



STORMWATER DISTRICT UTILITY FEASIBILITY STUDY

York County, South Carolina

February 18, 2018

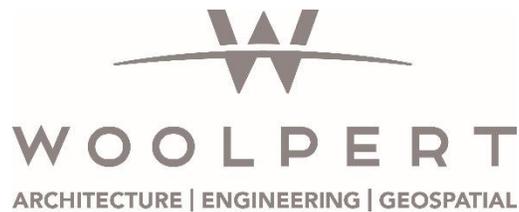


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1 Introduction

York County currently provides stormwater management services including operation and maintenance of its existing drainage system, construction of new capital improvement projects, regulatory compliance and development review services. These activities and projects are funded through the County’s general fund and, as with most communities, are typically performed in a reactive manner. York County is also growing rapidly and facing new challenges through its aging infrastructure and regulatory requirements.

To determine the program costs for meeting these growing stormwater needs, a program “needs assessment” has been conducted. This “needs assessment” considers the regulatory requirements the County must meet, programmatic and operation and maintenance needs to meet citizen expectations, and potential capital improvement projects to meet growing infrastructure demands. The “needs assessment” was derived from interviews with County staff, review of recent stormwater related budget items and capital investments, National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit requirements, and County planning documents, policies, and procedures related to stormwater activities. Finally, potential revenue sources were evaluated for applicability to York County.



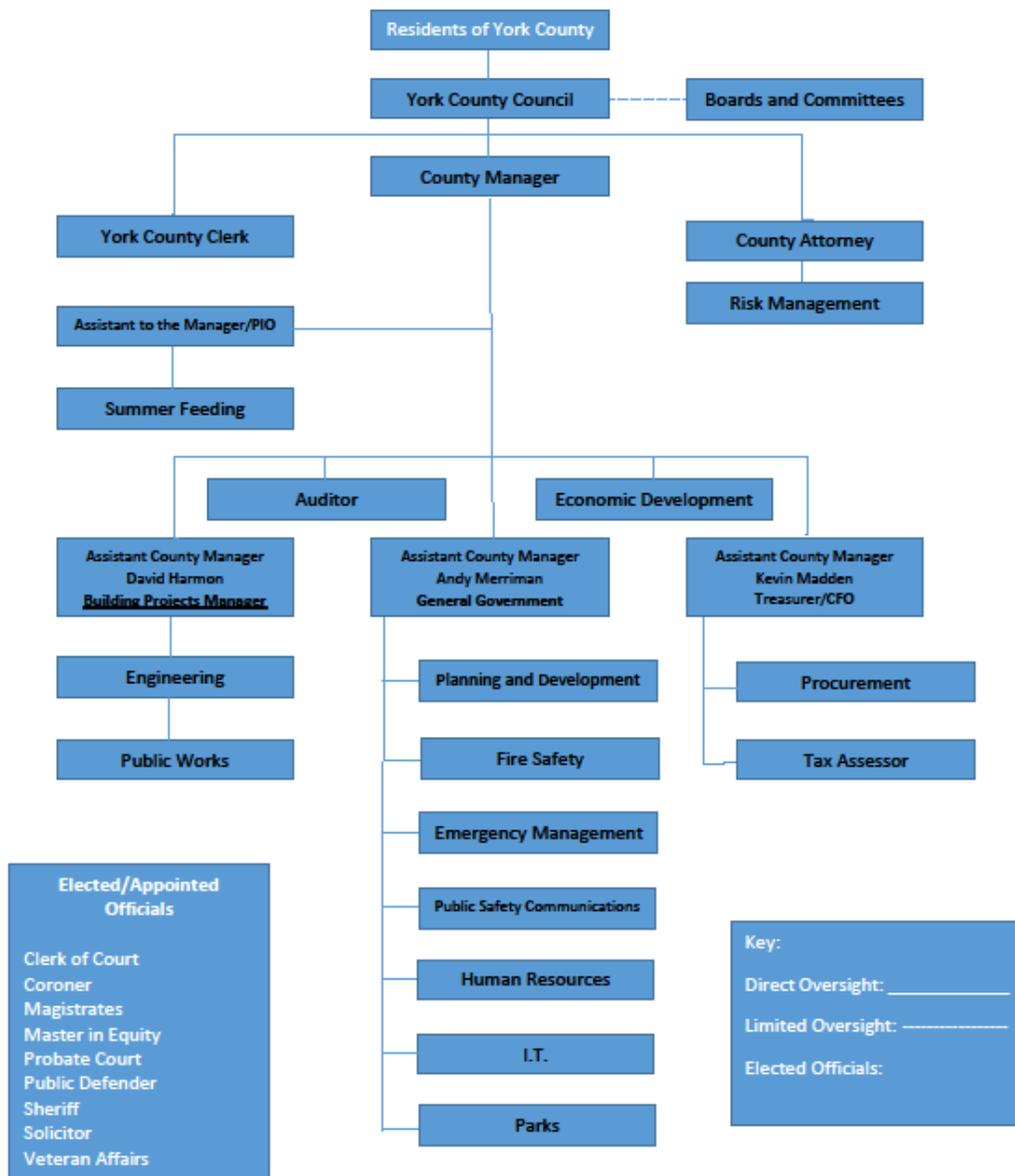
To capture all stormwater related functions of the County, this assessment is divided into four components; 1) regulatory compliance, 2) program support, 3) stormwater system operation and maintenance, and 4) stormwater system capital improvement projects. A description of each component along with current level of service, budget, future program needs, and a five-year projected cost to meet those needs is provided. The difference between the current budget and projected budget will provide insight into future funding gaps. However, it is not just the gap in funding that is important to the County, but also the stability and equity of the funding source that is given consideration. To ensure an adequate program, funding should be consistent and sufficient, yet flexible.

