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File #: 203073

October 23, 2023

VIA ELECTRONIC FILING

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor
P.O. Box 3265
Harrisburg, PA 17105-3265

Re: Petition of Aqua Pennsylvania, Inc. For Approval of its Third Long-Term Infrastructure Improvement Plan and Lead Service Line Replacement Program
Docket No. P-2023-

Dear Secretary Chiavetta:

Attached for filing please find the Petition of Aqua Pennsylvania, Inc. ("Aqua") For Approval of its Third Long-Term Infrastructure Improvement Plan ("LTIIP") and Lead Service Line Replacement Program ("LSLR") in the above-referenced proceeding. This Third LTIIP is for the five-year period 2023-2027, and is also being submitted pursuant to a commitment made by Aqua as a part of the Pennsylvania Public Utility Commission-approved Settlement at Docket No. A-2022-3034143, to amend its water LTIIP to include the acquisition of the water system assets of the Borough of Shenandoah ("Shenandoah") and the Municipal Authority of the Borough of Shenandoah ("MABS") (collectively, the "Shenandoah System"). In addition, in accordance with the provisions of 52 Pa. Code § 65.54(b), Aqua is including with its Third LTIIP its LSLR plan as a separate and distinct component of its LTIIP. Copies will be provided as indicated on the Certificate of Service.

Respectfully submitted,

Michael W. Hassell

MWH/kls
Attachment

cc: Certificate of Service

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant), and the Prehearing Order dated October 19, 2021 (establishing the list of fully active parties in this proceeding).

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Date: October 23, 2023

Michael W. Hassell

Michael W. Hassell

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Aqua Pennsylvania, Inc.	:	
For Approval of its Third Long-Term	:	Docket No. P-2023-_____
Infrastructure Improvement Plan and Lead	:	
Service Line Replacement Program	:	

PETITION OF AQUA PENNSYLVANIA, INC. FOR APPROVAL OF ITS THIRD LONG-TERM INFRASTRUCTURE IMPROVEMENT PLAN FOR 2023-2027 AND ITS LEAD SERVICE LINE REPLACEMENT PROGRAM

To The Pennsylvania Public Utility Commission:

Aqua Pennsylvania, Inc. ("Aqua" or the "Company") hereby files this Petition seeking approval of the Company's Third Long-Term Infrastructure Improvement Plan ("Third LTIIP" or the "Plan"), pursuant to Act 11 of 2012 ("Act 11" or the "Act"), which amended Chapters 3, 13, and 33 of the Pennsylvania Public Utility Code ("Public Utility Code" or the "Code"), and the regulations issued by the Pennsylvania Public Utility Commission ("Commission"), 52 Pa. Code §§ 121.1, et seq., Aqua further petitions for approval of the Company's Lead Service Line Replacement ("LSLR") Program in accordance with 66 Pa. C.S. § 1311(b), Chapter 65 of the Commission's regulations, 52 Pa. Code §§ 65.51, et seq., and the Commission's Final Rulemaking Order regarding Act 120 of 2018 ("Act 120") entered on March 14, 2022 at Docket No. L-2020-301952. As relevant to this Petition, Section 65.54(b) of the Commission's regulations, 52 Pa. Code § 65.54(b), directs that "[a]n entity that has a Commission-approved LTIIP shall include with its LSLR program petition a modified LTIIP containing a LSLR plan as a separate and distinct component of the entity's LTIIP."

The Company's currently effective LTIIP, for the period of 2020-2024, was approved by Order entered February 27, 2020, at Docket No. P-2019-3013940. This Third LTIIP is for the five-year period 2023-2027 and is also being submitted pursuant to a commitment made by Aqua as a part of the Commission-approved Settlement at Docket No. A-2022-3034143, to amend its water LTIIP to include the acquisition of the water system assets of the Borough of Shenandoah ("Shenandoah") and the Municipal Authority of the Borough of Shenandoah ("MABS") (collectively, the "Shenandoah System").[1]

The Company requests that the Commission approve Aqua's proposed Third LTIIP, which is attached to this Petition as **Exhibit A**, and its LSLR Program, which is included as Attachment A to the LTIIP.

I. INTRODUCTION

1. Aqua is a corporation organized and existing under the laws of the Commonwealth of Pennsylvania and is a wholly-owned subsidiary of Essential Utilities, Inc. ("Essential"). Aqua is a public utility as defined by the Public Utility Code, 66 Pa. C.S. § 102, and is a utility authorized to continue to use a previously-approved DSIC mechanism.

2. Aqua owns and operates water treatment facilities including water treatment plants, wells, storage, distribution, and transmission systems throughout Pennsylvania serving approximately 450,000 customers in 32 counties. Aqua's distribution system includes approximately 5,928 miles of pipe, 25,210 hydrants, 85,135 valves, and 449,298 customer meters.

[1] Application of Aqua Pennsylvania, Inc. pursuant to Sections 1102, 1329, and 507 of the Public Utility Code for Approval of its Acquisition of the Water System Assets of Shenandoah Borough and the Municipal Authority of the Borough of Shenandoah, Docket No. A-2022-3034143, Opinion and Order, Ordering Paragraph 11 (Jul. 13, 2023).

3. The names, addresses and telephone numbers of Aqua's attorneys for this filing are as follows:

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Aqua's attorneys are authorized to receive all notices and communications regarding this filing.

A. AQUA'S LTIIP

4. In response to the problems presented by the Commonwealth's aging water infrastructure, the Commission, on August 22, 1996, issued an order authorizing Aqua (then Philadelphia Suburban Water Company) to establish a DSIC. Thereafter, on December 18, 1996, the General Assembly enacted Section 1307(g) of the Public Utility Code, 66 Pa. C.S. § 1307(g), to eliminate any uncertainty as to the Commission's authority in this area. Aqua subsequently filed and had approved a DSIC following the Commission's requirements and procedures for processing and calculation. Aqua's recovery was capped at 5%.

5. On December 8, 2008, the Company filed Supplement No. 88 to Tariff Water-Pa. P.U.C. No. 1, requesting approval to increase the DSIC cap from 5% to 7.5%. The Commission

approved the increase in a Final Order entered on July 23, 2009, concluding that the water DSIC model was working effectively and that its use has made significant impact in terms of improving Aqua's distribution system.[2] Through this mechanism, the Company has accelerated its repair and replacement of its facilities and equipment and has reduced aging infrastructure in its service territory.

6. On February 14, 2012, the Governor signed into law Act 11 of 2012 ("Act 11"). Among other things, Act 11 repealed Section 1307(g) and replaced it with new provisions at 66 Pa. C.S. §§ 1350-1360, which authorized DSICs for all fixed utilities.

7. On May 11, 2012, the Commission issued its Tentative Implementation Order at Docket No. M-2012-2293611 and solicited comments and input on its proposed procedures and guidelines to implement Act 11. Aqua responded to the Commission's request and filed comments to the Tentative Implementation Order on May 31, 2012.

8. On August 2, 2012, the Commission issued the Final Implementation Order establishing procedures and guidelines necessary to implement Act 11.[3] The Final Implementation Order adopted the requirements established in Section 1352, provided additional standards that each LTIIP must meet, and gave guidance to utilities for meeting the Commission's standards.

9. The final Commission regulations concerning the LTIIP became effective on December 20, 2014. See 52 Pa. Code §§ 121.1, et seq; 44 Pa.B. 7856.

10. Aqua and other water utilities regulated by the Commission that had previously-approved DSIC mechanisms were not required to submit a LTIIP under 66 Pa. C.S. § 1360 and the Commission's Final Implementation Order.

[2] Pa. Pub. Util. Comm'n et al. v. Aqua Pennsylvania, Inc., Docket No. R-2008-2079310, Order Entered July 23, 2009.
[3] Implementation of Act 11 of 2012, Docket No. M-2012-2293611, Order Entered August 2, 2012 ("Final Implementation Order").

11. On November 5, 2015, the Commission issued for comment a Tentative Supplemental Implementation Order related to Act 11. Aqua submitted timely comments in response.

12. On September 21, 2016, the Commission entered its Final Supplemental Implementation Order.[4] Among other things, the Commission's Final Supplemental Implementation Order stated that to ensure all utilities with a Commission-approved DSIC were following uniform rules, it was now time for water utilities to comply with all aspects of Act 11, and thus to file a LTIIP with the Commission.

13. On January 20, 2017, Aqua filed its Petition for Approval of its LTIIP for 2017-2021 at Docket No. P-2017-2584953.

14. On May 18, 2017, the Commission entered its Opinion and Order approving Aqua's Petition for its LTIIP for 2017-2021.

15. On October 31, 2019, Aqua filed its Petition for Approval of its revised LTIIP for 2020-2024 at Docket No. P-2019-3013940, which the Commission determined was in fact a Second LTIIP. The Second LTIIP was filed, in part, to reflect the acquisition of several water systems that were able to be included in Aqua's LTIIP and DSIC.

16. On February 27, 2020, the Commission entered its Opinion and Order approving Aqua's Petition for approval of its Second LTIIP for 2020-2024.

17. On October 6, 2022, Aqua filed its Application at Docket No. A-2022-3034143 ("Shenandoah Application"), requesting the Commission's approval to acquire the Shenandoah System.

[4] Implementation of Act 11 of 2012, Docket No. M-2012-2293611, Order Entered September 21, 2016 ("Final Supplemental Implementation Order").

18. On April 11, 2023, Aqua, the Commission's Bureau of Investigation and Enforcement ("I&E"), the Office of Consumer Advocate ("OCA"), Shenandoah, and the MABS filed a Joint Petition for Approval of Settlement ("Settlement Petition") to settle all issues in the Shenandoah Application proceeding.[5]

19. By Order entered July 13, 2023, at Docket No. A-2022-3034143, the Commission approved the Settlement Petition, with modifications, and the Shenandoah Application.

20. The terms of the Settlement at Docket No. A-2022-3034143 required Aqua to file an amendment to its LTIIP to include the Shenandoah System, and any other Section 1329 systems that have been acquired but not included in the LTIIP, within 90 days after closing on the acquisition of the Shenandoah System.[6]

21. Act 11 provides utilities with the ability to implement a DSIC to recover reasonable and prudent costs incurred to repair, improve, or replace certain eligible distribution property that is part of the utility's distribution system. Eligible property for water utilities is defined in Section 1351 of the Public Utility Code. See 66 Pa. C.S. § 1351(3). Water utilities must file a LTIIP with the Commission that is consistent with the provisions of Section 1352 of the statute and Section 121.3 of Title 52 of the Pennsylvania Code. See 66 Pa. C.S. § 1352(a); 52 Pa. Code § 121.3.

22. Specifically, under Section 1352(a) of the Public Utility Code and Section 121.3(a) of Title 52 of the Pennsylvania Code, the LTIIP must include the following eight major elements:

(a) Identification of the types and age of eligible property owned and operated by the utility for which it is seeking recovery under this subchapter.

(b) An initial schedule for planned repair and replacement of eligible property.

(c) A general description of the location of the eligible property.

[5] Although the Office of Small Business Advocate ("OSBA"), a party in this proceeding, was not a party to the Settlement, the OSBA did not oppose the Settlement.
[6] The Company did not have any other Section 1329 acquisitions to include in this LTIIP.

(d) A reasonable estimate of the quantity of eligible property to be improved or repaired.

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

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

(g) A workforce management and training program designed to ensure that the utility will have access to a qualified workforce to perform work in a cost-effective, safe, and reliable manner.

(h) A description of a utility's outreach and coordination activities with other utilities, Department of Transportation, and local governments regarding the planned maintenance/construction projects and roadways that may be impacted by the LTIIP.

23. Aqua's Third LTIIP addresses each of these elements, as summarized in this Petition.

B. AQUA'S LSLR PLAN

24. On October 24, 2018, the Governor signed into law Act 120. Act 120, among other measures, amended Section 1311(b) of the Public Utility Code, 66 Pa.C.S. § 1311(b), which allowed for public utilities to replace customer-owned lead service lines ("COLSL") and recover those costs through a utility's DSIC if the utility has a DSIC program.

25. On September 3, 2020, Aqua filed its Petition for approval of tariff changes authorizing replacement of customer-owned lead service lines, in accordance with 66 Pa. C.S. § 1311(b) at Docket No. P-2020-3021766.

26. On July 15, 2021, the Commission approved Aqua's lead replacement petition at Docket No. P-2020-3021766.

27. On March 14, 2022, the Commission entered its Final Rulemaking Order at Docket No. L-2020-3019521, adopting new regulations to implement the lead service line ("LSL")

provisions of Act 120 at Chapter 65 of the Commission's regulations, 52 Pa. Code §§ 65.51-65.62. The Final Rulemaking Order adopted the requirements set forth in Section 1311(b) of the Public Utility Code, instituted timelines for the removal and replacement of all LSLs within public utility service territories, and established the regulatory requirements for LSLR programs, LSLR plans, and tariff revisions implementing LSLR programs.

28. The final Commission regulations concerning LSLRs became effective on July 23, 2022. See 52 Pa. Code §§ 65.51-65.62; 52 Pa.B. 4096.

29. Pursuant to Section 65.61 of the Commission's LSLR regulations, Aqua and other entities that received prior Commission approval to perform LSLR activities must file a LSLR program in accordance with the Commission's LSLR regulations no later than the effective date of the rates established under the entity's next base rate case or within 2 years of the effective date of the regulations, whichever comes first. See 52 Pa. Code § 65.61.

30. Act 120 establishes a standard for COLSL replacements as well as the recovery of costs associated with those replacements. Public water utilities must file a LSLR program with the Commission that is consistent with the provisions of Sections 65.54 and 65.55 of the Commission's regulations. See 52 Pa. Code §§ 65.54 and 65.55.

31. Pursuant to Section 65.54 of the LSLR regulations, a petition seeking approval of a LSLR Program must: (1) be served upon the Commission, the OCA, I&E, the OSBA, and the parties of record in the Company's most recent base rate case (52 Pa. Code § 65.54(a)); and (2) if the a utility has a Commission-approved LTIIP, include a modified LTIIP containing a LSLR plan that is a separate and distinct component thereof (Id. § 65.54(b)).

32. Specifically, under Section 65.55(b) of the Commission's regulations, a LSLR program must include the following elements:

> (1) A LSLR plan as described in § 65.56 (relating to LSLR plan requirements).
>
> (2) A pro forma tariff or tariff supplement containing the proposed changes necessary to implement the entity's LSLR program as described in § 65.58 (relating to pro forma tariff or tariff supplement requirements).
>
> (3) Information required by the Commission for filings under 66 Pa.C.S. § 1308 (relating to voluntary changes in rates), including statements required by § 53.52(a) (relating to applicability; public utilities other than canal, turnpike, tunnel, bridge and wharf companies).

33. Under Section 65.56 of the Commission's regulations, 52 Pa. Code § 65.56, an entity's LSLR plan must contain:

> (a) A service line inventory that complies with the U.S. Environmental Protection Agency's ("U.S. EPA") regulations at 40 CFR 141.1-143.20 as enforced by the Department of Environmental Protection.
>
> (b) A section addressing LSLR planning and replacements.
>
> (c) A section addressing communications, outreach, and education that complies with the U.S. EPA's regulations at 40 CFR 141.85 (relating to public education and supplemental monitoring and mitigation requirements).

34. Under Section 65.58 of the Commission's regulations, 52 Pa. Code § 65.58, an entity's pro forma tariff or tariff supplement containing the proposed changes necessary to implement the entity's LSLR program must address:

> (a) The LSLR program's annual cap on the number of customer-owned LSLs that can be replaced annually;
>
> (b) The demarcation of service lines;
>
> (c) The specifications for, and prohibitions upon, partial LSLRs;
>
> (d) The provision of reimbursements to eligible customers or property owners who replaced their LSL within 1 year before or from LSLR project commencement; and

(e) The provision of a warranty on LSLR work performed by the entity or its contractor of a term of not less than 2 years.

35. Under Section 53.52(a) of the Commission's regulations, 52 Pa. Code § 53.52(a), whenever a public utility files a tariff, revision or supplement effecting changes in the terms and conditions of service rendered or to be rendered, it shall submit all of the following:

(1) The specific reasons for each change.

(2) The total number of customers served by the utility.

(3) A calculation of the number of customers, by tariff subdivision, whose bills will be affected by the change.

(4) The effect of the change on the utility's customers.

(5) The direct or indirect effect of the proposed change on the utility's revenue and expenses.

(6) The effect of the change on the service rendered by the utility.

(7) A list of factors considered by the utility in its determination to make the change. The list shall include a comprehensive statement about why these factors were chosen and the relative importance of each. This subsection does not apply to a portion of a tariff change seeking a general rate increase as defined in 66 Pa.C.S. § 1308 (relating to voluntary changes in rates).

(8) Studies undertaken by the utility in order to draft its proposed change. This paragraph does not apply to a portion of a tariff change seeking a general rate increase as defined in 66 Pa.C.S. § 1308.

(9) Customer polls taken and other documents which indicate customer acceptance and desire for the proposed change. If the poll or other documents reveal discernible public opposition, an explanation of why the change is in the public interest shall be provided.

(10) Plans the utility has for introducing or implementing the changes with respect to its ratepayers.

(11) FCC, FERC or Commission orders or rulings applicable to the filing.

36. Aqua's LSLR Program contains all of the requirements enumerated in the Commission's regulations at 52 Pa. Code §§ 53.52(a), 65.55, and 65.56, as summarized in this Petition.

II. AQUA'S THIRD LONG-TERM INFRASTRUCTURE IMPROVEMENT PLAN FOR 2023-2027

A. BACKGROUND

37. In accordance with the Commission's Final Implementation Order and the Public Utility Code, Aqua's Third LTIIP includes only distribution plant that is DSIC eligible. Final Implementation Order at 18; 66 Pa. C.S. § 1352(a). Aqua has been identifying, repairing, and replacing its distribution infrastructure with the benefit of a DSIC for over 25 years. Since the inception of the DSIC program, Aqua has replaced approximately 2,676 miles of pipe and cleaned and lined an additional 331 miles of pipe for a total of 3,007 miles, or an average of over 100 miles per year. This represents approximately 46% of its distribution system that has been renewed under the DSIC. See Aqua Third LTIIP, Table 1. As explained in its Third LTIIP, Aqua has also replaced substantial numbers of services, hydrants, valves and meters under its DSIC Program. See Id., Table 1. Aqua's Third LTIIP memorializes its historic accelerated replacement of distribution infrastructure and its continued replacements under the DSIC program. See Id., Figure 1.

38. Aqua's infrastructure replacement program will allow it to continue to provide safe and reliable service to its customers. The replacement of eligible property will reduce main breaks and reduce non-revenue water. Reduced main breaks will also improve water quality to customers and increase service reliability.

39. In addition, this LTIIP is being filed to include Aqua's recent acquisition of the Shenandoah System, in accordance with the Joint Settlement approved by the Commission at Docket No. A-2022-3034143.

B. TYPES AND AGE OF ELIGIBLE PROPERTY

40. The Company's water distribution system varies in age and material type. Aqua's system ranges in age from pre-1900s to pipe in service in the present year. In Aqua's experience, utilizing the DSIC for over 25 years, it has encountered many different materials used for distribution pipes, including cement, cast iron, plastic, and ductile iron. Since the inception of the DSIC program, Aqua has used ductile iron for its replacements. Ductile iron requires little maintenance and has a service life of approximately 100 years. Ductile iron also can withstand high pressure, is corrosion resistant in most soils, and is easier for utility personnel to work with to cut or tap for service. Aqua will continue to replace its distribution infrastructure primarily using ductile iron pipe.

41. In addition, Aqua replaces Company-owned service lines as part of its main replacement program. Company services are replaced if the service line is not copper or is in poor condition. In limited circumstances plastic service lines are installed when needed. As explained in detail in the Company's proposed LSLR Program, the Company also replaces COLSLs that are known or discovered during a main replacement project or upon customer request.

42. The Company also installs new valves and hydrants as part of its main replacement program. The original pipe and valves are abandoned in place, and the new pipe and valves are installed. The new hydrants are activated on the new pipe, and the old hydrants are removed. The new hydrants are then inspected.

43. Meter replacement is not associated with Aqua's main replacement projects. Aqua replaces water meters in accordance with the Commission's schedules for removal of meters. See 52 Pa. Code § 65.8(b). The predominant replacement schedule is 20 years, applicable to all residential water meters of one inch or less.

C. SCHEDULE FOR REPAIR AND REPLACEMENT

44. Aqua's schedule for planned repair and replacement of its distribution system is set forth on pages 15 through 18 of the Company's Third LTIIP. Aqua has developed an updated "candidate pool" of approximately 1,141 miles of water main that the Company will target for replacement. The updated candidate pool consists of remaining pipe that was included in the Company's 2008 report[7] targeting approximately 1,500 miles of pipe in Aqua's distribution system for replacement as well as new footage that has been added to the candidate pool based on new information. See Aqua Third LTIIP, Table 14.

D. LOCATION OF ELIGIBLE PROPERTY

45. Aqua plans to replace all of the eligible property in both its Southeast Pennsylvania ("SEPA") and Greater Pennsylvania ("GPA") operating districts that span 32 Pennsylvania counties. A map showing the locations of eligible facilities is included on page 20 of the Third LTIIP in Figure 3.

E. QUANTITY OF PROPERTY TO BE IMPROVED

46. The estimated property to be improved under this Third LTIIP is described on pages 20 through 21 and in Tables 17 and 18.

47. Aqua plans to maintain an accelerated pace of replacement of mains. Aqua will be focusing on its current candidate pool for replacement or rehabilitation. In addition to pipe replacement, the DSIC program will continue to address services (both Company-owned and lead Customer-owned), valves, hydrants, and meters.

[7] In 2008 Aqua submitted Supplement No. 88 to Tariff Water-Pa. P.U.C. No. 1, requesting approval to increase its DSIC surcharge cap from 5% to 7.5%. Included with that Supplement was a technical memo (Appendix E to that filing) that described Aqua's approach to water main renewal. That approach continues to be applied today, with some additional "candidate pipe" targets added in the years since. A copy of that Appendix E was included in the Company's 2017 LTIIP.

F. PROJECTED ANNUAL EXPENDITURES AND MEASURES TO ENSURE THAT THE PLAN IS COST-EFFECTIVE

48. Aqua's projected budget for the years 2023 through 2027 is on page 22 of its Third LTIIP and displayed in Table 19. Aqua plans to continue its investment in its distribution system during this Third LTIIP to continue its accelerated replacements, to an average spending amount of over $195 million per year. Aqua plans to use a mix of equity and borrowed funds to finance these expenditures.

49. Aqua's investment is based on the water main replacements described in the LTIIP, planned "tie-ins" on dead ends, anticipated water main relocations associated with highway projects, and addressing the associated valves, hydrants, and service lines related to these replacements, tie-ins, and relocations. Also included are DSIC-eligible main breaks and meter replacement. The budget also includes amounts for replacement of up to a cap of 1,500 COLSLs, consistent with the Company's LSLR Program. Aqua's experience spanning more than 25 years with the DSIC provides the basis for budgeted amounts associated with these projects.

50. Aqua has developed and updated its Geographic Information System ("GIS") since it was first implemented in 2005. The GIS stores data on water mains, valves, hydrants, and other aspects of the Company's distribution system. The GIS is continually updated to account for the replacement of assets and the addition of new assets. Aqua coordinates its main replacements with municipal paving projects and other utilities as detailed in Section 9 of the Third LTIIP.

51. Aqua utilizes competitive bidding in the awarding of construction contracts to help ensure that its projects are cost-effective. In SEPA, Aqua's contracts primarily include the constructions of pipeline projects up to and including mains 16 inches in diameter. The contract also includes small installation and repair of services, hydrants, valves, etc., as needed to augment Aqua crews as well as road and ground restoration. These contracts are typically bid and awarded

for a multi-year term, and generally six contractors are invited to bid based on past experience with Aqua. Currently, more than 100 pipe replacement projects annually are constructed under the multi-year contracts. Most of the work performed under the contract is main replacement projects under Aqua's annual DSIC program. The majority of longer length projects or projects that involve mains 16 inches in diameter or greater are bid individually under a separate project-specific contract. Typically, five to eight contractors are invited to bid based on past experience with Aqua, including those awardees of the multi-year contracts. In recent years, 20 to 25 projects per year have been individually bid in SEPA, accounting for approximately one-third of the total length of pipe replaced.

52. In the GPA region, Aqua does not utilize the multi-year contracts. Since the operating areas are smaller than SEPA, the same efficiencies cannot be realized. DSIC-eligible main replacement projects are competitively bid as individual or multi-project bundles regardless of main size. Currently, these divisions undertake 0 to 12 pipe replacement projects in each division annually or approximately 30-35 projects in total. As with SEPA, contractors are invited to bid based on past experience with Aqua or other utilities.

G. ACCELERATED REPLACEMENT

53. Aqua has been replacing and rehabilitating its distribution system at an accelerated pace for more than 10 years. Since the inception of the DSIC program, the Company has repaired and replaced 2,676 miles of main (over 46% of the pipe in the distribution system), which is nearly twice what the 1% per year renewal rate would have accomplished (i.e., 1,384 miles). The Company considers a 1% per year renewal rate to be a baseline replacement rate. During the implementation of Aqua's DSIC program over the past 26 years, Aqua has far surpassed that baseline replacement rate and will continue to maintain an accelerated rate of replacement that exceeds the 1% per year renewal rate.

54. Further details on Aqua's acceleration plan, Aqua's historic replacements of main and other property for the past five years, and Aqua's DSIC expenditures for the past five years are set forth in Section 7 of Aqua's Third LTIIP.

H. WORKFORCE MANAGEMENT AND TRAINING PROGRAM

55. A description of the Company's workforce management and training program is on pages 31 through 34 of the Company's Third LTIIP.

56. Aqua utilizes construction inspectors to provide numerous services during the installation of mains, services, and hydrants in the distribution system, including: (1) monitoring the installation of lines to confirm that they are properly bedded and installed to Aqua specifications; (2) monitoring the backfill of the project for proper compaction as per Aqua specifications; (3) confirming that all materials in the project meet Aqua specifications; (4) documenting all locations of pipe, fittings, valves, service lines, etc. for accurate mapping and recordkeeping; and (5) observing contractor's implementation of contractor safety plans and advising contractors of any observed conditions of imminent danger. Inspectors can shut down a project until an imminent danger situation is addressed. Aqua requires its employees to participate in mandatory training throughout the year. Aqua performs annual training for certain topics, including confined space, traffic safety, excavation/trenching, general safety hazards, and hazard communications. Aqua also requires training on certain topics but not on an annual basis, including Personal Protection Equipment ("PPE"), electrical hazard, and competent person training. In 2019, Aqua developed a training program to educate drivers and reduce the frequency of backing accidents. Driving continues to be an integral part of training. In 2022, monthly video segments were implemented along with instructor led classes on reverse driving and backing, and in 2023 the Company included spotter training.

57. Contractors are required to provide their safety policies to the Company upon request, along with documentation on the contractors' employee training. Contractors are required to follow all state, federal, and Occupational Safety and Health Administration ("OSHA") rules and regulations for a project. Aqua utilizes a third-party safety vendor to perform site inspections on a regular basis for Aqua's contractors. Contractors must fill out Job Hazard Awareness forms daily using either Aqua's form or a similar form of the contractor. Contractors are responsible for following the requirements of PA One Call, including being responsible for all PA One Call requests for their project.

58. Aqua requires that its employees and contractors report immediately any injury that takes place to an employee of either party. As part of the Pennsylvania Underground Utility Protection Law, Aqua and its contractors are required to submit an Alleged Violation Report for all utility damage occurrences to the Commission.

I. OUTREACH AND COORDINATION ACTIVITIES WITH OTHER UTILITIES, PENNDOT, AND LOCAL GOVERNMENTS

59. Aqua works closely with local governments to coordinate its water main replacement projects with any planned paving. Aqua accumulates information from the Pennsylvania Department of Transportation ("PennDOT"), counties, and municipalities as to their intentions to undertake paving and other public works projects during the budget year. Paving projects known by Aqua in advance of replacement project selection are posted to the GIS and utilized in prioritizing specific projects for selection. Aqua will attempt to sync its replacement projects with municipal paving projects and often will share the cost of paving with the municipality. As explained on pages 35 to 36 of the Third LTIIP, this is often difficult due to municipalities not providing paving schedules in advance.

60. Aqua maintains a working relationship with PennDOT and receives notices of state road projects. Aqua will schedule replacement projects in line with state road projects to minimize disruption to the public. Additionally, Aqua and PECO Energy Company share asset data, including high-priority candidate replacement water and gas pipes. Joint project review meetings have been held every six to eight weeks to coordinate replacement schedules where water and gas main replacement projects intersect in each municipality.

III. AQUA'S LEAD SERVICE LINE REPLACEMENT PROGRAM

A. BACKGROUND

61. Aqua has developed its LSLR Program in accordance with Chapter 65 of the Commission's regulations, 52 Pa. Code §§ 65.51 et seq., and the Commission's Final Implementation Order entered on March 14, 2022 at Docket No. L-2020-3019521. Included in the Company's LSLR Program are the Company's LSLR Plan, a pro forma tariff supplement containing the proposed changes necessary to implement the LSLR Program, and information required by the Commission under 52 Pa. Code § 53.52(a) (related to tariff revisions).

62. The Company received prior Commission approval of its LSLR petition on July 15, 2021, at Docket No. P-2020-3021766. Under the Company's existing plan, COLSL replacements are capped at 200 per year and at a budgeted amount of $800,000. The Company's proposed LSLR Plan for 2023-2027 proposes a cap of 1,500 replacements per year, with a projected budget amount of approximately $12 Million per year at a full run-rate. This replacement rate is expected to enable the Company to replace all LSLs, Company-owned and Customer-owned, within 25 years, in accordance with the provisions of 52 Pa. Code §§ 65.53(a). This will allow the Company to continue to reduce and eliminate lead throughout the Company's systems, which in turn will improve the overall distribution system integrity and the health of the Company's customers and the Commonwealth overall.

B. LSLR PLAN

63. Aqua's LSLR Plan contains the following elements and supporting documents as required by Section 65.56 of the Commission's regulations, 66 Pa. C.S. § 65.56.

1. Service Line Inventory

64. Aqua's current Service Line Inventory and inventory methodology is discussed on pages 4 through 5 of its LSLR Plan and the current Service Line Inventory summary is displayed in Table 1 of the LSLR Plan.

65. Aqua is currently developing its Service Line Inventory, consistent with the intent and guidance of the U.S. EPA's Lead and Copper Rule Revisions.[8] To date, 90% of Company service line material has been identified and 73% of customer service line material has been identified using the methodologies described on pages 4 through 5 of the LSLR Plan.

66. In developing the Service Line Inventory, the Company has used a combination of evidence-based data, including field observations, tap cards, and as-built drawings. When evidence-based data is not available, the Company assigns material designations of "non-lead" based on its knowledge of when the use of lead was discontinued or banned in new construction for certain geographic areas. In addition, for galvanized service lines which were downstream from LSLs and/or lines which the Company cannot prove were never downstream from an LSL or lead gooseneck, those lines are assigned a Galvanized Requiring Replacement ("GRR") designation and are considered candidates for replacement.

67. Table 1 of the LSLR Plan shows total material type identification across Aqua's service territory and is reproduced below:

[8] On January 15, 2021, the U.S. EPA issued its Lead and Copper Rule Revisions ("LCRR"), which revised the National Primary Drinking Water Regulation for lead and copper pursuant to the Safe Drinking Water Act. The LCRR, among other things, required all water systems to create a publicly accessible LSL inventory and set forth replacement requirements. See 86 FR 4198. The compliance date for the LCRR is October 16, 2024. See 86 FR 31939.

Material Type	Company	Customer
Lead	43	389
GRR	920	10,380
Non-lead	391,334	307,126
Lead status unknown	42,613	117,015
Total	**434,910**	**434,910**

68. The Company will update its Service Line Inventory as progress is made on completing the inventory and as new water systems are acquired.

2. LSLR Planning and Replacements

a. Aqua's Projected Annual Investment and Sources of Financing

69. The Company's projected annual investment and sources of financing are provided on pages 5 through 6 of its LSLR Plan. The Company proposes a cap up to 1,500 replacements annually. Table 19 of the Company's Third LTIIP shows projected costs of up to the cap of 1,500 replacements per year.

