RATE STRUCTURE EVALUATION PLAN

30 JANUARY 2026

PHILADELPHIA WATER DEPARTMENT

Table of Contents

LIST OF TABLES

LIST OF FIGURES

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Executive Summary

The Philadelphia Water Department (PWD or Department) is launching a multi-year Rate Structure Evaluation effort to modernize its rate structure and how water, sewer, and stormwater costs are allocated and recovered from customers. The following document outlines the Department's plan to conduct the Rate Structure Evaluation effort and fulfills the requirement from the 2025 Rate Determination.

The evaluation responds to several converging drivers: aging infrastructure, evolving regulatory requirements, affordability challenges, expanded availability of customer-level data (including systemwide AMI), and the forthcoming replacement of the current billing system, Basis2. Together, these factors create both the need and the opportunity to re-examine the foundational framework of PWD's rate structures.

Purpose

PWD's Rate Structure Evaluation Plan (Plan) outlines the process and analytical framework that the Department will use to assess potential modifications to water, sewer, and stormwater rate structures. The Plan also identifies limitations, sets expectations, and describes the stakeholder engagement strategy that will guide this multi-phase effort. Ultimately, the goal is to identify clear, legally sound, cost-based, and administratively feasible structures that reflect industry best practices while serving the City's long-term needs.

Guiding Goals

The Evaluation is grounded in the following goals identified by PWD leadership:

- **Enhance customer understanding and transparency** of how rates and charges are determined.
- **Improve long-term revenue stability** amid increasing operating, capital, and regulatory costs.
- **Advance equity and affordability** by fairly allocating costs.
- **Support economic development**, enabling rates and structures that reflect responsible and sustainable growth.
- **Promote environmental stewardship**, aligning financial signals with resource protection and climate resiliency.
- **Ensure administrative feasibility**, including compatibility with the forthcoming billing system modernization.

Scope and Phasing

Recognizing both the breadth of potential changes and the cadence of required rate proceedings, the Evaluation will be completed in **two major phases**:

Phase 1 (2026): Stormwater and AMI Peaking Factors

Phase 1 focuses on topics that have already been subject to significant stakeholder discussion:

- Residential stormwater rate structure options.
- Potential residential stormwater discounts or credits.
- Recovery of SMIP/GARP[1] related credits.
- Updates to AMI-based peaking factors and their phase-in.

Phase 2 (2027–2029): Water, Sewer, Class-Based Rates, and Special Topics

Phase 2 addresses aspects of the rate structure that have not been previously vetted in detail and will require more comprehensive evaluation, including:

- Water service charges and quantity charges, including alternatives to the current declining block structure.
- Sewer service and quantity charges, including potential structural modifications and consideration of surcharges.
- Customer-class-based rates and their implications for fairness and cost recovery.
- Special and cross-cutting topics such as marginal cost treatment, recovery of customer programs, and potential new rate riders.

[1] Stormwater Management Incentives Program (SMIP) and Greened Acre Retrofit Program (GARP).

Methodology

PWD will employ a structured, data-driven methodology anchored in cost-of-service principles and industry best practices. Key steps include:

1. Refining goals and objectives.
2. Reviewing industry guidance and national peer practices.
3. Defining evaluation criteria centered on cost causation, equity/affordability, revenue stability, transparency, and administrative feasibility.
4. Developing and screening a suite of rate structure alternatives.
5. Conducting total system revenue-neutral cost-of-service analyses based on a recent rate determination to assess customer-class and customer impacts.
6. Evaluating administrative requirements, legal considerations, and stakeholder feedback.
7. Aligning implementation with billing system replacement timelines.

Stakeholder Engagement

Recognizing the broad public importance of rates, the Evaluation includes a two-tiered engagement approach:

- **Phase 1:** Targeted outreach to residential customers, Residential Customer Assistance and Services (RCAS) committee participants, Registered Community Organization (RCOs), and rate proceeding participants through meetings, town halls, surveys, and informational materials.
- **Phase 2:** A more expansive effort including a multi-sector Stakeholder Advisory Committee (SAC), community listening sessions, surveys, and coordinated communications involving residential, commercial, industrial, and institutional stakeholders.

Engagement activities will identify customer concerns, promote transparency, and inform the selection and refinement of alternatives.

Limitations and Givens

To maintain focus and align with the Rate Board's jurisdiction, the Evaluation will not reconsider topics such as the overall size of revenue requirements, regulatory strategies, or operational decisions. The analysis assumes the continued use of cost-of-service principles, the continuation of the existing Tiered Assistance Program (TAP) program as well as other assistance programs (such as discounts), the existing regulatory framework for rate setting and maintaining adequate revenues to fund the System. The Evaluation is also focused on rate structure issues (i.e., not overall revenue requirements or operational decisions).

Estimated Timeline and Reporting

Given the current 18-month cadence between base rate proceedings, stakeholder engagement and detailed evaluation will pause during formal base rate filings and resume afterward. PWD will issue progress updates at key milestones, including:

- Phase 1 progress reports and summaries of stormwater and AMI stakeholder engagement; and
- Phase 2 progress reports and summaries of SAC activities.

A final report will outline rate structure modifications for consideration in future rate proceedings.

Conclusion

The Rate Structure Evaluation provides an opportunity for the Department to modernize its rate framework, improve customer understanding, strengthen financial resilience, and align with evolving policy, environmental, and technological conditions. Through analysis and stakeholder engagement, it is PWD's intention to identify a set of transparent, equitable, and forward-looking rate structures capable of supporting the City's water, wastewater, and stormwater systems for the future.

1.0 Introduction

Per the 2025 Rate Determination dated July 23, 2025 (the Determination), the Philadelphia Water, Sewer and Storm Water Rate Board (the Rate Board) acknowledged the City of Philadelphia (City) Water Department's (PWD or the Department) commitment to begin an evaluation of the Department's rate structure via the Joint Petition for Partial Settlement dated May 30, 2025. The initial Joint Settlement Petition included representatives of the Department and the Public Advocate. With the Second Joint Petition for Partial Settlement the Philadelphia Large Users Group (PLUG) joined in the agreement. The Joint Petition for Partial Settlement and the subsequent Second Joint Petition for Partial Settlement as referred to as the "Settlement Agreement" herein.

As stated in the Settlement Agreement, the Department agreed to develop a plan for the evaluation of rate structure alternatives, referred to as the "Rate Structure Evaluation Plan" or "Plan" herein, and file the Plan with the Rate Board. The Plan includes target dates for commencement and completion of milestones. In addition, per the Settlement Agreement, the Department agreed to include the following items as part of the evaluation:

- Stormwater rate structure issues:
  - Residential rate structure options;
  - Residential stormwater discounts/credits; and
  - Recovery of Stormwater Management Incentives Program and Greened Acre Retrofit Program (SMIP/GARP) related credits.
- Rate structure alternatives:
  - Generally, including alternatives identified by the Public Advocate, PLUG and other stakeholders.
- Re-evaluation of the phase-in of the Advanced Metering Infrastructure (AMI) peaking factors, once more data is available.

