



October 4, 2024

**VIA E-FILING**

**Jonathan P. Nase**

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

**Re: Petition of Veolia Water Pennsylvania, Inc. for Approval of a Lead Service Line Replacement Program; Docket No. P-2023-3042107**

**Supplement to Compliance Filing Required by Order Entered September 12, 2024**

Dear Secretary Chiavetta:

On September 30, 2024, Veolia Water Pennsylvania, Inc. ("VWPA") filed a Compliance Filing in the above-referenced matter, which included a Modified Long Term Infrastructure Improvement Plan ("Modified LTIIP"). At the request of Commission staff, enclosed please find a red-line of VWPA's Modified LTIIP, showing the changes proposed in this proceeding, as compared to VWPA's LTIIP approved in Docket No. P-2021-3028256. (Please note: The changes in blue were proposed in October 2023 in response to a data request from the Bureau of Technical Utility Services. The changes in purple were proposed after that date.)

Copies have been served as shown on the enclosed Certificate of Service.

Please contact me if you have any questions or concerns about the enclosed filing.

Sincerely,

COZEN O'CONNOR

By: Jonathan P. Nase  
Counsel for *Veolia Water Pennsylvania, Inc.*

JPN  
Attachments

cc: Honorable Emily J. DeVoe  
Per Certificate of Service  
Kenneth Shaffer (Bureau of Technical Utility Services)  
John Van Zant (Bureau of Technical Utility Services)

Rosemary Chiavetta, Secretary  
October 4, 2024  
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Daniel Searfoorce (Bureau of Technical Utility Services)  
Larry Finnicum, Vice President, VWPA  
James C. Cagle, Vice President, Rates and Regulatory Affairs, Veolia

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of Veolia Water Pennsylvania, Inc. for :  
Approval of a Lead Service Line Replacement :           Docket No. P-2023-3042107  
Program :

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**CERTIFICATE OF SERVICE**

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I hereby certify that I have this 4<sup>th</sup> day of October, 2024, served a true copy of the foregoing **Supplement to Compliance Filing** upon the parties of record in this proceeding, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant) in the manner and upon the persons listed below:

**SERVICE BY E-MAIL ONLY**

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Respectfully submitted,



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Jonathan P. Nase, Esq.  
*Counsel for Veolia Water Pennsylvania, Inc.*

**APPENDIX A**

**September 30, 2024**~~October 31, 2023~~

**SUEZ-Veolia Water Pennsylvania, Inc.**

**Long Term Infrastructure Improvement Plan for**  
**Years 2022 through 2026**  
**in Support of Water Distribution System**  
**Improvement Charge**  
**Revised July 24, 2023**

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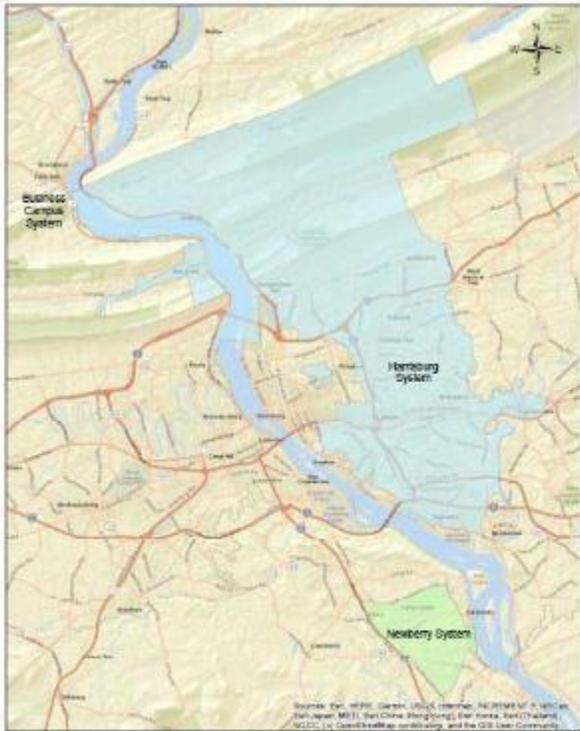
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# Introduction

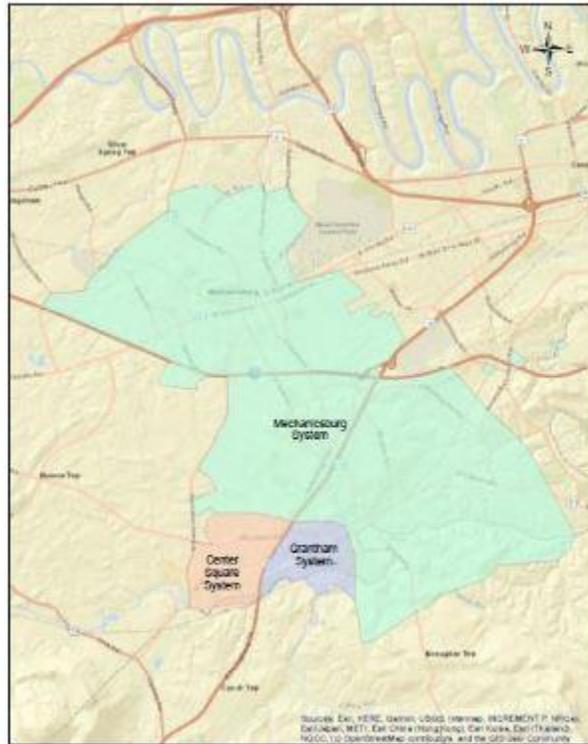
SUEZ-Veolia Water Pennsylvania, Inc. (“SUEZVeolia” or the “Company”), f/k/a SUEZUnited Water Pennsylvania Inc. (“United Water”) provides water service to over 66,000 customers in nine counties throughout Pennsylvania: Columbia; Cumberland; Dauphin; Franklin; Luzerne; Perry; Schuylkill; Wyoming; and, York Counties. See **Figure 1** for a map of its four major service territories.

