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August 15, 2019

**VIA eFILING**

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

**Re: Petition of Pennsylvania American Water Company Wastewater Operations for Approval of Modification of Long Term Infrastructure Improvement Plan**
**Docket No. P-2014-2431005**

Dear Secretary Chiavetta:

Enclosed for filing in the above-referenced matter is the **Joint Petition for Settlement**. Copies have been served on Deputy Chief Administrative Law Judge Joel H. Cheskis, Administrative Law Judge Andrew M. Calvelli, and all parties of record as indicated on the attached Certificate of Service.

Very truly yours,

Anthony C. DeCusatis

ACD/ap
Enclosures

c: Per Certificate of Service (w/encls.)

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**BEFORE THE**
**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

| | | |
|---|---|---|
| **PETITION OF PENNSYLVANIA AMERICAN WATER COMPANY WASTEWATER OPERATIONS FOR APPROVAL OF MODIFICATION OF LONG TERM INFRASTRUCTURE IMPROVEMENT PLAN** | : | **DOCKET NO. P-2014-2431005** |

## CERTIFICATE OF SERVICE

I hereby certify and affirm that I have this day served a copy of the **Joint Petition for Settlement** in the above-referenced proceeding on the following persons, in the manner specified below, in accordance with the requirements of 52 Pa. Code § 1.54:

**VIA ELECTRONIC AND FIRST CLASS MAIL**

The Honorable Joel H. Cheskis
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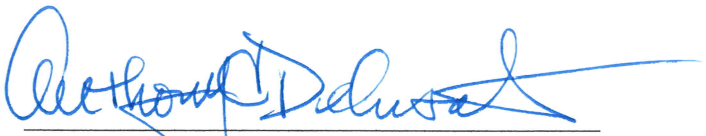
Respectfully submitted,



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*Counsel for*
*Pennsylvania-American Water Company*

Dated: August 15, 2019

**BEFORE THE**
**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

| | | |
|---|---|---|
| **PETITION OF PENNSYLVANIA-** | : | |
| **AMERICAN WATER COMPANY** | : | |
| **WASTEWATER OPERATIONS FOR** | : | |
| **APPROVAL OF MODIFICATION OF** | : | **DOCKET NO. P-2014-2431005** |
| **LONG-TERM INFRASTRUCTURE** | : | |
| **IMPROVEMENT PLAN** | : | |

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# JOINT PETITION FOR SETTLEMENT

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**August 15, 2019**

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## EXHIBITS AND STATEMENTS IN SUPPORT

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| Exhibit 2 | Risk-Based Condition Assessment Completion Schedule |
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| Statement B | Statement in Support of Joint Petition for Settlement of the Office of Consumer Advocate |
| Statement C | Statement in Support of Joint Petition for Settlement of the Bureau of Investigation and Enforcement |
| Statement D | Statement in Support of Joint Petition for Settlement of the Office of Small Business Advocate |

**BEFORE THE**
**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

| | | |
|---|---|---|
| **PETITION OF PENNSYLVANIA-AMERICAN WATER COMPANY WASTEWATER OPERATIONS FOR APPROVAL OF MODIFICATION OF LONG-TERM INFRASTRUCTURE IMPROVEMENT PLAN** | : | **DOCKET NO. P-2014-2431005** |

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## JOINT PETITION FOR SETTLEMENT

---

**TO DEPUTY CHIEF ADMINISTRATIVE LAW JUDGE JOEL H. CHESKIS AND ADMINISTRATIVE LAW JUDGE ANDREW M. CALVELLI:**

Pennsylvania-American Water Company ("PAWC" or "the Company"), the Office of Consumer Advocate ("OCA"), the Pennsylvania Public Utility Commission ("Commission") Bureau of Investigation and Enforcement ("I&E") and the Office of Small Business Advocate ("OSBA") (collectively, the "Joint Petitioners"), by their respective counsel, submit this Joint Petition For Settlement ("Settlement") in the above-captioned proceeding and request that the Administrative Law Judges approve the Settlement without modification. In support of this Settlement, the Joint Petitioners state as follows:

## I. BACKGROUND

1. This proceeding relates to the Long-Term Infrastructure Improvement Plan ("2014 LTIIP") for the Company's wastewater operations previously approved by the Commission on December 4, 2014.[1] The 2014 LTIIP covers a five-year period (2014 through

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[1] *Petition of Pennsylvania-American Water Co. Wastewater Operations for Approval of its Long-Term Infrastructure Improvement Plan and a Distribution System Improvement Charge*, Docket Nos. P-2014-2431005 and C-2014-243370 (Opinion and Order entered Dec. 4, 2014) ("December 2014 Order"). In the December 2014 Order, the Commission also approved PAWC's request to establish a Distribution System Improvement Charge ("DSIC") for its wastewater operations, subject to refund and recoupments after

2019) and focuses on infrastructure improvements designed to maintain safe and reliable service as a result of aging collection system infrastructure and infiltration and in-flow ("I&I") resulting from rainwater and groundwater.[2] The 2014 LTIIP reflects PAWC's implementation of a plan designed to accelerate annual investments by approximately $5.14 million annually for infrastructure upgrades, including: (1) replacement of approximately 94,000 linear feet of pipeline, 1,200 laterals, 400 manholes and one lift station; and (2) expansion of treatment, pumping and sludge disposal facilities to aggressively abate I&I.[3]

2. On February 29, 2016, February 28, 2017 and February 27, 2018, PAWC filed its Annual Asset Optimization Plan ("AAOP"), and those plans were subsequently approved by the Commission. As part of its approval of the February 27, 2018 AAOP, the Commission Bureau of Technical Utility Service ("TUS") directed PAWC to modify its 2014 LTIIP in light of the acceleration of DSIC-eligible wastewater capital investments shown in the AAOPs for 2015-2017. To that end, on December 12, 2018, PAWC filed the above-captioned Petition for Commission approval to replace the Company's 2014 LTIIP for the year 2019 and include four additional years (2020-2023) (the "Modified LTIIP").[4]

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resolution of the issues the Commission referred to the Office of Administrative Law Judge for the parties to address in on-the-record proceedings. Thereafter, the parties resolved those issues by a Joint Stipulation that provided, among other things, that the DSIC was not applicable to PAWC's Franklin and Koppel wastewater systems. On May 7, 2015, the Commission entered an Order approving the Joint Stipulation.

2 *See* December 2014 Order, pp. 4-16, 12-15.

3 *Id.*, p. 16.

4 The Company originally filed a Petition for Approval of a Major Modification to its Existing Long-Term Infrastructure Improvement Plan and Approval of its Second Long-Term Infrastructure Improvement Plan on November 8, 2018, but withdrew that petition on December 10, 2018 following guidance from TUS.

3. The Modified LTIIP, like the 2014 LTIIP, is designed to accelerate the rehabilitation, improvement and replacement of aging wastewater infrastructure, particularly for troubled systems acquired by PAWC, and continues to focus on reducing I&I. The Modified LTIIP reflects the following principal changes: (1) the Company's use of a more detailed risk-based condition assessment to prioritize projects; (2) increased spending of $20 million annually to maintain an accelerated rate of investment; (3) addition of 11 wastewater districts, including both combined and sanitary sewer systems acquired since 2014; and (4) expansion of DSIC-eligible property to include assets associated with combined sewer systems and the entire customer service lateral on gravity wastewater collection systems.[5]

4. The Petition was served on the OCA, the OSBA, I&E, and all parties of record in PAWC's most recent base rate proceeding at Docket No. R-2017-2595853. On January 2, 2019, I&E filed an Answer to PAWC's Petition and subsequently filed an Amended Answer and Comments ("Amended Answer") on January 10, 2019. Comments on PAWC's Modified LTIIP were filed by the OCA on January 9, 2019.

5. In its Amended Answer, I&E requested that this matter be assigned to the Office of Administrative Law Judge for an investigation. Accordingly, this matter was assigned to the Chief Administrative Law Judge Joel H. Cheskis and Administrative Law Judge Andrew M. Calvelli (the "ALJs").

6. In their Prehearing Conference Memoranda, the parties requested that the ALJs allow the parties to meet and discuss I&E's and the OCA's issues and concerns with the goal of

[5] Petition, p. 7.

reaching a resolution that does not require formal litigation. At the Prehearing Conference held on March 8, 2019, the ALJs granted the parties' request and directed a status update by April 9, 2019.

7. In March 2019, I&E and the Company held two informal discovery conferences to facilitate I&E's evaluation of the Company's proposed Modified LTIIP. In addition, through various telephone conferences and correspondence, the Joint Petitioners engaged in discussions to attempt to achieve a settlement of some or all of the issues raised by I&E and the OCA in this proceeding. On April 9 and May 8, 2019, the Joint Petitioners provided status reports to the ALJs to inform them of the progress of settlement discussions.

8. As a result of settlement negotiations, the Joint Petitioners were able to reach the Settlement set forth herein and agree that PAWC's Modified LTIIP should be implemented as filed, with the modifications described below. The Joint Petitioners notified the ALJs of the Settlement on June 7, 2019.

## II. TERMS AND CONDITIONS OF SETTLEMENT

9. Except as provided below and in the revisions which are shown in Exhibit 1 to this Joint Petition, PAWC's Petition is approved as filed:

### A. Risk-Based Condition Assessment Methodology

10. Section 2 of the Modified LTIIP describes in detail the Company's framework for analyzing, prioritizing and accelerating the renewal of aging wastewater collection system infrastructure. The Company employed a risk-based condition assessment to prioritize DSIC-eligible capital improvement projects, accelerate the replacement of aging infrastructure and reduce I&I in newly acquired systems.

11. In response to the issues raised in I&E's Amended Answer and the OCA's Comments, PAWC has provided the Joint Petitioners with additional information regarding the Company's risk-based condition assessment and planned schedule for replacement and rehabilitation of eligible property. First, Exhibit 2 hereto outlines the projected schedule for completion of the Company's risk-based condition assessment for each wastewater system covered by the Modified LTIIP. The information presented in Exhibit 2 is organized by three categories of systems: (1) newly acquired systems; (2) systems subject to a Pennsylvania Department of Environmental Protection or United States Environmental Protection Agency Consent Order; and (3) all other "routine" systems that do not fall under the other two categories. In addition, Exhibit 3 hereto provides detailed information on the Company's projected schedule for replacement and rehabilitation of DSIC-eligible property for each wastewater system based on the preliminary results of the Company's condition assessment. Exhibit 3 includes a breakdown of expenditures for each type of eligible property by year and by wastewater system (district), with expenditures for combined and sanitary systems displayed separately. PAWC will include an annual update of Exhibit 2 (Condition Assessment Schedule) with its AAOP filing.

12. For newly acquired wastewater systems that have known deficiencies in the gravity collections system (e.g., significant I&I, pipe defects, and installation deficiencies), which were observed during the pre-acquisition due diligence process, PAWC agrees to assume the highest risk factor for these known deficiencies. Once the condition assessment is completed, the risk factor will be adjusted to reflect actual conditions.

### B. Annual Expenditures and Replacements

13. To facilitate the evaluation of the Company's proposed Modified LTIIP, PAWC also provided the detailed table attached hereto as Exhibit 4, which identifies historic annual DSIC-eligible expenditures in each district, from 2015 through the latest available data for 2019 (January/February). Exhibit 4 also contains a summary of historic annual replacement for DSIC-eligible categories of plant for 2015 through 2018, by district.

14. In future AAOPs and other LTIIP-related filings, the Company will continue to distinguish between non-regulatory and regulatory investments and will separately identify expenditures for combined and sanitary systems.

15. Pursuant to Ordering Paragraph 7 of the Commission's October 26, 2017 Order in Docket No. A-2017-2606103, PAWC may collect a DSIC related to the Municipal Authority of the City of McKeesport system prior to the first base rate case in which the System plant-in-service is incorporated into PAWC's rate base, subject to three conditions. The Joint Petitioners agree that the first of those conditions (Ordering Paragraph 7(a)) is met because PAWC's Modified LTIIP incorporating the McKeesport system does not re-prioritize other existing commitments in other service areas.

16. In future LTIIP and AAOP filings, any changes in projected quantities or projected expenditures for the McKeesport system will be condition assessment-related and will not re-prioritize existing commitments in other service areas. In such filings, if projected quantities or projected expenditures are higher for the McKeesport system and lower for other service areas than the projections in its approved LTIIP, PAWC will include an explanation why the shift was appropriate and does not re-prioritize existing commitments in other service areas.

17. In addition, in future water and wastewater LTIIP and AAOP filings, if projected quantities or projected expenditures are higher for systems acquired under 66 Pa. C.S. § 1329 and lower for other service areas – compared to its approved LTIIP – the Company will include an explanation why the shift was appropriate and does not re-prioritize existing commitments in other service areas.

### C. Qualified Contractors

18. PAWC will continue to administer a competitive process for soliciting contracts and will also continue to use a third party to monitor contactor safety performance though the pre-qualification process described in Section 7 of the Modified LTIIP.

19. PAWC will use only pre-qualified contractors or trained Company employees to perform work on all wastewater DSIC-eligible projects.

### D. Coordination of Planned Projects

20. PAWC currently uses the PA One Call "Coordinate PA" system to facilitate and track contractor pre-construction meetings. The Company agrees to utilize the PA One Call "Coordinate One Call" system to identify targeted areas of anticipated work planned over a two-year look ahead period and to facilitate better coordination with other utilities and municipalities.

## III. THE SETTLEMENT IS IN THE PUBLIC INTEREST

21. PAWC, the OCA, I&E and OSBA have prepared, and attached to this Joint Petition, Statements in Support identified as Statements A through D, respectively, setting forth the bases on which they believe the Settlement is in the public interest.

22. The Joint Petitioners submit that the Settlement is in the public interest for the following additional reasons:

- ***Substantial Litigation And Associated Costs Will Be Avoided***. The Settlement amicably and expeditiously resolves a number of important and contentious issues. The administrative burden and costs to litigate these matters to conclusion would be substantial.
- ***The Settlement Is Consistent With Commission Policies Promoting Negotiated Settlements***. The Joint Petitioners arrived at the Settlement terms after conducting extensive discovery and engaging in in-depth discussions over several weeks. The Settlement terms and conditions constitute a carefully crafted package representing reasonable negotiated compromises on the issues addressed herein. Thus, the Settlement is consistent with the Commission's rules and practices encouraging negotiated settlements (*see* 52 Pa. Code §§ 5.231, 69.391 and 69.401), and is supported by substantial record evidence.

## IV. ADDITIONAL TERMS AND CONDITIONS

23. The Commission's approval of the Settlement shall not be construed as approval of any party's position on any issue, except to the extent required to effectuate the terms and agreements of the Settlement. Accordingly, this Settlement may not be cited as precedent in any future proceeding, except to the extent required to implement this Settlement.

24. The terms of the Settlement reflect a carefully balanced compromise of the interests of all active parties in this proceeding. It is understood and agreed among the Joint Petitioners that the Settlement is the result of compromise and does not necessarily represent the

position(s) that would be advanced by any party in this or any other proceeding, if it were fully litigated.

25. This Settlement is being presented only in the context of this proceeding in an effort to resolve the proceeding in a manner that is fair and reasonable. The Settlement is the product of compromise. This Settlement is presented without prejudice to any position which any of the parties may have advanced and without prejudice to the position any of the parties may advance in the future on the merits of the issues in future proceedings, except to the extent necessary to effectuate the terms and conditions of this Settlement.

26. This Settlement is conditioned upon the Commission's approval of the terms and conditions contained herein without modification. If the Commission should disapprove the Settlement or modify the terms and conditions herein, this Settlement may be withdrawn upon written notice to the Commission and all active parties within five business days following entry of the Commission's Order by any of the Joint Petitioners and, in such event, shall be of no force and effect. In the event that the Commission disapproves the Settlement or the Company or any other Joint Petitioner elects to withdraw as provided above, the Joint Petitioners reserve their respective rights to fully litigate this case, including but not limited to presentation of witnesses, cross-examination and legal argument through submission of Briefs, Exceptions and Replies to Exceptions.

27. If the ALJs, in their Recommended Decision on this Joint Petition, recommend that the Settlement be adopted as herein proposed without modification, the Joint Petitioners agree to waive the filing of Exceptions. However, the Joint Petitioners do not waive their rights to file Exceptions with respect to any modifications to the terms and conditions of this

Settlement, or any additional matters proposed by the Administrative Law Judges in their Recommended Decision. The Joint Petitioners also reserve the right to file Replies to any Exceptions that may be filed.

**WHEREFORE**, the Joint Petitioners, by their respective counsel, respectfully request that Chief Administrative Law Judge Joel H. Cheskis and Administrative Law Judge Andrew M. Calvelli enter a Recommended Decision and the Commission enter an Order approving the Settlement embodied in this Joint Petition, including all terms and conditions thereof without modification.

Respectfully submitted,

Dated: August 15, 2019

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Office of Small Business Advocate

*Counsel for Office of Small Business Advocate*

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# EXHIBIT NO. 1

# PENNSYLVANIA-AMERICAN WATER COMPANY

# 5-YEAR WASTEWATER
# LONG-TERM INFRASTRUCTURE IMPROVEMENT PLAN

August 15, 2019

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## Introduction

In accordance with the requirements of 66 Pa. C.S. §1350 - §1360 and the Public Utility Commission's Final Order for the Implementation of Act 11 of 2012 (Public Meeting of August 2, 2012, Docket No. M-2012-2293611), Pennsylvania-American Water Company (PAWC) is submitting this Wastewater Long-Term Infrastructure Improvement Plan (LTIIP) dated October 31, 2018 for calendar years 2019-2023. This plan modifies PAWC's 2014 Wastewater LTIIP used for the initial establishment of a Wastewater Distribution System Improvement Charge (DSIC), referred to in this report as "Wastewater DSIC" or "DSIC". This LTIIP is submitted in support of an expanded Wastewater DSIC mechanism for the current PAWC wastewater systems referenced below and modifies the existing LTIIP approved by the Public Utility Commission on December 4, 2014, at Docket No. P-2014-2431005, and covers the period of 2019-2023.

PAWC is a wholly owned subsidiary of American Water Works Company, Inc. and provides public water and sewer service to residents in Pennsylvania. PAWC owns and operates 18 wastewater systems located in 12 Counties across the Commonwealth, and serves approximately 65,139 customer connections (customer count as of 7/31/2018), including several bulk municipal customers.

Provided in Table 1 is a list of all wastewater systems owned and operated by PAWC. The location of each wastewater system is shown in Figure 1. The wastewater system list in this LTIIP is more detailed than the listing in PAWC's wastewater tariff because long-term infrastructure improvement planning is completed by system and the tariff list is grouped by wastewater district. Districts that have multiple wastewater systems include the Fairview, Northeast, and McKeesport Districts.

*Table 1 - List of PAWC Wastewater Systems*

| Wastewater System Grouped by State Region | | Rate Zone | Areas Served | Number of Customers as of 7/31/18 |
|---|---|---|---|---|
| Central | Fairview North | 1 | York County. Portions of Fairview Township | 1,498 |
| | Fairview South | 1 | York County. Portions of Fairview Township | 2,498 |
| | Franklin | 5 | Adams County. Portions of the Townships of Franklin, Hamiltonban, and Highland | 348 |
| | McEwensville | 1 | Northumberland County. McEwensville Borough | 133 |
| | New Cumberland | 2 | Cumberland County. New Cumberland Borough | 3,066 |
| Northeast | Blue Mountain Lake | 1 | Monroe County. Portions of the Townships of Smithfield and Stroud | 830 |
| | Lehman Pike [a] | 1 | Monroe County: Portions of Middle Smithfield Township. Pike County: Portions of Lehman Township | 2,714 |

| Wastewater System Grouped by State Region | | Rate Zone | Areas Served | Number of Customers as of 7/31/18 |
|---|---|---|---|---|
| | Marcel Lake [b] | 1 | Pike County. Portions of Delaware Township | 354 |
| | Pocono | 1 | Monroe County. A portion of Coolbaugh Township | 3,689 |
| | Scranton | 3 | Lackawanna County. The City of Scranton and the Borough of Dunmore | 29,551 [c] |
| Southeast | Coatesville | 1 | Chester County. The City of Coatesville, the Borough of Parkesburg and portions of the Borough of South Coatesville and portions of the Townships of Caln, East Fallowfield, Highland, Sadsbury, Valley, West Caln, and West Sadsbury | 6,226 [d] |
| West | Clarion | 1 | Clarion County. Clarion Borough and portions of the Townships of Clarion and Monroe | 2,157 [e] |
| | Claysville | 1 | Washington County. Claysville Borough and portions of the Township of Donegal | 503 |
| | Koppel | 4 | Beaver County. Koppel Borough | 351 [f] |
| | McKeesport | 6 | Allegheny County. The City of McKeesport, Port Vue Borough, and the following through bulk municipal connections: Boroughs of White Oak, East McKeesport, Lincoln, Liberty, Versailles, Glassport, and the Townships of North Versailles and Elizabeth | 8,096 [g] |
| | Dravosburg | 6 | Allegheny County. Borough of Dravosburg | 625 |
| | Duquesne | 6 | Allegheny County. The City of Duquesne and a portion of West Mifflin Borough | 1,840 |
| | Paint-Elk | 1 | Clarion County. Shippenville Borough and portions of the Townships of Elk and Paint | 660 |

[a] Also known as “Saw Creek Estates”
[b] Also known as “Clean Treatment”
[c] Number of customers does not include customers in portions of the Boroughs of Taylor, Dickson City, and Moosic served through inter-municipal agreements; bulk municipal customers own and maintain their own wastewater collection systems and are counted as single customers
[d] Caln, Sadsbury, Valley, and West Brandywine Townships are bulk municipal customers counted as single customers
[e] Strattanville Borough is a bulk municipal customers that is counted as a single customer
[f] Big Beaver Borough is a bulk municipal customer that is counted as a single customer
[g] Customers in the eight surrounding municipalities (Boroughs of White Oak, East McKeesport, Lincoln, Liberty, Versailles, Glassport, and the Townships of North Versailles and Elizabeth) are served through inter-municipal agreements and are not included in the total customer count and counted as single customers..

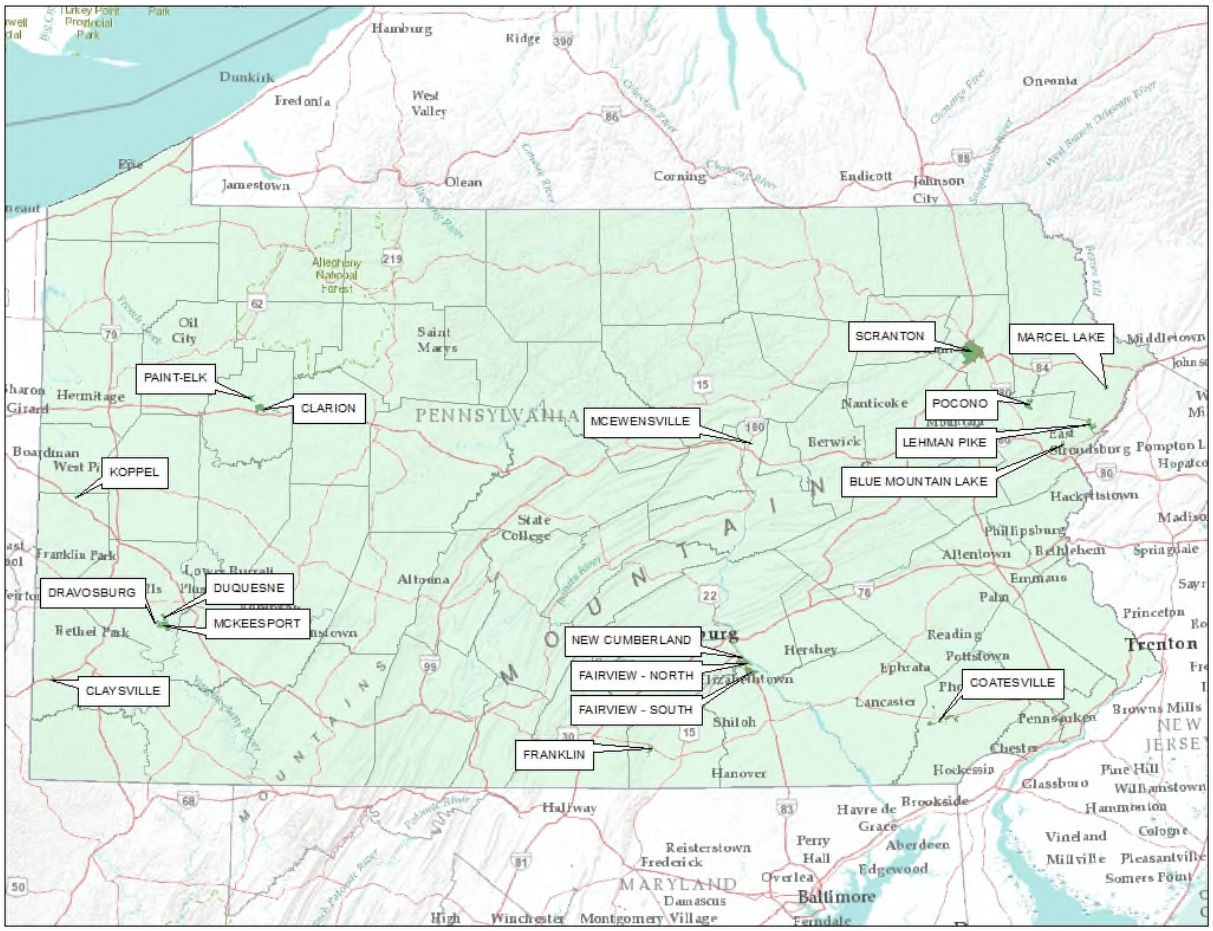


*Figure 1 – Location of PAWC Wastewater Systems*

The condition of the wastewater systems varies, depending on age, material, local conditions and quality of initial design or installation. Some systems require significant capital investment to maintain efficient, safe, and reliable service for existing customers. PAWC has acquired its wastewater systems from prior ownership in various states of disrepair. Many systems have aging infrastructure and significant inflow and infiltration (I&I) from rainfall runoff and groundwater.

During dry-weather conditions, the impact of I&I varies. Some wastewater collection systems have minimal impact from I&I during dry weather, while other systems experience high I&I even in dry weather conditions. For example, a wastewater collection system with a high-groundwater table can be significantly impacted by infiltration in dry weather conditions. In wet weather conditions, the impact of I&I is amplified. Flow entering a wastewater treatment plant (WWTP) can increase significantly due to the inflow of groundwater, rainfall runoff, and/or snowmelt. This may cause a sanitary sewer overflow (SSO) or combined sewer overflow (CSO) to occur if flow exceeds the plant's peak hydraulic capacity. Similarly, lift stations can become hydraulically overloaded if the inflow of sewage mixed with groundwater and rainfall runoff exceeds the pumping capacity, causing raw sewage to be released to streets or a local

waterway. I&I due to rainfall runoff, groundwater, or snowmelt can exceed the hydraulic carrying capacity of collection system piping, causing manhole lids to be lifted and raw sewage to be released into the environment. Hydraulically overloaded pipes and manholes can also cause sewer backups into homes and businesses. SSO's, CSO's and sewer backups due to I&I pose a public health risk and may violate many local and federal environmental regulations.

I&I has multiple causes, many of which are related to aging infrastructure. I&I can enter the wastewater collection system in various ways, such as cross connections, uncapped cleanouts, below-grade manhole lids, or roof drains. Groundwater inflow can enter the collection system through cracks in sewer pipes, faulty lateral connections, cracks in manhole walls, or deteriorated pipe joints. Groundwater can also enter the collection system through broken service laterals, root intrusion into a lateral pipe, or cracks in the walls of customer-owned grinder pump pits.

The focus of the wastewater LTIIP is to replace or rehabilitate collection system infrastructure based on strategic condition assessment and hydraulic evaluations; reduce I&I levels to address SSO and CSO issues; and to correct deficiencies in certain newly acquired wastewater system. These types of system improvements will improve system safety and reliability, customer service, and environmental compliance.

I&I has been reduced in a number of areas since the Wastewater DSIC rate mechanism was implemented. For instance, after significant capital investment in collection system upgrades which occurred over a multiple year timeframe, the Clarion collection system no longer experiences SSO events. Additionally, after a complete rebuild of Marcel Lake collection system with a resultant dramatic reduction in I&I, PAWC believes that PA Department of Environmental Protection (PaDEP) will now permit planning module approvals to resume.

Accelerated infrastructure replacement and rehabilitation is needed to continue meeting the challenges of PAWC wastewater systems, including systems that have been acquired by PAWC since the last wastewater LTIIP was submitted in 2014. PAWC wastewater customer base has increased from approximately 16,803 at the time the 2014 LTIIP was filed to the current total of 65,139 customer connections. Many newly acquired systems such as Scranton, McKeesport, Duquesne, and Dravosburg are currently under PaDEP Consent Orders and require accelerated rehabilitation and replacement.

This LTIIP provides a comprehensive description of the wastewater systems and establishes how PAWC plans to continue to accelerate the rehabilitation, improvement, and replacement of aging wastewater infrastructure (hereinafter referred to as eligible property) within these systems for the five year period from 2019 to 2023. The LTIIP includes an inventory and discussion of the types and age of property eligible for wastewater DSIC recovery; schedule for its planned rehabilitation and replacement; location of eligible property; reasonable estimate of the quantity of property to be improved; projected annual expenditures; manner in which replacement or rehabilitation of aging infrastructure will be accelerated; workforce management plan to ensure work is performed in cost-effective, safe and reliable manner; and description of outreach and coordination with other utilities to minimize disruptions to customers.

