

January 14, 2022

VIA ELECTRONIC MAIL

Hon. Ada Camacho-Welch, Secretary
Board of Public Utilities
44 South Clinton Avenue, 9th Floor
P.O. Box 350
Trenton, NJ 08625-0350
board.secretary@bpu.nj.gov

Re: In the Matter of the Petition of New Jersey-American Water Company, Inc. for Approval of Increased Tariff Rates and Charges for Water and Wastewater Service, and Other Tariff Modifications
BPU Docket No. WR2201_____

Dear Secretary Camacho-Welch:

On behalf of New Jersey-American Water Company, Inc. (the “Company” or “NJAWC”), we submit for filing pursuant to *N.J.A.C. 15:1-12.1, et seq.* the Public Copy of the above-referenced Petition. Due to the COVID-19 Pandemic and in accordance with the New Jersey Board of Public Utilities (“BPU”) orders issued on March 19, 2020 and May 20, 2020 in BPU Docket No. EO20030254, hard copies are not being submitted at this time, but can be provided at a later time, if needed.

The parties designated to receive notices and other communications in connection with this matter are as follows:

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Please note that certain information associated with the Petition is confidential (the “Confidential Information”). Contemporaneously with the filing of this Petition, the Company is submitting the Confidential Information, along with the Affidavit of Christopher M. Arfaa, Director, Corporate Counsel of American Water Works Service Company, Inc., in support of its request for confidentiality via a separate e-mail marked “CONFIDENTIAL” addressed to: records.custodian@bpu.nj.gov.

Respectfully,

A handwritten signature in dark ink, appearing to read 'Sarmili Saha', written in a cursive style.

Sarmili Saha

Enc.

cc: Service List (via email)
Brian O. Lipman, Director, Division of Rate Counsel (via Federal Express)
Pamela Owen, Assistant Chief, Deputy Attorney General (via Federal Express)

**I/M/O the Petition of New Jersey American Water Company, Inc. for
Approval of Increased Base Tariff Rates and
Charges for Water and Wastewater Service and Other Tariff Revisions
BPU Docket No. WR2201_____
OAL Docket No. PUC ____-22**

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**I/M/O the Petition of New Jersey American Water Company, Inc. for
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**BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES**

IN THE MATTER OF THE PETITION OF	:	
NEW JERSEY-AMERICAN WATER	:	CASE SUMMARY
COMPANY, INC. FOR APPROVAL OF	:	
INCREASED TARIFF RATES AND	:	BPU DOCKET NO.
CHARGES FOR WATER AND	:	
WASTEWATER SERVICE, AND OTHER	:	
TARIFF MODIFICATIONS	:	

By this Petition, New Jersey-American Water Company, Inc. (“NJAWC”, “New Jersey-American Water” or the “Company”) proposes to increase its base tariff rates and implement certain other tariff revisions as detailed further in its Petition and supporting Exhibits.

New Jersey-American Water has provided high quality, reliable water and wastewater services to its customers for over 130 years. In fact, in 2021, the Company was rated Number One in Customer Satisfaction of all large water utilities in the Northeast. In order to provide this level of service to its customers, the Company must make ongoing, significant capital investments, as well as incur a substantial amount of operations and maintenance (“O&M”) expenses.

NJAWC’s proposed rate increase is driven primarily by the capital investment required to maintain and improve the Company’s infrastructure. Since the effective date of rates in the Company’s last base rate case, NJAWC has invested, or will invest, approximately \$985 million in capital expenditures through the end of 2022. Nearly 68% of the Company’s proposed revenue increase is driven by investment in New Jersey’s infrastructure.

The investments the Company makes include improving the resiliency of its distribution system and treatment plants, treatment changes to maintain regulatory compliance, technology investments that will integrate with existing systems to enhance service to customers, and

management of source of supply and system demands. The Company has invested, or plans to invest, over \$454 million during the twelve months ending June 30, 2022 (the “Test Year”), and an additional \$272 million by December 31, 2022. Of that \$726 million, \$301 million are distribution system improvement charge (“DSIC”) eligible investments. As noted above, by the end of 2022 the Company will have invested approximately \$985 million in capital improvements since the effective date of rates in the Company’s last rate case. NJAWC has made and will continue to make these capital investments to continue to provide safe and reliable water and wastewater service to its customers. Moreover, every \$1 million the Company spends in capital is expected to create or sustain approximately 16 jobs in New Jersey. By doing so, the Company will have created or sustained over 15,000 jobs during the time period since the last rate case. NJAWC’s infrastructure investment provides vital benefits to the health and welfare of our customers and the state – vital service that continued in the face of the floodwaters spawned by Hurricane Ida and power outages from Tropical Storm Isaias.

