

DATE ISSUED: October 24, 2003 REPORT NO. 03-218

ATTENTION: Natural Resources and Culture Committee
Agenda of October 29, 2003

SUBJECT: Optimization of Sewer Spill Reduction Program

REFERENCE: City Manager's Report No. 01-180, dated September 5, 2001
Memo to Mayor and Council, dated September 13, 2001

SUMMARY

Issues - 1) Should the Committee recommend that the Metropolitan Wastewater Department be authorized to convert 38 limited staff positions to permanent positions and retain 19 of 29 limited staff positions beyond FY2004? 2) Should the Committee recommend that the Metropolitan Wastewater Department be authorized to establish a goal of repairing/ rehabilitating/ replacing 45 miles of sewer pipeline per year?

Manager's Recommendations - 1) Recommend authorization that the Metropolitan Wastewater Department convert 38 limited staff positions to permanent positions and retain 19 of 29 limited staff positions beyond FY2004; 2) Recommend authorization that the Metropolitan Wastewater Department establish a goal of repairing/rehabilitating/ replacing 45 miles of sewer pipeline per year.

Other Recommendations - At its October 20, 2003 meeting, the Public Utilities Advisory Commission recommended approval of the Manager's recommendations.

Fiscal Impact – This action does not impact Council's previous action by Council Resolution R-295587 on October 16, 2001 that approved four 7.5% annual increases to sewer service charges effective March 1 of 2002, 2003, 2004 and 2005.

BACKGROUND

In 1999 the Metropolitan Wastewater Department began development of a comprehensive Sewer Spill Reduction Program. The key elements of the program were:

- enhancement of the Capital Improvement Program for the repair, rehabilitation and replacement of deteriorated sewer pipelines, and
- optimization of the department's sewer pipeline cleaning program.

In October 2001, the City Council approved four annual 7.5 percent sewer rate increases to fund the enhanced Capital Improvement Program. Five percent of each 7.5 percent rate increase was intended to fund capital improvement and operational costs, and 2.5 percent of each rate increase was to be used solely to fund the Capital Improvement Program. The program included a goal of increasing the rate of sewer pipeline repairs, rehabilitation and replacement from approximately 15 miles per year to 60 miles per year. The annual rate of repair, rehabilitation and replacement reached 48 miles in CY2002 and is expected to be approximately 45 miles in CY2003. The program also included a goal of televising 1,000 miles of the approximately 3,000-mile system over 5 years. The intent was to use the results of the televising to better define the requirements for the Capital Improvement Program. The televising program was later refined to consist of televising 1,200 miles of pipeline over 3 years. This refinement will lead to the condition assessment of all pipelines over 40 years old as well as all trunk sewers, almost all pipelines in canyons and all pipelines with histories of frequent maintenance and/or sewer spills. The pipeline televising program is on schedule to complete the televising of 1,200 miles of pipelines by December 31, 2003. Final assessment of the televising data will be complete by December 31, 2004.

DISCUSSION

When the goal of ramping up sewer pipeline repair, rehabilitation and replacement from 15 miles per year to 60 miles per year was established, it was based on an assumption that 20 percent of the older portion of the system would require repair or rehabilitation and 40 percent would require replacement. This assumption was based on the history of responding to spills as well as national data as opposed to a detailed physical condition assessment. Through September 30, 2003, 538 miles of televising data have been assessed. The amount of pipe requiring repair or rehabilitation is 119.2 miles or 22.2 percent, approximately the same as the 20 percent anticipated. However, the amount of pipeline requiring replacement is only 104.2 miles or 19.4 percent which is approximately half the percentage anticipated. Since the oldest portions of the system, those most likely to be in the worst condition, were televised first, these results are expected to continue.

Before the Sewer Spill Reduction Program was initiated, the City was cleaning approximately 1,500 miles of its 2,894 mile system on a schedule that ranged from once a month to every two years. In December 2001, the City Council approved a staff recommendation to hire 67 limited positions in order to clean the entire system by March 2004. This cleaning program is on schedule to clean the system by March 2004, with the exception of some sections of some pipelines in environmentally sensitive areas.

As each segment of pipe is cleaned, the cleaning crews assess the pipe's condition prior to cleaning. This condition is used by staff to establish the cleaning frequency for that pipe. By March 2004, a cleaning frequency will be established for each segment of pipe in the Municipal Wastewater Collection system. This information will be used to determine long term cleaning crew staffing requirements.

The results of the Sewer Spill Reduction Program to date are encouraging. When comparing sewer spills through September for CY2000 versus CY2003, total sewer spills are down 60 percent and spills to public waters are down 66 percent. The substantial increase in the rate of pipeline replacement, rehabilitation and repair is addressing the most significant aspects of the structural deterioration of the system. However, the comprehensive cleaning program has been most responsible for the significant reduction in sewer spills over the past two years since it addresses the much broader range of sewer spill causes for the entire system.

RECOMMENDATION

Based upon pipeline televising program results, pipeline replacement requirements have been reduced significantly. It is recommended that the annual pipeline repair, rehabilitation and replacement goal be reduced to 45 miles per year rather than 60 miles per year.

The significant reduction in sewer spills over the past 2 ½ years is due largely to the comprehensive pipeline cleaning program. In order to continue this comprehensive cleaning program, it is recommended that 38 of the 67 limited positions approved by Council in December 2001 be retained as permanent positions, that 19 of the 67 limited positions be retained as limited positions and that the remaining 10 of the 67 limited positions be eliminated. It is expected that the 19 remaining limited positions will be attrited over a 10-year period as the pipeline replacement and rehabilitation program reduces the need for high frequency cleaning. This level of staffing would result in an increase in Right-of-Way cleaning from the previous rate of 1,183 miles per year to approximately 1,537 miles per year and an increase in non Right-of-Way (canyons) from 3 miles per year to approximately 106 miles per year.

ALTERNATIVES

1. Maintain the goal of repairing, rehabilitating and replacing 60 miles of sewer pipeline per year. This is not recommended as it is not warranted by the results of the televising program.
2. Eliminate 67 limited staff positions. This is not recommended as it would result in insufficient staffing to adequately clean the entire Municipal Sewer System's Pipelines.

Respectfully submitted,

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Director
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Approved by: Richard Mendes
Utilities General Manager

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