## Section 1 – Types and Age of Eligible Property

An inventory of all eligible property, as defined in 66 Pa. C.S. §1351 (4), is provided in this Section. PAWC has developed and is applying Geographic Information Systems (GIS) as the spatial component of its Enterprise Asset Management (EAM) Program. Wastewater assets, such as collection mains, manholes, and lift stations are spatially located and attributed with critical information about PAWC systems. GIS data will be updated continually to include system changes, such as replacement of old pipes or expansion of the wastewater collection system. GIS data was used to identify types and age of eligible property. For some recently acquired systems, there is limited information on the wastewater properties. For each system, all data sources were analyzed and the best available information was used to quantify the types of eligible property.

PAWC owns the following types of sewer collection systems:

*Gravity* – In a gravity collection system, service laterals from the customer premise connect to a sewer main usually located in an alley or street. For combined systems, catchbasins / inlets convey rainfall runoff directly to the gravity collection system. Eligible property also includes facilities that are unique to combined sewer collection systems, such as CSO regulators, diversion manholes, storage structures, outfalls, and equalization chambers. Sewer mains and interceptor sewer mains (also referred to as “trunk lines”) form a branched network that generally follows street layout, and can be accessed through manholes. Service laterals can be accessed through lateral cleanouts. Gravity collection systems either convey sewage directly to a WWTP or to a lift station. In total, the wastewater collection systems are comprised of approximately 65,139 service laterals, 20,874 manholes, and 4,156,078 linear feet (LF) of gravity main which includes combined sewer gravity mains. Gravity main and manhole material generally depends on installation date. Newer mains are polyvinyl chloride (PVC) and older mains are mostly vitrified clay pipe (VCP). Newer manholes are pre-cast or cast in place concrete and older manholes are brick.

*Low Pressure* – In a low-pressure collection system, individual customer sewage collects in a grinder pump and pit installation. Sewage is pumped from the pit through a service lateral into a low pressure force main. Depending on topography and layout, some low pressure collection systems include lift stations to boost pressure. A low pressure force main may contain in-line flow meters, valve vaults, and air and vacuum release chambers. A low pressure system can convey sewage directly to a WWTP, a lift station, or a manhole in the gravity system. On low pressure systems, the eligible property associated with the service lateral extends from the sewer main to the individual customer’s grinder pump unit. One exception to this exists in the Blue Mountain district where there are 5 company grinder pump and pit installations. PAWC owns approximately 458,177 LF of low pressure sewer main.

*Force Main* – A force main is a pressurized discharge pipeline from a lift station. A force main pipeline may contain in-line flow meters, valve vaults, and air and vacuum release chambers. Force mains can convey sewage directly to a WWTP or to a manhole in the gravity system. PAWC owns and operates 95 lift stations and approximately 257,725 LF of force main. In general, force main material is cast iron for older pipes, ductile iron or PVC for newer pipes.

“Eligible property” is defined in the Pa Code as property that is part of a distribution system and eligible for repair, improvement and replacement of infrastructure under 66 Pa. C.S. §1351, as follows:

4(i) Collection sewers, collecting mains and service laterals, including sewer taps, curb stops and lateral cleanouts installed as in-kind replacements for customers.

4(ii) Collection mains and valves for gravity and pressure systems and related facilities such as manholes, grinder pumps, air and vacuum release chambers, cleanouts, main line flow meters, valve vaults and lift stations installed as replacements or upgrades for existing facilities that have worn out, are in deteriorated condition or are required to be upgraded by law, regulation or order.

4(iii) Collection main extensions installed to implement solutions to wastewater problems that present a significant health and safety concern for customers currently receiving service from the wastewater utility.

4(iv) Collection main rehabilitation including inflow and infiltration projects.

4(v) Unreimbursed costs related to highway relocation projects where a wastewater utility must relocate its facilities.

4(vi) Other related capitalized costs.

For the purposes of this LTIIP, the term “sewers” refers to sewer mains which convey either sanitary or combined sewage.

Table 2 and Table 3 provide examples of eligible properties for each wastewater system. Table 4 lists pipe length by diameter for each system. Figure 2 and Figure 3 provide a breakdown by material for gravity pipe and pressurized pipe, respectively. Pipe install date breakdown is provided in Figure 4.

*Table 2 - Types and Age of Eligible Property*

| Wastewater System | | Gravity Main (LF) | Combined Sewer Gravity Main (LF) | Force Main / Low Pressure Main (LF) | Lift Stations | Manholes | Service Laterals [a] | General System Age |
|---|---|---|---|---|---|---|---|---|
| Central | Fairview North | 165,600 | 0 | 18,844 | 11 | 869 | 1,498 | >1950 |
| | Fairview South | 198,722 | 0 | 13,068 | 6 | 1,050 | 2,498 | >1992 |
| | Franklin | 55,239 | 0 | 12,423 | 1 | 198 | 348 | >1972 |
| | McEwensville | 12,669 | 0 | 1,242 | 4 | 57 | 133 | >1984 |
| | New Cumberland | 144,692 | 0 | 6,898 | 3 | 608 | 3,066 | >1950 |
| Northeast | Blue Mountain Lake | 0 | 0 | 68,250 | 6 | 0 | 830 | >1990 |
| | Lehman Pike | 0 | 0 | 268,447 | 13 | 0 | 2,714 | >1980 |
| | Marcel Lake | 30,732 | 0 | 28,597 | 3 | 130 | 354 | >1980 |
| | Pocono | 150,648 | 0 | 99,795 | 2 | 777 | 3,689 | >1975 |
| | Scranton | 552,748 | 1,186,820 | 12,032 | 7 | 9,055 | 29,551 | >1900 |
| Southeast | Coatesville | 352,945 | 0 | 93,605 | 17 | 1,670 | 6,226 | >1930s |
| West | Clarion | 200,860 | 0 | 36,293 | 6 | 930 | 2,157 | >1930s |
| | Claysville | 62,082 | 0 | 1,149 | 1 | 342 | 503 | >1983 |
| | Koppel | 25,909 | 0 | 0 | 0 | 87 | 351 | >1920s |
| | McKeesport | 73,403 | 616,877 | 32,731 | 9 | 3,236 | 8,096 | >1900 |
| | Dravosburg | 19,604 | 32,544 | 1,219 | 1 | 308 | 625 | >1900 |
| | Duquesne | 59,963 | 124,596 | 0 | 0 | 1,125 | 1.840 | >1900 |
| | Paint-Elk | 89,425 | 0 | 21,310 | 5 | 432 | 660 | >1960s |
| TOTAL | | 2,195,241 | 1,960,837 | 715,902 | 95 | 20,874 | 65,139 | |

[a]l. The entire customer service lateral on a gravity collection system is deemed to be DSIC-eligible property.

*Table 3 – Types of Eligible Property for Combined Sewer Systems*

| System | CSO Structures | Diversion Chambers | Inlets / Catchbasins |
|---|---|---|---|
| Scranton | 70 | 4 | 3,013 |
| McKeesport | 26 | 4 | 1,852 |
| Dravosburg | 1 | 0 | 264 |
| Duquesne | 4 | 0 | 944 |

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*Table 4 - Pipe Length by Diameter for each Wastewater System*

| | DIAMETER (in) | Blue Mountain Lake | Clarion | Claysville | Coatesville | Dravosburg | Duquesne | Koppel | Fairview North | Fairview South | Franklin | Marcel Lakes | McEwensville | McKeesport | New Cumberland | Paint-Elk | Pocono | Saw Creek | Scranton | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sanitary-Only Gravity Main (LF) | Unknown | | 10,233 | | 1,468 | | 3,825 | | | | | | 105 | 7,755 | | 1,382 | | | 3,761 | **28,529** |
| | 1 | | | | | | | | | | | | | | | | | | | **0** |
| | 4 | | 279 | | 156 | | | | | | | | | | | 578 | 1,607 | | | **2,619** |
| | 5 | | | | | | | 5,694 | | | | | | | | | | | | **5,694** |
| | 6 | | 12,402 | | 3,899 | | | 1,545 | 607 | | | | | | 398 | 11,597 | | | 3,402 | **33,851** |
| | 8 | | 130,881 | 52,931 | 299,147 | 18,627 | 31,679 | 13,331 | 147,862 | 193,075 | 46,511 | 27,205 | 10,947 | 28,455 | 121,349 | 74,338 | 127,690 | | 389,731 | **1,713,759** |
| | 9 | | | | | | | | | | | | | | | | | | 239 | **239** |
| | 10 | | 13,109 | 9,151 | 8,808 | 145 | 6,387 | 1,070 | 14,945 | 5,647 | 8,729 | | 1,617 | 15,065 | 13,501 | 274 | 5,547 | | 72,261 | **176,257** |
| | 12 | | 19,657 | | 7,278 | 122 | 7,769 | 1,266 | 2,186 | | | 3,526 | | 13,531 | 1,666 | | 875 | | 33,727 | **91,604** |
| | 14 | | | | | | 478 | | | | | | | | | | | | | **478** |
| | 15 | | 3,984 | | 14,222 | 710 | 2,332 | 3,004 | | | | | | 4,454 | 4,324 | 691 | 6,577 | | 24,777 | **65,075** |
| | 16 | | | | | | | | | | | | | | | | 736 | | 72 | **808** |
| | 18 | | 5,701 | | 8,430 | | 877 | | | | | | | 1,452 | 2,848 | 565 | 6,280 | | 7,352 | **33,505** |
| | 20 | | | | | | | | | | | | | 193 | | | | | 3,968 | **4,161** |
| | 21 | | | | | | | | | | | | | | 298 | | | | | **298** |
| | 22 | | | | | | | | | | | | | | | | | | 228 | **228** |
| | 24 | | 2,243 | | 4,706 | | 2,129 | | | | | | | 447 | | | 863 | | 4,508 | **14,895** |
| | 30 | | 751 | | 2,152 | | 1,066 | | | | | | | | | | 473 | | 1,638 | **6,081** |
| | 32 | | | | | | | | | | | | | | | | | | 428 | **428** |
| | 33 | | | | | | | | | | | | | 208 | | | | | | **208** |
| | 36 | | 1,618 | | 1,482 | | 204 | | | | | | | 1,206 | | | | | | **4,511** |
| | 39 | | | | | | | | | | | | | 637 | | | | | | **637** |
| | 42 | | | | 1,197 | | | | | | | | | | 306 | | | | | **1,504** |
| | 48 | | | | | | 878 | | | | | | | | | | | | 560 | **1,437** |
| | 54 | | | | | | 716 | | | | | | | | | | | | | **716** |
| | 60 | | | | | | 1,624 | | | | | | | | | | | | | **1,624** |
| | 78 | | | | | | | | | | | | | | | | | | 3,400 | **3,400** |
| | 80 | | | | | | | | | | | | | | | | | | 353 | **353** |
| | 25 x 41 | | | | | | | | | | | | | | | | | | 172 | **172** |

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| | DIAMETER (in) | Blue Mountain Lake | Clarion | Claysville | Coatesville | Dravosburg | Duquesne | Koppel | Fairview North | Fairview South | Franklin | Marcel Lakes | McEwensville | McKeesport | New Cumberland | Paint-Elk | Pocono | Saw Creek | Scranton | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 31 x 48 | | | | | | | | | | | | | | | | | | 155 | **155** |
| | 32 x 47 | | | | | | | | | | | | | | | | | | 168 | **168** |
| | 32 x 48 | | | | | | | | | | | | | | | | | | 835 | **835** |
| | 32 x 49 | | | | | | | | | | | | | | | | | | 403 | **403** |
| | 34 x 53 | | | | | | | | | | | | | | | | | | 558 | **558** |
| | 48 x 53 | | | | | | | | | | | | | | | | | | 53 | **53** |
| | **TOTAL** | **0** | **200,860** | **62,082** | **352,945** | **19,604** | **59,963** | **25,909** | **165,600** | **198,722** | **55,239** | **30,732** | **12,669** | **73,403** | **144,692** | **89,425** | **150,648** | **0** | **552,748** | ***2,195,241*** |
| Force/ Low Pressure Main (LF) | Unknown | | | | 10,811 | | | | | | 35 | | 499 | | | | 804 | 4 | | **12,153** |
| | 1 | | | | | | | | | | | | | | | | 343 | 609 | | **952** |
| | 1.25 | | | | | | | | | | | | | | | 1,101 | | | | **1,101** |
| | 1.5 | | | | | | | | 396 | | | | | | | | | | | **396** |
| | 2 | 20,366 | 739 | | 2,276 | | | | 2,478 | | | | 516 | | | 1,065 | 49,918 | 68,507 | | **145,865** |
| | 2.5 | | | | | | | | | | | | | | | 2,502 | | | | **2,502** |
| | 3 | 28,866 | 1,219 | 1,149 | | | | | | | | 755 | 227 | | | 2,149 | 19,747 | 89,086 | 391 | **143,588** |
| | 4 | 6,943 | 1,923 | | 34,555 | | | | 1,337 | | | 27,842 | | | 556 | 4,168 | 10,569 | 63,457 | 1,043 | **152,395** |
| | 6 | 12,075 | 29,361 | | 19,517 | 1,219 | | | 4,406 | | 12,388 | | | | 1,781 | 1,910 | 18,291 | 26,542 | 7,760 | **135,251** |
| | 8 | | 2,904 | | 7,443 | | | | 8,812 | 13,068 | | | | 122 | 4,562 | 8,415 | 122 | 12,207 | | **57,655** |
| | 10 | | 148 | | 9,808 | | | | 1,315 | | | | | | | | | 8,035 | 1,446 | **20,752** |
| | 12 | | | | 9,194 | | | | 100 | | | | | 562 | | | | | 1,391 | **11,247** |
| | 16 | | | | | | | | | | | | | 9,254 | | | | | | **9,254** |
| | 18 | | | | | | | | | | | | | 1,286 | | | | | | **1,286** |
| | 20 | | | | | | | | | | | | | 9,032 | | | | | | **9,032** |
| | 30 | | | | | | | | | | | | | 7,101 | | | | | | **7,101** |
| | 36 | | | | | | | | | | | | | 5,373 | | | | | | **5,373** |
| | **TOTAL** | **68,250** | **36,293** | **1,149** | **93,605** | **1,219** | **0** | **0** | **18,844** | **13,068** | **12,423** | **28,597** | **1,242** | **32,731** | **6,898** | **21,310** | **99,795** | **268,447** | **12,032** | ***715,902*** |
| Combined Gravity Main (LF) | Unknown | | | | | | 21,354 | | | | | | | 25,346 | | | | | 24,035 | **70,735** |
| | 4 | | | | | | | | | | | | | 511 | | | | | 768 | **1,279** |
| | 6 | | | | | | | | | | | | | 537 | | | | | 5,854 | **6,390** |
| | 8 | | | | | 3,888 | 32,748 | | | | | | | 137,430 | | | | | 320,113 | **494,179** |

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| | DIAMETER (in) | Blue Mountain Lake | Clarion | Claysville | Coatesville | Dravosburg | Duquesne | Koppel | Fairview North | Fairview South | Franklin | Marcel Lakes | McEwensville | McKeesport | New Cumberland | Paint-Elk | Pocono | Saw Creek | Scranton | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | | | | 6,663 | 10,463 | | | | | | | 43,054 | | | | | 209,354 | **269,535** |
| | 12 | | | | | 9,021 | 17,082 | | | | | | | 164,011 | | | | | 249,454 | **439,568** |
| | 14 | | | | | | | | | | | | | 335 | | | | | 807 | **1,142** |
| | 15 | | | | | 3,576 | 15,967 | | | | | | | 133,411 | | | | | 90,530 | **243,485** |
| | 16 | | | | | | 949 | | | | | | | | | | | | 1,054 | **2,003** |
| | 18 | | | | | 3,484 | 3,716 | | | | | | | 49,217 | | | | | 58,959 | **115,375** |
| | 20 | | | | | 874 | 273 | | | | | | | 9,347 | | | | | 47,084 | **57,577** |
| | 21 | | | | | | | | | | | | | 5,079 | | | | | 3,096 | **8,175** |
| | 22 | | | | | | | | | | | | | | | | | | 1,656 | **1,656** |
| | 24 | | | | | 3,138 | 11,278 | | | | | | | 18,748 | | | | | 51,333 | **84,497** |
| | 26 | | | | | | | | | | | | | | | | | | 984 | **984** |
| | 27 | | | | | | | | | | | | | 2,226 | | | | | 4,349 | **6,574** |
| | 30 | | | | | | 6,205 | | | | | | | 623 | | | | | 37,429 | **44,256** |
| | 32 | | | | | | | | | | | | | | | | | | 2,249 | **2,249** |
| | 33 | | | | | | | | | | | | | | | | | | 1,373 | **1,373** |
| | 36 | | | | | | 783 | | | | | | | 12,485 | | | | | 2,553 | **15,821** |
| | 38 | | | | | | | | | | | | | | | | | | 418 | **418** |
| | 39 | | | | | | | | | | | | | 2,931 | | | | | | **2,931** |
| | 40 | | | | | | | | | | | | | | | | | | 489 | **489** |
| | 42 | | | | | | | | | | | | | 6,048 | | | | | 1,072 | **7,121** |
| | 44 | | | | | | | | | | | | | | | | | | 409 | **409** |
| | 45 | | | | | 59 | | | | | | | | | | | | | | **59** |
| | 48 | | | | | 649 | 260 | | | | | | | 1,908 | | | | | 6,636 | **9,454** |
| | 49 | | | | | | | | | | | | | | | | | | 355 | **355** |
| | 52 | | | | | | | | | | | | | | | | | | 401 | **401** |
| | 54 | | | | | | 2,734 | | | | | | | 171 | | | | | 4,000 | **6,905** |
| | 56 | | | | | | | | | | | | | | | | | | 285 | **285** |
| | 59 | | | | | | | | | | | | | | | | | | 480 | **480** |
| | 60 | | | | | 424 | | | | | | | | 2,833 | | | | | 10,663 | **13,919** |
| | 63 | | | | | | | | | | | | | | | | | | 362 | **362** |
| | 66 | | | | | | | | | | | | | | | | | | 3,860 | **3,860** |
| | 72 | | | | | 768 | 210 | | | | | | | 558 | | | | | | **1,536** |

Wastewater Long-Term Infrastructure Improvement Plan 2019

| | DIAMETER (in) | Blue Mountain Lake | Clarion | Claysville | Coatesville | Dravosburg | Duquesne | Koppel | Fairview North | Fairview South | Franklin | Marcel Lakes | McEwensville | McKeesport | New Cumberland | Paint-Elk | Pocono | Saw Creek | Scranton | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 78 | | | | | | | | | | | | | | | | | | 2,593 | **2,593** |
| | 80 | | | | | | 573 | | | | | | | | | | | | | **573** |
| | 84 | | | | | | | | | | | | | 31 | | | | | | **31** |
| | 112 | | | | | | | | | | | | | 39 | | | | | | **39** |
| | 121 | | | | | | | | | | | | | | | | | | 28 | **28** |
| | 12" x 12" | | | | | | | | | | | | | | | | | | 15 | **15** |
| | 15.4" x 7.5" | | | | | | | | | | | | | | | | | | 15 | **15** |
| | 2' x 2'3" | | | | | | | | | | | | | | | | | | 187 | **187** |
| | 2'10" x 4'3" | | | | | | | | | | | | | | | | | | 624 | **624** |
| | 2'X2'4" | | | | | | | | | | | | | | | | | | 31 | **31** |
| | 2 x 3 | | | | | | | | | | | | | | | | | | 618 | **618** |
| | 20x39 | | | | | | | | | | | | | | | | | | 187 | **187** |
| | 24"X24" | | | | | | | | | | | | | | | | | | 45 | **45** |
| | 24"x27" | | | | | | | | | | | | | | | | | | 669 | **669** |
| | 25x36 | | | | | | | | | | | | | | | | | | 129 | **129** |
| | 25X40 | | | | | | | | | | | | | | | | | | 113 | **113** |
| | 26"x36" | | | | | | | | | | | | | | | | | | 372 | **372** |
| | 26"x38" | | | | | | | | | | | | | | | | | | 2,260 | **2,260** |
| | 26"x39" | | | | | | | | | | | | | | | | | | 4,541 | **4,541** |
| | 26"X41" | | | | | | | | | | | | | | | | | | 1,787 | **1,787** |
| | 27"x37" | | | | | | | | | | | | | | | | | | 395 | **395** |
| | 28"x42" | | | | | | | | | | | | | | | | | | 1,180 | **1,180** |
| | 29"x18" | | | | | | | | | | | | | | | | | | 146 | **146** |
| | 29"x44" | | | | | | | | | | | | | | | | | | 2,226 | **2,226** |
| | 29X56 | | | | | | | | | | | | | | | | | | 14 | **14** |
| | 3'4"X5'0" | | | | | | | | | | | | | | | | | | 217 | **217** |
| | 3'9"X2'6" | | | | | | | | | | | | | | | | | | 681 | **681** |
| | 3'X2' | | | | | | | | | | | | | | | | | | 269 | **269** |
| | 3'x4' | | | | | | | | | | | | | | | | | | 708 | **708** |
| | 3'x4'6" | | | | | | | | | | | | | | | | | | 396 | **396** |
| | 30"x42" | | | | | | | | | | | | | | | | | | 304 | **304** |
| | 30"x54" | | | | | | | | | | | | | | | | | | 241 | **241** |
| | 32"x41" | | | | | | | | | | | | | | | | | | 818 | **818** |
| | 32"x60" | | | | | | | | | | | | | | | | | | 377 | **377** |
| | 32round | | | | | | | | | | | | | | | | | | 264 | **264** |
| | 32x38 | | | | | | | | | | | | | | | | | | 323 | **323** |

Wastewater Long-Term Infrastructure Improvement Plan 2019

| | DIAMETER (in) | Blue Mountain Lake | Clarion | Claysville | Coatesville | Dravosburg | Duquesne | Koppel | Fairview North | Fairview South | Franklin | Marcel Lakes | McEwensville | McKeesport | New Cumberland | Paint-Elk | Pocono | Saw Creek | Scranton | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 34"x35" | | | | | | | | | | | | | | | | | | 204 | **204** |
| | 34"x48" | | | | | | | | | | | | | | | | | | 216 | **216** |
| | 34"x51" | | | | | | | | | | | | | | | | | | 1,368 | **1,368** |
| | 36"x36" | | | | | | | | | | | | | | | | | | 1,521 | **1,521** |
| | 36"x38" | | | | | | | | | | | | | | | | | | 903 | **903** |
| | 36"X41" | | | | | | | | | | | | | | | | | | 35 | **35** |
| | 36"X57" | | | | | | | | | | | | | | | | | | 430 | **430** |
| | 36X46 | | | | | | | | | | | | | | | | | | 89 | **89** |
| | 37"x57" | | | | | | | | | | | | | | | | | | 454 | **454** |
| | 38"x44" | | | | | | | | | | | | | | | | | | 195 | **195** |
| | 38"X57" | | | | | | | | | | | | | | | | | | 189 | **189** |
| | 38x38 | | | | | | | | | | | | | | | | | | 61 | **61** |
| | 38x92 | | | | | | | | | | | | | | | | | | 83 | **83** |
| | 4'8"x7'2" | | | | | | | | | | | | | | | | | | 2,643 | **2,643** |
| | 40"x60" | | | | | | | | | | | | | | | | | | 807 | **807** |
| | 40"x64" | | | | | | | | | | | | | | | | | | 859 | **859** |
| | 42"x60" | | | | | | | | | | | | | | | | | | 968 | **968** |
| | 44"x44" | | | | | | | | | | | | | | | | | | 297 | **297** |
| | 44"x68" | | | | | | | | | | | | | | | | | | 595 | **595** |
| | 45"x68" | | | | | | | | | | | | | | | | | | 218 | **218** |
| | 45X66 | | | | | | | | | | | | | | | | | | 151 | **151** |
| | 46"x66" | | | | | | | | | | | | | | | | | | 469 | **469** |
| | 48"x78" | | | | | | | | | | | | | | | | | | 607 | **607** |
| | 48"x84" | | | | | | | | | | | | | | | | | | 2,233 | **2,233** |
| | 48"X84"Egg | | | | | | | | | | | | | | | | | | 928 | **928** |
| | 48X90 | | | | | | | | | | | | | | | | | | 665 | **665** |
| | 52x53 | | | | | | | | | | | | | | | | | | 222 | **222** |
| | 56X80 | | | | | | | | | | | | | | | | | | 228 | **228** |
| | 59X64 | | | | | | | | | | | | | | | | | | 174 | **174** |
| | 6"X5" | | | | | | | | | | | | | | | | | | 9 | **9** |
| | 60"x72" | | | | | | | | | | | | | | | | | | 358 | **358** |
| | 62"X95" | | | | | | | | | | | | | | | | | | 663 | **663** |
| | 66"x99" | | | | | | | | | | | | | | | | | | 520 | **520** |
| | 7.5"X5" | | | | | | | | | | | | | | | | | | 16 | **16** |
| | 72"x108" | | | | | | | | | | | | | | | | | | 1,254 | **1,254** |
| | 78.5"X54" | | | | | | | | | | | | | | | | | | 536 | **536** |

Wastewater Long-Term Infrastructure Improvement Plan 2019

| | DIAMETER (in) | Blue Mountain Lake | Clarion | Claysville | Coatesville | Dravosburg | Duquesne | Koppel | Fairview North | Fairview South | Franklin | Marcel Lakes | McEwensville | McKeesport | New Cumberland | Paint-Elk | Pocono | Saw Creek | Scranton | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 87" C.B. | | | | | | | | | | | | | | | | | | 396 | **396** |
| | 9.25"X5" | | | | | | | | | | | | | | | | | | 18 | **18** |
| | **TOTAL** | **0** | **0** | **0** | **0** | **32,544** | **124,596** | **0** | **0** | **0** | **0** | **0** | **0** | **616,877** | **0** | **0** | **0** | **0** | **1,186,820** | ***1,960,837*** |

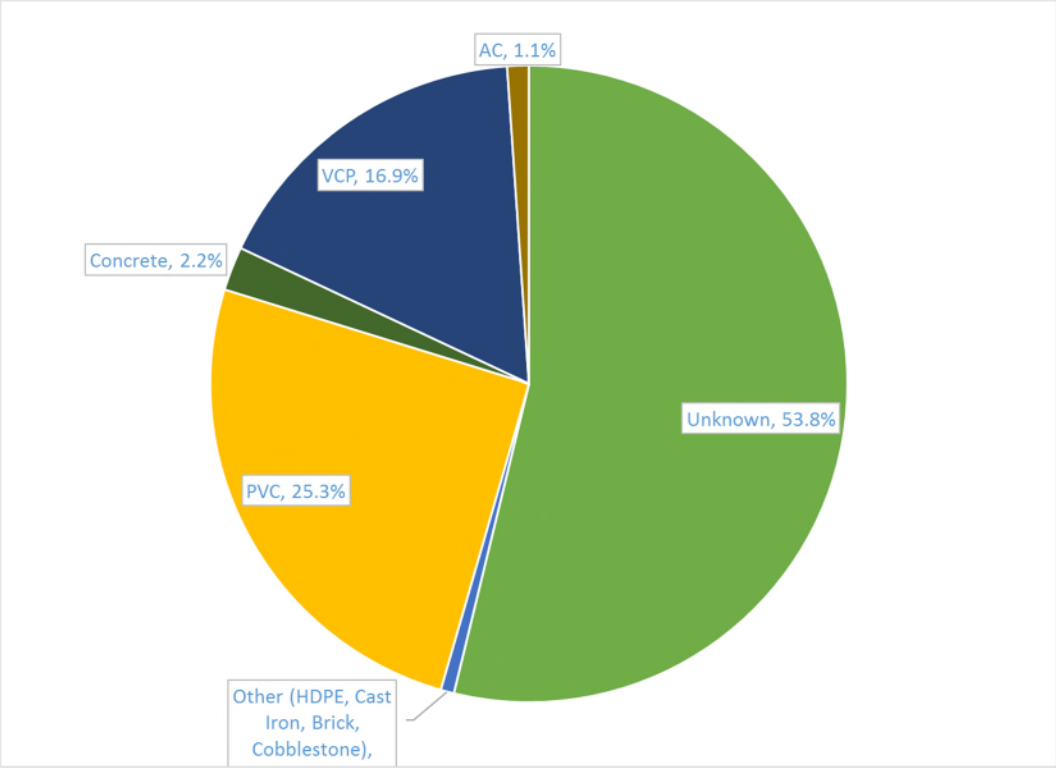


*Figure 2 - Gravity Main Material Breakdown by length [unknown percentage due in large part to acquisitions of Scranton and McKeesport]*