70. Anticipated sources of financing for the replacements will include short term debt of the Company converted at a later time into long term debt and equity. The Company is also exploring low-cost/no cost financing through the Pennsylvania Infrastructure Investment Authority ("PENNVEST") and other sources as they become available. As the Company identifies systems requiring significant LSL replacement, the Company will explore funding opportunities to reduce costs to ratepayers.

b. Aqua's Projected LSLRs Per Calendar Year and Description of Projection Development

71. The Company is projecting the following replacements during the term of this LTIIP, as set forth in Table 2 of the LSLR Plan:

2023	2024	2025	2026	2027
500	1,200	1,500	1,500	1,500

72. As noted in Table 1 of the LSLR Plan, Aqua currently has approximately 434,910 company-owned service lines, of which 42,613 are lead status unknown and 117,015 customer side service lines that are lead status unknown. In addition to finding and replacing lead service lines, the addition of GRR eligible for replacement under Act 120 has increased the potential number of replacements needed throughout Aqua's systems. Aqua believes 2% of the unknown customer side service lines, or 2,340 service lines, are potentially lead or GRR and will need to be replaced.

73. The projections for 2023-2027 are consistent with Aqua's annual cap proposed in this LTIIP and LSLR Plan.

c. Prioritization Criteria

74. The Company's prioritization criteria are explained on page 6 of its LSLR Plan.

75. For individual properties, Aqua considered the following prioritization criteria when developing the LSLR Plan: (1) emergency repairs revealing LSLs; (2) homes with elevated lead concentrations in tap samples; (3) schools and licensed day care facilities; (4) homeowners that request replacements; and (5) homeowners in systems that do not have widespread LSLs.

76. For systems, Aqua considered the following prioritization criteria when developing the LSLR Plan: (1) systems with higher projected lead or GRR replacements; (2) systems where PENNVEST or other funding is available; and (3) systems with aging water mains that require replacement.

d. Processes and Procedures to Address Emergency Repairs and Replacements Which Reveal LSLs

77. The Company's processes and procedures to address emergency repairs and replacements which reveal LSLs are discussed on pages 6 through 7 of its LSLR Plan.

78. When the Company uncovers a COLSL while completing emergency repairs to its system, the Company contacts the customer/owner and provides them with the information and materials in Section II.B.6. of the LSLR Plan and prioritizes the replacement of the entire service line both Company and customer side.

79. When the Company uncovers a Company-owned LSL while completing emergency repairs to its system, the Company will replace its service line up to the curb stop, which will reveal the customer-side material. Upon verification that the customer's service line is not lead, the Company will complete the Company-side replacement and restore service to the property. The Company will provide the customer with information regarding lead, pitcher filters, and flushing instructions. If the customer's service line is lead, the Company will follow the procedures outlined in Paragraph 78, above.

e. Processes and Procedures to Obtain Acceptance of a LSLR Prior to Project Commencement When the Customer Is and Is Not the Property Owner

80. The Company's processes and procedures to obtain acceptance of a LSLR prior to project commencement when the customer is and is not the property owner are addressed on pages 7 through 8 of the LSLR Plan.

81. For areas deemed high-risk, the Company or its third-party representatives will send pre-investigative letters to customers in preparation for the commencement of a main replacement project, requesting access to review the material type of the customer's service line. Aqua personnel or Aqua's third-party vendor will visit each customer premise within the scope of

the project with an unknown service line material to identify material type of the customer service line.

82. If the Company uncovers a Company-owned LSL or a COLSL during maintenance or construction activities, the Company will provide a form to the customer if the customer is at the premise or will post the form if the customer is not at the premise and attempt to contact the customer via phone to follow up with further information.

83. If there is no response to the pre-investigation letter or form, Aqua personnel or its third-party vendor will visit the premises to obtain acceptance in-person. If there is no response to door knocks, a door hanger will be left at the premises providing an Aqua contact number and requesting access to the customer/property owner's property to identify the service line material. If there is no response to the in-person outreach, Aqua will call the customer.

84. If the Company still does not receive a response to any of the above measures, it will initiate the 10-day shut-off procedures to gain access to review the service line material. If there is still no contact, Aqua will commence with the shut-off of service and require access to review the service line material as a condition to restore service, in accordance with the Commission's LSLR regulations.

85. After making contact with the resident and identifying the presence of a COLSL, Aqua personnel will ask whether the resident is the owner or renter of the building.

86. If the customer is the owner, and they agree to participate in the replacement, then the Company will provide the information and materials in Section II.B.6 of the LSLR Plan. If the customer is the owner and refuses to participate in the replacement the Company will follow the provisions of Section II.B.10 of the LSLR Plan.

87. If the customer is not the property owner, the Company will obtain the owner's contact information from the customer and attempt to reach the owner first via telephone call, next via letter, and finally by exploring all options to encourage property owners to participate, such as contacting the municipality and the local code enforcement in which the property is located. If the Company has not received acceptance after multiple efforts to contact the property owner and obtain acceptance, the Company will initiate the 10-day shut-off process.

88. In instances where the customer is not the owner of the property, the Company is proposing to use "Step In Rights" in limited circumstances and solely in the Company's discretion. The Step In Rights will be used when it will avoid termination of service to a customer when the property owner is unknown or has not responded to multiple attempts to contact and offer replacement of the COLSL under the program. The Step In Rights are to address circumstances that would result in termination of service to a property on no fault of the customer who is not the owner.

89. By obtaining agreement of the customer or property owner prior to commencing the main replacement project, the Company can more quickly and efficiently complete the main replacement and associated restoration. The Company will not be faced with having to delay a planned project or put an ongoing project on hold if the service line material cannot be identified or an LSL is discovered during a project. As such, there is less disruption to traffic, customers' daily lives, and reduced safety concerns of open construction.

f. Processes and Procedures Based on Acceptance of a LSLR

90. The Company's processes and procedures based on the acceptance of a LSLR are contained on pages 8 through 10 of the LSLR Plan.

91. If the customer or property owner expresses that they want to participate in Aqua's LSLR Program after their service line has been identified as lead, Aqua will provide pertinent

information to the customer including: (1) the Customer Lead/Galvanized Service Line Replacement Agreement ("Replacement Agreement"); (2) the Lead Fact Sheet providing educational information about lead in drinking water; (3) Information Sheet explaining Aqua's Lead Service Line Replacement Program; (4) sample bottles with instructions (pre-and post-replacement sampling); (5) post-COLSL replacement flushing instructions; and (6) pitcher filter with six months of replacement cartridges.

92. The Replacement Agreement allows a third-party licensed professional to enter the property and complete the LSLR. The agreement authorizes the utility and the contractor performing the work to access the customer/property owner's property, confirms the ownership of the service line following installation, and provides a warranty on the work completed. Further, the Replacement Agreement requires that the contractor install the replacement service line and restore the property as reasonably as practicable to the condition that existed prior to the LSLR.

93. Following replacement, Aqua personnel will visit the customer's property within 5 business days after the COLSL replacement to reinstall or exchange the meter. The Company personnel will remind the customer to follow the post-replacement instructions and take samples for lead that Aqua personnel will pick up when customer notifies Aqua that samples are ready.

94. In closing out the project, the Company provides a letter to the customer 3-6 months post-replacement confirming that the newly installed customer service line has been transferred back to the customer/property owner and confirming the warranty for the completed work. The Company also provide instructions for post-replacement 5th liter lead sampling and testing.

g. Lead/Material Recycling and Disposal Efforts

95. Aqua's lead and material recycling and disposal efforts are discussed on page 10 of the LSLR Plan.

96. In most replacements of COLSLs, the Company does not excavate and remove the existing LSL, it is abandoned in place and a new service line is installed. When a third-party plumber is completing the service line replacement, and if the line is removable and removed, the third-party plumbers dispose of any lead materials they excavate.

h. Industry Accepted Practices

97. Aqua's commitment to adhere to industry accepted practices in the replacement of service lines, both Company- and customer-owned, is explained on page 10 of the LSLR Plan.

98. The Company will adhere to the provisions of its tariff regarding replacement of company-side service lines. In addition, the Company will require Company personnel and its contractors to comply with any applicable plumbing codes related to customer-side service line replacement. The Company will follow Commission regulations regarding LSLRs including prevention of partial service line replacements and termination of service provisions, as needed to prevent partial LSL replacements.

i. Integration of Acquired Systems in the LSLR Plan

99. Aqua's procedures to integrate acquired systems into the LSLR Plan are detailed on page 10 of the LSLR Plan.

100. Where the Company acquires a water system prior to the deadline for water systems to complete their Service Line Inventories, the Company will take over the water system's efforts, if any, to identify and incorporate the service line materials of the system in to Aqua's overall Service Line Inventory.

101. For water systems acquired after the deadline for complete Service Line Inventories, the Company will incorporate the system's completed inventory into the Company's Service Line Inventory.

102. Some systems may not have completed a Service Line Inventory to the standards that the DEP and Commission regulations require, either due to lack of resources or other reasons. In these instances, during the acquisition process, the Company, to the extent feasible will work with the selling entity to begin the steps necessary to develop a Service Line Inventory and will continue those efforts after closing on the system.

103. An incomplete Service Line Inventory by the selling entity should not hold up a closing on the system. The Company can more easily fold the acquired system into the Company's LSLR Program and complete the inventory post-closing where the Company can access the customers' meters and view service line material.

j. Procedure Regarding Refusal of Offer to Replace a LSL

104. The Company's procedure regarding refusal of the offer to replace a COLSL is detailed on page 11 of the LSLR Plan.

105. During a LSLR project, Aqua will initiate termination procedures in instances when: (1) the customer and/or property owner refuse to replace the COLSL; and (2) the customer and/or property owner are non-responsive to the Company's requests to replace the COLSL. Termination procedures include posting of 10-day shut off notices, and other required contacts under the Commission's regulations. The Company's representatives will include notes within its customer information system documenting the refusal or non-response and complete any termination procedures as needed if the customer/property owner continues to refuse to replace the COLSL or does not respond.

106. In addition, the Company will provide the customer and/or property owner with a Customer Refusal Letter, its lead fact sheet describing the health hazards of lead service lines, and the lead service line program information sheet, which explains the requirements for reimbursement and the potential for termination of service.

107. As described in Paragraph 88, the Company may use Step In Rights, where it is in the public interest and would avoid termination of service to a customer that is not the property owner.

3. Communications, Outreach, and Education.

108. Aqua's communications activities listed and described in the following sections are in accordance with the U.S. EPA regulations at 40 C.F.R. § 141.85.

a. Printed and Broadcast Materials

109. A full list of all printed and broadcast materials the Company plans on distributing to further its COLSL replacement efforts are included in pages 11 through 12 of the LSLR Plan, and copies of the material are attached as Exhibits to the LSLR Plan. These materials may change, be updated from time to time, or new materials added as the LSLR Program evolves.

b. Aqua's Website

110. Information regarding the portion of the Company's website that houses information related to its LSLR Program[9] is located on pages 12 and 13 of the LSLR Plan.

111. Aqua's website provides information on sources of lead, the health effects of lead, the Company's compliance with lead requirements, how customers can protect against lead exposure, and a help line for customers requiring assistance in determining their service line material. The website also includes information on Aqua's LSLR Program including the status of current efforts to replace LSLs, a video on how customer/property owner can review their service line material and report it to Aqua through an online form, flushing instructions post-replacement, a video showing how to take a sample with the sample bottles provided by Aqua, and reimbursement requirements.

[9] *Available at* https://www.aquawater.com/about-water/water-quality/lead.php.

112. The Company is currently developing an online tool to show the replacement schedule by geographical location, six months into the future, and, through this same tool customers will be able to review their service line material, if known. This tool will be completed in accordance with the timeline set forth in the regulations.

113. Finally, the Company has established a section of its website that highlights upcoming community meetings and advisory committees hosted by the Company.

C. PRO FORMA TARIFF SUPPLEMENT

114. Aqua's pro forma tariff supplement containing the proposed changes necessary to implement the LSLR Program contains the following elements as required by Section 65.58 of the Commission's regulations, 52 Pa. C.S. § 65.58 and is attached to this Petition as **Exhibit B**.

1. The LSLR Program's Annual Cap On The Number Of Customer-Owned LSLs That Can Be Replaced Annually

115. Aqua's pro forma tariff supplement states that Company will replace up to 1,500 COLSLs per year under the Company's LSLR Program.

2. The Demarcation of Service Lines

116. Aqua's pro forma tariff supplement specifies that the Customer's service line extends from the customer's property to the curb stop or curb line or such point as designated by the Company.

3. The Specifications For Partial LSLRs

117. Aqua's pro forma tariff supplement specifies that no customer or property owner may install a partial LSL and that a partial LSL will result in termination of service until such time as the Company can replace the Company-owned LSL.

118. In addition, the supplement requires that a customer, or property owner where the customer is not the property owner, who elects to replace the COLSL themselves, must replace

the COLSL concurrent with the Company replacing the Company-owned LSL, provided that the customer or property owner shall provide the Company at least 90 days' notice prior to replacing the COLSL.

4. The Provision Of Reimbursements To Eligible Customers Or Property Owners Who Replaced Their LSL Within 1 Year Before Or From LSLR Project Commencement

119. Aqua's pro forma tariff supplement provides for the reimbursement of eligible customers or property owners, if the customer is not the property owner, who replaced their LSL within 1 year before or after the commencement of a LSLR Project. The online tool, described in Paragraph 112, above, will allow customers/property owners to determine if they are within the required radius of an LSLR Project.

5. The Provision Of A Warranty On LSLR Work Performed By The Entity Or Its Contractor Of A Term Of Not Less Than 2 Years

120. Aqua's pro forma tariff supplement provides a two-year warranty to the customer or property owner, if the customer is not the property owner, on the workmanship and materials of the LSLR and the restoration of surfaces. The two-year warranty begins upon the re-establishment of water service to the property after the LSLR has occurred.

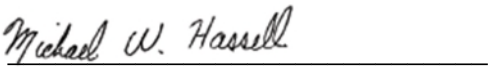
D. REQUIREMENTS OF SECTION 53.52(a) OF THE COMMISSION'S REGULATIONS

121. In addition, the Company has provided the information and supporting data required by 52 Pa. Code § 53.52(a), related to revisions and supplements to a utility's tariff, which is attached to this Petition as **Exhibit C**.

II. CONCLUSION

WHEREFORE, Aqua Pennsylvania, Inc. respectfully requests that the Pennsylvania Public Utility Commission approve the Company's Third Long-Term Infrastructure Improvement Plan, finding that it contains all the necessary items identified in 66 Pa. C.S. § 1352(a) and 52 Pa. Code § 121.3(a), and addresses only distribution property that is DSIC-eligible, as defined by 66 Pa. C.S. § 1351(3), and the Company's Lead Service Line Replacement Program, finding that it contains all the necessary items identified in 52 Pa. Code §§ 53.52(a) and 65.51 et seq., and the Commission's Final Implementation Order entered on March 14, 2022 at Docket No. L-2020-3019521.

Respectfully submitted,



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Counsel for Aqua Pennsylvania, Inc.

Dated: October 23, 2023

EXHIBIT A

AQUA PENNSYLVANIA, INC.

2023 Long Term Infrastructure Improvement Plan – October 23, 2023

Aqua Pennsylvania, Inc. ("Aqua" or the "Company") is submitting this 2023 Long Term Infrastructure Improvement Plan ("LTIIP") in accordance with the requirements of Chapter 13 of the Public Utility Code, 66 Pa. C.S. §§ 1350-1360, Chapter 121 of Title 52 of the Pennsylvania Code, the Pennsylvania Public Utility Commission's ("PUC" or the "Commission") Final Implementation Order entered on August 2, 2011 in Docket No. M-2012-2293611, the Commission's Supplemental Implementation Order entered on September 15, 2016 in Docket No. M-2012-2293611, and the Commission's Final Rulemaking Order regarding Act 120 of 2018[1] ("Act 120") entered on March 14, 2022 in Docket No. L-2020-3019521. The Company's LTIIP covers infrastructure investment through its established and longstanding Distribution System Improvement Charge ("DSIC"). Aqua had previously submitted and has operated under its existing LTIIP approved by the Commission on February 27, 2020 at Docket No. P-2019-3013940 covering the period from 2020-2024. Since Aqua filed its LTIIP in 2019, Aqua has acquired several systems (and several of these have been through the Company's most recent rate case) and the Commission has implemented rules regarding customer-owned lead service lines ("COLSL") under Act 120. In addition, this LTIIP is being filed to include Aqua's recent acquisition of the Municipal Authority of the Borough of Shenandoah's water system in accordance with the Joint Settlement approved by the Commission.[2] Aqua now files a new LTIIP for the years 2023-2027 which will replace the existing 2019 LTIIP and include its plan for COLSL replacements consistent with Act 120.

1. INTRODUCTION

Aqua owns and operates water systems serving approximately 450,000 customers in 32 counties throughout Pennsylvania. Its water distribution systems include approximately 5,928 miles of pipe, 25,210 hydrants, 85,135 valves, and 449,298 customer meters.

[1] Act of Oct. 24, 2018, P.L. 738, No. 120.

[2] *Application of Aqua Pennsylvania, Inc. pursuant to Sections 1102, 1329, and 507 of the Public Utility Code for Approval of its Acquisition of the Water System Assets of Shenandoah Borough and the Municipal Authority of the Borough of Shenandoah*, Docket No. A-2022-3034143, Opinion and Order, Ordering Paragraph 11 (Jul. 13, 2023).

Aqua's service territories are designated as either Southeast Pennsylvania ("SEPA"), which includes a contiguous distribution system within portions of Bucks, Chester, Delaware, and Montgomery counties and separate smaller systems in portions of Berks, Bucks, Chester, and Montgomery counties, or Greater Pennsylvania ("GPA"), which includes Aqua's service territories outside of SEPA.

In response to the problems presented by the Commonwealth's aging water infrastructure, the Commission, on August 22, 1996, issued an order authorizing Aqua (then Philadelphia Suburban Water Company) to establish a DSIC. Thereafter, on December 18, 1996, the General Assembly enacted Section 1307(g) of the Public Utility Code, 66 Pa. C.S. § 1307(g), to eliminate any uncertainty as to the Commission's authority in this area. Aqua subsequently filed and had approved a DSIC following the Commission's requirements and procedures for processing and calculation. Aqua's recovery was capped at 5%.

On December 8, 2008, Aqua filed Supplement No. 88 to Tariff Water-Pa. P.U.C. No. 1, requesting approval to increase the DSIC cap from 5% to 7.5%. In support of that tariff supplement, Aqua included a detailed analysis and long-term pipe replacement plan. The Commission approved the increase in the DSIC cap from 5% to 7.5% in a Final Order entered July 23, 2009 in Docket No. R-2008-2079310. The Commission, in that order, concluded that the water DSIC model was working effectively and, indeed, that its use has made a significant impact in terms of improving Aqua's distribution system. Aqua has continued its DSIC program under that model and has been successful in improving its distribution system.

Act 11 of 2012 ("Act 11") amended Chapter 13 of the Public Utility Code by adding Subchapter B, Sections 1350 through 1360 (66 Pa. C.S. §§ 1350-1360). Act 11 permitted water and wastewater utilities, electric distribution companies, natural gas distribution companies, and gas distribution operations to petition the Commission to implement a DSIC. The Commission entered its Final Implementation Order on Act 11 on August 2, 2012 at Docket M-2012-2293611. The Commission entered its Supplemental Implementation Order on Act 11 on September 21, 2016 at Docket M-2012-2293611 directing water utilities with pre-existing DSIC programs to file LTIIPs on a staggered filing schedule.

Aqua filed its first LTIIP on January 20, 2017, which the Commission approved on May 18, 2017 at Docket No. P-2017-2584953. Aqua filed its second LTIIP on October 31, 2019, which the Commission approved on February 27, 2020 at Docket No. P-2019-3013940.

On October 24, 2018, Governor Wolf signed Act 120 which allowed for public utilities to replace COLSLs and recover those costs through a utility's DSIC if the utility has a DSIC program. The Commission implemented a rulemaking to set forth the requirements and guidelines for utilities that implement a Lead Service Line ("LSL") Replacement Program ("LSLR Program"), which includes submitting a LSLR Plan to the Commission.

Since the inception of the DSIC program, Aqua has replaced approximately 2,676 miles of pipe and cleaned and lined an additional 331 miles of pipe for a total of 3,007 miles, or an average of over 100 miles per year. This represents approximately 46% of its distribution system that has been renewed under the DSIC. **Figure 1** presents a year-by-year overview of the DSIC program.

Figure 1 – Miles of Main Replaced or Rehabilitated

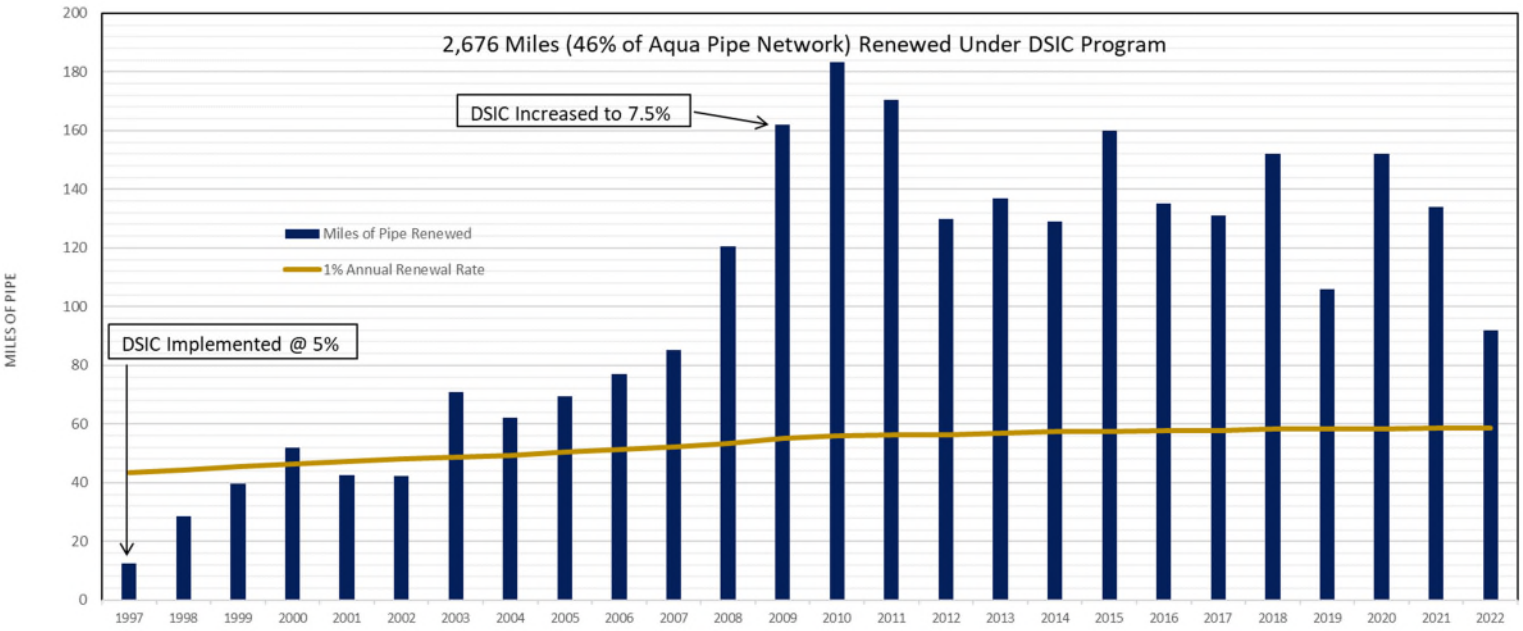


Figure 1 also displays the amount of pipe that would have been renewed at a 1% annual rate of renewal. The DSIC program has allowed Aqua to accelerate its renewal program

beyond the general rule of a 100-year replacement cycle. This LTIIP demonstrates that over the next five years Aqua will continue an accelerated water main replacement program in excess of the 1% annual rate.

In addition to pipe, Aqua has also addressed services, valves, hydrants, and meters as part of its DSIC program. **Table 1** provides an estimate of the total number of these assets installed under DSIC since 1997.

Table 1 – Summary of Assets Installed Under DSIC Program 1997- Oct 2023

Asset	Approximate Number Installed under DSIC 1997 - 2022	% of Total
Pipe (miles)[3]	2,676	46%
Company Services[4]	148,545	34%
Valves[5]	43,725	51%
Hydrants[6]	6,041	24%
Meters[7]	636,197	142%

The data in Table 1 show that in addition to pipe, Aqua's DSIC program has resulted in significant renewal of other distribution system assets since 1997.

[3] The miles of pipe shown includes both replaced pipe and pipe that was cleaned and lined.
[4] As a water main is replaced, the Company portion of the service line is entirely replaced. The value shown for "replaced" services represents the approximate number of service lines impacted by main replacement projects.
[5] Valves are not "replaced" during a water main replacement project. The original pipe and valves are abandoned in place, and new pipe and valves are installed. Often, the new pipe will include more valves, to provide better control of the system, than existed on the old pipe. The value shown for "replaced" valves is the approximate number of valves installed as part of main replacement projects.
[6] As with valves, hydrants are not "replaced" during a main replacement project. The old hydrants remain in place and in service until the new pipe is activated. New hydrants are connected to the new pipe and the old hydrants are removed. Inspections then occur on the new hydrants. Sometimes, the new pipe will include more hydrants than were located on the old pipe. The value shown for "replaced" hydrants is the approximate number of hydrants installed as part of main replacement projects.
[7] Meter replacement is not associated with water main replacement projects. Meters are replaced according to age and mandated replacement schedule.

2. TYPE AND AGE OF ELIGIBLE PROPERTY

Eligible asset property addressed under the DSIC program includes water mains, valves, hydrants, services and meters. In addition, items such as capitalized main breaks, tie-in of dead end mains, cleaning and lining, highway relocations, and other DSIC-eligible activities are included in Aqua's DSIC program.

Aqua developed a Geographic Information System ("GIS") for its water systems beginning in 2005. The GIS stores data on water mains, valves, and hydrants and is continually updated as the systems change with the addition of new assets and the replacement of old assets.

Table 2 through **Table 13**, below, describe Aqua's distribution system asset inventory and includes information on material, diameter, and age using GIS data as of October 2023. There is a subset of data that is "Unknown", as occasionally data and/or plans are simply not available, particularly for older facilities and acquisitions. However, the GIS provides the means to capture data moving forward as continuing investigatory and repair work proceeds.

Table 2 – Aqua Pipe Inventory by Diameter

Pipe Diameter	Miles	% of Total
<=4	215	4%
6	839	14%
8	3365	57%
10	89	1%
12	839	14%
>12	420	7%
Unknown	2	0%
TOTAL	**5,928**	**100%**

Table 3 – Aqua Pipe Inventory by Material

Material	Miles	% of Total
Asbestos Cement	230	4%
Cast Iron	1,101	19%
Cement Stovepipe[8]	11	0%
Ductile Iron	4,186	71%
Other	151	3%
PVC	243	4%
Unknown	7	0%
TOTAL	**5,928**	**100%**

Table 4 – Aqua Pipe Inventory by Installation Decade

Decade	Miles	% of Total
< 1900	14	0%
1900-1909	71	1%
1910-1919	31	1%
1920-1929	190	3%
1930-1939	62	1%
1940-1949	87	1%
1950-1959	177	3%
1960-1969	347	6%
1970-1979	424	7%
1980-1989	429	7%
1990-1999	501	8%
2000-2009	11,093	18%
2010-2019	1,601	27%
2020-2023[9]	441	7%
Unknown	460	8%
TOTAL	**5,928**	**100%**

[8] Cement stovepipe is a pipe material unique to SEPA. It consists of a "sandwich" of a cement material surrounding by an inner and outer jacket of galvanized iron. This pipe was installed in SEPA prior to 1930.
[9] As of October 2023.

Table 5 – Aqua Valve Inventory by Diameter

Pipe Diameter	Number of Valves	% of Total
<= 4-inch	3,375	4%
6-inch	13,827	16%
8-inch	52,821	62%
10-inch	1,163	1%
12-inch	10,425	12%
> 12-inch	3,305	4%
Unknown	219	0%
TOTAL	**85,135**	**100%**

Table 6 – Aqua Valve Inventory by Pipe Material

Pipe Material	Number of Valves	% of Total
Asbestos Cement	2,173	3%
Cast Iron	11,365	13%
Cement Stovepipe	161	0%
Ductile Iron	67,096	79%
Other	1,083	1%
PVC	2,941	%
Unknown	316	0%
TOTAL	**85,135**	**100%**

Table 7 – Aqua Valve Inventory by Installation Decade

Valve Installation Decade	Number of Valves	% of Total
<1900	167	0%
1900-1909	670	1%
1910-1919	271	0%
1920-1929	1.782	2%
1930-1939	667	1%
1940-1949	775	1%
1950-1959	1,756	2%
1960-1969	3,432	4%
1970-1979	4,429	5%
1980-1989	4,920	6%
1990-1999	6,545	8%
2000-2009	17,587	21%
2010-2019	28,923	34%
2020-2023[10]	8,589	10%
Unknown	4,622	5%
TOTAL	**85,135**	**100%**

Table 8– Aqua PA Hydrant Inventory by Installation Decade

Hydrant Installation Decade	Number of Hydrants	% of Total
1900-1909	5	0%
1910-1919	16	0%
1920-1929	24	0%
1930-1939	47	0%
1940-1949	41	0%
1950-1959	154	1%
1960-1969	501	2%
1970-1979	899	4%
1980-1989	1,511	6%
1990-1999	2,157	9%
2000-2009	5,207	21%
2010-2019	6,816	27%
2020-2023[11]	2,088	8%
Unknown	5,744	22%
TOTAL	**25,210**	**100%**

[10] As of October 2023.
[11] As of October 2023.

Table 9 – Aqua PA Meter Inventory by Size

Size	Description	Connection Size	Quantity	% of Total
1	1 INCH METER	1	9,168	2%
2	2 INCH METER	2	3,441	1%
3	3 INCH METER	3	785	0%
4	4 INCH METER	4	649	0%
6	6 INCH METER	6	508	0%
8	8 INCH METER	8	377	0%
10	10 INCH METER	10	48	0%
1 ½	1 1/2 INCH METER	1 ½	2722	1%
¾	3/4 INCH METER	3/4"	12,122	3%
5/8"	5/8 INCH METER	5/8"	387,642	86%
A	1" FIRE WITH BYPASS NON RES	1	18	0%
AA	2 X 2" RES MULT M	2	2	0%
B	1 1/2 WITH BYPASS NON[1] RES	1 ½	66	0%
C	2" WITH BYPASS NON RES	2	341	0%
D	3" WITH BYPASS NON RES	3	1	0%
E	4" WITH BYPASS NON RES	4	1,883	0%
G	6" WITH BYPASS NON RES	6	2,120	0%
K	8" WITH BYPASS NON RES	8	569	0%
L	10" WITH BYPASS NON RES	10	17	0%
M	5/8 X 3/4" RES MULT M[2]	5/8"	142	0%
N	5/8 X 1" RES MULT M	5/8"	21,863	5%
O	5/8 X 1 1/2" RES MULT M	5/8"	3,797	1%
P	5/8 X 2" RES MULT M	5/8"	75	0%
Q	3/4 X 1 RES MULT M	3/4"	184	0%
R	3/4 X 1 1/2" RES MULT M	3/4"	313	0%
S	3/4 X 2" RES MULT M	3/4"	14	0%
T	1" X 1" RES MULT M	1	100	0%
U	1" X 1 1/2" RES MULT M	1	265	0%
V	1" X 2" RES MULT M	1	58	0%
XX	1 1/2" X 1 1/2" RES MULT M	1 ½	2	0%
YY	1 1/2" X 2" RES MULT M	1 ½	4	0%
ZZ	2" X 1 1/2" RES MULT M	2	2	0%
TOTAL			**449,298**	**100%**

Table 10 – Aqua Meter Inventory by Installation Year

Meter Installation Year	Number of Meters	% of Total
Pre 1990	43	0%
1991	24	0%
1992	45	0%
1993	77	0%
1994	92	0%
1995	118	0%
1996	192	0%
1997	187	0%
1998	404	0%
1999	397	0%
2000	278	0%
2001	400	0%
2002	1,574	0%
2003	11,380	3%
2004	29,407	7%
2005	29,652	7%
2006	4,903	1%
2007	4,023	1%
2008	3,426	1%
2009	5,998	1%
2010	7,927	2%
2011	10,326	2%
2012	14,894	3%
2013	14,834	3%
2014	16,592	4%
2015	19,682	4%
2016	18,517	4%
2017	42,202	9%
2018	53,117	12%
2019	49,292	11%
2020	19,398	4%
2021	43,193	10%
2022	27,325	6%
2023[12]	19,379	4%
Total	**449,298**	**100%**

[12] As of October 2023.

