Final Report

On
City of Pearland Environmental Kiosks

Contract 582-6-77774

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Prepared for:

Galveston Bay Estuary Program
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Executive Summary

With the assistance from the Galveston Bay Estuary Program, the Pearland Independent School District and residents of the Community, the Pearland Parks and Recreation Department installed ten (10) environmental kiosks type signs at the trail head for a future seven (7) mile Trail Connectivity Project. The trail head is located at Centennial Park in Pearland, Texas. Centennial Park is located immediately adjacent to Mary’s Creek, a tributary that connects to Clear Creek and ultimately drains into Galveston Bay.

The kiosks were designed with the assistance of middle school students at Sablatura Middle School in Pearland, Texas. Staff from the Parks and Recreation Department met with three classes from the school to discuss environmental issues and to determine what types of signs would be located at the trail head.
Western Cottonmouth

Agkistrodon piscivorus bicinctus

Commonly referred to as the "water moccasin", the Western Cottonmouth is found in swampy, and wetlands found mainly in the Southeastern United States. An aquatic snake, the Cottonmouth diet consists primarily of fish, but they tend to feed on other snakes, amphibians, and small mammals. It ranges in color from tan to a half to three and a half feet in length. It is dark brown, brown or black with light cross markings on its back and has a broad, heavy body. The Western Cottonmouth is a venomous species! The name Cottonmouth comes from their instinct of opening the mouth and displaying the striking white inner lining of the mouth when disturbed.

Great Egret

Casmerodius albus

The Great Egret is the largest white egret in Texas. It frequents the Texas coastal region and is found in both fresh and saltwater marshes and streams. This pure white bird has distinctive long back plume feathers. Take note of the yellow beak and black legs.

Striped Skunk

Mephitis mephitis

The Striped Skunk inhabits wooded or brushy areas, and grasslands. While it prefers rocky outcroppings for refuge, it will often seek out the burrows of armadillos, foxes, and other animals. Skunks are largely nocturnal and seldom venture forth until late in the day; it retires to its den early in the morning. The Skunk is not choosy about its food, however its diet does change with the seasons. In the fall and winter its diet is primarily insects, followed by reptiles, small mammals, vegetation and birds. In the spring and summer its diet consists primarily of reptiles, followed by insects and small mammals, with vegetation making up the balance.
Gulf Coast Ribbon Snake

Thamnophis proximus

The Ribbon Snake is a slender, streamlined garter snake measuring anywhere from 19 to 47 inches. The Gulf Coast Ribbon Snake is easily distinguishable with three bright yellow stripes that contrast against its dark brown body. Because the Gulf Coast Snake is considered semi-aquatic, it is often found along the edge of the water or swiftly gliding across the water's surface. It feeds on frogs, tadpoles, salamanders, and small fish.

Spikerush

Eleocharis palustris

There are about 150 species of Spikerush worldwide. It may be encountered as floating, tangled mats, dense clumps in the mud or as rooted green spikes emerging from a few feet of submerged vegetation covering many acres. Some are cultivated as human food. Spikerush seeds are a major food source for birds and animals.

Common Raccoon

Procyon lotor

The Raccoon is a medium-sized mammal with a black facial mask outlined with white fur. Its bushy tail has black and white rings, and the tip of the tail is black. Mainly nocturnal, the Raccoon inhabits the broadleaf woodlands near streams or other bodies of water. Because the Raccoon has five fingers on its fore-paws, it is an adaptable hunter and forager. The Raccoon's diet consists of a variety of foods. Since it is mainly carnivorous, it feeds on crawfish, fish, birds and bird eggs.
**Flatsedge**

Flatsedge is one of the larger and more diverse plant families, with 3,000 to 5,000 species in 102 to 133 genera. Although sedge occurs in many characteristics in particular, the structure of its flower. Sedge has an economic and ecological value. With a reputation of being termed the world's worst weed, sedge and its persistent pest of agriculture. However, the economic value of sedge dates back to ancient Egypt where Cyperus papyrus was used in rope making and boat building.

