December 8, 2020

### VIA E-FILING

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

Re: Joint Application of Aqua Pa and the Borough of Phoenixville for approval of 1) the acquisition by Aqua of the water system assets of Phoenixville used in connection with the water service provided by Phoenixville in East Pikeland and Schuylkill Townships, Chester County, and in Upper Providence Township, Montgomery County, PA; and 2) the right of Aqua to begin to supply water service to the public in portions of East Pikeland Township, Chester County, and Upper Providence Township, Montgomery County, PA and 3) the abandonment by Phoenixville of public water service in East Pikeland Township, Chester County, and in Upper Providence Township, Montgomery County, and to certain locations in Schuylkill Township, Chester County, PA. Also request for approval of Section 507 PUMC contracts between Aqua PA and Phoenixville Borough.

AUUA

Docket No: A-2018-2642837

Dear Secretary Chiavetta:

Pursuant to the Commission's Statement Policy relating to water and wastewater system acquisitions at 52 Pa. Code § 69.721(f) enclosed is a copy of the original plant-in-service valuation of the water system assets acquired from the Borough of Phoenixville on December 4, 2019. Aqua Pennsylvania, Inc. is also serving these documents to the Bureau of Technical Utility Services.

Should you have any questions regarding this filing, please contact me at (610) 520-6359.

Sincerely,

Ein Feenerg

Erin M. Feeney Manager of Rates and Planning Aqua Pennsylvania, Inc.

Enclosures cc: Certificate of Service

### BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Aqua Pennsylvania, Inc.

Docket No. A-2018-2642837

### **CERTIFICATE OF SERVICE**

I hereby certify that I have this day served a true copy of the following document, the original cost plant-in-service valuation, in accordance with the requirements of 52 Pa. Code § 1.54 upon the person(s) and in the manner indicated below:

### VIA EMAIL

Christine Hoover, Esq. Office of Consumer Advocate 555 Walnut Avenue Fifth Floor, Forum Place Harrisburg, PA 17101-1923 (email to: <u>choover@paoca.org</u>)

Richard Kanaskie, Director Bureau of Investigation and Enforcement Pennsylvania Public Utility Commission Commonwealth Keystone Building 400 North Street Harrisburg, PA 17120 (email to: <u>rkanaskie@pa.gov</u>)

Larry Treaster Bureau of Audits Pennsylvania Public Utility Commission Three East Keystone Commonwealth Keystone Building 400 North Street Harrisburg, PA 17102 (email to: <u>latreaster@pa.gov</u>)

Dated: December 8, 2020

John R. Evans Office of Small Business Advocate Suite 202, Commerce Bldg. 300 North Second Street Harrisburg, PA 17101 (email to: jorevan@pa.gov)

Paul Diskin, Director Bureau of Technical Utility Services Pennsylvania Public Utility Commission Commonwealth Keystone Building 400 North Street Harrisburg, PA 17120 (email to: <u>pdiskin@pa.gov</u>)

Ein Feener

Erin M. Feeney Manager of Rates and Planning Aqua Pennsylvania, Inc. 762 W. Lancaster Avenue Bryn Mawr, PA 19010 610-520-6359 EFDomzalski@aquaamerica.com



Acquisition of the Water System Assets of Borough of Phoenixville located in East Pikeland and Upper Providence

> Original Cost of the Water Utility Plant and Depreciation Reserve Calculations at December 5, 2019

> > Bу

David A. Sheffer, Principal

AUS CONSULTANTS

3601 N. Progress Avenue, Suite 202

Harrisburg, PA 17110

717-763-9890 dsheffer@ausconsultants.com





DAVID A SHEFFER Principal

275 Grandview Avenue, Suite 100 Camp Hill, PA 17011 717.763.9890 = Tel 717.763.9931 = Fax dsheffer@ausconsultants.com

August 11, 2020

Mr. Chad Nardelli Manager, Property Accounting Aqua Pennsylvania, Inc. 762 West Lancaster Ave. Bryn Mawr, PA 19010

### RE: Acquisition of the Water System Assets of Borough of Phoenixville

Dear Mr. Nardelli:

In accordance with your request, we have prepared an inventory of the water system assets of portions of East Pikeland and Schuylkill Townships in Chester County and Upper Providence Township in Montgomery County, Pennsylvania ("Assets").

The inventory was prepared to conform to the Uniform System of Accounts for Water/Wastewater Utilities as prescribed by the National Association of Regulatory Utility Commissioners.

