



City of Arts & Innovation

Governmental Affairs Committee Memorandum

TO: GOVERNMENTAL AFFAIRS COMMITTEE **DATE: OCTOBER 5, 2016**

FROM: INTERNAL AUDIT DIVISION **WARDS: ALL**

**SUBJECT: PUBLIC WORKS DEPARTMENT WASTEWATER COLLECTION SYSTEM ASSET
MANAGEMENT PERFORMANCE AUDIT**

ISSUE:

Receive, review, provide input on, and recommend to the City Council approval of the performance audit report on the Public Works Department's Wastewater Collection System Asset Management.

RECOMMENDATION:

That the Governmental Affairs Committee receive, review, provide input on, and recommend to the City Council approval of the performance audit report on the Public Works Department's Wastewater Collection System Asset Management.

BACKGROUND:

In accordance with the Fiscal Year 2015/16 Internal Audit Workplan, a performance audit of the Public Works Wastewater Collection System Asset Management was conducted. The audit report with recommendations and management's response was finalized and released on June 24, 2016.

The scope of work was to assess the efficiency and effectiveness of five core components of wastewater asset management:

1. Asset inventory
2. Level of service – repairs and replacement; regulatory requirements
3. Critical assets – age, condition, failure history, predictive failure
4. Operation and Maintenance – preventative, replacement schedule, work order system
5. Long-term funding strategy

DISCUSSION:

With aging infrastructure and limited budgets, the City's Public Works Department is tasked with managing/operating the wastewater (sewer) collection system while maintaining a desired level of service to customers/rate payers.

The City's wastewater collection system includes over 820 miles of public sewer pipelines; 414 miles of sewer laterals (public and private), serving a population of over 320,000. Wastewater of approximately 40 million gallons per day from homes and businesses is transported using gravity and 19 pump stations through the miles of sewer lines to the wastewater treatment facility known as the Regional Water Quality Control Plant (RWQCP).

Findings

1. The Wastewater Division has established adequate administrative practices and internal controls to carry out the goals and requirements of the Sewer System Management Plan (SSMP) as required by state regulatory agencies.
2. The Department/Division has a comprehensive Capital Improvement Plan (CIP) that includes funded and unfunded repair/replacement projects for the wastewater collection system for the next five years.
3. There is a need to ensure a comprehensive maintenance management system that is integrated with a robust GIS mapping system in order to track all maintenance activities, service requests, work orders, SSO history, sewer line cleaning, sewer line and manhole repairs, sewer line CCTV inspections, gravity and force mains and sewer line rehabilitation and replacement projects.

Recommendations and Management Response

The following recommendations will preserve the City's capital investment in the sewer collection system while improving internal operations in order to continue providing the desired level of service:

1. Develop an implementation plan with the Innovation Technology (IT) Department to migrate information from CadMe to ArcGIS; interface the work order system (UWAM) with ArcGIS to improve staff efficiency and effectiveness.

Management Response:

Concur. In order for the UWAM to be effective it needs to be coupled with a modern and up-to-date mapping system. The Division will soon be opening recruitment for a Wastewater Collection System Scheduling Coordinator (Scheduler). The Scheduler job description was recently updated to attract candidates with a GIS skillset. Although the Scheduler alone cannot implement the recommendation, having a member of the Collections Section versed in GIS should help facilitate effective collaboration with IT. The Wastewater Division will meet with the IT department to discuss and develop an implementation plan as recommended.

2. Reduce inefficiencies in troubleshooting and monitoring all wastewater pump stations by investing in specific equipment.

Management Response:

Concur. Incorporation of pump motor AMP readings into SCADA across all stations would improve efforts to troubleshoot issues and, when

warranted, dispatch resources to remote facilities. Three of the 19 pump stations already have this capability and all are equipped with failure alarms. Pump motor AMP readings would be an enhancement to existing diagnostics. The Wastewater Division will implement a plan forward as follows:

In 2016 the Wastewater Division will undertake a wastewater and storm water lift station evaluation study. The study is intended to assess remote facilities operated and maintained by the Wastewater Division and will evaluate in detail structural, electrical, mechanical, safety, and communication capabilities and needs at each. The effort will result in a condition and needs assessment report and include a prioritized list projects to address issues identified. A similar evaluation was completed in 2008. This effort will revise the 2008 report and expand the scope to include storm water lift stations.

Staff suspects many stations are in need of upgrade and repair. As these enhancements are budgeted and moved forward in future years, the Wastewater Division proposes to incorporate into these projects the audit recommendation to add equipment to monitor pump motor AMP readings.

FISCAL IMPACT:

There is no fiscal impact associated with review of the audit findings and recommendations at this time. Authorization for expenditure of funds will be brought to City Council at a later date on a case by case basis.

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Attachments:

1. Wastewater Collection System Asset Management Audit Report
2. Presentation