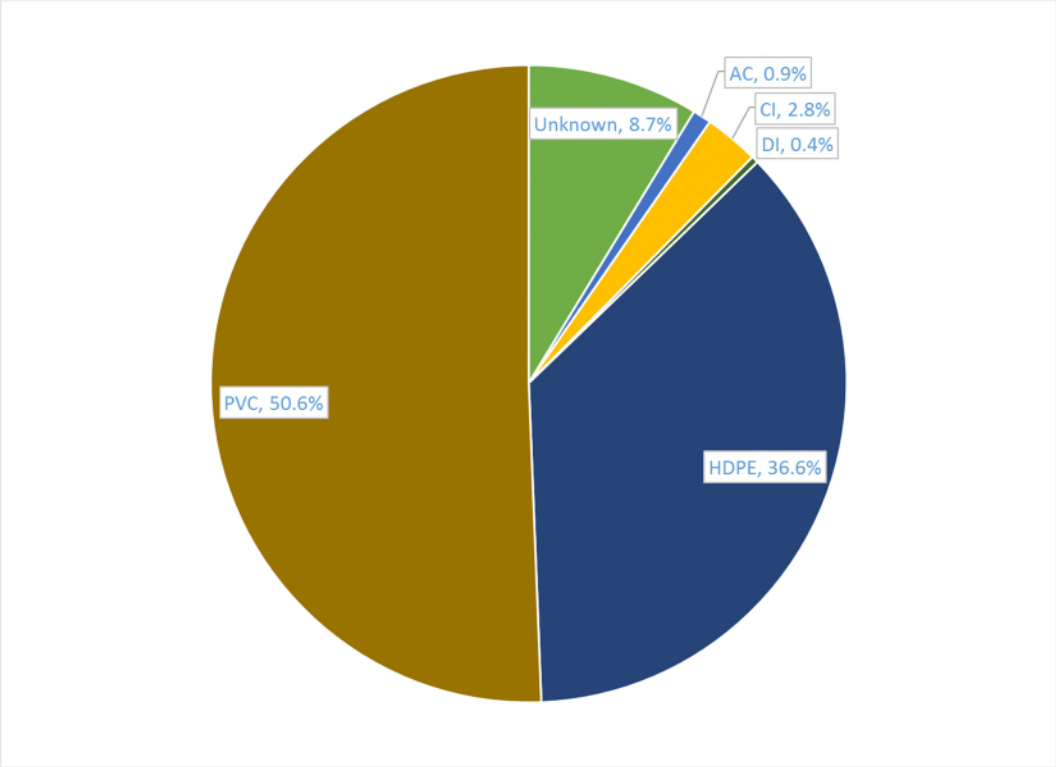


*Figure 3 - Pressurized Main Material Breakdown by length*

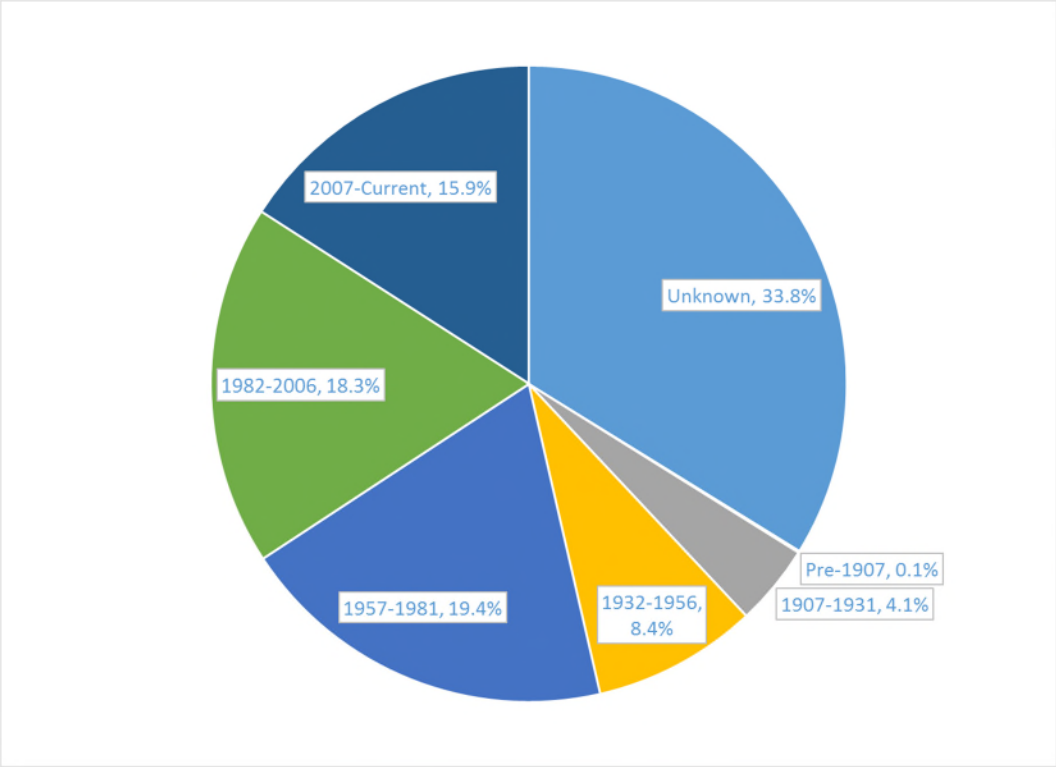


*Figure 4 - Pipe Install Date Breakdown by length*

## Section 2 – Schedule for Planned Rehabilitation and Replacement of Eligible Property

PAWC recognizes the importance of continuous renewal of aging infrastructure in order to ensure and maintain adequate, efficient, safe, and reliable service to existing customers. This Section provides an overview of the planning process for replacement of aging wastewater collection system infrastructure. Planning related to collection main extensions due to the increase in the number of customers is not included, except those projects that implement solutions to wastewater problems for existing customers. Planning for WWTP improvements is not included in this Section, as WWTP improvements are not DSIC eligible.

Capital investment programs and projects are needs based and prioritized within a strategic planning process utilizing drivers associated with various asset investment strategies (such as regulatory compliance, reliability, capacity, customer satisfaction, etc.) Within a 5-year strategic capital expenditure plan, PAWC has established longer term funding levels for main replacement and rehabilitation based on program needs. The Company determines an overall investment level based upon the performance of the existing assets and the anticipated remaining life expectancy of the asset, taking into account the impact of investment on customer rates. Ideally, PAWC's spending level for main replacement and rehabilitation should be adequate to keep pace with the anticipated remaining service life of the collection system infrastructure. Expecting pipelines to continue to provide service beyond their useful life generally results in higher levels of service failure and disruptions to customers.

The first step of the planning process is to conduct a macro-level overview of each wastewater system. GIS tools may be used to help identify and prioritize groups of wastewater properties that are likely candidates for replacement or rehabilitation. GIS tools are not the sole determinant for identifying groups of wastewater assets. Other data that may be applied includes operational knowledge / records, condition of lift stations, number and location of sanitary and/or dry weather sewer overflows, and recorded flows into the WWTP. This system specific information assists in identifying structural and hydraulic deficiencies within each collection system in order to assess potential vulnerabilities.

Properties may be divided into general categories based on the following:

- Systems that are currently or projected to be hydraulically overloaded as defined by 25 Pa. C.S. §94.1
- Known problem areas based on operation and maintenance records
- Sewer collection basins with high I&I
- Material and age; for example, old terra cotta pipes and deteriorated brick manholes are potential candidates for replacement / rehabilitation, while lift stations and polyvinyl chloride (PVC) sewers less than 20 years old are less likely to need replacement

Using these general categories, areas of concern can be identified which may contain properties in need of replacement. The macro-level planning process helps identify groups of assets which are potential candidates, and those groups of assets that are unlikely to need near-term replacement. This allows resources required for micro-level planning to be more efficiently targeted to those areas most likely to contain aging infrastructure in need of rehabilitation or replacement.

The next step in the planning process is to conduct a more detailed, micro-level planning analysis. A comprehensive sewer system evaluation study is conducted, which is a systematic approach to identify specific properties to be rehabilitated or replaced. This study may include:

- Continuous flow monitoring
- Rainfall monitoring
- Hydraulic modeling
- Smoke testing
- Dye testing
- Traditional Closed circuit TV (CCTV) inspection of mains and service laterals
- Multi-sensor robotic inspection including synchronized laser, sonar, and CCTV for the collection of the system's physical attributes
- Manhole inspection
- Lift station inspection / monitoring
- CSO inlet, outfall, and regulator inspections
- Subbasin analysis / prioritization

During the micro-level planning process, specific properties are identified as candidates for replacement or rehabilitation using a risk based methodology based on a condition assessment and hydraulic capacity evaluation. Focusing on replacement of aging infrastructure and reduction of I&I, strategic improvements identified in the micro-level planning process can be grouped in the following categories:

*Manhole replacement / rehabilitation* – Work may include frame and cover replacement, internal grouting, lining, or complete replacement. Manhole lining can be used for structural reinforcement, reduction of groundwater infiltration, or protection from corrosive gases. Whether replacement or rehabilitation is best depends on various factors, such as location, structural integrity, and manhole depth. For example, replacement cost may be similar to rehabilitation cost for shallow manholes. In such cases, replacement is likely the best option. For manholes located in areas that are difficult to excavate, lining may be the best option. For each individual project, all factors are considered to select the most prudent and cost-effective method.

*Pipe replacement / rehabilitation* – Work may consist of complete replacement, partial replacement, or trenchless rehabilitation such as cured-in-place pipe lining (CIPP), slip lining, close-fit pipe lining (fold and form), other pipe coatings/lining systems, pipe bursting, horizontal directional drilling using fused high-density polyethylene (HDPE) pipe or fused PVC pipe. Work

could include replacement of air and vacuum release chambers, valves, and flow meters. Pipe replacement and rehabilitation could be part of a relocation project due to highway construction, I&I project, or other project that addresses aging infrastructure. In some cases, projects may include main extensions installed to implement solutions to wastewater problems that present a health and safety concern for existing customers. For low pressure sewers and force mains, which have a shallower installation than gravity mains, replacement is often the best method. For gravity sewers, trenchless rehabilitation is often most cost-effective; however, replacement may be the best option in cases where the pipe is misaligned or has lost its structural integrity. Another option is to combine partial replacement with cured in place liner, such that ground disturbance is minimized to only those sections of pipe in need of replacement. PAWC has embraced trenchless technologies that allow underground infrastructure to be rehabilitated without the need for excavation. In general, trenchless rehabilitation is the preferred method to address aging infrastructure. Collapses or other significant defects that cannot be rehabilitated using trenchless technology on critical pipe segments (e.g. deformation) will be repaired or replaced using open-cut methods. For each individual project, all factors are considered to select the most prudent and cost-effective method.

*Service lateral replacement / rehabilitation* – Work may consist of replacing or rehabilitating gravity or low pressure sewer laterals, including taps, curb stops, and cleanouts. A cured-in-place liner is a trenchless alternative that may be best for service laterals that are difficult to excavate. Depending on the condition and number of connections, service lateral replacement may be combined with main line replacement / rehabilitation.

*Lift station replacement / rehabilitation* – Lift stations are evaluated on a case by case basis. A scoring system is provided at the end of this Section. Necessary improvements can usually be completed by full or partial rehabilitation. Replacement may be the best option for older and outdated lift stations.

*Combined sewer overflow facility replacement / rehabilitation* – CSO facilities are evaluated on a case by case basis. Replacement or rehabilitation of these facilities may include features such as outfall structures, bar screens, piping, valves, or diversion chamber / flow weirs.

Once specific properties are identified as needing replacement or rehabilitation, the final step in the micro-level planning process is prioritization. To better understand and evaluate the complex characteristics of its properties and the various drivers for improvements, PAWC plans to apply a prioritization model to score capital improvement projects which will be funded through the wastewater DSIC program.

The prioritization model for wastewater collection mains will use pipe condition information to assess the system's ability to meet performance measures associated with the following level of service factors. Defining the level of service that is expected from a pipe is dependent on the specific customers that it is serving.

*Level of Service Factors*

- Reliable service (prevent disruptions)
- Customer satisfaction
- Environmental sustainability

- Regulatory compliance
- Public safety

Service reliability, or continuity of operations, is based on factors such as the number of service interruptions (due to pipe failures or operational issues), events impacting critical facilities and the length of time associated with these service interruptions. Customer satisfaction is influenced by events such as sewage back-ups and blockages, odors and overflow discharges. Environmental sustainability and regulatory compliance is primarily determined by the number of dry weather or sanitary sewer overflow events that could impact waterways. Public safety includes events that impact critical facilities, the general public and the utilities employees.

The list of identified projects will cover multiple wastewater systems and geographical areas across the Commonwealth. Each project may have drivers based on local conditions. What follows below is a standardized condition based risk assessment prioritization system developed by the National Association of Sewer Service Companies (NASSCO) that can be applied to score and rank projects in different wastewater systems against each other to ensure cost-effective prioritization of capital investment.

In order to cost-effectively prioritize wastewater collection system replacement and rehabilitation projects, PAWC will utilize a risk-based condition assessment approach. To accomplish this prioritization, PAWC will perform a GIS analysis to assign a risk score to each project, where risk is defined as:

*Risk = Likelihood of Failure (LoF) x Consequence of Failure (CoF)*

By establishing of standardized definitions and a scoring system for Likelihood of Failure (LoF) and Consequence of Failure (CoF), a risk rating is obtained.

The LoF component represents the probability that the asset will fail based on the asset's physical condition. For linear assets, such as sewer pipelines, this score will be determined by reviewing CCTV or multi-sensor robotic inspections allowing pipes to be coded using the NASSCO's Pipeline Assessment Certification Program (PACP) which is an industry standard for performing condition assessments. Table 5 below lists the PACP grading that is used for LoF scoring.

*Table 5 – PACP Grading for LoF (NASSCO)*

| Grade | Description |
|---|---|
| 5 | Immediate Attention – Defect requires immediate attention |
| 4 | Poor – Severe defects that will become Grade 5 defects within the near future |
| 3 | Fair – Moderate defects that will continue to deteriorate |
| 2 | Good – Defects that have not begun to deteriorate |
| 1 | Excellent – Pipe functional with minor defects |

For pipelines without existing inspection data, desktop assessment using operations and maintenance history (if available), material, and date of construction will be used until condition assessment data is available. For newly acquired wastewater systems that have known deficiencies in the gravity collections system (e.g., significant I&I, pipe defects, and installation

deficiencies), which were observed during the pre-acquisition due diligence process, PAWC will assume the highest risk factor (Grade 5) for these known deficiencies. Once the condition assessment is completed, the risk factor will be adjusted to reflect actual conditions.

Non-linear assets, such as lift stations, can be classified using the Condition Index (CI) Scale developed by the US Army Corps of Engineers, which is shown in Table 6 below. A typical evaluation would include field inspection, interviews with operational personnel, and review of operation and maintenance records. The CI scale ranges from 0 to 100, with 0 indicating complete failure and 100 indicating perfect condition and function.

*Table 6 - US Army Corps of Engineers Condition Index Scale*

| Zone | CI | Condition Description | Recommended Action |
|---|---|---|---|
| 1 | 85 to 100 | Excellent: No noticeable defects. Some aging or wear may be visible. | Immediate action is not required |
| | 70 to 84 | Good: Only minor deterioration or defects are evident. | |
| 2 | 55 to 69 | Fair: Some deterioration or defects are evident, but function is not significantly affected. | Economic analysis of repair alternatives is recommended |
| | 40 to 54 | Marginal: Moderate deterioration. Function is still adequate | |
| 3 | 25 to 39 | Poor: Serious deterioration in at least some portions of structure. | Detailed evaluation is required to determine the need for repair, rehabilitation, or reconstruction |
| | 10 to 24 | Very Poor: Extensive deterioration. Barely functional. | |
| | 0 to 9 | Failed: No longer functions. General failure or complete failure of a major structural component. | |

The CoF score presents the direct and indirect impact to the customers and environment if the asset fails. When assigning weighting factors, one should consider how much the parameter contributes to the economic, social and environmental impacts in the event of a failure, commonly referred to as a “triple bottom line” accounting framework:

- Economic impact resulting from the need to conduct an urgent repair: accounts for the relative cost to repair failures (i.e. depth, pipe size, and accessibility) and any fines or other regulatory costs incurred due to a failure.
- Societal impact resulting from the loss of service of the asset: accounts for the number of customers affected by the failure, the type of customers affected (i.e. hospitals, schools, etc.) and the location of the asset.
- Environmental impact resulting from any discharges: accounts for the relative impact to the surrounding environment if a failure leads to a discharge.

CoF may be assigned to a scale from 1 to 6 with 6 being the highest consequence and 1 being the least. An overall CoF score will be calculated as a weighted average of all the individual CoF factors as shown in Table 7. The weighting factors will be 0.25 for each financial and social criterion and 0.50 for environmental criteria. Proposed weightings and ranges presented may be adjusted as the statewide analysis is performed. Weighting factors include diameter, depth, relative network position of pipe, class of road, distance from environmentally sensitive features,

and distance between downstream pipe to a service lateral of customer with high importance, and accessibility for maintenance and inspection. Diameter ranges have been customized to fit small or large wastewater systems. Relative network position is calculated as the sum of relative positions of all pipes discharging to an upstream structure. A larger relative network position would indicate more customers upstream and thus a larger impact of failure. Relative network position requires accurate maps of the system and will be calculated when available. Utilities have a set of customers who are very significant for the well-being of the community. These customers may include hospitals, schools, manufacturing facilities, and emergency services, etc., as determined by the utility. Providing uninterrupted service to these critical facilities is a priority.

Access to manholes and pipes are very important for inspection and repairs. Large construction equipment is sometimes required to repair the failure of a pipe. Response time for a service crew may be significantly higher, if access to the pipe is difficult. The failure of such a pipe may cause significant damage to the environment, as well as private properties, due to delays in response created by difficulties in accessing the failure point. A higher CoF should be assigned to these pipes. This will affect the economic costs, due directly to the difficulty and social costs, if the property needs to be disrupted to gain access.

*Table 7 - Consequence of Failure Scoring (NASSCO)*

| CoF Factor | Description | CoF Score | Criteria |
|---|---|---|---|
| Diameter (inch) – small wastewater systems | < 8” | 1 | Economic, Social |
| | ≥ 8” < 10” | 2 | |
| | ≥ 10” < 15” | 3 | |
| | ≥ 15” < 21” | 4 | |
| | ≥ 21” < 30” | 5 | |
| | ≥ 30” | 6 | |
| Diameter (inch) – large wastewater systems | < 10” | 1 | |
| | ≥ 10” < 15” | 2 | |
| | ≥ 15” < 24” | 3 | |
| | ≥ 24” < 36” | 4 | |
| | ≥ 36” < 60” | 5 | |
| | ≥ 60” | 6 | |
| Depth (ft),or | < 6’ | 1 | Economic, Social |
| | ≥ 6’ < 10’ | 2 | |
| | ≥ 10’ < 14’ | 3 | |
| | ≥ 14’ < 18’ | 4 | |
| | ≥ 18’ < 24’ | 5 | |
| | ≥ 24’ | 6 | |
| Relative Network Position of Pipe | ≤ 10 | 1 | Social |
| | 11 – 30 | 2 | |
| | 31 – 70 | 3 | |
| | 71 – 120 | 4 | |
| | 121 – 150 | 5 | |
| | > 150 | 6 | |
| Class of Road | Unpaved Road | 1 | Economic, Social |

| CoF Factor | Description | CoF Score | Criteria |
|---|---|---|---|
| | Minor Local Road | 2 | |
| | Major Local Road | 3 | |
| | Collector Road | 4 | |
| | Arterial / Building / Pool | 5 | |
| | Highway / Waterway / Railroad | 6 | |
| Distance from Environmentally Sensitive Features | ≥ 150 LF | 1 | Environmental |
| | 100 to 150 LF | 2 | |
| | 75 to 100 LF | 3 | |
| | 50 to 75 LF | 4 | |
| | 25 to 50 LF | 5 | |
| | < 25 LF | 6 | |
| Distance between Downstream Pipe to a Service Lateral for Customer with High Importance | ≥ 20,000 LF | 1 | Social |
| | 15,000 to 20,000 LF | 2 | |
| | 10,000 to 15,000 LF | 3 | |
| | 5,000 to 10,000 LF | 4 | |
| | 1,000 to 5,000 LF | 5 | |
| | < 1,000 LF | 6 | |
| Accessibility of Pipe | On Right-of-Way – no traffic control | 1 | Economic, Social |
| | On Right-of-Way – with traffic Control | 2 | |
| | On public land with vehicle access | 3 | |
| | On public land without vehicle access | 4 | |
| | On private land without vehicle access | 5 | |
| | Behind or under built structures and no vehicle access | 6 | |

The scoring system will have flexibility by allowing adjustment in how each criterion is weighted, and accounting for special circumstances which may be difficult to quantify. The prioritization model will serve as a tool that helps PAWC develop a schedule for planned rehabilitation and replacement of eligible property in order to maintain safe, reliable service to existing customers.

The overall risk associated with a failure event is a function of the LoF event and its consequence. Not all highly probable events need the same attention, since they may not have equally high consequence (impact) to the community.

Increased LoF should result in more aggressive maintenance and repair. Increased CoF should result in increased assessment. This approach provides the basis for an economically efficient, balanced and proactive assessment, maintenance and replacement/rehabilitation program.

This risk-based management approach allows for proactive planning. For example, pipelines serving critical community services, such as hospitals and other critical care facilities, can be proactively assessed and managed to minimize potential service disruptions. To reduce the impact to customers and save on mobilization and demobilization costs, project can be grouped together by geographic proximity and similar risk rankings. Likewise, pipeline construction work

can be coordinated with other roadwork such as road restoration, detours and other utility work. Improvement projects can be better scheduled by area to achieve unit cost savings rather than reactive projects scattered across a system.

In general, preference will be given to those systems with high I&I, and older systems with aging lift stations, brick manholes, and vitrified clay pipe. Some parameters may impact just one of the three triple bottom line categories, while some may have varying degrees of impacts. An example of this would be a sewer line that crosses a waterway. This clearly can impact the environmental aspect of the triple bottom line, considering the likelihood for contamination of the stream. There may also be some social impacts with respect to an interruption in recreational use of the waterway, and economic impacts that result from penalties and fines.

## Section 3 – Location of Eligible Property

Below are brief summaries of each wastewater system, including the types of eligible property and strategies for accelerated rehabilitation and replacement in each system.

PAWC is conducting a multi-sensor robotic inspection for all gravity pipelines of its various wastewater collection systems over the next three years. Some gravity pipelines that have been recently inspected will not be re-inspected, but the majority of gravity pipelines of recently acquired wastewater systems have either old CCTV inspection records or no inspection records. This statewide multi-sensor robotic inspection program will collect condition assessment data allowing each gravity pipe to be assigned a NASSCO score. In addition, pipe and manhole attribute data will be collected to improve GIS records and improve hydraulic model accuracy. The robotic inspection captures GPS data, including the coordinates of every service lateral flowing into the gravity system, which will improve PAWC's ability to respond to PA one-call requests.

The strategic approach for all gravity collection systems is to utilize a condition-based assessment, hydraulic capacity information, and GIS-based system attributes to prioritize accelerated replacement or rehabilitation work based on a triple bottom line risk assessment methodology using industry standard LoF and CoF factors.

### Central Pennsylvania

#### Fairview North

The Fairview North wastewater system is located in York County and provides wastewater collection and treatment service to approximately 1,498 mostly residential customers. The collection system serves portions of Fairview Township. PAWC purchased the assets of the Fairview North system in 2015.

The Fairview North collection system consists of approximately 165,600 LF of gravity main, ranging in diameter from 6-inch to 12-inch; and approximately 18,844 LF of force main, ranging in diameter from 1.5-inch to 12-inch. The collection system was originally installed around 1950. The system includes 11 lift stations. The approximately 869 manholes are brick or concrete. The system includes VCP, asbestos cement (AC), and PVC gravity mains. Force main material includes ductile iron, AC, and PVC.

The Fairview North system includes one WWTP with a permitted annual average daily flow of 1.206 MGD, which is the basis for the plant's hydraulic capacity. The plant is operated under NPDES permit PA-0081868. The 2017 annual average daily flow into the plant was 0.304 MGD, and the ratio of 3 consecutive month maximum to annual average was 1.13. During wet weather events, the system can experience flows up to five times the annual average.

Previous collection system investigations for the Fairview North wastewater system included some CCTV investigation in the collection system. This investigative work led to the 2017 project of lining 5,100 feet of 8-inch and 10-inch gravity trunk lines along Old York Road in Fairview Township, and 2,775 feet of 8-inch gravity trunk lines in 2018. Flow in the subbasins that service the Green Lane Farms area will be the initial focus of the rehabilitation efforts. This

area contains approximately 42,200 LF of predominantly concrete gravity mains and appears to be more significantly impacted by I&I during wet weather events than other areas in the system.

Fairview South

The Fairview South wastewater system is located in York County and provides wastewater collection and treatment service to approximately 2,498 mostly residential customers. The collection system serves portions of Fairview Township. PAWC purchased the assets of the Fairview South system in 2015.

The Fairview South collection system consists of approximately 198,722 LF of PVC gravity main, ranging in diameter from 8-inch to 10-inch; and approximately 13,068 LF of 8-inch PVC force main. The collection system was originally installed around 1992. The system includes 6 lift stations. The approximately 1,050 manholes are concrete.

The Fairview South system includes one WWTP with a permitted annual average daily flow of 0.94 MGD, which is the basis for the plant's hydraulic capacity. The plant is operated under NPDES permit PA-0082589. The 2017 annual average daily flow into the plant was 0.509 MGD, and the ratio of 3 consecutive month maximum to annual average was 1.05. During wet weather events, the system can experience flows up to three times the annual average.

Based on system age and observed wet weather flows, the collection is assumed to be in relatively good condition. However, some I&I rehabilitation projects are anticipated over the 5 year planning horizon. Wet weather flows in the subbasins that flow to the Corn Hill pump station and the Fairmont pump station appear to be more significant than other areas in the system and will be the initial focus of the investigative and rehabilitation work.

Franklin

The Franklin wastewater system is located in Adams County and provides wastewater collection and treatment service to portions of the Townships of Franklin, Hamiltonban, and Highland. The system consists of approximately 348 mostly residential customers. PAWC purchased the assets of the Franklin system in 2013 and neighboring Hamiltonban system in 2014. Hamiltonban was interconnected with the Franklin system in 2016.

The Franklin collection system consists of approximately 55,239 LF of mostly PVC and some VCP gravity main, ranging in diameter from 8-inch to 10-inch, and 12,423 LF of 6-inch PVC force main. Most of the collection system was installed in 2004 or later; the Hamiltonban portion was originally constructed around 1972. Most of the approximately 198 manholes are concrete.

Included in the above footages of gravity main is a stand-alone area known as the "sand mound," which serves 14 homes and was installed in 2004. The sand mound area consists of 6-inch PVC gravity mains that discharge into two 1,500 gallon septic tanks with an 1,800 gallon final settling tank, a lift station, and a 10,000 square-foot elevated sand mound. At this time, there are no plans to connect the sand mound area to the Franklin collection system.

The system contains one WWTP with a permitted annual average daily flow of 0.2 MGD, which is the basis for the plant's hydraulic capacity. The plant is operated under NPDES permit PA-

00248088. The 2017 annual average daily flow into the plant was 0.074 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.12. There is one lift station that was installed in 2016 to deliver flows from Hamiltonban to the Franklin WWTP. The WWTP is not expected to be hydraulically or organically overloaded in the next five years.

Rehabilitation projects will focus on the older Hamiltonban subbasin that consists of VCP and is impacted by I&I during wet weather events. For the newer areas within the Franklin subbasin, PAWC plans to complete repairs and rehabilitation projects on an as-needed basis.

McEwensville

The McEwensville wastewater system is located in Northumberland County and provides wastewater collection and treatment service to approximately 133 mostly residential customers. The collection system serves McEwensville Borough. PAWC purchased the assets of the McEwensville system in 2015.

The McEwensville collection system consists of approximately 12,669 LF of 8-inch and 10-inch PVC gravity main, and 1,242 LF of 2-inch to 3-inch PVC force main. The collection system was originally constructed in 1984. The approximately 57 manholes are concrete.

The system contains one WWTP with a permitted annual average daily flow of 0.045 MGD, which is the basis for the plant's hydraulic capacity. The plant is operated under NPDES permit PA-0111414. The 2017 annual average daily flow into the plant was 0.013 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.23. The system includes 4 lift stations.

PAWC plans to rehabilitate or replace all lift stations located in the collection system, including the lift station at the headworks of the WWTP. In addition, PAWC plans to complete targeted rehabilitation work in the collection system.

New Cumberland

The New Cumberland wastewater system is located in Cumberland County and currently provides wastewater collection and treatment service to approximately 3,066 mostly residential and commercial customers in New Cumberland Borough. PAWC purchased the assets of the New Cumberland system in 2016.

The collection system consists of approximately 144,692 LF of gravity, mostly VCP and some PVC ranging in diameter from 6-inch to 42-inch diameter; and approximately 6,898 LF of force main, 4-inch to 8-inch diameter. The collection system includes 3 lift stations. The collection system was originally constructed around 1950. Most of the gravity collection system consists of vitrified clay pipe with concrete manholes.

The New Cumberland system includes one WWTP with a permitted annual average daily flow of 1.25 MGD, which is the basis for the plant's hydraulic capacity. The plant is operated under NPDES permit PA-0026654. The 2017 annual average daily flow into the plant was 0.453 MGD, and the ratio of 3 consecutive month maximum to annual average was 1.12. During wet weather events, the system can experience flows up to ten times the annual average.

Previous collection system investigations included some CCTV investigation. Some lining projects were completed in the subbasin that flows by gravity to the Southeast lift station. According to the lift station flows, they have had some effect on reducing the amount of I&I in the subbasin, however an additional 1,452 feet of 8-inch and 10-inch VCP trunk lines are planned to be lined in 2018.

The Southeast lift station subbasin contains approximately 56,900 LF of predominantly vitrified clay pipe collection mains, ranging from 8-inch to 15-inch diameter, and is impacted by I&I during wet weather events. During wet weather events, the Southeast lift station subbasin appears to be more significant impacted with I&I than other areas in the system and will be the initial focus of rehabilitation efforts.

## Northeastern Pennsylvania

### Blue Mountain Lake

The Blue Mountain Lake (BML) wastewater system is located in Monroe County and currently provides wastewater collection and treatment service to approximately 830 mostly residential customers in portions of Stroud and Smithfield Townships. PAWC purchased the assets of the BML system in 2005.

