

COUNCIL ACTION FORM

SUBJECT: SANITARY SEWER SYSTEM EVALUATION

BACKGROUND:

The ability of the sanitary sewer system to convey wastewater well into the future is dependent on the removal of the current large amount of infiltration and inflow (I/I) in the system that occurs during rain events. In order to minimize the need for costly expansions to the Water Pollution Control (WPC) facility, as well as to convey flows from new development as the City grows, the City must work to reduce the overall I/I in the system. To help accomplish this goal, a 2008 Sanitary Sewer System Study recommended development of a full Sanitary Sewer System Evaluation (SSSE).

This evaluation is a comprehensive and systematic program for identifying the defects that could contribute I/I across the entire city-wide sanitary sewer system. It also involves prioritizing those defects and establishing rehabilitation costs so that repairs can be included in the Capital Improvements Plan. The SSSE program generally consists of the following tasks: data collection, sewer televising, smoke testing, manhole inspection, flow monitoring and hydraulic modeling. Not only will the SSSE identify sources of I/I, it also identifies areas of aging infrastructure in need of repair to prevent unexpected failures and emergency repairs.

On March 27, 2012, City Council approved a contract with Veenstra & Kimm (V&K) engineering consultants to complete the SSSE in the amount of \$2,198,500. A project website was established where residents and businesses can access current sewer evaluation activities (www.amessewerstudy.com). A Cable Channel 12 show was run explaining smoke testing and the potential impacts to areas residents and businesses. Public informational meetings have been held to gather input from the public. Overall the project is expected to proceed into 2014, including providing a required project update to DNR by July 1, 2014.

In preparing the draft 2013-2018 Capital Improvements Plan, staff worked with V&K to summarize the work that has been completed to date. Overall, weather during the past year has been very dry so certain work activities have been advanced while others have been put on hold. To date, smoke testing and manhole inspections are complete in 10 of the 16 watersheds. Televising of the sanitary sewer system continues with 5 watersheds being complete. During the winter months, televising of the siphons and railroad crossings will be a primary focus. Due to the dry weather, the flow monitoring activity has been primarily recording base flow information. As the snow melts in the spring, flow monitoring will continue. The project tasks including flow monitoring will continue through 2013.

During the manhole inspections and televising of the sewers, each pipe and structure are given a rating factor of 1 through 5. A rating of 5 means that there is a missing section, void, fracture, or collapse. Ratings of 5 are recommended to be fixed within 12 months. A

rating of 4 means that there is a longitudinal crack, circumferential fracture or open joints. Ratings of 4 are recommended to be fixed within 5 years. As of September 2012, with approximately 40 percent of the system having been inspected, it is estimated that there are \$6.9 million worth of ratings 4 and 5 to be fixed in the City of Ames sanitary sewer system. **Projecting the same rate of defects over the remaining 60 percent of the system, it is anticipated that the City of Ames may need to make \$17 million worth of infrastructure improvements to the sanitary sewer system pipes and structures over the next 5 or 6 years.**

You should note that included in the proposed CIP that will be presented to City Council next week will be sanitary sewer improvements in an amount of \$3.27 million annually for the next five years with funding from State's SRF Fund. These funds, if approved through DNR, would fix infrastructure defects with rating of 4 and 5. Additionally in the CIP, is an annual amount of \$200,000 from Sanitary Sewer Utility Funds for routine sewer rehabilitation.

Because of the significant impact this new initiative will have on sanitary sewer rates, the City Council will have to decide if these expenditures should be spread over a greater time period in order to mitigate the immediate impact on rates.