Developing such a funding source will provide an opportunity for the County to move to a more proactive approach, thus providing a higher level of service and ultimately saving taxpayers’ money through efficient management of the program and infrastructure. Any stormwater funding source must be cost effective in its implementation and easily understood by the public to “keep pace” with County growth, a changing regulatory framework, and aging infrastructure. Surrounding areas and other counties throughout the Southeast facing similar challenges have often implemented enterprise funds (stormwater utilities) to assist in funding similar stormwater activities and projects. Therefore, this assessment evaluates a variety of potential stormwater program funding sources including; a stormwater utility and ad valorem taxes, as well as single use funds such as grants, fees, and bonds.

2 Program Overview

The regulatory and support components of the York County stormwater program are located primarily within the Environmental Compliance Division of the Planning and Development Services Department. Environmental Compliance is responsible for implementation of the County’s Phase II NPDES MS4 permit and the State’s Stormwater Management and Sediment Reduction Act. Operation and maintenance, as well as capital project implementation responsibilities, are located primarily within the County’s Public Works Department. Other departments and divisions of the County have related responsibilities for program implementation including; Engineering, GIS, Development Services, and Planning. The organizational chart for York County is displayed in Figure 2.1.

Figure 2.1 – York County Government Organizational Chart



The County budget process begins in February of each year when department heads are provided a budget schedule and directed to start preparing their fiscal year budget. Final budgets are submitted to County Council in May of each year, and Council adopts the final budget for the fiscal year by the last Council meeting in June. Stormwater program funding is allocated in the annual budget through the departments and divisions listed above.

This assessment bases current stormwater related funding on individual budget line items that were clearly and solely designated for stormwater activities. Other stormwater related activities were identified by staff in program areas not clearly marked as “stormwater” in the budget, so a portion of those budgets were also allocated to stormwater.

Level of service (LOS) is a measure of the amount of service required or provided to meet expectations related to the four program components described in preceding paragraphs. For instance, at a minimum, the required LOS for regulatory compliance is to remain compliant with the requirements of the County’s NPDES Stormwater MS4 permit. The 2017 – 2018 County budget document sets, in part, the expected LOS for current funding levels (See below).

York County Budget Objectives:

- Maintain, renovate, and expand County facilities to meet service needs generated by a growing population
- Maintain County services at the current level and enhance services where possible
- Maintain County infrastructure to preserve invested capital and extend useful lives of investments
- Provide for a competitive salary and benefit structure for County employees to attract and keep qualified staff to operate the County’s programs and services
- Support productivity with technology
- Utilize financial planning to accommodate future capital needs
- Implement recommendations of the land use plan

The budget objectives above combined with each department’s mission statement (Figures 2.2 and 2.3) provide the framework for both the current LOS and future LOS. The future LOS has been created using current stated objectives as a minimum expectation, with anticipated future regulatory requirements, growth projections, and an understanding of operation and maintenance (O&M) needs related to aging infrastructure as added expectations and needs. The timeframe for the future LOS is five years.

Figure 2.2 – Planning and Development Services Mission Statement

The mission of York County Planning and Development Services is to enhance York County's quality of life, environment, and growth by providing the citizens of York County with comprehensive planning, efficient code enforcement, courteous technical assistance and public forums.

Figure 2.3 – Public Works Mission Statement

The mission of York County Public Works is to provide quality services that improve and enhance the safety, cleanliness, health, and quality of life in our community by supporting federal, state, and local laws through the daily operations of the department.

The “growth” component of the analysis is based on data contained in “York Forward – State of the County,” dated 2015 (Appendix E, York Forward 2035 Comprehensive Plan). Several key elements from that report can be found in Figure 2.4. In general, growth follows existing roads and utilities. Existing urbanized areas such as Fort Mill, Rock Hill, Clover, and the area around Lake Wylie continue to expand rather than taking the form of new urbanized areas.

Figure 2.4 – Growth Data

- Population growth of **21% over 10 years**.
- 2010 total population = 226,073
- 2020 total projection = 273,000
- Since 1990, urban population has increased from **57% to 77%**.

2.1 Current Program

The following sections provide a description of the current levels of service for each of the four previously referenced program areas; regulatory compliance, program support, system operation and maintenance, and capital improvement projects.

2.1.1 Regulatory Compliance

York County is subject to the NPDES MS4 Phase II stormwater permitting requirements. Permit No. SC 030000 requires the County to develop a stormwater management plan to address the following six minimum control measures (MCMs):

- Public Education and Outreach
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Stormwater Runoff Control
- Post Construction Stormwater Management for New Development and Redevelopment
- Pollution Prevention/Good Housekeeping for Municipal Operations

In addition, the permit requires the County to address water quality in watersheds with Total Maximum Daily Loads (TMDLs). The watersheds listed in Figure 2.5 have established TMDLs. For each TMDL watershed where a waste load allocation (WLA) has been assigned to the County, the County is required to develop a TMDL Monitoring and Assessment Plan and TMDL Implementation Plan to address the pollutants of concern. Figure 2.6 lists those watersheds with impairments and the relative pollutant of concern. Without intervention, TMDLs will also be developed for these watersheds. Figure 2.7 on the following page shows locations of SCDHEC water quality monitoring stations.