**Figure 1 Map of SUEZ’s-Veolia’s Service Area by County**



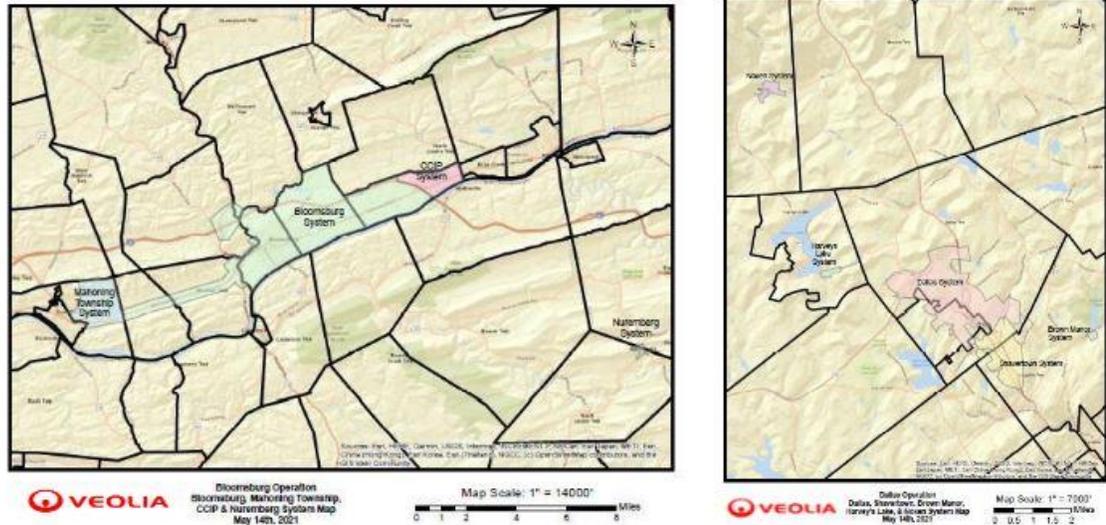
Hamburg Operation  
Hamburg, Newberry, & Business  
Campus System Map  
May 14th, 2021

Map Scale: 1" = 15000  
0 0.5 1 2 3 4  
Miles



Mechanicsburg Operation  
Mechanicsburg, Center Square  
& Grantam System Map  
May 14th, 2021

Map Scale: 1" = 6000  
0 0.25 0.5 1 1.5 2  
Miles



The distribution system is made up of approximately 925 miles of main, 13,750 main line valves, 3,669 fire hydrants, 68,146 service lines, and 64,389 meters. [SUEZ-Veolia](#) has four operating areas, the largest of which is Harrisburg/Newberry which serves 61.4% of the Company's customer base. Its Mechanicsburg system provides service to 22.2%, and the Bloomsburg and Dallas systems in northeast Pennsylvania serve the remaining 16.4%.

The current Harrisburg System was originally incorporated as Dauphin Consolidated Water Company in 1903 as the result of the merger of three companies. From 1962 to 1994, it expanded by acquiring 11 smaller private and municipal systems, including Newberry Water Company in 1985. The Company's Mechanicsburg System was acquired in 1954 and later expanded its service area when the Grantham Water Company was acquired in 1989 and the Center Square System was acquired in 2000. The Bloomsburg System in Columbia County was originally incorporated in 1877 and was acquired in 1986. The Bloomsburg operation also includes two small systems: (a) Columbia County Industrial Park (CCIP) and Nuremberg, as well as (b) the Mahoning water (and wastewater) system purchased in 2019. The Dallas System was formed

through the acquisition of four small companies in 1990. **Table 1** provides a breakdown of customers by operation.

**Table 1 - Number of Customers by Operation**

Operation Area	Customer Count	Percentage
Bloomsburg	7,241	10.9%
Dallas	3,650	5.5%
Harrisburg/Newberry	40,713	61.4%
Mechanicsburg	14,713	22.2%
<b>TOTAL</b>	<b>66,317</b>	<b>100.0%</b>

The Company’s customer base in all four operations is predominantly residential. **Table 2** provides a breakdown of the Company’s customers by classification.

**Table 2 - Number of Customers by Classification**

Customer Classification	Customer Count	Percentage
Commercial	5,016	7.6%
Industrial	54	0.1%
Public Authority	235	0.4%
Fire (PRP)	881	1.3%
Residential	60,131	90.7%
<b>TOTAL</b>	<b>66,317</b>	<b>100.0%</b>

[SUEZ-Veolia](#) received approval to charge a DSIC capped at 5% on March 2, 1998 at Pennsylvania Public Utility Commission (“Commission”) Docket No. R-00984265. The first DSIC charged by [SUEZ-Veolia](#) was 0.15% of billed revenues, effective April 1, 1998. Then, on October 23, 2013, the Company petitioned the Commission to increase the DSIC cap from 5% to 7.5% at Docket No. P- 2013-2389331. The Commission approved the Company’s request for an increase to the DSIC in a final order entered December 19, 2013. In the Company’s filing of Supplement No. 36 to Tariff Water - PA PUC No. 7, Ninth Revised Page 3A, on January 13, 2014, the Company reached its 7.5% cap. The cap was reset to zero as a result of a joint settlement of the

Company's 2018 general

base rate case. *See Pa. Pub. Util. Comm'n v. Suez Water PA Inc.*, Docket No. R-2018-3000834 (Order entered Dec. 6, 2018). Since resetting the DSIC to 0% as a result of the base rate case, the Company has not requested an increase to its DSIC surcharge.