The BML collection system consists of about 68,250 LF of low pressure sewer main, and does not contain any gravity or force main. The low pressure main was installed in 1990 or later, and consists of PVC main ranging in diameter from 2-inch to 6-inch. The system includes 6 lift stations.

The system contains one WWTP with a permitted annual average daily flow of 0.183 MGD. The plant is operated under NPDES permit PA-0062464. The 2017 annual average daily flow into the plant was 0.0919 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.039. The WWTP is not currently nor expected to be hydraulically or organically overloaded in the next five years. The collection system is in relatively good condition and experiences little to no I&I.

PAWC plans to continue to assess the condition of the system, and complete targeted rehabilitation work as needed. BML lift stations will be continuously evaluated, which may result in improvement or replacement projects for the purpose of increasing reliability of service.

### Lehman Pike

The Lehman Pike (LP) wastewater system serves portions of Middle Smithfield Township in Monroe County, and portions of Lehman Township in Pike County. LP provides wastewater collection and treatment service to approximately 2,714 mostly residential customers, mostly in Pike County. PAWC purchased the assets of the LP system in 2002.

The LP collection system consists of approximately 268,447 LF of low pressure main, and does not contain any gravity or force main. The low pressure main was installed in 1980 or later, and

consists of PVC main ranging in diameter from 1-inch to 10-inch. Each customer owns and maintains their own grinder pump and pit installation. The system includes 13 lift stations.

One of the lift stations owned by PAWC is located at an aerated equalization basin, which receives flow from the Timothy Lakes Campground. The Campground maintains its own collection system.

The LP system contains one WWTP with an NPDES permitted discharge of 0.75 MGD. The plant is operated under NPDES permit PA-0060640. The WWTP has an average day design flow capacity of 0.532 MGD. The 2017 annual average daily flow into the plant was 0.208 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.090. The WWTP is not currently nor expected to be hydraulically or organically overloaded in the next five years.

The LP collection system is in relatively good condition and experiences low I&I. Since the acquisition in 2002, PAWC has completed rehabilitation and replacement work at most of the lift stations. Over the next few years, work will focus on replacing poor quality original lateral installations. Additionally, PAWC plans to continue to assess the overall condition of the system, and complete targeted rehabilitation and improvement work as needed.

Marcel Lake

The Marcel Lake (ML) wastewater system is located in Pike County and provides wastewater collection and treatment service to approximately 354 mostly residential customers in the Marcel Lake Estates development in Delaware Township. In 2013, PAWC purchased the assets of the Marcel Lake system from the Clean Treatment Sewage Company.

The original gravity collection system was CCTV inspected in 2013 and found to be in extremely poor condition with about 82 percent of mains having severe or immediate attention deficiencies. In addition, about 39 percent of the gravity collection system was found to be installed with inadequate slope or depth. All lift stations were found to be of inadequate design and in very poor condition.

The system contains one WWTP with a permitted annual average daily flow of 0.100 MGD, which is the basis for the plant's hydraulic capacity. The plant is operated under NPDES permit PA-0060313. The 2017 average daily flow into the plant was 0.0897 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.630. In 2017, the peak three month hydraulic loading to the plant was 0.145 MGD which exceeds the WWTP capacity. Based on this historic data, the WWTP is still considered to be in hydraulic overload condition, More recent data is expected to change this designation, as is described below. The WWTP is not currently nor expected to be organically overloaded in the next five years.

In the first quarter of 2018, the replacement gravity collection system was placed into service. Data show the gravity system replacement to be very successful in reducing I&I. The ML system experiences dramatically lower WWTP influent sewage flow under all conditions. During periods of dry weather, the ML system experiences WWTP influent flows that are lower than the output of the water system (approximately 0.035 MGD). In periods of rainfall in excess of 5 inches, the ML system experiences flows rising only to 0.077 MGD. Past rainfall events of lesser magnitude have caused overflows in the collection system and have resulted in WWTP influent flows greater than 0.450 MGD. Data for a full year of operation will be analyzed in the

annual Chapter 94 report filing with the PaDEP. After the Chapter 94 report is submitted to PaDEP, PAWC believes that PaDEP will permit planning module approval to resume.

In its current state, the Marcel Lake collection system consists of approximately 30,732 LF of 8-inch and 12-inch PVC gravity main, and approximately 28,597 LF of PVC low pressure main, ranging in diameter from 3-inch to 4-inch. The newly installed gravity system includes three submersible lift stations whereas the previous layout design required 10 lift stations. The gravity collection area includes approximately 130 manholes. The low pressure system was originally installed in the 1980s or later.

Pocono

The Pocono wastewater system is located in Monroe County and provides wastewater collection and treatment service to approximately 3,689 mostly residential customers in the Pocono Country Place residential development within Coolbaugh Township. PAWC purchased the assets of the PCP system in 1995.

The Pocono collection system consists of approximately 150,648 LF of gravity main, ranging in diameter from 4-inch to 30-inch; 99,795 LF of low pressure main, ranging in diameter from 1-inch to 8-inch, about 5,400 LF of which is 4-inch and 6-inch diameter force main. The collection system was installed in 1975 or later. The system includes 2 lift stations. The force mains are ductile iron; the majority of low-pressure and gravity mains are PVC; and the approximately 777 manholes are concrete.

The system contains one WWTP with a permitted annual average daily flow of 1.256 MGD, which is the basis for the plant's hydraulic capacity. The plant is operated under NPDES permit PA-0060097. The 2017 annual average daily flow into the plant was 0.555 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.21. The WWTP is not currently nor expected to be hydraulically or organically overloaded in the next five years.

An aggressive I&I abatement program has been implemented. Between 2013 and 2015, CCTV inspection was completed for the entire gravity collection system. Based on the inspection results, during the subsequent three year period PAWC rehabilitated a portion of the gravity collection system, primarily utilizing trenchless rehabilitation methods where feasible, and rehabilitated manholes through pressure testing, grouting, and lining. Work completed has corrected numerous deficiencies in an effort to reduce I&I. However, the PCP collection system still experiences I&I due to high groundwater, aging grinder pump systems, roof drain cross connections, and cracks of the collection system mains and service laterals. PAWC plans to maintain an accelerated I&I abatement program, and to inspect the entire collection system. Furthermore, to improve I&I monitoring, PAWC plans to add metering pits to planned pipeline replacement projects in strategic locations for permanent flow monitoring in lieu of portable area-velocity meters.

Scranton

The Scranton combined sewer system (formerly Scranton Sewer Authority) is located in Lackawanna County and provides sanitary and combined sewage collection and treatment

service to approximately 29,551 customers, comprised of 26,735 residential, 2,723 commercial, 27 industrial customers, and 66 other / institutional / bulk customers. The collection system services the City of Scranton and Borough of Dunmore. PAWC's Scranton Wastewater System also provides conveyance and treatment of wastewater from portions of the adjacent Boroughs of Taylor, Dickson City, and Moosic through inter-municipal agreements with the Lower Lackawanna Valley Sanitary Authority (LLVSA) and the Lackawanna River Basin Sewer Authority (LRBSA). PAWC purchased the assets of Scranton Sewer Authority in 2016.

The Scranton Sewer Authority entered into a Consent Decree with the Environmental Protection Agency (EPA) and the PaDEP on January 31, 2013. The Consent Decree was amended with the approval of the District Court to substitute PAWC as the successor to the Scranton Sewer Authority effective as of the date of closing on the Company's acquisition from the Scranton Authority, which was December 29, 2016. Scranton Sewer Authority adopted a Long Term Control Plan (LTCP), that was approved by the PaDEP and EPA, for the purpose of reducing combined sewer overflows into the Lackawanna River and its tributaries from the Scranton Wastewater System service area in accordance with the requirements of the Clean Water Act. Under the amended Consent Decree, PAWC is required to implement the approved LTCP.

The LTCP was adopted in 2012. The ultimate goal of the LTCP is to attain water quality standards within the receiving streams of the Scranton Wastewater System's seventy-eight (78) CSO facilities. A variety of measures were evaluated to control the frequency and duration of the CSO events. With the use of hydraulic modeling, the primary control measures selected include in-line and off-line storage systems, strategic sewer separation, CSO regulator adjustments, and interceptor capacity improvements. Due to the large number of CSO facilities in the system, and the associated number of identified control projects, the LTCP will be implemented over a twenty-five (25) year period. Using a ranking system, which took into account the "triple bottom line" (financial, social, and environmental) attributes of each project, the LTCP CSO control projects were ranked and then divided into five implementation phases, with higher ranking projects generally placed in the earlier phases. The LTCP has a final completion date of December 1, 2037, with a current total estimated cost of approximately $140M.

The Scranton wastewater collection system consists of approximately 1,739,568 LF (329 miles) of gravity collection main ranging in diameter from 4-inch to 108-inch, approximately 68 percent (224 miles) of which is combined sewer. The collection system includes 12,032 LF of force main ranging in diameter from 3-inch to 12-inch inch. The 9,055 manholes are mostly brick with some concrete. Most of the collection system consists of 8-inch to 24-inch vitrified clay, reinforced concrete, and PVC pipe that is about 50 to 60 years old. Some pipes are over 100 years old. The system includes 7 lift stations.

Combined sewage is conveyed to CSO regulator chambers prior to connecting with an interceptor sewer. Under high wet-weather flow conditions that exceed the capacities of downstream facilities, the CSO regulators direct combined sewage to the receiving streams. Including the WWTP bypass, the Scranton collection system contains 78 permitted CSO discharge points: seventy (70) CSO regulator structures / outfalls, four (4) diversion manholes, and four (4) pumping station overflow outlets.

The main interceptor sewer for the Scranton system runs parallel to the Lackawanna River, which generally flows through the middle of Scranton City. The main interceptor is

approximately 5.8 miles in length, starting as a 24-inch diameter pipe at the upstream end of the system at the Leggetts Creek CSO Regulator and increasing to a 78-inch diameter pipe at the headworks to the Scranton WWTP. The 78-inch diameter portion of the main interceptor has a peak flow capacity of about 110 MGD compared to the existing peak capacity of the Scranton WWTP of 39 MGD. The main interceptor averages about 30 feet deep at its downstream end and crosses the Lackawanna River at three locations.

The Scranton system includes one WWTP with annual average daily flow hydraulic capacity of 20 MGD. Improvements are currently underway to comply with the PaDEP / EPA Combined Sewer Overflow Long Term Control Plan and NPDES permit in order to upgrade the BNR process to treat up to 46 MGD with 14 MGD biological nutrient reduction bypass flow, for a peak flow of 60 MGD. The plant discharges to the Lackawanna River under NPDES permit PA-0026492A-1. The 2017 annual average daily flow into the plant was 12.00 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.29. The WWTP is not in a current hydraulic or organic overload condition, nor is it projected to be within the next five years.

Preventative maintenance activities are continually performed by PAWC staff to optimize the operation of the collection system and to minimize the occurrences of blockages. The strategy for accelerated replacement and rehabilitation of aging infrastructure in the collection system will be a targeted, multi-year process. PAWC plans to use an approach that includes consent order compliance, long-term control plan and nine minimum control measures to address combined sewer overflows; and CCTV inspection of mains and laterals, multi-sensor robotic inspection, and hydraulic model development for the main replacement and rehabilitation program.

Using continuous information from PAWC collection system staff, including CCTV inspection results and multi-sensor robotic inspection of the system, PAWC plans to address immediate concerns and known areas of deficiency within the first 1-2 year period. These projects will generally include full asset replacement due to identified significant structural deficiencies, hydraulic limitations or restrictions (reverse slope, sage, etc.), and associated manhole surcharging and overflow conditions in the project areas. More specifically, over 9,000 LF of sewer main is anticipated to be replaced in 2019, including over 4,000 LF of interceptor main that currently experiences manhole surcharging and overflows during wet weather events. Other near term projects include replacement of sewer mains that have experienced structural failure as discovered via hydraulic issues and/or during regular cleaning, inspection, and condition assessment activities. Over the following years, the remaining areas of the system will continue to be inspected with the goal of accelerating asset renewal and rehabilitation.

The 7 lift stations are in good condition and are cleaned / maintained on a regular basis by PAWC staff. Two have been upgraded within the past two years, and one lift station is being upgraded in 2018.

## Southeastern Pennsylvania

### Coatesville

The Coatesville wastewater system is located in Chester County and provides wastewater collection and treatment service to approximately 6,226 customers, comprised of 5,852

residential customer connections, 352 commercial, 2 industrial, 16 other / institutional, and 4 bulk municipal customers. The collection system serves the City of Coatesville, the Borough of Parkesburg and portions of the Borough of South Coatesville and portions of the Townships of Caln, East Fallowfield, Highland, Sadsbury, Valley, West Caln, and West Sadsbury. The system includes the following bulk municipal customers: Caln, Sadsbury, Valley, and West Brandywine Townships. PAWC purchased the assets of the Coatesville system in 2001.

The Coatesville collection system consists of approximately 352,945 LF of gravity main, ranging in diameter from 4-inch to 42-inch; and approximately 93,605 LF of force main, ranging in diameter from 2-inch to 12-inch. The collection system was installed in the 1930s or later. The system includes 17 lift stations. The approximately 1,670 manholes are brick or concrete. The system includes clay, PVC, and ductile iron gravity main. Force main material includes ductile iron and PVC.

The system contains one WWTP with a permitted annual average daily flow of 7.0 MGD, which is the basis for the plant's hydraulic capacity. The plant is operated under NPDES permit PA-0026859. The 2017 annual average daily flow into the plant was 3.698 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.161. The WWTP is not currently nor expected to be hydraulically or organically overloaded in the next five years.

Since the 2001 acquisition, PAWC has maintained a regular program of monitoring collection system conditions. An aggressive I&I abatement program has been implemented to minimize extraneous flows into the system. The collection system is divided into ten subbasins, from which additional subbasins are identified and prioritized for the I&I monitoring and abatement program. Trenchless technologies, such as cured-in-place liners, have been an important tool to complete the rehabilitation work in a cost effective, safe and reliable manner. Work has continued in the high priority subbasins since the mid 1990's.

The general strategy to maintain an accelerated pace of replacement and rehabilitation of eligible property is to inspect portions of the collection system each year, and use the inspection results to identify projects to be completed the following year. The entire collection system was inspected in 2005, and a hydraulic model was developed. Some new additions to the system have not been inspected. The original inspection was completed over 13 years ago; therefore, some areas in critical subbasins have been re-inspected over the past two years. PAWC plans to continue inspections in order to maintain an accelerated I&I abatement program and continue to assess the condition of the system.

The Coatesville District has been under a regulatory requirement of a Connection Management Plan (CMP) since 2005. The treatment facility and restricted pipe segments of the interceptors have been replaced over the years, but two remaining projects of the West End Truck Line Phases 3-6 and the Parkesburg Pump Station Phase 2 Improvements are planned to move to construction in 2019.

## Western Pennsylvania

### Clarion

The Clarion wastewater system is located in Clarion County and provides wastewater collection and treatment service to approximately 2,157 mostly residential customers. The collection

system serves Clarion Borough, and portions of Monroe Township, Clarion Townships, and Strattanville Borough. Strattanville Borough is a bulk municipal customer that owns and maintains its own wastewater collection system. PAWC purchased the assets of the Clarion system in 2008.

The Clarion collection system consists of approximately 200,860 LF of gravity main, ranging in diameter from 4-inch to 36-inch; and approximately 36,293 LF of force main, ranging in diameter from 2-inch to 10-inch. The collection system was installed in the 1930s or later. The system includes 6 lift stations. Most of the approximately 930 manholes are brick, and the remaining ones are concrete. Most of the gravity collection mains are clay, and the remaining ones are PVC. Force mains are PVC, ductile iron, and HDPE. A recently installed 6-inch HDPE force main, which serves the Clarion-Limestone School District, accounts for most of the force main length in the Clarion system.

The system contains one WWTP with a permitted annual average daily flow of 2.9 MGD. The plant hydraulic capacity was increased in 2015 after WWTP improvements were completed. The plant is operated under NPDES permit PA-0029491. The 2017 annual average daily flow into the plant was 1.26 MGD, and the ratio of the 3 consecutive month maximum to annual average flow was 1.25. System improvements were completed, which include wet weather storage basins at the Liberty lift station and the WWTP. Prior to completion of system improvements, during excessive wet weather, bypasses would occur at the WWTP and SSOs would occur at the WWTP and within the collection system. In 2017, the system experienced no SSOs. The WWTP is not currently nor projected to be hydraulically or organically overloaded in the next five years.

Since the 2008 acquisition, PAWC has implemented an aggressive I&I abatement program to correct defects in priority subbasins of the collection system that were potential sources of I&I. Work has included main line, manhole, and lateral rehabilitation, as well as upgrades to lift stations. Trenchless technologies, including cured-in-place liners and pipe-bursting, have been an important tool to complete the rehabilitation work in a cost-effective, safe and reliable manner. PAWC has worked with Clarion University to address I&I issues in the University's collection system. The University hired a consultant in 2015 and has reported improvements to address the problems. PAWC plans to continue to work with Clarion University to minimize the impact of I&I from their collection system. Most of the inspection was completed over 12 years ago, and PAWC plans to re-inspect the targeted subbasins as well as other areas of the collection system. Most of the lift stations are in good condition and are inspected regularly and maintained as needed. The Mays Lift Station is in need of improvement and is scheduled for replacement in 2020.

I&I remains an issue in high priority subbasins in the collection system as well as several other subbasins, which will need to be addressed to prevent future hydraulic overload conditions. PAWC plans to maintain an accelerated I&I abatement program and inspect the entire collection system over the next three years. The basins that flow to the Liberty Lift Station will be targeted over the next several years due to significant I&I within the basins. Pipe segments consisting of VCP pipe with known I&I issues and root infiltration will be replaced or rehabilitated. The 2019 projects will replace VCP pipe in heavily wooded areas near the Liberty Lift Station that have major root infestation / blockage and I&I issues. For 2020, in addition to the Mays Lift Station project, a section of sewer main in the Applewood Valley development is targeted for replacement.

Claysville

The Claysville wastewater system is located in Washington County and currently provides wastewater collection and treatment service to approximately 503 mostly residential customers in the Borough of Claysville and portions of Donegal Township. PAWC purchased the assets of the Claysville system in 2008.

The Claysville collection system consists of approximately 62,082 LF of gravity main, 8-inch and 10-inch diameter; and approximately 1,149 LF of 3-inch force main. The majority of the collection system was installed in 1983, with two small extensions installed since that time. All mains are PVC, and all of the approximately 342 manholes are concrete. The system includes one lift station which serves the I-70 highway rest stop along with a few residential connections.

The system contains one WWTP with a permitted annual average daily flow of 0.16 MGD, which is the basis for the plant's hydraulic capacity. The plant is operated under NPDES permit PA-0093165. The 2017 annual average daily flow into the plant was 0.097 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.21. The WWTP is not currently nor projected to be hydraulically or organically overloaded in the next five years.

A sewer system evaluation study was conducted in 2008. Based on the results of this study, it was determined that the collection system is in relatively good condition. Some defective areas were identified and corrective actions were completed. After corrective actions, the collection system remains affected by I&I. In 2015, a wet weather storage tank was constructed at the WWTP to minimize sanitary sewer overflows due to I&I. Over the next three years, PAWC plans to re-inspect the entire collection system. PAWC plans to assess the condition of the system, and complete selected / limited rehabilitation work as needed based on findings of the investigative work.

Koppel

The Koppel wastewater system is located in Beaver County and provides wastewater collection and treatment service to approximately 351 mostly residential customers in Koppel Borough. PAWC purchased the assets of the Koppel system in 2013.

The Koppel system consists of approximately 25,909 LF of gravity main, ranging in diameter from 4-inch to 15-inch. The system was installed in the 1920s or later. Most of the gravity main is vitrified clay, with some PVC. The approximately 87 manholes are composed of brick. There are no lift stations or force mains in the Koppel collection system.

The system contains one WWTP with a permitted annual average daily flow of 0.24 MGD, which is the basis for the plant's hydraulic capacity. It is operated under NPDES permit PA-0023434. The 2017 annual average daily flow into the plant was 0.191 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.20. The WWTP is not currently nor expected to be hydraulically or organically overloaded in the next five years.

A general inspection was completed for all manholes in the Koppel system. Portions of the collection system have been inspected with CCTV. Based on the inspection results, several projects have been identified to address NASSCO grade 4 and 5 defects.

PAWC plans to inspect the entire gravity collection system in order to continue an accelerated I&I abatement program. Pipe replacement and rehabilitation projects will be implemented in the areas that contain significant defects with the higher priority basins being targeted first. Some of the initial projects in 2019 and 2020 include replacement of VCP pipe near Koppel Steel with major defects and alignment / slope issues along with rehabilitation of other VCP pipe within the priority basins.

McKeesport

The McKeesport combined sewer system is located in Allegheny County and provides wastewater and combined sewage collection and treatment service to approximately 8,096 mostly residential customers and commercial with some other / institutional customers. The collection system does not directly serve any industrial customers. The McKeesport collection system and regional WWTP also supply customers in eight surrounding municipalities through inter-municipal agreements, which include the Boroughs of White Oak, East McKeesport, Lincoln, Liberty, Versailles, Glassport, and the Townships of North Versailles and Elizabeth. PAWC purchased the assets of the McKeesport system in 2017.

The McKeesport collection system consists of approximately 690,280 LF of gravity main, ranging in diameter from 4-inch to 112-inch. Approximately 89 percent of gravity main is combined sewer. The McKeesport collection system includes approximately 32,731 LF of force main, ranging in diameter from 8-inch to 36-inch. The collection system was installed in the 1900 or later. The interceptor lines were installed in the 1950s or early 1960s to intercept flow that was going into the river and direct flow to the WWTP. The McKeesport collection system includes 9 lift stations. Most of the approximately 3,236 manholes are brick. Most of the gravity collection mains are vitrified clay pipe. Force main materials include cast iron and PVC. The system includes 4 diversion chambers / manholes and 26 combined sewer overflow outfalls.

The McKeesport system contains one WWTP with a permitted annual average daily flow of 13.0 MGD, which is the basis for the plant's hydraulic capacity. It is operated under NPDES permit PA-0026913. The 2017 annual average daily flow into the plant was 11.41 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.23. The WWTP is not currently nor expected to be hydraulically or organically overloaded in the next five years.

The City of McKeesport area of the collection system has fewer inspection records compared to Port Vue Borough. The strategy for accelerated replacement of aging infrastructure in the McKeesport collection system will be a pragmatic, targeted, and a multi-year process. PAWC plans to use a holistic approach that includes consent order compliance, long-term control plan and nine minimum control measures to address combined sewer overflows, flow monitoring, lateral inspection and GPS surveying, hydraulic model development, and CCTV inspection. Using continuous information from PAWC collection staff, and information from multi-sensor robotic inspections, PAWC plans to initially address immediate concerns and known areas of deficiency, followed by accelerated asset renewal / replacement based on future inspection results.

In order to comply with the PaDEP & the US EPA requirements, a LTCP was prepared by McKeesport. The conclusion of the study determined that several capital projects were to be constructed to comply with regulatory wet weather flow policies. These projects were

completed prior to acquisition by PAWC. PAWC is presently monitoring flows to verify the completed projects have met the goal of the LTCP.

The Port Vue Borough portion of the McKeesport collection system is located mostly west of the Youghiogheny River. Upon acquisition of the McKeesport System, PaDEP issued a consent order that the Grade 4 & 5 defects found in a prior CCTV inspection were to be repaired within 24 months of closing. The strategy for the Port Vue area of the McKeesport system is to initially rely on previous inspection records to identify a prioritized list of projects for accelerated rehabilitation and replacement. The list will be verified by multi-sensor robotic inspections in 2018 with the rehabilitation starting 2019.

Dravosburg

The Dravosburg combined sewer system is located in Allegheny County and provides sanitary and combined sewage collection and treatment service to approximately 625 mostly residential customers. The collection system serves the Borough of Dravosburg. PAWC purchased the assets of the Dravosburg system in 2017.

The Dravosburg collection system consists of approximately 52,148 LF of gravity main, ranging in diameter from 8-inch to 72-inch. Approximately 62 percent of the gravity main is combined sewer. The Dravosburg collection system includes approximately 1,219 LF of 6-inch force main. The collection system was installed in the 1900s or later. The system includes one lift station and one CSO outfall. Most of the approximately 308 manholes are brick. Most of the gravity collection mains are vitrified clay pipe.

The system contains one WWTP with a permitted annual average daily flow of 0.48 MGD, which is the basis for the plant's hydraulic capacity. It is operated under NPDES permit PA-0028401. The 2017 annual average daily flow into the plant was 0.201 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.40. The WWTP is not currently nor expected to be hydraulically or organically overloaded in the next five years.

The strategy for accelerated rehabilitation and replacement of existing infrastructure in the Dravosburg collection system will be similar to other recently acquired combined sewer systems such as McKeesport. The entire collection system will be inspected with multi-sensor robotics with condition and data attributes collected for use in developing a prioritized list of projects for rehabilitation or replacement of aging infrastructure. PAWC plans to initially address immediate concerns and known areas of deficiency, followed by accelerated asset renewal / replacement based on future inspection results.

Duquesne

The Duquesne combined sewer system is located in Allegheny County and provides sanitary and combined sewage collection and treatment service to approximately 1,840 mostly residential customers. The collection system serves the City of Duquesne and approximately 17 residential customers in West Mifflin Borough. PAWC purchased the assets of the Duquesne system in 2017.

The Duquesne collection system consists of approximately 184,560 LF of gravity main, ranging in diameter from 8-inch to 80-inch. Approximately 68 percent of the gravity main is combined sewer. There are no pumping stations or force mains in the Duquesne collection system. The Duquesne system includes four CSO structures. The collection system was installed in the 1900s or later. Most of the approximately 1,125 manholes are brick. Most of the gravity collection mains are vitrified clay pipe.

The system contains one WWTP with a permitted annual average daily flow of 2.0 MGD, which is the basis for the plant's hydraulic capacity. It is operated under NPDES permit PA-0026981. The 2017 annual average daily flow into the plant was 0.821 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.35. The WWTP is not currently nor expected to be hydraulically or organically overloaded in the next five years.

The strategy for accelerated rehabilitation and replacement of existing infrastructure in the Duquesne collection system will be similar to Dravosburg. The entire collection system will be inspected with multi-sensor robotics with condition and data attributes collected for use in developing a prioritized list of projects for rehabilitation or replacement of aging infrastructure. PAWC plans to initially address immediate concerns and known areas of deficiency, followed by accelerated asset renewal / replacement based on future inspection results.

Paint-Elk

The Paint-Elk wastewater system is located in Clarion County and provides wastewater collection and treatment service to approximately 660 mainly residential customers. The collection system serves Shippenville Borough and portions of the Townships of Elk and Paint. PAWC purchased the assets of the Paint-Elk system in 2014 and acquired the Shippenville Borough system in 2015.

The Paint-Elk collection system consists of approximately 89,425 LF of gravity main, ranging in diameter from 4-inch to 18-inch; and approximately 21,310 LF of force main, ranging in diameter from 1.25-inch to 8-inch. The collection system was installed in the 1960s or later. The system includes 5 lift stations. Most of the approximately 432 manholes are concrete. The majority of the gravity collection mains are PVC. Force main material includes PVC and HDPE. A lift station and sewer main extension was completed in 2017 to interconnect the Shippenville system to the Paint-Elk system. The Shippenville system is now a basin within the Paint-Elk system.

The system contains one WWTP with a permitted annual average daily flow of 0.6 MGD, which is the basis for the plant's hydraulic capacity. It is operated under NPDES permit PA-0034924. The 2017 annual average daily flow into the plant was 0.13 MGD, and the ratio of 3 consecutive month maximum to annual average flow was 1.23. The WWTP is not currently nor expected to be hydraulically or organically overloaded in the next five years.

Some of the lift stations are in good overall condition but major improvements are needed for many of the stations. The collection system is in good overall condition, however there are several areas of the system that need to be addressed. The entire system was inspected in 2017. Several projects have been identified within the priority basins that will include improvements to the existing VCP pipe. The 2019 projects will replace VCP pipe in one of the

priority basins. The VCP pipe has major defects and is in need of replacement. Improvements to 4 of the 5 lift stations are also planned for 2019 and 2020.

## Section 4 – Estimate of the Quantity of Property to Be Improved

The estimated quantities of property to be improved are listed in Table 8 below. To compile these estimates, the best available information was used regarding the infrastructure needs for each wastewater system. Actual quantities and scheduling may change depending on the outcome of sewer system evaluation or other planning studies, as described in Section 2 of this LTIIP.

*Table 8 – Projected Wastewater DSIC Eligible Properties to Be Replaced / Rehabilitated for 2019 to 2023*

| Year | Gravity Pipe (LF) | Manholes (ea) | Service Laterals (ea) | Lift Stations (ea) |
|---|---|---|---|---|
| 2019 | 35,298 | 197 | 453 | 6 |
| 2020 | 62,531 | 172 | 632 | 7 |
| 2021 | 83,786 | 240 | 747 | 3 |
| 2022 | 91,038 | 303 | 888 | 2 |
| 2023 | 104,701 | 392 | 1,071 | 2 |
| McKeesport CO & Coatesville CMP | | | | |
| McKeesport | 24,044 | 55 | 100 | 0 |
| Coatesville | 14,955 | 50 | 13 | 1 |

## Section 5 – Projected Annual Expenditures

The projected annual expenditures for 2019 to 2023 are listed in Table 9 below. These estimates are based on the quantities listed in Table 8 and recent, competitively-bid prices in Pennsylvania. Non-regulatory wastewater DSIC investments are expenditures that exclude regulatory driven costs such as projects associated with a consent order agreement (CO) or a connection management plan (CMP).

