

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF DELAWARE**

IN THE MATTER OF THE APPLICATION OF)	
VEOLIA WATER DELAWARE INC. FOR A)	PSC Docket No.
GENERAL INCREASE IN RATES)	23-XXXX
(Filed April 27, 2023))	

**APPLICATION OF VEOLIA WATER DELAWARE INC.
FOR A GENERAL INCREASE IN RATES**

VEOLIA WATER M&S (PARAMUS),
INC.
461 From Road, Suite 400
Paramus, NJ 07652
Attention: Elda Gil
Phone: 201-750-5738
Fax: 201-750-5728
elda.gil@veolia.com

VEOLIA WATER DELAWARE, INC.
2000 First State Blvd.
P.O. Box 6508
Wilmington, DE 19804-0508
Attention: Larry Finnicum
Phone: 302-633-5905 (Ext. 305)
Fax: 302-633-5910
larry.finnicum@veolia.com

SAUL EWING ARNSTEIN & LEHR
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April 27, 2023

Veolia Water Delaware, Inc. (“Veolia” or the “Company”) hereby submits this Application pursuant to Rule 8 of the Rules of Practice and Procedure of the Delaware Public Service Commission (the “Commission”), and in support thereof states as follows:

1. The Company’s name, mail and email address, telephone and fax numbers are as follows:

VEOLIA WATER DELAWARE, INC.	VEOLIA WATER M&S
2000 First State Blvd.	(PARAMUS), INC.
P.O. Box 6508	461 From Road, Suite 400
Wilmington, DE 19804-0508	Paramus, NJ 07652
Attention: Larry Finnicum	Attention: Elda Gil
Phone: 302-633-5905 (Ext. 305)	Phone: 201-750-5738
Fax: 302-633-5910	Fax: 201-750-5728
larry.finnicum@veolia.com	elda.gil@veolia.com

2. The Company seeks the authorization, right and approval for a general rate increase pursuant to 26 *Del.C.* §§ 201, 209, 304 and 306 and other sections of the Public Utilities Act of 1974, 26 *Del.C.* §§ 101 et seq. (the “Act”) as applicable.
3. The Company’s existing rates, as previously authorized and approved by the Commission in PSC Docket No. 19-0615, will be affected and modified by relief sought with this Application.
4. The material facts to be relied upon by the Company in connection with this Application are contained in the pre-filed testimony and exhibits of the Company’s representatives and expert(s), and supporting schedules, filed concurrently with this Application in accordance with the Commission’s Minimum Filing Requirements for All Regulated Companies Subject to the Jurisdiction of the Commission, codified at 26 *Del.C.* § 1002, Part A (the “Minimum Filing Requirements”). Updated with PSC Regulation Docket No. 4, Order No. 10155, dated December 14, 2022

5. This Application and the Commission's review and approval thereof are authorized by Sections 201, 209, 304 and 306 of the Act, and by the Commission's rules and regulations promulgated thereunder, including Part A of the Minimum Filing Requirements.
6. The proposed changes to the tariff, issued April 27, 2023 and effective June 26, 2023 are included as a part of the Minimum Filing Requirements.
7. The Company has, pursuant to Section 304 of the Act, and Section 1. A. of Part A of the Minimum Filing Requirements, filed a Notice of Intent to file a general rate increase. The Notice of Intent was originally filed on February 16, 2023.
8. Any information required by the Minimum Filing Requirements but not set forth herein (or attached hereto) is currently on file with the Commission.
9. The Company files for rate relief with the Commission for an overall net rate increase of \$ 6,083,443 or 18.98% the proposed increase in base rates includes \$1,751,000 of existing Distribution System Improvement Charge which will be rolled into base rates.

The major driver of this rate increase is the investment in facilities. Since the last rate case from April 2020 through December 2022 the Company has invested \$31.8M in facilities. In addition, the Company will invest \$11.2M during the period January through September 2023.

10. Based on the foregoing, the Company seeks the Commission's approval of the attached tariff *P.S.C. No. 6 – Water, Thirty Eighth Revised Sheet No. 1, Third Revised Sheet No.5, Fifth Revised Sheet No. 6, Sixth Revised Sheet No. 9, Fourth Revised Sheet No.10B, Sixth Revised Sheet No. 10G, Second Revised Sheet No.'s 11A and 11B, Seventeenth Revised Sheet No.'s 12 and 12A, Sixteenth Revised Sheet No.'s 12B through 12E, Thirteenth revised Sheet No.'s. 13, 14 and 15,*

Eleventh Revised Sheet No. 16, Thirty First Revised Sheet No. 17 and Third Revised Sheet No. 18

11. If the Commission suspends the operation of the rate change proposed in this Application, pursuant to Section 306(a) of the Act, then the Company intends to exercise its right to put increased rates into effect under bond sixty (60) days after the filing of this Application, as and to the extent permitted pursuant to 26 Del.C. § 306(c).

WHEREFORE, the Company respectfully requests that the Commission approve the general rate increase and tariff changes as requested in this Application.

Respectfully submitted:

VEOLIA WATER DELAWARE,
INC.

By: Elda Gil

Name: Elda Gil

Title: Manager Regulatory Business

Dated: April 27, 2023

VERIFICATION

STATE OF NEW JERSEY :
 :
COUNTY OF BERGEN :

SS

The undersigned, Elda Gil, Manager Regulatory Business of Veolia Water Management and Services (Paramus), Inc., being duly sworn, deposes and says that the facts and statements in the foregoing APPLICATION OF VEOLIA WATER DELAWARE, INC. FOR A GENERAL INCREASE IN RATES, dated April 27, 2023, are true and correct to the best of her knowledge, information and belief, but are in part based upon knowledge and information supplied by others.

Elda Gil

Name: Elda Gil

SWORN TO AND SUBSCRIBED

before me, a notary public, on this

27th day of April 2023.

Debra Maureen Visconti

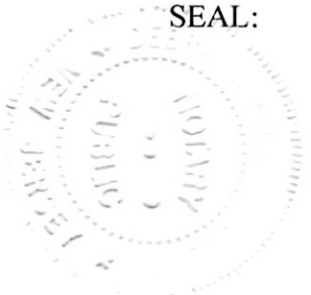
Debra Maureen Visconti

Notary Public of New Jersey

I.D. # 2228741

My Commission Expires 8/19/2024

SEAL:



CERTIFICATE OF SERVICE

The undersigned, Elda Gil, does hereby certify that the foregoing APPLICATION OF VEOLIA WATER DELAWARE, INC. FOR A GENERAL INCREASE IN RATES, dated April 27, 2023, together with all exhibits, schedules and other attachments thereto, have been filed electronically with State of Delaware Public Service Commission via Delafile.



Elda Gil
Manager Regulatory Business

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF DELAWARE**

IN THE MATTER OF THE APPLICATION OF)
VEOLIA WATER DELAWARE, INC. FOR A) PSC Docket No.
GENERAL INCREASE IN RATES) 23-XXXX
(Filed April 27, 2023))

PUBLIC NOTICE

TO: ALL CUSTOMERS OF VEOLIA WATER DELAWARE, INC.

On April 27, 2023, Veolia Water Delaware, Inc. (“Veolia” or “the Company”) filed with the Delaware Public Service Commission (“the Commission”) an application for an increase in its water service rates and for several changes to the Rules and Regulations in its Tariff (the “Application”). The new proposed rates and charges are designed to increase the net rates of the Company by approximately \$6.1 Million. The application includes a provision for \$1.8 Million of currently billed surcharges to be included in base rates and resetting of the surcharge amount to zero. The overall impact of the proposed rates on the Company’s revenue and on customers’ bills will be about 18.98%.

The following is a comparison of Veolia’s present rates and those proposed in the Application:

WATER CHARGE
Rate Per 1,000 Gallons

<u>RATE</u>	<u>OLD RATE</u>	<u>NEW</u>
<u>RESIDENTIAL:</u>		
0-2,000	\$ 5.1787	\$ 6.2144
2,001-7,000	\$ 6.2612	\$ 7.5134
Over 7,000	\$ 8.7735	\$ 10.5282
<u>COMMERCIAL</u>		
All Consumption	\$ 4.8580	\$ 6.0834
<u>INDUSTRIAL</u>		
0-1,400,000	\$ 4.7335	\$ 5.9275
Over 1,400,000	\$ 3.5324	\$ 4.4234

All Consumption	\$4.4546	\$ 5.5783
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All Consumption	\$4.4656	\$ 5.5920
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	MONTHLY	
<u>Meter Size</u>	<u>Old Rate</u>	<u>New Rate</u>
5/8"	\$14.25	\$16.60
3/4"	17.21	21.39
1"	22.78	28.11
1 1/4"	26.72	28.11
1 1/2"	33.21	41.80
2"	49.35	60.84
3"	125.40	91.86
4"	167.99	134.18
6"	269.29	246.51
8"	386.54	378.23
10"	502.71	528.78

	MONTHLY	
<u>Meter Size</u>	<u>Old Rate</u>	<u>No changes</u>
5/8"	\$2.70	\$2.70
3/4"	4.05	4.05
1"	6.75	6.75
1 1/4"	10.15	10.15
1 1/2"	13.53	13.53
2"	21.67	21.67
3"	40.63	40.63
4"	67.74	67.74
6"	135.53	135.53
8"	216.84	216.84
10"	311.72	311.72

PUBLIC FIRE HYDRANT

Maintained by Company	\$147.51	\$147.51
Maintained by Customer	131.71	131.71

PRIVATE FIRE PROTECTION

	MONTHLY	
<u>Meter Size</u>	<u>Old Rate</u>	<u>No changes</u>
1 1/2" service line	\$7.40	\$7.40
2" service line	30.75	30.75
4" service line	49.18	49.18
6" service line	122.88	122.88
8" service line	221.08	221.08
10" service line	344.02	344.02
12" service line	491.43	491.43
Charge per hydrant		
Maintained by Company	147.51	147.51
Maintained by Customer	131.71	131.71

Pursuant to 26 *Del. C.* 306(a)(1), the Commission has suspended the effectiveness of the proposed new rates and the proposed rules revisions pending further investigation and public evidentiary hearings, which will be held at a later date after further public notice. However, the utility is expected to exercise its right under 26 *Del. C.* 306(c) and place a portion of the proposed rate increase into effect, under bond and subject to refund, on June 26, 2023 , sixty (60) days after the filing of the Application, as permitted by law.

The Commission will make its decision on this matter on the basis of the evidence of record taken at public evidentiary hearings. The Commission may approve or reject, in whole or in part, the proposed increase and revisions and may approve a different method for allocating among rates any allowed increase in revenues should one be found to be appropriate.

Any person wishing to participate as a party in this docket (PSC Docket No. 23-XXXX) should file for leave to intervene with the Commission in accordance with Rule 21 of the Commission Rules of Practice and Procedure. Such petitions should be filed on or before _____, 2023 at the Commission's office located at:

Delaware Public Service Commission
861 Silver Lake Boulevard
Cannon Building
Suite 100
Dover, Delaware 19904

Petitions filed thereafter will not be considered except for good cause shown.

Interested customers are urged to review the application and supporting materials to see how their individual interest may be affected. Copies of the application are available for public inspection during normal business hours in the Commission's Dover office at the address listed above. Copies may also be reviewed, by appointment, at the office of the Division of the Public Advocate located at the Carvel State Office Building, 4th Floor, 820 North French Street, Wilmington, Delaware 19801. Please call (302) 577-5077 to arrange for a time to review the documents at such location.

Any individual with disabilities, who wishes to participate in, or to review these proceedings, should contact the Commission to discuss any auxiliary aides or services needed to facilitate such review or participation. Such contact may be in person, by writing, telephonically (including use of the Telecommunications Relay Service), or otherwise. For inquiries, the Commission's toll free telephone number (in Delaware) is 1-800-282-8574. Persons with questions concerning this application may contact the Commission by either Text Telephone ("TT") or by regular telephone at (302) 736-7500.

**BEFORE THE
DELAWARE PUBLIC SERVICE COMMISSION**

DIRECT TESTIMONY OF

**LARRY FINNICUM
VEOLIA WATER DELAWARE, INC.**

APRIL 2023

SUEZ WATER DELAWARE, INC.
Larry Finnicum

I. Introduction

Q. What is your name and business address?

A. My name is Larry Finnicum. My business address is 2000 First State Boulevard, Wilmington, DE 19804-0508.

Q. By whom are you employed and in what capacity?

A. I am employed by Veolia Water Pennsylvania and serve as the Vice President and General Manager of both .Veolia Water Delaware (VWDE) and Veolia Water Pennsylvania

Q. Please describe your work experience.

A. I started with Aqua America Inc. in Bryn Mawr Pennsylvania in 2003 as a Continuing Property Records Analyst. In 2004, I was promoted to a Rates Analyst. In 2006, I was then promoted to the Supervisor of Analytics and Logistics. In 2010, I was promoted to the role of National Director of Field Services. In 2011, I took on the role of Area Manager for Aqua North Carolina in Denver, North Carolina.

In September 2012, I was hired by Veolia Water Pennsylvania to become the Superintendent of the Bloomsburg and Dallas Operations. In 2014, I accepted the position of Operations Manager for VWDE. In 2016, I was promoted to Operations Director. Lastly, in 2022 I was promoted to Vice President and General Manager for the Mid Atlantic Division of Municipal Water for Veolia North America.

1 ***Q Have you previously testified before this or other regulatory**
2 **commissions in regards to a rate filing?**

3 A. Yes, I have submitted testimony in the 2016 and 2019 Veolia Water
4 Delaware Rate Case Filing pertaining to Company Operations and Capital
5 Additions.

6

7 **Q. Please describe your educational background.**

8 A. I have a Bachelor of Science Degree in Business Administration from Drexel
9 University in Philadelphia, Pennsylvania.

10

11 **Q. What is the subject of your testimony?**

12 A. In addition to a general overview of the Company's operations, I will present
13 testimony on the following:

- 14 • The Company's efforts to control costs and maintain rate stability;
- 15 • The Company's efforts to utilize innovation to drive operational efficiency
16 and reduce costs;
- 17 • Organizational changes within the Company since the last base rate
18 case;
- 19 • The Company's efforts to increase the customer experience;
- 20 • The Company's educational efforts regarding conservation and the
21 value of water; and,
- 22 • The proposed changes to the Company's tariff Rules and Regulations.

II. Description of the Company

Q. Please give a general description of VWDE

A. Veolia Water Delaware ("VWDE" or "the Company") provides water service to approximately 39,500 customers in northern New Castle County, including portions of Wilmington, Newark, Bear, St. Georges and Delaware City. The transmission and distribution system is made up of approximately 550 miles of water main, 7,475 valves and 2,312 fire hydrants. The production system consists of one surface water treatment plant. The source of supply is the Stanton Water Treatment Plant ("SWTP") which is rated at 30 MGD and it draws source water from the confluence of the Red and White Clay Creeks in Wilmington. The Company also has nine interconnections with area water suppliers. The interconnection with Chester Water Authority has a maximum capacity of 0.5 million gallons per day. An interconnection with Veolia Water Pennsylvania –Bethel Operations averaged 0.53 million gallons per day in 2022. Seven interconnections with the City of Wilmington with a combined capacity of 7.7 million gallons per day, dependent upon system pressures. VWDE owns and maintains 10 elevated tanks, 3 standpipes, and 7 ground level reservoirs. Additionally, VWDE has 13 booster stations strategically located throughout the system to maintain adequate pressures and serve these various storage facilities. The Company also operates an Aquifer Storage and Recovery facility (ASR) which allows 75 MG of water taken from VWDE's distribution system to be stored in an underground aquifer. This

1 water is then treated and pumped back to the distribution system to
2 augment water supply during periods of drought.

3

4 **III. Impact of Rate Change**

5 **Q. When was VWDE last general rate filing?**

6 A. VWDE last filed for a general rate case on September 27th 2019. The case
7 resulted in a 19.96% increase, which became effective June 4th 2020.

8

9 **Q. How much does an average residential customer use per day and what**
10 **does that equate to on a cost per day under current rates?**

11 A. In 2022, a residential customer used approximately 131 gallons per day
12 which equated to one dollar and thirty nine cents (\$1.30) per day.

13

14 **Q. How would the Company's proposed increase impact the residential**
15 **customer?**

16 A. The cost for 131 gallons per day for residential customer including existing
17 surcharges would increase by approximately \$0.15 per day. Considering
18 the Company's last increase to base rates was in June 2020 and the
19 proposed rates would not become effective until approximately December
20 2023, VWDE's customers will have benefitted from approximately three and
21 half years of unchanged base rates.

1 **Q. How do VWDE's rates compare to the other Delaware class "A" private**
2 **water companies?**

3 A. Currently, VWDE's average residential customer bill based on 4,000 gallons
4 per month is approximately 17% lower than other Class A private water
5 companies.

6

7 **IV. Reduction in Consumption**

8 **Q. Has the Company seen a decrease in residential customer usage?**

9 A. Yes, when calculating a 3 year average of residential per customer
10 consumption, excluding 2020, it indicates a reduction of per customer
11 consumption of approximately 2.5%. The reason to exclude 2020 is
12 because the per customer consumption went up 3.65%, more than likely
13 due to the pandemic measures enacted by the State that had most people
14 working from home.

15

16 **Q. What reasons do you attribute to this decrease in consumption?**

17 A. First it is important to understand that the decline in consumption is being
18 experienced across the water industry. Therefore, a significant reason for
19 the decline can be attributed to new conservation appliances and fixtures
20 installed in new homes as well as being replaced in existing homes. Another
21 reason is the Company's ongoing efforts to educate its customers about the
22 benefits of conservation. A third reason is the customer awareness that a
23 reduction in water usage translates to a reduction in their wastewater cost.

1 **Q. Has the Company seen a decrease in usage in other classifications?**

2 A. No, again excluding 2020, the Commercial classification on a per customer
3 consumption basis has remained relatively flat with a 0.25% increase based
4 on a 3 year average.

5

6 **V. Prudent Management of Costs and Promotion of Efficiency**

7 **Q. Please describe how the Company has prudently managed its costs?**

8 A. The Company recognizes that overall costs are going to increase each year.
9 Labor, materials costs, health insurance, etc. are some examples of annual
10 cost increases that cannot be avoided or, even in some circumstances,
11 mitigated. The Company also understands its responsibility to provide an
12 excellent level of services to its customers. Cutting costs simply to keep
13 rates low is not an option where the public is dependent upon the quality
14 and reliability of the services; therefore, the Company must find ways to
15 operate more efficiently. The Company strives to continuously improve its
16 service level by utilizing new technology, changing business processes, and
17 continuing to invest prudently in its assets.

18

19 **Q. What does VWDE do to control and manage its chemical costs?**

20 A. VWDE has found that the process of competitively bidding chemicals where
21 possible and entering into annual supply agreements has been an effective
22 method to control chemical expenses and manage cost volatility. In addition
23 to focusing on costs, VWDE consistently reviews its treatment process to

VEOLIA WATER DELAWARE, INC.

Larry Finnicum

1 identify areas where changing chemicals can potentially reduce cost and
2 improve or optimize the treatment process. As well, VWDE utilizes EOps
3 (Electronic Operational Reporting) that, through tables and graphs,
4 interprets chemical data collected from our SCADA system. EOps is a
5 secure user interface program that allows personnel to analyze real time
6 SCADA information without the possibility of altering the original main
7 database. Data can be matched up against water quality parameters to
8 show chemical usage during storm events, facility upsets, and just everyday
9 normal demands. The tool can also be used for projecting yearly budget
10 requests (decrease/increases). The tool is also used as a way to make sure
11 chemical level transducers are reporting properly and that the chemical
12 inventory is as accurate as possible.

13
14 **Q. Please describe the steps that the Company is taking to control energy**
15 **costs.**

16 A. Two factors affect overall energy expenses, usage and price. Usage is
17 under management control while price is subject to market conditions.
18 Because of its costs control measures, the Company has entered into
19 certain contracts for the purchase of energy utilized to provide water to
20 customers at favorable prices for kWh. In addition, since the last rate filing,
21 the Company has been focusing on the purchase of new and more efficient
22 pumps for its distribution booster stations as well as replacing some of those
23 pump's starters with variable frequency drives. In addition, the new high

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1 service pumps that went online in 2020 as part of the Clearwell Finished
2 Water Storage and High Service Pumping project have allowed for better
3 management of our electrical use. Their variable frequency drives allow
4 operators to easily adjust motor speeds at the Stanton Facility to manage
5 flow and pressure, and that creates a domino effect in how we can better
6 operate some of our remote booster stations. On such example is the
7 reduced frequency in which the Edgemoor Booster is needed, thereby
8 reducing overall electrical usage. As well, the Company continues to
9 specify LED (Light Emitting Diode) lighting on new projects and site
10 refurbishments.

11

12 **Q. Please describe the Company's energy requirements and contracts.**

13 A. The Company has three primary sites, which are the Stanton Water
14 Treatment Plant, the Christiana Booster Station, and the Bellevue Booster
15 Station. They comprise approximately 90% of the kWh used by VWDE. All
16 of these locations have negotiated contracts for their kWh energy usage
17 through December 2023. In addition, VWDE has three additional sites on
18 contract, through December 2023, those being River Road Booster, Green
19 Acres Booster, and Edgemoor Booster.

20

21 **Q. Can you give a few examples of how the Company is utilizing new**
22 **technology and innovation to reduce costs, improve business**
23 **efficiency, or meet regulatory requirements?**

VEOLIA WATER DELAWARE, INC.

Larry Finnicum

1 A. Yes, I will highlight the following four projects:

2 • **Infor Enterprise Asset Management** - VWDE continues to use Infor
3 Enterprise Asset Management (EAM) since its implementation in 2016.
4 EAM is part of the Asset Management Program at the Company. Benefits
5 are derived from being able to track work on all critical aboveground
6 equipment through maintaining a comprehensive digital equipment registry
7 and maintenance plan. Regulatory requirements, such as analyzer
8 calibrations, are tracked in through EAM to ensure compliance.

9 The system also provides the Company a way to improve preventive
10 maintenance and reactive work planning. Currently, work planning is
11 completed based on historical maintenance activities and equipment
12 failures. As VWDE continues to use the system, we have realized another
13 benefit. As staff track maintenance in the system, the system acts as a
14 knowledge transfer devise. Even if staff leave the Company, the tasks they
15 performed have been recorded in EAM and can be reassigned to new staff.

16 The Company is utilizing the EAM mobile platform to communicate
17 more efficiently through electronic communication. This feature provides
18 staff instant mobile access to critical information such as equipment
19 specifications and documentation.

20 Subsequently, the Company continues to benefit through increased
21 efficiencies by improving workforce management, by building a more
22 proactive maintenance culture in order to reduce equipment failure,
23 reducing the frequency of reactive maintenance, providing personnel with

VEOLIA WATER DELAWARE, INC.

Larry Finnicum

1 instant access to needed information, and moving the Company toward a
2 more ecofriendly, paperless workflow and maintenance tracking
3 environment.

4 • **Clevest Mobile Workforce Management** - In June of 2019, the
5 Company went live with the Clevest Mobile Workforce Management System
6 (Clevest). The Clevest system implementation effort provides a fully digital
7 and near real-time automated communication process for the Field Work
8 Order management business process. Clevest has increased the quality
9 and efficiencies in our billing and appointment management process along
10 with streamlining data collection and integration into our Customer Billing
11 and Care system. This improves customer satisfaction due to higher quality
12 of billing and improved management of appointments as the ability to route
13 and manage the workforce has become more efficient. Lastly, the Clevest
14 system also furthers the accuracy of our reading and billing due to reduction
15 to work order processing time, double entry validation, and elimination of
16 manual input errors.

17 • **KloudGin** - KloudGin (KG) is a unique field operations tool used by
18 the Company to track work completed on linear assets. Linear assets can
19 be described as components of the water network between the Water
20 Treatment Plants and customer meters. Some examples would be pipes,
21 valves, and hydrants. KG can be thought of as an asset management tool
22 for distribution network assets.

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1 In 2021, the Company began the process of transitioning this
2 fieldwork from a paper process to a state of the art system in KG. The
3 primary purpose of the system is to track work done on field assets so that
4 every time an asset is touched, such as a valve turned, main break repaired,
5 and hydrant flushed, each action is recorded.

6 KG is used as a scheduling device to track what employees are
7 working on throughout the day, in order to help more efficiently schedule
8 and track work. KG as a platform assists in keeping track of work
9 completed, to ensure all steps of a required project are completed before a
10 project is closed. There are checklists and surveys built into KG that ensure
11 staff are completing all necessary steps of a project, beginning with the one-
12 call, then the safety plan, tracking the dig and repair process, and eventually
13 through the restoration.

14 The final benefit of KG is the data collected. Currently VWDE is
15 using KG to compare our data to the AWWA standards. Reporting out of
16 KG is still in the development phase, but as reports continue to be requested
17 and come available, there are many opportunities for VWDE to ensure
18 efficiency in the field and in our operations to ensure customers are best
19 served and all work is completed properly.

20 • **Sensus AMI Program-** One of the core goals of the Company is
21 innovation through Smart Water and Digital Technologies. Through the
22 addition of Advanced Metering Infrastructure (AMI) equipment, the
23 Company provides more efficient meter reading services with real time

VEOLIA WATER DELAWARE, INC.

Larry Finnicum

1 monitoring. AMI physically is a system that starts with the customer's meter
2 connected to a Sensus Endpoint, which is read by an antenna base station.
3 Hourly reads from customer meters are collected and stored in an online
4 database that is accessible by VWDE Customer Service Representatives
5 through a portal.

6 AMI is proving to be extremely valuable to Non-Revenue Water
7 (NRW) identification and reduction. What the AMI data allows NRW staff to
8 accomplish is to compare the water production volumes into District
9 Metered Areas (DMAs), and compare the daily sale volumes obtained
10 through AMI to complete a daily NRW determination for each DMA in the
11 Delaware system with high saturation percentages of AMI deployment.
12 Now when a leak occurs in a district-metered area, the data makes ts very
13 easy to interpret and staff can be deployed quickly to locate and repair the
14 leak. Currently staff can make a determination on a leak within three to
15 seven days, where in the past it could sometimes take a month or two.

16 AMI also provides better visibility on peak usage customers. Similar
17 to the gains experienced in NRW, when a large industrial customer changes
18 an internal process and draws a large amount of water, staff no longer
19 needs to scramble to look for a perceived leak. When production increases
20 in a DMA, staff can first check AMI data to see if a large customer began
21 consuming more water and if leak investigation is warranted. This saves
22 staff time looking for a leak that may not exist, which in turn also saves
23 unnecessary fuel consumption.

1 Updates on the AMI program include the saturation rate of AMI endpoints
2 to be approximately 30% in the Delaware Operation. The goal is to achieve
3 95% saturation by 2026. Currently there are supply chain issues that have
4 delayed the desired rate of progress, but progress is still being made and
5 proper connections at the Veolia Corporate level are currently leveraged to
6 align the Company for future success in obtaining the necessary materials.

7

8

VI. Customer Service Improvements

9 **Q. Please describe the Company's initiatives to provide the customer a**
10 **leading customer experience.**

11 A. The Company has, among other things, implemented the following
12 initiatives to improve the customer experience:

13 • **E- billing** -- The Company continues to offer E-billing to its customers. As
14 of February of 2023, 15,668 customers are utilizing E-billing to realize a
15 "Green" solution to routine billing. E-billing adds a customer convenience
16 and reduces the cost of bill presentation. The Company also offers direct
17 debit and, as of February of 2023, there were 9,152 customers enrolled.

18 • **IVR (Interactive Voice Response System)** – In December of 2018, The
19 Company implemented an IVR System to provide various self-service
20 options to our customers 24 hours a day. This IVR system has both English
21 and Spanish prompts. Validation of a customer's account can occur when
22 they utilize the telephone number associated with their account. Those
23 customers who do not have a telephone number associated with their
24 account have the opportunity to update their contact information when they

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1 utilize their account number to access the IVR system. A customer can
2 attain their account balance, due date of their most recent bill and the date
3 of the last payment made on their account. Customers can request a
4 duplicate bill; attain information to sign up for paperless e-billing and direct
5 debit. Customers can also attain payment options by phone with no fees
6 associated for this service, mail and in person. Lastly, the IVR telephone
7 system has a call back feature during high call volume days. Customers
8 have an opportunity to leave a call back number and hold their place in line
9 for a customer service representative to return their call.

- 10 • **Website Upgrade** - With the Veolia Merger, mysuezwater.com was
11 rebranded in May 2022 to mywater.veolia.us. Customers are encouraged
12 to register on mywater.veolia.us and login and manage their account.
13 Customers can view and print their current and previous bills. They can view
14 water usage, enroll in paperless billing and setup automatic payments as
15 well as start and stop water service. They can sign up for alert messages
16 by telephone, text or email. The customer can also attain information
17 through the “Amazon Alexa” application. In 2022, the Company added a
18 chat feature to assist those customers who had additional questions while
19 utilizing the Company’s website. The customer-facing website offers our
20 registered and non-registered customers access to benefits such as the
21 water quality reports, our water conservation tools, tips, and survey. They
22 can also view alerts about outages, water flushing and other water related
23 topics specific to their zip code area.

VII. Customer Outreach and Education

Q. Please describe the Company's outreach program to customers.

A. The Company uses a multifaceted and multi-channel approach to outreach and communication with customers, and leverages communication channels both inside and outside of the bill envelope. Inside the bill envelope, VWDE uses bill messages directly printed on the bill to convey important information to customers. Additionally, bill inserts (pamphlets) that accompany the bill are provided on topics like conservation and how to avoid frozen pipes in winter. VWDE provides a robust website and uses social media channels, primarily Facebook and Twitter, to deliver important, timely information regarding water service. VWDE also maintains a robust digital presence with a full service website that provides Frequently Asked Questions (FAQs) on subjects ranging from water quality to handling emergencies to bill paying options and financial assistance. VWDE also leverages GIS-based communications tools to deliver customer notifications related to water service via phone, email and text.

VWDE collaborates with a number of local environmental organizations with subject matter expertise in environmental education concerning water resources. VWDE helped create and continues to sponsor a major environmentally themed annual special event, "Creek Fest" in White Clay Creek State Park at which we have staff located at an information booth. VWDE operations has underwritten production and

1 placement of permanent, free standing educational signage at the DuPont
2 Environmental Education Center at the Wilmington Riverfront, reaching
3 some 60,000 visitors annually. Finally, VWDE is currently implementing a
4 \$100,000 commitment to charities affecting VWDE service territory in the
5 areas of watershed education, conservation and financial assistance for
6 customers and are not being requested in this rate case.

7

8

VIII. Conservation Education

9 **Q. Describe the Company's efforts to educate the public in conservation**
10 **and the value of water.**

11 A. Customer education and outreach on conservation is a major focal point at
12 Veolia Water Delaware. The VWDE website, interactive online
13 conservation program, funding of multiple, long standing and respected
14 local environmental NGOs, EPA WaterSense partnership, conservation
15 education billing inserts, conservation messaging on door hangers,
16 information dissemination through public event attendance, and residential
17 conservation rate structure are some of the many ways that Veolia Water
18 currently promotes conservation awareness in the communities that it
19 serves.

20

21

IX. Personnel Requirements

22 **Q. What organizational changes has the Company made to ensure that**
23 **its operations remain current?**

VEOLIA WATER DELAWARE, INC.

Larry Finnicum

1 **A.** In 2022 the Company reorganized to regionalize the Engineering
2 department Mid Atlantic Region of the Company, which covers the
3 Company Operations in Delaware and Pennsylvania. The Company made
4 this organizational change to ensure that best practice management and
5 efficiencies are in place in the delivery of the Company's capital plan.
6 Another organizational change that the Company made in 2022 was the
7 addition of a Director of Operational Technology for the Mid Atlantic Region.
8 This role will lead the execution of strategy and work in the areas of
9 Operational Technology for the Region which will include, Non- Revenue
10 Water (NRW), Advanced Meter Infrastructure (AMI), Asset Management,
11 Supervisory Control And Data Acquisition (SCADA), and Data Analytics.
12 Lastly, in 2023 the Company reorganized customer service at a regional
13 level under a regional Customer Service Manager for the Mid Atlantic
14 Region. The Company made this organizational change to ensure that
15 standardization of policy and procedures are in place throughout the Region
16 to ensure a positive and effective customer experience to the Company's
17 customers.

18
19 **Q.** **Has the Company laid off any employees since the last base rate**
20 **filing?**

21 **A.** No. The Company has a trained and skilled workforce that it wants to
22 maintain.

1 **Q. Has the Company eliminated or reduced any positions since the last**
2 **rate filing?**

3 A. Yes, the Company has eliminated the position of Customer Service
4 Supervisor.

5

6 **Q. Is the Company planning to add any new positions by the end of the**
7 **Test Period?**

8 A. Yes, the Company is planning to add seven new positions. The first position
9 is an apprentice operator in the Company's Production Department. The
10 second position is an Engineering Associate that will work in the
11 Engineering department to support hydraulic modeling in the Company's
12 distribution system as well as support the Company's main renewal
13 projects. The third position is a Mid Atlantic Region Asset Management
14 Specialist that will support the ongoing effort to enhance the Company's
15 asset management initiatives around preventive maintenance and
16 corrective maintenance on the Company's assets. The fourth position is a
17 Mid Atlantic Communication Specialist that will focus on enhancing the
18 Company's digital experience and customer education as well as support
19 community relations within our service territories. The fifth position is a Mid
20 Atlantic Geographical Informational System (GIS) Specialist that will
21 support the operation of Company's GIS system with training to the
22 employees that utilize the system as well as working to ensure that updates
23 to the system are completed in a timely manner. The sixth position is a Mid

VEOLIA WATER DELAWARE, INC.