A TMDL is currently under development for the Catawba River for Nutrients. A “Lower Catawba River Dischargers Group” has been formed to work with the SCDHEC to develop the TMDL. This group is supplying data to SCDHEC and will be instrumental in developing the WLA for the TMDL. To avoid being assigned a

Figure 2.5 – TMDL Watersheds

- Crowders Creek – FC (NC TMDL)
- Beaverdam Creek – FC
- Brown Creek – FC
- Allison Creek – FC
- Calabash Branch – FC
- Upper Broad River – FC
- Steele Creek – FC
- Catawba River Trib – FC
- Lower Broad – FC
- Fishing Creek – FC
- Lower Catawba Basin – CHLA, pH, TN, TP (Under Development)

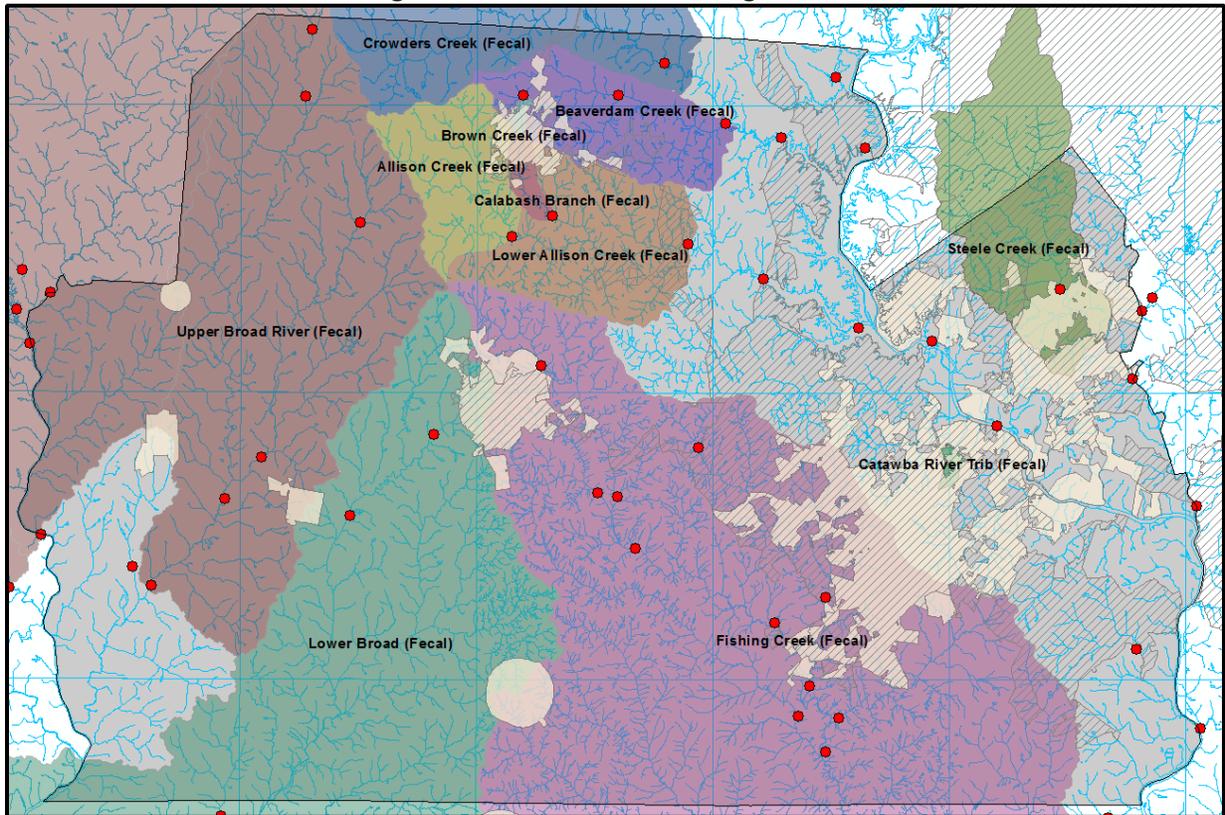
Figure 2.6 – Impaired Watersheds

- Clark Fork Creek – BIO
- Loves Creek – FC
- Ross Branch – Turbidity
- Turkey Creek – BIO
- Beaverdam Creek – BIO
- Lake Wylie at Crowders Creek – FC
- Lake Wylie at SC 274 – TP & CLA
- Lake Wylie at dam – NH3N & CU
- Sugar Creek – BIO
- Steel Creek – pH
- Wildcat Creek – DO
- Tools Fork Creek – Turbidity
- Tool Fork Creek at Hawkins Ridge – FC
- Fishing Creek – BIO
- Stoney Creek – BIO
- Taylors Creek – BIO
- Sixmile Creek – BIO

higher than warranted WLA, the County should be involved in this effort and should supplement the group's data with its own data.

The County is currently meeting its obligations under the NPDES MS4 permit. There are pending activities, however, that remain to be implemented. In particular, the County must develop and implement TMDL implementation plans prior to January 1st, 2018. Water quality monitoring is a permit requirement in certain watersheds. The County currently samples quarterly for Fecal Coliform bacteria, Total Nitrogen, and Total Phosphorous. The County also relies on the Catawba River Keeper and volunteers for additional monitoring data.

Figure 2.7 – SCDHEC Monitoring Stations



The Regulatory Compliance component of the program is staffed by approximately ten full time County staff members. Table 2.1 is a breakdown of staff resources that are dedicated full time to stormwater regulatory compliance.

Table 2.1 – Regulatory Compliance Staffing

Role	No. of Full Time Employees
Stormwater Manager	1 FTE
Illicit Discharge Detection and Elimination Coordinator	1 FTE
Public Education Coordinator	1 FTE
Plan Reviewers	2 FTE
Senior Inspector	1 FTE
Inspectors	4 FTE
Total FTEs:	10 FTEs

2.1.2 Program Support

The principal activities associated with the York County Stormwater Program are related to NPDES MS4 implementation. New development and redevelopment support services such as plan review and site inspection are accounted for in the Regulatory Compliance Section of this assessment. However, the program does receive support from administrative and management personnel (not included in the Regulatory Compliance Section). These activities and costs are necessary for the program to function and to provide the desired level of customer service. While not a part of the stormwater program, the County Engineer provides support to Public Works for stormwater related activities and capital improvement project planning.

