Double Bayou Watershed Partnership
Stakeholder Meeting

June 3, 2025
5:30 -7:00 PM
Oak Island Community Building

MEETING SUMMARY

Presenters: Ryan Bare (HARC), Kirsten Vernin (HARC), Schyler Rhea (WHF), Jennifer Irving (HARC), Brian Koch (TSSWCB), Jimmy Weaver (Trinity Bay SWCD)

Dinner, Sign-In, Welcome, Introductions, and Agenda Review
Ryan thanked everyone for attending and recognized program funders (TSSWCB and GBEP). 12 stakeholders were present at the meeting. The Trinity Bay Conservation District was thanked for the dinner and Chambers County was thanked for providing the meeting room. The logistics of the meeting were reviewed, and a recap of the Double Bayou Watershed Protection Plan (WPP) and the Implementation timeline were given. The goal of the plan is to improve water quality utilizing a voluntary, collaborative, and stakeholder-driven approach. The WPP was accepted by the U.S. Environmental Protection Agency in 2016. Phase I Implementation of the plan was from September 2018 and ended May 2023. Agricultural, wastewater, and outreach management measures, including feral hog removals were completed during this phase of the plan. Bacteria has been the primary focus in the watershed. This was the last WPP meeting for Phase II of the Implementation of the plan, which will conclude this fall. Phase III Implementation of the plan will begin Fall 2025.

SWAT & Green Infrastructure
Kirsten provided an overview of how the Soil and Water Assessment Tool (SWAT) is being applied for the Double Bayou Watershed to simulate the watershed to estimate how different green infrastructure practices, specifically forest restoration, prairie restoration, vegetated filter strips, and wetland restoration, could improve water quality by reducing bacteria. The goal of this project is to inform what type of and where to place these practices as part of the larger WPP strategy. The ways that stakeholder insights from the Fall 2024 WPP Implementation meeting were incorporated into the development of the watershed-based model were also explained.

Water Quality in the Double Bayou Watershed
Ryan provided an update on how water quality in Double Bayou compares to the rest of the Houston-Galveston region. Fecal indicator bacteria are the primary benchmark for water quality. A summary of the Double Bayou Water Quality Monitoring Program was given. This includes 15 years of water quality data with over 10,000 sample results. A short discussion about how stakeholders are using the bayou for recreation occurred. It was shared that there is not a lot of swimming. The primary forms of recreation in the watershed are hunting and fishing. After this discussion, Ryan explained the trends in bacteria levels in the watershed over time, as well as how they compare to the statewide standard for contact recreation. Over time, bacteria concentrations have ranged from close to the standard to about 3-3.5 times higher. Ryan then discussed where the bacteria are coming from and the completion of Bacterial Source Tracking in 2024. 71% of the total sources were from wildlife (46%) and domesticated animals (25%). Agricultural and residential sources (pets and cattle) are the primary contributors of bacteria on the West Fork, while the primary bacteria source on the East Fork is wildlife. Concern over the inclusion of feral hogs in the wildlife category was shared and that this might be overstating the wildlife contribution to overall bacteria loads. Ryan agreed that this could be the case and that better methods for tracking this are needed. There was also concern over human bacteria sources. This will be further investigated in Phase III Implementation of the Double Bayou WPP.

Wildlife Habitat Federation
Schyler provided an introduction to Wildlife Habitat Federation (WHF) and the technical services they provide related to site assessments, habitat management plan creation, and implementation of habitat restoration practices. An overview of grasslands in Texas was given. The presentation concluded with some examples of successful prairie restoration projects that highlight the interconnectedness of soil health, native plants, water quality and infiltration.

SWAT Stakeholder Discussion Activity

Jennifer provided guidance on the discussion topic, which included the four types of green infrastructure practices that HARC will be developing model scenarios for to investigate how they might improve water quality in the watershed. During the discussion, Trinity Bay Conservation District (TBCD) noted that they plant ryegrass along the canal banks. The primary goal of TBCD is drainage for flood risk management, which is why they clear the banks along conveyance systems, as trees and vegetation can restrict drainage. They do consider bank stabilization and erosion control as important. TBCD also confirmed that the new Wastewater Treatment Facility is in-use and that city sanitary sewer infrastructure was replaced with new lines. Another stakeholder shared that it would be nice to have a green infrastructure project in a public space, such as White's Park or Double Bayou Park, or school yards, so that community members could observe its function. It was also shared that Chambers County is growing and that working with developers to implement green infrastructure practices could be another implementation strategy. The discussion concluded with the determination that partnerships are needed to successfully implement green infrastructure practices in the watershed.

WQMP Implementation Update

Brian gave an overview of WQMPs, and Jimmy gave an update of the different types of conservation practices that have been implemented in the watershed by landowners through the WQMPs. TSSWCB is the lead agency in Texas responsible for planning, implementing, and managing programs and practices for abating agricultural and silvicultural nonpoint source water pollution. WQMPs are site-specific plans for land improvement measures developed through the SWCD for agricultural lands that provide farmers and ranchers a voluntary opportunity to achieve a level of pollution prevention or abatement consistent with state water quality standards. These plans provide state-certified proof that you are implementing conservation practices and can resolve water quality complaints through a voluntary process with SWCD and TSSWCB. There were 21 WQMPs in the watershed when the Watershed Protection Planning process began. Since then, there have been 20-30 additional WQMPs created. In fact, almost half of the watershed is under some type of plan.

Funding for this effort was provided through a Clean Water Act Nonpoint Source Grant administered by the Texas State Soil and Water Conservation Board from the U.S. Environmental Protection Agency and a grant from the Texas Commission on Environmental Quality administered by the Galveston Bay Estuary Program.