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1 Atlantic Engineering Accounting Analyst that will focus on the financial
2 management and accounting for capital expenditures and will review,
3 monitor, and ensure procedural compliance for cost and asset components
4 of the projects included in the capital program from initiation to closeout.
5 The seventh position is a Mid Atlantic Engineering Budget Analyst that will
6 have a meaningful impact on the day-to-day management of the capital plan
7 ensuring standardization, efficiency and collaboration to benefit the
8 engineering department, operations, and the Company customers.

9

10 **Q. Have these positions been filled?**

11 A. The Mid Atlantic Engineering Budget Analyst and Engineering Associate,
12 have been filled with start dates of April 10th and April 24th respectively. The
13 other positions are in various stages of the recruitment phase and are
14 anticipated to be filled by the end of the test period.

15

16 **X. Quality and Reliability of Service**

17 **Q. Has the Company had any informal or formal PSC complaints**
18 **regarding water quality or service issues since its last rate**
19 **proceeding?**

20 A. No.

21

22 **Q. Has the Company had any Tier One or Tier Two violations since its**
23 **last rate case proceeding?**

1 A. No.

2

3 **Q. Has the Company been involved in reviewing potential changes in**
4 **treatment requirements related to emerging contaminants?**

5 A Yes, the Company constantly monitors potential changes and regulations
6 which could impact treatment. One area that the Company has focused on
7 is the potential changes in regulations around PFAS, or per and
8 polyfluoroalkyl substances. As a result of such potential changes, the
9 Company will be embarking on a multi-year capital project that will address
10 the treatment of these constituents to a level at or below the USEPA's
11 proposed Maximum Contaminant Limits (MCLs) of a running annual
12 average of 4 parts per trillion (ppt) each for PFOA and PFOS. Please refer
13 to the testimony of Ms. Guillen for further details on this project. In addition,
14 the Company also regularly meets and communicates with various
15 stakeholders and partners on emerging contaminant issues.

16

17 **XI. Changes to Tariff Rules and Regulations**

18 **Q. Please discuss the proposed changes to the Company's tariff Rules**
19 **and Regulations.**

20 A. The Company is proposing changes to its tariff as follows:

21 • The Company is proposing moving the due date on bills from twenty
22 (20) to fifteen (15) days. Bills rendered to the State of Delaware or
23 department or institution thereof will remain at thirty (30) days.

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1 • The Company is proposing to transfer ownership and maintenance
2 responsibilities of any meter pits and vaults to the customer in the future.
3 Examples of these may be developer projects, Company main renewal
4 projects, new services, etc.

5 • The Company is proposing to remove all language around charges
6 for the testing unmetered private firelines as the Company has not found an
7 efficient way to monitor this activity and to assess these charges.

8 • The Company is proposing a change in the unit of measurement for
9 billing from 1,000 gallons to 100 gallons. The Company believes that billing
10 in 100 gallons eliminates the fluctuation in bills and provides a more steady
11 usage and payment per month for residential customers. In other words, by
12 billing in 100 gallons a customer is closely billed for what they used in a
13 month instead of moving the additional consumption to their next monthly
14 billing.

15
16 **XII. Customer Notification of New Rates**

17 **Q. How will you inform customers of the rate case filing and the need to**
18 **increase rates?**

19 A. The Company will inform customers of our rate filing and subsequent
20 hearings by publishing the required notices in the local newspaper and will
21 also send each of its customers a notice by mail. This mailing will include
22 the key facts and a link to Frequently Asked Questions (FAQs). We will also
23 provide a bill (insert or message) to every customer. Additionally, we will

VEOLIA WATER DELAWARE, INC.

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1 provide informational letters to key stakeholders, including elected officials
2 who represent districts that include areas that we serve, as well as our ten
3 largest industrial customers. Internally, and in addition to our call center
4 staff, all Company employees will be briefed on the rate filing and the drivers
5 for the increase and provided with FAQ information. They will also be
6 provided with the name of a Veolia Water Delaware contact in order to
7 elevate any customer questions in the event that there are any customer
8 inquiries that they are unable to answer. Finally, a news release, describing
9 the rate request and the reasons for the request will be distributed to the
10 news media to ensure that the facts of the case are accurately
11 described. This news release will be posted on VWDE's website, with
12 Facebook and Twitter being used to enhance customer awareness.

13

14 **Q. Does this conclude your direct testimony?**

15 **A.** Yes it does.

**BEFORE THE
DELAWARE PUBLIC SERVICE COMMISSION**

DIRECT TESTIMONY OF

**ELDA GIL
VEOLIA WATER DELAWARE, INC.**

APRIL 2023

VEOLIA WATER DELAWARE, INC.
Elda Gil

1 **Q. Please state your name and business address.**

2 A. My name is Elda Gil and my business address is 461 From Road, Paramus,
3 New Jersey.

4 B.

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed as a Manager of Regulatory Business for Veolia Water M&S
7 (Paramus), Inc. (VWM&S).

8

9 **Q. Please describe your work experience**

10 A. In May 2007, I joined VWM&S as an Associate Rate Analyst. In August
11 2010, I was promoted to the position of Regulatory Specialist, in July 2015
12 to Senior Regulatory Specialist and in May 2019, I was promoted to
13 Manager Regulatory Business.

14 Prior to joining VWM&S, I was employed by Ballet Makers Inc., a
15 manufacturer and retail company, where I was responsible for Cost
16 Accounting. From 2000 to 2005, I was employed by Federal Direct, Inc. a
17 securities printing company as a Staff Accountant responsible for billing and
18 accounts receivable. Prior to that, I held the position of Financial Analyst in
19 Granahorrar Bank of Colombia from 1992 to 1999, responsible for financial
20 analysis and preparation of the consolidated company budget and forecast.

1 **Q. Please summarize your educational background and other**
2 **qualifications.**

3 A. I am a Certified Public Accountant licensed in New Jersey and in the country
4 of Colombia. I graduated from Central University of Bogota, Colombia in
5 1996 with a Bachelor of Business Administration degree in Accounting, and
6 earned my Master of Science degree in Taxation from Los Andes University
7 of Bogota in 1999. Additionally, I have an MBA in Finance from Saint Peter's
8 University in 2008.

9

10 **Q. What regulatory agencies have you previously presented testimony?**

11 A. I have presented testimony before the New Jersey Board of Public Utilities
12 (NJBPU), the New York State Public Service Commission (NYPSC), the
13 Delaware Public Service Commission (DPSC), the Pennsylvania Public
14 Utility Commission (PPUC), the State of Rhode Island and Providence
15 Plantations Public Utilities Commission (RIPUC), and the Connecticut
16 Department of Public Utility Control (DPUC).

17

18 **Q. What cases have you provided direct testimony on behalf of Veolia**
19 **Water Delaware?**

20 A. I provided testimony in support of Operation and Maintenance expenses
21 and Taxes Other than Income Taxes rate case Docket No. 09-60.
22 Testimony in support of the calculation of the Revenue Deficiency,
23 Operation and Maintenance expenses and Taxes Other than Income Taxes

VEOLIA WATER DELAWARE, INC.

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1 in rate case Docket No.10-421. I also provided testimony in support of the
2 calculation of the Revenue Deficiency in rate case Docket No.19-0615.

3

4 **Q. What is the purpose and nature of your testimony in this proceeding?**

5 A. The purpose of my testimony is to support the Veolia Water Delaware, Inc.
6 (VWDE or the "Company") request for rate relief. I am sponsoring the
7 overall revenue requirement, revenue conversion factor and the calculation
8 of Federal and State Income Tax expense. Additionally, I am sponsoring
9 the computation of Rate Base and Depreciation Expense for the Test Year
10 ended December 31, 2022 and Test Period ending September 30, 2023 for
11 VWDE.

12

13 **Q. Who are the other witnesses in the case?**

14 A. Mr. Larry Finnicum is the Vice President and General Manager and will
15 address the Operations of the Company and proposed tariff changes. Ms.
16 Emily Guillen is sponsoring the Company's construction program. Mr. David
17 Njuguna is sponsoring the Normalized Operating Revenues. Ms. Jana
18 Labella is sponsoring Operating Expenses and Taxes Other than Income
19 Taxes. Ms. Anupa Jacob is sponsoring the expense projection of
20 Management and Services. Mr. James Cagle is sponsoring the Company's
21 requested treatment of the regulatory liability related to the Tax Cuts and
22 Jobs Act ("TCJA"), and the establishment of a mechanism related to the
23 treatment of PFAS. Ms. Ann T. Bui of Black & Veatch Management

1 Consulting is sponsoring the Cost of Service and Load Studies and Mr.
2 Harold Walker III of Gannett Fleming is sponsoring the Cost of Capital.

3

4 **Q. Which of the Minimum Filing Requirements “MFRs” are you**
5 **sponsoring?**

6 A. I am sponsoring the following MFRs for the overall revenue requirement,
7 revenue conversion factor, the calculation of Federal and State Income
8 Tax expense:

9 MFR 2.1.4 Statement of Reasons for the Filing

10 MFR 2.4.1 Previous Base Rate Cases, compliance filings description

11 MFR 3.1 Proposed Revenue Requirement

12 MFR 3.1.1.1 Overall Financial Summary

13 MFR 3.1.1.2 Income Tax Calculation

14 MFR 4.7.4-5 Investment Tax Credit

15 MFR 5.1 Net Operating Income Summary

16 MFR 5.3.14 Operating Taxes

17 MFR 5.5.1 Other Income

18 MFR 7 Computation of Gross Revenue Factor

19 I am sponsoring the following MFRs for Rate Base and Depreciation
20 Expense

21 MFR 4.2 Rate Base Summary

22 MFR 4.3.1-4 Used and Useful Utility Plant by Primary Account

23 MFR 4.4 Intangible Assets Claimed in Rate Base

VEOLIA WATER DELAWARE, INC.
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- 1 MFR 4.5 Accumulated Depreciation and Amortization
- 2 MFR 4.6 Unfunded Customer Advances and/or Contributions in Aid of
- 3 Construction
- 4 MFR 4.7 Accumulated Deferred Income Taxes and Unamortized
- 5 Investment Credit
- 6 MFR 4.8 Amortization of Contributions in Aid of Construction and
- 7 Advances for construction
- 8 MFR 4.9 Materials and Supplies
- 9 MFR 4.10.1 Investor Supplied Cash Working Capital
- 10 MFR 4.11.4 Prepayments
- 11 MFR 4.11.5 OPEB Funding
- 12 MFR 5.3.5 Depreciation Rates and Calculation of Test Period
- 13 Depreciation Expense
- 14 MFR 5.4 AFUDC
- 15
- 16 **Q. Please describe the exhibit you are presenting in support of the**
- 17 **Revenue Deficiency.**
- 18 A. **MFR 2.1.4.** Summary of the General Increase in Rate Filing, is a brief
- 19 outline of the key elements of the filing included in the requested increase
- 20 as well as the main drivers of the request. The largest single driver of this
- 21 increase relates to the investment in utility plant in service since the last
- 22 case. Ms. Guillen will discuss the details of the investments in utility plant

1 that will be placed in service during the Test Period. The other areas of the
2 rate case will be discussed by the individual witness mentioned above.

3 **MFR 2.4.1.** Previous Base Rate Cases, is a description of compliance filings
4 from the three most recent cases.

5 **MFR 3.1.** Statement of Operating Income, shows the Company's income
6 statement for the actual Test Year which is the twelve months ended
7 December 31, 2022 and the Test Period ending September 30, 2023 at
8 present and proposed rates. It also shows the computation of the required
9 rate increase necessary for the Company to achieve its requested rate of
10 return. Column (a) is the description of each of the line items, Column (b)
11 represents the actual test year ending December 31, 2022, Column (c)
12 Adjustments, shows the difference to the test year and the Adjusted Test
13 Period at present rates in Column (d). Column (e) shows the revenue
14 deficiency and the development of the rate increase of \$6,083,443 or
15 18.98% necessary for the Company to earn its requested rate of return of
16 7.59%. Column (f) shows the pro-forma level of revenues and expenses as
17 requested by the Company at proposed rates.

18 This increase includes a provision for approximately \$1,751,000 of
19 currently billed DSIC (or Distribution System Improvement Charge)
20 surcharges to be included in base rates. Per the DSIC tariff requirements,
21 a "new base rate filing" resets the DSIC charges to zero since the costs that
22 the DSIC is based on are reflected in this base rate filing and rolls these

1 costs into the proposed tariffed water service rates along with the additional
2 revenue increase requested in this filing.

3 **MFR 3.1.1. Schedule 1.** Overall Financial Summary. Summarizes the Rate
4 Base, Schedule 2, detailed below in my testimony. Proposed Rate of
5 Return, Schedule 4, detailed in Mr. Walker's testimony and Gross Revenue
6 Conversion factor, Schedule 5, described below in MFR 7.

7 **MFR 3.1.1.2.** Shows the income tax calculation for the Adjusted Test Period
8 at present rates and at proposed rates. State (8.7%) and Federal (21%)
9 income taxes were calculated based on adjusted state and federal taxable
10 income for the adjusted and pro forma Test Period and include the
11 amortization of the flow through tax and income tax credits. The interest
12 deduction for the Test Period was computed by multiplying the adjusted
13 Rate Base by the weighted average cost of debt included in this filing.

14 **MFR 4.7.4 - 4.7.5.** Shows the annual amortization and unamortized
15 balances of investment tax credits.

16 **MFR 5.1** Net Operating Income Summary. Summarizes the adjustments to
17 Operating Revenues, Schedule 3A, as detailed in the direct testimony of
18 Mr. Njuguna. Operating expenses which includes Operation and
19 Maintenance Expenses and Taxes Other than Income Taxes, Schedule 3B,
20 as detailed in the direct testimony of Ms. Labella, and Depreciation
21 Expenses MFR 5.3.5 discussed below.

22 **MFR 5.3.14** Operating Taxes, Schedule 3I, 3J, 3K, and 3L, shows the
23 calculation for total Operating Taxes and the Investment Tax Credit.

1 **MFR 5.5.1** Other Income. Summarizes the items booked outside of income
2 for operations. Intercompany interest, interest charged to construction,
3 other income deductions and other interest expense.

4 **MFR 7. Schedule 5.** Computation of Gross Revenue Factor, shows the
5 revenue conversion factor which is utilized in this proceeding. This factor is
6 applied to the deficiency in Utility Operating Income to determine the
7 amount of additional revenues that VWDE is requesting. This factor reflects
8 all revenue related taxes in its development.

9
10 **Q. Please describe the exhibit you are presenting in support of the Rate**
11 **Base and Depreciation Expense.**

12 A. **MFR 4.2.** A summary of the rate base can be found in MFR 4.2,
13 Jurisdictional Rate Base Summary. Line 12 of this schedule shows a
14 proposed Test Period rate base amount, which is calculated by the following
15 components:

- 16 a) The original cost of all used and useful utility plant in service and
- 17 intangible assets;
- 18 b) Less: related accumulated depreciation and amortization;
- 19 c) Less: the actual amount received and un-refunded as customer
- 20 advances or contributions in aid of construction of utility plant;
- 21 d) Less: any accumulated deferred and unamortized income taxes and
- 22 investment credits related to utility plant included in paragraph a.
- 23 above;

VEOLIA WATER DELAWARE, INC.

Elda Gil

1 e) Plus: accumulated depreciation of customer advances and
2 contributions in and of construction related to utility plant included in
3 paragraph a. above;

4 f) Plus: materials and supplies and prepayments made that are
5 necessary to the conduct of the business;

6 g) Plus: cash working capital;

7 h) Less: TCJA accumulated deferred taxes as discussed by Mr. Cagle;

8 i) Less: unamortized OPEB funding.

9 **MFR 4.3.1 and 4.3.4**, Used and Useful Utility Plant in Service, shows total
10 plant, excluding intangible plant, itemized by NARUC account. These
11 amounts represent VWDE investment in mains, services, treatment
12 equipment, pumping equipment, land, tools, transportation and other utility
13 plant and begin with the actual utility plant in service balance at December
14 31, 2022. The adjustments to utility plant that will be completed, placed in-
15 service, and retired during the Test Period can be found in MFR 4.3.4, Used
16 and Useful Utility Plant in Service – Test Period Adjustments. These
17 additions and retirements are derived from the Company’s planned capital
18 expenditures and retirements. Company witness Ms. Guillen discusses the
19 capital program in her testimony.

20 **MFR 4.4**. Non-depreciable amounts of intangible assets that are included
21 in rate base can be found in MFR 4.4, Intangible Assets Claimed in Rate
22 Base.

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1 **MFR 4.5**, Accumulated Depreciation and Amortization shows the per book
2 accumulated depreciation by account at the end of the Test Year. This
3 amount represents the recovery through depreciation expense of
4 investments made by VWDE to provide utility service to its customers. Nine
5 months of additional depreciation expense, representing the amount of
6 depreciation expense that takes place during the Test Period (January 1,
7 2023 through September 30, 2023), is added to the Test Year amounts. The
8 support for these additions have been provided in the workpapers.

9 **MFR 4.6**. Unrefunded customer Advances and/ or CIAC shows the Test
10 Year balance as well as CIAC that will be added through the end of the Test
11 Period.

12 **MFR 4.7.1- 4.7.2-4.7.3** Accumulated Deferred Income Taxes – Federal and
13 State (“ADIT”) shows the per book balances, as of the end of the Test Year,
14 of ADIT items relating to rate base. The adjustment made to the Test Year
15 balance is the projected change in the difference between the Test Period
16 depreciation expense at current rates and Test Period income tax
17 depreciation expense times the Company’s composite marginal income tax
18 rate of 27.87% (8.7% State and 21% Federal). The marginal income tax
19 rate is used as an estimate of the rate at which the ADIT will reverse over
20 time. A change in the income tax rates utilized or affected in the filing would
21 also change the ADIT amount.

22 **MFR 4.8**, Amortization of Contributions in Aid of Construction represents
23 the Company’s accumulated amortization of contributions and advances as

1 of the end of the Test Year. This amortization was discontinued as of
2 October 31, 1993 per DPSC Order No. 3683, Docket No. 93-28.

3 **MFR 4.9**, Materials and Supplies shows the calculation of the 13-month
4 average of materials and supplies balances that occurred during the test
5 year.

6 **MFR 4.10**, Investor Supplied Cash Working Capital is based on the factors
7 developed in the lead lag study Docket No. 19-0615 and apply to the
8 revenues, expenses, depreciation and income taxes respectively.

9 **MFR 4.11.4** Page 2, Prepayments is a calculation of the 13-month average
10 of prepayment balances that occurred during the test year.

11 **MFR 4.11.5** Page 3, OPEB Funding shows the calculation of the tax
12 affected Unfunded OPEB Liability as of the end of the Test Year and Test
13 Period.

14 **MFR 4.11.6** Regulatory Liability TCJA, The unamortized portion of the
15 Regulatory Liability related to the Excess Accumulated Deferred Income
16 Taxes as a result of the Tax Cuts and Jobs Act has been included in the
17 Company's rate base as per Order Number 9319 dated January 31, 2019.
18 This adjustment is discussed further in Mr. Cagle's testimony.

19 **MFR 5.3.5** shows the Company's calculation of its actual Test Year
20 depreciation expense and Test Period depreciation expense based on the
21 depreciation rates approved in Docket No. 19-0615. The depreciation rates
22 are applied to the forecasted utility plant in-service by primary account from
23 MFR 4.3.1 to calculate the Test Period depreciation expense.

VEOLIA WATER DELAWARE, INC.
Elda Gil

1 **MFR 5.4** Allowance for funds used during construction, represent the
2 annual and monthly rates approved in Docket No. 19-0615.

3

4 **Q. Does this conclude your direct testimony?**

5 **A. Yes, it does.**

**BEFORE THE
DELAWARE PUBLIC SERVICE COMMISSION**

DIRECT TESTIMONY OF

**EMILY GUILLEN
VEOLIA WATER DELAWARE, INC.**

APRIL 2023

I. Introduction

1 **Q. What is your name and business address?**

2 A. My name is Emily Guillén. My business address is 2000 First State
3 Boulevard, Wilmington, DE 19804-0508.

4

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by Veolia Water Delaware, Inc. ("VWDE" or the "Company")
7 as the Manager of Engineering.

8

9 **Q. Please describe your work experience.**

10 A. I began my career with VanDemark & Lynch in Wilmington, DE as an
11 Engineering Technician where I spent almost two years assisting project
12 managers and project engineers in civil site design projects. I was
13 responsible for the majority of the drafting and design work on projects,
14 including grading, stormwater management, and utility design.

15 In 2015 I pivoted to the Water Resources division at Rummel,
16 Klepper, and Kahl, LLP in their Wilmington, DE office. My projects focused
17 on stormwater management design, specifically highway drainage design
18 and green infrastructure, including stream restoration, living shorelines, and
19 wetlands. I also supported many urban infrastructure projects designing
20 stormwater BMPs and combined sewer separations. In 2019 I transitioned
21 to the Water/Wastewater design group, focusing solely on utility design

1 projects, including water main replacements, combined sewer separations,
2 and supporting asset management plans.

3 In 2021 I transitioned to the role of State Engineer at Aqua New
4 Jersey, where I was responsible for all capital utility investment for the
5 division.

6 In 2022 I took on the role of Manager of Engineering for Veolia Water
7 Delaware. In this position I am responsible for all capital utility investment
8 for the Company.

9

10 **Q Have you previously testified before this or other regulatory**
11 **commissions in regards to a rate filing?**

12 A. No.

13

14 **Q. Please describe your educational background.**

15 A. I have a Bachelor of Science degree in Civil Engineering from Bucknell
16 University in Lewisburg, Pennsylvania.

17

18 **Q. What is the subject of your testimony?**

19 A. I will present testimony on the following:

- 20 • The Company's capital investment plan through the end of the test
21 period.
- 22 • The Company's approach to Tank Maintenance
- 23 • PFAS Treatment

II. Capital Additions

Q. Please discuss the Company's capital additions through the end of the Test Period (TP).

A. Exhibit 1 (attached) includes a list of capital improvement projects that are either well in progress prior to the commencement of the historical test year or will get underway after the start of the test period. All projects will be placed in service prior to the end of the TP. Projects are grouped into six types: blankets, roll-up expenditure, main renewals, large projects, SMART Utility Projects, and miscellaneous projects. Associated plant retirements, advances and contributions, and costs to remove related to these projects are also included in this Exhibit.

Q. Please describe the Company's project numbering system as reflected in Exhibit 1.

A. The projects are grouped by category. Each project is assigned an alpha-numerical number. All projects start with the letter C to signify Capital project; the next two digits represent the year; the next letter signifies a specific category; the next digit signifies new (1) or replacement (5), and the last two digits represent the project number. The various categories are "A" for Source of Supply; "B" for Water Treatment; "C" for Pumping; "D" for Transmission and Distribution; "E" for system storage; "F" for service, "G" for meters; "J" for information technology; and "K" for general plant.

1 **Q. How many large projects are there over \$500,000 in the Capital**
2 **Improvement Schedule (Exhibit 1)?**

3 **A.** There are four (4) projects budgeted over \$500,000. They are as follow:

- 4 1. Filter Media Replacement Phase 1 – \$879,000; completed in 2022
- 5 2. Line 68, Filter Media Replacement Phase 2 – \$802,000
- 6 3. Edgemoor Reservoir Demo – \$659,000; completed in 2022
- 7 4. Line 72, SCADA Upgrade and Communication Improvement –
8 \$2,407,000

9

10 **Q. Can you please provide an overview of each project that is over**
11 **\$500,000?**

12 **A.** The primary objectives of VWDE's large capital projects are to improve the
13 Company's ability to reliably provide service to customers with cost effective
14 replacement of equipment that have reached or surpassed their useful life.

- 15 1. The Filter Media Replacement project is a two-phased project that
16 replaces the gravel, sand, and anthracite in all twelve of the Stanton Water
17 Treatment Plant's dual media gravity filters. The last filter media
18 replacement occurred in 2012-2013 and the media from that replacement
19 has reached the end of its approximately 10 year useful life. After 10 years
20 the media performance decreases requiring more frequent backwashing,
21 causing media loss and increased operating expenses. Two phases were
22 utilized to split the filters into two groups of six to spread out the time filters
23 spent offline and cashflow for the project across two fiscal years.

1 Phase 1 consisted of replacing the media in filters 1, 2, 3, 4,
2 9, and 10, as well as the replacement of influent valves on filters 1, 2, 3, and
3 4, and actuators on filters 1 and 2. Diver services were required to isolate
4 filters 3 and 4.

5 2. Phase 2 consists of replacing the media in filters 5, 6, 7, 8, 11, and
6 12.

7 3. The Edgemoor Reservoir Demolition project was identified in 2018
8 when the existing 22 MG reservoir was removed from service when it was
9 determined the reservoir's floating cover would require replacement at a
10 significant cost. This reservoir served the North part of VWDE's system
11 (approximately 60% of the Company's customer base). The Company used
12 Optimatics, an ArcGIS-based software that quantifies deficiencies and
13 assesses improvement alternatives in the system, to help the Company
14 make a cost-effective decision on upcoming capital projects

15 In addition to the significant cost to replace the floating cover on the
16 reservoir, it was determined that the amount of storage was unnecessary
17 and that a higher hydraulic grade line than the reservoir could provide would
18 be beneficial to the system. The Company was also finding it difficult to
19 maintain an acceptable chlorine residual in the summer. Given this
20 information, in 2019 the company constructed a 3 MG ground tank that
21 would increase the hydraulic gradeline by about 30 ft and allow operators
22 to better regulate the chlorine residual, while still providing the required
23 storage to the North part of the system.

1 With the completed construction of this tank, the 22 MG reservoir
2 was able to be permanently retired from service and demolished, returning
3 the land to a usable asset for future needs.

4 4. The SCADA Upgrade and Communication Improvement project
5 consists of full replacement of VWDE's SCADA systems as their 15 to 20-
6 year old hardware and software components are obsolete. Spare parts are
7 increasingly difficult to source and the current software cannot meet
8 baseline cybersecurity guidelines and is not on par with the Company's
9 SCADA Standards and Guidelines. The addition of future treatment needs
10 would be nearly impossible without the upgrade to the SCADA systems and
11 lack of replacement could compromise reliability impacting water supply to
12 customers in the system.

13 New components, standardized control panels, better
14 communications methods, and optimized operator interfaces will increase
15 system reliability, reduce operator training time, and reduce chance of error.
16 Cybersecurity risk will be reduced by the new system's ability to connect
17 with Utility Enterprise's SCADA Data Center.

18

19 **Q. Please generally describe the Company's other capital projects**
20 **included in Exhibit 1.**

21 A. The remaining capital projects included in Exhibit 1 are somewhat self-
22 explanatory, but are required to maintain asset conditions to meet customer

service standards and regulatory requirements. Below is a general description of these projects by major category.

• **Main Replacements projects:**

The Company has 550 miles of main installed throughout New Castle County, Delaware. Approximately 50 percent of these mains are more than 50 years old. Since 2017 the Company has been proactively increasing its investment in main replacements to target an improved main replacement life cycle of 150 years or better to improve our service to customers. Specific target areas include unlined cast iron pipe, asbestos cement pipe, and reliability projects. The Company began this program in the Ashbourne Hills community where 6.8 miles of unlined cast iron pipe were replaced between 2017 and 2022. Current large projects include the Windybush and Tudors Roads project and the South Dupont Highway project to improve reliability to customers as well as improve water quality. Some of these projects are also included in the Company's DSIC filings.

• **Blanket Projects:**

Some of the blanket projects described below are included under the DSIC filings. In addition to main refurbishment projects, these three categories are included under the DSIC program:

- Valve and Hydrant replacement
- Service line replacement (from main to curb or meter pit)

- Un-reimbursed utility relocation costs associated with relocations required by governmental entities

- **Transmission and Distribution** - This category includes new and replacement water mains installed as a repair, including valves and hydrants (Blankets). All of these projects are needed to meet the demands in the distribution system, improve fire flows, maintain water quality and provide adequate service pressure to customers.

- **Services** - This category includes the installation of new domestic and fire services to meet the growth in the system and replacement services to improve water quality and maintain supply / pressure.

- **Meters** - This category includes the installation of meters for new customers and the replacement of meters in accordance with regulatory requirements. Until 2019, replacement of Electronic Receiver Transmitters (ERTs) was also included in this category as it is crucial to maintain efficient and effective meter reading operations; this is now replaced with the retrofit of new SMART Sensus end points which are needed for AMI.

- **Treatment:** This category includes replacement and improvement of chemical equipment and other treatment equipment as needed to maintain the regulations.

- **Pumping:** This category includes replacement of deteriorated, failed and undersized pumping equipment as well as replacement / upgrade of

SCADA equipment required to provide effective system monitoring and control.

- **Operational Technology:**

This category includes improvements to and implementation of software systems, including asset management, information technology, geographic information system (GIS), hydraulic modeling and operational database systems (eOps, MDM). In addition, hardware that is required for these improvements is classified under this category.

Q. Please describe the upcoming PFAS treatment project at the Stanton Water Treatment Plant.

A. The PFAS treatment project was identified as a result of the pending Delaware and EPA regulations for maximum contaminant levels of PFOA and PFOS. In order to meet the proposed compliance levels, treatment for PFOA and PFOS will be implemented at the Stanton Water Treatment Plant as alternative sources of supply are not feasible options for the VWDE system. The project is currently in the design and permitting stage and anticipated to be in service in late 2024 or early 2025. The project consists of the installation of 21 lead lag treatment systems, a new building housing the equipment and an electrical room, and a 100,000 gallon backwash tank. Each treatment system consists of two dual-purpose vessels that can utilize either granulated activated carbon or resin to remove PFOA and PFOS. Each vessel is approximately 24.5 ft in height and 12 ft in diameter plus a

1 connecting train, putting the new building size at around 18,000 SF. The
2 total cost of this project is expected to exceed \$40 million.

3

4

III. Tank Maintenance

5 **Q. Please discuss the Company's approach to Tank Asset Maintenance?**

6 A. Water storage tanks are large capital assets. The maintenance of these
7 distribution system components is critical to avoid water quality violations,
8 customer complaints and service disruptions. Since 2014, in place of
9 regular individual inspection task orders, the Company has been planning
10 and executing 15-year maintenance contracts throughout the storage
11 network to extend the operability and service life of these 17 critical assets.
12 Three additional tanks have been added to the system (Edgemoor,
13 Clearwells 1 and 2 at Stanton Water Treatment Plant) since this initiative
14 was kicked off and are not under contract. The total number of tanks in the
15 system is now 20.

16 A condition assessment was performed on each tank in the
17 transmission and distribution network to identify initial structural, internal
18 painting, and external painting renovations required to bring the asset to
19 "like-new" condition. This included requirements to bring the asset up-to-
20 date with all EPA, OSHA, Delaware DPH and Homeland Security
21 regulations.

22 Each of the tank maintenance contracts is negotiated to
23 incorporate initial renovations; on-going inspection and care; and final

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Emily Guillén

renovations prior to the end on the contract term. On-going inspection and repair includes three-year cycles of visual inspections, remote operated vehicles inspections, and chemical clean washout services to remove mineral and biofilm build-up. In addition, the following items are addressed during these on-going inspections:

- Touch up all rusty areas on leg pads and anchor bolts
- Replace all damaged/loose/painted vent and OF screens
- Touch up all access hatch and vents
- Drill balcony weep holes where it may cause future corrosion
- Touch up corrosion on Balcony floors
- Repair any issue that may cause a safety/sanitary/security concern which can be remedied at the inspection. Includes openings around cathodic covers which can allow rain runoff into the tank (caulk to seal). Note any potential sanitation issue like open float pulley housings, vents/OF which screens are hard to secure etc.
- Tanks with dry interior: clean all trash from dry interior, sweep landings, and touch up as needed, note all repairs in report comments and make note of any possible future repairs

Lastly the awarded contractor performs unscheduled or emergency tank repairs at no additional charge.

It was undesirable to incorporate all 17 assets under contract at once. The results of the initial condition assessments as well as location and residents served were considered in the selection of tanks to be

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included in the first round of contracts. In 2014, six tanks in poor condition that are critical to maintaining service to our North System were placed under contract with Utility Service Co., formerly known as Advanced Solutions, a service group within Veolia North America. The table below summarizes these contract values. The annual fee to be paid is reviewed and adjusted annually based on comparing the year over year Engineering News Record (ENR) Construction Cost Index (CCI) index percentage applied to the previous year's annual fee. The initial renovations of all six tanks were completed within two years of the contract date.

Amortization of Tank Painting	Last Painted	Year	Base Proposal (Use ENR CCI to adjust)	Structural	Exterior Coating	Interior Coating	Total Contract Amount
Ashbourne Hills Elevated Tank, 0.2MG	2014	2014	\$ 50,383	\$ 21,044	\$ 355,671	\$ 117,993	\$ 494,708
Devon Elevated Tank, 0.5MG	2016	2014	\$ 61,023	\$ 11,596	\$ 481,063	\$ 170,911	\$ 663,570
Graylyn Crest Tank, 0.2MG	2015	2014	\$ 49,548	\$ 20,848	\$ 369,676	\$ 104,059	\$ 494,583
Green Acres Elevated Tank, 0.2MG	2015	2014	\$ 48,217	\$ 12,714	\$ 361,951	\$ 105,071	\$ 479,736
Newport Elevated Tank, 0.1MG	2015	2014	\$ 20,198	\$ 11,095	\$ 64,015	\$ 82,569	\$ 157,679
Villa Monterey Elevated Tank, 0.5MG	2016	2014	\$ 51,045	\$ 11,349	\$ 276,837	\$ 182,761	\$ 470,947

In 2017, four more tanks were placed under contract – see the table below. These tanks represent four of the six large capacity steel tanks currently in-service. River Road tank supports the Company's largest consumer of the Company. The other three support our north system. The initial renovations for both Bellevue Tanks and the Tri-State Tank have been completed. Those for River Road tank are scheduled following construction of a new 1MG tank in the same system. There are hydraulic considerations that make scheduling of removing these tanks from service more challenging.

