STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION
OF VEOLIA WATER NEW JERSEY, INC.
FOR APPROVAL OF AN INCREASE IN
RATES FOR WATER/SEWER SERVICE AND OTHER
TARIFF CHANGES.

BPU DOCKET NO. WR2311_____

Direct Testimony of
Elda Gil

Exhibit PT-1

Q. Please state your name and business address.

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

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

A. In May 2007, I joined Veolia Management and Services (VWM&S) as an Associate Rate Analyst. In August 2010, I was promoted to the position of Regulatory Specialist, in July 2015 to Senior Regulatory Specialist, in May 2019, I was promoted to Manager Regulatory Business and in May 2023 to Senior Manager Regulatory Business.

Q. Please summarize your educational background and other qualifications.

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

Q. Please describe your work experience.

A. Prior to joining VWM&S, I was employed by Ballet Makers Inc., a manufacturer and retail company, where I was responsible for Cost

Accounting. From 2000 to 2005, I was employed by Federal Direct, Inc. a securities printing company as a Staff Accountant responsible for billing and accounts receivable. Prior to that I held the position of Financial Analyst at Granahorrar Bank of Colombia from 1992 to 1999, responsible for financial analysis and preparation of the consolidated company budget and forecast.

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

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

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

A. The purpose of my testimony is to support the Veolia Water New Jersey, Inc. ("VWNJ" or the "Company") Company's request for rate relief. I am sponsoring the overall revenue requirement, revenue conversion factor, and support the development of Test Year and Pro Forma Year revenues at present rates.

Q. Please describe the current structure of Veolia Water New Jersey, Inc.

A. The Company has three main operation divisions: North Operation (Hackensack / Franklin Lakes); Highlands Operation (Vernon water systems, Arlington Hills Water and Wastewater, West Milford Water and Wastewater systems, and other Water Systems); and the Mid-State Operation (Toms River Water System, Lambertville Water System, Matchaponix Water System, and Wastewater System in Township of Plainsboro).

Q. Since the last Company Rate case, what Veolia Water New Jersey, Inc. acquisitions were approved by the BPU?.

A. Per BPU Docket No. WE22030200, dated September 28, 2022, the Board approved the Company to own and operate the water system in the Borough of Allendale ("Allendale"). The acquisition closed on November 30, 2022. Since this date, the system is now part of the North operations.

Q. Who are the other witnesses in the case?

A. Mr. Alan Weland, VP and General Manager of VWNJ, will discuss the company overview, employee levels and operational matters for the Company's operations. Mr. James Cagle is sponsoring the calculation of Federal Income Taxes, M&S Shared Assets, Accumulated Deferred Income Tax, Regulatory Liability Tax Cut and Jobs Act of 2017 (TCJA), Calculation of CTA allocation, Exhibit P-4 Schedules 5, 2N Line 2, 7D, 7E and 7I

respectively. Mr. Gary Prettyman is sponsoring the proposed rate design, and the proposed Tariff. Ms. Maryanne Hatch is sponsoring the Company's financials Exhibits P1, P2, P3 and the Consumption Normalization Trends. Ms. Jana Labella and Mr. Lino Bucci are sponsoring operation and maintenance expenses and taxes other than income, Exhibit P-4 Schedules 2 and 4. Ms. Anupa Jacobs. is sponsoring testimony regarding Management and Services Expenses (M&S), Exhibit P-4 Schedule 2N Line 1. Ms. Katherine Arp is sponsoring the Company's pro forma rate base Exhibit P-4 Schedule 7 and Depreciation Expense Exhibit P-4 Schedule 3. Mr. Antonio Vicente, PE is sponsoring the Company's construction program for the Company's operations Exhibit P-5. Mr. Harold Walker of Gannett Fleming is sponsoring the Company's overall Rate of Return including the recommended Return on Equity Exhibit P-6.

Q. What is the structure of this rate case?

A. The structure of this case starts with the Historical Test Year (HTY) which is the 12 months ended March 31, 2023. The actual Test Year in this case is March 31, 2024 with Post Test Year (PTY) adjustments for investments in projects that are major in nature and consequence through September 30, 2024, customer growth and some operation and maintenance expenses to project the Pro Forma revenue requirement.

Q. What Exhibits and Schedules are you responsible for in support of the filing?

A. I am presenting the consolidated overall revenue requirement and revenue conversion factor in Exhibit P-4. I am also supporting and am responsible for the development of Test Year and Pro Forma revenues at present rates including customer growth, which can be found on Exhibit P-4 Schedule 1 and I am responsible for the proposed Public Notice Exhibit P-8. If any other schedule or Exhibit is not specifically identified with a particular witness, I should be able to respond or direct the question to someone who can better respond to that question.

Q. Please describe Exhibit P-4 which you are presenting in support of the overall Revenue Requirement.

A. Statement of Operating Income shows the Company's income statement for the actual Historic Test Year which is the twelve months ended March 31, 2023 and the 6 month Post Test Year period ending September 30, 2024 at present and proposed rates. It also shows the computation of the required rate increase necessary for the Company to be afforded a reasonable opportunity to achieve its requested rate of return. Column (1) represents the actual historic test year ended March 31, 2023. Column (2) Adjustments, shows the difference between the historic test year and the Pro Forma at present rates in Column (3). Column (4) shows the revenue deficiency and the development of the rate increase of $63,926,032 or

19.57% necessary for the Company to be afforded the opportunity to earn its requested rate of return of 7.49%. This should occur after paying all its appropriate costs in order to serve its customers. Column (5) shows the Pro Forma level of revenues and expenses as requested by the Company at proposed rates.

The Computation of the Gross Revenue Conversion Factor shows the factor that is utilized in this proceeding. This factor is applied to the deficiency in Utility Operating Income to determine the amount of additional revenues that VWNJ is requesting. This factor reflects all revenue related taxes in its development.

Please note that the level of present rate revenues include $15,272,222 of currently billed DSIC (or Distribution System Improvement Charge) surcharges. At the conclusion of this case, pursuant to BPU regulations, we are confirming that the BPU should roll our current DSIC results into the Company's rate base.

Q. What are the main drivers of this rate case?

A. The largest driver of this rate case relates to our investment in utility plant in service of approximately $429 million since the Company's last rate case. Mr. Vicente will discuss the details of the investments in utility plant that will be placed in service during the period April 1, 2023 to the end of the Test Year, March 31, 2024, plus certain major projects through September 30, 2024. Other drivers include, labor and labor related expenses, power,

chemicals, waste disposal, uncollectibles, and taxes. These areas of the rate case will be discussed by the individual witnesses mentioned above.

Q. Please generally describe how the Company accounts for the water service that Veolia Water New Jersey provides its customers.

A. VWNJ serves approximately 253,000 customers under a general metered tariff Rate Schedule (RS-1) and approximately 9,300 Public and Private Fire Protection service customers under Rate Schedules 5 and 6 (RS 5-6). All customers are billed monthly. Except for the customers from the former West Milford MUA (Water and Sewer), and the former Allendale system, customers in this class are billed quarterly.

VWNJ also supplies water service to other municipalities through special agreements billed under Rate Schedule 3 (RS-3), Service to Other Water Supply Systems.

VWNJ provides service for construction purposes under Rate Schedule 11 (RS-11) for both metered and un-metered services. Metered usage is billed under RS-1, General Metered Service, and the un-metered usage is billed using an estimate of the volume of water to be used.

Q. Please describe how the sewer service that Veolia Water New Jersey provides is accounted for.

A. VWNJ serves approximately 6,300 customers under a general metered tariff Rate Schedules 7-10 (RS 7-10). Except for the customers from the

former West Milford MUA (which are billed quarterly), all other wastewater customers are currently billed monthly.

Q. Please explain Exhibit P-4, Schedule 1, Statement of Operating Revenues.

A. This exhibit details the operating revenues by class of customer for the Company and is shown on Water Lines 1 through 14, and by Sewer Lines 15 through 23. The Total is on Line 24 for the Historic Test Year ending March 31, 2023, and the Pro Forma period ending September 30, 2024, at both existing and proposed rates. Column (1) of Schedule 1 represents Company revenues for the Historic Test Year (twelve months ended March 31, 2023). Column (2) Adjustments, shows the difference to the historic test year and the Pro Forma period at present rates. Column (3) is the normalized and annualized revenues for the Pro Forma period at present rates. Column (4) details the projected increase by class of customer and Column (5) represents Pro Forma at proposed rates. Column (6) shows the percentage increase from the Pro Forma at present rates (Column 3) to proposed rates (Column 5).

Q. Please describe the process used to develop the Pro Forma revenues.

A. Water Consumption Normalization, was developed by Ms. Hatch and it is explained in more detail in her Testimony. The projected customer growth for all customer classes of the Company was based on a 5-year trend

analysis with the average number of meters for each year ended December from 2019 to 2022 and the 12 months ended March 31, 2023. Then, the analysis was extended through the Test Year ending March 31, 2024, and the Pro Forma period ending September 30, 2024, to obtain the total operating metered revenue at present rates plus the current DSIC Surcharge shown on Exhibit P-4, Schedule 1 Column (3) Line 14.

For Sewer Service, the bills are based on the facility charges by the water meter size or minimum charges plus the rate per thousand gallons of water registered where applicable. The customer growth and water registration are flat and no adjustment was necessary. Therefore, the actual Historic Test Year number of customers and water registered was used for Pro Forma purposes.

Q. How was customer growth determined?

A. For the Water Services**,** the customer growth was determined using a 5 year trend analysis with the average number of meters for each year ended December from 2019 to 2022 and the 12 months ended March 31, 2023. The Company projects an annual increase in customers of 0.52%, or 1,910 new customers for the Pro Forma period ending September 30, 2024.

For the Sewer Services, the number of customers is flat and consequently no additional growth is expected.

Q. Please describe the rate structure of providing fire service.

A. Under Rate Schedule No. 5 (RS-5), VWNJ provides Private fire protection through Company and customer maintained hydrants and fire service lines. Throughout the service territory, the Company provides Public Fire Protection, Rate Schedule No. 6 (RS-6), through an Inch Foot Charge based on the inch feet of transmission and distribution mains of the prior year and a separate hydrant charge for hydrants located in the Public right of way

The customers served by the former SUEZ Water Toms River, Lambertville, and Arlington Hills are charged a per hydrant fee with no inch foot charges.

The Company also provides public fire protection through a Homeowners Association rate per residential unit through Rate Schedule No.2 (RS-2).

Q. How was growth determined for fire protection services?

A. The growth for Private Fire Protection Service lines and hydrants was determined using trend analysis with the average number of fire lines and hydrants each year ended December from 2019 to 2022 and the 12 months ended March 31, 2023. Fire service lines, excluding residential 2” or less, are averaging an increase of 34 units per year and private hydrants have been very stable with no growth during the last few years, which I have considered in the Pro Forma revenue projection.

The trending analysis for Public Fire Protection Services indicates no growth in the number of hydrants. The inch foot charge is based on the number of inch feet from the prior year. The projected inch feet for Pro Forma was determined using trend analysis with the actual count each year ended December from 2019 to 2022.

Q. What was the result of the analysis conducted on other revenues?

A. Miscellaneous revenues consisting of items such as Turn-on Fees, Meter Reset Fees, Meter Repair Fees, Returned Checks and Rents from Other Property, combined, account for less than 0.25% of the total revenue. The average number of occurrences from the calendar year 2022 was used to project revenues from these miscellaneous items. This year is the most representative to a normalized year after the pandemic. Turn-on Fees, Meter Repair Fees and Meter Reset Fees are set by meter size on Rate Schedule No.12 (RS-12), Miscellaneous Service.

Q. How were Antenna Lease Revenues normalized?

A. The Pro Forma revenue for antenna leases was determined with an increase of 3% for the annualized revenues in 2023 based upon current contracts.

Q. Explain Exhibit P-8, Public Notice.

A. Exhibit P-8 is a draft of the Public Notice which is required to be filed. The section pertaining to the change in rates is currently blank. The Company intends to discuss the content of this section with Staff, Rate Counsel and other parties.

Q. Ms. Gil, do you believe that the Company needs to recover the amounts included in operating expenses and rate base in order to allow the Company a reasonable opportunity to earn a fair rate of return while providing safe, adequate, and proper service to its customers?

A. Yes, I do.

Q. Does this conclude your testimony?

A. Yes, it does.

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Direct Testimony of
Alan Weland

Exhibit PT-2

I. WITNESS INTRODUCTION

Q. Please state your name and business address.

A. My name is Alan Weland. My business address is 200 Lake Shore Drive, Haworth NJ, 07641.

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

A. I am Vice President and General Manager (VP/GM) of Veolia Water New Jersey, Inc. ("VWNJ", or the "Company"). In this capacity, I am responsible for the operation and management of VWNJ's New Jersey water and sewer utility operations.

Q. Briefly describe your education.

A. I hold a Bachelor's Degree in Civil Engineering (received 1988) and a Master's Degree in Environmental Engineering (received 1992), both from Manhattan College.

Q. Please describe your professional affiliations.

A. I am a member of the American Water Works Association (AWWA) and the Water Environment Federation (WEF). I am a board member for Choose New Jersey and the New Jersey Alliance for Action.

Q. Please describe your work experience.

A. I have over 35 years of water and wastewater utility operations and engineering experience, providing operations technical assistance, engineering management, capital project design and implementation, capital program management, corporate business development, and management of complex water and wastewater systems. Since joining the Company in June of 2000 I have held a number of operations management and engineering positions with increasing levels of responsibility. My most recent position before becoming VP/GM of VWNJ on July 1, 2020 was the VP/GM for Veolia's operation in Nassau County, NY, which is the largest public-private partnership in the North American wastewater utility industry. Prior to joining Veolia, I worked at the consulting engineering firms Montgomery Watson and Clinton Bogert Associates in various engineering capacities.

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

A. My testimony will generally describe the following:

- A general profile of VWNJ's water and sewer operations;
- Customer service performance;
- Community outreach and education programs;
- Reliability of service;
- Efficiencies and cost control;
- Labor and Benefits;
- Non-Revenue Water.

II. VEOLIA WATER NEW JERSEY PROFILE

Q. Please provide a profile of VWNJ's water and sewer operations.

A. VWNJ is wholly owned by Veolia Utility Resources LLC. The Company began in 1869 as the Hackensack Water Co. with a small treatment plant and distribution system that served a population of about 4,000. Today the Company is the second largest private water utility in the State of New Jersey serving approximately 262,000 retail water customers representing a population of more than one million residents in 76 municipalities, as well as 9 sales for resale customers. The Company also serves approximately 6,300 sewer customers in 4 municipalities.

The VWNJ combined water and sewer operations are generally organized into three groups, the Hackensack, Western, and Southern operations.

The Hackensack operation consists of one very large interconnected system serving approximately 844,000 people in Bergen County and northern Hudson County (608,000 people in Bergen County, 236,000 in Hudson County) in 66 municipalities. The main source of raw water supply for the Hackensack System is the watershed of the upper Hackensack River, which includes 4 surface water reservoirs. When needed, raw water is also drawn from the Saddle River and the Wanaque Reservoir. The water is treated at the state-of-the-art, 200 MGD Haworth Water Treatment Plant (WTP) located on the Oradell Reservoir. Supplemental water supplies are provided by 9 groundwater wells, purchased water from Jersey City, and purchased water from Veolia Water New

York. The distribution system consists of 26 pumping stations, 16 storage tanks, over 2,200 miles of water main and more than 16,000 hydrants. The average daily water consumption is approximately 81 MGD.

The Western operations consist of a number of smaller independent operating systems serving portions of Passaic, Sussex, Morris and Warren Counties (the “Highlands system”), the Lambertville system in Hunterdon County, and the Princeton Meadows system in Middlesex County.

The Highlands System includes 34 water systems and 8 sewer systems, serving approximately 16,400 people in 9 municipalities. All the water sources are groundwater. In total the Highlands water system includes 68 wells, 43 water treatment facilities, 3 booster stations, 28 storage tanks, approximately 105 miles of water main, and 342 hydrants. Average daily water consumption is approximately 1.2 MGD. In the sewer systems there are a total of approximately 31 miles of sewer collection mains, 7 sewage lift stations, and 8 sewage treatment plants. The average daily treated flow is approximately 0.6 MGD.

The Lambertville system serves approximately 1,900 residential and commercial water customers with a population of approximately 3,900 in 2 municipalities. Raw water can either be taken from a spring fed surface reservoir or from the Delaware and Raritan Canal. Water is treated at the 1.0 MGD Hill Water Treatment Plant located in West Amwell. The distribution system is made up of 3 booster stations, 3 storage tanks, approximately 15 miles of main and 96 hydrants. Average daily water consumption is approximately 0.2 MGD.

The Princeton Meadows system is a wastewater operation serving a large portion of Plainsboro Township in Middlesex County. The system includes 5 sewer pump stations, 42 miles of collection mains and serves approximately 3,400 customers and a population of approximately 15,000. Treatment is provided at the 1.64 MGD Princeton Meadows WWTP, which is a conventional activated sludge (biological) plant with flow equalization, primary treatment, secondary treatment, nutrient removal, chlorine disinfection and dechlorination. The final effluent is primarily discharged to Cranbury Brook, with a portion beneficially reused for irrigation on a golf course. The WWTP is currently undergoing a major improvement project to improve nutrient removal capabilities and storm hardening, as described in the testimony of Mr. Antonio Vicente.

The Southern operations include multiple water and sewer systems in Central New Jersey: water operations in Toms River (Ocean County); water and wastewater operations in Colts Neck (Monmouth County); and bulk water supply in Manalapan/aka Matchaponix (Monmouth County)..

The Toms River system was originally incorporated as the Toms River Water Company in 1897 to supply water to Toms River (formerly known as Dover Township), New Jersey, in Ocean County. The current water supply system provides potable water customers within its service area in the central portion of Ocean County that generally includes the municipalities of Toms River Township, South Toms River Borough, a portion of Berkeley Township and 7 customers in Brick Township. The system supplies water to approximately

50,000 residential and commercial connections with a population of approximately 120,000.

The water supply for Toms River customers is provided by groundwater sources at 7 treatment facilities/well fields, including 19 in-service production wells and one Aquifer Storage Recovery (ASR) well that tap into three major aquifers. The current maximum production capacity is 27.494 MGD with a firm capacity of 24.470 MGD. Supply sources are located throughout the operating territory. The groundwater is treated at each of the 7 treatment facilities and then pumped directly into the system mains or into ground level storage from which booster pumps draw suction and then discharge to system mains. The water distribution system includes approximately 544 miles of main, 10 storage tanks (5 tanks are located at treatment facilities), and more than 3,500 hydrants. Supplemental water supplies can be provided by purchased water from New Jersey American Water Company (at Lakewood Township) and Manchester Township through the use of existing interconnections.

Currently, three of the Company's wells are not directly providing water. These three wells (each ~1.0 MGD capacity) include Well 21 (Holly), Well 26 and Well 28 (Parkway). At the Parkway Facility, Wells 26 and 28 which had been utilized as interceptor wells to control the migration of the plume from the Reich Farm Superfund and treated at the Parkway Treatment Facility are now in stand-by mode and not used for public water supply. The groundwater extraction and treatment system at the Parkway Well Field was formally shut down during the week of November 19, 2019 per the EPA approved 5-year Post Remediation

Plan. At the end of the 5-year period the use of the wells would be planned to be evaluated. Veolia is being reimbursed for the loss of capacity as well as costs associated with the operation and maintenance during the stand-by status of Wells 26 and 28 via an agreement between the Company and Union Carbide Corporation/Dow Chemical Company with zero additional cost to the Veolia customers. Additionally, the incremental loss of the investment is paid quarterly by Dow to the Company and is applied to capital to reduce rate base for the portion of time within these wells' lifecycle that they would not be used for water production.

At the Holly Facility, Well 21 has been identified to be impacted by offsite (down-gradient) soil clean-up and groundwater remediation at the former Toms River Manufactured Gas Plant currently owned and operated by New Jersey Natural Gas (NJNG) and is regulated by the State of New Jersey Licensed Site Remediation Professional (LSRP) program under the Site Remediation Reform Act (SRRA). The Company and NJNG have entered into various Cooperation Agreements for cost recovery to proceed with identifying potential sources and replacing this water supply. Presently we have an application on file with the NJDEP Bureau of Water Allocation under final review for the installation of a new well at the Holly Facility replacing Well 21 in-kind utilizing the existing treatment works at the facility. VWNJ is receiving reimbursement from NJNG for engineering and preliminary work for the replacement of water supply and will continue to pursue full capacity recovery without impact to the VWNJ customers.

In March 2016, the Company purchased utility assets and acquired control of SBW&S Corp. in the Township of Colts Neck, Monmouth County. The utility assets include water distribution and metering systems for the delivery of drinking water to residential customers and collections systems for the conveyance of residential wastewater with each serving approximately 275 customers. Currently, VWNJ has a petition filed with the BPU for the expansion of its service territory in Colts Neck, as detailed in Docket No. WE23060397. The Company is seeking approval to extend utilities to a new 68-unit development in Colts Neck for both water and sewer infrastructure, authorized by Township Resolution 2023-96. A public hearing is set for November 14, 2023.

In 1985-86, the New Jersey Department of Environmental Protection (NJDEP) identified two defined critical water-supply management areas for groundwater supplies. These critical areas, where capacity of the aquifer system was not sufficient to meet future water demands, mandated studies to find new sources of water. Matchaponix Water Supply Company (MWSC) was constructed as a regional bulk water supply to meet both the water demand growth and deficit of groundwater supply in the critical water-supply management area in western Monmouth County. In 1993, the Company purchased MWSC. The system is a conjunctive use water facility (surface water and ASR injection/recovery as one source) with a conventional treatment plant that provides bulk-only water supply through transmission mains to Manalapan Township, Freehold Township and the Gordons Corner Water Company. The system serves a calculated equivalent population of 32,000. Current efforts are

focused on long-term sustainability of water supply (raw water quantity and quality) and treatment capabilities of the facility.

As of October 31, 2023, VWNJ employed 462 individuals in multiple locations across the State.

Q. Please discuss some of the investments and operational changes that have occurred since the last rate case.

A. Since the Board's decision in the last case, Docket WR21000729, dated May 19, 2021, the Company has continued to make significant investments to improve the safety, security, environmental/regulatory compliance, reliability and efficiency of the systems we operate, all in an effort to enhance the quality of service to our customers. By September 30, 2024, the end of the proposed post-test year in this case, VWNJ will have added to its plant in service an investment of approximately $429 million. Details of the Company's investments are included in the testimony of Mr. Antonio Vicente. These investments are consistent with the capital investment plans the Company has shared previously with the NJBPU, which demonstrates Veolia's commitment to delivery of the capital plan as a stipulation of the NJBPU approval of Veolia's purchase of SUEZ.

Significant investments in underground infrastructure renewal have been made, as evidenced by the Company's three DSIC filings since the last case. As has been our practice, a new Foundational Filing will be made during this proceeding to allow for an uninterrupted continuation of the DSIC program.

Replacement of lead service lines has been a particular focus of our underground infrastructure renewal program. Since 2019, in response to the 2018 Lead and Copper Rule Action Level Exceedance (ALE), the Company has replaced approximately 10,500 Company side lead services.

The July 2021 legislation that dealt with this issue significantly improved the Company's ability to remove lead services. Customers who were previously reluctant to replace their services due to the cost of replacement are now opting into the replacement program as the costs for non-Company side service lines are borne by the Company's programs and to be reflected in rates. Statistically, prior to the legislation the participation rate of customers in the lead replacement program was 6%. Post legislation the participation rate is nearly 100%. Since July 2021, the Company has replaced approximately 2,300 non-Company side lead service lines. In BPU Docket No. WR22060392, dated May 24, 2023, the Board approved the Company's request to defer the cost incurred to replace non-Company side lead service lines. Shortly after this rate case filing, a petition to recover non-Company side lead service lines will be filed in order to recover those costs through an ongoing surcharge.

The Company has also made significant investments in PFAS treatment, in response to the changing regulatory limits adopted by the NJDEP. Additional investment will be required to comply with the current regulations as well as to meet future changes to the regulations, which are anticipated to be enacted by the USEPA in the near future. Additional discussion on this topic is included later in my testimony.

The Company continues to make significant investments in wastewater treatment improvement projects. Improvement projects have been implemented at all nine of the VWNJ wastewater facilities. The most significant investment being made is at our Princeton Meadows WWTP, where a major upgrade project is being implemented to improve effluent quality in conformance with regulatory requirements.

More and more opportunities for Company growth through acquisition of municipal systems are materializing as a result of three major factors: scarcity of certified operations personnel exacerbated by retirement of the aging water/wastewater utility workforce; poor condition of the aging water/wastewater infrastructure across the country; and ever more stringent drinking water / wastewater effluent regulations, including new regulations for emerging contaminants. One such opportunity driven by these factors that became a reality was the Company's acquisition of the Borough of Allendale's water system.

The Company had a contract with the Borough since 2013 to operate and maintain the Borough's water system, but until recently the Borough desired to maintain ownership of the assets. The changing PFAS regulations required the construction of treatment facilities for most of the Borough wells. The Borough realized that they had neither the expertise or the resources to implement the required treatment projects and, as a result, made the decision to sell the system. The Company was the successful bidder for the system and following a public referendum when nearly 80 percent of voters approved the sale, the

transaction was closed in November 2022. One of the commitments that the Company made to the Borough was to implement the required PFAS treatment for the Borough wells soon after closing. VWNJ has lived up to that commitment by placing in-service treatment for three wells in July 2023. A second facility for a fourth well will be placed in-service by December 2023. The Allendale water system acquisition cost, as well as much needed capital investment in the Borough's system are included in this rate filing.

An area of continued focus for the Company is watershed management. A newly formed Watershed Department with expertise in aquatics and forestry have led to significant water quality improvements, improved biodiversity, and more effective and efficient watershed activities. Issues regarding identifying and eliminating watershed encroachments are being approached more proactively. The watershed team has also developed some of the more interesting and exciting uses of technology and innovation, such as the use of machine learning for control of harmful algal blooms that is discussed later in my testimony.

Operating expenses for labor, power, chemicals, and sludge have increased significantly since the last case. Much of these increases have been driven by inflation and ongoing, persistent supply chain issues in the aftermath of the COVID-19 pandemic. To offset these increases, the Company has worked to identify and implement innovations and efficiencies to the direct benefit of our customers. However, overall O&M expenses since the close of the test year in the last case have increased by over $24 million.

Finally, customer account receivables are still considerably higher than pre-pandemic levels. While current receivable amounts are lower than the peak levels experienced, much of the decrease is a result of debt forgiveness which Veolia made as a stipulated commitment for the NJBPU approval of Veolia's purchase of SUEZ. Based on historic patterns, a significant portion of these receivables will be uncollectible.

There are many more ongoing and future challenges facing our utility operations and our communities than ever before: climate change, resiliency, green energy transformation, decarbonization, economy/inflation, supply chain, emerging contaminants, just to name a few. Our Company's commitments to addressing these challenges and adapting human activities for a sustainable future, what we call the Ecological Transformation, are included in the investments included in this case and our plans for the future.

III. CUSTOMER SERVICE

Q. **Please comment on the Company's ongoing efforts to provide continuous improvement in the services that it delivers to its customers.**

A. Since the last rate case, the Company has worked to continuously improve the Customer Experience through a set of different ongoing initiatives.

