Alternative Rate Structure Analysis

DEVELOPMENT SERVICES COMMITTEE – STORMWATER CREDITS & INCENTIVES

Summary Meeting Notes

Date: August 15, 2019 **Time:** 9:00 AM – 10:30 AM

Location: Philadelphia Water Department Offices, 1101 Market Street, McCarty Conference Room

Agenda

- ✓ Introduction
- ✓ Recap Items
- ✓ Today's Discussion - Stormwater Credits and Incentives
- ✓ Next Steps

Attendees

Participants:	Alice Baker, PennFuture Deborah Cahill, Department of Public Property George Claflen, Claflen Associates Altje Hoekstra, Meliora Design Fran Lawn, Sustainable Business Network – GSI Partners Tom McHale, The HOW Group Libby Peters, Department of Commerce David Plante, Ruggiero Plante Land Design Marianne Scott, Building Industry Association Kevin Smith, Stantec Harry Weiss, Ballard Spahr Lena Smith, PennFuture Eliza Kelsten Alfred, Sustainable Business Network – GSI Partners Christopher Plummer, Drexel University Harry Laspee, Pennoni Meredith Trego, Department of Development and Planning Altoro Hall, Department of Commerce
PWD Staff:	Randy Hayman, Vicki Lenoci, Erin Williams, Jessica Brooks, Alan Fody, Sara Anderson
Consultant Team:	Jed Campbell (Jacobs), Brian Merritt (Black & Veatch), Danae Mobley (Retra Studio)

The following is a summary of the August 15, 2019 Development Service Committee meeting. The presentation utilized during the meeting is available on the Philadelphia Water, Sewer and Stormwater Rate Board website: https://www.phila.gov/departments/water-sewer-storm-water-rate-board/

Attendees are listed above, and Appendix A includes a list of all invitees. Appendix B provides definitions for key terms and acryonms used throughout the presentation and subsequent discussion.

Background

The Development Services Committee (DSC) was formed in 2012 to create a space for development community members to provide targeted feedback on the stormwater regulations and review procedures and identify ways for the Philadelphia Water Department (PWD or the Department) to become more business-friendly. The current DSC consists of developers, engineers, designers, lawyers, advocacy groups as well as City of Philadelphia (City) Partners. Dialogue with the DSC has aided PWD in several areas, offering input and feedback on updated 2015 stormwater regulatory requirements, along with permitting process improvements, technical criteria and guidance documents. More recent work has focused on additional guidance on maintenance of stormwater management practices (SMP) as well as incentive programs intended to increase private stormwater management.

As the DSC has provided valuable input on stormwater-related topics in the past, the Department and Black & Veatch Management Consulting, LLC (Black & Veatch) felt their feedback on the potential changes to the stormwater credits and incentives programs, being contemplated as part of the Alternative Rate Structure Analysis, would be helpful. The DSC provides another group of stakeholders and additional voices beyond those participating in the Alternative Rate Structure Group (ARSG).

The DSC was provided with essentially the same presentation utilized at ARSG Meeting No. 2, which was held a few days earlier on August 13, 2019. The DSC version of the presentation was adjusted to meeting the allotted time frame.

The following is a summary of the meeting, presentation, and resulting discussion.

Introduction

Jed Campbell welcomed the DSC and introduced Water Commissioner Randy Hayman. Commissioner Hayman provided a few opening remarks and thanked the DSC for their prior work on the Department's stormwater regulations and permitting process. Mr. Campbell then recapped the prior DSC meetings and noted that the committee's input helped inform the SMP Maintenance Guide and the Developer Right-of-Way Incentive Program, both of which would be launched this Fall.

Mr. Campbell then introduced Brian Merritt of Black & Veatch and explained that the topic for this DSC meeting was related to potential changes to the Department's stormwater credits and incentives program that were being evaluated ahead on the next rate proceeding. The Department and its consulting team were seeking additional feedback from the DSC.

Alternative Rate Structure Analysis

Mr. Merritt provided some additional background on the Alternative Rate Structure. The Black & Veatch Team (Team) works with the Department as part of its Cost of Service Consulting Team, which among

other services, helps PWD in evaluating and updating their rates and charges. The purpose of the Alternative Rate Structure Analysis is to assess whether the current rate structure still supports the Department's current mission and goals and whether it will continue to help meet future objectives.

As part of this work, the Team was evaluating potential incremental rate structure updates in the following key areas, which present both near-term and long-term challenges for the Department and its customers:

- Water quantity charges
- Stormwater credits and incentives
- A rider for pension-related expenses

The Department and its Consulting Team are looking to gather feedback and input on these key areas from various stakeholders to aid in preparing the next rate filing with the Philadelphia Water, Sewer and Stormwater Rate Board (the Rate Board). A separate group, the Alternative Rate Structure Group (ARSG), was convened to discuss all three topics. Further input on potential changes to the stormwater credits and incentives programs is being sought from the DSC.

Focus Topic - Stormwater Credits and Incentives

The Black & Veatch Team then provided a presentation explaining the Department's current stormwater credit and incentive programs, a long-term credit analysis overview, preliminary results of the credit analysis, an accelerated "eligible credits" analysis, and potential credit program adjustments. The following section summarizes key points for the presentation. For a copy of the complete presentation, please refer to the Rate Board website.

Introduction and Key Concepts

Before delving into the long-term analysis and its potential implications, the Black & Veatch Team provided the attendees with background information on the current stormwater rate structure, the current credits and incentives programs, programs impacting stormwater rates, and how the costs of those programs are recovered.