VEOLIA WATER DELAWARE INC.
Emily Guillén

Amortization of Tank Painting	Last Painted	Year	Base Proposal (Use ENR CCI to adjust)	Structural	Exterior Coating	Interior Coating	Total Contract Amount
Bellevue Ground Tank #1, 0.5MG	2018	2017	\$ 59,041	\$ 163,521	\$ 303,334	\$ 210,160	\$ 560,865
Bellevue Ground Tank #2, 1MG	2019	2017	\$ 73,680	\$ 54,979	\$ 364,197	\$ 278,178	\$ 697,354
River Road Elevated Tank, 1MG	2000	2017	\$ 104,177	\$ 100,681	\$ 654,644	\$ 218,860	\$ 974,185
Tri-State Elevated Tank, 1MG	2001	2017	\$ 104,772	\$ 82,589	\$ 686,412	\$ 213,521	\$ 982,522

1

2

3

4

5

6 **Q. Does this conclude your direct testimony?**

7 **A. Yes.**

Exhibit 1
Test Year and Period Capital Additions Forecast

Veolia Water Delaware

Test Year and Period Capital Additions Forecast

Additions for projects started before end of Test Year (December 31, 2022) and Test Period (September 30, 2023)

Line	Project ID	Project Name	CWIP Balance as of 12/31/22	Plant Additions 1/1/23 - 9/30/23	Total Cost without AFUDC	Local OH - 2.0%	Corporate OH - 4.0%	AFUDC	Total Cost	Month In-Service	Plant Account(s)	Plant #	Retire Amount	Cost to Remove	Salvage	Advance	CIAC
1	CYYD002_027	New Short Mains and Valves	4	(4)	(0)	(0)	(0)	-	(1)	Blanket	34300	343					
2	CYYD502_027	Repl Short Mains		(8)	(8)	(0)	(0)	-	(8)	Blanket - DSIC	34300	343					
3	CYYD503_027	Replacement Valves- TandD		(0)	(0)	(0)	(0)	-	(0)	Blanket - DSIC	34300	343					
4	CYF001_027	New Domestic Svcs		(1)	(1)	(0)	(0)	-	(2)	Blanket	34300	343					
5	CYF003_027	New Fire Services		(13)	(13)	(0)	(1)	-	(13)	Blanket	34500	345					
6	CYF501_027	Repl Domestic Services		(20)	(20)	(0)	(1)	-	(21)	Blanket - DSIC	34500	345					
7	CYF001_027	New Customer Meters		(1)	(1)	(0)	(0)	-	(1)	Blanket	34600	346					
8	CYF501_027	Repl Customer Meters		103	103	2	4	-	109	Blanket - DSIC	34600	346	4	0.2			
9	CYF502_027	Replacement End-Points Non-DSI		56	56	1	2	-	59	Blanket	34600	346	1	0.0			
10	C23D001_027	New Fire Hydrants		11	11	0	0	-	12	Blanket	34800	348					
11	C23D002_027	New Short Mains Valves	80	286	366	6	12	-	384	Blanket	34300	343					
12	C23D003_027	New Valves T D	15	21	36	0	1	-	37	Blanket	34300	343					
13	C23D501_027	Replacement Fire Hydrants		53	53	1	2	-	56	Blanket - DSIC	34800	348	6	1.8			
14	C23D502_027	Replacement Short Mains		273	273	5	11	-	290	Blanket - DSIC	34300	343	11	10.4			
15	C23D503_027	Replacement Valves	3	200	203	4	8	-	215	Blanket - DSIC	34300	343	3	1.8			
16	C23F001_027	New Domestic Svcs	2	118	120	2	5	-	128	Blanket	34500	345					
17	C23F003_027	New Fire Svcs		34	34	1	1	-	36	Blanket	34500	345					
18	C23F501_027	Replacement Domestic Svcs	17	288	305	6	12	-	322	Blanket - DSIC	34500	345	5	1.8			
19	C23F502_027	Repl Lead Svcs	5	100	105	2	4	-	111	Blanket	34500	345	2	0.6			
20	C23F503_027	Repl Fire Svcs		4	4	0	0	-	4	Blanket	34500	345	0	0.0			
21	C23G001_027	New Customer Meters		7	7	0	0	-	8	Blanket	34600	346					
22	C23G501_027	Repl Customer Meters	72	183	255	4	7	-	266	Blanket - DSIC	34600	346	9	0.6			
23	C23G502_027	Replacement Endpoints NonDSIC		650	650	13	27	-	690	Blanket	34600	346	6.4	0.0			
24	C21B501_027	Treatment Needs-R	3	-	3	-	-	-	3	Oct-21	33200	332	0.0	0.1			
25	C21C501_027	Pumping-R	6	-	6	-	-	-	6	Dec-21	32500	325	0.0	0.2			
26	C21J502_027	SCADA Control - R	4	-	4	-	-	-	4	Apr-23	39700	397	0	0.0			
27	C21K501_027	Electrical Equipment-R	83	-	83	-	-	-	83	Apr-23	32500	325	1	3.1			
28	C22J102_027	SCADA Controls	3	2	5	0	0	-	6	Apr-23	39700	397	0	0.0			
29	C22K101_027	NRW Equip DMA Prod Meters -R	73	-	73	-	-	-	73	Apr-23	39400	394	0	0.0			
30	C22K501_027	Electrical Equipment-R	11	(0)	11	(0)	(0)	-	11	Apr-23	32500	325	0	0.4			
31	C22K502_027	Safety and Security-R	39	(9)	31	(0)	(0)	-	30	Apr-23	39000	390	0	1.8			
32	C22K503_027	Tools and Work Equipment-R	6	-	6	-	-	-	6	Apr-23	39400	394	2	0.0			
33	C22K504_027	General Plant and Facilities-R	38	12	49	0	0	-	50	Apr-23	33100	331	0	2.5			
34	C23B501_027	Treatment Needs-R		170	170	3	7	-	180	Apr-23	33200	332	1	7.4			
35	C23C501_027	Pumping-R		85	85	2	3	-	90	Sep-23	32500	325	0	3.8			
36	C23J101_027	OT Optimization - R		40	40	1	2	-	42	Sep-23	39200	392	1	0.5			
37	C23J502_027	SCADA and Control - R		125	125	3	5	-	133	Sep-23	39700	397	6	0.5			
38	C23K101_027	NRW Equip DMA Prod Meters -R		75	75	2	3	-	80	Sep-23	39400	394	0	0.0			
39	C23K501_027	Electrical Equipment-R		125	125	3	5	-	133	Sep-23	32500	325	1	5.0			
40	C23K502_027	Safety and Security-R		50	50	1	2	-	53	Sep-23	39000	390	0	3.2			
41	C23K503_027	Tools and Work Equipment-R		45	45	1	2	-	48	Sep-23	39400	394	13.9	0.0			
42	C23K504_027	General Plant and Facilities-R		125	125	3	5	-	133	Sep-23	33100	331	0	6.6			

Test Year and Period Capital Additions Forecast
Additions for projects started before end of Test Year (December 31, 2022) and Test Period (September 30, 2023)

**BEFORE THE
DELAWARE PUBLIC SERVICE COMMISSION**

DIRECT TESTIMONY OF

**DAVID NJUGUNA
VEOLIA WATER DELAWARE, INC.**

APRIL 2023

1 **Q. Please state your name and business address.**

2 A. My name is David Njuguna, and my business address is 461 From Rd, Suite
3 400, Paramus, New Jersey 07652.

4
5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by Veolia Water M&S (Paramus), Inc. ("VWM&S") as
7 Manager – Regulatory Business.

8
9 **Q. Please summarize your educational background and qualifications.**

10 A. I graduated from Kenyatta University, Nairobi, Kenya, with a Bachelor of
11 Commerce Degree in Accounting in Year 2000 and earned a Masters
12 Degree in Business Administration from Rutgers Business School in 2012.

13
14 **Q. What experience did you have prior to joining VWM&S?**

15 A. From August 2001 to July 2006, I was employed by the Union Fenosa
16 Group, an integrated energy company headquartered in Madrid, Spain,
17 where I gained a broad outlook of utility accounting. During my tenure at
18 Union Fenosa, I held various positions and my responsibilities varied
19 depending on the title I held. As a management accountant, my
20 responsibilities included preparing, reviewing and analyzing monthly
21 divisional and consolidated financial statements and reports. As a financial
22 accountant, my responsibilities included financial analysis and preparation
23 of consolidated company budgets and financial reports.

1 **Q. When did you join VWM&S and in what capacity?**

2 A. I joined VWM&S in May 2007 as a Rate Analyst. In August 2010, I was
3 promoted to the position of Senior Rate Analyst and later promoted to the
4 position of Manager Regulatory Business in January 2016.

5

6 **Q. What other roles have you held while employed by VWM&S?**

7 A. From December 2012 through December 2015, I worked in the Accounting
8 Department of VWM&S as an Accounting Manager focusing on Regulatory
9 Accounting and Fixed Assets Accounting. My duties included, but were not
10 limited to, ensuring the proper accounting of deferred regulated assets and
11 fixed assets of the Company.

12

13 **Q. Before what regulatory agencies have you previously presented**
14 **testimony?**

15 A. I have previously filed testimony in rate case filings before the Delaware
16 Public Service Commission ("DEPSC"), the New York State Public Service
17 Commission ("NYPSC"), the New Jersey Board of Public Utilities
18 ("NJBPU"), the Pennsylvania Public Utility Commission ("PAPUC"), the
19 Arkansas Public Service Commission ("APSC") and the Idaho Public
20 Utilities Commission ("IPUC").

21

22 **Q. What is the purpose of your testimony in this proceeding?**

1 A. The purpose of my testimony is to present pro-forma adjustments to
2 normalize operating revenues for the Test Period at present rates for Veolia
3 Water Delaware Inc. (the “Company” or “VWDE”).
4

5 **Q. What schedules are you sponsoring?**

6 A. I am sponsoring the following Minimum Filing Requirements of the
7 Delaware Public Service Commission (“MFR”):

8 MFR 5.2.1 summarizes operating revenues for the Test Year and
9 normalized Test Period.

10 MFR 5.2.1 – Operating Revenues by Category, Schedule 3A

11 MFR 5.2.2 – Operating Revenues and Volumes

12 MFR 5.2.3 – Adjustments to Test Period Volumes and Units, Schedule
13 3A-1 through Schedule 3A-3

14 MFR 5.2.4 – Adjustments to Test Period Revenues
15

16 **Q. Please describe the Company’s Revenues.**

17 A. VWDE serves approximately 39,500 customers under a general metered
18 tariff for Residential, Commercial, Industrial, Public Authority, Sales for
19 Resale and Public and Private Fire Service customers. In addition, the
20 Company supplies wholesale water to its affiliate in Pennsylvania.

1 **Q. Please describe the Company's Revenue Categories.**

2 A. The Company's revenues are grouped under three major revenue
3 categories:

4 1) General Metered Sales of Water

5 2) Fire Protection

6 3) Miscellaneous Water Revenue.

7 General Metered Sales of Water comprises metered Residential,
8 Commercial, Industrial, Public Authority and Sales for Resale customers.

9 Fire Protection consists of private and public fire protection and the Other
10 Revenue category is made up of miscellaneous service revenues from
11 various customer fees, charges, and rents from leasing water property.

12

13 **Q. Please describe the adjustments made to normalize Sales of Water**
14 **Revenues?**

15 A. For general metered water customers, a bill analysis was prepared for the
16 Test Year (12 months ended December 31, 2022) verifying bill determinants
17 for customers by meter size. Thereafter, adjustments were made to
18 normalize revenues and volumes to reflect a typical or normalized usage
19 level. For the Residential customer class, the Company used the baseload
20 plus yearly average weather related methodology, utilizing 10 years of
21 historical average consumption by customer to arrive at the normalized
22 consumption for the Test Period. For industrial customers, the Company
23 used the average of calendar Years 2019 through 2022 volumes adjusted

1 for customers who have a minimum take or pay obligation with the
2 Company and a ten-year linear regression to normalize Commercial, Public
3 Authority and Sale for Resale customer classes, respectively.

4

5 **Q. Please describe the adjustments made to the industrial customer class**
6 **in order to forecast Test Period consumption?**

7 A. To project future normalized consumption, the Company averaged the
8 consumption volumes of active customers from calendar years 2019 to
9 2022.

10 Thereafter, the Company increased the Test Year volumes for CIBA-
11 GEIGY/BASF and Calpine Corporation to match their respective minimum
12 take or pay obligation of 168,000 MGL and 216,000 MGL annually, as their
13 four-year average consumption was less than the minimum.

14

15 **Q. How did the Company project the customer count for the Test Period?**

16 A. The Company projected the number of customers using a ten-year trend of
17 the average yearly number of customers from 2013 to 2022, for the
18 Residential and Commercial customer classes. For Industrial, Public
19 Authority and Sales for Resale customer classes, the Company has
20 assumed the same number of customers as in the Test Year.

1 **Q. How was the total projected sales of water developed?**

2 A. To the projected customer count, the Company applied the normalized
3 consumption to arrive at normalized volumes for the Test Period.

4

5 **Q. Please describe the adjustments made to the Fire Protection Category?**

6 A. The Company provides both public and private fire protection services.
7 Public fire service is provided via hydrants in the Company's service territory
8 whereas private fire protection is provided through Company owned and
9 customer maintained hydrants and fire service lines. To calculate the Test
10 Period adjustment, a bill analysis was performed verifying the billing
11 determinants for customers by number of hydrants, meters and service line
12 sizes. In the Test Year, the Company also makes a normalization
13 adjustment related to three private fire hydrants that were inadvertently
14 billed to two customers.

15 Thereafter, the Company calculated the annual customer growth for
16 fire services based on a three-year average (2019 through 2022). The
17 customer growth was then extended to the end of the Test Period. Please
18 refer to MFR 5.2.3 3A-3 that details the calculations.

19

20 **Q. Is the Company proposing any changes in the rates related to**
21 **miscellaneous charges?**

22 A. No, it is not.

23

1 **Q. Did you make any normalizing adjustments to Miscellaneous**
2 **Revenues?**

3 A. Yes. Miscellaneous revenues consist of various customer fees, late
4 payment fees and rent from leasing water property. WP-3A-Other
5 Revenues provides details of the normalizing adjustments to this revenue
6 category. The Company has used a three-year historical average to project
7 Test Period revenues from customer charges and increased current lease
8 charges as provided for in the lease agreements.

9

10 **Q. Did the Company develop proposed rates for the Test Period?**

11 A. Yes. Please refer to the testimony of Witness Ms. Bui for the proposed rates
12 and the tariff document sponsored by Mr. Finnicum.

13

14 **Q. Does this conclude your Direct Testimony?**

15 A. Yes, it does.

**BEFORE THE
DELAWARE PUBLIC SERVICE COMMISSION**

DIRECT TESTIMONY OF

**JANA LABELLA
VEOLIA WATER DELAWARE, INC.**

APRIL 2023

VEOLIA WATER DELAWARE, INC.

Jana Labella

1 **Q. Please state your name and business address.**

2 A. My name is Jana Labella, and my business address is 461 From Road, Suite 400,
3 Paramus, New Jersey 07652.

4
5 **Q. By whom are you employed and in what capacity?**

6 A. I am a Senior Regulatory Specialist in the Rate Department for Veolia Water M&S
7 (Parmus), Inc. ("VWM&S") which I joined in January of 2022.

8
9 **Q. Please summarize your educational background and other qualifications.**

10 A. I graduated from Baruch College in New York, NY with a Bachelor of Business
11 Administration degree in Accounting and from Pace University in New York, NY
12 with a Master of Science degree in Financial Management. I am a Certified Public
13 Accountant having received my certificate in 2014.

14
15 **Q. What experience did you have prior to joining VWM&S?**

16 A. Prior to joining VWM&S, I was employed by National Grid USA for fifteen years in
17 various departments, including accounting, external reporting, finance business
18 partners, and strategy and regulation. As Lead Analyst in the strategy and
19 regulation department, my responsibilities included supporting National Grid's
20 Federal Energy Regulatory Commission regulated companies on rate matters,
21 such as preparing annual rate updates for transmission companies jointly with
22 other New England Transmission Owners, preparing depreciation rate update

VEOLIA WATER DELAWARE, INC.

Jana Labella

filings for transmission companies and preparing rate case filings for National Grid
Liquified Natural Gas, LLC (“NG LNG”).

Q. What regulatory agencies have you previously appeared before and presented testimony?

A. I testified on behalf of NG LNG to update storage capacity rates before the Federal Energy Regulatory Commission. I also provided testimony in a rate case proceeding for Veolia Water New York, Inc.

Q. What is the purpose of your direct testimony in this proceeding?

A. The purpose of my testimony is to present certain schedules included in Section 5.3 of the Minimum Filing Requirements (“MFRs”) and to describe proposed adjustments to Operating Expenses and Taxes, Other than Income Taxes for Veolia Water Delaware, Inc.’s (“the Company” or “Veolia”).

Q. Which MFR’s are you sponsoring in this rate case?

A. I am sponsoring the following schedules:

MFR 3.1.3	Summary of Test Year Adjustments
MFR 5.3.1 Schedule 3B	Operating Expenses
MFR 5.3.2	Operating Expenses Adjustments
MFR 5.3.3 Schedule 3C	Payroll Costs
MFR 5.3.4 Schedule 3D	Executive Compensation
MFR 5.3.8 Schedule 3E	Sales Promotion and Advertising Expenses

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1 MFR 5.3.9 Schedule 3F Charitable and Educational Expense (not
2 applicable)

3 MFR 5.3.10 Lobbying Expense (not applicable)

4 MFR 5.3.11 Schedule 3G Social and Service Club Dues

5 MFR 5.3.12 Schedule 3H Rate Case Expense

6 MFR 5.3.14.7 Schedule 3M Other Federal, State and Local Taxes

7

8 **Q. Were all of the schedules listed in your previous answer prepared by you or**
9 **under your direction and supervision?**

10 A. Yes, all of these schedules were prepared by me or under my direction and
11 supervision, except for the portions derived from the testimony of other Company
12 witnesses in this proceeding.

13

14 **Q. What test year and test period are used in this proceeding?**

15 A. For this rate filing, the Company is utilizing a test year consisting of a 12-month
16 period ended December 31, 2022 of actual data ("Test Year") and a test period
17 consisting of twelve months ending September 30, 2023 ("Test Period"), containing
18 3 months of historical data and 9 months of projected data. The Test Year is based
19 on actual data per the company's books and records, which is kept in conformity
20 with the Uniform System of Accounts for water companies. For the Test Period the
21 Company analyzed historical actual data consisting of the four calendar years
22 2019, 2020, 2021 and 2022 to identify normalizing adjustments. Further
23 adjustments were also made to account for any known changes in cost projected

1 to occur in the Test Period and measurable with a reasonable accuracy at the time
2 of this rate filing.

3
4 **Q. Turning now to the schedules you are sponsoring, would you please explain**
5 **MFR 3.1.3, Summary of Test Year Adjustments.**

6 A. This schedule represents a summary of adjustments to the actual historical Test
7 Year and the Pro Forma Test Period for Operating Expenses and Taxes Other
8 than Income Taxes. Schedules 3B-1 through 3M-3 as well as supporting
9 workpapers provide additional details as discussed below.

10
11 **Q. Please provide a high-level summary of MFR 5.3.1, Schedule 3B, Operating**
12 **Expenses**

13 A. This schedule shows operating expenses, by major expense category for the Test
14 Year and the Test Period. The supporting calculations for all of the adjustments
15 can be found in the Workpaper section, 5.3.2 of the Minimum Filing Requirements.

16
17 **Q. Moving on to operating expense adjustments referenced in MFR 5.3.2, would**
18 **you please discuss the adjustments to Veolia's operation and maintenance**
19 **expenses reflected in Schedules 3B-1 through 3M-3:**

20 A. **Schedule 3B-1, Purchased Water.** The Company purchases water from Chester
21 Water Authority ("Chester") and Veolia Water Pennsylvania (formally known as
22 Bethel Township Water Company "Bethel") per existing contracts. The contract
23 with Chester requires the Company to purchase a minimum of 135,000 gallons per

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1 day, which on an annualized basis adds up to 49.275 million gallons. In calendar
2 years ("CY") 2019, 2021 and 2022, the Company water purchases exceeded the
3 minimum requirement on average by nine percent. This interconnection serves two
4 industrial customers, which used less water in CY 2020 in comparison to other
5 years, hence the Company was charged an additional amount to meet minimum
6 requirement. For this reason, the four-year average was chosen to calculate
7 purchased water volume as it produces a seven percent increase over a minimum
8 requirement which closely aligns with the prior period average. The cost of
9 purchased water was calculated by utilizing projected purchased water volume
10 multiplied by current rate, and adding monthly meter charge, annualized for the
11 Test Period.

12 The contract with Bethel allows the Company to purchase excess water
13 Bethel doesn't use for its customers. In CY 2022, the Company had one of its tanks
14 out of service for maintenance and this increased water purchased in that year.
15 Prior tank maintenance the Company experienced in 2019, which also required a
16 higher water purchase. For this reason, the cost of purchased water for the Test
17 Period was calculated by taking the historic four-year calendar average of
18 purchased water, multiplied by its current rate, and adding annual meter charges.
19 Current prices were obtained from the most recent invoices.

20 In addition, the Company has charges for the two City of Wilmington
21 contracts, one for interconnection guarantee, and the other to access the Hoopes
22 reservoir during times of drought, which were also added to the total purchased
23 water cost for the Test Period. The interconnection guarantee contract requires the

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1 Company to pay the City of Wilmington a monthly payment of \$21,677 per month,
2 which on an annualized basis adds up to \$260,124, for 30 years starting January
3 1, 2000. The Hoopes reservoir charge is an annual accessibility charge, which
4 provides Veolia access to up to 100 million gallons of raw water. Currently, the City
5 of Wilmington charges Veolia \$60,000 per year, but both sides are negotiating a
6 new price which has not been finalized at the time of this filing. The Test Period
7 reflects City of Wilmington's proposed price because the Company believes the
8 price increase will most likely happen within the Test Period.

9
10 **Q. Please continue describing the rest of the operating expense adjustments**
11 **referenced in MFR 5.3.2:**

12 **A. Schedule 3B-2, Purchased Power.** Purchased Power cost for the Test Period
13 was computed by calculating the total projected water production, which comes
14 from Revenue and Flow workpaper, times a four-year average of kilowatt hour
15 ("KWH") used per thousands of gallons to arrive at total KWH used, times
16 estimated test period power cost per KWH. Total water production was
17 determined by using volumetric sales, provided by Company witness Mr. Njuguna,
18 adjusted by the non-revenue water target percentage of 18.48% and reduced by
19 estimated Test Period purchased water. An average KWH per thousand gallons of
20 water was calculated by using an actual historical information from calendar years
21 2019, 2020, 2021 and 2022. The estimated Test Period power cost per KWH was
22 computed by using either the 2023 contract price or using the average price for the
23 calendar year 2022 and increased by inflation. Please refer to note #2 on the

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1 purchased power workpaper for details. Finally, other costs such as Gas (unrelated
2 to volume) and Gas – Heating were calculated using the Test Year amounts
3 adjusted by inflation factor for the Test Period. The details of purchased power
4 calculation discussed above could be found in WP 3B-2 Purchased Power.

5 **Schedule 3B-3, Chemicals.** The Company solicits bids for the chemicals. For CY
6 2023, it has contracted prices for six-months for the following chemicals: polymer,
7 ferric and phosphate. For all other chemicals the Company is using three-month
8 awarded bidder prices.

9 The Test Period Chemical expense was developed by calculating an average
10 amount of Chemicals used, by type, per million gallons of water using a three-year
11 average of historical information from calendar years 2020, 2021 and 2022. The
12 Test Period billed consumption, as provided by Company witness Mr. Njuguna,
13 was adjusted by the non-revenue water target percentage of 18.48% to arrive at
14 the amount of water subject to chemical treatment. The average chemical usage
15 per million gallons was applied to the Test Period production to arrive at the
16 projected chemical usage by type for the Test Period. The projected chemical
17 usage was then multiplied by the unit pricing per chemical.

18 **Schedule 3B-4, Sludge.** Sludge expense varies from year to year depending on
19 water conditions. The bill is derived based on total suspended solids and biological
20 oxygen demand loading, which is sampled quarterly, multiplied by the total volume.
21 The Test Period was developed by calculating a four-year calendar average and
22 then adjusted by the Test Period inflation factor. The calendar years 2019 and
23 2021 were also adjusted for \$4,516 and \$4,674, respectively, to reflect

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1 reclassification of annual wastewater discharge permit fee payments erroneously
2 recorded to account 50650, Licenses and Fees.

3 **Schedule 3B-5, Transportation.** Transportation expenses other than leases and
4 insurance were normalized by averaging historical information from calendar years
5 2019, 2020, 2021 and 2022. This average was increased by the Test Period
6 inflation factor to determine the Test Period expense.

7 Leasing costs were determined by annualizing the current level of leased vehicles
8 at monthly leasing costs and adjusted to reflect lease payments for vehicles
9 expected to be replaced within the Test Period.

10 An auto insurance cost for the Test Period was developed by taking a four-
11 calendar year average of premiums and claims, adjusted for inflation.

12 An adjustment was also made to reduce the expense for capitalized and
13 transferred out costs by using the Test Period allocation percentages from the
14 Labor Transfers workpaper applied to the Test Period total transportation expense.

15 **Schedule 3B-6, Customer Info Billing Costs.** The Customer Info Billing Costs is
16 composed of the costs for billing, printing, reports, customer notifications and
17 postage. Costs were adjusted to reflect the total number of bills from calendar year
18 2022 multiplied by the average price per unit of the same period and then adjusted
19 by inflation for the Test Period.

20 **Schedule 3B-7, Uncollectibles.** Uncollectible costs were normalized using
21 historical information from calendar years 2019, 2020, 2021 and 2022 by dividing
22 the actual uncollectible amount by the historical revenues for the same periods to

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1 determine an average uncollectible percentage. This percentage was then applied
2 to the Test Period operating revenues at present rates, provided by Company
3 witness Mr. Njuguna, to determine the uncollectible Test Period expense.

4 **Schedule 3B-8, Rents.** The Test Period rent expense indicated in the WP 3B-8
5 as Norfolk Southern Railway Company (currently owned by Railroad Management
6 Company IV LLC “RMC”) is based on the actual invoice covering calendar year
7 2023 period. Test Period rent expense for Christiana Avenue lease, owned by the
8 RMC as well, is based on the actual invoice with a license period of May 1, 2023
9 through April 30, 2024. The Company is currently negotiating with RMC rent
10 increases for both licenses, but the outcome is unknown at the time of filing this
11 case. Rent expense for Copier Machine was normalized by averaging historical
12 information from calendar years 2019, 2020, 2021 and 2022. This average was
13 increased by inflation to determine the Test Period expense. All other Test Period
14 rent expense was based on actual lease agreements.

15 **Schedule 3B-9, Management and Services.** The derivation of the Test Period
16 amount for line 1, Management and Services (“M&S”), is sponsored and discussed
17 in detail in the testimony of Company witness Ms. Jacob. In addition to the M&S
18 fees, VWM&S also charges the Company depreciation expense and a return on
19 shared assets. VWM&S owns a number of shared assets that are used either by
20 VWM&S employees to provide services to affiliates or by the affiliates on a shared
21 basis. These are primarily shared office facilities and information software and
22 systems. When VWM&S owns shared assets, it charges the affiliates, including
23 Veolia Water Delaware, Inc., a pre-tax return on the assets and booked

1 depreciation expense. The Test Period depreciation amount is significantly lower
2 than the Test Year due to asset retirements scheduled to take place within the Test
3 Period. Return, interest, and income taxes on shared assets were calculated
4 utilizing the recommended capital structure and ROE, as discussed in the
5 testimony of Company witness Mr. Walker.

6 **Schedule 3B-10, Outside Services.** The Company outsources additional
7 professional and technical support in areas where this may be required, such as,
8 Tank Maintenance, E-billing, IT Support, Legal, etc.

9 In 2014, an agreement was signed with Utility Service Co., for the ongoing
10 servicing and management of six tanks in the Company's service territory. This
11 agreement includes the ongoing upkeep, inspection, repair, coatings maintenance,
12 etc., of these tanks and runs for a 15-year term. In December 2017, a similar
13 agreement was signed for the ongoing servicing and management of an additional
14 four tanks for a 15-year term. The Tank Maintenance Fee for the Test Period is
15 based on the 2023 invoices. Please refer to the testimony of Company witness Ms.
16 Guillen for additional details on tank maintenance contracts.

17 Lab Testing expenses increased in 2022 due to monthly PFAS testing. The
18 Company expects to continue performing monthly PFAS testing to make sure it is
19 compliant with Delaware and EPA regulations, therefore, lab testing was
20 normalized by using the 2022 expense and adjusted for inflation for the Test
21 Period.

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1 The Test Period expense for E-billing was calculated using a three-year
2 average adjusted for an inflation factor. The three-year average was chosen in this
3 case because the Company switched the provider of e-billing services in late 2019.

4 Chemical cleaning at Christiana plant was excluded from the Test Period
5 as it was inadvertently charged to Outside Services account instead of Cost of
6 Removal.

7 All other outside services costs for the Test Period were computed by
8 applying inflation rate to the four-year average of actual costs for the calendar
9 years 2019 through 2022. WP 3B-10 Outside Services provides components and
10 support for the calculation of the Test Period expense.

11 **Schedule 3B-11, Other Operation and Maintenance (“O&M”).**

12 Test Period amount for Other O&M expenses was computed by taking a
13 four-year average of calendar years 2019 through 2022 and then adjusted by
14 inflation factor. Two components of Other O&M were adjusted to removed charges
15 erroneously recorded to Other O&M account. The first adjustment is to reclassify
16 2019 and 2021 annual wastewater discharge permit fees from Licenses and Fees
17 to Exhibit 3B-4, Sludge. The second adjustment is to reclassify rent expense for
18 postage meter erroneously recorded to Other O&M to Schedule 3B-8, Rent.

19 **Schedule 3B-12.1, Amortization of Tank Painting.** Amortization of Tank Painting
20 expense represents current allowed amortization approved in Docket 10-421.
21 Amortization of Arden and Cherokee Woods tanks began on October 1, 2011 and
22 is being amortized over a 17-year period.

1 **Schedule 3B-12.2, Amortization of Lagoon Cleaning.** The Test Year expense
2 represents current allowed amortization of lagoon cleanings approved in previous
3 rate cases. For the Test Period, in addition to current allowed amortization, the
4 Company estimated amortization for cleaning of lagoon No. 1, completed in
5 October 2022, and cleaning of lagoon No. 2, scheduled for summer of 2023.
6 Annual amortization amount for lagoon No.1 is determined based on the actual
7 expense incurred and for lagoon No. 2 is based on the contract with the vendor.
8 The Company is proposing a five-year amortization period for both lagoon
9 cleanings.

10 **Schedule 3B-13, Amortization of Tax Cuts and Jobs Act (“TCJA”).** Test Year
11 expense represents current allowed amortization of the regulatory liability related
12 to the excess accumulated deferred income taxes as a result of the 2017 Tax Cuts
13 and Jobs Act as approved in Order No. 9319, dated January 31, 2019. The Test
14 Period expense reflects a proposed adjustment to the annual amortization of
15 TCJA, which is further discussed in Direct testimony of Company witness Mr.
16 Cagle.

17 **Schedule No. 3B-14, Insurance General Liability.** Beginning in January 2020,
18 the accounting methodology related to insurance general liability changed. Claims
19 that used to be allocated through Management and Services (“M&S”) are now
20 being charged directly to the operating companies. The premiums are still
21 allocated through M&S. The Test Period expense was calculated by taking a three-
22 year average of claims multiplied by an inflation factor. Workpaper No. 3B-14

1 provides the components and support for the computation of the Test Period
2 expense.

3 **Schedule 3C-1, Payroll.** The adjustment to Payroll sets out the normalized
4 calculation of labor expense for the Test Period. Union agreements allow for a
5 2.75% salary increase in April (Production) and May (Customer Service) 2023.
6 Since the Test Year is the twelve months ending December 31, 2022, the 2.75%
7 was applied to 2022 hourly rates to properly reflect salaries and wages in year
8 2023. Furthermore, the labor adjustment in the Test Period reflects filling eight
9 vacant positions (T&D Superintendent, Finance Specialist, Production Operator,
10 Assistant Field Operations Superintendent, Control Systems Technician,
11 Maintenance Technician, and two Customer Service Representatives) and seven
12 new positions (Apprentice Operator, Engineering Associate, Mid-Atlantic Region
13 Asset Management Specialist, Mid-Atlantic Communications Specialist, Mid-
14 Atlantic Geographical Informational System Specialist, Mid-Atlantic Engineering
15 Accounting Analyst, and a Mid-Atlantic Engineering Budget Analyst). The T&D
16 Superintendent (1/17/23), Finance Specialist (1/17/23), and the Production
17 Operator (1/30/23) vacant positions have since been filled. The additional five
18 vacant positions are being actively recruited. Please refer to the testimony of
19 Company witness Mr. Finnicum for discussion regarding the seven new positions.
20 To compute the total annual wages and salaries of the Test Period, amounts
21 related to overtime pay and incentive compensation were also added. The
22 normalization adjustment for overtime pay is based on a four-year calendar (2019,
23 2020, 2021 and 2022) average and increased by the 2.75% union salary

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1 agreement. The amount of incentive compensation was determined by applying a
2 target percentage determined by each employee's eligibility in accordance with the
3 Company's Short-Term Incentive Plan (STIP) guidelines to employees' base pay.
4 Non-Exempt employees and union employees receive between 1.5% and 3.0%
5 bonus payments. Normalization adjustments for labor transferred in and
6 transferred out was based on 2022 actual. Capitalized labor was normalized by
7 increasing the 2022 actual with the Test Period pay for the Mid-Atlantic GIS
8 Specialist, Mid-Atlantic Engineering Accounting Analyst, and the Mid-Atlantic
9 Engineering Budget Analyst (new positions) which are expected to be 100%
10 capitalized. The Test Period ending September 30, 2023 was chosen for
11 normalization as it will more closely reflect the state of labor in Delaware as the
12 rate case proceedings move forward.

