

SJRA SANITARY SEWER TRANSMISSION ASSESSMENT & RENEWAL (SSTAR) PROGRAM



APRIL 2019

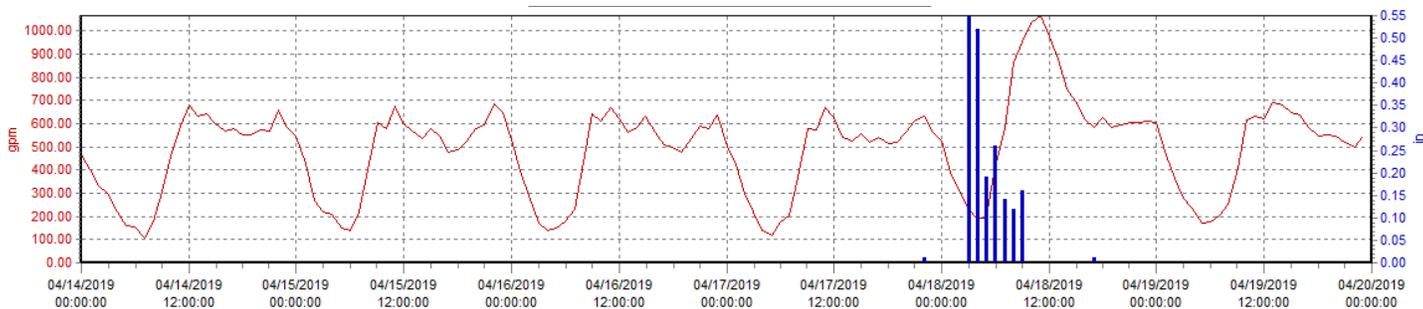
ABOUT THE SSTAR PROGRAM

The SSTAR Program is a community-wide, comprehensive assessment of the aging wastewater collection system in The Woodlands. The SSTAR Program is being conducted in two steps. The first step uses flow meters installed in pipes and rainfall monitoring to identify and quantify inflow and infiltration (I&I) in the system. The second step is a visual condition assessment of the wholesale system to assist with prioritizing rehabilitation projects for pipes, manholes, and pump stations by determining when rehabilitation is needed. These two steps will assist in prioritizing areas for further inspection and rehabilitation, and ultimately repairing those areas to improve the Woodlands system. By maintaining the system before it fails, there will be a reduced chance for sewage overflows into homes, businesses, and the environment.

PROJECT UPDATE APRIL 2019

Since March 1, the SJRA and its consultant have been collecting sewer system flow and rainfall data for analysis of I&I. In that time, two significant rain events have occurred. On both occasions, increases in flows were observed throughout the collection system. The data is being analyzed currently to determine the relative amounts of I&I in different areas (or "sub-basins") within the SJRA system, to aid in prioritizing additional inspections and rehabilitation of aging sewer pipes.

Below is an example of the information gathered from one flow meter and rain gauge during a rain event that occurred on April 18, 2019. The red line represents the wastewater flow in a 42-inch-diameter sewer line. Typical daily peaks and valleys of flow rate were observed on the "dry weather" days preceding the rain event (the daily patterns are due to fluctuations in usage during various hours of the day). The blue bars represent rainfall amounts in 30-minute intervals. The total rainfall for the event was approximately 2 inches of rain. Immediately following the rainfall, a corresponding increase in the sewer line flow rate was observed to occur in the late morning on April 18th. **Data similar to the chart below is being collected and analyzed for over 60 flow meters located throughout The Woodlands, during dry weather and wet weather events.**



System Response During April 18th Rainfall Event

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