Table 11 – Aqua Services Inventory by Size

Service Size	Number of Services	% of Total
½	168	0%
5/8	1,510	0%
¾	92,996	21%
1	143,278	33%
1 ¼	22	0%
1 ½	3,477	1%
2	3,143	1%
3	46	0%
4	1,319	0%
6	2,365	1%
8	755	0%
10	27	0%
12	30	0%
16	5	0%
20	1	0%
Unknown	185,767	43%
Total	**434,910**	**100%**

Table 12 – Aqua Services Inventory by Material

Service Material (Aqua owned portion)	Number of Services	% of Total
Copper	339,979	78%
Unknown	81,391	19%
Ductile Iron	5,807	1%
PVC	920	0%
Cast Iron	418	0%
Other	520	0%
Brass	517	0%
Galvanized Iron	920	0%
PolyEthylene (HDPE)	3,785	1%
Lead	43	0%
Black Iron	603	0%
Steel Welded	7	0%
Total	**434,910**	**100%**

Table 13 – Service Lines by Installation Year

Service Line Installation Year (Aqua owned portion)	Number of Services	% of Total
Pre 2005 or Unknown	250,862	52%
2005	7,019	2%
2006	6,319	1%
2007	6,715	2%
2008	8,147	2%
2009	10,530	2%
2010	11,875	3%
2011	11,170	3%
2012	9,548	2%
2013	8,428	2%
2014	10,959	3%
2015	13,136	3%
2016	13,027	3%
2017	14,328	3%
2018	10,954	3%
2019	10,108	2%
2020	9,298	2%
2021	10,913	3%
2022	8,215	2%
2023[13]	3,323	1%
Total	**434,910**	**100%**

Service lines are the pipes that deliver water from a Company owned water main to the customer's premise. Ownership of the service line is split between the Company and the customer. The Company owns the service line from its connection (tap) at the water main to a valve (curb stop), typically located near the customer's property line. The customer is then responsible for the service line from the curb stop to the premise. **Figure 2** illustrates service line ownership for a typical situation.

The service line information provided represents the Company owned portion of the service line only. The values shown were obtained from the Company's Tap Card data. Although tap cards are available for most of the original Philadelphia Suburban Water Company system, most acquisitions did not include tap cards. As a result, the Company often does

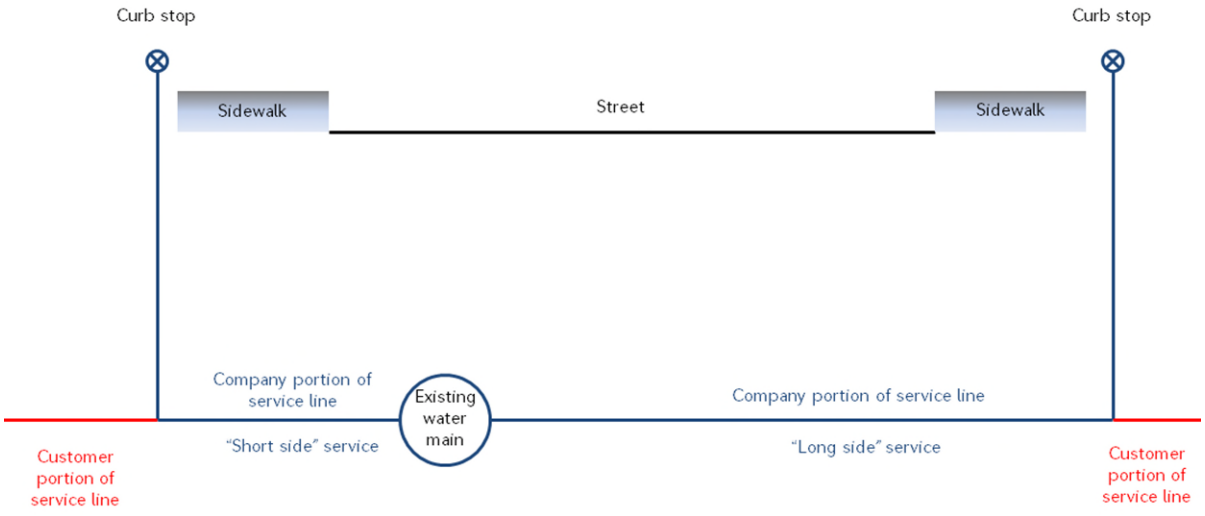
[13] As of October 2023.

not have good records of service line sizes, ages or material in acquired systems. And even when older tap cards do exist, the data is often incomplete. Thus, information on service line sizes and material may not be known until the service line is exposed. Therefore, the data provided represents the best available information, and is considered accurate after the implementation of GIS and related systems in the mid 2000's. The number of unknown sizes and materials is being reduced through the development of the Company's lead service line inventory, by which the Company is identifying both customer-side and Company-side service line material.

Service lines need to be addressed during water main replacement projects. The entire Company portion of the service line, both short side and long side, are replaced during a main replacement project. In some circumstances, plastic pipe is installed instead of copper when corrosive conditions are present.

Note that in both situations the customer portion of the service line currently is not replaced by the Company during the main replacement project. The exception to this is when a customer owned LSL is known or discovered. See the Company's LSLR Plan for more information.

Figure 2 – Typical Service Lines



Customer-owned Lead Service Lines

Lead was sometimes used for service lines in the early portion of the 20th Century. According to Company records, Aqua ceased the installation of lead Company-owned services in the 1930's. Lead Company-owned services are occasionally discovered during main replacement projects. Prior to Act 120 and the Commission's regulations, Company-owned LSLs were replaced when they were encountered during a water main replacement project, and information was provided to the customer to review their service line material and encourage the customer to replace their service line if it was lead.

The Pennsylvania General Assembly passed, and the Governor signed, Act 120 into law on October 24, 2018. The Company petitioned for, and the Commission approved, a COLSL replacement program on July 15, 2021 to allow Aqua to replace COLSLs during a main replacement project or upon customer request. Subsequent to the Commission's approval of Aqua's replacement program, the Commission issued final regulations on the implementation of Act 120. A requirement of the Commission's regulations is that an utility that has prior Commission approval to perform LSLR activities must file a LSLR Program that conforms with the Commission's regulations the earlier of the effective date of new base rates in the utility's rate case filed after the effective date of the LSL regulations or within two years after the Commission's LSL regulations take effect (July 26, 2024), whichever is sooner.[14] The Commission also required that for those utilities with existing LTIIPs, their Petition for approval of their LSLR Program shall include a modified LTIIP that includes the LSLR Plan as a distinct component of the utility's LTIIP.[15]

The Company has included its LSLR Plan as **Attachment A** to this new LTIIP. The LSLR Plan complies with the Commission's regulations and proposes modifications to the Company's current cap of 200 on the number of replacements the Company may perform annually. The Company is not proposing a budget cap in its LSLR Plan, as a budgetary cap is not required by the Commission's regulations, but will seek to meet the targeted budget amounts stated in this LTIIP similar to other categories of DSIC-eligible property.

[14] 52 Pa. Code § 65.61.
[15] Id. at § 65.54(b).

3. SCHEDULE FOR PLANNED REPAIR AND REPLACEMENT OF ELIGIBLE PROPERTY

Aqua initiated its DSIC program in 1997 and has replaced significant portions of its distribution system since that time. Figure 1 showed the work that has been completed through December 31, 2022.

Macro Planning

In 2008 Aqua submitted Supplement No. 88 to Tariff Water-Pa. P.U.C. No. 1, requesting approval to increase its DSIC surcharge cap from 5% to 7.5%. Included with that Supplement was a technical memo (Appendix E to that filing) that described Aqua's approach to water main renewal. That approach continues to be applied today, with some additional "candidate pipe" targets added in the years since. A copy of that Appendix E was included in the Company's 2017 LTIIP.

The 2008 report identified a "candidate pool" of approximately 1,500 miles of pipe in Aqua's distribution system to be targeted for replacement. Since then, Aqua has replaced more than 1,000 miles of pipe. Not all of this pipe was from that candidate pool, since other replacement needs arise each year (such as opportunistic coordination with municipal repaving projects). In addition, continuing data gathering as well as a better understanding of pipe inventories outside of SEPA has refined the estimate of the original candidate pool.

Table 14 summarizes the current "candidate pool" of pipe for Aqua. It indicates which pipe was included in the 2008 report and new footage that has been added to the candidate pool since then based on new information. A discussion of why the pipe in the additional pool is being targeted follows the table.

Table 14 – Aqua Current Candidate Pool

Pipe Category	Miles from Appendix E	Miles Remaining
Cement Stovepipe	195	11
Unlined Cast Iron 1936-1948	243	41[16]
1890-1926 pipe	825	121
≤ 4-inch	275	22[17]
Subtotal Original Pool	**1,538**	**195**
Unlined Cast Iron (1949-1951)	-	14
Factory Lined Cast Iron (1952-1960)	-	130
Unlined Cast Iron (1927-1935)	-	34
Asbestos Cement	-	230
Cleaned and Lined Pipe	-	228[18]
Factory Lined Cast Iron (1961-1963)	-	83
Factory Lined Cast Iron (1964-1970)	-	227
Subtotal Additional Pool	**-**	**946**
TOTAL	**1,538**	**1,141**

With the implementation of GIS, Aqua was able to effectively extend its long-term water main replacement program planning. Prior to the GIS, project selection was an annual process, relying on various spreadsheets and paper notes maintained by various groups and individuals within the Company. While effective, this approach did not allow for a broader, more long-term view of the program. Since the GIS has been in place, a significant amount of pipe that is not ductile iron, or is older than 50 to 60 years, has been captured in a future replacement project. This approach recognizes the fact that all pipe will eventually need to be replaced, and ensures that no pipe will be "missed".

The candidate pools listed in Table 14 represent the categories of pipe that are highest on the priority list for replacement. Selection of specific replacement projects in a given year is done annually as described below in "Micro Planning".

Unlined Cast Iron (1949-1951) pipe is very similar to the 1936-1948 vintage cast iron pipe that was included in the original candidate pool. The only difference is that additional joint types

[16] Only includes pipe in SEPA since data is not readily available to supplement this in GPA.
[17] Does not include Ductile Iron, PVC, and other "newer" pipe materials that are likely to be sized appropriately and thus not in need of replacement.
[18] The Cleaned and Lined pipe is all unlined Cast Iron installed prior to 1951. It is all in SEPA as that is the only region where Aqua performed cleaning and lining.

were starting to be used between 1949-1951. Break rates for this category of pipe were similar to the 1936-1948 vintage, and this pipe is also unlined.

The Factory Lined Cast Iron (1952-1960) category represents the first use of factory lined pipe in the Company. While the break rates for this pipe are not as high as the unlined 1936-1948 and 1949-1951 categories, Aqua has observed high break frequencies in specific water main installation projects from that era. Therefore, pipe in this category has been added to future replacement projects in the GIS, and specific projects are selected for construction based upon observed local high break frequencies. Factory Lined Cast Iron for the 1961-1963 and 1964-1970 periods have also recently been added to candidate pool which the Company will now incorporate into its replacement planning. These vintage categories contain the majority of the remaining mileage of fragile, thin-walled cast iron material and were added due to exhibitions of higher levels of break rates compared to Aqua's overall distribution network break rate.

The Unlined Cast Iron (1927-1935) was originally the preferred candidate for cleaning and lining. This pipe was manufactured using the "pit casting" method resulting in thicker walled pipe than the subsequent "spun cast" pipe that Aqua began installing in 1936. The thicker walls make this pipe less prone to breaking, thus making it a good candidate to clean and line. But as noted elsewhere, the 34 miles of pipe remaining in this category is scattered throughout the system making cleaning and lining less cost effective. As this pipe is nearing 100 years of age, it becomes a candidate for replacement.

Asbestos cement pipe is concentrated in several acquisitions in SEPA and a small number of systems in GPA. Asbestos cement pipe was most commonly installed in the 1940's and 1950's, but it was available and still being installed into the early 1980's. While the asbestos cement pipe does not create water quality concerns, special precautions must be taken when repairing such a pipe so that asbestos fibers are not released to the air. In addition, this pipe material often "crumbles" when under repair, increasing the scope and duration of a main break repair.

As noted elsewhere, cleaning and lining of unlined cast iron pipe resolved water quality and hydraulic problems, but did not extend the life of the pipe indefinitely. Some of that pipe (33 miles) is already more than 100 years old, and nearly half (164 miles) is more than 90 years

old. Generally, Aqua expects to get a minimum additional 20 years of life out of the cleaned and lined pipe. However, depending on ongoing break rates a lined pipe may be replaced earlier or later.

Aqua continues to monitor break rates for these cohorts as they age.

Valves, services, and hydrants are replaced generally as part of the Company's main replacement schedule. Meters are replaced, per Commission regulation, on a 20 year replacement schedule.

Please see Section 5, below, for the property to be improved during this LTIIP period.

Micro Planning

In SEPA, all pipes within the candidate pool have already been grouped into prospective projects. From these prospective projects, specific projects for the upcoming year are selected starting in early summer of the preceding year. The micro-level planning involves selecting specific projects from those, coordinating with local and state organizations, refining project scope as needed, balancing workload across the divisions, avoiding overloading any particular area, addressing new or worsening conditions, and addressing newly discovered issues.

The process is slightly different outside of SEPA. The characteristics of those systems require a different approach. Because the systems tend to be smaller, a relatively small project can have a significant impact on the overall system. Therefore, the selection of specific projects is driven more by "local knowledge" of the operators and engineers that work closely with those systems. Projects are selected to address pipes with high break frequencies or areas with ongoing water quality or hydraulic issues.

4. LOCATION OF ELIGIBLE PROPERTY AND REGIONAL CHARACTERISTICS

Aqua's water systems are distributed across the state, but are concentrated in SEPA. The SEPA "region" includes a contiguous distribution system within Bucks, Chester, Delaware, and Montgomery counties and separate smaller systems in Berks, Bucks,

Chester, and Montgomery counties. SEPA accounts for 77% of Aqua's pipe in Pennsylvania.

The SEPA distribution system ranges from urbanized areas surrounding the City of Philadelphia to suburban areas heading away from the City to rural areas at the outer edges of the system and in the satellite systems.

Aqua systems outside of SEPA, designated as GPA, are considerably smaller. They range in size from Canal Acres (Pike County) with fewer than 15 customers and less than 1 mile of pipe to the Shenango system (Mercer and Lawrence counties) with nearly 300 miles of pipe serving approximately 20,000 customers.

Figure 3 shows the distribution of Aqua systems across Pennsylvania, **Table 15** provides a breakdown of pipe mileage by region and material, and **Table 16** provides information on other assets by region.

Figure 3 – Aqua Systems

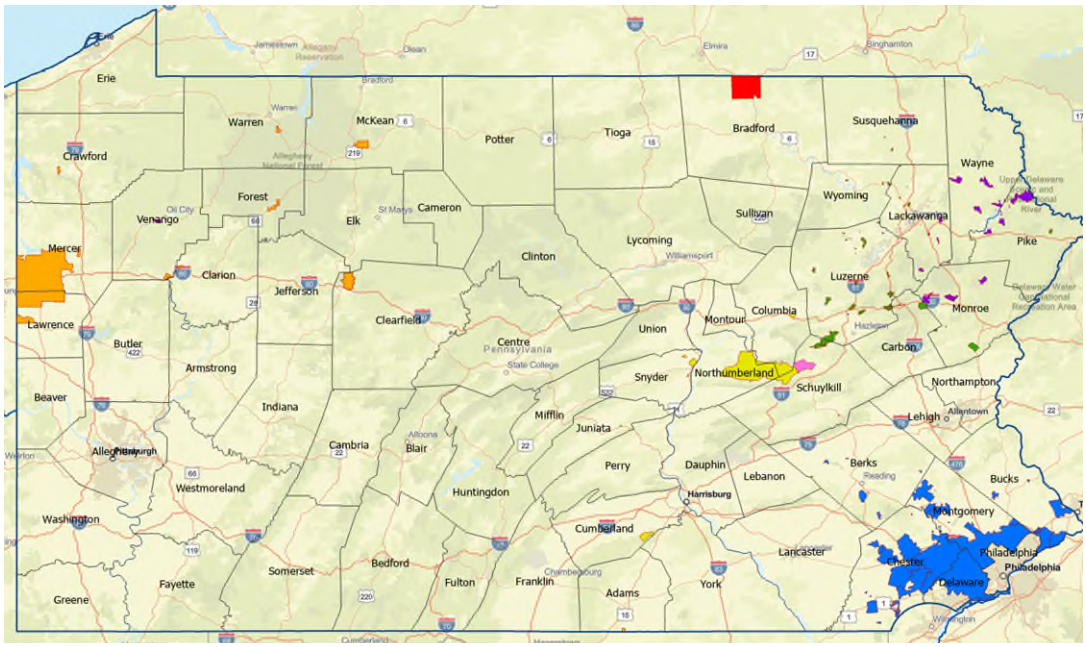


Table 15 – Pipe Mileage By Region and Material

Region	Material_Category	Miles of Pipe	% of Total
Greater PA	Asbestos Cement	36	1%
	Cast Iron	199	3%
	Ductile Iron	889	15%
	Other	210	4%
	Unknown	6	0%
Greater PA subtotal		**1,341**	**23%**
SEPA	Asbestos Cement	194	3%
	Cast Iron	903	15%
	Cement Stovepipe	11	0%
	Ductile Iron	3,296	56%
	Other	183	3%
	Unknown	0	0%
SEPA subtotal		**4,587**	**77%**
TOTAL		**5,928**	**100%**

Table 16 – Other Assets By Region

Region	Number of Valves	% of Total	Number of Hydrants	% of Total	Number of Meters	% of Total
GPA	18,262	21%	4,945	20%	71,636	16%
SEPA	66,873	79%	20,265	80%	377,662	84%
TOTAL	**85,135**	**100%**	**25,210**	**100%**	**449,298**	**100%**

5. REASONABLE ESTIMATE OF THE QUANTITY OF PROPERTY TO BE IMPROVED

Note that in addition to planned water main replacements, the DSIC budget also addresses capital cost of 1) water main breaks, 2) highway relocations, and 3) tie-ins to eliminate dead ends.

Table 17 presents Aqua's planned water main replacement plans for the 5-year period 2023-2027. This projected mileage to be replaced has been included in the 5-year capital budget and assumes a slight annual increase in the average cost per foot for main replacement. Pipe replacement costs are also dependent on the types and locations of projects. For example, work done in a state road and large diameter pipe

replacement projects are typically more expensive than a "typical" 8-inch main replacement project in a small residential street. Thus, the actual mileage replaced in future years will be driven by these various factors, and may vary from the projected mileage presented in Table 17.

Table 17 – Projected 5-year Water Main Replacement Schedule

Year	Projected Miles of Pipe to be Replaced
2023	86
2024	84
2025	74
2026	67
2027	67

The 5-year main replacement projections demonstrate a continued accelerated replacement rate for Aqua. The pace also reflects plans to replace some larger mains, in congested construction areas, and addresses approximately 368 miles of our prioritized "pool" of candidate main replacement projects.

In addition to pipe replacement, the DSIC program will continue to address services, valves, hydrants, and meters. The DSIC program will also address COLSLs as described in Attachment A. **Table 18** presents 5 year projections of the number of these assets to be addressed. The values for service, valves and hydrants are projected based on historic "per mile" values. Meter replacement is independent of main replacement projects, and those values are based on scheduled meter replacements.

Table 18 – Projected 5-year Replacement Schedule

Year	Services	COLSL	Valves	Hydrants	Meters
2023	4,386	500	1,290	172	22,015
2024	4,284	1,200	1,260	168	53,100
2025	3,774	1,500	1,110	148	21,730
2026	3,417	1,500	1,005	134	11,175
2027	3,417	1,500	1,005	134	7,605

6. PROJECTED ANNUAL EXPENDITURES AND MEASURES TO ENSURE COST-EFFECTIVENESS

Aqua's projected budget for 2023 through 2027 is in **Table 19** below.

Table 19 – Projected Budget 2023-2027

Project Group	2023	2024	2025	2026	2027
Main Replacements	$ 141,591,627	$ 131,578,925	$ 128,786,868	$ 121,245,137	$ 121,585,291
Tie-In Dead End Mains	4,749,526	20,475,832	9,250,000	6,760,000	10,260,000
Capitalized Main Breaks	3,629,121	4,085,000	4,560,000	4,261,000	4,941,000
Highway Relocations	3,841,566	1,081,800	675,000	1,056,800	1,806,800
Valve Replacements	1,243,639	1,356,000	1,211,000	1,311,000	1,371,000
Other Main/DistrSysImpr	3,215,994	3,198,400	1,860,800	4,176,700	6,650,299
Eligible Meters	5,719,619	12,499,834	6,159,995	4,243,289	2,619,340
ERT Devices	1,821,810	3,637,222	1,532,977	812,047	555,285
Renewal Services - Regular	3,520,648	6,340,515	7,334,290	7,349,469	7,417,202
Renewal Services Main Rehab	19,822,772	18,510,649	18,070,062	17,014,219	17,061,841
Replace/Relocate Hydrants	4,373,591	4,241,568	4,057,156	3,775,904	3,786,109
COLSLs	1,900,000	8,152,149	11,741,638	12,093,887	12,456,704
TOTAL DSIC ELIGIBLE	$ 195,429,912	$ 215,157,894	$ 195,239,786	$ 184,099,452	$ 190,510,870

Table 19 above displays Aqua's 5 year capital budget for DSIC eligible projects. This budget is based upon the water main replacement "pace" described herein, planned "tie-ins" of dead ends, anticipated water main relocations associated with highway projects, and Aqua's experience on the levels of valve, hydrant, and service line replacement that will be associated with these water main replacements, tie-ins and relocations. Budgets for DSIC eligible replacements associated with water main breaks and other eligible distribution system work are based upon past experience. Meter replacement budgets consider meter age, and PUC mandated meter replacement intervals. Aqua's investment in these capital expenditures will be financed by a mix of equity and borrowed funds.

Aqua's operation, maintenance and construction activities are structured into two main regions – SEPA and GPA. The GPA region evolved from the 1999 acquisition of the former Consumers Water Company as well as additional, smaller acquisitions. SEPA, formerly known as The Philadelphia Suburban Water Company, employed a long-time organizational structure with several regional offices to allow for efficient service. In both SEPA and GPA DSIC eligible main replacement projects are performed by

independent, pre-approved contractors. Other DSIC-eligible activities, such as service, hydrant and valve replacement, are performed by Aqua maintenance and construction crews augmented by independent contractors when necessary.

Contract Bidding Procedures – SEPA

SEPA has utilized a long-standing program of bidding and awarding construction contracts in each of its operating divisions. Each division contract primarily includes the construction of pipeline projects up to and including mains 16-inches in diameter. The contract also includes small installation and repair of services, hydrants, valves, etc. as needed to augment Aqua crews as well as road and ground restoration. These contracts are typically bid and awarded for a multi-year term. Contractors, usually 6 in number, are invited to bid based on past experience with Aqua. Most of the work performed under the contract is main replacement projects under Aqua's annual DSIC program. Currently, more than 100 pipe replacement projects annually are constructed under the multi-year contract. With the growth of the DSIC program since 1997, Aqua has steadily increased the number of pipe replacement projects which exceed the size limits under the multi-year contract. The majority of longer length projects or projects that involve mains 16-inches in diameter and greater are generally bid individually under a separate project-specific contract. Typically, 5 to 6 contractors are invited to bid based on past experience with Aqua, including those awardees of the multi-year contracts. In recent years, 20 to 25 projects per year have been individually bid in SEPA, accounting for approximately one third of the total length of pipe replaced.

Contract Bidding Procedures – GPA

The GPA region does not utilize the multi-year contracts. Since the operating areas are smaller than SEPA, the same efficiencies cannot be realized. DSIC-eligible main replacement projects are competitively bid as individual or multi-project bundles regardless of main size. Currently, these operating areas undertake 0 to 12 pipe replacement projects in each area annually or approximately 30-35 projects in total. As with SEPA, contractors are invited to bid based on past experience with Aqua or other utilities.

7. ACCELERATION PLAN AND MAINTENANCE OF SAFE AND RELIABLE SERVICE

Aqua has utilized the DSIC to renew its distribution system since 1997. Over that approximately 26-year period, over 46% of the pipe (2,676 miles) in the system has been renewed. This amount of pipe mileage renewed over 26 years comes to an average of 100 miles per year. This accelerated rate of renewal is nearly twice what a 1% per year renewal rate would have accomplished (1,384 miles). The Company considers a 1% per year renewal rate to be a baseline replacement rate. During the implementation of Aqua's DSIC program over the past 26 years, Aqua has far surpassed that baseline replacement rate, and will continue to maintain its accelerated rate of replacement.

Table 20 shows Aqua's historic rehabilitation and replacement of mains for the period 2018-2022, and **Table 21** shows Aqua's historic replacement of services, valves hydrants, and meters for the period 2018-2022.

Table 20 – Historic Main Replacement and Rehabilitation

Year	Actual Miles of Pipe Replaced or Rehabilitated
2018	152
2019	106
2020	152
2021	134
2022	92

Table 21 – Historic Replacement Schedule Other Property

Year	Services[19]	COLSLs	Valves[20]	Hydrants[21]	Meters
2018	9,188	N/A	3,171	454	47,688
2019	9,371	N/A	1,880	276	46,654
2020	9,894	N/A	2,571	408	23,613
2021	10,696	66	2,143	389	39,475
2022	7,760	200	1,643	277	23,199

[19] The number of services replaced is an estimate based on the miles of pipe that was replaced in each year shown in Table 21. Please see also footnote 4, above.
[20] The number of valves replaced is estimated based on the miles of pipe that was replaced in each year shown in Table 21. Please see also footnote 5, above.
[21] The number of hydrants replaced is estimated based on the miles of pipe that was replaced in each year shown in Table 21. Please see also footnote 6, above.

The associated expenditures for 2018-2022 are included below in **Table 22**.

Table 22 – DSIC Expenditures for Prior Years

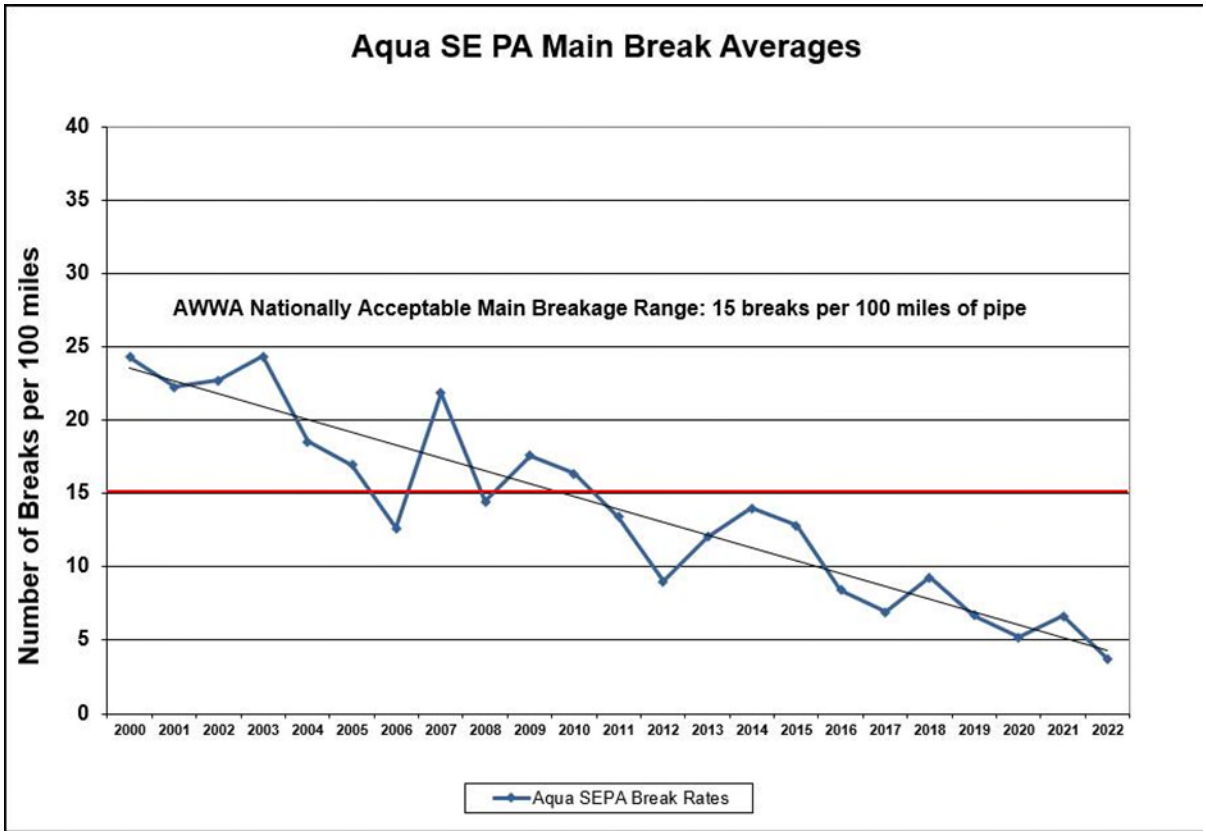
Project Group	2018	2019	2020	2021	2022
Main Replacements	$ 146,442,379	$ 174,569,280	$ 158,577,871	$ 152,676,638	$152,114,123
Tie-In Dead End Mains	1,717,467	2,731,720	10,559,071	10,380,542	2,516,589
Capitalized Main Breaks	5,701,155	5,156,508	4,120,686	4,122,595	5,824,922
Highway Relocations	1,644,244	2,280,952	675,911	3,684,747	2,363,580
Valve Replacements	1,605,193	1,878,211	789,551	1,417,778	1,286,097
Other Main/DistrSysImpr	1,666,834	1,614,845	2,028,486	1,400,313	2,281,036
Eligible Meters	9,050,652	7,865,341	3,086,785	5,809,267	5,167,008
ERT Devices	3,582,349	3,575,972	2,007,335	3,031,446	747,963
Renewal Services - Regular	5,978,413	5,461,011	4,499,018	5,093,888	4,280,220
Renewal Services Main Rehab	17,856,738	18,124,916	16,658,391	20,768,430	18,807,918
Replace/Relocate Hydrants	6,388,695	5,934,460	4,333,198	4,831,088	4,208,325
COLSLs	-	-	-	342,424	1,134,417
TOTAL DSIC ELIGIBLE	**$ 201,634,121**	**$ 229,193,217**	**$ 207,336,303**	**$ 208,367,616**	**$ 200,732,199**

The DSIC program has been successful in improving reliability (main breaks), efficiency (non-revenue water), and water quality.

Figure 4 shows the general decline in water main break rates since 2000 in SEPA. Most water main breaks occur during the cold winter months, so yearly variations are expected depending on the severity of the weather. However, there is a definite downward trend in main breaks in SEPA resulting from the DSIC program. This results in fewer interruptions of service to customers.

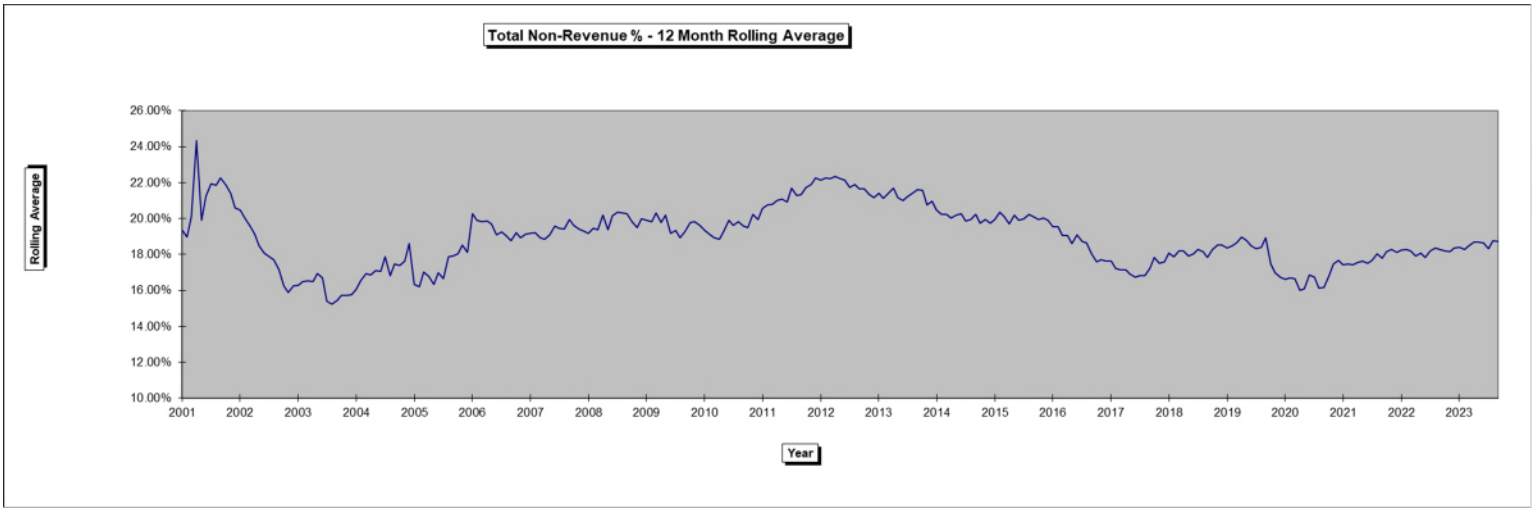
Another way to examine the declining main break trend is to consider the total number of breaks each year, rather than the break rate. In 2003 there were a total of 998 break events in SEPA, which is the most over this time period. In 2022, the number of breaks was a new low of 171. For the past twelve years, the SEPA break rate has been below the American Water Works Association ("AWWA") nationally acceptable main breakage rate of 15 breaks per 100 miles.