There are several administrative support, technical, and management staff providing assistance to stormwater program activities with varying levels of responsibility and time commitment to the program. Table 2.2 is a breakdown of staff resources that are dedicated to stormwater program support and their relative time spent on stormwater activities.

Table 2.2 – Program Support Staffing

Role	No. of Full Time Employees
Administrative Support	0.2 FTE
Development Services Manager	0.2 FTE
Planning Director	0.2 FTE
GIS and IT Support	0.1 FTE
Total FTEs:	0.7 FTEs

Floodplain Management is located within Environmental Compliance and is considered a function of the stormwater program. Multiple staff are involved in floodplain management activities including the following.

Table 2.3 – Environmental Compliance Staffing

Role	No. of Full Time Employees
Environmental Compliance Manager	0.15 FTE
Commercial Plans Reviewer	0.20 FTE
Residential Plans Reviewer	0.25 FTE
Total FTEs:	0.6 FTEs

The County Building and Codes Enforcement also have a role in floodplain management providing review of building plans.

2.1.3 System Operation and Maintenance

The York County Public Works Department is responsible for operation and maintenance of the County owned drainage system. Assets and service extents for the County drainage system include culverts, pipes, inlets, junction boxes, stormwater control measures, and ditches located on County property, within a County road right of way, or properly dedicated easement.

The overwhelming majority of citizen complaints to Public Works are related to drainage issues.

However, the County has very few drainage easements, so drainage improvements are necessarily limited mostly to road right-of-way. Currently the County maintains approximately 118 miles of pipe and drainage associated with approximately 653 miles of road. Public Works maintains a work crew of 3 staff and equipment that spend approximately 5% of their time (0.15 FTEs) addressing stormwater related issues. On occasion, the County has relied on the City of Rock Hill to supplement the County needs with City equipment (e.g., Vacuum Truck).

The County also owns several stormwater control measures (SCMs). SCMs include structures installed by the SCDOT as part of Pennies for Progress projects, four individual detention ponds plus six detention ponds at the landfill, ten low hazard dams with County owned roads on top, and five bridges. These assets require routine maintenance. New and large developments (most notably, 842 approved units in Westport and 3,100 potential units in Daimler) illustrate the rapid pace of growth of the system and the need for additional crew members and equipment.

The County has not established an asset management approach to stormwater system operations and management and, therefore, operates primarily in a reactive mode to system failures. This is not unusual for most communities in the southeast, although many are now implementing asset management programs. The level of service associated with a reactive approach to an aging system is not efficient and often drives a “run to failure” mode of operation. A major failure of the system could have devastating effects on the budget, and there is currently insufficient funding to provide a high level of preventive maintenance. **Anticipated growth in the County coupled with age of the existing system indicates that maintenance and capital improvement needs will grow at a rapid pace.**

It should be noted that the County has Cityworks Asset Management software and is in the process of populating the database with stormwater assets. If fully utilized, this software will facilitate the County moving to a proactive asset management program. To optimize the use of Cityworks, the County should prepare an inventory and condition assessment of all stormwater assets.

2.1.4 Capital Improvement Projects

Capital improvement projects are typically large repair or replacement projects that require engineering design or that exceed a cost threshold within the annual operation and maintenance budget. A large neighborhood drainage improvement project may qualify as a capital project, but most capital projects involve single structures. Culvert replacement projects are the most common stormwater related capital projects for communities.

York County does not maintain a projected capital improvement project list. Projects are addressed as the need arises. The County also does not have a specific policy for constructing new stormwater facilities to accommodate for growth. The result of adding new large development projects is generally an increase in flooding within the lower portions of the developed watershed. York County may find itself in a position over the next five years of having to address new and legacy flooding issues.

Staff and equipment shown in the System Operation and Maintenance section of this document are also utilized to install large projects as needed and appropriate. On those occasions when the size or complexity of the project is beyond the capabilities or resources of the County, private engineers and/or contractors are employed.

2.2 Projected Program

The following sections provide a description of the projected program needs for each of the four previously referenced program areas; regulatory compliance, program support, system operation and maintenance, and capital improvement projects.

2.2.1 Regulatory Program Needs

South Carolina NPDES General Stormwater Permit No. SCRO300000 expires December 31, 2018. Each iteration of this permit has included additional requirements and “tightening” of existing requirements. **While the next draft of the permit has not yet been prepared, it is anticipated that the program will continue with increasing regulatory requirements, particularly those associated with TMDL implementation.**

The current permit requires communities with established TMDLs to prepare and implement water quality monitoring plans. Based on the results of the monitoring, the community must then create and implement TMDL implementation plans. TMDL plans may require the community to design and construct stormwater control measures and implement other Best Management Practices such as public education campaigns.

Additionally, in many watersheds there are multiple sources of pollutants including; natural background levels, point sources (e.g., wastewater treatment facilities and industry), and other non-point sources (e.g., agricultural lands and permitted municipalities). Background or legacy issues can affect loadings and may not be influenced by stormwater runoff. Understanding the impact of naturally occurring pollutant levels is important. As well, it is important to understand the impact of other sources, both point and non-point sources, to ensure the County is addressing an appropriate level of the overall pollutant level.

