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TO: Kurt Hodgen, City Manager  
FROM: Thanh Dang, Transportation & Environmental Planning Manager  
DATE: January 27, 2016  
RE: Presentation on the East Market Street Regenerative Stormwater Conveyance Channel project

**Summary:** The Public Works Department and representatives from A. Morton Thomas & Associates, Inc. (AMT) will present a project status update for the East Market Street Regenerative Stormwater Conveyance (RSC) channel project.

**Background:** In 2015, the City was awarded the Stormwater Local Assistance Fund (SLAF) grant from the Virginia Department of Environmental Quality (VA DEQ) for the design and construction of a regenerative stormwater conveyance (RSC) channel and dry swale within East Market Street median between Chestnut Ridge Drive and the Kohl's department store entrance.

This area drains into Sieberts Creek, a tributary of Blacks Run. Blacks Run was initially placed on Virginia's 303(d) list of impaired waters in 1996 for violations of the fecal coliform standard and the general standard for aquatic life. The aquatic life TMDL identified sediment as the primary stressor of Blacks Run. Blacks Run ultimately drains into the Chesapeake Bay watershed which is impaired for phosphorus, nitrogen, and sediment. The East Market St RSC and dry swale project targets 104 acres of highly developed commercial area with high concentration of impervious areas. RSC is an innovative approach to provide stormwater treatment by combining stormwater management with wetland stream restoration.

Current Chesapeake Bay TMDL models and guidance, estimate that the City will be required to implement stormwater management projects and practices to remove 673 lbs of phosphorus per year by 2028. The East Market Street RSC project is estimated to remove 18.56 lbs of phosphorus per year. Estimated cost per pound of phosphorus removed is \$32,672 per lb of phosphorus. With the SLAF grant covering half the costs, the cost effectiveness for city dollars is \$16,336 per lb of phosphorus removed. For comparison, the SLAF grant's maximum threshold for projects to be considered was \$50,000 per lb of phosphorus removed.

In addition to water quality improvements, the project will eliminate problems with existing rip-rap and improve aesthetics with plantings.

In October 2015, Public Works awarded engineering design of this project to A. Morton Thomas & Associates (AMT). By February 5, the project will be at 75% design completion with a bid package delivered to VA DEQ in mid- to late- February. Public Works anticipates project construction to take place between May through October 2016.

Additional project information is available at, <http://www.harrisonburgva.gov/east-market-street-stormwater>.

**Key Issues:** This project will help the City meet its Municipal Separate Storm Sewer System (MS4) permit requirements for Local TMDL and Chesapeake Bay TMDL pollution reduction.

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**Environmental Impact:** This project will reduce stormwater pollution entering Blacks Run and the Chesapeake Bay.

**Fiscal Impact:** The project is estimated to cost \$606,369. VA DEQ will reimburse the City half of the total project cost, \$303,198, and the remaining \$303,198 is paid by the City's Stormwater Fund.

**Prior Actions:** Approval of FY15-16 Budget for East Market Street Stormwater Improvements.

**Alternatives:** (a) None

**Community Engagement:** This project was shared with citizens at open house meetings and presentations to organizations during the development of the Stormwater Utility Fee Ordinance. However, no formal public engagement process took place specifically for this project, and none is required.

**Recommendation:**

**Attachments:** Project Location & Contributing Drainage Area Maps

**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.*

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