Figure 4 – Aqua SEPA Main Break Averages Since 2000



Non-revenue water ("NRW") is also declining. Replacement of older, potentially leaky pipes with newer pipes should result in lower leakage. **Figure 5** shows metered ratio trends for SEPA. The percentages shown represent the amount of unbilled water divided by the total water produced. While this is not the preferred approach to NRW evaluations today, it is the only data that is available dating back to 2001.

Figure 5 – Metered Ratio Trends



Applying more current approaches to analyzing and managing NRW has been a particular focus of the Company in recent years. This includes applying the AWWA water audit method. In 2013, a consultant was retained to conduct a study of NRW in SEPA. Considerable effort was spent examining real and apparent loss percentages and volumes. One finding of that study was that earlier metered ratio trends (prior to 2007) were actually flatter than shown on the chart due to errors discovered in the method used to account for Prior Month Billing Adjustments during that period. As a result of the study, the Company has identified and continues to pursue a number of business cases to address the efficient, sustainable distribution of water. These include standardization of customer meter testing, application of theft reduction techniques, calibration of production meters, and standardization of leak detection practices. The latter case, along with the ongoing replacement of old pipe from the DSIC program, has been a driver in reducing NRW. Figure 5 shows the impact of this effort on metered ratio as one performance indicator. Since total water send-out has been declining, metered ratio does not portray the more significant decline in water loss volume. Examined a different way, in SEPA alone, NRW has decreased by approximately 1.0 billion gallons per year since 2015.

In addition to desktop NRW analysis, the Company has increased efforts in proactive leak detection, including lift and shift acoustic surveys, pilot satellite leak detection, pilot real-time permanently installed leak and transient monitoring on critical infrastructure, and partial theft of service algorithm directed investigations.

Water quality complaints have declined over time as noted in **Figure 6** which shows significant reductions in the number of both taste and odor and discolored water service orders since 2000 in SEPA. Similarly in **Figure 7**, both taste and odor and discolored water service orders have been reduced in GPA.

Figure 6 – Water Quality Service Orders in SEPA

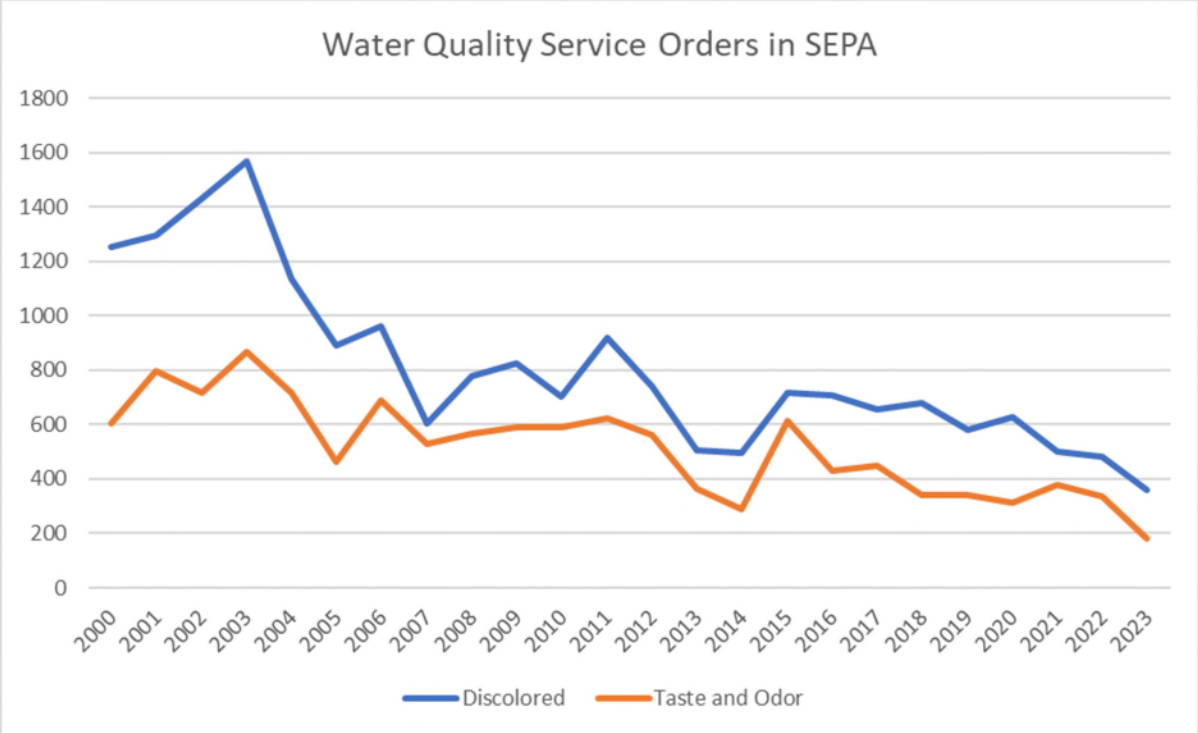
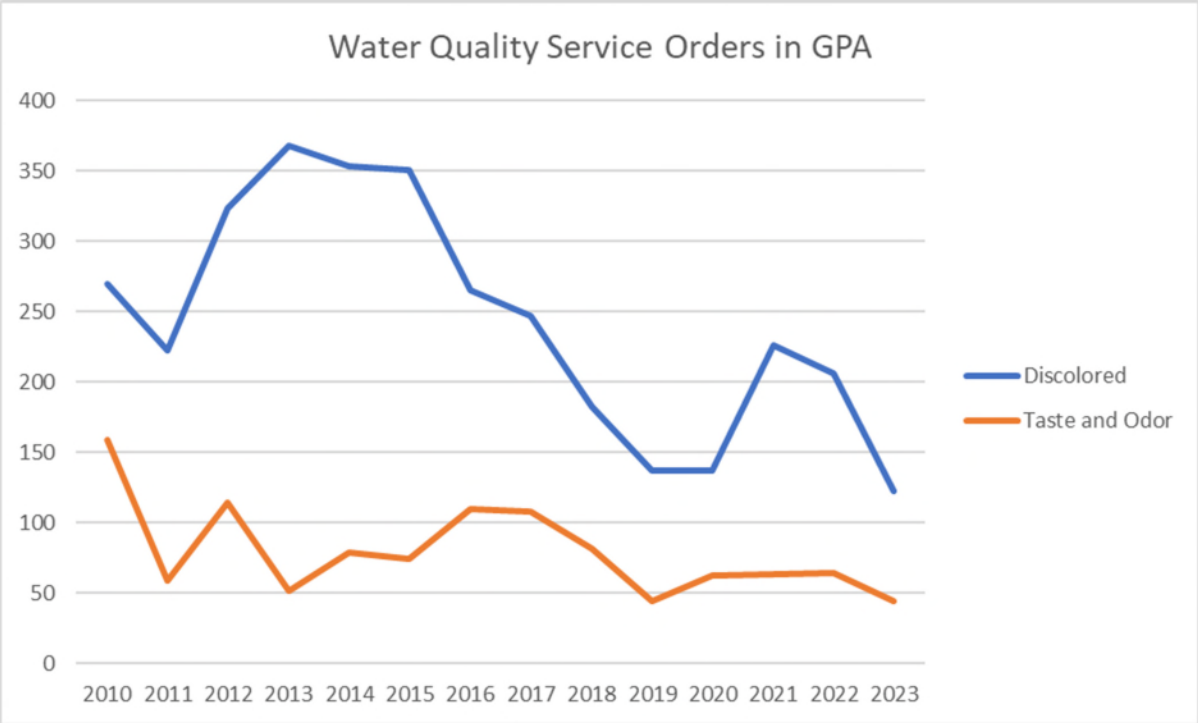


Figure 7 – Water Quality Service Orders in GPA



This is another achievement for the DSIC program. As old, unlined cast iron pipes were replaced or cleaned and lined, the Company has experienced reduced complaints about water quality associated with the corrosion of the interior pipe walls. **Figure 8** shows an older unlined cast iron pipe that was replaced.

Figure 8 – Replacement of Older Pipes

The cleaning and lining program also contributed to improved water quality as the cement mortar lining applied to the walls of the unlined cast iron pipe prevents the interior corrosion of the iron. See **Figure 9** for before and after examples of the impact of cleaning and lining. However, it should be noted that the cleaning and lining process can only allow the Company to maintain the useful life of a cast iron pipe. Eventually that pipe will still need to be replaced due to age.

Figure 9 – Impact of Cleaning and Lining

Aqua's cleaning and lining program was limited to the more urban areas in SEPA and ended after 2014. Cleaning and lining was an attractive alternative to pipe replacement in the 1990's and early 2000's as the population of candidate pipe (unlined cast iron with good remaining structural life) was concentrated in neighborhoods. This allowed contractors to mobilize in a single location and clean and line large quantities of pipe, resulting in cost efficiencies. At its peak, the cleaning and lining program was able to renew pipe for approximately half the cost of replacement.

As the population of this "candidate" pipe declined and became more geographically dispersed, the efficiencies of cleaning and lining were lost and the cost savings compared to pipe replacement became much less. As a result, Aqua has not included cleaning and lining of mains in its current LTIIP budget.

8. WORKFORCE MANAGEMENT

The Commission requires that a utility that utilizes DSIC have a workforce management and training program designed to ensure that the utility has access to a qualified workforce to perform work in a cost-effective, safe and reliable manner.

Inspectors

Aqua utilizes construction inspectors to provide numerous services during the installation of mains, services, and hydrants in the distribution system. The inspectors are there to perform the following tasks, as well as any other work that may be necessary:

- Monitor the installation of the lines to confirm that they are properly bedded and installed to Aqua specifications.
- Monitor the backfill of the project for proper compaction as per Aqua specifications.
- Confirm that all materials such as pipe, fittings, backfill, concrete, etc. in the project meet the Aqua specifications.
- Capture the quantities of pipe and other materials for proper record keeping, plans, etc.
- Capture the quantities of pipe and other materials, labor, etc. for accurate billing and payments.
- Document all locations of pipe, fittings, valves, service lines, etc. for accurate mapping and recordkeeping.
- Work with residential customers to lessen the impact of the project and answer or address any issues that occur within the project.
- Work with businesses that are impacted by the project to insure deliveries, access, and service outages do not disrupt business.
- Coordinate contractors with school districts, municipalities, and emergency services so that bus routes, trash pick-up, mail delivery, and emergency response are not impacted.
- Monitor the temporary restoration during the project to make certain that roads are safely traveled.
- Monitor the restoration required in projects to make certain they are done to state or municipal specifications, and insure that proper payment is achieved.
- Observe contractor's implementation of contractor safety plans and advise contractor of any observed conditions of imminent danger. Inspectors can shut down a project until an imminent danger situation is addressed.

Safety and Training

Aqua requires its employees in the Distribution/Construction arena to have mandatory safety training throughout the year. Aside from the required annual training, there is additional training that also takes place. Examples of the required annual training are confined space, traffic safety, excavation/trenching, general safety hazards, and hazard communications. In addition, there are other programs that are required, but not on an annual basis, including Personal Protection Equipment ("PPE"), electrical hazard, competent person, and others. First Aid/CPR and automated external defibrillator training are offered yearly to maintain certifications and proficiency. In 2019, Aqua developed a training program to educate drivers and reduce the frequency of backing accidents. Driving continues to be an integral part of training. In addition, to the video segments, Safety Days include keynote speakers discussing driving skills & techniques. In 2022, monthly video segments were implemented along with instructor led classes on reverse driving and backing, and in 2023 the Company included spotter training. Aqua routinely sends out "Tool Box" Talks on safety topics; tripping hazards, electrical, tools, and seasonal topics such as weather, holidays, and Back to School. The Safety department also issues "Safety Alerts" previewing incidents and near misses. In addition, Aqua has instituted a "Near Miss" (Safety Learning Opportunities) initiative where hazards are identified and resolved within 30 days.

All employees in Distribution/Construction are required to wear their Personal Protection Equipment whenever they exit their vehicles on a jobsite. The PPE includes hard hat, safety vest, safety glasses, and steel toe shoes. All of this PPE is supplied by the Company. Aqua also instituted a change in a policy for cutting pipe in a trench. The use of cut-off saws, also sometimes called demo saws, is prohibited from use in a trench by our employees and any contractors working for Aqua. These saws utilized in a trench have nationally been a source of fatalities and injuries in the industry. There are numerous other methods of cutting pipe or other material in trenches, so to prevent any incidents the use of the cut-off saws has been prohibited.

Aqua requires all employees, and contractors, to report immediately any injury that takes place to an employee of either party. Aqua also requires employees and contractors to report any damage to utilities during the excavation process. As part of

the Pennsylvania Underground Utility Protection Law, Aqua and its contractors are required to submit an Alleged Violation Report for all utility damage occurrences to the Commission.

Contractors

To supplement Aqua's employee workforce, Aqua utilizes outside contractors for main replacement projects, including the service and hydrant connections that go along with the project. Contractors are required at Aqua's request to provide Aqua with their safety policy and documentation of training to their employees, including but not limited to competent person, utility damage prevention, and traffic safety.

Aqua requires contractors to follow all state, federal, and Occupational Safety and Health Administration rules and regulations in the implementation of a project. This is required in all contract documents for construction. Aqua utilizes a third-party safety consultant to perform site inspections on a regular basis for Aqua's contractors. Contractors are also required to fill out a Job Hazard Awareness form daily, either utilizing the Aqua form or a similar form designated by the contractor.

Contractors are also required to provide the PPE for their employees, including hard hat, work gloves, reflective vest or shirt, safety shoes, and safety eyewear.

Contractors are also responsible for reporting to Aqua any injuries sustained on an Aqua project. They are also required to report any utility damage that occurs on the jobsite. As part of the Pennsylvania Underground Utility Line Protection Law, the contractor is required to submit an Alleged Violation Report for all utility damage occurrences to the Commission. Contractors are responsible for following the requirements of PA One Call, including being responsible for all PA One Call requests for their project.

Aqua's inspectors are also required to coordinate all service outages or main outages with contractor and other Aqua personnel, including notification of the customers.

9. OUTREACH AND COORDINATION ACTIVITIES WITH OTHER UTILITIES, PENNDOT, AND LOCAL GOVERNMENTS

Using Aqua's GIS and historical asset data, Aqua has developed an inventory of pipe replacement candidates throughout its footprint. Between the months of May and October, replacement candidates are typically chosen and prioritized for replacement in the subsequent budget year. Each potential replacement project is vetted by the corresponding construction division's manager, i.e., analyzed for feasibility of construction in the coming budget year. As part of the analysis process, Aqua collects information from the Pennsylvania Department of Transportation ("PENNDOT"), counties and municipalities as to their intentions to undertake paving and other public works projects during the budget year. Paving projects known by Aqua in advance of replacement project selection are posted to the GIS alongside candidate replacement projects and utilized in prioritizing specific projects for selection and refining of specific project scopes. Where Aqua chooses to undertake a pipe replacement project on a road pre-scheduled for paving, the project will be coordinated with the state, county or municipality. Aqua and the government agency will work together to insure that the design, permitting and construction of the pipe project will be completed in time to allow for the road to be paved. In some cases, where pipe replacement projects are large, the government agencies will agree to postpone paving of its roads to the following year. Aqua's Engineering Department meets several times a year with PENNDOT's Permits, Traffic and Maintenance officials, formally presenting plans for pipe replacement projects in state roads for the coming year or longer. As a result of these meetings PENNDOT may adjust its paving plans and other construction project schedules for Aqua's benefit. Where PENNDOT schedules cannot accommodate Aqua's projects, Aqua will defer its project a minimum of 5 years. Typically, when Aqua undertakes a project where paving has been pre-planned by the government agency, Aqua and its rate payers will benefit financially through the avoidance of road surface restoration, usually a full-lane or half-road milling and macadam overlay.

Unfortunately, most municipalities do not identify their paving plans in advance of Aqua's project selection. Annual municipal budgets may not be approved until early in the budget year resulting in paving projects not being formalized until well into the budget year. In these instances, Aqua must be proactive in identifying opportunities to coordinate pipe

replacement and road paving. Following the selection of pipe replacement projects in early fall preceding Aqua's budget year, construction division managers and superintendents visit with each municipality in which pipe projects are planned. In many instances, municipal officials and engineers will identify roads where repaving can be coordinated with Aqua's project. A sharing of costs is negotiated and the municipality will undertake the milling and paving of the entire road with a monetary contribution from Aqua.

In 2020- October 2023, Aqua undertook 119 pipe projects which resulted in savings to Aqua in surface restoration avoidance.

Although less frequent, continuous outreach by Aqua has resulted in additional coordination opportunities recently, including track construction by SEPTA, and sanitary, storm sewer and bridge construction by state, county and municipal governments.

Following the initiation of the Gas DSIC in Pennsylvania, additional coordination opportunities for joint water main and gas main replacement have substantially increased, especially in SEPA between Aqua and PECO. Beginning in 2013, Aqua and PECO undertook a sharing of asset data including high-priority candidate replacement water and gas pipes. Joint project review meetings have been held every 6 to 8 weeks to coordinate replacement schedules where water and gas main replacement projects intersect in each municipality. Aqua and PECO have also met jointly with municipal officials, residents and businesses to present the timing and coordination plans of each utility's projects. Working together benefits the general public through greater efficiency, coordinated traffic control and the avoidance of wasteful demolition of recently paved roads by the second utility to construct. In addition, this coordination results in nominal cost savings to the utilities, associated with economies of scale, since installation of both water and gas mains usually requires repaving of the full road.

ATTACHMENT A

Lead Service Line Replacement Plan

Aqua Pennsylvania, Inc.

Lead Service Line Replacement Plan

TABLE OF CONTENTS

DEFINITIONS 3

I. INTRODUCTION 4

II. LSLR PLAN REQUIREMENTS 4

A. Service Line Inventory 4

B. Planning and Replacements 5

1. Aqua's Projected Annual Investment and Sources of Financing 5

2. Aqua's Projected LSLRs Per Calendar Year and Description of Projection Development 6

3. Prioritization Criteria 6

4. Processes and Procedures to Address Emergency Repairs and Replacements Which Reveal LSLs 6

5. Processes and Procedures to Obtain Acceptance of a LSLR Prior to Project Commencement When the Customer Is and Is Not the Property Owner 7

6. Processes and Procedures Based on Acceptance of a LSLR 8

7. Lead/Material Recycling and Disposal Efforts 10

8. Industry Accepted Practices 10

9. Integration of Acquired Systems in the LSLR Plan 10

10. Procedure Regarding Refusal of Offer to Replace a LSL 11

C. Communications, Outreach and Education 11

1. Printed and Broadcast Materials 11

2. Aqua's Website 12

III. CONCLUSION 13

DEFINITIONS

Aqua or Company – Aqua Pennsylvania, Inc.

COLSL – Customer-owned lead service line

DEP – Pennsylvania Department of Environmental Protection

EPA – United States Environmental Protection Agency

GPA – Aqua's Greater Pennsylvania Division

GRR – Galvanized service line requiring replacement

LCRR – Lead and Copper Rule Revisions amending the EPA's Lead and Copper Rule. All community and non-transient non-community public water systems are required to comply with the LCRR starting October 16, 2024.

Lead action level - EPA's action level for lead in water delivered to users of public drinking water systems is 15 µg/L.

Lead trigger level - EPA's trigger level for lead in water delivered to users of public drinking water systems is 10 µg/L.

LSLR – Lead service line replacement

LSLR Project Commencement – Installation of the first lead service line replacement within a lead service line replacement project area.

LTIIP – Long-Term Infrastructure Improvement Plan

PENNVEST – Pennsylvania Infrastructure Investment Authority

PUC or Commission – Pennsylvania Public Utility Commission

SEPA – Aqua's Southeastern Division

µg/L – Micrograms per liter.

I. INTRODUCTION

Aqua has developed the following Lead Service Line Replacement ("LSLR") Plan in accordance with Chapter 65 of the Pennsylvania Public Utility Commission's ("PUC" or the "Commission") regulations, 52 Pa. Code §§ 65.51 et seq., and the Commission's Final Implementation Order entered on March 14, 2022 at Docket No. L-2020-3019521. Included with the Company's LSLR Plan is a pro-forma tariff supplement containing the proposed changes necessary to implement the LSLR Program, and information required by the Commission under 52 Pa. Code § 53.52(a). Aqua submits this LSLR Plan as part of its Long-Term Infrastructure Improvement Plan ("LTIIP").

Aqua owns and operates water systems serving approximately 450,000 customers in 32 counties throughout Pennsylvania. Aqua's service territories are designated as either Southeast Pennsylvania ("SEPA"), which includes a contiguous distribution system within portions of Bucks, Chester, Delaware, and Montgomery counties and separate smaller systems in portions of Berks, Bucks, Chester, and Montgomery counties, or Greater Pennsylvania ("GPA"), which includes Aqua's service territories outside of SEPA.

The Company received prior Commission approval of its LSLR petition on July 15, 2021 at Docket No. P-2020-3021766. Under the Company's existing plan, COLSL replacements are capped at 200 per year and at a budgeted amount of $800,000.

II. LSLR PLAN REQUIREMENTS

Aqua's LSLR Plan contains the following elements and supporting documents as required by the Commission.

A. Service Line Inventory

The Service Line Inventory is being developed consistent with the intent and guidance of the Lead and Copper Rule Revisions ("LCRR") including use of all available sources of information to establish service line material designations for each side of ownership (i.e., Company and customer) which thus informs an overall service line material designation.

In developing the Service Line Inventory, the Company has used a combination of evidence-based data, including field observations, tap cards, and as-built drawings. Field observations which have occurred through meter replacement, and any time a field service representative is able to access the service line through excavation or at the meter location and is able to observe the service line material. The field observation also includes proactive review of service line material prior to main replacement work commencing in high-risk areas. The Company will send a letter to customers with unknown service line material requesting customers to identify their service line material.

When evidence-based data, as described above, is not available, the Company has applied the following methodology to assign material designations within the Service Line Inventory:

1. Aqua's tariff from 1956 to current practice requires installation of Type K Copper on both the Company and customer side of the service line for 49 municipalities within the Hatboro and Main systems. Homes built during 1956 or later for these water systems were therefore assigned a "non-lead" designation.

2. Pennsylvania banned the use of lead in all plumbing in early January 1991, and therefore homes that were built during or after 1991 are similarly assigned a "non-lead" designation within the Service Line Inventory.

3. For galvanized service lines which are or were downstream from LSLs and/or the Company cannot prove that they were never downstream from an LSL or lead gooseneck they are assigned a Galvanized Requiring Replacement ("GRR") and will be considered candidates for replacement, unless the home and service line was built during or after 1991.

Aqua's Service Line Inventory is continuing to be developed at this time, including the incorporation of all remaining tap cards, assumptions as described above, and other evidence-based data, with 90% of Company service line material identified and 73% of customer service line material identified, detailed further below.

The Company will update its Service Line Inventory as progress is made on completing the inventory and as new water systems are acquired. Section II.B.9 provides further discussion on integration of acquired systems into the Company's LSLR Plan.

Table 1 below shows total material type identification across Aqua's service territory.

Table 1 – Current Service Line Inventory Summary

Material Type	Company	Customer
Lead	43	389
GRR	920	10,380
Non-lead	391,334	307,126
Lead status unknown	42,613	117,015
Total	**434,910**	**434,910**

The current Service Line Inventory with location identifiers is being developed and will be available on Aqua's website as further described in Section II.C.2.

B. Planning and Replacements

1. Aqua's Projected Annual Investment and Sources of Financing

The Company proposes a cap up to 1,500 replacements annually. Anticipated sources of financing for the replacements will include short term debt of the Company converted at a later time into long term debt and equity. The Company is also exploring low-cost/no cost financing

through the Pennsylvania Infrastructure Investment Authority ("PENNVEST") and other sources as they become available. As the Company identifies systems requiring significant LSL replacement, the Company will explore funding opportunities to reduce costs to ratepayers.

2. Aqua's Projected LSLRs Per Calendar Year and Description of Projection Development

The Company is projecting the following replacements during the term of this LTIIP as set forth in **Table 2**:

Table 2 – Projected COLSL Replacements During LTIIP Period

2023	2024	2025	2026	2027
500	1,200	1,500	1,500	1,500

Aqua currently has approximately 434,910 company-owned service lines, of which 42,613 are an unknown material and 117,015 customer side service lines that are lead status unknown. In addition to finding and replacing lead service lines, the addition of galvanized service lines that are or ever have been downstream from a lead service line or lead gooseneck are GRR and are eligible for replacement under Act 120 and therefore have increased the potential number of replacements needed throughout Aqua's systems. Aqua believes 2% or 2,340 of the unknown customer side service lines are potentially lead or GRR that will need to be replaced. The projections for 2023-2027 are consistent with Aqua's annual cap proposed in this LTIIP and LSLR Plan.

3. Prioritization Criteria

The Company considered the following prioritization criteria when developing the LSLR Plan:

- Individual Properties
  - Emergency Repairs revealing LSLs.
  - Homes with elevated lead concentrations in tap samples.
  - Schools and licensed day care facilities
  - Homeowners that request replacements.
  - Homeowners in systems that do not have widespread LSLs.

- Systems
  - Systems with higher projected lead or GRR replacements.
  - Systems where PENNVEST or other funding is available.
  - Systems with aging water mains that require replacement.

4. Processes and Procedures to Address Emergency Repairs and Replacements Which Reveal LSLs

When the Company uncovers an LSL while completing emergency repairs to its system, if both the customer side and Company side of the service line are lead, the Company will contact

the customer/owner and provide them with the information and materials in Section II.B.6. and prioritize the replacement of the entire service line both Company and customer side. If only the customer side of the service line is lead, the Company will similarly provide the information and materials in Section II.B.6. and prioritize the replacement of the COLSL.

When the Company uncovers an LSL while completing emergency repairs to its system, and the LSL is Company-owned, the Company will replace its service line up to the curb stop, which will reveal the customer-side material. Upon verification that the customer's service line is not lead, the Company will complete the Company-side replacement and restore service to the property. The Company will provide the customer with information regarding lead, pitcher filters, and flushing instructions as described below. If the customer's service line material is lead or GRR, the Company will provide the customer with the information and materials in Section II.B.6. and prioritize replacement of the COLSL.

5. Processes and Procedures to Obtain Acceptance of a LSLR Prior to Project Commencement When the Customer Is and Is Not the Property Owner

For areas deemed high-risk, the Company or its third-party representatives will send pre-investigative letters to customers in preparation for the commencement of a main replacement project and will request authorization to gain access to a customer's structure using pre-investigation letters (**Exhibit A**), requesting access to review the material type of the customer's service line. Aqua personnel or Aqua's third-party vendor will visit each customer premise within the scope of the project with an unknown service line material to identify material type of the customer service line. Aqua plans on engaging customers throughout its footprint with surveys (**Exhibit B**) sent by mail requesting customer participation in identifying service line materials. The Company will also be developing additional survey materials to engage customers to assist the Company in completing the Service Line Inventory. If the Company uncovers a Company side LSL or a COLSL during maintenance or construction activities, the Company will provide a form (**Exhibit C**) to the customer if the customer is at the premise or will post the form if the customer is not at the premise and attempt to contact the customer through via phone to follow up with further information.

If there is no response to the pre-investigation letter or form, Aqua personnel or its third-party vendor will visit the premises to obtain acceptance in-person. If there is no response to door knocks, a door hanger (**Exhibit D**) will be left at the premises providing an Aqua contact number and requesting access to the customer/property owner's property to identify the service line material. If there is no response to the in-person outreach, a list is generated and Aqua will call the customer. If the Company does not receive a response, it will initiate the 10-day shut-off procedures (**Exhibit E**) to get access and review the service line material. If there is still no contact, Aqua will commence with the shut-off of service and require access to review the service line material as a condition to restore service.

After making contact with the resident and identifying the presence of a COLSL, Aqua personnel will ask whether the resident is the owner or renter of the building. If the customer is the owner, and they agree to participate in the replacement, then the Company will provide the

information and materials in Section II.B.6 below. If the customer is the owner and refuses to participate in the replacement the Company will follow the provisions of Section II.B.10, below. If the customer is not the property owner, the Company will obtain the owner's contact information from the customer and call the owner to explain the program to the owner and provide the owner with a copy of the Customer Lead/Galvanized Service Line Replacement Agreement ("Replacement Agreement") (**Exhibit F**). If the Company does not receive a response to telephone calls to the owner, the Company will send a letter to the property owner (**Exhibit G**) explaining the program and request that the property owner contact the Company. If the property owner does not respond, the Company will explore all options to encourage property owners to participate, such as contacting the municipality and the local code enforcement in which the property is located, and, in certain circumstances, at the Company's discretion, using Step In Rights as described in Section II.B.10. If the Company has not received acceptance after multiple efforts to contact the property owner and obtain the Replacement Agreement, the Company will initiate the 10-day shut-off process.

By obtaining agreement of the customer or property owner prior to commencing the main replacement project, the Company can more quickly and efficiently complete the main replacement and associated restoration. The Company will not be faced with having to delay a planned project or put an ongoing project on hold (including incomplete restoration) if the service line material cannot be identified or an LSL is discovered during a project. The Company would not have to stop mid-project to identify the service line material and get the customer/owner's consent while potentially keeping two mains in service or having an open cut in a roadway. As such, there is less disruption to traffic, customers' daily lives, and reduced safety concerns of open construction.

6. Processes and Procedures Based on Acceptance of a LSLR

If the customer or property owner expresses that they want to participate in Aqua's LSLR Program after their service line has been identified as lead, Aqua will provide the following information to the customer:

- Customer Lead/Galvanized Service Line Replacement Agreement and postage-prepaid and pre-addressed envelope to the Company (**Exhibit F**).
- Lead Fact Sheet providing educational information about lead in drinking water (**Exhibit H**).
- Information Sheet explaining Aqua's Lead Service Line Replacement Program (**Exhibit I**).
- Sample bottles with instructions (pre-and post-replacement sampling) (**Exhibit J**).
- Post-COLSL replacement flushing instructions (**Exhibit K**).
- Pitcher filter with six months of replacement cartridges (**Exhibit L**).

When the above information is provided to the customer/property owner, the Company will explain to the customer/property owner that a plumber will contact them and schedule the replacement of the COLSL. If the customer/property owner does not return the Replacement Agreement, the Company will contact the customer/property owner until it receives a signed copy of the Replacement Agreement, which will be retained by the Company. During a main replacement project, the Company will proceed with the procedures set forth in II.B.10. if the signed Replacement Agreement is not returned.

The Replacement Agreement allows a third-party licensed professional to enter the property and complete the LSLR. The agreement authorizes the Company and the contractor performing the work to access the customer/property owner's property, confirms the ownership of the service line following installation, and provides a warranty on the work completed. Further, the agreement requires that the contractor install the replacement service line and restore the property as reasonably as practicable to the condition that existed prior to the LSLR.

Upon receipt of the Replacement Agreement, the Company will request for the customer/property owner to complete the pre-replacement sampling at their premise per the instructions provided (**Exhibit J**)**.** Once the pre-sampling is completed, the customer/property owner will contact the Company, per the instructions, and Company personnel will pick up the samples. Following testing of samples, the Company will call the customer and send the customer/property owner the results of the.

Aqua will call and mail lead sample results to the customer within 10 business days (**Exhibit M**) of receiving the results, provided that the sample results are less than 15 micrograms per liter ("ug/L"). If the sample results are greater than 15 ug/L, results will be provided by phone and mailed within 3 calendar days of receiving the results and Aqua will provide additional sample bottles and investigate until the results return to less than or equal to 15 ug/L. Aqua will continue to provide replacement filters during this time as needed. If repeated monthly sampling results in greater than 15 ug/L, the Company will start a special investigation.

