



Memorandum

To: Stormwater Advisory Committee

From: CDM

Date: June 1, 2010

Subject: Stormwater Advisory Committee Kickoff Meeting

On May 20, 2010, the CDM team facilitated a kickoff meeting for the Stormwater Advisory Committee (SWAC) for the City of Lynchburg (City). The session was held at 6:00 pm at the James River Conference Center.

The City of Lynchburg and CDM provided each member of the group with meeting materials including a glossary of terms, the Stormwater Advisory Committee Charter, a set of PowerPoint slides, and a project notebook. The following is a list of agenda items covered during the session:

- What is Stormwater?
- Combined Sewer Overflow in the City
- Stormwater Management Drivers
- Current Stormwater Management Activities
- Level of Service, Cost of Service
- Next Meetings

Introductory Remarks

Jeff Scarano (City of Lynchburg Public Utilities) began the meeting by thanking the group for their attendance and by introducing the project. The stated purpose of the SWAC is to assist the City of Lynchburg in the development of recommendations for the future of the stormwater management program. The City wishes to determine priorities for the program, the appropriate level of stormwater service, the level of interest for public participation in the program, and recommendations for various stormwater needs, regulatory response, and financial requirements. The City has engaged a wide cross-section of citizens representing various sectors of the community to participate in the process. At this point, Mr. Scarano

asked all members in the room to introduce themselves. Also, as a procedural note, Mr. Scarano informed the group that the City would like for members to consider an alternate to attend in their place if they are not able to attend a meeting.

Following introductions, Mr. Scarano introduced Chris Tabor from CDM. The CDM team will be facilitating the Stormwater Advisory Committee Process. CDM will be providing information on the stormwater management program, an assessment of the current program, and alternative programs/activities that could be considered for the future stormwater program. The CDM team will also discuss possible funding options to support the program. CDM will be asking the group to provide feedback on these items in order to develop a final list of recommendations that will be presented to the City administration.

Mr. Tabor requested an open dialogue between SWAC members, CDM and City staff throughout the process. The meetings will be facilitated to emphasize fairness and equity among all parties. All individual viewpoints should be respected.

Stormwater Management and Combined Sewer Overflows (CSOs)

Mr. Tabor continued the presentation with a discussion of stormwater management basics and an explanation of combined sewer overflows (CSOs). He defined stormwater as the portion of precipitation that runs off pavement, rooftops, and lawns in urban areas. He explained that runoff in Lynchburg drains to the James River, which ultimately drains to the Chesapeake Bay. A unique aspect of the City's system historically is that wet weather stormwater flows enter a storm sewer system that is combined with the City's wastewater system. During dry weather, wastewater flows from homes and businesses enter the sewer system and drain to the City's wastewater treatment plant. However, when it rains, stormwater runoff also enters the same system. When flows are too high, they may bypass the wastewater treatment plant and enter the James River untreated.

Over the past 20 years, the City has been undergoing construction to separate the stormwater and wastewater systems. This shift in policy was driven by federal regulations, including the Clean Water Act of 1972, the 1994 CSO Control Policy and the City's 1994 Consent Order from EPA. Under the Consent Order, the City has committed to addressing the combined sewer overflow issues, although no specific deadline is mandated. The City must separate the systems based on an analysis of how much the City can afford annually. To date, the City has completed 50% of the separation projects at a cost of \$150 million. The City estimates that \$350 million in projects remain, with funding provided by sewer customers. The City is required to update their CSO plan every 10 years, which is ongoing right now. The City is validating that complete separation of the combined system is the most cost effective solution for water quality benefits.

It was noted that the City's Public Utilities Department addresses the CSO program in its entirety. This stormwater advisory committee process will be to address the separated stormwater system only. The Stormwater Advisory Committee will not be dealing with the CSO program at this time but needed to hear about the program to understand the historical perspective of stormwater management in the City and also some of the regulatory drivers for the program.

