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MANAGEMENT LETTER

DATE: November 22, 2013

TO: Metropolitan King County Councilmembers

FROM: Kymber Waltmunson, County Auditor

SUBJECT: Management Letter on the Wastewater Treatment Division's Response to Recommendation 10 of the Performance Audit of the Combined Sewer Overflow Program

This management letter provides the results of our review of the Wastewater Treatment Division's (WTD) response to recommendation 10 of the 2012 Performance Audit of the Combined Sewer Overflow (CSO) Program. We found that while WTD has made efforts to respond to the recommendation (and a corresponding County Council proviso), its response falls short of the intent of the recommendation by placing no value on reducing pollution sooner and using an incomplete methodology for prioritizing projects. We recommended that WTD include overflow volume reduction and the time value of pollution in evaluating the cost-effectiveness of CSO projects and project sequences. The County Executive concurred with this recommendation.

Background

In October 2012, the Auditor's Office made ten recommendations to improve cost-effectiveness of the CSO program in a council-mandated performance audit. The estimated cost is $711 million (2010 dollars) for the remaining projects needed to bring the county into compliance with the federal Clean Water Act.

The Auditor's Office has begun its follow-up, and a subsequent management letter will address recommendations 1-9. We are submitting a separate management letter regarding recommendation 10 because it was the subject of a County Council budget proviso and WTD recently submitted a report in response.

Recommendation 10 addresses our finding that WTD's CSO Control Plan project sequence takes neither the cost-effectiveness of the various projects in reducing pollution nor the time value of pollution into account. For example, the project (Hanford, Lander, Kingdome, King Street, or HLKK) that would reduce by far the largest amount of pollution is scheduled to be completed last. Completing the HLKK project sooner would reduce discharge volumes much sooner with potentially little impact on sewer rates.

The County Council adopted a proviso in the 2013 budget ordinance directing WTD to submit a report "providing additional financial and cost-effectiveness analysis as outlined in the King County Auditor's Office 2012 Performance Audit of Combined Sewer Overflow Program, of the 2012 adopted long-term combined sewer overflow ("CSO") control plan project sequencing and alternate project sequencing." The County Council directed that the report include analysis of accelerating one or more CSO projects. In addition to these directives specific to recommendation 10 of the performance audit, the County Council proviso also required the report to address a variety of other questions relating to costs, staffing, rate impacts, alternative financing, coordination with other projects, regulatory issues, etc.

WTD submitted its report to the County Council on October 25, 2013, and its primary finding is that the disadvantages outweigh the advantages of accelerating the HLKK project.

WTD's Proviso Report Is Largely Responsive to the County Council Proviso, but Places No Value on Reducing Pollution Sooner

The WTD report is largely responsive to the County Council proviso in that it evaluates acceleration of the HLKK project and the impact of doing so on costs, staffing, rate impacts, etc., as directed by the County Council. However, the report does not evaluate the time value of pollution as specified by recommendation 10.

WTD's report indicates that accelerating the HLKK project would result in a higher present value cost of the project because expenditures would occur sooner, and dollars spent sooner are worth more than dollars spent later. However, the report places no value on reducing pollution sooner rather than later and therefore does not meet the intent of recommendation 10. According to the proviso report, the HLKK project removes over twice the amount of PCBs and copper per year as all of the other CSO projects combined.

Accelerating the HLKK project would keep more than four pounds of PCBs from being discharged into the East Waterway (next to Harbor Island) that would otherwise not be removed. PCBs are linked to serious human and environmental health issues, are allowed at a maximum contamination level of .5 part per billion in drinking water, are persistent in the environment, bio-accumulate in the food chain, and are a key driver for major and costly remediation in this water resource inventory area.

Placing a value on the volume of pollutants removed, accelerating the HLKK project is no more expensive per unit of pollution removed than if it is not accelerated. Using data available in the proviso report, despite the higher present value cost of accelerating the HLKK project, the present value of the cost per volume of pollutants removed is about the same whether the project is accelerated or not.

The Methodology Used for Prioritizing CSO Projects Is Incomplete

The proviso report uses a measure of the sensitivity of the receiving water as its metric for prioritizing CSO projects. This methodology uses incomplete information and does not take into account the volume of pollutant discharges as directed by County Council.

Measurements of Sensitivity Use Incomplete Information
The information WTD used to calculate sensitivity may be incomplete or inaccurate. We note in particular that the East Waterway was given a low sensitivity of .3 for human exposure to pathogens even though it is used regularly for net fishing by tribal fishermen.

Prioritization Methodology does not Include Volume of Pollution
The proviso report prioritizes CSO projects by developing a score for four measures of public and environmental health sensitivity:

1. Public exposure to pathogens;
2. Public consumption of resident fish;
3. Recontamination of sediments; and
4. Salmon exposure to contaminants.

For example, salmon exposure to contaminants is measured by the number of salmon habitat sites in the CSO discharge area multiplied by the size of the salmon run. The volume of pollutant discharge is not considered in this score.

This methodology could result in a situation in which a drop of discharge into an area considered to be slightly more sensitive is prioritized more highly than a million gallons of discharge into an area considered to be slightly less sensitive. While this is an extreme example, we note that volume of pollutant discharge varies by as much as 140 times among the various CSO discharge areas. If it had been considered, the volume of pollution discharged into the receiving water would affect the sensitivity measures WTD uses. Using the example of salmon exposure to contaminants, sensitivity is a function of not only the number of salmon habitat sites and the size of the salmon run, but also the volume of pollution in the discharge area. Pollution volume is important in measuring the sensitivity of the other WTD factors: public exposure to contaminants, consumption of resident fish, and recontamination of sediments.

Conclusion
While WTD's proviso report is largely responsive to the County Council proviso, the analysis conducted for the report is incomplete and does not meet the intent of recommendation 10 of the CSO Performance Audit.

Larry Brubaker, Senior Principal Management Auditor, Bob Thomas, Senior Principal Management Auditor, and Chantal Stevens, Principal Performance Management Analyst, conducted this management review. Please contact Larry Brubaker at 477-1034 or me at 477-1038 if you have any questions about the issues discussed in this letter.

cc: Dow Constantine, King County Executive, Department of Executive Services (DES)
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