Mill Bayou-Watson Bayou Sub-Basin Work Plan

Northwest Florida Watersheds Partnership Program

The **Northwest Florida Watersheds Partnership Program (Program)** is a collaborative, multi-party initiative to proactively address critical water resource issues within priority sub-basins within the Northwest Florida Water Management District (District). The program is being implemented in coordination with local and county governments, regional entities, and other interested parties to maximize effectiveness.

Mill Bayou-Watson Bayou

The Mill Bayou-Watson Bayou sub-basin was selected as the priority sub-basin within the St. Andrew Bay watershed. This sub-basin encompasses approximately 33,920 acres in Bay County, Florida, including the cities of Panama City, Lynn Haven, and Springfield and portions of Parker and Callaway, as well as unincorporated areas of Bay County. Receiving waters include North Bay to the north and St. Andrew Bay to the south.

The work plan describes the sub-basin's characteristics, critical water resource issues, and strategies and proposed projects that can be implemented to address these issues. Urban development encompasses the majority of the sub-basin, with residential, commercial, and industrial land uses comprising over 59 percent of the area. Upland forest and wetlands each encompass over 12 percent of the sub-basin. The sub-basin's population was 76,284 according to the 2020 census, with a projected 2045 population of 93,670. This represents a 23 percent increase over the 2020 population.

Current Issues and Challenges

Water quality in the Mill Bayou-Watson Bayou sub-basin is affected by nonpoint source pollution generated by storm-water runoff across the landscape picking up pollutants from diffuse sources. Common pollutants include nutrients, sediments, bacteria, fertilizers, herbicides, insecticides, oils and greases, and effluent from septic systems. The sub-basin includes approximately 6,059 known and likely septic systems, each which may be a source of nutrients and bacteria.

Water quality impairments include:

North Bay (Fecal coliform, dissolved oxygen)
St. Andrew Bay (Fecal coliform, Enterococci)
Beatty Bayou (Fecal coliform)
Robinson Bayou (Fecal coliform)
Massalina Bayou (Fecal coliform)
Pretty Bayou (Fecal coliform, Enterococci)
Mill Bayou (Fecal coliform)

Other challenges affecting the sub-basin include susceptibility to coastal flooding, including storm surge associated with hurricanes and tropical storms, the need to increase the capacity of water supply and wastewater infrastructure, vulnerability of seagrass and salt marsh habitats, and source water protection.

Strategies and Solutions

The work plan summarizes management strategies to address the water resource challenges affecting the Mill Bayou-Watsons Bayou sub-basin. Each approach identified addresses multiple issue areas and objectives, reflecting the interrelated nature of water resource attributes and conditions. Proposed strategies include stormwater system improvements, central wastewater and onsite septic treatment system improvements, ecosystem restoration, water supply protection and development, and monitoring and assessment.

Site of Proposed 17th Street Regional Stormwater Wetland Park in Lynn Haven

Proposed Projects and Funding Needs

Proposed projects to address water resource issues within the Mill Bayou—Watson Bayou sub-basin are detailed in the work plan. Addressing critical water resource issues will require a multi-year effort. Future projects, in addition to those identified within the work plan, will likely be needed to fully address water resource issues and challenges within the sub-basin. As of January 2026, **20** projects have been proposed at an estimated total cost of **$50.6 million**. The current unmet funding need is **$32.3 million**. Project types include:

- Water supply and reclaimed water system development and upgrades
- Wastewater infrastructure system improvements and septic to sewer conversions
- Stormwater system upgrades
- Floodplain restoration
- Living shorelines

Beatty Bayou

For more information please visit: https://nwfwater.com/water-resources/surface-water-improvement-and-management/