## Section 1: Types and Age of Eligible Property

The assets that are DSIC-eligible include mains, valves, hydrants, and meters. Other DSIC-eligible property includes the tie-in of dead-end mains, the rehabilitation of mains via cleaning and lining, underground infrastructure replacement, the unreimbursed costs of relocating facilities due to highway projects, and other related capitalized costs. 66 Pa. C.S. § 1351 (definition of “eligible property” (3)).

**Tables 3 through 5** describe the Company’s’ current main inventory. **Table 6** sets forth the valve inventory. **Table 7** identifies the number of services by material type. **Table 8** lists the hydrant inventory by decade installed. **Tables 9 and 10** describes the Company’s’ meter inventory.

**Table 3 - Linear Footage/Mileage of Main by Diameter**

Diameter	Feet	Miles	Percent
<4"	214,180	41	4%
4"	241,331	46	5%
6"	1,044,947	198	21%
8"	2,122,851	402	43%
10"	113,320	21	2%
12"	913,159	173	19%
>12"	235,707	45	5%
Total	4,885,495	925	100%

**Table 4 - Miles of Main Installed by Material in Each Decade**

Material	1900-1909	1910-1919	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	2010-2019	Total Miles
Unlined CI	18	8	8	17	20	18	46	6	0	0	0	0	141
Galvanized	0	1	1	2	1	4	2	0	0	0	0	0	11
Asbestos Cement	0	0	0	0	2	39	75	94	6	0	0	0	216
Ductile Iron	0	0	0	0	0	0	0	1	6	20	43	106	177
PVC & PET	0	0	0	0	0	0	0	6	98	126	110	41	381
	18	9	9	19	23	60	123	107	109	146	154	147	925

**Table 5 - Average Age of Mains**

Material	Year - Average Installed	Average Age
Unlined CI	1944	77
Galvanized	1945	76
Asbestos Cement	1965	56
Ductile Iron	2009	12
PVC & PET	1997	24
Total Water Main	1984	37

**Table 6 - Number of Valves by Size and Decade Installed**

AGE	<4"	4"	6"	8"	10"	12"	>12"	Total
< 1910	6	74	59	4	22	17	0	182
1910 - 1919	12	29	1	12	1	1	5	61
1920 - 1929	9	24	16	1	22	0	14	86
1930 - 1939	31	47	101	30	7	7	2	225
1940 - 1949	23	69	89	38	0	13	14	246
1950 - 1959	51	90	271	97	24	27	3	563
1960 - 1969	38	30	534	212	36	97	59	1,006
1970 - 1979	51	40	552	315	11	173	35	1,177
1980 - 1989	188	17	323	727	6	285	10	1,556
1990 - 1999	295	42	167	1294	10	440	36	2,284
2000 - 2009	375	75	152	1815	20	562	43	3,042
2010-2019	427	105	106	1509	7	447	113	2,714
2020+	58	17	38	399	1	90	5	608
Total	1564	659	2409	6453	167	2159	339	13,750

**Table 7 - Number of Services by Material Type**

<b>Material</b>	<b>Total</b>	<b>Percentage</b>
Asbestos Cement	170	0.2%
Cast Iron	74	0.1%
Copper	24,875	36.5%
Ductile Iron	210	0.3%
Galvanized	905	1.3%
Plastic	19,637	28.8%
Lead	0	0.0%
Unknown	22,275	32.7%
<b>Total</b>	<b>68,146</b>	<b>100.0%</b>

**Table 8 - Number of Hydrants Installed by Decade**

<b>Age</b>	<b>Total</b>	<b>Percentage</b>
1900 - 1909	64	1.7%
1910 - 1919	9	0.2%
1920 - 1929	26	0.7%
1930 - 1939	66	1.8%
1940 - 1949	78	2.1%
1950 - 1959	217	5.9%
1960 - 1969	445	12.1%
1970 - 1979	428	11.7%
1980 - 1989	438	11.9%
1990 - 1999	622	17.0%
2000 - 2009	707	19.3%
2010 - 2019	438	11.9%
2020+	131	3.6%
<b>Total</b>	<b>3,669</b>	<b>100%</b>

**Table 9 - Number of Meters by Size**

<b>Size</b>	<b>Number</b>
0058	59,835
0075	1,286
0100	1,749
0150	633
0200	631
0300	52
0400	72
0600	83
0800	41
1000	7
<b>Grand Total</b>	<b>64,389</b>

**Table 10 - Number of Meters by Age**

<b>Year</b>	<b>Meter Age</b>
Pre 2000	2,084
2001	1,093
2002	1,250
2003	1,295
2004	1,189
2005	1,436
2006	3,729
2007	2,290
2008	2,200
2009	1,584
2010	2,275
2011	1,651
2012	2,264
2013	6,775
2014	6,361
2015	3,451
2016	8,518
2017	3,404
2018	2,428
2019	3,281
2020	4,482
2021	1,349
<b>Total</b>	<b>64,389</b>

The types of mains vary from system to system. The Harrisburg and Mechanicsburg systems were originally owned by General Waterworks, which almost exclusively used asbestos cement (“AC”) pipe during the 1950’s through the 1970’s. Currently, AC pipe represents 23.2 percent of the total miles of mains. All but less than one mile of the 216 miles of asbestos cement main resides in these two systems. Galvanized pipe was primarily used in the 1930’s through the 1960’s, while unlined cast iron pipe was used from around 1900 until about 1980. All four of these types of material have varying challenges and life cycles and, therefore, each requires a unique replacement strategy -- which is discussed in Section 6 below.