Key Terms

First Black & Veatch defined several key terms related to the stormwater fee and associated credit program that were used throughout the presentation and subsequent discussion. Key terms included:

- **Gross Area (GA):** A property's entire parcel area.
- **Impervious Area (IA):** A surface which restricts the infiltration of water. Examples: roofs, driveways, sidewalks, parking lots, etc.
- **Surface Discharge:** The discharge of stormwater runoff from a property to an adjacent surface water body without use of PWD infrastructure.
- **Impervious Area Managed:** Impervious area that directs runoff to surface water bodies or to approved Stormwater Management Practices (SMPs).
- **Impervious Area Reduction (IAR):** IA directed to pervious area or which has characteristics similar to pervious area.

Attendees were provided with a handout which included the key terms noted above, as well as other terms and acronyms used throughout the presentation. The handout is provided in **Appendix B**.

Current Stormwater Rate Structure

Black & Veatch then explained the current stormwater rate structure which recognizes two primary customers classes, residential and non-residential properties. The Team noted that condominium customers are included in the non-residential customer category for presentation purposes. Condominium customers are similar to non-residential customers in that their stormwater charges are determined in the same manner as non-residential customers. Condominiums are also eligible for stormwater credit. The current stormwater rate structure is presented in Figure 1.

Figure 1 – Current Stormwater Rate Structure

Residential	Non-Residential

• Includes residential properties up to 4 dwelling units (excluding condominiums)
• Residential customers are billed:
  • Uniform stormwater charge per parcel, based upon on the overall average GA and IA (associated with the residential customer class)
  • Billing and collection charge per account
	• Includes all properties which cannot be classified as residential
	• Non-Residential customers are billed:
	  • GA charge ($ per 500 square feet) based on the parcel's actual GA
	  • IA charge ($ per 500 square feet) based on the parcel's actual IA
	  • Billing and collection charge per account

Attendees were then provided with an example of how non-residential stormwater charges are applied.

Current Credit Program

The team then presented a summary of the current stormwater credit program, which is only available to non-residential customers (including condominiums). The Department offers three primary types of credit:

1. Impervious Area Credit (IA Credit)
2. Gross Area Credit (GA Credit)
3. National Pollution Discharge Elimination System (NPDES) Credit – which is only offered to customers with a valid NPDES Permit for Industrial Stormwater Discharge Activities

As summarized in Figure 2, the attendees were provided with an overview of the options under each credit type, applicable management approaches as well as the maximum allowable credit percentages by credit type and discharge location.

Figure 2 – Current Stormwater Credit Program

Credit Type	Options	Management Approach	Credit Maximums[2] Non-Surface	Surface
IA	IAR	1. Tree Canopy Cover 2. Roof leader/Downspout Disconnection 3. Pavement Disconnection	100%	100%
	IA Managed	1. Infiltration 2. Detention and slow release 3. Pollutant reduction and filtration 4. Surface Discharge	80%	90%
GA	Open Space NRCS[1]-Curve Number	Applicable to open space only	80%	90%
	GA Credit for IA Managed	Equivalent GA Credit for IA Managed	80%	90%
NPDES	IA Managed	Compliant / Active NPDES Permit	7%	7%
	Open Space GA	Compliant / Active NPDES Permit	7%	7%

Notes: [1] NRCS - National Resources Conservation Service

It was noted that the current credit program and currently allowable maximums are defined in the Departments Rates and Charges Section 4.5. The credit program policies are further explained and detailed in the Stormwater Management Service Charge Credits and Appeals Manual. Both documents are available via PWD's website.

At this point, the Team mentioned the following important details regarding the current credit program:

- The current credit program criteria only require management of the first 1" of runoff to qualify for IA managed credit.
  - However, current stormwater management regulations require management of the first 1½" of runoff.
  - Therefore, customers that do not meet current stormwater code requirements are eligible for the same amount of credit as those that manage to current standards.
- The original intent of the credit program was to 1) incentivize property owners to implement and maintain functional stormwater management practices to help the City meets its stormwater goals, and 2) provide the opportunity for property owners to reduce their monthly SWMS Charge.
  - The desire to incent property owners to implement stormwater management was part of the rational for setting that original allowable credit percentage at 100% of the IA charge and also cited as part of the rationale for the current percentages.
- Properties which discharge to a surface water body can technically qualify for credit without managing stormwater volume and quality.

The team explained that PWD was interested in exploring whether the current credit program would help support the Department's long-term mission and goals, helping to manage natural resources and meet regulatory requirements while balancing customer impacts. In addition, the Long-Term Impact Analysis, which would be presented in a few moments, indicates the credit program should be re-evaluated considering some potential customer related impacts.

Programs Impacting Stormwater Rates

Beyond the core cost of providing stormwater service, the programs listed in Figure 3 also influence overall stormwater rates and charges.

Figure 3 – Other Stormwater Programs

Program	Description
SMIP/GARP Grants	• Currently, PWD offers $25 million in Stormwater Management Incentive Program (SMIP) / Greened Acre Retrofit Project (GARP) Grants annually. • Customers receive both grant assistance and stormwater credit once the stormwater management practice is constructed and certified.
Stormwater CAP	• The Stormwater Customer Assistance Program (Stormwater CAP) is offered to non-residential customers that were highly impacted by the transition from their meter-based stormwater fee. • The program provides customers with a gradual transition to the full parcel-area based SWMS Charge.