13 **Schedule 3C-2, Payroll Benefits.** Employee group health and life is the cost
14 incurred by the Company to provide medical and dental care along with group term
15 life insurance coverage to employees who choose to be covered by Veolia
16 benefits. Vision insurance is entirely funded by employees. It is computed based
17 on actual rates for 2023 prorated for employees currently enrolled in the plan and
18 multiplied by the expected number of employees by the end of the Test Period.

19 Employee 401K plan reflects the Company's 401K contribution match.
20 Employee 401K expense was normalized by utilizing a four-year average of actual
21 historical costs for the calendar years 2019 through 2022 and adjusted by the
22 salary increase of 2.75% discussed in the Payroll section to arrive at Test Period
23 expense.

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Workers Compensation cost for the Test Period was calculated by using a four-calendar year (2019 through 2022) average of actual premiums and adding a four-calendar year average of claim payments recorded in liability GL account 26200 and then adjusted by inflation factor for the Test Period. The IBNR (incurred but not reported) reserves were excluded from the Test Period calculation.

Other Employee Benefits cost was normalized using a four-calendar year (2019, 2020, 2021 and 2022) average of actual historical costs, and then adjusted for inflation to arrive at the Test Period expense.

Schedule 3C-3, Pension and OPEB. Test Period expense for both Pension and OPEB reflects the level of costs determined for 2023 by the Company's actuary, Towers Watson, based on the current employee complement. In an effort to contain costs, the Company no longer provides Pension and OPEB benefits to new hires. According to ASC 715-30-35-4, only the Service Cost for Pension and OPEB is subject to capitalization. However, the Company is requesting recovery of the full actuarial amount for operating expense, as required.

Schedule 3C-4, Fringe Benefits. Fringe benefits such as group health & life, payroll taxes, workers compensation, pension, OPEB, 401K, and other employee benefits are capitalized or transferred in/out from other operating companies. The Company uses fringe benefit allocation method to ensure employee benefits follow labor charges. A portion of fringe benefit expenses are therefore transferred off the income statement to the balance sheet, primarily following labor charges to capital projects. For the Test Period, fringe benefits cost was adjusted using the same percentages calculated for Payroll, as discussed above.

1 **Schedule 3H, Amortization of Rate Case.** The Test Year only includes
2 amortization of 2019 rate case, which set to be complete in May 2023. The Test
3 Period includes a projected cost associated with filing of current rate case. The
4 Company estimates to incur approximately \$270,000 in costs related to
5 consultants retained for this proceeding for depreciation and rate of return studies,
6 cost for legal services from outside counsel and other administrative costs. The
7 Company proposes to amortize these costs over a two-year period.

8 **Schedule 3M-1, Real Estate Taxes.** This adjustment was calculated based on
9 used and useful utility plant/property that will be used to provide service to
10 customers through the end of the Test Period. The Test Period expense was
11 calculated by averaging the annual percentage increases between calendar years
12 2020 and 2021 and 2021 and 2022 and multiplying this average by calendar year
13 2022 expense, as adjusted. The adjustments reflect sale of two parcels and
14 correction to Sherwood Road actual 2022 payment. WP 3M-1, Real Estate Taxes,
15 provides further details and support for this calculation.

16 **Schedule 3M-2, Payroll Taxes.** Test Period payroll taxes were calculated using
17 2023 statutory Federal and State tax rates, which were applied to the Test Period
18 taxable payroll base.

19 **Schedule 3M-3, Regulatory Commission.** To calculate the Regulatory
20 Commission expense for the Test Period, the Company used the most recent
21 assessment rate received from the Delaware Public Service Commission
22 multiplied by the Test Period operating revenues at Present Rates provided by
23 Company witness Mr. Njuguna and revenue associated with the DSIC surcharge.

1 **Q. Ms. Labella, would you please explain the Inflationary Factor used in this**
2 **filing.**

3 A. The inflationary factor used in this filing was obtained from the Blue Chip Financial
4 Forecasts estimate of increases to the Consumer Price Index as per the February
5 1, 2023 report. An average of the three quarters within the Test Period was used
6 resulting in an inflationary factor of 2.97%.

7

8 **Q. Moving on to other MFRs, would you please describe MFR 5.3.3, Schedule**
9 **3C, Payroll Costs.**

10 A. MFR 5.3.3, Schedule 3C, provides in a summary form, the payroll costs, which
11 includes direct payroll costs as well as direct benefit costs, incurred by the
12 Company in the Test Year and projected for the Test Period. All individual
13 components were derived from respective workpapers supporting MFR 5.3.2.

14

15 **Q. Would you please explain MFR 5.3.4, Schedule 3D, Executive Compensation.**

16 A. Schedule 3D lists the titles for the five highest paid executives as well as other
17 benefits, such as Car and Allowance.

18

19 **Q. Would you please explain MFR 5.3.8, Schedule 3E, Sales Promotion and**
20 **Advertising Expenses.**

21 A. This schedule generally includes items that are educational in nature and benefit
22 customers. During the Test Year, the Company incurred expense for printing

VEOLIA WATER DELAWARE, INC.

Jana Labella

educational bill inserts designed to share tips with customers on how to prevent frozen pipes.

Q. Is MFR 5.3.9, Schedule 3F, Charitable and Educational Expenses, applicable to this proceeding?

A. No, this schedule is not applicable as the Company is not seeking recovery of contributions for charitable and educational expenses or other charitable purposes in this filing.

Q. Is MFR 5.3.10, Lobbying Expenses, applicable to this proceeding?

A. No, this schedule is not applicable as the Company is not seeking recovery of lobbying expenses.

Q. Ms. Labella, is the Company seeking to recover social and service club dues listed in MFR 5.3.11, Schedule 3G?

A. Yes, the Company is seeking recovery of membership dues for water related associations the company belongs to. The Company participates in listed organizations to collaborate with other water utilities and share best practices to benefit the community it serves. American Water Resources Association membership fee was recorded to a "below-the-line" account in the Test Year and is being reclassified on this schedule as the intent was to record that payment to GL account 50650.

1 **Q. Please describe the content of MFR 5.3.12, Schedule 3H, Rate Case Expense.**

2 A. This schedule provides a list of expenses by category estimated to be incurred in
3 preparation of the current rate filing as well as the list of actual expenses
4 associated with the filing of the previous case. It also states total expense amounts,
5 amortization periods and amounts amortized to-date.

6

7 **Q. Please explain MFR 5.3.14, Schedule 3M, Other Federal, State and Local**
8 **Taxes.**

9 A. This schedule provides a summary of other Federal, State and Local taxes for the
10 Test Year and Test Period. Workpapers 3M-1, Real Estate Taxes, 3M-2, Payroll
11 Taxes, and 3M-3, Regulatory Commission, provide the components and support
12 for the computation of the Test Period expense.

13

14 **Q. Does this conclude your testimony?**

15 A. Yes.

**BEFORE THE
DELAWARE PUBLIC SERVICE COMMISSION**

DIRECT TESTIMONY OF

**ANUPA JACOB
VEOLIA WATER DELAWARE, INC.**

APRIL 2023

VEOLIA WATER DELAWARE, INC.
Anupa Jacob

1 **Q. Please state your name and business address.**

2 A. My name is Anupa Jacob and my business address is Veolia Water M&S
3 (Paramus), Inc. ("VWM&S"), 461 From Road, Suite 400, Paramus, NJ
4 07652.

5

6 **Q. By whom are you employed and in what capacity?**

7 A. I am the VP/Controller & Chief Accounting Officer at VWM&S (formerly
8 SUEZ Water Management & Services Inc.) with the overall responsibility of
9 the company's financial accounting records of the regulated companies.

10

11 **Q. Please describe your work experience**

12 A. I have over fifteen years of experience in accounting and auditing regulated
13 utilities, publicly traded companies, and private companies. Previous to my
14 current role, I was the Director of Utility Accounting for VWM&S, Manager
15 of Technical Accounting and Derivatives Accounting at National Grid, Plc.,
16 and held various roles within the Assurance practice at PwC.

17

18 **Q. Please summarize your educational background and other**
19 **qualifications.**

20 A. I received a Bachelor Degree in Electronics and Communication
21 Engineering from Cochin University of Science and Technology, India and
22 a Master of Business Administration with a concentration in Accounting from

VEOLIA WATER DELAWARE, INC.
Anupa Jacob

1 Baruch College, City University of New York. I am a Certified Public
2 Accountant licensed in the State of New York.

3

4 **Q. What regulatory agencies have you previously presented testimony?**

5 A. I have previously presented testimony before the Idaho Public Utilities
6 Commission.

7

8 **Q. What is the purpose and nature of your testimony in this proceeding?**

9 A. The purpose of my testimony is to describe the nature of the Management
10 and Services Fee and the methodology followed to calculate the allocations
11 to Veolia Water Delaware, Inc. ("VWDE").

12

13 **Q. Which of the Minimum Filing Requirements "MFRs" are you**
14 **sponsoring?**

15 A. I will be sponsoring MFR 5.3.13. and MFR 5.3.2 Schedule No. 3B-9.

16

17 **Q. Please describe the MFR's and Exhibits you are presenting in support**
18 **of the Management and Services Expense.**

19 A. MFR 5.3.13 provides a breakdown of M&S charges by expense category
20 for the test year and test period prior to an adjustment for payroll increase
21 factor. MFR 5.3.2 Schedule No. 3B-9 shows the break out of total M&S Fees
22 between M&S charges after being adjusted for payroll increase,
23 depreciation related to and return on shared assets.

VEOLIA WATER DELAWARE, INC.
Anupa Jacob

1 **Q. What does the Management and Services Fee represent?**

2 A. VWM&S fees represents the services provided to VWDE by VWM&S
3 employees. These services include administrative, engineering, legal,
4 operations, accounting, finance, human resources, purchasing, insurance,
5 data processing, customer service, billing, public relations, planning and
6 ratemaking services and other general services necessary in the proper
7 conduct of business.

8

9 **Q. How are these costs allocated and have there been any changes to the**
10 **allocation methodology since the last general rate case?**

11 A. The company continues to use the same cost allocation methodology
12 described in the Cost Allocation Manual ("CAM"), which has been previously
13 approved in Docket No. 16-0163, Order approved November 30, 2017.
14 Refer to the CAM document attached to the MFR 5.3.13. The shared
15 services allocation methodology did not change as a result of the merger
16 with Veolia. When significant organizational changes occur during the year
17 that may affect the allocation of shared costs between affiliated entities, the
18 Company reviews the nature of the changes and determines the necessary
19 updates to the allocation factors in accordance with the CAM. As a result of
20 the merger with Veolia in the first quarter of 2022, there were
21 announcements made regarding the scope and responsibilities of certain
22 employees within the shared services. We reviewed these changes with
23 each department, and we recalculated the new allocation percentages

VEOLIA WATER DELAWARE, INC.
Anupa Jacob

1 using the three-factor formula depending on the scope of responsibilities for
2 each employee within a department.

3 Due to the changes discussed above, VWM&S costs were normalized by
4 taking actual costs allocated to VWDE for the 12 months ended December
5 31, 2022 and applying the updated allocation factors to get to the test period
6 VWM&S costs. The normalized amount was then adjusted by the salary
7 increase factor of 3.62% per 2023 average salary increases to arrive at the
8 Test Period expense.

9

10 **Q. Are there any other components that are included in the**
11 **Management and Services Fee?**

12 A. In addition to the services fees discussed above depreciation expense and
13 a return on Shared Assets is also included within the VWM&S fees as
14 described in Ms. Labella's Testimony. Refer also to Schedule No. 3B-9
15 included with MFR 5.3.2.

16

17 **Q. Does this conclude your direct testimony?**

18 A. Yes, it does.

**BEFORE THE
DELAWARE PUBLIC SERVICE COMMISSION**

DIRECT TESTIMONY OF

**JAMES C. CAGLE
VEOLIA WATER DELAWARE, INC.**

APRIL 2023

VEOLIA WATER DELAWARE, INC.

James C. Cagle

1 **Q. Please state your name and business address.**

2 A. I am James C. Cagle. My business address is 461 From Road, Paramus, NJ
3 07652.

4 **Q. By whom and in what capacity are you employed?**

5 A. I am the Vice President, Rates and Regulatory Affairs for Veolia Water M&S
6 (Paramus), Inc. ("VWM&S" and formerly SUEZ Water Management & Services
7 Inc.).

8 **Q. What are your job responsibilities?**

9 A. I am primarily responsible for the management and direction of rate case filings
10 for the regulated affiliates of VWM&S. I am also responsible for oversight of
11 certain rate related compliance and reporting requirements as prescribed by
12 the various regulatory commissions having jurisdiction over the Veolia utilities.

13 **Q. Please outline your educational and professional qualifications.**

14 A. I received a Bachelor of Accountancy degree from the University of Oklahoma
15 in 1987 and am a Certified Public Accountant licensed in the State of Texas. I
16 was initially employed by United Water Management & Services Inc., the
17 predecessor of SUEZ Water Management & Services Inc. as Director,
18 Regulatory Business in October of 2007 and have held my current position
19 since March 2010. Previous to that, I was employed by Atmos Energy
20 Corporation, a natural gas utility operating in twelve states, as Manager, Rates
21 and Revenue Requirements.

22 **Q. Have you previously testified before the Delaware Public Service**
23 **Commission?**

1 A. Yes. I provided in the Company's last rate case filing (Docket No. 16-0615),
2 the Company's 2009 and 2010 rate cases as well as other matters. I have also
3 provided testimony in rate case and other filings before several other state
4 commissions on various regulatory issues.

5 **Q. What is the purpose of your testimony in this proceeding?**

6 A. The purpose of my testimony is to support the request of Veolia Water
7 Delaware, Inc. ("VWDE" or "Company") for an increase in its base rates for
8 water service. Specifically, I am supporting the Company's requested treatment
9 of the regulatory liability related to the Tax Cuts and Jobs Act ("TCJA"), and the
10 establishment of a Rate Mitigation Mechanism to assist with the significant
11 costs related to the treatment of PFAS.

12

13 **Q. Are you sponsoring any exhibits which support the Company's request?**

14 A. Yes. I am sponsoring MFR 4.11.6 Schedule 2L which shows the proposed
15 TCJA amortization and MFR 8.2, page 36 of 36 of the tariff.

16

17 **TCJA Regulatory Liability**

18

19 **Q. Please summarize the history of the TCJA regulatory liability and the**
20 **treatment in previous rate case filings.**

21 A. On December 22, 2017, the TCJA was signed into law which substantially
22 modified the Internal Revenue Code and had a direct impact on VWDE and
23 other regulated utilities. The TCJA provision having the greatest direct impact

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1 is the reduction of the corporate income tax rate from 35% to 21%. Because
2 VWDE is rate regulated and subject to the jurisdiction of the Commission, that
3 change in the total balance of ADIT, including gross-up, was reflected as a
4 regulatory liability on the Company's balance sheet as of December 31, 2017
5 in compliance with Order No. 9177. This regulatory liability amount is also
6 commonly referred to as excess accumulated deferred income taxes ("EADIT").
7 That Order reduced the Company's rates to reflect a decrease in VWDE's
8 volumetric and fire protection rates to reflect the reduction in the FIT rate as
9 well as an amount representing the amortization of the EADIT regulatory
10 liability as agreed to by Commission Staff, the Delaware Division of the Public
11 Advocate ("DPA"), and the Company. The Company's base rates were
12 changed effective March 1, 2019. The change in rates included an estimated
13 amount of amortization of the EADIT regulatory liability of \$161,659 per year
14 based upon a 40 year period pending determination of the appropriate
15 amortization resulting from the Average Rate Assumption Method ("ARAM")
16 calculations as required by the IRS and the final determination of the protected
17 and unprotected portions.

18
19 Commission Order 9177 also required the Company to file its Excess Deferred
20 Income Tax worksheets by March 31, 2019 for an audit and true-up of the
21 Company's claimed annual amortization rate. The filing indicated a small
22 adjustment reducing the regulatory liability by approximately \$17,000 as a
23 result of return to provision (RTP) adjustments. The worksheets were filed

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1 timely and the audit report was completed in December 2020 indicating no
2 changes to the EADIT balances including the adjustment noted above.

3
4 Finally, the Commission's Order (9599 approved June 3, 2020) in the
5 Company's last rate case filing Ordered in paragraph 54 that matters
6 surrounding the regulatory liability associated with the TCJA will continue to be
7 addressed in PSC Docket 17-1240. As the TCJA docket is now complete
8 through the Commission's Order 10030, VWDE is proposing a change in the
9 EADIT amortization.

10
11 **Q. What will be the remaining EADIT liability as of September 30, 2023?**

12 A. As of December 31, 2017, the total EADIT balance was \$6,449,388 of which
13 \$5,662,746 is protected, and \$786,642 is unprotected. Including the
14 amortization which began February 28, 2019, the remaining amount at
15 September 30, 2023 will be \$5,694,999 of which \$5,144,524 is protected and
16 \$550,475 is unprotected.

17
18 **Q. What amortization period(s) is the Company proposing for the protected**
19 **portion of the EADIT balance?**

20 A. The Company is proposing the protected portion of the balance be amortized
21 at an amount of \$130,000 per year which is slightly less than the projected
22 ARAM amounts determined by the Company's tax department.

1 **Q. Why is the Company proposing an amortization lower than the**
2 **projected ARAM amounts?**

3 A. The amortization period for the amount of the regulatory liability which arose
4 from temporary differences between book and tax methods and lives that are
5 considered “protected” and, per the Internal Revenue Code Section 168(f)9
6 normalization rules may be amortized no faster than over the period in which
7 ADIT would have otherwise reversed over the remaining book lives of its’ assets.
8 The Average Rate Assumption Method (“ARAM”) of amortization must be
9 utilized for as much of the regulatory liability as possible if the requisite data is
10 available to the utility. ARAM calculates a specific amount by year rather than a
11 period of amortization and if amortized faster, could result in a normalization
12 violation which would prohibit the Company from utilizing accelerated
13 depreciation for income tax purposes. The actual ARAM amount is not known
14 before the final income tax return for a particular year is filed therefore
15 projections must be relied upon to determine the amortization amount. The
16 results of the Company’s ARAM calculations from 2022 through 2025 are as
17 follows:

18 2022 - \$136,685

19 2023 - \$148,961

20 2024 - \$138,620

21 2025 - \$132,816

Q. What amortization period(s) is the Company proposing for the unprotected portions of the EADIT balance?

A. The amortization period for the regulatory liability which arose from amounts not considered normalized are “unprotected” and may be amortized by the utility over a period different from the protected amount. The Company is proposing an amortization amount of \$180,000 per year.

Rate Mitigation Mechanism

Q. Please describe the proposed Rate Mitigation Mechanism.

A. As noted in Mr. Finnicum's and Ms. Guillen's testimony, the Company is currently embarking on a significant multi-year capital project to address PFAS treatment to meet the EPA's proposed 4 parts per trillion (ppt) maximum contaminant Limits (MCLs) for PFOA and PFOS. The Stanton Plant PFAS project is currently underway and is anticipated to be completed and in service at the end of 2024. Current estimates of the project indicate plant in service will increase approximately \$45M to \$50M. Additionally, related Operation and Maintenance costs for the treatment media are currently estimated to be approximately \$6M annually and depreciation expense will also increase significantly. This project alone indicates a significant increase in the need for rate relief in the Company's next rate case filing.

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1 As a result of this project, the Company is proposing a mechanism by which
2 customers would initially contribute to the costs of the project. The mechanism
3 has two objectives. The first is to reduce rate shock at the time of the next rate
4 case filing, which is anticipated to include these costs. The second is to reduce
5 the overall cost to customers by providing a full offset in rate base to the cost
6 of the project, at the time the project is in service.

7

8 The proposed mechanism would include a surcharge which will accumulate as
9 a regulatory liability from the time of its implementation until the Company's
10 next rate case filing. As the liability accumulates, carrying charges calculated
11 at the weighted average cost of capital determined in this rate case will be
12 added monthly to the balance. The surcharge, while increasing rates charged
13 to customers when implemented, will provide an interim step between the rates
14 proposed in this case and those at the time of the next rate case which will
15 mitigate rate shock at the next rate case filing. Also, by including carrying costs,
16 the full benefit will accrue to customers reducing future rates by the carrying
17 costs and depreciation expense to be included in rates in the future.

18

19 If accepted, the proposed mechanism would begin approximately six months
20 after rates are set in this case. The surcharge would accumulate in a regulatory
21 liability account and carrying costs at the weighted average cost of capital
22 would accrue monthly. The surcharge would cease at the time rates go into

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1 effect from the next rate case filing and the balance accumulated on that date
2 would offset depreciable plant in service.

3

4 **Q. Would the customer be charged for plant in service that is not yet in**
5 **service?**

6 A. No. That is not the intent. The surcharge is intended to fully offset future rates
7 and accumulates as a regulatory liability to offset rate base similar to how
8 contributions in aid of construction are accounted for today. While cash would
9 be received through rates, the funds are to be accounted for such that the
10 accumulated balance would receive carrying charges as a make whole
11 provision to customers.

12

13 **Q. What is the proposed amount of the surcharge?**

14 A. As shown on the proposed tariff, the Company is proposing a flat per month
15 charge per meter which increases by meter size in the same proportion as the
16 proposed meter charges as follows:

Meter Size	Charge
5/8"	\$5.00
3/4"	6.44
1"	8.47
1-1/4"	8.47
1-1/2"	12.59
2"	18.33
3"	27.67
4"	40.42
6"	74.25
8"	113.92
10"	159.27

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1 As proposed, the mechanism would apply to General Metered Service
2 customers as described on Sheet No. 12, Schedule A of the Company's tariff.

3

4 **Q. Can you give an example of the mechanism?**

5 A. Yes, I can. The amounts are for illustration only.

6 Stanton PFAS Project cost \$50,000,000

7 Rate Mitigation collection (\$2,000,000)

8 Carrying Costs (\$100,000)

9 Net rate base \$47,900,000

10

11 **Revolving Fund Loans**

12

13 **Q. Is the Company able to access funds in the form of low-cost loans from**
14 **the Delaware Safe Drinking Water State Revolving Fund?**

15 A. The Company has had discussions with DNREC's Environmental Finance
16 Office and DHSS regarding the Safe Drinking Water State Revolving Fund to
17 determine the process by which it might access state revolving loan funds. The
18 Company is in the process of identifying applicable projects, and has filed a
19 notice of intent for such funds for PFAS treatment at its ASR well. The notice
20 of intent allowed the Drinking Water State Revolving Fund, which is part of the
21 Division of Public Health, to evaluate and rank the project. All projects are
22 ranked based on multiple criteria with the highest rating including projects that
23 provide service to disadvantaged communities, projects that remedy a water

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1 quality violation, and lead service line replacement projects. The DWSRF filed
2 its Intended Use Plan (IUP) for the State Revolving Funds which includes its
3 ranking and the planned allotments. For the next fiscal year, the DWSRF is
4 planning to fund all projects that are listed in the IUP, with the Veolia ASR Well
5 ranked as number 21 out of 27 projects. The next step is to file the application
6 for the project, which will be submitted by June 15, 2023.

7

8 The Company borrows funds at the Veolia Utility Resources LLC, and the
9 Company is discussing with DNREC and DHHS as to the level at which such
10 borrowings can occur. Typically, VUR borrows funds which have payment
11 provisions which come due at the end of the loans which have 20 to 30 year
12 terms. When such loans come due, the balance is “re-borrowed” at the interest
13 rate then in effect for another similar term. In the case of the state revolving
14 fund loans, interest and principal payments are due semi-annually. From a
15 cash management standpoint, the amount of the principal payment would then
16 be “re-borrowed” at interim periods of the loan at current interest rates. As a
17 result, while the lower interest rate provides benefits, it is less than it seems
18 because of its design. VWDE will continue to work with DHSS and DNREC in
19 an effort to access such funds.

**Customer Benefits Resulting from Veolia Environnement S.A.'s
Acquisition of SUEZ S.A.**

Q. Please describe the customer benefits provided by the acquisition of SUEZ S.A. by Veolia Environnement S.A. ("Veolia") as it may related to this Case?

A. On June 11, 2021, the Joint Petitioners¹ submitted a Joint Application to the Commission seeking approval of Veolia's acquisition of a majority or all of the outstanding shares of SUEZ S.A. (the "Transaction"). As a result of the Commission's approval of the Settlement Agreement in that case (Case 21-0436), certain Terms and Conditions were Ordered by the Commission and the following summarizes those provisions relating to this case filing by section.

As related to Operational Stability, the Joint applicants have not made any changes to VWDE's management, jobs, employee compensation and benefits or other contractual rights and obligations and will not at least until such time as the required period expires. Additionally, the collective bargaining agreements are honored in full.

As related to Rate Stability, VWDE instituted a one-year moratorium on base rate case filings. The transaction was consummated on January 18, 2022, and this case filing is being made after the end of the moratorium. No transaction

¹ Veolia Environnement S.A. ("Veolia"), a French *societe anonyme*, Veolia North America, Inc., a Delaware corporation and wholly-owned subsidiary of Veolia ("Veolia North America"), SUEZ S.A., a French *societe anonyme* ("SUEZ"), and VWDE.

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1 costs have been included for recovery from VWDE's customers and no
2 transaction costs are included in this case filing.

3
4 Related to Low-income relief and the CARES program, as agreed in the
5 settlement, an additional \$110,000 is available for VWDE's CARES program.
6 VWDE and its affiliate utility companies are in the process of expanding the
7 CARES program throughout all of its regulated utility footprint and is promoting
8 the program through public advertising and community outreach and is
9 increasing the amount available to customers to \$300 and making conservation
10 kits available to recipients.

11
12 VWDE received approximately \$136,000 to date from the Low-Income
13 Household Water Assistance Program ("LIHWAP") funded by the American
14 Rescue Plan and the Consolidated Appropriations Act of 2021 and continues
15 to monitor the availability of such programs.

16
17 Veolia S.A.'s shareholders contributed \$300,000 to reduce total residential
18 customers' arrears that are more than 60 days overdue, measured as of the
19 date of the Commission order approving the Transaction. This contribution
20 exceeded total active residential customers' arrears of approximately \$132,000
21 which were more than 60 days overdue as of that date. Those credits appeared
22 on customer's bills during March 2022 well within the 90 day requirement. The
23 approximately \$168,000 difference is available to the CARES program.

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1 As related to Affiliate Interest Agreements, no changes have been made to
2 VWDE's affiliate interest agreement with Veolia Water M&S (Paramus), Inc. nor
3 have upstream changes occurred which require any amendments.

4

5 As related to Capital Plans, VWDE's existing robust capital plans including
6 those described in the VWDE Long-Term Infrastructure Improvement Plan
7 report filed with the Commission are in place. Evaluation of the potential of
8 its Actiflo3, Hubgrade, and other technologies are ongoing. If the Company
9 determines that it plans to implement Actiflo3 or Hubgrade, it will notify Staff
10 and DPA with a cost-benefit analysis.

11

12 As related to community benefits, in 2022, Veolia utilized \$25,000 of the
13 \$100,000 commitment and the remaining amount will be utilized in 2023 and
14 2024.

15

16 As related to commitments related to purchase accounting, no impact of
17 purchase accounting, goodwill or other fair value transactions have been
18 recorded at any of the regulated utility companies, or has there been an impact
19 to the assets and costs that are directly charged and allocated to VWDE.

20

21 Veolia S.A. Shareholders provided approximately \$1.3M in benefits to VWDE's
22 customers as a result of the "most favored nation" provisions of the Settlement
23 as approved by the Commission in Order No. 10123.

1 As related to estimated bills, VWDE is providing quarterly reports to the
2 Commission regarding the number of customers who have received estimated
3 bills for more than six consecutive months as of the most recent billing cycle.
4 The Company has made significant progress in reducing the number of related
5 estimated bills.

6
7 Finally, no assets of VWDE, or any subsidiary of Veolia Water Resources LLC,
8 are pledged or used as collateral or for any purpose by Veolia or any VE
9 subsidiary or affiliate. The accounting policies and tax return elections
10 associated with the Transaction do not impact VWDE's future deferrals or
11 expense recognition. The capital structure utilized for ratemaking for VWDE
12 has not changed as a result of the Transaction and all financial protections
13 presently in place between VWDE and other Veolia entities continue without
14 change.

15
16 **RING-FENCING**

17
18 **Q. Please describe the current ring-fencing measures.**

19 A. As noted in the approval in 21-0436, financial protections outlined in my
20 testimony in that case will continue without change. In order to provide more
21 specific information, the ring-fencing measures currently in place are largely a
22 result of the corporate structure of Veolia Utility Resources LLC ("VUR" formerly
23 SUEZ Water Resources LLC) and such measures are designed to comply with

1 regulatory requirements and debt covenants. The following ring-fencing
2 measures are currently in place:

3

4 **Organizational Structure:**

5 Regulated and unregulated functions are organized as separate corporate
6 structures. Within the current structure of VUR, each utility is a separate legal
7 entity and, outside of Veolia Water Operations (Paramus), Inc.("VWOI"),
8 Corwick Realty Company ("Corwick"), and Veolia Water New Jersey, Inc.'s
9 50% interest in The Dundee Water Power and Land Company which are
10 immaterial, they are all regulated by a Commission or other economic regulator.

11

12 Corporate subsidiaries maintain their own corporate officers and directors.

13

14 Corporate subsidiaries maintain their current status as subsidiaries and are
15 organized in a manner that provides corporate separation of regulated and non-
16 regulated activities.

17

18 Employees of the regulated entities are not direct employees of the parent or
19 nonregulated entities.

20

21 **Accounting:**

22 Each utility subsidiary of VUR (singularly, a "Utility Subsidiary" or collectively,
23 the

1 “Utility Subsidiaries”) maintains its own accounting records and financial
2 statements to reflect its own assets and liabilities.

3
4 **Affiliate Agreements:**

5 Transactions among the Utility Subsidiaries and their corporate affiliates take
6 place pursuant to the terms of a Commission-approved affiliated agreement
7 where required.

8 **Debt Issuances:**

9 Each Utility Subsidiary maintains the capability to issue its own long-term debt
10 (with such debt issuances subject to Commission approval if required).
11 Historically, debt is issued at the immediate parent level (i.e., the VUR level)
12 for the benefit of each VUR subsidiary. This methodology has been utilized for
13 ratemaking in each of the Company’s base rate cases. In the event subsidiary
14 debt should be issued, such issuances would be made in accordance with any
15 required Commission approvals.

16
17 The Utility Subsidiaries do not pledge or encumber their assets or make any
18 loan guarantees for the benefit of corporate affiliates.

19
20 No Utility Subsidiary assumes debt issued by a holding company nor does any
21 Utility Subsidiary guarantee any debt for its parent or affiliates. If such debt
22 were assumed or guaranteed, all applicable Commission approvals would be
23 sought.

1

2

The VUR subsidiaries each participate in an approved money pooling agreement as required by the applicable regulatory commission.

4

5

Currently, no debt exists at any of VUR's Utility Subsidiaries except for an immaterial amount of legacy debt (approximately \$29k maturing in July 2024) at Veolia Water New Jersey, Inc.

7

8

Money pooling:

9

Money pools are maintained separately for regulated and unregulated operations. The current Money Pooling agreement includes VUR entities only. Only VUR's unregulated affiliates (VWOI and Corwick) are included. Per the current Money Pooling agreement, VWOI and Corwick may only be net contributors to the money pool.

10

11

12

13

14

15

Governance Measures:

16

The following governance measures are currently in place:

17

18

Stitching Depository PGGM Infrastructure Funds, acting in its capacity as title holder of PGGM Infrastructure Fund (together, "PGGM"), a cooperative Dutch pension fund service provider, headquartered in the Netherlands, is the 20% owner of Veolia Utility Parent, Inc. ("VUPI"), the immediate parent company of VUR. Anti-dilutive measures are in place to ensure PGGM can maintain its

19

20

21

22

1 economic interest at current levels and there are no cross-default provisions
2 between Veolia and VUPI. (or its subsidiaries).

3

4 As a part of the current governance structure, in recognition of PGGM's 20%
5 ownership in VUPI, VUPI's Board of Directors comprises members from Veolia
6 (3 employee directors), PGGM (1 director and 1 non-voting observer) and one
7 non-employee (independent) director.

