
*Stormwater Assessment Advisory Committee
Final Report*

Stormwater Management Assessment Fee Policy Options and Recommendations

Prepared for
West Chester Borough, PA

December 23, 2013

CH2MHILL®

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Executive Summary

Background

The West Chester Borough is facing strict regulatory requirements for pollutant load reductions from the total maximum daily loads (TMDL) issued by the U.S. Environmental Protection Agency (EPA) and the Pennsylvania Department of Environmental Protection (PADEP), and a need to manage stormwater runoff as part of its National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) permit. Both water quality and water quantity issues are drivers for this type of project. Given that the Borough is largely built out, impervious land cover contributes large volumes of runoff into the storm sewer system during storms. Even small storms can overload the system, backing stormwater into streets and low spots, causing localized flooding, and in some instances damaging sewer lines. Goose Creek, Plum Run, Taylor Run, and the beginning of Blackhorse Run in Everhart Park suffer streambank erosion, streambed scouring that lead to exposed utilities and risk to property, increased trash and floatables, degraded stream ecology, and downstream watershed impacts.

The effects of the recent prolonged recession on the Borough's financial situation have resulted in the cost of providing municipal services increasing faster than revenue sources. The Borough has a backlog of unfunded capital projects to address flooding and drainage asset renewal needs, and faces increasing requirements to meet the MS4 permit and TMDLs.

The Borough requires onsite control of runoff for new development, but most of the Borough was not subject to these requirements and thus contributes runoff directly to the storm sewer system and local streams. A significant portion of the property in the Borough is tax exempt and do not generate revenue to support the annual budget. Still, those properties benefit from stormwater-related services. This disparity between services provided and revenue generated is difficult to manage.

Purpose

This report documents the policy options and recommendations of the Stormwater Assessment Advisory Committee (SWAAC) for elected officials to consider in implementing the Borough's stormwater capital improvement program (CIP), maintaining new and existing stormwater management systems, and complying with increasing federal and state regulatory requirements. Faced with anticipated funding gaps, the Borough has evaluated alternate approaches to address capital and maintenance costs while meeting Borough goals for economic development, and evaluated the feasibility of developing an impervious area (IA)-based fee for stormwater management services. Every property contributes to the need for stormwater management based on the volume of runoff generated by the property. A stormwater management fee is typically assessed based on the amount of impervious surface on each property.

The SWAAC carefully reviewed the following policy options:

- What does the Borough need to do, and how much will it cost? Program elements, level of service (LOS), and the cost of regulatory compliance and improved customer service were considered.
- How can these costs be paid? What dedicated funding options should be implemented? Options include continued reliance on property taxes and other contributions to the general fund, implementation of a dedicated property tax based on assessed value, and implementation of a stormwater management assessment fee (SWMAF) based on IA.
- What rate structure options for the SWMAF is right for the Borough?
- Should the Borough use a pay-as-you-go financing program or use debt-financing for the stormwater CIP?
- How can the Borough incentivize action? Incentive options include rebates or grants and credits.

- How will the Borough administer billing? Stand-alone bills, real estate bills, and sewer bills were considered.
- How will the Borough manage appeals? Frequency and timeframes for appeals were considered.

Key Findings and Recommendations

Policy Issue #1: What does the Borough need to do and how much does it cost?

The SWAAC first considered the requirements to meet the Borough’s regulatory obligations, maintain its existing infrastructure and address capital program needs for drainage improvements and to repair/replace existing storm drainage systems. These program elements represent a “level of service.” Three alternatives were considered:

- | | |
|--------|---|
| Low | Assumes current level of operation and maintenance expenditures, known CIP project needs, and MS4 permit implementation. (That is, status quo or no changes to the current program, and likely inadequate because of regulations promulgated by USEPA and PADEP). |
| Medium | Assumes additional funding for CIP projects on the Borough’s known backlog of capital program needs, MS4 permit implementation, increased maintenance and customer service, rehabilitation of stormwater infrastructure, increased urban forestry expenditures, basic master planning to better define capital needs; and GIS improvements. |
| High | Assumes full funding for the CIP backlog of projects over a 5-year period, MS4 permit implementation, high level of maintenance and customer service, faster rehabilitation of stormwater infrastructure, increased urban forestry expenditures, more comprehensive master planning, and GIS improvements. |

Program Recommendation

After extensive discussion of the LOS scenarios, the SWAAC felt that it could not recommend the full backlog be funded under the medium scenario because of the higher fees that would result, so a “revised medium” scenario was proposed that included only one additional project from the CIP backlog. Table 1 summarizes the LOS cost estimates for program elements for the proposed SWMAF.

Policy Issue #2: What are the options to pay for these costs?

The SWAAC reviewed two options for dedicated funding of stormwater management program:

- A dedicated property tax based on assessed value
- A stormwater management assessment fee based on impervious area.

Comparisons of the effects of these two options were made across all the major property classes in the Borough, including single-family residential, multi-family residential, commercial, industrial, institutional, faith organizations and non-profits. In addition, a review was conducted of what other jurisdictions are doing to meet stormwater funding challenges. Based on that assessment, the SWAAC recommended proceeding with a stormwater management assessment fee based on impervious area because it is more equitable. Properties would pay based on contribution to stormwater runoff as measured by impervious area. All properties that contribute will pay, including parking lots that do not currently have water/sewer bills, and tax-exempt properties that do not currently pay property taxes. For the SWMAF, a number of rate structure options were considered, as discussed in detail in Section 2.

Rate Structure Recommendation

There are various approaches to determine rate structure by which properties are assessed a stormwater management fee. Properties could be assessed a fee based on land use, whether residential, commercial, multi-unit, institutional, or other. But a land-use based approach does not take into consideration the

various sized properties and amount of IA on each, and therefore inequitable. As such, the SWAAC recommended that the Borough use a tiered approach based on the amount of IA.

TABLE 1
Level of Service Cost Estimate Summary

	Estimated Average Annual Costs			
	Low	Medium (revised)	Medium (original)	High
Operating Costs				
Operations and Maintenance	\$324,660	\$357,000	\$357,000	\$387,540
NPDES Permit Activities	\$10,880	\$33,100	\$33,100	\$59,580
Administrative	\$33,600	\$51,660	\$51,660	\$82,940
Urban Forestry/Parks	\$0	\$89,080	\$89,080	\$178,520
Professional Services	\$42,300	\$77,300	\$77,300	\$112,300
Total Operating	\$411,440	\$608,140	\$608,140	\$820,880
Capital Costs				
Equipment	\$49,200	\$49,200	\$49,200	\$49,200
Pipes	\$250,750	\$250,750	\$250,750	\$250,750
Stream Improvements	\$320,500	\$320,500	\$320,500	\$320,500
Additional Candidate Project	\$0	\$61,000	\$285,600	\$571,000
Total Capital	\$620,450	\$681,450	\$906,050	\$1,191,450
Total Operating and Capital	\$1,031,890	\$1,289,590	\$1,514,190	\$2,012,330

Using impervious estimates based on Chester County's geographic information system (GIS) impervious cover data layer, three rate structure scenarios were evaluated. For the three rate scenarios, the tiering method (with 6 tiers), applied to all properties, was used.

Figure 1 compares the unit rates (\$/1,000 ft²) for the LOS scenarios. Table 2 shows the IA ranges for the recommended six-tier rate structure and the estimated rates for the medium revised LOS. All scenarios are based on pay-as-you go financing that includes no issuance of bonds and is assumed to spread capital costs over time.

Rate Recommendations

The SWAAC recommends Rate Scenario 2—Revised Medium Level of Service, which represents the estimated program needs to satisfy MS4 permit and other regulatory requirements, and to fund the base CIP program plus the expanded Pine Alley Brick Sewer Replacement project. The following financing options are recommended:

- Use tiering of all properties, with six tiers based on the IA ranges shown in Table 2.
- Use the SWMAF to pay directly for CIP projects; that is, do not use debt financing.

Policy Issue #3: How can the Borough incentivize action? Rebates/Grants and Credits

Many stormwater management programs that assess fees based on IA provide incentives to properties with onsite stormwater facilities to treat stormwater runoff. Two types of incentive programs typically are considered: Rebates or grants, and Credits.

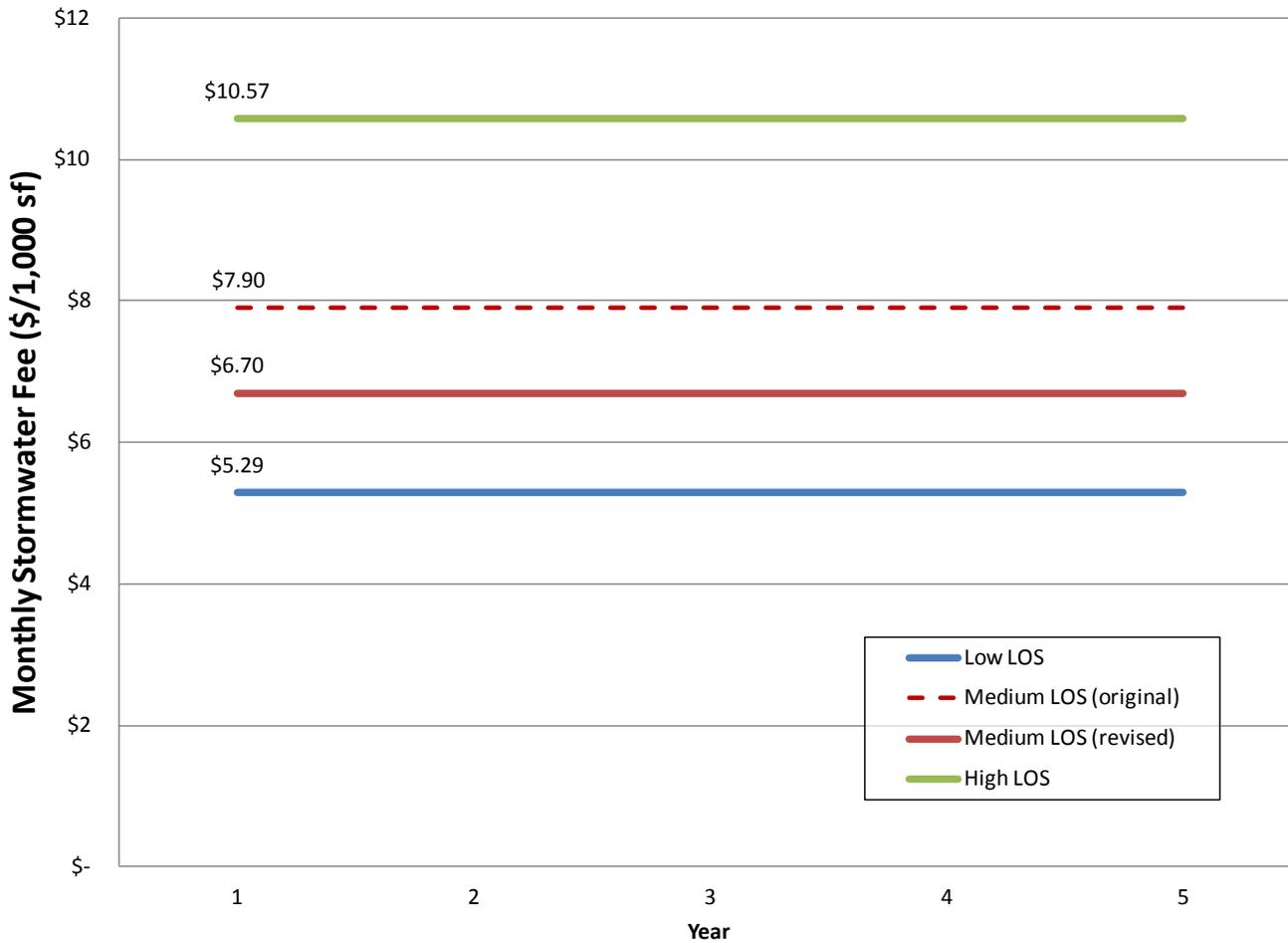


FIGURE 1
Comparison of SWMAF by Rate Scenario (Pay-as-you-go Financing)

TABLE 2
Monthly Stormwater Assessment Fee per Property by Tier Revised-Medium Level of Service

	Years 1 to 5 ^a
Stormwater Assessment Fee(\$ per 1,000 ft ²)	\$6.70
Monthly Stormwater Assessment Fee per Property	
Tier 1 (> 0 and ≤ 1,000 ft ²)	\$3.35
Tier 2 (>1,000 and ≤ 1,500 ft ²)	\$8.38
Tier 3 (> 1,500 and ≤ 2,000 ft ²)	\$11.73
Tier 4 (> 2,000 and ≤ 2,500 ft ²)	\$15.08
Tier 5 (> 2,500 and ≤ 3,000 ft ²)	\$18.43
Tier 6 (> 3,000)	<i>Tier 6 properties pay based on total impervious area. The minimum fee in Tier 6 is \$20.10 per month for 3,000 ft² of impervious area, increasing at \$6.70/1,000 ft².</i>

Note: Applies to all properties.
^a Assumes revised medium LOS
 ft² = square feet

The purpose of grants or rebates is to provide a one-time subsidy to reduce construction costs associated with installing stormwater facilities on private property. This sort of program is fairly uncommon, but is growing in popularity among jurisdictions with MS4 permit mandates.

The purpose of credits is to help property owners reduce their annual stormwater fee, thus providing an incentive for implementing stormwater management facilities. Credits typically have been offered only to commercial properties, but recent trends now include single-family properties eligible for certain credits. The credits that properties can receive vary. Most stormwater management assessment programs provide only a partial credit, but others provide full credit. The rationale for not providing 100 percent credit is that property owners should contribute to paying for services that are beyond their property lines, such as Borough-wide permit compliance, road drainage maintenance, and stormwater management improvements on public lands. The criteria for determining credit level typically are based on the type of facility and percent of IA treated (usually just the onsite IA).

Incentive Program Recommendations

Because credit programs give property owners a means to reduce fees while furthering the Borough's stormwater management goals, the SWAAC recommends a credit program. The SWAAC is not recommending a rebate program but recommending credits to encourage maintenance of facilities on private property. To facilitate the administrative burden of running a credit program, the SWAAC recommends that the credit program start by providing credits to nonresidential properties, because they are fewer in number, typically have larger impervious area, and thus likely have greater fees and greater potential for reducing those fees with credits for existing BMPs. An allowance was included for the cost of a credit program in the four LOS scenarios.

Policy Issue #4: Should any property classes be exempted?

Based on the preliminary analysis of parcels in GIS, less than 4 percent of the 3,999 properties in the Borough of West Chester are classified as tax-exempt (GIS data provided by Chester County and relates to tax assessment classification). These properties account for roughly 20 percent of the total impervious area or number of billing units. Most stormwater management assessment programs do not exempt or waive charges for tax-exempt properties, because the stormwater charge is a fee for service, similar to water and wastewater management or trash collection and disposal. Only when state enabling legislation requires that specific properties be exempted or waived do stormwater management assessment programs provide exemptions. Unless authorized to exempt certain types of properties, stormwater management assessment programs could face legal challenges if they treated classes of properties differently because the correlation between service requirements and how much each property contributes to the need for that service is then different by property type, and inequitable. In Pennsylvania, there is no state legislation that would exempt religious and nonprofit properties from the stormwater management assessment charge.

Exemption Recommendations

The SWAAC recommends that no exemptions be provided for any property in the Program, including payment required by the Borough.

Policy Issue #5: How will the Borough administer billing?

Three billing methods are commonly used to collect stormwater management assessment fees around the country: real estate tax bills, water or sewer utility bills, or separate billing systems. Selection of a billing system is unique to the locality establishing a stormwater management assessment program. For example, the water/sewer bill may only cover part of the stormwater management assessment program service area, whereas the property tax database provides more thorough coverage. The selection of the billing method should be cost-effective, timely, and capture all affected properties.

Billing Recommendations

The SWAAC recommends adding a new line item for the SWMAF based on the rate class for the property to the monthly sewer bill. Properties that do not now get a sewer bill will be added to the database in order to get a bill, and the sanitary sewer line item will show a \$0 charge.

Policy Issue #6: How will the Borough administer appeals?

All stormwater management assessment program charges typically provide a mechanism for rate payers to appeal their bills and allow them to correct erroneous information. However, what can be appealed, when, and the process for submitting and reviewing appeals need to be clearly defined to make the fee defensible and manageable. What can be appealed typically is limited to the following:

- IA calculation and corresponding tier assignment
- Credit calculation, assuming a property owner applied for a credit.

Appeals typically are submitted only once a year, well ahead of the billing cycle.

Appeals Recommendations

SWAAC recommended that appeals be allowed only once a year to minimize administrative costs and that a deadline for appeals be set 6 months before the first bills go out in a given fiscal year.

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Acronyms and Abbreviations

BMP	Best Management Practice (stormwater control, sometimes used interchangeably with GI)
Borough	West Chester Borough
CIP	Capital Improvement Program
ERU	Equivalent Residential Unit
ft ²	square feet
GI	green infrastructure
IA	impervious area
LOS	level of service
MS4	municipal separate storm sewer system
NPDES	National Pollutant Discharge Elimination System
PADEP	Pennsylvania Department of Environmental Protection
SFR	Single-Family Residential
SWAAC	Stormwater Assessment Advisory Committee
SWMAF	Stormwater Management Assessment Fee
TMDL	Total Maximum Daily Load
USEPA	U.S. Environmental Protection Agency

Introduction

Purpose

This report documents the policy options and recommendations of the Stormwater Assessment Advisory Committee (SWAAC) for the elected officials of the Borough of West Chester to consider with respect to implementing the Borough's stormwater capital improvement program (CIP), maintaining new and existing storm water management systems, and complying with increasing federal and state regulatory requirements. Faced with anticipated funding gaps, the Borough has evaluated alternate approaches to address the capital and ongoing maintenance costs while also meeting Borough goals for economic development, and to evaluate the feasibility of developing an impervious area (IA)-based fee for stormwater management services (also called a stormwater utility). Each property contributes to the need for stormwater management based on the volume of runoff generated by their property. That volume of runoff is a direct function of how much impervious surface is on their property, such as rooftops and paved surfaces, which prevent rainfall from infiltrating.¹ So a stormwater management fee is typically assessed based on the amount of impervious surface on each property.

The SWAAC carefully reviewed policy options as described below:

- What does the Borough need to do and how much does it cost? Program elements, level of service (LOS), and cost to provide regulatory compliance and improved customer service were considered.
- What are the options to pay for these costs? What dedicated funding options should be implemented? Continuation of Borough's reliance on property taxes and other contributions to the general fund, or implementation of a dedicated property tax based on assessed value, or implementation of a stormwater management assessment fee (SWMAF) based on IA were considered.
- What rate structure options for the SWMAF is right for the Borough?
- Should the Borough use a pay-as-you-go financing program, or should the Borough use debt-financing for the stormwater CIP?
- How can the Borough incentivize action? Incentive options including rebates or grants and credits were considered.
- How will the Borough administer billing? Stand-alone bills, real estate bills, and sewer bills were considered.
- How will the Borough manage appeals? Frequency and timeframes for appeals were considered.

Drivers for Dedicated Source of Funding for Stormwater Management

Numerous drivers requiring changes to the way the Borough manages urban stormwater runoff support the need for a dedicated funding source.

The West Chester Borough is facing strict regulatory requirements for pollutant load reductions from the total maximum daily loads (TMDL) issued by the U.S. Environmental Protection Agency (EPA) and the Pennsylvania Department of Environmental Protection (PADEP), as well a need to manage stormwater runoff as part of its National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) permit. For example, if the Goose Creek nutrient TMDL is implemented as written, the total phosphorus load in

¹ Impervious surfaces must be clearly defined within the ordinance establishing the stormwater management fee.

stormwater runoff from the Borough will have to be reduced by more than 50 percent. In addition, future environmental mandates are likely to continue to be more stringent, reinforcing the importance of the Borough's effort to evaluate a dedicated funding mechanism for stormwater infrastructure.