Stormwater Customer Program Cost Recovery

How program costs are recovered also influences rates and charges and which customers bare those costs.

1. **SMIP/GARP Grants Costs** - are recovered by wastewater revenues. 40-percent of the SMIP/GARP grant costs are recovered via sanitary rates and the remaining 60-percent from stormwater rates.
2. **Stormwater Credits** – are recovered by stormwater revenues via a reduction in overall billing units. The impact of credits is proportionately recovered from all customers, in that the system-wide IA and GA unit rates are set, accounting for credit impacts. Essentially, the fewer billing units results in higher rates for all stormwater customers.
3. **Stormwater CAP Costs** – are recovered from non-residential stormwater customers only. The costs are added to the overall revenue requirements for the non-residential stormwater customer class and ultimately reflected in the non-residential IA and GA rates.

Long Term Impact Analysis

The team then presented on the long-term impact analysis.

Objectives of the Long-Term Impact Analysis

The Team first explained that the objectives of the long-term impact analysis were to:

1. Develop a long-term projection of the impacts of the stormwater credits and incentives programs on billable units of services as well as stormwater revenues and rates.
2. Understand the impacts of updated billing data on customer billings and rates. *Note - The Department recently obtained new billing data based upon 2015 aerial and infrared imagery. The updated data set provides new impervious area and gross area data for billing purposes.*
3. Identify any potential imbalances that might occur with respect to customer classes over the long-term.

Credit Projection Approach

For credit projections purposes, the following three primary categories were utilized: SMIP/GARP, Surface Discharge, and All Others. Projections were developed through fiscal year (FY) 2036 based upon current programs, policies, and budgets.

- SMIP/GARP projections are intended to reflect credit resulting from SMIP/GARP funded projects.
  - These properties will receive IA managed, and the associated GA managed credit once the projects are completed and verified.
  - SMIP/GARP credit projections are directly tied to the annual SMIP/GARP budget, which fuels the number of resulting greened acres and the associated credit.
  - An average cost per greened acre was applied and used to develop the projections along with an estimated average project duration to reflect the time between the award of a SMIP/GARP grant and the completion of the project.
- Credit projections for both the Surface Discharge and All Others credit categories were based upon program performance data as of the end of FY 2018.
  - Surface Discharge credits were projected based upon program growth with respect to the number of parcels receiving credit and the average credit awarded per parcel by type including:
    - IA Managed
    - GA Managed
    - Open Space GA
    - NPDES
  - "All Others" projections include impervious area reductions and non-surface discharge properties which typically achieve credit as a result of development or redevelopment activity. Like the surface discharge category, these projections were based upon credit program growth and the average credit awarded per parcel by type including:
    - IAR
    - IA Managed
    - GA Managed
    - Open Space GA
    - NPDES

Preliminary Results

Next, the Team presented the preliminary results of the long-term impact analysis, noting the projections were based upon program performance as of the end of FY 2018 as well as the updated billing data. It was noted that the analysis would eventually be updated based upon the end of FY 2019 data once available. The projections provide an indicator of what would reasonably be expected to occur over the long-term.

Annual Revenue Impacts

For the next rate proceeding, the Department anticipates filing for rates for FY 2021 and FY 2022. The following estimates provide the projected annual revenue impacts of each program by FY 2021:

- **Annual Stormwater CAP**: Is expected to decrease from $2.3 million in FY 2019 to $2.1 million in FY 2021 as customers continue to roll-off the program.
- **Annual SMIP/GARP Grant Amount:** The annual SMIP/GARP budget was assumed to remain at $25 million per year.
- **Annual Contra Revenue from Credits increases**: The contra-revenue from credits is projected to increase from an estimated $19.6 million in FY 2019 to $24.3 Million by FY 2021. This increase reflects an estimated 6% annual increase in stormwater costs as well as the impact associated with additional credits.
    - It was noted that Contra-Revenue was another metric being used to help quantify and evaluate credit-related impacts.
    - As discussed previously, for rate-setting purposes, credits are reflected as a loss in billing units.

Units of Service – Impact of 2015 Data Set

The updated billing data will further influence rates and charges. The new data reflects the following changes:

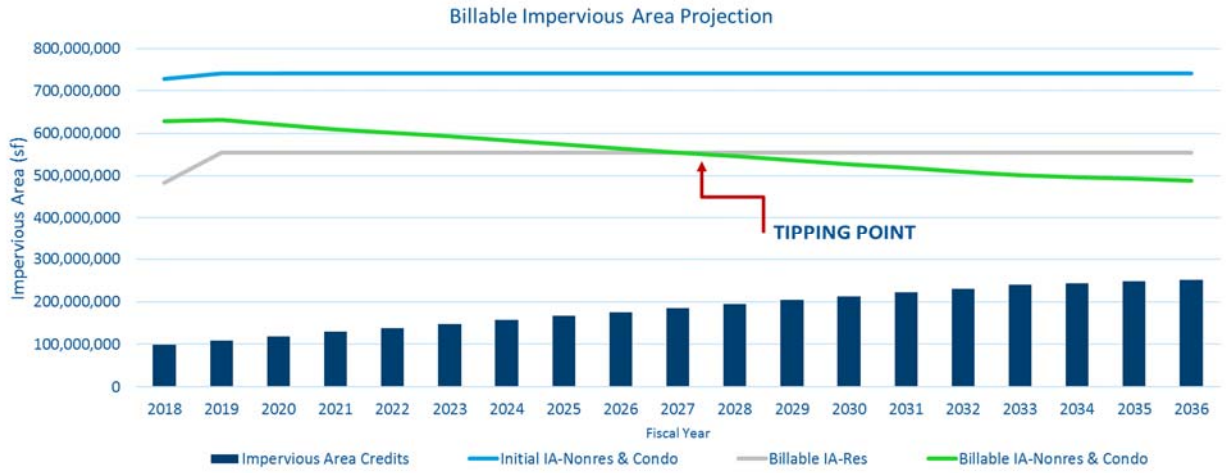
- Impervious Area has increased a total of 84 million square feet or 6.9 percent when compared to the current billing data set, which has approximately 1.2 billion square feet of IA (before accounting for credit impacts). Of the IA impacts:
    - Residential IA increased by 72 million square feet (14.9 percent). The average residential impervious area per parcel also increased from 1,050 sf to 1,200 square feet.
    - Non-residential and condominium IA increased by 12 million square feet (1.6%).
- There is no significant change in GA square footage when compared to the prior data set.