The Company has continued to install radio frequency (RF) data collection technology as per Docket Number WM14080834. The installation of these RFs is related to our Enhanced Metering Project (EMP), which is replacing the past "Drive-By" meter reading process. With this meter reading system in

place, we have access to hourly consumption data for our customers. This data allows us to improve customer service by improving our ability to answer customer usage questions, increasing billing accuracy and efficiency while improving the resolution of high bill complaints. As of July 2023, approximately 87% of all our customer meters across the State have been converted to RF technology. While this is a significant achievement, ongoing supply chain issues that persist in the aftermath of the COVID pandemic have prevented us from achieving our goal of 100% RF saturation. We will continue progressing towards complete RF technology conversion, leveraging the buying power of our entire Veolia North America portfolio of operations, with a goal of completing the program in the next two to three years.

To ensure billing accuracy, the Company continues to aggressively change-out aged and failing meters. Since the last rate case, we changed out approximately 50,000 meters across the State. While this is a large amount, similar to the RF technology conversion it was fewer than our original plan as a result of the after effects from the COVID-19 pandemic (i.e. supply chain disruption, difficulties entering customer residences and facilities for meter changes.) We remain in compliance with meter change requirements; continued additional effort and customer communication will be required to assure this continues.

A continued focus of the meter replacement program has been changing meters that have had long term estimates, zero readings or aged meters that we suspect have been under registering consumption, a more common

circumstance as meters age. Having access to customer's hourly consumption data also enables the Company to better prioritize the change-out work allowing us to maximize the efficiency of our work effort.

The Company continues to encourage its customers to subscribe to e-billing, which possesses the benefit of being a "greener" solution than paper billing and a customer convenience. Since the last rate case, the number of customers enrolled in e-billing increased from approximately 71,000 to 138,000. The Company also offers a direct debit service that presents similar benefits as the e-billing initiative. For this service, the number of enrolled customers rose from 41,000 to 61,000.

The Company's website (mywater.veolia.us) is one of the key components in improving the customer experience and continues to be enhanced based on customer feedback, technology trends, and peer assessments. A back-end portal allows incoming web requests to be handled directly and automatically when possible. The website offers important alerts and outage/active work maps, and allows online appointment scheduling. It is fully integrated with the Company's billing system, allowing customers to manage most aspects of their water accounts online, and providing digital notification of important events such as payments due/received, bills available and more. Water conservation is a centerpiece of the Veolia customer online experience. Through the website customers are provided with access to hourly consumption data on a near real-time basis. A series of interactive features are available including a tool to see how much water can be saved through conservation

efforts and personalized goals can be set, as well as a feature that allows customers to receive personalized water conservation tips.

Customers with an online account also have the ability to use the Alexa Veolia Water Skill, allowing them to leverage Amazon's voice assistant to get information about their balance, payments, and local contact information.

Our Interactive Voice Response system (IVR), continues to be utilized and upgraded to expand the ability for customers to benefit from self-service features without the need to speak with customer service representatives (CSRs), located in Hackensack NJ, and make information available outside of normal Customer Service Contact Center operating hours. Upon recognition of the caller (based on phone number), the system is able to provide the customer with information such as account balance, payment locations and help in completing transactions such as bill payment, submission of meter readings and appointment scheduling.

All calls to the Contact Center continue to be recorded and supervisors review recordings on a regular basis to assess quality of service and accuracy of information provided to customers. Timely feedback is provided to all CSRs to ensure that the highest standards of service are maintained.

Veolia has language translation services established to enable customers to discuss issues in their language of choice. In addition to this, all menu options in the automated telephone system are offered in both English and Spanish.

Q. In addition to that mentioned above, how else does the Company communicate with its customers?

A. VWNJ strives to keep its customers well informed of available services and rights. The website is a central part of this communication strategy. In addition to the information already referenced in relation to services, VWNJ also provides real-time alerts and mapping on the website and text-to-voice/text-to-text notifications relating to any water service disruptions. In addition, copies of communication materials are accessible online as well as other important information about VWNJ (e.g. Sustainable Development Report, Lead Information, Water Conservation Guide and Tools, Rate Schedules, Customer Bill Of Rights, Water Quality Reports).

VWNJ has several customer service leaflets and brochures that are available to customers that include but are not limited to:

- WaterWays: Quarterly information updates are included in all paper and electronic bills and available in reception areas. These brochures contain seasonal updates regarding VWNJ activities and key information pertinent to customer water supply for the current time of year. The Company also uses this publication to provide mandatory annual updates to customers driven by regulation.
- Customer Information Guide: Provides information on all services available and the Customer Bill of Rights. This also includes information regarding ‘Special Needs’ services available for customers who require large print or Braille bills.

The Company recognizes the importance of real-time communication with customers in the event of supply disruptions. As well as providing real-time water supply updates to customers at mywater.veolia.us, the Company maintains Geodecisions Notify which is a high-speed, GIS-driven mass communication outbound telephone notification system. This system allows VWNJ to call out to customers, at a rate of 60,000 calls per hour, with important information about their water supply. The system can also be used to issue critical updates regarding conserving water or to notify customers of planned and unplanned maintenance in their supply area.

VWNJ strives to keep its customers well informed of services and rights. To help achieve this, a suite of customer communication resources are available, including but not limited to:

- Bill messages
- Bill inserts, print media and news releases
- Radio spots / live radio interviews
- Social media

Q. Please describe the Company's customer contact and complaint record.

A. The Company’s Customer Service Contact Center in Hackensack continues to perform at a high level. Year to date through July 2023 the average speed of answer (ASA) was 1 minute 27 seconds and the abandoned call rate was 5.6%. This performance is similar to the 1 minute 18 seconds ASA and 7.1% abandoned call rate in 2020 at the time of the previous rate filing.

These results are being achieved in spite of challenges presented as we return to “new normal” operations in the aftermath of the COVID pandemic. An example of a challenge is the return to normal bill collections activities that were suspended during the pandemic. Not only are the number and value of delinquent accounts significantly higher post pandemic, we also have the new winter moratorium on service disconnects that complicates the collections process. Another example of a challenge is the ongoing aggressive lead service line replacement program that now includes the Company’s responsibility for non-Company side service line replacements. These challenges have added to the number of customer communications handled by the Contact Center and have increased the complexity of customer requests.

Beyond speaking directly to a CSR, we provide many options for customers to communicate with the Company: IVR, e-mail, website, social media, regular mail/correspondence. Balancing the Contact Center workload and organization to respond to all types of customer contacts in a timely fashion is critical. In order to maintain and ultimately improve customer service performance we strive for continuous improvement and challenge the status quo.

During the pandemic, Contact Center personnel necessarily adjusted to a fully remote operation in order to keep the staff safe. Post pandemic as we adjust to changing conditions we have re-thought this approach and moved to a hybrid work model where representatives have a 50/50 remote/in-person work

schedule. This model strikes a good balance of flexibility for the Contact Center staff while allowing for strong communications, teambuilding, and staff training.

Evaluation of the Contact Center staff size, organization, resources and facilities to meet the changing workload is a continuous effort. A summary of Contact Center staff changes is included in the overview of labor and benefits. Regarding facilities, the existing Contact Center at our Hackensack facility is aging, which necessitates renovation and the space needs to be redesigned for our new mode of operation. However, while the Hackensack facility is conveniently located, it has a number of limitations. First, it is mainly a field services center with many field services personnel and associated heavy equipment on-site. Second, the site has limited parking and no room for expansion for any of the current on-site functions. These limitations create an environment that is hazardous, particularly for office personnel. As a result, planning has begun for relocation of the Contact Center from the Hackensack facility to a more suitable location elsewhere in Hackensack system service territory.

For the 12-month period ending July 31, 2023, VWNJ received 317 informal NJBPU inquiries and 1 docketed complaint. These inquiries represent a ratio of 1.19 per 1,000 customers. The 2020 ratio reported in the last rate case was 0.43 per 1,000 customers. Veolia believes this increase can be attributed mainly to the resumption of normal bill collection activities that were suspended during the pandemic.

Q. Please describe the Company's bill collection practices.

A. VWNJ offers customers a wide variety of payment options to facilitate prompt payment for services rendered. Customers can pay by check or money order and also pay by credit card and electronic check online, via an automated 24- hour telephone payment line. . No fees are charged to the customer for these different payment methods. Customers are able to make cash payments at over 150 authorized payment locations in our service territory. VWNJ continues to work with customers struggling to pay their balances, offering options such as no-verification long-term payment plans.

Pursuant to NJBPU regulations, if payment is not received by the due date, then a reminder notice is sent to the customer. If payment is still not received following the notice, then a shut-off notice is sent to the customer. Door postings are performed as a last form of customer outreach prior to the disconnection of service. When performing door postings, customers are presented with payment assistance options to help keep their service connected. Service is discontinued consistent with NJBPU regulations if payment is still withheld. A turn-on fee is charged to the customer for service to be restored following disconnection for non-payment. Of course, no service shut-offs are performed between November 15 and March 15 every year in accordance with the recently enacted Winter Moratorium regulations.

For the month ending July 31, 2023, there were over 14,000 delinquent accounts greater than 60 days with an associated accounts receivable balance of over $6.7 million. The total balance for accounts receivable was $16.5

million. The number of delinquent accounts and accounts receivable balances are lower than peak levels during the pandemic. Certainly the resumption of bill collection activities has contributed to the reduction. The largest reductions were provided by the $2.8 million debt forgiveness provided by Veolia as a commitment toward the NJBPU approval of Veolia's purchase of SUEZ, and the customer grants provided through the Low Income Household Water Assistance Program (LIHWAP). However, the account receivable balances remain well above the pre-pandemic levels.

Q. Does VWNJ offer any assistance programs to their customers that may have difficulty in paying their bills?

A. VWNJ continues to offer its customer assistance program, Veolia Cares. The program is designed to offer monetary assistance to customers facing long-term (e.g., low income) or temporary financial hardship. The program awards a grant of up to $150 per customer per year towards the payment of the customer's water charges on his/her bill. For the period from September 2020 to July 2023, VWNJ approved over 540 grants totaling approximately $129,745; this represented an average grant award of $139.21. These grants are funded by VWNJ parent company and therefore not passed onto customers. Veolia has increased available funding for the program by $1.1 million as a commitment toward the NJBPU approval of Veolia's purchase of SUEZ.

The recently established LIHWAP program has proven to be very successful by providing approximately $1 million in funding for VWNJ customers

in need of assistance. The program was recently closed to new applicants because Federal funding ran out and currently LIHWAP will not be renewed.

VWNJ has promoted the availability of help to customers experiencing financial difficulty by providing information about extended payment plans and guidance about applying for Veolia Cares and LIHWAP funding on outreach messages on bills and bill inserts.

IV. COMMUNITY OUTREACH AND EDUCATION

Q. Please describe your water conservation program.

A. VWNJ has a broad array of conservation programs, including interactive online programs that help customers track their water use and education programs for students from kindergarten through high school. Veolia's instructors provide engaging activities and presentations to students with a focus on water conservation, water treatment, environmental stewardship as well as scientific properties of water and related concepts. The programs are delivered in person and virtually. On other annual special days of action, such as Earth Day, Imagine a Day Without Water and Drinking Water Week, the Company visits local classrooms and provides interactive lessons on the essential need of water, which include student contests. With this approach, the Company has been able to reach more groups and offer more classes. In the 2022-23 school year, our school program reached more than 17,000 students across the State. In addition, we had more than 1,000 summer camp students at our Haworth facility in July and August.

The Company makes use of an internet and social media strategy to foster the wise use of water. The interactive conservation survey on our website allows customers to input details about their homes – the ages of their appliances, whether they take showers or baths, if toilets have been updated, etc. – to learn about specific changes they can make to conserve water. VWNJ also promotes conservation in posts on social media, quarterly bill inserts and in advertisements.

Other activities include the Company's sponsorship of community environmental fairs and symposiums. Veolia hosted or participated in 35 Earth Day events alone in 2023, all promoting conservation. In 2022, Veolia opened its Conservation Garden in Northern New Jersey at our Haworth facility, which teaches the public about how they can have a beautiful garden with plantings that don't require constant watering. One of the Company's many events in South Jersey in 2022, the Company held a rain barrel build workshop at the Girl Scouts of the Jersey Shore summer campsite, serving as a reminder on how to conserve in the face of increasing human population growth and other activities that degrade natural resources and the ecosystem.

Q. What other programs do you use to educate and interact with your customers?

A. VWNJ strives to be transparent with customers and has many outreach activities to educate customers about programs, inform them of issues and help them understand the utility. Providing real-time information to customers is a priority.

The Company uses social media, its website and its rapid phone and email system to inform customers of service issues, emergencies, repairs and other alerts.

The Company offers tours of our facilities across the State. At the Haworth Water Treatment Plant, students and residents can see firsthand how we purify drinking water. The tour features materials that detail each step of the treatment process, watershed maps outlining our surface water reservoirs and facilities, as well as maps of our water distribution system. There are also displays of artifacts from the Company's 154-year history as well as an aquarium containing live specimens of aquatic life found in our reservoirs.

Q. Please describe the Company's involvement with the community.

A. VWNJ has a long tradition of impactful community programs, a commitment to volunteerism and strong partnerships through significant charitable giving.

The Company has a robust menu of community outreach programs. Since the last rate case, VWNJ built the Haworth Environmental Center, which has an outdoor classroom where we offer interactive environmental programs for the public. The Company's Watershed Recreation Program allows customers to enjoy the areas surrounding our reservoirs for fishing, bird watching and hiking – and to learn about becoming better protectors of the watershed. Our new Reservoir Rangers Program provides fun opportunities for children to take those important first steps in understanding how to become good caretakers of the Earth.

VWNJ and community groups collaborate on numerous watershed cleanups as well as events like fishing derbies and dates when the reservoirs are opened to kayakers and canoeists. The Company has a long history of employees volunteering within communities, from building homes to serving dinner at homeless shelters or replanting a forest for a park. The Company hosts Project “WET” (Water Education for Teachers) workshops for educators to learn how to protect and restore our vital water sources as well as how to help decrease climate change, bringing that information to students.

The Company has a charitable giving program that supports and encourages efforts that promote education, address economic and social issues within the communities we serve, and support programs that protect the environment. Veolia has traditionally given more than $100,000 annually to charitable programs in New Jersey. As a commitment related to the NJBPU approval of Veolia’s purchase of SUEZ, the Company provided additional funding of $775,000 over three years. Our sweeping charitable giving program allows us to support many dozens of organizations statewide, including food banks, Habitat for Humanity and programs to help elderly and disabled residents. In the past two years, we have funded 30 environmental non-profits for projects to clean up the environment, create community gardens and improve parks. Veolia scholarships and support of educational programs enable the Company to have a significant role in the environmental education of the next generation. Every year, we provide STEM scholarships to 10 students who would otherwise not be able to attend college without help. Other community education efforts the

Company supports include a YWCA program for young women leaders and classes to help students prepare for the SAT and ACT.

Q. Do you have a program to receive feedback from your customers?

A. VWNJ holds public forums where customers can discuss issues, ask questions, suggest changes, and learn about our services. Customers have provided feedback on company initiatives and issues as well as ways to improve customer services. These forums have taken place in all regions of our service territory. Where there have been special issues in a community, the Company brought in top members of all departments to listen to concerns and answer any questions.

V. SERVICE RELIABILITY

Q. Please describe the Company's drinking water quality compliance record.

A. Hackensack System: Since 2007, the Company has maintained an outstanding record of water quality compliance with zero MCL violations. One significant water quality challenge in 2019 was the lead action level exceedance (ALE) in the Hackensack System. Through a complete team effort, by June 30, 2020 the drinking water for the Hackensack system was back in compliance with all regulatory standards for lead - and has remained in compliance ever since. In fact, current lead levels are at the lowest recorded values since promulgation of the Lead and Copper Rule in 1991. For the latest sampling period ending June 30, 2023, the 90th percentile lead level for the Hackensack System was 5.4 parts per billion (ppb), well below the federal standard of 15 ppb.

Maintaining compliance and reducing lead levels requires continuous efforts and coordination across all functional areas, including:

- As of July 31, 2023, the Company had invested approximately $127.5 million to remove and replace over 10,300 company side lead service lines (LSLs). The engineering and field services teams coordinated the activities of as many as 25 construction crews, some working six days a week, removing company side lead in 57 municipalities.
- As noted earlier in my testimony, since July 2021 when the law made various regulatory changes, the Company has seen a dramatic increase in the number of customers opting to allow VWNJ to replace their portion of the service line if it includes lead materials. As of July 31, 2023, the Company had invested approximately $12.8 million to remove and replace over 2,000 non-Company side LSLs.
- The Company's operations and maintenance personnel, along with water quality and process experts, continue to study the unique characteristics of the system's water chemistry and hydraulics in order to optimize treatment. These efforts have resulted in the historically low lead levels currently measured.
- In the rare instance when testing results for a customer's lead level is above the federal action level (only one result was above the standard during the most recently completed sampling period in

June 2023), VWNJ personnel will visit the home/business to help identify and address potential causes.

- The Company continues to educate customers about lead through our outreach and education programs. Customer service representatives are trained to assist customers who call for information about lead.

While we are pleased with our progress toward lead level reduction, our work is not finished. The Company will continue to improve water treatment and will continue to remove LSLs until all LSLs are eliminated. Our plan is to complete the LSL removal program by 2030, one year ahead of the deadline mandated by law. Please see the testimony of Mr. Antonio Vicente.

Highlands Systems: There have been a few limited water quality action level exceedances related to lead and copper and bacteriological parameters. All except one system (Bald Eagle Village Lead ALE) returned to compliance during subsequent sampling cycles. The Company is in the process of taking action to achieve compliance in that one system.

Toms River / Colts Neck / Matchaponix: Since the last rate filing, the Company has maintained an excellent record of water quality compliance with zero MCL violations and zero reporting violations.

A key tool for maintaining and improving water quality is our calibrated network hydraulic model, which is used almost daily to develop / support operational decisions on how the system is managed and maintained. The model is critical for managing our unidirectional hydrant flushing program,

ensuring that the water mains are effectively “scrubbed” to improve water quality over the longer term with the least amount of wasted water. As a direct result of the unidirectional flushing program, customer discolored water quality calls remain low, averaging 5 calls per month since the last rate filing.

Lambertville: In November 2019 and the first half of 2020 the Lambertville system exceeded the ALE for lead in the distribution system. The system has realized reductions from 16 PPB at the 90th percentile (1st half of 2020) to 5 PPB at the 90th percentile (2nd half of 2020). Corrosion Control was installed in 2021 and results have remained low, between 2 and 9 ppb.

Q. Please describe the Company's wastewater system compliance record.

A. Highlands Systems: Since the acquisition of the West Milford MUA wastewater systems in 2018, the Company has made tremendous progress in upgrading the facilities in order to address these system’s long history of effluent permit exceedances / violations. By the end of 2023, total investment in system upgrades will exceed $12.3 million. There are significant projects planned for two of the wastewater treatment facilities (Bald Eagle Village and Birch Hill). The two projects will be completed in the next few years and are therefore not included in this rate filing. After completion of these two projects, the major investment in the systems to meet current effluent permit requirements will be completed.

These upgrades, along with adjustments to O&M procedures and personnel, have resulted in significant performance improvements. To demonstrate the performance improvements, the following table summarizes the

total annual number of effluent quality permit exceedances at the Highlands System wastewater treatment facilities since the start of 2019 (2023 data is through July).

Year	**2019**	**2020**	**2021**	**2022**	**2023**
Effluent Quality Exceedances	105	65	10	8	5

Princeton Meadows: Since the last rate filing, the Company has maintained an excellent record of wastewater compliance with zero permit exceedances and zero reporting violations.

Q. What other actions is the Company taking to ensure reliability of service to its customers?

A. Service reliability is a top priority and the Company works to ensure that reliability through training, emergency response preparation, and investment in infrastructure.

Training: A well trained staff helps ensure health and safety, regulatory compliance, and proficient/efficient work practices, all of which result in system reliability. In addition, opportunities for training and professional licensing are important for employee retention and attraction, and help guarantee enough depth and redundancy of personnel qualified to operate our systems. This is

particularly important in today's workforce environment. Like all water/wastewater utilities, VWNJ is adjusting to significant staff turnover due to the retirement of many long time employees as well as a very competitive hiring market.

The Company promotes continuous training and offers employees incentives to obtain water and wastewater operator licenses. Since our last rate filing, the Company has developed New Jersey licensed operator education programs in partnership with Bergen Community College (BCC) for level 1 licensing, and with Rutgers University for advanced operator licensing. The Rutgers program is offered to VWNJ operations personnel (so far, two operations personnel from the Haworth facility have completed the program), and other Veolia operations personnel working at contract operations throughout the State. The BCC program provides a comprehensive overview of water and sewer system operations. It is not only useful for operator training, it provides an overall operations perspective for anyone interested. As such, the Company makes the program available to employees from across all functional areas. An initial class of 11 students completed the program in August 2022, and a second class of 12 students recently completed the program in September 2023. There have been participants from across the VWNJ organization including, operations, field services, customer service, and administration departments. The program has the potential to be offered to people outside the VWNJ organization, such as high school students who may be interested in a career in

water or wastewater operations, which would further enhance the Company's ability to develop and maintain a pipeline of operations personnel.

Veolia has also developed an on-line training platform called Veolia Academy. Since 2021, more than 200 employees have successfully completed Veolia Academy courses to learn technical skills and prepare for state certifications necessary for a career in the water and wastewater industry. More than 100 courses are offered in seven Learning Paths covering all aspects of the operations and maintenance of water and wastewater systems. The courses were developed and delivered by Veolia North America employees who are industry experts in their respective fields. Recognizing that a shortage of skilled water and wastewater professionals is not just a Veolia challenge, in June 2023 the Company opened free Veolia Academy access to the general public to support skills acquisition for anyone looking for strong, stable jobs in the water and wastewater treatment industry.

Emergency Response: The Company operates a 24/7 dedicated call center to handle emergencies, the Central Service Bureau (CSB), and maintains emergency response crews on call. Emergency response crews are managed to respond on-site to any emergency within 45 minutes.

The Company maintains Emergency Response Plans (ERPs) for VWNJ operations throughout the State. Particular focus and attention is provided to our dams, as a result of the severe consequences that would result from a failure of these most critical assets. Accordingly, each dam has its own specific Emergency Action Plan (EAP). All ERPs and EAPs are prepared, updated, and

approved in accordance with regulatory requirements. To ensure staff knowledge and adherence to the ERP/EAP requirements, periodic drills are conducted along with concerned external agencies (e.g. OEMs, police. fire officials).

Investment: The Company has invested $23.2 million for water treatment, reliability and production since April 1, 2021. The Company will invest another $55.8 million for treatment, reliability, and production by September 30, 2024, the end of the post-test year in this case.

The Company has invested $3.5 million for wastewater treatment, reliability and pumping since April 1, 2021. The Company will invest another $61.4 million for treatment, reliability, and pumping by September 30, 2024.

In addition to the investments listed above, the Company continues to develop and invest in existing and new digital solutions to optimize the operation of the utility and improve the reliability of service to customers. Digitizing the utility creates a digital twin of our systems that institutionalizes knowledge. Through authorized access, information can be democratized via technology and leveraged across the business quickly aiding in more timely and effective decision making as well as efficient training of new employees.

Q. How is Veolia leveraging digital transformation to enhance operational efficiency, ensure compliance with regulatory mandates, and further its commitment to sustainability, especially in the context of the recent acquisition of SUEZ?

A: As the transformation in digitization of the utility continues to evolve, it will continue to expand the insights on how the systems perform dynamically and transform the way we approach productive work. Examples of the digital solutions include: Clevest mobile workforce management system, which handles customer appointments; Hexagon (formerly Infor) and KloudGin which are our Computerized Maintenance Management Systems (CMMS) used for all above and below ground assets; Augury, which is a real-time diagnostic technology/program for critical assets; Enterprise GIS (EGIS) consisting of a fully-enabled WebGIS environment leveraging a cloud-first approach for supporting all workflows and business system integrations; SAMS, which is our Water Quality Management System (WQMS) that was implemented to improve the management of water quality data; and finally Supervisory Control and Data Acquisition (SCADA) for all facilities and systems in alignment with Company SCADA standards (particularly with regard to cyber security).

Planned Hubgrade Implementation: Pursuant to the conditions set forth by the NJBPU in the settlement term sheet approving the acquisition of SUEZ by Veolia in 2021, the Company was mandated to seek prior approval before incurring any expense related to the implementation of its Hubgrade data optimization system. As per the term sheet: "Veolia will ascertain whether and how to implement its Hubgrade data optimization system within existing budgets to conduct probabilistic assessments for prioritization of capital projects, identify and reduce leaks, and generally improve system performance at reduced costs. After the designated efforts are concluded, the Joint Petitioners will develop and,

subject to any required Board review, implement a best practices plan, including a cost-benefit analysis related to any forthcoming operational changes."

At present, Veolia is conducting a cost-benefit analysis for all the New Jersey operating systems, evaluating implementation costs (both internal parent Veolia operating company and external resources) with the aim to implement the Water Loss Management and Energy Utilization (Etracking) Hubgrade digital solutions for VWNJ.

Purpose of Hubgrade: This initiative serves to support the priorities which emphasize a deeper understanding of Water Loss and Energy Utilization (reduction of carbon footprint and reduction of operating costs). Hubgrade for Water Operations (HWO) has been conceived to empower water and wastewater network/plant managers and operators to visualize, produce, and analyze operational and asset data. This leads to enhanced environmental performance, operational efficiency, and offers greater transparency for our operational decision-makers. The introduction of Hubgrade will not just furnish immediate functionalities to our operations but will also lay a foundation for iterative enhancements based on real-world data and operational experiences.

The overarching vision is to harness the advantages of digitization, institutionalize best practices, and ensure our utility services are at the forefront of efficiency and sustainability.

The Water Loss Management module is a critical tool designed for drinking water network managers. Its primary function is to help reduce water loss by aggregating and analyzing data from various sources, including remote

management systems, GIS, and SCADA. This integration provides operators with actionable insights to better manage their systems. In addition to this, Hubgrade features the Etracking solution — a web-based application tailored for both analysts in remote centers and on-site operators. Its main advantage is in efficiently monitoring and tracking energy consumption across a range of assets, promoting enhanced energy management practices.

Like all digital systems, the success of Hubgrade depends on careful planning and design to ensure maximum efficiency and return on investment. Veolia is committed to this process and will soon submit our Hubgrade strategies for NJBPU's review, comment and approval.

Q. Please discuss the issue of PFAS.

A. As part of its mission to comply with all regulations and proactively address water quality issues, VWNJ has been carefully monitoring regulatory developments related to many emerging contaminants (e.g. microplastics, 1,4-dioxane, legionella, pharmaceuticals, cyanobacteria, enhanced lead and copper rule, etc.) Particular attention is being focused on per- and polyfluoroalkyl substances (PFAS). It is estimated that nearly half of all drinking water in the US contains one or more types of PFAS chemicals, which is creating a high demand for resources of all kinds to implement required treatment projects at water supply systems across the country. This makes a proactive approach absolutely essential to protect public health and maintain compliance.

In our last rate case, it was indicated that action would be needed to address PFAS in the near future at two of the Company's systems, although no costs were included in the filing. Since the last case there have been significant developments in PFAS regulations. In 2021, the NJDEP enacted at that time the most stringent limits in the US for two PFAS compounds: PFOS and PFOA. These regulations required investments in treatment at a number of locations that are included in this rate filing, as detailed in the testimony of Mr. Antonio Vicente.

