

San Jacinto River Authority Current and Future Infrastructure Initiatives

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Introduction

Created by the Texas Legislature in 1937 (Article 8280-121, as amended), the San Jacinto River Authority (SJRA) is a government agency whose mission is to develop, conserve, and protect the water resources of the San Jacinto River basin. Covering all or part of seven counties, the organization's jurisdiction includes the entire San Jacinto River watershed, excluding Harris County. The SJRA is one of 10 major river authorities in the State of Texas, and like other river authorities, its primary purpose is to implement long-term, regional projects related to water supply and wastewater treatment. SJRA has five separate operating divisions: The Lake Conroe Division, the Woodlands Division, the Highlands Division, the Groundwater Reduction Plan (GRP) Division, and the Flood Management Division. Except for the Flood Management Division, the operating divisions operate and maintain a wide variety of infrastructure critical to meet the needs of SJRA's customers.

Objectives

SJRA operates and maintains infrastructure to provide raw and treated water supply and wastewater treatment services to numerous customers in Montgomery and eastern Harris County. These customers range from large industrial complexes to agricultural farms to Municipal Utilities Districts (MUDs) to property owners on Lake Conroe to multiple municipalities. In all cases, SJRA must plan accordingly for the next 10-50 years to both maintain current infrastructure and build or expand the infrastructure to meet future expanded customer needs. Since 2017, SJRA has completed an annually updated 10-Year Project Plan (5-years prior 2017) that encompasses projects to newly construct, rehabilitate, repair, replace or expand the infrastructure required for serving its customers.

Divisions and Projects

Highlands Division

Located in east Harris County, the Highlands Division originated as SJRA's first operating division in the 1940s and delivers raw water from Lake Houston and the Trinity River through an extensive 27-mile system of canals, a pump station on Lake Houston, two transfer stations allowing water transfer from the Coastal Water Authority (CWA) canal, 65+ crossing structures (siphons, control structures, culverts, bridges), and a 1,400-acre staging reservoir in order to provide water to customers such as Exxon Mobil, Chevron Phillips Chemical Company, and a number of other industrial, municipal and agricultural customers. Projects over the next 10 years include rehabilitation and repairs to siphon and control structures, erosion repair and prevention projects along channel levees, pump station and transfer station improvements, and facility improvements at the Emergency Operations Center (EOC).

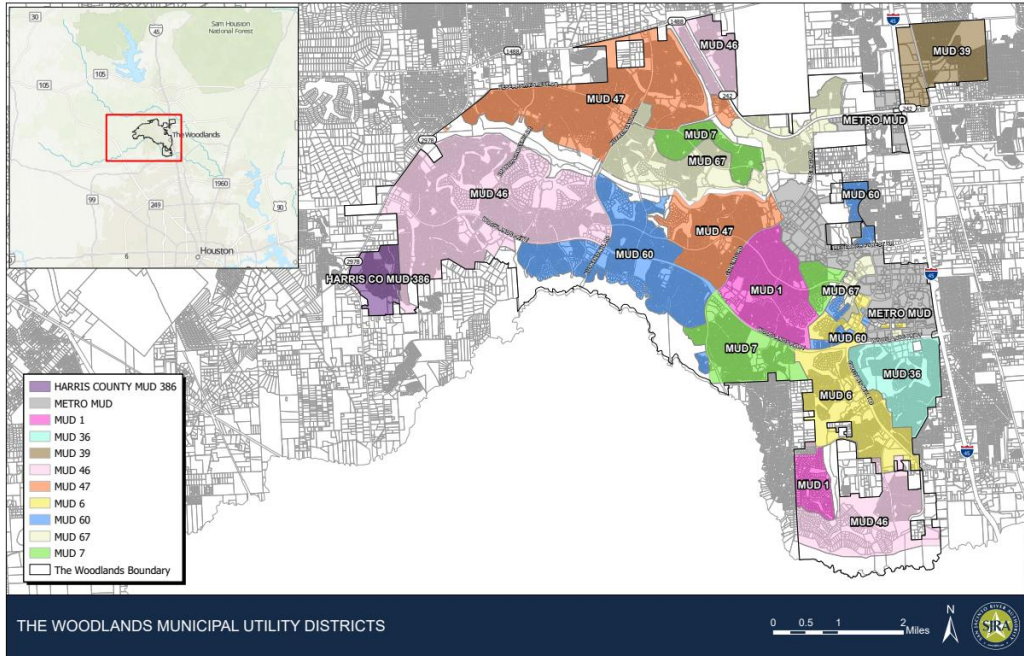


Figure 2. Woodlands Division Boundaries and MUDs

GRP Division

Located at the Lake Conroe Dam, the GRP Division’s purpose is to substantially reduce future groundwater usage from the Gulf Coast Aquifer by ensuring a reliable, long-term diversified portfolio of alternative water supply sources for all of Montgomery County. Since 2016, SJRA’s GRP strategy has been the design, construction, operation, maintenance, and administration of a water treatment plant and over 55 miles of transmission lines that treat surface water from Lake Conroe to meet or exceed drinking water standards, and then deliver it to cities and utilities within Montgomery County in the most cost-effective manner. Projects over the next 10 years include pretreatment and filtration optimization projects at the surface water plant, as well as utility projects to provide additional treated surface water to customers that have not received water in the past or increasing the amount that can be delivered.