Since the 1980’s, the Company has been installing both ductile iron and polyvinyl chloride (“PVC”) pipe -- which represents 60.8% of the total miles of mains. Recently, the Company has shifted to ductile iron as its primary choice; ductile iron main is used exclusively when high pressure is encountered and when mains are installed in state highways, stream crossings or critical intersections.

The 13,750 main line valves are exercised and inspected via the Company’s valve maintenance program. Currently, the Company uses its hydraulic models to perform a valve analysis which identifies which valves are critical and should be inspected on a more frequent basis and potentially replaced. The Company also has 72 pressure reducing valves that ensure proper pressures are maintained in areas that experience high pressure. Due to the criticality of these valves, they are replaced on a more frequent basis.

The Company’s service lines, by definition, represent the line from the main to the curb stop or valve which is located at or close to the customer’s property line. The replacement of these service lines is a DSIC-eligible expense. The customer’s service line is that line which extends

from where the Company's responsibility ends (curb stop or valve) to the customer's facility. In the past and currently, the Company does not maintain, repair or replace the customer's service line.

The Company, at present, is unaware of any lead service lines in its inventory and is currently updating its service inventory for company-owned service lines and customer-owned service lines. While **Table 7** indicates that the material on 22,275 of the service lines is unknown, the Company has interviewed its long-term field employees to determine their experience in encountering lead services. They have indicated that, while they may infrequently encounter a lead gooseneck on a galvanized service, they have not come across any lead services. The Company's policy is to replace any lead goosenecks when encountered. See **Figure 2** for an illustration and picture of a gooseneck.

**Figure 2 - Lead Gooseneck**

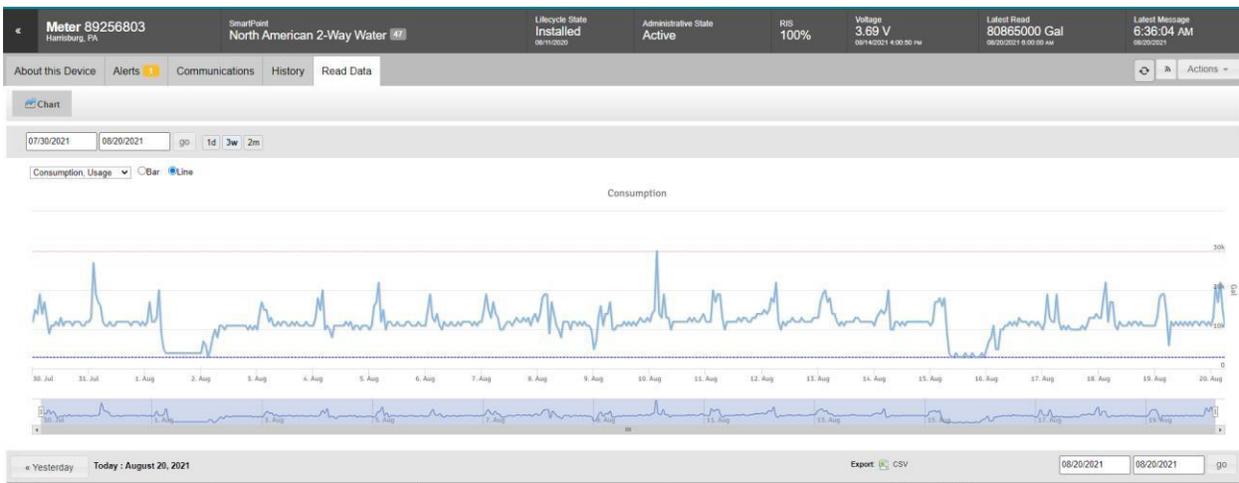


The 3,669 hydrants located throughout the system are inspected and the Company's goal is to exercise each hydrant once per year during the Company's flushing program. This annual inspection will identify any inoperable hydrants that would need to be replaced. Hydrants are also replaced as a part of the Company's main replacement program. The Company can also use its

hydraulic models to identify hydrants that could be relocated to an adjacent larger main, thus improving fire flows.

The Company is currently installing an AMI system. This project involves replacing the Iron end points with Sensus endpoints that enable meters to be read on an hourly interval and displayed in real time. The Company currently has replaced 20,200 end points and has a goal of having all its customers equipped with AMI by 2026. The AMI technology has multiple benefits, from improving customers’ service to improved tracking of non-revenue water (“NRW”). **Figure 3** illustrates an example of water flow trends provided by Sensus.

**Figure 3 - Daily Flows from Large Apartment Complex**



## Section 2: Schedule of Planned Repairs and Replacement

Each year the Company prepares a five-year strategic capital plan which includes all the DSIC-eligible properties. The budgets are based on “blanket” approvals but include specific project categories. As related to DSIC-eligible property, the project categories include the following:

**Replacement Fire Hydrants** - Project number CYYD501. This project category is for the replacement of fire hydrants not included as a part of the main replacement projects (D600's). These are budgeted utilizing historical trends and any known new initiatives.

