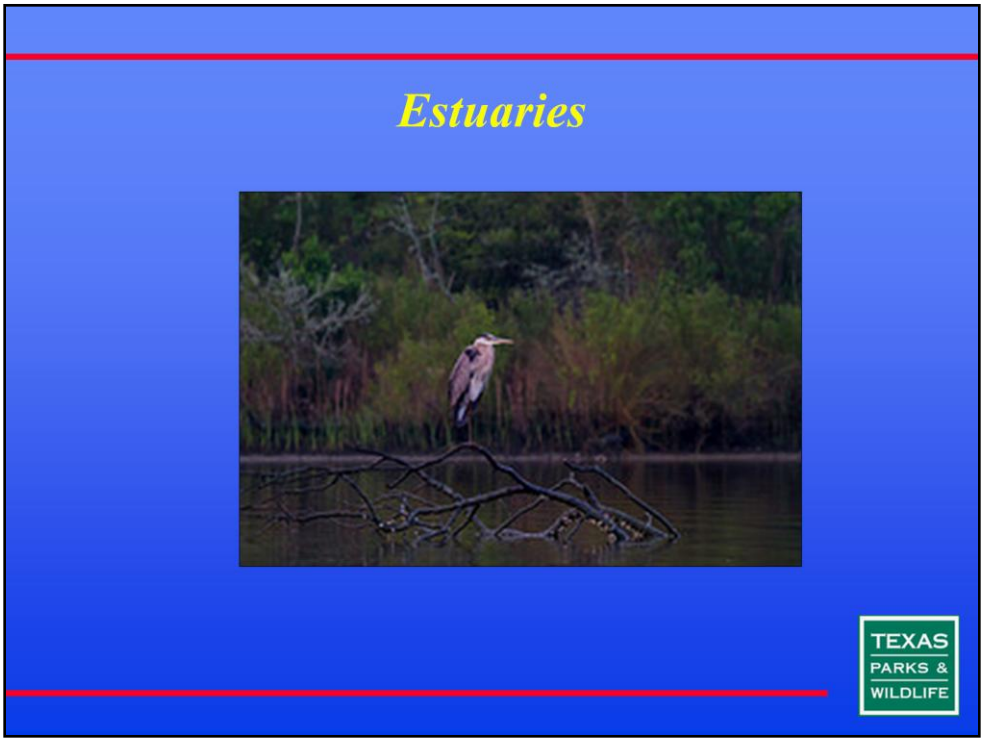
The herbaceous vegetated layer of the riparian zone provides important cover and feeding habitat for small mammals (squirrel and other rodents, rabbit, skunk, opossum, armadillo and raccoon) large mammals (red fox, bobcat, coyote and white-tailed deer), reptiles, amphibians, and many birds including the songbirds mentioned above.

Much of the upstream segments and tributaries of Horsepen Bayou, Big Island Slough and Armand Bayou have been channelized and the entire riparian habitat has been removed. The loss of riparian has led to the loss of much of the historical in-stream habitat on which many species depend. Only portions of the riparian zone remain within the watershed consisting of emergent vegetation and tree-lined banks dominated by various species of elm, oak and ash trees.

Riparian forest, vegetated banks and meandering channels improve in-stream water quality by slowing down flood waters and providing natural filtration of nutrients, bacteria and sediment loaded waters.

Stream side forests are also important in controlling erosion through shoreline stabilization and shading waters thereby improving water quality.

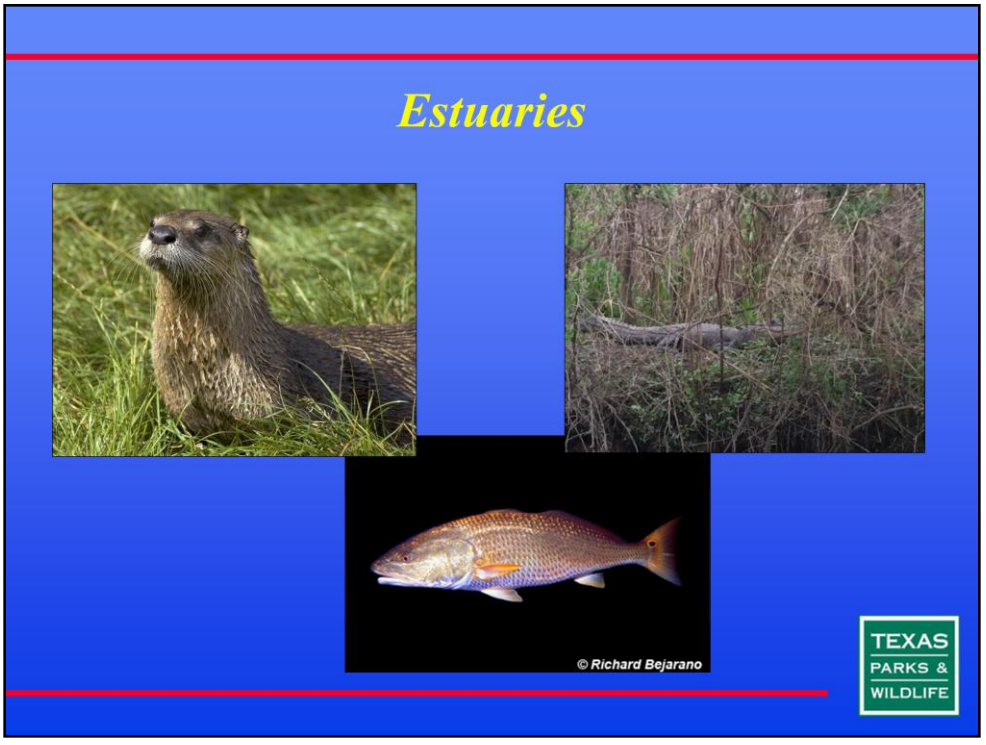
Freshwater streams in the watershed that still retain a significant amount of the in-stream and riparian habitats have been reduced to one segment within Horsepen Bayou and one segment in Armand Bayou.



The lower end of Armand and Horsepen Bayous are estuaries.

Estuaries are areas where freshwater from inland streams and saltwater from the ocean mix.

The dominant shoreline vegetation is *Spartina alternaflora* (smooth cordgrass), or intertidal saltmarsh habitat.



The Armand Bayou estuary is an important nursery area for marine finfish and shellfish species in the Galveston Bay system.

Juvenile marine fish need an intermediate salinity for development and utilize the intertidal salt marsh to hide from predators.

Salinities within the estuary can vary significantly depending on the amount of rain within the watershed.

It is not uncommon for saltwater and freshwater species of fish to be found living in the same segment of the bayou.

Estuaries also provide habitat for animals such as wading birds, river otters and American alligator.

Loss and degradation of these habitats results in the loss of important ecological functions and values and decreases the ways in which the waterways can remove the increasing amounts of anthropogenic sourced bacteria from the watershed.

This loss and degradation has already resulted in diminished water quality within the watershed. If continued, the water quality situation within the watershed will only worsen and could begin to affect human health, wildlife diversity and populations.

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