8 **Q. Do you believe the current ring-fencing measures are sufficient to**
9 **separate VUR's regulated operations from non-regulated affiliate**
10 **activities?**

11 A. Yes. S&P Global also recognizes this in its May 5, 2022, research update within
12 which it discussed insulating measures between VUR and its parent. Those
13 are:

14

15 - VUR's intermediate holding company VUPI is a separate legal entity with its
16 own capital structure; maintains its own records; does not commingle funds,
17 assets, or cash flows; and does not participate in a money pool with parent
18 Veolia;

19

20 - VUR also has its own credit facility and debt arrangements and has operations
21 that are separate from the rest of the group;

1 - There is a strong economic basis for Veolia to preserve the credit strength of
2 VUR, reflecting VUR's low-risk, profitable, and regulated operations;

3

4 - VUPI is 20% owned by Dutch pension company PGGM and 80% owned by
5 Veolia. PGGM is a significant minority shareholder of VUPI and has an active
6 economic interest with board member representation;

7

8 - The governance rights in place for PGGM surrounding matters such as
9 dividend distributions and voluntary bankruptcy filings support our view that
10 there are independent directors who have effective influence on decision-
11 making;

12 - Anti-dilutive measures are in place to ensure that PGGM can maintain its
13 economic interest at current levels; and

14

15 - There are no cross-default provisions between Veolia and VUPI (or its
16 subsidiaries) and the minority shareholder's governance rights supports our
17 opinion that a default at Veolia would not directly lead to a default at VUR or its
18 subsidiaries.

19

20 **Q. Does this conclude your direct testimony?**

21 **A.** Yes it does.

**BEFORE THE
DELAWARE PUBLIC SERVICE COMMISSION**

DIRECT TESTIMONY OF

**ANN BUI
VEOLIA WATER DELAWARE, INC.**

APRIL 2023

1 **INTRODUCTION**

2 **Q.** Please state **your name, occupation, and business address.**

3 A. My name is Ann Bui, and I am a Senior Managing Director with Black & Veatch
4 Management Consulting LLC ("Black & Veatch"), which is headquartered at 11041
5 Lamar Avenue, Overland Park, Kansas. In addition to serving as a Project Director
6 for client engagements, I lead Black & Veatch's national electric, gas, and water
7 Rates and Regulatory Practice. I am testifying on behalf of Veolia Water Delaware,
8 Inc. ("VWDE" or the "Company") in this case.

9
10 **Q.** **Please summarize your educational background and professional experience.**

11 A. As detailed in my attached resume (Appendix A), I received my education in
12 Chemical Engineering at the University of British Columbia, Canada, and the
13 University of California at Los Angeles. My Master of Business Administration from
14 the University of California at Davis specializes in Finance and Organization
15 Management.

16 My experience includes helping utilities with organizational effectiveness
17 studies, reducing carbon footprints for energy-intensive activities, addressing
18 affordability and assistance program needs, quantifying the financial impact of
19 deferred asset maintenance, and developing innovative approaches for
20 structuring alternative delivery projects using private and public financing
21 instruments. During my 33-year career, I have worked on more than 475
22 engagements, providing financial and business planning services for public and

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investor-owned utilities of all sizes. These services have spanned all aspects of rate filings, from revenue requirements to cost of service and rate design to stakeholder public outreach. Some of these engagements have also included low-income/customer affordability evaluations and business and management process reviews as they relate to consolidation efforts and integration of new or updated technologies.

Over the past two decades, I have provided expert witness testimony in front of the California Public Utilities Commission, the Indiana Utilities Regulatory Commission, and the Kentucky Public Service Commission. I have testified before utility rate commissions in numerous rate filings on cost-of-service matters for long-standing clients such as the Philadelphia Water Department and Washington Suburban Sanitary Commission. I have also provided expert witness testimony and litigation support for the City of San Diego, CA, Greater Cincinnati Water Works, Baton Rouge, LA, Atlanta, GA, and the City of Holland, MI.

I am a long-standing member of several industry associations that are key to developing and providing guidance to the rate-making community. As an active member of the American Water Works Association (AWWA), the National Association of Water Agencies, and the Water Environmental Federation (WEF), I have served in the following leadership positions:

- Past Chair of AWWA's Finance, Accounting, and Management Controls (FAMC) Committee (3 years)
- Vice-Chair of FAMC (3 years)

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- Member of AWWA's Rates and Charges (R&C) and FAMC committees
 - Co-Chair of Publications Subcommittee (Joint R&C and FAMC)
 - Vice-Chair of R&C Rate Design subcommittee
 - Member of R&C Water Reuse subcommittee
 - Member of R&C System Development Charges subcommittee
 - Member of R&C Executive Review Committee
 - Chair for current revision to AWWA's M29 Manual, Water Utility Capital Financing

In addition to serving on industry committees, I have also contributed as an editor, author, and reviewer for AWWA's M1-Principles of Water Rates, Fees and Charges (6th and 7th editions, and the currently under development, 8th edition); WEF's Manual of Practices 27- Financing and Charges for Wastewater Systems (3rd and 4th editions), and WEF's User-Fee-Funded Stormwater Program.

Q. What is the purpose of your testimony?

A. My testimony aims to provide a cost-of-service overview and describe the methodology and results of Black & Veatch's Cost-of-Service Study (COSS) prepared for this proceeding.

Q. Please identify the Exhibit you are sponsoring in the filing supporting the Cost-of-Service Study.

A. Black & Veatch is sponsoring MRF 8.4, whose information is grouped as follows:

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- Overall Summary includes summaries of the study, cost-of-service rate design, the current and proposed charges, and the impact of typical customer bills.
- Cost of Service Development presents the revenue deficiency and allocation of revenues, operating expenses, depreciation expense, income taxes, plant, and rate base to the functional cost components. The distribution of the revenue requirements to the customer classes completes this section.
- Workpapers and Assumptions includes the details and assumptions used in the COSS, such as allocation, customer data, and demand factors.

COST OF SERVICE OVERVIEW

Q. What is the purpose of a Cost-of-Service Study?

A. The purpose of a cost-of-service study is to analyze the assignment of cost responsibility to customers serviced and to guide the development of rates in rate cases. As it is neither economically practical nor often possible to determine cost responsibility and applicable rates for each individual customer, rate practitioners conducting a cost-of-service analysis use groups or classes of customers with similar water-use characteristics for cost allocations. Ratemaking endeavors to assign costs to classes of customers in a non-discriminatory, cost-responsive manner so that rates can be designed to meet the cost of providing services to customer classes.

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1

2 **Q. Was the Cost-of-Service Study in this proceeding consistent with Generally**
3 **Accepted Industry Guidelines?**

4 A. Yes. The cost-of-service analysis conducted by Black & Veatch utilizes a cost-
5 causative approach endorsed by AWWA's Principles of Water Rates, Fees, and
6 Charges, Manual of Water Supply Practices M1 (M1 Manual). The methodology
7 produces cost of service allocations recognizing the projected customer service
8 requirements for the Company. Proposed rates are designed according to
9 allocated service costs and local policy considerations. The methodology used in
10 the COSS is consistent with the Company's approach in prior rate proceedings.

11

12 **Q. Please describe the various components of a COSS.**

13 A. Essentially, a COSS consists of three parts that can be summarized as follows:

14 • Revenue and Revenue Requirements. Rates and charges should generate
15 adequate revenues to meet the operating and capital costs and provide for
16 the utility's financial stability. Under this step, we project the Company's test
17 year revenues under existing rates and compare them to the projected test
18 year operational and capital needs.

19 • Cost of Service. The cost-of-service analysis evaluates the existing utility and
20 the relative load placed on the utility by the different customer classes to
21 allocate costs based on services received fairly. The cost-of-service analyses
22 consider the functional aspects of utility operations and cost components such

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as base, extra-capacity, meter, customer, and other direct costs. This step provides a means of apportioning costs and the overall return to each customer class.

- Rate Design. Under this step, we develop rates and charges that reflect cost-of-service principles and the Company's goals and objectives.

COST OF SERVICE AND RATE DESIGN

Q. Please summarize Black & Veatch's COSS.

A. Black & Veatch's cost-of-service analysis uses the Base-Extra Capacity method and methodology accepted by the PSC in past proceedings. The M1 Manual recognizes the Base-Extra Capacity approach as an acceptable means of determining the costs of service.

Under the Base-Extra Capacity method, the identified revenue requirements are allocated to functional cost components. Simply put, functional cost components can be considered activities that drive costs. For the COSS, these functional cost components are Average Daily Use, Maximum Day Use (MD), Maximum Hour Use (MH), Meters, Services, Billing & Collection, and Fire Protection.

Next, we identify the billing determinants for each customer class by functional cost component. After this is completed, the functional costs are allocated to the residential, commercial, industrial, public authority, and fire protection customer classes based on the number of units calculated in Step 2.

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1 Finally, we determine the revenue gap between the cost of service and revenues
2 under existing rates for each class.

3

4 **Q. Does the cost of service by customer class presented in the COSS reflect the**
5 **actual Test Year and Test Period data presented in the filing?**

6 A. Yes. Black & Veatch used the revenue requirements developed by the Company
7 in this proceeding and allocated them to the functional cost components and
8 customer classes using factors and ratios that reflect current operations and
9 requirements. The System maximum day and hour ratios and those for the
10 residential, commercial, industrial and public authority classes are based on Black
11 & Veatch's Customer Class Load Study (Load Study), which is included in MFR 8.4.

12

13 **Q. Why was a Customer Class Load Study conducted, and how is it used?**

14 A. With the implementation of Advanced Metering Infrastructure (AMI), the
15 Company can gain more insight into consumptive demand patterns. Black &
16 Veatch was engaged by the Company to examine the available AMI data to inform
17 max-day and max-hour estimations in a way that will provide more granular data
18 and insights than reliance upon monthly billing data alone. As detailed in MFR 8.4,
19 the Load Study reviewed over 8 million data points from approximately 11,100
20 providing hourly data. Where AMI was unavailable, monthly billing data were
21 reviewed, and Black & Veatch followed Appendix A of the M1 Manual to estimate

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1 maximum day and maximum hour factors. AMI data were not available for the
2 resale customer.

3
4 **Q. Please describe any major findings of the Load Study.**

5 A. The Load Study results indicate that the customer max day occurred on
6 08/08/2022 with a combined demand of 12,822,635 gallons for the day. The
7 customer max hour occurred on 08/09/22 at 7:00 AM, with a combined demand
8 of 839,428 gallons for the hour. The coincident demands (i.e., the demands
9 occurring simultaneously as the system peak) are shown in Table ES-1 of the Load
10 Study. Table ES-2 in the Load Study summarizes noncoincident demands by
11 customer class. The results of the Load Study indicate that the relationship
12 between the coincidental and noncoincidental factors is within the 1.0-1.40
13 diversity range provided in AWWA's M1 manual.

14 Finally, the Load Study results provide a more realistic reflection of MD
15 and MH peaking factors at the customer-class level. The prior rate case used
16 guidance provided by AWWA when customer-level data is not available. For this
17 rate proceeding, Black & Veatch is using the results of the Load Study for customer
18 class peaking factors. This approach modifies the general AWWA guidance to
19 reflect customer class characteristics more accurately for the cost-of-service
20 analysis.

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1

Customer Class	Load Study		AWWA Factors in		MH/MD	
			Lieu of Actual Data			
	Max Day	Max Hour	Max Day	Max Hour	Load Study	AWWA
Residential	1.26	1.93	2.00	5.00	1.53	2.50
Commercial	1.17	1.88	1.70	3.50	1.60	2.06
Industrial	1.54	1.81	1.20	1.50	1.18	1.25
Public Authority	1.26	3.25	1.70	3.50	2.59	2.06

2

3 **Q. Please discuss the section, which summarizes the results of the COSS.**

4 A. The Revenue Deficiency tab summarizes the cost-of-service calculated
5 deficiencies by customer class. The analysis indicates that the total revenue
6 deficiency reflects an 18.98% increase in revenues needed to meet the
7 Company's operational and capital needs. Other operating revenues are not
8 being increased. Thus, the overall percentage increase in the customer classes is
9 19.27%.

10 The COSS suggests that the overall average revenue increase by customer
11 class would be:

- 12 ● Residential – an increase of 9.99%
- 13 ● Commercial – an increase of 17.34%
- 14 ● Industrial – an increase of 70.91%
- 15 ● Public Authority – an increase of 21.46%

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- Sales for Resale – an increase of 31.10%
- Private Fire – a decrease of 42.74%
- Public Fire – a decrease of 42.90%

For the COSS, no DSIC revenues are assumed.

Q. Are the proposed rates consistent with the COSS?

A. The design of customer rates should reflect a balance between the costs associated with providing service and local policy and Company perspectives. The first objective should always be to make sure that the overall revenues generated under the proposed rate design fully recover the revenue requirements. Second, the rate design should be sensitive to large increases or decreases in rates that impact customers. Third, rate design can also be used as an integral part of reinforcing desired customer behaviors. For example, inclining block structures help convey the message that efficient water use (i.e., conservation) is important.

The rate design philosophy reflected in the COSS supports an incremental approach to COS – the concept of gradualism. Under this approach, the proposed facility charges reflect COS-based rates that incorporate a small decrease in the meter ratios for sizes 3" and above. The Company's proposed rate design keeps the typical bill for a residential customer using 4,000 gallons of water per month at 18.65%, lower than the overall system increase of 19.27%. The COS-based facility charges reflect an overall increase of 16.49% compared to current rates. No change in the volumetric rate design is being proposed. As a result, for the

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1 residential customer that has an inclining block rate, the increase to the first block
2 is proposed at 20.0%. The facility charges for the Commercial, Industrial, Public
3 Authority, and Sales for Resale classes are the same as for the Residential class.
4 While these customer classes all have different volumetric rates and structures,
5 the rate proposal reflects the same 25.2% increase.

6 Rather than decrease the Public and Private Fire protection rates, the rate
7 proposal is to maintain them at the current rates. This action is particularly
8 important when using AMI-based demand factors that are significantly different
9 from the AWWA ratios used when data are unavailable to inform utility-specific
10 factors.

11

12 **Q. Please discuss why you believe the proposed revenue increase allocation is fair.**

13 A. The Company continues to make substantial infrastructure and operational
14 improvements to the water system. The overall revenue increase reflects the
15 magnitude of these investments and is distributed to all customers in the same,
16 fair manner.

17

18 **Q. Are any changes to the rate structure being proposed in this filing?**

19 A. No.

20 /

21 **Q. Does this conclude your direct testimony?**

22 A. Yes, it does.

Ann Bui

Senior Managing Director

Ms. Bui serves as a Senior Managing Director with Black & Veatch's Global Advisory business and leads the company's Rates and Regulatory practice. Besides providing clients with strategic financial management strategies, her responsibilities include driving growth and innovation to utilities in the areas of financial and advisory planning, climate solutions, resiliency and sustainability issues, and asset integrity.

Ann has more than 30 years of experience with clients in North and South America, Europe, and Asia gained through more than 475 engagements, providing financial and business planning services for public and investor-owned utilities of all sizes. Her recent assignments have focused on reducing carbon footprints for energy-intensive activities, water insecurity, addressing affordability and assistance program needs, and developing innovative approaches for structuring alternative delivery projects using private and public financing instruments.

She has prepared financial feasibility reports supporting more than \$15 billion of revenue bond sales, \$8 billion in state revolving fund loans, and over \$1 billion in grant applications.

Ms. Bui has completed due diligence engagements for entities of many internationally well-established companies such as KKR, Macquarie Capital, Credit Suisse, Morgan Stanley, J.P. Morgan, Goldman Sachs, Bank of America Merrill Lynch, Rothschild, Canada Pension Plan Investment Board, Barclays, Fiera Infrastructure, Alma Global, and PGGM. Her work on due diligence efforts has supported water and wastewater infrastructure assets totaling over \$45 billion.

Over the past two decades, Ms. Bui has provided expert witness testimony in front of the California Public Utilities Commission, the Indiana Utilities Regulatory Commission, the Idaho Public Utilities Commission, and the Kentucky Public Service Commission. She has served as an expert witness in front of utility rate commissions for such clients as the Philadelphia Water Department and Washington Suburban Sanitary Commission. She has also provided expert witness testimony supporting rate litigation matters for the City of San Diego, CA, Greater Cincinnati Water Works, the City of Baton Rouge, LA, and the City of Atlanta, GA.

An active proponent of advancing the water industry, Ms. Bui is a long-standing member of several industry associations. She is a past Chair of the American Water



EDUCATION

Masters, Business Administration, Finance, University of California – Davis, 1995

MS, Chemical Engineering, University of California Los Angeles, 1989

BS, Chemical Engineering, University of British Columbia, 1986, Canada

YEARS EXPERIENCE

33

PROFESSIONAL REGISTRATION

License, Engineer-In-Training, #XE094654, California, 1995

PROFESSIONAL ASSOCIATIONS

AWWA

Past Chair - AWWA's Finance, Accounting & Management Controls Committee

Member – AWWA's Rates & Charges

WEF

NACWA's Utility Management Committee

RELEVANT EXPERTISE

Financial & Management Consulting Services; Debt Issuance Support; Elasticity Studies; Cost of Service & Rate Design; Institutional & Organizational Studies; Alternative Financing; Valuations/M&A

Works Association (AWWA) Finance, Accounting, and Management Controls Committee and is involved with AWWA's Rates and Charges Committee, the National Association of Clean Water Agency's Utility Management Committee, and the Water Environment Federation (WEF).

Ann serves as an author, editor, and peer reviewer for many of the rate-making industry's manuals of practice, including AWWA's M1 – Principles of Water Rates, Fees and Charges, the current update to M1, the current update of WEF's Manual of Practice 27, Financing and Charges for Wastewater Systems, and WEF's User-Fee Funded Stormwater Program. She is the lead author and editor of AWWA's book ***Financial Management for Water Utilities: Principles of Finance, Accounting and Management Controls***. Presently, Ann is the Chair for the update to AWWA's M29 – Water Utility Capital Financing.

SELECT REPRESENTATIVE EXPERIENCE

City of Los Angeles Bureau of Sanitation, CA | Various Wastewater and Stormwater Rate Services

Project Director. Black & Veatch has provided financial and rate consulting services to the City of Los Angeles (City) since the 1970s. Ms. Bui has worked with the City of Los Angeles, Bureau of Sanitation (LASAN) in a variety of positions since 2008. Currently, she is the Project Director for Black & Veatch's engagement with LASAN to evaluate rate structure alternatives pertaining to the City's Clean Water Program. This restructuring work involves extensive public outreach and engagement since it has been over a decade since the last cost-of-service study.

Since 2008, Ms. Bui and her team have assisted LASAN with the following services:

- Provided funding strategies to support the City's submittal of three Enhanced Watershed Management Permits (EWMPs). The EWMP outlines a strategy to address watershed activities to comply with MS4 requirements.
- Reviewed stormwater fees and alternative funding sources for the stormwater program. Consideration was given to the need and appropriate basis for stormwater quality-based charges. A financial planning and rate design model was developed for City staff to annually evaluate the financial status of the stormwater program. The model is designed to provide future budget estimates, evaluate alternative revenues, revenue requirements, and the flow of funds analyses, and show the effect of any changes on existing and alternative rate designs.
- Updated LASAN's Sewerage Generation Factors (SGF). The SGF is the basis for sewage facilities charges imposed on new development or renovation of existing facilities. The SGF consists of a volumetric and two strength components. The analysis included research of the existing SGF, a mass balance, field surveys, and benchmarking to similar utilities. In addition, we incorporated the effects of water conservation measures enacted by the City of Los Angeles into the analysis.
- Reconciled LASAN's Contract Agency section service charges. LASAN entered into separate agreements with 29 surrounding agencies to provide wastewater services. The reconciliation required updates of O&M and capital costs, flow and strength characteristics, cost allocations, and facilities charges.

Philadelphia Water Department, PA | Water, Wastewater and Stormwater Cost of Service Studies

Project Director. Ms. Bui has worked with the City of Philadelphia since 2003 and currently serves as the Project Director for Black & Veatch's multi-utility cost of service work with the PWD. During her time working with this client, Black & Veatch has performed the following services:

- Comprehensive services performed include grants, loans, and revenue bond financing
- Managed the entire letter of interest through the financial closing effort for PWD's first WIFIA loan
- Developed the first municipal rate rider for the tiered customer assistance program
- Developed an impervious area-based stormwater fee

In addition to the above, Ms. Bui has presented and testified as an expert witness during rate hearing proceedings before an independent hearing examiner and the recently formed Rate Board.

American Water Company, CA | Automated Metering Infrastructure Rate Case Support and Water-Budget Rate Setting Expert Witness

Project Director. Ms. Bui served as the Project Director for California American Water's (CAW's) Rate Case petition for an Automated Metering Infrastructure (AMI) program in front of the California Public Utilities Commission (CPUC). CAW retained Black & Veatch to help support the development of an AMI framework and provide expert witness testimony. As part of the framework, we developed cost estimates for different AMI configurations and evaluated both tangible and intangible benefits of AMI. The CPUC reviewed and passed the petition, with Black & Veatch serving as an expert witness. Concurrent with the work, Ms. Bui served as an expert witness for CAW's separate CPUC rate petition regarding its water budget-based rate design for the Monterey service area.

Washington Suburban Sanitary Commission, MD | Comprehensive Water and Wastewater Rate Study

Project Director. Ms. Bui is the project director responsible for Black & Veatch's engagement with WSSC Water. Since 2016, we have completed numerous assignments with WSSC Water, including conducting a comprehensive water and wastewater rate study, analysis and development of a new overhead cost allocation methodology, creation of miscellaneous fees, and providing litigation support to WSSC on rate-setting matters in front of the Maryland PSC.

Sewerage and Water Board of New Orleans, LA | Operations Reports, Comprehensive Financial Planning & Cost of Service Studies & Customer Assistance Program

Project Director. Ms. Bui serves as the Project Director for Black & Veatch's ongoing engagement with SWBNO. Our work for SWBNO has been on a continual basis for over 50 years. Services provided include the annual report on operations for water, wastewater, and storm drainage utilities, including evaluation of management, operations, financing, and compliance with bond covenants; engineering bond reports; rate studies, and the development of SWBNO's first comprehensive customer assistance program.

Charleston Water Systems, SC | Comprehensive Financial Planning, Cost of Service Studies, and Asset Valuations

Project Director. Ms. Bui serves as the Project Director supporting Black & Veatch's comprehensive financial services to Charleston Water Systems. We have provided revenue bond-related, rate design, and

other financial services to the Charleston Water Service for several decades. The comprehensive water and wastewater rate study and rate schedules were last updated in 2021 and are scheduled for a full update in 2023. In addition, contracts with wholesale customers were reviewed and updated. Current work includes asset valuation for specific parts of the water system that are being considered for purchase by an existing customer and the development of leachate surcharges.

Long Beach Water Department, CA | Water and Wastewater Rate Study and Water Budget-Based Study

Project Director. Ms. Bui served as the Project Director for a water budget-based rate study. She worked with the water conservation group within the Department to develop irrigation water budget-based rates that meet the cost of service principles and Proposition 218. The primary focus was on analyzing the 100 plus irrigation customers and determining appropriate budgets that would help the city meet a state-mandated reduction in consumption. Ms. Bui conducted a cost-of-service analysis for all customers in the process. Additionally, Ms. Bui served as the Project Director in the development of a water and sewer rate study. Ms. Bui developed a customized rate model to assist the Department in updating rates. The Department reviews rates on annual basis to verify revenue stability. The cost of service study helped the Department analyze equality among its customer classes. Based on the analysis, the Department conducted a “what-if” analysis to determine the alternative that would generate enough revenue to meet its needs.

City of Phoenix, AZ | Water Efficiency Study & Innovation and Efficiency Study

Project Director. Ms. Bui served as the Project Director for two water efficiency studies with the City. In this role, she worked closely with the Water Service Department staff to perform a cost analysis on the various preventative and reactive maintenance activities for the water utility. The Department handles production and distribution functions for the water system. The intent of the cost analysis was to determine the actual cost that is required by the Department to perform activities such as water main repairs, valves, and hydrant maintenance and benchmark these activities to third-party providers. For the Innovation and Efficiency Study, Ms. Bui led the Black & Veatch team in finding both short- and long-term cost savings, as well as assessing the operational efficiency of the water and wastewater utilities. Black & Veatch identified more than 200 recommendations for improvements and short-term savings of greater than 2.5 percent of the Department’s operating budget. Overall savings, including debt refinancing efforts undertaken by the City’s Finance Department and other one-time efforts, provided savings of almost 9 percent of the water budget and approximately 7 percent of the wastewater budget.

Water Supplies Department, Hong Kong | Water Conservation and Loss Analysis

Technical Reviewer. Ms. Bui served as the lead reviewer and subject matter expert for the regulatory and infrastructure governance aspect of Black & Veatch’s engagement with the Hong Kong Water Supplies Department (WSD) as part of a larger Total Water Management program. The WSD supplies more than 7 million people. Under this part of the engagement, Ms. Bui reviewed recommendations made to improvement the organization’s governance and structure to meet current and future regulatory needs.

Midwestern & Eastern US - Water, Wastewater, Stormwater, Solid Waste, Gas & Hydroelectric Utility Enterprise Financial Planning, Rate & Cost-of-Service Studies, System Development Charges, Indirect Cost Allocations, & Business Planning Activities

- Jasper, AL
- Veolia Water, DE
- Florida Governmental Utility Authority, FL
- JEA, FL
- Miami-Dade Water and Sewer Department, FL
- North Miami, FL
- Surfside, FL
- Atlanta, GA
- Cedar Falls, IA
- Bloomington Department of Utilities, IN
- Aurora, IL
- Highland, IL
- Thorn Creek Basin Sanitary District, IL
- El Dorado, KS
- Johnson County Wastewater, KS
- Kansas City Board of Public Utilities, KS
- Leavenworth, KS
- Topeka, KS
- Unified Government of Wyandotte County, KS
- WaterOne, KS
- Louisville Water Company, KY
- Louisville Metropolitan Sewer District, KY
- Northern Kentucky Water District, KY
- SD#1 Northern Kentucky Sewer District, KY
- Warren County, KY
- Baton Rouge, LA
- Parish of East Baton Rouge, LA
- Shreveport, LA
- Sewerage and Water Board of New Orleans, LA
- Washington Suburban Sanitary Commission, MD
- Detroit, MI
- Grand Rapids, MI
- Great Lakes Water Authority, MI
- Holland, MI
- Rochester Hills, MI
- Wyoming, MI
- Kansas City, MO
- Metropolitan St Louis Sewer District, MO
- High Point, NC
- Raleigh, NC
- Clayton, NC
- Johnston County, NC
- Winston-Salem, NC
- Lincoln, NE
- Norfolk, NE
- New Jersey American Water, NJ
- Veolia Water, NY
- Columbus, OH
- Dayton, OH
- Greater Cincinnati Water Works, OH
- Mason, OH
- Metropolitan Sewer District of Hamilton County, OH
- Broken Arrow Municipal Authority, OK
- Tulsa, OK
- Tulsa Municipal Utility Authority, OK
- Alleghany County Sanitary Authority, PA
- Philadelphia Water Department, PA
- Philadelphia Gas Works, PA
- Beaufort-Jasper Water and Sewer Authority, SC
- Charleston, SC
- Charleston Water System, SC
- Columbia, SC
- Renewable Water Resources, SC
- Woodruff Roebuck Water District, SC
- Arlington, TX
- Fort Worth, TX
- Gulf Coast Water Authority, TX
- Hudson Oaks, TX
- Lower Colorado River Authority, TX
- North Texas Municipal Water Authority, TX
- San Antonio Water System, TX
- Taylor, TX
- Norfolk, VA
- Hydro One, Canada
- Palmas Del Mar Utilities, PR
- Puerto Rico Aqueduct and Sewer Authority, PR

Western US - Water, Wastewater, Stormwater, & Solid Waste Utility Enterprise Financial Planning, Rate & Cost-of-Service Studies, Indirect Cost Allocations, Management Audits /Organizational Assessment Studies, & Business Planning Activities

- Flagstaff, AZ
- Glendale, AZ
- Phoenix, AZ
- Tucson, AZ
- Scottsdale, AZ
- Antioch, CA
- Atascadero Mutual Water Company, CA
- Banning, CA
- Burbank, CA
- California American Water, CA
- California State University, Channel Islands, CA
- Cambria Community Services District, CA
- Camrosa Water District, CA
- Central Contra Costa Sanitation District, CA
- Chino Hills, CA
- County of San Bernardino, CA
- County of San Diego, CA
- Cucamonga Valley Water District, CA
- Downey, CA
- Dublin San Ramon Service District, CA
- Encinitas Wastewater Authority, CA
- Escondido, CA
- Fountain Valley, CA
- Golden States Water Company, CA
- Goleta Water District, CA
- Helix Water District, CA
- Indio Water Authority, CA
- Santa Monica, CA
- Los Angeles Bureau of Sanitation
- LA DWP, CA
- Leucadia Water District, CA
- Lomita, CA
- Long Beach, CA
- Lynwood, CA
- Manhattan Beach, CA
- Marin Municipal Water District, CA
- Menlo Park, CA
- Metropolitan Water District of Southern California
- Napa, CA
- Newport Beach, CA
- Oakland, CA
- Olivehain Municipal Water District, CA
- Ontario, CA
- Orange, CA
- Oxnard, CA
- Padre Dam Municipal Water District, CA
- Palo Alto, CA
- Patterson, CA
- Pico Rivera, CA
- Ponomo, CA
- Port Hueneme, CA
- Port of San Diego, CA
- Rancho California Water District, CA
- Riverside Public Utilities, CA
- San Clemente, CA
- San Diego, CA
- San Joaquin County, CA
- San Jose, CA
- San Juan Capistrano, CA
- Santa Ana, CA
- Santa Clara, CA
- Santa Ynez River Water Conservation District, CA
- Simi Valley, CA
- Soledad, CA
- Soquel Creek Water District, CA
- South Gate, CA
- Sweetwater Authority, CA
- Western Municipal Water District, CA
- Westminster, CA
- Vallecitos Water District, CA
- Vallejo Flood Control District, CA
- Yuba City, CA
- Cherry Hills Sanitation District, CO
- Parker Water and Sanitation District, CO
- Southeastern Colorado Water Conservancy District, CO
- Waste Management Inc., CO
- Veolia Water, ID
- Las Campanas Water & Sewer Cooperative, NM
- Henderson, NV
- Las Vegas, NV
- Salem, OR
- Tacoma, WA
- Guam Waterworks Authority

PUBLICATIONS & PRESENTATIONS

"The Conundrum of Water Affordability. What's at Stake," Lead story, Water Finance & Management, February 2021.

"Customer-centricity for Utilities" Zyprme Webinar, October 29, 2020.

"Can't Pay; Won't Pay: COVID Implications for Water Utility Funding" Water Online, September 16, 2020

"How Much is it Worth? An Overview of Valuing Water Utilities" Journal AWWA, August 2020.

"Municipal Water and Privatization" Bank of America Merrill Lynch Water Investors Conference, December 2019

"Water Reuse Cost Allocations and Pricing" Journal AWWA, November 2019.

"A Smoother Road to AMI: Leveraging applicable lessons from the Power Industry" Journal AWWA, September 2017.

"What is a World-Class Utility and How Does Yours Become One?" Water Online, July 25, 2017

"Where are We Heading Next? Strategic Directions in the Water Industry", presented at the Conference of Infrastructure Financing Agencies, Federal Policy Meeting in Washington, D.C., April 2017.

"What's in Your Wallet? Ways to Address Aging Infrastructure and Lack of Money." Annual Utility Management Conference. June 2016

"No More Sacred Cows", published in Journal AWWA, January 2016.

"Business Risks to the Capital Financing Process", published in AWWA's Opflow magazine, September 2015.

"Securing Solid Revenues Streams for Water Utilities is Crucial for Financial Resilience", published in Breaking Energy, September 10, 2015.

"Revenues and Expenses and Ratios, Oh My! A Finance Primer for Non-Finance Professionals", presented at the Annual Utility Management Conference in Glendale, Ariz., March 2013.

Bui, Ann T., Editor, Financial Management for Water Utilities: Principles of Finance, Accounting and Management Controls, 2012, published by AWWA, Denver, Colo.

"Checks and Balances: An Overview of the New Financial Management for Water Utilities Handbook", presented at the Annual AWWA Conference in Dallas, Tex., June 2012.

"Introduction to Financial Planning" presented at the Pacific Northwest Section of the Clean Water Association Winter Short Course University, Portland, Oreg., February 2010.

"Money Makes the World Go 'Round: An Overview of the New Financial Management for Water Utilities Handbook," presented at the Annual AWWA Conference in San Diego, Calif., June 2009.

“Key Performance Indicators” presented at the Annual AWWA Conference in San Diego, Calif., June 2009.

“Everything You Ever Wanted to Know About Finance Management but were Afraid to Ask: An Overview of the New Financial Management for Water Utilities Manual”, presented at the Annual AWWA Conference in Atlanta, Ga., June 2008.

“Alternative Funding Sources” presented at the Regional Water Authority Conference in Rancho Cordova, Calif., April 2007.

“Financial Benchmarks” presented at the Annual AWWA Conference in San Francisco, Calif., June 2005.

“Maximize Debt Market Options – Minimize Revenue Adjustments” presented at the Kentucky/Tennessee AWWA/WEF Conference in Nashville, Tenn., August 2004.

“Quantification and Reduction of Risk from Hazardous Air Emissions - Keynote address,” presented at the AIChE Annual Conference in San Francisco, Calif., November 1994.

