Performance Audit of the City’s Fire Hydrant Inspection, Maintenance, and Repair Operations

Public Works Commission
February 13, 2020
## Results in Brief

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Audit Objectives:

1. Evaluate whether City maintains accurate locational data on fire hydrants and whether City has developed and promulgated adequate policies and procedures.

2. Assess data management effectiveness in ensuring fire hydrant operational issues are fully addressed.

3. Assess fire hydrant program cost management and program efficiency.

Audit Scope: January 1, 2019 - June 30, 2019 in order to focus on City’s current processes for fire hydrant inspection, maintenance, and repair.
Background

Fire hydrants serve several critical functions:

- Firefighting / fire flow compliance testing
- Flushing water mains / maintaining water quality
- Temporary water supply connections during water main breaks
- Insertion points to inspect water main interiors

City is responsible for about 1,366 fire hydrants located within Beverly Hills and a portion of West Hollywood.

Public Works Department’s Water Distribution Division has primary responsibility for the City’s fire hydrant program.
Finding 1: Location, Processes, Supervision

- City has compiled and maintains comprehensive locational GIS data on all fire hydrants within its area of responsibility.

- City has developed work standards that are substantially compliant with industry standards. Audit field observations confirmed crews’ understanding and execution of the work standards.

- Opportunities to improve direct supervision of field crews’ work.
Finding 2: Data Management

• City implemented current processes in January 2019; previous processes were reactive, ad hoc, and not systematic.

• Audit field inspections revealed some data inaccuracies.

• Interviews with field crews showed differing practices on types and amount of data collection.

• Implementing more systematic data collection practices would improve information flow and program efficiency.
Finding 3: Program Costs and Efficiency

Program Cost Key Issues:

• During audit period, 66 percent of fire hydrant operations conducted at overtime rates.

• Total direct labor charges = $55,700, of which $41,000 was overtime pay.

• Department unable to provide summary data on materials costs due to lack of inventory information system.

• Audit inspection of storeroom determined that physical controls are limited.

• City is addressing the issue with implementation of new system.
Finding 3: Program Costs and Efficiency

Program Efficiency Key Issues:

• Water main valves and fire hydrants are co-located throughout the City’s zones of responsibility, although frequency of inspection and numbers of main valves and hydrants differ (4,900 main valves vs. 1,300 hydrants).

• Water main valve maintenance and fire hydrant maintenance utilizes essentially same equipment, vehicles, and crews; however, dispatch practices differ.

• City could optimize operations by consolidating water main valve and fire hydrant tasks and dispatch
Recommendations

We made four recommendations to address key issues identified in the audit:

1. Establish processes and procedures to provide for more direct supervisory review of field crews’ work.

2. Add to existing or develop new work standards to provide for more systematic, consistent, and accurate data collection.

3. Provide updates on status of efforts to address inventory control issues.

4. Consolidate efforts for water main valve and fire hydrant inspection, maintenance, and repair operations.

management agreed to implement all four recommendations.