In terms of expenses, NJAWC has managed and continues to manage its operations responsibly and effectively to uphold its continued commitment to provide safe and reliable water and wastewater services to its customers at reasonable rates. Although the Company is seeking an increase in O&M expenses, NJAWC’s O&M expense level is not much higher than it was more than a decade ago. Moreover, the Company’s O&M expense over that period has increased at a rate significantly less than the rate of inflation. Because each dollar saved in O&M expenses permits \$8 dollars to be invested in plant at no impact to rates, the Company’s cost containment efforts provided significant benefits to customers beyond mere cost savings.

The Company is requesting an increase in base rates because its existing rates will not afford NJAWC the opportunity to earn a reasonable return on its investments or to recover its

reasonable operating costs in the period during which rates are effective. Additionally, the Company requests certain other relief to serve the long-term interests of its customers while allowing the Company to continue to provide safe, reliable and proper service. Those include recovery of the regulatory asset authorized by the Board for prudently-incurred incremental expenses related to COVID-19, and an Uncollectible Adjustment Clause to address fluctuations in bad debt expense on a going forward basis to protect both our customers and the Company.

The rates proposed in this filing would yield additional total operating revenues of \$94.7 million, representing an increase of 11.22% over existing annual revenues. The impact of the proposed increase on the bill of an average residential customers using 5,520 gallons of water per month would be \$6.78 or 10.86%.¹ This represents a daily cost of only \$2.28 cents for all the water necessary for drinking, cooking, cleaning, bathing and basic sanitation.

¹ The actual percentage increase applicable to specific customers will vary according to the pertinent rate schedule and the level of each customer's usage.

**BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES**

**IN THE MATTER OF THE PETITION OF :
NEW JERSEY-AMERICAN WATER : PETITION
COMPANY, INC. FOR APPROVAL OF :
INCREASED TARIFF RATES AND : BPU DOCKET NO.: WR2201_____
CHARGES FOR WATER AND :
WASTEWATER SERVICE AND OTHER :
TARIFF MODIFICATIONS :**

TO: THE HONORABLE COMMISSIONERS OF THE BOARD OF PUBLIC UTILITIES

New Jersey-American Water Company, Inc. (the “Company,” “NJAWC” or “Petitioner”), a public utility corporation of the State of New Jersey, with its principal office at 1 Water Street, Camden, New Jersey 08102, hereby petitions this Honorable Board (the “Board” or “BPU”) for authority pursuant to N.J.S.A. 48:2-21, N.J.S.A. 48:2-21.1 and N.J.A.C. 14:1-5.12 to increase its base tariff rates and charges for water and wastewater service and to implement certain other tariff revisions. In support thereof, Petitioner states as follows:

I. BACKGROUND

1. NJAWC is engaged in the production, treatment and distribution of water and collection of wastewater within its defined service territory within the State of New Jersey. Said service territory includes portions of the following counties: Atlantic, Bergen, Burlington, Camden, Cape May, Essex, Gloucester, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Somerset, Union, and Warren. As of December 31, 2021, Petitioner serves approximately 660,000 water and fire service customers and 49,900 wastewater service customers.

2. The rate schedules and other tariff provisions that NJAWC proposes to modify by virtue of this filing are those currently effective rate schedules and tariff provisions now on file

with the Board, designated “Tariff for Water and Wastewater Service, B.P.U. No. 8 – Water and Wastewater” (the “Existing Tariff”).

3. The Existing Tariff was issued pursuant to Board Orders in Docket Nos. WR10040260, effective January 1, 2011, WR15010035, effective September 21, 2015, WR16111065, effective April 1, 2017, WR18111241, effective March 26, 2018, WR17090985, effective October 29, 2018, WM18080904, effective January 1, 2019, WR17111183, effective July 1, 2019 and WR19121516, effective October 28, 2020.

4. The proposed rate schedules and other tariff provisions that Petitioner seeks to make effective as a result of this filing are those contained in the tariff sheets, which are blacklined against the Existing Tariff to reflect proposed changes (the “Proposed Tariff”), a copy of which is attached as Exhibit P-1. It is requested that the Proposed Tariff be made effective February 13, 2022, a date which is no less than thirty (30) days from the date of this filing.

