

STAFF REPORT

INFORMATIONAL REPORT REGARDING FOLLOW-UP OF SEWER SMOKE TESTING RESULTS

Honorable Mayor and Council Members:

Summary

This informational report provides the Council with an update on the smoke testing program.

Background

In previous years the City conducted sewer system smoke testing projects in various areas. Smoke testing consists of blocking sections of the sewer main, then blowing a bright white anhydrous calcium chloride "smoke" into a central manhole. The highly visible smoke identifies cracks and off-sets in the sewer main and lateral as it escapes through dry soils to the surface. It is for this reason smoke-testing is most effective when done in the late summer to early fall. The smoke also identifies prohibited cross-connection of stormwater into the sewer from roof or yard drains. The property owners receive notification prior to the start of smoke testing describing in details the procedure of smoke testing. After a smoke testing is done, a survey crew logs the locations of visible smoke. The smoke is non-toxic and will not penetrate past sewer gas traps ("P-traps") into homes unless the plumbing was not installed to code or the traps have been allowed to dry out. If illegal connections or problems with the sewer lateral line are identified, city staff sends a letter requiring homeowners to fix their sewer lateral.

The last smoke testing project was completed in 2002. Most defective laterals have been repaired and the majority of illegal connections were eliminated. Recently, City staff did the last mailing to ensure that a few remaining illegal connections identified previously have been fixed.

Discussion

City staff should resume the smoke testing program and conduct it on a regular basis since it is the most efficient way to determine points of Inflow and Infiltration. Currently, City's wet weather flows are much higher than the dry weather flows mainly because of the defective lateral and cross connections; therefore the City is paying the treatment plant during winter time for treating the stormwater runoff that enters the system from defective sewer lateral lines, illegal cross connections and increased cost for improvements at the plant to treat wet weather flows. Reducing Inflow and Infiltration will reduce costs to the sewer treatment plant, decrease possibility of the sewer overflow and comply with the requirement of the State and Regional Water Quality Control Boards Sewer System Management Plan (SSMP). City will continue doing Capital Improvement Projects to ensure

that sewer main lines are fully sealed and will not have any inflow of stormwater or infiltration of the ground water. Sewer pipelining, pipe bursting and pipe replacement are the types of projects City staff successfully implemented in the past and will keep using in the future.

Staff is in the process of finalizing the Capacity Study project which is part of the City's efforts to comply with SSMP requirements. The Capacity Study project outlines projects that will eliminate any capacity related problems in the sewer system. One of the projects indicated in the Capacity Study was Smoke Testing. It is recommended to start smoke testing in the areas with the highest level of Inflow and Infiltration.

The cost of smoke testing in the basins is approximately \$40,000, not including enforcement of the non-compliant properties. In order to reduce the cost, City will do some smoke testing projects inhouse using available staff in Public Works Sewer Services and allocating one person from the Services Street Paving Program. The cost of doing smoke testing in-house will include staff time, equipment and supplies.

General Plan/Vision Statement

This project is consistent with the General Plan General Community Goals and Policies section (Paragraph 1015), which states "To provide public services efficiently and at a level adequate to serve an ultimate population of about 28,000" and with the General Plan Public Facilities and Services Goals section (Paragraph 2041), which states "To provide public services at a level adequate to ensure public safety, health and welfare at the lowest possible cost; to establish and maintain all essential public services and facilities in a manner that ensures continued operation in time of emergency."

Fiscal Impact

Funding for this project will come from the Sewer CIP Program.

Public Contact

Public contact included posting of City Council agenda.

Recommendation

No action is required. This is an informational report.

Alternatives

- 1. Take no action
- 2. Refer back to staff for additional information

Attachments

A. None.

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