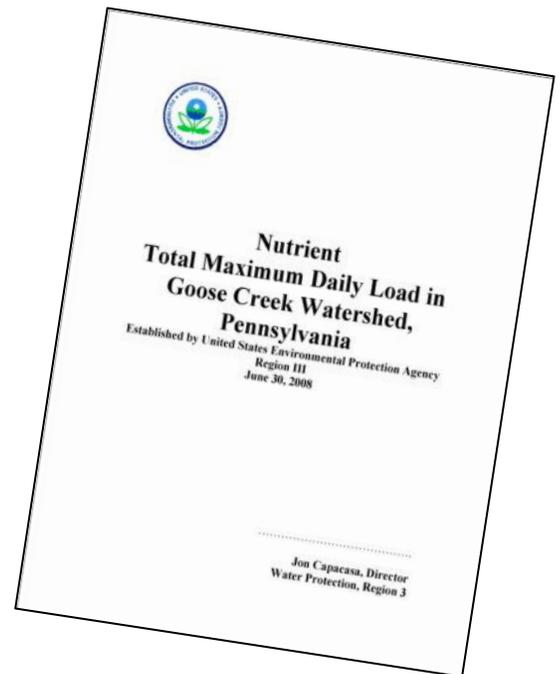
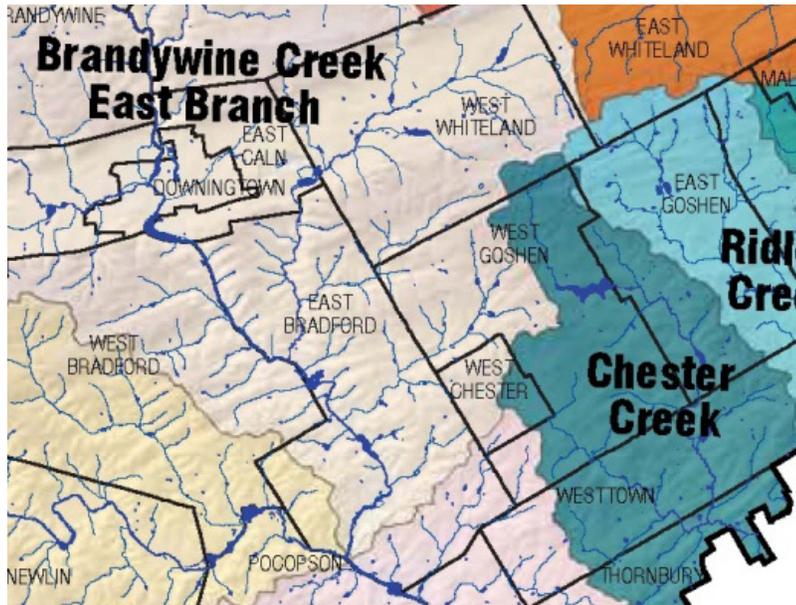
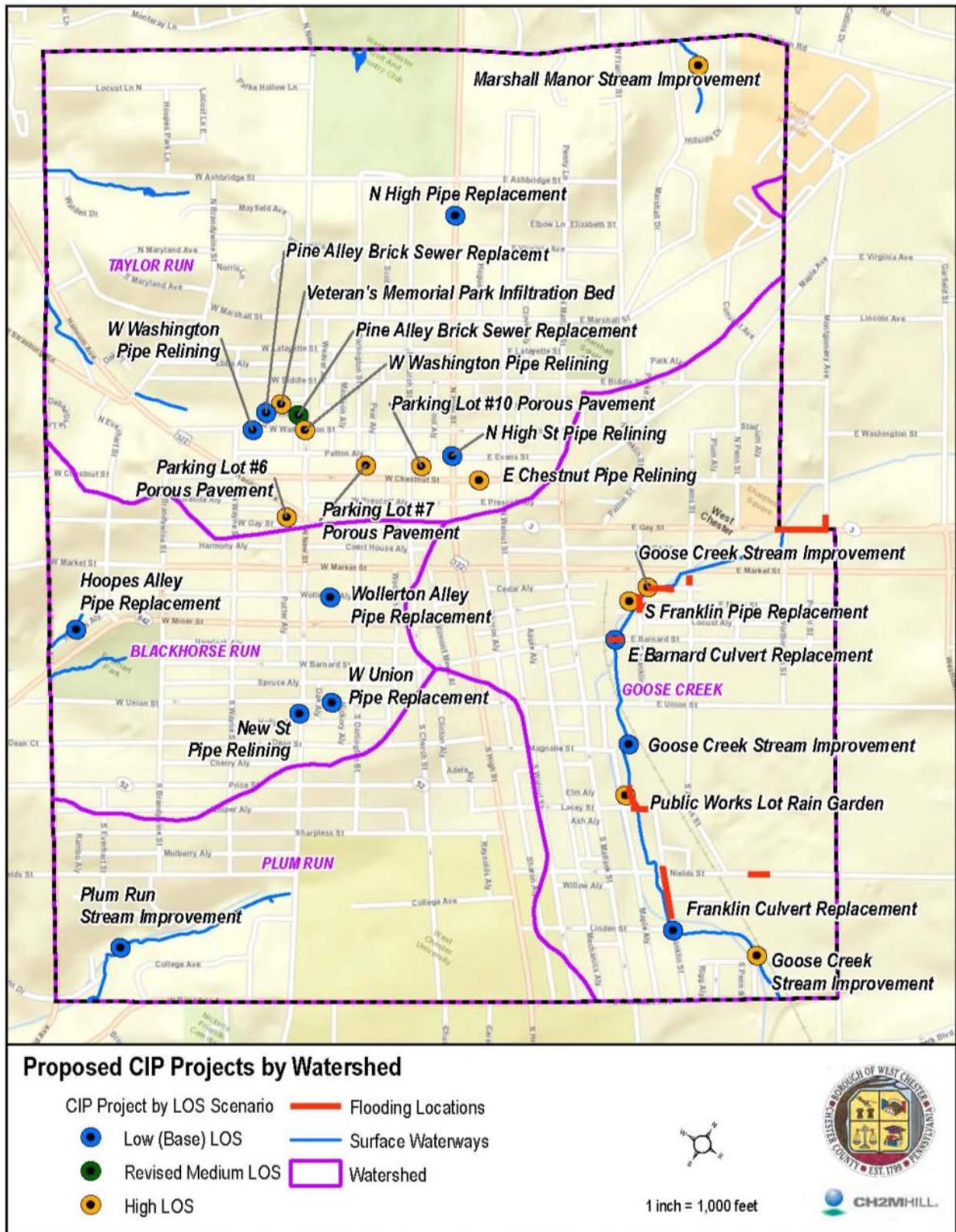


FIGURE 1-1

The West Chester Borough Watersheds

The Goose Creek Watershed (tributary to Chester Creek) has a TMDL requirement to reduce total phosphorus by more than 50%.

In addition to water quality issues, water quantity issues are also drivers for this type of project. Given that the Borough is largely built out, the paved, impervious land cover contributes large volumes of runoff into the storm sewer system during rainstorms. Even during relatively small storms, stormwater can overload the system, backing up into streets and low spots, causing localized flooding, and in some instances damaging storm sewer lines. The surface waterways (Goose Creek, Plum Run, Taylor Run, and the beginning of Blackhorse Run in Everhart Park) suffer from this increased volume of runoff showing signs of streambank erosion, streambed scouring that leads to exposed utilities and risk to property, increased amounts of trash and floatables, and degraded stream ecology.



Data provided by Chester County GIS. Project locations provided by WC Borough Public Works Dept staff. Map created 11-20-13 for Stormwater Assessment Feasibility Project

FIGURE 1-2

Areas of Flooding in West Chester Borough

West Chester Borough, as most urbanized historic communities in southeastern Pennsylvania, has locations of localized flooding and a number of stormwater-related capital improvement plan (CIP) projects identified.



FIGURE 1-3

Stream Erosion on Goose Creek near Mosteller Park

Stream erosion threatens existing infrastructure, in this case a sanitary sewer crossing the stream.

Finally, the effects of the recent prolonged recession, which has exacerbated financial strain on the Borough, have created a situation in which the cost to provide municipal services is increasing faster than revenue sources. The Borough has a backlog of unfunded capital projects to address flooding and drainage asset renewal needs, as well as anticipated increased requirements to meet the MS4 permit and TMDLs.

With more than 35 percent of properties owned by tax-exempt organizations, the disparity between services provided and revenue generated from property taxes is all the more challenging to manage. When it comes to stormwater, basically every developed property contributes to the problem in some way. Although the Borough requires onsite control of runoff for new development, most of the Borough (historically developed and therefore grandfathered) is not subject to these requirements and therefore contributes runoff directly to the storm sewer system and thus local streams. The historic town has a very old storm sewer system with extensive maintenance and upkeep needs. A stormwater management assessment program (or, stormwater utility) provides a legally defensible mechanism to equitably charge property owners based on the amount of runoff they generate.



FIGURE 1-4

Severe Streambank Erosion on Plum Run, Threatening Private Property

Project Background

Faced with significant increases in regulatory requirements and anticipated funding gaps, the Borough has evaluated ways to address ongoing capital and maintenance costs while also meeting its goals for economic development, and also evaluated the feasibility of developing an IA-based fee for stormwater management services. Studies and activities completed before the current implementation efforts include the following:

- In March 2012, the West Chester Citizens Financial Advisory Ad-Hoc Committee recommended in its report to Borough Council that a stormwater fee program be developed and implemented as a way to improve the Borough's financial situation.
- In January 2013, West Chester Borough released a request for proposals seeking support for preparation of a Feasibility Report and Implementation Plan for a Stormwater Assessment Fee.
- In April 2013, West Chester Borough contracted with CH2M HILL to determine the feasibility of the SWAAF.
- In December 2013, a summary of this report will be presented to the Borough Council for approval to move on to implementation planning.

Benefits of a Dedicated Funding Source for Stormwater Management

A dedicated funding source for stormwater, such as an SWMAF, can provide the following benefits:

For citizens

- Improved public health and safety
- Improved customer service and a reduced backlog of customer complaints
- Reduced long-term capital costs through proactive maintenance
- Local drainage improvements that help reduce localized flooding
- Other triple bottom line benefits such as potential increased property value (but not property assessments), and improved aesthetic and environmental quality

For businesses

- Improved Borough services
- Cleaner streets, which help improve the business climate
- Support of economic development initiatives and public-private partnerships

For environmental quality

- Meeting local and regional regulations on water quality, reducing the possibility of USEPA fines for compliance with permit requirements
- Creating cleaner rivers, creeks and streams
- Providing cleaner, improved park areas

Significant issues related to stormwater management are the focus of recent regulatory requirements such as the Municipal Separate Storm Sewer System (MS4) permit.² As noted, the Borough is facing increased regulatory scrutiny from PADEP. Projects and programs related to stormwater are dispersed throughout the Borough's Department of Public Works, and implementation of a dedicated funding source can help streamline and provide program efficiencies in both projects and programs. One of the main benefits is movement away from a reactive, emergency repair model for stormwater management to a proactive, strategic, and customer-service-driven approach.

² US EPA issues permits for stormwater discharges from MS4s, which it defines as a conveyance or system of conveyances that is:

- Owned by a state, Borough, town, village, or other public entity that discharges to waters of the U.S.;
- Designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.);
- Not a combined sewer; and
- Not part of a Publicly Owned Treatment Works (sewage treatment plant).

Impervious Area-based Stormwater User Fee Implementation Steps

Figure 1-5 shows the overall sequence of tasks being followed to implement an IA-based stormwater assessment fee. The review of program requirements and LOS options were developed in Task 1. Those program costs were used to evaluate funding options and policy implications in Tasks 2 and 3, with review and input by the SWAAC. This report documents the policy options and recommendations developed by the SWAAC during the feasibility study phase of the project (Tasks 1, 2, and 3). If the Borough Council agrees with the SWAAC recommendations and decides to proceed with implementation, the SWAAC's input will form the first step of a concerted public outreach program in Task 4 that will continue with public outreach activities targeting a cross section of stakeholder groups. Materials for public outreach will be developed during the implementation phase, including PowerPoint presentations, factsheets, and a frequently asked questions (FAQ) document.

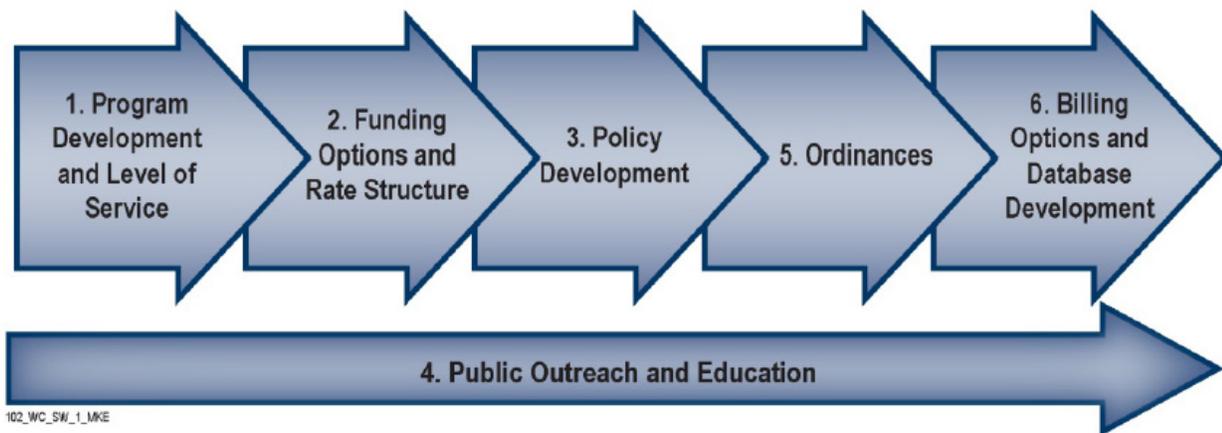


FIGURE 1-5
Stormwater Management Assessment Fee Feasibility Study and Implementation Road Map

Stormwater Assessment Advisory Committee Composition and Process

To attract broad stakeholder input to this study, the Borough formed the SWAAC at the start of the project feasibility study phase. It includes representatives from the business and faith communities, Borough residents, nonprofit institutions, the Chester County Hospital, West Chester University, West Chester Borough and Chester County staff. The SWAAC was convened to support the SWMAF evaluation through a series of meetings to evaluate policy options. This report documents the options, deliberations, and recommendations.

For the SWMAF evaluation, the SWAAC participated in four meetings between July and October 2013. The meetings were structured to educate the SWAAC on policy options, to solicit feedback on additional analyses needed, and to obtain recommendations. Generally one or two major policy issues were discussed in each meeting, with each successive meeting allowing for a recap of discussion and preliminary recommendations before being finalized. A new policy paper was prepared and distributed before each meeting. Policy papers were also used to capture discussion and decisions by the SWAAC, and updated papers were distributed after each meeting to reflect the discussion and recommendations. Appendix A lists of SWAAC members, Borough staff members, and consultants who supported this effort, and documentation of attendance at each meeting.

Policy Options and Recommendations

Policy Issue #1. Program Elements, Level of Service, and Costs

Appendix B contains the final version of the policy paper prepared for and reviewed by the SWAAC on program elements, LOS, and costs. Key issues and recommendations are summarized below.

Program Elements and Regulatory Requirements: What does the Borough need to do and how much does it cost?

An analysis was performed to document activities within the Department of Public Works that contribute to stormwater management and watershed protection, and to document the baseline, potential program enhancements, and funding requirements that will help achieve regulatory compliance and improve customer service. A stormwater management program assessment was developed for the following program elements and their respective costs:

- Program administration
- Inspection and maintenance
 - Stormwater BMPs
 - Street sweeping
 - Inlet / catch basin cleaning
 - Storm drains
- MS4 permit compliance
- TMDL compliance
- Master planning and Stormwater Management Plan
- Public education on stormwater management
- Administration of credit program
- Data management (GIS System, Computerized Maintenance Management System [CMMS])
- Capital Improvement Plan (engineering, design, construction)

For each element, the project team analyzed and summarized internal and external program costs for a 5-year period for three LOS alternatives and compared them to the current program. No two stormwater management assessment programs (IA-based user fee programs) are exactly alike, but the program elements funded by the fee generally are similar. To identify program costs for the proposed fee, individual program elements were evaluated and estimates developed based on a combination of previous reports, staff salaries, estimated time spent on stormwater-related functions/services, etc.

Level-of-Service Alternatives

The SWAAC first considered the requirements to meet the Borough’s regulatory obligations, maintain its existing infrastructure and address capital program needs for drainage improvements and to repair/replace existing storm drainage systems. These program elements, taken together, represent a “level of service.”

Three LOS alternatives were considered:

- | | |
|--------|--|
| Low | Assumes current level of operation and maintenance expenditures, known CIP project needs, and MS4 permit implementation. (That is, status quo or no changes to the current program, and which is likely inadequate because of regulations promulgated by USEPA and PADEP). |
| Medium | Assumes additional funding for CIP projects on the Borough’s known backlog of capital program needs, MS4 permit implementation, increased maintenance and customer service, rehabilitation of stormwater infrastructure, and basic master planning to better define capital needs. |

High Assumes full funding for the CIP backlog of projects over a 5-year period, MS4 permit implementation, high level of maintenance and customer service, faster rehabilitation of stormwater infrastructure, increased urban forestry expenditures, more comprehensive master planning, and GIS improvements.

A key variable in determining program costs and LOS is what CIP projects to include and how those projects get funded over the project's 5-year planning horizon. All three LOS scenarios include full funding of the Borough's list of CIP projects, which historically have not been fully funded given competing budget priorities. However, the longer backlog or "wish list" of unfunded CIP projects initially was included in the medium LOS scenario, assuming a 10-year implementation period, and in the high LOS scenario, assuming a 5-year implementation period. After extensive discussion of the 3 LOS scenarios, the SWAAC felt that it could not recommend the full backlog be funded under the medium LOS scenario because of the higher fees that would result, so a "revised medium LOS" scenario was proposed that included only one additional project from the CIP backlog. (Other refinements were made based on SWAAC feedback, as discussed in Appendix B.) Table 2-1 summarizes the LOS cost estimates for program elements for the proposed SWMAF under all four LOS scenarios. Figure 2-1 shows how costs are assumed to be distributed over the first 5 years of the program for the medium and high LOS alternatives.

TABLE 2-1
Level of Service Cost Estimate Summary

	Estimated Average Annual Costs			
	Low	Medium (revised)	Medium (original)	High
Operating Costs				
Operations and Maintenance	\$324,660	\$357,000	\$357,000	\$387,540
NPDES Permit Activities	\$10,880	\$33,100	\$33,100	\$59,580
Administrative	\$33,600	\$51,660	\$51,660	\$82,940
Urban Forestry/Parks	\$0	\$89,080	\$89,080	\$178,520
Professional Services	\$42,300	\$77,300	\$77,300	\$112,300
Total Operating	\$411,440	\$608,140	\$608,140	\$820,880
Capital Costs				
Equipment	\$49,200	\$49,200	\$49,200	\$49,200
Pipes	\$250,750	\$250,750	\$250,750	\$250,750
Stream Improvements	\$320,500	\$320,500	\$320,500	\$320,500
Additional Candidate Project	\$0	\$61,000	\$285,600	\$571,000
Total Capital	\$620,450	\$681,450	\$906,050	\$1,191,450
Total Operating and Capital	\$1,031,890	\$1,289,590	\$1,514,190	\$2,012,330

Level-of-Service Recommendations

The SWAAC recommended that dedicated funding options be investigated to provide at least the revised medium LOS, with a goal of moving toward the medium LOS. It was agreed that the current low LOS would not be adequate to meet regulatory requirements.

As part of the CIP program, the SWMAF set at the revised medium LOS would generate revenue to cover costs associated with ongoing planning, engineering, and construction of the Low LOS projects shown in Figure 2-2, with the addition of the Pine Alley Brick Sewer Replacement project (an expansion of the project included in the Borough's 5-year CIP), which was considered a higher priority than other projects on the longer list of additional CIP projects included in the original medium and high LOS scenarios.