This document is proffered as the Water Department's Rate Structure Evaluation Plan to the Rate Board. Details of the Plan, including anticipated target dates, milestones, and additional background information are provided throughout.

2.0 Background

Pursuant to the Philadelphia Home Rule Charter (the Charter), the City owns, operates, maintains, repairs, and improves the water system (Water System) and wastewater system (Wastewater System) serving the City and 10 wholesale wastewater contract customers and one wholesale water contract customer, as a self-supporting enterprise fund utility. Collectively, the Water System and the Wastewater System are referred to herein as "the System."

- Section 5-800 of the Charter conveys the authority to the Water Department to operate the Water and Wastewater Systems.
- Section 5-801 authorizes the establishment and regulation of rates and charges for the Water Department.
- Ordinance 130251-A (the Rate Ordinance), effective January 20, 2014, created the Rate Board and prescribed certain rate-making standards.
  - Under the Rate Ordinance, the Rate Board is responsible for setting and regulating rates and charges for supplying water, sewer, and stormwater services to retail customers.
  - Prior to the creation of the Rate Board, the Water Commissioner was charged with setting rates and charges.
- The "Water Fund" is the dedicated enterprise fund that accounts for the assets, liabilities, revenues and expenses of the operations of the Department's integrated water, wastewater, and stormwater systems.
  - The Water Fund is primarily supported by user charges and revenue bonds, ensuring compliance with bond covenants and maintaining financial sustainability for infrastructure investments[2].
- The "General Bond Ordinance[3]" establishes requirements, pursuant to the issue of revenue bonds, for the imposition of rates and charges sufficient to meet specified financial metrics. Collectively these are referred to as the "Rate Covenants."

2.1 Existing Rate Structure

At its highest level, a rate structure is the general framework for how a utility charges its customers for services provided. Or in other words, the framework for how a utility recovers costs from customers.

- The Department's existing rate structure reflects the three primary services provided to customers: water, sewer and stormwater.
- The current rates and charges were established via the 2025 Rate Determination.

The existing rate structure is presented in Figure 2-1.

[2] Beyond routine revenue sources, Department staff continually seek to secure other funding and financing through state, federal and private programs to further support the System.

[3] The Restated General Water and Wastewater Revenue Bond Ordinance of 1989, approved by the Mayor on June 24, 1993, as supplemented and amended.

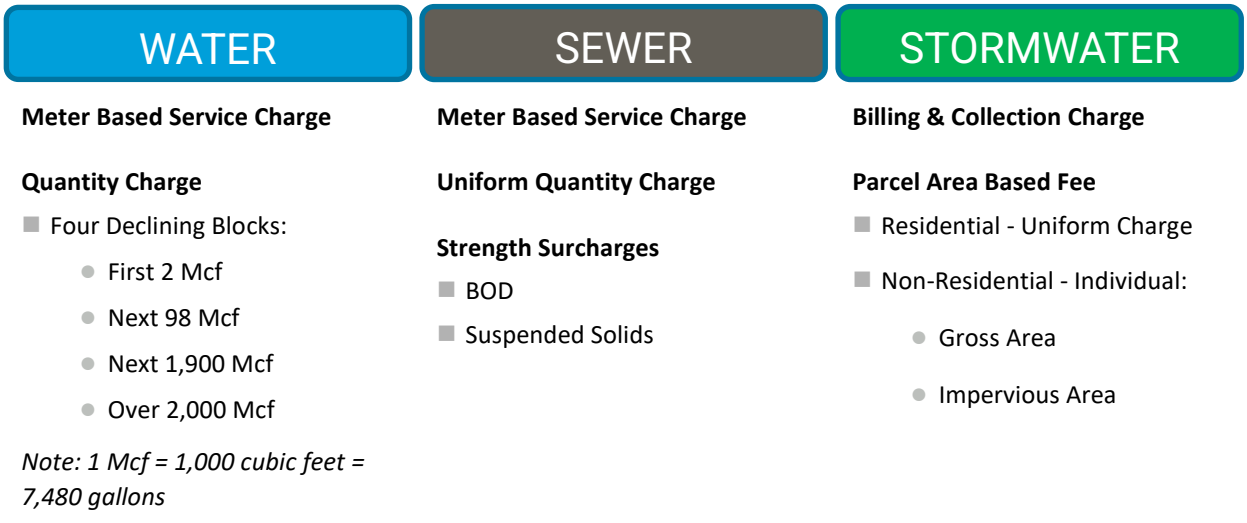

Figure 2-1 Existing Rate Structure

The Tiered Assistance Program (TAP) Rate Rider Surcharge (or TAP-R), which recovers the cost of discounts provided to TAP customers, is added to the base water and sewer quantity charges.

The specific schedule of rates in the format of the rate structure is developed via a cost-of-service analysis, typically conducted in support of proposed rates and charges, when filed before the Rate Board. The cost-of-service analysis utilizes a cost-causative approach recognized by industry groups.

- The premise of a cost-causative approach is that costs should be assigned to customers based on parameters which actually cause or are related to those costs.
  - In other words, if a certain activity or characteristic drives a cost, that cost is allocated to the customers who create or contribute to that characteristic (i.e. demand).
- The methodologies applied under this approach produce cost of service allocations recognizing the projected customer service requirements for the services provided by the City.
- Rates are also designed in accordance with allocated cost of service, policy considerations and precedents established during prior Rate Proceedings.
- While the cost-of-service analysis takes into account customer class, a single rate schedule is designed for all water and sewer customers.
  - Stormwater rates recognize separate customer classes for Residential, Non-Residential and Condominium customers.

Beyond the above rate structure, the Department also recovers one-time and specific costs for services, outside of normal water, sewer and stormwater services, via miscellaneous fees.

For the most part, the Department's water and sewer rate structure has been in place for over 40 years with the parcel area-based stormwater service and the Tiered Assistance Program (TAP) Rate Rider Surcharge (or TAP-R), being the most recently adopted changes.

- For the most part, this rate structure and the resulting rates and charges have provided sufficient revenues to operate the System.

- That being said, it is considered industry best practice for utilities to periodically re-evaluate their rate structure to assess whether it:
  - Supports the utility's mission and goals;
  - Provides revenue stability;
  - Predictable customer bills;
  - Reasonably and fairly recovers costs from customers and respective customer classes;
  - Reflects more current conditions and policy considerations; and
  - Complies with applicable laws, among other factors.

2.2 Industry Guidelines & Principles

The Department's existing rate structure, the underlying cost-of-service analysis, and resulting charges are generally consistent with industry principles and guidelines from the following manuals:

- American Water Works Association's (AWWA) Principles of Water Rates, Fees, and Charges, Manual of Water Supply Practices M1- 7th Edition (AWWA or M1 Manual);
- Water Environment Federation's (WEF) Financing and Charges for Wastewater Systems, Manual of Practice M27 – 5th Edition, (WEF Manual or MoP 27); and
- WEF's Special Publication, User Fee Funded Stormwater Programs- 2nd Edition.