*Table 9 - Projected Annual Wastewater DSIC Expenditures 2019 to 2023 (in millions)*

| Year | Non-Regulatory Investment | Regulatory | | Total Investment |
|---|---|---|---|---|
| | | McKeesport CO | Coatesville CMP | |
| 2019 | $11.69M | $9.55M | $9.26M | $30.50M |
| 2020 | $20.07M | | | $20.07M |
| 2021 | $20.98M | | | $20.98M |
| 2022 | $20.36M | | | $20.36M |
| 2023 | $22.63M | $1.21M | | $23.84M |

Some quantities may change depending on the results of sewer system evaluation and engineering studies. Costs may vary depending on whether a replacement or rehabilitation method was selected during the final design. For example, competitive bid prices for gravity replacement varied with depth of pipe and diameter, so an average depth and diameter was assumed to generate a projected cost. Annual expenditures may be subject to periodic fluctuation due to larger wastewater upgrades associated with regulatory compliance; therefore these are listed separately. For all projects, the most prudent and cost-effective method will be selected. In addition, PAWC uses competitive bidding to ensure all major capital projects are completed in a cost-effective manner.

## Section 6 – Acceleration of Infrastructure Replacement / Renewal

PAWC has continuously invested in its wastewater infrastructure to maintain safe, reliable service to its customers. As shown in Table 10 below, from 2015 to 2018 PAWC spent an average of $7.39 million annually on wastewater DSIC eligible infrastructure improvements (regulatory driven projects shown separately). From 2019 to 2023, PAWC proposes to increase non-regulatory wastewater DSIC eligible spending to over $20 million annually in order to continue making necessary improvements at an accelerated pace. The proposed spending for 2019 to 2023 represents a 159 percent increase in wastewater DSIC spending, excluding regulatory driven projects.

*Table 10 - Historic Annual Wastewater DSIC Expenditures (in millions)*

| Year | Annual DSIC Expenditures |
|---|---|
| 2015 | $8.92M |
| 2016 | $5.51M |
| 2017 | $8.42M |
| 2018 [a] | $6.70M |
| Regulatory Driven | |
| McKeesport (2018) | $0.76M |
| Coatesville | 0 |

[a] Current Projection

## Section 7 – Workforce Management Plan

To ensure system reliability and public safety, all wastewater DSIC eligible projects will be constructed by qualified contractors or PAWC staff. For some wastewater systems, PAWC staff complete investigative work, spot repairs, or lift station repairs which may be DSIC eligible work. Typically, DSIC eligible projects are bundled together for competitive bidding to prequalified contractors in order to achieve economies of scale.

PAWC utilizes a pre-qualification process to ensure all contractors are qualified to perform work in a cost-effective, safe, and reliable manner. PAWC utilizes Avetta as a third party entity to monitor contractor safety performance. The Avetta contractor prequalification process helps PAWC certify and centralize contractor data, perform pre-project screening, and contractor pre-qualification. Avetta allows PAWC to more effectively manage its risk and contractors' performance. During the pre-qualification screening process, contractors are required to submit pertinent documentation, such as:

- Safety: company policy, designated safety inspector, OSHA lost workdays and recordable incidents, OSHA violations
- Worker's Compensation Experience Ratings (Experience Modifier)
- Staffing information
- Annual value of work and percentage of work relevant to bid project
- Work experience schedule
- Bonding capacity
- Liability Insurance coverage
- References

All construction projects performed by independent contractors are properly inspected. PAWC employees are actively engaged in the direct supervision of project inspections. The project close-out process includes a punch-list to ensure all work is completed according to contract documents. PAWC will use only pre-qualified contractors or trained Company employees to perform work on all wastewater DSIC-eligible projects.

## Section 8 – Outreach and Coordination with Other Utilities

The acceleration of aging infrastructure proposed in this LTIIP will lead to disruptions as work is performed in the right of ways of the roadways and streets across the PAWC service area. Local municipalities and other utilities / agencies may be planning paving projects or underground infrastructure replacement projects located in the same right-of-way as PAWC wastewater infrastructure. PAWC recognizes that coordination with other utilities minimizes disruption and ensures that infrastructure replacement is efficient and cost effective. Therefore, PAWC plans to take the following steps to reach out to customers about disturbances, and to coordinate with other utilities and the Pennsylvania Department of Transportation (PennDOT) located within the PAWC service area:

- Utilize Pennsylvania's one-call system for "design notifications," to coordinate design work with other utilities and municipalities and Coordinate PA to identify targeted areas of anticipated work planned over the next two years
- Maintain open communication with local municipalities to stay informed about planned utility and paving projects
- Maintain communication with PennDOT Utility Administrators and review the "letting" schedule
- Maintain communication / working relationships with other utilities operating in our service area
- Where applicable and cost-effective, use trenchless technologies to minimize roadway disturbance
- Prior to working within a community, issue door-to-door notifications, press releases, and / or information letters to notify those customers / community associations affected by the work.
- PAWC has launched its "CodeRED" system, which delivers high-speed notifications to customers when water emergencies occur. Customers enrolling in CodeRED can be contacted quickly by text, email, telephone, and the CodeRED mobile app depending on their personal preferences. CodeRED rapidly contacts large numbers of customers about emergency situations, which include boil water advisories, main breaks, water conservation requirements and other major events impacting water service. The system will also be used for non-urgent notification, such as planned service outages, local hydrant flushing, low-pressure events and major traffic impacts.
- Leverage areas where PAWC owns both sewer and water lines to replace both simultaneously as appropriate

# EXHIBIT NO. 2

# Condition Assessment Schedule

| District | Total Gravity LF | 2018 | 2019 | 2020 | 2021 | 2022 | # Manholes |
|---|---|---|---|---|---|---|---|
| ***New Aquisition*** | | | | | | | |
| Franklin | 55,239 | | 55,239 | | | | 198 |
| McEwensville | 12,669 | | 12,669 | | | | 57 |
| New Cumberland | 144,692 | | 56,900 | 87,792 | | | 608 |
| Fairview North | 165,600 | 159,505 | 6,095 | | | | 869 |
| Fairview South | 198,722 | | 45,940 | 152,782 | | | 1,050 |
| Paint Elk | 89,425 | | 5,000 | 0 | 0 | | 432 |
| Marcel Lakes | N/A | | | | | | N/A |
| ***Consent Order*** | | | | | | | |
| Scranton | 1,739,568 | 363,000 | 609,000 | 767,568 | 0 | | 9,055 |
| McKeesport | 690,280 | | 552,224 | | | | 3,236 |
| Dravosburg | 52,148 | | 52,148 | | | | 308 |
| Duquesne | 184,559 | | 184,559 | | | | 1,125 |
| ***Routine*** | | | | | | | |
| Blue Mountain | 0 | | | | | | 0 |
| Claysville | 62,082 | | 62,082 | | | | 342 |
| Clarion | 200,860 | | 111,300 | 89,560 | | | 930 |
| Coatesville | 352,945 | | 30,000 | 30,000 | 30,000 | 30,000 | 1,670 |
| Koppel | 25,909 | | 25,909 | | | | 87 |
| Lehman Pike | 0 | | | | | | 0 |
| Pocono | 150,648 | | 75,000 | 75,648 | | | 777 |

# SUMMARY OF 2019 REDZONE WORK

| District | Proposed Footage in 2019 in the LTIP | Actual Footage for Contract in 2019 | PAWC Contact | Month Ready to Start | Define area or Basins to be inspected |
|---|---|---|---|---|---|
| | | | | | |
| Pocono Country Place | 75,000 | 75,000 | Gerald DeBalko | May-19 | Basins 2, 3, and 4 |
| Coatesville | 30,000 | 38,459 | Gerald DeBalko | May-19 | Coatesville Basins CV-1 and CV-2 |
| Franklin/HB | 15,000 | 46,505 | Scott Armbrust | Apr-19 | Hamiltonban Collection Area |
| McEwensville | 12,669 | 12,669 | Scott Armbrust | May-19 | Entire System |
| New Cumberland | 50,000 | 56,900 | Scott Armbrust | Apr-19 | Sub Basin to SE Pump Station |
| Koppel | 25,909 | 25,909 | Jed Fiscus | Apr-19 | Complete system inspection including mapping and NASSCO inspection of 87 manholes. |
| Claysville | 30,000 | 40,126 | Dan Haught | 19-Mar | System inspection including manholes with NASSCO ratings on the remaining portion not previously assessed. |
| Clarion | 100,000 | 111,300 | Jed Fiscus | Jun-19 | 50% of system inspected including mapping and NASSCO inspection of approximately 465 manholes. Includes inspection of basins 1, 2, 3B, 5A, 5B, 5C, 5D, 5I, 6, 8, 8I, 9 and 11 |
| Fairview North | 90,577 | 6,072 | Scott Armbrust | Jan-19 | Larger than 12 inch |
| Fairview South | 50,000 | 45,940 | Scott Armbrust | May-19 | Corn Hill, Fisher and Clover Sub Basins |
| Paint Elk-Ship | 5,000 | 5,000 | Jed Fiscus | Oct-19 | Various areas that were not able to be televised during initial inspection. Work to provide access to be completed in early fall of 2019. Also includes mapping of approximately 20 manholes and NASSCO MH inspections of 343 manholes. |
| Scranton | 460,000 | 609,000 | Dan Rickard | Mar-19 | LTCP Phases D & E |
| | | | | | |
| SUBTOTAL | **944,155** | **1,072,880** | | | |
| | | | | | |
| McKeesport 2018 | 237,800 | 243,120 | Rachael Beam | Ongoing | Separate Contract |
| McKeesport 2019 | 725,955 | 725,955 | Rachael Beam | Ongoing | Separate Contract |
| | | | | | |
| ***TOTAL*** | ***1,670,110*** | ***1,798,835*** | ***** TOTAL NOT INCLUDING 2018 MCKEESPORT WORK*** | | |

# EXHIBIT NO. 3

| Waste Water LTIIP | | 2019 | | | | | 2020 | | | | | 2021 | | | | | 2022 | | | | | 2023 | | | | | 2019-2023 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DISTRICT | | Linear Footage | Manholes | Laterals | Lift Stations | Investment | Linear Footage | Manholes | Laterals | Lift Stations | Investment | Linear Footage | Manholes | Laterals | Lift Stations | Investment | Linear Footage | Manholes | Laterals | Lift Stations | Investment | Linear Footage | Manholes | Laterals | Lift Stations | Investment | Linear Footage | Manholes | Laterals | Lift Stations | Investment |
| 2447-PA-Clarion WW | DSIC Qualified | 7,378 | 38 | 72 | | $1.47 | 2,500 | 4 | 12 | 1 | $1.61 | 5,000 | 21 | 43 | 1 | $1.64 | 7,500 | 32 | 98 | 1 | $1.91 | 10,800 | 42 | 34 | | $2.22 | **33,178** | **137** | **259** | **3** | **$8.84** |
| 2458-PA-Pocono WW | | 2,245 | 17 | 0 | | $0.61 | 2,415 | 17 | 0 | | $0.64 | 2,510 | 19 | 0 | | $0.66 | 2,700 | | | | $0.70 | 2,800 | | | | $0.75 | **12,670** | **53** | **0** | **0** | **$3.36** |
| 2467-PA-Coatesville WW | | 1,524 | 9 | 32 | 0 | $0.71 | 3,901 | 14 | 37 | | $1.54 | 4,647 | 22 | 74 | | $2.37 | 7,783 | 20 | 58 | | $2.15 | 8,406 | 19 | 127 | | $2.35 | **26,261** | **84** | **328** | **0** | **$9.11** |
| 2469-PA-Lehman Pike WW | | 0 | 0 | 150 | | $0.23 | 0 | 0 | 200 | | $0.30 | 0 | 0 | 200 | | $0.38 | 0 | 0 | 200 | | $0.38 | 0 | 0 | 200 | 1 | $0.60 | **0** | **0** | **950** | **1** | **$1.88** |
| 2426-PA-Claysville WW | | 1,600 | 2 | 2 | | $0.18 | 1,600 | 2 | 3 | 1 | $0.24 | 2,200 | 0 | 0 | 0 | $0.26 | 0 | 0 | 0 | 0 | $0.04 | 0 | 0 | 0 | 0 | $0.05 | **5,400** | **4** | **5** | **1** | **$0.77** |
| 2476-PA-Pocono BlueMtn WW | | 0 | 0 | 0 | | $0.00 | 0 | 0 | 0 | | $0.00 | 0 | 0 | 0 | 1 | $0.23 | 0 | 0 | 0 | | $0.00 | 0 | 0 | 0 | | $0.00 | **0** | **0** | **0** | **1** | **$0.23** |
| **Subtotal** | | **12,747** | **66** | **256** | **0** | **$3.18** | **10,416** | **37** | **252** | **2** | **$4.33** | **14,357** | **62** | **317** | **2** | **$5.54** | **17,983** | **52** | **356** | **1** | **$5.17** | **22,006** | **61** | **361** | **1** | **$5.96** | **77,509** | **278** | **1,542** | **6** | **$24.19** |
| 2435-PA-Koppel WW | Future-DSIC Qualified | 1,000 | 6 | 20 | | $0.38 | 1,500 | 8 | 10 | | $0.41 | 1,750 | 5 | 20 | | $0.46 | 2,500 | 15 | 40 | | $0.52 | 2,750 | 15 | 35 | | $0.71 | **9,500** | **49** | **125** | **0** | **$2.47** |
| 2438-PA-Paint Elk Twp WW | | 2,400 | 11 | 19 | 0 | $0.46 | 0 | 0 | 0 | 4 | $1.36 | 3,200 | 12 | 25 | | $0.99 | 5,300 | 27 | 58 | | $1.01 | 5,900 | 27 | 50 | | $1.08 | **16,800** | **77** | **152** | **4** | **$4.89** |
| 2460-PA-Fairview WW - NORTH | | 6,125 | 10 | 60 | 1 | $1.04 | 6,550 | 10 | 60 | | $0.93 | 8,300 | 10 | 80 | | $1.21 | 10,000 | 9 | 88 | | $1.45 | 12,700 | 8 | 110 | | $1.83 | **43,675** | **47** | **398** | **1** | **$6.46** |
| 2460-PA-Fairview WW-SOUTH | | 0 | | | 1 | $0.15 | 1,000 | | | | $0.41 | 1,500 | | 15 | | $0.37 | 2,000 | | 20 | | $0.28 | 2,500 | | 25 | | $0.35 | **7,000** | **0** | **60** | **1** | **$1.56** |
| 2487-PA-New Cumberland WW | | 100 | | | 1 | $0.10 | 12,435 | 10 | 150 | | $2.00 | 13,450 | 14 | 175 | | $1.91 | 14,100 | 19 | 180 | | $2.11 | 16,500 | 18 | 200 | | $2.45 | **56,585** | **61** | **705** | **1** | **$8.58** |
| 2492-PA-Scranton WW | | 9,126 | 62 | 67 | | $5.32 | 7,185 | 51 | 135 | | $5.35 | 11,495 | 69 | 62 | | $5.33 | 18,305 | 102 | 103 | | $5.38 | 19,220 | 115 | 178 | | $5.83 | **65,331** | **399** | **545** | **0** | **$27.20** |
| 2412-PA-McKeesport | | 3,800 | 36 | 20 | 2 | $1.00 | 18,145 | 50 | 20 | | $4.85 | 19,300 | 57 | 25 | | $4.52 | 20,850 | 62 | 25 | | $4.37 | 23,125 | 74 | 30 | | $4.38 | **85,220** | **279** | **120** | **2** | **$19.11** |
| 2436-PA-Cln Trtmt WW | | | | | | | | | | | | | | | | | | | | | | | | | | | **0** | **0** | **0** | **0** | **$0.00** |
| 2483-PA-Franklin WW | | 0 | 6 | 11 | | $0.00 | 5,000 | 6 | 5 | | $0.33 | 10,434 | 11 | 28 | | $0.61 | 0 | 17 | 18 | | $0.00 | 0 | 74 | 82 | | $0.00 | **15,434** | **114** | **144** | **0** | **$0.94** |
| 2485-PA-McEwensville WW | | 0 | | | 1 | $0.06 | 300 | | | 1 | $0.10 | 0 | | | 1 | $0.05 | 0 | | | 1 | $0.05 | 0 | | | 1 | $0.05 | **300** | **0** | **0** | **5** | **$0.31** |
| **Subtotal** | | **22,551** | **131** | **197** | **6** | **$8.50** | **52,115** | **135** | **380** | **5** | **$15.75** | **69,429** | **178** | **430** | **1** | **$15.44** | **73,055** | **251** | **532** | **1** | **$15.17** | **82,695** | **331** | **710** | **1** | **$16.67** | **299,845** | **1,026** | **2,249** | **14** | **$71.53** |
| **Total** | | **35,298** | **197** | **453** | **6** | **$11.68** | **62,531** | **172** | **632** | **7** | **$20.07** | **83,786** | **240** | **747** | **3** | **$20.98** | **91,038** | **303** | **888** | **2** | **$20.34** | **104,701** | **392** | **1,071** | **2** | **$22.63** | **377,354** | **1,304** | **3,791** | **20** | **$95.71** |
| **Regulatory** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *Consent Order-McKeesport* | | *21,044* | *55* | *100* | | *$9.55* | | | | | | | | | | | | | | | | *3,000* | | | | *$1.21* | ***24,044*** | ***55*** | ***100*** | ***0*** | ***$10.76*** |
| *CMP - Coatesville WW* | | *14,955* | *50* | *13* | *1* | *$9.26* | | | | | | | | | | | | | | | | | | | | | ***14,955*** | ***50*** | ***13*** | ***1*** | ***$9.26*** |
| **Total** | | **71,297** | **302** | **566** | **7** | **$30.50** | **62,531** | **172** | **632** | **7** | **$20.07** | **83,786** | **240** | **747** | **3** | **$20.98** | **91,038** | **303** | **888** | **2** | **$20.34** | **107,701** | **392** | **1,071** | **2** | **$23.84** | **416,353** | **1,409** | **3,904** | **21** | **$115.73** |
| *Longterm Control-Scranton WW* | | | | | | *$14.60* | | | | | *$6.82* | | | | | *$0.00* | | | | | *$2.85* | | | | | *$6.66* | *0* | *0* | *0* | *0* | *$30.93* |

*combinded sewer systems

# EXHIBIT NO. 4

**Historical Annual Expenditures 2015 to 2019**

| Year | Projected Annual Expenditures | ProjectedCumulative Expenditures | Actual Annual Expenditures | Actual Cumulative Annual Expenditures |
|---|---|---|---|---|
| 2015 | $5,265,244 | $5,265,244 | $8,923,443 | $8,923,443 |
| 2016 | $5,290,000 | $10,555,244 | $5,509,055 | $14,432,498 |
| 2017 | $5,682,655 | $16,237,899 | $8,416,554 | $22,849,052 |
| 2018 | $5,097,241 | $21,335,140 | $4,810,440 | $27,659,492 |
| 2019 | $4,350,000 | $25,685,140 | | $27,659,492 |
| Total | $25,685,140 | | $27,659,492 | |

| District | Funding Project Number | Work Order Number | Description: | Capital Investment |
|---|---|---|---|---|
| **Claysville WW** | | | | |
| 26 | R24-26B1 | R24-26B1.15-P-0002 | Replacement of sewer main CV 60' 8" SDR CLAYSVILLE | $1,583.69 |
| 26 | R24-26H1 | R24-26H1.15-P-0001 | Lateral Replacement | $8,575.13 |
| **26 Total** | | **Claysville WW** | | **$10,158.82** |
| **Clarion WW** | | | | |
| 47 | R24-47B1 | R24-47B1.15-P-0003 | Sewer line replacement project within Clarion Borough. The project included the installation of approximately 1,300 LF of 6" and 8" sewer main and 7 manholes. | $262,941.19 |
| 47 | R24-47B1 | R24-47B1.15-P-0004 | Sewer line replacement project within Clarion Borough and Clarion Township. The project included the installation of approximately 1,300 LF of 6", 8" and 12" sewer main and 4 manholes. | $203,362.48 |
| 47 | R24-47B1 | R24-47B1.15-P-0006 | Sewer line replacement project within Clarion Borough and Clarion Township. The project included the installation of approximately 1,700 LF of 6", 8" and 10" sewer main and 9 manholes. | $358,616.81 |
| 47 | R24-47D1 | R24-47D1.13-P-0002<br>R24-47D1.15-P-0002 | Sewer line replacement project within Clarion Borough and Clarion Township. The project included the installation of approximately 2,200 LF of 6", 8", 12" and 15" sewer main and 18 manholes. | $362,405.47 |
| 47 | R24-47F1 | R24-47F1.15-P-0003 | Manhole Replacement project within Monroe Township. The project included the replacement and epoxy lining of 15 manholes. | $57,631.08 |
| **47 Total** | | **Clarion WW** | | **$1,244,957.03** |
| **Pocono WW** | | | | |
| 58 | R24-58B1 | R24-58B1.15-P-0001 | Sewer line replacement project within the Pocono Country Place development. The project included the installation of approximately 150 LF of 8" sewer main, 2 manholes and 10 laterals. | $117,567.70 |
| 58 | R24-58B1 | R24-58B1.15-P-0002 | Sewer line replacement project within the Pocono Country Place development. The project included the installation of approximately 1,196 LF of 8" sewer main, 6 manholes and 26 laterals. | $444,954.60 |
| 58 | R24-58C1 | R24-58C1.15-P-0001 | Emergency sewer main replacement work. | 5,882.69 |
| 58 | R24-58H1 | R24-58H1.15-P-0001 | The replacement of two sanitary sewer laterals within the Pocono Country Place development. | 16,313.56 |
| 58 | R24-58Q1 | R24-58Q1.15-P-0005 | Lift Station H replacement project within the Pocono Country Place development. The project included the installation of an above grade suction lift station containing two pumps, flow meter and a valve vault. | $325,746.33 |
| **58 Total** | | **Pocono WW** | | **$910,464.88** |
| **Coatesville WW** | | | | |
| 67 | I24-670004 | I24-670004-01 | Sewer line replacement project within the City of Coatesville. The project included the installation of approximately 2,529 LF of 8", 24", and 30" sewer main, 14 manholes and 64 laterals. | $1,408,985.67 |
| 67 | I24-670004 | I24-670004-02 | Sewer line replacement project within the City of Coatesville. The project included the installation of approximately 1,050 LF of 30" sewer main within a 60" casing pipe performed by microtunneling. | $3,161,867.69 |
| 67 | R24-67B1 | R24-67B1.15-P-0001 | Sewer line replacement project within Parkesburg Borough. The project included the installation of approximately 2,310 LF of 8" sewer main, 6 manholes and 61 laterals. | $893,435.30 |
| 67 | R24-67B1 | R24-67B1.15-P-0002 | Sewer line replacement project within Parkesburg Borough. The project included the installation of approximately 300 LF of 10" sewer main, 3 manholes and 2 laterals. | $302,488.90 |
| 67 | R24-67B1 | R24-67B1.15-P-0004 | Sewer line replacement project within the City of Coatesville. The project included the installation of approximately 450 LF of 8" sewer main, 1 manholes and 9 laterals. | $152,917.06 |
| 67 | R24-67B1 | R24-67B1.15-P-0005 | Sewer line replacement project within Parkesburg Borough. The project included the installation of approximately 679 LF of 10" sewer main, 4 manholes and 7 laterals. | $232,354.12 |
| 67 | R24-67C1 | R24-67C1.15-P-0001 | Five unscheduled sewer main replacement projects totaling approximately 45 feet of sewer main replacement. | 87,428.61 |
| 67 | R24-67F1 | R24-67F1.15-P-0001 | The replacement of two sanitary sewer manholes that were determined to be defective during inspection. | 45,233.26 |
| 67 | R24-67H1 | R24-67H1.15-P-0001 | The replacement of nine sanitary sewer laterals that were determined to be defective an require replacement during televising | $56,992.03 |
| 67 | R24-67Q1 | R24-67Q1.15-P-0001 | Submersible Pump replacement at West Sadsbury Lift Station | $19,256.99 |
| 67 | R24-67Q1 | R24-67Q1.15-P-0007 | Submersible Pump replacement at Sandy Hill Lift Station | $13,554.32 |
| **67 Total** | | **Coatesville WW** | | **$6,374,513.95** |
| **Marcel Lakes WW** | | | | |

| District | Funding Project Number | Work Order Number | Description: | Capital Investment |
|---|---|---|---|---|
| 69 | R24-69C1 | R24-69C1.15-P-0001 | One unscheduled sewer main replacement on the low pressure portion of the Marcel Lakes collection system including approximately 5 feet of 4" PVC. | $2,544.21 |
| **69 Total** | | **Marcel Lakes WW** | | **$2,544.21** |
| **Lehman Pike WW** | | | | |
| 69 | R24-69H1 | R24-69H1.15-P-0001 | 2015 sewer lateral replacement project including the replacement of 260 1-1/4" laterals. | $380,803.88 |
| **69 Total** | | **Lehman Pike WW** | | **$380,803.88** |
| **Total** | | | | **$8,923,442.77** |