The Team noted that the updated data set wasn't included in the last rate proceeding and will be incorporated into the next rate filing with the Rate Board. With the increase in impervious area, residential properties will now represent a larger portion of the total impervious area in the City. As a consequence, and outside of any other updates or changes to stormwater costs and associated programs, residential customer rates would increase.

Long-Term Credit Projections – IA Units of Service

The Team presented a projection of the long-term impact of credits on the IA billable units of service, as summarized in Figure 5.

Figure 5 – IA Units of Service Impacts



The figure shows the projection for the impervious area units of service through FY 2036.

- The light blue line at the top represents the Non-Residential IA billing units prior to reduction due to credits.
- The dark blue bars at the bottom represent IA Credits.
- The green line shows the resulting "Billable" IA Units associated with non-residential customers after accounting for credits.
- The grey-line represents the Residential IA units. The influence of the new data set on the IA billing units can be seen in the increase of the initial years.

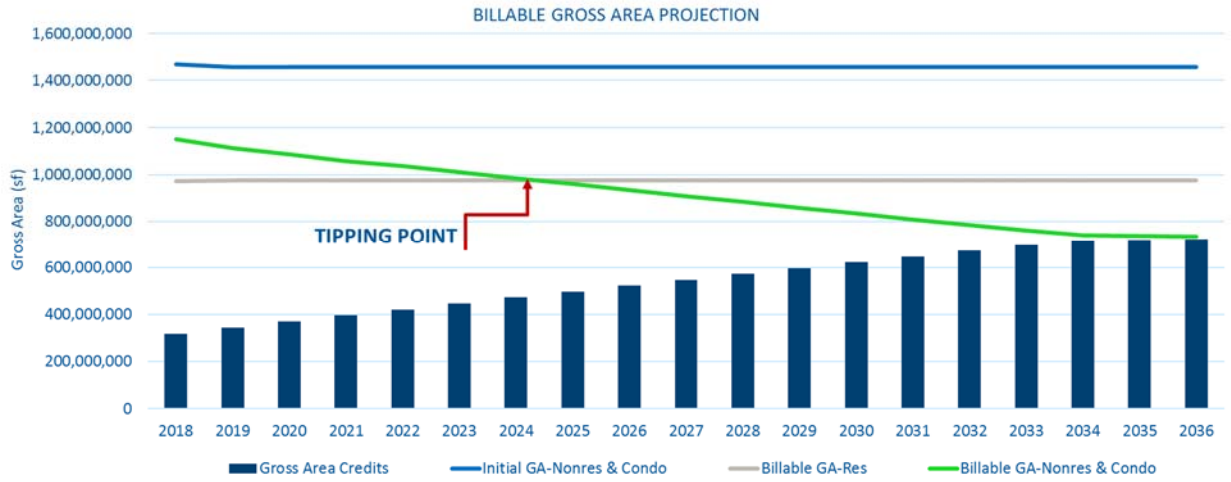
As indicated by the figure, by FY 2027, IA Credit is projected to increase by 77 million square feet; as a result, there will be more residential billing units than non-residential. This will put further pressure on residential customers as well as those that cannot achieve credits. This potential "Tipping Point" raises concerns about equity with respect to stormwater customer classes.

In addition, with rate proceedings occurring approximately once every two years, there are only 3 more proceedings in which to consider credit program and rate structure changes before the "Tipping Point" is reached. It may be more difficult to make changes in the future if the "Tipping Point" occurs. As such, PWD is interesting in re-examining whether the current credits and incentives programs are appropriate. Further, the level of credits offered should be reviewed to determine whether they are appropriate as they do not necessarily reflect reductions in cost or cost avoidance as it relates to the stormwater program.

Long-Term Credit Projections – GA Units of Service

The Team then presented a projection of the long-term impact of credits on the GA billable units of service, as summarized in Figure 6. Similar to the corresponding figure for IA, the figure shows the projection for the gross area units of service through FY 2036.

Figure 6 – GA Units of Service Impacts



As indicated by the figure, by FY 2025, GA Credit is projected to increase by 153 million square feet; as a result, there will be more residential billing units than non-residential. Like the impacts of the IA "Tipping Point," this will put further pressure on residential customers as well as those that cannot achieve credit.