**Replacement Short Main and Valves** - Project number CYYD502. This project category is for the replacement of valves and capitalized main breaks. While historical trends are used, there has been an increase from the past in this category due to the Company's increased NRW efforts in locating leaks as well as the cost of repairs due to increased restoration costs required by the local municipalities.

**Replacement Services** - Project number CYYF501. This project category is for the replacement of services not included as a part of the main replacement projects (D600's). The Company's policy is to replace the Company portion of the service in its entirety, as opposed to repairing a service leak.

[Replacement Lead Services - Project number CYYF502. This project category is for the replacement of lead services not included as a part of the main replacement projects \(D600's\). The Company's policy is to replace the Company portion of the service in its entirety.](#)

[Replacement Customer Lead Services - Project number CYYF504. This project category is for the replacement of customer owned lead services. The Company's policy is to offer to replace the Customer portion of the service in its entirety.](#)

**Replacement Fire Services** - Project number CYYF503. This project category is for the replacement of fire services not included as a part of the main replacement projects (D600's). The Company continues to monitor its unmetered fire services and, when unauthorized use is occurring, the Company is requiring the customer to retrofit the fire line with a meter.

**Replacement Meters** - Project number CYYG501. This project category is for the replacement of aged, damaged and stopped meters as well as meter pits (moving a meter from inside the house into a meter pit) installed as a part of the main replacement projects (D600's).

**Main Replacements** - Project number CYYD600. This project category is for the replacement of DSIC-eligible mains. An analysis of the Company's current assets is conducted to arrive at a detailed list of projects, which, in turn, is rolled into a single budgetary number.

**Highway Projects** - Project number CYYD700. This project category is difficult to budget as it depends heavily on the Pennsylvania Department of Transportation ("PennDOT") and local municipality projects. The Company meets with representatives of these entities to formulate a more-accurate plan; however, schedules often change -- which means that this category is sometimes either over- or under-budgeted. Typically, by the end of the first or second quarter of each year, the Company knows what highway projects are going forward for that given year and the Company is required to adjust its main replacements schedule and budget.

**New Mains** – Project number CYYD100. This project category is for the installation of mains to eliminate dead-ends.

A summary of the budgeted amount for 2022 through 2026 is included in **Table 11**. The amounts represent net dollars without overheads or any inflation adjustments and are subject to final budget approvals by [SUEZ's-Veolia's](#) parent companies.

**Table 11: DSIC Expenditures for 2022 through 2026 (\$1000s)**

Table 11 - DSIC Expenditures for 2022 through 2026 ('000s)						
PROJECT ID	PROJECT TITLE	2022	2023	2024	2025	2026
CYYD502_002	Replacement Short Mains & Valves – DSIC	\$900	\$900	\$900	\$900	\$900
CYYD501_002	Replacement Fire Hydrants - DSIC	50	50	50	50	50
CYYD700_002	Highway Main Projects DSIC	1,500	1,500	1,500	1,500	1,500
CYYD100_002	New Mains – DSIC	1,000	1,000	1,000	1,000	1,000
CYYD600_002	Replacement Main Projects - DSIC	7,500	7,500	7,500	7,500	7,500
CYYF501_002	Replacement Domestic Services – DSIC	500	500	500	500	500
CYYF502_002	Replacement Lead Services - DSIC	0	250	250	250	250
CYYF503_002	Replacement Fire Services - DSIC	25	25	25	25	25
CYYF504_002	Replacement Customer Lead Services	0	100	100	100	100
CYYG501_002	Replacement Customer Meters -DSIC	2,100	2,100	2,100	2,100	2,100
<b>TOTAL NET DSIC</b>		<b>\$13,575</b>	<b>\$13,925</b>	<b>\$13,925</b>	<b>\$13,925</b>	<b>\$13,925</b>
<b>TOTAL NET BUDGET</b>		<b>\$23,996</b>	<b>\$42,857</b>	<b>\$29,147</b>	<b>\$33,647</b>	<b>\$38,692</b>
<b>PERCENT DSIC</b>		<b>57%</b>	<b>32%</b>	<b>48%</b>	<b>41%</b>	<b>36%</b>

### Section 3: Location of Eligible Property

The DSIC-eligible property is located throughout [SUEZ's-Veolia's](#) four operational areas: Harrisburg, Mechanicsburg, Bloomsburg and Dallas. These assets are tracked via the Company's GIS system, which is updated frequently with better data and the location of facilities. Each field employee is equipped with a GPS unit linked to their smart tablet which allows them to locate facilities on a continuous basis and upload data to the GIS system. **Table 12** is a summary of all DSIC-eligible assets by operation and **Table 13** provides a detailed list of mains by material for each operation.

**Table 12: Summary of DSIC-Eligible Assets by Operation**

Inventory	Harrisburg	Mechanicsburg	Bloomsburg	Dallas	Total
Water Main (Miles)	571	181	114	60	925
Services	42,126	15,406	7,257	3,634	68,423
Valves	8,523	2,983	1,371	873	13,750
Fire Hydrants	2,439	676	460	94	3,669
Meters	40,717	14,784	7,241	3,650	66,392

**Table 13: Linear Footage of Main by Material in each Operation**

Operation	Material					Total LF	Total Miles
	ACP	CI	GALV	DI	PVC		
Bloomsburg	48,899	255,193	10,777	166,121	122,549	603,539	114
Dallas	4,068	47,194	18,387	61,392	183,886	314,927	60
Harrisburg/Newberry	847,937	382,068	25,960	504,145	1,253,200	3,013,310	571
Mechanicsburg	241,676	60,191	1,198	203,133	447,562	953,760	181
Total Footage	1,142,580	744,646	56,322	934,791	2,007,197	4,885,536	925
Total Mileage	216	141	11	177	380		

**Section 4: Estimate of the Quantity of Eligible DSIC Property**

Based on the capital amounts included in the budget (see **Table 11** in Section 2 above), the estimated DSIC property to be replaced is provided in **Table 14** below.