As the above documents are well recognized within their respective industries as reasonable and acceptable approaches, the Department will continue to reference them in the evaluation of its rate structure.

2.3 Billing System Replacement

While the Department has explored alternative rate structures in the recent past, the ability to implement more broad-based changes to the rate structure were limited by constraints associated with the current billing system, Basis2. As indicated during the 2025 Rate Proceeding, the City is in the process of replacing the billing system. The upgraded billing system is anticipated to allow for the implementation of rate structure alternatives and provide increased flexibility for future changes and adjustments.

As of the submission of this plan, the billing system replacement team, which includes representatives from WRB, PWD, the City Office of Innovation and Technology (OIT), is in the process of evaluating vendor submissions as part of the procurement process[4]. Following the selection of a vendor and associated contract negotiations, the billing system replacement process is expected to take between 3 to 5 years, at this time.

The Department intends to align, as appropriate, the implementation of any future rate structure changes with the development and deployment of the updated billing system, avoiding disruptions to operations and allowing for adequate customer notifications.

[4] During the procurement process, discussion and dialogue with the Billing System Replacement team may be limited in order to adhere to City's procurement policies and requirements.

3.0 Approach

PWD's current rate structure (meter-based service charges, declining-block water quantity charges, uniform sewer quantity charges, strength surcharges, etc.) has served the City for decades. However, rising regulatory obligations, aging infrastructure, modernization of meter and billing systems, ongoing affordability concerns, equitable distribution of costs, industry trends, local economic conditions, changing customer demands and evolving customer expectations necessitate a fresh assessment of the general framework and underlying structural components of the rate structure.

The following section highlights the Department's approach to the Rate Structure Evaluation process.

3.1 Goals

Through the Rate Structure Evaluation process, PWD intends to leverage better customer information along with the most current and newly available data to identify appropriate rate structure(s) that can serve the City for years to come. The resulting rate structure should be logical, transparent, easily understood and accessible to all rate payers.

Based on preliminary discussions with leadership, the following initial set of broad-based goals have been identified for the Rate Structure Evaluation effort, from the Department's vantage point:

- Enhance customer understanding of rates
- Increase stability and maintain revenue sufficiency
- Define a rate structure that will serve PWD and its customers for the future
- Enhance equity/affordability
- Promote economic development
- Promote sustainability and stewardship

3.2 Objectives

PWD will pursue the following objectives as summarized in Table 3-1:

Table 3-1 Rate Structure Evaluation Process Objectives

Transparency & Customer Understanding	■ Improve clarity in billing and the public's understanding of how costs are recovered. ■ Reduce customer confusion between water, sewer, and stormwater charges.
Financial and Operational Goals	■ Promote long-term revenue stability amid rising O&M, capital, and regulatory costs. ■ Support PWD's strategic financial obligations, including capital improvements and debt-service coverage of the System.
Equity and Affordability	■ Evaluate how costs are distributed among customer classes. ■ Assess whether changes influence affordability, while maintaining equity in cost recovery across customer classes.
Sustainability and Stewardship	■ Align pricing structures and incentives with environmental and policy goals, including resource protection, pollution reduction, and climate resilience.
Administrative Feasibility	■ Align potential rate structures with the new billing system's capabilities and transition timeline. ■ Consider customer services needs along with ongoing administrative and data management.

3.3 Phased Approach

The Department intends to use a phased approach for the Rate Structure Evaluation effort, taking into account the current cadence of rate filings and the required time frame for rate proceedings, ongoing billing system replacement efforts, and overall availability of staff.

Based upon recent General Rate Proceedings, the time available between proceedings (considering the timing of the advanced notice filing and the final rate determination) is approximately 18 months[5]. TAP Rate Rider Reconciliation filings occur annually, generally occurring between early to late January through June of each calendar year.

To accommodate the available time between rate proceedings and acknowledging the interveners in the General Rate Proceedings[6] are highly likely to be involved in stakeholder outreach engagement meetings undertaken as part of the Rate Structure Evaluation effort, the Department's initial plan is to divide the evaluation into (at least) two phases.

In accordance with the Department's rates and charges approved in the 2025 Rate Determination, TAP-R Reconciliation filings will continue annually and will overlap with the evaluation efforts.

The planned phases are summarized in Figure 3-1and further discussed below. The remaining sections of the Plan are presented in context of the two-phase approach.

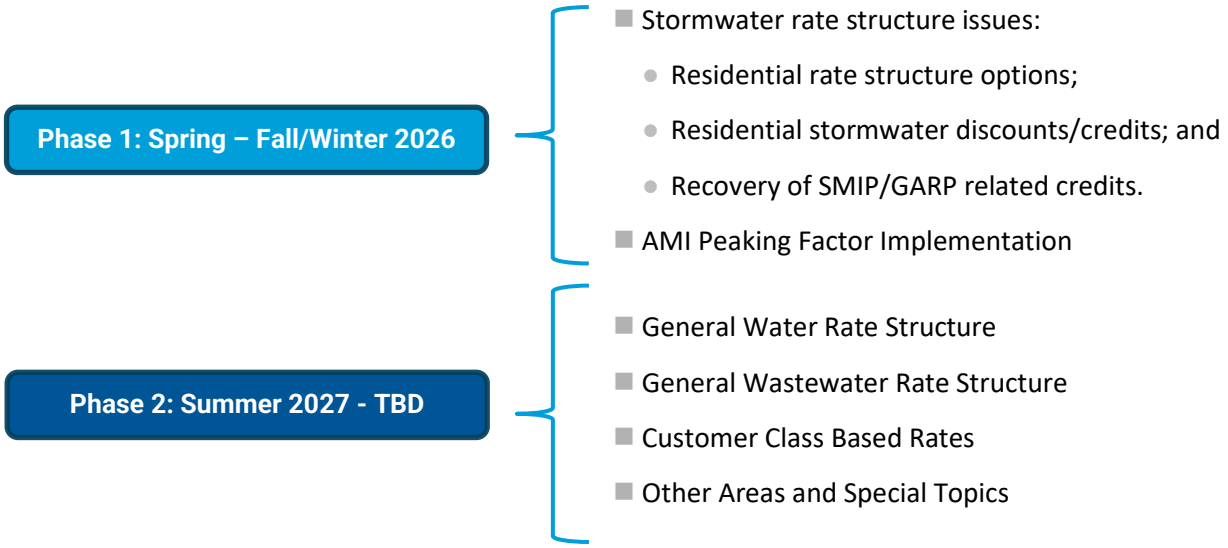

Figure 3-1 Rate Structure Evaluation Phases

[5] This 18-month timeframe does not account for the time required by the PWD, WRB and its consultants to develop the filing.

[6] In accordance with the Department's rates and charges approved in the 2025 Rate Determination, TAP-R Reconciliation filings will continue annually and will overlap with the evaluation efforts.

3.3.1 Phase 1

As noted in Figure 3-1, Phase 1 of the Plan is anticipated to be completed during the current calendar year (2026). This Phase will focus on the stormwater rate structure related topics identified during the prior rate proceeding as well as updates to the AMI Peaking Factor study and the associated phase-in of the results into cost of service.