Stormwater Management Drivers

Mr. Tabor discussed the many regulatory programs that describe how communities must deal with stormwater. These programs are ever-evolving, particularly in Virginia. The National Pollutant Discharge Elimination System (NPDES) Phase II stormwater permit requires the City to implement six minimum measures for stormwater management, which include public education, public involvement, illicit discharge elimination, runoff controls during construction, runoff controls after construction and municipal good housekeeping. The City has a 5-year permit to implement many activities related to these six measures. In addition, the City is regulated by water quality rules related to the Chesapeake Bay. The State and EPA are currently evaluating these rules and will soon be implementing limits on pollutants for communities discharging to waters that end up in the Bay. These pollutants include nitrogen, phosphorus and sediment. Lastly, the City is also regulated by Federal and State Stormwater Regulations. The State of Virginia is currently drafting a new set of state stormwater rules to control runoff from developed sites and pollutants. Once issued, City's will have to develop programs to comply with these rules. It is anticipated that the new rules will be in place by 2012.

In terms of future regulations affecting Lynchburg, the Chesapeake Bay Rules will be most influential. The EPA is currently developing a Total Maximum Daily Load (TMDL) for the Chesapeake Bay. This TMDL amounts to a "pollution diet" for all communities and dischargers in the Bay watershed, which covers 64,000 square miles and six states. The EPA will define a strict limit for pollutant loads from each discharger. In turn, communities will have to implement programs locally to achieve this limit. Two-year milestones will be established by EPA to track compliance with the rules. The EPA plans to announce these limits by December 2010.

In addition to the Chesapeake Bay Rules, the City will also be impacted by pending TMDLs for the James River. The pollutants of concern for Lynchburg are bacteria and chlorophyll A. The bacteria TMDL will also be established in 2010 while the chlorophyll A TMDL date is still pending.

Finally, the City may also be impacted by changes to the City's NPDES Permit as the first 5-year permit cycle has expired. It is anticipated that the next round of permits will be more focused on urban stormwater. Also, the EPA has proposed a new set of national stormwater

rules that will address sediment leaving construction sites. These rules may be implemented by 2012.

Current Stormwater Management Activities

Mr. Tabor introduced Steve Sedgwick from CDM to discuss some of the current activities of the City's stormwater management program. Mr. Sedgwick discussed that there are three aspects of a stormwater management program, which include technical, financial and organizational. There are technical guidelines to follow as well as an organization designed to support these technical activities. The financial aspect is in place to provide the staff and equipment necessary to sustain the organization.

There are four functional areas of the stormwater program that we consider when grouping the myriad of stormwater program activities. They are: Program Management, Regulatory Compliance, Operations and Maintenance, and Capital Improvements Projects. Categorizing the services provided in this manner will allow the SWAC to understand and evaluate the types of service Lynchburg is providing in each category. For Program Management, activities may include program oversight, master planning, complaint response and development review. For Regulatory Compliance, activities include activities such as public education, erosion and sediment control, post-construction control and other related permit activities. For Operations and Maintenance, activities include storm sewer cleaning, street sweeping, pipe/ditch maintenance and repair. For Capital Improvements Projects (CIP), activities may include large pipe upgrades, stream restoration/stabilization and installation of best management practices (BMPs).

When evaluating and developing a stormwater management program, we typically consider a three phased process that may occur concurrently. The Technical Process determines the needs for service, budget requirements, a long-term implementation plan and how to implement. The Financial Process includes consideration of where the associated dollars lie within the program, the appropriate funding methodology for the program both today and in the future and the appropriate administrative features to support funding/implementation of the program. And finally, the Public Involvement Process begins with the formation of a committee (such as the SWAC), the committee's review of the program, the committee's recommendations for the program and ultimately the presentation of these recommendations to the City Council/City Administration.

CDM has begun an evaluation of the City's current stormwater management program. Mr. Sedgwick presented a list of issues and services (with supporting pictures) related to the City's current stormwater program. The City deals with flooding and ponding in and along roadways. In addition to public safety concerns for drivers, flooding and ponding can lead to damaged infrastructure that must be addressed proactively. Mr. Sedgwick presented a photo of a sink hole that formed due to failing infrastructure. Stream degradation is also a concern in the City. Stream degradation leads to sediment deposits in the stream, which can limit the

conveyance capacity of streams and infrastructure. Also, sediment deposited in the stream can degrade water quality.