**WW DSIC 2016**

| District | Funding Project Number | | Description: | Installed Quantity | Capital Investment 2016 |
|---|---|---|---|---|---|
| **Clarion WW** | | | | | |
| 47 | R24-47A1 | | Sewer extension to Chernicky Lift Station to connect Chernicky LS basin to Stone House Road Lift Station basin. Demolition of Chernicky LS is also part of the project | 250 | $42,245 |
| 47 | R24-47B1 | | Sewer line replacement projects within Clarion Borough and Clarion Township. The projects include the installation of approximately 4,160 LF of sewer mains. | 4,160 | $698,077 |
| 47 | R24-47C1 | | Emergency sewer main replacement work. | | $0 |
| 47 | R24-47F1 | | Manhole replacements at locations determined to be deficient during annual manhole inspection program id required. | 6 | $50,084 |
| 47 | R24-47H1 | | Lateral replacements at locations determined to be deficient during annual inspection program. | 3 | $14,102 |
| 47 | R24-47Q1 | | Process Plant Facilities and Equip - Lift Stations | | |
| **47 Total** | | **Clarion WW** | | | **$804,508** |
| **Pocono WW** | | | | | |
| 58 | I24-580005 | | | | $0 |
| 58 | I24-580004 | | | | $0 |
| 58 | R24-58B1 | | Sewer line replacement project within the Pocono Country Place development. The project included the installation of approximately 1,063 LF | 1,063 | $71,154 |
| 58 | R24-58C1 | | Emergency sewer main replacement work. | | |
| 58 | R24-58F1 | | Manhole replacements at locations determined to be deficient during annual manhole inspection program id required. | | |
| 58 | R24-58H1 | | Lateral replacements at locations determined to be deficient during annual inspection program. | 2 | $8,618 |
| 58 | R24-58Q1 | | Process Plant Facilities and Equip - Lift Stations | | $10,780 |
| **58 Total** | | **Pocono WW** | | | **$90,552** |
| **Coatesville WW** | | | | | |
| 67 | I24-670004 | | West End Trunkline project including the installation of approximately 100 LF of 30" sewer main. | 100 LF | $192,681 |
| 67 | R24-67B1 | | Sewer line replacement projects within the City of Coatesville and Parkesburg Borough. The project included the installation of approximately 4,593 LF of 8" and 12" sewer main, 26 manholes, and 84 laterals. | 4593 LF | $1,371,548 |
| 67 | R24-67C1 | | Emergency sewer main replacement work. | 53 LF | $130,958 |
| 67 | R24-67F1 | | Manhole replacements at locations determined to be deficient during annual manhole inspection program. | 1 EA | $8,997 |
| 67 | R24-67H1 | | Lateral replacements at locations determined to be deficient during annual inspection program. | 7 EA | $60,866 |
| 67 | R24-67Q1 | | Pump replacement at Millview and Providence Hill Lift Stations. Electrical Panel Replacement at Short Hill and Windy Hill Lift Stations. | 3 | $26,327 |
| **67 Total** | **Coatesville WW** | | | | **$1,791,377** |
| **Lehman Pike WW** | | | | | |
| 69 | I24-690001 | | Sanitary Sewer replacement of the Marcel Lakes Collection system including a portion of 33,000 LF of 8" and 12" sewer main project and 29 manholes. | 6600 LF | $2,416,744 |
| 69 | R24-69C1 | | Emergency sewer main replacement work. | | $26,028 |
| 69 | R24-69F1 | | Manhole replacements at locations determined to be deficient during annual manhole inspection program id required. | 1 | $790 |
| 69 | R24-69H1 | | 2016 lateral replacement project to replace approximately 223 1-1/4" laterals | 223 | $379,020 |
| **69 Total** | **Lehman Pike WW** | | | | **$2,822,582** |
| **Total** | | | | | **$5,509,019** |

| District | Funding Project Number | | Description: | Installed Quantity | Capital Investment 2017 |
|---|---|---|---|---|---|
| **Clarion WW** | | | | | |
| 47 | R24-47B1 | | Sewer line replacement projects | 2,195 ft | $377,160.86 |
| 47 | R24-47C1 | | Emergency sewer main replacement work. | 5 ft | $45,045.34 |
| 47 | R24-47F1 | | Manhole replacements at locations determined to be deficient during annual manhole inspection program id required. | 3 | $21,518.07 |
| 47 | R24-47H1 | | Lateral replacements at locations determined to be deficient during annual inspection program. | 8 | $48,908.62 |
| 47 | R24-47Q1 | | Process Plant Facilities and Equip - Lift Stations | | |
| **47 Total** | | **Clarion WW** | | **2,200** ft | **$492,632.89** |
| **Pocono WW** | | | | | |
| 58 | R24-58B1 | | Sewer line replacement projects | 2,105 ft | $377,673.44 |
| 58 | R24-58C1 | | Emergency sewer main replacement work. | | $15,675.86 |
| 58 | R24-58F1 | | Valve replacements at locations determined to be deficient | 1 | $932.36 |
| 58 | R24-58H1 | | Lateral replacements at locations determined to be deficient during annual inspection program. | 5 | $29,022.15 |
| 58 | R24-58Q1 | | | | |
| **58 Total** | | **Pocono WW** | | **2,105** ft | **$423,303.81** |
| **Coatesville WW** | | | | | |
| 67 | R24-67B1 | | Sewer line replacement projects 65 laterals, and 26 manholes. | 6,690 ft | $2,059,647.91 |
| 67 | R24-67C1 | | Emergency sewer main replacement work. | 25 ft | $19,616.66 |
| 67 | R24-67D1 | | Sewer line relocation projects | 300 ft | $64,667.22 |
| 67 | R24-67F1 | | Manhole replacements at locations determined to be deficient during annual manhole inspection program. | 3 | $21,148.87 |
| 67 | R24-67H1 | | Lateral replacements at locations determined to be deficient during annual inspection program. | 8 | $50,459.20 |
| 67 | R24-67Q1 | | | | |
| **67 Total** | | **Coatesville WW** | | **7,015** ft | **$2,215,539.86** |
| **Lehman Pike WW** | | | | | |
| 69 | R24-69B1 | | Sewer line replacement projects | ft | |
| 69 | R24-69C1 | | Emergency sewer main replacement work. | 10 ft | $16,403.45 |
| 69 | R24-69F1 | | Valve replacements at locations determined to be deficient | 1 | $1,744.05 |
| 69 | R24-69H1 | | 2017 lateral replacement project to replace approximately 300 1-1/4" laterals | 115 | $301,413.17 |
| **69 Total** | | **Lehman Pike WW** | | **10** ft | **$319,560.67** |
| **Marcel Lake WW** | | | | | |
| 69 | I24-690001 | | Sanitary Sewer replacement of the Marcel Lakes Collection system including a portion of 25,347LF of 8" and 12" sewer main, 3 lift stations, 275 laterals, and 125 manholes. | 25,347 ft | $4,965,516.61 |
| **69 Total** | | **Marcel Lake WW** | | **25,347** ft | **$4,965,516.61** |
| **Total** | | | | | **$8,416,553.84** |

| District | Funding Project Number | | Description: | Installed Quantity | Capital Investment 2018 * Jan/Feb 2019 |
|---|---|---|---|---|---|
| **Clarion WW** | | | | | |
| 47 | R24-47B1 | | Sewer line replacement projects (including manholes and laterals) | 6,109 ft | $1,104,265.40 |
| 47 | R24-47C1 | | Emergency sewer main replacement work. | *9* ft | $13,765.33 |
| 47 | R24-47F1 | | Manhole replacements at locations determined to be deficient during annual manhole inspection program id required. | *7* | $29,243.61 |
| 47 | R24-47H1 | | Lateral replacements at locations determined to be deficient during annual inspection program. | 2 | $16,955.37 |
| 47 | R24-47Q1 | | Process Plant Facilities and Equip - Lift Stations | | |
| **47 Total** | | **Clarion WW** | | **6,118** ft | **$1,164,229.71** |
| **Pocono WW** | | | | | |
| 58 | R24-58B1 | | Sewer line replacement projects (including manholes and laterals) | 2,023 ft | $309,371.79 |
| 58 | R24-58C1 | | Emergency sewer main replacement work. | | $10,958.01 |
| 58 | R24-58F1 | | Manhole replacements at locations determined to be deficient during annual manhole inspection program id required. | | |
| 58 | R24-58H1 | | Lateral replacements at locations determined to be deficient during annual inspection program. | 27 | $27,503.18 |
| 58 | R24-58Q1 | | | | |
| **58 Total** | | **Pocono WW** | | **2,023** ft | **$347,832.98** |
| **Coatesville WW** | | | | | |
| 67 | R24-67B1 | | Sewer line replacement projects (including manholes and laterals) | 5,237 ft | $2,150,159.87 |
| 67 | R24-67C1 | | Emergency sewer main replacement work. | | $39,298.04 |
| 67 | R24-67F1 | | Manhole replacements at locations determined to be deficient during annual manhole inspection program. | 28 | $85,911.34 |
| 67 | R24-67H1 | | Lateral replacements at locations determined to be deficient during annual inspection program. | 108 | $102,365.89 |
| 67 | R24-67Q1 | | | | |
| **67 Total** | | **Coatesville WW** | | **5,237** ft | **$2,377,735.14** |
| **Lehman Pike WW** | | | | | |
| 69 | R24-69B1 | | Sewer line replacement projects (including manholes and laterals) | 5,700 ft | $590,134.11 |
| 69 | R24-69C1 | | Emergency sewer main replacement work. | ft | $12,867.56 |
| 69 | R24-69F1 | | Valve replacements at locations determined to be deficient | 1 | $14,237.84 |
| 69 | R24-69H1 | | Lateral replacement project | 130 | $303,402.42 |
| **69 Total** | | **Lehman Pike WW** | | **5,700** ft | **$920,641.93** |
| **Total** | | | | | **$4,810,439.76** |

| 2015 | Mains (LF) | | Manholes | Laterals | Lift Stations |
|---|---|---|---|---|---|
| | Gravity | LP/Force | | | |
| Blue Mountain Lake | | | | | |
| Lehman-Pike | | | | 260 | |
| Pocono Country Place (Pocono) | 1,346 | | 8 | 38 | 1 |
| Claysville | 60 | | | | |
| Coatesville | 7,363 | | 30 | 152 | *2* |
| Clarion | 6,500 | | 53 | | |
| Marcel Lake | 5 | | | | |
| **Total** | **15,274** | **-** | **91** | **450** | **3** |

*submersible pump replacements

| 2016 | Mains (LF) | | Manholes | Laterals | Lift Stations |
|---|---|---|---|---|---|
| | Gravity | LP/Force | | | |
| Blue Mountain Lake | | | | | |
| Lehman-Pike | | | 1 | 223 | |
| Pocono Country Place (Pocono) | 1,063 | | | 2 | |
| Claysville | | | | | |
| Coatesville | 4,746 | | 27 | 91 | 3 |
| Clarion | 4,410 | | 6 | 3 | |
| Marcel Lake | 6,600 | | 29 | - | |
| **Total** | **16,819** | **-** | **63** | **319** | **3** |

| 2017 | Mains (LF) | | Manholes / Valves | Laterals | Lift Stations |
|---|---|---|---|---|---|
| | Gravity | LP/Force | | | |
| Blue Mountain Lake | | | | | |
| Lehman-Pike | | 10 | | 115 | |
| Pocono Country Place (Pocono) | 2,105 | | | 5 | |
| Claysville | | | | | |
| Coatesville | 7,015 | | 3 | 8 | |
| Clarion | 2,200 | | 3 | 8 | |
| Marcel Lake | 25,347 | | 125 | 275 | 3 |
| **Total** | **36,667** | **10** | **131** | **411** | **3** |

| 2018 | Mains (LF) | | Manholes | Laterals | Lift Stations |
|---|---|---|---|---|---|
| | Gravity | LP/Force | | | |
| Blue Mountain Lake | | | | | |
| Lehman-Pike | | 5,700 | 1 | 152 | |
| Pocono Country Place (Pocono) | 2,023 | | 10 | 47 | |
| Claysville | | | | | |
| Coatesville | 4,582 | 655 | 47 | 128 | |
| Clarion | 6,118 | | 37 | 71 | |
| **Total** | **12,723** | **6,355** | **95** | **398** | **-** |

# STATEMENT A

**BEFORE THE**
**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

| | | |
|---|---|---|
| **PETITION OF PENNSYLVANIA-** | : | |
| **AMERICAN WATER COMPANY** | : | |
| **WASTEWATER OPERATIONS FOR** | : | |
| **APPROVAL OF MODIFICATION OF** | : | **DOCKET NO. P-2014-2431005** |
| **LONG-TERM INFRASTRUCTURE** | : | |
| **IMPROVEMENT PLAN** | : | |

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# STATEMENT OF PENNSYLVANIA-AMERICAN WATER COMPANY IN SUPPORT OF THE JOINT PETITION FOR SETTLEMENT

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**August 15, 2019**

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**BEFORE THE**
**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

| | | |
|---|---|---|
| **PETITION OF PENNSYLVANIA-AMERICAN WATER COMPANY WASTEWATER OPERATIONS FOR APPROVAL OF MODIFICATION OF LONG-TERM INFRASTRUCTURE IMPROVEMENT PLAN** | : | **DOCKET NO. P-2014-2431005** |

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**STATEMENT OF PENNSYLVANIA-AMERICAN WATER COMPANY IN SUPPORT OF THE JOINT PETITION FOR SETTLEMENT**

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## I. INTRODUCTION

On August 15, 2019, Pennsylvania-American Water Company ("PAWC" or "the Company"), the Office of Consumer Advocate ("OCA"), the Pennsylvania Public Utility Commission's ("Commission") Bureau of Investigation and Enforcement ("I&E") and the Office of Small Business Advocate ("OSBA") (collectively, the "Joint Petitioners") filed with the Commission a Joint Petition For Settlement ("Joint Petition") in the above-captioned proceeding. The Joint Petition contains a statement of the factual background and procedural history of this case, which is incorporated herein by reference.[1] This Statement in Support (the "Statement") is filed pursuant to Paragraph 21 of the Joint Petition.

The settlement set forth in the Joint Petition (the "Settlement") was reached after an investigation by the parties of PAWC's proposal to modify its current Commission-approved Long-Term Infrastructure Improvement Plan for the Company's wastewater operations covering the five-year period 2014 through 2019 ("2014 LTIIP"),[2] which included substantial informal

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[1] PAWC's Proposed Findings of Fact, Conclusions of Law and Ordering Paragraphs are attached hereto as Appendix A.

[2] *Petition of Pennsylvania-American Water Co. Wastewater Operations for Approval of its Long-Term Infrastructure Improvement Plan and a Distribution System Improvement Charge,* Docket Nos. P-2014-2431005 and C-2014-243370 (Opinion and Order entered Dec. 4, 2014) ("December 2014 Order"). In the December 2014 Order, the Commission also approved PAWC's request to establish a Distribution System

discovery. In addition, the parties engaged in discussions and negotiations about the terms of the Settlement over an extended period.

PAWC is in full agreement with each of the reasons the Joint Petitioners stated the Settlement is in the public interest. In this Statement, PAWC offers additional reasons why the Settlement is in the public interest and should be approved.

## II. THE SETTLEMENT IS IN THE PUBLIC INTEREST AND FULLY SATISFIES THE REQUIREMENTS OF ACT 11 OF 2012 AND THE COMMISSION'S LONG-TERM INFRASTRUCTURE IMPROVEMENT PLAN REGULATIONS

On February 14, 2012, former Governor Corbett signed into law Act 11 of 2012 ("Act 11"). Act 11 amended the Public Utility Code ("Code") in several respects, including the addition of Subchapter B (66 Pa.C.S. §§ 1350 – 1360), which authorizes the Commission to approve a DSIC upon petition by an electric distribution company, a natural gas distribution company, a water utility or a wastewater utility. Section 1352(a) of the Code provides that a utility must submit a long-term infrastructure improvement plan ("LTIIP") "in order to be eligible to recover costs under section 1353 (relating to distribution system improvement charge)." In addition, Section 1352 provides that an LTIIP should include the following:

> (1) Identification of the types and age of eligible property owned or operated by the utility for which the utility would seek recovery under this subchapter.
>
> (2) An initial schedule for the planned repair and replacement of eligible property.
>
> (3) A general description of the location of the eligible property.
>
> (4) A reasonable estimate of the quantity of eligible property to be improved.

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Improvement Charge ("DSIC") for its wastewater operations, subject to refund and recoupments after resolution of the issues the Commission referred to the Office of Administrative Law Judge for the parties to address in on-the-record proceedings. Thereafter, the parties resolved those issues by a Joint Stipulation that provided, among other things, that the DSIC was not applicable to PAWC's Franklin and Koppel wastewater systems. On May 7, 2015, the Commission entered an Order approving the Joint Stipulation.

(5) Projected annual expenditures to implement the plan and measures taken to ensure that the plan is cost effective.

(6) The manner in which the replacement of aging infrastructure will be accelerated and how the repair, improvement or replacement will ensure and maintain adequate, efficient, safe, reliable and reasonable service.

66 Pa. C.S. § 1352(a)(1)-(6).

On August 2, 2012, the Commission entered an Implementation Order,[3] most of which is devoted to explaining how the Commission intended to implement the provisions of Subchapter B, including the Commission's expectations with regard to the contents of an LTIIP. On May 23, 2014, the Commission finalized the LTIIP Regulations at 52 Pa. Code §§ 121.1-121.8 (the "LTIIP Regulations"), which establish the procedures and criteria for the filing, modification and periodic review of LTIIPs.[4] The LTIIP Regulations build on the Implementation Order and include the six statutory components of an LTIIP as well as two additional requirements for submission of: (1) a workforce management and training program; and (2) a description of a utility's outreach and coordination activities with other utilities, the Department of Transportation and local governments.[5]

In its Petition, PAWC requested approval to replace the 2014 LTIIP for the year 2019 and include four additional years (2020-2023) ("Modified LTIIP"). The Modified LTIIP, like the 2014 LTIIP, is designed to accelerate the rehabilitation, improvement and replacement of aging wastewater infrastructure, particularly for troubled systems acquired by PAWC, and continues to focus on reducing inflow and infiltration ("I&I"). The Modified LTIIP reflects the following

[3] *Implementation of Act 11 of 2012*, Docket No. M-2012-2293611 (Final Implementation Order entered August 2, 2012).

[4] The LTIIP Regulations were established pursuant to a May 23, 2014 Final Rulemaking Order at Docket No. L-2012-2317274 and became effective on December 20, 2014.

[5] *See* 52 Pa. Code §§ 121.3(a)(7)-(8).

principal changes: (1) the Company's use of a more detailed risk-based condition assessment to prioritize projects; (2) increased spending of $20 million annually to maintain an accelerated rate of investment; (3) addition of 11 wastewater districts, including both combined and sanitary sewer systems acquired since 2014; and (4) expansion of DSIC-eligible property to include assets associated with combined sewer systems and the entire customer service lateral on gravity wastewater collection systems.[6]

PAWC's Modified LTIIP, as revised by the Settlement to address the issues raised by I&E and the OCA in this proceeding, contains all of the elements required by 66 Pa.C.S. §§ 1352(a)(1)-(6) and the LTIIP Regulations and thus is reasonable, cost-effective and designed to ensure and maintain adequate, efficient, safe, reliable and reasonable service. Key elements of the Settlement that satisfy those requirements are discussed in more detail below.

### A. Types and Ages of Eligible Property (66 Pa.C.S. § 1352(a)(1); 52 Pa. Code § 121.3(a)(1))

Under the Settlement, the accelerated investment totaling approximately $115.7 million encompassed by the Modified LTIIP consists entirely of "eligible property," as defined in 66 Pa.C.S. §1351.[7] As described in detail in Section 1 of the Modified LTIIP, such property includes a variety of wastewater facilities, including collection mains, manholes, lift stations, service laterals, combined sewer overflow ("CSO") structures, diversion chambers and inlets/catch basins.[8]

In their Comments on the Company's proposed Modified LTIIP, both the OCA and I&E asserted that additional information was necessary to assist the Commission in determining that the Modified LTIIP will accelerate PAWC's wastewater infrastructure repair and replacement in

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6 Petition, p. 7.

7 Joint Petition, Exhibit 1, p. 37 (Table 9).

8 *Id.*, pp. 5-13.

a cost-effective manner.[9] With respect to the types and ages of eligible property included in the Modified LTIIP, the OCA specifically recommended that the Company provide a breakdown of historic annual replacement and retirement for categories of plant for 2015 through 2018 to date, by district."[10] Under the Settlement, PAWC provided the specific information requested by the OCA in a detailed spreadsheet attached to the Joint Petition as Exhibit 3. Joint Petition, ¶ 11. Exhibit 3 shows the Company's projected schedule for replacement and rehabilitation of DSIC-eligible property by category of plant and district based on the preliminary results of the Company's risk-based condition assessment discussed in Section II.B. below.

### B. Schedule for Planned Repair and Replacement of Eligible Property (66 Pa.C.S. § 1352(a)(2); 52 Pa. Code § 121.3(a)(2)) an dReasonable Estimates of the Quantity of the Eligible Property to Be Improved (66 Pa.C.S. § 1352(a)(4); 52 Pa. Code § 121.3(a)(2))

Section 2 of the Modified LTIIP describes in detail the Company's rigorous framework for analyzing, prioritizing and accelerating the renewal of aging wastewater collection system infrastructure. The first step of that process involves a macro-level analysis of each wastewater system using the Company's Geographic Information System and other data to identify general categories of property for replacement or rehabilitation, including sewer collection basins with high I&I and older systems with terra cotta pipes, aging lift systems or deteriorated brick manholes.[11] From those general categories, specific manholes, pipes, service laterals, lift stations and CSO facilities were identified as potential candidates for replacement or rehabilitation based on wastewater system investigation studies that included flow measurement, smoke testing, closed circuit television inspection, system modeling and physical inspection.[12]

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9 *See* I&E Amended Answer and Comments, pp. 6-12; OCA Comments, pp. 3-5.

10 OCA Comments, p. 5.

11 Joint Petition, Exhibit 1, pp. 14-15.

12 *Id.*, pp. 15-16.

PAWC then applied a risk-based condition assessment methodology to prioritize DSIC-eligible capital improvement projects identified through this micro-level planning process. The risk-based condition assessment scored each project using standard likelihood of failure ("LoF") and consequence of failure ("CoF") factors. The LoF score estimates the structural integrity of each asset while the CoF rating is related to the environmental, economic and social consequences of asset failure. After both ratings were determined, they were multiplied together to arrive at the risk score, which was then used to prioritize property in need of more aggressive maintenance and repair.[13] Table 8 in Section 4 of the Modified LTIIP, as updated by the Settlement, shows the estimated number of pipes, laterals, manholes and lift stations to be replaced by PAWC each year based on the preliminary results of its risk-based condition assessment.[14]

In its Amended Answer and Comments, I&E assert that additional data is necessary to support the risk-based condition approach employed by the Company to prioritize wastewater collection system replacement and rehabilitation projects and accelerate the associated investments included in the Modified LTIIP.[15] To address I&E's comments, under the Settlement, PAWC provided detailed tables outlining the projected schedule for completion of the Company's condition assessment for each wastewater system covered by the Modified LTIIP, as well as estimates of the DSIC-eligible property to be improved and the projected schedule for the associated replacement and repair work identified by the Company's condition assessment to date. Joint Petition, ¶ 11; *see also* Exhibits 2 and 3. The Settlement also clarifies that PAWC will assume the highest risk factor for newly acquired wastewater systems that have

[13] *See id.*, pp. 17-21.

[14] *Id.*, p. 36.

[15] *See* I&E Amended Answer and Comments, pp. 5-11.

known deficiencies, such as significant I&I, at the outset of the condition assessment, which will be adjusted to reflect actual conditions. Joint Petition, ¶ 12.

### C. Location of Eligible Property (66 Pa.C.S. § 1352(a)(3); 52 Pa. Code § 121.3(a)(3)); The Manner in Which the Replacement of Aging Infrastructure Will Be Accelerated Under the Modified LTIIP and How the Repair, Improvement or Replacement Will Ensure and Maintain Adequate, Efficient, Safe, Reliable and Reasonable Service (66 Pa.C.S. § 1352(a)(6))

As explained in Section 3 of the Modified LTIIP, PAWC wastewater systems include: Fairview North, Fairview South, Franklin, McEwensville, New Cumberland, Blue Mountain Lake, Lehman Pike, Marcel Lake, Pocono, Scranton, Coatesville, Clarion, Claysville, Koppel, McKeesport, Dravosburg, Duquesne and Paint-Elk. Since acquiring those wastewater systems, PAWC has made improvements based on studies and investigations that have identified the need to rehabilitate or replace deteriorated and failed pipes, manholes and lift stations.[16] The Company's accelerated investment under its Modified LTIIP will be targeted and prioritized based on the factors described in Section 2 of the Modified LTIIP.

Under the Settlement, the Company agreed to the OCA's recommendation to continue distinguishing between regulatory and non-regulatory projects in PAWC's future LTIIP-related filings. Joint Petition, ¶ 14. In response to the OCA's Comments (p. 4), the Settlement also confirms that the Modified LTIIP does not re-prioritize existing infrastructure improvement commitments to the Company's McKeesport wastewater division from other service areas consistent with Ordering Paragraph 7(a) of the Commission's October 26, 2017 Order in Docket No. A-2017-2606103. Joint Petition, ¶ 15. In future LTIIP and AAOP filings, if projected expenditures or quantities are higher for the McKeesport system or systems acquired under 66 Pa.C.S. § 1329, the Company also agreed to explain why the shift is appropriate and does not re-prioritize existing commitments. Joint Petition, ¶¶ 16-17.

[16] Joint Petition, Exhibit 1, pp. 22-36.

### D. Projected Annual Expenditures to Implement the Modified LTIIP and Measures to Ensure that the Plan is Cost Effective (66 Pa.C.S. § 1352(a)(5); 52 Pa. Code § 121.3(a)(5); 52 Pa. Code § 121.4(d))

As explained in Section 6, the Modified LTIIP proposes to increase the Company's historic annual wastewater DSIC-eligible spending, on average, from approximately $7.8 million annually (2015-2018) to over $20 million annually, representing a 159 percent increase, to continue making necessary system upgrades at an accelerated pace.[17] The overall cost-effectiveness of PAWC's Modified LTIIP is established by data presented in Section 2 of the Plan which show that accelerated investments to replace aging infrastructure and manage I&I are the focus of the Company's Modified LTIIP. The eligible property within each project is being prioritized for improvement and replacement using risk assessment measures designed to help plan and optimize expenditures by, for example, grouping projects by geographic proximity to achieve unit cost savings.[18] In addition, as explained in Section 5, the Company uses competitive bidding to ensure all major capital improvement projects are completed in a cost-effective manner.[19]

The OCA commented that the information shown in Table 9 of the Company's original filing did not tie the projected annual expenditures to individual systems or to the priorities identified in the overview of each system.[20] The Settlement addresses the OCA concern by providing the Joint Petitioners with a breakdown of expenditures for each type of eligible property by year and by wastewater system, with expenditures for combined and sanitary systems displayed separately in the detailed table set forth in Exhibit 3 to the Joint Petition. Joint Petition, ¶ 11. To facilitate the evaluation of the Company's proposed Modified LTIIP, PAWC

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17 *Id.*, pp. 37-38.

18 *Id.*, p. 20.

19 *Id.*, p. 37.

20 OCA Comments, p. 3.

also provided additional information in Exhibit 4 to the Joint Petition, which identifies historic annual DSIC-eligible expenditures from 2015 through the latest available data for 2019 (January/February). Joint Petition, ¶ 13.

### E. Workforce Management Plan (66 Pa.C.S. § 1359(a); 52 Pa. Code § 121.3(a)(7))

Under the Settlement, to ensure system reliability and public safety, PAWC's contractor workforce will be fully qualified, in accordance with the standards set forth in Section 1359 of the Public Utility Code. *See* Joint Petition, ¶¶ 18-19. In that regard, PAWC will continue to administer a competitive process for soliciting contracts and uses a third party to monitor contractor safety performance through a pre-qualification process described in Section 7 of the Modified LTIIP.[21] During the pre-qualification screening process, contractors are required to submit documentation, including safety history, technical capabilities, staffing information and Worker's Compensation Experience Ratings. Under the Settlement, PAWC agreed to continue to use all pre-qualified contractors or trained PAWC employees to perform work on all wastewater DSIC-eligible projects. Joint Petition, ¶ 18.

### F. Outreach and Coordination Activities (52 Pa. Code § 121.3(a)(8))

Under the Settlement, PAWC will continue to coordinate with municipalities, the Department of Transportation and other utilities to ensure that LTIIP projects are properly planned, and executed in an efficient and cost-effective manner as required by the LTIIP Regulations. As explained in Section 8 of the Modified LTIIP, such coordination includes maintaining open communication with applicable municipalities, agencies and utilities, use of technology to minimize roadway disturbance, delivery of high-speed notifications to customers

[21] *See* Joint Petition, Exhibit 1, p. 38.

when water emergencies occur, and leveraging opportunities to replace sewer and water lines simultaneously.[22]

The Settlement also addresses I&E's concern regarding the Company's current use of the PA One Call "Coordinate PA" system.[23] Specifically, PAWC agreed to utilize the PA One Call "Coordinate One Call" system to identify targeted areas of anticipated work planned over the next two years and to facilitate better coordination with other utilities and municipalities. Joint Petition, ¶ 20.

In summary, based on the supplemental information and commitments provided by the Company under the Settlement, the Joint Petitioners agree that the accelerated investment included in the Modified LTIIP will enable the Company to upgrade collection system infrastructure, reduce I&I levels to minimize overflow issues, and address deficiencies in certain newly acquired wastewater systems. These infrastructure improvements will improve safety and reliability, customer service and environmental compliance. Accordingly, the Commission should approve the Modified LTIIP that contains all of the elements required by Section 1352 of the Public Utility Code and the LTIIP Regulations.

## III. CONCLUSION

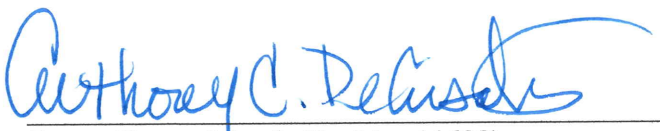
The Settlement provides a reasonable means of resolving all issues raised in this proceeding. It also reduces the administrative burdens on the Commission and the litigation

[22] *Id.*, p. 39.

[23] I&E Amended Answer and Comments, pp. 12-13.

costs of all parties. Accordingly, for the reasons set forth above and in the Joint Petition, the Settlement is in the public interest and should be approved without modification.

Respectfully submitted,



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Dated: August 15, 2019

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# APPENDIX A

**Proposed Findings of Fact, Conclusions of Law and Ordering Paragraphs**

**BEFORE THE**
**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

| | | |
|---|---|---|
| **PETITION OF PENNSYLVANIA-** | : | |
| **AMERICAN WATER COMPANY** | : | |
| **WASTEWATER OPERATIONS FOR** | : | |
| **APPROVAL OF MODIFICATION OF** | : | **DOCKET NO. P-2014-2431005** |
| **LONG-TERM INFRASTRUCTURE** | : | |
| **IMPROVEMENT PLAN** | : | |

# PENNSYLVANIA-AMERICAN WATER COMPANY'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDERING PARAGRAPHS

**August 15, 2019**

## PROPOSED FINDINGS OF FACT

1. This proceeding relates to the Long-Term Infrastructure Improvement Plan ("2014 LTIIP") for Pennsylvania-American Water Company's ("PAWC's" or "the Company's") wastewater operations previously approved by the Pennsylvania Public Utility Commission ("Commission") on December 4, 2014.[24] The 2014 LTIIP covers a five-year period (2014 through 2019) and focuses on infrastructure improvements designed to maintain safe and reliable service as a result of aging collection system infrastructure and infiltration and in-flow ("I&I") resulting from rainwater and groundwater.[25] The 2014 LTIIP reflects PAWC's implementation of a plan designed to accelerate annual investments by approximately $5.14 million annually for infrastructure upgrades, including: (1) replacement of approximately 94,000 linear feet of pipeline, 1,200 laterals, 400 manholes and one lift station; and (2) expansion of treatment, pumping and sludge disposal facilities to aggressively abate I&I.[26]

2. On February 29, 2016, February 28, 2017 and February 27, 2018, PAWC filed its Annual Asset Optimization Plan ("AAOP"), and those plans were subsequently approved by the Commission. As part of its approval of the February 27, 2018 AAOP, the Commission Bureau of Technical Utility Service ("TUS") directed PAWC to modify its 2014 LTIIP in light of the acceleration of DSIC-eligible wastewater capital investments shown in the AAOP for 2015-

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[24] *Petition of Pennsylvania-American Water Co. Wastewater Operations for Approval of its Long-Term Infrastructure Improvement Plan and a Distribution System Improvement Charge*, Docket Nos. P-2014-2431005 and C-2014-243370 (Opinion and Order entered Dec. 4, 2014) ("December 2014 Order"). In the December 2014 Order, the Commission also approved PAWC's request to establish a Distribution System Improvement Charge ("DSIC") for its wastewater operations, subject to refund and recoupments after resolution of the issues the Commission referred to the Office of Administrative Law Judge for the parties to address in on-the-record proceedings. Thereafter, the parties resolved those issues by a Joint Stipulation that provided, among other things, that the DSIC was not applicable to PAWC's Franklin and Koppel wastewater systems. On May 7, 2015, the Commission entered an Order approving the Joint Stipulation.

[25] *See* December 2014 Order, pp. 4-16, 12-15.

[26] *Id.*, p. 16.