In March 2023, the USEPA announced its proposal to establish even more stringent PFAS regulations, which will require significantly more investment in treatment projects in the Company's systems across the State. Please refer to the testimony of Mr. Antonio Vicente for a discussion regarding these future investments. These investments are not included in this case but, along with the associated long-term PFAS system operations and maintenance expenses, they will significantly impact customer rates.

The Company did not cause the PFAS contamination in its water sources, but VWNJ is certainly committed to removing PFAS in accordance with all drinking water regulations. The costs related to PFAS treatment are significant and the Company is very sensitive to the customer cost increases that will result. Of course proactive, effective and efficient project delivery is essential to control costs. We are also actively seeking ways to offset the required costs through looking at all reasonable options to impact those customer costs including, but

not limited to, working to obtain access to funding from federal/state infrastructure funds.

VI. EFFICIENCIES AND COST CONTROL

Q. What controls or practices are in-place to manage its costs?

A. VWNJ uses a disciplined approach to manage investments and O&M expenditures to provide the best value for our customers. The Company has a centralized supply chain management group leveraging the aggregate volumes of material and services purchased by all our businesses to obtain the most favorable prices for the benefit of our customers.

Chemical usage is optimized using a program developed in-house called ChemTracker. It is a dynamic operations tool that helps optimize chemical dosing by integrating chemical usage data with key operational targets in a clear visual format. ChemTracker also incorporates critical environmental compliance and permit related targets associated with chemical usage and provides a rationale for dosage changes related to changes in water quality and other environmental and operational conditions.

Maintenance costs are optimized through utilization of CMMS software, Hexagon (formerly Infor) and KloudGin. CMMS helps manage maintenance schedules and optimize maintenance tasks, which leads to a more efficient use of internal labor, subcontractors, and materials. The maintenance data also assists in optimizing the whole life costs of equipment ownership by guiding decisions regarding equipment repair versus replacement.

Modern IOT technology can provide observational information of machines by collecting and communicating physical conditions in real time. Augury, a real-time diagnostic technology/program, has been deployed for critical assets throughout the State. This technology allows early detection of irregular functioning of equipment, which enables staff to respond before a catastrophic failure, thereby reducing overall maintenance cost and increasing asset availability.

Recently, VWNJ implemented a predictive modeling tool that uses machine learning to generate a continuously evolving model that can estimate a weekly risk rating for development of harmful algal blooms (HABs) in our reservoirs. The tool uses various sources of data, including: water quality data from vertical profilers and discrete sampling; meteorological data from local instruments and public access databases; satellite imagery from NASA - CyAN and ESA - Sentinel 2a; and microbiological lab data. The tool is evolving and as we implement new sensors and monitoring points, the accuracy rating of these models will improve. The predictions from these models inform our management decisions. We anticipate a reduction in chemical usage for HAB control and improved raw water quality that will improve treatability, which will result in improved finished water quality.

Q. Please describe the steps that the Company is taking to control energy costs.

A. For regular use (non-emergency), the Company has two sources of electricity: the local power grid and an 8 MW peak-shaving natural gas fired plant located at the Haworth WTP. The Company continues to improve costs by utilizing the strategy of running this on-site gas plant, thereby substituting favorable natural gas prices for expensive hourly electricity "street prices" when applicable. For the calendar years since the last rate case, the average all-in cost of 1 KWh used by the Haworth WTP has increased due to global events; however, we still remain competitive and below the U.S. Energy Information Administration (EIA) posted $/kWh costs for New Jersey as of August 2023 for a commercial or industrial site, printed at $0.1476/kWh and $0.1269/kWh, respectively:

Year	Haworth WTP $/kWh	% Generated On-Site
2021	0.0813	25.5
2022	0.0961	29.9
2023 (10 mo.)	0.1019	33.2

These results were accomplished through a variety of factors including: Daily Demand Response Management (DRM), peak avoidances and proper maintenance and rehabilitation of existing equipment. The Company continues to purchase longer-term contracts for electricity and natural gas to protect the Company and hence ratepayers against price spikes, and with stipulations with the third party supplier allowing us to sell back unused portions of the contracted

commitment at favorable market prices. This was advantageous in 2022 when we had electric and natural gas contracts from 2020. However, the contracts established in 2022 for 2023 and 2024 are trending above historical norms. We are starting to see some price relief in contracts established in 2023 for 2025 usage, but prices remain elevated from the 2020-2021 time period.

Regarding electricity usage, the Company continues to focus on pumping equipment optimization, replacing old inefficient pumps with higher efficiency units, investing in Variable Frequency Drives and establishing protocols to use the most efficient pumps for different flow scenarios. VWNJ continues to utilize real-time power monitoring equipment on all large equipment at the Haworth WTP and most large pumping stations allowing the company to optimize energy efficient pump configurations. One example of this would be the rehabilitation of our Fairview Pump Station. When comparing 2023 summer usage vs. 2021 summer usage we are seeing an 8% efficiency increase in kWh/MG. The station was under construction during the summer of 2022.

Q. What steps has the Company taken to control distribution system costs?

A. One of the ways the Company has taken steps to control distribution system costs is through changes in work in the field. The Company has reduced dependence on subcontractors for emergency work, base paving and lead service line replacements by increasing the use of its internal crews. Work orders for subcontractors decreased from a high of 422 in 2018 to 26 in 2021, 80 in 2022 and 76 in 2023 (as of 11/1/23). The increase in contractor usage in 2022

and 2023 is the result of a high amount of activity completed in designated contaminated soil areas, which requires specialized work and disposal practices.

VWNJ has found that its own crews can perform the work more efficiently and at a lower cost. One example is that the Company now performs its own base paving. Performing this work with Company staff costs less – and reduces the wait time. Crews can more quickly move on to the next task. The annual cost savings for base paving alone is $1.3 million. Another example is valve testing. In 2023, VWNJ increased small valve testing in-house and has plans to increase this effort in the future utilizing additional internal staff.

VII. LABOR AND BENEFITS

Q. What are the main challenges facing the Company in today's workforce environment?

A. Like all water/wastewater utilities, VWNJ is facing many challenges toward managing and maintaining an effective workforce:

- The Company is adjusting to significant staff turnover due to the retirement of many long time employees.
- We are experiencing high staff turnover in certain positions, particularly in the customer operations and construction departments.
- The Company is adjusting to changing work habits and employee expectations in a post pandemic world.
- There is an increasing need for qualified personnel to operate and maintain the systems within an ever more challenging regulatory

environment, increased customer awareness / expectations, and increased use of technology / innovation.

- The hiring market is extremely competitive, making recruitment and employee retention very challenging.

In spite of these many challenges, the Company has maintained a relatively stable number of employees, while improving quality and productivity in delivering customer care, maintaining water quality and regulatory compliance, delivering the capital expenditure program and providing service reliability to its customers.

Q. Is the Company planning to add any new hires?

A. As of October 31, 2023, the Company had 462 full time employees. It also had 9 vacancies which it plans to fill by the end of the test year. In addition, the Company has established an additional 8 positions which it intends to fill by the end of the test year. This would bring the number of total headcount in the VWNJ workforce to 479. The 8 additional positions are discussed below.

- <u>Hydraulic Modeler</u>:

This person will develop and maintain the water transmission and distribution system hydraulic models to support capital master planning, capital project development, and operations. They will develop analyses and reports to be provided to regulators and customers, as required. They will provide training, technical assistance and support for the distribution system management and digital information application.

This role will greatly reduce dependence on outside consultants that currently perform modeling tasks.

- PFAS Engineering Positions (5):

As described in the testimony of Mr. Antonio Vicente, the Company is developing a number of PFAS treatment projects to meet regulatory requirements. Additional engineering resources are required to provide proper project management. We will hire a PFAS program manager to coordinate all PFAS project activities across the State, and four project engineers/managers to manage the development and delivery of the projects.

- Laboratory Chemist:

Upcoming Lead and Copper Rule Revisions will add significant complexity and will increase the amount of laboratory analyses required to demonstrate compliance. VWNJ currently utilizes a contract laboratory to perform lead and copper analyses; the rule revisions will significantly increase this cost. Developing the ability to perform these analyses at our Haworth Laboratory will improve quality control and eliminate the need for an outside lab. We will add one instrument chemist to oversee procurement of lead required laboratory equipment, installation, method development, and apply for Laboratory Certification.

- Business Development Director:

The aging workforce, aging infrastructure, and increasing regulatory requirements are driving municipalities to consider

privatization or sale of their water/sewer systems. In response to this new demand, the Company will hire a Business Development Director to identify and develop water and sewer system acquisition opportunities and other related new business opportunities.

The proposed additional positions will address critical challenges facing our operations. They will reinforce our ability to meet regulatory demands and maintain system reliability. Recovery for these roles represents an investment in our capacity to deliver consistent, high-quality service now and into the future. That said, we will need to be flexible and adjust our workforce as necessary to meet the changing demands of the communities we serve, our customers, our regulators, and other stakeholders.

VIII. NON-REVENUE WATER (NRW)

Q. Please describe the Company's actions towards reducing physical (real) water losses?

A. The Company is continuing its efforts to reduce real water losses. VWNJ has expanded its active leak detection program utilizing both mobile and fixed equipment. This equipment helps locate hidden leaks, prioritize mains that are in need of repairs, and identify areas that may emerge as a concern. Many leaks that would have gone on undetected for long time periods are now being identified and repaired.

VWNJ utilizes fixed acoustic vibration sensors that provide continuous 24/7 leak monitoring. These sensors are deployed in parts of the distribution system, notably the pressure districts located in the Palisades Cliffs region, which have historically been a water loss problem area due to the geological makeup (rock formation) where leaks typically do not surface and can be difficult to locate. The sensors transmit data via cellular communication to a web-based graphic dashboard. The sensor data is continuously correlated and is able to detect when a leak is starting to develop and provide a precise location of the leak. This early leak detection allows for a very proactive approach to leak repairs, which in turn results in reduced water loss. Currently there are approximately 2,150 sensors deployed in the system. The sensors cover approximately 300 miles of the distribution system piping (approximately 14% of the system).

In another program that reduces water loss, VWNJ utilizes an innovative technology called NO-DES (Neutral Output Discharge Elimination System) for flushing of distribution piping. Instead of traditional methods where water flows out of fire hydrants and runs to waste, the NO-DES process utilizes a trailer mounted pumping, filtering and re-chlorinating system which circulates the water within the water distribution system. In addition to conserving water, the NO-DES process improves water quality in the distribution system (e.g. increased disinfectant residual concentration, improved effectiveness of treatment for lead). In 2023, VWNJ has flushed approximately 100 miles of piping utilizing the NO-DES equipment. This has resulted in a savings of

approximately 12.4 million gallons of water. Since 2020, we have flushed over 490 miles of piping, with a savings of approximately 54 million gallons of water.

Q. Please describe the Company's actions towards reducing apparent losses?

A. We have continued with the "Strategic Meter Initiative", a program that includes 655 meters (the top 0.3%, representing approximately 20% of water sold) with the largest billed volumetric consumption. Consumption data for these meters is monitored and field inspections are performed when anomalies are discovered.

We also count on the EMP referenced in Section III to provide real time consumption data. This allows us to perform real time water balances, and it is useful to spot meter inaccuracies, tampering and other exceptions such as leaks on the customer side.

Q. What has the Company done regarding main replacement?

A. Thanks to the NJBPU approving a DSIC program, the Company has been able to increase its investments in underground infrastructure renewal, contributing to distribution system sustainability improvements and reduction of NRW. In the 2011-2013 time period, before the advent of the DSIC program, VWNJ renewed on average 1 to 2 miles of pipe per year. For the 2021-2023 period, VWNJ renewed an average of approximately 11 miles per year. This renewal amount is lower than the Company would ideally perform primarily due to the ongoing

significant investment in lead service line replacements. However, the lead service line replacement program is certainly contributing to the reduction in real water loss as these services are typically old and commonly prone to leakage.

Q. What have been the impacts of your initiatives on NRW since the last rate case?

A. Thanks to the consistent efforts related to real and apparent losses, VWNJ has been able to control the level of NRW. In the Hackensack system, as of September 2023, NRW is 18.9% (equivalent to 19.0% at our last rate filing). The combined NRW for all VWNJ operations across the State is 18.4%. While performance over the last few years has been flat, the Company is confident that continued efforts on reducing real and apparent water losses will lead to additional improvements in NRW.

Q. Does this conclude your testimony?

A. Yes it does.

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF
VEOLIA WATER NEW JERSEY INC.
FOR APPROVAL OF AN INCREASE IN RATES
FOR WATER AND SEWER SERVICE
AND OTHER TARIFF CHANGES

BPU DOCKET NO. WR2311_____

DIRECT TESTIMONY OF GARY S. PRETTYMAN

EXHIBIT PT-3

BACKGROUND

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

A. My name is Gary S. Prettyman and I am Senior Director Regulatory Business at Veolia Water Management & Services Company, and I am authorized to testify on behalf of Veolia Water New Jersey Inc. in this case. My business address is Veolia Water Management & Services, 461 From Road, Suite 400, Paramus, NJ 07652.

Q. Please summarize your educational background and professional experience.

A. I have over forty-four years' experience in water and wastewater utility management and regulatory practice including all aspects of rate applications. I have testified before regulatory commissions on accounting issues, tariff design, and company policy in numerous proceedings. Since 2012, I have been employed at Veolia to provide assistance and supervision in the preparation and filing of various types of regulatory applications, including base rate proceedings. The details of my professional experience and educational background are shown in Appendix A supplementing this testimony.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to support the request of Veolia Water New Jersey ("VWNJ") for an increase in its base rates for water and sewer service. Specifically, I am supporting the Company's position regarding the proposed rate design and the proposed tariff.

Q. Have you prepared exhibits which support the Company's request?

A. Yes, I have. I am specifically responsible for Rate Design and Proposed Rates included in Exhibit P-7, the proposed tariff.

Rate Design

Q. Please discuss the Company's proposed rate design contained in Exhibit P–4 Schedule 1 and Exhibit P-7.

A. In the 2018 rate case, Mr. Herbert of Gannett Fleming prepared a cost of service study which was used as a basis for the proposed rate design. Mr. Herbert had designed statewide water rates and statewide sewer rates. However, all parties and the BPU acknowledge that when designing rates, considerations other than pure cost of service must be made when implementing rate design. The impact on customers in moving toward cost of service should be considered. In some instances, it may take more than one rate case to reach cost of service equilibrium, although moving as close to actual COS is an appropriate goal. For example, the impact on smaller systems with only a small number of customers is one consideration as is the regulatory principle of gradualism in rate changes which should also be considered. In addition, consideration should be given to the structure of the Company's rates, notably the proportion of revenues received from fixed charges and the impact of our volumetric rates on customers, the balance between water and sewer rates, as well as the stability of the company's revenues overall.

Q. Can you give an example of fixed service charges?

A. Yes. I reviewed the various companies' tariffs on each of the companies website and the current monthly 5/8" fixed service charges and effective date for the larger regulated water companies in New Jersey are listed below.

	VWNJ	**NJAWC**	**MWC**	**MWC**	**Aqua**
Effective	5/19/21	2/13/23	1/1/23	Proposed	6/1/19
5/8" rate	$17.60	$19.85	$20.20	$25.35	$16.50
DSIC					
Effective	6/29/23	4/29/23			
5/8" rate	$3.62	$1.42	$0.00	$0.00	$0.00
Total	$21.22	$21.27	$20.20	$25.35	$16.50

As illustrated by this table, the Company's 5/8" fixed charges, without DSIC, are below those of other New Jersey investor-owned utilities. New Jersey American was recently awarded a 5/8" fixed service charge of $19.85, which is much higher than the Company's current charge of $17.60 although it is below the Company's rate of $21.22 including DSIC. However, with NJAWC current DSIC rate the combined rate is comparable to VWNJ. In his 2018 cost of service study, Mr. Herbert recommended a fixed service charge of $23.90 per month for a 5/8" meter.

Q. Can you comment on the relationship between needed capital investments and customer bill impacts?

A. The continuing need for capital investment is certainly one of the drivers of increases to customer bills, particularly those of small, stand-alone sewer systems. This situation was evident in the Company's previous Arlington Hills rate case, Docket No.WR16060510 (Order dated October 20, 2017). In that case, it was obvious that the magnitude of

investments needed in our sewer systems and their operations on the generally smaller customer base had a disproportionate impact on the rate increase necessary to recover the allowed revenue requirement. These kinds of impacts are not only applicable to the Company's sewer operations, but to statewide sewer operations. It is one of the reasons that we believe the regulators have been encouraging a reasonable trend toward statewide consolidation of tariffs, and why we have been moving to further combine VWNJ's various operating systems' tariffs over several years.

As more stringent compliance issues continue, sewer utilities, whether regulated or non-regulated, will continue to require major investments. As with statewide water rates, which the Board has advocated to become an accepted practice for decades, at a minimum, statewide sewer rates must be a critical public policy goal, and should be designed and implemented. The rates resulting from the Company's immediately prior rate case reflected a positive move in this direction. However, the impact on customer bills must still be considered, along with various options for mitigating some portion of any significant bill impacts.

It must be recognized that unlike water rates which are in part measured by water meters, sewer systems can measure their "flows" only indirectly. There are no "sewer meters." Sewer Flows are usually measured based on a home's water flow through its water meter and assumptions are made based on that measured water flow. Often water meter readings during the winter months or quarters in New Jersey are used since there is unlikely to be irrigation (sprinkler) usage during that winter timeframe, so only domestic sewer flow would be measured , while during the warmer months, water meters would also be measuring irrigation (sprinklers) for which no sewer collection or flows would be occurring. This is especially true in areas that are more seasonal in nature.

In 2018, the Company acquired the small independently operated West Milford

MUA systems. Those sewer systems had multiple DEP treatment process violations. Since taking over that system, the Company has made and will continue to make significant investments in these operating systems. As noted in the Board's Order dated 10/29/18, Docket No. WE17111189, the Company estimated at that time that it would need to make approximately $25.9 million in sewer facility investments over the then next five years on behalf of those systems' 1,496 sewer customers. The Company is constantly reevaluating the magnitude of future investments which will be needed due to environmental regulations, any sewer system's projected future construction needs will probably change over time. Especially with respect to a free standing (i.e. non-interconnected), sewer system, adjustments in rates would certainly be significant for the 1,496 customers of West Milford without some kind of move toward state-wide rates or attempting to spread the cost of many of these individual sewer system environmental investments over more customers than a single free standing system could likely support..

As environmental and public health requirements move forward, the Company believes that the infrastructure needs related to its sewer services is an important issue now and will become even more significant over the coming years. The Company's proposed sewer rates in this filing reflect additional move towards more balanced or more state-wide rates.

Q. Please describe the tariff language changes the Company proposes to make in Exhibit P-7

A. Exhibit P-7 reflects some proposed changes to the rules and regulations section of the Veolia Tariffs. Some of those changes are typographical in nature and will not be discussed in this testimony but can be seen in the blacklined tariff, and I would be happy to address any questions or issues raised by any party in the normal course of this proceeding. Other

suggested revisions to the tariffs are listed and briefly explained below. Deletions are in { } additions are underlined.

- Third Revised Sheet No. 17
  - 2.1 (a) Department of the Company, {in person}, by regular mail, {facsimile transmission} electronic mail where available, or by telephone, by the owner,
  - (b) – Department of the Company, {in person}, by regular mail, {facsimile transmission} electronic mail where available, or by telephone, by the owner,
- Third Revised Sheet No. 19
  - 2.10 added – <u>including but not limited to any special pavement restorations</u>
- Third Revised Sheet No. 22
  - 4.1 – Applications for main extensions shall be made {in person, by facsimile}, online or by mail, {at} <u>to</u> the New Business Department of the Company.
- Third Revised Sheet No. 22
  - 4.2 added – highways have been rough graded to an established and approved grade <u>and a curb line installed.</u>
- Third Revised Sheet No. 23
  - 5.5 service pipe is {two} <u>four</u> inches or greater in diameter, a valve will be installed at the tap <u>and behind the curb</u> for the purpose of turning on and shutting off water
  - and behind the curb.
- Third Revised Sheet No. 24

- 5.10 There shall be a stop {and waste cock} placed on the connecting pipe, inside the wall line of the building supplied

§ Third Revised Sheet No. 26

- 7.6(a) Proof of annual testing of devices shall be made available to the Company upon request.

§ Third Revised Sheet No. 27

- 7.8 stop valve and the meter at the customer's expense by a licensed plumber.

§ Third Revised Sheet No. 27

- 8.1 (a) unmetered service through fire hydrants owned and maintained by the Company {or customer}

§ Third Revised Sheet No. 28

- 8.1 (e) with {special} meters and {should} shall be used exclusively for fire protection
- 8.1 (e) {The service pipe shall be comparable to the meter.}
- 8.1(h) No water {should} shall be used through private fire protection facilities except

§ Third Revised Sheet No. 32

- 10.1 Deduct metering arrangement will not be permitted by the Company. Any submetering arrangements are the responsibility of the applicant/property owner/or appropriate entity.

§ Third Revised Sheet No. 33

- 10.2 (b) ". New meter vaults are not permitted. {unless approved by the Company}
- 10.2(b) The meter housing shall be frost-proof and {eitherwell} either

well drained

§ Third Revised Sheet No 36

· 11.1 . The Customer shall have at least {15} 20 days to pay a valid bill for service from the postmark of the bill. N.J.A.C. 14:3-3A.3 (b). Payment may be made by mail, call the Company or in person at a designated agency of the territory served.

· 11.1 The notice of discontinuance shall be postmarked no earlier than {15} 20 days after the postmark

§ Third Revised Sheet No. 46

· 16.1 If separate service lines cannot be provided, provisions to isolate and turn off service to individual customers for non-payment, without impact to other customers, shall be provided by the applicant.

Q. Please generally discuss the rate design you are proposing for Veolia's water tariffs that you are reflecting in Exhibit P-4, Schedule 1 and Exhibit P-7.

A. As previously mentioned, the cost of service study prepared by Mr. Herbert in the last case was utilized as a basis for designing VWNJ water rates. The first step was to consider the fixed service charges as noted above. Mr. Herbert recommended a fixed service charge for a 5/8" meter of $23.90 per month based on his Cost of Service results. Considering the Company's current fixed service charge, the Company thought it a good idea that its fixed charges be within a similar range to that of other regulated water companies in New Jersey and the impact of any change on its customers. The Company intends to request a monthly fixed service charge of $21.22. As shown previously, the $21.22 rate is what customers are currently paying when combining the current base rates with the current DSIC charge, thus

effectively zeroing out the DSIC as a result of this case, which we understand was the point behind the DSIC regulations. The fixed service charges among VWNJ various operating water systems were previously equalized, and, as part of the current tariff, are being applied to those acquisitions which have subsequently occurred that are and will be metered.

Regarding the Allendale acquisition, the Company proposed to Allendale (pursuant to its request for bid documents) a ten-year binding rate schedule for Allendale. The Company, in its proposal, recognized and advised Allendale, hat all rate decisions are subject to Board approval. In the first rate case after acquisition, which is the current rate case, the Company is proposing to increase all fixed charges by 2%. This proposed increase to total Allendale revenues would be only 0.7%. Other than that, the volumetric blocks and rates remain the same for Allendale.

Although the cost of service study again recommended a decrease in the Private Fire Protection rate, as well as a large increase in Public Fire Protection, the Company has modified its tariff design proposal not to reflect these cost of service results at this time. BPU Staff has consistently indicated its reluctance to send inconsistent pricing signals to customers through decreases in particular tariff classifications, and we have not done that in our proposal. In addition, it should be noted that at this time, the Company is proposing to leave Public Fire rates unchanged because in the current climate, increasing Public Fire charges directly impacts municipal budgets which are certainly under serious financial pressure and VWNJ believes it important not to exacerbate those stresses, even if by a small amount Ultimately, such municipal cost increases are inevitably passed on to property owners in the form of increased property taxes. The Company's belief is that this is not the time to increase these charges in spite of the cost of service based results.

Mr. Herbert's cost of service study further recommended an increase of approximately 53% for the resale class, specifically for the bulk sales rate in the

Matchaponix tariff. In another example of the use of gradualism, the Company is recommending that our current resale rate be increased by 14.60%.

After considering the Company's objective of ultimately statewide sewer rates, looking at the current and future required investment in facilities as noted above, and the resultant impacts on rates, the Company is proposing sewer rates as follows.

Arlington Hills, "Old" West Milford, Colts Neck and "New West Milford MUA" – The Company equalized the fixed service charges in the last rate case. The volumetric charge was also equalized between Arlington Hills and Old West Milford. Since Colts Neck is only a collection system, their fixed charge rate is much lower. The new proposed West Milford MUA volumetric rate is lower however it is the same percentage increase as the other areas. The Company is proposing to increase these charges by the same percentage of 15%.

Arlington Hills Apartment and Commercial Sewer Rates – In the Arlington Hills rate case previously mentioned, the Company established an Apartment rate. During the development of those rates, it was discovered that the previous commercial rate was high and not based on the Company's real projected costs. In the last VWNJ rate case, the Company reduced the Commercial rate by about 50% to begin to deal with that problem. In the current rate case, the Company is proposing to increase the Apartment Fixed service charge by 15.47% and the volumetric rate by 15%. Then , the Company suggests equalizing the commercial rate with the apartment fixed service charge rate or about an increase of 4.93%. The volumetric rate should then be equalized with the apartment rate and increased by 15%.

Former West Milford MUA – The Company acquired the West Milford MUA in December 2018. At that time, the Company continued to charge the previous MUA customers the rates that they were being charged. In the previous rate case, the water rates were equalized with the statewide water tariff. Regarding the sewer rates, the fixed service

charge was equalized with the rest of the sewer customers in the previous rate case. However, under the Company's proposal, they will have a different and lower volumetric charge which is proposed to be increased by the same 15% as the fixed service charge.

Princeton Meadows – This system's current sewer rates are based upon a flat rate structure. Although the Company's position is thata water consumption based sewer tariff would be preferable, the Company does not as yet have consumption data available since a different water purveyor provides water service. Therefore, the Company is proposing to uniformly increase all Princeton Meadows flat rates. Since Princeton Meadows is building a new treatment plant, which is included in this rate case, the Company is proposing an increase of approximately 4.5 times the increase to the other sewer customers or 67%. While this is high, it is significantly less than if Princeton Meadows customers needed to pay for the revenue requirement themselves, including the entire impact of the new treatment facility which would only serve those sewer customers.

Q. With the proposed water and sewer rates, will the Company have a reasonable opportunity to recover its revenue requirement?

A. Yes, it should. Overall, the Company's proposed rates for both water and sewer customers are designed to fairly balance the impact of the requested rate increase and respect the intent to adhere to the greatest extent reasonable to gradually impact utility rates while providing appropriate cost recovery.

Q. Is the Company proposing any changes to its miscellaneous charges?

A. No it is not.

Q. Does this conclude your testimony at this time?

A. Yes it does.

APPENDIX A

PROFESSIONAL QUALIFICATIONS

OF

GARY S. PRETTYMAN

Has over forty-four years' experience in water and wastewater utility management and regulatory practices. This includes preparation of all aspects of rate increase application, review of testimony of all witnesses participating in the case, interface with regulatory commission staff and Public Advocate, budgeting, acquisition analysis, bill analysis, legislative review, and compliance with regulatory requirements. Has testified on accounting issues, tariff design, and company policy in numerous regulatory proceedings.