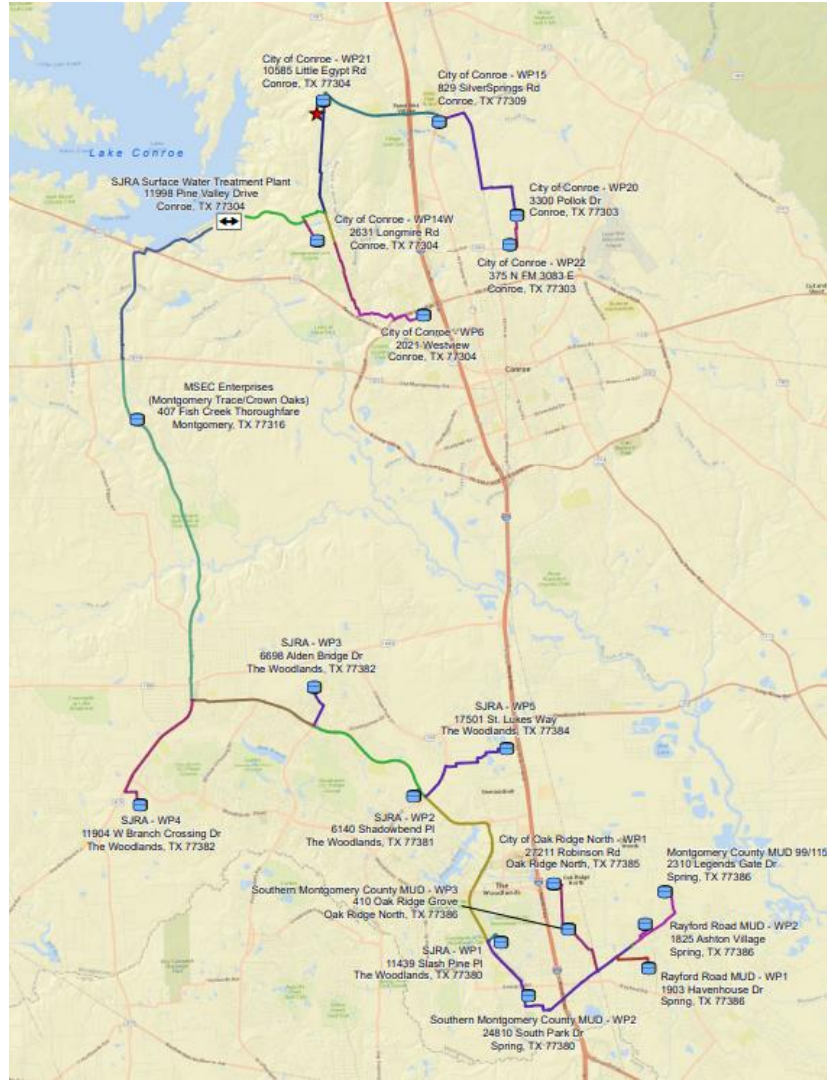


Figure 3. GRP Surface Water Plant and Transmission System

Lake Conroe Division

Lake Conroe was built as a joint venture between SJRA and the City of Houston beginning in 1969 and completed in 1973 to serve as a backup water supply reservoir for the City of Houston. The City of Houston owns two-thirds of the water rights in the reservoir and SJRA owns the remaining one-third. The reservoir can store up to 430,000 acre-feet of water at the normal pool elevation of 201 above Mean Sea Level (MSL). Outlet structures on the dam include one service spillway with five gates (40ft x 30ft each), and a service outlet with 3 gates with a 10-ft diameter conduit. Projects over the next 10 years include a new maintenance facility, paving and drainage improvements, rehabilitation of relief wells, and rehabilitation of the main spillway gates.

Additionally, the Lake Conroe Division operates and maintains the Bear Branch Reservoir in The Woodlands as well as Bear Branch from the reservoir to Lake Woodlands as well as part of Upper Panther Branch to its confluence with Bear Branch. The reservoir and earth-fill dam for Bear Branch was constructed in 1983 to provide

flood control for the northern part of The Woodlands. Projects over the next 10 years includes soil cement repairs and spillway replacement at the dam and drainage improvements south of the reservoir along Bear Branch.



Figure 4. Lake Conroe and Dam



Figure 5. Bear Branch Reservoir and Flowage System