

Office of the City Engineer

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To: Alderman Kaplan, Chairman
Public Works & Services Committee

From: John C. Rooney, Asst. Commissioner of Public Works/City Engineer *JCR*

RE: Item 14-10649

This item pertains to the 2013 Storm & Sanitary Asset Management System Summary Report submitted to the City of Racine. AECOM Technical Services) was hired by the City of Racine to assist the City Engineer's Office in inspection and assessment of this annual work. The City of Racine uses Pipeline Assessment and Certification Program (PACP), the US industry standard system for coding sewer defects. This is done via Closed Circuit Televising (CCTV) to visually inspect assets and inventory defects. The City owns and operates a sanitary sewer collection system comprised of over 4,200 manholes/structures and over 1 million feet of sewers. This collection system does not include assets owned by the Racine Wastewater Utility such as lift stations, force mains, and interceptor sewers. The City's storm sewer collection system includes 7,100 catch basins/inlets, over 4,900 manholes and almost 1.25 million feet of sewers and inlet leads.

Today, in 2013 dollars, the City of Racine sanitary and storm sewer network has an approximate initial investment value (or replacement value) of almost \$225 million and \$415 million, respectively. The PACP coding is used to determine which types of rehabilitation strategies (relining, spot repair, total replacement, etc.) provides the most cost effective way to extend the useful life of sewer networks. This is done through a 10 year program that began in 2004 to CCTV all sewer assets. Through the ninth year (ending in 2012) of the 10 year program, 92% of the sanitary sewer system and 80% of the storm sewer system has been inspected via CCTV. In addition, 99% of sanitary manholes, 88% of storm manholes, and 77% of catch basin/inlets have been inspected. On average, 86% of the entire sewer system has been inspected resulting in a backlog of \$38.3 million (\$18.1 million sanitary & \$23.3 million storm) of necessary rehabilitation or replacement. Extrapolating these costs over the 14% of the uninspected assets would amount to a \$48 million backlog. Under a ten year program to address this backlog, the City should be investing \$4.8 million annually in capital improvement (\$2.1 million in sanitary & \$2.7 million in storm). In the 2015 proposed budget, the sanitary and storm capital investment is \$2.2 million and \$1.875 million, respectively. This addresses the backlog of sanitary and storm over 10 and 15 years, respectively. The Storm Water Utility also must fully fund all operations such as street sweeping, leaf collection, catch basin cleaning, storm retention, engineering, administration; as well as capital for equipment & projects for Best Management Practice devices and stream bank restoration. In addition, the Sanitary Sewer Maintenance Fund pays for maintenance and repair of over 28,000 laterals and tri-annual cleaning of nearly 54 miles of sanitary sewer mains.

The report becomes a useful budgeting tool in managing the City of Racine's sewer assets. The City of Racine's overall story based on sewer asset management is the following:

- Updated, complete, accurate inventory of assets
 - GIS data and mapping
 - Easily accessible to users (engineers, public via CUI)
- Timely application of appropriate CIP actions
- Reducing the backlog of required improvements
 - Structural problems
 - Inflow/Infiltration problems
- Coordinated planning with street paving
 - Reduces open cuts of new streets
 - Effective operation of collection system
 - Regular cleaning
 - Optimizes flow conditions
 - Reduces backup potential
 - Proactively addressing problem areas

This result provides sound budgeting consistent with good asset management practices. It is my recommendation that the committee receives and file the report.