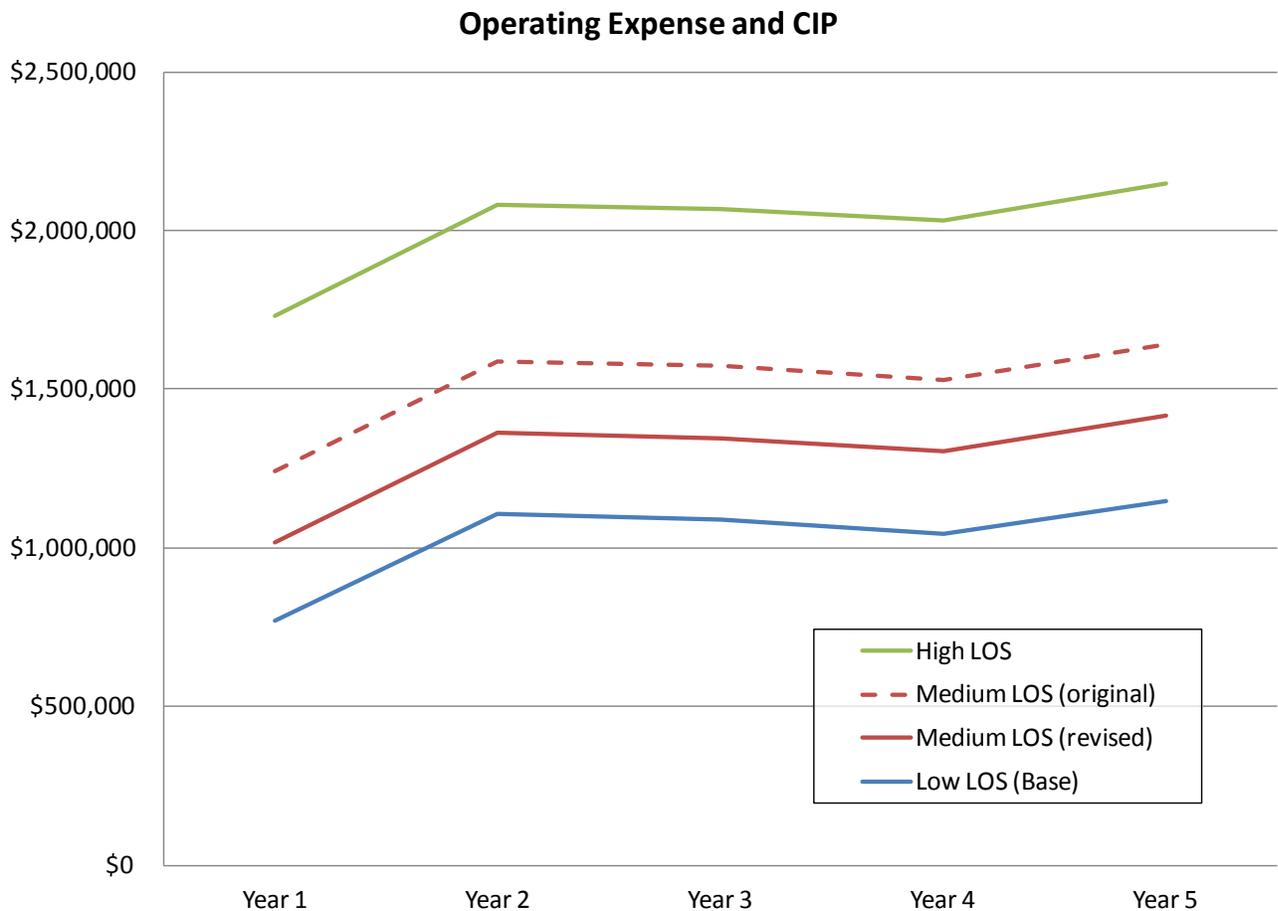


FIGURE 2-1
Level of Service Program Needs for the Next 5 Years

Policy Issue #2. Rate Structure and Preliminary Rates

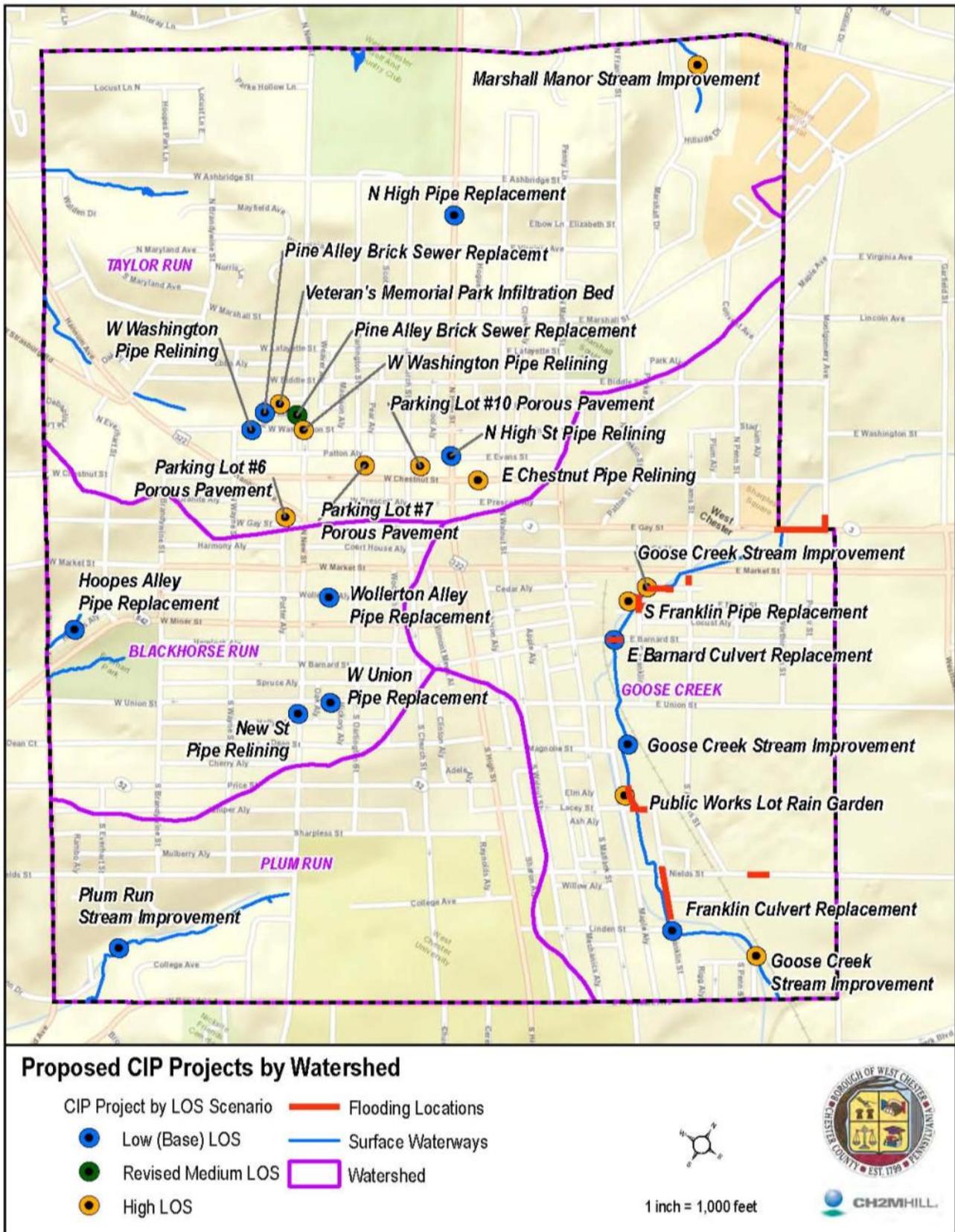
The SWAAC reviewed two options for dedicated funding of the stormwater program:

- Implementation of a dedicated property tax based on assessed value
- Implementation of a stormwater management assessment fee based on impervious area

Comparisons of the effects of these options were made across all major property classes in the Borough: single-family residential, multi-family residential, commercial, industrial, institutional, faith organizations, and nonprofits. Also, a review was conducted of what other jurisdictions are doing to meet stormwater funding challenges. Based on that assessment, the SWAAC recommended proceeding with the SWMAF because it is more equitable—properties would pay based on their contributions to stormwater runoff as measured by impervious area, and all properties that contribute to the issue will pay, including parking lots, which do not have water/sewer bills, and owners of tax-exempt properties who, do not pay property taxes.

For the SWMAF, a number of rate structure options were considered, as discussed below.

Appendix C contains on rate structure alternatives and preliminary rates for the option to pay all costs annually (pay as you go). It should be noted that the concept of using debt financing by issuing bonds to finance the capital improvement program was also discussed with the SWAAC, but considered infeasible given the relatively small size of the Borough's CIP. Key issues and recommendations are summarized below.



Data provided by Chester County GIS. Project locations provided by WC Borough Public Works Dept staff. Map prepared 11-20-13 for Stormwater Assessment Feasibility Project

FIGURE 2-2
Capital Improvement Projects for Low and Medium/High Levels of Service

Rate Structure Options: Tiering

There are various approaches to determine rate structure. Properties could be assessed a fee based on whether they are residential, business, multi-unit, institutional or other. However, this approach does not take into consideration the various sized properties and amount of IA on each. As such, it is recommended that the Borough use a tiered approach based on the amount of IA.

Three rate structure options were evaluated using impervious estimates based data provided by Chester County's geographic information system (GIS). For the three rate scenarios, the tiering method (with 6 tiers), applied to all properties, was used. Table 2-2 shows the IA range for the recommended six-tier rate structure. The tiering method groups all properties within a range of IA, which are then assessed a fee based on a representative IA for that range. For larger parcels with over 3,000 square feet of IA, the fee will be calculated based on actual IA. Based on feedback from the SWAAC, the tiering method was preferred over using actual IA or lumping all properties regardless of type because it represents a reasonable and equitable method.

TABLE 2-2

All Properties Tiers, 1,000 for first tier and 500 for Subsequent Tiers, Multiplier Based on Midpoint

Tier	Total Impervious Area (ft ²)	Property Count in Tier	Fee Multiplier	Billing Units in Tier ^a
Tier 1 (> 0 and ≤ 1,000 ft ²)	504,391	721	0.50	361
Tier 2 (> 1,000 and ≤ 1,500 ft ²)	849,057	678	1.25	848
Tier 3 (> 1,500 and ≤ 2,000 ft ²)	1,149,028	659	1.75	1,153
Tier 4 (> 2,000 and ≤ 2,500 ft ²)	1,208,858	542	2.25	1,220
Tier 5 (> 2,500 and ≤ 3,000 ft ²)	1,005,166	366	2.75	1,007
Tier 6 (> 3,000 ft ²)	12,625,644	1,033	n/a	12,626
Total	17,342,143	3,999		17,215

ft² = square feet of impervious area defining the tier

^a Tiers 1–5, count of properties times multiplier. Tier 6, total impervious area divided by 1,000 ft².

Rate Structure Recommendations

The SWAAC recommends Rate Scenario 2—Revised Medium Level of Service, which represents the estimated program needs to satisfy MS4 permit and other regulatory requirements, and to fund the base CIP program plus the expanded Pine Alley Brick Sewer Replacement project. The following financing options are recommended:

- Use tiering of all properties, with six tiers based on the IA ranges shown in Table 2-2.
- Use the SWMAF to pay directly for CIP projects; that is, do not use debt financing.

Table 2-3 is a financial summary for the Stormwater Management Assessment Program over 5 years, based on the SWAAC recommended fee of \$6.70/1,000 ft². Estimated operating revenues and expenditures are provided in detail, and annual balances are shown. Table 2-4 shows the monthly Stormwater Assessment Fee per Property by Tier for the Revised Medium Level of Service option.

TABLE 2-3

Financial Summary for the Revised Medium Level of Service Rate Scenario

	Year 1	Year 2	Year 3	Year 4	Year 5
Stormwater Assessment Fee (\$/1,000 ft ²)	\$6.70	\$6.70	\$6.70	\$6.70	\$6.70
Billing Units	17,215	17,301	17,387	17,474	17,561
Operating Revenues					
SWMAF	\$1,332,440	\$1,339,100	\$1,345,750	\$1,352,490	\$1,359,220
less Allowance for Uncollectable Accounts	(\$66,600)	(\$67,000)	(\$67,300)	(\$67,600)	(\$68,000)
less Credits/Incentives	(\$55,400)	(\$55,800)	(\$56,000)	(\$56,300)	(\$56,500)
Grants	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Interest Income	\$200	\$400	\$300	\$400	\$400
Total Revenues	\$1,307,685	\$1,314,100	\$1,320,520	\$1,326,810	\$1,333,010
Expenditures					
Operation And Maintenance	\$612,800	\$617,400	\$632,900	\$580,600	\$597,000
Non-operating	\$0	\$0	\$0	\$0	\$0
Debt Service	\$0	\$0	\$0	\$0	\$0
Stormwater CIP (Pay-Go)	\$406,000	\$744,000	\$714,000	\$724,750	\$818,500
Total Expenditures	\$968,800	\$1,293,400	\$1,208,900	\$1,185,350	\$1,295,500
Beginning Balance	\$0	\$288,885	\$241,585	\$215,205	\$236,665
Ending Balance	\$288,885	\$241,585	\$215,205	\$236,665	\$154,175

TABLE 2-4

Monthly Stormwater Assessment Fee per Property by Tier: Revised Medium Level of Service

Low	Year 1	Year 2	Year 3	Year 4	Year 5
Stormwater Assessment Fee(\$ per 1,000 ft ²)	\$6.70	\$6.70	\$6.70	\$6.70	\$6.70
Monthly Stormwater Assessment Fee per Property					
Tier 1 (> 0 and ≤ 1,000 ft ²)	\$3.35	\$3.35	\$3.35	\$3.35	\$3.35
Tier 2 (> 1,000 and ≤ 1,500 ft ²)	\$8.38	\$8.38	\$8.38	\$8.38	\$8.38
Tier 3 (> 1,500 and ≤ 2,000 ft ²)	\$11.73	\$11.73	\$11.73	\$11.73	\$11.73
Tier 4 (> 2,000 and ≤ 2,500 ft ²)	\$15.08	\$15.08	\$15.08	\$15.08	\$15.08
Tier 5 (> 2,500 and ≤ 3,000 ft ²)	\$18.43	\$18.43	\$18.43	\$18.43	\$18.43
Tier 6 (> 3,000)	<i>Properties pay based on total impervious area. The minimum fee in Tier 6 is \$20.10 per month for 3,000 ft² of impervious area, increasing at \$6.70/1,000 ft².</i>				

Policy Issue #3. Credits and Incentives

Many stormwater management assessment programs that assess fees based on IA provide incentives to properties with onsite stormwater facilities to manage stormwater runoff. Two types of incentive programs

typically are considered: rebates or grants, and credits. Appendix D contains the policy paper on incentive program options. Key issues and recommendations are summarized below.

Rebates or Grants

The purpose of grants or rebates is to provide a one-time subsidy to reduce construction costs associated with installing stormwater facilities on private property. This sort of program is uncommon, but it is growing in popularity among jurisdictions with combined sewer overflow (CSO) and MS4 permit mandates. Examples include Philadelphia’s Stormwater Management Incentives Program; Montgomery County, Maryland’s RainScapes program; and Washington DC’s RiverSmart Homes. For example, RainScapes provides grants of up to \$1,200 for residential property and up to \$5,000 for commercial, multi-family, or institutional property, depending on project type. Eligible practices include rain gardens, tree canopy, permeable pavers, green roofs, rain barrels, and others. RainScapes is funded by the County’s stormwater management assessment program. Similarly, the RiverSmart Homes program funds up to \$1,200 for similar project types but is restricted to private residences.

Credits

The purpose of credits is to help property owners reduce their annual stormwater fee, thus providing an incentive for implementing stormwater management facilities. Credits historically have been offered only to commercial properties, but recent trends show that single-family properties are now eligible in some stormwater management assessment programs for certain types of credits. The credit amount that a property can receive varies among stormwater management assessment programs. Most utilities provide only a partial credit, but others provide full credit. The rationale for not providing a 100 percent credit, even if all stormwater is managed onsite, is that property owners should contribute to services provided by the Borough that are beyond their property lines, such as NPDES MS4 permit compliance, road drainage maintenance, and BMP improvements on public lands. The criteria for determining the credit level typically are based on the type of facility and percent of IA treated (usually just the onsite IA). Some stormwater management assessment programs provide credits to property owners who do not have qualifying facilities but agree to participate in public education or outreach programs.

Table 2-5 summarizes credit programs around the United States. Table 2-6 lists potential credit amounts by stormwater project type being considered by the City of Lancaster, PA, to be considered as West Chester Borough develops a credit program.

Incentive Program Recommendations

Because credit programs give property owners a mechanism with which to reduce their fee while furthering the Borough’s stormwater management goals, the SWAAC recommends providing a credit program. The SWAAC is not recommending a rebate program, but it is recommending credits to encourage maintenance of facilities on private property.

To manage the administrative burden of running a credit program, the SWAAC recommended that the credit program start by providing credits to nonresidential properties, because they are fewer in number and typically have larger impervious areas, and therefore are likely have greater fees and greater potential for reducing those fees with credits for existing BMPs.

An allowance was included for the cost of a credit program in the estimated SWMAF scenarios.

Policy Issue #4: Exemptions

Based on the preliminary analysis of parcels in GIS, less than 4 percent of the 3,999 properties in the Borough of West Chester are classified as tax-exempt (GIS data provided by Chester County and relates to tax assessment classification). These properties account for roughly 20 percent of the total impervious area or number of billing units.

TABLE 2-5
Example Credit Programs

Municipality	Single Family Residential?	Non-residential and Multi-family residential?	Types of Credits	Maximum Credit Allowed
Chesapeake, VA	No	Yes	Application of onsite BMPs that provide water quality or water quantity benefits.	Water quality (20%) Water quantity (20%) Maximum of 40%
Prince William County, VA	No	Yes	Control stormwater onsite; non-structural program participation	50% for structural control 30% for nonstructural controls compiled as follows: 30% for nutrient mgmt. plan 30% for public education program 10% for attending workshop 10% site cleanup
Virginia Beach, VA	No	Yes	Manage stormwater quality onsite	30% for management to pre-developed condition 20% for management to Chesapeake Bay standards
Portland, OR	Yes	Yes	Low-impact development (ecorooft, rain barrel, rain garden) Tree canopy Downspout disconnect Stormwater quality Stormwater quantity Stormwater planters	35% of total stormwater charges Credit for tree canopy based on number of trees taller than 15 feet.
Philadelphia, PA	No	Yes, must have >500 ft ² impervious area	IA Gross area NPDES credit Application and renewal fee apply	Except monthly minimum charge. Up to 100% of stormwater charge for IA and gross area credit 7% for NPDES credit
NEORS, Cleveland, OH	Yes	Yes	Stormwater quality credit (25%) Stormwater quantity credit (50%) Education credit (25%)	Up to 75% Up to 100% for public/private schools

TABLE 2-6
Example Credit Program Matrix from the City of Lancaster, PA
(Draft Stormwater Facility Classifications for SWMF Credits)

Peak Rate (Flood) Controls 25% Credit	Volume Controls / Green Infrastructure 50% Credit	Water Quality Controls 25% Credit	Non-Structural Controls 15% Credit	NDPES Industrial Stormwater Permitted Sites 10% Credit
Constructed wetland	Pervious pavement with infiltration bed	Constructed wetland Constructed filter	Tree canopy cover Downspout disconnection	Facilities with an active, fully-compliant NPDES permit from the PA DEP
Wet pond / retention basin	Infiltration basin Rain garden / bioretention	Proprietary water quality filters and hydrodynamic devices ^a		
Dry extended detention basin	Subsurface infiltration bed Vegetated roof	Vegetated swale Vegetated filter strip		
Special detention areas (parking lot/ roof)	Infiltration trench / tree infiltration trench Runoff capture and reuse Dry well / seepage pit Infiltration berm and retentive grading			

^a Proprietary water quality filters and hydrodynamic devices must provide water quality treatment for the first inch and be certified through third party testing.

Most stormwater management assessment programs do not exempt or waive charges for tax-exempt properties. The rationale is that the stormwater charge is a fee for service (that is, stormwater management). This is similar to other utility services, such as water and wastewater management or trash collection and disposal. Only when state enabling legislation requires specific properties to be exempted or waived do stormwater management assessment programs provide exemptions. Unless authorized to exempt certain types of properties, stormwater management assessment programs could face legal challenges if they chose to treat classes of properties differently because the correlation between service requirements and how much each property contributes to the need for that service is then different by property type, thus reducing the equity of the charge. For the stormwater management assessment programs implemented in Pennsylvania, there is no state legislation that would exempt religious and nonprofit properties from the stormwater management assessment program charge.

Exemption Recommendations

The SWAAC is recommending that no exemptions are provided for any property in the Program, including payment required by the Borough. Appendix E presents the policy paper that was developed and reviewed with the SWAAC on exemptions.

Policy Issue #5: Billing System

Three billing methods are commonly used to collect stormwater management assessment program charges around the country: real estate tax bills, water/sewer utility bills, and separate billing systems. Selection of a billing system is unique to the locality establishing a stormwater utility. For example, the water/sewer bill may only cover part of the stormwater management assessment program service area, whereas the property tax database provides complete coverage. Water and sewer bills are not normally sent to parking lots and vacant properties with no water/sewer connection. Similarly, property tax bills are not usually sent

to owners of tax-exempt properties. It may be the case that the stormwater management assessment program service area is not covered by either database system. The selection of the billing method should be cost-effective, timely, and capture all affected properties.

Appendix F presents the policy paper on billing options.

Billing System Recommendations

The Borough administration is recommending adding a new line item for the SWMAF to the water and sewer bill that is issued quarterly or monthly based on the rate class for the property. Properties that do not get a water/sewer bill will be added to the list getting bills for the SWMAF, with their water/sewer line item showing a \$0 charge.

