Bacteria problems in Bastrop Bayou can be exacerbated by failing septic systems, poorly managed land application of sludge from wastewater treatment plants and reduction in freshwater inflows. Intermittent flow is observed throughout Bastrop Bayou during dry periods which significantly reduce freshwater inflow. Without the flushing effect from inflow, tidal movement remains stagnant which leads to higher concentrations of bacteria. Along with intermittent flow, temperature also plays a role in changing bacterial levels, as bacterial counts are observed to be significantly higher in spring and summer months compared to cooler months.

History and Development
Brazoria County was settled in 1836 and became one of the first counties in Texas. Bastrop Bayou has always played an integral part in transporting supplies and enabling agriculture and commerce in Brazoria County. Wooden ferries were built by hand and used to cross the bayou before the first drawbridge over Bastrop Bayou was built in the late 1830s. Farming supplies were often delivered by sailboat along canals in 1935. From a total of 6,000 acres planted in the crop in 1931, planting grew to 26,000 acres by 1940. In 1948 Brazoria County was the nation’s leading rice producer, producing a crop valued at more than $10 million. The average yield per acre almost doubled between 1956 and 1970, with an average of 53,000 acres being planted during those years. Rice and grain exports comprised 65,000 tons in 1968. American Rice, incorporated at Brazosport, shipped 350,000 tons of rice in 1990. Although agriculture is still an economic driver within the Bastrop Bayou watershed, the Brazoria County economy has become more diversified.

Agriculture
Agriculture within Bastrop Bayou watershed has a long and colorful history. From the rise of major rice growing to the expansion of new crops like sugar cane, agriculture continues to be a major activity within the watershed. As the area between the bayou and the tidewater becomes more developed, so too does the agriculture in the area. Agriculture is based around seafood. Aquaculture of shrimp, crab, crawfish and other seafood products brings over $20 million dollars into the local economy. Specialties include oysters and clams. With a number of farmers raising hogs to support the local beef, garden and goldfish pond industry, rice production within the watershed land across Texas remains on the low. As a result, many farmers no longer grow two crops a year, instead opting to grow one crop each year to improve yields. Conservation easements are also becoming more common within the watershed, as farmers look to the future of maintaining natural habitats and preserve open vistas and natural landscapes.

Bacteria Levels at Four Locations within Bastrop Bayou Watershed

Brazoria National Wildlife Refuge
Brazoria National Wildlife Refuge (BNWR) is rich in ecosystem habitats including freshwater sloughs, salt marshes and native bluegrass prairies. This habitat is important to the many species of birds that can be found during each season. In winter, more than 100,000 snow goose, Canadian geese, pintail, northern shovelers, teal, gadwall, American wigeon, sandhill cranes and mottled ducks fill the ponds and sloughs to capacity. In summer, birds that nest on the refuge include 10 species of herons and egrets, 10 sparrows, 2 bobolinks, 2 meadowlarks, 2 sandpipers, 4 rail species and common loon. In addition, 3 species of gators are found on the refuge - American alligator, black and American crocodile.

Brazoria National Wildlife Refuge
BNWR is part of the Great Texas Coastal Birding Trail which has been completed in 2000 through the cooperation of public and private conservation organizations, land managers, conservation groups, businesses, government agencies and communities. The Trail features 308 distinct wildlife viewing sites. Enhancements such as board walks, parking pullouts, lookout observation platforms and landscaping to attract native wildlife have been constructed at a number of sites.

Nature tourism not only benefits the residents of Bastrop Bayou because of the preservation of natural habitat, but its cities and towns also attract tourists. The four-county region within Bastrop County is a part of the Great Texas Coastal Birding Trail, which has been completed in 2000 through the cooperation of public and private conservation organizations, land managers, conservation groups, businesses, government agencies and communities. The Trail features 308 distinct wildlife viewing sites. Enhancements such as board walks, parking pullouts, lookout observation platforms and landscaping to attract native wildlife have been constructed at a number of sites.

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No matter where we live, work or play we are always in a watershed – an area of land that drains to a creek, river, bayou or lake. As a result, everything we put up washing into our waterways. As a result, everything we put in water will impact the quality of our water, and the health of aquatic life. What we put in the water within Bastrop Bayou is a brackish mixture of freshwater from Galveston Bay and the Gulf of Mexico. As a result, the dissolved oxygen concentrations usually decrease. The dissolved oxygen (DO) levels at or above 5 mg/L are considered good for aquatic organisms. As temperature increases, dissolved oxygen concentrations usually decrease. The dissolved oxygen and temperature relationship throughout Bastrop Bayou watershed appears satisfactory.