PROFESSIONAL EXPERIENCE

2012 to present

Veolia Water (previously SUEZ/United Water), Paramus, New Jersey. Senior Director Regulatory Business. Responsible for preparation of rate increase application for the subsidiary companies and filing with state regulatory commissions. This includes 6 water and wastewater companies in 6 states. Also involved in other company issues including management planning, accounting, special tariff contracts, various petitions filed with Commissions and acquisitions.

2008 to July 2011

AUS Consultants, Mt. Laurel, New Jersey. Principal and Vice President. Has offered testimony as an expert witness on the subjects of revenue requirements, bill analysis, proof of revenues and tariff design, rate base, accounting, and lead/lag studies. Has also prepared original cost studies and acquisition analysis.

2004 to 2008

Prettyman Consulting, Mt Laurel, New Jersey. President and principal consultant providing rate case and other regulatory services to clients.

2001 to 2004

Elizabethtown Water Company, Westfield, New Jersey. Vice President – Rates and Regulation of Elizabethtown Water Company. Was responsible for all regulatory matters for the subsidiary companies. This includes preparation and filing of rate increase applications with the state regulatory commission, other matters filed with the commission and was liaison with regulatory organizations.

1996 to 2001

AUS Consultants, Mt. Laurel, New Jersey. Vice President responsible primarily for water and wastewater regulatory matters pertaining to rate cases. This includes: preparing all accounting exhibits and supporting testimony, preparing the petition for filing, conducting and/or assisting in settlement negotiations, bill analysis, proof of revenues and tariff design, lead/lag studies and various regulatory and financial matters.

1979 to 1996

American Water Works Company, Inc./New Jersey-American Water Company. Was employed as Director of Rates and Revenue responsible for the preparation of rate increase applications for the subsidiary water companies. Responsible for development of the company's budget function, participated in acquisition of water and/or sewer companies and prepared special projects as required. Was also Assistant Treasurer of subsidiary companies for six years.

Assistant Director of Rates and Revenue. In addition to preparing financial and economic aspects of the rate increase applications, assisted Director in the management, supervision, development, and daily operations of the department and related staff.

Business Manager for local operating office responsible for the supervision and management of all daily business-related operations of the company.

Revenue Requirement Specialist for American Water Works Service Company. Prepared and supported in testimony financial and economic aspects of the rate increase applications for operating water companies in several states.

Rate Analyst I and II. Prepared financial and economic aspects of rate increase applications for the appropriate witness in the case.

1977 to 1979

Computer Sciences Corporation. Was employed as a Staff Accountant in the Defense System Division. Developed and implemented controls for the division property system and conducted capital budget analysis, property system reconciliation, depreciation schedule, and participated in special projects.

TESTIMONY

I presented testimony to and have been cross-examined before the following regulatory authorities:

Connecticut Department of Public Utility Control
Delaware Public Service Commission
Florida Public Service Commission
Idaho Public Utility Commission (submitted only)
Indiana Utility Regulatory Commission
New Jersey Board of Public Utilities
New York Public Service Commission
North Carolina Utilities Commission (submitted only)
State of Rhode Island and Providence Plantations Public Utilities Commission
State Corporation Commission of Virginia
Public Service Commission of West Virginia (submitted only)

LIST OF CLIENTS SERVED

Adelphia Sewer Company
Adelphia Water Company
American Anglian
Andover Utility Company
Applied Wastewater Management, Inc.
Aqua Utilities Florida
Aqua New Jersey
Aqua North Carolina
Bridgeport Hydraulic Company
Connecticut Natural Gas Company
Consumers New Jersey Water Company
Delaware Assoc. of Alternative Energy Providers
Elizabethtown Water Company
Equitable Gas Company
Gulf & Southern Resources, LLC
Borough of Hamburg
Kansas City Power and Light
KH Beacon Hill Sewer, Inc.
Long Neck Water Company
Mount Holly Water Company
Mountaineer Gas Company
New Jersey-American Water Company
Papetti Hygrade (Michael Foods, Inc)
Public Water Supply Company
Rolling Hills Sewer Company
Borough of South River
Sussex Shores Water Company
Thames Water Holdings, Inc.
Trenton Water Works
Tidewater Utilities, Inc.
United Water Arlington Hills Sewerage Co.
United Water Delaware
United Water Great George
SUEZ Idaho
United Water Indiana
United Water Mid-Atlantic Utilities
United Water New Jersey
United Water New Rochelle
United Water Owego
United Water Pennsylvania
United Water Princeton Meadows
United Water Rhode Island
United Water Toms River
United Water Virginia
United Water West Chester

United Water West Milford
Wildwood Water Utility

While employed with American Water Works Company, I participated in over 75 rate proceedings in New Jersey, New York and Connecticut.

PERSONAL

Education:

1976 - Rowan University - B.A. Business Administration/Accounting

Professional Affiliations:

National Association of Water Companies –
- Member National Regulatory Committee
- Current Treasurer New Jersey Chapter
- Past Secretary New Jersey Chapter
- Past Chairman New Jersey Chapter
- Past Chairman Scholarship Committee New Jersey Chapter
- Past Member of Regulatory Committee New Jersey Chapter
- Past Member of Small Water Companies Committee – National

New Jersey Utilities Association –
- Past Chairman Rates and Regulation Committee
- Current Member Rates and Regulation Committee

New Jersey Shares –
- Member of Board of Directors

Financial Research Institute at University of Missouri – May 2023
- Faculty member – Advanced Seminar on Transformational Water Utility Pricing & Rate Design

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION
OF VEOLIA WATER NEW JERSEY, INC.
FOR APPROVAL OF AN INCREASE IN
RATES FOR WATER/SEWER SERVICE AND OTHER
TARIFF CHANGES.

BPU DOCKET NO. WR2311_____

Direct Testimony of
James Cagle

Exhibit PT-4

Q. Please state your name and business address.

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

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

A. I am the Vice President, Rates and Regulatory Affairs for Veolia Water M&S (Paramus), Inc. (VWM&S).

Q. What are your job responsibilities?

A. I am primarily responsible for the management and direction of rate case filings for the Company. I am also responsible for oversight of certain rate related compliance and reporting requirements as prescribed by the various regulatory Commissions having jurisdiction over the Veolia companies.

Q. Please outline your educational and professional qualifications.

A. I received a Bachelor of Accountancy degree from the University of Oklahoma in 1987 and am a Certified Public Accountant licensed in the State of Texas. I was initially employed by United Water M&S as Director, Regulatory Business in October of 2007 and have held my current position since March 2010. Previous to that, I was employed by Atmos Energy Corporation, a natural gas utility operating in twelve states, as Manager, Rates and Revenue Requirements. I have testified numerous times before the New Jersey Board of Public Utilities (the "Board") and several other state commissions on various regulatory issues.

Purpose and Outline

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

A. The purpose of my testimony in this case is to present and support for the following:

- o Calculation of Income taxes - Exhibit P-4 Schedule 5.
- o Calculation of Accumulated Deferred Income Taxes (ADIT) – Exhibit P-4, Schedule 5
- o Calculation of the Consolidated Tax Adjustment (CTA) - Exhibit P-4 Schedule 7-I.
- o Calculation of the allocation of the costs of VWM&S Shared Assets – Exhibit P-4 Schedule 2-N
- o Adjustments related to the protected and unprotected regulatory liability balances created by the Tax Cuts and Jobs Act (TCJA) – Exhibit P-4 Schedules 2-S and 7-E

Income Taxes

Q. Please describe the calculation of income tax expense.

A. As shown on Exhibit P-4, Schedule 5, the calculation of Federal Income Tax expense is calculated in two phases; current income tax expense and deferred income tax expense. To arrive at current taxable income, the calculation includes the pro forma revenues and expenses included in the applicable other exhibits to this filing. To arrive at current taxable income, interest charges and excess tax depreciation over book depreciation is also included as a deduction from taxable income. The calculation Interest charges included as expense in the calculation are calculated by applying the debt cost rate discussed above times

the debt portion of the Company's capital structure as shown in Exhibit P-6, to the Company's rate base as presented in the case (Exhibit P-4, Schedule 5, note [1]). The net amount represents pro-forma current taxable income to which the statutory Federal income tax rate of 21% is applied. The amortization of Income Tax Credit (ITC) then reduces this amount to arrive at total current income tax.

Deferred tax expense is then calculated by where the excess tax over book depreciation amount is multiplied by the statutory Federal income tax rate.

The total of current income and deferred income tax expenses are the total income tax expense.

Q. Please describe the Company's ADIT calculation.

A. Exhibit P-4 Schedule 7-D adds the incremental changes in ADIT for the period April 1, 2023 through the Pro-forma period ended March 31, 2024. The incremental changes are based upon projections provided by the Company's tax department and represents the incremental impact of plant in service related tax depreciation and deductions as compared to the projected book depreciation for the period. The deferred income tax amount represents this book / tax difference multiplied by the Federal income tax rate of 21%.

Additionally, for the post test year period, the ADIT impact is calculated in the same manner including only those projects which are of major nature and consequence as described in Mr. Vicente's testimony.

Consolidated Income Taxes

Q. Has the Company included a calculation of CTA in its filing?

A. Yes. The Company's calculation, compliant with the Board's Order in Docket No. EO12121072 and the Board's approved methodology contained in the regulation, is provided in Exhibit P4 Schedule 7-I.

M&S Shared Assets

Q. Please explain the shared asset adjustment shown on Schedule 2-N.

A. The adjustment included on Schedule 2-N reflects the calculation of the shared assets balance at March 31, 2023 net of accumulated depreciation and ADIT (rate base) times the rate of return as filed in this rate case plus depreciation expense. That total amount is then allocated to each operating company based upon the three factor formula in the updated and Board approved affiliate agreement. Company's affiliate agreement and cost allocation with VWM&S was approved by the Board on January 25, 2017. Previous to the agreement, capital expenditures generally related to investments in Information Technology hardware and software, such as the PeopleSoft accounting software upgrade and Powerplan asset management software for example, would have been allocated to each company and reflected on that company's balance sheet. As such, it would have increased the operating company's rate base and been recovered in rates through depreciation expense and return.

With the current methodology, the asset appropriately remains on VWM&S's balance sheet and a portion of the costs are allocated to the operating companies and recovered through deprecation and return. As a result, the

revenue requirement is the same for these assets under either the updated method or the previous method.

Tax Cuts and Jobs Act

Q. Please describe the Company's adjustment related to TCJA.

A. Amortization of the Regulatory Liability related to the Excess Accumulated Deferred Income Taxes ("EDIT") as a result of the Tax Cuts and Jobs Act is included in Exhibit P-4 Schedule 2-S while the balances of the EDIT as of the end of the test period are shown on Schedule 7-E. There are two portions of the EDIT regulatory liability: "protected" and "unprotected". The amortization of the regulatory liability which arose from normalized amounts is considered "protected" and, per the Internal Revenue Code, may be amortized no faster than over the period in which Accumulated Deferred Income Taxes ("ADIT") would have otherwise reversed. The Average Rate Assumption Method ("ARAM") of amortization must be utilized for as much of the regulatory liability as possible if the requisite data is available to the utility. The amortization period for the amount of 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.

Q. What is the current amortization of the TCJA EDIT?

A. Currently the protected portion is being amortized at an annual amount of $2,756,064. Schedule 7-E shows the remaining balance of the TCJA regulatory liability calculated utilizing this amount through March 31, 2024. There is currently no amortization of the remaining unprotected EDIT. In the last rate case filing, the

Company proposed to return the balance of the unprotected portion of the TCJA EDIT as a surcredit to customers. As anticipated, there is a residual balance related to that surcharge amount which should be amortized in this rate case filing. This residual balance is $975,779.

Q. Has the Company proposed a change to the amortization of the protectedportion of the regulatory liability?

A. Yes. As described above, protected EDIT may be amortized no faster than over the period in which ADIT would have otherwise reversed. Continuing analysis of the amounts of projected ARAM reversals show the following:

2022 – $1,428,219

2023 - $1,443,889

2024 - $1,447,654

2025 - $1,495,669

2026 – $1,506,348

The current amortization of the protected portion of the TCJA EDIT is simply too high and should be reduced to a level which is consistent with the most recent projection in order to prevent the amortization from being faster than ADIT would have otherwise reversed. We are proposing an annual amortization of $1,360,000 going forward which is slightly lower than the 2023 projected amortization. As the actual ARAM amount can be different than those projections, it is appropriate to be conservative in the amortization of these amounts in order to ensure compliance with the Internal Revenue Service requirements.

Q. What is the Company's proposal related to the remaining unprotected balance?

A. The Company is proposing to amortize this remaining balance over a three year period or approximately $325,260 per year.

Q. Does this conclude your testimony at this time?

A. Yes.

STATE OF NEW JERSEY
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IN THE MATTER OF THE PETITION
OF VEOLIA WATER NEW JERSEY, INC.

FOR APPROVAL OF AN INCREASE IN
RATES FOR WATER/SEWER SERVICE AND OTHER
TARIFF CHANGES.

BPU DOCKET NO. WR2311_____

Direct Testimony of
Maryanne Hatch

Exhibit PT-5

Q. Please state your name and business address.

A. My name is Maryanne Hatch, and my business address is 461 From Rd, Paramus, New Jersey.

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

A. I joined Veolia Water Management and Services Inc. (VWM&S) as Senior Director, Rates and Regulatory Affairs in May 2023.

Q. Please summarize your educational background and other qualifications.

A. I graduated from the University of Wyoming in 2005 with a Dual Master of Science degree in Economics and Finance. I earned my Bachelor of Science degree in Economics in 2003, also from the University of Wyoming.

Q. Please describe your work experience.

A. Prior to joining Veolia, I was employed by the National Rural Utilities Cooperative Finance Corporation (NRUCFC) from 2020 to 2023, where I was responsible for providing rate, regulatory, and policy expertise to NRUCFC member cooperatives. From 2019 through 2020 I was employed by FTI Consulting where I provided consulting services on energy and regulatory matters. From 2014 though 2018, I was employed by the Edison Electric Institute where I represented investor-owned electric utilities on policy issues. From 2012 to 2014 and I served as an economist at the

Federal Energy Regulatory Commission (FERC), within the Office of Energy Market Regulation, where I analyzed electric market-based rate filings. From 2011 through 2012 I was employed by Science Applications International Corporation (SAIC) where I provided consulting services such as financial analysis and regulatory research. From 2005 to 2011, I served as an economist at FERC, within the Office of Administrative Litigation, where I served as an witness on a variety of issues in the wholesale electric, natural gas, and refined petroleum products pipeline industries.

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

A. I have presented testimony before FERC on behalf of FERC Trial Staff.

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

A. The purpose of my testimony is to provide: (1) the Veolia Water New Jersey, ("VWNJ" or the "Company") comparative Income statements and Balance Sheets (Exhibits P-1 and P-2); (2) Income Statements consisting of 5 months actual and 7 months budget data (Exhibit P-3); and (3) normalized consumption to support the development of Test Year and Pro Forma Year revenues at present rates.

Q. Please list the Exhibits that you are sponsoring in this rate case.

A. I am sponsoring the following exhibits:

I. Exhibit P-1, Schedule 1. Income Statements - 2020, 2021, 2022

II. Exhibit P-2, Schedule 1. Balance Sheets – 2020, 2021, 2022

III. Exhibit P-3, Schedule 1. Income Statements – Twelve months Ended March 31, 2024 (5 months actual, 7 months budget)

Q. Please describe Exhibit P-1 Schedule 1.

A. Exhibit P-1 Schedule 1 reflects the Company's comparative Income Statements for the 12 months ending December 31, 2020, 2021 and 2022.

Q. Please describe Exhibit P-2 Schedule 1.

A. Exhibit P-2 Schedule 1 reflects the Company's comparative Balance Sheets at December 31, 2020, 2021 and 2022.

Q. Please describe Exhibit P-3 Schedule 1.

A. Exhibit P-3 Schedule 1 reflects the twelve months ended March 31, 2024, which is the test year in this rate case. This schedule currently includes 5 months of actual amounts booked to revenues and expenses through August 31, 2023, and budgeted 7 months amounts from September 2023 through March 2024.

Q. How was consumption normalized?

A. Consumption was normalized based on ten calendar years' worth of data. For the residential class, consumption was normalized using the base usage methodology plus a weather-related portion for the residential class.

Linear regression trends were utilized for all other customer classes. The process will be discussed in further detail below.

Q. Is the process used to normalize consumption consistent with the methodology VWNJ has utilized in the past?

A. The process used to normalize consumption is consistent with the methodology used by the Company in the previous rate case, filed in 2020. However, the period used in the normalization process has been expanded from five years to ten years to smooth out abnormalities attributable to the COVID-19 pandemic.

Q. How was consumption normalized?

A. Water consumption for all classes was normalized to develop estimated consumption for the Post Test Year period ending September 30, 2024 . For all customer classes except the residential customer class (to be discussed below), consumption was normalized by developing a trend using a linear regression of the historical consumption based on the most recent ten calendar years (2013-2022). To develop normalized consumption for the end of the Test Year, the trend was then applied to a date of September 30, 2024. Additionally, projected customer growth was incorporated to that date based on an application of projected customer growth (number of meters) as provided in the testimony of Ms. Gil.

Q. Explain the Linear Regression "Linest" function, used in projecting the consumption for Commercial, Industrial, Public Authority and Resale classes.

A. This "Linest" function calculates the statistics for a line by using the least squares method to calculate a straight line of the Company's historical consumption for the most recent ten calendar years 2013 through 2022, ending on December 31. This function shows a good correlation between history and the trend, suggesting a reasonable normalized consumption pattern and its application results in reasonable normalized consumption volumes for the Post-Test Year.

Q. Does normalized consumption for all rate classes excluding the residential rate class reflect any adjustments?

A. Yes, two adjustments were made to non-residential consumption to provide a reasonable consumption normalization given the acquisition of the Borough of Allendale assets ("Allendale""), which became part of the VWNJ system effective November 30, 2022. Before joining the system, VWNJ sold water to Allendale pursuant to the Resale (Service to Other Systems) tariff. Now that Allendale is part of the VWNJ system, those sales are no longer under the Resale tariff and are now instead made pursuant to VWNJ's General Metered tariff. Accordingly, Resale consumption was adjusted by removing sales historically made to Allendale. A separate adjustment was applied to commercial consumption because less than ten

years' worth of consumption data under the VWNJ tariff was available. This limited data for Allendale was appropriately removed from the trend analysis. Once the trend analysis was completed, an average of six years (2017-2022) of Allendale's commercial consumption data was computed and added on top of the trended consumption amount. Six years' worth of operational data was available because VWNJ operated the Allendale system during that period and provided billing services to Allendale before it became part of the VWNJ system.

Q. What approach did you use in projecting residential consumption?

A. Residential customers represent approximately 90 percent of the total number of customers served in the Company's service territory. Given this relative proportion, it is necessary to take a more detailed approach to more accurately normalize water consumption for the residential customer class. Consistent with industry trends, VWNJ has generally been seeing a decline in total water consumption and per customer usage In any particular year, water consumption can vary significantly due to external factors, particularly weather fluctuations, which can vary year over year. Other external factors include environmental changes, social and economic conditions, housing growth, conservation measures, adoption of water efficient appliances, and other extraordinary events such as a global pandemic. To more accurately determine the proper consumption level used to set rates, the analysis for residential customers was based on a

base usage methodology plus a weather-related portion. This methodology provides more accurate trends by isolating consumption that would have occurred under normal conditions and consumption that is more likely to be attributable to weather and outdoor water usage during the summer months. As noted above, I have analyzed data over a longer, 10 year, period to work to address COVID-19 abnormalities. It is also consistent with the methodology used by the Company in its previous rate case, filed in 2020.

Q. Explain the base usage methodology you used in projecting residential consumption.

A. First, the historical usage per meter was calculated on a monthly basis for the most recent ten calendar years (2013-2022). Then, a trend using the average usage of the base months or winter months (Jan, Feb, Mar, and Apr) “Base Usage” was calculated. Next, this base usage by year was compared against total average usage by year for the entire period to determine the ten year “Excess-Over Base” average usage. The trend in base usage and the excess over base average usage was added together to arrive at a normalized residential per capita usage of 7.687 thousand gallons per month. This number was then multiplied by the total projected residential customers to arrive at the projected residential consumption for the Pro Forma period of 21,433,216 thousand gallons.

Q. Does normalized consumption for the residential rate class reflect any adjustments?

A. Yes. This calculation includes an adjustment to reflect the recent acquisitions of the Allendale system, as well as the former West Milford MUA which became part of the VWNJ system in October 2018. Consumption data under the VWNJ tariff for both acquisitions was less than ten calendar years. Consistent with the adjustment to consumption reflecting the Allendale acquisition discussed previously, the limited residential consumption data that was available for Allendale and West Milford MUA was removed from the trend analysis. Once the trend analysis was completed, an average of six years (2017-2022) of Allendale's residential consumption and an average of four years (2019-2022) of West Milford MUA's residential consumption was computed and added on top of the trended amount.

Q. In what Exhibit can the Normalized Consumption be found?

A. The Normalized Consumption is included in Exhibit P-4 Schedule 1A, column 11, under General Meter sales and Resale lines, discussed in Ms. Gil's Testimony.

Q. Does this conclude your direct testimony?

A. Yes, it does.

STATE OF NEW JERSEY
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TARIFF CHANGES.

BPU DOCKET NO. WR2311_____

Direct Testimony of
Lino Bucci

Exhibit PT-6

Q. Please state your name and business address.

A. My name is Lino Bucci, and my business address is 461 From Road, Paramus, New Jersey 07652.

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

A. I am employed by Veolia Water Management & Services Inc. ("VWM&S" and formerly SUEZ Water Management & Services Inc.) as a Regulatory Specialist. In this role, I am responsible for assisting my team in preparing, compiling, analyzing, and presenting data to support rate and compliance filings. I also support changing the rates within the Company's Customer Care and Billing platform.

Q. Please summarize your educational background and other qualifications.

A. I graduated from Ramapo College of New Jersey, Mahwah, New Jersey in 2017 with a Bachelor of Science Business Administration degree with a concentration in Finance.

Q. Please describe your work experience.

A. After graduating from Ramapo College of New Jersey, I joined VWM&S where I am currently employed. I was promoted from Associate Rate Analyst to Rate Analyst in March 2020, and then promoted to Regulatory Specialist in July 2021.

Q. Before which regulatory agencies have you previously presented testimony?

A. I have provided testimony in rate case proceedings before the New Jersey Board of Public Utilities and the New York Public Service Commission.

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

A. The purpose of my testimony is to support the calculations of certain Operation and Maintenance ("O&M") expenses. I developed the Pro Forma expenses by reflecting known and measurable changes on an annualized basis to the Historic Test Year ("HTY") which represents the twelve months ended March 31, 2023. In addition, I made normalization calculations to develop costs that reflect the continuing operations of the Company.

Q. What Exhibits and Schedules are you presenting in support of the filing?

A. I am supporting the adjustments to O&M, as well as Payroll Taxes, as summarized in Exhibit P-4 Schedules 2 and 4. Please see below for a summary of the specific schedules I am supporting.

O&M Expenses:

2-A Salaries and Wages

2-B Employee Health and Welfare

2-C Fringe Benefits Transferred

2-D Pension Expense

2-E Post Retirement Benefits Expense

2-F Purchased Water

2-G Purchased Power

2-H Chemicals

2-I Waste Disposal

2-W Non-Revenue Water and Inflationary Factor

Taxes Other Than Income:

4-B Payroll Taxes

Q. Describe generally the approach taken in preparing your adjustments.

A. I made normalizing and annualizing adjustments to operating expense accounts to properly reflect in rates going forward appropriate levels used in this filing to make them consistent with the revenues and rate base items. For expenses that can be independently analyzed, such as labor, purchased water, purchased power, and chemicals, I made adjustments to annualize and normalize the expenses based upon known and measurable changes. For the purpose of projecting other expenses where such information is not available, Blue Chip Financial Forecast's estimated increases to the GDP Price Index were used to reflect inflationary trends as reflected in Schedule 2-W, discussed further in my testimony.

Q. Please describe each adjustment to Operating Expenses that you are sponsoring.

A. **Exhibit P-4 Schedule 2-A Salaries and Wages:** The adjustment to Salaries and Wages expense represents the normalized and annualized calculation of labor expense from the HTY ending 3/31/23 through the Test Year ending 3/31/24. In order to normalize salaries, actual salaries as of July 31, 2023 were used to capture actual salary increases to Non-Bargaining employees that went into effect April 1, 2023, and to capture actual salary increases to the Matchaponix Division (formerly SUEZ Water Matchaponix, Inc.) Wage increases to Bargaining employees that went into effect May 15, 2023 were similarly normalized. The remaining Bargaining employees for the North Operations (formerly SUEZ Water New Jersey Inc.) and the Mid-State Operations (formerly SUEZ Water Toms River Inc.) were increased by the salary increases as negotiated by Union agreements. Furthermore, the adjustment to Salaries and Wages in the Pro Forma year also reflects filling vacant positions as of March 31, 2023, as well as the addition of new positions expected to be filled. Please refer to the testimony of Mr. Weland for further details regarding the Company's need for full staffing and the timing of filling the new positions.

To compute total annual Salaries and Wages, amounts related to a normalized level of overtime pay and incentive compensation were also included. The normalized adjustment for overtime pay was calculated using the HTY increased by the normalized salary increases allowed per the

Union agreements to determine the appropriate normalized Pro Forma year amounts. The amount of incentive compensation was determined by applying a target percentage determined by each employee's eligibility in accordance with the Company's Short-Term Incentive Plan (STIP) guidelines to the employee's base pay. This program is available to exempt employees. Non-exempt employees and Union employees receive bonus payments.

The normalization adjustment for labor transferred in, transferred out, and for capitalized labor, was calculated based upon a four-year historical average percentage utilizing calendar years 2020, 2021, 2022, and the HTY 12 months ended March 31, 2023.

Exhibit P-4 Schedule 2-B Employee Health and Welfare: Employee group health and life are costs incurred by the Company to provide medical, dental, and vision care, along with group term life insurance coverage to employees. Employee group health and life expense was determined by using actual rates for 2023 for employees enrolled in the medical plan as of March 31, 2023, normalized to include the addition of the currently vacant but to be filled positions and new positions, and then adjusted by 2.8% inflation.(see Schedule 2-W.)

Employee 401k costs reflect the Company's 401k matching contribution. The Pro Forma amount for 401k was normalized by using the annualized actual amounts for the month of March 2023. The normalized

amount was then adjusted by applying the salary increase scheduled pursuant to the Union agreements, then divided by the actual number of employees as of March 2023, and then finally multiplied by the total number of employees expected during the Pro Forma year.

The Pro Forma amount for other employee benefits was normalized by using the HTY amounts adjusted for inflation.

Worker's compensation expense was normalized by using a four-year average of actual historical premium and claim costs for the calendar years 2020, 2021, 2022, and the HTY.

Exhibit P-4 Schedule 2-C Fringe Benefits Transferred: Fringe benefits, such as group health and life, payroll taxes, worker's compensation, pension, other post-employment benefits ("OPEB"), and other employee benefits, are allocated to either capital or other Operating Units. Fringe benefits was adjusted using the same percentages calculated for labor transfers. According to ASC 715-30-35-4, only the Service Cost for Pension and OPEB is subject to capitalization, and the Company has reflected this in its calculations.