**BEFORE THE
DELAWARE PUBLIC SERVICE COMMISSION**

DIRECT TESTIMONY OF

**HAROLD WALKER, III
VEOLIA WATER DELAWARE, INC.**

APRIL 2023

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OVERALL RATE OF RETURN TERMS, ABBREVIATIONS AND ACRONYMS

Terms, Abbreviations and Acronyms	Defined
CAPM	Capital Asset Pricing Model
Commission	Delaware Public Service Commission
Company	Veolia Water Delaware, Inc.
Comparable Companies	Water Group Followed by Analysts
Comparable Group	Water Group Followed by Analysts
Cost of Capital	Investor-required cost rate
DCF	Discounted Cash Flow
DPS	Dividend per share
EPA	U.S. Environmental Protection Agency's
EPS	Earnings per share
Financial Risk	Leverage
GICS	Global Industry Classification System
IOU	Investor Owned Utilities
Leverage	Fixed cost capital
Long-term U.S. Treasury Securities	Base Risk-Free Rate
M/B	Market-to-Book Ratios
Moody's	Moody's Investors Service
NARUC	National Association of Regulatory Utility Commissioners
Non-Systematic Risk	Company-Specific Risk
PSC	Delaware Public Service Commission
ROE	Return on Equity
RP	Risk Premium
S&P	Standard & Poor's
SIC	Standard Industrial Classification
Systematic Risk	Non-Diversifiable Risk
Value Line	Value Line Investment Survey
VUR	Veolia Utility Resources LLC
VWDE	Veolia Water Delaware, Inc.
Water Group	Water Group Followed by Analysts

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INTRODUCTION

- Q. Please state your name and business address.**
- A. My name is Harold Walker, III. My business address is 1010 Adams Avenue, Audubon, Pennsylvania 19403.
- Q. By whom are you employed and in what capacity?**
- A. I am employed by Gannett Fleming Valuation and Rate Consultants, LLC as Manager, Financial Studies.
- Q. What is your educational background and employment experience?**
- A. My educational background, business experience and qualifications are provided in Appendix A.

SCOPE OF TESTIMONY

- Q. What is the purpose of your testimony?**
- A. The purpose of my testimony is to recommend an appropriate overall rate of return that Veolia Water Delaware, Inc. (“VWDE” or the “Company”) should be afforded an opportunity to earn on its water service rate base. My testimony is supported by Exhibit No. 1, which is composed of 19 Schedules.

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SUMMARY OF RECOMMENDATION

Q. What is your recommended cost of equity?

A. My recommendation is that VWDE be permitted an overall rate of return of 7.86%, including an 11.00%¹ cost of common equity, based upon the Company's capital structure pro form at March 31, 2023. My recommended cost of common equity reflects VWDE's unique risk characteristics.

Q. How did you determine your recommended common equity cost rate?

A. I used several models to help me in formulating my recommended common equity cost rate including Discounted Cash Flow ("DCF"), Capital Asset Pricing Model ("CAPM") and Risk Premium ("RP").

Q. Is it important to use more than one market model?

A. Yes. It is necessary to estimate common equity cost rates using a number of different models. At any given time, a particular model may understate or overstate the cost of equity. While any single investor may rely solely upon one model, different investors rely on different models and many investors use multiple models. Therefore, because the price of common stock reflects a number of valuation models, it is appropriate to estimate the market-required common equity cost rate by applying a broad range of analytical models.

¹ It should be noted that my current analysis contained in Exhibit HW-1 supports a cost of common equity of 11.0% for the Company. The Company's filing includes an overall rate of return of 7.59% and a 10.50% cost of common equity for filing purposes to minimize the requested revenue increase.

1 **Q. Please summarize your common equity cost rate recommendation.**

2 A. There is no market data concerning VWDE's shares of common stock
3 because VWDE shares of common stock are not publicly traded.
4 Accordingly, due to the lack of market data concerning VWDE's equity, I
5 used a comparable group of publicly traded companies to estimate the
6 common equity cost rate. Based upon the results of my entire analysis, I
7 conclude VWDE's current common equity cost rate is at least 11.00%. The
8 current range of common equity cost for VWDE is 9.70% (DCF), 12.30%
9 (CAPM), and 11.20% (RP). Value Line Investment Survey ("Value Line") is
10 relied upon by many investors and is the only investment advisory service
11 of which I am aware that projects earned return on equity. As a check on
12 the reasonableness of my common equity cost rate recommendation, I
13 reviewed Value Line's projected returns on common equity for comparable
14 utilities. Value Line's projected earned returns on common equity for my
15 comparable utilities average 10.7% and range from 8.1% to 13.8%. The
16 range of the projected returns suggests that my recommendation that
17 VWDE be permitted an opportunity to earn 11.00% is reasonable, if not
18 conservative.

PRINCIPLES OF RATE REGULATION AND FAIR RATE OF RETURN

Q. What are the principles guiding fair rates of return in the context of rate regulation?

A. In a capitalistic or free market system, competition determines the price for all goods and services. Utilities are permitted to operate as monopolies or near monopolies as a tradeoff for a ceiling on the price of service because: (1) the services provided by utilities are considered necessities by society; and (2) capital-intensive and long-lived facilities are necessary to provide utility service. Generally, utilities are required to serve all customers in their service territory at reasonable rates determined by regulators. As a result, regulators act as a substitute for a competitive-free market system when they authorize prices for utility service.

Although utilities operate in varying degrees as regulated monopolies, they must compete with governmental bodies, non-regulated industries, and other utilities for labor, materials, and capital. Capital is provided by investors who seek the highest return commensurate with the perceived level of risk; the greater the perceived risk, the higher the required return rate. In order for utilities to attract the capital required to provide service, a fair rate of return should equal an investor-required, market-determined rate of return.

1 **Q. WHAT CONSTITUTES A FAIR RATE OF RETURN?**

2 A. Two noted Supreme Court cases define the benchmarks of a fair rate of
3 return. In *Bluefield*², a fair rate of return is defined as: (1) equal to the return
4 on investments in other business undertakings with the same level of risks
5 (the comparable earnings standard); (2) sufficient to assure confidence in
6 the financial soundness of a utility (the financial integrity standard); (3)
7 adequate to permit a public utility to maintain and support its credit, enabling
8 the utility to raise or attract additional capital necessary to provide reliable
9 service (the capital attraction standard). The second case, *Hope*³,
10 determined a fair rate of return to be based upon guidelines found in
11 *Bluefield* as well as stating that: (1) allowed revenues must cover capital
12 costs including service on debt and dividends on stock; and (2) the
13 Commission was not bound to use any single formula or combination of
14 formulae in determining rates. Utilities are not entitled to a guaranteed
15 return. However, the regulatory-determined price for service must allow the
16 utility a fair opportunity to recover all costs associated with providing the
17 service, including a fair rate of return.

²Bluefield Water Works & Improvement Company v. P.S.C. of West Virginia, 262 U.S. 679 (1923).

³Federal Power Commission v. Hope Natural Gas Company, 320 U.S. 591 (1944).

INVESTMENT RISK

1
2 **Q. Previously, you referred to risk. Please define the term risk.**

3 A. Risk is the uncertainty associated with a particular action; the greater the
4 uncertainty of a particular outcome, the greater the risk. Investors who
5 invest in risky assets expose themselves to investment risk particular to that
6 investment. Investment risk is the sum of business risk and financial risk.
7 Business risk is the risk inherent in the operations of a business. Assuming
8 that a Company is financed with 100% common equity, business risk
9 includes all operating factors that affect the probability of receiving expected
10 future income such as: sales volatility, management actions, availability of
11 product substitutes, technological obsolescence, regulation, raw materials,
12 labor, size and growth of the market served, diversity of the customer base,
13 economic activity of the area served, and other similar factors.

14 **Q. What is financial risk?**

15 A. Financial risk reflects the manner in which an enterprise is financed.
16 Financial risk arises from the use of fixed cost capital (leverage) such as
17 debt and/or preferred stock, because of the contractual obligations
18 associated with the use of such capital. Because the fixed contractual
19 obligations must be serviced before earnings are available for common
20 stockholders, the introduction of leverage increases the potential volatility
21 of the earnings available for common shareholders and therefore increases
22 common shareholder risks.

Although financial risk and business risk are separate and distinct, they are interrelated. In order for a company to maintain a given level of investment risk, business risk and financial risk should complement one another to the extent possible. For example, two firms may have similar investment risks while having different levels of business risk, if the business risk differences are compensated for by using more or less leverage (financial risk) thereby resulting in similar investment risk.

DESCRIPTION OF VWDE

Q. Please give a brief description of the Company.

A. VWDE is a private or investor-owned company. VWDE is a regulated public utility that provides water service to about 39,500 (12/31/22) customers located in its franchise territories in New Castle County, Delaware. The price of service of VWDE is regulated by the Delaware Public Service Commission (“Commission” or “PSC”).

VWDE is a wholly-owned subsidiary of Veolia Utility Resources LLC (“VUR”). VUR is the sole source of VWDE’s external capital. VUR owns and provides services to water and wastewater utility companies which are located throughout the United States (e.g., VWDE). VUR was founded in 1869 and is based in Paramus, New Jersey. VUR is a subsidiary of Veolia Utility Parent, Inc., which is a subsidiary of Veolia North America, Inc.

Veolia North America, Inc. is a wholly-owned subsidiary of Veolia Environnement S.A. Veolia Environnement S.A. is a French transnational

1 company with activities in three main service and utility areas: water
2 management, waste management and energy services.

3 4 **THE INDUSTRY**

5 **Q. Please give a brief overview of the industry in which the Company**
6 **operates.**

7 A. VWDE operates in the water supply industry. The water supply industry
8 has a Standard Industrial Classification ("SIC") code of 4941, has water
9 utilities, and includes establishments primarily engaged in distributing water
10 for sale for residential, commercial, and industrial uses. Government
11 controlled establishments such as municipalities, public service districts and
12 other local governmental entities dominate the industry. Private companies
13 or investor owned utilities ("IOU") are active in the construction and
14 improvement of water supply facilities and infrastructure. There are
15 currently about 11,000 U.S. Businesses with a SIC code of 4941.

16 A comparative industry to the water supply industry is the wastewater
17 supply industry. The wastewater utility industry has a Standard Industrial
18 Classification ("SIC") code of 4952 (Sewerage Systems), has sewer utilities,
19 and includes establishments primarily engaged in the collection and
20 disposal of wastes conducted through a sewer system, including such
21 treatment processes as may be provided. There are currently about 2,200
22 U.S. Businesses with a SIC code of 4952.

1 The water supply industry is the most fragmented of the major utility
2 industries with more than 53,000 community water systems in the U.S.
3 (83% of which serve less than 3,300 customers). The nation's water
4 systems range in size from large municipally owned systems, such as the
5 New York City water system that serves approximately 9 million people, to
6 small systems, where a few customers share a common well.

7 According to the U.S. Environmental Protection Agency's ("EPA")
8 most recent survey of publicly-owned wastewater treatment facilities in
9 2008, there are approximately 15,000 such facilities in the nation, serving
10 approximately 74% of the U.S. population. Ninety eight percent of domestic
11 wastewater systems are government owned rather than IOUs. Currently,
12 there are no wastewater utility companies that have actively traded stock.⁴

13 An estimated 16% of all water supplies are managed or owned by
14 IOUs. IOUs consist of companies with common stock that is either actively
15 traded or inactively traded, as well as companies that are closely held, or
16 not publicly traded. Currently, there are only about nine investor owned
17 water utility companies with publicly traded stock in the U.S.

18 The water utility industry's and wastewater utility industry's increased
19 compliance with state and federal water purity levels and large infrastructure
20 replacements are driving consolidation of the wastewater utility and water
21 utility industries. Because many wastewater utility and water utility
22 operations do not have the means to finance the significant capital

⁴Many of the publicly traded water utility stocks also own some wastewater utilities but there are no publicly traded utility stocks which are comprised solely of wastewater utilities.

1 expenditures needed to comply with these requirements, many have been
2 selling their operations to larger, financially stronger utilities.

3 The larger IOUs have been following an aggressive acquisition
4 program to expand their operations by acquiring smaller wastewater and
5 water systems. Generally, they enter a new market by acquiring one or
6 several wastewater or water utilities. After their initial entry into a new
7 market, the larger investor-owned water utility companies continually seek
8 to expand their market share and services through the acquisition of
9 wastewater and water utility businesses and operations that can be
10 integrated with their existing operations. Such acquisitions may allow a
11 company to expand market share and increase asset utilization by
12 eliminating duplicate management, administrative, and operational
13 functions. Acquisitions of small, independent utilities can often add earning
14 assets without necessarily incurring the costs associated with the SDWA if
15 such acquisitions are contiguous to the potential purchaser.

16 In summary, the result of increased capital spending, to meet the
17 SDWA and CWA requirements⁵ and replace the aging infrastructure of
18 many systems, has moved the wastewater and water industries toward
19 consolidation. Moreover, Federal and State regulations and controls

⁵The SDWA, or Safe Drinking Water Act, is the principal federal law in the United States intended to ensure safe drinking water for the public. Pursuant to the act, the EPA is required to set standards for drinking water quality and oversee all states, localities, and water suppliers who implement these standards. The CWA, or Clean Water Act, is the primary federal law in the United States governing water pollution. The CWA's objective is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

1 concerning water quality are still in the process of being developed and it is
2 not possible to predict the scope or the enforceability of regulations or
3 standards which may be established in the future, or the cost and effect of
4 existing and potential regulations and legislation upon VWDE. However, as
5 a smaller water system, VWDE faces the cost of compliance with less
6 financial resources when compared to larger IOU water utilities.

7 8 **COMPARABLE GROUP**

9 **Q. How do you estimate the cost of common equity for VWDE?**

10 A. VWDE's common stock is not publicly traded. Accordingly, I employed a
11 comparable group of utility companies with actively traded stock, to
12 determine a market-required cost rate of common equity capital for VWDE.
13 Since no companies are perfectly identical to VWDE, it is reasonable to
14 determine the market-required cost rate for a comparable group of utility
15 companies and adjust, to the extent necessary, for investment risk
16 differences between VWDE and the comparable group.

17 **Q. How did you select the comparable group used to determine the cost**
18 **of common equity for VWDE?**

19 A. I selected a comparable group of water utilities to determine the cost of
20 common equity for VWDE considering security analysts' coverage. Unlike
21 the other utility industries, only a portion of the IOU water companies with
22 publicly traded stock in the U.S. are followed by security analysts.
23 Coverage by security analysts is important when determining a market

1 required cost of common equity. Accordingly, security analysts' coverage
2 was considered when selecting my comparable group. I selected my water
3 utility comparable group, Water Group Followed by Analysts ("Water
4 Group"), based upon a general criteria that includes: (1) all U.S. water
5 utilities that are covered by security analysts as measured by the existence
6 of sources of published projected five-year growth rates in earnings per
7 share ("EPS"); (2) with a Standard Industrial Classification (SIC) of 4941
8 (i.e., Water Supply Facilities and Infrastructure); (3) with a North American
9 Industry Classification System (NAICS) of 221310 (i.e., Water Supply and
10 Irrigation Systems); (4) are not the announced subject of an acquisition; (5)
11 currently pay a common dividend and have not reduced their common
12 dividend within the past four years; (6) have market value of common stock,
13 the product of multiplying the closing stock price by the number of common
14 shares outstanding, greater than \$500.0 million; and (7) have a total
15 enterprise, the sum of market value, preferred stock and total debt, greater
16 than \$700.0 million.

17 It should be noted that the Water Group is also referred to as the
18 Comparable Group and/or the Comparable Companies.⁶ The names of the
19 utilities that comprise the Comparable Group and their bond or credit ratings
20 are listed in Table 1.

⁶All of the Comparable Companies also provide some wastewater service.

Bond and Credit Ratings for
The Water Group Followed by Analysts

	<u>S&P Credit Rating</u>
<u>Water Group Followed by Analysts</u>	
American States Water Co	A+
American Water Works Co Inc	A
California Water Service Gp *	A+
Essential Utilities, Inc.	A
Middlesex Water Co	A
SJW Corp	A-
York Water Co	<u>A-</u>
Average	<u>A</u>

* - The A+ bond rating is that for California Water Service, Inc.

Table 1

Q. Why did you include not being the subject of an acquisition as a criteria for the Water Group?

A. To begin with, there are only about nine investor owned water utility companies with publicly traded stock in the U.S., and some of these companies are very small. As stated previously, the IOU water industry receives only limited exposure on Wall Street.

Additionally, the merger activity in the water industry can result in abnormal or “tainted” stock prices in terms of a DCF analysis because premiums are typically paid in corporate acquisitions. That is, when a tender offer is made for the purchase of all the outstanding stock of a company, the amount of that offer usually exceeds the price at which the stock was previously traded in the market. These large premiums are often

1 reflected in the prices of other water utilities that are not currently the
2 announced subject of an acquisition.⁷

3

4

CAPITAL STRUCTURE

5 **Q. What is required to develop an overall rate of return?**

6 A. The first step in developing an overall rate of return is the selection of capital
7 structure ratios to be employed. Next, the cost rate for each capital
8 component is determined. The overall rate of return is the product of
9 weighting each capital component by its respective capital cost rate. This
10 procedure results in VWDE's overall rate of return being weighted
11 proportionately to the amount of capital and cost of capital of each type of
12 capital.

13

14 **Q. Does VWDE directly raise or issue its own debt capital?**

15 A. No, prospectively VWDE does not raise its own capital; rather VUR is the
16 sole source of VWDE's external capital.

17

18 **Q. What capital structure ratios are appropriate to be used to develop**
19 **VWDE's overall rate of return?**

20 A. Consistent with settled rate setting principles, I believe it is necessary to
21 evaluate VWDE's current cost of capital based on VUR's pro forma March

⁷ Multiple publications mention these impacts including Research Magazine – April 2010, Barron's – March 2001, Utility Business – June 2002, and Value Line Investment Survey – April 2013.

1 31, 2023 capital structure, which includes 46% debt and 54% common
2 equity as reflected in Schedule 1.

3

4 **Q. Is there a set of regulatory and financial principles used in deciding**
5 **the appropriate capital structure to use for cost of capital purposes?**

6 A. Yes. There is a general set of regulatory and financial principles used in
7 deciding the capital structure issue for cost of capital purposes that are
8 consistent with both regulatory and financial theories:

9 1) It is generally preferable to use a utility's actual capital structure in
10 developing its rate of return. However, in deciding whether a
11 departure from this general preference is warranted in a particular
12 case, it is appropriate to first look to the issue of whether the utility is
13 a financially independent entity. In determining whether a utility is a
14 financially independent entity or self-financing, it is important to look
15 to whether the utility:

- 16 • has its own bond rating;
- 17 • provides its own debt financing; and
- 18 • debt financing is not guaranteed by a parent company.

19 2) When a utility issues its own debt that is not guaranteed by the public
20 or private parent and has its own bond rating, regulatory and financial
21 principles indicate to use a utility's own capital structure, unless the
22 utility's capital structure is not representative of the utility's risk profile
23 or where use of the actual capital structure would create atypical

1 results. Regulatory and financial principles involve determining
2 whether the actual capital structure is atypical when compared with
3 the capital structures approved by the Commission for other utilities
4 that operate in the same industry (*i.e.*, water utility, gas distribution
5 utility, etc.), as well as those of the proxy utility companies that
6 operate in the same industry.

7 3) For utility subsidiaries without publicly traded stock, the manner in
8 which the utility obtains its debt financing determines whether it does
9 its own financing. Public Utility Commissions generally determine if
10 a subsidiary has financial, operational, and managerial relationships
11 with its parent entity. However, having such ties typically has not led
12 to use of a parent's capital structure for regulatory purposes, unless
13 the subsidiary utility issues no long-term debt, issues long-term debt
14 only to its parent, or issues long-term debt to outside investors only
15 with the guarantee of its parent.

16 4) If a utility does not provide its own financing, Public Utility
17 Commissions often look to another entity. Generally, Public Utility
18 Commissions use the actual capital structure of the entity that does
19 the financing for the regulated utility as long as it results in just and
20 reasonable rates. This generally means using a parent company.

21 5) If the parent's capital structure is used, because it finances the
22 operation of the utility, regulatory and financial principles require
23 adjustments in the utility's allowed rate of return on equity to adjust

1 for risk differences, if any, between the parent and the regulated
2 subsidiary. If, however, the financing entity's capital structure is
3 inconsistent relative to the capital structures of the publicly-traded
4 proxy companies used in the cost of equity analysis and capital
5 structures approved for other utilities that operate in the same
6 industry (*i.e.*, water utility, gas distribution utility, etc.), Public Utility
7 Commissions employ a hypothetical capital structure.

8 Once the cost of equity for the proxy companies is determined,
9 thereby establishing a range of reasonable returns, Public Utility
10 Commissions should determine where to set the utility's return in that range
11 based upon how the utility's risk compares with that of other utilities that
12 operate in the same industry (*i.e.*, water utility, gas distribution utility, etc.).
13 The risk analysis begins with the assumption that the utility generally falls
14 within a broad range of average risk, absent highly unusual circumstances
15 that indicate an inconsistently high or low risk as compared to other utilities
16 that operate in the same industry (*i.e.*, water utility, gas distribution utility,
17 etc.). Generally, financial risk is a function of the amount of debt in an
18 entity's capital structure used for cost of capital purposes. When there is
19 more debt, there is more risk.

1 **Q. How does your recommended capital structure compare with ratios**
2 **employed by other investor-owned companies?**

3 **A.** The capital structure I recommend for VWDE reflects a common equity ratio
4 of 54% which is similar to the range of the ratios employed by other investor-
5 owned water companies as shown on pages 1 and 2 of Schedule 2. A
6 comparison of my recommendation for VWDE's capital structure ratios to
7 those recently employed by the Comparison Group is shown in Table 2.

<u>Comparison of Capital Structure Ratios</u>			
	<u>VWDE</u>	<u>Water Group</u>	
	<u>Pro Forma at</u>	<u>At</u>	<u>Projected</u>
	<u>3/31/2023</u>	<u>9/30/2022</u>	<u>2026</u>
Debt	46.2	49.8	48.3
Preferred Stock	0.0	0.1	0.0
Common Equity	<u>53.8</u>	<u>50.1</u>	<u>51.7</u>
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

8

9

Table 2

10 VWDE's rate making capital structure ratios are reasonable based
11 upon the above information.

1 **EMBEDDED COST RATE**

2 **Q. What embedded cost rates do you recommend be used to calculate**
3 **VWDE's overall rate of return?**

4 A. Consistent with my recommended capital structure ratios I recommend
5 using VUR's embedded debt cost rate of 4.20% for VWDE as reflected in
6 Schedule 1. This embedded debt cost rate of 4.20% is detailed in the
7 Company's Exhibit __ Schedule _____. The determination of an embedded
8 cost rate is a relatively simple arithmetic exercise because a company has
9 contracted for this capital for a specific period of time and at a specific cost,
10 including issuance expenses and coupon rate.

11
12 **FINANCIAL ANALYSIS**

13 **Q. Have you reviewed historical financial information of VWDE as part of**
14 **your analysis?**

15 A. Yes. On page 1 of Schedule 3, I developed a five-year analysis, ending in
16 2021, detailing various financial ratios for VWDE. On Schedule 4, I
17 performed a similar five-year analysis for the Water Group. Schedule 5
18 reveals the results of operations for a large broad-based group of utilities
19 known as the Standard & Poor's ("S&P") Utilities for the five years ending
20 2021. This information is useful in determining relative risk differences
21 between different types of utilities.

22 Comparing VWDE, the Comparable Group and the S&P Utilities'
23 coverage of fixed charges and the various cash flow coverage proves that

1 the Comparable Group has experienced a higher level of coverage than the
2 S&P Utilities. Reviewing VWDE's various cash flow coverages shows
3 VWDE has had higher levels of coverage than the Comparable Group.
4

5 **Q. What do you conclude from the comparison of all the information**
6 **shown on Schedules 3 through 5?**

7 A. Taken together, these comparisons show that VWDE is exposed to risk that
8 is similar in nature but greater in degree compared with the Comparable
9 Groups. This is evident in particular when one considers the size and
10 diversification of VWDE, or lack thereof, as compared to the Comparable
11 Companies. Moreover, the evidence from the various financial ratios shows
12 VWDE's risks as being similar to the Comparable Companies' but less than
13 the larger S&P Utilities. Prospectively, VWDE's future construction
14 expenditures will place downward pressure on VWDE's financial ratios as
15 measured by interest coverage and cash generation.
16

17 **Q. What information is shown on Schedule 6?**

18 A. Schedule 6 lists the names, issuer credit ratings, common stock rankings,
19 betas and market values of the companies contained in the Comparable
20 Group and the S&P Utilities. As is evident from the information shown on
21 Table 3, the Comparable Group and the S&P Utilities are similar to each
22 other in risk.
23

1

	<u>S&P Issuer Credit Rating</u>	<u>S&P Quality Ranking</u>	<u>Value Line Beta</u>	<u>Recent Market Value (Mill \$)</u>	<u>Market Quartile Name</u>
Water Group	A	High (A)	0.79	3,138.126	Mid-Cap
S&P Utilities	BBB+	Average (B+)	0.88	25,329.726	Large-Cap

2

Table 3

3

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The Water Group's average issuer credit ratings and common stock rankings are higher than the S&P Utilities. The average beta of the Comparable Group, 0.79, is less than the average beta of the S&P Utilities, 0.88. Beta is a measure of volatility or market risk; the higher the beta, the higher the market risk. The market values provide an indication of the relative size of each group. As a generalization, the smaller the average sizes of a group, the greater the risk.

Page 2 of Schedule 6 shows that VWDE has generally experienced the lowest return on equity ("ROE") when compared to the Comparable Companies. Further, VWDE's dividend payout ratio is lower than the Comparable Companies' dividend payout ratio.

S&P, the predominant bond rating agency, considers profit to be a fundamental determinant of credit protection. S&P states that a firm's profit level:

Whether generated by the regulated or deregulated side of the business, profitability is critical for utilities because of the need to fund investment-generating capacity, maintain access to external debt and equity capital, and make acquisitions.

1 Profit potential and stability is a critical determinant of credit
2 protection. A company that generates higher operating
3 margins and returns on capital also has a greater ability to
4 fund growth internally, attract capital externally, and withstand
5 business adversity. Earnings power ultimately attests to the
6 value of the company's assets, as well. In fact, a company's
7 profit performance offers a litmus test of its fundamental
8 health and competitive position.

9
10 Accordingly, the conclusions about profitability should confirm
11 the assessment of business risk, including the degree of
12 advantage provided by the regulatory environment.⁸

13
14 **Q. What information is shown on Schedule 7?**

15 A. Schedule 7 reveals the capital intensity and capital recovery for VWDE, the
16 Comparable Companies and the S&P Utilities. Based upon the 2021 capital
17 intensity ratio of plant to revenues, VWDE (\$7.36) is more capital intensive
18 as compared to the Water Group (\$6.60) and more than the S&P Utilities
19 (\$4.78). From a purely financial point of view, based on current accounting
20 practices, the rate of capital recovery or depreciation rate is an indication of
21 risk because it represents cash flow and the return of an investment.
22 VWDE's average rate of capital recovery is lower than the Comparable
23 Group's, suggesting more risk.

24 The return on equity and depreciation expense provides the margin
25 for coverage of construction expenditures. For a utility company,
26 depreciation expense is the single largest generator of cash flow. From a
27 financial analyst's point of view, cash flow is the life blood of a utility

⁸Standard & Poor's Ratings Services, *Criteria, Utilities: Key Credit Factors: Business And Financial Risks In The Investor-Owned Utilities Industry*, Nov. 26, 2008, pgs. 8-9.

company. Without it, a utility cannot access capital markets, it cannot construct plant, and therefore, it cannot provide service to its customers.

RISK ANALYSIS

Q. Please explain the information shown on Schedule 8.

A. Schedule 8 details the size difference between VWDE and the Comparable Group. Company size is an indicator of business risk and is summarized in Table 4.

<u>Number of Times Larger Than the VWDE</u>	
	<u>Water Group</u>
Capitalization	34.9x
Revenues	34.2x
Number of Customers	24.6x

Table 4

As shown in Table 4, VWDE is much smaller than the Water Group. The size of a company affects risk. A smaller company requires the employment of proportionately less financial leverage (*i.e.*, debt and preferred capital) than a larger company to balance out investment risk. If investment risk is not balanced out, then a higher cost of capital is required.

Q. Why is size significant to your analysis?

A. The size of a company can be likened to ships on the ocean, since a large ship has a much better chance of weathering a storm than a small ship.

1 The loss of a large customer will impact a small company much more than
2 a large company because a large customer of a small company usually
3 accounts for a larger percentage of the small company's sales.

4 Moreover, a larger company is likely to have a more diverse
5 geographic operation than a smaller company, which enables it to sustain
6 earnings fluctuations caused by abnormal weather in one portion of its
7 service territory. A larger company operating in more than one regulatory
8 jurisdiction enjoys "regulatory diversification" which makes it less
9 susceptible to adverse regulatory developments or eminent domain claims
10 in any single jurisdiction. Further, a larger company with a more diverse
11 customer base is less susceptible to downturns associated with regional
12 economic conditions than a small company. For example, on average, the
13 average company in the Water Group provides water/sewer service in
14 multiple states for about 968,000 customers. The average population of the
15 communities served by the average company in the Water Group is about
16 3.5 million people. These wide-ranging operations provide the Water Group
17 substantial geographic, economic, regulatory, weather and customer
18 diversification. VWDE provides regulated water service to about 39,400
19 customers (2021). The concentration of VWDE's business in northeastern
20 Delaware makes it very susceptible to any adverse development in local
21 regulatory, economic, demographic, competitive and weather conditions.

22 Further, S&P, a major credit rating agency, recognizes the
23 importance that diversification and size play in credit ratings. S&P believes

1 some of the critical factors include: regional and cross-border market
2 diversification (mitigates economic, demographic, and political risk
3 concentration); customer diversification; and regulatory regime
4 diversification.⁹

5 The size of a company can be a barrier to fluid access to capital
6 markets (*i.e.*, liquidity risk). Investors require compensation for the lack of
7 marketability and liquidity of their investments. If no compensation is
8 provided, then investors, or at least sophisticated investors, shy away.

9
10 **Q. Is the impact of size commonly recognized?**

11 A. Yes, the National Association of Regulatory Utility Commissioners
12 ("NARUC"), and the majority of acclaimed financial texts, recognize that size
13 affects relative business risk. Liquidity risk and the existence of the small
14 firm effect relating to business risk of small firms are well-documented in
15 financial literature.¹⁰ Investors' expectations reflect the highly-publicized
16 existence of the small firm effect. For example, many mutual funds classify
17 their investment strategy as small capitalization in an attempt to profit from
18 the existence of the small firm effect.

19 As previously discussed, S&P recognizes that size plays a role in
20 credit ratings.

⁹Standard & Poor's, Corporate Ratings Criteria, Utilities: Key Credit Factors: Business and Financial Risks in The Investor-Owned Utilities Industry, Nov. 26, 2008.

¹⁰Banz, Rolf, W. "The Relationship Between Return and Market Value of Common Stocks," *Journal of Financial Economics*, 9:3-18 1981. For subsequent studies see Fama and French, etc.

1 Standard & Poor's has no minimum size criterion for
2 any given rating level. However, size turns out to be
3 significantly correlated to ratings. The reason: size
4 often provides a measure of diversification, and/or
5 affects competitive position. . . . Small companies are,
6 almost by definition, more concentrated in terms of
7 product, number of customers, or geography. In effect,
8 they lack some elements of diversification that can
9 benefit larger companies. To the extent that markets
10 and regional economies change, a broader scope of
11 business affords protection. This consideration is
12 balanced against the performance and prospects of a
13 given business. . . . In addition, lack of financial
14 flexibility is usually an important negative factor in the
15 case of very small companies. Adverse developments
16 that would simply be a setback for companies with
17 greater resources could spell the end for companies
18 with limited access to funds.¹¹

19
20 As shown on Schedule 9, size plays a role in the composition of investors,
21 and hence liquidity. In 2021, about 112% of the Water Group's shares
22 traded while the larger companies comprising the S&P Utilities had a much
23 higher trading volume of 149%. Insiders¹² hold more than eight times more,
24 as a percent to total, of the Water Group's shares than the S&P Utilities.
25 Currently, only about 71% of the Water Group shares are held by
26 institutions¹³ while the larger companies comprising the S&P Utilities had
27 much higher institutional holdings of 80%. Due to small size and less
28 interest by financial institutions, fewer security analysts follow the
29 Comparable Group and none follow VWDE.

¹¹*Standard & Poor's, Corporate Ratings Criteria 2006*; pg. 22.

¹²An insider is a director or an officer who has a policy-making role or a person who is directly or indirectly the beneficial owner of more than 10% of a certain company's stock.

¹³Institutional holders are those investment managers having a fair market value of equity assets under management of \$100 million or more. Certain banks, insurance companies, investment advisers, investment companies, foundations and pension funds are included in this category.

1 The lack of trading activity may affect the cost of equity estimates for
2 small entities such as VWDE and the Water Group. When stock prices do
3 not change because of inactive trading activity, estimates of dividend yield
4 for use in a dividend cash flow model and beta estimates for use in the
5 capital asset pricing model are affected. In a stock market that is generally
6 up, the beta estimates for the Comparable Companies may be understated
7 due to thin trading.

8
9 **Q. Do VWDE and the Comparable Companies have similar operating**
10 **risks?**

11 A. Yes. From an operations standpoint, VWDE and the Comparable
12 Companies have similar risks and are indistinguishable. Both are required
13 to meet Clean Water Act and Safe Drinking Water Act requirements and are
14 also required to provide safe and reliable services to their customers and
15 comply with Commission regulations.

16
17 **Q. Is there any single measure that best shows investment risk from a**
18 **common stockholder's perspective?**

19 A. No. However, from a creditor's viewpoint, the best measure of investment
20 risk is debt rating. The debt rating process generally provides a good
21 measure of investment risk for common stockholders because the factors
22 considered in the debt rating process are usually relevant factors that a
23 common stock investor would consider in assessing the risk of an

investment. Credit rating agencies, such as S&P, assess the risk of an investment into two categories based on: fundamental business analysis; and financial analysis.¹⁴ The business risk analysis includes assessing: Country risk; industry risk; competitive position; and profitability/peer group comparisons. The financial risk analysis includes assessing: accounting; financial governance and policies/risk tolerance; cash flow adequacy; capital structure/asset protection; and liquidity/short-term factors.