The original cost of the property of Assets was determined from a detailed analysis of the books and records of Assets and has been segregated as follows:

	Original	Calculated
	Cost	Reserve
Account 101 - Utility Plant in Service	\$1,803,612	\$776,888

The results of our study are discussed and supported by the Executive Summary contained in Section 1, the detailed original costs in Section 2 and the depreciation calculations in Section 3.

Respectfully submitted, AUS Consultants

TDDC. SMM

BY: David A. Sheffer



### Acquisition of the Water System Assets of Borough of Phoenixville

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# **SECTION 1**

#### AQUA PENNSYLVANIA, INC.

### Acquisition of the East Pikeland and Providence Township Water System Assets of Borough of Phoenixville

### Executive Summary

### BACKGROUND

The Borough of Phoenixville ("Borough") provides water service to the Borough and portions of East Pikeland and Upper Providence Townships in Chester County and Montgomery County, Pennsylvania ("Assets"). Fire protection service is provided to its service area.

On April 26, 2017, Aqua Pennsylvania, Inc. ("Aqua") filed an application to seek the Public Utility Commission approval of the acquisition of a portion of the Borough's water system assets, which are located in East Pikeland Township, Chester County and Upper Providence Township, Montgomery County, Pennsylvania. The sale included all assets of the system, located in the two townships, including the distribution system, meters and hydrants. The system Assets were purchased by Aqua-PA from the Borough on December 5, 2019.

#### **OVERVIEW OF PURCHASED FACILITIES**

The assets acquired, are for the distribution of water, of which consists of approximately 33,500 feet of distribution piping and valves, 53 fire hydrants, meters and services. There are approximately 530 customers which all are metered. Water is supplied by the Borough through three master meters. Two located in Upper Providence Township and one in East Pikeland Township. Most of the assets are mains, with majority being 6"-10" cast iron pipe. Included are 53 fire hydrants and over 500 meters.

Aqua intends to upgrade the system where needed.

### Source of Supply Facilities:

Water is purchased from the Borough of Phoenixville though 3 master meters. Two meters are in the Upper Providence and the other located in the smaller East Pikeland section.

### Distribution System

The water distribution mains, account for the majority of the purchased assets, with most mains being documented as 6" - 10" diameter ductile/cast iron pipe. The footage of the distribution mains was verified by the scaling of system maps, along with the aid of Aqua personnel providing knowledge of the possible location of the mains and by walking the line with a measuring wheel.

Each customer has their own service line running from the main to the curb. The number of customers was verified via conversations with Aqua personnel. The same goes for services.

Through additional conversations with Aqua personnel and due diligence, AUS Consultants has garnered appropriate information as to the quality of the system. All assets except for fire hydrants are below ground. A list of assets is contained in Section 2 of this report.

### **OVERVIEW OF THE STUDY TECHNIQUES**

The study of the original cost of the system's assets was conducted in three (3) phases. First, a comprehensive utility plant inventory was conducted to ascertain and confirm the type and quality of the property owned and operated system.

Second, the original cost of the inventoried property was determined based on a review of available construction records and other available sources. After several conversations with

1-2

Aqua personnel, AUS Consultants received adequate data and maps in order to appropriately develop an accurate cost and inventory. The age of the plant was determined using information obtained from casting dates off the hydrants and Aqua personnel's knowledge of the system. Construction costs were developed utilizing Phoenixville Borough's installed costs and/or installed costs from comparable water systems.

Third, Aqua requested theoretical accrued depreciation calculations performed based upon the results of the original cost study to reflect the theoretical capital recovery of the plant in service at December 5, 2019.

A complete discussion of the methodologies employed in the original cost study is set forth in the following sections of this report.

### EXPLANATION OF THE STUDY

### Utility Plant Inventory

A comprehensive inventory of the system's assets was performed, based upon a review of system maps. At this time a count of the customers, hydrants and valves was conducted. Also, the footage of the mains was verified by using system maps and walking the system with a measuring wheel, including reviewing components. Aqua personnel provided any additional knowledge of the system to aid in the inventory process.

### Mass Property

For the purpose of this study, "mass" property consists of Utility Plant recorded on Account 331 (Mains and Accessories), Account 333 (Services), Account 334 (Meters) and Account 335 (Hydrants).

1-3

For Account 331, footage of pipe was determined by reviewing maps as well as speaking with Aqua personnel. This same procedure was utilized for valves, services and hydrants.

As previously noted, all customers are metered (Account 334), and are serviced through a 5/8" meter.