3.3.1.1 Stormwater Rate Structure Topics

Stormwater rate structure topics have been the subject of discussions during the 2019 Alternative Rate Structure Analysis as well as the 2023 and 2025 Rate Proceedings. Discussions have occurred with stakeholder groups including the Residential Customer Assistance and Services (RCAS) Committee and other groups outside of the normal rate proceeding participants. As such, alternatives for the residential stormwater rate structure as well as the recovery of SMIP/GARP grants and credits have been more thoroughly examined and more broadly discussed than other rate structure related topics.

As noted during the 2025 Rate Proceeding, the case of the *Borough of West Chester v. Pennsylvania State System of Higher Education*[7], is currently before the Pennsylvania Supreme Court (PA Supreme Court). The decision in this case may have implications for the Department, the existing stormwater rate structure and underlying cost allocations. Pending the outcome, changes to key policies such as which properties are included in the stormwater customer base and how wet weather costs are allocated may be necessary. The full implications of a potential PA Supreme Court decision in this matter are not known at this time. Should the PA Supreme Court uphold the lower court decision, PWD would need to fully revisit the existing cost allocation factors and their underlying rationale.

In addition, potential adjustments to the City's Green City, Clean Waters and related stormwater management needs may influence future cost recovery, including updates to incentives and credit programs.

Barring any significant changes in those areas, the Department intends to revisit residential stormwater rate structure options, the potential for residential stormwater discounts/credits, and the recovery of SMIP/GARP related credits during Phase 1 of the Plan. This approach assumes that the existing stormwater user fee methodology, which recognizes three key components: Gross Area (GA), Impervious Area (IA), and the billing and collection charge, will be retained. With this understanding, the Department will proceed with further vetting:

1. Two Primary Residential Rate Structure Options:
    a. Residential Rate Structure by Building Type; and
    b. Residential Tiers for the GA and IA components.
2. Potential Residential Credit Program Options; and
3. Recovery of SMIP/GARP Grants and Credits.

Rate structure options will be updated to reflect the most currently available billing data. Administrative, supporting policy and program needs, along with stormwater bill data management system requirements will be further discussed with the Department's Stormwater Billing Team to

[7] 291 A.3d 455 (Pa. Cmwlth. 2023), direct appeal, appeal docket 9 MAP 2023

understand the resource needs of the rate structure and credits options; anticipated implementation timeframes related to these areas will also be discussed.

The methodology that will be employed in the evaluation of the stormwater rate structure options is further discussed in Section 4.0. The stakeholder engagement approach for these topics is presented in Section 5.0 of the Plan.

3.3.1.2 AMI Peaking Factor Implementation

The previous completed AMI peaking factor (or demand factors) study[8] provided significant new insights into customer usage patterns and demands on the water system. As a result, during the last proceeding, the Department proposed to begin phasing in the AMI based peaking factors over time, to replace the previous factors which were based upon less granular information and reflected industry accepted methodology and assumptions. The intention of the phase-in is to replace the assumptions-based peaking factors with those based upon real customer demand data, which was not available until the deployment of AMI. The Department will build upon the insights from the initial study, which was based on July 1, 2023 to September 30, 2023 hourly AMI data (during FY 2024) from a roll-out of approximately 40% of retail customers. The updates to the AMI peaking factor study will strengthen the analytical rigor and better support the Rate Structure Evaluation, using a much broader and more complete AMI data set.

AMI Peaking Factor Study Updates

As of the drafting of this Plan, the Department has already begun to supplement the AMI data used in the prior study. Additional details on the enhancements to the initial study that the updated data will provide are further discussed in Table 3-2 below.

Table 3-2 AMI Peaking Factor Study Enhancements

Increased Customer Representation	■ AMI rollout is approximately 90% complete. ● The update will use FY 2025 data, encompassing roughly 450,000 meters, instead of the 210,000 utilized in the initial study. ■ Reducing the need for selective sampling to normalize the data and increasing confidence in the findings.
Expanded Temporal Coverage	■ The study update will analyze a full 365-day, 8,760-hour dataset from FY 2025. ■ Allowing for characterization of peak demands across all seasons and conditions, not just summer months. ■ Providing another year of weather variability for more robust peak estimation.
Refined Customer Categories	■ To support the evaluation of broader rate structure alternatives, the study will explore alternative customer groupings, such as: ● Residential vs. Non-Residential and their corresponding peaking characteristics.
Addition of Spatial Analysis	■ A GIS-based screening will be used to: ● Identify spatial patterns in demand; and ● Flag potential customer classification issues (e.g., residential meters located in industrial zones).

[8] See 2025 Rate Proceeding, PWD Statement 7 Schedule BV-4: WP-1 AMI Demand Study

AMI Peaking Factor Phase-In

With the updated AMI Peaking Factors, the Department will revisit the proposed phase-in approach and update the previously prepared white paper[9] on the impact of the AMI peaking factors on the cost-of-service analysis under the existing rate structure, more specifically the current declining block rate structure for water quantity charges.

Updates and Stakeholder Discussions

The expanded dataset, refined customer segmentation, and spatial analytics aim to improve peaking factor development and support equitable rate design. The Department plans to share updated versions of the AMI Peaking Factor Study and the associated impact analysis with the Rate Board, Rate Proceeding Participants and other stakeholders later this year. Planned stakeholder engagement is further discussed in Section 5.0 of the Plan.

3.3.2 Phase 2

As noted in Figure 3-1, Phase 2 of the Plan is anticipated to commence in the summer of 2027 following the next base rate proceeding. This phase will focus on the rate structure more broadly, including the water and sewer rate structure, customer class-based rates, as well as other topics. Such rate structure changes were previously limited by the capabilities of Basis2. With the billing system replacement effort, those limitations will no longer impede further rate structure updates[10].

As this phase will cover topics that have not been as thoroughly discussed as Phase 1 topics, therefore the evaluation will be more data intensive requiring detailed and robust analysis, the Department estimates it will take at least 12 to 18 months to complete, accounting for stakeholder engagement.

With this phase, for changes in each evaluation area, the Department anticipates evaluating:

- Overall pros and cons;
- Cost allocated to components and underlying assumptions;
- Estimated cost of service shifts;
- Class level cost recovery and associated customer bill impacts;
- Customer understanding and acceptability; as well as
- Implementation considerations.

Further details on the topics the Department anticipates exploring further during Phase 2 are detailed below. The methodology and stakeholder engagement approach that will be employed during Phase 2 are further discussed in Section 4.0 and Section 5.0, respectively.

3.3.2.1 Water Rate Structure

Like most water utilities through the United States, the Department's existing water rate structure is composed of two components.

[9] See 2025 Rate Proceeding, PWD Statement 7 Schedule BV-4: WP-2 Impact of Updated Peaking Factors.
[10] There may be some limitations with the new billing system, but those are not known at this time.

1. Service Charge: This is a fixed fee per billing period regardless of consumption. The Department's service charge is meter-based and increases with size.
2. Quantity Charge: This is a variable fee per billing period based on water consumption. The fee is based on price per unit of water. The Department's water quantity charges are based on a declining block rate structure.