Following replacement, Aqua personnel will visit the customer's property within 5 business days after the COLSL replacement to reinstall or exchange the meter. The Company personnel will remind the customer to follow the post-replacement instructions and take samples that Aqua personnel will pick up when customer notifies Aqua that samples are ready.

Atypical conditions for a LSLR may include (a) the property owner has passed away and an executor is seeking replacement, (b) a person selling property during main replacement project, or (c) a service line serving multiple properties. As these situations arise, the Company will require documentation and, in the Company's judgment, get the proper authorization to complete the replacement.

In closing out the project, the Company will then provide a letter (**Exhibit N**) to the customer 3-6 months post-replacement confirming the provisions in the Replacement Agreement for project close-out. The letter confirms the newly installed customer service line has been transferred back to the customer/property owner and reminds the customer of the warranty for the

completed work. The Company will also provide instructions for post-replacement 5th liter sampling (**Exhibit O**). Following 5th liter sampling, Aqua will call and mail 5th liter sampling results within 10 business days for results less than 15 ug/L and withing 3 calendar days for results greater than 15 ug/L (**Exhibit P**).

7. Lead/Material Recycling and Disposal Efforts

In most replacements of COLSLs, the Company does not excavate and remove the existing LSL, it is abandoned in place and a new service line is installed. When a third-party plumber is completing the service line replacement, and if the line is removable and removed, the third-party plumbers dispose of any lead materials they excavate.

8. Industry Accepted Practices

The Company will adhere to the provisions of its tariff regarding replacement of company-side service lines. In addition, the Company will require Company personnel and its contractors to comply with any applicable plumbing codes related to customer-side service line replacement. The Company will follow Commission regulations regarding LSLRs including prevention of partial service line replacements and termination of service provisions, if needed to prevent partial LSL replacements.

9. Integration of Acquired Systems in the LSLR Plan

Where the Company acquires a water system prior to the deadline for water systems to complete their Service Line Inventories, the Company will take over the water system's efforts, if any, to identify and incorporate the service line materials of the system in to Aqua's overall Service Line Inventory. This will include the efforts described in Section II.A., above.

For water systems acquired after the deadline for complete Service Line Inventories, the Company will incorporate the system's completed inventory into the Company's Service Line Inventory. It must be noted that some systems may not have completed a Service Line Inventory to the standards that the DEP and Commission regulations require either due to lack of resources or other reasons. In these instances, during the acquisition process, the Company, to the extent feasible will work with the selling entity to begin the steps necessary to develop a Service Line Inventory and will continue those efforts after closing on the system. However, an incomplete Service Line Inventory by the selling entity should not hold up a closing on the system. The Company can more easily fold the acquired system into the Company's LSLR Program and complete the inventory post-closing where the Company can access the customers' meters and view service line material.

In these situations, the Company will explain its plans to complete the Service Line Inventory for the to-be-acquired system, and how those efforts will continue post-closing, and provide updates to the Commission on the progress of the Service Line Inventory for the subject system in its LSLR Program Reports.

10. Procedure Regarding Refusal of Offer to Replace a LSL

During a LSLR project, if the customer refuses to replace, and the Company has either made contact with the customer/property owner and they refuse, or where the customer/property owner is non-responsive to the Company's requests as described in Section II.B.5 to replace the COLSL, Aqua will initiate termination procedures. Termination procedures include posting of 10-day shut off notices, and other required contacts under the Commission's regulations.

In certain circumstances and in the Company's sole discretion, the Company may utilize Step In Rights as described in its tariff to perform a replacement where it will avoid termination of service to an occupant that is not the property owner. Under these limited circumstances, the Step In Rights will be used when the Company has attempted to contact the property owner to replace the COLSL, the structure is occupied by a party that is not the property owner, and the Company has attempted to get authorization to replace the COLSL, the property owner cannot be identified, or the property owner has been notified of the offer to replace the COLSL and has not responded.

The Company's representatives will include notes within its customer information system documenting the refusal or non-response and complete any termination procedures as needed if the customer/property owner continues to refuse to replace the COLSL or does not respond.

The Company will also provide a Customer Refusal Letter (**Exhibit Q**), its lead fact sheet describing the health hazards of lead service lines (**Exhibit H**), and the lead service line program information sheet (**Exhibit I**) which explains the requirements for reimbursement and the potential for termination of service.

C. Communications, Outreach and Education

Aqua's communications activities listed and described in the following sections are in accordance with EPA regulations at 40 C.F.R. § 141.85.

1. Printed and Broadcast Materials

As described in Section II.B above, and as further supplemented here, below is a list of all printed and broadcast materials the Company plans on distributing under different scenarios of COLSL replacement efforts. These materials may change or be updated from time to time.

- Exhibit A – Pre-investigative letters to identify service line material.
- Exhibit B – Customer surveys.
- Exhibit C – Form provided to customer if the Company discovers a LSL or GRR during construction or maintenance activities.
- Exhibit D – Door hanger placed if contact is not made with customer to identify service line material.
- Exhibit E – 10 day shutoff notice.
- Exhibit F – Customer Lead/Galvanized Service Line Replacement Agreement.
- Exhibit G – Letter to customer requesting participation in the replacement program.

- Exhibit H – Lead Fact Sheet providing educational information about lead in drinking water.
- Exhibit I – Lead Service Line Replacement Program Information Sheet.
- Exhibit J – Sample bottles with instructions (pre- and post-replacement sampling).
- Exhibit K – Post-COLSL replacement flushing instructions.
- Exhibit L – Pitcher filter.
- Exhibit M – Sample results letter.
- Exhibit N – COLSL replacement close out letter.
- Exhibit O – 5th Liter sampling instructions.
- Exhibit P – 5th Liter sample results letter.
- Exhibit Q – Letter provided if customer refuses replacement.

In addition to the above communication materials, Aqua has developed letters to be distributed as required by EPA regulations when they take effect:

- Exhibit R – Public education materials when elevated lead levels are found in a system.
- Exhibit S – Notification of individual tap results from lead tap monitoring.
- Exhibit T – Notification of known service line containing lead.
- Exhibit U – Notification of known service line that is GRR.
- Exhibit V – Notification of a lead status unknown service line.
- Exhibit W – Notification of a disturbance to a lead, GRR, or lead status unknown service line that results in the service line being shut off or bypassed.
- Exhibit X – Notification of a disturbance to a lead, GRR, or lead status unknown service line from the replacement of an inline water meter, a water meter setter, or gooseneck, pigtail, or connector.
- Exhibit Y – Press release regarding action level exceedance.

2. Aqua's Website

The Company currently has developed a section of its website that houses information related to Lead and its LSLR Program.

https://www.aquawater.com/about-water/water-quality/lead.php

Aqua's website provides information on sources of lead, the health effects of lead, the Company's compliance with lead requirements, how customers can protect against lead exposure, and a help line for customers requiring assistance in determining their service line material. The website also includes information on Aqua's LSLR Program including the status of current efforts to replace LSLs, a video on how customer/property owner can review their service line material and report it to Aqua through an online form, flushing instructions post-replacement, a video showing how to take a sample with the sample bottles provided by Aqua, and reimbursement requirements.

The Company is currently developing an online tool to show the replacement schedule by geographical location, six months into the future. This tool will be completed in accordance with the timeline set forth in the Commission's regulations.

This same online tool will be able to be used by customers/property owners to determine if they are within the required radius of a project and within the required time of the commencement of a project, thereby allowing them to determine their eligibility for reimbursement. The online tool will also show the material type of the service line, if known. The Company's website currently provides an online form a customer can fill out regarding their service line material with the ability to attach pictures.

The Company has identified project phases that will be completed in specified segments of time to implement the online tool. The first project phase will entail the development of the required functions in the tool which will allow customers/property owners to fulfill the needs indicated above. This project phase has an anticipated completion in the fourth quarter of 2023. The second project phase, occurring in early 2024, will entail user acceptance testing. In this phase, the Company will confirm that the developed tool meets all criteria and provided capabilities set forth in the regulations. This phase has an anticipated completion in the first quarter of 2024. In the third project phase, the Company will complete the deployment of the tool to its customers/property owners. The tool will be made accessible on the Company's website and future customer portal to allow customers/property owners to seamlessly confirm if they meet the criteria specified above. The anticipated completion of this phase will be the second quarter of 2024.

III. CONCLUSION

The Company will continue to develop its Service Line Inventory and replace COLSLs in accordance with this LSLR Plan and work toward the goal of removing all LSLs from its system. The Company's LSLR Plan will be updated as needed.

EXHIBIT A

Pre-Investigative Letters

[DATE]

«Property_Owners»
«Address_1»
«Address_2»

RE: Property at «Service_Address»

Dear Customer,

Aqua Pennsylvania is completing a service line material inventory as required by the United States Environmental Protection Agency (USEPA), the Pennsylvania Department of Environmental Protection (PADEP), and the Pennsylvania Public Utility Commission (PAPUC). We have two options available for you to identify your service line material. The first option is self-reporting that involves either filling out a survey (enclosed) that can be mailed back to us, or using the QR Code provided on the survey to upload your survey responses. The second option is to schedule an appointment to have your water service line inspected to determine its material of construction, and more specifically, to determine if you have a lead or galvanized service line. To complete this study in a timely manner, Aqua has hired a contractor, [CONTRACTOR]. If you select the second option, [CONTRACTOR] will have an inspector visit your home to collect information regarding service line material.

The presence of a lead or galvanized water service line does not mean that drinking water in your home is contaminated with lead; however, removal of the lead or galvanized service line eliminates any future possibility of lead entering your water supply from the water service line. You can learn more about lead in drinking water and steps you can take to minimize exposure by calling the Safe Drinking Water Hotline at (800) 426-4791, or by visiting the EPA website at https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water.

If our inspection reveals that you have a lead or galvanized service line, **Aqua will replace**, **AT NO DIRECT COST TO YOU**, **any part of your service line that is constructed of lead or galvanized pipe. The service line extends from the water main in the street to your water meter.** Aqua will install the new service line and you will own and maintain the new service line as a part of your property. We will provide you with additional service line replacement information if we identify that your service line is lead or galvanized.

If you prefer to have your service line inspected in person, please call the **[PHONE NUMBER]** between the hours of 8am-5pm to schedule an appointment. Appointments will be available on select weekdays, evenings and Saturdays. Please state that you are calling to have your water line inspected for lead or galvanized pipe. We thank you in advance for your support for this important initiative.

Sincerely,

Michael Fili, Vice President
Capital Planning, Design & Construction
Aqua Pennsylvania

[DATE]

****FINAL ATTEMPT TO REACH YOU BEFORE FURTHER ACTION TAKEN****

Dear Customer,

Aqua Pennsylvania (Aqua or the Company), through its contractor, [CONTRACTOR], has attempted to reach you on multiple occasions regarding a significant project that is under way in your area. Aqua requires that you identify your service line material or permit [CONTRACTOR] to access to the Company's meter at your property.

As required by the United States Environmental Protection Agency (USEPA), the Pennsylvania Department of Environmental Protection (PADEP), and the Pennsylvania Public Utility Commission (PAPUC), Aqua is completing a service line material inventory. We have two options available for you to identify your service line material. The first option is self-reporting that involves either filling out a survey (enclosed) that can be mailed back to us, or using the QR Code provided on the survey to upload your survey responses. The second option is to schedule an appointment to have your water service line inspected to determine its material of construction, and more specifically, to determine if you have a lead or galvanized service line. If you select the second option, [CONTRACTOR] will have an inspector visit your home to collect information regarding service line material. Failure to select one of these methods may result in further action taken by Aqua to obtain the required information, including requiring you to permit access to the Company's meter at your property and potential termination of service for failure to provide access.

The presence of a lead or galvanized water service line does not mean that drinking water in your home is contaminated with lead; however, removal of the lead or galvanized service line eliminates any future possibility of lead entering your water supply from the water service line. You can learn more about lead in drinking water and steps you can take to minimize exposure by calling the Safe Drinking Water Hotline at (800) 426-4791, or by visiting the EPA website at https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water.

If our inspection reveals that you have a lead or galvanized service line, **Aqua will replace**, **AT NO DIRECT COST TO YOU**, **any part of your service line that is constructed of lead or galvanized pipe. The service line extends from the water main in the street to your water meter.** Aqua owns the portion of the service line from the main in the street to the curb stop or edge of right of way (Aqua Service Line). You own the portion of the service line from the curb stop or edge of right of way through your property and into your structure (Customer Service Line). Aqua will install the new service line and dedicate back to you the Customer Service Line and you will own and maintain the new Customer Service Line as a part of your property. We will provide you with additional service line replacement information if we identify that your service line is lead or galvanized.

If you prefer to have your service line inspected in person, please call the **[PHONE NUMBER]** between the hours of 8am-6pm to schedule an appointment. Please state that you are calling to have your water line inspected for lead or galvanized pipe. It is important that we hear from you soon. We thank you in advance for your support for this important initiative.

Sincerely,

Michael Fili, Vice President Capital Planning, Design & Construction

EXHIBIT B

Customer Surveys

Customer Lead and Copper Survey

To comply with Pennsylvania Public Utility Commission (PAPUC), Pennsylvania Department of Environmental Protection (PADEP) and Environmental Protection Agency (EPA) regulations, Aqua is compiling a database of the materials used in our customer's service lines. Please take a few minutes to complete this survey. If you have questions or would like assistance, please call [PHONE NUMBER] between the hours of 8am-5pm to schedule an appointment. Please state that you are calling about the Aqua [SPECIFIC DIVISION] Water Survey.

To save time we provide a QR Code to complete this survey online:

(If you choose to complete this online, you may recycle these materials.)

Name of person filling out the survey: _____

Phone number should we have questions: _____

1. Home Address: _____
2. Year home built: _____
3. If known, what type of material is the service line coming into your home? Please provide a picture for verification via email to [EMAIL ADDRESS] or mail back with this survey. See included pipe identification instructions.

   _____Lead _____Copper _____Plastic or PVC or PEX _____Galvanized

***If other or unknown please CALL [PHONE NUMBER] to verify.**

Water Pipe and Service Line Material Identification

	Lead	Galvanized Iron	Copper
Outer Appearance	Dull gray, bendable; Often curves between wall/floor and valve	Dark gray or black; Straight rigid pipe	Brown; Can have green corrosion spots
Threads at connections	None	Yes	None
Scratch Test (coin or key)	Shiny silver	Hard to scratch, remains gray	Copper, like a penny
Magnet Test	Does not stick	Magnet WILL stick	Does not stick

Please return completed survey in the enclosed self-address envelope to [ADDRESS]

How to Identify Water Service Line and Water Pipe Materials in Your Home

Water Service Line and Pipe Material Identification Instructions

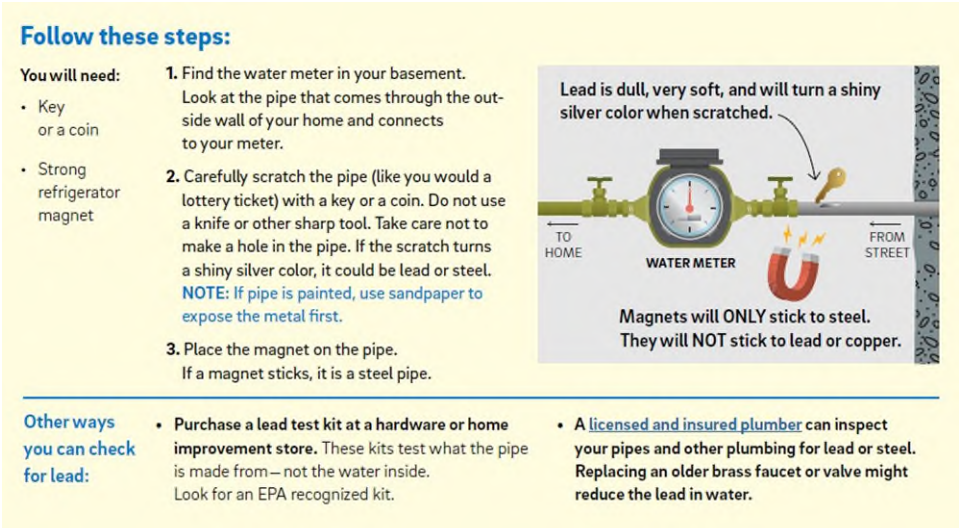
Step 1

Locate the water service line entering your home which is usually located in the basement or a crawlspace. The service line is typically just before the whole-house shut-off valve which should be near where the water service enters the home.

Step 2

Use the identification sheet below to help identify your service line material (copper, lead, galvanized or plastic pipe).

- **Lead** – pipe is NOT threaded, it is soft, easily scraped, dull silver-gray in color, and a magnet does NOT stick to the pipe. Use flat edge of a screwdriver (or similar tool) to scrape the pipe. If the scraped area is shiny and silver, the line is lead.
- **Copper** – the color of a penny and not threaded
- **Galvanized** – pipe is threaded, dull silver-gray in color, and magnet will typically stick to the pipe
- **Plastic** – white, blue, or black rigid plastic pipe



Thank you for taking time out of your busy schedule to complete and return this survey. The data collected will help us to provide an accurate inventory of water service line materials in your community to eliminate lead from service lines.

Please return completed survey in the enclosed self-address envelope
to [ADDRESS]

EXHIBIT C

Construction and Maintenance Activities
Discover Lead Line Form

AQUA℠

An Essential Utilities Company

Premises No.: _____ Tap Serial No.: _____ Date: _____

Address: _____

Prepared by: _____

PWSID: _____ PWS Name: _____

¡Favor de no consumir el agua sin antes comunicarse con nuestro Departament de Servicio al Cliente al **877.987.2782!**

An Important Health Notice From Aqua

PLEASE READ THIS BEFORE USING YOUR WATER!

During our maintenance/construction activities today, Aqua encountered:

- ☐ An Aqua-owned lead service line
- ☐ An Aqua-owned galvanized service line

that provides water from our water main to the curb stop.

Please note that:

- ☐ It has been replaced today.
- ☐ It will be replaced by: _____

The customer-owned service line that provides water from the curb stop into your house is constructed of:

_____

We encourage you to review the flushing instructions below and the information about lead on the back of this form. We will:

1. contact you to arrange for tap water sampling and
2. provide you with a pitcher filter to protect you from lead.

In the meantime, please call us if you would like additional information at 877.987.2782.

Please review and follow these very important **instructions*** to minimize your exposure to metals, such as lead, which might have been stirred up due to the customer-owned service line replacement work. Please flush all your faucets using these steps:

1.  **If possible, remove faucet aerators from all water faucets in the home.**
2. **Beginning in the lowest level of the home, fully open the cold water faucets throughout the home.**
3. **Let the water run for at least 30 minutes at the last faucet you opened (which was on your top floor).**
4. **Turn off each faucet starting with the faucets in the highest level of the home. Be sure to run water in bathtubs and showers as well as faucets.**
5. **Clean and reinstall any aerators you might have removed in Step 1.**
6. **Do not consume tap water, open hot water faucets, or use icemaker or filtered water dispenser until after flushing is complete.**

**Based on the American Water Works Association-recommended safety procedures (awwa.org).*

You might also wish to use a NSF-approved home filter for water to be used for drinking and cooking, particularly if you are pregnant or have children under age six. Go to NSF.org for more information.

Please see the other side of this notice for more information on lead. Thank you for letting Aqua serve you! For questions or concerns, please contact Aqua customer service at **877.987.2782**.

More helpful information on the back

PA-0723

AQUA℠

An Essential Utilities Company

Premises No.: _____ Tap Serial No.: _____ Date: _____

Address: _____

Prepared by: _____

PWSID: _____ PWS Name: _____

¡Favor de no consumir el agua sin antes comunicarse con nuestro Departament de Servicio al Cliente al **877.987.2782!**

An Important Health Notice From Aqua

PLEASE READ THIS BEFORE USING YOUR WATER!

During our maintenance/construction activities today, Aqua encountered:

- ☐ An Aqua-owned lead service line
- ☐ An Aqua-owned galvanized service line

that provides water from our water main to the curb stop.

Please note that:

- ☐ It has been replaced today.
- ☐ It will be replaced by: _____

The customer-owned service line that provides water from the curb stop into your house is constructed of:

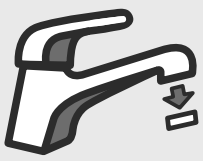
_____

We encourage you to review the flushing instructions below and the information about lead on the back of this form. We will:

1. contact you to arrange for tap water sampling and
2. provide you with a pitcher filter to protect you from lead.

In the meantime, please call us if you would like additional information at 877.987.2782.

Please review and follow these very important **instructions*** to minimize your exposure to metals, such as lead, which might have been stirred up due to the customer-owned service line replacement work. Please flush all your faucets using these steps:

1.  **If possible, remove faucet aerators from all water faucets in the home.**
2. **Beginning in the lowest level of the home, fully open the cold water faucets throughout the home.**
3. **Let the water run for at least 30 minutes at the last faucet you opened (which was on your top floor).**
4. **Turn off each faucet starting with the faucets in the highest level of the home. Be sure to run water in bathtubs and showers as well as faucets.**
5. **Clean and reinstall any aerators you might have removed in Step 1.**
6. **Do not consume tap water, open hot water faucets, or use icemaker or filtered water dispenser until after flushing is complete.**

**Based on the American Water Works Association-recommended safety procedures (awwa.org).*

You might also wish to use a NSF-approved home filter for water to be used for drinking and cooking, particularly if you are pregnant or have children under age six. Go to NSF.org for more information.

Please see the other side of this notice for more information on lead. Thank you for letting Aqua serve you! For questions or concerns, please contact Aqua customer service at **877.987.2782**.

More helpful information on the back

PA-0723

Information About Lead and Drinking Water

AQUA℠
An Essential Utilities Company

How does lead get into drinking water?

Lead is not typically found in the streams, reservoirs or wells that serve as our water supplies. The main water lines that carry water from treatment plants to customers don't contribute to lead. The main source of lead in drinking water is from lead service lines (the pipelines that deliver water from the water mains in the street to homes) and from household plumbing that contains lead.

Before the use of copper for water pipes, lead was once a material of choice. Before 1986, lead was also a key component of the solder used by plumbers when installing home plumbing. Lead is even found in brass and bronze plumbing fixtures. The chemical properties of water can cause lead and other metals to leach into the water. Water utilities, including Aqua, treat drinking water to reduce the chance for metals to leach into the water.

Customers who have, or think they might have, lead service lines are strongly encouraged to replace their service lines. If customers choose to replace their household plumbing, they should use certified lead-free solder and fixtures.

How Aqua protects its customers:

Aqua conducts required testing for drinking water contaminants, including lead and copper, to ensure compliance with state and federal drinking water standards. Aqua also tests for lead in high-risk sample homes to comply with the U.S. Environmental Protection Agency's (EPA) lead and copper rule. According to the EPA, sampling locations must be selected based on priority tied to possible lead exposure. Aqua also works with individual customers who request lead information for their home. Test results, including those for lead and copper, are summarized in our annual water quality reports, which are produced for every water system we own and operate. You can find your community's water quality report on AquaAmerica.com.

Changes in water sources are not common. However, if we ever need to use a new water source, Aqua works with state environmental regulators to perform an early evaluation of the new source to anticipate water quality concerns and identify potential treatment needs.

Once a new water source is approved, Aqua further verifies the acceptability of water quality by conducting testing at approved high-risk homes for a sustained period of time to ensure water quality.

Health effects of lead:

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys and can interfere with the production of red blood cells that carry oxygen to all parts of your body. **The greatest risk of lead exposure is to infants, young children and pregnant women.** Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

If your home's water shows elevated levels of lead, or if you are concerned about the potential of lead in your water, here are ways you can minimize exposure.

- **Run your tap to flush out lead.** If your water hasn't been used for several hours, run water for at least15 to 30 seconds or until it becomes cold or reaches a steady temperature before using it for drinking or cooking.
- **Use cold water to cook and prepare baby formula. Don't boil water to reduce lead.** Lead dissolves more easily into hot water. Boiling water won't reduce lead.
- If you buy a water filter, make sure it's approved to reduce lead. You can contact NSF International at 800.NSF.8010 or NSF.org.
- If you are concerned about exposure, contact your local health department or healthcare provider to find out how you can get your child tested for lead. Call Aqua at 877.987.2782 for information about testing your water for lead.
- Brass faucets, fittings and valves – even those advertised as lead free – might contribute lead to drinking water. The law allows end-use fixtures,such as faucets, with wetted surfaces containing a maximum weighted average of 0.25 percent lead to be labeled as lead free. Visit NSF International at NSF.org to learn more.

For more information on reducing lead exposure in your home and the health effects of lead, visit the EPA at EPA.gov/lead or contact your healthcare provider.

EXHIBIT D

Door Hanger

IMPORTANT NOTICE

AQUA℠

An Essential Utilities Company

We're sorry...we missed you!

A company representative was at your property today.

Date:_____Time:_____

The purpose(s) of our visit was to:

- ❑ Gain Access to Conduct Service Line Inspection
- ❑ Other/Comments:_____
  _____
  _____

* If unable to provide access for service line inspection, please fill out the survey provided via mail and/or QR code. If a survey was not received please contact the ERM Call Center via the information provided below.

Please Contact Us

ERM Call Center: (610) 679-9058

AQUA℠

An Essential Utilities Company

PA-LSL 05/23

EXHIBIT E

10 Day Shutoff Notice

10-Day Shut Off Notice

DATE NOTICE ISSUED:

Name: _____

Service Address: _____

Premise No. _____

In order for Aqua Pennsylvania, Inc. to continue supplying water service to your residence/business, you need to take immediate action. If the information ***marked*** below is not provided within the next 10 days, we will shut off the water service at the above address on or after 8:00 A.M. on _____ **Aqua may act on this notice for up to 60 days.**

THIS ACTION WILL BE TAKEN FOR THE FOLLOWING REASON:

1. Your Bill For $ _____ is Overdue. Call 1.877.987.2782 (and choose Collections).

2. Meter Operations:

- ❑ ACT 120 Lead Service Line Inspection or Replacement. Call 610.645.4272 to speak with Water Quality.
- ❑ Inactive Account - Apply for Water Service
- ❑ Meter Equipment Inspection
- ❑ Exchange or Install Meter
- ❑ Meter Space Does Not Meet Aqua PA Specifications
- ❑ Customer side leak, property owner responsibility. Call 1.877.987.2782 to update repair status.

Other: _____ Call 1.877.WTR.AQUA or 1.877.987.2782.

3. Backflow Prevention:

- ❑ Failure to Test Backflow Device
- ❑ Failure to Install Backflow Device
- ❑ SEPA 610.541.4179 or backflow@aquawater.com
- ❑ GPA 1.877.987.2782 or gpabackflow@aquawater.com

TO STOP THE SHUT OFF, YOU MUST DO THE FOLLOWING AT ONCE:

- Pay the total amount due or call 1.877.WTR.AQUA or 1.877.987.2782 (and choose Collections) to: request a payment arrangement, let us know that you made the payment, or dispute the overdue bill. If we shut off your water, you may have to pay the following charges to have your water turned back on: Overdue Amount $_____ ; Turn-On Charge $ _____ ; **Payments will not be accepted by our representative. It must be paid at an authorized payment location** (call Aqua for the nearest payment location's address)
- Allow access by an Authorized Aqua Service Representative for inspection, installation or replacement of the existing meter equipment at the property. Call 1.877.987.2782 to schedule an appointment.
- Call 1.877.WTR.AQUA or 1.877.987.2782 (and choose Collections) if you or someone in your home has a serious illness or a medical condition. Read the Medical Emergency Notice shown (on the back).
- Comunicarse con Aqua al 877.987.2782 (elija "Bobranzas" - "Collectiones" en inglés para hacernos saber que realizó el, pago, o para disputar el balance altrasado. También puede communicarse con Aqua a la dirección que aparece arriba.
- Attencion! Este es en mensaje muy importante. Si usted no lo entiende, favor de llama a 877.987.2782.

If you have any questions or need more information, please call us, 877.987.2782. If you are not satisfied after you talk to us, you may file a complaint with the Public Utility Commission by calling 1.800.692.7380 toll free, or by writing to P.O. Box 3265 Harrisburg, PA 17105-3265. The Public Utility Commission will delay the shut off if you file a complaint before the shut off date.

AQUA℠

An Essential Utilities Company

762 W. Lancaster Avenue
Bryn Mawr, PA 19010-3489

IMPORTANT TO KNOW - BEFORE WE SHUT OFF YOUR UTILITY SERVICE

- **If we shut off your service during the winter months (between Dec. 1 – Mar. 31)** we will restore your service within 24 hours of your meeting all requirements/conditions to have service reconnected. Where street digging is required it may take up to 7 days.
- If you are a victim of domestic violence and have a Protection From Abuse Order (PFA) or other court order that shows clear evidence of domestic violence, there are special protections available. **Call us immediately at 877.987.2782.** (You will be required to provide us with a copy of the order.)
- You may be eligible for a payment agreement or special assistance programs. **Call 877.987.2782 right away** to provide us with household income and occupant information. Documentation of your income may be required, such as pay stubs or tax documents.
- If your landlord pays your utility bill: You have certain legal protections. Please call us at 877.987.2782.
- If you have trouble understanding or speaking English or have a disability please call us at 877.987.2782 for free interpretation.
- If your service is shut off, you may be required to pay more than the amount listed on the front of this notice to have your service turned back on. You may have to pay any additional bills that have become past due.
- All adult occupants of the premise whose name appears on the mortgage, deed, or lease are considered "customers" and are responsible for payment of this bill.
- If service is shut off, ANY adult occupant who has been living at the premise may have to pay all or portions of this bill to have service restored.
- If your service is shut off, you must contact us after your payment has been made to be sure you have met all conditions to have the service turned back on and to arrange access to your premise.
- After all conditions have been met to have the service turned back on, it may take up to 7 days to have your service restored. Please contact us to discuss the details.
- If you need water to heat your property, please contact Aqua immediately at 877.987.2782 (and choose Collections) so we can arrange a service visit to verify that need. The company will act in accordance with the public utility laws with respect to water service shut offs.

MEDICAL EMERGENCY NOTICE

Let us know if someone living in your home is seriously ill or has a medical condition.
WE WILL NOT SHUT OFF YOUR SERVICE provided you:

A. Provide a medical certification by a licensed physician, nurse practitioner or physician's assistant.
Medical certifications must be in writing and signed by your physician, nurse practitioner or physician's assistant by fax, email or mail within three days.

AND

B. Make some equitable arrangements to pay your current bills for service.

Call **Aqua at 877.987.2782** to let us know about your medical emergency.

FAX: 610.520.2168 or **toll-free at 866.780.8301**

ATTN: Collections Department
Aqua Pennsylvania, Inc.
762 W. Lancaster Avenue
Bryn Mawr, PA 19010

EXHIBIT F

Customer Agreement

Customer Lead/Galvanized Service Line Replacement License Agreement

LICENSE AGREEMENT TO REPLACE THE CUSTOMER OWNED LEAD/GALVANIZED SERVICE LINE

The undersigned customer(s) or property owner(s) (the "Customer"), through this License Agreement, grants Aqua Pennsylvania, Inc. ("Aqua" or the "Company") and its contractors and/or subcontractors a license to enter upon the Customer's property at the service address set forth below (the "Property") for the purpose of replacing the Customer-owned lead or galvanized service line with a new Customer-side service line and connecting the new Customer-side service line to the Company's facilities, at no direct cost to the Customer.

Service Address:_____

City:_____State:_____Zip:_____

The Customer represents that the Customer is the sole legal owner of the Property and has sole authority to agree to this License Agreement. The term of this License Agreement shall be twelve (12) months following the date this License Agreement is countersigned by the Company.

The Company owns the Company-side service line from the Company's water main to the curb stop, meter pit, or valve (as applicable) at or near the Customer's property line. The Company, in its sole discretion has determined the location of the Company-side service line. The Company-side service line will be owned and maintained by the Company.

The Company or the Company's contractor and/or subcontractor shall replace the Customer-owned lead or galvanized service line with a new service line of size and material determined by the Company. The Customer-owned lead or galvanized service line will be abandoned in place. The Company shall connect the new Customer-side service line to the Company's connecting facilities and the Customer's premises. It may be necessary for the Company or Company's contractor to gain entry into the Customer's premises to make the connection at the meter with the new Customer-side service line. The ownership of the new Customer-side service line will be dedicated to the Customer at the completion of the replacement. Ownership and maintenance responsibilities of the new Customer-side service line will remain with the Customer.

Following the replacement of the Customer-side service line, the Company will restore the Customer's Property as reasonably as practicable to the condition prior to the commencement of the replacement under this Licenese Agreement. The Company warrants the workmanship and materials of the installation of the new Customer-side service line and restoration of surfaces for a period of two (2) years from the date the replacement is completed. The date the replacement is completed is the date water service is re-established to the Property.