With respect to GA, there are only 2 more proceeding in which to consider credit program and rate structure changes before the GA "Tipping Point" occurs. This is part of the reason that PWD is being to look at these issues now and discuss them with stakeholders. A broader review and evaluation of additional changes will be undertaken following the next rate proceeding.

Accelerated Eligible Credits Analysis

The long-term impacts are based upon projected growth in the credit program. However, another area that has the potential to influence customers rates and credits relates to "Credit Eligible Parcels," which have the potential to create uncertainty with respect to stormwater revenues and customer rates. In other words, "Credit Eligible Parcels" present a potential financial risk to both PWD and customers.

Stormwater credits are voluntary, and customers need to apply in order to receive credit. Right now, there are over 500 "known" projects that have been through PWD's plan review process that have either been completed or are in construction that could potentially apply for credit. These "Credit Eligible Parcels" are from projects which date back as far as 2005. The fact that these projects haven't applied for the credit program creates uncertainty with respect to stormwater revenues and customer rates.

As mentioned earlier, the stormwater credit program only requires management of the first inch of runoff to qualify for credit. Whereas, the stormwater management regulations require management of the first inch and a half of runoff. So, anything approved prior to 2015, when the current regulations were adopted, does not meet current stormwater management requirements, yet they are technically eligible to receive credit.

As indicated in Figure 7, there are an estimated 40 million square feet of "eligible credits". Of the total, roughly 32 million square feet correspond to over 400 projects developed under the old regulations.

Figure 7 – Estimated Potential Credit

Non-Surface Discharge Credit = 32.25 M sf

Surface Discharge Credit = 8.65M sf

M = Million

Given the potential uncertainty, the Black & Veatch Team ran a "what if" scenario analysis and looked at varying levels of enrollment assuming customers would apply and receive credit during the current fiscal year. This is referred to as the Accelerated Eligible Credits Analysis.

Summary – "Eligible Credits" Analysis

The Team then presented the "book ends" of the analysis, showing the impacts of 100 percent of "Credit Eligible" projects applying and receiving credit.

With respect to projected "Tipping Points":

- Under the current programs and policies, the "Tipping Points" are projected to occur in FY 2025 for GA and FY 2027 for IA.
- If all properties "Credit Eligible" projects applied and received credits, the tipping point would accelerate and occur in FY 2023 for both GA and IA.

With respect to customer rates, Figure 8 summarizes the potential impacts on both residential and non-residential rates.

Figure 8 – "Eligible Credits" Analysis – Impact to Stormwater Rates

	Status Quo	100% Apply
FY 2021 Residential Rates		
IA/GA	$15.853	$16.381
FY 2021 Non-Residential Rates		
IA (per 500 sf)	$5.403	$5.604
GA (per 500 sf)	$0.773	$0.789

In summary, Residential customers would see about a $0.53/month increase. The non-residential IA rate would increase $0.20, and the GA rate would increase a little over a penny.

It was noted that while is not likely that all "Eligible Parcels" would ultimately achieve credit, the analysis does provide a sense of the overall potential impacts if these customers are granted stormwater credit.

Key Take-Aways

The key take-aways from the analysis were summarized as follows:

- The continued escalation of stormwater costs and reductions in billable units of service will put pressure on rates with compounding effect. Contra revenues will continue to increase.
- Within the next 6-9 years, residential customers will bear the majority of the burden of stormwater-related costs – with no ability to reduce their fees under the current program.
- "Credit Eligible" parcels have the potential to accelerate the tipping points and put further pressure on rates.

Potential Credit Program Adjustments

Short-Term Mitigation Approaches

The team introduced three short term incremental changes actions that will begin to help contain some of the potential long-term ramifications of the current programs and policies.

1. Align the credit criteria with stormwater regulations.
2. Specify an enrollment window for applying for credit following the development (or redevelopment) or a property.
3. Adjust the program budgets for SMIP and GARP.

Aligning the credit criteria with the current stormwater regulations would help reduce potential credit from properties, that have not applied for credit yet and which don't meet current regulations. A sunset period or time horizon would likely be established to allow those potential "credit eligible" properties an opportunity to enroll.

By specifying an enrollment window for properties to apply for credit following the completion of construction, the Department reduces the size of the possible eligible candidates applying for credits. This potential policy would apply to projects built under the current regulations.

- The aim would be to avoid another build-up in "credit liability" similar to what "credit eligible" properties currently present.
- This would be an administrative policy to help manage potential contra revenues and rate pressure and contain the associated risks.
- While a specific proposal has not been identified, a 12-24-month period following the completion of construction has been discussed internally.
- With this approach, additional policies would likely be needed, such as specifically policy that addressed property ownership changes.

Finally, an adjustment to the SMIP/GARP program budget could help to mitigate some of the short-term credit impacts and provide all customers with some rate relief.

Long-Term Mitigation Approaches

The Team explained that while the short-term adjustments would buy some time to contain the potential issues, longer-term adjustments are likely needed to fully mitigate concerns. Two areas for long- term evaluation would include:

- Holistic credit program updates

- Revisiting stormwater rate structure

It was noted that longer-term adjustments will require further evaluation and deliberation with stakeholders. This effort will take place over the next several years following the next rate proceeding.

