



City of Harrisonburg, Virginia

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STREET MAINTENANCE
TRAFFIC ENGINEERING
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REFUSE/ RECYCLING
CENTRAL STORES

TO: Kurt Hodgen, City Manager
FROM: Thomas Hartman, PE, Assistant Director of Public Works
DATE: May 24, 2016
RE: Report on Stormwater Utility Fund

Summary: The Department of Public Works (DPW) was requested at the May 10, 2016 City Council meeting to provide a report concerning the current status of the City's Municipal Separate Storm Sewer System (MS4) program goals as it relates to the Stormwater Management Fund. This report outlines all aspects of the MS4 program, and provides an update to the current Total Maximum Daily Load (TMDL) reduction requirements.

Background: The Stormwater Management Fund (Fund) was developed to assist the City with the revised MS4 regulations that became effective on July 1, 2013. In order to develop the Fund, DPW worked with a Stormwater Advisory Committee (SWAC) and from that one year plus endeavor the Fund was created. The Fund was developed to assist in four (4) areas; Operation and Maintenance, Permit Compliance, Utility Administration, and Capital Projects. Below is a breakdown of how the fee was planned to be distributed amongst the four (4) areas and a brief explanation of each.

23% - Operations and Maintenance - The stormwater utility fee funds the landfill tipping fee for the disposal of collected street sweeping debris and the purchase of new or replacement flusher truck and street sweeper equipment. It also includes the maintenance of all BMP's built to assist the City in achieving its TMDL reduction goals.

4% - Permit Compliance - The stormwater utility fee funds the MS4 Permit stormwater program which includes any SWPPP-required costs to comply with pollution prevention requirements, staff training, supplies and testing for illicit discharge detection, and public outreach and education.

4% - Utility Administration - The stormwater utility fee funds administration of the fee which includes developing and maintaining a stormwater utility fee credit program, processing and tracking credit applications, and conducting educational workshops.

69% - Capital Projects - The stormwater utility fee funds the design and construction of capital projects to meet the TMDL reduction requirements for the City of Harrisonburg. This includes retrofits to existing stormwater facilities to increase their designed pollutant removal. Also, the Stormwater Improvement Plan is included in this area, as this document would be able to provide the City a road map to meeting our TMDL reduction requirements.

As evident in the cost breakdowns shown above, the majority of the collected revenue was to be utilized for the development and construction of Capital Projects in order to meet our TMDL reduction requirements. The fee was developed based on an estimated cost of \$35,000 to \$40,000 / lb of TP removed. During the development we had only identified 2 projects to help meet our 1st permit cycle goal; they were the East Market Street RSC and Lucy Simms projects. The remaining 1st permit cycle projects were to be identified

with the Stormwater Improvement Plan, which is under development. Also, the fee was developed so that in the later years of the 1st permit cycle the planning and design for the 2nd permit cycle projects could be accomplished. Finally, it was discussed during Fund development that in order to meet our total TMDL requirements it was going to take a threefold approach of 1) Capital projects on City owned property, 2) Private projects in partnership with the City, and 3) possible purchase of credits from a credit bank.

The initial fee was estimated to collect \$2,200,000 per year, with approximately \$1,500,000 of the collected revenue being used for Capital Projects, which equates to \$22,500,000 for Capital Projects over a 15 year time period. This collected revenue would provide the City with a budget of approximately \$35,000 / lb of TP removed for our projects. This is the benchmark that all potential City projects would be gauged in order to determine their cost effectiveness. It should be noted that during the Fund development Street Sweeping was identified as a Good Housekeeping program, but no TMDL pollutant removal was associated with this practice.

Following the development of the Stormwater Utility Program and Fund, and its adoption by Council, guidance was released from DEQ that allowed pollutant credits to be received from Street Sweeping activities. Attached is a table that shows the TMDL reduction requirement for our current permit cycle and the anticipated TMDL reduction requirements for the second and third cycles, as well as the pollutant removal credits received from Street Sweeping. As shown, our current Street Sweeping activities allow the City to meet its 1st permit cycle reduction requirements, but fall short in the 2nd and 3rd cycles in regards to total nitrogen (TN) and total suspended solids (TSS). It should also be stated that discussions are taking place at the State level in regards to Street Sweeping and the amount of pollutant removal credits allowed to be taken from this practice. DPW talked with DEQ officials concerning the status of the Street Sweeping guidance and expect overall revisions to the pollutant removal requirements for the 2nd and 3rd permit cycles. From that conversation it is anticipated that since the City has already included Street Sweeping in its approved TMDL action plan, DEQ plans to allow those removal credits to remain valid regardless of any future amendments to the Street Sweeping guidance. However, a final determination on allowing the same Street Sweeping credits has not yet been made and there will be revisions to the Stormwater model used to determine the TMDL reduction requirements, and any changes to either Street Sweeping or the Stormwater model could result in increased TMDL reduction requirements for the City.

It should be noted that Street Sweeping estimates used for the current TMDL action plan were values collected during FY14, when the City was only measuring the volume of collected material and then calculating the tonnage. Beginning in FY15 DPW began weighing all sweeper debris and because of the change the collected tonnage has decreased from the reported amount in FY14. The revised TP removal is approximately 630 lbs of TP removed, which does not satisfy the 3rd permit cycle goal. This report was prepared using the revised Street Sweeping removal of 630 lbs/yr.

Costs Remaining with Street Sweeping Being Performed

Due to Street Sweeping the City has, as based on the 1st permit cycle guidance, met the complete TMDL "diet" for the 1st permit cycle. However, TN and TSS are still needed for the 2nd and 3rd permit cycle. In order to determine a cost associated with the removal of TN and TSS, DPW used DEQ supplied guidance to equate the cost of TN removal to that of TP removal, meaning that 1 lb of TP removed equates to 6.9 lbs of TN. Therefore, if we assume a cost of \$35,000 / lb of TP removed, the equivalent TN cost would be \$5,100 / lb of TN removed. If we apply this cost to the shown deficit in 2nd and 3rd permit cycles the cost for each cycle year would be **\$3,779,100** and **\$21,246,600** respectively. Performing the same comparison based on TSS (1 lb TP removed equates to 469.2 lb of TSS removed) the equivalent cost is \$75 / lb of TSS removed and

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results in a 2nd and 3rd permit cycle cost of **\$4,456,200** and **\$33,907,425** respectively. These costs are only related to achieving the TMDL reduction requirement, it does not include the cost associated with the three (3) other areas that Fund revenues are utilized.

As shown the TMDL reduction goals still present a challenge for the City and will require funds in order to meet those goals.

Key Issues: None.

Environmental Impact: None.

Fiscal Impact: None.

Prior Actions: None.

Alternatives: None.

Community Engagement: None.

Recommendation: DPW at this time does not recommend any changes to the Stormwater Management Fund's Billing Unit (BU) fee of \$10.50/BU.

Attachments: None.

Review:

The initiating Department Director will place in Legistar, in sequence of transmittal, the names of each department that must initial their review in order for this item to be placed on the City Council agenda. The completion of review only addresses the readiness of the issue for Council consideration. This does not address the recommendation for approval or denial of the issue.