



## CITY OF SUGAR LAND

Engineering Department

**CIP Project Number:** WW0802

**Title:** Collection System Rehabilitation Program

**Project Phase:** PER

**% of Phase Completion**



**Cost for this Phase:** \$240,000

**Funding Sources:** Revenue Bond

**Project Manager:** Pete Polito

**Contractor:** TBD

**Consultant:** HDR

**Project Description:** In FY2008 a citywide wastewater collection system and Infiltration/Inflow (I&I) evaluation study was performed to identify areas that experience sanitary sewer overflows (SSO) from I&I during heavy storm events and repeat dry weather occurrences. A Preliminary Engineering Report (PER) will be completed after the study. The results of the PER will identify areas that need further detailed evaluation for the CIPs scheduled over the next five years.

**Justification:** Continued rehabilitation of the sanitary sewer system (mains & manholes) due to high levels of deterioration, grade deficiencies or point failures. Evaluation provides an updated plan for the City's collection system rehabilitation program and avoids a potential TCEQ mandate for a City CMOM program. Recent failures on deep buried truss pipe, increased I&I in isolated areas and failures on several critical force mains warrant project continuation.

**Updates: December 2008-** HDR continue to analyze field data collected for three months. Rain gauge damage from Hurricane Ike has impacted available rainfall data to correlate with field data. Field data collection efforts may need to extend to February 2009.

**March 2009** – rainfall data was collected for 3 months to complete the study phase. Field data being analyzed and the next progress meeting is scheduled 03/11/09. Study phase will be completed soon and project will transition into Preliminary Engineering Report (PER) phase.

**June 2009** – Draft copy of study submitted to City staff late May 2009. Progress meeting held June 8, 2009 to review report and discuss ranking system to determine areas of deficiency. Upon review of data, it appears that additional field data to be collected to confirm inflow/infiltration results. This will delay the final report but is a necessary step to ensure final report represents true field conditions.

**July 2009** – Additional field data was collected to confirm inflow/infiltration results. Study report on hold until such measurements are made.

**August 2009** – Based on results of field data collected, further field testing needs to be performed to accurately measure flow capacity of targeted/critical lift stations. Utilities staff considering options to measure flow using ultrasonic technology to measure flow. Final study report delayed until more accurate measurements can be made.

**September 2009** – Decision made to complete final report based on available design pumping capacities for each lift station. Draft final report submitted 9/28/09 for review. Final report expected to be completed in October. Next steps will include negotiating scope and fee for Preliminary Engineering Report (PER). Engineering contract anticipated for council approval in December.

**October 2009** – Draft wastewater rehabilitation study re-submitted 10/23/09. Minor comments submitted back to HDR for preparation of final report. Next steps will include detailed scope of work and fee negotiations for PER phase. Engineering contract anticipated for approval in December.

**November 2009** – HDR received City comments to report. They will complete the final report and submit appropriate copies in December. PER scope and fee have been negotiated with HDR and engineering contract will be presented to City Council at the December 15 council meeting.

**December 2009** – City council approved PER phase contract with HDR for \$239,790 at the December 15 council meeting. Next steps will include kickoff meeting in January 2010 to initiate discussions on manhole inspections, smoke testing and pipeline television testing.

**January 2010** – Consultant, HDR/Claunch & Miller, gathering information and shoring up subcontractors prior to kickoff meeting. Kickoff meeting will be postponed to February 2010.

**February 2010** - Kickoff meeting for PER/Field Survey portion of the project was held in February. TV inspection of large diameter/deep gravity mains is tentatively scheduled to begin in March. Southwest Water will be HDR's subcontractor for the inspection work. SWW was selected based on best price and the fact that they use the Granite XP inspection software the City currently uses. Smoke testing portion of the project is not scheduled to begin until June, to allow for dryer conditions.

**March 2010** - Manhole inspection of large diameter/deep gravity mains began week of March 8. Southwest Water (Subcontract to HDR) started TV inspection of large diameter mains week of March 29. Inspections will continue through April and May. Smoke testing of shallow sewer mains will start in June 2010.

**May 2010** - Southwest Water continued inspection of large diameter & deep sewer mains throughout the City. Inspections will continue June. Smoke testing of shallow sewer mains scheduled to in June 2010.

**June 2010 (3<sup>rd</sup> Quarter)** CCTV Inspection of all line segments identified as critical in study phase of project has been completed and is currently being evaluated by HDR. HDR is scheduled to begin smoke testing of Horseshoe and Main St Lift Station service areas on July 12, 2010.

**August 2010** – Smoke testing was completed in early August. HDR is still reviewing CCTV inspection tapes of critical lines. Total footage of critical lines televised was less than anticipated. HDR and project team are scheduled to meet Sept. 15, 2010 to identify additional lines for CCTV inspection.

**September 2010 (4<sup>th</sup> Quarter)** - – Smoke testing was completed in early August. HDR is still reviewing CCTV inspection tapes of critical lines. Total footage of critical lines televised was less than anticipated. HDR and project team are in the process of identifying additional lines for CCTV inspection. Initial data review indicates line deficiencies and probable construction cost will exceed FY2011 construction budget. Project team is recommending combining project budgets for WW0802 and WW01101, with design to be completed in FY2011 and construction recommended for FY2012.