Each charge serves a distinct purpose in cost recovery. Further understanding these charges is important for customers to understand: the services they receive, how their charges fund those services, as well as how their bills are calculated.

First adopted nearly 40 years ago, the original intent of the declining block rate structure was to reflect the way costs are incurred by the Department, how customers' peak demand influences system design and capacity, and to recognize economies of scale.

With the Rate Structure Evaluation effort, the Department plans to evaluate both components of the water rate structure, the cost recovered by each, as well as customer understanding including naming conventions. With respect to the Quantity Charge, it is anticipated that the existing declining block rate structure will be compared to:

- Uniform Rates;
- Inclining Block Rates; and
- Hybrid Block Rates (i.e. inclining/declining).

3.3.2.2 Sewer Rate Structure

Similar to the water rate structure, the Water Department's existing sewer rate includes service and quantity charges and includes surcharges for high-strength wastewater. The existing sewer rate structure is comprised of the following components:

1. Service Charge: This is a fixed fee per billing period regardless of consumption. The Department's service charge is meter-based and increases with size.
2. Quantity Charge: This is a variable fee per billing period based on water consumption. The fee is based on price per unit of water. The Department's sewer quantity charges are based on a uniform rate structure, and don't vary.
3. Biological Oxygen Demand (BOD_5) Surcharge: This surcharge applies when customers discharge wastewater with pollutant content in excess of 250 milligrams per liter of BOD_5.
4. Suspended Solids (SS) Surcharge: This surcharge applies when customers discharge wastewater with pollutant content in excess of 350 milligrams per liter of SS.

The above rate structure is commonly used by wastewater/sewer utilities across the Country. As with the water rate structure, the Water Department plans to evaluate each component of the sewer rate structure, the cost recovered by each, as well as customer understanding including naming conventions. During the 2025 Rate Proceeding, it was suggested that a declining block rate structure for sewer quantity charges be considered. PWD agreed to explore this alternative, along with others that may arise during the evaluation process.

3.3.2.3 Customer Class Based Rates

While the Department's cost of service analysis recognizes customer classes, the final rate schedules for water and sewer service apply to all customers.

During the process, the Department plans to evaluate the potential for establishing class base rates. Class-based rates are a pricing strategy used by utilities to allocate costs among different customer groups, or "classes," such as residential, commercial, and industrial users. This approach aims to ensure that each class pays a fair share of the utility's costs based on their usage patterns, service requirements, and the costs they impose on the system.

Class-based rates segment customers into distinct groups according to criteria like usage volume, peak demand, or service type. Each class is then assigned a rate structure that reflects the costs associated with serving that group. For example, residential customers may pay a different rate per gallon than industrial users; residential customers may be charged under a uniform block rate structure, while commercial customers are charged under a declining block rate structure.

3.3.2.4 Special and Other Topics

While each area of the Rate Structure Evaluation has the potential to touch various aspects of cost of service, the PWD also plans to revisit policies related to cost recovery and rate design for, but not limited to, the following:

- Cost of Service Allocations;
- Marginal Costs;
- Recovery of Customer Programs (e.g., Discounts, etc.) Costs; and
- Potential Rate Riders.

3.4 Limitations and Givens

To help frame and focus on the evaluation effort, it can be helpful to set boundaries around the topics and the discussions which occur around them. The evaluation will focus on rate structure, cost allocations and the recovery of costs from customers, largely aligning with the jurisdiction of the Rate Board. The Department intends to provide background information to stakeholders, when and where relevant, to help build a common understanding of the utility, its vision and mission, the costs and needs of the system, financial and regulatory requirements, existing rates and charges, underlying rate making / policy decisions and assumptions, etc.

Areas such as the actual operation of the utility, actual costs and expenses, financial metrics, the decisions of current and prior leadership, compliance strategies and specific details of permitting requirements, capital improvement program plans, among other areas, will not be put forward for deliberation and debate. This is not to dissuade discussion but rather appropriately frame dialogue and set clear expectations of what the purpose of the Rate Structure Evaluation effort is and will be, as well as the type of feedback the PWD hopes to gather. Stakeholder outreach and engagement is discussed further in Section 5.0 of this plan.

3.4.1 Limitations

The following areas are outside of the Rate Structure Evaluation process:

- Department costs/specific revenue requirements (e.g., O&M costs, capital financing);
- Financial requirements and metrics;
- Regulatory compliance strategies or requirements; and
- Overall utility performance (operational or otherwise).

3.4.2 Givens

The following are givens the Rate Structure Evaluation process will adhere to:

- The Rate Structure Evaluation process relates to retail rates under the jurisdiction of the Rate Board and is subject to the limitations of the Rate Ordinance.
- Rates will continue to be based upon cost-of-service principles, supported by data and appropriate studies.
- TAP is assumed to remain in place as the primary assistance program for low-income customers. Other assistance programs such as senior citizen and charity discounts are assumed to remain as well.
- Recommendations must be legally definable and acceptable meeting applicable requirements for rates and rate structures (e.g., the Rate Ordinance, cost of service principles).
- Any proposed changes to the Department's retail rate structure would be subject to a future rate proceeding.

3.5 Cost of Service Analysis

Rate structure alternatives, revisions to cost allocations and other adjustments, along with customer bill impacts developed during the Rate Structure Evaluation will utilize the cost of service associated with the rates in effect at the time of the analysis.

- This approach will provide a common basis to compare and contrast alternatives, identify pros and cons, evaluate key design principles and assess customer class-based recovery.
- For example, alternatives evaluated during the first phase of the Plan between the Spring and Fall of 2026, would utilize the cost-of-service analysis that are the basis of the current rates (effective September 1, 2025) as approved in the 2025 Rate Determination.

3.6 Coordination with Ongoing Billing System Replacement Efforts

During the evaluation process, the Billing System Replacement Team will be consulted to provide feedback on considerations related to the new billing system associated with any proposed alternatives, such as:

- Timing and implementation time frames;
- Billing data requirements;
- Customer service and billing;
- Additional resource needs;
- Potential system limitations; and
- Cost considerations.

4.0 Methodology

4.1 Overall Methodology

The Department will employ a structured, data driven, and stakeholder informed methodology to evaluate potential modifications to its water, sewer, and stormwater rate structures. The approach aligns industry best practices, Philadelphia specific regulatory requirements, and the availability of new data and system capabilities. The methodology is grounded in cost-of-service principles and designed to ensure logical, transparent, equitable, and administratively feasible outcomes.

Throughout the evaluation, all analyses will be supported by reliable data, verified assumptions, and industry standard modeling techniques. The foundation of the process will remain consistent with cost-of-service methodologies and regulatory requirements.

The following steps outline the general methodology the Department plans to employ for the rate structure evaluation:

4.1.1 Refine Goals and Objectives

The evaluation process begins by refining and confirming the Department's goals for the rate structure, including revenue stability, customer understanding, equity and affordability, sustainability alignment, and long-term administrative feasibility. These goals will guide the development and assessment of all alternatives. Additionally, objectives will continue to reflect cost-of-service requirements, policy considerations, and the Rate Ordinance requirements.