### Non-Depreciable Plant:

303.10 Easements

### **Depreciable Plant:**

331.00 Mains & Accessories333.00 Services334.00 Meters335.00 Hydrants

### **ORIGINAL COST ANALYSIS**

The goal of the original cost study was to ascertain the original cost of the system's plant in service by fixed capital accounts and, within each account, to determine the original cost by retirement unit (for non-mass) or size and type (for mass property) and by vintage year. Reasonably reliable data exits to establish the age and original cost of the system's assets by account. The original cost determinations for Account 331 (Mains and Accessories), Account 333 (Services), and Account 334 (Meters) are explained as follows:

### Account 331, Account 333 and Account 334

The original cost and footage of mains and accessories was determinable from available records and through conversations with Aqua personnel. As previously explained, the physical inventory provided the total number of valves and meters. Unit costs were developed utilizing Aqua installed costs and cost information from other available sources. The original cost values

at April 26, 2017 for the system's mains, services and meters as established by the original cost total \$1,333,857; \$290,438; \$131,016, respectively.

### **SUMMARY OF ORIGINAL COST**

The results of the original cost study established that the original cost of the system's utility plant in service is not less than \$1,803,612, as summarized by plant account in Section 2 (Pg. 2-1). In review of all provided records, AUS Consultants did not identify any Contributions in Aid-of-Construction.

### **DEPRECIATION RESERVE**

AUS Consultants, as requested, prepared a theoretical calculated deprecation reserve of the utility plant in service at December 5, 2019. The calculated accrued depreciation reserve amounts to \$776,888 at December 5, 2019. The calculations were based upon the Straight Line-Average Service Life Methodology utilizing appropriate service lives and mortality curves for the specific fixed capital assets by category and condition of the plant at the study date.

The results of those calculations and details supporting documentation are included in Section 3 of this report.

# **SECTION 2**

### Acquisition of Phoenixville Water System (East Pikeland and Upper Providence Township)

### Summary of the Original Cost of Plant in Service as of December 5, 2019

Acct. No.	Account Title	 Original Cost
	Non-Depreciable Plant:	
303.10	Easements	\$ 1.00
	Total Non-Depreciable	 1.00
	Depreciable Plant:	
	Mains & Accessories	
331.11	CI 4" and Under	\$ 78,788.75
331.12	CI 6" - 10"	797,819.80
	CI 12" & Over	372,952.44
	AC 6" - 10"	38,153.32
	AC 12" & Over	1,713.42
	Copper 4" & Under	1,497.66
331.90	Valves	42,931.29
	Total Account 331 Mains & Accessories	\$ 1,333,856.68
333.00	Services	290,438.03
334.00	Meters	131,016.00
335.00	Hydrants	48,300.64
	Total Depreciable Plant	\$ 1,803,611.35
	Total Original Cost	\$ 1,803,612.35

### Acquisition of Phoenixville Water System (East Pikeland and Upper Providence Township)

### Summary of the Original Cost of Plant in Service as of December 5, 2019 Account 303.10 Easements

Item	Year Installed Unit	No.	iginal cost
Easements			\$ 1.00
TOTAL Account 303.10			\$ 1.00

### Acquisition of Phoenixville Water System (East Pikeland and Upper Providence Township)

### Summary of the Original Cost of Plant in Service as of December 5, 2019 Account 331 - Mains & Accessories

Acct. NoItem	Year Installed	Unit	No.		Original Cost
331.11 Mains and Accessories- Cast Iron - 4" and Unde	er Pipe				
4" and Under Cast Iron Pipe	1911	Ft.	214	\$	142.31
4" and Under Cast Iron Pipe	1979	Ft.	1,485	+	20,403.90
4" and Under Cast Iron Pipe	1982	Ft.	3,516		58,242.54
Total Account 331.11 - 4" and Under Cast Iron F	Pipe			\$	78,788.75
331.12 Mains and Accessories - Cast Iron - 6" - 10" Pip	е				
6" - 10" Cast Iron Pipe	1911	Ft.	1,737	\$	2,680.77
6" - 10" Cast Iron Pipe	1957	Ft.	148		1,675.85
6" - 10" Cast Iron Pipe	1979	Ft.	1,335		42,372.90
6" - 10" Cast Iron Pipe	1980	Ft.	1,541		53,400.79
6" - 10" Cast Iron Pipe	1982	Ft.	5,023		192,146.49
6" - 10" Cast Iron Pipe	1985	Ft.	1,930		87,409.70
6" - 10" Cast Iron Pipe	1986	Ft.	1,872		84,458.40
6" - 10" Cast Iron Pipe	1987	Ft.	1,322		61,005.89
6" - 10" Cast Iron Pipe	1988	Ft.	1,116		53,988.36
6" - 10" Cast Iron Pipe	1989	Ft.	1,619		82,212.82
6" - 10" Cast Iron Pipe	1997	Ft.	2,222		136,467.83
Total Account 331.12 - 6" - 10" Cast Iron Pipe				\$	797,819.80
331.13 Mains and Accessories - Cast Iron - 12" and Ov	er Pipe				
12" and Over Cast Iron Pipe	1949	Ft.	1,183	\$	18,312.84
12" and Over Cast Iron Pipe	1971	Ft.	1,582		51,652.30
12" and Over Cast Iron Pipe	1978	Ft.	1,952		116,963.84
12" and Over Cast Iron Pipe	1982	Ft.	2,478		186,023.46
Total Account 331.13 - 12" and Over Cast Iron F	Pipe			\$	372,952.44
331.22 Mains and Accessories - Asbestos Cement 6" -					
6" - 10" Asbestos Cement Pipe	1980	Ft.	1,101	\$	38,153.32
Total Account 331.22 - 6" - 10" Asbestos Ceme	nt			\$	38,153.32