Questions Posed During the Presentation

The following is a summary of questions posed during the presentation

Question: Are the changes for stormwater management (from 1 inch to 1 ½ inches) stated in PWD's regulations? Will the requirements change again, meaning increasing the capture requirement (from 1 ½ inches to 2 inches for example)?
Response: Yes, the stormwater management requirements are specified in Section 600.5 of the Department's regulations. The credit program requirements are stated in the *Stormwater Management Service Charge Credits and Appeals Manual.* The credit program requirements were not aligned when the regulations were updated in 2015. Currently, there are not any planned increases to the volume capture requirement further. That said, there is a possibility that the requirements may need to be adjusted in the future as necessary to meet permit requirements.
Question: Do you think the credits are linked to the financial commitment the owner has to make to implement stormwater management on his or her property?
Response: Credits are not linked to investments made by private owners. Regardless of whether or not there is a stormwater fee and credit program, there would still be stormwater management requirements that private development projects would need to meet. Rather, credit programs are typically intended to recognize the avoided costs or costs savings. In the Department's case, the credit program was not initially designed around program costs by the Department, but instead to incentivize participation. There's not a 1:1 correlation in cost savings/cost avoidance from the Department's perspective. The longer-term stormwater management program (reflected in the LTCP) assumes a certain level of private stormwater management will occur. The current stormwater costs, recovered by the stormwater fee, related to the management of and improvements to the City's stormwater system. In other words, the Department's stormwater program costs already account for private stormwater management and aren't necessarily reduced by private stormwater management. That said, it's important to recognize private stormwater management in the context of the credit program.
Question: The $25M grant program a current program? Is it a competitive process? Is the budget being fully expended?
Response: Yes, there is a competitive application process for the SMIP/GARP grants. Applications are judged based on overall management potential (i.e., greened acres achieved), project, cost per greened acre as well as several other factors. There is no required match for participants. The program budget is currently being fully expended.

Question: Residential properties manage stormwater. Does the credit projection include residential stormwater management? Why don't residential properties receive credits?

Response: Residential properties may manage stormwater if the requirements were triggered. That said, credit projections only look at non-residential projects, as only they are eligible.

A residential credit program isn't part of the current evaluation but could be looked at in the future.

The Department has looked at this in the past, and one concern is that a residential credit program would likely create a significant administrative burden (i.e., cost) given that there are over 460,000 residential properties versus the 75,000 non-residential properties.

Question: Do you know why customers aren't taking advantage of the program?

Response: For some customers, the long-term maintenance of the system (which is required) may seem burdensome. Some believe the amount of the credit isn't worth the effort to apply for and maintain documentation required as part of the credit program.

Question: Are property owners able to fill out the credit application directly?

Response: Yes, and there's no fee associated with the credit application, and it can be submitted during the development review process.

The Department noted that there is a disconnect between the design engineer/ contractor, that may be interfacing with the Department during the re/development property, and the final property owner or property manager. The Department has found, on multiple occasions, that the owner may not understand these maintenance requirements or that they have an SMP on their property.

Question: Do you think property owners feel like there's less of an obligation for them to maintain the systems if they don't apply (for credit)?

Response: That's possible. There's more education that can be done to help owners understand their responsibilities.

Question: Why aren't property owners who make it through the development/redevelopment process automatically given the credit? And then if they're not maintaining the system, they lose your credit?

Response: The credit program is voluntary. While the credit program is introduced, and enrollment is encouraged many times throughout the development process, it is still up to the property owner to decide whether to apply.

Staff noted that it's important to have people speak directly with the Department to acknowledge and understand the implications of having an SMP on their property. There are still a good number of people that are surprised during post-construction that they are liable for this infrastructure.

If an SMP is not maintained, the customer could lose their credit.

Question: With post-construction site inspection, what are the percentages of projects require repair?
Response: Almost 100-percent of projects need some form of additional maintenance or repair after inspection.
Question: Is the property required to do reporting about maintenance?
Response: No, currently, there are no specific reporting requirements back to the Department, but it is something that has been discussed previously. Instituting reporting requirements (especially tied to the credit) may help keep owners stay more on top of SMP maintenance.

Group Discussion

The facilitators led the meeting attendees through an individual exercise where participants expressed their opinions on the advantages and disadvantages of the short-term mitigation approaches presented. The following is a summary of the activity and the subsequent discussion.

Group Questions for the Short-Term Mitigation Approaches

Align Credit Criteria with Stormwater Regulations & Enrollment Window Discussion

- Some participants commented that it only seemed to make sense to align the credit program requirements with current stormwater management requirements as those facilities (designed to manage the first inch of runoff) no longer meet the code requirements.
- A participant asked if the Department would take away credit from customers with facilities designed to the 1" requirement.
    - The Department is not considering making any changes to customers with existing credit at this time. The change would only apply to property owners with SMPs designed based on the 1" requirement who have not yet applied for credit.
    - For any property already receiving credit, which manages the first inch of runoff, their credit would remain in place. Adjusting or pro-rating these credits may be a long-term consideration.
    - Some participants commented that "taking away credit for people who have already invested sounds like a non-starter."
- Others wondered if there would be more certainty if credits were provided automatically and if it would help with tracking financial metrics and longer-term projections.
    - Providing credits automatically could help alleviate some level of uncertainty. It may also create more administrative work.
        - Before automatically awarding credits, the Department would implement changes to the inspection process that would allow the PWD staff an opportunity to engage with the property owner.
        - The Department is also looking at moving up the date of the first inspection to establish a relationship with the owner sooner.
        - It was further noted that with respect to credit, the key is not the initial investment in the private SMP but rather the long-term operation and maintenance that helps/benefits the overall system. Having property owners

understand their maintenance responsibilities and acknowledge them before receiving credit may be an important step in improving the process.