**Table 14: Estimated Miles of Main to be Installed/Replaced 2022 to 2026**

Year	D100	D600	D700	Total Miles
2022	1.0	7.5	1.5	10
2023	1.0	7.5	1.5	10
2024	1.0	7.5	1.5	10
2025	1.0	7.5	1.5	10
2026	1.0	7.5	1.5	10
<b>Total</b>	5.0	37.5	7.5	50

For valves, services and hydrants, the number of units retired depends largely on the main replacement program. It is estimated that the Company will replace approximately ~~12,500~~1,250 services per year, 250 valves per year, and 100 hydrants per year.

The number of meters replaced depends on several factors, including: size; age of meter; failure rate; new technology; and, to some degree, the main replacement program. The Company estimates that it will replace between 3,000 and 3,500 meters per year.

## **Section 5: Projected Annual Expenditures to Implement the Company’s Cost-Effective Infrastructure Plan**

The Company’s annual expenditures are included in **Table 11** of Section 2 above - *DSIC Expenditures for 2022 through 2026*. The Company continues to implement a continuous improvement process to ensure that capital expenditures are being deployed in a prudent and cost-effective manner consistent with the requirements of the Pennsylvania Public Utility Code (“Code”). The following are examples of how the Company is improving its processes:

- The Company has done extensive work to improve GIS system accuracy. Each field employee has a GPS unit that enables locating facilities in the field and updating data into the GIS system. In addition to upgrading its GIS system, the Company installed KloudGin – an asset management system that interfaces with GIS – in the second quarter of 2021.
- Currently, the Company has gone paperless for many of its field activities. Field employees are supplied with smart tablets, which allows them to access GIS, locate facilities via GPS, record all data, and communicate with their supervisor or other employees via FaceTime.
- The Company has implemented an aggressive NRW program that has a direct correlation to DSIC projects. In addition to the traditional leak surveys, the NRW program includes: installation of data loggers throughout the distribution system

(which detect leaks via monitoring noise), utilization of satellite imaging, establishment of district metering zones (which allows for more precise NRW monitoring), optimization of pressure management, smart metering, fire line management and SCADA night flow data. In the past five years, the Company has been able to reduce its NRW by 14.8%, which is equivalent to 415 million gallons per year or 1.13 million gallons per day.

- The Company has enhanced its hydraulic modeling, which is utilized for design as well as prioritizing infrastructure replacement based on water quality, pressure management, and fire protection.
- [SUEZ-Veolia](#) has access to its parent Company's research and technical resources.
- The Company is continually evaluating which services are best to be performed internally and which are best to be outsourced. For example, flagging and traffic control is mostly outsourced to Flagger Force, a company that specializes in traffic control. This has proved to be a safer and more-efficient use of our internal work force. Another example is outsourcing of the inspection of water mains to engineering firms.
- Succession planning and hiring practices are also a priority -- especially when considering the Company's aging workforce. Hiring employees with the right skills is critical in ensuring efficient deployment of capital dollars -- particularly in light of being a "smart utility."

- The Company’s bidding process utilizes a list of pre-qualified contractors, which is evaluated and updated annually. The Company evaluates which infrastructure projects could be done internally with its own forces. The Company also evaluates which projects could be bid on an individual basis and which projects could be bundled. This is becoming more important due to an increase in the amount of DSIC projects expected over the next five years.
- [SUEZ’s-Veolia’s](#) parent company leverages its corporate buying power. Materials such as pipes, meters, hydrants, valves, etc., are bid annually by the parent company’s Corporate Procurement Department. This approach provides [SUEZ Veolia](#) with better pricing than it could obtain locally or as a stand-alone company. The Company has a Commission-approved master services affiliated interest agreement in place for such services.

## Section 6: Accelerated Replacement

The Company in the past ten years has replaced a total of 84 miles of main, which represents 9.0 percent of its mains and is equivalent to a 110-year replacement cycle. **Table 15** sets forth the Company’s historic replacement rate.