The adjustment also includes the allocation from the Company's other general and administrative expenses to other business units for call center costs and laboratory charges. The Pro Forma amounts were developed based on the HTY actuals adjusted by inflation.

Exhibit P-4 Schedule 2-D Pension Expense and 2-E Post Retirement Benefits Expense: The Pro Forma amounts for both Pension and OPEB reflect the level of costs determined for 2023 by the Company's actuary, Willis Towers Watson, based on the current employee complement, adjusted by inflation. In an effort to contain costs for these benefits, the Company has not provided pension and OPEB benefits for new hires for a number of years.

Exhibit P-4 Schedule 2-F Purchased Water: The adjustment for Purchased Water represents the normalized expense for water operations. The Company purchases water per the agreements with the City of Jersey City, Montvale, Hoboken, New Jersey Water Supply Authority ("NJWSA"), Passaic Valley Water Commission on an as-needed basis, and the Township of Freehold.

The Pro Forma year for Jersey City was calculated based on the historical three-year average of gallons purchased from calendar years 2021, 2022, and the HTY, and the actual price per the agreement.

The Pro Forma year for Montvale was calculated based on the historical four-year average of gallons purchased from calendar years 2020, 2021, 2022, and the HTY, and the tariff rates to be effective February 1, 2024 (Veolia Water New York Rate Year 4 rates per Order 19-W-0168).

The Pro Forma year for Hoboken was based on the actual 2023 cost adjusted by the annual increase per the agreement.

The Pro Forma year for NJWSA was calculated based on the minimum purchased water gallons per the Company's agreement with NJWSA, and the actual prices from NJWSA and from Delaware River Basin Commission.

The Pro Forma year for Township of Freehold was calculated based on the historical four-year average of gallons purchased from calendar years 2020, 2021, 2022, and the HTY, and the tariff rates per their website retrieved in July 2023. The Company is not aware of any upcoming rate changes.

Exhibit P-4 Schedule 2-G Purchased Power: The adjustment for Purchased Power represents the normalized expense for purchased power needed for our water and sewer operations, calculated separately. The total power cost was calculated by first determining the water production and the sewer flow for the Pro Forma year. Water production was calculated by using the Pro Forma year water consumption, provided by Ms. Gil, grossed up by the average non-revenue water percentage shown in Schedule 2W. Sewer flow was calculated by averaging the flow from calendar years 2020, 2021, 2022, and the HTY. Next, the average kilowatt hour (kWh) per thousand gallons for water and sewer operations were calculated by using a four-year average of calendar years 2020, 2021, 2022, and the HTY, and a three-year average of calendar years 2021, 2022, and the HTY, respectively. The total kWh used for the Pro Forma year for water and

sewer operations was multiplied by the average power cost per kWh from the HTY, and then adjusted by the average annual increase from calendar years 2020, 2021, 2022, and the HTY.

Pro Forma gas costs was based on the actual HTY expense adjusted by inflation.

Pro Forma other utilities unrelated to volume costs were based on the averaging of calendar years 2020, 2021, 2022, and the HTY, adjusted by inflation.

Pro Forma DOW Reimbursement costs were based on the averaging of calendar years 2020, 2021, 2022, and the HTY.

Exhibit P-4 Schedule 2-H Chemicals: The adjustment for Chemicals represents the normalized expense for chemicals needed related to our water and sewer operations, calculated separately. The total chemical cost was calculated by using the historical four-year average usage per chemical per million gallons of water for water operations, and per million gallons of sewer flow for sewer operations, from 2020 to the HTY. The calculated average usage was then multiplied by the projected water production or sewer flow in the Pro Forma year to determine the quantity of chemicals to be used. Water production was calculated by using the Pro Forma year water consumption grossed up by the average non-revenue water percentage shown in Schedule 2W, adjusted to remove raw water. Sewer flow was calculated by averaging the flow by location from calendar years

2020, 2021, 2022, and the HTY. The quantity of chemicals to be used was then multiplied by either the chemical prices provided by the Company's Procurement Department projected 2024 prices, or the most recent price adjusted by inflation.

Exhibit P-4 Schedule 2-I Waste Disposal: The adjustment for Waste Disposal represents the normalized expense for water and sewer operations, calculated separately. Waste disposal is calculated by multiplying the quantity or total flow by the unit price.

The Pro Forma quantity was determined by using an average of historical calendar years quantities ranging from 2020 to the HTY, or the actual quantity from the HTY, depending on the historical trends.

The Pro Forma unit price was determined by using an average of historical calendar years cost ranging from 2020 to the HTY, or the actual cost from the HTY adjusted for inflation.

If there was no quantity or unit price available, total cost was used to determine the Pro Forma year based on the averaging of available historical costs, adjusted for inflation.

Exhibit P-4 Schedule 2-N Management and Services Fee: Please refer to the testimony of Ms. Jacob for further details regarding the Company's Management and Services fees expense ("M&S") adjustments, and to Mr.

Cagle for details regarding the M&S Shared Assets adjustments. Those witnesses provided the inputs which I included in this schedule.

2-W Non-Revenue Water and Inflationary Factor: This schedule shows the calculation of the Pro Forma year water production for the Company, as well as the reason for the inflationary factor used in this calculation. Water production was calculated by using the Pro Forma year water consumption grossed up by the historical three-year average non-revenue water percentage. The North Operation has a separate line to remove raw water from the projected Pro Forma year water production to determine the level of usage applied to chemicals. This adjustment differentiates water production used in the Pro Forma Purchased Power and Chemicals calculations, as discussed previously in my testimony.

The inflation factors used were obtained from the Blue Chip Financial Forecast's estimates of increases to the Consumer Price Index as of June 1, 2023 (Volume 39, No. 5). Projections for the last three quarters of 2023 and the first and second quarters of 2024 were used. These rates were used to reflect increases in certain expenses from the HTY to approximate the amount for the Pro Forma year, as noted in the above testimony.

Exhibit P-4 Schedule 4-B Payroll Taxes: Payroll taxes were calculated using the statutory Federal and State tax rates, which were applied to the taxable payroll base in the Pro Forma year.

Q. Does this conclude your testimony?

A. Yes, it does.

STATE OF NEW JERSEY
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BPU DOCKET NO. WR2311_____

Direct Testimony of

Jana Labella

Exhibit PT-7

Q. Please state your name and business address.

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

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

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

Q. Please summarize your educational background and other qualifications.

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

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

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

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.(NYPSC) and Veolia Water Delaware, Inc.(DPSC)

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 Exhibit P-4, Schedules 2 and 4, and to describe proposed adjustments to Operation and Maintenance Expenses and Taxes, Other than Income Taxes, for Veolia Water New Jersey, Inc. ("the Company" or "Veolia").

Q. Which Exhibits and Schedules are you sponsoring in this rate case?

A. I am sponsoring the following schedules:

Schedule 2-J	Transportation
Schedule 2-K	Uncollectible
Schedule 2-L	Customer Information/ Billing Cost
Schedule 2-M	Rents and Leases
Schedule 2-N1	Liability Insurance

Schedule 2-O Outside Services

Schedule 2-P Regulatory Commission Expense

Schedule 2-QAmortization of Tank Painting Costs

Schedule 2-R Amortization of Rate Case Expense

Schedule 2-S Amortization TCJA 2017

Schedule 2-T Amortization Remediation Costs

Schedule 2-U Amortization Miscellaneous

Schedule 2-V Other Operation and Maintenance Expenses

Schedule 4-A Real Estate Taxes

Schedule 4-C Gross Receipts, Franchise and Excise Taxes

Schedule 4-D Other Miscellaneous Taxes

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

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

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

A. For this rate filing, the Company is utilizing a historical test year consisting of a 12-month period ended March 31, 2023, of actual data ("HTY") and a test period consisting of twelve months ending March 31, 2024 ("Pro Forma" or "Test Year"). The HTY is based on actual data per the company's books and records, which is

kept in conformity with the Uniform System of Accounts for water companies. For the Test Year the Company analyzed historical actual data as well as projected expenditures in order to identify appropriate and normalizing adjustments. I have identified those analyses in detail below in the relevant sections of my testimony. Further adjustments were also made to account for any known changes in costs projected to occur either in the Test Year or Pro Forma period which I believe to be measurable with a reasonable accuracy at the time of this rate filing. As further information becomes available, it is my intention to update these various schedules as appropriate.

Q. Turning now to the schedules you are sponsoring; would you please discuss the adjustments to Veolia's operation and maintenance expenses reflected in schedules you are sponsoring:

A. **Schedule 2-J, Transportation.** Transportation expenses other than leases, fuel, payroll, insurance, and depreciation were normalized by averaging historical information from years 2020 through the HTY. This average was increased by the Test Year inflation factor to determine the Pro Forma expense.(see Schedule 2-W)

Leasing costs were determined by annualizing the current level of leased vehicles at monthly leasing costs. Fuel cost has increased in recent years, therefore the Pro Forma was projected by utilizing the HTY level of expense as the most up-to-date cost.

The Pro Forma amount for payroll is the allocation from the Salaries and Wages and Fringe Benefits Schedules 2A and 2C.

An auto insurance cost for the Test Year was developed by taking a four-year average of historical information, excluding (as non-recurring) an auto accident indemnity payment of $805K as noted in the WP 2-J, and that adjusted four year average was further increased by the Test Year inflation factor.

The Pro Forma amount for depreciation is estimated using the HTY level of expense. The Pro Forma amount for Rents is the four-year average allocation adjusted by the average rate increase of rents from the Rents Schedule 2-M. An adjustment was also made to reduce the expense for capitalized and transferred out costs by using the Test Year allocation percentages from the Labor Transfers workpaper applied to the Pro Forma total transportation expense.

Q. Please continue discussing the rest of the schedules.

A. Schedule 2-L, Uncollectible. The uncollectible percentage for Pro Forma was calculated using actual write-off activity for the 9-months ended September 2023 over operational revenue for the same period. This was done to reflect current write-off activity since the Covid-19 pandemic, The Company was not allowed to shut off customers for non-payments pursuant to the directive of the New Jersey Board of Public Utilities (“BPU” or “Board”). This percentage was then applied to the Test Year operating revenues at present rates, provided by Ms. Gil, to determine the uncollectible Pro Forma expense.

Schedule 2-L, Customer Info Billing Costs. The Customer Info Billing Costs is composed of the costs for billing, printing, reports, customer notifications and postage. Costs were adjusted to reflect the total number of bills from the HTY multiplied by the average price per unit of the same period and then adjusted by the inflation factor for the Pro Forma.

Schedule 2-M, Rents. The Pro Forma rent expense for Copier Machines, Trailer Rentals, Railways and Miscellaneous rent was normalized by averaging historical information from years 2020 through the HTY. This average was increased by the inflation factor to determine the Pro Forma expense. Postage machine expense was annualized for Pro Forma using 2023 payments. All other Test Year amounts should represent the 2023 payment amount per the contract or the current invoice plus the annual escalation factor within the contract as specified in the contract and noted on the relevant schedule.

Schedule No. **2-N1, Insurance General Liability**. Beginning in January 2020, the accounting methodology related to insurance general liability changed. Claims that used to be allocated through Management and Services ("M&S") are now being charged directly to the regulated companies. The premiums are still allocated through M&S. The Test Year expense was calculated by taking a four-year average of claims multiplied by an inflation factor. Workpaper No. 2-N1 provides the components and support for the computation of the Pro Forma expense.

Schedule 2-O, Outside Services. The Company outsources additional professional and technical support in areas where this may be required, such as,

lawn maintenance, security, e-billing, IT Support, legal, etc. Most of the outside services costs for the Test Year period were computed by applying an inflation factor to the four-year average of actual costs for the calendar years 2020, 2021, 2022, and the HTY, except for the items specifically discussed below or in the notes to the WP 2-O, Outside Services.

Engineering Consultants expense included an environmental obligation recorded in CY 2022 and also included in the HTY period in the amount of $3.5M for potential future environmental remediation of contaminated soil around the water tanks. This amount was removed from the averaging for normalization purposes.

For some costs like e-billing and e-payment convenience fees, as well as other costs identified in the Schedule 2-O, the HTY amounts reflect the most updated trend. In these cases, this amount was used and adjusted by the inflation factor to arrive at the Pro Forma amount.

Any additional costs expected for the Pro Forma period were also included. WP 2-O, Outside Services, which provides components and support for the calculation of the Pro Forma expense.

All Covid related expenses were removed from the calendar years 2020 through the HTY and shown on a separate line and are not included in this rate case.

Schedule 2-P, Regulatory Commission. To calculate the Pro Forma regulatory commission expense, the Company used 2023 assessment rates per invoice multiplied by the Pro Forma water and sewer operating revenues at present and

proposed rates provided by Ms. Gil. Starting in 2021, the Company receives a consolidated assessment invoice for all New Jersey regulated entities. For the filing purposes, WP 2-P is split between water and sewer segment using the same assessment rates.

Schedule 2-Q Amortization of Tank Painting. The Pro Forma amortization amount includes previously approved tank painting amortization amounts as well as additional cost/credit associated with previous tank painting projects which company incurred after the rate case approval. Five additional tank paintings are planned during the Pro Forma period. Two of which are planned to be painted in May 2024. The Company is proposing an amortization period of 20 years for all five projects.

Schedule 2-R, Amortization of Rate Case Expenses. The amortization of 2020 rate case ends at the end of July 2024 and therefore is excluded from the Pro Forma expense. The Test Year includes a projected cost associated with filing of current rate case. The Company estimates to incur approximately $525,000 in costs related to consultants retained for this proceeding for rate of return study, as well as the cost for legal services from outside counsel and other administrative costs. The Company proposes to amortize these costs over a three-year period.

Schedule 2-S, Amortization of Tax Cuts and Jobs Act ("TCJA") 2017. The Historical Test Year expense represents current allowed amortization of the regulatory liability related to the excess accumulated deferred income taxes as a result of the 2017 Tax Cuts and Jobs Act as approved in the last rate case. The

Pro Forma expense reflects a proposed adjustment to the annual amortization of TCJA, which is further discussed in the testimony of Mr. Cagle.

Schedule 2-T, Amortization of Remediation Cost. The Test Year expense represents current allowed amortization of remediation cost for New Milford approved in Docket No. WR15101177, which amortization will not end until April 2036.

The HTY includes Parkway and Whitesville radium removal media exchange amortization, approved in the last case, which ends within the Test Year, and hence, is not included in the Pro Forma expense. The Company has contracted Water Remediation Technology LLC to perform the media change out later in 2023 and the amounts for both locations are included in the Pro Forma year. The Company is proposing to amortize Parkway media exchange over 24-months period and Whitesville location over 36-months period. The amortization periods are based upon the anticipated time periods for future replacement cycles.

Schedule 2-U, Amortization Miscellaneous.

This schedule represents other amortizations. MTBE product liability litigation and cancer cluster expenses were approved previously with amortization periods extending beyond the Pro Forma period.

The Company filed a letter with the Board regarding the disposition of land in the Boroughs of Alpine, Franklin Lakes, and Bogota that they were in the ordinary course of business and did not require a separate petition. All of these lands were vacant and not used by the Company. The Board agreed in a letter dated January 22, 2021. The land sale of property in Township of North Bergen

was approved in Docket No. WM17050462. The Company has included half of the gain on sale, consistent with our understanding of the Board's policy, and proposing to amortize it over 36-months period consistent with the rate case expenses.

Schedule 2-V, Other Operation and Maintenance ("O&M").

Most Pro Forma amounts for Other O&M expenses were computed by taking an average of four years from 2020 through the HTY escalated by the Test Year inflation factor. Two components of Other O&M were adjusted for normalization purposes. The first adjustment is to reclassify 2020, 2021, 2022, and HTY rent expense for postage meter recorded to Other O&M to WP 2-M, Rents. The second adjustment is to include Cintas uniforms rental charges, previously recorded to Rents, in the calculation of Pro Forma costs of uniform purchases included in the Safety Material - General line, as the Company no longer rents the uniforms.

For Lake Deforest Reservoir, the Company utilized the most recent payment as the best estimate for Pro Forma period. Lake Deforest was developed many decades ago as a regional water supply for the benefit of the residents of Rockland County, New York and the residents of Bergen County, New Jersey. The Company entered into an agreement in 1954 with what is now Veolia Water New York, Inc.("VWNY"), which provided for the allocation of the annual operating charge for the operation of the Lake Deforest Reservoir, and the annual payment by VWNJ to VWNY in connection with the operation of the Lake Deforest

Reservoir. I understand that this contractual payment has been recognized for many years in VWNJ rate case.

All Covid related expenses were removed from the calendar years 2020 through the HTY and shown as a separate line item and are not being requested for recovery in this case since we understand the Board's intention is to handle it separately. However, during the pendency of this rate case, should the Board make a determination on these expenses, it could be appropriate to make an appropriate adjustment to reflect those costs in rates resulting from this case.

Q. Regarding Taxes Other than Income Taxes, would you please describe the adjustments proposed to Schedules 4-A, 4-C and 4-D.

A. **Schedule 4-A, Real Estate Taxes.** This adjustment was calculated based on used and useful utility plant/property that will be used to provide service to customers through the end of the Test Year., March 31, 2024. The Pro Forma expense was calculated by averaging the annual percentage increases between calendar years 2020 and 2022 and multiplying this average by HTY expense, as adjusted. The adjustments reflect sale of parcels, decreases in property tax rates, and increases in assessed value as explained in the notes to WP 4-A, Real Estate Taxes. For the locations showing land sale, the taxes associated with the sold lots were excluded from the averaging for Pro Forma calculation. The locations, which had tax rate decreases and/ or increases in assessed values, the Pro Forma was calculated using 2023 payments annualized and escalated by the inflation factor.

Schedule 4-C, Gross Receipts, Franchise and Excise Taxes. Gross Receipts and Franchise Taxes were determined by using Pro Forma revenue, as provided

by Ms. Gil, and adjusted for non-taxable revenue and allowed exemptions. Net revenue was then multiplied by the statutory 2023 tax rates to arrive at Gross Receipts, Franchise and Excise Taxes.

Schedule 4-D, Other Taxes. The water system delivery tax was determined by using a rate of $.01 per thousand gallons to the billed consumption in the Pro Forma period. The Water Diversion Tax was determined using a three-year average of actual payments from calendar years 2020 through 2022.

Q. Does this conclude your testimony?

A. Yes.

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION
OF VEOLIA WATER NEW JERSEY, INC.
FOR APPROVAL OF AN INCREASE IN
RATES FOR WATER/SEWER SERVICE AND OTHER
TARIFF CHANGES.

BPU DOCKET NO. WR2311_____

Direct Testimony of
Anupa Jacob

Exhibit PT-8

Q. Please state your name and business address.

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

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

A. I am the Vice President/Controller & Chief Accounting Officer at VWM&S (formerly SUEZ Water Management & Services Inc.) with the overall responsibility over the Company's financial accounting records of the regulated companies. The regulated companies consist of those companies that are regulated by the state Public Utility Commission in New Jersey, New York, Pennsylvania, Delaware, Rhode Island and Idaho.

Q. Please describe your work experience

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

Q. Please summarize your educational background and other qualifications.

A. I received a Bachelor's Degree in Electronics and Communication Engineering from Cochin University of Science and Technology, India and a Master of Business Administration with a concentration in Accounting from Baruch College, City University of New York. I am a Certified Public Accountant licensed in the State of New York.

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

A. I have previously presented testimony before the Idaho Public Utilities Commission and the Delaware Public Service Commission.

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

A. The purpose of my testimony is to describe the nature of the Management and Services Fee and the methodology followed to calculate the allocations to Veolia Water New Jersey, Inc. ("VWNJ").

Q. Which of the Schedules are you sponsoring?

A. I will be sponsoring line 1 of Exhibit P4 Schedule 2N which represents the Management & Services ("M&S") costs component of the total M&S fees.

Q. Please describe the Schedules you are presenting in support of the M&S costs.

A. The M&S costs for historical test year ended March 31, 2023 was normalized for certain pension allocation adjustments. The normalized amount was then adjusted by the projected salary increase factor of 3% (as shown in the payroll workpapers contained in SIR-23) to arrive at the proforma M&S costs component of the M&S fees.

Q. What does the M&S costs component of M&S fees represent?

A. M&S costs represents the services provided to VWNJ by VWM&S employees. These services include administrative, engineering, legal, operations, accounting, finance, human resources, purchasing, insurance, data processing, customer service, billing, public relations, planning and ratemaking services and other general services necessary for the proper conduct of our business.

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

A. VWM&S continues to use the cost allocation methodology described in the Cost Allocation Manual ("CAM"). The shared services allocation methodology did not change as a result of the merger with Veolia, and so has been in use by the Company since 1/25/17 (BPU order Docket No. WO16080806)That manual has provided the basis of these fees during the last two of New Jersey base rate cases. The purpose of the CAM is to ensure that the items I have listed above and services provided to the utility

subsidiaries are accounted for properly so that the Company recovers those prudently incurred charges..

When significant organizational changes occur which may affect the allocation of shared costs between affiliated entities, VWM&S reviews the nature of the changes and determines the necessary updates to the allocation factors in accordance with the CAM. As a result of the merger with Veolia in the first quarter of 2022, there were announcements made regarding the scope and responsibilities of certain employees within the shared services group. We reviewed these changes with each department, and we recalculated the new allocation percentages using the three-factor formula contained in that manual depending on the scope of responsibilities for each employee within a department.

Q. Are there any other components that are included in the M&S Fees?

A. As described in Mr. Cagle's Testimony, in addition to the services fees discussed above, depreciation expense related to shared assets and a return on the same is also included within the M&S fees.

Q. Does this conclude your testimony?

A. Yes, it does.

STATE OF NEW JERSEY
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IN THE MATTER OF THE PETITION OF
VEOLIA WATER NEW JERSEY, INC.
FOR APPROVAL OF AN INCREASE IN
RATES FOR WATER/SEWER SERVICE AND OTHER
TARIFF CHANGES

BPU DOCKET NO. WR2311 _____

Direct Testimony of
Katherine Arp

Exhibit PT-9

Q. Please state your name and business address.

A. My name is Katherine Arp, and my business address is 461 From Road, Suite 400, Paramus, New Jersey 07652.

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

A. I am employed by Veolia Management & Services ("VWM&S") as a Senior Regulatory Specialist. In this role, I am responsible for compiling, analyzing, and logically presenting supporting data for rate cases.

Q. Please summarize your educational background and other qualifications.

A. I graduated from William Paterson University in Wayne, New Jersey in 2005 with a Bachelor of Science degree in Accounting.

Q. Please describe your work experience.

A. Before joining the VWM&S Regulatory Business department, I worked eleven years in the accounting department with a focus on fixed assets and corporate management and services costs.

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

A. I have provided testimony in rate case proceedings before the New York Public Service Commission, State of Rhode Island and Providence

Plantations Public Utilities Commission, Delaware Public Service Commission, and New Jersey Board of Public Utilities in Cases WR18050593 and WR20110729.

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

A. The purpose of my testimony is to provide support for Veolia Water New Jersey, Inc.'s ("VWNJ" or the "Company") calculation of normalized Depreciation Expense for the Test Year and Post-Test Year and the computation of Rate Base for the Test Year ending March 31, 2024 and the Post-Test Year ending September 30, 2024.

Q. Please list the Exhibits that you are sponsoring in this rate case.

A. I am sponsoring the following exhibits:

I. Exhibit P-4, Schedule 3. Depreciation and Amortization Expense

II. Exhibit P-4, Schedule 7. Rate Base

Q. Please describe Exhibit P-4 Schedule 3.

A. Exhibit P-4, Schedule 3 is a summary of the Company's calculation of its pro forma depreciation expense based on proposed additional costs to Plant in Service and acquisition adjustments during the Test Year and Post-Test Year.

The Pro Forma Depreciation Expense is derived by multiplying the individual plant account components shown on Exhibit P-4, Schedule 7A

and acquisition adjustments at Post-Test Year with VWNJ's current annual depreciation rates and amortization periods.

Q. Please list the sub-schedules you are presenting in support of VWNJ's Rate Base.

A. In all, there are seven (7) sub-schedules in Exhibit P-4 Schedule 7 that I have prepared in support of VWNJ's rate base. They are as follows:

I. Schedule 7-A: Plant in Service Summary
II. Schedule 7-B: Accumulated Depreciation Summary
III. Schedule 7-C: Contributions in Aid of Construction and Customer Advances for Construction Summary
IV. Schedule 7-F: Materials and Supplies Summary
V. Schedule 7-G: Prepaid Expenses Summary
VI. Schedule 7-H: Customer Deposits
VII. Schedule 7-J: Cash Working Capital

In addition, I am supporting the calculation of the rate base, Exhibit P-4 Schedule 7, which summarizes the results of these Schedules as well as those sponsored by other witnesses. I am responsible for taking the information from these other witnesses and combining that data with the schedules I am responsible for in order to develop the Company's rate base request.

Q. What other rate base related items are sponsored by Company witnesses besides you?

A. The forecasted Plant Additions and Retirements as shown in Schedule 7-A are sponsored by Mr. Antonio Vicente in Exhibit P-5. In addition, Mr. James Cagle will sponsor the following sub-schedules: Accumulated Deferred Income Tax (Schedule 7-D) shown on line 7, Regulatory Liability TCJA (Schedule 7-E) shown on line 8, and the Calculation of CTA (Schedule 7-I) shown on line 13 of Exhibit P-4, Schedule 7.

Q. Please describe Schedule 7.

A. Schedule 7 shows the results of the information from the applicable supporting schedules. The Historic Test Year data ending March 31, 2023, is directly from the Company's books and records. The Test Year ending March 31, 2024, includes forecasted plant additions through March 31, 2024, as well as changes to other balances calculated and projected through that date. For the Post-Test Year ending September 30, 2024, only changes related to plant in service, accumulated depreciation, and Accumulated Deferred Income taxes for those projects that are major in nature and consequence, that were supplied by Mr. Vicente, are projected.

Q. Please describe Schedule 7-A.

A. Schedule 7-A shows how the Company's Utility Plant in Service balance is derived. Column 1 shows the Plant balance as of March 31, 2023. Columns

2 and 3 show actual plant additions and retirements from April 1, 2023 through July 31, 2023. Columns 4 and 5 show the forecasted plant additions and retirements. Columns 2 through 5 are added to column 1 (Plant Balance) to arrive at the Test Year Plant Balance (3/31/2024) in column 6. Using the same method, columns 7 and 8 show projected plant additions and retirements for the post test year period. These figures are added to the Test Year Balance (column 6) to arrive at the Post-Test Year (9/30/2024) Plant balance in column 9.

Q. Please explain the basis for the Additions and Retirements on Schedule 7-A.

A. The forecasted capital additions for the Test Year and Post-Test Year were provided by Mr. Antonio Vicente. They are shown in columns 4 and 7 within schedule 7-A and detailed on Exhibit P-5. These costs represent plant expenditures that will be placed in service by March 31, 2024, and those projects that will be in service and are major in nature and consequence as of September 30, 2024, respectively. In addition, Mr. Vicente also provided the retirements associated with these capital projects, and these amounts are included in columns 5 and 8 within same schedule.