4.1.2 Review Types of Rate Structures

The Department will review foundational rate structure types (uniform, block, seasonal, demand based, parcel based). This review is intended to provide an overall understanding of the types of rate structures utilized in the water and sewer industry and identify potential alternatives.

4.1.3 Review Industry and Peer Data

The Department will review peer data, current literature, guidelines, and industry frameworks—including AWWA M1, WEF MoP 27, and stormwater user fee best practices—to identify reasonable approaches and peer benchmarks. The Department will compile and review peer ordinances/rate resolutions, COS/rate reports, board decisions, and relevant offering statements; inventory structures and typical bills for water/sewer/stormwater. Comparative assessments will help identify emerging trends, viable structural models, and lessons learned from comparable utilities.

4.1.4 Define Evaluation Criteria

A structured set of evaluation criteria will be developed to assess candidate rate structure alternatives. These criteria will address:

- Cost of service alignment
- Revenue stability impacts
- Customer affordability and equity

- Administrative feasibility under existing and future billing platforms
- Transparency and customer comprehension
- Alignment with environmental and policy objectives

Criteria will be used to consistently compare alternatives.

4.1.5 Identify Alternative Rate Structures

Potential alternatives will be identified and refined for water, sewer, and stormwater services. This process will apply cost causative principles, reflect customer class characteristics, and incorporate considerations such as:

- Parcel based stormwater fees
- Adjustments to declining block water rates
- Treatment of affordability programs, including TAP Rider implications
- Reevaluation of AMI related peaking factors as data becomes available

Alternatives will consider current billing system capabilities (for near-term changes) and planned billing system modernization (for longer term changes).

4.1.6 Evaluate Alternatives

Each rate structure alternative will undergo quantitative and qualitative evaluation:

Cost-of-Service (COS) Analysis

- COS will be performed on a revenue neutral basis utilizing the COS study from the most recent rate proceeding to compare customer class impacts and cost recovery alignment.
- COS allocation methods will reflect industry accepted cost causative approaches.

Impact & Feasibility Assessment

- Financial impacts on customer classes.
- Billing and administrative requirements.
- Customer bill predictability and transparency.
- Legal and regulatory compliance constraints.
- Consistency with limitations and givens defined in the Plan (e.g., revenue requirements are outside of the rate structure evaluation process).

As alternatives are evaluated, the Department will revisit foundational rate structure types (uniform, block, seasonal, parcel based, demand based, etc.) to ensure comprehensive evaluation. This iterative process supports refinement and integration of emerging information, including new AMI data, evolving billing system capabilities, and stakeholder input.

4.1.7 Stakeholder Engagement and Communication

Stakeholder involvement will occur throughout the process to ensure transparency and capture external perspectives. This includes engagement with:

- Water Revenue Bureau (WRB)
- Office of Innovation and Technology (OIT)
- Public Advocate
- Philadelphia Large Users Group (PLUG)
- Community groups and large user representatives
- Other City departments and interested parties

Stakeholder input will help validate objectives, refine criteria, review alternatives, and identify potential implementation considerations.

Further details on the stakeholder engagement approach are provided in Section 5.0.

4.2 Phase 1 Methodology

As noted above, Phase 1 will evaluate Stormwater rate structure topics and the AMI Peaking Factors phase-in. The stormwater rate structure topics have been the subject of discussions during the 2019 Alternative Rate Structure Analysis as well as the 2023 and 2025 Rate Proceedings. These alternatives regarding the residential stormwater rate structure and the recovery of SMIP/GARP grants and credits have been more thoroughly examined than other rate structure related topics. As such these rate structure issues will not require all the steps as outlined for a complete or thorough rate structure evaluation. Phase 1 will focus on the evaluation of the proposed alternatives (step 6).

4.3 Phase 2 Methodology

Phase 2 will evaluate Water and Sewer rate structure topics. This phase will focus on the rate structure more broadly, including the water and sewer rate structure, customer class-based rates, as well as other topics. This phase will be more intensive, requiring all the steps outlined for a complete or thorough rate structure evaluation.

5.0 Stakeholder Outreach & Engagement

The outcomes of this Evaluation have the potential to impact water, sewer and stormwater rates for all customers within the City. Recognizing the impact that even small rate changes can have on our customers and the importance of understanding those concerns, the Department will provide education and seek feedback via targeted outreach and engagement activities aligned with the phased evaluation approach described in the previous sections of this plan. The Department will engage stakeholders throughout the Evaluation with the goals of:

- Convening and soliciting perspectives of diverse stakeholder groups;
- Educating stakeholders about the Evaluation and the implications of the potential/proposed rate structure modifications;
- Understanding customer concerns with the existing and the potential future rate structures; and
- Fostering acceptance of proposed modifications and addressing concerns raised during the rate proceedings.

5.1 Phase 1 Stakeholder Engagement

Phase 1 consists of the evaluation of topics previously discussed during recent rate proceedings and with stakeholders. Each topic has slightly different stakeholders and varying levels of complexity, therefore engagement for stormwater related topics and the implementation of AMI peaking factors are expected to take similar but distinct approaches, which are discussed further below.

5.1.1 Stormwater Rate Structure Evaluation Engagement

The stormwater rate structure modifications under consideration will have the greatest impact and raise the most concern for residential customers with single family homes, larger properties and greater impervious areas. Therefore, the outreach and engagement activities will focus on these customers. To achieve this, the Department will partner with the Residential Customer Assistance and Services committee (RCAS) and existing Registered Community Organizations (RCOs) to identify target neighborhoods for Town Halls/Listening Sessions. These direct engagement initiatives will be supplemented with broader messaging and surveys.

5.1.1.1 Engagement Objectives

Engagement activities will be designed to achieve the following objectives.

- Educate impacted customers on the potential modifications to the Residential Stormwater Rate Structure.
- Understand customer impacts and concerns.
- Document input for consideration in the evaluation and selection of alternatives.

5.1.1.2 Engagement Schedule

Engagement activities will be conducted to align with the phased evaluation approach.

- Winter 2026 – engagement planning.
- Spring and Summer 2026 – active engagement & integration of feedback into the Evaluation.

5.1.1.3 Stakeholder Identification

Stakeholder identification and characterization will be a key factor in a successful engagement process. The Department will collaborate internally and with existing stakeholder groups to identify impacted customers and neighborhoods for targeted outreach and engagement. This will include identifying not only who to engage but also how to promote participation and provide sufficient access for those stakeholders. Considerations include:

- Who will be impacted – residential customers with single familiar homes and larger properties.
- Provide sufficient accessibility and participation through:
  - Direct engagement:
    - In-person and virtual
    - Vary time of day/week
    - Provide multiple modalities to address any physical limitations.
  - Digital communications
  - Multilingual requirements

5.1.1.4 Engagement Mechanisms

It is anticipated that the following engagement mechanisms will be utilized to reach the targeted stakeholders. Additional details to be developed through engagement planning efforts may alter this approach.