**Table 15: Historical Miles of Main Replaced**

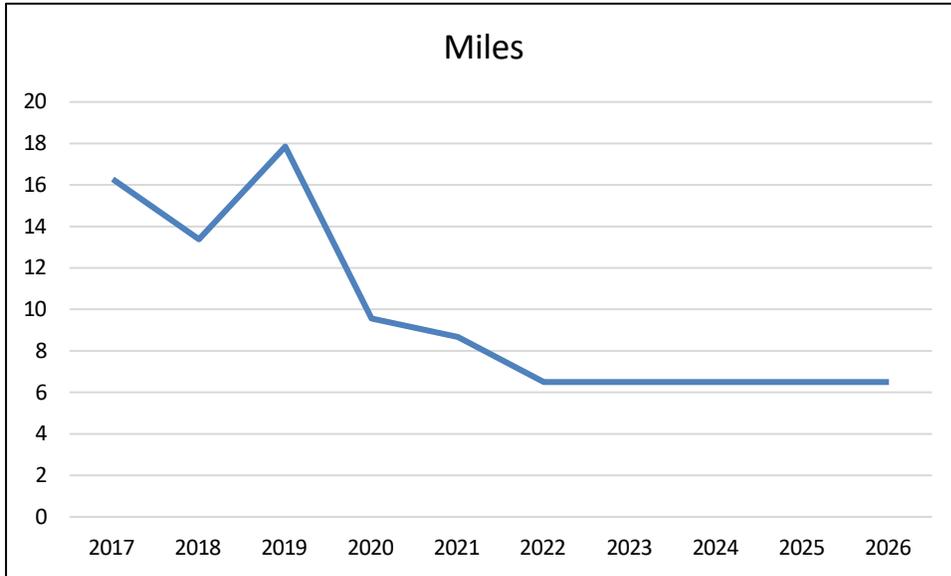
Period	Years	Total	Average
10 years	2011 - 2021	84	8.4
5 years	2016 - 2021	61	12.2
3 years	2018 - 2021	31	10.3
2 years	2019 - 2021	20	10.0

While the 100-year replacement rate is an industry guideline, other factors influence the replacement rate. The age and material of distribution system components play an integral role in the replacement rate. For example, a brand new system consisting of all ductile iron main would not require replacement of any mains in the near future.

[SUEZ's Veolia's](#) average age of mains is only 37 years – as compared to the much older systems operated by other water utilities in the Commonwealth with more-accelerated DSIC programs. See **Table 5** (*Average Age of Mains*) in Section 1 above. Of the Company's 925 miles of main, approximately 28% of the main is greater than 50 years old, 48 percent is less than 30 years old, and 41 percent is ductile iron or PVC pipe. See **Table 4** (*Miles of Main Installed by Material in Each Decade*) in Section 1 above. Indeed, it would be imprudent and detrimental to ratepayers to replace DSIC-eligible property before it has even neared its useful life. Infrastructure improvement programs must be dynamic and adjusted (either accelerated or slowed down) on a periodic basis in order to meet the specific needs of the system. This LTIP reflects the Company's focus on portions of its system that are nearing the end of their useful life or otherwise require attention.

In response to the anticipated needs of its system, the Company plans to continue its main renewal program over the next five years. See **Table 14** (*Estimated Miles of Main to be Installed/Replaced 2022-2026*) in Section 4 above and **Graph 1** below. The Company's focus for the next five years with respect to main replacement concerns Galvanized pipe, unlined Case Iron and the AC pipe. The five-year plan proposes to replace the entire 11 miles of Galvanized main. This represents an average replacement rate of nine miles per year. See **Graph 1** and **Table 16** below. **Table 17** below sets forth the projected average age of main.

**Graph 1: Water Main Replacement Rate in Miles Per Year 2017 to 2026**



**Table 16: Miles of Main by Material 2022 vs Projected 2026**

<b>Material</b>	<b>2022</b>	<b>2026</b>
Unlined CI	141	135
Galvanized	11	0
Asbestos Cement	216	198
Ductile Iron	177	210
PVC & PET	381	382
<b>Total Miles</b>	<b>925</b>	<b>925</b>

**Table 17: Projected Average Age of Main 2021 vs 2026**

Material	Current		2026 Projected	
	Average Year	Average Age	Average Year	Average Age
Unlined CI	1945	77	1947	81
Galvanized	1945	76	0	0
Asbestos Cement	1968	56	1969	60
Ductile Iron	2009	12	2014	11
PVC & PET	1997	24	2004	17
TOTAL Water Main	1984	37	1989	36

In 2018, the American Society of Engineers gave Pennsylvania’s water systems a D grade -- estimating that the systems have a \$10.2 billion funding gap. However, the DSIC mechanism has allowed [SUEZ-Veolia](#) and the other private water companies (as opposed to municipal and authority- owned systems) to make the necessary investments in infrastructure since its inception. The investments that the Company has made and plans to make in the future will provide its customers with a more-sustainable and reliable water service. The number of main breaks per miles of main is one metric that is a good indicator of reliability of service. In 2020, the Company’s main break per mile of main was 0.147 (135 main breaks) compared to the 2015 rate of 0.237 (209 main breaks).

Another indicator that shows the effectiveness of the DSIC investments is the reduction in the amount of NRW. The Company through its NRW program has reduced its NRW consistently over the past five years.

## **Section 7: Workforce Management and Training**

The Company continually evaluates both its internal workforce and its utilization of external contractors to ensure that it has in place a safe and efficient workforce to complete its

infrastructure replacement program. A contractor must be prequalified, which requires evaluation of past performance, adherence to company specifications, attendance at the Company's annual training and review of the contractor's safety record before it can perform any work for the Company. In 2021, the Company had 31 companies attend its annual Contactor Meeting where the Company goes over its detailed specifications and safety requirements.

In addition to contracting out the installation of mains, the Company contracts out the inspection of its main replacements to engineering firms that specialize in water main installation. The Company has also outsourced paving restoration and the majority of traffic control. Having this work outsourced allows the employees of [SUEZ-Veolia](#) to focus more on the Company's core business of providing high quality water service. The Company's workforce primarily focuses on capitalized main breaks, replacement of valves, services and hydrants under its annual programs, and the majority of meter replacements.