# Acquisition of Phoenixville Water System (East Pikeland and Upper Providence Township)

### Summary of the Original Cost of Plant in Service as of December 5, 2019 Account 331 - Mains & Accessories

Acct. <u>No.</u>	Item	Year Installed	Unit	No.	-	Original Cost
331.23	Mains and Accessories - Asbestos Cement 12" and	Over Pipe				
	12" and Over Asbestos Cement Pipe	1971	Ft.	114	\$	1,713.42
	Total Account 331.23 - 12" and Over Asbestos Ceme	ent			\$	1,713.42
331.51	Mains and Accessories - Copper 4" and Under Pipe 4" and Under Copper Pipe	1979	Ft.	109	\$	1,497.66
		1070	1.	100	Ψ	1,407.00
	Total Account 331.51 - 4" and Under Copper Pipe				\$	1,497.66
331.90	) Mains and Accessories - Valves					
	Valves	1949	Ea.	1	\$	119.19
	Valves	1978	Ea.	4		1,963.80
	Valves	1980	Ea.	10		5,732.50
	Valves	1982	Ea.	28		18,355.40
	Valves	1985	Ea.	8		5,766.56
	Valves	1986	Ea.	9		6,512.85
	Valves	1989	Ea.	3		2,511.51
	Valves	1997	Ea.	2		1,969.48
	Total Account 331.90 - Valves				\$	42,931.29
	TOTAL Account 331 - Mains and Accessories				\$	1,333,856.68

# Acquisition of Phoenixville Water System (East Pikeland and Upper Providence Township)

### Summary of the Original Cost of Plant in Service as of December 5, 2019 Account 333.00 - Services

Item	Year <u>Installed</u>	Unit	No.	Original Cost
3				
-	1930	Ea.	67 \$	1,747.36
	1932	Ea.	1	24.21
	1934	Ea.	1	22.35
	1936	Ea.	1	24.21
	1939	Ea.	1	26.08
	1941	Ea.	2	55.88
	1942	Ea.	1	29.80
	1943	Ea.	2	59.60
	1944	Ea.	1	31.67
	1945	Ea.	2	63.34
	1946	Ea.	1	35.39
	1947	Ea.	2	81.96
	1948	Ea.	1	46.57
	1949	Ea.	2	100.58
	1950	Ea.	1	52.15
	1951	Ea.	4	216.08
	1952	Ea.	4	230.96
	1953	Ea.	3	184.41
	1954	Ea.	4	260.76
	1955	Ea.	4	268.24
	1956	Ea.	3	217.92
	1957	Ea.	4	305.48
	1958	Ea.	4	327.84
	1959	Ea.	4	342.72
	1960	Ea.	3	268.23
	1961	Ea.	4	372.52
	1962	Ea.	3	285.00
	1963	Ea.	3	296.16
	1964	Ea.	3	307.35
	1965	Ea.	3	324.12
	1966	Ea.	4 3	447.04
	1967 1968	Ea. Ea.	3	352.05 368.82
	1968	Ea. Ea.	3	402.33
	1909	Ea. Ea.	3	402.33
	1970	Ea. Ea.	5	828.90
	1971	Ea.	5	894.10
	1972	Ea.	5	931.35
	1974	Ea.	5	1,071.05
	1975	Ea.	5	1,145.55
	1976	Ea.	5	1,210.75
	1977	Ea.	5	1,294.55
	1978	Ea.	5	1,350.45
	1979	Ea.	5	1,490.15
	1980	Ea.	5	1,629.85
	1981	Ea.	2	685.46
	1001	<u>_</u> .	<u> </u>	000.10