Further, the South Carolina Department of Health and Environmental Control (SCDHEC) is in the process of developing a water quality model to support the creation of a TMDL document for the Catawba River. WLAs will be assigned to all discharges to the river, including stormwater runoff from the urbanized areas of York County. **A Catawba River TMDL could significantly impact requirements for the program and require installation of structural controls by adding pollutant reduction requirements on the County’s stormwater runoff.**

It is recommended that the County evaluate and enhance its current water quality monitoring. Preliminary observations of the County’s monitoring program indicate that more frequent monitoring or continuous monitoring may be appropriate to protect the County from unreasonable assignment of WLAs during the TMDL development process. Bacterial Source Tracking is another water quality testing technique that may be appropriate for York County to identify the source of bacteria and, if possible, eliminate or reduce the source. **The County should consider a significant investment into monitoring and managing its stormwater runoff and streams.** At a minimum, (1) additional environmental specialist should be added to the staff.

Continued development pressures also bring a greater demand for plan review and inspection. While existing plan reviewers can keep up with the anticipated increase in numbers of plans, it is increasingly difficult for the County’s inspectors (consider travel time) to maintain the schedule of inspections required by permit. It is anticipated that (1) additional full-time inspector will be needed.

Table 2.4 – Regulatory Program Staffing Needs

Role	No. of Full Time Employees
Environmental Specialist	1 FTE
Inspector	1 FTE
Total FTEs:	2 FTEs

Additional equipment and resource needs:

- Water quality monitoring program
- TMDL planning and implementation
- (2) Trucks

2.2.2 Program Support needs

As the County and the program continue to grow, additional support staff will be needed to meet demand. Over the next five years, it is anticipated that a full-time floodplain manager will be needed to meet the demand from new development. There is an increase in the occurrence of extreme flooding events and greater development pressures within the County’s watersheds, adding importance to sound floodplain management. Additionally, (1) new administrative support staff will be needed to maintain the current level of service.

Table 2.5 – Program Support Staffing Needs

Role	No. of Full Time Employees
Floodplain Manager	1.0 FTE
Administrative Support	1.0 FTE
Total FTEs:	2.0 FTEs

* Work of FTE Floodplain Manager is currently being performed by multiple people equivalent to 0.6 FTEs. It is anticipated that hiring a floodplain manager will relieve those duties from others allowing them to absorb increasing duties within their primary work area.

Additional equipment and resource needs:

- One Truck

2.2.3 O&M Program needs

A proactive approach to managing stormwater assets provides for more efficient operations and cost savings. Many communities across the southeast are moving towards a proactive, asset management approach for their stormwater systems. This includes mapping the system, performing routine inspections and condition assessments, and developing repair and replacement strategies built around the community’s desired level of service. For a community, such as the County, that is experiencing rapid growth, an asset management approach will provide for systematic, preventive maintenance of the existing system. Such an approach would allow the County to perform routine maintenance and

install needed improvements before stormwater infrastructure fails or becomes so deficient that the cost to repair exceeds the cost of replacement. By acting in such a manner, the County can address citizen demands to manage growth more effectively and use funds in the most cost-effective manner; thereby saving money while providing better service/quality of life.

In general, the tools and data needed to develop such a program include the following.

- System inventory
- System condition assessment
- System capacity analysis
- Repair and replacement plan and strategies
- Asset management/work order software (Note: York County has implemented Cityworks software and is currently populating the software with data.)

From this approach, the County should develop a prioritized CIP list (See CIP section) and a Repair and Replacement Plan to more efficiently manage its stormwater system. As the County continues to add new development, the stormwater system will necessarily grow. This growth will also require additional people, equipment, and resources.

Table 2.6 – O&M Program Staffing Needs

Role	No. of Full Time Employees
Construction Staff	2 FTEs
Vacuum Truck Operator	1 FTE
Total FTEs:	3 FTEs

Additional equipment and resource needs:

- Vacuum truck
- Two trucks
- System inventory
- System condition assessment
- Repair and replacement plan and strategy
- Cityworks configuration

2.2.4 CIP Program needs

One means of reducing flooding issues caused by growth is to strengthen ordinances and policies related to stormwater management for new development and redevelopment. Another mechanism is to perform watershed studies ahead of new development to identify potential “choke points” within the system. Absent these ordinances and policies, the County should develop funding levels to assist with future stormwater system capacity issues.

Additionally, the County’s NPDES MS4 Stormwater permit requires development of TMDL implementation plans. These plans may require the design and construction of water quality SCMs. It is currently unknown as to the number, size, location, and complexity of these SCMs, however, future budgets should account for some level of SCM implementation. It was also noted during review of

TMDLs and subsequent discussions with staff that stream bank stabilization projects can be an effective means of decreasing sediment and pollutant loadings. This is particularly significant in the Lower Catawba River. **It is anticipated that design, construction, and long-term maintenance of stream bank stabilization projects will be incorporated into the stormwater program.**

The Operation and Maintenance section of this report discusses the need for and development of a prioritized CIP list. This list is generated, in part, from the repair and replacement strategy, but also from known and anticipated issues within County watersheds. **Watershed planning is one means to identify and evaluate potential future CIP projects.**

During discussions with staff, it was noted that one bridge needs repair. The cost of this repair is estimated at \$50,000. There are also a significant number of culverts that are approaching need of repair or replacement.

Role	No. of Full Time Employees
No new staff identified	0 FTEs
Total FTEs:	0 FTEs

Additional equipment and resource needs:

- Prioritized CIP list
- Design standards review and update
- Watershed planning and flood mitigation analysis

3 Funding

The next several sections of this analysis discuss current funding levels as well as sources and anticipated future funding levels that will be required. The difference in funding levels between the present and future levels indicates the potential gap in funding that needs to be filled either through existing sources or alternative sources. The discussion on funding sources provides guidance on means for funding not only the funding gap, but also current needs.