The maximum coverage under the warranty on the workmanship and materials is limited to repairing or replacing the Customer-side service line if the failure was due to the workmanship and materials of the replacement, and restoration of surfaces which shall mean restoration as reasonably as practicable to the condition that existed prior to the replacement under this License Agreement. The Company shall not be liable for any damages beyond the maximum coverage of the two year warranty as described in this License Agreement. Should any repair be necessary under this warranty, the Customer grants Aqua and its contractors and/or subcontractors license to enter upon the Customer's Property to complete the repairs.

In consideration of the Company performing the Customer-side service line replacement at no direct cost to the Customer and receiving the associated warranty on workmanship and materials and restoration of surfaces as set forth above, the Customer agrees to indemnify, release and hold harmless the Company and its affiliates, agents, and contractors and/or subcontractors from and against all claims, liabilities, and costs arising from acts and omissions of the Company and/or its contractors and/or subcontractors in replacing and installing the new Customer-side service line that are outside of the associated warranty on workmanship and materials and restoration of surfaces. The Customer specifically agrees to accept dedication of the newly installed Customer-owned portion of the service line upon completion of its installation.

PLEASE RETURN A SIGNED COPY OF THIS LICENSE AGREEMENT IN THE PRE-ADDRESSED, POSTAGE PAID, ENVELOPE TO:

Aqua Pennsylvania, Inc.
762 W. Lancaster Ave.
Bryn Mawr, PA 19010
Attention: Water Quality Department

Contract No.

CUSTOMER	AQUA PENNSYLVANIA, INC.
Signature: _____	Signature: _____
Printed Name: _____	Printed Name: _____
Date: _____	Title: _____
Phone: _____	Date: _____

EXHIBIT G

Customer Letter – Lead Material Identified

Date

Address

Dear Aqua Customer,

Aqua Pennsylvania is implementing a lead line replacement program. Our records show that the service line at the above address is, or may be, comprised of lead.

The water service line serving your property includes a section of pipe from the water main to the curb (curb stop) that is "company-owned." There is a second section of pipe extending from the curb stop to your home that is "customer-owned." It is the property owner's responsibility to maintain the customer-owned service line.

Aqua can replace, **AT NO DIRECT COST TO YOU**, **your customer-owned service line from the curb line to the connection with the water meter inside your building/house**. Our contractor will excavate/tunnel from the water main to your building/house and enter your building/house to disconnect the lead service line and connect the new one. The new customer-owned service line will then be turned over to you to own and maintain as a part of your property.

To move forward with this program, please call 610.645.4272. Please leave a message that you would like your lead service line replaced with your name, address, and phone number. Someone will call you back by the next business day.

Please note that refusal to replace the lead service line may result in termination of water service to the property.

We thank you in advance for your support of this program.

Sincerely,

Ann Dreyer
Supervisor, Water Quality Services

Attachments: Lead Fact Sheet

AQUA℠

An Essential Utilities Company

Aqua Wants Our Customers to Be Informed*

Here's what you should know about lead and drinking water.

Lead is not typically found in the streams, reservoirs or wells that serve as water supplies or in the main water lines that carry water from treatment plants to homes. Yet, the chemical properties of water can cause lead and other metals to leach into drinking water. The main source of lead in drinking water is from lead service lines (the pipes that deliver water from water mains in the street and into homes) and from typical household plumbing (lead solder and brass fixtures) that contains lead. Households that have, or suspect having, lead service lines or lead in their household plumbing are strongly encouraged to replace them. The use of lead in solder was prohibited after 1986, so buildings constructed after then should not have contained lead in the solder.

How Aqua protects its customers:

Water utilities, including Aqua, treat drinking water to reduce the chance for metals to leach into the water. Aqua conducts required testing for drinking water contaminants, including lead and copper, to ensure compliance with state and federal drinking water standards. Aqua tests the water at our treatment plants, and also schedules customer tap sampling and tests for lead in potential high-risk areas, to comply with the U.S. Environmental Protection Agency's (EPA) lead and copper rule.

You can always view your community's test results. They are summarized in our annual water quality reports, which are produced for every water system we own and operate.

Lead Service Line Replacement Program:

Aqua can now assist customers with replacing the customer/property owner's portion of the service line if it is made of lead. Aqua's new program will allow us to work with customers, either during a main replacement project or by customer request, to replace the customer/property owner's portion of the service line if it is lead and dedicate the service line back to the customer/property owner at no direct cost to the customer/property owner.

Visit our website at https://www.aquaamerica.com/our-states/pennsylvania/leadservicelines.aspx for more information.

Call us at 877.987.2782 for more information.

You can find your community's water quality report at AquaAmerica.com.

More helpful information on the back

If you are a residential customer:

You should know that there are parts of the service line bringing water to your home that are Aqua's property (the pipe that goes from our water main in the street to your curb) and parts of the service line that are the property owner's (the pipe that goes from your curb to your home). When we encounter lead service lines during our maintenance and construction activities, we will seek to identify the material type of both portions (Aqua's and the property owner's) of the service line. If we find lead on Aqua's side only, Aqua will replace its portion of the service line. If we find lead on the customer/property owner's side, we will work with you to replace the customer/property owner portion.

If you have concerns regarding your internal plumbing, we recommend that you have a licensed plumber check the pipes that are your property. This is important to know, because household plumbing can also be a source of lead in tap water. See the section below on "what you can do" for minimizing your risk if this happens.

Aqua suggests that you call us at 877.987.2782 for more information. We'll quickly put you in touch with one of our water quality experts.

If you are a school or day care center:

You should know that the EPA has established more stringent sampling procedures for schools and day care centers. Because children often drink from fountains and faucets at school without flushing the water first, and because they are at higher risk of health effects due to exposure, for their protection, sampling is done differently at schools and day care centers.

Aqua suggests that you call the EPA's safe drinking water hotline at 800.426.4791 or email them using this URL: https://www.epa.gov/lead/forms/lead-hotline-national-lead-information-center. Specific information regarding schools can be found on EPA's website at https://www.epa.gov/ground-water-and-drinking-water/3ts-reducing-lead-drinking-water. It's important for any testing you do to be conducted using EPA protocols, so that the results are meaningful.

The health effects of lead:

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys and can interfere with the production of red blood cells that carry oxygen to all parts of the body. The greatest risk of lead exposure is to infants, young children and pregnant women.

If you are concerned about lead exposure:

- Contact your local health department or healthcare provider to find out how you can get your child tested for lead.
- Visit the EPA at EPA.gov/lead for more information on the health effects of lead or reducing lead exposure in your home.
- Call Aqua at 877.987.2782 for information about testing your water.

What you can do:

If your home's water shows elevated levels of lead, or if you are concerned about the potential of lead in your water, below are ways you can minimize your exposure.

- **Run your tap to flush out lead.** If your water hasn't been used for several hours, run your water for a few minutes or until it becomes cold or reaches a steady temperature before drinking or cooking.
- **Use cold water to cook or prepare baby formula.** Don't boil water to reduce lead. Lead dissolves more easily into hot water and boiling will concentrate the lead. Boiling water won't reduce lead.
- If you buy a water filter for lead removal, make sure it's approved to reduce lead. Contact NSF International, www.NSF.org.

*This information sheet contains regulatorily required or recommended language and nothing herein is intended as, nor should be construed as, a promise of or contract for payment or reimbursement of expenses incurred for any action you take on account of this information sheet.

EXHIBIT H

Lead Fact Sheet

AQUA℠

An Essential Utilities Company

Aqua Wants Our Customers to Be Informed*

Here's what you should know about lead and drinking water.

Lead is not typically found in the streams, reservoirs or wells that serve as water supplies or in the main water lines that carry water from treatment plants to homes. Yet, the chemical properties of water can cause lead and other metals to leach into drinking water. The main source of lead in drinking water is from lead service lines (the pipes that deliver water from water mains in the street and into homes) and from typical household plumbing (lead solder and brass fixtures) that contains lead. Households that have, or suspect having, lead service lines or lead in their household plumbing are strongly encouraged to replace them. The use of lead in solder was prohibited after 1986, so buildings constructed after then should not have contained lead in the solder.

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Water utilities, including Aqua, treat drinking water to reduce the chance for metals to leach into the water. Aqua conducts required testing for drinking water contaminants, including lead and copper, to ensure compliance with state and federal drinking water standards. Aqua tests the water at our treatment plants, and also schedules customer tap sampling and tests for lead in potential high-risk areas, to comply with the U.S. Environmental Protection Agency's (EPA) lead and copper rule.

You can always view your community's test results. They are summarized in our annual water quality reports, which are produced for every water system we own and operate.

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Visit our website at https://www.aquaamerica.com/our-states/pennsylvania/leadservicelines.aspx for more information.

Call us at 877.987.2782 for more information.

You can find your community's water quality report at AquaAmerica.com.

More helpful information on the back

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You should know that there are parts of the service line bringing water to your home that are Aqua's property (the pipe that goes from our water main in the street to your curb) and parts of the service line that are the property owner's (the pipe that goes from your curb to your home). When we encounter lead service lines during our maintenance and construction activities, we will seek to identify the material type of both portions (Aqua's and the property owner's) of the service line. If we find lead on Aqua's side only, Aqua will replace its portion of the service line. If we find lead on the customer/property owner's side, we will work with you to replace the customer/property owner portion.

If you have concerns regarding your internal plumbing, we recommend that you have a licensed plumber check the pipes that are your property. This is important to know, because household plumbing can also be a source of lead in tap water. See the section below on "what you can do" for minimizing your risk if this happens.

Aqua suggests that you call us at 877.987.2782 for more information. We'll quickly put you in touch with one of our water quality experts.

If you are a school or day care center:

You should know that the EPA has established more stringent sampling procedures for schools and day care centers. Because children often drink from fountains and faucets at school without flushing the water first, and because they are at higher risk of health effects due to exposure, for their protection, sampling is done differently at schools and day care centers.

Aqua suggests that you call the EPA's safe drinking water hotline at 800.426.4791 or email them using this URL: https://www.epa.gov/lead/forms/lead-hotline-national-lead-information-center. Specific information regarding schools can be found on EPA's website at https://www.epa.gov/ground-water-and-drinking-water/3ts-reducing-lead-drinking-water. It's important for any testing you do to be conducted using EPA protocols, so that the results are meaningful.

The health effects of lead:

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys and can interfere with the production of red blood cells that carry oxygen to all parts of the body. The greatest risk of lead exposure is to infants, young children and pregnant women.

If you are concerned about lead exposure:

- Contact your local health department or healthcare provider to find out how you can get your child tested for lead.
- Visit the EPA at EPA.gov/lead for more information on the health effects of lead or reducing lead exposure in your home.
- Call Aqua at 877.987.2782 for information about testing your water.

What you can do:

If your home's water shows elevated levels of lead, or if you are concerned about the potential of lead in your water, below are ways you can minimize your exposure.

- **Run your tap to flush out lead.** If your water hasn't been used for several hours, run your water for a few minutes or until it becomes cold or reaches a steady temperature before drinking or cooking.
- **Use cold water to cook or prepare baby formula.** Don't boil water to reduce lead. Lead dissolves more easily into hot water and boiling will concentrate the lead. Boiling water won't reduce lead.
- If you buy a water filter for lead removal, make sure it's approved to reduce lead. Contact NSF International, www.NSF.org.

*This information sheet contains regulatorily required or recommended language and nothing herein is intended as, nor should be construed as, a promise of or contract for payment or reimbursement of expenses incurred for any action you take on account of this information sheet.

EXHIBIT I

Lead Service Line Replacement Program
Information Sheet

Customer Lead Service Line Replacement Program Information Sheet

BACKGROUND – AQUA CUSTOMER LEAD SERVICE LINE REPLACEMENT PROGRAM

Lead is a naturally occurring metal that can cause a variety of adverse health effects. While the most common sources of lead exposure are soil, paint chips and dust, drinking water is another route of lead exposure, primarily as a result of corrosion of lead pipes and plumbing materials. The Pennsylvania General Assembly determined it is in the public interest for water utilities to assist customers in the replacement of customer-owned lead, or galvanized requiring replacement ("galvanized"), service lines throughout Pennsylvania.

The service line that provides water service to a property is made up of two parts: a Company-owned portion (which connects from the Company's main to the curb line) and a customer-owned portion (which connects from the curb line to a customer's structure). Customers, or property owners if the customer is not the property owner ("Customer") are required to maintain and repair the Customer-owned portion of the service line.

Aqua Pennsylvania, Inc. ("Aqua" or the "Company") now has been granted the authority to assist Customers in replacing the Customer-owned portion of the service line if that service line is identified as lead or galvanized.

CUSTOMER-OWNED LEAD SERVICE LINE REPLACEMENT PROGRAM

Under the Customer Lead Service Line Replacement Program ("Replacement Program"), Aqua will identify customer-owned service lines that are lead or galvanized, enter into an agreement with the Customer to replace the Customer-owned portion of the service line and restore the Customer's property at no direct cost to the customer, dedicate the newly installed customer portion of the service line back to the Customer, and provide a warranty on the work completed to replace the Customer-owned lead or galvanized service line.

Aqua's Replacement Program is made up of two parts: (1) replacements in connection with a main replacement project, and (2) replacements per Customer request not associated with a main replacement project.

Cap on Replacements Per Year

Aqua can perform up to 1,500 customer-owned lead or galvanized service line replacements per year.

Customer Agreement and Replacement

In order for Aqua to complete a replacement, the Customer must enter into an agreement with Aqua to replace the Customer-owned lead or galvanized service line. Aqua cannot replace the Customer portion of a lead or galvanized service line without first entering into an agreement. The agreement provides that the Customer will give access to Aqua, or Aqua's contractor, to complete the

replacement. Following replacement, Aqua, or Aqua's contractor, will restore the property as reasonably as practicable to its former condition prior to the replacement of the Customer-owned lead or galvanized service line.

Dedication of Newly Installed Customer Portion of Service Line and Warranty

After the new Customer-owned portion of the service line is installed, the Customer-owned portion will be dedicated to the Customer and ownership and responsibility for repair and maintenance of the Customer-owned portion of the service line will remain with the Customer as was the case prior to the replacement. A two-year warranty on the workmanship and materials of the installation and the restoration of surfaces shall be provided.

Coordination of Replacements

Aqua will strive to group customer requested replacements within its operating divisions to create efficiencies. However, Aqua may replace a Customer's lead or galvanized service line if projects cannot be grouped together in its discretion.

Sampling and Testing

Prior to the replacement, Aqua will provide water sampling materials to customers that Aqua will collect, test, and provide the results to Customers from those samples. In addition, Aqua will provide a National Sanitation Foundation approved water filter (pitcher or tap filter) and six months of replacement filters.

After a replacement conducted through this program, Aqua will again provide water sampling materials to the property for additional testing.

Reimbursement for Customers that Have Already Replaced a Lead or Galvanized Service Line

As part of Aqua's Replacement Program, Aqua will provide a reimbursement to those Customers that have replaced their Customer-owned lead or galvanized service line within certain time periods subject to certain requirements. Reimbursement will occur for those Customers that provide documentation sufficient, in Aqua's sole discretion, to verify that the Customer replaced the Customer-owned lead or galvanized service line within one year before or after the start of a planned lead service line replacement project main replacement and as long as the Customer is within one mile of the main replacement project or focused replacement area. Customers will be eligible for reimbursement up to 125% of the average cost of Aqua's lead and galvanized replacements. Average cost used to determine reimbursement amounts during a calendar year will be based on Aqua's prior calendar year average costs for lead and galvanized service line replacements. Examples of documentation required by Aqua for a Customer to be eligible for reimbursement include, but are not limited to, detailed estimates from a licensed plumber and paid invoices or statements. A verified statement may also be submitted from the licensed plumber.

Partial Replacements Prohibited

Under the Pennsylvania Public Utility Commission's ("PUC") regulations, Aqua cannot perform a partial replacement of a lead or galvanized service line. If a Customer causes a partial replacement, by replacing the Customer portion of a lead or galvanized service line without notifying Aqua, Aqua is required to terminate service until a full replacement of the lead or galvanized service line can be completed.

In addition, any Customer that refuses to allow Aqua (or its contractor) to replace the lead or galvanized service line, or refuses to employ its own licensed plumber to replace the lead or galvanized service line, will result in termination of service to the property until the entire lead or galvanized service line is replaced.

Aqua may, in its sole discretion, use Step In Rights as described in Aqua's tariff to perform a replacement if the customer or occupier of the property is not the owner, Aqua has attempted to contact the owner with an offer to replace the Customer lead service line and has not received a response, and such replacement is in the public interest to avoid termination of service to a property where the customer is not the owner of the property.

CONCLUSION

Aqua recognizes the importance of removing lead from water systems across Pennsylvania both on Aqua owned and Customer-owned assets. Aqua looks forward to working with Customers to achieve this goal.

EXHIBIT J

Pre- and Post-Replacement Sampling Instructions

Aqua Pennsylvania
Sampling Instructions for Special Lead Analysis

Sample Bottles – Obtain two 1 Liter plastic bottles from Aqua Pennsylvania's Bryn Mawr Lab. These bottles are specifically designed for lead analysis.

Sample Location – A kitchen or bathroom cold-water faucet. The water going to that faucet should not have any treatment, such as a filter or a water softener. If you do have a treatment system, note that on the form below.

Sampling Procedure – A minimum six (6) hour period during which there is no water use throughout the house must be achieved prior to sampling. We recommend that either early mornings or evenings upon returning home are the best sampling times. Be sure to use a kitchen or bathroom cold water tap that has been used for drinking water consumption in the past few weeks. Do not intentionally flush the water line before the start of the 6 hour period.

Sample #1 (Imm): Do not remove the aerator prior to sampling. Place the opened sample bottle below the faucet and open the cold water tap as you would do to fill a glass of water. Fill the sample bottle to the line marked "1000-ml" **without allowing any water to run into the sink** and keep running the water. This sample will be water that has been standing in the fixture and the interior plumbing overnight. Tightly cap the sample bottle and place back in the bag.

Sample #2 (5 Min): Allow the cold water to continue to run for 5 minutes and then take the second sample, filling the second bottle. The sample is meant to reflect water coming in from the water main in the street.

If any plumbing repairs or replacements have been done in the home, especially to the faucet where the sample was collected, within the last three years, please note.

Once the samples have been taken, please call 610.645.4272 Monday through Friday so that a driver can be notified to pick up samples. If you are leaving a message on our voicemail, please leave your name, address, and number where you can be reached. Please put the bottles outside your front door as early as possible (if it is more appropriate to leave somewhere other than front door, please specify that when calling).

Results / Questions - The results from your samples and information about lead will be provided to you as soon as practical but no later than 30 days after the system learns of the tap monitoring results. However, if excessive lead levels are found, immediate notification will be provided within two working days after results are made available. Call 610.645.4272 if you have any questions regarding these instructions.
Thank you for your cooperation.

In order to process the samples, it is important that the resident complete this form and return with bottles

Age of house:_____Do you have a lead service line? Y/N/Don't Know

Do you have a water softener or treatment system? Y/N

Have you had any plumbing repairs or replacement in the last 3 years? Y/N If Yes, Explain:

Sample Location and faucet (i.e. kitchen sink) _____
Water was last used: Time:_____ Date:_____

Sample #1 was collected Time:_____ Date:_____
Sample #2 was collected Time:_____ Date:_____

I have read the above directions and have taken tap samples in accordance with these directions.

_____ Date:_____
Signature

Name: **Phone number:**

Address: **Mailing Address (if different):**

EXHIBIT K

Post-Replacement Flushing Instructions

AQUA℠

An Essential Utilities Company

¡Favor de no consumir el agua sin antes comunicarse con nuestro Departament de Servicio al Cliente al 877.987.2782!

An Important Health Notice From Aqua*

PLEASE READ THIS BEFORE USING YOUR WATER!

As part of Aqua's Customer-Owned Lead Service Line Replacement Program ("Replacement Program"), Aqua, or Aqua's contractor, replaced your customer-owned lead or galvanized service line. Before using your water please follow the flushing instructions below:

Please review and follow these very important **instructions**[1] to minimize your exposure to metals, such as lead, which might have been stirred up due to the service-line replacement work. Please flush all your faucets using these steps:

1.  **If possible, remove faucet aerators from all water faucets in the home.**
2. **Beginning in the lowest level of the home, fully open the cold water faucets throughout the home.**
3. **Let the water run for at least 30 minutes at the last faucet you opened (which was on your top floor).**
4. **Turn off each faucet starting with the faucets in the highest level of the home. Be sure to run water in bathtubs and showers as well as faucets.**
5. **Clean and reinstall any aerators you might have removed in Step 1.**
6. **Do not consume tap water, open hot water faucets, or use icemaker or filtered water dispenser until after flushing is complete.**

1Based on the American Water Works Association-recommended safety procedures (awwa.org).

You might also wish to use a NSF-approved home filter for water to be used for drinking and cooking, particularly if you are pregnant or have children under age six. Go to NSF.org for more information.

Please visit Aqua's website for more information concerning Aqua's Replacement program at https://www.aquawater.com/about-water/water-quality/lead.php. Thank you for letting Aqua serve you! For questions or concerns, please contact Aqua customer service at **877.987.2782.**

**This information sheet contains regulatorily required or recommended language and nothing herein is intended as, nor should be construed as, a promise of or contract for payment or reimbursement of expenses incurred for any action you take on account of this information sheet.*

EXHIBIT L

Pitcher Filter


BRITA
LONGLAST
WATER FILTRATION SYSTEM
Longest-Lasting
Lead-Removing Filter*
BRITA
10
CUP CAPACITY
1 PITCHER / 1 FILTER
REDUCES
99% OF LEAD,
Mercury, Chlorine, Benzene and More
(See back panel for details)
FILTER LASTS
6
months*
120 Gallons


BRITA
LONGLAST
WATER FILTRATION SYSTEM
Small Filter, Big Impact™
GREAT-TASTING WATER WITHOUT THE WASTE™
With Brita LONGLAST,® enjoy 6 months (120 gallons) of cleaner, great-tasting water. Change your filter less often and replace up to 1,800 bottles each year.*
*Standard 16.9 oz. single-use water bottles
GET TO THE GOOD STUFF — WHAT WE FILTER OUT
The Brita® Pacifica Pitcher with LONGLAST® Filter reduces the following impurities that may be in your tap water:
Heavy Metals | Lead, Mercury, Cadmium
Taste and Odor | Chlorine
Particulates | Particulate I
Pharmaceuticals | Estrone, Ibuprofen, Naproxen
Industrial Chemicals | Bisphenol A (BPA), Nonyl Phenol
Industrial Pollutants | Asbestos, Benzene
EASY SETUP
With quick setup, you can start using your Brita® today!
WASH YOUR HANDS BEFORE UNWRAPPING THE FILTER.
DISCARD FIRST 3 PITCHERS OF WATER TO FLUSH OUT SYSTEM.
1 TO INSERT FILTER, LINE UP GROOVE WITH RIDGE IN RESERVOIR. PRESS FIRMLY.
2 ADD COLD TAP WATER.
3 REPLACE FILTER EVERY 120 GALLONS.
See User's Guide for detailed instructions. No presoak or rinse required!
For best results, store the Brita® Pitcher in your refrigerator or out of direct sunlight.
GET MORE WITH BRITA®
Join now to receive custom filter replacement reminders, see the latest news and offers, earn points and claim rewards.
Visit brita.com/register.
ifica Pitcher (model
NGLAST® Filter
has been tested
the WQA against
dards 42, 53 and 401
of the claims
Performance Data Sheet.
FILTER REPLACEMENT IS ESSENTIAL FOR PRODUCT TO PERFORM AS REPRESENTED.
REPLACE FILTER EVERY 120 GALLONS
(ABOUT 6 MONTHS FOR THE AVERAGE FAMILY).
ES IMPORTANTE CAMBIAR LOS FILTROS PARA QUE EL PRODUCTO FUNCIONE SEGÚN LO INDICADO.
CAMBIE EL FILTRO DESPUÉS DE CADA 120 GALONES
(ALREDEDOR DE 6 MESES PARA LA FAMILIA PROMEDIO).

EXHIBIT M

Lead Sampling Results Letter

DATE

(NAME)
(ADDRESS)
(CITY, STATE, ZIP)

Dear :

Below are the results for the water samples you collected from your property on DATE following the sampling protocol instructions provided you.

	IMMEDIATE SAMPLE	***5-MINUTE SAMPLE***
LEAD		

mg/L = milligrams per Liter or parts per million
ug/L = Micrograms per Liter or parts per billion
N.D. = Not Detected

The “Action Level” for lead in drinking water is 15 ug/L.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing in older homes. Aqua is responsible for providing high-quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for a period of time it takes to bring in fresh water before using it for drinking or cooking.

The water supplied to this area meets all the National Primary Drinking Water Standards.

Call me at 610.645.4234 if you have any questions.

Sincerely,

Ann Dreyer
Supervisor, Water Quality Services

EXHIBIT N

Lead Service Line Replacement Close Out Letter

[DATE]

Dear Customer:

Our records show that your service line has been replaced in the last three to six months. As detailed in the Customer Lead/Galvanized Service Line Replacement License Agreement, the Company has dedicated the newly installed customer-owned portion of the service line back to you and you are responsible for that service line as of the date of completion of the installation. Your warranty on the workmanship and materials of the newly installed Customer-side service line and restoration of the surfaces is for 24 months from the date the replacement was completed.

We are offering, free of charge, lead sampling to our customers that have had their service lines replaced within this time frame. If you are interested in having your water sampled for lead, please call 610.645.4272 and leave your address and phone number and we will call you back to deliver the bottles and instructions to you. Aqua will pick up the samples and deliver to the laboratory.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing in older homes. Aqua is responsible for providing high-quality drinking water to your home but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by running your water for a few minutes or until it becomes cold before using it for drinking or cooking.

Call me at 610.645.4234 if you have any questions.

Sincerely,

Ann Dreyer
Supervisor, Water Quality Services

EXHIBIT O

5th Liter Sampling Instructions

Aqua Pennsylvania
Sampling Instructions for Special Lead Analysis
For homes that had their Lead or Galvanized Service Line Replaced

Thank you for agreeing to collect samples following your lead/galvanized service line replacement. We recognize these instructions can be confusing. If you have any questions about the sampling protocol, please call us at 610.645.4272.

Please complete the back of these instructions with information on your home and when you collected the samples.

Sample Bottles – Five 1 Liter plastic bottles will be dropped off from Aqua Pennsylvania's Bryn Mawr Lab. These bottles are specifically designed for lead and copper analyses.

Sample Location – Please sample from a kitchen or bathroom cold-water faucet. The water going to that faucet should not have any treatment such as a filter or a water softener. If you do have a treatment system, note that on the form. Each of the 5 bottles must be collected from the same faucet.

Sampling Procedure – Do not use any water in your house for a minimum of six (6) hours prior to sampling. We recommend sampling either early mornings or evenings upon returning home. Be sure to use a kitchen or bathroom cold water tap that has been used for drinking water consumption in the past few days. Do not intentionally flush the water line before the start of the 6-hour period. Do not remove the aerator prior to sampling.

A series of five samples will be collected. We suggest that you line up the bottles by number (1 through 5) and remove the caps.

Sample #1 (first draw): Place the opened sample bottle below the faucet and open the cold water tap as you would to fill a glass of water. Fill the sample bottle to the line marked "1000-ml" **without allowing any water to run into the sink** *and keep running the water*.

After sample # 1 has been filled, quickly place bottle # 2 under the faucet. Fill each bottle in order (1 through 5) while the water continues to flow from the faucet. After each of the 5 bottles has been filled, replace the caps, tighten the caps, and place the bottles back in the bags.

If any plumbing repairs or replacements have been done in the home within the last three years, please note this on the form.

After the samples have been collected, please call 610.645.4272 Monday through Friday so that a driver can be notified to pick up samples. If you are leaving a message on our voicemail, please leave your name, address, and number where you can be reached. Place samples bottles outside the front door for pick-up (if it is more appropriate to leave somewhere other than front door, please specify that when calling).

Results / Questions - The results from your samples and information about lead will be provided to you as soon as practical but no later than 30 days. However, if elevated lead levels are found, prompt notification will be provided within two working days after results are made available. Call 610.645.4272 if you have any questions regarding these instructions.

<u>In order to process the samples, it is important that the resident complete this form and return with the 5 bottles.</u>

Do you have a water softener or treatment system? Y / N

If so, was your softener or treatment bypassed when you took the samples? Y / N

Have you had any plumbing repairs or replacement in the last 3 years? Y/N If Yes, Explain:

Sample Location and faucet (i.e., kitchen sink) _____

Water was last used: Time:_____ Date:_____

Series of five water samples:

- Sample #1 was collected: Time:_____ Date:_____
- Sample #5 was collected: Time:_____ Date:_____

I have read the instructions and have taken the 5 tap samples in accordance with these instructions.

_____ Date:_____
Signature

Name: **Phone number:**

Address: **Mailing Address (if different):**

EXHIBIT P

5th Liter Sample Results Letter

DATE

Name
Address

Dear [NAME] :

Below are the lead results for the water samples you collected from your property, following the 5th Liter sampling protocol instructions provided to you, on DATE.

	1st Liter	*2nd Liter*	*3rd Liter*	*4th Liter*	*5th Liter*
LEAD RESULT	ug/L	ug/L	ug/L	ug/L	ug/L

ug/L = Micrograms per Liter or parts per billion
N.D. = Not Detected

The "Action Level" for lead in drinking water is 15 ug/L.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing in older homes. Aqua is responsible for providing high-quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for a period of time it takes to bring in fresh water before using it for drinking or cooking.

The water supplied to this area meets all the National Primary Drinking Water Standards.

I have included an additional fact sheet on lead in drinking water for your information. Call me at 610.645.4234 if you have any questions.

Sincerely,

Ann Dreyer
Supervisor, Water Quality Services

EXHIBIT Q

Customer Refusal Letter

[DATE]

Dear Customer:

Our records show that your service line is lead or galvanized requiring replacement. Aqua has attempted to contact you to replace your lead or galvanized service line. Aqua has either received no response from you or you have refused to allow Aqua to replace your lead or galvanized service line.

Under the Pennsylvania Public Utility Commission's ("PUC") regulations, Aqua cannot perform a partial replacement of a lead or galvanized service line or allow the continued use of a partial lead or galvanized service line (see 52 Pa. Code § 65.62). In accordance with PUC regulations Aqua is required to terminate service to your premise.

To avoid termination of service, please contact Aqua's Water Quality Department at 610.645.4234 to set up an appointment and receive further information to replace your lead or galvanized service line.

Sincerely,

Michael Fili, Vice President
Capital Planning, Design & Construction
Aqua Pennsylvania, Inc.

Attachments: Lead Fact Sheet
Aqua Lead Service Line Replacement Program Information Sheet

AQUA℠

An Essential Utilities Company

Aqua Wants Our Customers to Be Informed*

Here's what you should know about lead and drinking water.

Lead is not typically found in the streams, reservoirs or wells that serve as water supplies or in the main water lines that carry water from treatment plants to homes. Yet, the chemical properties of water can cause lead and other metals to leach into drinking water. The main source of lead in drinking water is from lead service lines (the pipes that deliver water from water mains in the street and into homes) and from typical household plumbing (lead solder and brass fixtures) that contains lead. Households that have, or suspect having, lead service lines or lead in their household plumbing are strongly encouraged to replace them. The use of lead in solder was prohibited after 1986, so buildings constructed after then should not have contained lead in the solder.

How Aqua protects its customers:

Water utilities, including Aqua, treat drinking water to reduce the chance for metals to leach into the water. Aqua conducts required testing for drinking water contaminants, including lead and copper, to ensure compliance with state and federal drinking water standards. Aqua tests the water at our treatment plants, and also schedules customer tap sampling and tests for lead in potential high-risk areas, to comply with the U.S. Environmental Protection Agency's (EPA) lead and copper rule.

You can always view your community's test results. They are summarized in our annual water quality reports, which are produced for every water system we own and operate.

Lead Service Line Replacement Program:

Aqua can now assist customers with replacing the customer/property owner's portion of the service line if it is made of lead. Aqua's new program will allow us to work with customers, either during a main replacement project or by customer request, to replace the customer/property owner's portion of the service line if it is lead and dedicate the service line back to the customer/property owner at no direct cost to the customer/property owner.

Visit our website at https://www.aquaamerica.com/our-states/pennsylvania/leadservicelines.aspx for more information.

Call us at 877.987.2782 for more information.

You can find your community's water quality report at AquaAmerica.com.