Services

# Acquisition of Phoenixville Water System (East Pikeland and Upper Providence Township)

### Summary of the Original Cost of Plant in Service as of December 5, 2019 Account 333.00 - Services

Item	Year Installed	Unit	No.	Original Cost
	1000	Γ.	0	707.00
	1982	Ea.	2	737.62
	1983	Ea.	2	771.14
	1984	Ea.	3	1,201.44
	1985	Ea. Ea.	2	823.30
	1986		2	841.92
	1987	Ea.	2	856.84
	1988	Ea.	3	1,369.08
	1989	Ea.	2 2	961.14
	1990	Ea.	10	976.04
	1991	Ea.		5,066.50
	1992	Ea.	9	4,744.26
	1993	Ea.	10	5,439.00
	1994	Ea.	9	5,029.20
	1995	Ea.	9	5,146.56
	1996	Ea.	10	5,979.20
	1997	Ea.	9	5,414.76
	1998	Ea.	10	6,146.80
	1999	Ea.	9	5,599.17
	2000	Ea.	10	6,482.10
	2001	Ea.	9	5,934.51
	2002	Ea.	9	6,035.04
	2003	Ea.	9	6,169.14
	2004	Ea.	10	7,227.20
	2005	Ea.	9	6,873.30
	2006	Ea.	9	7,610.85
	2007	Ea.	10	9,034.00
	2008	Ea.	9	8,616.78
	2009	Ea.	9	9,002.34
	2010	Ea.	10	10,337.90
	2011	Ea.	19	20,102.00
	2012	Ea.	19	20,845.28
	2013	Ea.	19	21,305.27
	2014	Ea.	20	22,650.20
	2015	Ea.	19	21,871.47
	2016	Ea.	19	22,083.89

TOTAL Account 333.00 - Services

\$ 290,438.03

# Acquisition of Phoenixville Water System (East Pikeland and Upper Providence Township)

### Summary of the Original Cost of Plant in Service as of December 5, 2019 Account 334.00 - Meters

Item	Year Installed	Unit	No.	Original Cost
Meters	2001	Ea.	530	\$ 131,016.00
TOTAL Account 334.00 - Meters				\$ 131,016.00

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# Acquisition of Phoenixville Water System (East Pikeland and Upper Providence Township)

### Summary of the Original Cost of Plant in Service as of December 5, 2019 Account 335.00 - Hydrants

	Item	Year Installed	Unit	No.	Original Cost
Hydrants		1966	EA	1 \$	122.11
		1974	EA	2	492.46
		1978	EA	1	364.34
		1980	EA	4	1,657.52
		1982	EA	5	2,452.25
		1983	EA	1	528.49
		1985	EA	4	2,282.12
		1986	EA	5	2,962.75
		1987	EA	4	2,458.28
		1988	EA	1	640.59
		1989	EA	1	686.63
		1997	EA	2	1,901.76
		1998	EA	1	986.91
		1999	EA	2	2,033.88
		2000	EA	2	2,105.94
		2001	EA	1	1,103.02
		2009	EA	2	2,938.72
		2019	EA	3	6,419.91
		1990	EA	11	16,162.96

TOTAL Account 335.00 - Hydrants

53 \$ 48,300.64

# **SECTION 3**

### Acquisition of Phoenixville Water System (East Pikeland and Upper Providence Township)

### Summary of Original Cost, Calculated Depreciation Reserve and Depreciated Original Cost as of December 05, 2019

Acct. <u>No.</u>	Description	Original Cost at Dec. 5, 2019	ASL/Iowa <u>Curve</u>	Depreciation Reserve	0	epreciated riginal Cost Dec. 5, 2019
	Non-Depreciable Plant:					
303.10	Easements	\$1.00		\$0.00	\$	1.00
	Total Non-Depreciable Plant	\$1.00		\$0.00	\$	1.00
	Depreciable Plant:					
	Mains & Accessories:					
331.11	CI 4" and Under	78,788.75	65-R3	42,117.13		36,671.62
331.12	CI 6" - 10"	797,819.80	80-R3	309,844.25		487,975.55
331.13	CI 12" & Over	372,952.44	90-R3	160,892.23		212,060.21
331.22	AC 6" - 10"	38,153.32	70-R3	19,624.98		18,528.34
331.23	AC 12" & Over	1,713.42	75-R3	990.71		722.71
331.51	Copper 4" & Under	1,497.66	50-R3	1,036.75		460.91
331.90	Valves	42,931.29	75-R3	19,054.94		23,876.35
	Total Account 331 - Mains & Accessories	1,333,856.68		553,560.99		780,295.69
333.00	Services	290,438.03	50-R3	80,905.54		209,532.49
334.00	Meters	131,016.00	20-R3	125,308.83		5,707.17
335.00	Hydrants	48,300.64	65-R3	17,112.21		31,188.43
	Total Depreciable Plant	\$1,803,611.35		\$776,887.57	9	61,026,723.78
	Total Plant in Service	\$1,803,612.35		\$776,887.57	\$	1,026,724.78