- Facilitated Town Halls and/or Listening Sessions:
  - Anticipate 6 - 8 meetings.
  - Engagement 1 – Educate and feedback on potential modifications.
  - Engagement 2 – Proposed rate structure and additional feedback.
- Targeted Surveys:
  - Gage public understanding of stormwater rates.
  - Gage understanding of and interest in residential stormwater credits.
  - Press releases website & social media content:
    - Educate on rates and potential credit opportunities.

5.1.1.5 Collection and Integration of Input

Stakeholder concerns and priorities will be documented through meeting minutes and will inform decision making priorities and criteria. A summary report will be issued at the conclusion of the engagement effort to document the process and the resulting feedback and recommendations.

5.1.2 AMI Peaking Factor Implementation Stakeholder Engagement

The AMI Peaking Factor Study has been on-going since 2023, and PWD shared the results to date with the Rate Board and rate case participants in the 2025 General Rate Proceeding. The updated AMI

Peaking Factor Study and the associated impact analysis will similarly be shared with the Rate Board, rate case participants and other stakeholders as they are completed in the coming months.

The Department anticipates holding meeting(s) with these stakeholders to present the updated results and to discuss path forward including phasing-in the new data driven peaking factors.

5.2 Phase 2 Stakeholder Engagement

The water-sewer rate structure evaluation will be broader than that of stormwater and the implementation of AMI based peaking factors. The water-sewer rate structure modifications under consideration will potentially have rate impacts for all residential and non-residential customers within the City. Therefore, a more robust stakeholder engagement effort is planned. The effort is intended to engage key stakeholder organizations representing residential, commercial, institutional customers as well as others and will employ multiple mechanisms to educate and gather feedback from these diverse stakeholders.

A Stakeholder Advisory Committee (SAC) will be the primary forum for educating and gathering input from a diverse cross section of impacted customer classes. The SAC will be supplemented with a combination of targeted town halls/listening sessions, surveys and global communications through social and traditional media.

5.2.1 Engagement Scope and Objectives

Engagement activities will be designed to achieve the following objectives.

- Educate stakeholders on the current rate structure, potential modifications and their implications, and the proposed rate structure and the implications/benefits.
- Understand customer impacts/concerns.
- Document stakeholder input for consideration in the evaluation and selection of alternatives.

5.2.2 Engagement Schedule

Engagement activities will be conducted to align with the phased evaluation approach:

- Spring and Summer 2027 – engagement planning and development/solicitation of the SAC.
- Fall 2027 through Fall 2028/Winter 2029 – SAC and general public engagement.

5.2.3 Stakeholder Identification

Stakeholder identification and characterization will be a key factor in a successful engagement process. The Department will consider previous Rate Case participants and collaborate with existing stakeholder groups to identify potential SAC members as well as potential venues for additional outreach and engagement. This will include identifying not only who to engage but also how to promote participation and provide sufficient access for those stakeholders. Considerations include:

- SAC formation:
  - Identify who/how many to invite/include (prioritize diverse representation across user classes).
  - Determine how to encourage and maintain active participation.
  - Define how the SAC will operate (draft committee charter or similar).

- Broader engagement:
  - Identify diverse subset existing organizations (residential and non-residential) and target locations for potential hosting of town halls/listening sessions.
- Consider logistical and access needs:
  - In-person and virtual.
  - Vary time of day/week.
  - Provide multiple modalities to address any physical limitations.

5.2.4 Engagement Mechanisms

It is anticipated that the following engagement mechanisms will be utilized. Additional details to be developed through engagement planning efforts may alter this approach.

- SAC meeting/workshops at key milestones, anticipate meeting every 2 - 3 months for 12 - 18 months. Potential meeting topics include:
  - Introduction – Why you are here & Water Utility Rates 101
  - Potential water/sewer rate structures (definition/pros/cons) & SAC priorities
  - Class-based rates (definition/pros/cons) & SAC priorities
  - Additional considerations – cost of service allocations, recovery of customer programs, marginal costs, potential rate riders
  - Recommended Rate Structure(s) & Impact Analysis
  - Selected Rate Structure & justification documentation
- Potential Broader Engagement:
  - Community Listening Sessions – for general education and solicit input at a high level.
  - Surveys – to collect information about understanding of rates and concerns with existing rates.
  - Conventional and digital outreach – to educate and publicize feedback opportunities:
    - Print media – press releases and articles.
    - Website content
    - Social Media

5.2.5 Collection and Integration of Input

Stakeholder concerns and priorities will be documented through meeting minutes and will inform decision making priorities and criteria. SAC input will also be used to inform education needs for larger communications strategies.

A summary report will be issued at the conclusion of the engagement effort to document the process and the resulting feedback and positions of various constituencies.

6.0 Estimated Timeline

As stated earlier, the Rate Structure Evaluation process is planned to be comprised of (at least) two phases. Figure 6-1 Summarizes the preliminary topics and estimated timelines.