Q. What is the bond rating of VWDE and the Comparable Group?

A. Page 1 of Schedule 10 shows the average bond/credit rating Comparable Group. The Comparable Group has an A credit profile and VWDE does not have bonds rated. VUR has an A credit profile. The major bond rating/credit rating agencies append modifiers, such as +, - for S&P and 1, 2, and 3 for Moody's Investors Service ("Moody's") to each generic rating classification. For example, an "A" credit profile is comprised of three subsets such as A+, A, A- for S&P or A1, A2 or A3 for Moody's. The modifier of either "+" or "1" indicates that the obligation ranks in the higher end of its generic rating category; the modifier "2" indicates a mid-range ranking; and the modifier of "-" or "3" indicates a ranking in the lower end of that generic rating category.

S&P and Moody's publish financial benchmark criteria necessary to obtain a bond rating for different types of utilities. As a generalization, the

¹⁴*Standard & Poor's, Corporate Ratings Criteria*, General: Criteria Methodology: Business Risk/Financial Risk Matrix Expanded, May 27, 2009 and *Standard & Poor's, Criteria Corporates General: Corporate Methodology*, November 19, 2013.

1 higher the perceived business risk, the more stringent the financial criteria
2 so the sum of the two, business risk and financial criteria, remains the same.

3

4 **Q. What are some financial benchmarks applied by credit rating agencies**
5 **for rating public utility debt?**

6 A. S&P describes their range of financial benchmarks as

7 Risk-adjusted ratio guidelines depict the role that financial
8 ratios play in Standard & Poor's rating process, since financial
9 ratios are viewed in the context of a firm's business risk. A
10 company with a stronger competitive position, more favorable
11 business prospects, and more predictable cash flows can
12 afford to undertake added financial risk while maintaining the
13 same credit rating. The guidelines displayed in the matrices
14 make explicit the linkage between financial ratios and levels
15 of business risk.¹⁵

16

17 **Q. What other information is shown on Schedule 10?**

18 A. Page 2 of Schedule 10 summarizes the application of S&P's and Moody's
19 measures of financial risk for VWDE and the Comparable Group. S&P's
20 and Moody's measures of financial risk are broader than the traditional
21 measure of financial risk (i.e., leverage). Besides reviewing amounts of
22 leverage employed, S&P and Moody's also focus on earnings protection
23 and cash flow adequacy.

24 As is evident from the information shown on page 2 of Schedule 10,
25 for the five years ending in 2021 and for the year 2021, VWDE's cash flow
26 adequacy ratios were generally higher than the Comparable Companies in
27 most instances. Comparing the VWDE and the Water Group's measures

¹⁵Standard & Poor's Corporate Rating Criteria, 2000.

1 of cash flow adequacy shows that the VWDE has experienced a higher level
2 of cash flow adequacy than Water Group, indicating that VWDE is a lower
3 investment risk than the Water Group. Prospectively, based upon the
4 Company's construction program, the Company's ratios are likely to be
5 strained. Based solely upon VWDE's historical ratios, it is my opinion that
6 VWDE's credit profile is similar but higher to the Comparable Companies.

7 Further, based solely upon VWDE's size, it is my opinion that
8 VWDE's credit profile is similar but lower than the Comparable Groups'.
9 Based on VWDE's smaller size, it is highly likely that VWDE's credit profile
10 is below BBB (i.e., BB), based solely upon size. An analysis of corporate
11 credit ratings, shown on page 4 of Schedule 10, indicates that there is an
12 90% (100%-0%-1%-6%-3%=90%) chance that VWDE's credit profile falls
13 below BBB based on their small size alone.¹⁶ As S&P has stated, size is
14 significantly correlated to credit ratings.

15 An analysis of corporate credit ratings, summarized on page 4 of
16 Schedule 10, found The Berkshire Gas Company ("Berkshire") to be the
17 smallest utility with a credit rating. Berkshire's credit rating is only A- despite
18 having a capitalization comprised of about \$198 million and a common
19 equity ratio of 70%. According to this analysis of corporate credit ratings,
20 the smallest rated water utility is The York Water Company ("York"). York's

16 Additionally, using VWDE's \$147 million capitalization as a midpoint, I found only 13 companies which had capitalization of between \$0 million to \$300 million with a S&P bond or credit rating. Of these 13 companies, only 23% had bonds rated BBB or higher.

1 credit rating is only A- notwithstanding having a capitalization of about \$301
2 million and a common equity ratio of 51%.

3

4 **Q. Have you reviewed the Company's large construction program?**

5 A. Yes, the Company estimates their construction program to total \$108 million
6 from 2023 through 2027. At year end 2021 the Company's total capital
7 outstanding was \$147.6 million indicating the need for a 73% increase
8 (\$108 million ÷ \$147.6 million) in capital through 2027.

9

10 **Q. How does the magnitude of the Company's large construction**
11 **program compare to the Comparable Group's construction program?**

12 A. The Company is forecasted to require 73% of additional capital to finance
13 their construction program while the Comparable Group is projected by
14 Value Line to require 61% of additional capital to finance their construction
15 programs. Accordingly, VWDE's capital requirements are about 20%
16 greater than the Comparable Group's through 2027 indicating more risk for
17 VWDE.

18 In order to compete with the Comparable Group for capital, in the
19 future, it will be necessary for VWDE to achieve higher returns on equity,
20 and increased cash flow just to maintain a similar credit quality.

21 S&P has stated:

22 ... low authorized returns may affect the industry's ability to
23 attract necessary capital to develop new water supplies and
24 upgrade the quality of existing supplies . . . Traditional
25 ratemaking policy has not provided sufficient credit support

1 during the construction cycle of the electric industry over the
2 past 15 years. To avoid a repeat in the water industry,
3 regulators must be aware of the increased challenges the
4 industry faces.¹⁷

5 Investors will not provide the equity capital necessary for increasing the
6 amount of common equity in a capital structure unless the regulatory
7 authority allows an adequate rate of return on the equity.¹⁸

8

9 **Q. What do you conclude from the various measures of investment risk**
10 **information you have testified to?**

11 A. A summary of my conclusions regarding the risk analyses discussed
12 previously is shown in Table 5. Overall, the information summarized in
13 Table 5 indicates that VWDE has similar investment risk as the Water
14 Group.

¹⁷Standard & Poor's CreditWeek, May 25, 1992 (emphasis added).

¹⁸National Association of Regulatory Utility Commissioners, loc. cit.

<u>Summary of Risk Analyses</u>		
	VWDE	Water Group Followed by Analysts
1. Business Risk:		
2. Country Risk	Similar Risk Level	
3. Industry Risk	Similar Risk Level	
4. Competitive Position	Similar Risk Level	
5. Profitability/Peer Group Comparisons	Higher Risk Level	
6. Capitalization Ratios & Financial Risk (Leverage)*	Similar Risk Level	
7. Debt Cost Rate*	Similar Risk Level	
8. Relative Size:		
9. Regulatory Diversification	Higher Risk Level	
10. Economic Diversification	Higher Risk Level	
11. Demographic Diversification	Higher Risk Level	
12. Diversification of Weather Conditions	Higher Risk Level	
13. Customer Concentration of Revenues	Higher Risk Level	
14. Capital Intensity	Higher Risk Level	
15. Capital Recovery	Higher Risk Level	
16. Lower Liquidity:		
17. Institutional Holdings	Higher Risk Level	
18. Insider Holdings	Higher Risk Level	
19. Percentage of Shares Traded	Higher Risk Level	
20. Required To Meet Clean Water Acts and Safe Drinking Water Act	Similar Risk Level	
21. Credit Market Financial Risk Metrics		Higher Risk Level
22. Cash Flow Adequacy		Higher Risk Level
23. Credit Rating / Credit Profile	Similar Risk Level	
* - Based on recommended capital structure for rate making purposes. Comment: The terms "Similar Level " indicates same amount of risk and the terms "Higher Level " indicates greater risk.		

1

Table 5

2

3

CAPITAL COST RATES

4

Q. What information is shown on Schedule 11?

5

A. Schedule 11 reviews long-term and short-term interest rate trends. Long-

6

term and short-term interest rate trends are reviewed to ascertain the “sub-

7

flooring” or “basement” upon which the Comparable Companies’ common

1 equity market capitalization rate is built. Based upon the settled yields
2 implied in the Treasury Bond future contracts and the long-term and recent
3 trends in spreads between long-term government bonds and A-rated public
4 utility bonds available to me at the time Schedule 11 was prepared, I
5 conclude that the market believes that if the Comparable Companies issued
6 new long-term bonds near term, they would be priced to yield about 5.4%
7 based upon a credit profile of "A." Further, it is reasonable to conclude the
8 market anticipates that long-term government bonds will be priced to yield
9 about 3.8%, near term.

10 Since October 2008, the Federal Reserve has been monetizing US
11 Treasury debt to artificially suppress interest rates through expansionary
12 money policies (i.e., quantitative easing). The Federal Reserve, with
13 effectively unlimited money at its disposal, intervenes at any time it wishes,
14 in whatever volume it wishes, to make sure that Treasury bond and bill
15 prices and yields are exactly what the Federal Reserve wants them to be.
16 The US Treasury bond market, and mortgage market, has become an
17 artificial market with no connection to objective risk and interest rates.

18 In August 2011, the Federal Reserve began "Operation Twist."
19 Under "Operation Twist," the Federal Reserve began buying \$400 billion of
20 long-dated or long-term US Treasury debt, financed by selling short-term
21 US Treasury debt with three years to go or less. The goal of "Operation
22 Twist" was to try to drive long-term rates lower, which the Federal Reserve
23 thought would help the mortgage market. This process has created an

1 artificial demand for the US Treasury debt themselves, and easily drives
2 interest rates artificially lower and deceives investors into believing US
3 Treasury debt is safe with wide demand. This has resulted in the entire
4 capital system being impacted by the Federal Reserve's distortion of the
5 price of risk.

6 In the real world of economics, the borrower pays an interest
7 rate to a lender, who makes money (interest) by taking on the
8 risk of lending and deferring gratification. The lender is willing
9 to not spend his money now. In a free market economy,
10 interest rates are essentially a price put on money, and they
11 reflect the time preference of people. Higher interest rates
12 reflect a high demand for borrowing and lower savings. But
13 the higher rates automatically correct this situation by
14 encouraging savings and discouraging borrowing. Lower
15 interest rates will work the opposite way. When the
16 government/central bank tampers with interest rates, savings
17 and lending are distorted, and resources are misallocated.
18 This is evident in looking back on the housing bubble. The
19 artificially low interest rates signaled that there was a high
20 amount of savings. But it was a false signal. There was also
21 a signal for people to borrow more. Again, it was a false signal.
22 As these false signals were revealed, the housing boom
23 turned into a bust.¹⁹
24

25 More recently, in response to COVID-19, the Federal Reserve
26 provided monetary and fiscal stimulus to increase liquidity in the form of new
27 fiscal stimulus programs and rate cuts. "For context, new fiscal stimulus and
28 total fiscal deficits in the US are roughly double the levels seen in 2008-
29 2009, and the US fiscal deficit we project for 2020 of 15%-18% is only
30 matched by deficits seen at the height of WWII in 1942-1943."²⁰ The

¹⁹Pike, Geoffrey "The Threat of Negative Interest Rates," Wealth Daily, May 30, 2014,
<http://www.wealthdaily.com/articles/the-threat-of-negative-interest-rates/5185>, (6/03/2014)

²⁰ <https://www.jpmorgan.com/jpmpdf/1320748588999.pdf>, (5/29/20).

1 combined result of these actions by the Federal Reserve and investors'
2 flight to quality resulted in artificial and historically low risk-free rates as
3 measured by the 30-year treasury bond yield.

4
5 **Q. What are some of the results from the FED's monetary and fiscal**
6 **stimulus?**

7 A. The FED's quantitative easing of expanding its own balance sheet, by
8 buying bonds, and therefore injecting money into the economy, floods the
9 economy with additional cash, keeping interest rates low and impacts equity
10 markets. Additionally, the FED's uninterrupted and aggressive monetary
11 expansion policy necessarily puts pressure on inflation. The FED's
12 monetary and fiscal stimulus, which included artificial and historically low
13 interest rates, have produced some of the highest inflation rates in the last
14 40 years according to CNBC.

15 Inflation rose 9.1% in June, even more than expected, as
16 consumer pressures intensify.

17
18 Shoppers paid sharply higher prices for a variety of goods in
19 June as inflation kept its hold on a slowing U.S. economy, the
20 Bureau of Labor Statistics reported Wednesday.

21
22 The consumer price index, a broad measure of everyday
23 goods and services related to the cost of living, soared 9.1%
24 from a year ago, above the 8.8% Dow Jones estimate. That
25 marked the fastest pace for inflation going back to November
26 1981.²¹
27

²¹ Cox, J. (2022, July 13). Inflation rose 9.1% in June, even more than expected, as consumer pressures intensify. *CNBC*. Retrieved from <https://www.cnbc.com/2022/07/13/inflation-rose-9point1percent-in-june-even-more-than-expected-as-price-pressures-intensify.html>, (7/13/22).

1 In response to the recent level of inflation rates, the Federal Reserve
2 announced its goal of increasing interest rates as high as needed to get
3 inflation back to 2%.

4 Americans are headed for a painful period of slow economic
5 growth and possibly rising joblessness as the Federal
6 Reserve raises interest rates to fight high inflation, U.S.
7 central bank chief Jerome Powell warned on Friday in his
8 bluntest language yet about what is in store for the world's
9 biggest economy.

10
11 In a speech kicking off the Jackson Hole central banking
12 conference in Wyoming, Powell said the Fed will raise rates
13 as high as needed to restrict growth, and would keep them
14 there "for some time" to bring down inflation that is running at
15 more than three times the Fed's 2% goal.

16
17 "Reducing inflation is likely to require a sustained period of
18 below-trend growth," Powell said. "While higher interest rates,
19 slower growth, and softer labor market conditions will bring
20 down inflation, they will also bring some pain to households
21 and businesses. These are the unfortunate costs of reducing
22 inflation. But a failure to restore price stability would mean far
23 greater pain."

24
25 As that pain increases, Powell said, people should not expect
26 the Fed to dial back its monetary policy quickly until the
27 inflation problem is fixed.²²
28

29 Prospectively the capital markets will be affected by the upcoming
30 unprecedented large Treasury financings coupled with increased interest
31 rates. Investors provide capital based upon risk and return opportunities
32 and investors will not provide common equity capital when higher risk-
33 adjusted returns are available.

²² Schneider, H and Saphir, A (2022, August 26). Powell sees pain ahead as Fed sticks to the fast lane to beat inflation. *REUTERS*. Retrieved from <https://www.reuters.com/markets/us/feds-powell-pain-tight-policy-slow-growth-needed-for-some-time-beat-inflation-2022-08-26/>, (8/27/22).

COMMON EQUITY COST RATE ESTIMATE

Q. What is the best method of estimating common equity cost rates?

A. There is no single method (model) suitable for estimating the cost rate for common equity. While a single investor may rely solely upon one model in evaluating investment opportunities, other investors rely on different models. Most sophisticated investors who use an equity valuation model rely on many models in evaluating their common equity investment alternatives. Therefore, the average price of an equity security reflects the results of the application of many equity models used by investors in determining their investment decisions.

The application of any single model to estimate common equity cost rates is not appropriate because the security price for which the equity cost rate is being estimated reflects the application of many models used in the valuation of the investment. That is, the price of any security reflects the collective application of many models. Accordingly, if only one model is used to estimate common equity cost rates, that cost rate will most likely be different from the collective market's cost rates because the collective valuation in the market reflects more than one method.

Noted financial texts, investor organizations and professional societies all endorse the use of more than one valuation method. "We endorse the dividend discount model, particularly when used for establishing companies with consistent earnings power and when used

1 along with other valuation models. It is our view that, in any case, an
2 investor should employ more than one model."²³

3 The American Association of Individual Investors state, "No one area
4 of investment is suitable for all investors and no single method of evaluating
5 investment opportunities has been proven successful all of the time."²⁴

6 In their study guide, the National Society of Rate of Return Analysts
7 state, "No cost of equity model or other concept is recommended or
8 emphasized, nor is any procedure for employing any model recommended
9 . . . it remains important to recognize that alternative methods exist and have
10 merit in cost of capital estimation. To this end, analysts should be
11 knowledgeable of a broad spectrum of cost of capital techniques and
12 issues."²⁵

13 Several different models should be employed to measure accurately
14 the market-required cost of equity reflected in the price of stock. Therefore,
15 I used three recognized methods: the DCF shown on Schedule 12, the
16 CAPM shown on Schedule 17, and the RP shown on Schedule 18.

²³Sidney Cottle, Roger F. Murray and Frank E. Block, Graham and Dodd's Securities Analysis 5th Edition, McGraw-Hill, Inc., 1988, p. 568 (emphasis added).

²⁴Editorial Policy, AAII Journal, American Association of Individual Investors, Volume 18, No. 1, January 1996, p. 1.

²⁵David C. Parcell, The Cost of Capital - A Practitioners Guide, National Society of Rate of Return Analysts, 1995 Edition.

DISCOUNTED CASH FLOW

Q. Please explain the discounted cash flow model.

A. The DCF is based upon the assumption that the price of a share of stock is equal to a future stream of cash flows to which the holder is entitled. The stream of cash flows is discounted at the investor-required cost rate (cost of capital).

Although the traditional DCF assumes a stream of cash flow into perpetuity, a termination, or sale price can be calculated at any point in time. Therefore, the return rate to the stockholder consists of cash flow (earnings or dividends) received and the change in the price of a share of stock. The cost of equity is defined as:

...the minimum rate of return that must be earned on equity finance and investments to keep the value of existing common equity unchanged. This return rate is the rate of return that investors expect to receive on the Company's common stock . . . the dividend yield plus the capital gains yield . . . ²⁶

Q. Please explain how you calculated your dividend yield in the DCF shown on Schedule 12.

A. As shown on page 1 of Schedule 12, I used the average dividend yield of 1.8% for the Water Group. The individual dividend yields are shown on page 2 of Schedule 12 and are based upon the most recent months' yield, February 2023, and the twelve-month average yield, ending February 2023.

²⁶J. Fred Weston and Eugene F. Brigham, Essentials of Managerial Finance, 3rd ed. (The Dryden Press), 1974, p. 504 (emphasis added).

1 The second input to a market DCF calculation is the determination of an
2 appropriate share price growth rate.

3

4 **Q. What sources of growth rates did you review?**

5 A. I reviewed both historical and projected growth rates. Schedule 13 shows
6 the array of projected growth rates for the Comparable Companies that are
7 published. Specific historical growth rates are shown for informational
8 purposes because I believe the meaningful historical growth rates are
9 already considered when analysts arrive at their projected growth rates.
10 Nonetheless, some investors may still rely on historical growth rates.

11

12 **Q. Please explain the sources of the projected growth rates shown on**
13 **Schedule 13.**

14 A. I relied upon four sources for projected growth rates, First Call, S&P, Zacks
15 Investment Research and Value Line.²⁷

16

17 **Q. Did you review any other growth rates besides those shown on**
18 **Schedule 13?**

19 A. Yes. I reviewed EPS growth rates reflecting changes in return rates on book
20 common equity (ROE) over time. I summarized recent ROEs on page 1 of
21 Schedule 14 and compared those to the Water Group's higher levels

²⁷With the exception of Value Line, the earnings growth rate projections are consensus estimates five-year EPS estimates. These consensus estimates are compiled from more than 1,700 financial analysts and brokerage firms nationwide. It should be noted that none of the consensus forecasts provides projected DPS estimates. Value Line publishes projected Cash flow, EPS and DPS five-year growth projections as well.

1 projected to be achieved by Value Line, as shown on page 2 of Schedule
2 14. ROEs increase when EPS grows at much higher/faster rates than book
3 value.

4 I also reviewed industry specific average projected growth rates that
5 are published by Zacks for the industries in which the Comparable
6 Companies operate. According to Zacks, the Water Group's industry is
7 projected to have EPS growth rates that average 9.8% over the next five
8 years.

9
10 **Q. What do you conclude from the growth rates you have reviewed?**

11 **A.** Table 6 summarizes some of the various growth rates reviewed.

<u>Summary of Growth Rates</u>	
	<u>Water Group</u>
Projected 5 Year Growth in EPS	7.0
Actual 5 Year Growth in EPS	5.4
Projected 5 Year Growth in DPS	7.3
Projected 5 Year Growth in EPS for the industry	9.8

12 **Table 6**

13 Academic studies suggest that growth rate conclusions should be tested for
14 reasonableness against long-term interest rate levels. Further, the
15 minimum growth rate must at least exceed expected inflation levels.
16 Otherwise, investors would experience decreases in the purchasing power
17 of their investment. Finally, the combined result of adding the growth rate
18 to the market value dividend yield must provide a sufficient margin over

1 yields of public utility debt.

2

3

4 **Q. What method did you use to arrive at your growth rate conclusion?**

5 A. No single method is necessarily the correct method of estimating share
6 value growth. It is reasonable to assume that investors anticipate that the
7 Water Group's current ROE will expand to higher levels. The published
8 historical earnings growth rates for the Water Group averages 5.4%.
9 Because there is not necessarily any single means of estimating share
10 value growth, I considered all of this information in determining a growth
11 rate conclusion for the Comparable Companies.

12 Moreover, while some rate of return practitioners would advocate
13 that mathematical precision should be followed when selecting a growth
14 rate, the fact is that investors do not behave in the same manner when
15 establishing the market price for a stock. Rather, investors consider both
16 company-specific variables and overall market sentiment such as inflation
17 rates, interest rates and economic conditions when formulating their capital
18 gains expectations. This is especially true when one considers the relatively
19 meaningless negative growth rates. That is, use of a negative growth rate
20 in a DCF implies that investors invest with the expectation of losing money.

21 The range of growth rates previously summarized supports the
22 reasonableness of an expected 7.0% growth rate for the Water Group
23 based primarily on the projected five-year growth rates and considering the

1 Water Group's industry projected EPS growth rates of 9.8%. Like the
2 projected growth rates, this investor-expected growth rate of 7.0% is based
3 on a survey of projected and historical growth rates published by
4 established entities, including First Call, S&P, Zacks Investment Research
5 and Value Line. Use of information from these unbiased professional
6 organizations provides an objective estimation of investor's expectations of
7 growth. Based on the aforesaid, all growth rates for the Comparison
8 Companies have been considered and have been given weight in
9 determining a 7.0% growth rate for the Water Group.

10
11 **Q. What is your market value DCF estimate for the Comparable**
12 **Companies?**

13 A. The market value DCF cost rate estimate for the Water Group is 8.9%, as
14 detailed on page 1 of Schedule 12.

15
16 **Q. Are there other considerations that should be taken into account in**
17 **reviewing a market value capitalization DCF cost rate estimate?**

18 A. Yes. It should be noted that although I recommend specific dividend yields
19 for the Comparable Group, I recommend that less weight be given to the
20 resultant market value DCF cost rate due to the market's current market
21 capitalization ratios and the impact that the market-to-book ratio has on the
22 DCF results. The Comparable Companies' current market-to-book ratios of
23 302% and low dividend yields are being affected by the aforementioned

1 policy of the Federal Reserve that has resulted in the mispricing of capital
2 due to artificial interest rates, not DCF fundamentals.

3 Although the DCF cost for common equity appears to be based upon
4 mathematical precision, the derived result does not reflect the reality of the
5 marketplace since the model proceeds from unconnected assumptions.
6 The traditional DCF derived cost rate for common equity will continuously
7 understate or overstate investors' return requirements as long as stock
8 prices continually sell above or below book value. A traditional DCF model
9 implicitly assumes that stock price will be driven to book value over time.
10 However, such a proposition is not rational when viewed in the context of
11 an investor purchasing stock above book value. It is not rational to assume
12 that an investor would expect share price to decrease 67%
13 ($100\% \div 302\% = 33\% - 100\% = 67\%$) in value to equal book value.

14 Utility stocks do not trade in a vacuum. Utility stock prices, whether
15 they are above or below book value, reflect worldwide market sentiment and
16 are not reflective of only one element.

17
18 **Q. What do you mean by your statement that utility stocks are not traded**
19 **in a vacuum?**

20 A. Utility stocks cannot be viewed solely by themselves. They must be
21 viewed in the context of the market environment. Table 7 summarizes
22 recent market-to-book ratios ("M/B") for well-known measures of market

1 value reported in the March 13, 2023 issue of Barron's and the Water
2 Group's average M/B as shown on page 1 of Schedule 14.

	<u>M/B Ratios(%)</u>
Dow Jones Industrials	429
Dow Jones Transportation	442
Dow Jones Utilities	204
S&P 500	383
S&P Industrials	519
Vs.	
Water Group	302

3 **Table 7**

4 Utility stock investors view their investment decisions compared with other
5 investment alternatives, including those of the various market measures
6 shown in Table 7.

7
8 **Q. How does a traditional DCF implicitly assume that market price will**
9 **equal book value?**

10 A. Under traditional DCF theory, price will equal book value ($M/B=1.00$) only
11 when a company is earning its cost of capital. Traditional DCF theory
12 maintains that a company is under-earning its cost of capital when the
13 market price is below book value ($M/B<1.00$), while a company over-earning
14 its cost of capital will have a market price above its book value ($M/B>1.00$).
15 If this were true, it would imply that the capitalistic free-market is not efficient
16 because the overwhelming majority of stocks would currently be earning

1 more than their cost of capital. Table 7 shows that most stocks sell at an
2 M/B that is greater than 1.0.

3

4 **Q. Please explain why such a phenomenon would show that the**
5 **capitalistic free-market is not efficient.**

6 A. Historically, the S&P 500, which represented the largest 500 companies
7 listed on exchanges in the United States, have not sold at an M/B of 1.0
8 during the last 24-years, 1999-2022. Based upon the traditional DCF
9 assumption, which suggests that companies with M/Bs greater than 1.0
10 earn more than their cost of capital, this data would suggest that the S&P
11 500 companies have earned more than their cost of capital while competing
12 in a competitive environment over the 24-year period. In a competitive
13 market, new companies would continually enter the market up to the point
14 that the earnings rate was at least equal to their cost of capital.

15 During this period the S&P 500 sold at an average M/B of 306% while
16 experiencing a ROE of 18.0% over a period in which interest rates averaged
17 3.9%. It is important to note that during this period the S&P 500 M/B ranged
18 from 192% to 490%, all while competing in competitive markets.

19

20 **Q. What is the significance of S&P 500 m/b and the cost of capital for a**
21 **water utility?**

22 A. As stated previously, utility stocks do not trade in a vacuum. They must
23 compete for capital with other firms including the S&P 500 stocks. Over

1 time, there has been a relationship between M/Bs of S&P 500 stocks and
2 utility stocks. Although S&P 500 stocks have generally sold at a higher
3 multiple of book value than utility stocks, both have tracked in similar
4 directions. Because utility and S&P 500 stock prices relative to book values
5 move in similar directions, it is irrational to conclude that stock prices that
6 are different from book value, either higher or lower, suggests that a firm is
7 over-or under-earning its cost of capital when competitive, free-markets
8 exist.

9
10 **Q. Does the market value DCF provide a reasonable estimate of the Water**
11 **Group's common equity cost rate?**

12 A. No, the DCF only provides a reasonable estimate of the Comparable
13 Group's common equity cost rate when their market price and book value
14 are similar (M/B=100%).²⁸ A DCF will overstate a common equity cost rate
15 when M/Bs are below 100% and understate when they are above 100%.
16 Since the Comparable Group's current M/Bs average 302%, the DCF
17 understates their common equity cost rate. Schedule 15 provides a
18 numerical illustration of the impact of M/Bs on investors' market returns and
19 DCF returns. The reason that DCF understates or overstates investors'
20 return requirements depending upon M/B levels is because a DCF-derived
21 equity cost rate is applied to a book value rate base while investors' returns
22 are measured relative to stock price levels. Based upon this, I recommend

²⁸Roger A Morin, Regulatory Finance - Utilities' Cost of Capital, Public Utility Reports, Inc., 1994, pp. 236-237.

that less weight be given to the market value DCF cost rate unless the increased financial risk, resulting from applying a market value cost rate to a book value, is accounted for.

Q. How do you resolve the financial risk difference between market value cost rates and book value cost rates?

A. The basic proposition of financial theory regarding the economic value of a company is based on market value. That is, a company's value is based on its **market value** weighted average cost of capital.²⁹ The American Society of Appraisers, ASA Business Valuation Standards, 2009, and the National Association of Certified Valuation Analysts, Professional Standards, 2007, use the same definition:

Weighted Average Cost of Capital (WACC). The cost of capital (discount rate) determined by the weighted average, **at market values**, of the cost of all financing sources in the business enterprise's capital structure. (Emphasis added)

Accordingly, the market value derived cost rate reflects the financial risk or leverage associated with **capitalization ratios based on market value**, not book value.

As shown on page 1 of Schedule 16, for the Water Group there is a large difference in leverage as a result of the average \$4.400 **billion** difference in market value common equity and book value common equity.

²⁹For other examples, see <http://www.investinganswers.com/financial-dictionary/financial-statement-analysis/weighted-average-cost-capital-wacc-2905>. Also see <http://www.wallstreetmojo.com/weighted-average-cost-capital-wacc/>, or <http://accountingexplained.com/misc/corporate-finance/wacc>.

1 This difference in market values and book values results in debt/equity
2 ratios based on market value of 26.2%/73.8% (debt/equity) verses
3 49.8%/50.2% (debt/equity) based on book value as shown on page 1 of
4 Schedule 16. The larger the difference between market values and book
5 values the less reliable the models' results are because **the models**
6 **provide an estimate of the cost of capital of market value**, not book
7 value.

8 Financial theory concludes that capital structure and firm value are
9 related. Since capital structure and firm value are related, an adjustment is
10 required when a cost of common equity model is based on market value
11 and if its results are then applied to book value. As explained previously,
12 the market value derived cost rate reflects the financial risk or leverage
13 associated with **capitalization ratios based on market value**, not book
14 value. The authors Brealey, Myers and Allen provide a similar definition of
15 the cost of capital being based on market capitalization, not book value,

16 The values of debt and equity add up to overall firm value (D
17 $+ E = V$) and firm value V equals asset value. **These figures**
18 **are all market values, not book (accounting) values.** The
19 market value of equity is often much larger than the book
20 value, so the market debt ratio D/V is often much lower than
21 a debt ratio computed from the book balance sheet.³⁰
22

23 The work of Modigliani and Miller concludes that the market value of
24 any firm is independent of its capital structure and this is precisely the
25 reason why an adjustment is appropriate. The only way for the market value

³⁰Brealey, Myers and Allen, Principles of Corporate Finance, 10th edition, page 216 (emphasis added).

1 of a firm to remain independent of its capital structure is if the capital cost
2 rates change to offset changes in the capital structure. If the capital cost
3 rates do not change to offset changes in the capital structure, then the value
4 of the firm will change. Clearly an adjustment is required when a cost of
5 common equity model is based on **market value** and if its results are then
6 applied to **book value** because the capital structure is changed from
7 **market value** capitalization to **book value** capitalization.

8 Differences in the amount of leverage employed can be quantified
9 based upon the Comparable Group's leveraged beta being "unleveraged"
10 through the application of the a "Hamada Model."

11 The Hamada equation is a fundamental analysis method of
12 analyzing a firm's cost of capital as it uses additional financial
13 leverage, and how that relates to the overall riskiness of the
14 firm. The measure is used to summarize the effects this type
15 of leverage has on a firm's cost of capital—over and above
16 the cost of capital as if the firm had no debt.³¹

17 The Hamada Model combines two financial theorems: the Modigliani-Miller
18 Theorem and the CAPM.³² On page 2 of Schedule 16 I used two Hamada
19 Models including the original Hamada formula and the Harris-Pringle
20 formula to account for the 23.7 percentage point change in common equity
21 ratio that results from changing from market value capitalization to book
22 value capitalization. The results of the application of the original Hamada
23 formula and the Harris-Pringle formula determine a range of adjustment of

31 Hargrave, Marshall. "Hamada Equation Definition, Formula, Example," *Investopedia*. Accessed 3/14/23. <https://www.investopedia.com/terms/h/hamadaequation.asp>.

32 "Hamada's Equation," Corporate Finance Institute. Accessed 3/14/23. <https://corporatefinanceinstitute.com/resources/valuation/hamadas-equation/>.

1 0.75% to 1.20%, and average 0.98%. The details of the application of the
2 two Hamada models are shown on page 2 of Schedule 16.

3 For example, the inputs to the original Hamada formula for the Water
4 Group market value capitalization consist of their raw leveraged beta of
5 0.66, debt ratio of 26.2%, preferred stock ratio of 0.0%, common equity ratio
6 of 73.8% and combined tax rate of 27.87%. The group's unleveraged beta
7 is determined to be 0.53 through the use of the following original Hamada
8 formula:

9
$$BI = Bu (1 + (1 - t) D/E + P/E)$$

10 where:

11 BI = observed, leveraged beta
12 Bu = calculated, unleveraged beta
13 t = income tax rate
14 D = debt ratio
15 P = preferred stock ratio
16 E = common equity ratio

17 Applying the unleveraged beta of 0.53 along with the Water Group's book
18 value capitalization ratios of 49.8% long-term debt, 0.1% preferred stock
19 and 50.1% common equity and combined tax rate of 27.87% results in a
20 leveraged beta of 0.90 applicable to the group's book value capitalization.
21 Based upon the Water Group's risk premium of 5.0% and the difference
22 between Water Group's market value leveraged beta, their book value
23 leveraged beta of 0.24 (0.90 - 0.66) indicates that the Water Group's
24 common equity cost rate must be increased by 1.20 (0.24 x 5.0 = 1.20) in
25 recognition of their book value's exposure to more financial risk.