Q. Please describe Schedule 7-B.

A. Schedule 7-B shows the calculation of the Accumulated Depreciation balances for the Test Year and Post-Test Year. Line 1 is the Accumulated

Depreciation balance as of March 31, 2023 (historical test year). Columns 2 through 5 show actual depreciation expense, retirements, cost of removal, and salvage from April 1, 2023 through July 31, 2023. Lines 6 and 14 show eight months (August 2023 through March 2024) of Test Year depreciation expense and six months (April 2024 through September 2024) of the Post-Test Year depreciation expense for those projects that are major in nature and consequence is added to the Accumulated Depreciation balance. This balance is also adjusted by both the Retirements (lines 7 and 15), which were included in the calculation of the utility plant on Schedule 7-A, and the cost of removal/salvage (lines 8, 9, 16, and 17). These forecasted Plant Retirements, Cost of Removal, and Salvage were also provided by Mr. Vicente.

Q. Please describe Schedule 7-C.

A. Schedule 7-C shows the calculation of the Contributions in Aid of Construction ("CIAC") and Customer Advances for Construction ("CAC") balance. Lines 1 and 2 show the CIAC and CAC balance as of March 31, 2023. Lines 4 and 5 are actual additions and refunds from April 1, 2023 through July 31, 2023. Line 3 is nine (9) months of additional amortization for CIAC MTBE, line 6 is the forecasted contributions and line 7 is the forecasted refunds expected by March 31, 2024. Lines 1 through 7 are added together to arrive at the Test Year balance (Line 8). There are no additional amounts of CIAC and CAC being requested for the Post-Test

Year September 30,2024 period. Forecasted CIAC was provided by Mr. Vicente in Exhibit P-5.

Q. Please describe Schedule 7-F.

A. Schedule 7-F shows a summary of Materials and Supplies used for operating and maintenance purposes. Since it represents an ongoing investment by the Company in providing water service to its customers, it is included in the rate base. As has been the consistent company practice, a thirteen (13) month average was used to calculate this amount since actual dollar amounts vary from month to month.

Q. Please describe Schedule 7-G.

A. Schedule 7-G shows a summary of Prepaid Expenses (e.g. prepaid taxes for property, gross receipts, franchise, and excise). As with the previous schedule, these expenses represent an investment by the Company in providing water service to its customers. Thus, consistent with company practice, they should be included in the rate base. Again, as described in Schedule 7-F above, a thirteen (13) month average was used to calculate this amount since actual dollar amounts vary from month to month.

Q. Please describe Schedule 7-H.

A. Schedule 7-H shows a summary of Customer Deposits. Customer Deposits represent funds supplied by the customer that are available for Company

use. Hence, it is included as a deduction to the Rate Base. Again, as described in Schedule 7-F & 7-G above, a thirteen (13) month average was used to calculate this amount since actual dollar amounts vary from month to month.

Q. How did the Company develop its cash working capital requirement shown on Schedule 7-J?

A. The leads and lags used to develop VWNJ's cash working capital requirement are the same studies that were used in the Company's prior Rate Case (WR20110729). Since there have been no material changes that would warrant a change in the leads or lags, except for monthly billing, which was adjusted in the 2015 rate case, the average lags to the pro forma level of expenses were utilized in the current rate case.

Q. What other Test Year adjustments are included in the Rate Base?

A. There are two other adjustments included in the Rate Base. The first adjustment is for the Allendale acquisition adjustment, and the second is for the Rivervale Remediation Adjustment.

Q. Please explain the Allendale acquisition adjustment.

A. The acquisition adjustment for Allendale was added to the Test Year's Utility Plant Acquisition Adjustment account and reduced by the annual amortization amount. The amount of the acquisition adjustment represents

the difference between the amount paid for the acquisition less closing costs and the original cost less depreciation valuation developed by Mott Macdonald. The Company is proposing an amortization period of 20 years.

The Allendale acquisition was approved by the BPU in Docket No. WE22030200 dated September 28, 2022 and the Company closed on November 30, 2022.

Q. Please example the Rivervale Remediation Adjustment.

A. We have made an adjustment for Riverdale Remediation which was needed because there had been considerable illegal dumping over the years in an undeveloped wetlands area in Riverdale, New Jersey. Veolia Water New Jersey received funds from an entity called GreenVest totaling $1,346,430 for wetlands remediation costs. These received funds were offset by the costs spent by Veolia on the Rivervale Remediation project. There are remaining funds received from Greenvest over and above the Company's costs. That remaining balance is being treated as a reduction from the Company's rate base since the remaining dollars are not currently being used to benefit our customers. However, should additional costs need to be invested in a remediation project, those dollars will be available to be used and if they are completely used no further rate base reduction would be necessary.

Q. Does this conclude your direct testimony?

A. Yes, it does.

STATE OF NEW JERSEY
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BPU DOCKET NO. WR2311

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Direct Testimony of
Antonio Vicente, P.E.

Exhibit PT-10

Q. Please state your name, title, affiliation and address.

A. My name is Antonio Vicente, Director of Engineering for Veolia Water New Jersey. My business address is 200 Lake Shore Drive, Haworth, NJ 07641.

Q. What is your position and by whom are you employed?

A. I am the Director of Engineering for Veolia Water New Jersey ("Veolia", "VWNJ" or the "Company"). Operating Systems under my purview include the following operations: North Operation (Hackensack / Franklin Lakes); Highlands Operation (Vernon water systems, Arlington Hills Water and Wastewater, West Milford Water and Wastewater systems, and other Water Systems); and the Mid-State Operation (Toms River Water System, Lambertville Water System, Matchaponix Water System, and Wastewater System in Township of Plainsboro).

Q. What are your duties of employment at Veolia Water New Jersey?

A. As Director of Engineering, I manage the capital plans and engineering for the facilities identified above. I direct the design and construction of capital projects concerning sources of water supply, dams and reservoirs, water and wastewater treatment plants, transmission and distribution systems, customer service lines, meters, Radio Frequency ("RF") meter reading devices, distribution system storage tanks, and pumping facilities. I manage a staff of licensed professional engineers, one licensed professional surveyor, engineers-in-training, project

managers, administrative personnel, CAD designers, and field inspectors. Transmission & Distribution ("T&D") "blanket" projects and meter and RFs programs day-to-day operations are managed by other VWNJ directors.

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Q. What is your education and professional background?

A. I graduated in 1994 and 1996 from The Cooper Union, Albert Nerken School of Engineering, in New York, New York with BE and ME degrees in Civil Engineering. I have been licensed as a Professional Engineer in the State of New York since 2002 and State of New Jersey since 2022.

I have worked with Veolia (formerly SUEZ and United Water) since November 2005. In addition to my current role, I have held the following positions:

- Manager Network Engineering & New Business Engineer - November 2015 to March 2022
- Operations Engineer - December 2009 to October 2015
- Senior Project Engineer II – July 2008 to November 2009
- Senior Project Engineer I – November 2005 to June 2008

Previous to Veolia, I was employed by T&M Associates from 1997-2005 and held the positions of Project Manager, Senior Staff Engineer and Staff Engineer. I had various responsibilities with respect to investigations, studies, design and construction phases in wastewater and water projects. I worked at URS Greiner from November 1996 to April 1997 as an engineer-in-training.

Q. Have you previously submitted testimony or testified before any regulatory commissions?

A. Yes, I filed direct testimony for the Veolia (formerly SUEZ) Water Arlington Hills Inc. Rate Case in 2016. I have testified before the New Jersey Board of Public Utilities ("BPU") in public hearings on various franchise area expansion petitions for water and sewer systems in Mount Arlington and water system in Vernon Township.

Q. What is the subject of your testimony?

A. The purpose of my testimony is to describe the capital investment needs of the areas of Company for which I am responsible; specifically focusing on the major capital investment items starting April 1, 2023 through the Pro Forma Test Year ending March 31, 2024. I will also present the Company's large and significant capital projects to be completed before the end of the Post Test Year, September 30, 2024, as provided in Exhibit P-5.

Q. Please describe the Company's plans for capital investment through September 30, 2024, which will include the Post Test year period in this case.

A. In general, the Company's more recent capital investments have seen a robust continuation in investment on below-ground assets (i.e. mains and service line improvements). VWNJ has invested significant capital on the replacement of the company-owned lead services since January 2019 and the program has

continued with the current replacement rate of approximately 2,100 company side service lines per year. The lead service replacement program has expanded since 2021 in non-company side lead service line replacements since the change in law in 2021 to both provide a time frame for this expanded program and the direction to allow reimbursement for this replacement work. The Company also has recently experienced an increase in investment on above-ground assets (i.e., water supply facilities, water and wastewater treatment reliability, pumping equipment, and general facilities) especially at facilities near or above the current state regulations for Per- and Polyfluoroalkyl Substances (PFAS). Approximately nine specific PFAS Treatment projects being undertaken by VWNJ are described below.

Although not included in this rate filing due to timing, there are five (5) other water production facilities near or above the state PFAS limits currently with temporary PFAS treatment, that will need permanent treatment in the near future. Additionally, it should be noted the Company has commenced additional studies in preparation for meeting the proposed EPA regulations for PFAS which will establish new limits, that are more stringent than current NJDEP regulations. These new regulations will require significant treatment investments in various other water systems and certainly impact our larger treatment plants such as Haworth, Lambertville, Matchaponix, and Berkeley in Toms River. In total, twenty-one (21) existing treatment plants will require PFAS treatment or, in a few locations, consolidation of treatment with a nearby Veolia water system. Currently, the EPA regulations are anticipated to become effective in 2024, but

the adoption and implementation schedules are currently unknown. The current initial conceptual capital cost estimate for water treatment projects for the Company from the proposed EPA PFAS regulations is estimated to be $750M to $850M but that estimate will be further refined as time goes on. It is important to note that the current rate case does not include costs related to system improvements due to proposed EPA PFAS regulations since I am advised that this rate case only deals with appropriate in-service investments through September 2024, and these PFAS treatment investments will not be in service by that date.

With the initial BPU approval of the Distribution System Improvement Charge ("DSIC") program in October 2012, VWNJ has filed semi-annual DSIC filings in each of the past ten years, starting in 2013, with the most recent in May 2023. Exhibit P-5 includes capital additions starting April 1, 2023, regardless of whether they were also included in the May 2023 DSIC filing for period ending April 30, 2023. It is important to note the May 2023 surcharge filing was limited to only investments in Lead Service Lines Replacements due to reaching the five percent "DSIC Cap". In addition, since the Company's rate base (Exhibit P-4, Schedule 7) begins with the actual utility plant balance at March 31, 2023, there is no double count of the investments contained on Exhibit P-5.

The Company has developed a Master Plan (Long Term Planning Study) in accordance with the Order issued in Docket WR07020135. The final version of the Master Plan was submitted to the BPU in draft form in October 2009 and was submitted in final form in February 2010. The Master Plan clearly outlined

the direction and focus of the Company's capital investment plans over the long-term from those dates. The Company formally updated the Master Plan in 2016. The Company is currently updating the Master Plan for the Hackensack/Franklin Lakes and Toms River Systems and anticipates their completion by the end of 2023. The projects included in this case are consistent with the goals of those various Master Plans.

Q. Please explain Exhibit P-5.

A. Exhibit P-5 consists of a listing of capital projects for all of VWNJ. Most of the listed projects will be in service for our customers before the end of the test year period ending March 31, 2024. Two large and significant projects will be in service before September 30, 2024, the end of the post test year period. These large and significant projects will be described later in my testimony. I have provided the information for my areas of responsibility to Ms. Arp for development of rate base and the depreciation expense.

Q. Please describe the more dollar intensive projects shown on Exhibit P-5.

A. The following are brief descriptions of the larger dollar intensive projects that are listed on Exhibit P-5, for which are scheduled to be in service during the test year period, followed by descriptions of the large and significant projects which I am confident will be in service during the post test year period ending in September 30, 2024:

Projects in service on or before March 31, 2024

- **Line (13) - Lake Tappan Dike Seepage Mitigation**

  In March 2020 during a routine inspection, a newly discovered condition was noticed indicating potential seepage through the Lake Tappan Dike which forms part of the impoundment for the Lake Tappan reservoir. VWNJ installed permanent piezometers with data loggers to continuously measure groundwater levels under a separate project. Based on the monitoring, the dike requires improvements consisting of clearing trees and grubbing of roots, installation of weighted filter blankets (approx. 700 linear feet), and installation of 3 new piezometers at Lake Tappan Dike for the purpose of maintaining/improving the stability of the dike. The project is anticipated to start in the Fall of 2023 pending permit approvals. This project is expected to be in service by March 31, 2024, with an approximate cost of $2.15M.

- **Line (28) – New Clearwell (Matchaponix)**

  The clearwell at the Matchaponix Water Treatment Plant consists of a steel tank installed in 1998. Based on inspection completed in 2017, the tank is in poor condition and is near the end of its service life. This project includes the clearwell replacement, replacement of low lift pump station, reconfiguration of the backwash holding tank, various piping and valving improvements, removal of the old generator, and other miscellaneous improvements. The cost of this project is $4.15M. Construction work is ongoing and the project is expected to be in service by December 2023.

- **Line (29) – Replacement of Oradell Reservoir Aeration System & Compressors**

  This project involves the replacement of the existing aeration equipment at the Haworth Water Treatment Plant and Oradell Reservoir, which has reached the end of its useful life. The existing system was having difficulty providing sufficient vertical mixing or suppressing Cyanobacteria growth. Proper aeration of the water column is a key part of our reservoir management strategy in order to control cyanobacteria growth to maintain desirable raw water quality. The project consisted of replacing the entire system (including compressors, tubing) and installing new air diffusers throughout the reservoir. The cost of this project is $1.33M and has been in service since August 2023.

- **Line (31) – PFAS Treatment Highlands Bald Eagle Commons**

  The PFAS concentration for this site has been observed in individual testing, as approaching the current NJDEP MCL. Due to those PFAS levels, a treatment system will be provided in the existing structure. These improvements consist of two (2) 42” ion exchange vessels (installed in series) rated for 111 gallons per minute (gpm), along with new piping, and electrical improvements. The cost of this project is $0.90M. Construction is ongoing and the project is expected to be fully completed and in-service by December 2023.

- **Line (32) – PFAS Treatment Highlands East Brookwood #3**

The PFAS concentration for this site has been observed in individual testing as approaching the current NJDEP MCL. Due to those PFAS levels, a treatment system will be provided within a new 300 sq. ft. structure. These improvements consist of two (2) 30" ion exchange vessels (installed in series) rated for 50 gpm, along with new piping, electrical improvements including new service, and disinfection system improvements. The cost of this project is $1.78M. Construction is ongoing and the project is expected to be fully completed and in-service by March 2024.

- **Line (33) – PFAS Treatment Highland Lakes #1**

The PFAS concentration for this site has been observed in individual testing to exceed the NJDEP MCL. Due to those PFAS levels, temporary PFAS treatment was installed at this facility inside the existing structure. The permanent treatment system requires a new 36' by 16' and 10' deep below-grade chamber to accommodate the designed improvements. These improvements consist of two (2) 24" ion exchange vessels (installed in series) rated for 35 gpm, along with new piping, hydropneumatic tanks, electrical improvements including new service, and new chemical equipment. The cost of this project is $1.82M. Construction is ongoing and the project is expected to be in service by December 2023.

- **Line (34) – PFAS Treatment Highlands East Brookwood #2**

The PFAS concentration for this site has been observed in individual testing to exceed the current NJDEP MCL. Due to those PFAS levels,

temporary PFAS treatment was installed at this facility inside the existing structure. The permanent treatment system requires a new 24' by 20' structure to accommodate the proposed improvements, including space for future nitrate treatment. These improvements consist of two (2) 24" ion exchange vessels (installed in series) rated for 30 gpm, along with new piping, electrical improvements including new service, new booster pumps, and disinfection system improvements. The cost of this project is $1.75M. Construction is ongoing, and the project is expected to be in service by December 2023.

- **Line (35) – PFAS Treatment Highlands Independence #1 & #2**

  The PFAS concentration for this site has been observed in individual testing as approaching the current NJDEP MCL. Due to those PFAS levels, a treatment system will be provided within a new 34' by 24' structure, including space for future nitrate treatment. These improvements consist of two (2) 30" ion exchange vessels (installed in series) rated for 50 gpm, along with new piping, electrical improvements including new service, and disinfection system improvements. The cost of this project is $1.77M. Construction is ongoing and the project is expected to be completed and in-servicer by December 2023.

- **Line (36) – PFAS Treatment Highlands Olde Milford 88 Rolling Ridge Well**

  The PFAS concentration for this site was observed in individual testing as approaching the current NJDEP MCL. Due to those PFAS levels, a treatment system will be provided within a new 19' by 12' building addition.

These improvements consist of two (2) 36” ion exchange vessels (installed in series) rated for 80 gpm, along with new piping, disinfection system, and electrical improvements. The cost of this project is $1.12M. Construction is ongoing and the project is expected to be fully completed and in-service by March 2024.

- **Line (37) – PFAS Treatment Highlands Olde Milford HV Well #5 & #6**

The PFAS concentration for this site has been observed in individual testing to exceed the NJDEP MCL. Due to those PFAS levels, temporary PFAS Treatment was installed at this facility inside the existing structure. The existing building requires an addition of approximately 10’ by 21’ to accommodate the proposed permanent treatment improvements. The proposed improvements consist of two (2) 30” ion exchange treatment vessels (installed in series) rated for 52 gpm, along with new piping, electrical improvements including new service, and new chemical equipment. The cost of this project is $1.99M. Construction is ongoing and the project is expected to be placed into service by December 2023.

- **Line (38) – PFAS Treatment Highlands Sunset Ridge**

The PFAS concentration for this site was observed in individual testing to exceed the NJDEP MCL. Due to those PFAS levels, temporary PFAS treatment was installed at this facility inside the existing structure. The permanent treatment system will also be provided inside the existing structure. These improvements consist of two (2) 36” ion exchange vessels (installed in series) rated for 70 gpm, along with new piping,

electrical improvements including new service, and disinfection system improvements. The cost of this project is $0.94M. Construction is ongoing and the project is expected to be fully completed and in-service by December 2023.

- **Line (39) - PFAS Treatment Wyandotte Well**

  As a result of elevated levels of PFAS, this project consisted of bench-scale testing to determine the effectiveness of granular activated carbon and ion exchange media for treatment of the existing Wyandotte and High Mountain wells (1,150 gpm combined flow) at the Wyandotte Treatment Plant in Franklin Lakes. Based on those test results, ion exchange media was selected due to media performance and space limitations. This project included a building expansion of approximately 36’ by 17’ to house the two new 8’ diameter vessels operating in parallel. The project also consisted of various electrical, piping, process, and control improvements and chemical feed additions (sodium bisulfite, zinc orthophosphate, liquid ammonia sulfate, sodium hydroxide, and sodium hypochlorite) to retrofit the PFAS treatment into the existing water plant. This project had a cost of $6.06M and was placed into service in July of 2023.

- **Line (46) – Fairview Pump Station Upgrade**

  The Fairview Pump Station is a critical pump facility providing appropriate water service to approximately 100,000 people in Pressure District (PD) 20 in the Hackensack System. The existing mechanical and electrical equipment is original to the facility (from the 1980’s) and is at the end of its

useful life. This project consists of replacement of existing three pumps, electrical equipment (including substation, switchgear and MCC, emergency generator and transfer switch), chemical treatment equipment, SCADA replacement, and instrumentation. Additional improvements include installation of variable frequency drives (VFDs) and installation of a surge tank along with miscellaneous building and site improvements. The cost of this project is $9.80M. Construction is ongoing, and the project has been placed in-service in September 2023 and fully completed by December 2023.

- **Lines (55,58,59) Water Main Dead-End Enclosures, Relocations and Renewal Projects (DSIC)**

  The Company submitted its last DSIC filing on May 15, 2023, for work completed in the period from November 1, 2022, to April 30, 2023. This recent filing was limited to only the lead service replacement program as the company reached the DSIC cap limit. From April 1, 2023, to March 31, 2024, the Company plans to perform approximately eleven (11) water main replacements / renewals, six (6) dead-end enclosures, and ten (10) main relocations. These projects have a total estimated cost of approximately $22.95M and are expected to be in service by March 31, 2024.

- **Line (57) Leak Detection Loggers**

  Since installation of the leak detection loggers began in 2015, the Company has experienced a significant reduction in both production and NRW volumes in problematic pressure districts by proactively identifying,

confirming, and repairing leaks. This successful program has been a major contributor to the overall reductions of real losses, production volumes, and NRW levels. These new generation leak sensors provide correlation functionality by collecting sound files for cloud analysis. This allows leaks to be pinpointed by the software, which provides time-savings for field personnel. These new leak sensors have 5-G communication and replaceable batteries which is expected to extend the service life of the units. With this project the Company will replace older leak sensors that are near the end of their service life or no longer operable. Leak sensors will be received and installed before March 31, 2024. This project has a cost of $0.52M.

- **Line (118) – Montvale Tank Land Purchase (Property Reserved for Future Use)**

  The majority of the Company's customers in Montvale are served by PD30 in the Hackensack/ Franklin Lakes Water System. PD30 is a critical pressure district in transmitting water to both the wholesale customers in the northwest portion of the water system, as well as to our Franklin Lakes Water System itself. VWNJ has been in negotiations with the Borough of Montvale over the past 2 ½ years to find property to locate a new water storage tank and several properties have been evaluated. A property was identified that is ideal for locating the new proposed tank and pump station facilities. This land acquisition is estimated at $4.725M, and is estimated to be acquired in early 2024 (prior to March 31, 2024) and is included

under this rate filing as “property reserved for future use”. After the proposed property purchase, VWNJ will commence the design of the proposed tanks and pump station along with offsite distribution & transmission improvements. Because of the project’s timing, the cost of the design and construction of future improvements are not included in this Rate Filing. The actual construction of the tank is currently anticipated to be completed before the next base rate case.

Large and significant projects that will be in service on or before September 30, 2024, during the post test year period.

- **Line (42) – Windsor WTP Filter & BW Replacement**

The existing treatment plant was constructed in 1990 with an onsite well (No. 4) producing approximately 1,900 gpm. Based on prior investigations, several components within the Windsor Avenue Water Treatment Plant (WTP) are nearing the end of their useful life and are scheduled for replacement. This project has been split into two separate projects because this facility is criticalto meet peak summer-time production. The first project will consist of building modifications and expansion, iron and manganese filter vessel replacements, backwash wastewater system improvements, chemical feed system improvements, and resiliency facility hardening. The cost of this project is $9.02M. Project work is ongoing, and the project is expected to be in service by May 2024. The second part of this project, starting after the first part, still in early 2024, will consist of electrical improvements, emergency generator replacement, high service

pump replacement, and instrumentation and controls. However, due to the timing of this second part of this project, it is not included in this rate case.

- **Line (104) – Princeton Meadows WWTP Replacement**

The Princeton Meadows Wastewater Treatment Plant ("PMWWTP") was originally constructed in 1971 and upgraded in 1978 to serve residential and commercial customers. The existing plant was designed as an activated sludge plant with a capacity of 1.64 million gallons per day (MGD). In 2018, the New Jersey Department of Environmental Protection (NJDEP) issued new limits for ammonia and phosphorus for PMWWTP to provide additional protection to the surface waters discharge. The Company evaluated alternatives to meet the new requirements, while also negotiating with the NJDEP to allow additional time to meet the new limits. After extensive evaluation and discussions, it was determined that replacement of the plant was the most cost-effective alternative to meeting the new ammonia and phosphorus limits. The new Plant, rated at 1.7 MGD, is designed utilizing an oxidation ditch technology with grit chambers, secondary clarifiers, tertiary disk filters, UV disinfection, post aeration and sludge thickening. Due to the proximity of residential neighbors, much of the treatment train needs to be enclosed with an odor control system. The cost of this project through the post test year period is $61.4M, with an additional $6.7M (including cost of removal) which will occur after September 30, 2024. Construction work is ongoing and the

project is expected to be in service by September 2024. The $6.7m of post September 2024 I has not been included for recovery in this rate case.

Q. Please generally describe the Company's other capital projects included in Exhibit P-5.

A. The remaining capital projects included in Exhibit P-5 are self-explanatory but are all required to maintain asset conditions to meet important service standard levels and regulatory requirements. Below is a general description of these projects by major category.

- **Lines (2-12, 14-16) - Source of Supply**:

  This category includes several projects relating to source of supply improvements including well rehabilitations and upgrades, dam improvements, raw water aqueduct improvements, and well sealing. Total cost for these improvements is $1.89M. These projects will be placed into service over time and are expected to be completed and in-service before March 2024.

- **Lines (18-27, 30, 40-41) - Water Treatment**:

  This category includes replacement and improvement of chemical equipment and other treatment equipment as needed to maintain the treatment production capability and meet water quality standards/regulations. Total cost for these improvements is $4.87M. These projects will be placed into service over time and are expected to be completed and placed in-service before March 2024.

- **Lines (44-45, 47-53) - Pumping**:

  This category includes collection of projects related to replacement of deteriorated, failed and undersized pumping equipment. The total cost is $4.45M. These projects will be placed into service over time and are expected to be completed and in-service before March 2024.

- **Lines (56, 60-66) - Transmission and Distribution and Storage**:

  Company side lead service line replacement was included in the recent DSIC filing, however other projects described below were not because of the DSIC cap limit. In addition to main dead-end enclosures, relocations, and renewal projects described previously, valve and hydrant replacements are included under the DSIC program. This category also includes main extensions, new valves and new hydrants, new short mains, and replacement of short mains. All of these improvements are needed to meet the demands of the distribution system, improve fire flows, maintain water quality, and provide adequate service to customers. These investments will total $22.57M. An additional $0.49M is attributed to improvements to water storage tanks as part of tank rehabilitation projects. These investments are expected to be placed into service through March 2024.

- **Line (68-72) - Customer Service Lines:**

  This category includes the installation of new domestic and fire services to meet the growth within the system and replacement services to reduce leaks, improve water quality, and maintain supply/pressure. The

replacement of Company owned services is also included in the regular DSIC filings.

Starting in January 2019, under the Lead and Copper Rule Action Level Exceedance (ALE), VWNJ has invested significant capital on the replacement of the Company-owned lead service lines. VWNJ plans to continue proactive investment in the lead service line replacement program through 2030 at a rate of approximately 2,100 Company-owned lead service line replacements every year. In the test year period, the Company plans to invest approximately $31.56M in this effort.

Investment in the non-lead domestic and fire service line replacements is also estimated at $13.04M. New domestic and fire service line investments total $2.27M and $1.56M, respectively.

- **Lines (74-78) - Customer Meters:**

This category includes the installation of meters for new customers and the replacement of meters in accordance with regulatory requirements. Replacement of Radio Frequency (“RF”) devices is also included in this category for the continuation of the roll out of the Company’s Advanced Metering Infrastructure (“AMI”). This will enable reading of customer meters through the use of the AMI antennas which will improve the efficiency of operations and help with NRW tracking on a more frequent basis than the current monthly billing allows. This will also provide additional information that the customer will be able to access on the Company’s website. The total amount invested in this category in the test

year period is $13.51M. An additional $0.23M is for replacement of meter test benches.

- **Lines (79-90) - Information Technology and General Plant:**

  Several projects are included in these categories which include SCADA upgrades, equipment and vehicles, EH&S improvements, security improvements and tools. The total capital additions combined is $2.80M and are expected to be in-service by March 2024.

- **Lines (91-107) - Wastewater Laterals, Collection, Pumping, Treatment and General Plant**

  Several projects are included in these categories. The total capital additions combined is $2.45M. They will be placed in service over time and are expected to be in-service by March 2024.