Policy Issue #6: Appeals

Stormwater management assessment program charges typically provide a mechanism for rate payers to appeal their bills and allow them the ability to correct erroneous information. However, what can be appealed, when, and the process for submitting and reviewing appeals need to be clearly defined to make the fee defensible and manageable. Appendix G presents the policy paper on appeals options. Appeals typically are limited to the following:

- IA calculation and tier assignment
- Credit calculation, assuming a property owner applied for a credit

Appeals typically are submitted only once per year, well in advance of the billing cycle (60 to 90 days), but with a quarterly billing cycle this could be done more frequently. The Borough administration would prefer that appeals be allowed only once per year to minimize administrative costs.

Appeals Recommendations

The Borough administration is recommending that a deadline for appeals be set 6 months before the first bills go out in a given fiscal year. Assuming the first bills go out July 1, for example, then appeals would be due no later than January 1 of each calendar year.

Appendix A
Advisory Committee Participants and Attendance

Stormwater Assessment Advisory Committee Member List and Attendance

Name	Stakeholder Group	Meeting #1	Meeting #2	Meeting #3	Meeting #4
Mark Thompson	Business Representative	Yes	Yes	Yes	Yes
Paul F. Huberty	Chester County Hospital	No	Yes	Yes	No
Jan Bowers	Chester County	Yes	No	Yes	Yes
Chuck Christy	Council Representative	Yes	Yes	Yes	Yes
Stephen Shinn	Council Representative	No	Yes	Yes	No
Keir Abrahams	Rental property owner	Yes	Yes	Yes	No
Ann Carroll	Resident	Alt.	Yes	No	Yes
Bob Smiley	Resident	Yes	Yes	Yes	No
Dan Murray	Resident	Yes	Yes	Yes	Yes
Brendon Dolan	Resident	Yes	Yes	Yes	No
Tim Lutz	Resident	Yes	Yes	Yes	Yes
Jasmine Jones	Resident	No	Yes	No	No
Don Braceland	Resident	Yes	No	Yes	No
Rev. Truman Brooks	United Methodist Church	N/A	Yes	Yes	No
Mark Mixner	West Chester University	Yes	Yes	Yes	Yes
Ernie McNeeley	Borough Manager	Yes	Yes	Yes	Yes
O. B. Laing	Director, Public Works Department	Yes	Yes	Yes	Yes

Appendix B
Policy Paper #1: Program Needs

Stormwater Utility Program Needs Policy Development Summary West Chester, PA	Policy Paper No. 1
	<i>Date Prepared:</i> August 29, 2013 <i>Dates Revised:</i> September 26, 2013, October 21, 2013 <i>Date Final:</i> November 4, 2013

Policy Issue: What is funded by the proposed Stormwater Utility?

Overview

There are several types of funding sources, which may include one or a combination of ad valorem taxes, grants, loans, and user charges. A stormwater utility is a funding mechanism dedicated for a variety of stormwater program elements that may include conveyance, maintenance, and capital improvements. The Borough's General Fund is the source of funding for the stormwater program. In order to consider funding sources, it is important to define the costs and level of service (LOS) for the stormwater program. This policy paper defines which program elements (Operations and Maintenance [O&M] and Capital Improvement Program [CIP]) should be funded by the proposed stormwater utility fee pursuant to Pennsylvania law.

A stormwater utility can fund O&M or capital projects, or both. O&M can include administrative costs, inspection/maintenance costs, billing/collection costs, design costs, and other stormwater-related functions. Capital project costs can include rehabilitation and replacement of existing stormwater facilities, new facilities, and equipment for stormwater activities. Program elements that could be funded by the stormwater utility fee include the following:

- Capital Improvement Projects
 - Stormwater-related projects/equipment from Public Works Department (PWD) CIP
 - Catch basin rehabilitation and replacement
 - Storm drain rehabilitation and replacement
 - Additional capital projects/equipment needs to address Total Maximum Daily Load (TMDL)/Municipal Separate Storm Sewer System (MS4) permit
- Program Administration
 - Establishment of the Utility
 - Billing and collection
 - Incentive/credit program (costs of administering program)
- Inspections and Maintenance
 - Stormwater management facilities (ponds, swales, underground storage systems, etc.)
 - Street sweeping
 - Stormwater conveyance
 - Catch basins
 - Manholes
 - Outfalls
 - Pipes
 - Flow Monitoring
- National Pollutant Discharge Elimination System (NPDES) Phase II Implementation (MS4 permit), including six minimum control measures (MCMs):
 - Public education
 - Public participation/involvement
 - Illicit discharge detection/elimination
 - Construction site runoff control
 - Post-construction stormwater management
 - Pollution prevention
- Water quality monitoring (e.g., TMDL compliance)
- Streambank/Floodplain Management

Exhibits 1 through 7 provide additional detail on the LOS scenario assumptions. Exhibits 8 and 9 summarize the estimated operating costs by LOS. Exhibits 10 and 11 summarize the estimated capital costs by LOS. Exhibits 12 and 13 summarize the combined estimated operating and capital costs by LOS option.

Policy Options

- Low (Base) LOS scenario—Current LOS, 5-year CIP, and current MS4 Permit activities with baseline administrative costs for utility
- Original Medium LOS scenario—Improved MS4 Permit Implementation, Increased likelihood of TMDL compliance, Increased Maintenance and Customer Service
- Revised Medium LOS scenario—Current LOS, 5-year CIP and one additional priority CIP project. Improved MS4 permit implementation, increased likelihood of TMDL compliance, increased maintenance and customer service
- High LOS scenario—Further improved MS4 permit implementation, best likelihood of TMDL compliance, high level of maintenance and customer service

Stormwater Utility Program Needs Policy Development Summary West Chester, PA	Policy Paper No. 1
	<i>Date Prepared:</i> August 29, 2013 <i>Dates Revised:</i> September 26, 2013, October 21, 2013 <i>Date Final:</i> November 4, 2013
Policy Issue: What is funded by the proposed Stormwater Utility?	
<p><u>Issues, Concerns, Benefits</u></p> <ul style="list-style-type: none"> • The Low (Base) LOS scenario attempts to match the current O&M program most closely and includes the projects identified in the PWD 5-year CIP. The fee is the lowest, but additional CIP projects are not addressed and the low LOS scenario is not expected in the long term to be compliant with MS4 permit and related TMDL requirements. • The revised Medium LOS scenario provides advancement above the current program, including one additional high-priority CIP project, increased activities for improved MS4 permit compliance, increased urban forestry expenditures and a medium level of stormwater master planning and GIS improvements. • The High LOS scenario would provide funding for a more comprehensive program, including all the additional PWD identified CIP projects over a 5-year period, further increased activities for improved MS4 permit compliance, increased urban forestry expenditures, and a significant level of stormwater master planning and GIS improvements. However, the billing rates may not be acceptable. • There is some uncertainty in all the scenarios/cost estimates, especially given the uncertain TMDL/permit requirements and the lack of stormwater master planning. • Reasons to consider increasing LOS include: <ul style="list-style-type: none"> ○ Goose Creek TMDL <ul style="list-style-type: none"> ▪ Proposed strategy based on street sweeping ▪ If approved by DEP, will likely require additional sweeping, reporting, etc. ▪ If not fully approved by DEP, other measures will be required ○ NPDES MS4 Permit <ul style="list-style-type: none"> ▪ Reporting requirements likely to increase due to TMDL, Chester County Act 167 Stormwater Management Plan, etc. ▪ DEP review of previous MS4 annual reports included many “areas for continued implementation/improvement;” with the most related to public education/outreach (MCM #1) ○ Maintenance and customer service <ul style="list-style-type: none"> ▪ Providing for increased inlet cleaning, preventive maintenance, repairs, etc. ▪ Additional capital items ▪ Increased utility administration ▪ Higher level of urban forestry (maintenance, planting, etc.) ○ Strategic planning <ul style="list-style-type: none"> ▪ Increased level of professional services for database, mapping, stormwater master planning, design, etc. 	
<p><u>Consultant Recommendation</u></p> <p>The Low LOS scenario is not expected to be compliant with MS4 permit and related TMDL requirements in the future. Based on Advisory Committee (AC) Meeting #2, refinements were made to the original Medium and High LOS scenarios to better define likely MS4 permit requirements and schedule. Based on AC Meeting #3, additional refinements were made to the CIP portion of the Medium LOS. Use the revised medium LOS scenario as recommended by the AC at Meeting #4.</p>	
<p><u>Advisory Committee Comments</u></p> <p><i>Question:</i> Does the Program include streambank stabilization and maintenance? <i>Answer:</i> Yes, streambank stabilization projects have been identified and included in the Medium and High LOS scenarios.</p> <p><i>AC Comment:</i> The majority of our system is made of brick pipes that are over 100 years old. Emergency structural failures have occurred and will continue to occur unless we get a handle on it. An emergency repair of the old system ends up costing the Borough more money in the long run.</p> <p><i>Consultant Response:</i> A Capital Improvement Master Plan will help define the long-term capital improvements that are needed, costs, priorities, etc. That would include both new facilities, and actions needed for rehabilitation or replacement of aging assets, such as storm drains.</p>	

<p>Stormwater Utility Program Needs Policy Development Summary West Chester, PA</p>	<p align="center">Policy Paper No. 1</p> <p><i>Date Prepared:</i> August 29, 2013 <i>Dates Revised:</i> September 26, 2013, October 21, 2013 <i>Date Final:</i> November 4, 2013</p>
<p>Policy Issue: What is funded by the proposed Stormwater Utility?</p>	
<p>Advisory Committee Comments (continued)</p> <p><u>Question:</u> If the LOS envisioned exceeds the ability of the customers to pay, does that require a decrease in LOS? <u>Answer:</u> Yes it would.</p> <p><u>AC Comment:</u> Regarding Street Sweeping activity—the current regulations require the Borough to weigh the ‘dirt’ that is swept up from the roads, test it for phosphorus, and then dispose of it safely according to regulations. This activity is just getting started and is costing the Borough quite a bit.</p> <p><u>Consultant Response:</u> It is likely that to comply with the TMDL regulations, the Borough may have to do more than just street sweep. The Medium and High LOS scenarios provide additional funding to help address these requirements.</p> <p><u>AC Response:</u> Regulations are getting tighter and tighter and we need to be proactive.</p> <p><u>AC Comment:</u> Within our existing LOS scenario, urban forest and green infrastructure (GI) activity are being left out of the equation. This commenter is in favor of seeing how the rates would work out if funding the urban forest and GI component were increased. Since much urban infrastructure (e.g., pipes) is not seen by the ratepayer, having a program that included some visible elements could likely make this fee more palatable by the public.</p> <p><u>Consultant Response:</u> The benefits of trees/urban forest are not 100% related to stormwater; however, if the AC felt that urban forestry was valuable enough to the stormwater program, they could choose to fund it 100% by the Fee.</p> <p><u>Additional Comment:</u> The urban forestry program could also be broadened so that the Borough would pay for condemned tree removal to incentivize increased tree planting by residents.</p> <p><u>AC Comment:</u> Public education is needed; however, it doesn’t necessarily change behavior and therefore needs to be done better and more effectively. The current program cost of \$3,900 (and the small increases proposed in Med/High) are likely underfunding this important activity.</p> <p><u>Consultant Response:</u> Agreed, the small increases are intended only to help meet the MS4 permit requirements. The Borough should consider additional public education opportunities through grant funding, partnerships, etc. The revised Medium and High LOS scenarios provide additional funding for public education and outreach.</p> <p><u>AC Comment:</u> Increase allocation for Master Planning in the Medium/High LOS Scenarios.</p> <ul style="list-style-type: none"> • <u>Question:</u> Does the current Low LOS include any current efforts to handle illegal discharges? <u>Answer:</u> Yes, as this activity is required by the MS4 permit and is included in the operations/maintenance category. <p><u>Question:</u> Since the low level is inadequate, then why not use the Medium LOS to start developing the rate model and financial planning? Shift the LOS to align with the expected statutory requirements. <u>Answer:</u> It is likely that the next round of permits (5-year cycle) will tighten and have more stringent requirements. EPA and DEP are being flexible with their language, but that likely will diminish over time. The Medium and High LOS have been revised with edits as mentioned above (urban forestry, public education, and Master Plan).</p> <p><u>Question:</u> What activity is included in the Medium LOS for Education/Outreach? <u>Answer:</u> Currently geared towards “checking a box” in the permit. The Medium and High LOS have been revised to increase this activity to include some funds for more meaningful activity.</p> <p><u>Question:</u> the Medium LOS shows the additional capital costs spread out over 10 years. Do we have that long? <u>Answer:</u> Yes, we expect that the Borough will have 10 years from a regulatory perspective, but we have also found that regulators tend to reduce scrutiny if communities are more proactive at improving permit compliance.</p>	
<p>Additional Advisory Committee Comments (10/3/13 meeting)</p> <p><u>Question:</u> What is the difference of Master Planning (MP) in the Medium and High categories? <u>Answer:</u> The Medium LOS includes an MP process that is more basic (i.e., relying on best available information) and that would entail a lower level of detail. The High LOS master planning assumptions include more detailed effort including the potential for some surveying of existing drainage systems to support hydrologic and hydraulic modeling, and a detailed look at flooding solutions, etc.</p> <p><u>Question:</u> The quantity for public education at \$15,000 per year for medium and high LOS seems very high, is this a reasonable target? <u>Answer:</u> It was agreed at AC Meeting #2 that the proposed increase from existing was not very meaningful and this value provides a reasonable educational activity for the Borough, especially to ramp up an outreach program (the cost would likely decrease after the first 5 years).</p>	

Stormwater Utility Program Needs Policy Development Summary West Chester, PA	Policy Paper No. 1
	<i>Date Prepared:</i> August 29, 2013 <i>Dates Revised:</i> September 26, 2013, October 21, 2013 <i>Date Final:</i> November 4, 2013

Policy Issue: What is funded by the proposed Stormwater Utility?

Advisory Committee Comments (continued)

AC Comment: The proposed rates shown are based on the Medium LOS, and it is a hard sell to propose anything over Medium because the rates shown are fairly high. Many community-based non-profit entities would be hard pressed to raise funds or find budget to pay their stormwater fee. Could you develop a hybrid where you take some items from the Low scenario and some items from the Medium scenario? *Answer:* Yes, we developed a revised Medium scenario in which some of the CIP items were edited.

Additional Advisory Committee Comments (10/24/13 meeting)

Comment: Emergency repairs cost the Borough more than planned ones which is a good reason for pursuing the revised Medium LOS scenario. *Response:* Agreed, and the master planning included in the Medium LOS could be used for additional condition assessment to develop a replacement schedule for elements of the Borough’s stormwater system.

Comment: The distribution of CIP projects on the map may appear uneven; therefore it would be good to emphasize to the public the watershed/community nature of stormwater. *Response:* Agreed.

Decision/Action

The original Low LOS was updated in the following categories:

- Urban Forestry—assumed no allocation currently for stormwater

The Medium LOS was updated in the following categories:

- Master Planning—confirmed \$30,000/yr over 5 years is reasonable
 - Public Education—increased to \$15,000 (in labor costs)
 - Urban Forestry—50% of existing expenditures revised to include half-time urban forester costs
- Medium LOS was updated (to create the revised Medium LOS based on additional AC comments, including:
- Only include one additional CIP project; remove all other priority CIP projects and retain in the High LOS scenario

The original High LOS was updated in the following categories:

- Master Planning—confirmed \$60,000/yr over 5 years is reasonable
- Public Education—increased to \$30,000 (in labor costs)
- Urban Forestry—increased to 100% of existing expenditures including ½ time urban forester costs

AC Recommendation: Proceed with the revised Medium LOS.

Exhibits

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EXHIBIT 1

Summary of Stormwater Activities from Department Public Works Manpower Reports—Existing Activities Serve as the Basis for the Low (Base) LOS

Activity	Year				MEDIAN	
	2011	2010	2009	2008		
Street Sweeping (hours)	1,588	1,730	1,777	1,847	1,754	
Storm Sewer Work (hours)	Preventive maintenance	1,038	1,067	1,534	605	1,053
	Repair projects minor construction	472	685	556	570	563
	Total	1,510	1,752	2,090	1,175	1,631
	Trees planted	102	80	51	110	91
	Planting expenses	\$35,479	\$17,592	\$17,895	\$38,602	\$26,687
Urban Forestry	Preventive maintenance cost	\$61,627	\$119,432	\$98,864	\$103,950	\$101,407
	Total cost	\$97,106	\$137,024	\$116,759	\$142,552	\$126,892
	Public works (hours) (plus half-time forester)	63	34	67	37	50
	Total hours	6,386	6,841	6,567	7,003	6,704
Equipment Maintenance	% assumed for SW	5%	5%	5%	5%	5%
	Hours for SW	319	342	328	350	335
NPDES activities hours (CH2M HILL est.)	80	80	80	80	80	
Total staff DPW hours for SW	3,480	3,858	4,262	3,409	3,669	
% available staff time for SW	6.7	7.5	8.5	6.6	7.1	

EXHIBIT 2

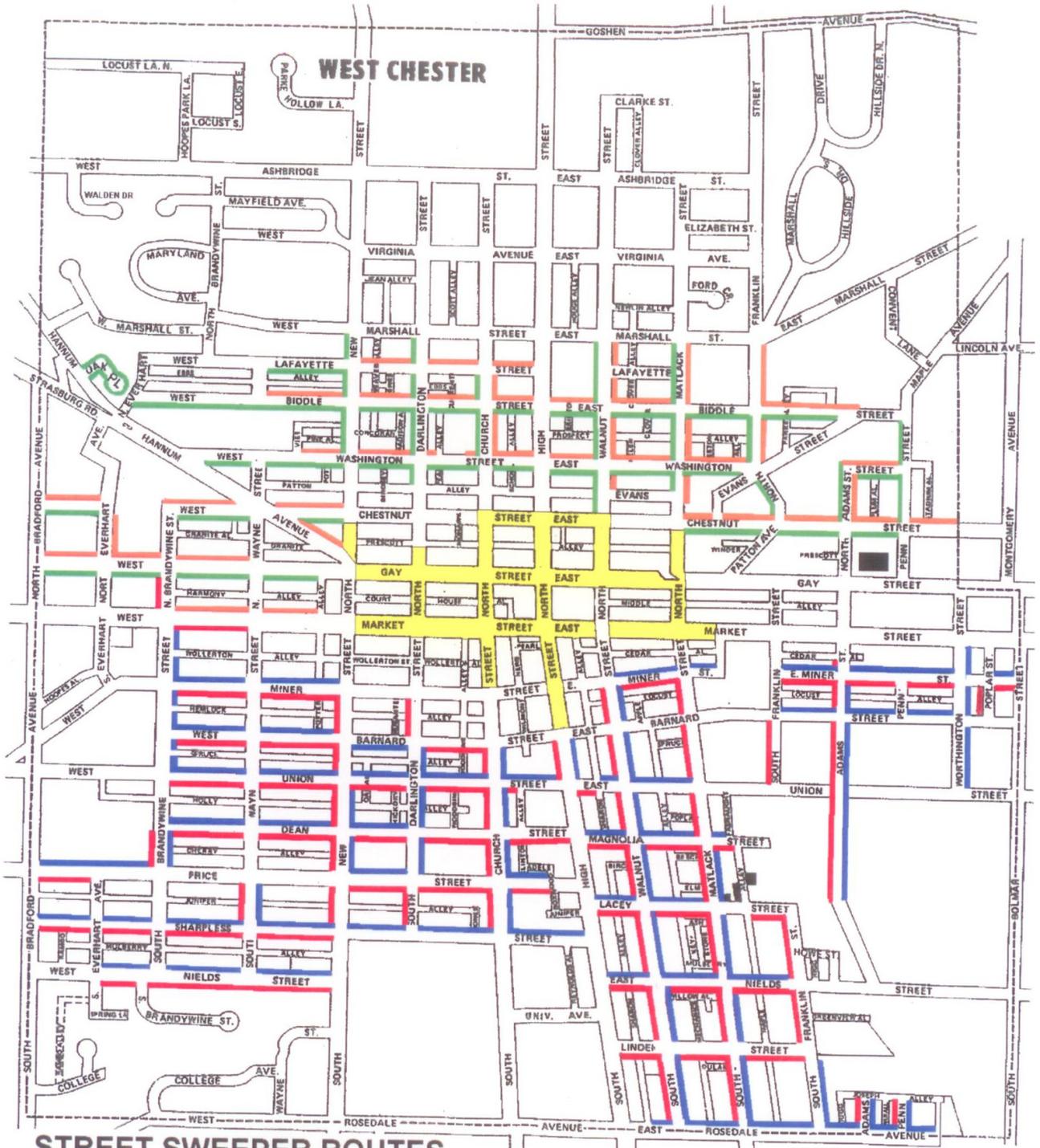
Existing Stormwater System Components That Must Be Maintained in All LOS Scenarios

Stormwater Features	Count (Length)
Stormwater Outfall	53
Stormwater Inlet	865
Stormwater Junction Box	8
Stormwater Manhole	163
Storm Sewer Lines	1,296 pipes (22.7 miles)

EXHIBIT 3

Street Sweeping Routes of West Chester

Street sweeping is a major component of the Borough's MS4 permit activities and the proposed strategy for complying with the Goose Creek TMDL.