More helpful information on the back

If you are a residential customer:

You should know that there are parts of the service line bringing water to your home that are Aqua's property (the pipe that goes from our water main in the street to your curb) and parts of the service line that are the property owner's (the pipe that goes from your curb to your home). When we encounter lead service lines during our maintenance and construction activities, we will seek to identify the material type of both portions (Aqua's and the property owner's) of the service line. If we find lead on Aqua's side only, Aqua will replace its portion of the service line. If we find lead on the customer/property owner's side, we will work with you to replace the customer/property owner portion.

If you have concerns regarding your internal plumbing, we recommend that you have a licensed plumber check the pipes that are your property. This is important to know, because household plumbing can also be a source of lead in tap water. See the section below on "what you can do" for minimizing your risk if this happens.

Aqua suggests that you call us at 877.987.2782 for more information. We'll quickly put you in touch with one of our water quality experts.

If you are a school or day care center:

You should know that the EPA has established more stringent sampling procedures for schools and day care centers. Because children often drink from fountains and faucets at school without flushing the water first, and because they are at higher risk of health effects due to exposure, for their protection, sampling is done differently at schools and day care centers.

Aqua suggests that you call the EPA's safe drinking water hotline at 800.426.4791 or email them using this URL: https://www.epa.gov/lead/forms/lead-hotline-national-lead-information-center. Specific information regarding schools can be found on EPA's website at https://www.epa.gov/ground-water-and-drinking-water/3ts-reducing-lead-drinking-water. It's important for any testing you do to be conducted using EPA protocols, so that the results are meaningful.

The health effects of lead:

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys and can interfere with the production of red blood cells that carry oxygen to all parts of the body. The greatest risk of lead exposure is to infants, young children and pregnant women.

If you are concerned about lead exposure:

- Contact your local health department or healthcare provider to find out how you can get your child tested for lead.
- Visit the EPA at EPA.gov/lead for more information on the health effects of lead or reducing lead exposure in your home.
- Call Aqua at 877.987.2782 for information about testing your water.

What you can do:

If your home's water shows elevated levels of lead, or if you are concerned about the potential of lead in your water, below are ways you can minimize your exposure.

- **Run your tap to flush out lead.** If your water hasn't been used for several hours, run your water for a few minutes or until it becomes cold or reaches a steady temperature before drinking or cooking.
- **Use cold water to cook or prepare baby formula.** Don't boil water to reduce lead. Lead dissolves more easily into hot water and boiling will concentrate the lead. Boiling water won't reduce lead.
- If you buy a water filter for lead removal, make sure it's approved to reduce lead. Contact NSF International, www.NSF.org.

*This information sheet contains regulatorily required or recommended language and nothing herein is intended as, nor should be construed as, a promise of or contract for payment or reimbursement of expenses incurred for any action you take on account of this information sheet.

Customer Lead Service Line Replacement Program Information Sheet

BACKGROUND – AQUA CUSTOMER LEAD SERVICE LINE REPLACEMENT PROGRAM

Lead is a naturally occurring metal that can cause a variety of adverse health effects. While the most common sources of lead exposure are soil, paint chips and dust, drinking water is another route of lead exposure, primarily as a result of corrosion of lead pipes and plumbing materials. The Pennsylvania General Assembly determined it is in the public interest for water utilities to assist customers in the replacement of customer-owned lead, or galvanized requiring replacement ("galvanized"), service lines throughout Pennsylvania.

The service line that provides water service to a property is made up of two parts: a Company-owned portion (which connects from the Company's main to the curb line) and a customer-owned portion (which connects from the curb line to a customer's structure). Customers, or property owners if the customer is not the property owner ("Customer") are required to maintain and repair the Customer-owned portion of the service line.

Aqua Pennsylvania, Inc. ("Aqua" or the "Company") now has been granted the authority to assist Customers in replacing the Customer-owned portion of the service line if that service line is identified as lead or galvanized.

CUSTOMER-OWNED LEAD SERVICE LINE REPLACEMENT PROGRAM

Under the Customer Lead Service Line Replacement Program ("Replacement Program"), Aqua will identify customer-owned service lines that are lead or galvanized, enter into an agreement with the Customer to replace the Customer-owned portion of the service line and restore the Customer's property at no direct cost to the customer, dedicate the newly installed customer portion of the service line back to the Customer, and provide a warranty on the work completed to replace the Customer-owned lead or galvanized service line.

Aqua's Replacement Program is made up of two parts: (1) replacements in connection with a main replacement project, and (2) replacements per Customer request not associated with a main replacement project.

Cap on Replacements Per Year

Aqua can perform up to 1,500 customer-owned lead or galvanized service line replacements per year.

Customer Agreement and Replacement

In order for Aqua to complete a replacement, the Customer must enter into an agreement with Aqua to replace the Customer-owned lead or galvanized service line. Aqua cannot replace the Customer portion of a lead or galvanized service line without first entering into an agreement. The agreement provides that the Customer will give access to Aqua, or Aqua's contractor, to complete the

replacement. Following replacement, Aqua, or Aqua's contractor, will restore the property as reasonably as practicable to its former condition prior to the replacement of the Customer-owned lead or galvanized service line.

Dedication of Newly Installed Customer Portion of Service Line and Warranty

After the new Customer-owned portion of the service line is installed, the Customer-owned portion will be dedicated to the Customer and ownership and responsibility for repair and maintenance of the Customer-owned portion of the service line will remain with the Customer as was the case prior to the replacement. A two-year warranty on the workmanship and materials of the installation and the restoration of surfaces shall be provided.

Coordination of Replacements

Aqua will strive to group customer requested replacements within its operating divisions to create efficiencies. However, Aqua may replace a Customer's lead or galvanized service line if projects cannot be grouped together in its discretion.

Sampling and Testing

Prior to the replacement, Aqua will provide water sampling materials to customers that Aqua will collect, test, and provide the results to Customers from those samples. In addition, Aqua will provide a National Sanitation Foundation approved water filter (pitcher or tap filter) and six months of replacement filters.

After a replacement conducted through this program, Aqua will again provide water sampling materials to the property for additional testing.

Reimbursement for Customers that Have Already Replaced a Lead or Galvanized Service Line

As part of Aqua's Replacement Program, Aqua will provide a reimbursement to those Customers that have replaced their Customer-owned lead or galvanized service line within certain time periods subject to certain requirements. Reimbursement will occur for those Customers that provide documentation sufficient, in Aqua's sole discretion, to verify that the Customer replaced the Customer-owned lead or galvanized service line within one year before or after the start of a planned lead service line replacement project main replacement and as long as the Customer is within one mile of the main replacement project or focused replacement area. Customers will be eligible for reimbursement up to 125% of the average cost of Aqua's lead and galvanized replacements. Average cost used to determine reimbursement amounts during a calendar year will be based on Aqua's prior calendar year average costs for lead and galvanized service line replacements. Examples of documentation required by Aqua for a Customer to be eligible for reimbursement include, but are not limited to, detailed estimates from a licensed plumber and paid invoices or statements. A verified statement may also be submitted from the licensed plumber.

Partial Replacements Prohibited

Under the Pennsylvania Public Utility Commission's ("PUC") regulations, Aqua cannot perform a partial replacement of a lead or galvanized service line. If a Customer causes a partial replacement, by replacing the Customer portion of a lead or galvanized service line without notifying Aqua, Aqua is required to terminate service until a full replacement of the lead or galvanized service line can be completed.

In addition, any Customer that refuses to allow Aqua (or its contractor) to replace the lead or galvanized service line, or refuses to employ its own licensed plumber to replace the lead or galvanized service line, will result in termination of service to the property until the entire lead or galvanized service line is replaced.

Aqua may, in its sole discretion, use Step In Rights as described in Aqua's tariff to perform a replacement if the customer or occupier of the property is not the owner, Aqua has attempted to contact the owner with an offer to replace the Customer lead service line and has not received a response, and such replacement is in the public interest to avoid termination of service to a property where the customer is not the owner of the property.

CONCLUSION

Aqua recognizes the importance of removing lead from water systems across Pennsylvania both on Aqua owned and Customer-owned assets. Aqua looks forward to working with Customers to achieve this goal.

EXHIBIT R

Public Education Materials – 40 C.F.R. § 141.85(a)

IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER[1]

[INSERT NAME OF WATER SYSTEM] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.

Health Effects of Lead

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

Sources of Lead

Lead is a common metal found in the environment. Drinking water is one possible source of lead exposure. Lead Service lines, brass faucets, fittings, and valves, including those advertised as "low lead" or "lead-free," may contribute lead to drinking water. Regulations previously allowed "low lead" fixtures containing up to 8 percent lead. Current regulations only allow "lead-free" fixtures with up to 0.25 percent lead. When water is in contact with pipes, service lines, or plumbing that contains lead for several hours, the lead may enter drinking water. Homes built before 1990 are more likely to have lead pipes or lead solder.

The main sources of lead exposure are lead-based paint, lead-contaminated dust or soil, and some plumbing materials. In addition, lead can be found in certain types of pottery, pewter, brass fixtures, food, and cosmetics. Other sources include exposure in the workplace and exposure from certain hobbies (lead can be carried on clothing or shoes). Lead is found in some toys, some playground equipment, and some children's metal jewelry.

Steps You Can Take to Reduce Your Exposure to Lead in Your Water

- **Run your tap to flush out lead.** If your water hasn't been used for several hours, run your water for a few minutes or until it becomes cold or reaches a steady temperature before drinking or cooking.
- **Use cold water to cook or prepare baby formula.** Do not boil water to reduce lead. Lead dissolves more easily in hot water and boiling water will concentrate the lead.
- **Do not boil water to remove lead.** Boiling water will not reduce lead.
- **Consider alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is

[1] This information contains regulatory or recommended language, and nothing herein is intended as, nor should be construed as, a promise of or contract for payment or reimbursement of expenses incurred for any action you take on account of this information sheet.

approved to reduce lead or contact NSF International (www.nsf.org) for information on performance standards for water filters. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality.

- **Test your water for lead.** Call us at 1-877-987-2782 to find out how to get your water tested for lead.
- **Get your child's blood tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.

What happened? What is being done?
[Notice Specific Information: Explain why there are elevated levels of lead in the system's drinking water (if known) and what the water system is doing to reduce the lead levels in homes/buildings in this area.]

Aqua's lead and galvanized service line replacement program
At Aqua, we are implementing a program that involves replacing all lead and galvanized service lines in our drinking water systems at no direct cost to our customers. Information about our lead and galvanized service line replacement program is attached. For more information, call us at 1-877-987-2782, or visit our website at https://www.aquawater.com/about-water/water-quality/lead.php. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's website at http://www.epa.gov/lead or contact your health care provider.

EXHIBIT S

Lead and Copper Monitoring Results – 40 C.F.R. § 141.85(d)

[DATE]

Dear Customer:

We would like to thank you for your participation in the lead tap monitoring program. Below are the results of the water samples you collected from your property at **ADDRESS** on **DATE**, following the sampling instructions provided to you.

	Immediate Sample	USEPA Action Level
Lead	ug/L	15 ug/L
Copper	mg/L	1.3 mg/L

ug/L = micrograms per liter or parts per billion
mg/L = milligrams per liter or parts per million
ND = Not detected

☐ Lead was **NOT DETECTED** at this sample location.
☐ Lead was detected **BELOW** the action level of 15 ug/L (ppb).
☐ Lead was detected **ABOVE** the action level of 15 ug/L (ppb).

Under the authority of the Safe Drinking Water Act, the EPA set the action level for lead in drinking water at 15 ug/L. The action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that Aqua must follow. This means Aqua must ensure that water from the customer's tap does not exceed this level in at least 90 percent of the homes sampled (90th percentile value). Because lead may pose serious health risks, the EPA set a Maximum Contaminant Level Goal (MCLG) of zero for lead. The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

Lead is more likely to accumulate when water is in contact with a lead source for longer periods of time. There are steps you can take to minimize exposure to lead in drinking water:[1]

- **Run your tap to flush out lead.** If your water hasn't been used for several hours, run your water for a few minutes or until it becomes cold or reaches a steady temperature before drinking or cooking.

[1] This information contains regulatory or recommended language, and nothing herein is intended as, nor should be construed as, a promise of or contract for payment or reimbursement of expenses incurred for any action you take on account of this information sheet.

- **Use cold water to cook or prepare baby formula.** Do not boil water to reduce lead. Lead dissolves more easily in hot water and boiling water will concentrate the lead.
- **Do not boil water to remove lead.** Boiling water will not reduce lead.
- **Consider alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International (www.nsf.org) for information on performance standards for water filters. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality.
- **Test your water for lead.** Call us at 1-877-987-2782 to find out how to get your water tested for lead.
- **Get your child's blood tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.

If you need more information concerning this result or have any questions, please contact us at 1-877-987-2782.

Sincerely,

Aqua Pennsylvania

EXHIBIT T

Notification of Known Lead Service Line –
40 C.F.R. § 141.85(e)(3)(i)

[DATE]

Dear Customer:

Aqua Pennsylvania (Aqua) is implementing a program that involves replacing all lead and galvanized service lines in our drinking water systems at no direct cost to our customers. Aqua supplies water to your home through a service line that runs from the water main into your home. Aqua owns the service line from the water main to the curb. You own the service line that runs from the curb into your home.

Our records indicate that the water service line serving your home contains lead. We will be contacting you to verify the service line material and to schedule the replacement of your service line. We will replace all portions of the service line that are lead or galvanized. Information about our lead and galvanized service line replacement program is attached. Note that if you proceed with replacement of your service line using your own plumber, Aqua is required to replace the company-owned service line, if lead or galvanized, upon your notification.

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

Lead is more likely to accumulate when water is in contact with a lead source for longer periods of time. There are steps you can take to minimize exposure to lead in drinking water:[1]

- **Run your tap to flush out lead.** If your water hasn't been used for several hours, run your water for a few minutes or until it becomes cold or reaches a steady temperature before drinking or cooking.
- **Use cold water to cook or prepare baby formula.** Do not boil water to reduce lead. Lead dissolves more easily in hot water and boiling water will concentrate the lead.
- **Do not boil water to remove lead.** Boiling water will not reduce lead.
- **Consider alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International (www.nsf.org) for information on performance standards for water filters. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality.
- **Test your water for lead.** Call us at 1-877-987-2782 to find out how to get your water tested for lead.

[1] This information contains regulatory or recommended language, and nothing herein is intended as, nor should be construed as, a promise of or contract for payment or reimbursement of expenses incurred for any action you take on account of this information sheet.

- **Get your child's blood tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.

You will be receiving this letter annually until your lead service line has been replaced. If you have any questions, please contact us at 1-877-987-2782.

Sincerely,

Aqua Pennsylvania

Attachment: Customer Lead Service Line Replacement Program Information Sheet

Customer Lead Service Line Replacement Program Information Sheet

BACKGROUND – AQUA CUSTOMER LEAD SERVICE LINE REPLACEMENT PROGRAM

Lead is a naturally occurring metal that can cause a variety of adverse health effects. While the most common sources of lead exposure are soil, paint chips and dust, drinking water is another route of lead exposure, primarily as a result of corrosion of lead pipes and plumbing materials. The Pennsylvania General Assembly determined it is in the public interest for water utilities to assist customers in the replacement of customer-owned lead, or galvanized requiring replacement ("galvanized"), service lines throughout Pennsylvania.

The service line that provides water service to a property is made up of two parts: a Company-owned portion (which connects from the Company's main to the curb line) and a customer-owned portion (which connects from the curb line to a customer's structure). Customers, or property owners if the customer is not the property owner ("Customer") are required to maintain and repair the Customer-owned portion of the service line.

Aqua Pennsylvania, Inc. ("Aqua" or the "Company") now has been granted the authority to assist Customers in replacing the Customer-owned portion of the service line if that service line is identified as lead or galvanized.

CUSTOMER-OWNED LEAD SERVICE LINE REPLACEMENT PROGRAM

Under the Customer Lead Service Line Replacement Program ("Replacement Program"), Aqua will identify customer-owned service lines that are lead or galvanized, enter into an agreement with the Customer to replace the Customer-owned portion of the service line and restore the Customer's property at no direct cost to the customer, dedicate the newly installed customer portion of the service line back to the Customer, and provide a warranty on the work completed to replace the Customer-owned lead or galvanized service line.

Aqua's Replacement Program is made up of two parts: (1) replacements in connection with a main replacement project, and (2) replacements per Customer request not associated with a main replacement project.

Cap on Replacements Per Year

Aqua can perform up to 1,500 customer-owned lead or galvanized service line replacements per year.

Customer Agreement and Replacement

In order for Aqua to complete a replacement, the Customer must enter into an agreement with Aqua to replace the Customer-owned lead or galvanized service line. Aqua cannot replace the Customer portion of a lead or galvanized service line without first entering into an agreement. The agreement provides that the Customer will give access to Aqua, or Aqua's contractor, to complete the

replacement. Following replacement, Aqua, or Aqua's contractor, will restore the property as reasonably as practicable to its former condition prior to the replacement of the Customer-owned lead or galvanized service line.

Dedication of Newly Installed Customer Portion of Service Line and Warranty

After the new Customer-owned portion of the service line is installed, the Customer-owned portion will be dedicated to the Customer and ownership and responsibility for repair and maintenance of the Customer-owned portion of the service line will remain with the Customer as was the case prior to the replacement. A two-year warranty on the workmanship and materials of the installation and the restoration of surfaces shall be provided.

Coordination of Replacements

Aqua will strive to group customer requested replacements within its operating divisions to create efficiencies. However, Aqua may replace a Customer's lead or galvanized service line if projects cannot be grouped together in its discretion.

Sampling and Testing

Prior to the replacement, Aqua will provide water sampling materials to customers that Aqua will collect, test, and provide the results to Customers from those samples. In addition, Aqua will provide a National Sanitation Foundation approved water filter (pitcher or tap filter) and six months of replacement filters.

After a replacement conducted through this program, Aqua will again provide water sampling materials to the property for additional testing.

Reimbursement for Customers that Have Already Replaced a Lead or Galvanized Service Line

As part of Aqua's Replacement Program, Aqua will provide a reimbursement to those Customers that have replaced their Customer-owned lead or galvanized service line within certain time periods subject to certain requirements. Reimbursement will occur for those Customers that provide documentation sufficient, in Aqua's sole discretion, to verify that the Customer replaced the Customer-owned lead or galvanized service line within one year before or after the start of a planned lead service line replacement project main replacement and as long as the Customer is within one mile of the main replacement project or focused replacement area. Customers will be eligible for reimbursement up to 125% of the average cost of Aqua's lead and galvanized replacements. Average cost used to determine reimbursement amounts during a calendar year will be based on Aqua's prior calendar year average costs for lead and galvanized service line replacements. Examples of documentation required by Aqua for a Customer to be eligible for reimbursement include, but are not limited to, detailed estimates from a licensed plumber and paid invoices or statements. A verified statement may also be submitted from the licensed plumber.

Partial Replacements Prohibited

Under the Pennsylvania Public Utility Commission's ("PUC") regulations, Aqua cannot perform a partial replacement of a lead or galvanized service line. If a Customer causes a partial replacement, by replacing the Customer portion of a lead or galvanized service line without notifying Aqua, Aqua is required to terminate service until a full replacement of the lead or galvanized service line can be completed.

In addition, any Customer that refuses to allow Aqua (or its contractor) to replace the lead or galvanized service line, or refuses to employ its own licensed plumber to replace the lead or galvanized service line, will result in termination of service to the property until the entire lead or galvanized service line is replaced.

Aqua may, in its sole discretion, use Step In Rights as described in Aqua's tariff to perform a replacement if the customer or occupier of the property is not the owner, Aqua has attempted to contact the owner with an offer to replace the Customer lead service line and has not received a response, and such replacement is in the public interest to avoid termination of service to a property where the customer is not the owner of the property.

CONCLUSION

Aqua recognizes the importance of removing lead from water systems across Pennsylvania both on Aqua owned and Customer-owned assets. Aqua looks forward to working with Customers to achieve this goal.

EXHIBIT U

Notification of Known GRR Service Line –
40 C.F.R. § 141.85(e)(3)(ii)

[DATE]

Dear Customer:

Aqua Pennsylvania (Aqua) is implementing a program that involves replacing all lead and galvanized service lines in our drinking water systems at no direct cost to our customers. Aqua supplies water to your home through a service line that runs from the water main into your home. Aqua owns the service line from the water main to the curb. You own the service line that runs from the curb into your home.

Our records indicate that the water service line serving your home is a galvanized pipe that requires replacement. We will be contacting you to verify the service line material and to schedule the replacement of your service line. We will replace all portions of the service line that are lead or galvanized. Information about our lead and galvanized service line replacement program is attached. Note that if you proceed with replacement of your service line using your own plumber, Aqua is required to replace the company-owned service line, if lead or galvanized, upon your notification.

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

Lead is more likely to accumulate when water is in contact with a lead source for longer periods of time. There are steps you can take to minimize exposure to lead in drinking water:[1]

- **Run your tap to flush out lead.** If your water hasn't been used for several hours, run your water for a few minutes or until it becomes cold or reaches a steady temperature before drinking or cooking.
- **Use cold water to cook or prepare baby formula.** Do not boil water to reduce lead. Lead dissolves more easily in hot water and boiling water will concentrate the lead.
- **Do not boil water to remove lead.** Boiling water will not reduce lead.
- **Consider alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International (www.nsf.org) for information on performance standards for water filters. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality.
- **Test your water for lead.** Call us at 1-877-987-2782 to find out how to get your water tested for lead.

[1] This information contains regulatory or recommended language, and nothing herein is intended as, nor should be construed as, a promise of or contract for payment or reimbursement of expenses incurred for any action you take on account of this information sheet.

- **Get your child's blood tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.

You will be receiving this letter annually until your galvanized service line has been replaced. If you have any questions, please contact us at 1-877-987-2782.

Sincerely,

Aqua Pennsylvania

Attachment: Customer Lead Service Line Replacement Program Information Sheet

Customer Lead Service Line Replacement Program Information Sheet

BACKGROUND – AQUA CUSTOMER LEAD SERVICE LINE REPLACEMENT PROGRAM

Lead is a naturally occurring metal that can cause a variety of adverse health effects. While the most common sources of lead exposure are soil, paint chips and dust, drinking water is another route of lead exposure, primarily as a result of corrosion of lead pipes and plumbing materials. The Pennsylvania General Assembly determined it is in the public interest for water utilities to assist customers in the replacement of customer-owned lead, or galvanized requiring replacement ("galvanized"), service lines throughout Pennsylvania.

The service line that provides water service to a property is made up of two parts: a Company-owned portion (which connects from the Company's main to the curb line) and a customer-owned portion (which connects from the curb line to a customer's structure). Customers, or property owners if the customer is not the property owner ("Customer") are required to maintain and repair the Customer-owned portion of the service line.

Aqua Pennsylvania, Inc. ("Aqua" or the "Company") now has been granted the authority to assist Customers in replacing the Customer-owned portion of the service line if that service line is identified as lead or galvanized.

CUSTOMER-OWNED LEAD SERVICE LINE REPLACEMENT PROGRAM

Under the Customer Lead Service Line Replacement Program ("Replacement Program"), Aqua will identify customer-owned service lines that are lead or galvanized, enter into an agreement with the Customer to replace the Customer-owned portion of the service line and restore the Customer's property at no direct cost to the customer, dedicate the newly installed customer portion of the service line back to the Customer, and provide a warranty on the work completed to replace the Customer-owned lead or galvanized service line.

Aqua's Replacement Program is made up of two parts: (1) replacements in connection with a main replacement project, and (2) replacements per Customer request not associated with a main replacement project.

Cap on Replacements Per Year

Aqua can perform up to 1,500 customer-owned lead or galvanized service line replacements per year.

Customer Agreement and Replacement

In order for Aqua to complete a replacement, the Customer must enter into an agreement with Aqua to replace the Customer-owned lead or galvanized service line. Aqua cannot replace the Customer portion of a lead or galvanized service line without first entering into an agreement. The agreement provides that the Customer will give access to Aqua, or Aqua's contractor, to complete the

replacement. Following replacement, Aqua, or Aqua's contractor, will restore the property as reasonably as practicable to its former condition prior to the replacement of the Customer-owned lead or galvanized service line.

Dedication of Newly Installed Customer Portion of Service Line and Warranty

After the new Customer-owned portion of the service line is installed, the Customer-owned portion will be dedicated to the Customer and ownership and responsibility for repair and maintenance of the Customer-owned portion of the service line will remain with the Customer as was the case prior to the replacement. A two-year warranty on the workmanship and materials of the installation and the restoration of surfaces shall be provided.

Coordination of Replacements

Aqua will strive to group customer requested replacements within its operating divisions to create efficiencies. However, Aqua may replace a Customer's lead or galvanized service line if projects cannot be grouped together in its discretion.

Sampling and Testing

Prior to the replacement, Aqua will provide water sampling materials to customers that Aqua will collect, test, and provide the results to Customers from those samples. In addition, Aqua will provide a National Sanitation Foundation approved water filter (pitcher or tap filter) and six months of replacement filters.

After a replacement conducted through this program, Aqua will again provide water sampling materials to the property for additional testing.

Reimbursement for Customers that Have Already Replaced a Lead or Galvanized Service Line

As part of Aqua's Replacement Program, Aqua will provide a reimbursement to those Customers that have replaced their Customer-owned lead or galvanized service line within certain time periods subject to certain requirements. Reimbursement will occur for those Customers that provide documentation sufficient, in Aqua's sole discretion, to verify that the Customer replaced the Customer-owned lead or galvanized service line within one year before or after the start of a planned lead service line replacement project main replacement and as long as the Customer is within one mile of the main replacement project or focused replacement area. Customers will be eligible for reimbursement up to 125% of the average cost of Aqua's lead and galvanized replacements. Average cost used to determine reimbursement amounts during a calendar year will be based on Aqua's prior calendar year average costs for lead and galvanized service line replacements. Examples of documentation required by Aqua for a Customer to be eligible for reimbursement include, but are not limited to, detailed estimates from a licensed plumber and paid invoices or statements. A verified statement may also be submitted from the licensed plumber.

Partial Replacements Prohibited

Under the Pennsylvania Public Utility Commission's ("PUC") regulations, Aqua cannot perform a partial replacement of a lead or galvanized service line. If a Customer causes a partial replacement, by replacing the Customer portion of a lead or galvanized service line without notifying Aqua, Aqua is required to terminate service until a full replacement of the lead or galvanized service line can be completed.

In addition, any Customer that refuses to allow Aqua (or its contractor) to replace the lead or galvanized service line, or refuses to employ its own licensed plumber to replace the lead or galvanized service line, will result in termination of service to the property until the entire lead or galvanized service line is replaced.

Aqua may, in its sole discretion, use Step In Rights as described in Aqua's tariff to perform a replacement if the customer or occupier of the property is not the owner, Aqua has attempted to contact the owner with an offer to replace the Customer lead service line and has not received a response, and such replacement is in the public interest to avoid termination of service to a property where the customer is not the owner of the property.

CONCLUSION

Aqua recognizes the importance of removing lead from water systems across Pennsylvania both on Aqua owned and Customer-owned assets. Aqua looks forward to working with Customers to achieve this goal.

EXHIBIT V

Notification of Unknown Service Line Material – 40 C.F.R. § 141.85(e)(3)(iii)

[DATE]

Dear Customer:

Aqua Pennsylvania (Aqua) is implementing a program that involves replacing all lead and galvanized service lines in our drinking water systems at no direct cost to our customers. Aqua supplies water to your home through a service line that runs from the water main into your home. Aqua owns the service line from the water main to the curb. You own the service line that runs from the curb into your home.

Our records indicate that the water service line material serving your home is unknown but may be lead or galvanized. You can help us by identifying the material of the service line that provides water to your home. If possible, please review the **Identify Your Service Line Material** video located at *https://www.aquawater.com/about-water/water-quality/lead.php* or by using the QR code to the right to help with your determination. You have two options to respond:

- Fill out the **Customer Lead and Copper Survey** attached and return it by mail using the postage prepaid return envelope included with this letter.
- Complete the online questionnaire available with the video. The online questionnaire is the preferred option since it will allow you to provide photos of your service line.

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

Lead is more likely to accumulate when water is in contact with a lead source for longer periods of time. There are steps you can take to minimize exposure to lead in drinking water:[1]

- **Run your tap to flush out lead.** If your water hasn't been used for several hours, run your water for a few minutes or until it becomes cold or reaches a steady temperature before drinking or cooking.
- **Use cold water to cook or prepare baby formula.** Do not boil water to reduce lead. Lead dissolves more easily in hot water and boiling water will concentrate the lead.
- **Do not boil water to remove lead.** Boiling water will not reduce lead.
- **Consider alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International (www.nsf.org) for information on

[1] This information contains regulatory or recommended language, and nothing herein is intended as, nor should be construed as, a promise of or contract for payment or reimbursement of expenses incurred for any action you take on account of this information sheet.

performance standards for water filters. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality.

- **Test your water for lead.** Call us at 1-877-987-2782 to find out how to get your water tested for lead.
- **Get your child's blood tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.

You will be receiving this letter annually until you have notified us of your service line material. If you have any questions, please contact us at 1-877-987-2782.

Sincerely,

Aqua Pennsylvania

Attachment: Customer Lead and Copper Survey

Customer Lead and Copper Survey

To comply with Pennsylvania Public Utility Commission (PAPUC), Pennsylvania Department of Environmental Protection (PADEP) and Environmental Protection Agency (EPA) regulations, Aqua is compiling a database of the materials used in our customer's service lines. Please take a few minutes to complete this survey. If you have questions or would like assistance, please call [PHONE NUMBER] between the hours of 8am-5pm to schedule an appointment. Please state that you are calling about the Aqua [SPECIFIC DIVISION] Water Survey.

To save time we provide a QR Code to complete this survey online:

(If you choose to complete this online, you may recycle these materials.)

Name of person filling out the survey: _____

Phone number should we have questions: _____

1. Home Address: _____
2. Year home built: _____
3. If known, what type of material is the service line coming into your home? Please provide a picture for verification via email to [EMAIL ADDRESS] or mail back with this survey. See included pipe identification instructions.

   _____Lead _____Copper _____Plastic or PVC or PEX _____Galvanized

***If other or unknown please CALL [PHONE NUMBER] to verify.**

Water Pipe and Service Line Material Identification

	Lead	Galvanized Iron	Copper
Outer Appearance	Dull gray, bendable; Often curves between wall/floor and valve	Dark gray or black; Straight rigid pipe	Brown; Can have green corrosion spots
Threads at connections	None	Yes	None
Scratch Test (coin or key)	Shiny silver	Hard to scratch, remains gray	Copper, like a penny
Magnet Test	Does not stick	Magnet WILL stick	Does not stick

Please return completed survey in the enclosed self-address envelope to [ADDRESS]

How to Identify Water Service Line and Water Pipe Materials in Your Home

Water Service Line and Pipe Material Identification Instructions

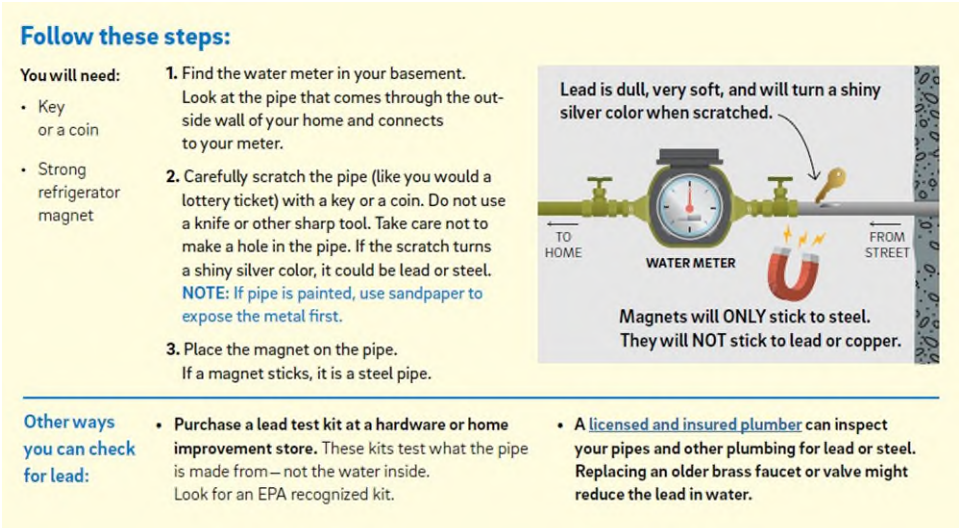
Step 1

Locate the water service line entering your home which is usually located in the basement or a crawlspace. The service line is typically just before the whole-house shut-off valve which should be near where the water service enters the home.

Step 2

Use the identification sheet below to help identify your service line material (copper, lead, galvanized or plastic pipe).