2017. To that end, on December 12, 2018, PAWC filed the above-captioned Petition for Commission approval to replace the Company's 2014 LTIIP for the year 2019 and include four additional years (2020-2023) (the "Modified LTIIP").[27]

3. The Modified LTIIP, like the 2014 LTIIP, is designed to accelerate the rehabilitation, improvement and replacement of aging wastewater infrastructure, particularly for troubled systems acquired by PAWC, and continues to focus on reducing I&I. The Modified LTIIP reflects the following principal changes: (1) the Company's use of a more detailed risk-based condition assessment to prioritize projects; (2) increased spending of $20 million annually to maintain an accelerated rate of investment; (3) addition of 11 wastewater districts, including both combined and sanitary sewer systems acquired since 2014; and (4) expansion of DSIC-eligible property to include assets associated with combined sewer systems and the entire customer service lateral on gravity wastewater collection systems.[28]

4. The Petition was served on the Office of Consumer Advocate ("OCA"), the Office of Small Business Advocate ("OSBA"), the Commission's Bureau of Investigation and Enforcement ("I&E"), and all parties of record in PAWC's most recent base rate proceeding at Docket No. R-2017-2595853. On January 2, 2019, I&E filed an Answer to PAWC's Petition and subsequently filed an Amended Answer and Comments ("Amended Answer") on January 10, 2019. Comments on PAWC's Modified LTIIP were filed by the OCA on January 9, 2019.

5. In its Amended Answer, I&E requested that this matter be assigned to the Office of Administrative Law Judge for an investigation. Accordingly, this matter was assigned to the

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[27] The Company originally filed a Petition for Approval of a Major Modification to its Existing Long-Term Infrastructure Improvement Plan and Approval of its Second Long-Term Infrastructure Improvement Plan on November 8, 2018, but withdrew that petition on December 10, 2018 following guidance from TUS.

[28] Petition, p. 7.

Chief Administrative Law Judge Joel H. Cheskis and Administrative Law Judge Andrew M. Calvelli (the "ALJs"). On February 8, 2019, the Commission issued a Hearing Notice establishing an Initial Prehearing Conference for this matter for Friday, March 8, 2019, beginning at 10:00 a.m.

6. Pursuant to the Prehearing Conference Order issued by the ALJs on February 14, 2019, PAWC, I&E, the OCA, and the OSBA filed Prehearing Conference Memoranda. In each of their respective Prehearing Conference Memoranda, the parties requested that the ALJs allow the parties to meet and discuss I&E's and the OCA's issues and concerns with the goal of reaching a resolution that does not require formal litigation. At the Prehearing Conference held on March 8, 2019, the ALJs granted the parties' request and directed a status update by April 9, 2019.

7. In March 2019, I&E and the Company held two informal discovery conferences to facilitate I&E's evaluation of the Company's proposed Modified LTIIP. In addition, through various telephone conferences and correspondence, the Joint Petitioners engaged in discussions to attempt to achieve a settlement of some or all of the issues raised by I&E and the OCA in this proceeding. On April 9 and May 8, 2019, the Joint Petitioners provided status reports to the ALJs to inform them of the progress of settlement discussions.

8. On June 7, 2019, the parties notified the ALJs that a settlement in principle had been reached on the issues raised by I&E and the OCA in this proceeding and the settling parties would submit a Joint Petition for Settlement and Statements in Support to memorialize their agreement.

9. On August 15, 2019, PAWC, I&E, the OCA and the OSBA submitted a Joint Petition for Settlement ("Settlement" or "Joint Petition") and requested that the ALJ approve the

Settlement without modification. The Joint Petition consists of twenty-six numbered paragraphs. Exhibit 1 to the Joint Petition is the Company's Modified LTIIP as enhanced by the Settlement. Exhibits 2-4 to the Joint Petition consist of detailed tables provided to the Joint Petitioners under the Settlement to facilitate the Commission's evaluation of PAWC's proposed Modified LTIIP. Statements in Support were submitted by PAWC, I&E, the OCA and the OSBA, which were appended to the Joint Petition as Statements A-D. In their respective Statements in Support, each of the Joint Petitioners explains why it believes that the Settlement resolves the issues raised by I&E and the OCA in this proceeding and why the Settlement overall is in the public interest and should be approved.

10. Under the Settlement, the Joint Petitioners agreed that PAWC's Modified LTIIP should be implemented as filed, with the limited modifications described in the Joint Petition. The principal substantive terms and conditions of the Settlement are set forth in Paragraph Nos. 9-19 of the Joint Petition, which address the issues and concerns raised in I&E's Amended Answer and the OCA's Comments.

11. Paragraph Nos. 11-13 of the Joint Petition address Comments submitted by both I&E and the OCA that additional information was necessary to assist the Commission in determining that the Modified LTIIP will accelerate PAWC's wastewater infrastructure repair and replacement in a cost-effective manner.[29] Accordingly, Paragraph Nos. 11 through 13 provide as follows:

> 11. In response to the issues raised in I&E's Amended Answer and the OCA's Comments, PAWC has provided the Joint Petitioners with additional information regarding the Company's risk-based condition assessment and planned schedule for replacement and rehabilitation of eligible

[29] *See* I&E Amended Answer and Comments, pp. 6-12; OCA Comments, pp. 3-5.

property. First, Exhibit 2 hereto outlines the projected schedule for completion of the Company's risk-based condition assessment for each wastewater system covered by the Modified LTIIP. The information presented in Exhibit 2 is organized by three categories of systems: (1) newly acquired systems; (2) systems subject to a Pennsylvania Department of Environmental Protection or United States Environmental Protection Agency Consent Order; and (3) all other "routine" systems that do not fall under the other two categories. In addition, Exhibit 3 hereto provides detailed information on the Company's projected schedule for replacement and rehabilitation of DSIC-eligible property for each wastewater system based on the preliminary results of the Company's condition assessment. Exhibit 3 includes a breakdown of expenditures for each type of eligible property by year and by wastewater system (district), with expenditures for combined and sanitary systems displayed separately. PAWC will include an annual update of Exhibit 2 (Condition Assessment Schedule) with its AAOP filing.

12. For newly acquired wastewater systems that have known deficiencies in the gravity collections system (e.g., significant I&I, pipe defects, and installation deficiencies), which were observed during the pre-acquisition due diligence process, PAWC agrees to assume the highest risk factor for these known deficiencies. Once the condition assessment is completed, the risk factor will be adjusted to reflect actual conditions.

13. To facilitate the evaluation of the Company's proposed Modified LTIIP, PAWC also provided the detailed table attached hereto as Exhibit 4, which identifies historic annual DSIC-eligible expenditures in each district, from 2015 through the latest available data for 2019 (January/February). Exhibit 4 also contains a summary of historic annual replacement for DSIC-eligible categories of plant for 2015 through 2018, by district.

12. I&E and the OCA each explain why Paragraph No. 11-13 of the Joint Petition address their concerns regarding the supplemental information they believe is necessary to evaluate the Company's proposed Modified LTIIP in their respective Statements in Support (I&E Statement in Support, pp. 7-14; OCA Statement in Support, pp. 3-4).

13. Paragraph No. 14 of the Joint Petition adopts the following recommendation advanced in the OCA Comments (p. 5): "In future Annual Asset Optimization plans and other LTIIP-related filings, the Company will continue to distinguish between non-regulatory and regulatory investments."

14. Paragraph Nos. 15-17 of the Joint Petition clarifies address the OCA's recommendation in its Comments (p. 5) that if the projected quantities of property improved or annual expenditures are higher for the Company's McKeesport division and lower for other service areas, PAWC should explain why the shift was appropriate in future LTIIP and AAOP filings. Accordingly, Paragraph Nos. 15 through 17 provide as follows:

> 15. Pursuant to Ordering Paragraph 7 of the Commission's October 26, 2017 Order in Docket No. A-2017-2606103, PAWC may collect a DSIC related to the Municipal Authority of the City of McKeesport system prior to the first base rate case in which the System plant-in-service is incorporated into PAWC's rate base, subject to three conditions. The Joint Petitioners agree that the first of those conditions (Ordering Paragraph 7(a)) is met because PAWC's Modified LTIIP incorporating the McKeesport system does not re-prioritize other existing commitments in other service areas.
>
> 16. In future LTIIP and AAOP filings, any changes in projected quantities or projected expenditures for the McKeesport system will be condition assessment-related and will not re-prioritize existing commitments in other service areas. In such filings, if projected quantities or projected expenditures are higher for the McKeesport system and lower for other service areas than the projections in its approved LTIIP, PAWC will include an explanation why the shift was appropriate and does not re-prioritize existing commitments in other service areas.
>
> 17. In addition, in future water and wastewater LTIIP and AAOP filings, if projected quantities or projected expenditures are higher for systems acquired under 66 Pa. C.S. § 1329 and lower for other service areas – compared to its approved LTIIP – the Company will include an

explanation why the shift was appropriate and does not re-prioritize existing commitments in other service areas.

15. The OCA addresses why it supports Paragraph Nos. 15-17 in its Statement in Support (pp. 5-6).

16. PAWC agreed to Paragraph Nos. 18-19 of the Joint Petition to address issues raised by I&E concerning qualified contracts under PAWC's workforce management plan. Paragraph Nos. 18-19 provide as follows:

> 18. PAWC will continue to administer a competitive process for soliciting contracts and will also continue to use a third party to monitor contactor safety performance though the pre-qualification process described in Section 7 of the Modified LTIIP.
>
> 19. PAWC will use only pre-qualified contractors or trained Company employees to perform work on all wastewater DSIC-eligible projects.

17. Paragraph No. 20 of the Joint Petition addresses I&E's concern regarding the Company's current use of the PA One Call "Coordinate PA" system. Paragraph No. 20 provides as follows:

> 20. PAWC currently uses the PA One Call "Coordinate PA" system to facilitate and track contractor pre-construction meetings. The Company agrees to utilize the PA One Call "Coordinate One Call" system to identify targeted areas of anticipated work planned over a two-year look ahead period and to facilitate better coordination with other utilities and municipalities.

18. I&E addresses why it supports Paragraph Nos. 18-20 in its Statement in Support (pp. 14-17).

19. The terms and conditions of the Settlement address and resolve in a fair and reasonable fashion all of the issues raised by I&E and the OCA in this proceeding.

20. As explained in the Company's Statement in Support (pp. 2-10), PAWC's Modified LTIIP agreed to by the Joint Petitioners under the Settlement satisfies the requirements set forth in Section 1352(a) of the Public Utility Code and the Commission's regulations at 52 Pa Code § 121.1-121.8 governing long-term infrastructure improvement plans ("LTIIPs"). Section 1 of the Modified LTIIP describes the types and age of the DSIC-eligible property included in PAWC's accelerated investment totaling approximately $115.7 million encompassed by the Modified LTIIP. Section 2 of the Modified LTIIP describes in detail the Company's risk-based condition assessment approach for analyzing, prioritizing and accelerating the renewal of aging wastewater collection system infrastructure in a cost-effective manner. Sections 3 through 6 provide the general location of the eligible property covered by the Modified LTIIP and schedules depicting the levels of investment of quality of property targeted for accelerated repair and replacement based on the preliminary results of the Company's risk-based condition assessment. Finally, Sections 7 and 8 of the Modified LTIIP provide an effective workforce management plan and discussion of coordination and outreach activities.

21. In addition, based on the supplemental information and commitments provided by the Company under the Settlement, the Joint Petitioners agreed that the accelerated investment included in the Modified LTIIP is reasonable, cost-effective and designed to ensure and maintain adequate, efficient, safe, reliable and reasonable service. *See* PAWC Statement in Support, pp. 2-10; I&E Statement in Support, pp. 7-17; OCA Statement in Support, pp. 3-7; OSBA Statement in Support, pp. 4-5.

## PROPOSED CONCLUSIONS OF LAW

1. On February 14, 2012, former Governor Corbett signed into law Act 11 of 2012 ("Act 11"). Act 11 amended the Public Utility Code ("Code") in several respects, including the addition of Subchapter B (66 Pa.C.S. §§ 1350 – 1360), which authorizes the Commission to approve a DSIC upon petition by an electric distribution company, a natural gas distribution company, a water utility or a wastewater utility. Section 1352(a) of the Code provides that a utility must submit a long-term infrastructure improvement plan ("LTIIP") "in order to be eligible to recover costs under section 1353 (relating to distribution system improvement charge)." In addition, Section 1352(a) of Code, 66 Pa. C.S. § 1352(a), provides that an LTIIP should include the following:

> (1) Identification of the types and age of eligible property owned or operated by the utility for which the utility would seek recovery under this subchapter.
>
> (2) An initial schedule for the planned repair and replacement of eligible property.
>
> (3) A general description of the location of the eligible property.
>
> (4) A reasonable estimate of the quantity of eligible property to be improved.
>
> (5) Projected annual expenditures to implement the plan and measures taken to ensure that the plan is cost effective.
>
> (6) The manner in which the replacement of aging infrastructure will be accelerated and how the repair, improvement or replacement will ensure and maintain adequate, efficient, safe, reliable and reasonable service.

2. On August 2, 2012, the Commission entered an Implementation Order,[30] most of which is devoted to explaining how the Commission intended to implement the provisions of Subchapter B, including the Commission's expectations with regard to the contents of an LTIIP. On May 23, 2014, the Commission finalized the LTIIP Regulations at 52 Pa. Code §§ 121.1-121.8 (the "LTIIP Regulations"), which establish the procedures and criteria for the filing, modification and periodic review of LTIIPs.[31] The LTIIP Regulations build on the Implementation Order and include the six statutory components of an LTIIP as well as two additional requirements for submission of: (1) a workforce management and training program; and (2) a description of a utility's outreach and coordination activities with other utilities, the Department of Transportation and local governments.[32]

3. In order to approve a settlement, the Commission must determine that the proposed terms and conditions, viewed in the context of the settlement as a whole, are in the public interest. *See Pa. P.U.C. v. CS Water & Sewer Ass'n*, 74 Pa. P.U.C. 767, 771 (1991); *Pa. P.U.C. v. Philadelphia Elec. Co.*, 60 Pa. P.U.C. 1, 22 (1985).

4. The Commission's policy and precedent embodied in its regulation at 52 Pa. Code § 5.231 and its Policy Statement on Settlements at 52 Pa. Code § 69.401 encourage parties to resolve contested proceedings by settlement.

5. In its Policy Statement, the Commission stated that "the results achieved from a negotiated settlement or stipulation, or both, in which the interested parties have had an

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[30] *Implementation of Act 11 of 2012*, Docket No. M-2012-2293611 (Final Implementation Order entered August 2, 2012).

[31] The LTIIP Regulations were established pursuant to a May 23, 2014 Final Rulemaking Order at Docket No. L-2012-2317274 and became effective on December 20, 2014.

[32] *See* 52 Pa. Code §§ 121.3(a)(7)-(8).

opportunity to participate *are often preferable to those achieved at the conclusion of a fully litigated proceeding*" (emphasis added).

6. *Pa. P.U.C. v. PECO Energy Co.*, Docket No. R-2010-2161575 (Recommended Decision issued November 2, 2010), p. 12, which was approved and adopted by the Commission in its Final Order entered December 21, 2010, summarized the benefits of resolving contested cases by settlement:

> Settlements lessen the time and expense the parties must expend litigating a case and at the same time conserve administrative hearing resources. The Commission has indicated that settlement results are often preferable to those achieved at the conclusion of a fully litigated proceeding. 52 Pa. Code § 69.401. Rate cases are expensive to litigate and the cost of such litigation at a reasonable level is an operating expense recovered in the rates approved by the Commission. This means that a settlement, which allows the parties to avoid the substantial costs of preparing and serving testimony and the cross-examination of witnesses in lengthy hearings, the preparation and service of briefs, reply briefs, exceptions and reply exceptions, together with the briefs and reply briefs necessitated by any appeal of the Commission's decision, yields significant expense savings for the company's customers. That is one reason why settlements are encouraged by long-standing Commission policy.

7. The terms and conditions of the Joint Petition satisfy all of the Commission's criteria for approval of a settlement.

## PROPOSED ORDERING PARAGRAPHS

1. The Joint Petition is granted and the Settlement is approved, without modification.

2. This proceeding shall be marked closed.

# STATEMENT B

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

| | | |
|---|---|---|
| Petition of Pennsylvania-American Water Company<br>Wastewater Operations For Approval of Modification<br>Of Long-Term Infrastructure Improvement Plan | :<br>:<br>: | Docket No. P-2014-2431005 |

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OCA STATEMENT IN SUPPORT OF
JOINT PETITION FOR COMPLETE SETTLEMENT

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The Office of Consumer Advocate (OCA), one of the signatory parties to the Joint Petition for Settlement of All Issues (Settlement) respectfully requests that the terms and conditions of the Settlement be approved by the Pennsylvania Public Utility Commission (Commission). This request is based upon the OCA's conclusion that the proposed Settlement is in the public interest and is in the interest of the wastewater customers of Pennsylvania-American Water Company (PAWC or Company).

## I. INTRODUCTION

PAWC's current Long Term Infrastructure Improvement Plan (2014 LTIIP) began with calendar year 2015 and ends in 2019. Petition of Petition of PAWC for Approval of LTIIP, Docket No. P-2014-2431005, Order (Dec. 4, 2014) (LTIIP Order). On November 8, 2018, PAWC filed a Petition, which was captioned as a Major Modification to its existing LTIIP and a Second LTIIP. The Company filed a request to withdraw the Petition on December 10, 2018. On December 12, 2018, PAWC filed a new Petition and LTIIP, which was captioned as a Modification to its existing LTIIP. The proposed LTIIP would replace the Company's existing

LTIIP for the Year 2019 and includes Years 2020-2023. Petition at 6. The major changes reflected in the LTIIP are (1) PAWC's use of a risk-based condition assessment to prioritize projects, (2) increased spending and (3) the expansion of LTIIP projects to include plant associated with combined sewer systems and the entire customer service lateral. Petition at 7; LTIIP at 7-13, 17-21, 36-37. PAWC also proposed to add the following 11 wastewater districts:

Rate Zone 1 – Fairview North, Fairview South, McEwensville, and Paint-Elk
Rate Zone 2 – New Cumberland
Rate Zone 3 – Scranton
Rate Zone 4 – Koppel
Rate Zone 5 – Franklin
Rate Zone 6 – McKeesport, Dravosburg, and Duquesne[1]

LTIIP at 1-2.

On January 9, 2019, the OCA filed Comments on the proposed LTIIP.[2] In its Comments, the OCA submitted that supplemental information may be needed by the Commission and its staff in their review of PAWC's proposed LTIIP for compliance with the requirements of Act 11. The OCA recommended that the Company provide the following information:

1. a breakdown of historic annual replacement and retirement for categories of plant for 2015 through 2018 to date, by district, and

2. a table showing the projected annual expenditures by eligible plant categories and by district, with expenditures separately identified for combined and sanitary systems.

In addition, in future Annual Asset Optimization Plans (AAOPs) and other LTIIP-related filings, the OCA submitted that PAWC should:

[1] The Commission approved a term of settlement in PAWC's Application to acquire the wastewater collection and treatment assets of the City of McKeesport, Docket No. A-2017-2606103, which provided that PAWC may collect a DSIC related to the McKeesport system prior to the first base rate case in which the system plant in service is incorporated into PAWC's rate base, subject to certain conditions, including the filing of an amended wastewater LTIIP incorporating the McKeesport area (McKeesport, Dravosburg and Duquesne districts), which does not re-prioritize other existing commitments in other service areas. Application of PAWC to Acquire the City of McKeesport, Order at 3-4 (Oct. 26, 2017).

[2] On January 2, 2019, the Bureau of Investigation & Enforcement (I&E) filed an Answer to PAWC's Petition. On January 10, 2019, I&E filed an Amended Answer and Comments.

3. continue to distinguish between non-regulatory and regulatory investment and

4. to the extent that, relative to the projections in this LTIIP, quantities of property improved or annual expenditures are higher for McKeesport and lower for other service areas, explain why the shift was appropriate and consistent with Ordering Paragraph 7(a) of the Commission's October 26, 2017 Order in Docket No. A-2017-2606103.

## II. TERMS AND CONDITIONS OF JOINT PETITION FOR SETTLEMENT

The following terms of the proposed Settlement directly address the OCA's concerns raised in its Comments:

### A. Settlement ¶¶ 10, 14 - Projected Spending

From 2015 to 2018, PAWC spent an average of $7.39 million annually on wastewater DSIC eligible infrastructure improvements, exclusive of "regulatory driven projects."[3] LTIIP at 37. In its proposed LTIIP, the Company plans to spend over $20 million annually for the period 2019 to 2023, which represents a 159 percent increase in wastewater DSIC spending, excluding regulatory driven projects. Id.

In its Comments, the OCA raised a concern that PAWC did not tie its projected annual expenditures to individual districts or to the priorities identified in the overview of each district. Comments at 3-4. The OCA submitted that a table showing the projected annual expenditures by eligible plant categories and by district would provide necessary information and assist the Commission in assessing the cost-effectiveness of PAWC's plan and its prioritization of DSIC-eligible projects.[4] Further, as discussed above, PAWC proposes to expand the LTIIP to include 11 additional wastewater districts. LTIIP at 1-2. The Company indicated that these additions include both combined and sanitary systems acquired since 2014 and that DSIC eligible property

[3] PAWC-WW indicates that "[n]on-regulatory wastewater DSIC investments are expenditures that exclude regulatory driven costs such as projects associated with a consent order agreement (CO) or a connection management plan (CMP)." LTIIP at 36.

[4] See LTIIP Order at 13-14.

includes wastewater assets associated with both combined and sanitary systems. Id. at 7; Petition at 8. The Commission has conditioned approval of the combined systems on the requirement that PAWC develop a separate cost of service study for the combined systems, which may be the basis for separate rate zones going forward.[5] Accordingly, the OCA suggested that the table should also identify expenditures for combined systems separately from sanitary systems.

Consistent with the OCA's recommendations, Exhibit 3 to the proposed Settlement provides a breakdown of proposed expenditures for each type of eligible property by year and by wastewater system (district) and highlights the expenditures for combined systems to distinguish them from expenditures for sanitary systems. Further, in Paragraph 14 of the proposed Settlement, PAWC commits that it will separately identify expenditures for combined and sanitary systems in future AAOPs and LTIIP-related filings.

**B. Settlement ¶ 13 - Historic Spending and Rate of Replacement**

In its Comments, the OCA pointed out that PAWC's filing did not provide a breakdown of its historic annual replacement and retirement by categories of eligible plant, for each district, to demonstrate how the DSIC will accelerate infrastructure repair and replacement across all of its districts and rate zones.[6] Comments at 3. Exhibit 4 provides this information. Specifically, the chart on the first page identifies historic DSIC-eligible expenditures in each district, from 2015 through early 2019. The chart on pages 2 through 10 provides a detailed summary of historic annual replacement for DSIC-eligible categories of plant for 2015 through 2018, by district.

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[5] Joint Application of PAWC and the Sewer Authority of the City of Scranton, Order at 84-86 (Oct. 19, 2016); McKeesport Order at 2.

[6] The Company had provided that information in its Asset Optimization Plan filings for 2016 and 2017. Docket Nos. M-2017-2591935 (2016), M-2018-3000128 (2017). See also LTIIP Order at 10-12.

### C. Settlement ¶¶ 14-17 - No Re-Prioritization of Existing Commitments in Other Service Areas

As noted above, in its Order approving PAWC's acquisition of the wastewater assets of the Municipal Authority of the City of McKeesport, the Commission adopted a condition that PAWC file an amended wastewater LTIIP incorporating the McKeesport area (McKeesport, Dravosburg and Duquesne districts), which does not re-prioritize other existing commitments in other service areas. *Supra*, note 1. In its Comments on the proposed LTIIP, the OCA submitted that, to the extent that, relative to the projections in this LTIIP, quantities or expenditures are higher for McKeesport and lower for other service areas, PAWC should explain why the shift was appropriate and consistent with the McKeesport Order. Comments at 4.

Paragraph 15 of the Settlement reflects the Parties' agreement that PAWC's proposed LTIIP does not re-prioritize other existing commitments in other service areas. Paragraph 16 provides PAWC's commitment that, in its future LTIIP and AAOP filings, any changes in projected quantities or expenditures for the McKeesport system will not re-prioritize other existing commitments in other service areas. Further, if projections are higher for McKeesport and lower for other service areas relative to the approved LTIIP, PAWC will include an explanation in the filing as to why the shift was appropriate. This will facilitate review of the Company's compliance with this condition of the McKeesport Order.

Paragraph 17 contains PAWC's agreement that it will meet the requirements of Paragraph 16, not only with regard to the acquired McKeesport system, but with regard to all wastewater and water systems acquired under Section 1329 of the Public Utility Code, 66 Pa. C.S. § 1329. Specifically, Paragraph 17 of the proposed Settlement provides:

> [i]n future water and wastewater LTIIP and AAOP filings, if projected quantities or projected expenditures are higher for systems acquired under 66 Pa. C.S. § 1329 and lower for other service areas – compared to its approved LTIIP – the

> Company will include an explanation why the shift was appropriate and does not re-prioritize existing commitments in other service areas.

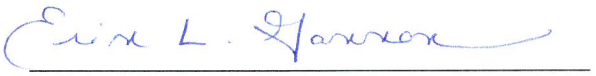
The benefit of this provision is that, each time PAWC files a new or modified LTIIP or AAOP that plans to increase improvements or spending in a system acquired under Section 1329 and decrease improvements or spending for other PAWC service areas (compared to the levels projected in PAWC's approved LTIIP), the Company will provide an explanation, as part of the filing, why the shift was appropriate. This information will help to facilitate review of PAWC's filings and may avoid the need for the OCA and other interested parties to investigate or raise an issue in Comments each time there is an apparent shift in levels.

In its LTIIP, the Company provided separate projections for (1) the quantity of property to be improved and annual expenditures related to the McKeesport Order and (2) "non-regulatory" quantities/expenditures. LTIIP at 36-37; *supra*, note 3. PAWC qualified its projections by stating that "[a]ctual quantities and scheduling may change depending on the outcome of sewer system evaluation or other planning studies." LTIIP at 36. To assist the Commission and stakeholders in monitoring PAWC's prioritization during the LTIIP period, the OCA recommended that the Company continue to distinguish between McKeesport quantities/expenditures and non-regulatory quantities/expenditures in its future AAOPs and LTIIP filings. Comments at 4. The Company's agreement with this recommendation is reflected in Paragraph 14.

## III. CONCLUSION

The Settlement effectively resolves the issues that the Office of Consumer Advocate raised and considered in response to the Petition filed by Pennsylvania-American Water Company to modify its wastewater Long Term Infrastructure Improvement Plan. For the foregoing reasons, the Office of Consumer Advocate submits that the terms and conditions of the Settlement are in the public interest and should be approved.

Respectfully submitted,



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Dated: August 14, 2019
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# STATEMENT C

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

| | | |
|---|---|---|
| In Re: Petition of Pennsylvania-American Water Company Wastewater Operations for approval of Modification of Long-Term Infrastructure Improvement Plan | : | Docket No.: P-2014-2431005 |

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**BUREAU OF INVESTIGATION AND ENFORCEMENT**
**STATEMENT IN SUPPORT OF**
**JOINT PETITION FOR SETTLEMENT**

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**TO: DEPUTY CHIEF ADMINISTRATIVE LAW JUDGE JOEL H. CHESKIS AND ADMINISTRATIVE LAW JUDGE ANDREW M. CALVELLI:**

The Bureau of Investigation and Enforcement ("I&E") of the Pennsylvania Public Utility Commission ("Commission"), by and through its Prosecutor Scott B. Granger, hereby respectfully submits that the terms and conditions of the foregoing Joint Petition for Settlement ("Joint Settlement") are in the public interest and represent a fair, just, and reasonable balance of the interests of the Pennsylvania American Water Company ("PAWC"); I&E; the Office of Consumer Advocate ("OCA"); the Office of Small Business Advocate ("OSBA"); (collectively the "Joint Petitioners" or the 'Parties"); and, the affected ratepayers.

## I. BACKGROUND

1. On December 12, 2018 PAWC filed its Petition of Pennsylvania American Water Company Wastewater Operations for Approval of Modification of Long-Term

Infrastructure Improvement Plan ("Petition to Modify LTIIP") giving rise to this proceeding.

2. After filing an initial Answer, I&E ultimately filed an Amended Answer and Comments of the Bureau of Investigation and Enforcement to the Petition of the Pennsylvania – American Water Company ("I&E Amended Answer")[1] to PAWC's Petition to Modify LTIIP on January 10, 2019.

3. I&E is charged with representing the public interest in Commission proceedings related to rates, rate-related services, and petitions and applications affecting the public interest. In negotiated settlements, it is incumbent upon I&E to identify how amicable resolution of any such proceeding may benefit the public interest and to ensure that the public interest is served. Based upon I&E's analysis of PAWC's Petition to Modify LTIIP and the positions negotiated by the Parties, acceptance of this proposed Settlement is in the public interest and I&E recommends that the Administrative Law Judges and the Commission approve the Settlement in its entirety.

4. As more fully set forth in the Petition to Modify LTIIP, this proceeding relates to PAWC's 2014 Long-Term Infrastructure Improvement Plan ("2014 LTIIP") for the Company's wastewater operations which was previously approved by the Commission on December 4, 2014.[2] The 2014 LTIIP covers a five-year period (2014 through 2019) and focuses on infrastructure improvements designed to maintain safe and

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1 I&E originally filed its *Answer of the Bureau of Investigation and Enforcement to the Petition of the Pennsylvania – American Water Company* ("Answer") on January 2, 2019. I&E then followed-up its original Answer with its *Amended Answer and Comments of the Bureau of Investigation and Enforcement to the Petition of the Pennsylvania – American Water Company* on January 10, 2019 to specify and expand on the issues raised in I&E's original Answer.