Erosion is also an issue to be addressed by the City's program. Excessive flow in pipes can cause significant erosion at the outlet point from the pipe to the stream. Several dramatic pictures documenting this issue were shown. Excessive erosion can lead to water quality issues, public safety issues, and loss of property. And finally, the City's program must address water quality specifically. This includes efforts to reduce the amount of pollutants entering streams and eliminating illegal discharges.

The City has an active maintenance program to address many of these issues. The maintenance program includes street sweeping to remove pollutants from roadways before they enter the stream. The City also has vactor trucks that can be used to vacuum debris from clogged pipes and catch basins. The City can use special camera equipment to investigate issues in pipes before they become major maintenance issues. Also, the City has implemented stormwater BMPs to treat runoff from roads and parking areas before it enters the drainage system. Mr. Sedgwick presented several example BMP projects.

One example BMP project is the Riverfront Park Rain Garden. The project was designed to treat stormwater runoff from downtown impervious areas before the runoff is discharged to the James River. The project is a retrofit for existing development that had no previous stormwater controls. These types of projects will be necessary in the future to achieve compliance with regulatory programs.

Level of Service and Cost of Service Analysis

In future meetings, CDM will provide an evaluation of the City's stormwater level of service and cost of service. The level of service will be provided via a matrix that will be used to assess the four functional areas of the program. CDM will provide an estimated annual cost for today's services as well as projected cost for future levels of service that may be desired by citizens or necessary to comply with future regulatory requirements. Once the SWAC has a foundation of understanding of today's services and the gap to provide future services, CDM will facilitate a discussion of available funding options to support the stormwater program. Options may include an expansion of the current funding program, which relies almost exclusively on the City's general fund or include alternatives such as special assessments, bonds, or user fees.

Future SWAC Schedule of Meetings

At the conclusion of the technical discussion, Mr. Sedgwick discussed the schedule of meetings for the SWAC. Options were provided for future meetings this summer. Based on a consensus vote of the group, the next SWAC meeting will be held on June 24th. Meeting #3 will be held on July 15th. All meetings will be held at the James River Conference Center unless otherwise noted.

Summary of Stormwater Advisory Committee Questions and Comments

Before the close of the meeting, Mr. Sedgwick facilitated a general question and answer session with the Committee. The following is a list of questions and comments made by the Advisory Committee:

Q – What happens if we treat stormwater at the surface and is discharged to a portion of the separated system, but it then discharges back to a combined system?

A- The ultimate goal of the program today is separation. The current stormwater program prioritizes improvements in the separated areas until the combined areas are addressed by Public Utilities. However, the City will coordinate stormwater improvements with separation projects when appropriate.

Q – Can we get the presentations ahead of time?

A – The City and its consultant will make every effort to make the presentation materials available to the SWAC ahead of the meetings as schedule permits.

Q – Will there be any consideration of the stormwater impacts from areas outside the City?

A – Yes, the City does consider the potential impacts from areas outside of the City. However, the current program focuses primarily on improvements and maintenance inside the City limits. The primary reason is that the City can't regulate land use outside its limits. It was noted that the County currently does not have a stormwater program, but the County will receive a pollution allocation for the Chesapeake Bay TMDL that will require them to address pollutant loadings in the County. Also, it was noted that City staff does meet regularly with surrounding communities to discuss stormwater issues and potentially develop regional solutions if appropriate.

Q – What percentage of the wastewater flow can be attributed to customers served outside the City's limits?

A – About 20% of wastewater on a typical day comes from outside the City. Also, the City is monitoring infiltration into the separated system to determine additional flow unrelated to surface water runoff. Some tests have concluded that wet weather flows can be 4 to 6 times the normal flow.

Q – What will the City do to solve stormwater issues on private property?

A – As a part of this process, the group will have an opportunity to discuss the City's level of service, including service on private property. Right now, the City's policy is to maintain the system within the public right-of-way. However, the City does look at ways to solve stormwater issues for citizens.

Next Meeting

The next meeting of the Stormwater Advisory Committee will be held on July 24, 2010 at 6:00pm at the James River Conference Center. Once again, snacks and drinks will be available. Attendees were thanked for their time and encouraged to attend the subsequent meetings.

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