STREET SWEEPER ROUTES

- DAILY 2AM-5AM: Yellow
- MONDAY 8AM-11AM: Orange
- TUESDAY 8AM-11AM: Green
- WEDNESDAY 8AM-11AM: Blue
- THURSDAY 8AM-11AM: Red

EXHIBIT 4

Comparison of O&M Estimates/Assumptions for Revised Low, Medium-Revised, and High LOS Scenarios

Item/Activity	Low (Base) LOS		Medium-Revised LOS		High LOS	
	Desc.	Cost/yr	Desc.	Increase	Desc.	Increase
Operations and Maintenance (O&M)						
Street sweeping		\$68,500		\$6,900	25% increase	\$17,100
Preventive maintenance, minor construction, materials	Existing	\$104,100	10% increase	\$10,400	15% increase	\$15,600
Vehicle maintenance, equipment fuel, supervisory time		\$124,100		\$12,400	20% increase	\$24,800
NPDES Permit Activities						
MS4 annual report, training, etc.		\$4,500	25% increase	\$1,100	50% increase	\$2,300
Public education/outreach	Existing	\$3,900	\$15,000 labor	\$19,200	30,000 labor	\$42,300
Administrative						
Utility administration (billing)	\$2/bill	\$12,300	1/2 FTE	\$16,400	1 FTE	\$45,100
Urban forestry/parks						
Urban forestry	Assume 0	\$0	50% of existing	\$81,000	100% of existing	\$163,000
Professional Services						
Stormwater database/GIS updates		\$1,500	\$6,500/yr	\$5,000	\$11,500/yr	\$10,000
Stormwater master planning/design	Existing	\$0	\$30,000/yr	\$30,000	\$60,000/yr	\$60,000
TOTAL INCREASE (\$/year)		\$0		\$182,400		\$380,200
Total (\$/year)		\$318,900		\$501,300		\$699,100
% Increase (total for items included above)		0%		57%		119%

EXHIBIT 5

Capital Items Included in All LOS Scenarios

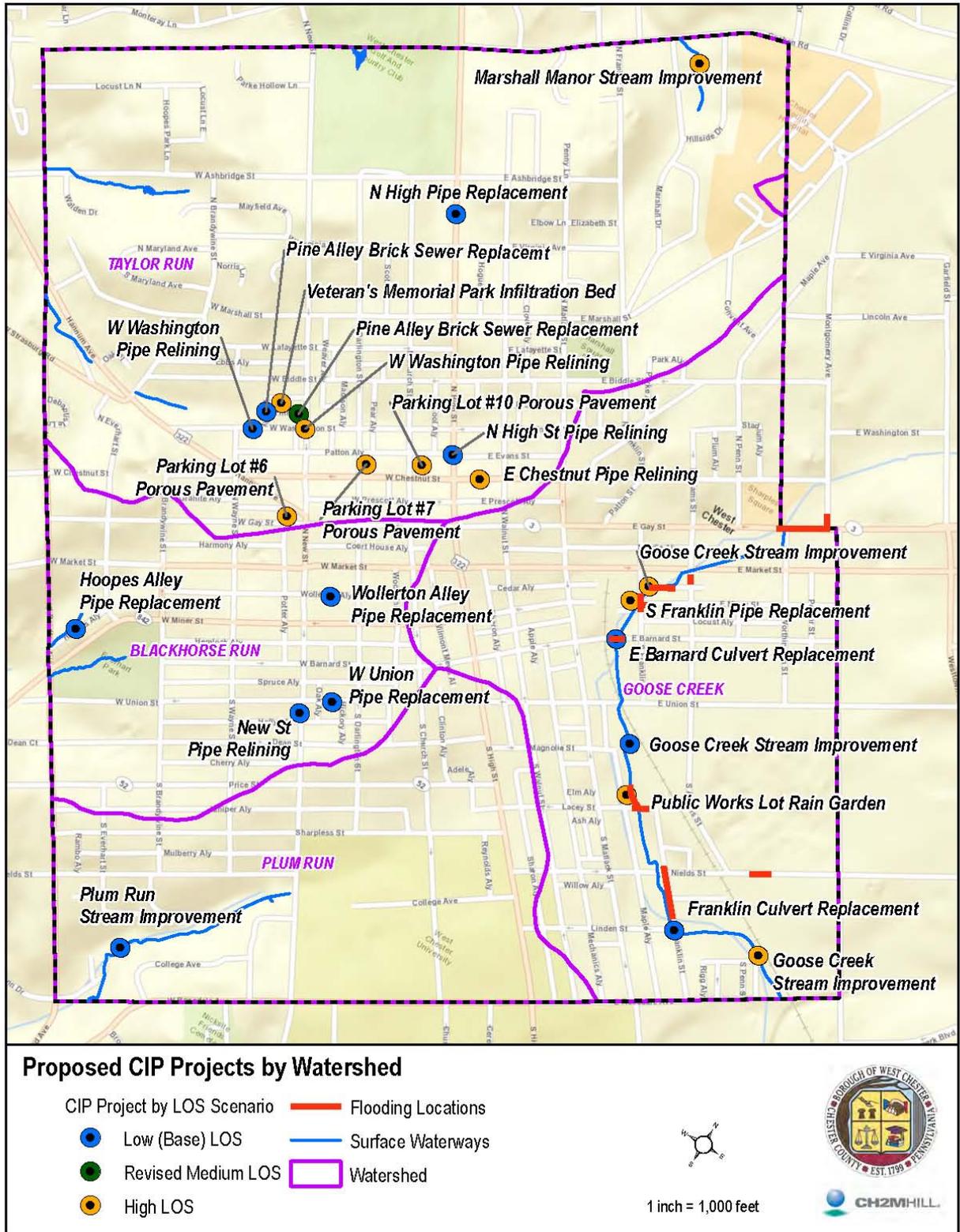
Base 5-year CIP Items	Estimated Cost
Equipment	
Replace 1997 Sewer Jet, 44-30 (30% for SW)	\$36,000
Replace Street Sweeper 44-40	\$210,000
Pipes	
Replace Pine Alley Brick Sewer	\$195,000
Replace N. High St. (Virginia-Ashbridge)	\$150,000
Replace West Union St. (Darlington-New)	\$250,000
Reline New St. (Union-Holly Alley)	\$75,000
Replace Wollerton Alley (New-Darlington)	\$90,000
Reline W. Washington (Hannum-New)	\$160,000
Replace Hoopes Alley (Everhard-Outfall)	\$115,000
Reline N. High St. (Chestnut to Washington)	\$218,750
Stream Improvements	
E. Barnard St. Culvert Replacement	\$250,000
Franklin at Linden Culvert Replacement	\$290,000
Plum Run (College-Bradford)	\$687,500
Goose Creek (Franklin-Nields)	\$375,000
Total (nearest \$1,000)	\$3,102,000

EXHIBIT 6

Additional Capital Items Included in Medium-Revised (*project) and High (all projects) LOS scenarios

Additional CIP Items	Total Estimated Cost
Equipment	
Vactor Truck (30% of cost allocated to SW)	\$69,000
Pipes	
<i>Replace Pine Alley Brick Sewer (expanded project)*</i>	<i>\$305,000</i>
Reline W. Washington (Darlington-Wayne)	\$275,000
Reline E. Chestnut (Walnut-High)	\$218,800
Replace S. Franklin (Market-Outfall)	\$275,000
Stream Improvements	
Marshall Manor Tributary (Hillside-Goshen)	\$500,000
Goose Creek (Cedar Alley-Franklin)	\$137,500
Goose Creek (Mosteller Park)	\$375,000
Additional Candidate TMDL BMPs	
Veteran's Park Infiltration Bed (Tier 2)	\$125,000
Parking Lot #6 Porous Pavement (Tier 2)	\$253,100
Parking Lot #7 Porous Pavement (Tier 2)	\$106,900
Parking Lot #10 Porous Pavement (Tier 2)	\$151,900
Public Works Lot Rain Garden (Tier 1)	\$62,500
TOTAL (nearest \$100)	\$2,854,700
Additional cost/yr for Medium LOS (1 additional CIP project over 5 years)	\$61,000
Additional cost/yr for High LOS (all additional CIP projects over 5 years)	\$571,000

EXHIBIT 7
Proposed Capital Improvement Projects



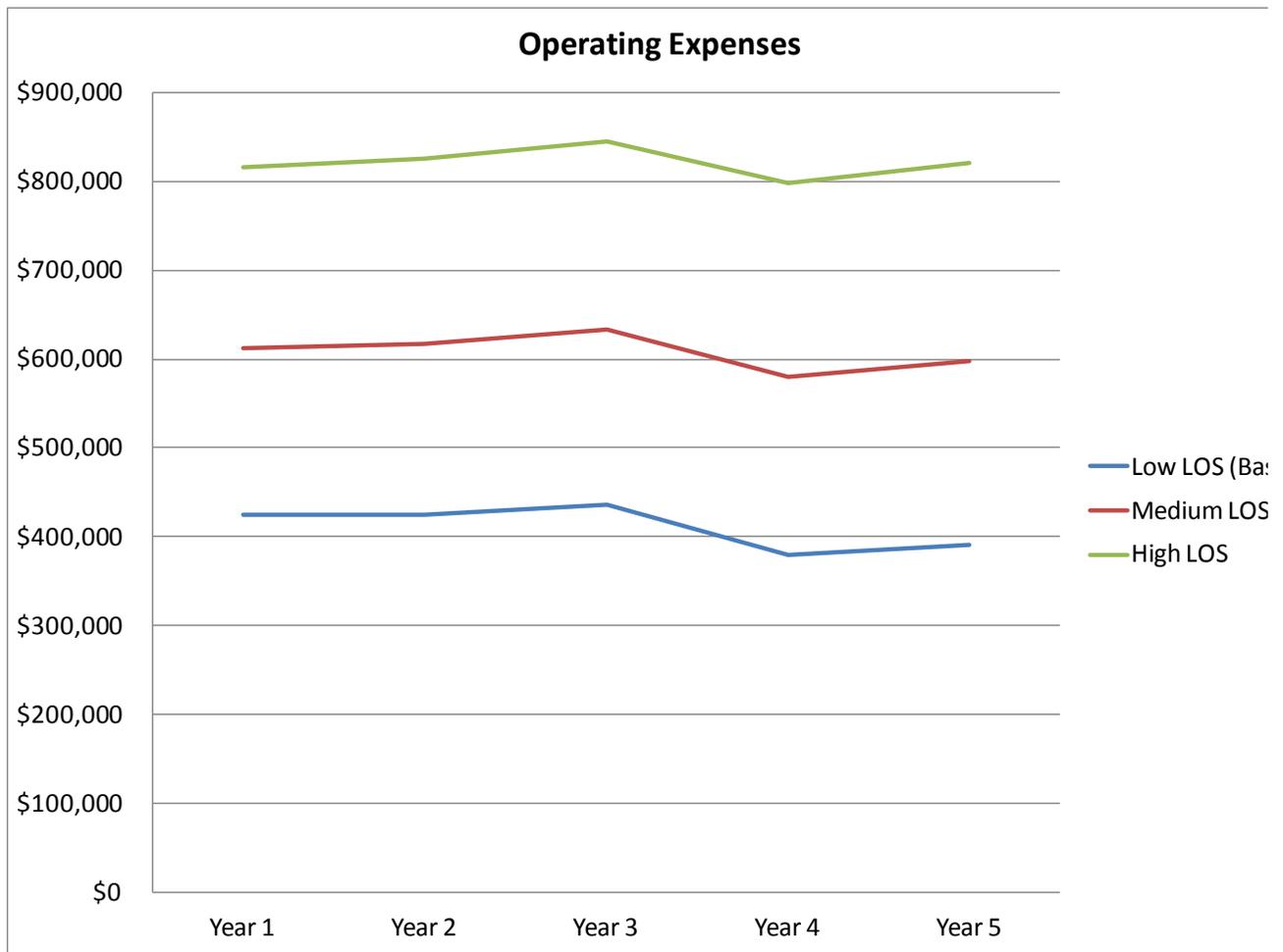
Data provided by Chester County GIS. Project locations provided by WC Borough Public Works Dept staff. Map prepared 11-20-13 for Stormwater Assessment Feasibility Project

EXHIBIT 8
LOS Scenarios for O&M

Operating Expenses	Year 1	Year 2	Year 3	Year 4	Year 5
Low (Base) LOS					
Operations and maintenance (O&M)	\$305,800	\$314,900	\$324,400	\$334,100	\$344,100
NPDES permit activities	\$10,200	\$10,600	\$10,900	\$11,200	\$11,500
Administrative	\$40,000	\$30,600	\$31,500	\$32,500	\$33,400
Urban forestry/parks	\$0	\$0	\$0	\$0	\$0
Professional services	\$69,500	\$69,500	\$69,500	\$1,500	\$1,500
Total expenditures	\$425,500	\$425,600	\$436,300	\$379,300	\$390,500
Medium-Revised LOS					
Operations and maintenance (O&M)	\$336,200	\$346,300	\$356,700	\$367,400	\$378,400
NPDES permit activities	\$31,200	\$32,100	\$33,100	\$34,000	\$35,100
Administrative	\$57,000	\$48,100	\$49,600	\$51,000	\$52,600
Urban forestry/parks	\$83,900	\$86,400	\$89,000	\$91,700	\$94,400
Professional services	\$104,500	\$104,500	\$104,500	\$36,500	\$36,500
Total expenditures	\$612,800	\$617,400	\$632,900	\$580,600	\$597,000
High LOS					
Operations and maintenance (O&M)	\$365,000	\$375,900	\$387,200	\$398,800	\$410,800
NPDES permit activities	\$56,100	\$57,800	\$59,500	\$61,300	\$63,200
Administrative	\$86,500	\$78,500	\$80,800	\$83,200	\$85,700
Urban forestry/parks	\$168,100	\$173,200	\$178,400	\$183,700	\$189,200
Professional services	\$139,500	\$139,500	\$139,500	\$71,500	\$71,500
Total expenditures	\$815,200	\$824,900	\$845,400	\$798,500	\$820,400

Assumes 3 percent inflation

EXHIBIT 9
LOS Scenarios for O&M



Note: Operating expenses are the same for revised and original Medium LOS.

EXHIBIT 10

LOS Scenarios for Capital Improvements

CIP	Year 1	Year 2	Year 3	Year 4	Year 5
Low LOS (Base)					
Equipment	\$0	\$18,000	\$88,000	\$70,000	\$70,000
Pipes	\$345,000	\$415,000	\$275,000	\$218,750	\$0
Stream improvements	\$0	\$250,000	\$290,000	\$375,000	\$687,500
Total CIP	\$345,000	\$683,000	\$653,000	\$663,750	\$757,500
Medium LOS (revised)					
Equipment	\$0	\$18,000	\$88,000	\$70,000	\$70,000
Pipes	\$345,000	\$415,000	\$275,000	\$218,750	\$0
Stream improvements	\$0	\$250,000	\$290,000	\$375,000	\$687,500
Additional candidate projects ^a	\$61,000	\$61,000	\$61,000	\$61,000	\$61,000
Total CIP	\$406,000	\$744,000	\$714,000	\$724,750	\$818,500
Medium LOS (original)					
Equipment	\$0	\$18,000	\$88,000	\$70,000	\$70,000
Pipes	\$345,000	\$415,000	\$275,000	\$218,750	\$0
Stream improvements	\$0	\$250,000	\$290,000	\$375,000	\$687,500
Additional candidate projects	\$285,600	\$285,600	\$285,600	\$285,600	\$285,600
Total CIP	\$630,600	\$968,600	\$938,600	\$949,350	\$1,043,100
High LOS					
Equipment	\$0	\$18,000	\$88,000	\$70,000	\$70,000
Pipes	\$345,000	\$415,000	\$275,000	\$218,750	\$0
Stream improvements	\$0	\$250,000	\$290,000	\$375,000	\$687,500
Additional candidate projects ^b	\$571,000	\$571,000	\$571,000	\$571,000	\$571,000
Total CIP	\$916,000	\$1,254,000	\$1,224,000	\$1,234,750	\$1,328,500

^a Costs for Medium-Revised LOS additional candidate projects assumes 5-year implementation of Replace Pine Alley Brick Sewer (additional funding for project expansion)

^b Costs for High LOS additional candidate projects assumes 5 year implementation rate

EXHIBIT 11

LOS Scenarios for Capital Improvements

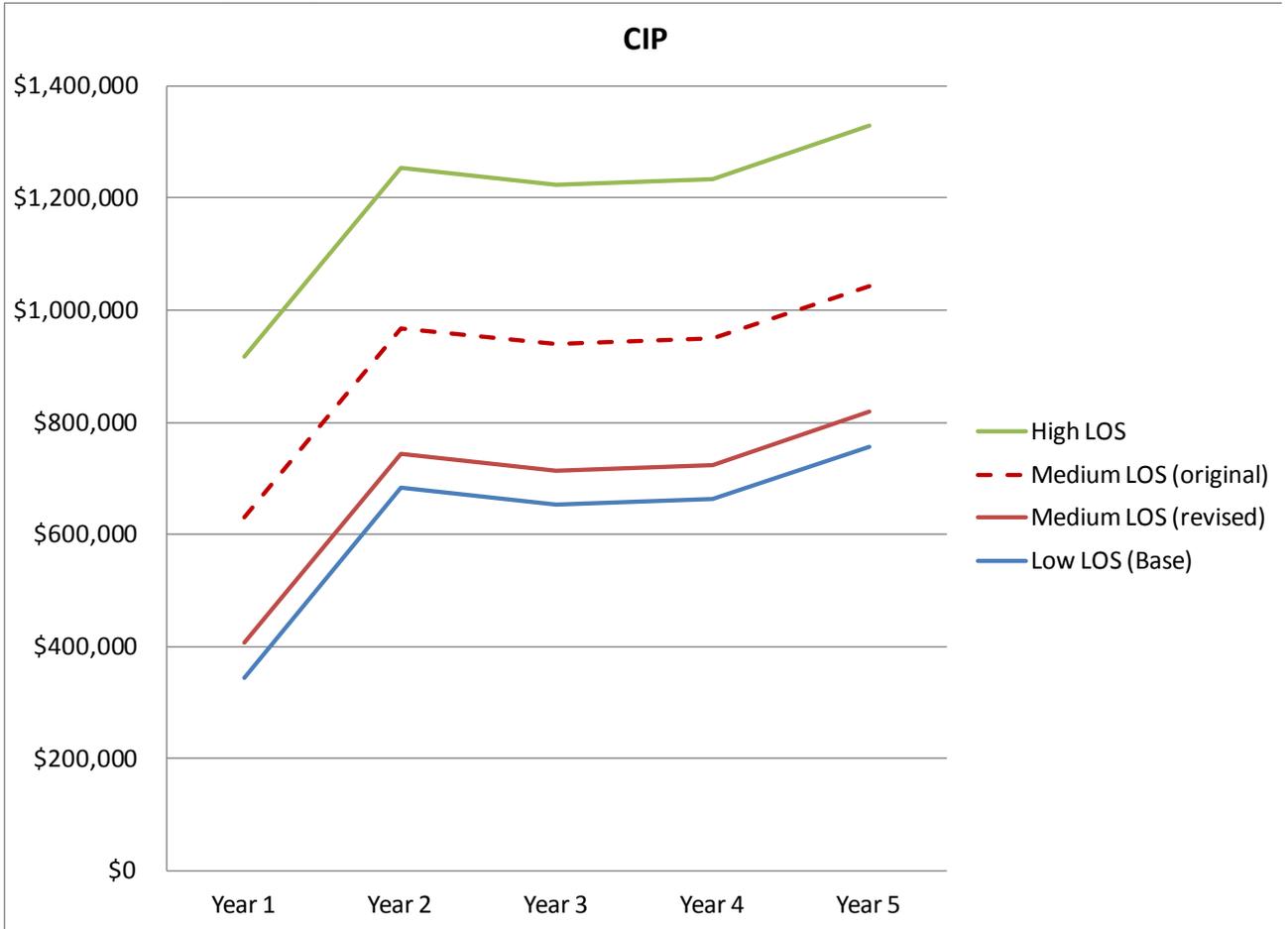
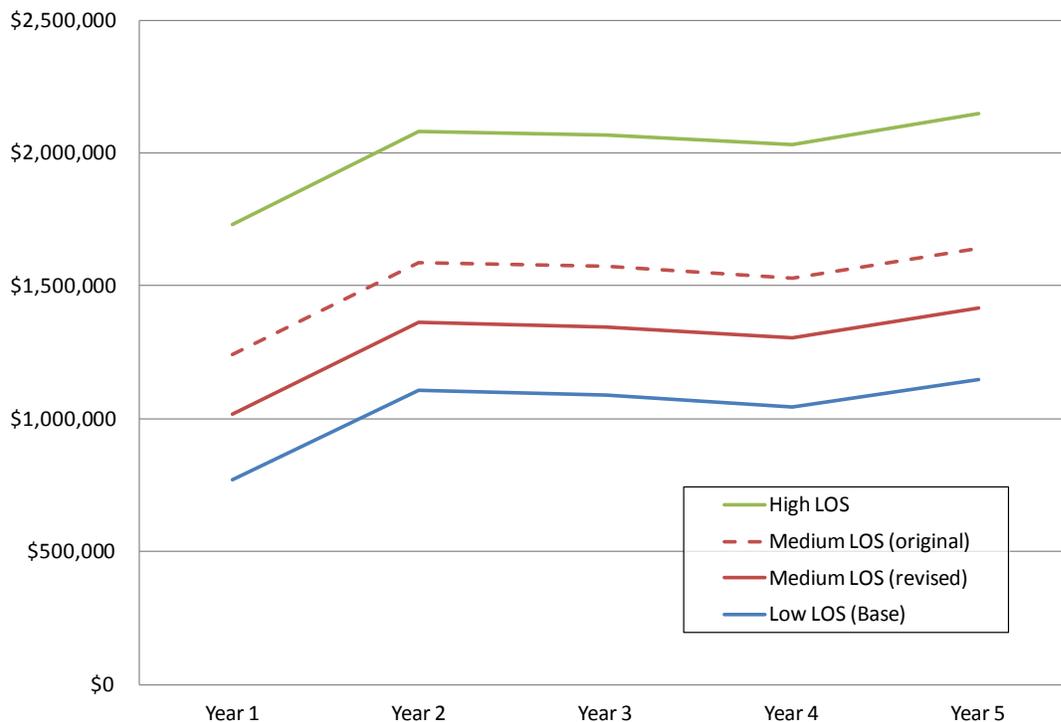