Aqua Pennsylvania, Inc. EastPikeland&UpperProvidence 331.11 Mains & Accessories - CI 4" and Under

	Salvage Value:	0% Averag	e Service Life: 65	Survivor Curve:	<i>R3</i>
Year	Original Cost	Expectancy	Avg. Service Life	Reserve Ratio	Calculated Reserve
(1)	(2)	(3)	(4)	(5)	(6)
1911	142.31	0.57	65.00	0.99119	141
1979	20,403.90	28.58	65.00	0.56029	11,432
1982	58,242.54	30.91	65.00	0.52443	30,544
Total	78,788.75				42,117.13

## Aqua Pennsylvania, Inc. EastPikeland&UpperProvidence 331.12 Mains & Accessories - CI 6"-10"

# Original Cost Of Utility Plant In Service And Development Of Calculated Depr Reserve as of December 05, 2019 Based Upon Broad Group/Remaining Life Procedure and Technique

	Salvage Value:	0% Averag	e Service Life: 80	Survivor Curve:	<i>R3</i>
Year	Original Cost	Expectancy	Avg. Service Life	Reserve Ratio	Calculated Reserve
(1)	(2)	(3)	(4)	(5)	(6)
1911	2,680.77	6.63	80.00	0.91709	2,459
1957	1,675.85	26.12	80.00	0.67354	1,129
1979	42,372.90	42.62	80.00	0.46727	19,800
1980	53,400.79	43.45	80.00	0.45688	24,398
1982	192,146.49	45.13	80.00	0.43592	83,760
1985	87,409.70	47.69	80.00	0.40389	35,304
1986	84,458.40	48.55	80.00	0.39309	33,199
1987	61,005.89	49.42	80.00	0.38221	23,317
1988	53,988.36	50.30	80.00	0.37124	20,043
1989	82,212.82	51.18	80.00	0.36022	29,615
1997	136,467.83	58.41	80.00	0.26982	36,822
Total	797,819.80				309,844.25

Aqua Pennsylvania, Inc. EastPikeland&UpperProvidence 331.13 Mains & Accessories - CI 12" & Over

	Salvage Value:	0% Averag	e Service Life: 90	Survivor Curve:	<i>R3</i>
Year	Original Cost	Expectancy	Avg. Service Life	Reserve Ratio	Calculated Reserve
(1)	(2)	(3)	(4)	(5)	(6)
1949	18,312.84	29.26	90.00	0.67492	12,360
1971	51,652.30	45.54	90.00	0.49398	25,515
1978	116,963.84	51.35	90.00	0.42944	50,229
1982	186,023.46	54.78	90.00	0.39129	72,789
Total	372,952.44				160,892.23

Aqua Pennsylvania, Inc. EastPikeland&UpperProvidence 331.22 Mains & Accessories - AC 6" - 10"

	Salvage Value:	0% Averag	e Service Life: 70	Survivor Curve:	<i>R3</i>
Year	Original Cost	<b>Expectancy</b>	Avg. Service Life	Reserve Ratio	Calculated Reserve
(1)	(2)	(3)	(4)	(5)	(6)
1980	38,153.32	33.99	70.00	0.51437	19,625
Total	38,153.32				19,624.98

Aqua Pennsylvania, Inc. EastPikeland&UpperProvidence 331.23 Mains & Accessories - AC 12" & Over

	Salvage Value:	0% Averag	e Service Life: 75	Survivor Curve:	<i>R3</i>
Year	Original Cost	<b>Expectancy</b>	Avg. Service Life	Reserve Ratio	Calculated Reserve
(1)	(2)	(3)	(4)	(5)	(6)
1971	1,713.42	31.63	75.00	0.57821	991
Total	1,713.42				990.71

Aqua Pennsylvania, Inc. EastPikeland&UpperProvidence 331.51 Mains & Accessories - Copper 4'' & Under

	Salvage Value:	0% Averag	e Service Life: 50	Survivor Curve:	<i>R3</i>
Year	Original Cost	Expectancy	Avg. Service Life	Reserve Ratio	Calculated Reserve
(1)	(2)	(3)	(4)	(5)	(6)
1979	1,497.66	15.39	50.00	0.69225	1,037
Total	1,497.66				1,036.75