3.1 Current Funding Levels

York County’s stormwater program is implemented through multiple departments and divisions and is funded through general tax revenues and various fees. There are several budget accounts with substantial funds dedicated to stormwater, but the majority of funding comes from accounts that are shared among several service areas. This makes it difficult to extract exactly what the County is currently spending on a comprehensive stormwater program including; regulatory compliance, program support, system operation and maintenance, capital improvement projects.

To arrive at the total estimated current funding level, this analysis included those items that are clearly and directly related to stormwater and percentages of budget items where stormwater is a part of the budget. Public Works provided information on the portion of their annual budget believed to be

associated with stormwater related operation and maintenance activities. Table 3.1 is a summary of the current level of funding per the County’s 2017 – 2018 budget ordinance.

Table 3.1 – Current Stormwater Program Funding Sources

York County Budget Item	Current Funding
Account 43111 – Public Works Benefits	\$ 11,140 \$ 8,600
41911 and 41918 – Planning and Development Admin Benefits	\$ 63,890 \$ 28,000
41925 – Planning and Development Environmental Compliance Benefits	\$495,991 \$169,000*
Additional Staff Support Benefits	\$ 26,250 \$ 14,000
Additional overhead costs including,	\$ 53,325
	TOTAL: \$870,196

*This does not include vacation, sick, and holidays. All other salaries include these items in total benefits.

This list of funding sources demonstrates a total of approximately **\$870,000 per year** in stormwater program related spending. This does not necessarily represent the current program needs, but rather current program funding.

The next section of this analysis starts with the current level of funding and incorporates both additional current needs and future needs to project a required five-year budget.

3.2 Projected Five Year Budget

To simply maintain the current level of service (LOS), the current budget should be adjusted for inflation and population (stormwater system) growth. The current annual inflation rate is 1.9% and the projected growth rate is 21% over ten years. Therefore, simply maintaining the same level of service requires adjusting the current spending to account for both program inflation and growth. See Table 3.2 below.

Table 3.2 – Annual Budget Requirements to Maintain LOS

Year	Current LOS Budget Needs
Year 0	\$870,000
Year 1	\$992,000
Year 2	\$1,009,000
Year 3	\$1,026,000
Year 4	\$1,043,000
Year 5	\$1,061,000

Per the budget goals and anticipated needs of the stormwater system, simply maintaining the current LOS is not desired. Additional needs over the five-year planning period are noted below in Table 3.3.

Table 3.3 – Stormwater Program Needs and Associated Costs

Item	Initial Costs	Annual Costs
Start-up & Maintenance Costs: <ul style="list-style-type: none"> • Initial Data Acquisition • Data Maintenance 	\$150,000	\$30,000
Water Quality Program: <ul style="list-style-type: none"> • Monitoring • TMDL Planning • TMDL Implementation 	\$500,000	\$310,000
System Operation & Maintenance Planning: <ul style="list-style-type: none"> • System Inventory • Condition Assessment • System Capacity Analysis • Repair / Replacement Planning 	\$1,550,000	\$240,000
System Operation & Maintenance <ul style="list-style-type: none"> • Vacuum Truck • Repair, Rehabilitate, Replace • Emergency Repair Fund (10%) 	\$450,000	\$1,880,000
Program Support <ul style="list-style-type: none"> • Design Standards Update • Cityworks Enhancements 	\$100,000	\$0
Staffing Needs: 6.4 FTEs	\$0	\$429,000
Equipment Needs: Five trucks	\$150,000	\$0
Current Program (\$870,000): <ul style="list-style-type: none"> • 1.9% Inflation • 2.1% Growth 		\$1,061,000

When timing of the needs in Table 3.3 is considered, the annual program costs range from a low of \$3,942,000 in Year 5 to a high of \$4,635,000 in Year 2. The average annual need is \$4,235,000.

In comparison, there are national studies indicating that average costs for stormwater program implementation range from \$12 to \$63 per capita depending on the level of service being provided by the community. Based on the population of unincorporated York County (145,000), the current level of service provided by the County, and the mid-range per capita costs (\$29 - \$46), the projected budget should be approximately \$4.2M - \$6.7M. Additionally, based on our experience with similar communities in South Carolina, we would anticipate the budget to range between \$3M and \$6M.

Table 3.4 illustrates the financial gap between current revenue projections (adjusted for inflation) and projected revenue needed to fully fund the stormwater program. **Over the next five years, it is projected that if funding levels follow past trends, there will be an approximately \$16M funding gap between revenues and program needs.**

Table 3.4 – Anticipated Annual Budget Requirements

Year	Current Revenue Projections	Projected Budget Needs	Revenue Gap
Year 1	\$992,000	\$4,124,000	\$3,132,000
Year 2	\$1,009,000	\$4,635,000 (High)	\$3,626,000
Year 3	\$1,025,000	\$4,241,000	\$3,216,000
Year 4	\$1,043,000	\$4,234,000	\$3,191,000
Year 5	\$1,061,000	\$3,942,000 (Low)	\$2,881,000
5 Year Totals	\$5,130,000	\$21,176,000	\$16,046,000

3.3 Potential Funding Sources

While communities use a variety of sources to fund stormwater activities, the two primary sources are tax revenues and enterprise funds. Other sources such as grants and fees can be used to supplement the primary funding source, but are seldom sufficient to fully fund the entire program. The following sections provide a general description of a number of potential funding sources for the County to consider as primary and supplemental sources.

3.3.1 Primary Sources

The following sections discuss potential primary funding sources; tax revenue and enterprise funds.

3.3.1.1 General/Special Revenue Fund

Many communities, like York County, fund their stormwater programs through the general tax fund or a special revenue fund (i.e., subset of general fund). This traditional source of funding provides flexibility for changing budget needs. Stormwater is a line item(s) in the budget; therefore, Council has stricter control on both the revenues generated and how funds are spent. While this can be seen as a positive, it also provides some challenges to the stormwater program.