A safe work culture, whether it involves the Company's employees or contractor employees, is a core value of the Company. The Company has an Environmental, Health and Safety ("EHS") Manager. The Company tracks both lagging and leading indicators to monitor the effectiveness of the safety program. Lagging indicators, such as recordable accidents, lost time accidents and vehicle accidents, are measured and monitored daily via the Company's Intalex software. All accidents must be reported within one day and a review call depending on severity is required within one day to twenty-one days. Leading indicators, such as near misses or unsafe work conditions, are tracked and remedial measures are implemented as appropriate. In 2020, the Company reported 209 near misses and, depending on the severity of the near miss, an action plan is required.

In addition to requiring employees to wear the proper personal protective equipment, all jobs require that a safe work plan be filled out prior to the commencement of the work. This is now a paperless process, as the report is filled out on the employee's smart tablet. This has made it easier for the field employee to complete the process and allows for better data retention.

All employees are required to take the appropriate safety training. Below is a list of training that the field employees received in 2020:

- Asbestos awareness;
- Cold stress;
- Confined space;
- Demolition/cut-off saw training;
- PennDOT, shipper;
- Electrical safety;
- Emergency response and action plans;
- Environmental awareness;
- Excavation and trenching safety – competent person;
- Extinguisher and fire safety;
- Fall protection awareness;
- Fire prevention plan and evacuation plan;
- Flagger training;
- Globally harmonized system of classification and labeling;
- Hand and power tool safety;
- Hazard communication;
- Hearing conservation awareness;
- Heat stress recognition and prevention;
- Industrial ergonomics;
- Job hazard analysis, safe work plan;
- Ladder safety;
- Lead pipe and material identification training;
- Lockout/tagout;
- Machine guarding;
- Overhead crane/hoist training;
- Permit required confined space entrant/attendant training;
- Portable fire extinguishers;
- Preventing back injuries;
- Proper handling of asbestos pipe (2 day);
- Proper storage, labeling and disposal of universal waste;
- Resource Conservation and Recovery Act (“RCRA”) training; and,

- Respiratory protection.

In 2020, neither the Company nor any of its contractors had any recordable injuries related to any infrastructure replacement project. Safety is a top priority for [SUEZVeolia](#).

## **Section 8: Outreach and Coordination with Other Utilities and Entities**

The Company recognizes the importance of maintaining good communications with PennDOT, the municipalities [SUEZ-Veolia](#) serves, and other utilities. The replacement of aging infrastructure leads to disruptions as work is performed in the rights of way of roads and streets. In order to ease and alleviate these interruptions, [SUEZVEOLIA](#) works with PennDOT, local municipalities, and other utilities to accumulate information as to their intentions to undertake paving and other public works within the budget year. [SUEZVEOLIA](#) recognizes that, by working and communicating with these entities, disruptions are minimized. Moreover, it ensures that infrastructure replacement is efficient and cost-effective. Each relationship is unique and involves different opportunities and challenges.

[SUEZVEOLIA](#)'s interactions with PennDOT involve dealings with three different regional offices. The Company maintains a list of PennDOT's proposed projects, which is used in gauging the magnitude of replacement work that is required for each project. The challenge is the timing of these projects. While the Company may be aware of the project, there are times that the Company needs to begin relocating its facilities within months of when PennDOT gives notice to the Company of its intent to proceed.

[SUEZVEOLIA](#)'s relationship with municipalities involves dealing closely with each municipality's Public Works Director to know what work is being planned within the municipality's

jurisdictional

boundaries. Projects range from paving to major sewer replacements. The paving projects are evaluated to determine if replacement of [SUEZVEOLIA](#)'s facilities is warranted based on their age and maintenance history. The more-extensive projects require a different evaluation and often require the Company to relocate its facilities as a result of the project. However, the timing and notification of this work does not always coincide with the Company's budget and work schedule. The time afforded the Company to commence its work often precludes the Company from finalizing designs and scheduling the work with its contractors.

[SUEZVEOLIA](#)'s relationships with other utilities have become more important -- especially since the other utilities are also replacing a significant amount of their infrastructure under their DSIC programs. Of particular concern is the coordination of work with gas utilities to ensure that the work being designed and the co-location of facilities does not pose any safety risks. [SUEZVEOLIA](#) is making an effort to coordinate with these other utilities through direct outreach.

Regardless of the entity with which the Company is dealing, [SUEZVEOLIA](#) utilizes Pennsylvania's one-call system during the Company's initial phase of project design and before the first dig. This system allows for accurate coordination of the design by avoiding conflicts with other buried utilities during construction. [SUEZVEOLIA](#) recently purchased a Hydro Excavator, which allows the Company to locate other facilities utilizing a safer and more efficient process.

Finally, [SUEZVEOLIA](#) keeps its customers informed about water disturbances by issuing door-to-door notifications, issuing press releases, posting [SUEZVEOLIA](#) website banners, making social media posts, and mailing informational letters notifying customers and communities affected by the work. The Company has a very extensive community outreach program headed by the Company's Public Affairs Manager.

## CONCLUSION

[SUEZVEOLIA](#)'s LTIP sets forth a reasonable plan for the prudent repair and replacement of DSIC- eligible property for the years 2022 through 2026. The Company is committed to maintaining its main replacement by focusing on the assets that have the greatest need for remediation. [SUEZVEOLIA](#) will continue to support and enhance its safety program that is critical in protecting both its employees and contractors. Coordination with local municipalities and other utilities in order to realize project efficiencies will also be a key component of the Company's' LTIP. Finally, since 1998, the Company's DSIC has proven successful in accelerating the repair and replacement of eligible distribution system assets and should be permitted to continue as set forth herein.