Q. How would you characterize the existing transmission and distribution network of VWNJ's Hackensack system?

A. The Company owns and maintains approximately 2,200 miles of transmission and distribution mains in Bergen and Hudson Counties. About 50 percent of the existing water mains were installed during or before the 1940s. All of these older mains are gradually reaching the end of their anticipated useful life. The average age of VWNJ's water transmission and distribution system is approximately 79 years old in the Company's Hackensack system. The approved DSIC program in 2012 has allowed Veolia to invest considerably more in the renewal of its transmission and distribution network. The DSIC program will continue to

significantly assist VWNJ in expediting the much-needed system improvements. The percentage of distribution system mains replaced on an annual basis has significantly increased from 2012 to the present. However, the main replacement renewal program has been impacted in the last few years with the focus on the investment in lead service replacements and, more recently, with PFAS treatment projects. The plan is to continue to increase investment in the distribution system main replacement in future years. The ultimate goal, per the Water Quality Accountability Act, is to achieve a 150-year replacement cycle rate (0.66% or 14.5 miles for the VWNJ Hackensack/Franklin Lakes system) annually. This requirement also applies to Toms River and Lambertville systems. The Water Quality Accountability Act also allows a well-documented study by a professional engineer that justifies deviation from the 150-year replacement cycle to be prepared by the Utility.

The Company will continue its risk-based selection for main renewal by targeting the areas with high frequency of main breaks and main segments that are determined to have the highest probability of failure with the help of InfoMaster asset integrity management and capital planning software. In addition, the Company has begun to perform detailed condition assessments of large diameter pre-stressed concrete cylinder pipe (“PCCP”) transmission mains which can be prone to sudden and impactful failure in order to prioritize renewals of these critical assets. VWNJ’s next DSIC foundational filing will outline and describe the proposed main improvements in detail.

Q. Does this conclude your testimony?

A. Yes.

VEOLIA WATER NEW JERSEY, INC.
PARAMUS, NEW JERSEY

RATE OF RETURN

DIRECT TESTIMONY
OF
HAROLD WALKER, III

NOVEMBER 2023

Prepared by:

GANNETT FLEMING

TABLE OF CONTENTS

OVERALL RATE OF RETURN TERMS, ABBREVIATIONS AND ACRONYMS

Terms, Abbreviations and Acronyms	Defined
BPU	New Jersey Board of Public Utilities
CAPM	Capital Asset Pricing Model
Commission	New Jersey Board of Public Utilities
Company	Veolia Water New Jersey, 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
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
VWNJ	Veolia Water New Jersey, Inc.
Water Group	Water Group Followed by Analysts

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 New Jersey, Inc. ("VWNJ" or the "Company") should be afforded an opportunity to earn on its water service rate base. My testimony is supported by Exhibit P-6, which is composed of 19 Schedules.

SUMMARY OF RECOMMENDATION

Q. What is your recommended cost of equity?

A. My recommendation is that VWNJ be permitted an overall rate of return of 7.75%, including a 10.80%[1] cost of common equity, based upon the Company's capital

1 It should be noted that my current analysis contained in Exhibit P-6 supports a cost of common equity of 10.80% for the Company. The Company's filing includes an overall rate of return of 7.49% and a 10.30% cost of common equity for filing purposes to minimize the requested revenue increase.

structure pro forma at March 31, 2023. My recommended cost of common equity reflects VWNJ'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.

Q. Please summarize your common equity cost rate recommendation.

A. There is no market data concerning VWNJ's shares of common stock because VWNJ shares of common stock are not publicly traded. Accordingly, due to the lack of market data concerning VWNJ's equity, I used a comparable group of publicly traded companies to estimate the common equity cost rate. Based upon the results of my entire analysis, I conclude VWNJ's current common equity cost rate is at least 10.80%. The current range of common equity cost for VWNJ is 9.05% (DCF), 11.85% (CAPM), and 11.25% (RP). Value Line Investment Survey ("Value Line") is relied upon by many investors and is the only investment advisory

service of which I am aware that projects earned return on equity. As a check on the reasonableness of my common equity cost rate recommendation, I reviewed Value Line's projected returns on common equity for comparable utilities. Value Line's projected earned returns on common equity for my comparable utilities average 10.7% and the median is 10.3%. The range of the projected returns suggests that my recommendation that VWNJ be permitted an opportunity to earn 10.80% is reasonable, if not 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.

Q. WHAT CONSTITUTES A FAIR RATE OF RETURN?

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

INVESTMENT RISK

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

A. Risk is the uncertainty associated with a particular action; the greater the uncertainty of a particular outcome, the greater the risk. Investors who invest in

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

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

risky assets expose themselves to investment risk particular to that investment. Investment risk is the sum of business risk and financial risk. Business risk is the risk inherent in the operations of a business. Assuming that a Company is financed with 100% common equity, business risk includes all operating factors that affect the probability of receiving expected future income such as: sales volatility, management actions, availability of product substitutes, technological obsolescence, regulation, raw materials, labor, size and growth of the market served, diversity of the customer base, economic activity of the area served, and other similar factors.

Q. What is financial risk?

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

Q. Please give a brief description of the Company.

A. VWNJ is a private or investor-owned company. VWNJ is a regulated public utility that provides water and wastewater service to about 263,600 (12/31/22) customers located in its franchise territories in the State of New Jersey, in a portion of Bergen, Hudson, Passaic, Morris, Hunterdon, Sussex, Ocean, Monmouth, and Middlesex Counties. The price of service of VWNJ is regulated by the New Jersey Board of Public Utilities ("Commission" or "BPU").

VWNJ is a wholly-owned subsidiary of Veolia Utility Resources LLC ("VUR"). VUR is the sole source of VWNJ's external capital. VUR owns and provides services to water and wastewater utility companies which are located throughout the United States (e.g., VWNJ). 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 company with activities in three main service and utility areas: water management, waste management and energy services.

THE INDUSTRY

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

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

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

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

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

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

The water utility industry's and wastewater utility industry's increased compliance with state and federal water purity levels and large infrastructure replacements are driving consolidation of the wastewater utility and water utility industries. Because many wastewater utility and water utility operations do not have the means to finance the significant capital expenditures needed to comply with these requirements, many have been selling their operations to larger, financially stronger utilities.

The larger IOUs have been following an aggressive acquisition program to expand their operations by acquiring smaller wastewater and water systems. Generally, they enter a new market by acquiring one or several wastewater or water utilities. After their initial entry into a new market, the larger investor-owned water

[4]Many 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.

utility companies continually seek to expand their market share and services through the acquisition of wastewater and water utility businesses and operations that can be integrated with their existing operations. Such acquisitions may allow a company to expand market share and increase asset utilization by eliminating duplicate management, administrative, and operational functions. Acquisitions of small, independent utilities can often add earning assets without necessarily incurring the costs associated with the SDWA if such acquisitions are contiguous to the potential purchaser.

In summary, the result of increased capital spending, to meet the SDWA and CWA requirements[5] and replace the aging infrastructure of many systems, has moved the wastewater and water industries toward consolidation. Moreover, Federal and State regulations and controls concerning water quality are still in the process of being developed and it is not possible to predict the scope or the enforceability of regulations or standards which may be established in the future, or the cost and effect of existing and potential regulations and legislation upon VWNJ. However, as a medium size water and wastewater system, VWNJ faces the cost of compliance with less financial resources when compared to larger IOU water utilities.

[5]The 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.

COMPARABLE GROUP

Q. How do you estimate the cost of common equity for VWNJ?

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

Q. How did you select the comparable group used to determine the cost of common equity for VWNJ?

A. I selected a comparable group of water utilities to determine the cost of common equity for VWNJ considering security analysts' coverage. Unlike the other utility industries, only a portion of the IOU water companies with publicly traded stock in the U.S. are followed by security analysts. Coverage by security analysts is important when determining a market required cost of common equity. Accordingly, security analysts' coverage was considered when selecting my comparable group. I selected my water utility comparable group, Water Group Followed by Analysts ("Water Group"), based upon a general criteria that includes: (1) all U.S. water utilities that are covered by security analysts as measured by the existence of sources of published projected five-year growth rates in earnings per share ("EPS"); (2) with a Standard Industrial Classification (SIC) of 4941 (i.e., Water Supply Facilities and Infrastructure); (3) with a North American Industry

Classification System (NAICS) of 221310 (i.e., Water Supply and Irrigation Systems); (4) are not the announced subject of an acquisition; (5) currently pay a common dividend and have not reduced their common dividend within the past four years; (6) have market value of common stock, the product of multiplying the closing stock price by the number of common shares outstanding, greater than $500.0 million; and (7) have a total enterprise, the sum of market value, preferred stock and total debt, greater than $700.0 million.

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

Bond and Credit Ratings for
The Water Group Followed by Analysts

	S&P Credit Rating
Water Group Followed by Analysts	
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	A-
Average	A

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

Table 1

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

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

CAPITAL STRUCTURE

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

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

[7] Multiple publications mention these impacts including Research Magazine – April 2010, Barron's – March 2001, Utility Business – June 2002, Value Line Investment Survey – April 2013, and Wastewater Digest, March 2022.

Q. Does VWNJ directly raise or issue its own debt capital?

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

Q. What capital structure ratios are appropriate to be used to develop VWNJ's overall rate of return?

A. Consistent with settled rate setting principles, I believe it is necessary to evaluate VWNJ's current cost of capital based on VUR's pro forma March 31, 2023 capital structure, which includes 46% debt and 54% common equity as reflected in Schedule 1.

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

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

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

- has its own bond rating;
- provides its own debt financing; and

- debt financing is not guaranteed by a parent company.

2) When a utility issues its own debt that is not guaranteed by the public or private parent and has its own bond rating, regulatory and financial principles indicate to use a utility's own capital structure, unless the utility's capital structure is not representative of the utility's risk profile or where use of the actual capital structure would create atypical results. Regulatory and financial principles involve determining whether the actual capital structure is atypical when compared with the capital structures approved by the Commission for other utilities that operate in the same industry (*i.e.*, water utility, gas distribution utility, etc.), as well as those of the proxy utility companies that operate in the same industry.

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

4) If a utility does not provide its own financing, Public Utility Commissions often look to another entity. Generally, Public Utility Commissions use the actual capital structure of the entity that does the financing for the regulated

utility as long as it results in just and reasonable rates. This generally means using a parent company.

5) If the parent's capital structure is used, because it finances the operation of the utility, regulatory and financial principles require adjustments in the utility's allowed rate of return on equity to adjust for risk differences, if any, between the parent and the regulated subsidiary. If, however, the financing entity's capital structure is inconsistent relative to the capital structures of the publicly-traded proxy companies used in the cost of equity analysis and capital structures approved for other utilities that operate in the same industry (*i.e.,* water utility, gas distribution utility, etc.), Public Utility Commissions employ a hypothetical capital structure.

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

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

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

Comparison of Capital Structure Ratios

	VWNJ	Water Group	
	Pro Forma at 3/31/2023	At 3/31/2023	Projected 2027
Debt	46.2	50.2	47.7
Preferred Stock	0.0	0.1	0.0
Common Equity	53.8	49.7	52.3
	100.0	100.0	100.0

Table 2

VWNJ's rate making capital structure ratios are reasonable based upon the above information.

EMBEDDED COST RATE

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

A. Consistent with my recommended capital structure ratios I recommend using VUR's embedded debt cost rate of 4.20% for VWNJ as reflected in Schedule 1.

This embedded debt cost rate of 4.20% is detailed in the Company's Exhibit __ Schedule ___. The determination of an embedded cost rate is a relatively simple arithmetic exercise because a company has contracted for this capital for a specific period of time and at a specific cost, including issuance expenses and coupon rate.

FINANCIAL ANALYSIS

Q. Have you reviewed historical financial information of VWNJ as part of your analysis?

A. Yes. On page 1 of Schedule 3, I developed a five-year analysis, ending in 2022, detailing various financial ratios for VWNJ. On Schedule 4, I performed a similar five-year analysis for the Water Group. Schedule 5 reveals the results of operations for a large broad-based group of utilities known as the Standard & Poor's ("S&P") Utilities for the five years ending 2022. This information is useful in determining relative risk differences between different types of utilities.

Comparing VWNJ, the Comparable Group and the S&P Utilities' coverage of fixed charges and the various cash flow coverage proves that the Comparable Group has experienced a lower level of coverage than the S&P Utilities. Reviewing VWNJ's various cash flow coverages shows VWNJ has had higher levels of coverage than the Comparable Group.

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

A. Taken together, these comparisons show that VWNJ is exposed to risk that is similar in nature but greater in degree compared with the Comparable Groups. This is evident in particular when one considers the size and diversification of VWNJ,

or lack thereof, as compared to the Comparable Companies. Moreover, the evidence from the various financial ratios shows VWNJ's risks as being similar to the Comparable Companies' but less than the larger S&P Utilities. Prospectively, VWNJ's future construction expenditures will place downward pressure on VWNJ's financial ratios as measured by interest coverage and cash generation.

Q. What information is shown on Schedule 6?

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

	S&P Issuer Credit Rating	S&P Quality Ranking	Value Line Beta	Recent Market Value (Mill $)	Market Quartile Name
Water Group	A	High (A)	0.79	3,059.360	Mid-Cap
S&P Utilities	BBB+	Average (B+)	0.92	26,406.595	Large-Cap

Table 3

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, 0.92. 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 VWNJ has generally experienced the lowest return on equity ("ROE") when compared to the Comparable Companies. Further, VWNJ'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. Profit potential and stability is a critical determinant of credit protection. A company that generates higher operating margins and returns on capital also has a greater ability to fund growth internally, attract capital externally, and withstand business adversity. Earnings power ultimately attests to the value of the company's assets, as well. In fact, a company's profit performance offers a litmus test of its fundamental health and competitive position.
>
> Accordingly, the conclusions about profitability should confirm the assessment of business risk, including the degree of advantage provided by the regulatory environment.[8]

Q. What information is shown on Schedule 7?

A. Schedule 7 reveals the capital intensity and capital recovery for VWNJ, the Comparable Companies and the S&P Utilities. Based upon the 2022 capital intensity ratio of plant to revenues, VWNJ ($6.41) is less capital intensive as compared to the Water Group ($6.63) and more than the S&P Utilities ($4.45). From a purely financial point of view, based on current accounting practices, the rate of capital recovery or depreciation rate is an indication of risk because it

[8]Standard & 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.

represents cash flow and the return of an investment. VWNJ's average rate of capital recovery is lower than the Comparable Group's, suggesting more risk.

The return on equity and depreciation expense provides the margin for coverage of construction expenditures. For a utility company, depreciation expense is the single largest generator of cash flow. From a financial analyst's point of view, cash flow is the life blood of a utility 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 VWNJ and the Comparable Group. Company size is an indicator of business risk and is summarized in Table 4.

	Number of Times Larger Than the VWNJ
	Water Group
Capitalization	3.8x
Revenues	3.6x
Number of Customers	3.7x

Table 4

As shown in Table 4, VWNJ is 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. The loss of a large customer will impact a small company much more than a large company because a large customer of a small company usually accounts for a larger percentage of the small company's sales.

Moreover, a larger company is likely to have a more diverse geographic operation than a smaller company, which enables it to sustain earnings fluctuations caused by abnormal weather in one portion of its service territory. A larger company operating in more than one regulatory jurisdiction enjoys "regulatory diversification" which makes it less susceptible to adverse regulatory developments or eminent domain claims in any single jurisdiction. Further, a larger company with a more diverse customer base is less susceptible to downturns associated with regional economic conditions than a small company. For example, on average, the average company in the Water Group provides water/sewer service in multiple states for about 963,400 customers. The average population of the communities served by the average company in the Water Group is about 3.5 million people. These wide-ranging operations provide the Water Group substantial geographic, economic, regulatory, weather and customer diversification. VWNJ provides regulated water and wastewater service to about 263,600 customers (2022). The concentration of SWNJ's business in northeastern New Jersey makes it very susceptible to any adverse development in local regulatory, economic, demographic, competitive and weather conditions.

Further, S&P, a major credit rating agency, recognizes the importance that diversification and size play in credit ratings. S&P believes some of the critical factors include: regional and cross-border market diversification (mitigates economic, demographic, and political risk concentration); customer diversification; and regulatory regime diversification.[9]

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

Q. Is the impact of size commonly recognized?

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

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

> Standard & Poor's has no minimum size criterion for any given rating level. However, size turns out to be significantly correlated to ratings. The reason: size often

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

[10]Banz, 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.

> provides a measure of diversification, and/or affects competitive position. . . . Small companies are, almost by definition, more concentrated in terms of product, number of customers, or geography. In effect, they lack some elements of diversification that can benefit larger companies. To the extent that markets and regional economies change, a broader scope of business affords protection. This consideration is balanced against the performance and prospects of a given business. . . . In addition, lack of financial flexibility is usually an important negative factor in the case of very small companies. Adverse developments that would simply be a setback for companies with greater resources could spell the end for companies with limited access to funds.[11]

As shown on Schedule 9, size plays a role in the composition of investors, and hence liquidity. In 2022, about 123% of the Water Group's shares traded while the larger companies comprising the S&P Utilities had a much higher trading volume of 169%. Insiders[12] hold more than ten times more, as a percent to total, of the Water Group's shares than the S&P Utilities. Currently, only about 77% of the Water Group shares are held by institutions[13] while the larger companies comprising the S&P Utilities had much higher institutional holdings of 84%. Due to small size and less interest by financial institutions, fewer security analysts follow the Comparable Group and none follow VWNJ.

The lack of trading activity may affect the cost of equity estimates for small entities such as VWNJ and the Water Group. When stock prices do not change because of inactive trading activity, estimates of dividend yield for use in a dividend

[11] *Standard & Poor's*, Corporate Ratings Criteria 2006; pg. 22.
[12] An 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.
[13] Institutional 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.

cash flow model and beta estimates for use in the capital asset pricing model are affected. In a stock market that is generally up, the beta estimates for the Comparable Companies may be understated due to thin trading.

Q. Do VWNJ and the Comparable Companies have similar operating risks?

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

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

A. No. However, from a creditor's viewpoint, the best measure of investment risk is debt rating. The debt rating process generally provides a good measure of investment risk for common stockholders because the factors considered in the debt rating process are usually relevant factors that a 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.

[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.

Q. What is the bond rating of VWNJ 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 VWNJ 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 higher the perceived business risk, the more stringent the financial criteria so the sum of the two, business risk and financial criteria, remains the same.

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

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

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

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

Q. What other information is shown on Schedule 10?

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

As is evident from the information shown on page 2 of Schedule 10, for the five years ending in 2022 and for the year 2022, VWNJ's cash flow adequacy ratios were generally higher than the Comparable Companies in most instances. Comparing the VWNJ and the Water Group's measures of cash flow adequacy shows that the VWNJ has experienced a higher level of cash flow adequacy than Water Group, indicating that VWNJ is a lower investment risk than the Water Group. Prospectively, based upon the Company's construction program, the Company's ratios are likely to be strained. Based solely upon VWNJ's historical ratios, it is my opinion that VWNJ's credit profile is similar but higher to the Comparable Companies.

Further, based solely upon VWNJ's size, it is my opinion that VWNJ's credit profile is similar but lower than the Comparable Groups'. Based on VWNJ's smaller size, it is highly likely that VWNJ's credit profile is below BBB (i.e., BB), based solely upon size. An analysis of corporate credit ratings, shown on page 4 of Schedule 10, indicates that there is an 86% (100%-0%-1%-4%-9%=86%) chance

that VWNJ's credit profile falls below BBB based on their small size alone.[16] As S&P has stated, size is significantly correlated to credit ratings.

An analysis of corporate credit ratings, summarized on page 4 of Schedule 10, found The Berkshire Gas Company ("Berkshire") to be the smallest utility with a credit rating. Berkshire's credit rating is only BBB+ despite having a capitalization comprised of about $204 million and a common equity ratio of 71%. According to this analysis of corporate credit ratings, the smallest rated water utility is The York Water Company ("York"). York's credit rating is only A- notwithstanding having a capitalization of about $347 million and a common equity ratio of 60%.

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

A. Yes, the Company estimates their construction program to total $635 million from 2023 through 2026. At year end 2022 the Company's total capital outstanding was $1,453 million indicating the need for a 44% increase ($635 million ÷ $1,453 million) in capital through 2026.

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

A. The Company is forecasted to require 44% of additional capital to finance their construction program while the Comparable Group is projected by Value Line to require 46% of additional capital to finance their construction programs.

16 Additionally, using VWNJ's $1.453 billion capitalization as a midpoint, I found only 36 companies which had capitalization of between $1.353 billion to $1.553 billion with a S&P bond or credit rating. Of these 36 companies, only 22% had bonds rated BBB or higher.

Accordingly, VWNJ's capital requirements are about equal to the Comparable Group's through 2026 indicating similar risk for VWNJ.

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

S&P has stated:

> ... low authorized returns may affect the industry's ability to attract necessary capital to develop new water supplies and upgrade the quality of existing supplies . . . Traditional ratemaking policy has not provided sufficient credit support during the construction cycle of the electric industry over the past 15 years. To avoid a repeat in the water industry, regulators must be aware of the increased challenges the industry faces.[17]

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

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

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

[17]Standard & Poor's CreditWeek, May 25, 1992 (emphasis added).
[18]National Association of Regulatory Utility Commissioners, loc. cit.

Summary of Risk Analyses		
	VWNJ	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.

Table 5

CAPITAL COST RATES

Q. What information is shown on Schedule 11?

A. Schedule 11 reviews long-term and short-term interest rate trends. Long-term and short-term interest rate trends are reviewed to ascertain the “sub-flooring” or “basement” upon which the Comparable Companies’ common equity market capitalization rate is built. Based upon the settled yields implied in the Treasury Bond future contracts and the long-term and recent trends in spreads between long-

term government bonds and A-rated public utility bonds available to me at the time Schedule 11 was prepared, I conclude that the market believes that if the Comparable Companies issued new long-term bonds near term, they would be priced to yield about 5.5% based upon a credit profile of "A." Further, it is reasonable to conclude the market anticipates that long-term government bonds will be priced to yield about 4.0%, near term.

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

In August 2011, the Federal Reserve began "Operation Twist." Under "Operation Twist," the Federal Reserve began buying $400 billion of long-dated or long-term US Treasury debt, financed by selling short-term US Treasury debt with three years to go or less. The goal of "Operation Twist" was to try to drive long-term rates lower, which the Federal Reserve thought would help the mortgage market. This process has created an artificial demand for the US Treasury debt themselves, and easily drives interest rates artificially lower and deceives investors into believing US Treasury debt is safe with wide demand. This has resulted in the

entire capital system being impacted by the Federal Reserve's distortion of the price of risk.

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

More recently, in response to COVID-19, the Federal Reserve provided monetary and fiscal stimulus to increase liquidity in the form of new fiscal stimulus programs and rate cuts. "For context, new fiscal stimulus and total fiscal deficits in the US are roughly double the levels seen in 2008-2009, and the US fiscal deficit we project for 2020 of 15%-18% is only matched by deficits seen at the height of WWII in 1942-1943."[20] The combined result of these actions by the Federal Reserve and investors' flight to quality resulted in artificial and historically low risk-free rates as measured by the 30-year treasury bond yield.

[19]Pike, 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).

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

A. The FED's quantitative easing of expanding its own balance sheet, by buying bonds, and therefore injecting money into the economy, floods the economy with additional cash, keeping interest rates low and impacts equity markets. Additionally, the FED's uninterrupted and aggressive monetary expansion policy necessarily puts pressure on inflation. The FED's monetary and fiscal stimulus, which included artificial and historically low interest rates, have produced some of the highest inflation rates in the last 40 years according to CNBC.

> Inflation rose 9.1% in June, even more than expected, as consumer pressures intensify.
>
> Shoppers paid sharply higher prices for a variety of goods in June as inflation kept its hold on a slowing U.S. economy, the Bureau of Labor Statistics reported Wednesday.
>
> The consumer price index, a broad measure of everyday goods and services related to the cost of living, soared 9.1% from a year ago, above the 8.8% Dow Jones estimate. That marked the fastest pace for inflation going back to November 1981.[21]

In response to the recent level of inflation rates, the Federal Reserve announced its goal of increasing interest rates as high as needed to get inflation back to 2%.

> Americans are headed for a painful period of slow economic growth and possibly rising joblessness as the Federal Reserve raises interest rates to fight high inflation, U.S. central bank chief Jerome Powell warned on Friday in his bluntest language yet about what is in store for the world's biggest economy.
>
> In a speech kicking off the Jackson Hole central banking conference in Wyoming, Powell said the Fed will raise rates as high as needed

[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).

> to restrict growth, and would keep them there "for some time" to bring down inflation that is running at more than three times the Fed's 2% goal.
>
> "Reducing inflation is likely to require a sustained period of below-trend growth," Powell said. "While higher interest rates, slower growth, and softer labor market conditions will bring down inflation, they will also bring some pain to households and businesses. These are the unfortunate costs of reducing inflation. But a failure to restore price stability would mean far greater pain."
>
> As that pain increases, Powell said, people should not expect the Fed to dial back its monetary policy quickly until the inflation problem is fixed.[22]

More recently the Chiman of the Federal Reserve reiterated its goal of increasing interest rates as high as needed to get inflation back to 2%.

> It is the Fed's job to bring inflation down to our 2 percent goal, and we will do so. **We have tightened policy significantly over the past year**. Although inflation has moved down from its peak—a welcome development—it remains too high. **We are prepared to raise rates further if appropriate**, and intend to hold policy at a restrictive level until we are confident that inflation is moving sustainably down toward our objective. . . .
>
> Restrictive monetary policy has tightened financial conditions, supporting the expectation of below-trend growth. **Since last year's symposium, the two-year real yield is up about 250 basis points, and longer-term real yields are higher as well—by nearly 150 basis points.** Beyond changes in interest rates, bank lending standards have tightened, and loan growth has slowed sharply. . . .
>
> But we are attentive to signs that the economy may not be cooling as expected. So far this year, GDP (gross domestic product) growth has come in above expectations and above its longer-run trend, and recent readings on consumer spending have been especially robust. In addition, after decelerating sharply over the past 18 months, the housing sector is showing signs of picking back up. Additional evidence of persistently above-trend growth could put further

[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).

progress on inflation at risk and **could warrant further tightening of monetary policy**.[23]

Prospectively the capital markets will be affected by the upcoming unprecedented large Treasury financings coupled with increased interest rates. Investors provide capital based upon risk and return opportunities and investors will not provide common equity capital when higher risk-adjusted returns are available.

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

23 Jerome H. Powell, "Inflation: Progress and the Path Ahead" ("Structural Shifts in the Global Economy," an economic policy symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 25, 2023). *(Emphasis added and footnotes omitted*)

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 along with other valuation models. It is our view that, in any case, an investor should employ more than one model."[24]

The American Association of Individual Investors state, "No one area of investment is suitable for all investors and no single method of evaluating investment opportunities has been proven successful all of the time."[25]

In their study guide, the National Society of Rate of Return Analysts state, "No cost of equity model or other concept is recommended or emphasized, nor is any procedure for employing any model recommended . . . it remains important to recognize that alternative methods exist and have merit in cost of capital estimation. To this end, analysts should be knowledgeable of a broad spectrum of cost of capital techniques and issues."[26]

Several different models should be employed to measure accurately the market-required cost of equity reflected in the price of stock. Therefore, I used three recognized methods: the DCF shown on Schedule 12, the CAPM shown on Schedule 17, and the RP shown on Schedule 18.