Because funding comes through the general tax fund, the budget can fluctuate significantly each year depending on the available tax base and other County resource needs and political will. Funds can also be transferred from the stormwater budget to assist other program areas during the fiscal year. While this gives certain flexibility to the County in use of its revenues, it creates an unstable and, to a certain extent, unreliable funding source for the stormwater program. It is also difficult to track costs associated with a comprehensive stormwater program.

This uncertain annual funding level makes it difficult to efficiently manage the stormwater program and system to meet long-term goals. Regulatory and infrastructure needs are continuing to increase and there is a general reluctance to increase taxes each year to keep pace. Many communities in the Southeast continue to use the general tax fund as their principal funding mechanism, but as regulatory programs grow and capital improvement needs increase, more communities are resorting to more stable, consistent funding mechanisms for their stormwater programs.

3.3.1.2 Enterprise Fund

The Stormwater Management and Sediment Reduction Act, Title 48, Chapter 14 and South Carolina Regulation 72-300, provide the authority to local governments to create a stormwater utility. Stormwater utilities or enterprise funds establish a fee in exchange for goods or services. Some of the most common county-operated enterprise funds are water and sewer utilities, ambulance services, and airports. York County’s stormwater program can operate under an enterprise fund, also known as a stormwater utility. To establish a stormwater utility, a correlation between the fee and cost of services related to stormwater management must be made to meet the “fair and equitable” standard. This is typically accomplished by developing the fee based on the quantity of runoff potentially generated by a particular property.

Several advantages of a stormwater utility funding mechanism are:

- Dedicated and consistent funding source
- Fee is related to contribution to runoff
- Provides incentive to reduce impervious area
- Rates can be periodically adjusted

There are also disadvantages to a stormwater utility. Typically, residents see stormwater utility fees as a “rain tax”; therefore, considerable public education is often necessary prior to implementation to minimize opposition. Nonprofit, religious, and governmental organizations that are usually exempt from taxes are subject to a stormwater fee. A stormwater utility requires, at a minimum, coordination with other departments or entities for billing and requires expenditure of funds to establish the ordinance, credit and appeals processes, rate structure, and billing mechanism. Billing data must be maintained on a regular basis.

Fees can be collected countywide and redistributed to contributing municipalities or collected from residents in unincorporated areas only. According to the “2017 Southeast Stormwater Utility Report,” there are more than 35 communities in South Carolina that operate a stormwater utility. Table 3.5 below shows communities in and adjacent to York County currently operating stormwater utilities.

Table 3.5 – Local Stormwater Utilities, Rates, and Revenues

	<u>Rock Hill</u>	<u>Fort Mill</u>	<u>Tega Cay</u>	<u>Lancaster County</u>
ERU	10,000 sf	3,473 sf	3,500 sf	3,500 sf
Billing Rate/ERU/year	\$42 (<10,000 sf) \$52 (>10,000 sf)	\$72	\$108	\$60
Revenue	\$3,900,000	\$710,000	\$480,000	Unknown
Credit System	Yes	Yes	Yes	Unknown

Based on GIS data obtained from the County, revenue projections have been determined for three different residential rates at an assumed average equivalent residential unit (ERU) of 3,500 square feet, as illustrated in Table 3.6 below. York County does not currently have sufficient data to calculate the actual ERU, therefore, we have used the typical ERU from the utilities above. Rock Hill utilizes a unique method and was not considered in the calculation. A number of other assumptions have been made to support these projections, including.

- An estimate of total impervious area for non-residential units based on building footprints. It should be noted that as more accurate impervious area data is applied it is anticipate that projected revenues will significantly increase.
- Non-collection rates have not been applied.
- Credit policies have not been applied.

Table 3.6 – Revenue Projections for Potential Stormwater Utility Rates

Unincorporated York County Stormwater Utility Funding Projections			
Potential Annual Fee/ERU (3,500 sq. ft.)	\$36	\$48	\$60
Stormwater Utility Revenue 39.4% Residential 60.6% Non-Residential	\$2,400,000	\$3,300,00	\$4,100,000

Table 3.7 – Typical Annual Bills for Various Uses

Unincorporated York County Stormwater Utility Funding Projections			
Residential Fee (3,500 sq. ft.)	\$36	\$48	\$60
Fast Food, Bank, Gas Station (7 ERUs)	\$252	\$336	\$420
Small Institutional, Church (14 ERUs)	\$504	\$672	\$840
Retail Center, Small School or Industrial (133 ERUs)	\$4,788	\$6,384	\$7,980
Large School or Industrial (136 ERUs)	\$4,896	\$6,528	\$8,160

Current stormwater related spending per capita is approximately \$7 per year. Moving to a fee required to generate \$4M per year would be approximately \$53 per year – more than seven times the current spending level. Based on this fact, and the current level of uncertainty with several of the items

reviewed in this report (e.g., MS4 permitting, TMDLs, etc.), a phased approach to fee implementation is recommended. Many communities have used this approach successfully.

Phasing of fees is accomplished by establishing step increases in rates within the budget ordinance. For instance, the initial rate may be \$36 per ERU for the first year with gradual increases to \$60 over several years. Such an approach provides customers time to account for the new fees in their annual budgets. This is especially important for larger customers and nonprofit and governmental entities.

3.3.2 Supplemental Sources

The following sections discuss potential supplemental funding sources.