EXHIBIT 12
Summary of Operating and CIP

	Year 1	Year 2	Year 3	Year 4	Year 5
Low LOS (Base)					
Operating expense ^a	\$425,500	\$425,600	\$436,300	\$379,300	\$390,500
CIP	\$345,000	\$683,000	\$653,000	\$663,750	\$757,500
Total operating and CIP	\$770,500	\$1,108,600	\$1,089,300	\$1,043,050	\$1,148,000
Medium LOS (revised)					
Operating expense ^a	\$612,800	\$617,400	\$632,900	\$580,600	\$597,000
CIP	\$406,000	\$744,000	\$714,000	\$724,750	\$818,500
Total operating and CIP	\$1,018,800	\$1,361,400	\$1,346,900	\$1,305,350	\$1,415,500
Medium LOS (original)					
Operating expense ^a	\$612,800	\$617,400	\$632,900	\$580,600	\$597,000
CIP	\$630,600	\$968,600	\$938,600	\$949,350	\$1,043,100
Total operating and CIP	\$1,243,400	\$1,586,000	\$1,571,500	\$1,529,950	\$1,640,100
High LOS					
Operating expense ^a	\$815,200	\$824,900	\$845,400	\$798,500	\$820,400
CIP	\$916,000	\$1,254,000	\$1,224,000	\$1,234,750	\$1,328,500
Total operating and CIP	\$1,731,200	\$2,078,900	\$2,069,400	\$2,033,250	\$2,148,900

^aassumes 3 percent inflation

EXHIBIT 13
Summary of Operating and CIP



Appendix C
Policy Paper #2: Rate Structure and
Preliminary Rates

Stormwater Utility Rate Structure and Rates Policy Development Summary

West Chester, PA

Policy Paper No. 2

Date Prepared: September 26, 2013

Date Revised: October 21, 2013

Date Final: November 21, 2013

Policy Issue: What type of rate structure should be used for the Stormwater Utility? What is the likely range for the initial rate for the stormwater utility fee?

Overview

The rate structure for most stormwater utilities is set up so that single-family residential properties pay 1 ERU (Equivalent Residential Unit) and multi-family or nonresidential properties pay based on actual impervious area. The ERU is determined through statistical analysis of the imperviousness of single-family residential parcels. The number of ERUs (billing units) for multi-family or nonresidential properties is based on total impervious area divided by the ERU or base unit.

To help with equity and fairness of the stormwater charge, municipalities are now starting to develop and implement tiered rate structures that break properties into tiers based on amount of impervious area. This could be applied for single-family properties or all properties. For example, there may be a statistical justification to break single-family residential properties into categories (small, medium, large). Or, a tiered rate structure could be applied to all properties.

The total number of billing units, based on the rate structure, is then used to determine the rate. That is, the rate is set to recover total program costs, debt service, equity funded CIP, reserves, which combined are the total revenue requirements. The rate could be expressed as \$/ERU or \$/1,000 ft².

Policy Options

- **Categories Based on Property Class**—For this option, there would be multiple categories based on property class. For this option single-family residential (SFR) properties would be charged 1 ERU. All other property classes would be charged based on total impervious area. This method is perhaps the simplest and requires minimal analysis of the residential land use category. This method also has the lowest cost for billing system database implementation and maintenance. However, using 1 ERU for SFR properties is less equitable than billing categories based on size, or tiers.
- **Categories Based on Size**—For this option, there would be multiple categories, such as small, medium, and large properties. These categories could also be applied to all properties (commercial, institutional, industrial, faith-based and nonprofit properties) if they fall within the impervious area tier ranges. Properties with impervious area greater than the largest tier would pay based on actual impervious area.

Issues, Concerns, Benefits

- A primary issue or concern involves equity issues. Does a smaller single family property (which contributes less stormwater) pay the same as a larger single family property (which contributes more stormwater), while each receive the same benefit(s) from the citywide program. The benefits of breaking single family residential properties into several categories or tiers (i.e., more precision) needs to be weighed against the implementation costs of developing and maintaining a tiered rate structure. This method involves additional analysis for billing system implementation and maintenance of impervious area data. However, it more equitably links fees to impervious area size. The more tiers, the higher the administrative cost and the greater likelihood of categorizing properties into the wrong tier, and therefore a possibly higher number of appeals of bills.
- Another related consideration is whether gathering and maintaining data for more detailed classification (more tiers) will result in noticeable differences in charges to customers.
- Based on existing GIS data and the property tax database, Exhibit 1 shows the equity comparison between the number of properties and impervious area by property type (stormwater class). The median value impervious area for all properties is estimated to be 1,941 ft² and 1,732 ft² for residential properties. For purpose of this analysis, the base unit is 1,000 ft², and the rate is expressed as \$/1,000 ft².
- Exhibit 2 shows the frequency distribution by impervious area and stormwater class. The first tier is set at 1,000 ft², tiers 2 to 5 increase in 500 ft² increments, and Tier 6 is for impervious area more than 3,000 ft². As shown in Exhibit 2, the impervious area above which the number of residential properties significantly drops is roughly 5,000 ft².
- Exhibit 3 compares two rate structure options (structured beginning at 1,000 ft², with increments of 500 ft²) and the relative charges based on \$1 per 1,000 ft². Option 1 uses the midpoint of the impervious area ranges for each tier to determine the rate multiplier. Option 2 uses the upper value of the impervious area ranges for each tier to determine the rate multiplier. Exhibit 4 compares the number of billing units for each rate structure option. Exhibit 5 compares the number billing units by stormwater class and tier.

Stormwater Utility Rate Structure and Rates Policy Development Summary

West Chester, PA

Policy Paper No. 2

Date Prepared: September 26, 2013

Date Revised: October 21, 2013

Date Final: November 21, 2013

Policy Issue: What type of rate structure should be used for the Stormwater Utility? What is the likely range for the initial rate for the stormwater utility fee?

Issues, Concerns, Benefits (continued)

- For illustrative purposes, Exhibit 6 provides the preliminary revenue requirements for the Medium LOS (introduced during Advisory Committee meeting #2, and revised based on comments). The Medium LOS was used to develop preliminary rates based on rate structure Options 1 and 2. Exhibit 7 shows the estimated monthly stormwater charges. The rate(s) under Rate Structure Option 2 is slightly lower because there are more billing units under Option 2, which is caused by the increase in the rate multiplier associated with the upper value of the tier range.
- Rates can increase over time depending on the O&M programs, CIP, availability of grants/loans, debt service, credits/incentives, and collection rate.

Consultant Recommendation

Based on the analyses presented, it is evident that justification for multiple tiers exists. However, while the equity issue could be used to justify a tiered rate structure, these considerations need to be balanced against considerations of simplicity and implementation/ database maintenance costs. More tiers are recommended for equity reasons, but only if the quality of the impervious area data is high enough to have confidence in categorizing properties into more bins, i.e. smaller impervious area ranges. The Consultant Recommended rate structure is Option 1, which assigns all properties to the recommended Tiers and charges are based on a rate multiplier using the mid-point of the tier ranges.

Advisory Committee Comments

• **Can the first tier (Tier 1: 0 to 1,000 ft²) be split into two tiers?**

It is possible. However, one objective of the AC was to get at least equal number of properties into the tiers. If Tier 1 is split, then this creates a new tier with only 124 properties. Parcel with 500 ft² or less of impervious area are unlikely to be housing and so splitting Tier 1 would not provide additional benefit to the analysis. Splitting Tier 1 only adds approximately 116 billing units. In terms of rate impacts, for the Medium LOS (revised) the increase in billing units does not result in rate charge and no more than \$300 in revenue for the first year.

• **Is the current operating budget (represented as the Low LOS) adequate to meet the Borough's needs?**

Based on discussion during the October 3 Advisory Committee meeting, Borough staff indicated that the current operating budget is not adequate to meet the Borough's needs. The Medium LOS operating budget represents a funding level that would better serve the Borough. The CIP shown for the Low LOS represents the "wish list" of projects, and the Borough is not spending at that level for CIP. It was recognized that it could take a couple years to build up to that level. The projects identified under the Low LOS are important (necessary), so the Advisory Committee is interested in seeing a rate scenario with the Medium LOS operating and Low LOS CIP (plus one additional project).

• **Could the rate remain the same for a 3- or 5-year period?**

From a rate setting perspective it is possible to set rates to generate enough revenue to cover the planned expenditures for a 3- or 5-year period. This is done by other utilities and helps maintain stable rates, manage projects, develop small level of reserves, and prioritize stormwater related programs.

Additional Advisory Committee Comments (10/03/13 meeting)

Question: Could the General Fund portion of the Borough budget fund a portion of the stormwater program?

Answer: Yes, some parts of the stormwater program can continue to be funded by the General Fund, and is a policy choice. Since a Stormwater Utility fee is a dedicated funding source, typically jurisdictions identify the stormwater management functions and fund them entirely by the Stormwater Utility fee, which helps with ease of budgeting and planning. It is possible that programs are phased in over a period of time (i.e., shifting funding from the General Fund to Stormwater Fund over specified period). This could help keep the Stormwater Utility rate lower and gradually phase out General Fund allocations for stormwater.

Stormwater Utility Rate Structure and Rates Policy Development Summary

West Chester, PA

Policy Paper No. 2

Date Prepared: September 26, 2013

Date Revised: October 21, 2013

Date Final: November 21, 2013

Policy Issue: What type of rate structure should be used for the Stormwater Utility? What is the likely range for the initial rate for the stormwater utility fee?

Additional Advisory Committee Comments (continued)

AC Comment: we are not meeting our existing infrastructure needs, and reactionary responses to known problems is expensive.

Consultant Response: Through Master Planning and asset management, identifying the renewal and replacement needs is key to the long term success of the stormwater system.

AC Comment: The 5-year CIP is just that—a plan—and it is a list of what the Borough should be doing.

AC Follow-up: Low LOS is still “found” money; Low LOS still has the CIP projects listed as the Base case.

Consultant Response: Based on review the regulatory requirements, the Low Scenario is not likely to meet permit obligations, especially on the operations and maintenance side. CIP for Medium LOS will be revisited.

Question: What is the timeframe to assess the rate? *Answer:* The Stormwater Utility fee rate (\$/1,000 ft²) is based on the revenue requirements for the selected LOS / programs to be funded. How often the rate is reassessed varies by jurisdiction and is a policy choice that should strike a balance between revenue requirements and rate stability. Some jurisdictions set the rate every year, and some set it to last several years. When rates are fixed for longer periods then financial issues related to acceptable fund balances should be considered relative to projected CIP and operating budgets.

Question: What properties are considered Institutional? What properties are considered Government? *Answer:* government properties are those owned by the municipality, county, state or federal entity (including West Chester University). Institutional are nonprofits, church and hospital.

Question: How is pervious defined? *Answer:* lack of built structures; undeveloped land. The existing stormwater ordinance will provide definitions to be used for the stormwater assessment program.

Question: Why is there variation on the CIP from year to year? *Answer:* Each year includes funding for different projects, costing a different amount of money (estimated).

AC Comment: It appears like the rates go up Year 1 with Revenue needs and down in subsequent years. *Consultant Response:* Agreed. The rate increase in Year 2 reflects the ramp up in costs. For rate setting, it is good to keep rates stable, as a policy the AC could recommend to identify a rate that would cover the first five years of the Stormwater Utility. This would allow the Borough to establish rate stability, manage projects, develop a reserve, and adjust priorities as the program evolves.

Question: Could the Borough enact a dedicated funding source simply by raising property taxes? *Answer:* Yes, it is possible to identify a dedicated portion of the property tax for stormwater. However, funding is subject to appropriation and revenues could fluctuate based on assessed values. Further, the tax exempt properties (34% of the total) in the Borough would not contribute to that funding source, and some of those have significant amounts of impervious surfaces.

AC Comment: Please be clear when communicating that this is a service, it is not an optional service that can be turned on and off like a cable utility. *AC Comment:* The proposed rates shown are based on the Medium LOS, and it is a hard sell to propose anything over Medium because the rates shown are fairly high. Many community-based non-profit entities would be hard pressed to raise funds or find budget to pay their stormwater fee.

AC Comment: Of the three shown, could you develop a hybrid where you take some items from the Low scenario and some items from the Medium scenario (i.e. Low-plus or Medium-minus) *Consultant Response:* Yes this can be done assuming the AC recommends it. **(Action Item)**. *AC Follow-up*—Low is not meeting our needs and while it is better than nothing, it is likely not going to meet regulatory requirements.

Consultant Action Item: After AC discussion, the consultants were directed to develop a “Medium-minus” scenario in which some of the CIP items were edited. **(Action Item)**

Question: What will happen to the tax rate? Will the budget decrease? *Answer:* It could, however, that is a budget discussion for Borough Council to make.

Stormwater Utility Rate Structure and Rates Policy Development Summary West Chester, PA	Policy Paper No. 2
	<i>Date Prepared:</i> September 26, 2013 <i>Date Revised:</i> October 21, 2013 <i>Date Final:</i> November 21, 2013
Policy Issue: What type of rate structure should be used for the Stormwater Utility? What is the likely range for the initial rate for the stormwater utility fee?	
<p><u>Additional Advisory Committee Comments (continued)</u></p> <p><i>Question:</i> Why do the tiers have a relatively equal number of billing units? <i>Answer:</i> the rationale is not to affect the program or revenue needs, but to provide an ease of administration since more tiers tend to have more appeals and creates an administrative burden. The tiers are structured so that there are approximately the same number of customers in each tier. The billing units are based on the rate multiplier, which is determined based on using the middle value of the tier range divided by 1,000 ft² (i.e., the middle value between 1,000 and 1,500 ft² of IA is 1,250 ft²; divided by 1,000 ft² results in a rate multiplier of 1.25).</p> <p><i>AC Comment:</i> In general, the Medium revised rate seems reasonable given the program needs.</p> <p><i>AC Comment:</i> It is important to communicate that West Chester Borough is being fiscally responsible and proactive, since the stormwater needs are different than most communities in the County and State. It is difficult to compare the stormwater needs of West Chester to the stormwater needs of Radnor, Mt Lebanon, or Lancaster (other PA municipalities with stormwater utilities in the works), because those communities choose to either fund less of their program or have other sources of revenue to defer rate increases (e.g., PennVest loans for Lancaster).</p>	
<p><u>Decision/Action</u></p> <ul style="list-style-type: none"> • Rate Structure Option 1 • Revised Medium rate structure 	

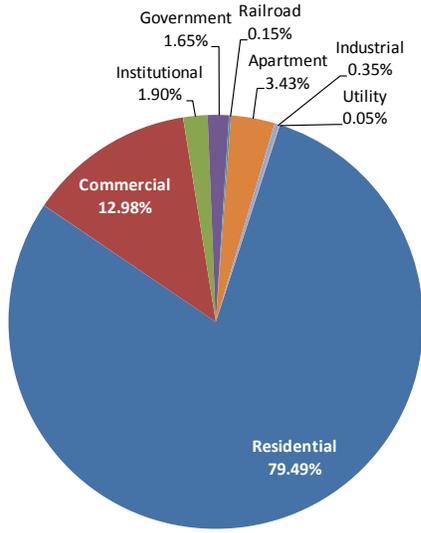
Exhibit

1	Comparison of the Number of Properties and Impervious Area by Stormwater Class.....	5
2	Number of Properties and Impervious Area by Stormwater Class.....	5
3	Rate Structure Options	6
4	Number of Properties and Billing Units by Stormwater Class and Rate Structure.....	7
5	Number Billing Units by Stormwater Class and Tier.....	Error! Bookmark not defined.
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EXHIBIT 1

