Texas Commission on Environmental Quality
Nonpoint Source Program

Dickinson Bayou: Watershed Protection Plan Implementation

Water Body	Dickinson Bayou Tidal (Seg 1103), Dickinson Bayou Above Tidal (Seg 1104)
Location	Galveston and Brazoria Counties
River Basin	San Jacinto - Brazos Coastal (11)
Contractor	Texas AgriLife Extension Service
Project Period	May 12, 2008 to August 31, 2011
Project Total	$794,998 (Federal 60% and Local Match 40%)

Project Description

Dickinson Bayou (Segments 1103 and 1104) has been impaired for bacteria and depressed dissolved oxygen since 1996. As a result, the bayou does not currently meet its aquatic life or contact recreation use, creating environmental and public health concerns. In 2004, the Dickinson Bayou Watershed Partnership formally came together through a shared interest in preserving and enhancing the natural integrity of the watershed through the coordinated management of natural resources. A Watershed Protection Plan (WPP) was completed in the spring of 2009 and is currently under revision to incorporate new information from a recent bacteria Total Maximum Daily Load (TMDL) study.

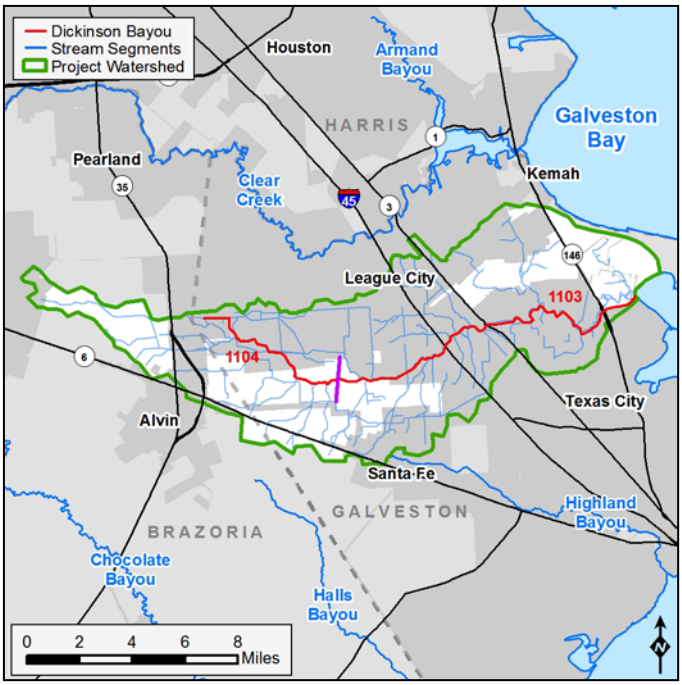
The primary goal of this project is to implement and demonstrate effective best management practices (BMP) within the Dickinson Bayou watershed. Water smart landscaping and low impact development (LID) education was promoted through installation of two water smart demonstration landscapes and two LID demonstration sites. Workshops about proper maintenance of on-site sewage facilities (OSSF) were held, and an OSSF hazard map was developed. The use of wetlands was promoted by working with local storm water entities and installing a storm water treatment wetland.

Current Status

The project closed August 31, 2011. Texas AgriLife Extension submitted the Final Report which is approved by Environmental Protection Agency (EPA) and Texas Commission on Environmental Quality (TCEQ).

Public Participation

The Partnership's website contains information on Partnership meetings as well as information about how local residents can help protect the Dickinson Bayou watershed. There is also information about free OSSF workshop training for homeowners.



For More Information

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Project Highlights

- Four factsheets on topics important to the watershed have been developed.
- Two water smart demonstration landscapes have been installed in the City of Dickinson at the Texas Parks and Wildlife Department's Marine Lab (1502 FM 517 East) and at City Hall (2716 FM 517 East).
- A hazard map displaying areas where OSSFs are most likely to fail was created for Galveston County.
- An OSSF training workshop was held that covered basic information about proper homeowner maintenance of OSSFs.
- A set of activity modules were developed for educators in the watershed. They include activities compiled from outside sources as well as newly developed activities and a power point lecture specific to the Dickinson Bayou watershed.
- Developed an OSSF optimization model for the watershed that provides information on scenarios for OSSF upgrades or connection to new or existing wastewater treatment plants, based on the age of OSSFs, their location in relation to drainage networks, underlying soil type, OSSF density, and cost of upgrades versus centralized collection.
- Completed a detention basin stormwater wetland demonstration project at the Clear Creek Independent School District Education Village. The bottom of this 11 acre detention basin was re-countered to have wetland features.
- Installed two stormwater best management practices. A 1,000 square foot rain garden that captures runoff from about half of the 10,000 square foot Dickinson Public Library was installed. A 1,000 gallon rain water harvesting cistern at San Leon Elementary School that collects roof runoff that is stored and used to irrigate a habitat garden.