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[24]Sidney Cottle, Roger F. Murray and Frank E. Block, Graham and Dodd's Securities Analysis 5th Edition, McGraw-Hill, Inc., 1988, p. 568 (emphasis added).
[25]Editorial Policy, AAII Journal, American Association of Individual Investors, Volume 18, No. 1, January 1996, p. 1.
[26]David 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 . . . [27]

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 2.0% 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, July 2023, and the twelve-month average yield, ending July 2023. The second input to a market DCF calculation is the determination of an appropriate share price growth rate.

[27] J. Fred Weston and Eugene F. Brigham, Essentials of Managerial Finance, 3rd ed. (The Dryden Press), 1974, p. 504 (emphasis added).

Q. What sources of growth rates did you review?

A. I reviewed both historical and projected growth rates. Schedule 13 shows the array of projected growth rates for the Comparable Companies that are published. Specific historical growth rates are shown for informational purposes because I believe the meaningful historical growth rates are already considered when analysts arrive at their projected growth rates. Nonetheless, some investors may still rely on historical growth rates.

Q. Please explain the sources of the projected growth rates shown on Schedule 13.

A. I relied upon four sources for projected growth rates, First Call, S&P, Zacks Investment Research and Value Line.[28]

Q. Did you review any other growth rates besides those shown on Schedule 13?

A. Yes. I reviewed EPS growth rates reflecting changes in return rates on book common equity (ROE) over time. I summarized recent ROEs on page 1 of Schedule 14 and compared those to the Water Group's higher levels projected to be achieved by Value Line, as shown on page 2 of Schedule 14. ROEs increase when EPS grows at much higher/faster rates than book value.

I also reviewed industry specific average projected growth rates that are published by Zacks for the industries in which the Comparable Companies operate. According to Zacks, the Water Group's industry is projected to have EPS growth rates that average 9.1% over the next five years.

[28]With 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.

Q. What do you conclude from the growth rates you have reviewed?

A. Table 6 summarizes some of the various growth rates reviewed.

Summary of Growth Rates

	Water Group
Projected 5 Year Growth in EPS	6.2
Actual 5 Year Growth in EPS	5.2
Projected 5 Year Growth in DPS	7.2
Projected 5 Year Growth in EPS for the industry	9.1

Table 6

Academic studies suggest that growth rate conclusions should be tested for reasonableness against long-term interest rate levels. Further, the minimum growth rate must at least exceed expected inflation levels. Otherwise, investors would experience decreases in the purchasing power of their investment. Finally, the combined result of adding the growth rate to the market value dividend yield must provide a sufficient margin over yields of public utility debt.

Q. What method did you use to arrive at your growth rate conclusion?

A. No single method is necessarily the correct method of estimating share value growth. It is reasonable to assume that investors anticipate that the Water Group's current ROE will expand to higher levels. The published historical earnings growth rates for the Water Group averages 5.2%. Because there is not necessarily any single means of estimating share value growth, I considered all of this information in determining a growth rate conclusion for the Comparable Companies.

Moreover, while some rate of return practitioners would advocate that mathematical precision should be followed when selecting a growth rate, the fact

is that investors do not behave in the same manner when establishing the market price for a stock. Rather, investors consider both company-specific variables and overall market sentiment such as inflation rates, interest rates and economic conditions when formulating their capital gains expectations. This is especially true when one considers the relatively meaningless negative growth rates. That is, use of a negative growth rate in a DCF implies that investors invest with the expectation of losing money.

The range of growth rates previously summarized supports the reasonableness of an expected 6.2% growth rate for the Water Group based primarily on the projected five-year growth rates and considering the Water Group's industry projected EPS growth rates of 9.1%. Like the projected growth rates, this investor-expected growth rate of 6.2% is based on a survey of projected and historical growth rates published by established entities, including First Call, S&P, Zacks Investment Research and Value Line. Use of information from these unbiased professional organizations provides an objective estimation of investor's expectations of growth. Based on the aforesaid, all growth rates for the Comparison Companies have been considered and have been given weight in determining a 6.2% growth rate for the Water Group.

Q. What is your market value DCF estimate for the Comparable Companies?

A. The market value DCF cost rate estimate for the Water Group is 8.3%, as detailed on page 1 of Schedule 12.

Q. Are there other considerations that should be taken into account in reviewing a market value capitalization DCF cost rate estimate?

A. Yes. It should be noted that although I recommend specific dividend yields for the Comparable Group, I recommend that less weight be given to the resultant market value DCF cost rate due to the market's current market capitalization ratios and the impact that the market-to-book ratio has on the DCF results.[29] The Comparable Companies' current market-to-book ratios of 287% and low dividend yields are being affected by the aforementioned policy of the Federal Reserve that has resulted in the mispricing of capital due to artificial interest rates, not DCF fundamentals.

Although the DCF cost for common equity appears to be based upon mathematical precision, the derived result does not reflect the reality of the marketplace since the model proceeds from unconnected assumptions. The traditional DCF derived cost rate for common equity will continuously understate or overstate investors' return requirements as long as stock prices continually sell above or below book value. A traditional DCF model implicitly assumes that stock price will be driven to book value over time. However, such a proposition is not rational when viewed in the context of an investor purchasing stock above book value. It is <u>not</u> rational to assume that an investor would expect share price to <u>decrease</u> 65% (100%÷287%=35%-100%=65%) in value to equal book value.

29 The impact of the market's current market capitalization ratios on the resultant market value DCF cost rate is especially evidenced when the DCF result for individual companies in the Comparable Group is considered. For example, the resultant market value DCF cost rate for one of the individual companies in the Comparable Group is <u>below their current long-term debt cost</u> rate while a second company's cost is only slightly above.

Utility stocks do not trade in a vacuum. Utility stock prices, whether they are above or below book value, reflect worldwide market sentiment and are not reflective of only one element.

Q. What do you mean by your statement that utility stocks are not traded in a vacuum?

A. Utility stocks cannot be viewed solely by themselves. They must be viewed in the context of the market environment. Table 7 summarizes recent market-to-book ratios ("M/B") for well-known measures of market value reported in the August 7, 2023 issue of Barron's and the Water Group's average M/B as shown on page 1 of Schedule 14.

	M/B Ratios(%)
Dow Jones Industrials	471
Dow Jones Transportation	508
Dow Jones Utilities	203
S&P 500	437
S&P Industrials	584
Vs.	
Water Group	287

Table 7

Utility stock investors view their investment decisions compared with other investment alternatives, including those of the various market measures shown in Table 7.

Q. How does a traditional DCF implicitly assume that market price will equal book value?

A. Under traditional DCF theory, price will equal book value (M/B=1.00) only when a company is earning its cost of capital. Traditional DCF theory maintains that a company is under-earning its cost of capital when the market price is below book value (M/B<1.00), while a company over-earning its cost of capital will have a market price above its book value (M/B>1.00). If this were true, it would imply that the capitalistic free-market is not efficient because the overwhelming majority of stocks would currently be earning more than their cost of capital. Table 7 shows that most stocks sell at an M/B that is greater than 1.0.

Q. Please explain why such a phenomenon would show that the capitalistic free-market is not efficient.

A. Historically, the S&P 500, which represented the largest 500 companies listed on exchanges in the United States, have not sold at an M/B of 1.0 during the last 24-years, 1999-2022. Based upon the traditional DCF assumption, which suggests that companies with M/Bs greater than 1.0 earn more than their cost of capital, this data would suggest that the S&P 500 companies have earned more than their cost of capital while competing in a competitive environment over the 24-year period. In a competitive market, new companies would continually enter the market up to the point that the earnings rate was at least equal to their cost of capital.

During this period the S&P 500 sold at an average M/B of 306% while experiencing a ROE of 18.0% over a period in which interest rates averaged 3.9%.

It is important to note that during this period the S&P 500 M/B ranged from 192% to 490%, all while competing in competitive markets.

Q. What is the significance of S&P 500 M/B and the cost of capital for a water utility?

A. As stated previously, utility stocks do not trade in a vacuum. They must compete for capital with other firms including the S&P 500 stocks. Over time, there has been a relationship between M/Bs of S&P 500 stocks and utility stocks. Although S&P 500 stocks have generally sold at a higher multiple of book value than utility stocks, both have tracked in similar directions. Because utility and S&P 500 stock prices relative to book values move in similar directions, it is irrational to conclude that stock prices that are different from book value, either higher or lower, suggests that a firm is over-or under-earning its cost of capital when competitive, free-markets exist.

Q. Does the market value DCF provide a reasonable estimate of the Water Group's common equity cost rate?

A. No, the DCF only provides a reasonable estimate of the Comparable Group's common equity cost rate when their market price and book value are similar (M/B=100%).[30] A DCF will overstate a common equity cost rate when M/Bs are below 100% and understate when they are above 100%. Since the Comparable Group's current M/Bs average 287%, the DCF understates their common equity cost rate. Schedule 15 provides a numerical illustration of the impact of M/Bs on investors' market returns and DCF returns. The reason that DCF understates or

[30]Roger A Morin, Regulatory Finance - Utilities' Cost of Capital, Public Utility Reports, Inc., 1994, pp. 236-237.

overstates investors' return requirements depending upon M/B levels is because a DCF-derived equity cost rate is applied to a book value rate base while investors' returns are measured relative to stock price levels. Based upon this, I recommend 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.[31] 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.

[31]For 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 .

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 $4.516 **billion** difference in market value common equity and book value common equity. This difference in market values and book values results in debt/equity ratios based on market value of 27.4%/72.6% (debt/equity) verses 50.2%/49.8% (debt/equity) based on book value as shown on page 1 of Schedule 16. The larger the difference between market values and book values the less reliable the models' results are because **the models provide an estimate of the cost of capital of market value**, not book value.

Financial theory concludes that capital structure and firm value are related. Since capital structure and firm value are related, an adjustment is required when a cost of common equity model is based on market value and if its results are then applied to book value. As explained previously, the market value derived cost rate reflects the financial risk or leverage associated with **capitalization ratios based on market value**, not book value. The authors Brealey, Myers and Allen provide a similar definition of the cost of capital being based on market capitalization, not book value,

> The values of debt and equity add up to overall firm value (D + E = V) and firm value V equals asset value. **These figures are all market values, not book (accounting) values**. The market value of equity is often much larger than the book value, so the market debt ratio D/V is often much lower than a debt ratio computed from the book balance sheet.[32]

The work of Modigliani and Miller concludes that the market value of any firm is independent of its capital structure and this is precisely the reason why an

[32]Brealey, Myers and Allen, Principles of Corporate Finance, 10th edition, page 216 (emphasis added).

adjustment is appropriate. The only way for the market value of a firm to remain independent of its capital structure is if the capital cost rates change to offset changes in the capital structure. If the capital cost rates do not change to offset changes in the capital structure, then the value of the firm will change. Clearly an adjustment is required when a cost of common equity model is based on **market value** and if its results are then applied to **book value** because the capital structure is changed from **market value** capitalization to **book value** capitalization.

Differences in the amount of leverage employed can be quantified based upon the Comparable Group's leveraged beta being "unleveraged" through the application of the a "Hamada Model."

> The Hamada equation is a fundamental analysis method of analyzing a firm's cost of capital as it uses additional financial leverage, and how that relates to the overall riskiness of the firm. The measure is used to summarize the effects this type of leverage has on a firm's cost of capital—over and above the cost of capital as if the firm had no debt.[33]

The Hamada Model combines two financial theorems: the Modigliani-Miller Theorem and the CAPM.[34] On page 2 of Schedule 16 I used two Hamada Models including the original Hamada formula and the Harris-Pringle formula to account for the 22.9 percentage point (72.6% - 49.7% = 22.9%) change in common equity ratio that results from changing from market value capitalization to book value capitalization. The results of the application of the original Hamada formula and the Harris-Pringle formula determine a range of adjustment of 0.73% to 1.20%, and

33 Hargrave, Marshall. "Hamada Equation Definition, Formula, Example," *Investopedia*. Accessed 3/14/23. https://www.investopedia.com/terms/h/hamadaequation.asp.
34 "Hamada's Equation," Corporate Finance Institute. Accessed 3/14/23. https://corporatefinanceinstitute.com/resources/valuation/hamadas-equation/.

average 0.97%. The details of the application of the two Hamada models are shown on page 2 of Schedule 16.

For example, the inputs to the original Hamada formula for the Water Group market value capitalization consist of their raw leveraged beta of 0.66, debt ratio of 27.4%, preferred stock ratio of 0.0%, common equity ratio of 72.6% and combined tax rate of 26.14%. The group's unleveraged beta is determined to be 0.52 through the use of the following original Hamada formula::

$$Bl = Bu\ (1 + (1 - t)\ D/E + P/E)$$

where:

Bl = observed, leveraged beta
Bu = calculated, unleveraged beta
t = income tax rate
D = debt ratio
P = preferred stock ratio
E = common equity ratio

Applying the unleveraged beta of 0.52 along with the Water Group's book value capitalization ratios of 50.2% long-term debt, 0.1% preferred stock and 49.7% common equity and combined tax rate of 26.14% results in a leveraged beta of 0.90 applicable to the group's book value capitalization. Based upon the Water Group's risk premium of 5.0% and the difference between Water Group's market value leveraged beta, their book value leveraged beta of 0.24 (0.90 - 0.66) indicates that the Water Group's common equity cost rate must be increased by 1.20 (0.24 x 5.0 = 1.20) in recognition of their book value's exposure to more financial risk.

The inputs to the Harris-Pringle formula for the Water Group market value capitalization consist of their raw leveraged beta of 0.66, debt ratio of 27.4%, preferred stock ratio of 0.0%, common equity ratio of 72.6% and debt beta of 0.34.

The group's unleveraged beta is determined to be 0.57 through the use of the following Harris-Pringle formula:

$$Bl = Bu + (Bu - Bd)(D/E)$$

where:

Bl = observed, leveraged beta
Bu = calculated, unleveraged beta
Bd = debt beta
D = debt ratio
P = preferred stock ratio
E = common equity ratio

Applying the unleveraged beta of 0.57 along with the Water Group's book value capitalization ratios of 50.2% long-term debt, 0.1% preferred stock and 49.7% common equity and debt beta of 0.34 results in a leveraged beta of 0.81 applicable to the group's book value capitalization. Based upon the Water Group's risk premium of 5.0% and the difference between Water Group's market value leveraged beta, their book value leveraged beta of 0.15 (0.81 - 0.66) indicates that the Water Group's common equity cost rate must be increased by 0.73 (0.15 x 5.0 = 0.73) in recognition of their book value's exposure to more financial risk.

Q. Is there another way to reflect the financial risk difference that exists as a result of market capitalization ratios being significantly different from book value capitalization ratios?

A. Yes, generally speaking. Although it is possible to know the direction of a financial risk adjustment on common equity cost rate, a specific quantification of financial risk differences is very difficult. Although the end result of a financial risk adjustment is very subjective and specific quantification very difficult, the direction of the adjustment is clearly known. However, hypothetically if the Comparable

Group's debt were rated based on market value debt ratios they would command an Aaa rating. The Comparison Group currently has bonds rated A based upon their book value debt ratios. The yield spread on a bond rated Aaa versus A rated bonds averages about 53 basis points or 0.53% as shown on page 3 of Schedule 16.

The end result of the application of the Hamada Model and the bond yield spread indicates that the Water Group market value common equity cost rate equity cost rate should be adjusted upward by at least 0.75% (0.97% hamada est. + 0.53% yield spread = 1.50% ÷ 2 = 0.8%) since it is going to be applied to a book value.

Accounting for the increased amount of leverage between market value derived DCF cost rates and book value cost rates indicates a book value DCF cost rate of 9.05% for the Water Group (8.3% + 0.75% = 9.05%).

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-free rate of 4.0% based upon the recent and forward long-term Treasury yields. I used the average beta of 0.79 for the Water Group as shown on page 1 of Schedule 17. However, as stated previously, the Comparable Group's betas are understated due to their small size which affects their stock price changes.

Q. After developing an appropriate beta and risk-free rate, what else is necessary to calculate a CAPM derived cost rate?

A. A market premium is necessary to determine a traditional CAPM derived cost rate. The market return rate is the return expected for the entire market. The market premium is then multiplied by the company specific beta to capture the incremental cost of additional risk (market premium) above the base risk-free rate (long-term treasury securities) to develop a risk adjusted market premium. For example, if you conclude that the expected return on the market as a whole is 15% and further assume that the risk-free rate is 8%, then the market premium is shown to be 7% (15% - 8% = 7%).

Further, assume there are two companies, one of which is considered less risky than the market, and therefore has a beta of less than 1.00 or 0.80. The second company has a beta that is greater than 1.00 or 1.20, and is therefore considered riskier than the market. By multiplying the hypothetical 7.0% market premium by the respective betas of 0.80 and 1.20, risk adjusted market premiums of 5.6% (7.0% x 0.80) and 8.4% (7.0% x 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 10.12% 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 13.70% less the risk free rate of 4.0% and the S&P 500's average projected total market return for the next three to five years of 14.53% less the risk free rate of 4.0% from S&P Global Market Intelligence. 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.

Q. How did you adjust for the impact that size has on the Comparable Group's beta?

A. The adjustment is reflected in the CAPM size premium. The CAPM size premium is developed on page 4 of Schedule 17. The size premium reflects the risks associated with the Comparable Group's small size and its impact on the determination of their beta. This adjustment is necessary because beta (systematic risk) does not capture or reflect the Comparable Group's small size. I reduced the size premium by the ratio of the Comparison Group's beta to their respective market quartile's beta and estimated credit spreads for the comparison companies and the quartile companies.

Q. What is the comparison group's market cost of equity based upon your CAPM calculation?

A. The CAPM based on Ibbotson Associates' historical market returns shows a market cost rate of 10.6% for the Water Group. The CAPM based on projected market returns shows a 12.7% for the Water Group, as shown on page 1 of Schedule 17. The Comparable Group's market value CAPM of 11.1% is based 75% on the results of the historical market returns and 25% on the projected market returns. Adjusting the market value CAPM based upon the end result of the application of the Hamada

Model and the bond yield spread to account for the difference in leverage between market value capitalization ratios and book value ratios discussed previously indicates a cost rate of 11.85% for the Water Group applicable to book value (11.1% + 0.75% = 11.85%).

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 5.5% based upon their credit profile that supports an A bond rating.

Q. What is the appropriate risk premium to be added to the future long-term borrowing rate?

A. To determine a common equity cost rate, it is necessary to estimate a risk premium to be added to the Comparable Group's prospective long-term debt rate. Investors may rely upon published projected premiums; they also rely upon their experiences of investing in ultimately determining a probabilistic forecasted risk premium.

Projections of total market returns of 14.12% are shown on page 9 of Schedule 18. A projected risk premium for the market can be derived by subtracting the debt cost rate from the projected market return as shown on page 9 of Schedule 18. However, the derived risk premium for the market is not directly applicable to the Comparable Companies because they are less risky than the market. The use of 80% of the market's risk is a conservative estimation of their level of risk as compared to the market. Based on this, a reasonable estimate of a longer term projected risk premium is 7.2% as shown on page 9 of Schedule 18.

Q. How do investors' experiences affect their determination of a risk premium?

A. Returns on various assets are studied to determine a probabilistic risk premium. The most noted asset return studies and resultant risk premium studies are those performed by Ibbotson Associates. However, Ibbotson Associates has not performed asset return studies concerning public utility common stocks. Based upon Ibbotson Associates' methodology of computing asset returns, I calculated annual returns for the S&P utilities and bonds for the period 1928-2022. The resultant annual returns were then compared to determine a recent risk premium from a recent 20-year period, 2003-2022 and subsequent periods that were each

increased by ten years until the entire study period was reviewed (pages 2 and 3 of Schedule 18).

A long-term analysis of rates of return is necessary because it assumes that investors' expectations are, on average, equal to realized long-run rates of return and resultant risk premium. Observing a single year's risk premium, either high or low, may not be consistent with investors' requirements. Further, studies show a mean reversion in risk premiums. In other words, over time, risk premiums revert to a longer-term average premium. Moreover, since the expected rate of return is defined as "the rate of return expected to be realized from an investment; the mean value of the probability distribution of possible results,"[35] a long-term analysis of annual returns is appropriate.

Q. What do you conclude from the information shown on pages 2 and 3 of Schedule 18?

A. The average of the absolute range of the S&P Utilities' appropriate average risk premium (i.e., bonds rated AAA to A) was 4.9% during the seven periods studied, as calculated from page 2 of Schedule 18. The credit adjusted longer term risk premiums (i.e., bonds rated A), 1928-2022, averages 4.6%. The appropriate average (i.e., bonds rated AAA to A) longer term risk premiums, 1928-2022, have an absolute range of 4.6% to 5.2%, and averages 4.8%.

The aforementioned premiums are based on total returns for bonds; and reflect their price risk. A bond's price risk is not related to its credit quality and is eliminated when a bond is held to maturity from time of purchase. Using the

[35]Eugene F. Brigham, Fundamentals of Financial Management, Fifth Edition, The Dryden Press, 1989, p. 106.

income returns, page 4 of Schedule 18, for bonds eliminates price risk and better measures an investor's required return based on credit quality. The appropriate average risk premium (i.e., bonds rated AAA to A) based on income returns was 5.7% during the seven periods studied. The credit adjusted longer term risk premiums (i.e., bonds rated A), 1928-2022, averages 4.9%. The appropriate average (i.e., bonds rated AAA to A) longer term risk premiums, 1928-2022, have an absolute range of 4.9% to 5.2%, and averages 5.1%.

Q. What information is shown on page 4 of Schedule 18?

A. Page 4 of Schedule 18 proves and measures the negative relationship between interest rate levels and the resulting risk premium. That is, risk premiums are generally higher when interest rates are low and risk premiums are generally lower when interest rates are high. This was proven by sorting the 95-year period, 1928 to 2022, annual returns based on interest rate level from lowest interest rate to highest interest rate and distributing the results into two groups, a 47-year low interest rate environment group and a 48-year high interest rate environment group.

During the period 1928-2022, the 47 years with the lowest interest rates had an average interest rate of 2.8% and reflected a range of interest rates from 1.4% to 4.0%. This period resembles the current interest rate environment of 4.0% discussed previously regarding the CAPM's risk free rate. The risk premium based on total returns during this low interest rate environment produced the appropriate average (i.e., bonds rated AAA to A) longer term risk premium of 6.9% and a credit adjusted longer term risk premium (i.e., bonds rated A) of 6.3%. The annual income return based risk premium during this low interest rate environment

produced the appropriate average (i.e., bonds rated AAA to A) longer term risk premium of 7.5% and a credit adjusted longer term risk premium (i.e., bonds rated A) of 7.2%.

However, during the period 1928-2022, the 48 years with the highest interest rates had an average interest rate of 7.1% and reflected a range of interest rates from 4.1% to 13.5%. This period is far different from the current interest rate environment of 4.0%. The risk premium based on total returns during the highest interest rate environment produced an average longer term risk premium of 2.9% over bonds rated AAA to A and a credit adjusted longer term risk premium (i.e., bonds rated A) of only 2.9%. The annual income return based risk premium during the highest interest rate environment produced an average longer term risk premium of 2.8% over bonds rated AAA to A and a credit adjusted longer term risk premium (i.e., bonds rated A) of only 2.7%.

Over time, risk premiums are mean reverting. They constantly move toward a long-term average reflecting a long-term level of interest rates. That is, an above-average risk premium will decrease toward a long-term average while a below-average risk premium will increase toward a long-term average. In any single year, of course, investor-required rates of return may not be realized and in certain instances, a single year's risk premiums may be negative. Negative risk premiums are not indicative of investors' expectations and violate the basic premise of finance concerning risk and return. Negative risk premiums usually occur only in the stock market's down years (*i.e.,* the years in which the stock markets' return was negative).

When interest rate levels are not considered the credit adjusted longer term risk premium (i.e., bonds rated A), 1928-2022, averages 4.9%, discussed previously regarding page 4 of Schedule 18. However, the annual income return based risk premium during the low interest rate environment produced a credit adjusted longer term risk premium (i.e., bonds rated A) of 7.2%. Since this period resembles the current interest rate environment of 4.0%, a reasonable estimate of investors risk premium based on historical returns is based on a 50% weighting on the results of the entire 1928-2022 historical market returns and a 50% weighting on the results of the low interest rate environment to produce a 6.0% historical risk premium. However, I recognize that the current interest rate environment of 4.0% is close to the upper end of the low interest rate environment, which ranged from 1.4% to 4.0%, and have lowered my estimate of the risk premium to 5.0%.

Adding the risk premium of 5.0% for the Comparable Group to the prospective cost of newly-issued long-term debt of 5.5% results in a market value risk premium derived cost rate for common equity of 10.5% as reflected on page 1 of Schedule 18. Adjusting the market value risk premium based upon the end result of the application of the Hamada Model and the bond yield spread to account for the difference in leverage between market value capitalization and book value ratios discussed previously indicates a cost rate of 11.25% applicable to book value (10.5% + 0.75% = 11.25%).

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 9.05% to 11.85% as reflected on Schedule 19. Based upon this data, the common equity cost rate for the Water Group is at least 10.80%. My recommendation is based upon the Water Group's 10.80% common equity cost rate.

Q. Do you recommend a cost of common equity of 10.80% for VWNJ?

A. Yes. Based upon the financial analysis and risk analysis, I conclude that VWNJ 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 VWNJ of 9.05% (DCF), 11.85% (CAPM), and 11.25% (RP) as shown in Table 8.

Summary of the VWNJ's Equity Cost Rates	
DCF	9.05
CAPM	11.85
RP	11.25

Table 8

Q. What is your common equity cost rate recommendation for VWNJ?

A. As discussed above and as shown in Schedule 19, I recommend a 10.80% common equity cost rate for VWNJ.

Q. Have you checked the reasonableness of your recommended common equity rate for VWNJ?

A. Yes. Page 2 of Schedule 14 reflects the average projected earned return on average book common equity for the companies in the Comparable Group for the period 2026-2028, which is shown to average 10.7% and have median of 10.3%. Given the large degree to which regulatory lag and attrition impacts water utilities earning, the range of the comparable utilities' projected earned returns suggests that my recommendation that VWNJ be permitted an opportunity to earn 10.80% is reasonable, if not conservative.

OVERALL RATE OF RETURN RECOMMENDATION

Q. What is your overall fair rate of return recommendation for the VWNJ?

A. Based upon the recommended capital structure and my estimate of the VWNJ's common equity cost rate, I recommend an overall fair rate of return of 7.75%.[36] The details of my recommendation are shown on Schedule 1.

Q. HAVE YOU TESTED THE REASONABLENESS OF YOUR OVERALL FAIR RATE OF RETURN RECOMMENDATION?

A. Yes. If my recommended overall rate of return is actually earned, it will give VWNJ ratios that will allow VWNJ to present a financial profile that will enable it to attract capital necessary to provide safe and reliable water service, at reasonable terms.

36 It should be noted that my current analysis contained in Exhibit P-6 supports a cost of common equity of 10.80% for the Company. The Company's filing includes an overall rate of return of 7.49% and a 10.30% of common equity for filing purposes to minimize the requested revenue increase.

Q. Does that conclude your direct testimony?

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" (CRRA) 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 obtained a license as a 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.

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.

Client	Docket No.
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
Bermuda Water Company, Inc	W-01812A-22-0256
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
Philadelphia Gas Works	R-2023-3037933
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
Suez Water Owego-Nichols, Inc.	19-W-0168 & 19-W-0269
Suez Water New York, Inc.	19-W-0168 & 19-W-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
Veolia Water Idaho, Inc.	VEO-W-22-02
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