Comparison of the Number of Properties and Impervious Area by Stormwater Class

Number of Properties



Impervious Area

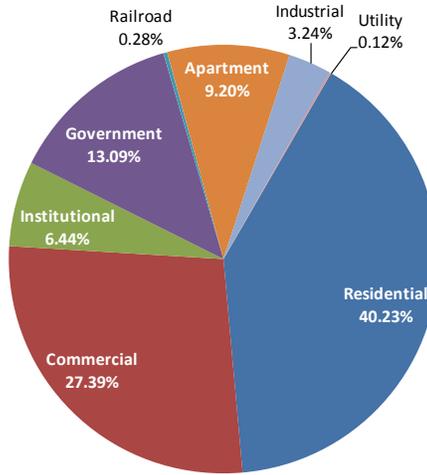


EXHIBIT 2

Number of Properties and Impervious Area by Stormwater Class

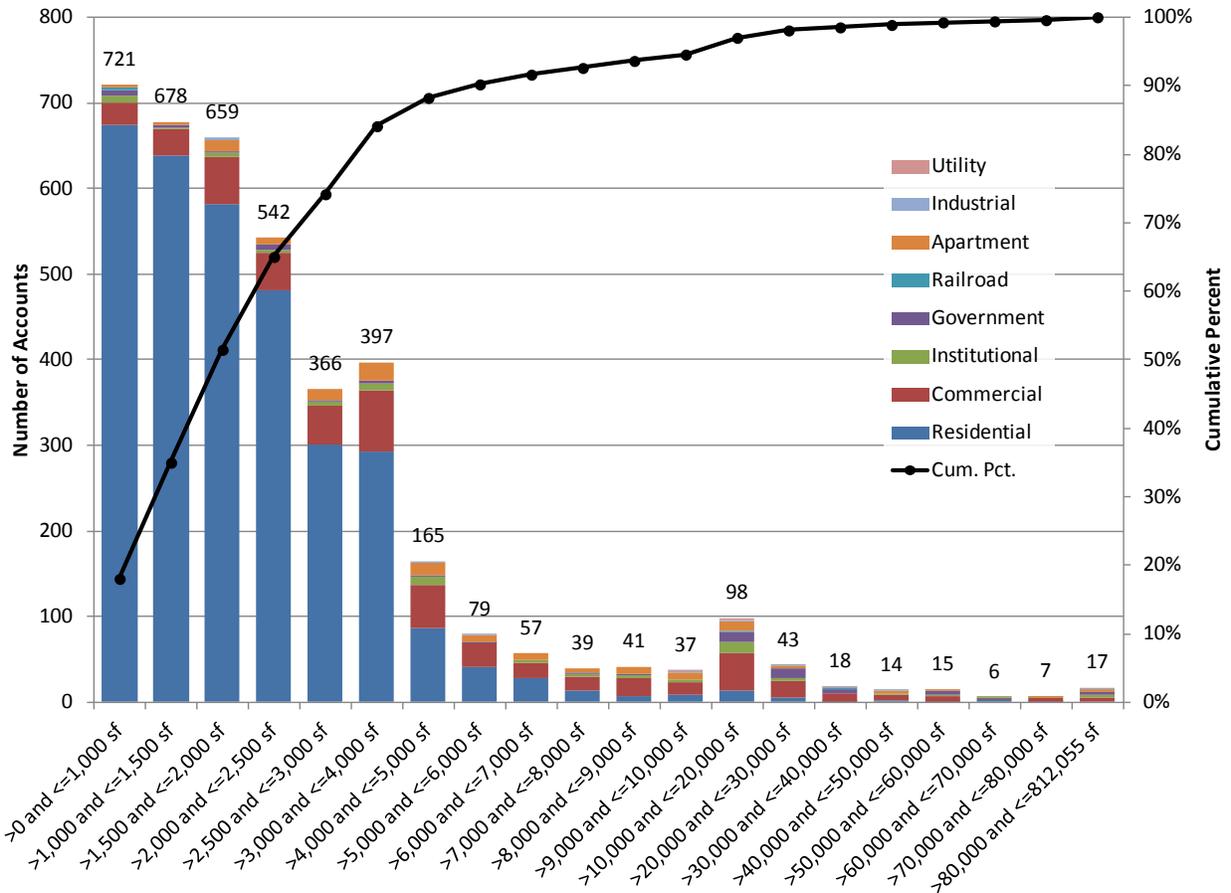


EXHIBIT 3

Rate Structure Options

Tier	Properties	Multiplier	Billing Units	% of Total Billing Units	If the base rate is \$1, then property would pay ...
Rate Structure Option 1: Tiers apply to all properties; for Tiers 2 – 5 IA increases in 500 ft² increments, multiplier based on mid-point of the tier range. Base Rate expressed as \$ per 1,000 ft².					
Tier 1 (> 0 and ≤ 1,000 ft ²)	721	0.50	361	2%	\$0.50
Tier 2 (> 1,000 and ≤ 1,500 ft ²)	678	1.25	848	5%	\$1.25
Tier 3 (> 1,500 and ≤ 2,000 ft ²)	659	1.75	1,153	7%	\$1.75
Tier 4 (> 2,000 and ≤ 2,500 ft ²)	542	2.25	1,220	7%	\$2.25
Tier 5 (> 2,500 and ≤ 3,000 ft ²)	366	2.75	1,007	6%	\$2.75
Tier 6 (> 3,000 ft ²)	1,033	n/a	12,626	73%	\$10.00 ^a
Total	3,999		17,215		
Rate Structure Option 2: Tiers apply to all properties; for Tiers 2 – 5 IA increases in 500 ft² increments, multiplier based on upper value of the tier range. Base Rate expressed as \$ per 1,000 ft².					
Tier 1 (> 0 and ≤ 1,000 ft ²)	721	1.00	721	4%	\$1.00
Tier 2 (> 1,000 and ≤ 1,500 ft ²)	678	1.50	1,018	6%	\$1.50
Tier 3 (> 1,500 and ≤ 2,000 ft ²)	659	2.00	1,318	7%	\$2.00
Tier 4 (> 2,000 and ≤ 2,500 ft ²)	542	2.50	1,355	7%	\$2.50
Tier 5 (> 2,500 and ≤ 3,000 ft ²)	366	3.00	1,098	6%	\$3.00
Tier 6 (> 3,000 ft ²)	1,033	n/a	12,626	70%	\$10.00 ^a
Total	3,999		18,136		
Rate Structure Option 3: Tiers apply to all properties; for Tiers 1 – 6 IA increases in 500 ft² increments, multiplier based on mid-point of the tier range. Base Rate expressed as \$ per 1,000 ft².					
Tier 1 (> 0 and ≤ 500 ft ²)	124	0.25	31	0.2%	\$0.25
Tier 2 (> 500 and ≤ 1,000 ft ²)	597	0.75	448	3%	\$0.75
Tier 3 (> 1,000 and ≤ 1,500 ft ²)	678	1.25	848	5%	\$1.25
Tier 4 (> 1,500 and ≤ 2,000 ft ²)	659	1.75	1,153	7%	\$1.75
Tier 5 (> 2,000 and ≤ 2,500 ft ²)	542	2.25	1,220	7%	\$2.25
Tier 6 (> 2,500 and ≤ 3,000 ft ²)	366	2.75	1,007	6%	\$2.75
Tier 7 (> 3,000 ft ²)	1,033	n/a	12,626	73%	\$10.00 ^a
Total	3,999		17,331		

^a IA = 10,000 ft²

EXHIBIT 4

Number of Properties and Billing Units by Stormwater Class and Rate Structure

Stormwater Class	Estimated Impervious Area (ft ²)	%	Number of Properties	Pct.	Billing Units by Rate Structure			
					Option 1	%	Option 2	%
Residential	6,976,763	40	3,179	79	6,850	40	7,687	42
Commercial	4,750,385	27	519	13	4,750	28	4,807	27
Institutional	1,117,472	6	76	2	1,118	6	1,125	6
Government	2,270,396	13	66	2	2,271	13	2,277	13
Railroad	47,769	<1	6	<1	48	<1	50	<1
Apartment	1,595,127	9	137	3	1,595	9	1,605	9
Industrial	562,625	3	14	<1	563	3	563	3
Utility	21,606	<1	2	<1	22	<1	22	<1
Total ^a	17,342,143		3,999		17,217		18,136	

^a Compared to Table 1, total billing units for Option 1 is off by 2 units due to rounding.

EXHIBIT 5

Number Billing Units by Stormwater Class and Tier

	Residential	Commercial	Institutional	Government	Railroad	Apartment	Industrial	Utility
Rate Structure Option 1								
Tier 1 (> 0 and ≤ 1,000 ft ²)	337	13	4	3	2	2	0	0
Tier 2 (> 1,000 and ≤ 1,500 ft ²)	798	39	3	4	0	5	0	0
Tier 3 (> 1,500 and ≤ 2,000 ft ²)	1,019	96	7	5	0	23	4	0
Tier 4 (> 2,000 and ≤ 2,500 ft ²)	1,082	99	7	14	0	18	0	0
Tier 5 (> 2,500 and ≤ 3,000 ft ²)	828	124	14	6	0	36	0	0
Tier 6 (> 3,000 ft ²)	2,786	4,379	1,083	2,239	46	1,511	559	22
Total	6,850	4,750	1,118	2,271	48	1,595	563	22
Rate Structure Option 2								
Tier 1 (> 0 and ≤ 1,000 ft ²)	674	26	8	6	4	3	0	0
Tier 2 (> 1,000 and ≤ 1,500 ft ²)	957	47	3	5	0	6	0	0
Tier 3 (> 1,500 and ≤ 2,000 ft ²)	1,164	110	8	6	0	26	4	0
Tier 4 (> 2,000 and ≤ 2,500 ft ²)	1,203	110	8	15	0	20	0	0
Tier 5 (> 2,500 and ≤ 3,000 ft ²)	903	135	15	6	0	39	0	0
Tier 6 (> 3,000 ft ²)	2,786	4,379	1,083	2,239	46	1,511	559	22
Total	7,687	4,807	1,125	2,277	50	1,605	563	22

EXHIBIT 6

Preliminary Revenue Requirements—Medium LOS (revised)

	Year 1	Year 2	Year 3	Year 4	Year 5
O&M	\$612,800	\$617,400	\$632,900	\$580,600	\$597,000
Allowance Uncollectible Accounts	\$69,200	\$69,600	\$69,900	\$70,200	\$70,600
Allowance for SWMF Credits	\$57,500	\$57,800	\$58,000	\$58,400	\$58,700
Allowance Operating Reserve	153,200	\$0	\$0	\$0	\$0
Debt Service	\$0	\$0	\$0	\$0	\$0
Stormwater CIP	\$406,000	\$744,000	\$714,000	\$724,750	\$818,500
<i>Less: Non Rate Revenue</i>					
Investment Income	(300)	(500)	(500)	(500)	(400)
Grants*	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)
Net Revenue Requirement	\$1,248,400	\$1,438,300	\$1,424,300	\$1,383,450	\$1,494,400

Note: Assumes minimum annual Community Development Block Grant / Community Revitalization Grant Amount. Grants are not guaranteed and may require matching contributions.

EXHIBIT 7

Preliminary Rates and Proposed Rate Structures

Tier (Impervious Area Range)	Preliminary Monthly Stormwater Charge ^a	
	Option 1	Option 2
Tier 1 (> 0 and ≤ 1,000 ft ²)	\$3.35	\$6.35
Tier 2 (> 1,000 and ≤ 1,500 ft ²)	\$8.38	\$9.53
Tier 3 (> 1,500 and ≤ 2,000 ft ²)	\$11.73	\$12.70
Tier 4 (> 2,000 and ≤ 2,500 ft ²)	\$15.08	\$15.88
Tier 5 (> 2,500 and ≤ 3,000 ft ²)	\$18.43	\$19.05
Tier 6 (> 3,000 ft ²)	\$6.70 per 1,000 ft ²	\$6.35 per 1,000 ft ²

^aAssumes medium level of service (revised), preliminary rate Years 1 to 5.

Appendix D
Policy Paper #3: Credits / Incentives

Stormwater Utility Fee Credits / Incentives

Policy Development Summary

West Chester, PA

Policy Paper No. 3

Date Prepared: October 21, 2013

Date Revised: November 4, 2013

Date Final: November 27, 2013

Policy Issue: What type of credits or incentives should be provided to property owners for onsite stormwater management facilities? What is the likely impact on the initial rate for the stormwater utility fee?

Overview

Many stormwater utilities provide incentives to properties that have onsite stormwater facilities that treat stormwater runoff. There are two types of incentive programs typically considered:

- Grants or rebates
- Credits

The purpose of **grants or rebates** is to provide one-time subsidy to reduce design and/or construction costs associated with installing stormwater facilities on private property. This sort of program is growing in popularity among jurisdictions with Municipal Separate Stormwater System (MS4) federal permit mandates. Examples include Montgomery County, Maryland's RainScapes program, DC's RiverSmart Homes, and Philadelphia's Stormwater Management Incentives Program (SMIP). Links are provided at end of this section, below. For example, RainScapes provides grants up to \$1,200 for residential property and up to \$5000 for Commercial, multi-family, or institutional property, depending on project type. Eligible practices include but are not limited to rain gardens, tree canopy, permeable pavers, green roofs and rain barrels. RainScapes is funded by the County's stormwater utility. Philadelphia's SMIP program offers financial assistance in the form of grants to nonresidential property owners who want to implement green stormwater infrastructure to manage runoff on their property.

The purpose of **credits** is to help properties reduce their stormwater charge, thus providing an incentive for implementation and maintenance of stormwater facilities. Historically, credits have been offered to commercial properties but recent trends show that single-family properties are now eligible for certain types of credits. The credit amount that a property can receive varies among stormwater utilities. Most utilities provide only a partial credit while others provide a full credit. The criteria for determining the credit amount typically are based on type of facility, and percent of impervious area treated (usually just the onsite impervious area). Some utilities provide credits to properties that do not have qualifying facilities but agree to participate in public education or outreach programs. Exhibit 1 summarizes of credit programs around the U.S. Exhibit 2 lists potential credit amounts by stormwater project type being considered by the City of Lancaster, PA.

Links to Sample Rebate/Grant Programs:

Montgomery County Maryland: <http://www.montgomerycountymd.gov/dectmpl.asp?url=/content/dep/water/rainscapes.asp>

Washington DC: <http://ddoe.dc.gov/service/riversmart-homes-overview>

Philadelphia, PA: http://www.phillywatersheds.org/what_were_doing/SMIP_Grant

Links to Sample Credit Programs:

Portland, OR - <http://www.portlandonline.com/bes/index.cfm?c=43444&>

Policy Options

- 1) Rebates or Grants:
 - a) Property Eligibility for Credits
 - i) Provide credits to only commercial properties
 - ii) Provide credits to all properties
 - b) Amount of Credit
 - i) \$ limits by project type
 - ii) \$ limits by property type
 - c) Qualifying Facilities / Activities
 - i) Approved BMPs, green infrastructure
- 2) Credits:
 - a) Property Eligibility for Credits
 - i) Provide credits to only commercial properties
 - ii) Provide credits to all properties
 - b) Amount of Credit
 - i) Partial (less than 100% reduction in charge)
 - ii) Full (complete waiver of charge)
 - c) Qualifying Facilities / Activities
 - i) Approved BMPs, green infrastructure
 - d) Participation in activities (i.e., public education, adopt-a-highway)

Stormwater Utility Fee Credits / Incentives Policy Development Summary West Chester, PA	Policy Paper No. 3
	<i>Date Prepared:</i> October 21, 2013
	<i>Date Revised:</i> November 4, 2013
<i>Date Final:</i> November 27, 2013	

Policy Issue: What type of credits or incentives should be provided to property owners for onsite stormwater management facilities? What is the likely impact on the initial rate for the stormwater utility fee?

Issues, Concerns, Benefits

Both rebates and credit programs represent a policy option to increase stormwater treatment and improve compliance with permit requirements by giving property owners incentive to build stormwater facilities on private property. But these programs represent a cost (in the case of rebates) or a reduction in revenue (in the case of credits). Both types of programs have administrative costs that should be considered. All credit programs typically require some sort of maintenance agreement between the property owner and the utility to ensure that the facility is built appropriately and maintained in proper working order according to established design standards. The City of Portland’s Clean River Rewards stormwater credit program required 2 full-time staff: one to administer and promote the program, the other to conduct inspections to be sure facilities are being maintained.

Credits typically require an application be submitted to be eligible for the credit, with residential programs typically being granted without inspection of more than a small sample of properties, and nonresidential facility credits requiring a site inspection. Philadelphia’s credit application can be [accessed at this link](#)). The period for which credits are kept in place varies, with some utilities requiring annual reapplication, and some granting credits for longer periods (3 to 5 years), and some granting credits indefinitely without reapplying.

The question of what is the maximum level of credit is a policy question. Few jurisdictions grant 100% credit (essentially a waiver). Often these are situations in which the facility is an industrial facility with its own stormwater permit, or it discharges directly to “waters of the U.S.” without passing through the MS4 system. More often, only partial credits are allowed (25%, 35% or 50% reduction, for example), the rationale being that even if the property controls 100% of stormwater onsite, the municipality still has costs to manage stormwater offsite that everyone benefits from (for example, program administration for the permit, drainage from public roads).

Consultant Recommendation

The consultant recommends developing both a credit and a rebate program to support MS4 compliance, with credits of not more than 50%. These programs could be phased in after initial implementation of a stormwater fee, largely to allow time to set up administrative systems and outreach programs to support them.

<p>Stormwater Utility Fee Credits / Incentives Policy Development Summary West Chester, PA</p>	<p>Policy Paper No. 3 <i>Date Prepared:</i> October 21, 2013 <i>Date Revised:</i> November 4, 2013 <i>Date Final:</i> November 27, 2013</p>
<p>Policy Issue: What type of credits or incentives should be provided to property owners for onsite stormwater management facilities? What is the likely impact on the initial rate for the stormwater utility fee?</p>	
<p><u>Advisory Committee Comments</u></p> <p><i>AC Comment:</i> A grant program seems infeasible and difficult to administer, particularly at the beginning of year 1 of a utility before revenues are available to fund the program. The credit program seems reasonable as it gives the feeling of control to the rate payer, who could reduce their costs by being proactive.</p> <p><i>AC Question:</i> How often do other communities require a credit application?</p> <p><i>Response:</i> We typically see annual application periods that are open for a relatively short time, to reduce the administrative burden on the municipality. We also see a range from annual applications to as long as 5 years before re-application is required. Typically there is a deadline every year for new applications that is set 4 to 6 months before the fiscal year starts, so that credits can be factored into next year’s bill. Typically the program is heavily advertised to encourage the public to apply.</p> <p><i>AC Question:</i> Would property owners who follows the existing stormwater management ordinance still obtain credit, even though they are doing what they have to anyway?</p> <p><i>Consultant Response:</i> Most credit programs are for facilities designed to meet current design standards, with the primary purpose being to incentivize maintenance of those facilities. But less commonly, credits are given only for going above and beyond regulatory requirements (e.g., Raleigh, NC). We recommend focusing on giving credit for meeting current standards and meeting maintenance requirements.</p> <p><i>AC Question:</i> Who would administer the program? Would it be a new FTE or added to the responsibility of an existing staff member? What skill level of that employee would be required?</p> <p><i>Answer:</i> With a relatively low expectation of applications each year, an existing public works staff member would likely be able to administer the program. There are two aspects to administration: processing new applications; and doing inspections in the field to confirm that facilities are installed as indicated in the application. Inspections typically are not done on all properties, but some percentage, with a focus on larger properties and facilities.</p> <p><i>Comment:</i> The AC needs to determine if a credit program is recommended. The details will be worked out in the Implementation phase.</p>	
<p><u>Decision/Action</u></p> <p>Because credit programs give property owners a mechanism to reduce their fee while furthering the Borough’s stormwater management goals, the SWAAC recommends providing a credit program. At the present time the SWAAC is not recommending a rebate program, however it is recommending credits to encourage maintenance of facilities on private property.</p> <p>To facilitate the administrative burden of running a credit program, the SWAAC recommended that the credit program start by providing credits to nonresidential properties, because they are smaller in number and typically have larger impervious and therefore likely have greater fees and greater potential for reducing those fees with credits for existing BMPs.</p>	

Exhibits

1 Example Credit Programs..... 4

2 Example Credit Program Matrix from the City of Lancaster, PA 5

EXHIBIT 1

Example Credit Programs

Municipality	Single Family Residential?	Nonresidential and Multi-Family residential?	Types of Credits	Maximum Credit Allowed
Chesapeake, VA	No	Yes	Application of onsite BMPs that provide water quality or water quantity benefits.	Water quality (20%) Water quantity (20%) Maximum of 40%
Prince William County, VA	No	Yes	Control stormwater on-site; non-structural program participation	50% for structural control 30% for non-structural controls compiled as follows: 30% for nutrient mgmt. plan 30% for public education program 10% for attending workshop 10% site cleanup
Virginia Beach, VA	No	Yes	Manage stormwater quality on-site	30% for management to pre-developed condition 20% for management to Chesapeake Bay standards
Portland, OR	Yes	Yes	LID (ecorroof, rain barrel, rain garden) Tree canopy Downspout disconnect Stormwater quality Stormwater quantity Stormwater planters	35% of total stormwater charges Credit for tree canopy based on number of trees greater than 15 feet.
Philadelphia, PA	No	Yes, must have > 500 ft ² impervious area	Impervious area (IA) Gross area (GA) NPDES credit Application and renewal fee apply	Except monthly minimum charge. Up to 100% of stormwater charge for IA and GA credit 7% for NPDES credit
NEORS, Cleveland, OH	Yes	Yes	Stormwater Quality Credit (25%) Stormwater Quantity Credit (50%) Education Credit (25%)	Up to 75% Up to 100% for public/private schools

EXHIBIT 2
Example Credit Program Matrix from the City of Lancaster, PA

Peak Rate (Flood) Controls 25% credit	Volume Controls / Green Infrastructure 50% credit	Water Quality Controls 25% credit	Non-Structural Controls 15% credit	NDPES Industrial Stormwater Permitted Sites 10% credit
Constructed wetland	Pervious pavement with infiltration bed	Constructed wetland Constructed filter	Tree canopy cover Downspout disconnection	Facilities with an active, fully compliant NPDES permit from the PA DEP
Wet pond / retention basin	Infiltration basin Rain garden / bioretention	Proprietary water quality filters and hydrodynamic devices ^a		
Dry extended detention basin	Subsurface infiltration bed	Vegetated swale		
Special detention areas (parking lot/roof)	Vegetated roof Infiltration trench / tree infiltration trench Runoff capture and reuse Dry well / seepage pit Infiltration berm & retentive grading	Vegetated filter strip		

^a Proprietary water quality filters and hydrodynamic devices must provide water quality treatment for the first inch and be certified through third party testing.

