



## CITY COUNCIL AGENDA ITEMS

**To:** Mayor Graham and City Council  
**From:** Dennis Sullivan, Director of Public Works  
Walter Denton, City Administrator  
**Date:** November 3, 2008  
**Subject:** RESOLUTION – Sanitary Sewer District Lift Station SCADA  
(Supervisory Control and Data Acquisition)

**List of committees that have reviewed:** Public Works

**Background:** The City currently uses “Mission Communications” to provide limited SCADA service for our lift stations. When sewer backups occurred in Thornbury Subdivision a few years ago, it was discovered that either Mission or Vandeventer Engineering at the time of an upgrade to the Greystone Lift Station SCADA hardware (Greystone services Thornbury) put the wrong unit number into the Mission system. As a result, the Greystone Lift Station was not being monitored; some other location, not in O’Fallon, was shown on our screen instead. Therefore, when there was a problem at this lift station causing a high wet well level there was no indication or alarm sent. So, our crew did not respond to that location in time to avoid the backups. We were sued by the residents having backups as were Mission and Vandeventer. Mission was assessed a portion of the suit’s final settlement.

As a result, Mission has locked us out of key monitoring screens and callout lists until we indemnify them as to any future liability regarding lift station monitoring. To use a service with no liability or incentive to provide a quality monitoring and control system is foolish.

Additionally, this year, we have noticed the Mission system has become less reliable. To date this year we have had 400+ communication failure alarms and additional false or nuisance alarms resulting in the dispatch of Sewer Crew personnel to lift stations. Currently, approximately 20 hours (\$600) per week of overtime is required to investigate these unnecessary alarms. The alarms are most likely a function of Mission’s cell phone provider’s problems around 1:00am. And, we have noticed from what data we do receive from Mission (without granting indemnification) lift stations are disappearing and not being monitored at all. The Lincoln Farm Lift Station is currently not being monitored. We have only 30 minutes to respond to this station if there is a problem when alarms are available. In short, reliability has become unacceptable.

As a result of the earlier problems and the recent developments, we have been working with some urgency on an expansion of our existing water SCADA system to provide what Mission does for our lift station monitoring with needed enhancements to collect critical data and operate/control our sanitary system more efficiently. At this time, we need to put in place monitoring and communications devices at all 14 of our lift stations. We currently have a Beta Test Site at the Eagle Lift Station, near IHOP, at the intersection of Venita and Hwy 50. It has met all our expectations, and our Sewer Crew now possesses the ability to make the other 13 installations and provide maintenance/repair of the system. Basically, it is a black box-type of installation, where most electronic component repair is done at a manufacture representative installation as they are sealed units.

**Legal Considerations, if any:** The proposed system will be under the City's control using City owned equipment. Mission Communications and its cell phone providers will not have to be provided indemnification for their potential negligence. .

**Budget Impact:** Funds for this urgent work are not available in the current budget. Staff proposes to borrow the needed funding from the Water Enterprise Fund cash reserve and pay it back over the next two budget years.

**Staff recommendation:** Staff recommends the acceptance of the proposal from Gonzalez Companies in an amount not to exceed \$215,000. This does not include installation of the equipment that Gonzalez had in their proposal. Gonzalez will do project integration, equipment procurement, and pre-assembly for final installation as well as provide software and programming. Our in-house personnel will install the equipment at the lift stations. The \$228,000 figure in the Gonzalez proposal included contractor installation of the equipment at the lift stations.