3.3.2.1 Section 319(h) Grants

In South Carolina, Section 319(h) grants are administered by SCDHEC from annual grant allocations from EPA. Funds are intended to implement strategies and projects described in the State's Non-Point Source (NPS) Management Program. Grants are awarded on a competitive basis and are restricted by the level of annual funding. Individual grants pay up to 60 percent of eligible project costs with the awardee providing a 40 percent non-federal match. Grant proposals for NPS projects are solicited periodically throughout the year. Because of the competitive nature and variability of funding levels, Section 319(h) grants are not considered a reliable source for ongoing project funding. They also require considerable effort in developing grant applications and tracking of expenditures.

Historically, the County has not made use of Section 319(h) grants.

3.3.2.2 State Revolving Fund Loans

The State Revolving Fund (SRF) program provides low-interest rate loans for building stormwater quality improvement projects. The program is run by the SCDHEC and the SC Rural Infrastructure Authority (RIA), Office of Local Government (OLG).

The money available for SRF loans depends on repayments from current loans and the yearly capitalization grant that comes from the EPA. If a project includes a qualified water or energy reduction component, low impact development or other environmentally innovative "green" practices, an incentive loan rate may apply. The County may identify suitable capital projects for financing using this methodology, but the State Revolving Fund is not a long-term funding solution.

3.3.2.3 Municipal Bonding

Revenue bonding is typically used to finance large construction projects and is not suitable for funding on-going program activities. The County may identify suitable capital projects for financing using this methodology, but like State Revolving Fund loans, bonding is not a long-term funding solution.

3.3.2.4 Development/Impact Fees

Development or impact fees are a common fee associated with water and sewer utilities. Fees are based on the size and impact of the proposed development on the capacity of the existing downstream system. Although impact fees rarely cover the full impact of the development, they do offset some of the costs associated with operation, maintenance, and upgrades to the existing system.

Development fees may be appropriate in areas of the County where new development is occurring and upgrades are needed to downstream systems. These fees could help to offset the cost of increasing capacity, but generally do not address regulatory compliance, maintenance, or replacement of aging infrastructure.

3.3.2.5 In-lieu-of-Construction Fees

In-lieu-of-construction fees can be used to fund regional stormwater control measures such as detention basins and water quality controls. Rather than each development constructing its own facility, the developer pays the County a fee to be used for constructing a regional facility. This mechanism reduces the number of facilities to be inspected, operated, and maintained, but it can also create accounting and planning issues for the County.

In areas of new development, regional facilities must be constructed in advance of construction, so the County may have an initial financial outlay prior to collecting the in-lieu-of fee. Proper planning is essential. Only some watersheds will be suitable for implementation of regional facilities. While this is not recommended as a primary funding source for York County, it may be appropriate to consider in watersheds that are currently undeveloped, but where development is expected in the near future.

3.3.2.6 Permitting Fees

Communities often charge fees to cover the cost of reviewing proposed development plans for compliance with community regulations. While these fees typically cover some of the cost associated with this activity, they generally do not cover all costs associated with plan review and inspection of development projects.

As noted in a previous section, York County Development Services currently charges various plan review and inspection fees for development projects. These fees have recently been increased, therefore it is not recommended that these fees be adjusted again at this time.

In addition to tax revenues, the County currently utilizes fees to supplement program needs.

Table 3.8 shows current fees collected by the County and the annual revenue generated by those fees.

Table 3.8 – Current York County Fees and Revenue

Fee Description	Fee Basis	2016 – 2017 Total Collections
Grading permit	\$250 per disturbed acre or portion thereof	\$153,831
Plan review (Re-Review)	\$50 per disturbed acre, maximum of \$500	\$15,940
Fines	Variable	\$7,250
Total Annual Revenue:		\$177,021

NOTES:

- 1) The fee structure is being revised at the time of this document, therefore, revenues from fee collection may increase.

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- 2) The County also collected fines in the amount of \$7,250 for fiscal year 2016 - 2017

4 Recommendations

Four components of the stormwater program were reviewed as part of this assessment; 1) Regulatory Compliance, 2) Program Support, 3) Operation and Maintenance, and 4) Capital Improvement Projects. Both current and future resource needs were evaluated and compared with current funding levels. Further, tax based and fee based funding mechanisms for the program were explored.

While the program is currently meeting its regulatory compliance requirements and level of service expectations in most areas, it is apparent that funding is short for maintaining compliance and the current level of service over the next several years. Additionally, substantial funding will be required over the next five-year period to build a sustainable stormwater program that maintains compliance with the MS4 program, moves to a more proactive approach to system maintenance, meets growing infrastructure and water quality demands, and manages County growth in an effective manner.

The County currently provides for program funding through general tax revenues. Traditionally, many stormwater programs have been funded in this manner. With implementation of the NPDES MS4 stormwater permitting program, however, many regulated communities have moved to a more stable and equitable funding source; a stormwater utility. A stormwater utility fee in York County is capable of fully funding the stormwater program at a manageable fee for citizens.

It recommended that York County proceed with the development and implementation of a stormwater utility fee. Based on the results of this feasibility study, it is recommended that revenues from the utility fee should be approximately \$4 million. If funded at this level, it is anticipated that regulatory program, program support, stormwater operations and maintenance, and current Capital Improvement Project needs could be met through the foreseeable future.

As the stormwater system and program continues to grow to meet increasing demands from citizens, County growth, and increasing regulatory pressure, this study should be revisited and updated appropriately.

As part of the stormwater utility implementation, it is further recommended that the County consider the following as part of the utility implementation.

- 1) A phased approach to implementation to ease the budgetary concerns of large stormwater generators and non-profit organizations.
- 2) A credit manual to provide for reduced fees for those entities that contribute to NPDES MS4 compliance, that reduce runoff from their sites beyond County standards, or that provide for a higher than required water quality protection.
- 3) An appeals manual to provide for a formal process for challenging the calculated fee.