Appendix E
Policy Paper #4: Exemptions

<p>Stormwater Utility Exemptions/Waivers for Tax Exempt Properties Policy Development Summary West Chester, PA</p>	<p>Draft Policy Paper No. 4</p> <p><i>Date Prepared: October 21, 2013</i> <i>Date Revised: November 4, 2013</i> <i>Date Final: November 27, 2013</i></p>
<p>Policy Issue: Should tax exempt properties, such as religious / not-for-profit and government properties, be assessed the stormwater utility charge?</p>	
<p>Overview</p> <p>Based on the preliminary GIS analysis there are approximately 50 parcels coded as Churches (i.e., Faith Based Organizations), 23 parcels coded as Non-Profit Organizations, 3 parcels are coded as Hospitals, and 68 parcels are coded as Government (Exhibit 1). These properties represent less than 4 percent of the total of 3,999 properties in the Borough of West Chester, but account for approximately 20 percent of the total impervious area or number of billing units (Exhibit 1). Exhibit 2 shows the breakdown of the number of properties by Tier, which shows that many of these properties have large amounts of impervious area. Exhibit 3 summarizes the preliminary Stormwater Utility Fees by Land Use Class, including the total, average, minimum, and maximum charges.</p> <p>Most Stormwater Utilities do not exempt / waive the charges for tax-exempt properties. The rationale is that the stormwater charge is a fee for service (i.e., stormwater management). This is similar to other utility services, such as water and wastewater management or solid waste (trash) collection and disposal. Only when state enabling legislation requires specific properties to be exempted or waived do stormwater utilities provide exemptions. Unless authorized to exempt certain types of properties, Stormwater Utilities could face legal challenges if they chose to treat classes of properties differently because the correlation between service requirements and how much each property contributes to the need for that service is then different by property type, thus reducing the equity of the charge.</p> <p>While most Stormwater Utilities charge tax-exempt properties, they can provide partial credits for on-site stormwater management, as well as non-structural practices such as public education/outreach services pertaining to stormwater management. For the stormwater utilities implemented in Pennsylvania, there is no state legislation that would exempt religious and non-profit properties from the stormwater utility charge.</p>	
<p>Policy Options</p> <ul style="list-style-type: none"> • Charge all tax-exempt properties. • Do not Charge tax-exempt properties. • Charge tax-exempt properties, except local government. 	
<p>Issues, Concerns, Benefits</p> <ul style="list-style-type: none"> • While religious, non-institutional, and city-owned properties may be tax-exempt, the stormwater utility charge is not a tax because the charge is not based on the value of the property; it is based on the properties contribution to stormwater runoff. • Stormwater utilities in other States also charge religious and non-profit properties. In Florida and Illinois, churches have challenged the stormwater utility charge in certain localities claiming that it is tax. The Courts' in both States have ruled that the stormwater utility charge is valid and not a tax. (Church of Peace v. City of Rock Island, Third District No. 3-04-0480 (May 12, 2005) and Sarasota County v. Sarasota Church of Christ, Inc., 667 So. 2d 180, 182 (Fla. 1995)) • In 2012, there was a ruling that indicates that federal properties are required to pay Stormwater Charges. • Some stormwater utilities charge government (local, state, and/or federal) properties (including schools), while others do not. In particular, it's common for local governments not to impose stormwater fees on themselves because that's a budget transfer within local government, but not a net increase in revenue. • Regarding equity and fairness, if full or partial waivers are provided to religious / non-profit institutional proportions, other properties may argue that they are subsidizing those properties. • Exhibit 1 shows that 20 percent the billing units are classified as tax exempt. Based on Rate Structure Option 1 presented in Policy Paper 2, and the Medium Level of Service (revised) presented in Policy Paper 1, if Institutional and Government properties did not pay the charge, then all other properties could pay an additional \$1.63 per 1,000 sf per month (Exhibit 4). 	
<p>Consultant Recommendation</p> <p>Since these properties require stormwater service, it is recommended that these properties not be exempt from the utility fee. Consideration of partial credits could provide some relief.</p>	

Stormwater Utility Exemptions/Waivers for Tax Exempt Properties Policy Development Summary West Chester, PA	Draft Policy Paper No. 4
	<i>Date Prepared:</i> October 21, 2013 <i>Date Revised:</i> November 4, 2013 <i>Date Final:</i> November 27, 2013
Policy Issue: Should tax exempt properties, such as religious / not-for-profit and government properties, be assessed the stormwater utility charge?	
<u>Advisory Committee Comments</u> <p>At Meeting #4, discussions were held with the AC to determine whether any property classes should be exempted from the stormwater utility fee. Consultants presented an analysis (slides 66–69) that summarized tax-exempt parcels, by total number, estimated impervious area, reduction in revenue based on preliminary fees on a monthly basis. It was noted on Slide 69 that if all tax-exempt properties were to be excluded from the fee program, the rate would need to be raised an additional \$1.63 per month per 1,000 ft² to make up the difference in revenue.</p> <p>The AC members representing West Chester University and Chester County recognized the importance of the program and thought their tax-exempt organizations were prepared to pay as long as other tax-exempt organizations were included in the program and the credit program is available in year 1 for nonresidential properties to potentially reduce their fee.</p>	
<u>Decision/Action</u> <p>The AC recommended that there be no exemptions included in the Program, including payment required by the Borough. This was determined after brief discussion, in which it was noted that the Borough could impose the fee on its properties and pay the fee using a transfer between departments.</p>	

Exhibits

1	Breakdown of Number of Parcels, Total Impervious Area, and ERUs for Religious, Nonprofit, City-, State-, and Federal-owned Properties by Land Use Class	3
2	Breakdown of Number of Parcels by Land Use Class and Tier for Religious, Nonprofit, City-, State-, and Federal- owned.....	3
3	Preliminary Monthly Stormwater Utility Fees by Land Use Class.....	4
4	Comparison of Monthly Stormwater Utility Charge (\$/1,000ft ²) between All Properties and Without Institutional and Government Properties	4

EXHIBIT 1

Breakdown of Number of Parcels, Total Impervious Area, and ERUs for Religious, Nonprofit, City-, State-, and Federal-owned Properties by Land Use Class

Land Use Description	Number of Parcels	Estimated Total Impervious Area (ft ²)	Number of Billing Units ^a	% of Total Billing Units ^b
E—Chester County Property	13	226,555	226.85	1.3
E—Federal	3	56,127	56.12	0.3
E—Fire Companies	1	55,016	55.02	0.3
E—Local Government (Townships & Boroughs)	25	359,992	360.60	2.1
E—Local Gov't Parks	6	79,067	79.48	0.5
E—Schools	10	1,423,814	1,423.97	8.3
E—Service Connected	2	2,806	2.25	0.0
E—State	8	67,018	67.11	0.4
E—Churches	50	319,420	319.21	1.9
E—Hospitals, etc.	3	255,396	255.40	1.5
E—Nonprofit Organizations	23	542,655	542.45	3.2
Total	144	3,387,867	3,388.46	19.7

^a Based on Rate Structure Option 1 as described in Policy Paper #2.

^b Based on 17,217 total billing units.

EXHIBIT 2

Breakdown of Number of Parcels by Land Use Class and Tier for Religious, Nonprofit, City-, State-, and Federal-owned

Land Use Description	Count	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Tier 6
E—Chester County Property	13	0	2	0	0	1	10
E—Federal	3	0	0	0	0	0	3
E—Fire Companies	1	0	0	0	0	0	1
E—Local Government (Townships & Boroughs)	25	6	1	0	2	0	16
E—Local Gov't Parks	6	1	0	0	2	0	3
E—Schools	10	0	0	0	1	0	9
E—Service Connected	2	1	0	1	0	0	0
E—State	8	0	0	2	1	1	4
E—Churches	50	7	2	2	2	5	32
E—Hospitals, etc.	3	0	0	0	0	0	3
E—Nonprofit Organizations	23	1	0	2	1	0	19
Total	144	16	5	7	9	7	100

EXHIBIT 3

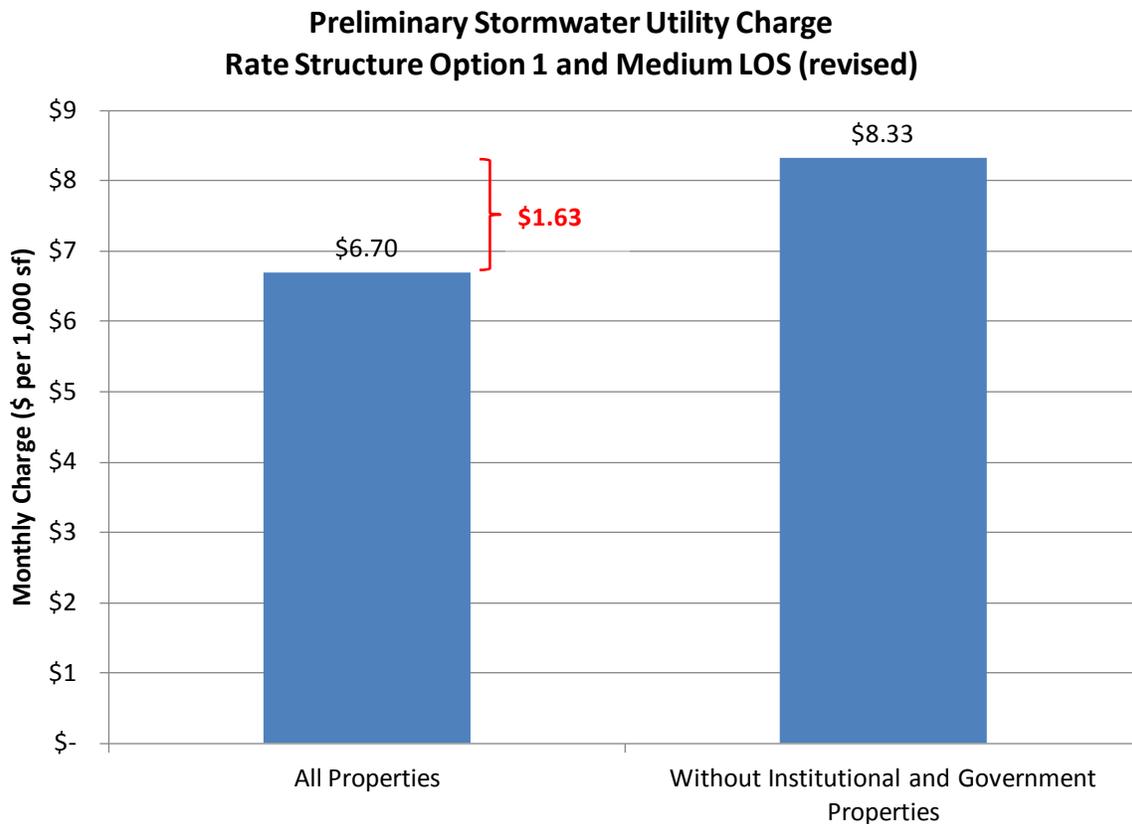
Preliminary Monthly Stormwater Utility Fees by Land Use Class

Land Use Description	Total	Average	Minimum	Maximum
E—Chester County Property	\$1,520	\$117	\$8	\$353
E—Federal	\$376	\$125	\$100	\$148
E—Fire Companies	\$369	\$369	\$369	\$369
E—Local Government (Townships & Boroughs)	\$2,416	\$97	\$3	\$395
E—Local Gov't Parks	\$533	\$89	\$3	\$359
E—Schools	\$9,541	\$954	\$15	\$5,441
E—Service Connected	\$15	\$8	\$3	\$12
E—State	\$450	\$56	\$12	\$187
E—Churches	\$2,139	\$43	\$3	\$141
E—Hospitals, etc.	\$1,711	\$570	\$152	\$1,265
E—Nonprofit Organizations	\$3,634	\$158	\$3	\$1,208
Total	\$22,703			

Based on Rate Structure Option 1 as described in Policy Paper #2 and Medium LOS (revised) described in Policy Paper #1.

EXHIBIT 4

Comparison of Monthly Stormwater Utility Charge (\$/1,000ft²) between All Properties and Without Institutional and Government Properties



Appendix F
Policy Paper #5: Billing System

Stormwater Utility Billing System Options Policy Development Summary

West Chester, PA

Policy Paper No. 5

Date Prepared: October 20, 2013

Date Revised: November 8, 2013

Date Final: November 27, 2013

Policy Issue: Should the proposed Stormwater Utility fee appear on the property tax bill, water/sewer bill, or a separate standalone billing system?

Overview

Three billing methods are commonly used to collect stormwater utility charges: real estate tax bills, water/sewer utility bills, or separate billing systems. Selection of a billing system is unique to the locality establishing a stormwater utility. The water/sewer bill may only cover part of the stormwater utility service area, whereas the property tax database provides complete coverage. It may be the case that the stormwater utility service area is not covered by either database system. The selection of the billing method should be cost-effective, timely, and capture all affected properties.

Policy Options

- Line item on the real estate tax bill
- Line item on the water/sewer bill
- Standalone stormwater bill

Issues, Concerns, Benefits

Water/Sewer Bills

Sewer bills are based on water consumption as calculated using Aqua PA's meter reading service and billing system. Aqua PA sends sewer bills (currently 4,153 sewer accounts) on behalf of the Borough and payments are made directly to the Borough. It is important to determine whether Aqua PA's billing system will allow the Borough to add another line item that shows the stormwater fee. Presumably this is feasible, but it will require close coordination with Aqua PA's billing department.

Pros

- Provides near full coverage of all properties in the Borough, except for properties not receiving water and sewer bills, such as parking lots and vacant lots with impervious area.
- Established enforcement mechanism is in place for collecting delinquent bills; the Borough enacts a lien on the property in order to collect delinquent payments.
- Monthly billing cycle reduces the charge paid per bill and improves cash flow. The Borough has 12 monthly billing cycles, so bills are going out every week to a different group of accounts, each of which receives bills monthly.
- Reinforces perception that the SWU is a fee for service, not a tax.
- Existing sewer billing system could feasibly allow the addition of another line item on the existing bill layout (pending verification from Aqua PA).

Cons

- Collection rate is typically lower than real estate tax bill. West Chester aggressively uses liens and sheriff sales to improve collections. Current collection rate is 97%.
- The stormwater assessment fee could be similar in magnitude to existing water/sewer fees, thus drawing negative attention.
- Will require additional non-water/sewer accounts to be added to current master billing file (accounts such as parking lots or vacant land with impervious area). There are roughly 82 (pending verification) non-water/sewer parcels.
- Bills are based on water meters, not parcels, and there are some parcels with multiple meters. These will require further investigation in the Master Account File.
- Bills are typically sent to tenants, not owners. Tenants are less likely to be interested in incentive programs for managing impervious area on property. Roughly 370 (pending verification) accounts are tenant occupied in West Chester.

Stormwater Utility Billing System Options Policy Development Summary

West Chester, PA

Policy Paper No. 5

Date Prepared: October 20, 2013

Date Revised: November 8, 2013

Date Final: November 27, 2013

Policy Issue: Should the proposed Stormwater Utility fee appear on the property tax bill, water/sewer bill, or a separate standalone billing system?

Issues, Concerns, Benefits (continued)

Real Estate Tax Bill

Pros

- Provides near full coverage of all properties in the Borough, except for properties that are tax-exempt, such as faith communities, nonprofits, and government. There are 150 (*pending verification*) accounts that would need to be added to the billing database to cover these tax exempt properties, if this approach is used.
- Established enforcement mechanism is in place for collecting delinquent bills, by placing a lien on property.
- Payment of many bills through escrow payments to mortgage companies and typically increases collection rate.
- The SWU could be smaller than real estate taxes, thus not drawing attention.
- Bills are sent to owners, not tenants. Owners are more likely to be interested in incentive programs for managing impervious area on property.

Cons

- Reinforces perception that the SWU is a tax, not a fee for service. The SWU is not based on property value. Rather, it is based on a property's impervious area and its contribution to stormwater runoff.
- Creates confusion on whether fee is tax deductible.
- Requires special handling of tax-exempt accounts. For example, separate assessment notices may be required.
- Annual billing cycle increases the charge paid per bill, and affects cash flow (i.e., once or twice per year depending on tax assessment cycles).
- The real estate tax bill may not allow the addition another line item or could require additional cost to add one.

Standalone Bill

Pros

- Can be used if the water/sewer and real estate billing systems require significant reprogramming to accommodate another line item.

Cons

- High initial cost to set up, and administrative cost to send bills and to track accounts receivable.
- Results in high level of nonpayment.
- Enforcement could be limited to collection agencies, which require additional costs.

Implementation Issues

Most billing options will calculate stormwater fees and credits external to the actual billing system that prints bills, and tracks account receivable. The calculation of bills can be done manually with a series of GIS data and billing data queries, but these often are better done if a custom database software application is developed that tracks all the billing rules reflected in the ordinance and policy decisions. Key implementation issues for any billing method will include the following:

- Coding/programming for impervious area based fees/charges
- Creation of database for properties currently not charged
 - Hardware
 - Software
- Integration with existing systems (such as Aqua PA's billing system), may require modification or replacement of legacy billing systems

Stormwater Utility Billing System Options Policy Development Summary

West Chester, PA

Policy Paper No. 5

Date Prepared: October 20, 2013

Date Revised: November 8, 2013

Date Final: November 27, 2013

Policy Issue: Should the proposed Stormwater Utility fee appear on the property tax bill, water/sewer bill, or a separate standalone billing system?

Issues, Concerns, Benefits (continued)

- Funding for these activities, sometimes taken as a “loan” against the sewer fund or the general fund that is subsequently paid back by the user fee
- Coding/programming for exemptions, credits
- Handling delinquent accounts and late payments? Some utilities will assess a late payment (typically 10 percent)
- Public/stakeholder education/awareness
 - Before billing begins (see outreach strategy, which includes assessment notices, mailers, web sites, and stakeholder meetings and presentations)
 - After first bills are issued (use a phone bank/call center, with operators trained with FAQs; Borough currently has a call tree set up for different utilities)
 - Ongoing
- Staffing needs within the Borough to manage the administrative component of the billing program.
- Regardless of approach taken, need to clearly define who is responsible for maintaining related billing data, which falls in four categories: account information (owner or tenant), and impervious area information, accounts receivable, and adjustments/credits. One entity needs to manage the overall process.

Consultant Recommendation

Use the sewer bill, as it will require fewer new accounts to be billed than the real estate tax bill, and promote the view that the charge is a fee for service, not a tax.

Advisory Committee Comments

AC Comment: As a Borough resident, I have already paid for services for the tax-exempt members of the community and have borne the burden on my own tax bill. I do not want to pay again and prefer that this fee be collected by the Sewer Bill.

Consultant Response: West Chester Borough uses a service through Aqua PA (the regional water utility) in order to collect sanitary sewer fees. Aqua PA sends sewer bills to more than 4,000 customers in the Borough. Customers send payment to the Borough, where one FTE is administering this program.

AC Comment: As a Borough institution, I prefer to pay an annual fee on my tax bill. Could the tax bill be redesigned so it clearly shows it as a fee, but is delivered on the tax bill?

Consultant Response: There is too much variety in how taxes are collected—some are escrowed, others are collected quarterly, or annually. If paid out of pocket on an annual bill, a stormwater fee of a couple hundred dollars is harder to pay than a monthly bill that spreads the fee over 12 payments. But if the property tax bill is paid through a monthly mortgage escrow account, it amounts to the same thing as a monthly water/sewer bill. Additionally, owners pay property taxes, and a high majority of properties in the Borough are multi-unit and tenant occupied.

Decision/Action

The AC recommended that the sewer billing option be explored with Aqua PA.

Appendix G
Policy Paper#6: Appeals

Stormwater Utility Appeals Policy Development Summary

West Chester, PA

Policy Paper No. 6

Date Prepared: October 20, 2013

Date Revised: November 4, 2013

Date Final: November 27, 2013

Policy Issue: Should the proposed Stormwater Utility allow for fees to be appealed and what issues can be appealed.

Overview

All stormwater utility charges typically provide a mechanism for rate payers to appeal their bills, to give them the ability to correct erroneous information. However, what can be appealed, when, and the process for submitting and reviewing appeals need to be clearly defined to make the fee defensible and manageable.

Policy Options

What can be appealed:

- Impervious area calculation and tier assignment
- Determination of exemption status (for example, if Ordinance exempts local and state governments)
- Credit calculation (assumes a property applied for a credit)

When are appeals submitted:

- Typically only once a year, well in advance of billing cycle (60 to 90 days), but with monthly billing cycle, this might be done more frequently.

Process for submitting appeals:

- Typically a form is developed that has basic property owner information, and the onus is on the property owner to provide backup information in the form of maps, aerials, or documentation of charges.
- Review is done by someone designated as the administrator of the fee or a designee, with a prescribed time to respond (typically 30 to 60 days)

Issues, Concerns, Benefits

Appeals are typically allowed only once per year, to minimize administrative costs. For example, the Borough may choose to set that deadline 6 months before the first bills go out in a given fiscal year. Assuming first bills go out July 1, then appeals would be due January 1. Note that in the first year of the SWU, the Borough should consider issuing assessment notices to allow customers to budget for the new fee. The goal would be to issue that assessment notice well in advance of the appeal date, with a target of July 1.

Consultant Recommendation

Allow for limited appeals based on impervious area, tier assignment, charge calculation, or credit calculation. Appeals must be submitted 6 months before new fees, or fee increases are in effect. Appeals should put burden of proof on the customer filing the appeal.

Advisory Committee Comments

None provided, other than to make a recommendation (below).

Decision/Action

The AC recommended an appeal program be put in place, at a frequency of once per year, heard and decided on by the Borough Manager and/or the Director of Public Works Department.