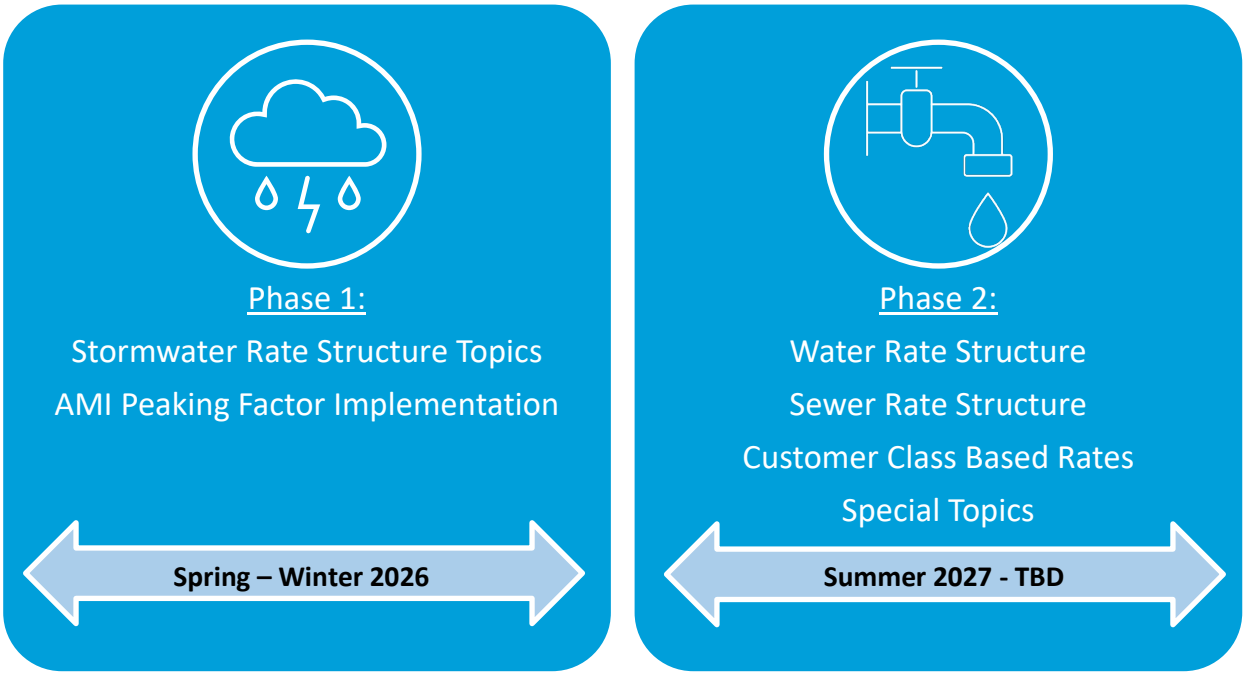

Figure 6-1 Rate Structure Evaluation – Overall Phases

6.1 Rate Proceedings

At this time, the Department anticipates having to submit base rate filings in line with recent experiences approximately every 18 months. In addition, annual TAP-R Reconciliation Filings will continue to occur. Given the required process and the parties involved during a base rate proceeding, the Department anticipates having to pause the rate structure evaluation process for all intents and purposes. While desktop analysis and research may continue to occur in parallel with the proceeding, detailed stakeholder discussion and meetings will likely be placed on hold or paused. The Department anticipates reconvening stakeholder efforts following the completion of base rate proceeding, barring any outside complications.

6.2 Stakeholder Engagement

As discussed in Section 5.0, stakeholder discussions for Phase 1 will occur Spring through Fall of 2026. Phase 2 stakeholder discussions will commence in the Summer of 2027, following the next base rate proceeding (anticipated to be filed in January 2027). Phase 2 stakeholders discussions may need to be paused assuming the Department will file a base rate request again in 2029.

6.3 Anticipated Timeline

An estimated timeline showing the overall anticipated timeline for the evaluation effort in parallel with anticipated rate proceedings is provided in Figure 6-2.

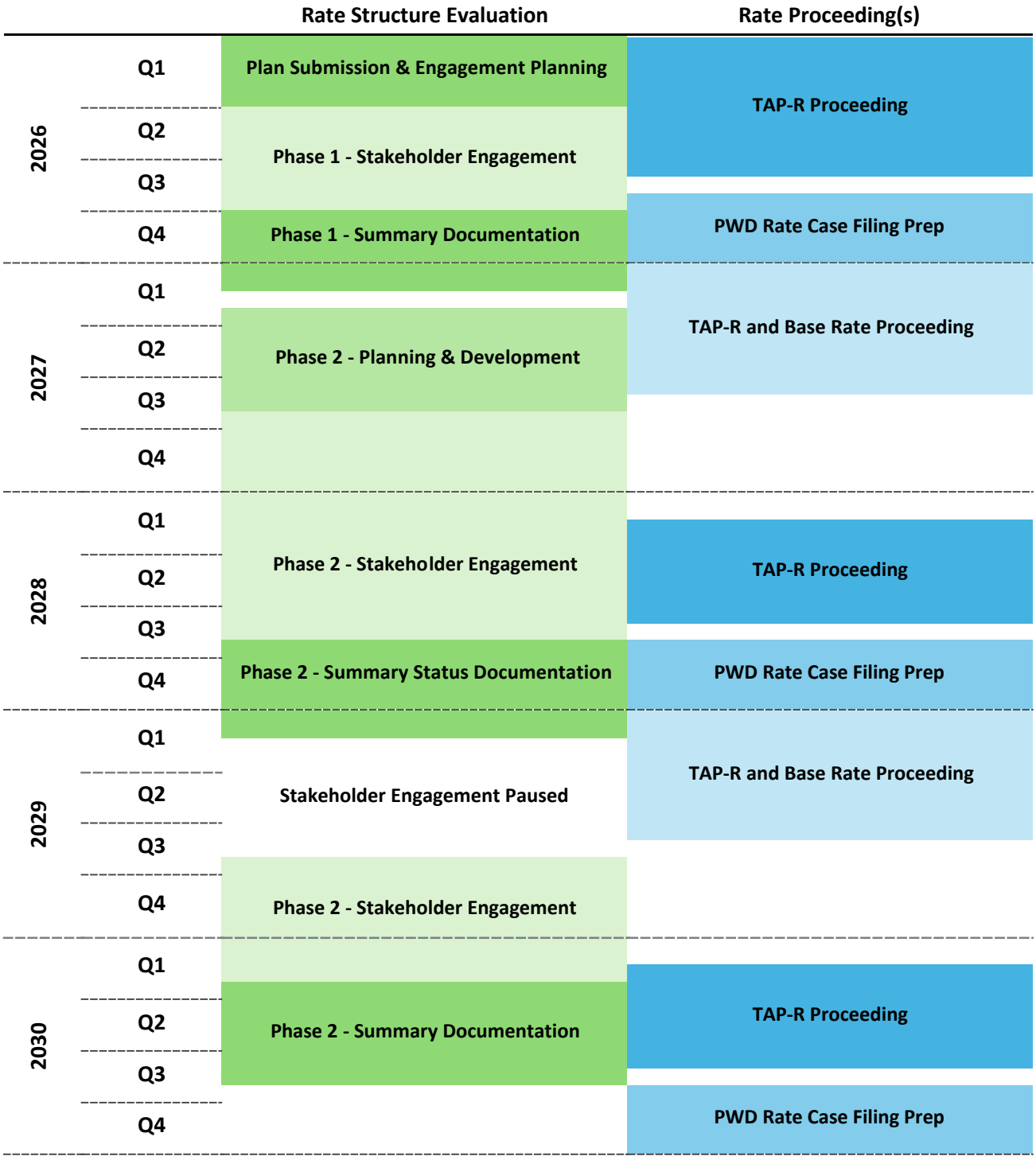

Figure 6-2 Rate Structure Evaluation Timeline

The above timeline shows the anticipated Rate Structure Evaluation effort timeline (in context of calendar years), accounting for anticipated TAP-R and Base Rate Proceedings. The timeframe for the TAP-R and Base Rate Proceedings accounts for: the advanced and final notifications, the 120-day rate proceeding process and the determination by the Rate Board.

7.0 Reporting

The Department anticipates that the following documents will be provided to the Rate Board and made available to participants during the Evaluation process:

1. Phase 1: Progress Report
    a. Summary of Stormwater Stakeholder Meetings
    b. Summary of AMI Peaking Factor Implementation Factors Stakeholder Meetings
2. Phase 2: Progress Report
    a. Summary of SAC Meetings

The Department will provide periodic updates, when available, via the Quarterly Report on planned and completed meetings as well as overall progress.

A final summary report will be developed, identifying potential rate structure updates and associated considerations.

8.0 Summary

The Rate Structure Evaluation process is an opportunity for PWD to modernize its rate structure framework, enhance equity and sustainability, strengthen financial resilience, and improve transparency for customers. The Rate Structure Evaluation Plan provides for robust analysis, stakeholder involvement, and a clear path toward identifying rate structure updates responsive to the City's needs for the future.