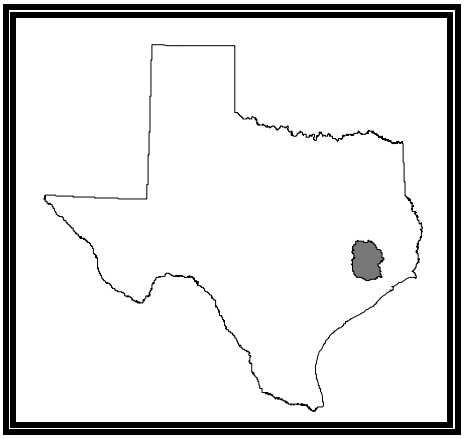
Basin 10

San Jacinto River



San Jacinto River Basin Narrative Summary

The East and West Forks of the San Jacinto River merge in the headwaters of Lake Houston. The San Jacinto River flows approximately 20 miles from Lake Houston to its confluence with the Houston Ship Channel. The river flows another 10 miles to Galveston Bay. This basin includes a portion of the Houston Ship Channel and associated tributaries. Total basin drainage area is 5,600 square miles. There are approximately 1,750 square miles in the West Fork drainage area, and 1,050 square miles in the East Fork drainage area. Buffalo Bayou, a major tributary to the Houston Ship Channel, has a drainage area of 1,034 square miles.

Associated bay and estuary segments include Upper Galveston Bay, San Jacinto Bay, Scott Bay, Burnett Bay, and Barbours Cut.

According to the 2000 Census, the basin population is over 1.5 million with the majority residing in Harris County. The City of Houston is the largest city in the basin. Other principal cities in the basin include Pasadena and Bellaire in Harris County and Conroe in Montgomery County. In addition to the numerous towns and cities, hundreds of wastewater treatment plants discharge into basin water bodies. This basin includes the most highly-urbanized and industrialized portions of the Houston metropolitan area. All major economic categories are represented including industrial/manufacturing, petrochemical, commercial, transportation, agriculture, recreation, and government.

The basin has been divided into 17 classified segments consisting of approximately 517 stream miles and two reservoirs (Lakes Houston and Conroe) covering 51.9 square miles surface area. Monitoring coverage in the basin has improved through the coordinated efforts of the TCEQ, Houston-Galveston Area Council, City of Houston, Galveston County Health District, San Jacinto River Authority, and Harris County Pollution Control. Throughout the basin, there are approximately 250 sites scheduled for monitoring in fiscal year 2003. At the scheduled frequency, this represents approximately 31,254 monitoring events. This is a significant increase from the 70 monitoring sites reported in 1996.

The San Jacinto River Basin exhibits wide variations in water quality. As the Houston metroplex expands to the north, numerous wastewater treatment plants and urban runoff increase the organic and nutrient loading and fecal coliform bacteria levels in all major tributaries to Lake Houston. Major tributaries to Lake Houston in northwestern Harris County are Cypress Creek, the West Fork of the San Jacinto River, and Spring Creek. Dissolved oxygen deficiencies can also occur in these streams.

Lake Houston tributaries draining the less populated areas of northeastern Harris County and Montgomery County, include Caney Creek, the East Fork of the San Jacinto River, and Peach Creek tend to have better water

quality. In the future, the quality of these water bodies may be affected by urban expansion.

The Houston metropolitan area is drained almost entirely by Buffalo Bayou, which has been channelized to form the Houston Ship Channel in its lower reach. Major tributaries draining to Buffalo Bayou/Houston Ship Channel are Brays, Greens, Sims, White Oak Bayous. In addition to a large number of municipal and industrial wastewater discharges, Houston bayous receive significant amounts of urban stormwater runoff. Very high fecal coliform levels are common. Depressed dissolved oxygen occurs during warm summer months, especially in smaller tributary streams.

In 1990, TDH issued a restricted consumption (one meal per month) and a sub-population no-consumption (women of child bearing age, pregnant women, and children) advisory for dioxin (ADV-3). The advisory includes all species of catfish and blue crabs in the Houston Ship Channel and all contiguous waters. In the San Jacinto River Basin this encompasses the tidal portions of Houston Ship Channel tributaries including Brays, Greens, Patrick, Sims, and Vince Bayous and the San Jacinto River Tidal.

In 2001, TDH issued a second advisory restricted consumption (one meal per month) and a sub-population no-consumption (women of child bearing age, pregnant women, and children) advisory for PCBs and Organochlorine Pesticides (ADV-20). The advisory includes all species of fish in the Houston Ship Channel upstream of the Lynchburg Ferry crossing and from the San Jacinto River downstream of the U.S. Highway 90 bridge.

The lower portion of Buffalo Bayou and the San Jacinto River were channelized in 1915, which opened the Houston area to ship traffic. Today, the Port of Houston is the third leading shipping terminal in the United States. Oil and petrochemical industries along the channel make it one of the most highly industrialized areas of the world. Over the past several years, water quality in the Houston Ship Channel has improved due to advanced wastewater treatment and reduced waste loads. Aquatic and/or marine organisms are inhabiting areas where few had previously been found.