**Yellow-Crowned Night Heron**

Nestassus violaceus

This is a beautiful silver-gray, 26" tall heron with a black head and neck patching white cap and cheek patches. Its frequent wooded swamps and seaside ditches and fields primarily on crabs, crawfish, frogs and small fish.
Looking east towards wetlands.

Looking south along trail.
Project Description

The City of Pearland has future plans to develop a seven (7) mile Trail Connectivity Project. The trail will ultimately connect three (3) elementary and two (2) middle schools. The trail will also connect an environmental educational building, a recycling center and Centennial Park. The first phase of the Trail Connectivity Project will connect Centennial Park to the proposed environmental educational center, the existing recycling center and a large detention basin commonly know as Mary’s Creek Detention. The first phase of the trail will start on the south side of Mary’s Creek near an environmentally sensitive wetland at Centennial Park and travel west approximately 2.2 miles along Mary’s Creek to Manvel Road.

The Pearland Parks and Recreation Department purchased and installed the ten (10) informational kiosks at selected sites at the trail head for first phase of the Trail Connectivity Project. Each kiosk serves as a permanent community outreach exhibit containing environmental education information about the habitat, wildlife and natural resources of the Texas Gulf Coast.

A kiosk design and development team consisting of staff from the Pearland Parks and Recreation Department, students from Sablatura Middle School and a few residents from the community assisted with the project. The environmental kiosks were purchased through a Houston area vendor and installed by staff from the Parks and Recreation Department. The project includes action items from The Galveston Bay Plan: PPE-1- which is to establish community involvement in the Galveston Bay programs, and PPE-3- which is to develop a long-range adult education and outreach program for the community.
Project Results

On October 9, 2007, and again on November 5, 2007, staff from the Pearland Parks and Recreation Department met with Students from Sablatura Middle School and residents of the community to discuss the project and to come up with ideas for the kiosk signs.

In December of 2007, staff from the Parks and Recreation Department walked the route of the first phase of the proposed Trail Connectivity Project to determine the location of environmental kiosks. During approximately the same time period, staff was working with the consultant for the Trail Connectivity Project and realized that the trail project included educational and Wayfinding signs as part of that project. Due to this fact it was determined the environmental kiosks signs would be better located adjacent to environmentally sensitive wetlands at the proposed trail head for the Trail Connectivity project.

In February of 2008, the Design and Development team finalized the plan for the kiosk signs. From March of 2008, through July of 2008, the team worked with various sign vendors to solicit proposals for the project. After careful consideration, the final design for the kiosks was completed and the City entered into an agreement with Proworx Architectural Signage of Houston to finish the design and complete the layout for each sign. The environment kiosk signs were purchased by the City in July of 2007; however, due to fabrication complications with the sign base, they were not delivered to the City until the second week of September. The kiosks were picked up from Proworx on September 7, 2008. The installation of the ten (10) environmental kiosk signs began on September 11, 2008, and the project was 100% complete on September 14, 2008.

The original budget for the project submitted in the grant application totaled $15,000. Through the competitive bid process and with the diligence of the design and development team, the total cost of the Environmental Kiosk Sign project was $5,800.

An estimated 200 citizens per day utilize the park. It is anticipated that on an annual basis, over 73,000 persons will have an opportunity learn from the environmental signs that were installed at the future trail head for the Trail Connectivity Project.
**Project Conclusions**

Positive relationships were made between the Pearland Parks and Recreation Department, Sablatura Middle School and citizens of the community as the group worked together to develop educational and information kiosk signs that are located at the trail head for the first phase of the Trail Connectivity Project.

The kiosk signs will be viewed by thousands of individuals every year and will provide an opportunity for those individuals that view the kiosks to learn more about the environment and the local habit of the area.

The environmental kiosk signs have become an outdoor learning center for area schools and daycares and for individuals that utilize the park.