2 *See* Petition to Modify LTIIP, pp. 1-7 and Attachment A.

reliable service as a result of aging collection system infrastructure suffering from infiltration and in-flow ("I&I") of rainwater and groundwater.[3] The 2014 LTIIP reflects PAWC's implementation of a plan designed to accelerate annual investments by approximately $5.14 million annually for infrastructure upgrades, including: (1) replacement of approximately 94,000 linear feet of pipeline, 1,200 laterals, 400 manholes and one lift station; and (2) expansion of treatment, pumping and sludge disposal facilities to aggressively abate I&I.[4]

5. On February 29, 2016, February 28, 2017 and February 27, 2018, PAWC filed its Annual Asset Optimization Plan ("AAOP"), and each of those plans were subsequently approved by the Commission.

6. As part of its approval of the February 27, 2018 AAOP, the Commission's Bureau of Technical Utility Service ("TUS") directed PAWC to modify its 2014 LTIIP in light of the acceleration of DSIC-eligible wastewater capital investments shown in the AAOP for 2015-2017.

7. In May 2018, PAWC advised the Commission that the Company expected to file a petition to modify its LTIIP in November 2018.

8. On November 8, 2018, PAWC filed a Petition for Approval of a Major Modification to its Existing Long-Term Infrastructure Improvement Plan and Approval of its Second Long-Term Infrastructure Improvement Plan. PAWC noted that TUS provided guidance to PAWC regarding the filing of a Major Modification to its Existing

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3 Joint Settlement, pp. 1-2.
4 *Id.*, p. 2.

Long-Term Infrastructure Improvement Plan rather than a Second Long-Term Infrastructure Improvement Plan.

9. Then, on December 10, 2018, PAWC filed a letter withdrawing the November 8, 2018 Petition for Approval of a Major Modification. The November 8, 2018 filing is not the genesis of this proceeding.

10. Subsequently, on December 12, 2018, PAWC filed the above-captioned Petition to Modify LTIIP to replace the Company's 2014 LTIIP for the year 2019 and to include four (4) additional years (2020-2023) (the "2018 Modified LTIIP")[5] as referenced in Paragraph 1 *supra*.

11. PAWC averred that the 2018 Modified LTIIP replaces Year 2019 of the Company's 2014 Wastewater Long-Term Infrastructure Improvement Plan; adds Years 2020 through 2023; and, it also includes wastewater assets acquired by the Company since 2014.[6] PAWC noted that the 2018 Modified LTIIP utilizes a risk-based condition approach in order to cost-effectively prioritize wastewater collection system replacement and rehabilitation projects and accelerates the rehabilitation, improvement, and replacement of aging wastewater infrastructure for wastewater systems.[7]

12. PAWC also asserted that as a regulated Pennsylvania public utility, the Company must comply with drinking water, environmental and other operational

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5 Petition to Modify LTIIP, p. 6.
6 *Id.*, p. 7.
7 *Id.*, p. 7. *See also* I&E Amended Answer, p. 2.

standards established by the Pennsylvania Department of Environmental Protection ("DEP") and the federal Environmental Protection Agency ("EPA").[8]

13. Further, PAWC alleged, since acquiring the identified wastewater systems, PAWC has made improvements and/or has undertaken system evaluations. PAWC claims capital additions continue to be needed to rehabilitate, improve and replace elements of the collection system in order to maintain adequate, efficient, safe, reliable and reasonable service and to comply with existing and evolving regulatory standards imposed by agencies of the state and federal governments. PAWC averred, of particular importance, consistent, ongoing rehabilitation, improvement and replacement of the collection systems are necessary to avoid increases in and, to the extent possible, to reduce, I&I.[9]

14. PAWC averred that the Modified LTIIP, like the 2014 LTIIP, is designed to accelerate the rehabilitation, improvement and replacement of aging wastewater infrastructure, particularly for troubled systems acquired by PAWC, and continues to focus on reducing I&I. The Modified LTIIP reflects the following principal changes: (1) the Company's use of a more detailed risk-based condition assessment to prioritize projects; (2) increased spending of $20 million annually to maintain an accelerated rate of investment; (3) addition of 11 wastewater districts, including both combined and sanitary sewer systems acquired since 2014; and (4) expansion of DSIC-eligible property to

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8 *Id.*

9 Petition to Modify LTIIP, p. 2.

include assets associated with combined sewer systems and the entire customer service lateral on gravity wastewater collection systems.[10]

15. The OCA filed Comments regarding PAWC's Petition to Modify LTIIP on January 9, 2019.

16. A Prehearing Conference was held on March 8, 2019 before Deputy Chief Administrative Law Judge Joel H. Cheskis and Administrative Law Judge Andrew M. Calvelli (the "ALJs"), during which the ALJs granted the Parties request that the ALJs allow the Parties to meet and enter into settlement negotiations with the goal of reaching an amicable resolution in lieu of embarking on formal litigation.

17. In accordance with Commission policy favoring settlements at 52 Pa. Code § 5.231, the Parties held several extensive informal discovery and settlement conferences during which the Parties thoroughly vetted the issues raised in PAWC's Petition to Modify LTIIP, I&E's Amended Answer, and the OCA's Comments.

18. Following the extensive settlement negotiations, the Joint Petitioners reached a full settlement of all issues raised by the Parties as set forth in the Joint Petition for Settlement.

## II. TERMS AND CONDITIONS OF SETTLEMENT

### A. General (Joint Petition ¶¶ 8, 21-27):

I&E submits that the Joint Settlement balances the interests of the Company, its customers, and the Joint Petitioners in a fair and equitable manner and presents a resolution for the Commission's adoption that best serves the public interest.

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[10] Petition to Modify LTIIP, p. 7.

Accordingly, for the specific reasons articulated below, and in order to achieve the full scope of benefits addressed in the Joint Settlement, I&E requests that the Joint Settlement be recommended by the ALJs and approved by the Commission without modification.

### B. Risk Based Condition Assessment Methodology (Joint Petition ¶¶ 10-12):

*Settlement Terms*

In the Settlement, the Joint Petitioners agree that Section 2 of the Modified LTIIP describes in detail the Company's framework for analyzing, prioritizing and accelerating the renewal of aging wastewater collection system infrastructure. The Company employed a risk-based condition assessment to prioritize DSIC-eligible capital improvement projects, accelerate the replacement of aging infrastructure and reduce I&I in newly acquired systems.

Further, in response to the issues raised in I&E's Amended Answer and the OCA's Comments, PAWC provided the Joint Petitioners with additional information regarding the Company's risk-based condition assessment and planned schedule for replacement and rehabilitation of eligible property. First, Exhibit 2 attached to the Joint Petition outlines the projected schedule for completion of the Company's risk-based condition assessment for each wastewater system covered by the Modified LTIIP. The information presented in Exhibit 2 is organized by three categories of systems: (1) newly acquired systems; (2) systems subject to a Pennsylvania Department of Environmental Protection or United States Environmental Protection Agency Consent Order; and (3) all other "routine" systems that do not fall under the other two categories. In addition, Exhibit 3 attached to the Joint Petition provides detailed information on the Company's

projected schedule for replacement and rehabilitation of DSIC-eligible property for each wastewater system based on the preliminary results of the Company's condition assessment. Exhibit 3 includes a breakdown of expenditures for each type of eligible property by year and by wastewater system (district), with expenditures for combined and sanitary systems displayed separately. Also, PAWC agrees to include an annual update of Exhibit 2 (Condition Assessment Schedule) with its AAOP filing.

Finally, the Parties agree that for newly acquired wastewater systems that have known deficiencies in the gravity collections system (e.g., significant I&I, pipe defects, and installation deficiencies), which were observed during the pre-acquisition due diligence process, PAWC agrees to assume the highest risk factor for these known deficiencies. Once the condition assessment is completed, the risk factor will be adjusted to reflect actual conditions.

*Discussion*

I&E raised concerns in its Amended Answer regarding PAWC's proposed Modified LTIIP utilizing a risk-based condition assessment approach in order to cost-effectively prioritize wastewater collection system replacement and rehabilitation projects and accelerate the rehabilitation, improvement, and replacement of aging wastewater infrastructure for wastewater systems.[11] I&E noted that PAWC failed to provide a baseline risk assessment, that would demonstrate the "ordinary" (base rate) infrastructure improvement, schedule, cost and risk before applying the "additional recovery

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[11] I&E Amended Answer, p. 6. *See also*, Petition to Modify LTIIP, ¶ 18.

mechanism" associated with the Modified LTIIP/DISC.[12] The absence of a baseline risk assessment by PAWC eliminates the ability of I&E and the Commission to project an annual risk reduction and a total risk reduction for the accelerated infrastructure improvement schedule when applying the additional recovery mechanism ("ARM").[13] Attachment A to the Modified LTIIP dated October 31, 2018 describes the intention of the RBCAA, which is to calculate the total risk of every PAWC pipeline and facility. PAWC proposes to prioritize their facility replacement starting with the facilities at the highest calculated risk and ending with the facilities at the lowest calculated risk. I&E argued that this proposed strategy, however, doesn't demonstrate a baseline risk assessment that identifies all the risks and consequences projected through time at the "ordinary" base rate; and therefore, doesn't yield any useful expenditure and risk reduction end points that would indicate if the ARM is a detriment or benefit to the public interest.[14] I&E concluded that the method currently proposed by PAWC (the RBCAA) is unacceptable and requires a corrective fix that will establish a viable risk reduction strategy; and, that will demonstrate how the proposed ARM reduces annual risk and total risk going forward.[15] I&E added, PAWC's failure to demonstrate how the proposed ARM will reduce total risk is also a failure to demonstrate how the proposed LTIIP expenditures are cost effective and in the public interest.[16]

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12 I&E Amended Answer, p. 6.
13 *Id.*
14 *Id.*, pp. 6-7.
15 *Id.*, p. 7.
16 *Id.*

I&E also raised concerns that PAWC failed to provide data to support a risk-based condition assessment approach in its filing. PAWC's filing failed to provide the necessary pipe/conveyance data variables to properly assess conditions (material, install date, type, actual length, combined system, average depth, etc.) and no data currently exists for approximately 21.1 miles of pipe.[17] Also, the filing failed to provide pipe/conveyance material breakdowns within the PAWC gravity system for approximately 54% of all pipe and for approximately 9% of all pressurized sanitary sewer pipe. And, the filing failed to provide pipe/conveyance installation dates for approximately 34% of the PAWC wastewater system.[18]

*Conclusion*

I&E supports the risk-based condition assessment methodology settlement terms as reflecting a full and fair compromise of the issues raised by the Parties and, accordingly, is in the public interest. I&E recognizes that these settlement terms are the result of compromises by the Parties and do not necessarily represent the position(s) that would be advanced by I&E or the other Parties in the event this proceeding were to be fully litigated. The Parties reached this compromise after lengthy informal discovery and negotiations. I&E believes the agreed upon Settlement terms reflect the amicable agreement among the Joint Petitioners.

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17 *Id.*

18 *Id.*, pp. 7-8.

**B. Projected Annual Expenditures and Replacements (Joint Petition ¶¶ 13-17):**

*Settlement Terms*

In the Settlement, the Joint Petitioners acknowledge that, to facilitate the evaluation of the Company's proposed Modified LTIIP, PAWC provided the detailed table attached to the Joint Petition as Exhibit 4, which identifies historic annual DSIC-eligible expenditures in each district, from 2015 through the latest available data for 2019 (January/February). Exhibit 4 also contains a summary of historic annual replacement for DSIC-eligible categories of plant for 2015 through 2018, by district. And, in future AAOPs and other LTIIP-related filings, the Company agrees to continue to distinguish between non-regulatory and regulatory investments and will separately identify expenditures for combined and sanitary only systems.

Further, the Parties agreed that pursuant to Ordering Paragraph 7 of the Commission's October 26, 2017 Order in Docket No. A-2017-2606103, PAWC may collect a DSIC related to the Municipal Authority of the City of McKeesport system prior to the first base rate case in which the System plant-in-service is incorporated into PAWC's rate base, subject to three conditions. The Joint Petitioners agree that the first of those conditions (Ordering Paragraph 7(a)) is met because PAWC's Modified LTIIP incorporating the McKeesport system does not re-prioritize other existing commitments in other service areas. Additionally, the Parties agreed in future LTIIP and AAOP filings, any changes in projected quantities or projected expenditures for the McKeesport system will be condition assessment-related and will not re-prioritize existing commitments in other service areas. In such filings, if projected quantities or projected expenditures are

higher for the McKeesport system and lower for other service areas than the projections in its approved LTIIP, PAWC will include an explanation why the shift was appropriate and that the shift does not re-prioritize existing commitments in other service areas.

Finally, the Parties agreed in future water and wastewater LTIIP and AAOP filings, if projected quantities or projected expenditures are higher for systems acquired under 66 Pa. C.S. § 1329 and lower for other service areas – compared to its approved LTIIP – the Company will include an explanation why the shift was appropriate and why the shift does not re-prioritize existing commitments in other service areas.

*Discussion*

I&E raised concerns regarding the projected annual expenditures and replacements, and whether any changes in projected quantities or changes in expenditures would result in the re-prioritizing existing commitments in other service territories.[19] I&E noted that PAWC Petition and Modified LTIIP address a variety of wastewater systems, Commission Orders, PAWC transfers, PAWC sales, etc., without clearly addressing the following: (i) the bottom line effect(s) (if any) to the eligible costs regarding ordinary infrastructure maintenance and replacement built into base rates; (ii) presenting key detailed and concise references to orders, transfers, sales, etc.; and (iii) following the guidelines of the Public Utility Code, Section 1353(b)(i) regarding a description of the eligible property.[20] Most notably, PAWC failed to clearly separate (within all the appropriate areas of the Modified LTIIP and applicable DSIC) the

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19 *See* I&E Amended Answer, pp. 7-11.
20 I&E Amended Answer, p. 8.

"ordinary" pipeline segment replacement and maintenance costs (associated with the appropriate base rates for each system) from the "additional recovery mechanism" associated with the accelerated LTIIP/DISC asset replacement proposed in the Modified LTIIP.[21] Further, PAWC failed to provide, for each individual PAWC wastewater system, the proposed DSIC charge as a function of percent billed to customers as described in the Public Utility Code, Section 1358, and the relevant limitations.[22] Additionally, I&E noted PAWC failed to provide a description of the improvements covered by the base rates and DSIC in sufficient detail and incorporated into the Modified LTIIP.[23] Finally, PAWC failed to break down the proposed wastewater infrastructure improvements further into the eligible property as defined in the Public Utility Code, Section 1351 "Eligible property."[24]

I&E also argued that PAWC's filing was deficient for failing to provide a condition assessment of all the PAWC wastewater systems and infrastructure that would allow the Commission to fully analyze and evaluate PAWC's proposed Modified LTIIP Plan.[25] I&E reasoned, the requested condition assessment should identify all of PAWC's pipe/conveyance systems, infrastructure, etc., associated with sanitary sewer overflows ("SSO"); combined sewers; the combined sewer overflow ("CSO") mitigation/removal plan and schedule filed with the environmental authorities; and, should identify the risks

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21 *Id.*, pp. 8-9.
22 *Id.*, p. 9.
23 *Id.*
24 *Id.*
25 *Id.*, p. 8.

associated with the failure of not meeting the CSO separation requirements with regard to Pennsylvania and federal regulations, public health hazards and water quality standards.[26]

Finally, the OCA also expressed concerns regarding PAWC's projected annual expenditures and replacements; and, re-prioritizing existing commitments in other service territories.[27]

*Conclusion*

I&E supports the projected annual expenditures and replacements settlement terms as reflecting a full and fair compromise of the issues raised by the Parties and, accordingly, is in the public interest. I&E recognizes that these settlement terms are the result of compromises by the Parties and do not necessarily represent the position(s) that would be advanced by I&E or the other Parties in the event this proceeding were to be fully litigated. The Parties reached this compromise after lengthy informal discovery and negotiations. I&E believes the agreed upon Settlement terms reflect the amicable agreement among the Joint Petitioners.

**C Qualified Contractors (Joint Petition ¶¶ 18-19):**

*Settlement Terms*

In the Settlement, the Joint Petitioners agreed that PAWC will continue to administer a competitive process for soliciting contracts and will also continue to use a third party to monitor contactor safety performance though the pre-qualification process described in Section 7 of the Modified LTIIP. Further, PAWC will use only pre-qualified

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26 *Id.*

27 Comments of the Office of Consumer Advocate, pp. 2-4.

contractors or trained Company employees to perform work on all wastewater DSIC-eligible projects.

*Discussion*

I&E expressed its concerns regarding the definition of "qualified contractor" and the methodology used to compile PAWC's list of qualified contractors.[28] In response to I&E's concerns, PAWC provided details regarding its processes for evaluating contractors during the informal discovery and settlement negotiations. Further, PAWC confirmed that it uses a third-party risk management company that monitors and certifies safety performance of the PAWC contractors in a centralized database. PAWC asserted that these processes establish the basis of PAWC's "qualified contractors." PAWC also affirmed that it continuously maintains and updates the list of approved qualified contractors based upon satisfactory job performance and maintaining acceptable certification with the third-party risk management company; and, PAWC concluded this list of pre-qualified contractors fosters competitive bidding.

*Conclusion*

I&E supports the qualified contractors settlement terms as reflecting a full and fair compromise of the issues raised by the Parties and, accordingly, is in the public interest. I&E recognizes that these settlement terms are the result of compromises by the Parties and do not necessarily represent the position(s) that would be advanced by I&E or the other Parties in the event this proceeding were to be fully litigated. The Parties reached this compromise after lengthy informal discovery and negotiations. I&E believes the

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[28] I&E Amended Answer, p. 12.

agreed upon Settlement terms maintain a proper balance of the interests of the Parties and reflect an amicable agreement among the Joint Petitioners.

**D. Coordination of Planned Projects (Joint Petition ¶ 20):**

*Settlement Terms*

In the Joint Petition for Settlement the Joint Petitioners acknowledge that PAWC currently uses the PA One Call "Coordinate PA" system to facilitate and track contractor pre-construction meetings. And that the Company agrees to utilize the PA One Call "Coordinate One Call" system to identify targeted areas of anticipated work planned over a two-year look ahead period and to facilitate better coordination with other utilities and municipalities.

*Discussion*

I&E expressed its concerns regarding the coordination of planned projects and activities and raised the issue of PAWC's use of the PA One Call 'Coordinate PA" ("Coordinate PA") system.[29] I&E argued that the Modified LTIIP should include provisions that PAWC create and initiate newly written procedures and orders to contractors, engineers, etc., to utilize the design notification system in PA One Call without exception.[30] I&E noted that it could not find a single event where PAWC utilized the PA One Call design notification system in the past.[31] I&E requested that the Modified LTIIP reflect this process and demonstrate, via PAWC procedures, the

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29 I&E Amended Answer, pp. 12-13.
30 *Id.*, p. 12.
31 *Id.*

methodology through which this will be achieved and measured to ensure a successful implementation and continued practice.[32]

*Conclusion*

I&E supports the coordination of planned projects settlement terms as reflecting a full and fair compromise of the issues raised by the Parties and, accordingly, is in the public interest. I&E recognizes that these settlement terms are the result of compromises by the Parties and do not necessarily represent the position(s) that would be advanced by I&E or the other Parties in the event this proceeding were to be fully litigated. The Parties reached this compromise after lengthy informal discovery and negotiations. I&E believes the agreed upon Settlement terms maintain a proper balance of the interests of the Parties and reflect an amicable agreement among the Joint Petitioners.

## III. THE SETTLEMENT SATISFIES THE PUBLIC INTEREST

19. I&E represents that all issues raised in the pleadings, in informal discovery, and in the settlement negotiations have been amicably resolved and are incorporated or considered in the resolution proposed in the Settlement. The very nature of a settlement requires compromise on the part of all parties. This Settlement exemplifies the benefits to be derived from a negotiated approach to resolving what can appear at first blush to be irreconcilable regulatory differences. The Joint Petitioners have carefully discussed and negotiated all issues raised in this proceeding, and specifically those addressed and resolved in this Settlement. Further line-by-line identification of the ultimate resolution of the disputed issues beyond those presented in the Settlement is not necessary as I&E

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[32] *Id.*, pp. 12-13.

represents that the Settlement maintains the proper balance of the interests of all parties. I&E is satisfied that no further action is necessary and considers its investigation of PAWC's Petition to Modify LTIIP complete.

20. Based upon I&E's analysis of the pleadings and all the information provided during the informal discovery conferences, acceptance of this Settlement is in the public interest. I&E further submits that the acceptance of this Settlement negates the need for evidentiary hearings, which would compel the extensive devotion of time and expense for the preparation, presentation, and cross-examination of multiple witnesses, the preparation of Main and Reply Briefs, the preparation of Exceptions and Replies, and the potential of filed appeals, all yielding substantial savings for all parties and ultimately all customers. Moreover, the Settlement provides regulatory certainty with respect to the disposition of issues and final resolution of this case which all parties agree benefits their discrete interests.

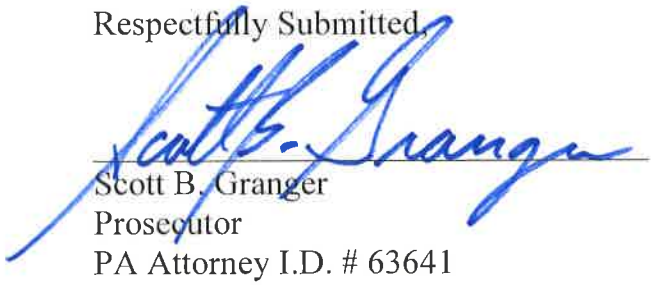
21. The Settlement is conditioned upon the Commission's approval of all terms without modification. Should the Commission fail to grant such approval or otherwise modify the terms and conditions of the Settlement, it may be withdrawn by the Company, I&E, or any other Joint Petitioner.

22. I&E's agreement to settle this case is made without any admission or prejudice to any position that I&E might adopt during subsequent litigation in the event that the Settlement is rejected by the Commission or otherwise properly withdrawn by any other parties to the Settlement.

23. If the ALJs recommend that the Commission adopt the Settlement as proposed, I&E agrees to waive the filing of Exceptions. However, I&E does not waive its right to file Replies to Exceptions with respect to any modifications to the terms and conditions of the Settlement or any additional matters that may be proposed by the ALJs in their Recommended Decision. I&E also does not waive the right to file Replies in the event any party files Exceptions.

WHEREFORE, the Commission's Bureau of Investigation and Enforcement represents that it supports the Joint Petition for Settlement as being in the public interest and respectfully requests that Deputy Chief Administrative Law Judge Joel H. Cheskis and Administrative Law Judge Andrew M. Calvelli recommend, and the Commission approve, the terms and conditions contained in the Joint Petition for Settlement.

Respectfully Submitted,



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Dated: August 14, 2019

# STATEMENT D

**BEFORE THE**
**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

| | | |
|---|---|---|
| **PETITION OF PENNSYLVANIA-AMERICAN WATER COMPANY WASTEWATER OPERATIONS FOR APPROVAL OF MODIFICATION OF LONG-TERM INFRASTRUCTURE IMPROVEMENT PLAN** | : | **DOCKET NO. P-2014-2431005** |

**STATEMENT OF THE OFFICE OF SMALL BUSINESS ADVOCATE**
**IN SUPPORT OF THE JOINT PETITION FOR SETTLEMENT**

## I. INTRODUCTION

The Small Business Advocate is authorized and directed to represent the interests of small business consumers in proceedings before the Pennsylvania Public Utility Commission ("Commission") under the provisions of the Small Business Advocate Act, Act 181 of 1988, 73 P.S. §§ 399.41 - 399.50. In order to discharge this statutory duty, the Office of Small Business Advocate ("OSBA") is participating as a party to this proceeding to ensure that the interests of small commercial and industrial ("Small C&I") customers of Pennsylvania-American Water Company ("PAWC" or the "Company") are adequately represented and protected.

## II. PROCEDURAL BACKGROUND

On July 3, 2014, PAWC filed with the Commission a Petition for Approval of Wastewater Long Term Infrastructure Improvement Plan ("LTIIP") and Approval to Establish and Implement a Distribution System Improvement Charge ("DSIC") ("2014 LTIIP/DSIC Petition").

The Office of Small Business Advocate ("OSBA") filed a Notice of Intervention, Public Statement and Notice of Appearance in response to PAWC's 2014 LTIIP/DSIC Petition on July 22, 2014. On July 23, 2014, the Office of Consumer Advocate ("OCA") filed a Public Statement, Formal Complaint and an Answer to PAWC's 2014 LTIIP/DSIC Petition.

On December 4, 2014, the Commission entered an Opinion and Order, approving PAWC's 2014 LTIIP Petition. In the December 4, 2014 Opinion and Order, the Commission also approved PAWC's 2014 DSIC Petition, subject to refund and recoupment after final resolution of the issues brought before the Office of Administrative Law Judge (OALJ) as well as the applicability of the DSIC to PAWC's Franklin and Koppel wastewater systems.

On November 8, 2018, PAWC filed the *Petition of Pennsylvania-American Water Company Wastewater Operations for Approval of a Major Modification to its Existing Long-Term Infrastructure Improvement Plan and Approval of its Second Long-Term Infrastructure Improvement Plan* ("2018 LTIIP Petition"). PAWC filed a letter on December 10, 2018 withdrawing the 2018 LTIIP Petition.

On December 12, 2018, PAWC filed the *Pennsylvania-American Water Company Wastewater Operations Petition for Approval of Modification of Long-Term Infrastructure Improvement Plan* ("2018 Petition to Modify LTIIP") to replace PAWC's 2014 LTIIP for the year 2019 and to include the additional years of 2020 through 20213 ("Modified LTIIIP"). In the 2018 Petition to Modify LTIIP, PAWC indicated that the major changes reflected in the Modified LTIIP were its use of a risk-based condition assessment to cost-effectively prioritize projects, increased spending, the expansion of the

number of wastewater districts to eighteen, and expansion of DSIC-eligible property to include plants associated with both combined and sanitary sewer systems and the entire customer service lateral on a gravity wastewater collection system.

On January 2, 2019, the Commission's Bureau of Investigation and Enforcement ("I&E") filed an Answer to PAWC's 2018 Petition to Modify LTIIP. On January 9, 2019, the OCA filed Comments with the Commission in this proceeding responding to the 2018 Petition to Modify LTIIP.

On January 10, 2019, I&E filed an Amended Answer and Comments to the 2018 Petition to Modify LTIIP.

A Prehearing Conference was held on March 8, 2019 before Deputy Chief Administrative Law Judge ("ALJ") Joel Cheskis and ALJ Andrew Calvelli, at which time the parties requested that the ALJs permit the parties the opportunity to resolve the issues identified in this matter without setting a formal litigation schedule for at least thirty days.

Subsequently, the parties engaged in informal discovery and provided the ALJs with status reports at certain intervals.

The parties engaged in settlement discussions, and a settlement of all issues was reached.

The OSBA participated in the negotiations that led to the proposed settlement, and is a signatory to the Joint Petition for Settlement ("Settlement"). The OSBA submits this statement in support of the Settlement.

## III. STATEMENT IN SUPPORT OF SETTLEMENT

Upon further review of the Company's filings and subsequent discovery, the OSBA determined that the issues initially outlined in its prehearing memorandum had been adequately addressed.

Pursuant to the Settlement, the parties agreed that the Company should be permitted to implement its Modified LTIIP with certain revisions. Included in these revisions are the obligations for PAWC to use only pre-qualified contractors or trained company employees to perform work on all wastewater DSIC-eligible projects, and for PAWC to continue to use a competitive process for soliciting contracts as well as continuing to use a third party to monitor contractor safety performance throughout the pre-qualification process outlined in Section 7 of its Modified LTIIP. Furthermore, PAWC agrees to assume the highest risk factor for newly acquired wastewater systems with known deficiencies in their gravity collections system when conducting its risk-based condition assessment to prioritize DSIC-eligible capital improvement projects. These commitments will benefit Small C&I customers of the Company because such measures will likely promote safety and should minimize service disruptions for Small C&I customers.

The OSBA additionally supports the commitment by PAWC to use the PA One Call "Coordinate One Call" system to identify targeted areas of anticipated work over a two-year look ahead period and to facilitate better coordination with other utilities and municipalities. Construction projects can deter customers from patronizing small businesses if access to small businesses is disrupted by such projects. Patrons may avoid streets where construction is ongoing and may even believe that businesses are not open

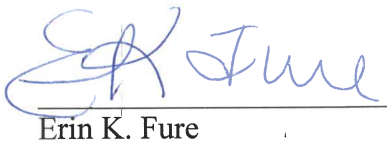
while construction occurs. In order to minimize impact on small business, the OSBA believes that construction projects should be coordinated to the extent possible. The OSBA believes that PAWC's commitments toward this goal will have a beneficial impact on the Company's Small C&I customers. The OSBA has concluded that the settlement is reasonable and in the interests of the Company's Small C&I customers.

## IV. CONCLUSION

Settlement of this proceeding avoids the litigation of complex, competing proposals and saves the possibly significant costs of further administrative proceedings. Such costs are borne not only by the Joint Petitioners, but ultimately by the Company's customers as well. Avoiding further litigation of this matter will serve judicial efficiency and will allow the OSBA to more efficiently employ its resources in other areas.

For the reasons set forth in the Settlement, as well as the additional factors enumerated in this statement, the OSBA supports the proposed Settlement and respectfully requests that Deputy Chief ALJ Cheskis and ALJ Calvelli and the Commission approve the Settlement in its entirety without modification.

Respectfully submitted,



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Dated: August 14, 2019