1 The inputs to the Harris-Pringle formula for the Water Group market
2 value capitalization consist of their raw leveraged beta of 0.66, debt ratio of
3 26.2%, preferred stock ratio of 0.0%, common equity ratio of 73.8% and
4 debt beta of 0.34. The group's unleveraged beta is determined to be 0.58
5 through the use of the following Harris-Pringle formula:

$$6 \qquad \qquad \qquad BI = Bu + (Bu - Bd)(D/E)$$

7 where:

8 BI = observed, leveraged beta

9 Bu = calculated, unleveraged beta

10 Bd = debt beta

11 D = debt ratio

12 P = preferred stock ratio

13 E = common equity ratio

14 Applying the unleveraged beta of 0.58 along with the Water Group's book
15 value capitalization ratios of 49.8% long-term debt, 0.1% preferred stock
16 and 50.1% common equity and debt beta of 0.34 results in a leveraged beta
17 of 0.81 applicable to the group's book value capitalization. Based upon the
18 Water Group's risk premium of 5.0% and the difference between Water
19 Group's market value leveraged beta, their book value leveraged beta of
20 0.15 (0.81 - 0.66) indicates that the Water Group's common equity cost rate
21 must be increased by 0.75 (0.15 x 5.0 = 0.75) in recognition of their book
22 value's exposure to more financial risk.

1 **Q. Is there another way to reflect the financial risk difference that exists**
2 **as a result of market capitalization ratios being significantly different**
3 **from book value capitalization ratios?**

4 A. Yes, generally speaking. Although it is possible to know the direction of a
5 financial risk adjustment on common equity cost rate, a specific
6 quantification of financial risk differences is very difficult. Although the end
7 result of a financial risk adjustment is very subjective and specific
8 quantification very difficult, the direction of the adjustment is clearly known.
9 However, hypothetically if the Comparable Group's debt were rated based
10 on market value debt ratios they would command an Aaa rating. The
11 Comparison Group currently has bonds rated A based upon their book
12 value debt ratios. The yield spread on a bond rated Aaa versus A rated
13 bonds averages about 65 basis points or 0.65% as shown on page 3 of
14 Schedule 16.

15 The end result of the application of the Hamada Model and the bond
16 yield spread indicates that the Water Group market value common equity
17 cost rate equity cost rate should be adjusted upward by at least 0.80%
18 (0.98% hamada est. + 0.65% yield spread = 1.63% ÷ 2 = 0.8%) since it is
19 going to be applied to a book value.

20 Accounting for the increased amount of leverage between market
21 value derived DCF cost rates and book value cost rates indicates a book
22 value DCF cost rate of 9.70% for the Water Group (8.9% + 0.8% = 9.70%).

CAPITAL ASSET PRICING MODEL

Q. Please briefly describe the theory of the capital asset pricing model.

A. The CAPM is based upon the assumption that investors hold diversified portfolios and that the market only recognizes or rewards non-diversifiable (or systematic) risk when determining the price of a security because company-specific risk (or non-systematic) is removed through diversification. Further, investors are assumed to require additional or higher returns for assuming additional or higher risk. This assumption is captured by using a beta that provides an incremental cost of additional risk above the base risk-free rate available to investors. The beta of a security reflects the market risk or systematic risk of the security relative to the market. The beta for the market is always equal to 1.00; therefore, a company whose stock has a beta greater than 1.00 is considered riskier than the market, and a company with a beta less than 1.00 is considered less risky than the market. The base risk-free rate is assumed to be a U.S. Government treasury security because they are assumed to be free of default risk.

Q. What risk-free rate and beta have you used in your CAPM calculation?

A. The risk-free rate used in CAPM should have approximately the same maturity as the life of the asset for which the cost rate is being determined. Because utility assets are long-lived, a long-term Treasury Bond yield serves as an appropriate proxy. Previously, I estimated an appropriate risk-

1 free rate of 3.8% based upon the recent and forward long-term Treasury
2 yields. I used the average beta of 0.79 for the Water Group as shown on
3 page 1 of Schedule 17. However, as stated previously, the Comparable
4 Group's betas are understated due to their small size which affects their
5 stock price changes.

6
7 **Q. After developing an appropriate beta and risk-free rate, what else is**
8 **necessary to calculate a CAPM derived cost rate?**

9 A. A market premium is necessary to determine a traditional CAPM derived
10 cost rate. The market return rate is the return expected for the entire
11 market. The market premium is then multiplied by the company specific
12 beta to capture the incremental cost of additional risk (market premium)
13 above the base risk-free rate (long-term treasury securities) to develop a
14 risk adjusted market premium. For example, if you conclude that the
15 expected return on the market as a whole is 15% and further assume that
16 the risk-free rate is 8%, then the market premium is shown to be 7% ($15\% - 8\% = 7\%$).
17

18 Further, assume there are two companies, one of which is
19 considered less risky than the market, and therefore has a beta of less than
20 1.00 or 0.80. The second company has a beta that is greater than 1.00 or
21 1.20, and is therefore considered riskier than the market. By multiplying the
22 hypothetical 7.0% market premium by the respective betas of 0.80 and 1.20,
23 risk adjusted market premiums of 5.6% ($7.0\% \times 0.80$) and 8.4% ($7.0\% \times$

1.20) are shown for the company considered less risky than the market and for the company considered riskier than the market, respectively.

Adding the assumed risk-free rate of 8% to the risk adjusted market premiums results in the CAPM derived cost rates of 13.6% (5.6% + 8.0%) for the less risky company and 16.4% (8.4% + 8.0%) for the company considered of greater risk than the market. In fact, the result of this hypothetical CAPM calculation shows that: (1) the least risky company, with the beta of 0.80, has a cost rate of 13.6%; (2) the market, with the beta of 1.00, has a cost rate of 15.0%; and (3) that the higher risk company, with a beta of 1.20, has a cost rate of 16.4%.

Q. How did you develop a market premium for your CAPM?

A. The average projected market premium of 11.1% is developed on page 2 of Schedule 17. It is based upon Value Line's average projected total market return for the next three to five years of 14.9% less the risk free rate of 3.8%. I also reviewed market premiums derived from Ibbotson Associates' most recent publication concerning asset returns that show a market premium of 7.5%. The Ibbotson Associates' market premium may be on the low side reflective of the higher interest rate environment found during their study (*i.e.*, 5.0%). The Value Line market premium reflects the Federal Reserve's current artificial interest rate levels while the Ibbotson Associates' market premiums reflect a higher interest rate environment.

1 **Q. How did you adjust for the impact that size has on the Comparable**
2 **Group's beta?**

3 A. The adjustment is reflected in the CAPM size premium. The CAPM size
4 premium is developed on page 4 of Schedule 17. The size premium reflects
5 the risks associated with the Comparable Group's small size and its impact
6 on the determination of their beta. This adjustment is necessary because
7 beta (systematic risk) does not capture or reflect the Comparable Group's
8 small size. I reduced the size premium by the ratio of the Comparison
9 Group's beta to their respective market quartile's beta.

10

11 **Q. What is the comparison group's market cost of equity based upon**
12 **your CAPM calculation?**

13 A. The CAPM based on Ibbotson Associates' historical market returns shows
14 a market cost rate of 11.5% for the Water Group. The CAPM based on
15 Value Line's projected market returns shows a 14.4% for the Water Group,
16 as shown on page 1 of Schedule 17. The Comparable Group's market
17 value CAPM of 11.5% is based 100% on the results of the historical market
18 returns and 0% on the projected market returns. Adjusting the market value
19 CAPM based upon the end result of the application of the Hamada Model
20 and the bond yield spread to account for the difference in leverage between
21 market value capitalization ratios and book value ratios discussed
22 previously indicates a cost rate of 12.3% for the Water Group applicable to
23 book value ($11.5\% + 0.8\% = 12.3\%$).

RISK PREMIUM

Q. What is a risk premium?

A. A risk premium is the common equity investors' required premium over the long-term debt cost rate for the same company, in recognition of the added risk to which the common stockholder is exposed versus long-term debtholders. Long-term debtholders have a stated contract concerning the receipt of dividend and principal repayment whereas common stock investors do not. Further, long-term debtholders have the first claim on assets in case of bankruptcy. A risk premium recognizes the higher risk to which a common stock investor is exposed. The risk premium-derived cost rate for common equity is the simplest form of deriving the cost rate for common equity because it is nothing more than a premium above the prospective level of long-term corporate debt.

Q. What is the appropriate estimated future long-term borrowing rate for the Comparable Companies?

A. The estimated near term long-term borrowing rate for the Comparable Companies is 5.4% based upon their credit profile that supports an A bond rating.

1 **Q. What is the appropriate risk premium to be added to the future long-**
2 **term borrowing rate?**

3 A. To determine a common equity cost rate, it is necessary to estimate a risk
4 premium to be added to the Comparable Group's prospective long-term
5 debt rate. Investors may rely upon published projected premiums; they also
6 rely upon their experiences of investing in ultimately determining a
7 probabilistic forecasted risk premium.

8 Projections of total market returns are shown on page 9 of Schedule
9 18. A projected risk premium for the market can be derived by subtracting
10 the debt cost rate from the projected market return as shown on page 9 of
11 Schedule 18. However, the derived risk premium for the market is not
12 directly applicable to the Comparable Companies because they are less
13 risky than the market. The use of 90% of the market's risk is a conservative
14 estimation of their level of risk as compared to the market.

15 The midpoint of the risk premium range is 9.1% and the average for
16 the most recent quarter is 8.7% as shown on page 9 of Schedule 18. Based
17 on this, a reasonable estimate of a longer term projected risk premium is
18 8.7%.

19

20 **Q. How do investors' experiences affect their determination of a risk**
21 **premium?**

22 A. Returns on various assets are studied to determine a probabilistic risk
23 premium. The most noted asset return studies and resultant risk premium

1 studies are those performed by Ibbotson Associates. However, Ibbotson
2 Associates has not performed asset return studies concerning public utility
3 common stocks. Based upon Ibbotson Associates' methodology of
4 computing asset returns, I calculated annual returns for the S&P utilities and
5 bonds for the period 1928-2021. The resultant annual returns were then
6 compared to determine a recent risk premium from a recent 20-year period,
7 2002-2021 and subsequent periods that were each increased by ten years
8 until the entire study period was reviewed (pages 2 and 3 of Schedule 18).

9 A long-term analysis of rates of return is necessary because it
10 assumes that investors' expectations are, on average, equal to realized
11 long-run rates of return and resultant risk premium. Observing a single
12 year's risk premium, either high or low, may not be consistent with investors'
13 requirements. Further, studies show a mean reversion in risk premiums. In
14 other words, over time, risk premiums revert to a longer-term average
15 premium. Moreover, since the expected rate of return is defined as "the
16 rate of return expected to be realized from an investment; the mean value
17 of the probability distribution of possible results,"³³ a long-term analysis of
18 annual returns is appropriate.

³³Eugene F. Brigham, Fundamentals of Financial Management, Fifth Edition, The Dryden Press, 1989, p. 106.

1 **Q. What do you conclude from the information shown on pages 2 and 3**
2 **of Schedule 18?**

3 A. The average of the absolute range of the S&P Utilities' appropriate average
4 risk premium (i.e., bonds rated AAA to A) was 3.8% during the seven
5 periods studied, as calculated from page 2 of Schedule 18. The credit
6 adjusted longer term risk premiums (i.e., bonds rated A), 1928-2021,
7 averages 4.3%. The appropriate average (i.e., bonds rated AAA to A)
8 longer term risk premiums, 1928-2021, have an absolute range of 4.3% to
9 5.2%, and averages 4.6%.

10 The aforementioned premiums are based on total returns for bonds;
11 and reflect their price risk. A bond's price risk is not related to its credit
12 quality and is eliminated when a bond is held to maturity from time of
13 purchase. Using the income returns, page 4 of Schedule 18, for bonds
14 eliminates price risk and better measures an investor's required return
15 based on credit quality. The appropriate average risk premium (i.e., bonds
16 rated AAA to A) based on income returns was 5.5% during the seven
17 periods studied. The credit adjusted longer term risk premiums (i.e., bonds
18 rated A), 1928-2021, averages 4.9%. The appropriate average (i.e., bonds
19 rated AAA to A) longer term risk premiums, 1928-2021, have an absolute
20 range of 4.9% to 5.3%, and averages 5.1%.

1 **Q. What information is shown on page 4 of Schedule 18?**

2 A. Page 4 of Schedule 18 proves and measures the negative relationship
3 between interest rate levels and the resulting risk premium. That is, risk
4 premiums are generally higher when interest rates are low and risk
5 premiums are generally lower when interest rates are high. This was
6 proven by sorting the 94-year period, 1928 to 2021, annual returns based
7 on interest rate level from lowest interest rate to highest interest rate and
8 distributing the results into two equal groups, a 47-year low interest rate
9 environment group and a 47-year high interest rate environment group.

10 During the period 1928-2021, the 47 years with the lowest interest
11 rates had an average interest rate of 2.9% and reflected a range of interest
12 rates from 1.4% to 4.1%. This period resembles the current interest rate
13 environment of 3.8% discussed previously regarding the CAPM's risk free
14 rate. The risk premium based on total returns during this low interest rate
15 environment produced the appropriate average (i.e., bonds rated AAA to A)
16 longer term risk premium of 6.4% and a credit adjusted longer term risk
17 premium (i.e., bonds rated A) of 5.6%. The annual income return based
18 risk premium during this low interest rate environment produced the
19 appropriate average (i.e., bonds rated AAA to A) longer term risk premium
20 of 7.5% and a credit adjusted longer term risk premium (i.e., bonds rated A)
21 of 7.2%.

22 However, during the period 1928-2021, the 47 years with the highest
23 interest rates had an average interest rate of 7.2% and reflected a range of

1 interest rates from 4.1% to 13.5%. This period is far different from the
2 current interest rate environment of 3.8%. The risk premium based on total
3 returns during the highest interest rate environment produced an average
4 longer term risk premium of 3.0% over bonds rated AAA to A and a credit
5 adjusted longer term risk premium (i.e., bonds rated A) of only 2.9%. The
6 annual income return based risk premium during the highest interest rate
7 environment produced an average longer term risk premium of 2.8% over
8 bonds rated AAA to A and a credit adjusted longer term risk premium (i.e.,
9 bonds rated A) of only 2.7%.

10 Over time, risk premiums are mean reverting. They constantly move
11 toward a long-term average reflecting a long-term level of interest rates.
12 That is, an above-average risk premium will decrease toward a long-term
13 average while a below-average risk premium will increase toward a long-
14 term average. In any single year, of course, investor-required rates of return
15 may not be realized and in certain instances, a single year's risk premiums
16 may be negative. Negative risk premiums are not indicative of investors'
17 expectations and violate the basic premise of finance concerning risk and
18 return. Negative risk premiums usually occur only in the stock market's
19 down years (i.e., the years in which the stock markets' return was negative).

20 When interest rate levels are not considered the credit adjusted
21 longer term risk premium (i.e., bonds rated A), 1928-2021, averages 4.6%,
22 discussed previously regarding pages 2 and 3 of Schedule 18. However,
23 the annual income return based risk premium during the low interest rate

1 environment produced a credit adjusted longer term risk premium (i.e.,
2 bonds rated A) of 7.2%. Since this period's interest rate environment
3 resembles the current interest rate environment of 3.8%, a reasonable
4 estimate of investors risk premium based on historical returns is based on
5 a 50% weighting on the results of the entire 1928-2021 historical market
6 returns and a 50% weighting on the results of the low interest rate
7 environment to produce a 5.5% historical risk premium. However, I
8 recognize that the current interest rate environment of 3.8% is close to the
9 upper end of the low interest rate environment, which ranged from 1.4% to
10 4.1%, and have lowered my estimate of the risk premium to 5.0%.

11 Adding the risk premium of 5.0% for the Comparable Group to the
12 prospective cost of newly-issued long-term debt of 5.4% results in a market
13 value risk premium derived cost rate for common equity of 10.4% as
14 reflected on page 1 of Schedule 18. Adjusting the market value risk
15 premium based upon the end result of the application of the Hamada Model
16 and the bond yield spread to account for the difference in leverage between
17 market value capitalization and book value ratios discussed previously
18 indicates a cost rate of 11.2% applicable to book value ($10.4\% + 0.8\% =$
19 11.2%).

SUMMARY OF COMMON EQUITY COST RATE

Q. What is your Comparable Group's common equity cost rate?

A. Based upon the results of the models employed, the Water Group's common equity cost rate is in the range of 9.7% to 12.3% as reflected on Schedule 19. Based upon this data, the common equity cost rate for the Water Group is at least 11.00%. My recommendation is based upon the Water Group's 11.00% common equity cost rate.

Q. Do you recommend a cost of common equity of 11.00% for VWDE?

A. Yes. Based upon the financial analysis and risk analysis, I conclude that VWDE is exposed to overall similar investment risk as the Comparable Group. This is evidenced by the factors summarized in Table 5 discussed previously.

The results of the three models employed for the Water Group show a current range of common equity cost applicable to book value of VWDE of 9.70% (DCF), 12.30% (CAPM), and 11.20% (RP) as shown in Table 8.

Summary of the VWDE's Equity Cost Rates	
DCF	9.70
CAPM	12.30
RP	11.20

Table 8

Q. What is your common equity cost rate recommendation for VWDE?

A. As discussed above and as shown in Schedule 19, I recommend a 11.00% common equity cost rate for VWDE.

1 **Q. Have you checked the reasonableness of your recommended**
2 **common equity rate for VWDE?**

3 A. Yes. Page 2 of Schedule 14 reflects the average projected earned return
4 on average book common equity for the companies in the Comparable
5 Group for the period 2025-2027, which is shown to average 10.7% and
6 range from 8.1% to 13.8%. Given the large degree to which regulatory lag
7 and attrition impacts water utilities earning, the range of the comparable
8 utilities' projected earned returns suggests that my recommendation that
9 VWDE be permitted an opportunity to earn 11.00% is reasonable, if not
10 conservative.

11

12 **OVERALL RATE OF RETURN RECOMMENDATION**

13 **Q. What is your overall fair rate of return recommendation for the VWDE?**

14 A. Based upon the recommended capital structure and my estimate of the
15 VWDE's common equity cost rate, I recommend an overall fair rate of return
16 of 7.86%.³⁴ The details of my recommendation are shown on Schedule 1.

17 **Q. HAVE YOU TESTED THE REASONABLENESS OF YOUR OVERALL**
18 **FAIR RATE OF RETURN RECOMMENDATION?**

19 A. Yes. If my recommended overall rate of return is actually earned, it will give
20 VWDE ratios that will allow VWDE to present a financial profile that will

34 It should be noted that my current analysis contained in Exhibit HW-1 supports a cost of common equity of 11.0% for the Company. The Company's filing includes an overall rate of return of 7.59% and a 10.50% of common equity for filing purposes to minimize the requested revenue increase.

1 enable it to attract capital necessary to provide safe and reliable water
2 service, at reasonable terms.

3

4 **Q. Does that conclude your direct testimony?**

5 **A. Yes, it does.**

APPENDIX A

Professional Qualifications
of
Harold Walker, III
Manager, Financial Studies
Gannett Fleming Valuation and Rate Consultants, LLC.

EDUCATION

Mr. Walker graduated from Pennsylvania State University in 1984 with a Bachelor of Science Degree in Finance. His studies concentrated on securities analysis and portfolio management with an emphasis on economics and quantitative business analysis. He has also completed the regulation and the rate-making process courses presented by the College of Business Administration and Economics Center for Public Utilities at New Mexico State University. Additionally, he has attended programs presented by The Institute of Chartered Financial Analysts (CFA).

Mr. Walker was awarded the professional designation "Certified Rate of Return Analyst" (CRRRA) by the Society of Utility and Regulatory Financial Analysts. This designation is based upon education, experience and the successful completion of a comprehensive examination. He is also a member of the Society of Utility and Regulatory Financial Analysts (SURFA) and has attended numerous financial forums sponsored by the Society. The SURFA forums are recognized by the Association for Investment Management and Research (AIMR) and the National Association of State Boards of Accountancy for continuing education credits.

Mr. Walker is also a licensed Municipal Advisor Representative (Series 50) by Municipal Securities Rulemaking Board (MSRB) and Financial Industry Regulatory Authority (FINRA).

BUSINESS EXPERIENCE

Prior to joining Gannett Fleming Valuation and Rate Consultants, LLC., Mr. Walker was employed by AUS Consultants - Utility Services. He held various positions during his eleven years with AUS, concluding his employment there as a Vice President. His duties included providing and supervising financial and economic studies on behalf of investor owned and municipally owned water, wastewater, electric, natural gas distribution and transmission, oil pipeline and telephone utilities as well as resource recovery companies.

In 1996, Mr. Walker joined Gannett Fleming Valuation and Rate Consultants, LLC. In his capacity as Manager, Financial Studies and for the past twenty years, he has continuously studied rates of return requirements for regulated firms. In this regard, he supervised the preparation of rate of return studies in connection with his testimony and in the past, for other individuals. He also assisted and/or developed dividend policy studies, nuclear prudence studies, calculated fixed charge rates for avoided costs involving cogeneration projects, financial decision studies for capital budgeting purposes and developed financial models for determining future capital requirements and the effect of those requirements on investors and ratepayers, valued utility property and common stock for acquisition and divestiture, and assisted in the private placement of fixed capital securities for public utilities.

Head, Gannett Fleming GASB 34 Task Force responsible for developing Governmental Accounting Standards Board (GASB) 34 services, and educating Gannett Fleming personnel and Gannett Fleming clients on GASB 34 and how it may affect them. The GASB 34 related services include inventory of assets, valuation of assets, salvage estimation, annual depreciation rate determination, estimation of depreciation reserve, asset service life determination, asset condition assessment, condition assessment documentation, maintenance estimate for asset preservation, establishment of condition level index, geographic information system (GIS) and data management services, management discussion and analysis (MD&A) reporting, required supplemental information (RSI) reporting, auditor interface, and GASB 34 compliance review.

Mr. Walker was also the Publisher of C.A. Turner Utility Reports from 1988 to 1996. C.A. Turner Utility Reports is a financial publication which provides financial data and related ratios and forecasts covering the utility industry. From 1993 to 1994, he became a contributing author for the Fortnightly, a utility trade journal. His column was the Financial News column and focused mainly on the natural gas industry.

In 2004, Mr. Walker was elected to serve on the Board of Directors of SURFA. Previously, he served as an ex-officio directors as an advisor to SURFA's existing President. In 2000, Mr. Walker was elected President of SURFA for the 2001-2002 term. Prior to that, he was elected to serve on the Board of Directors of SURFA during the period 1997-1998 and 1999-2000. Currently, he also serves on the Pennsylvania Municipal Authorities Association, Electric Deregulation Committee.

EXPERT TESTIMONY

Mr. Walker has submitted testimony or been deposed on various topics before regulatory commissions and courts in 26 states including: Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Idaho, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, Nevada, New Jersey, New York, North Carolina, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, and West Virginia. His testimonies covered various subjects including: fair rate of return, fair market value, the taking of natural resources, benchmarking, appropriate

capital structure and fixed capital cost rates, depreciation, purchased water adjustments, synchronization of interest charges for income tax purposes, valuation, cash working capital, lead-lag studies, financial analyses of investment alternatives, and fair value. The following tabulation provides a listing of the electric power, natural gas distribution, telephone, wastewater, and water service utility cases in which he has been involved as a witness.

<u>Client</u>	<u>Docket No.</u>
Alpena Power Company	U-10020
Armstrong Telephone Company - Northern Division	92-0884-T-42T
Armstrong Telephone Company - Northern Division	95-0571-T-42T
Artesian Water Company, Inc.	90 10
Artesian Water Company, Inc.	06 158
Aqua Illinois Consolidated Water Divisions and Consolidated Sewer Divisions	11-0436
Aqua Illinois Hawthorn Woods Wastewater Division	07 0620/07 0621/08 0067
Aqua Illinois Hawthorn Woods Water Division	07 0620/07 0621/08 0067
Aqua Illinois Kankakee Water Division	10-0194
Aqua Illinois Kankakee Water Division	14-0419
Aqua Illinois Vermilion Division	07 0620/07 0621/08 0067
Aqua Illinois Willowbrook Wastewater Division	07 0620/07 0621/08 0067
Aqua Illinois Willowbrook Water Division	07 0620/07 0621/08 0067
Aqua Pennsylvania, Inc	A-2022-3034143
Aqua Pennsylvania Wastewater Inc	A-2016-2580061
Aqua Pennsylvania Wastewater Inc	A-2017-2605434
Aqua Pennsylvania Wastewater Inc	A-2018-3001582
Aqua Pennsylvania Wastewater Inc	A-2019-3008491
Aqua Pennsylvania Wastewater Inc	A-2019-3009052
Aqua Pennsylvania Wastewater Inc	A-2019-3015173
Aqua Pennsylvania Wastewater Inc	A-2021-3024267
Aqua Pennsylvania Wastewater Inc	A-2021-3026132

Aqua Pennsylvania Wastewater Inc	A-2021-3027268
Aqua Virginia - Alpha Water Corporation	Pue-2009-00059
Aqua Virginia - Blue Ridge Utility Company, Inc.	Pue-2009-00059
Aqua Virginia - Caroline Utilities, Inc. (Wastewater)	Pue-2009-00059
Aqua Virginia - Caroline Utilities, Inc. (Water)	Pue-2009-00059
Aqua Virginia - Earlysville Forest Water Company	Pue-2009-00059
Aqua Virginia - Heritage Homes of Virginia	Pue-2009-00059
Aqua Virginia - Indian River Water Company	Pue-2009-00059
Aqua Virginia - James River Service Corp.	Pue-2009-00059
Aqua Virginia - Lake Holiday Utilities, Inc. (Wastewater)	Pue-2009-00059
Aqua Virginia - Lake Holiday Utilities, Inc. (Water)	Pue-2009-00059
Aqua Virginia - Lake Monticello Services Co. (Wastewater)	Pue-2009-00059
Aqua Virginia - Lake Monticello Services Co. (Water)	Pue-2009-00059
Aqua Virginia - Lake Shawnee	Pue-2009-00059
Aqua Virginia - Land'or Utility Company (Wastewater)	Pue-2009-00059
Aqua Virginia - Land'or Utility Company (Water)	Pue-2009-00059
Aqua Virginia - Mountainview Water Company, Inc.	Pue-2009-00059
Aqua Virginia - Powhatan Water Works, Inc.	Pue-2009-00059
Aqua Virginia - Rainbow Forest Water Corporation	Pue-2009-00059
Aqua Virginia - Shawnee Land	Pue-2009-00059
Aqua Virginia - Sydnor Water Corporation	Pue-2009-00059
Aqua Virginia - Water Distributors, Inc.	Pue-2009-00059
Atlantic City Sewerage Company	WR21071006
Berkshire Gas Company	18-40
Berkshire Gas Company	22-20
Borough of Brentwood	A-2021-3024058
Borough of Hanover	R-2009-2106908
Borough of Hanover	R-2012-2311725
Borough of Hanover	R-2014-242830
Borough of Hanover	R-2021-3026116
Borough of Hanover	P-2021-3026854

Borough of Royersford	A-2020-3019634
Butler Area Sewer Authority	A-2020-3019634
Chaparral City Water Company	W 02113a 04 0616
California-American Water Company	CIVCV156413
Connecticut-American Water Company	99-08-32
Connecticut Water Company	06 07 08
Citizens Utilities Company	
Colorado Gas Division	-
Citizens Utilities Company	
Vermont Electric Division	5426
Citizens Utilities Home Water Company	R 901664
Citizens Utilities Water Company	
of Pennsylvania	R 901663
City of Beaver Falls	A-2022-3033138
City of Bethlehem - Bureau of Water	R-00984375
City of Bethlehem - Bureau of Water	R 00072492
City of Bethlehem - Bureau of Water	R-2013-2390244
City of Bethlehem - Bureau of Water	R-2020-3020256
City of Dubois – Bureau of Water	R-2013-2350509
City of Dubois – Bureau of Water	R-2016-2554150
City of Lancaster Sewer Fund	R-00005109
City of Lancaster Sewer Fund	R-00049862
City of Lancaster Sewer Fund	R-2012-2310366
City of Lancaster Sewer Fund	R-2019-3010955
City of Lancaster Sewer Fund	R-2019-3010955
City of Lancaster Water Fund	R-00984567
City of Lancaster Water Fund	R-00016114
City of Lancaster Water Fund	R 00051167
City of Lancaster Water Fund	R-2010-2179103
City of Lancaster Water Fund	R-2014-2418872
City of Lancaster Water Fund	R-2021-3026682
City of Lancaster Water Fund	P-2022-3035591
Coastland Corporation	15-cvs-216
Consumers Pennsylvania Water Company	
Roaring Creek Division	R-00973869
Consumers Pennsylvania Water Company	
Shenango Valley Division	R-00973972

Country Knolls Water Works, Inc.	90 W 0458
East Resources, Inc. - West Virginia Utility	06 0445 G 42T
Elizabethtown Water Company	WR06030257
Forest Park, Inc.	19-W-0168 & 19-W-0269
Hampton Water Works Company	DW 99-057
Hidden Valley Utility Services, LP	R-2018-3001306
Hidden Valley Utility Services, LP	R-2018-3001307
Illinois American Water Company	16-0093
Illinois American Water Company	22-0210
Indian Rock Water Company	R-911971
Indiana Natural Gas Corporation	38891
Jamaica Water Supply Company	-
Kane Borough Authority	A-2019-3014248
Kentucky American Water Company, Inc.	2007 00134
Middlesex Water Company	WR 89030266J
Millcreek Township Water Authority	55 198 Y 00021 11
Missouri-American Water Company	WR 2000-281
Missouri-American Water Company	SR 2000-282
Missouri-American Water Company	WR-2022-0303
Mount Holly Water Company	WR06030257
Nevada Power Company d/b/a NV Energy	20-06003
New Jersey American Water Company	WR 89080702J
New Jersey American Water Company	WR 90090950J
New Jersey American Water Company	WR 03070511
New Jersey American Water Company	WR-06030257
New Jersey American Water Company	WR08010020
New Jersey American Water Company	WR10040260
New Jersey American Water Company	WR11070460
New Jersey American Water Company	WR15010035
New Jersey American Water Company	WR17090985
New Jersey American Water Company	WR19121516
New Jersey American Water Company	WR22010019
New Jersey Natural Gas Company	GR19030420
New Jersey Natural Gas Company	GR21030679
Newtown Artesian Water Company	R-911977
Newtown Artesian Water Company	R-00943157
Newtown Artesian Water Company	R-2009-2117550

Newtown Artesian Water Company	R-2011-2230259
Newtown Artesian Water Company	R-2017-2624240
Newtown Artesian Water Company	R-2019-3006904
North Maine Utilities	14-0396
Northern Indiana Fuel & Light Company	38770
Oklahoma Natural Gas Company	PUD-940000477
Palmetto Utilities, Inc.	2020-281-S
Palmetto Wastewater Reclamation, LLC	2018-82-S
Pennichuck Water Works, Inc.	DW 04 048
Pennichuck Water Works, Inc.	DW 06 073
Pennichuck Water Works, Inc.	DW 08 073
Pennsylvania Gas & Water Company (Gas)	R-891261
Pennsylvania Gas & Water Co. (Water)	R 901726
Pennsylvania Gas & Water Co. (Water)	R-911966
Pennsylvania Gas & Water Co. (Water)	R-22404
Pennsylvania Gas & Water Co. (Water)	R-00922482
Pennsylvania Gas & Water Co. (Water)	R-00932667
Philadelphia Gas Works	R-2020-3017206
Public Service Company of North Carolina, Inc.	G-5, Sub 565
Public Service Electric and Gas Company	ER181010029
Public Service Electric and Gas Company	GR18010030
Presque Isle Harbor Water Company	U-9702
Sierra Pacific Power Company d/b/a NV Energy	19-06002
Sierra Pacific Power Company d/b/a NV Energy	22-06014
St. Louis County Water Company	WR-2000-844
Suez Water Delaware, Inc.	19-0615
Suez Water Idaho, Inc.	SUZ-W-20-02
Suez Water New Jersey, Inc.	WR18050593
Suez Water New Jersey, Inc.	WR20110729
Suez Water Owego-Nichols, Inc.	17-W-0528
Suez Water Pennsylvania, Inc.	R-2018-3000834
Suez Water Pennsylvania, Inc.	A-2018-3003519
Suez Water Pennsylvania, Inc.	A-2018-3003517
Suez Water Rhode Island, Inc.	Docket No. 4800
	19-W-0168 & 19-W-
Suez Water Owego-Nichols, Inc.	0269
	19-W-0168 & 19-W-
Suez Water New York, Inc.	0269

Suez Westchester, Inc.	19-W-0168 & 19-W-0269
Town of North East Water Fund	9190
Township of Exeter	A-2018-3004933
United Water New Rochelle	W-95-W-1168
United Water Toms River	WR-95050219
Upper Pottsgrove Township	A-2020-3021460
Valley Township (water)	A-2020-3019859
Valley Township (wastewater)	A-2020-3020178
Valley Water Systems, Inc.	06 10 07
Virginia American Water Company	PUR-2018-00175
Virginia American Water Company	PUR-2021-00255
West Virginia-American Water Company	15-0676-W-42T
West Virginia-American Water Company	15-0675-S-42T
Wilmington Suburban Water Corporation	94-149
York Water Company	R-901813
York Water Company	R-922168
York Water Company	R-943053
York Water Company	R-963619
York Water Company	R-994605
York Water Company	R-00016236
Young Brothers, LLC	2019-0117