- Participants asked if the property owner should be required to be on-site during the final inspection.
    - Currently, the Department requests that the property owner attend the final inspection, but they have the option to send a project representative. A policy change like this would require some deliberation by the Department.
    - Attendees further commented that requiring the property owner to be present during the final inspection would help alleviate some of the confusion and help people better understand the obligation.
- A question was posed as to whether the credit enrollment window would re-open after a property was sold.
    - It was noted that this is a policy that the Department is considering. If the prior property owner chose not to pursue credit, but the new property wished to take advantage of the program, it would seem fair to allow them the opportunity to apply.
    - Participants noted that this seemed like an important policy that should be developed.
- Others were curious about what goal would be achieved by closing the application window.
    - The team explained that the goal of specifying an application window is risk mitigation - both from the financial liability faced by the Department and the potential rate impacts to the customer. This type of administrative policy would help to avoid a buildup in potential credits, so that there are not 400 projects out “sitting out there” and eliminate uncertainty about whether or not or when they might apply for credit.
    - The Department would plan to do outreach and education around the enrollment window to make sure the information gets to the appropriate people.
- A member of the DSC noted that a short application timeframe (say less than 60 days) seems unreasonable, but the timeframe also shouldn’t be too long.
    - A six to twelve months makes sense because if you tell someone, they have two years to complete something, they probably won’t pay attention.
    - A six to twelve months window might encourage/incentivize customers to act.
    - One participant recommended six months, stating that twelve months is too long a window.
    - Another participant noted that traditional ownership transactions associated development are typically completed within twelve months of construction close-out.
- Others noted that consultants that have helped guide people through this process should be highlighted and advertised so that people know where to get assistance.
    -
    - PWD customer service professionals are available to speak with property owners about their bill, visit their property to discuss management opportunities, as well as help with the credit application, etc.
    - PWD has a list available online of contractors that conduct stormwater management maintenance and repairs.

Adjust the SMIP/GARP program budget:

- DSC members asked if the goal of reducing the SMIP/GARP budget was to reduce the number of people coming in for credits or provide relief to rate payers.
    - The team responded noting that it would help on both fronts. It would provide immediate rate relief to customers and reduce the amount of credit under the current program design.
    - It was further explained that rate-payer money is helping fund the implementation of projects. Private property owners are receiving both a grant and long-term credit.
- Acknowledging that reducing the credit program budget may help rates, others asked how does the reduction in budget would impact meeting the greened acres requirements of the COA.
    - The impact is still under evaluation. It is likely the reduction is SMIP/GARP projects would have to be accommodated by other Department projects.
- With a reduction in budget, could the cost per greened acre paid to property owners be reduced as well.
    - That is a possibility. That would be evaluated if and when the program was redesigned.
    - Some participants commented that it may disincentivize owners to participate because in many cases the current amount awarded per green acre only covers basic infrastructure and there's still an additional cost to the owner for planting and other elements that goes into a "complete" project.
- A committee member asked if the full $25 million in program costs was available for grant funding.
    - The majority of the budget is available for grant funding. The program is administered by PIDC, and there are some administrative costs (roughly $600,000).
    - The Department also incurs administrative costs, but they are not included in the SMIP/GARP budget, nor do they impact the amount of money available for grants.
- The committee discussed the impact on the system if fewer SMIP/GARP projects were completed.
    - The Department stated that if fewer SMIP/GARP projects were completed, then the Department may have to find other ways to achieve that management. This may include projects on public lands, expanded or alternative capital improvements projects, among other approaches.
- The DSC asked if there was a comparison of SMIP/GARP cost per greened acre versus PWD's cost per greened acre.
    - It was noted that the Department was currently evaluating this but couldn't share specific figures at this time.
    - A stakeholder felt that this comparison would help tie the credit cost to the true costs of the program.
    - The team further explained that the SMIP/GARP cost per greened acre has been increasing over time.
        - There is a sense that the Department may have already captured the lowest hanging fruit (i.e. most cost-effective greened acres) at the beginning of the program.

- Projects that have more recently applied for grants now are more expensive (i.e. higher cost per greened acre) and may be more reflective of typical costs the Department would see for SMIP/GARP projects. Further, if credits are also considered in total project costs, SMIP/GARP may not always offer a lower cost alternative to achieving greened acres.

Longer-Term Adjustments

- A stakeholder questioned why credit was offered for only meeting the 1½" management requirement. They further suggested that perhaps requiring customers to go above and beyond what is required "by law" (to be eligible for credit) might truly encourage increased stormwater management on private property and provide a benefit to the system.
  - The team noted that other cities require customers to go above and beyond the minimum requirements to be eligible for credits.
  - Initially, Philadelphia's credit program was designed to incentivize participation and ensure more properties complied with regulations.
  - Long term, the program may have to strike a balance between requiring participants go "above-and-beyond" while acknowledging customers that meet requirements and are maintaining their SMPs.
  - Another member of the DSC further suggested that there should be a distinction made between those who voluntarily retrofit their properties and invest their own money, those taking advantage of SMIP/GARP grants, and those who are implementing SMPs to meet the regulations due to re/development activity.
- The DSC inquired as to how many people had retrofitted their property to date.
  - The team explained that very few property owners had voluntarily retrofitted their properties.
  - Most of the retrofits that have been installed are a result of SMIP/GARP.
- Other suggested a tiered program.
  - The team agreed and noted that this is a potential option that they can investigate with a redesign of the credit program.