- **Lead** – pipe is NOT threaded, it is soft, easily scraped, dull silver-gray in color, and a magnet does NOT stick to the pipe. Use flat edge of a screwdriver (or similar tool) to scrape the pipe. If the scraped area is shiny and silver, the line is lead.
- **Copper** – the color of a penny and not threaded
- **Galvanized** – pipe is threaded, dull silver-gray in color, and magnet will typically stick to the pipe
- **Plastic** – white, blue, or black rigid plastic pipe



Thank you for taking time out of your busy schedule to complete and return this survey. The data collected will help us to provide an accurate inventory of water service line materials in your community to eliminate lead from service lines.

Please return completed survey in the enclosed self-address envelope
to [ADDRESS]

EXHIBIT W

Notification of a Disturbance to a Lead, GRR, or Lead Status Unknown Service Line that Results in the Service Line Being Shut Off or Bypassed – 40 C.F.R. § 141.85(f)(1)

AQUA℠

An Essential Utilities Company

¡Favor de no consumir el agua sin antes comunicarse con nuestro Departament de Servicio al Cliente al 877.987.2782!

An Important Health Notice From Aqua*

PLEASE READ THIS BEFORE USING YOUR WATER!

Aqua Pennsylvania is completing work on our water system that requires shutting off or bypassing your service line that may cause a disturbance to your service line. Our records indicate that your water service line is lead, galvanized requiring replacement, or lead status unknown. Due to the nature of your service line material, we must inform you that disturbing a service line that contains lead could result in elevated lead levels in your drinking water.

Before using your water, please review and follow the flushing instructions below to minimize your exposure to lead and to remove particulate lead that may have been stirred up during the disturbance.

1.  If possible, remove faucet aerators from all water faucets in the home.
2. Beginning in the lowest level of the home, fully open the cold water faucets throughout the home.
3. Let the water run for at least 30 minutes at the last faucet you opened (which was on your top floor).
4. Turn off each faucet starting with the faucets in the highest level of the home. Be sure to run water in bathtubs and showers as well as faucets.
5. Clean and reinstall any aerators you might have removed in Step 1.
6. Do not consume tap water, open hot water faucets, or use icemaker or filtered water dispenser until after flushing is complete.

[1]*Based on the American Water Works Association-recommended safety procedures (awwa.org).*

Please visit Aqua's website for more information concerning Aqua's Replacement program at https://www.aquawater.com/about-water/water-quality/lead.php. Thank you for letting Aqua serve you! For questions and concerns please contact Aqua customer service at 877.987.2782.

**This information sheet contains regulatorily required or recommended language and nothing herein is intended as, nor should be construed as, a promise of or a contract for payment or reimbursement of expenses incurred for any action you take on account of this information sheet.*

EXHIBIT X

Notification of a Disturbance to a Lead, GRR, or Lead Status Unknown Service Line From the Replacement of an Inline Water Meter, a Water Meter Setter, or Gooseneck, Pigtail, or Connector – 40 C.F.R. § 141.85(f)(2)

AQUA℠

An Essential Utilities Company

¡Favor de no consumir el agua sin antes comunicarse con nuestro Departament de Servicio al Cliente al 877.987.2782!

An Important Health Notice From Aqua*

PLEASE READ THIS BEFORE USING YOUR WATER!

Aqua Pennsylvania is completing work on our water system including replacing an inline water meter, a water meter setter, or gooseneck, pigtail, or connector that may cause a disturbance to your service line. Our records indicate that your water service line is lead, galvanized requiring replacement, or lead status unknown. Due to the nature of your service line material, we must inform you that disturbing a service line that contains lead could result in elevated lead levels in your drinking water.

Before using your water, please review and follow the flushing instructions below to minimize your exposure to lead and to remove particulate lead that may have been stirred up during the disturbance. Please use the provided pitcher filter prior to using water for drinking and cooking. Please refer to the instructions provided with the pitcher filter.

1.  If possible, remove faucet aerators from all water faucets in the home.
2. Beginning in the lowest level of the home, fully open the cold water faucets throughout the home.
3. Let the water run for at least 30 minutes at the last faucet you opened (which was on your top floor).
4. Turn off each faucet starting with the faucets in the highest level of the home. Be sure to run water in bathtubs and showers as well as faucets.
5. Clean and reinstall any aerators you might have removed in Step 1.
6. Do not consume tap water, open hot water faucets, or use icemaker or filtered water dispenser until after flushing is complete.

[1]Based on the American Water Works Association-recommended safety procedures (awwa.org).

Please visit Aqua's website for more information concerning Aqua's Replacement program at https://www.aquawater.com/about-water/water-quality/lead.php. Thank you for letting Aqua serve you! For questions and concerns please contact Aqua customer service at 877.987.2782.

[INSERT NAME OF WATER SYSTEM] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.

Health Effects of Lead

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

Sources of Lead

Lead is a common metal found in the environment. Drinking water is one possible source of lead exposure. Lead Service lines, brass faucets, fittings, and valves, including those advertised as "low lead" or "lead-free," may contribute lead to drinking water. Regulations previously allowed "low lead" fixtures containing up to 8 percent lead. Current regulations only allow "lead-free" fixtures with up to 0.25 percent lead. When water is in contact with pipes, service lines, or plumbing that contains lead for several hours, the lead may enter drinking water. Homes built before 1990 are more likely to have lead pipes or lead solder.

The main sources of lead exposure are lead-based paint, lead-contaminated dust or soil, and some plumbing materials. In addition, lead can be found in certain types of pottery, pewter, brass fixtures, food, and cosmetics. Other sources include exposure in the workplace and exposure from certain hobbies (lead can be carried on clothing or shoes). Lead is found in some toys, some playground equipment, and some children's metal jewelry.

Steps You Can Take to Reduce Your Exposure to Lead in Your Water

- **Run your tap to flush out lead.** If your water hasn't been used for several hours, run your water for a few minutes or until it becomes cold or reaches a steady temperature before drinking or cooking.
- **Use cold water to cook or prepare baby formula.** Do not boil water to reduce lead. Lead dissolves more easily in hot water and boiling water will concentrate the lead.
- **Do not boil water to remove lead.** Boiling water will not reduce lead.
- **Consider alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International (www.nsf.org) for information on performance standards for water filters. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality.
- **Test your water for lead.** Call us at 1-877-987-2782 to find out how to get your water tested for lead.

- **Get your child's blood tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.

What happened? What is being done?
[Notice Specific Information: Explain why there are elevated levels of lead in the system's drinking water (if known) and what the water system is doing to reduce the lead levels in homes/buildings in this area.]

Aqua's lead and galvanized service line replacement program
At Aqua, we are implementing a program that involves replacing all lead and galvanized service lines in our drinking water systems at no direct cost to our customers. Information about our lead and galvanized service line replacement program is attached.

For more information, call us at 1-877-987-2782, or visit our website at https://www.aquawater.com/about-water/water-quality/lead.php. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's website at http://www.epa.gov/lead or contact your health care provider.

Attachment: Customer Lead Service Line Replacement Program Information Sheet

**This information sheet contains regulatorily required or recommended language and nothing herein is intended as, nor should be construed as, a promise of or a contract for payment or reimbursement of expenses incurred for any action you take on account of this information sheet.*

Customer Lead Service Line Replacement Program Information Sheet

BACKGROUND – AQUA CUSTOMER LEAD SERVICE LINE REPLACEMENT PROGRAM

Lead is a naturally occurring metal that can cause a variety of adverse health effects. While the most common sources of lead exposure are soil, paint chips and dust, drinking water is another route of lead exposure, primarily as a result of corrosion of lead pipes and plumbing materials. The Pennsylvania General Assembly determined it is in the public interest for water utilities to assist customers in the replacement of customer-owned lead, or galvanized requiring replacement ("galvanized"), service lines throughout Pennsylvania.

The service line that provides water service to a property is made up of two parts: a Company-owned portion (which connects from the Company's main to the curb line) and a customer-owned portion (which connects from the curb line to a customer's structure). Customers, or property owners if the customer is not the property owner ("Customer") are required to maintain and repair the Customer-owned portion of the service line.

Aqua Pennsylvania, Inc. ("Aqua" or the "Company") now has been granted the authority to assist Customers in replacing the Customer-owned portion of the service line if that service line is identified as lead or galvanized.

CUSTOMER-OWNED LEAD SERVICE LINE REPLACEMENT PROGRAM

Under the Customer Lead Service Line Replacement Program ("Replacement Program"), Aqua will identify customer-owned service lines that are lead or galvanized, enter into an agreement with the Customer to replace the Customer-owned portion of the service line and restore the Customer's property at no direct cost to the customer, dedicate the newly installed customer portion of the service line back to the Customer, and provide a warranty on the work completed to replace the Customer-owned lead or galvanized service line.

Aqua's Replacement Program is made up of two parts: (1) replacements in connection with a main replacement project, and (2) replacements per Customer request not associated with a main replacement project.

Cap on Replacements Per Year

Aqua can perform up to 1,500 customer-owned lead or galvanized service line replacements per year.

Customer Agreement and Replacement

In order for Aqua to complete a replacement, the Customer must enter into an agreement with Aqua to replace the Customer-owned lead or galvanized service line. Aqua cannot replace the Customer portion of a lead or galvanized service line without first entering into an agreement. The agreement provides that the Customer will give access to Aqua, or Aqua's contractor, to complete the

replacement. Following replacement, Aqua, or Aqua's contractor, will restore the property as reasonably as practicable to its former condition prior to the replacement of the Customer-owned lead or galvanized service line.

Dedication of Newly Installed Customer Portion of Service Line and Warranty

After the new Customer-owned portion of the service line is installed, the Customer-owned portion will be dedicated to the Customer and ownership and responsibility for repair and maintenance of the Customer-owned portion of the service line will remain with the Customer as was the case prior to the replacement. A two-year warranty on the workmanship and materials of the installation and the restoration of surfaces shall be provided.

Coordination of Replacements

Aqua will strive to group customer requested replacements within its operating divisions to create efficiencies. However, Aqua may replace a Customer's lead or galvanized service line if projects cannot be grouped together in its discretion.

Sampling and Testing

Prior to the replacement, Aqua will provide water sampling materials to customers that Aqua will collect, test, and provide the results to Customers from those samples. In addition, Aqua will provide a National Sanitation Foundation approved water filter (pitcher or tap filter) and six months of replacement filters.

After a replacement conducted through this program, Aqua will again provide water sampling materials to the property for additional testing.

Reimbursement for Customers that Have Already Replaced a Lead or Galvanized Service Line

As part of Aqua's Replacement Program, Aqua will provide a reimbursement to those Customers that have replaced their Customer-owned lead or galvanized service line within certain time periods subject to certain requirements. Reimbursement will occur for those Customers that provide documentation sufficient, in Aqua's sole discretion, to verify that the Customer replaced the Customer-owned lead or galvanized service line within one year before or after the start of a planned lead service line replacement project main replacement and as long as the Customer is within one mile of the main replacement project or focused replacement area. Customers will be eligible for reimbursement up to 125% of the average cost of Aqua's lead and galvanized replacements. Average cost used to determine reimbursement amounts during a calendar year will be based on Aqua's prior calendar year average costs for lead and galvanized service line replacements. Examples of documentation required by Aqua for a Customer to be eligible for reimbursement include, but are not limited to, detailed estimates from a licensed plumber and paid invoices or statements. A verified statement may also be submitted from the licensed plumber.

Partial Replacements Prohibited

Under the Pennsylvania Public Utility Commission's ("PUC") regulations, Aqua cannot perform a partial replacement of a lead or galvanized service line. If a Customer causes a partial replacement, by replacing the Customer portion of a lead or galvanized service line without notifying Aqua, Aqua is required to terminate service until a full replacement of the lead or galvanized service line can be completed.

In addition, any Customer that refuses to allow Aqua (or its contractor) to replace the lead or galvanized service line, or refuses to employ its own licensed plumber to replace the lead or galvanized service line, will result in termination of service to the property until the entire lead or galvanized service line is replaced.

Aqua may, in its sole discretion, use Step In Rights as described in Aqua's tariff to perform a replacement if the customer or occupier of the property is not the owner, Aqua has attempted to contact the owner with an offer to replace the Customer lead service line and has not received a response, and such replacement is in the public interest to avoid termination of service to a property where the customer is not the owner of the property.

CONCLUSION

Aqua recognizes the importance of removing lead from water systems across Pennsylvania both on Aqua owned and Customer-owned assets. Aqua looks forward to working with Customers to achieve this goal.

EXHIBIT Y

Press Release Regarding Action Level Exceedance – 40 C.F.R. § 141.85(b)(2)(v)

Press Release

Contact: [INSERT]

For release: [DATE]

IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER[1]

BRYN MAWR, Pa. – [INSERT NAME OF WATER SYSTEM] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.

Health Effects of Lead

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

Sources of Lead

Lead is a common metal found in the environment. Drinking water is one possible source of lead exposure. Lead Service lines, brass faucets, fittings, and valves, including those advertised as "low lead" or "lead-free," may contribute lead to drinking water. Regulations previously allowed "low lead" fixtures containing up to 8 percent lead. Current regulations only allow "lead-free" fixtures with up to 0.25 percent lead. When water is in contact with pipes, service lines, or plumbing that contains lead for several hours, the lead may enter drinking water. Homes built before 1990 are more likely to have lead pipes or lead solder.

The main sources of lead exposure are lead-based paint, lead-contaminated dust or soil, and some plumbing materials. In addition, lead can be found in certain types of pottery, pewter, brass fixtures, food, and cosmetics. Other sources include exposure in the workplace and exposure from certain hobbies (lead can be carried on clothing or shoes). Lead is found in some toys, some playground equipment, and some children's metal jewelry.

[1] This information contains regulatory or recommended language, and nothing herein is intended as, nor should be construed as, a promise of or contract for payment or reimbursement of expenses incurred for any action you take on account of this information sheet.

Steps You Can Take to Reduce Your Exposure to Lead in Your Water

- **Run your tap to flush out lead.** If your water hasn't been used for several hours, run your water for a few minutes or until it becomes cold or reaches a steady temperature before drinking or cooking.
- **Use cold water to cook or prepare baby formula.** Do not boil water to reduce lead. Lead dissolves more easily in hot water and boiling water will concentrate the lead.
- **Do not boil water to remove lead.** Boiling water will not reduce lead.
- **Consider alternative sources or treatment of water.** You may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International (www.nsf.org) for information on performance standards for water filters. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality.
- **Test your water for lead.** Call us at 1-877-987-2782 to find out how to get your water tested for lead.
- **Get your child's blood tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.

What happened? What is being done?

[Notice Specific Information: Explain why there are elevated levels of lead in the system's drinking water (if known) and what the water system is doing to reduce the lead levels in homes/buildings in this area.]

Aqua's lead and galvanized service line replacement program

At Aqua, we are implementing a program that involves replacing all lead and galvanized service lines in our drinking water systems at no direct cost to our customers. Information about our lead and galvanized service line replacement program is attached. For more information, call us at 1-877-987-2782, or visit our website at https://www.aquawater.com/about-water/water-quality/lead.php.

"We take seriously our responsibility to sustain life by safely delivering Earth's most essential resource, and our mission is exemplified by our commitment to remove lead service lines from drinking water systems across Pennsylvania," said Aqua Pennsylvania President Marc Lucca. "Our lead service line replacement program enables our team to ensure safe drinking water for our customers without unnecessarily burdening them with the direct cost of replacement."

For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's website at http://www.epa.gov/lead or contact your health care provider.

Aqua Pennsylvania serves approximately 1.5 million people in 32 counties throughout the Commonwealth of Pennsylvania. Visit AquaWater.com for more information or follow Aqua on Facebook at facebook.com/AquaWater and on Twitter at @AquaWater.

This release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including, among others: the Company's ability to replace all lead and galvanized requiring replacement service lines in its drinking water systems and to do this at no direct cost to its customers There are important factors that could cause actual results to differ materially from those expressed or implied by such forward-looking statements including: general economic business conditions; the receipt of governmental approvals; and other factors discussed in our Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q, and other filings with the Securities and Exchange Commission. For more information regarding risks and uncertainties associated with Essential Utilities' business, please refer to Essential Utilities' annual, quarterly and other SEC filings. Essential Utilities is not under any obligation — and expressly disclaims any such obligation — to update or alter its forward-looking statements whether as a result of new information, future events or otherwise.

# # #

EXHIBIT B

AQUA PENNSYLVANIA, INC.
(hereinafter referred to as the "Company")

RATES, RULES, AND REGULATIONS

GOVERNING THE DISTRIBUTION AND SALE OF

WATER SERVICE

IN PORTIONS OF

ADAMS, BERKS, BRADFORD, BUCKS, CARBON, CHESTER, CLARION, CLEARFIELD, COLUMBIA, CRAWFORD, CUMBERLAND, DELAWARE, FOREST, JUNIATA, LACKAWANNA, LAWRENCE, LEHIGH, LUZERNE, MERCER, MCKEAN, MONROE, MONTGOMERY, NORTHHAMPTON, NORTHUMBERLAND, PIKE, SCHUYLKILL, SUSQUEHANNA, SNYDER, VENANGO, WARREN, WAYNE, AND WYOMING COUNTIES

IN THE COMMONWEALTH OF PENNSYLVANIA

ISSUED: xxxx xx, 202x

EFFECTIVE: xxxx xx, 202x

By:
Marc Lucca, President
Aqua Pennsylvania, Inc.
762 Lancaster Avenue
Bryn Mawr, Pennsylvania 19010

NOTICE

THIS TARIFF SUPPLEMNT MODIFIES THE EXISTING LEAD SERVICE LINE RULES IN COMPLIANCE WITH 52 PA. CODE § 65.51 ET SEQ.

LIST OF CHANGES MADE BY THIS TARIFF

Changes: Supplement No. XX to Tariff Water-PA P.U.C. No. 3 modifies the lead service line rules (Rules 20.1 and 20.2) in compliance with 52 Pa. Code § 65.51 et seq. Refer to pages 1, 2, 3, 4, 48, 49, 50, and 51.

TABLE OF CONTENTS

	Page Number		
Rates, Rules, and Regulations	1	XXXX Revised	(C)
List of Changes Made by This Tariff	2	XXXX Revised	(C)
Table of Contents	3	XXXX Revised	(C)
Table of Contents (cont'd)	4	XXXX Revised	(C)
Table of Contents (cont'd)	5	Original Page	
Held For Future Use	6	Original Page	
Description of Territory Served	7	Original Page	
Description of Territory Served (cont'd)	8	Original Page	
Description of Territory Served (cont'd)	9	Original Page	
Description of Territory Served (cont'd)	10	Original Page	
Description of Territory Served (cont'd)	11	First Revised	

SCHEDULE OF RATES:

Metered and Unmetered Service Charge	12.1	Original Page
Consumption Charge	12.2	Original Page
Consumption Charge (cont'd)	12.3	Original Page
Consumption Charge (cont'd)	12.4	Original Page
Metered and Unmetered Private Fire Service	12.5	Original Page
Metered and Unmetered Private Fire Service (cont'd)	12.6	Original Page
Public Fire Service	12.7	Original Page
Belle Aire Acres Division	12.8	Original Page
Shenandoah Division	12.9	First Revised
Shenandoah Division	12.10	Original Page
Industrial Standby Rate	13	Original Page
Industrial Standby Rate (cont'd)	14	Original Page
Industrial Standby Rate (cont'd)	15	Original Page
Resale and Electric Generation Standby Rate	16	Original Page
Resale and Electric Generation Standby Rate (cont'd)	17	Original Page
Resale and Electric Generation Standby Rate (cont'd)	18	Original Page
Rider DIS - Demand Based Industrial Service	19	Original Page
Rider DRS - Demand Based Resale Service	20	Original Page
Rider EGS - Electric Generation Service	21	Original Page
Rider OPI - Off Peak/Interruptible Rate Service	22	Original Page
Rider OPI - Off Peak/Interruptible Rate Service (cont'd)	23	Original Page
Distribution System Improvement Charge (DSIC)	24	Third Revised
DSIC (cont'd)	25	Original Page
DSIC (cont'd)	26	First Revised
DSIC (cont'd)	27	Original Page

TABLE OF CONTENTS

	Page Number		
State Tax Adjustment Surcharge (STAS)	28	First Revised	
Page Held For Future Use	29	Original Page	
Page Held For Future Use	30	Original Page	
Page Held For Future Use	31	Original Page	
Customer Assistance Program (CAP) Rider	32	Original Page	
CAP (cont'd)	33	Original Page	
Page Held For Future Use	34	Original Page	
Page Held For Future Use	35	Original Page	
Page Held For Future Use	36	Original Page	
Page Held For Future Use	37	Original Page	
Page Held For Future Use	38	Original Page	
RULES AND REGULATIONS:			
Introduction	39	Original Page	
Introduction (cont'd)	40	Original Page	
Definitions	41	Original Page	
Definitions (cont'd)	42	Original Page	
Definitions (cont'd)	43	Original Page	
Application for Service	44	Original Page	
Deposits and Credit Standards	45	Original Page	
Billing and Payment	46	Original Page	
Billing and Payment (cont'd)	47	Original Page	
Service Connections	48	XXXX Revised	(C)
Service Connections (cont'd)	49	XXXX Revised	(C)
Service Connections (cont'd)	50	XXXX Revised	(C)
Service Connections (cont'd)	51	XXXX Revised	(C)
Service Connections (cont'd)	52	Original Page	
Service Connections (cont'd)	53	Original Page	
Meters and Meter Locations	54	Original Page	
Meters and Meter Locations (cont'd)	55	Original Page	
Meters and Meter Locations (cont'd)	56	Original Page	
Construction Service	57	Original Page	
Metered Fire Service	58	Original Page	
Unmetered Fire Service/Hydrants	59	Original Page	
Unmetered Fire Service/Hydrants (cont'd)	60	Original Page	

RULES AND REGULATIONS

SERVICE CONNECTIONS

19. Company's Service Lines:

Except for service connections made in accordance with Rule 65, the Company will make all connections to its mains and furnish, install and maintain the Company's service main to and including the Curb Stop, which under normal circumstances will be placed inside the curb-line. The Company's service line will be the property of the Company and under its control. The point of delivery and sale for any water service furnished to the Customer shall be at the Curb Stop.

The maximum Company investment per Company service line shall be calculated using the same formula set forth in the definition of Company Contribution in Rule 62.

The cost of any Company service line in excess of the applicable maximum Company investment shall be paid by the Customer, plus all applicable taxes including income taxes occasioned by the contract. The Company may require payment of the estimated amount of such excess cost in advance of the installation and will make a partial repayment of the extent the actual cost is determined to be less than the estimate.

Whenever it is necessary to install a service line in advance of the date on which the premises are occupied and a meter is set, a deposit may be required in an amount not to exceed the estimated cost of installation, which deposit will be refunded to the depositor when the service becomes active (i.e., the meter has been set and the premises occupied), provided that event occurs within five years from the date of deposit.

20.1. Customer Service Line: The Customer's service line shall extend from the Property to the Curb Stop or curb line or such point as designated by the Company. All connections, service lines and fixtures owned by the Customer shall be maintained by the Customer in good order, and all meters and appurtenances owned by the Company and located on the Property of the Customer shall be protected properly by the Customer. All leaks in or other deteriorated condition of the Customer's service line or any other pipe or fixture in or upon the premises supplied must be repaired immediately by the owner or occupant of the premises.

(C)

SERVICE CONNECTIONS (cont'd)

20.2. Customer Owned Lead Service Line Replacements: **(C)**

Notwithstanding Rules 20.1, 21, and 25, the Company (or contractors employed by the Company) shall replace Customer Owned Lead Service Lines ("COLSLs") pursuant to the Company's Lead Service Line Replacement Program ("Replacement Program"), provided the customer (or the property owner if the customer is not the property owner) provides consent through a signed agreement.

Lead Service Line – LSL – shall be defined as a service line made of lead that connects the water main to a building inlet and a lead pigtail, gooseneck or other fitting that is connected to the lead line. A galvanized service line (iron or steel piping that has been dipped in zinc to prevent corrosion and rusting) is considered a Lead Service Line if it ever was or is currently downstream of any lead service line or service line of unknown material.

The Company will replace up to 1,500 COLSLs per year under the Company's Replacement Program.

If no shutoff valve exists along a specific length of pipe within a structure, the Company may install a shutoff valve which will serve as the point of demarcation between the property's service line and the property's interior water distribution piping.

No customer or property owner may install a partial LSL. A partial LSL shall result in termination of service until such time as the Company can replace the Company-owned LSL. A customer, or property owner where the customer is not the property owner, that elects to replace the COLSL themselves, shall replace the COLSL concurrent with the Company replacing the Company-owned LSL, provided that the customer or property owner shall provide the Company at least 90 days' notice prior to replacing the COLSL.

The Company shall refuse to establish service to a property where a customer or property owner (if the customer is not the property owner) has previously refused or failed to accept the Company's offer to replace the COLSL until the applicant verifies the replacement of the COLSL by providing a paid invoice from a licensed contractor or verified statement from a licensed contractor attesting to the completion of the COLSL replacement. The customer or property owner may also request Aqua (or its contractor) complete the COLSL replacement. Upon completion, service will be established or restored to the property.

RULES AND REGULATIONS

SERVICE CONNECTIONS (cont'd)

20.2. Customer Owned Lead Service Line Replacements (cont'd): **(C)**

Step In Rights

The Company may utilize Step In Rights in the following circumstances where a customer or occupier of a premise is not the property owner. The Company is authorized to replace a COLSL when:

a. The Company has attempted to contact the property owner with an offer to replace the COLSL in accordance with the Company's LSLR Plan.
b. The Customer or the occupier of the Property is not the property owner.
c. The Company has attempted to get authorization to replace the COLSL, the property owner cannot be identified, or the property owner has been notified and has not responded to the Company's offer to replace the COLSL.

In these circumstances, the Company may, in its discretion, replace the COLSL in accordance with the Company's LSLR Plan if such replacement would avoid the termination of water service to the Customer or the occupier of the property without obtaining the consent of the property owner. When the Company exercises Step In Rights, the Company, its officers, directors, employees and agents are released and held harmless from and against any and all liability, including liability to third parties and the property owner, for personal injury, including death, property damage, or other actions, damages, fines, penalties, claims, demands, judgments, losses, costs, expenses, suit and actions (including reasonable attorney's fees), for personal injury, including death, property damage or other injury, to the extent caused by or arising out of the work performed by the Company or its agents in replacing the COLSL.

RULES AND REGULATIONS

SERVICE CONNECTIONS (cont'd)

20.2. Customer Owned Lead Service Line Replacements (cont'd): **(C)**

Reimbursements

The Company shall provide a reimbursement to an eligible customer or property owner, if the customer is not the property owner, who replaced their LSL within 1 year before or after the commencement of a Lead Service Line Replacement ("LSLR") Project. A LSLR Project shall be defined as a Company scheduled lead service line replacement activity either in conjunction with main replacements, or a specific delineated project area to replace LSLs. LSLR Project Commencement shall be defined as installation of the first lead service line replacement within a lead service line project area. LSLR Project Area shall be defined as the area encompassing the Company's scheduled lead service line replacement activities, which includes the area within a 1-mile radius of a LSLR Project, if that area is served by the Company.

Reimbursements to customers or property owners, if the customer is not the property owner, require that the customer or property owner provides the Company with a paid invoice, a certification from a certified plumber, and other documentation required by the Company, in its sole discretion, to verify the replacement. Failure to provide sufficient information will result in no reimbursement being paid. The Company shall reimburse eligible customers or property owners up to 125% of the average costs of Aqua's LSLRs, not to exceed the actual cost incurred by the customer to replace their LSL. The average cost of Aqua's LSLRs in any year will be determined by the average cost of Aqua LSLRs in the prior calendar year. Reimbursements will be provided to customers or property owners through check mailed to the customer or property owner. Customers or property owners that are outside the LSLR Project Area or seek reimbursement for a replacement that occurred greater than one year before or after the LSLR Project Commencement will be ineligible for reimbursement.

Warranty

The Company (or its contractor) shall provide a warranty to the customer or property owner, if the customer is not the property owner, for a period of two years on the workmanship and materials of the LSLR and the restoration of surfaces. The two year warranty shall commence upon the re-establishment of water service to the property after the LSLR has occurred.

The maximum coverage under the warranty shall be only to repair or replace the Customer side service line if the failure was due to the workmanship or materials of the LSLR, and restoration of surfaces which shall mean restoration as reasonably as practicable to the condition that existed prior to the LSLR.

The Company will not be liable for any damages beyond the maximum coverage of the two year warranty as described in this warranty section.

If a repair is required and qualifies under the warranty, the customer or property owner consents and grants license to Aqua or its contractor to access the property and complete the repair as needed.

EXHIBIT C

Please find the following information submitted as supporting data in accordance with 52 Pa. Code §53.52(a):

1. **The specific reasons for each change.**

   The Company is filing this proposed tariff change to comply with the Commission's regulations under Act 120 of 2018 ("Act 120") at 52 Pa. Code § 65.51 et seq. The Company is also requesting an increase in the annual cap that has previously been granted by the Commission for the Company's pre-existing lead service line replacement ("LSLR") activities. The increase requested is due to expanded replacement activities due to the inclusion of galvanized service lines in the definition of lead service lines ("LSL"), identifying more LSLs due to service line inventory work, and increased costs for replacement of LSLs.

2. **The total number of customers served by the utility.**

   As of 12/31/2022, the Company served 450,618 customers.

3. **A calculation of the number of customers, by tariff subdivision, whose bill will be affected by the change:**

   All Aqua customers that have the Distribution System Improvement Charge ("DSIC") applied to their bill will be affected by the change.

4. **The effect of the change on the utility's customers.**

   Customers that have lead service lines will have the opportunity to have the Company, or its contractors, replace their customer lead service line at no direct cost to that customer. Additionally, customers that have replaced their LSLs, may be eligible for reimbursement of those costs.

5. **The direct or indirect effect of the proposed change on the utility's revenue and expenses.**

   Under Act 120, the costs associated with the LSLR Program will be recovered through the Company's DSIC or base rates. Table 19 of the Company's Long Term Infrastructure Improvement Plan ("LTIIP") shows projected costs of up to the cap of 1,500 replacements per year.

6. **The effect of the change on the service rendered by the utility.**

   Through the Company's LSLR Program, the Company will be working to eliminate customer LSLs across its footprint and thereby reducing customer exposure to lead. The Company does not anticipate any other significant effect on the service rendered by the Company.

7. **All factors considered by the utility in its determination to make the change. The list shall include a comprehensive statement about why these factors were chosen and the relative importance of each.**

   The Company considered the following factors in its determination to make the proposed change in the tariff, they are as follows:

   (a) The Company is required to comply with Act 120 and the Commission's regulations which require that the Company submit a LSLR Program in accordance with the Commissions regulations no later than the effective date of rates established under the entity's next base rate case filed following the effective date of the Commission's lead regulations or within two years of the effective date of the Commission's lead regulations, whichever comes first.

   (b) Reducing and eliminating lead service lines throughout the Company's systems.

   These factors were chosen because they are regulatory requirements, and they will improve overall system integrity and the health of the Company's customers and the Commonwealth overall.

8. **Studies undertaken by the utility in order to specifically address the proposed changes.**

   The Company did not undertake a study to specifically address the proposed changes.

9. **Customer polls taken and other documents which indicate customer acceptance and desire for the proposed change. If the poll or other documents reveal discernible public opposition, an explanation of why the change is in the public interest shall be provided.**

   While the Company has not taken a formal poll with respect to customer acceptance and desire for the proposed change, the Company has already been replacing customer-owned lead service lines in its service area and customers that have participated were generally supportive of this program.

10. Plans the utility has for introducing or implementing the changes with respect to its ratepayers.

The Company has included in its LSLR Program various communications and outreach documents as required by the Commission's regulations. Please see the LSLR Plan attached to the LTIIP.

11. FCC, FERC, or Commission orders or rulings applicable to the filing.

Please refer to the Commission's Order entered March 14, 2022, at Docket No. L-2020-3019521 regarding the implementation of Act 120. Please also refer to the Commission's Order entered July 14, 2021, at Docket No. P-2020-3021766 regarding the Company's previously-approved LSLR activities.

VERIFICATION

I, Michael Fili, Vice President, Capital Planning, Design & Construction of Aqua Pennsylvania, Inc., hereby state that the facts set forth in Aqua Pennsylvania, Inc.'s Third Long Term Infrastructure Improvement Plan and Lead Service Line Replacement Program are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Michael Fili
Vice President, Capital Planning, Design & Construction
Aqua Pennsylvania, Inc.

Dated: October 23, 2023