### Aqua Pennsylvania, Inc. EastPikeland&UpperProvidence 331.90 Mains & Accessories - Valves

	Salvage Value:	0% Averag	e Service Life: 75	Survivor Curve:	<i>R3</i>
Year	Original Cost	Expectancy	Avg. Service Life	Reserve Ratio	Calculated Reserve
(1)	(2)	(3)	(4)	(5)	(6)
1949	119.19	17.37	75.00	0.76835	92
1978	1,963.80	37.08	75.00	0.50561	993
1980	5,732.50	38.70	75.00	0.48405	2,775
1982	18,355.40	40.34	75.00	0.46208	8,482
1985	5,766.56	42.86	75.00	0.42850	2,471
1986	6,512.85	43.71	75.00	0.41715	2,717
1989	2,511.51	46.31	75.00	0.38257	961
1997	1,969.48	53.47	75.00	0.28706	565
Total	42,931.29				19,054.94

## Aqua Pennsylvania, Inc. EastPikeland&UpperProvidence 333.00 Services

# Original Cost Of Utility Plant In Service And Development Of Calculated Depr Reserve as of December 05, 2019 Based Upon Broad Group/Remaining Life Procedure and Technique

S	alvage Value:	0% Averag	e Service Life: 50	Survivor Curve:	<i>R3</i>
Year	Original Cost	Expectancy	Avg. Service Life	Reserve Ratio	Calculated Reserve
(1)	(2)	(3)	(4)	(5)	(6)
1930	1,747.36	0.00	0.00	1.00000	1,74
1932	24.21	0.00	0.00	1.00000	2
1934	22.35	0.00	0.00	1.00000	2
1936	24.21	0.50	50.00	0.99000	2
1939	26.08	1.01	50.00	0.97973	2
1941	55.88	1.47	50.00	0.97069	5
1942	29.80	1.70	50.00	0.96595	2
1943	59.60	1.94	50.00	0.96111	5
1944	31.67	2.19	50.00	0.95617	3
1945	63.34	2.44	50.00	0.95117	6
1946	35.39	2.69	50.00	0.94611	3
1947	81.96	2.95	50.00	0.94101	7
1948	46.57	3.21	50.00	0.93589	4
1949	100.58	3.46	50.00	0.93077	9
1950	52.15	3.72	50.00	0.92564	4
1951	216.08	3.97	50.00	0.92051	19
1952	230.96	4.23	50.00	0.91537	21
1953	184.41	4.49	50.00	0.91021	16
1954	260.76	4.75	50.00	0.90500	23
1955	268.24	5.01	50.00	0.89972	24
1956	217.92	5.28	50.00	0.89434	19
1957	305.48	5.56	50.00	0.88883	27
1958	327.84	5.84	50.00	0.88317	29
1959	342.72	6.13	50.00	0.87731	30
1960	268.23	6.44	50.00	0.87123	23
1961	372.52	6.75	50.00	0.86490	32
1962	285.00	7.08	50.00	0.85830	24
1963	296.16	7.43	50.00	0.85140	25

### Aqua Pennsylvania, Inc. EastPikeland&UpperProvidence 333.00 Services

# **Original Cost Of Utility Plant In Service** And Development Of Calculated Depr Reserve as of December 05, 2019 Based Upon Broad Group/Remaining Life Procedure and Technique

S	Salvage Value: 0% Average Service Life: 50		Survivor Curve:	<i>R3</i>	
Year	Original Cost	Expectancy	Avg. Service Life	Reserve Ratio	Calculated Reserve
(1)	(2)	(3)	(4)	(5)	(6)
1964	307.35	7.79	50.00	0.84419	25
1965	324.12	8.17	50.00	0.83664	27
1966	447.04	8.56	50.00	0.82874	37
1967	352.05	8.98	50.00	0.82047	28
1968	368.82	9.41	50.00	0.81184	29
1969	402.33	9.86	50.00	0.80283	32
1970	441.45	10.33	50.00	0.79344	35
1971	828.90	10.82	50.00	0.78367	65
1972	894.10	11.32	50.00	0.77352	69
1973	931.35	11.85	50.00	0.76299	71
1974	1,071.05	12.40	50.00	0.75208	80
1975	1,145.55	12.96	50.00	0.74081	84
1976	1,210.75	13.54	50.00	0.72918	88
1977	1,294.55	14.14	50.00	0.71720	92
1978	1,350.45	14.76	50.00	0.70489	95
1979	1,490.15	15.39	50.00	0.69225	1,03
1980	1,629.85	16.04	50.00	0.67929	1,10
1981	685.46	16.70	50.00	0.66603	45
1982	737.62	17.38	50.00	0.65247	48
1983	771.14	18.07	50.00	0.63863	49
1984	1,201.44	18.77	50.00	0.62453	75
1985	823.30	19.49	50.00	0.61016	50
1986	841.92	20.22	50.00	0.59554	50
1987	856.84	20.97	50.00	0.58067	49
1988	1,369.08	21.72	50.00	0.56557	77
1989	961.14	22.49	50.00	0.55024	52
1990	976.04	23.27	50.00	0.53469	52
1991	5,066.50	24.05	50.00	0.51892	2,62