Summary

The Team summarized the potential incremental changes and associated benefits as follows:

- Aligning stormwater credit criteria with current regulations helps manage "build-up" of potential credit;
- Specifying an enrollment period helps manage longer-term impacts / reduces uncertainty; and
- Reducing SMIP/GARP Budget provides immediate relief to rate payers.

It was reiterated that broader changes need to be considered in the future to address potential future equity issues.

Next Steps

Ms. Vicki Lenoci then closed the meeting, noting that DSC members were invited to provide written comments on the potential changes discussed during the meeting as well as any comments on longer-term adjustments. She noted that the deadline for submitting written comments was September 16th.

The team further explained that summary meetings notes, along with responses to questions posed during the meetings, would be provided. The notes, along with meeting materials, will be posted to the Rate Board website.

Ms. Lenoci then alerted the DSC to the upcoming Developer Right-Of-Way Incentive program and Maintenance Guide, which would be launched in the coming months. She noted the Department would also be moving to online technical submissions for stormwater permitting and plan review and that the PWD Plan Review website was also being revamped. Finally, Ms. Lenoci encouraged the DSC to sign-up for email updates via https://phillyh2o.info/plan-review-email and thanked the DSC for their participation.

Appendix A – Meeting Invitees

Last Name	First Name	Organization
Baker	Alice	PennFuture
Bartolotta	Katie	Delaware Valley Green Building Council
Cahill	Deborah	City of Philadelphia, Department of Public Property
Celoni	Mark	Pennoni
Claflen	George	Claflen Associates
Craighead	Stephanie	City of Philadelphia, Parks and Recreation
Emmon	Brian	Southern Land Company
Farina	John	U.S. Construction
Franklin	Chris	Brandywine Realty Trust
Hoekstra	Altje	Meliora Design
Lawn	Fran	Sustainable Business Network – GSI Partners
Levine	Larry	Natural Resource Defense Council
Maransky	James	E-Built, BIA President
MCreesh	Tom	Temple University
McHale	Tom	The HOW Group
Mondlak	John	City of Philadelphia, Department of Development and Planning
Musil	Joe	Urban Engineers
Nuss	Jonathan	David Brothers
Peters	Libby	City of Philadelphia, Commerce, Director of Policy and Performance
Plante	David	Ruggiero Plante Land Design
Pluto	Ron	Brandywine Realty Trust
Scott	Marianne	Building Industry Association
Skafte	Karen	Ground Reconsidered
Smith	Kevin	Stantec
Tantala	Peter	Tantala Associates
Trainer	Nancy	Drexel University
Weingram	Josh	Liberty Property Trust
Weiss	Harry	Ballard Spahr
Zurn	John	University of Pennsylvania

Appendix B – Stormwater Credits and Incentives – Definitions List

Alternative Rate Structure: Stormwater Credits & Incentives

Definition List

Greened Acre Retrofit Program (GARP)	GARP is a PWD program that provides stormwater grants to contractors or project aggregators who can build large-scale stormwater retrofit projects across multiple properties.
Gross Area (GA)	A property's entire parcel area.
Impervious Area (IA)	A surface which restricts the infiltration of water. Examples: roofs, driveways, sidewalks, parking lots, etc.
Impervious Area Managed	Impervious area that directs runoff to surface water bodies or to approved Stormwater Management Practices (SMPs).
Impervious Area Reduction (IAR)	Impervious area directed to pervious area or which has characteristics similar to pervious area.
National Pollutant Discharge Elimination System Industrial Permit Stormwater Credit (NPDES Credit)	National Pollutant Discharge Elimination System Industrial Permit Stormwater Credit (NPDES Credit) To receive a NPDES Credit, the customer must demonstrate that the parcel is subject to an active NPDES Permit for Industrial Stormwater Discharge Activities and that the operator has been in compliance with the permit requirements during the preceding twelve months.
NRCS-CN Open Space Credit	Credit option applicable only to the Open Space, calculated as Gross Area subtracted by Impervious Area (GA-IA), of a parcel. Under this option, the customer must demonstrate an average Natural Resource Conservation Service Curve Number (NRCS-CN) meets one of the values as specified in the Credits and Appeals Manual Appendix A. The NRCS-CN represents the runoff potential for a particular soil and ground cover.
Open Space	The pervious area of a parcel (equal to GA minus IA).
Square feet (sf)	A measurement of area.
Stormwater Customer Assistance Program (CAP)	The purpose of the Stormwater Customer Assistance Program (CAP) is to mitigate the annual fiscal year increase due to the transition from a meter-based charge to a parcel-area based

	stormwater charge. The CAP affords non-residential customers the ability to gradually transition to a parcel-area based SWMS Charge over a longer period of time than the established 4-year phase-in.
Stormwater Management Improvement Program (SMIP)	SMIP is a PWD program that offers grant funding to non-residential customers for the design and construction of stormwater projects.
Stormwater Management Practice (SMP)	Structural or engineered control devices and systems (e.g. retention ponds, rain gardens) that help reduce the quantity and improve the quality of stormwater runoff.
Stormwater Management Services (SWMS) Charges	Charges for Stormwater Management Services (SWMS) supplied by PWD
Surface Discharge	The discharge of stormwater runoff from a property to an adjacent surface water body without use of PWD infrastructure.