## Aqua Pennsylvania, Inc. EastPikeland&UpperProvidence 333.00 Services

S	Salvage Value:	0% Averag	e Service Life: 50	Survivor Curve:	<i>R3</i>
Year	Original Cost	Expectancy	Avg. Service Life	Reserve Ratio	Calculated Reserve
(1)	(2)	(3)	(4)	(5)	(6)
1992	4,744.26	24.85	50.00	0.50293	2,386
1993	5,439.00	25.66	50.00	0.48674	2,647
1994	5,029.20	26.48	50.00	0.47034	2,365
1995	5,146.56	27.31	50.00	0.45375	2,335
1996	5,979.20	28.15	50.00	0.43696	2,613
1997	5,414.76	29.00	50.00	0.41998	2,274
1998	6,146.80	29.86	50.00	0.40281	2,476
1999	5,599.17	30.73	50.00	0.38547	2,158
2000	6,482.10	31.60	50.00	0.36794	2,385
2001	5,934.51	32.49	50.00	0.35025	2,079
2002	6,035.04	33.38	50.00	0.33239	2,006
2003	6,169.14	34.28	50.00	0.31437	1,939
2004	7,227.20	35.19	50.00	0.29620	2,141
2005	6,873.30	36.11	50.00	0.27788	1,910
2006	7,610.85	37.03	50.00	0.25942	1,974
2007	9,034.00	37.96	50.00	0.24083	2,176
2008	8,616.78	38.89	50.00	0.22211	1,914
2009	9,002.34	39.84	50.00	0.20327	1,830
2010	10,337.90	40.78	50.00	0.18432	1,905
2011	20,102.00	41.74	50.00	0.16526	3,322
2012	20,845.28	42.69	50.00	0.14611	3,046
2013	21,305.27	43.66	50.00	0.12686	2,703
2014	22,650.20	44.62	50.00	0.10753	2,436
2015	21,871.47	45.59	50.00	0.08813	1,927
2016	22,083.89	46.57	50.00	0.06865	1,516
Total	290,438.03				80,905.54

## Aqua Pennsylvania, Inc. EastPikeland&UpperProvidence 334.00 Meters

	Salvage Value:	0% Averag	e Service Life: 20	Survivor Curve:	<i>R3</i>
Year	Original Cost	Expectancy	Avg. Service Life	Reserve Ratio	Calculated Reserve
(1)	(2)	(3)	(4)	(5)	(6)
1989	131,016.00	0.87	20.00	0.95644	125,309
Total	131,016.00				125,308.83

### Aqua Pennsylvania, Inc. EastPikeland&UpperProvidence 335.00 Fire Hydrants

	Salvage Value:	0% Averag	e Service Life: 65	Survivor Curve:	<i>R3</i>
Year	Original Cost	Expectancy	Avg. Service Life	Reserve Ratio	Calculated Reserve
(1)	(2)	(3)	(4)	(5)	(6)
1966	122.11	19.46	65.00	0.70056	86
1974	492.46	24.87	65.00	0.61739	304
1978	364.34	27.82	65.00	0.57201	208
1980	1,657.52	29.35	65.00	0.54848	909
1982	2,452.25	30.91	65.00	0.52443	1,286
1983	528.49	31.71	65.00	0.51218	271
1985	2,282.12	33.32	65.00	0.48737	1,112
1986	2,962.75	34.14	65.00	0.47481	1,407
1987	2,458.28	34.96	65.00	0.46208	1,136
1988	640.59	35.80	65.00	0.44924	288
1989	686.63	36.64	65.00	0.43632	300
1990	16,162.96	37.49	65.00	0.42326	6,841
1997	1,901.76	43.62	65.00	0.32895	626
1998	986.91	44.52	65.00	0.31507	311
1999	2,033.88	45.43	65.00	0.30112	612
2000	2,105.94	46.34	65.00	0.28706	605
2001	1,103.02	47.26	65.00	0.27292	301
2009	2,938.72	54.78	65.00	0.15717	462
2019	6,419.91	64.51	65.00	0.00758	49
Total	48,300.64				17,112.21