II. BASE RATES

5. The Company’s proposed revenue requirement, equal to the cost of providing water, fire and wastewater service to NJAWC’s customers, is approximately \$903.1 million.

6. The Company’s revenue deficiency is \$94.7 million or approximately 11.7%.

7. The proposed increase will produce additional revenues of \$94.7 million per year or 11.22% over existing annual revenues.

8. The impact of this Petition on the bill of an average customer using 5,520 gallons per month would be \$6.78 or 10.86%. The actual percentage increase applicable to specific customers will vary according to the applicable rate schedule and the level of each customer’s usage.

9. Petitioner's test year ends June 30, 2022. Petitioner is proposing to reflect changes in capital expenditures through December 31, 2022, and changes in certain revenues and expenses through March 31, 2023.

10. Petitioner's filing in this case is based on five months of actual and seven months of estimated data. During the proceeding, the Company will update its Direct Testimony, Exhibits and Schedules, as appropriate, to reflect actual results. It is anticipated that by the conclusion of this case, the entire test year ending June 30, 2022 will reflect actual results.

11. As required by N.J.A.C. 14:1-5.12(a)(11), the Company has applied a consolidated tax adjustment. After the execution of an Agreement of Non-Disclosure ("NDA"), a proposed version of which is attached as Exhibit P-1A, a consolidated tax savings schedule will be provided to the NDA signatory parties.

III. THE NEED FOR THE REQUESTED RATE RELIEF

12. The primary driver of the proposed rate increase is the capital investment to maintain and improve the Company's infrastructure to continue providing safe, reliable and adequate service to its customers. Nearly 68% of the Company's proposed revenue increase is driven by investment in the Company's infrastructure. In total, the Company will have invested approximately \$985 million in capital improvements since the effective date of rates in the Company's last rate case (Docket No. WR19121516) (the "2019 Rate Case"). Specifically, the Company has invested or plans to invest over \$454 million during the test year, and an additional \$272 million by December 31, 2022. Those investments total \$726 million, of which \$301 million is DSIC eligible investments.

13. In making these investments, NJAWC works to control capital expenditure costs through competitive bidding, streamlined selection of services and materials and utilization of large volume purchasing power.

14. Petitioner has made these capital improvements to allow it to continue to provide safe, reliable and proper service in a manner that serves the long-term interests of our customers.

15. Many of these projects, which are described in the Company's Direct Testimony, Exhibits and Schedules, are necessary to comply with environmental or water quality regulations, address aging facilities, and increase system resiliency and reliability. Additional capital improvement projects address emerging compounds such as perfluorooctanoic acid ("PFOA"), 1,4-dioxane, and hexavalent chromium, the reduction of non-revenue water, and climate variability. In each instance, these projects support the Company's continued provision of safe, adequate and reliable service to customers.¹

16. It is not possible to continue to make investments at this level without a reasonable opportunity to earn a reasonable return on the Company's capital invested in the system.

17. While not a significant driver in this rate case, the Company seeks to recover \$230.1 million in O&M expenses, which represents a modest increase. The Company's O&M expenses over the past decade have increased at a rate significantly less than the rate of inflation.

¹ The Company acknowledges recent New Jersey legislation that requires public water systems to inventory and replace lead service lines ("LSLs") within 10 years. See P.L. 2021, Chapter 183 ("LSL Legislation"). Pursuant to the LSL Legislation, the Company must submit its LSL replacement plan "at its next general rate proceeding." Contemporaneously with the filing of this rate case, the Company will submit its LSL replacement plan in accordance with the LSL Legislation.

IV. COVID-19 REGULATORY ASSET

18. Like all utilities in the State, NJAWC has been impacted by the COVID-19 pandemic. Through a series of voluntary initiatives by the Company, Board actions, and Executive Orders issued by Governor Murphy, the Company has taken and continues to take action to help protect all customers, including its most vulnerable, during the COVID-19 emergency.

19. Specifically, in March 2020, the Company voluntarily implemented a number of measures aimed at protecting customers including: 1) suspending service disconnections for non-payment; 2) suspending notices of disconnection; 3) reconnecting customers previously disconnected for non-payment; 4) waiving reconnection fees; and 5) suspending late fees and interest penalties on past-due accounts. The Company also temporarily waived certain eligibility requirements for its H2O Help to Others Program which provides: 1) emergency bill-paying assistance to customers; 2) qualifying water customers up to a 100% discount on their monthly fixed service charge for water customers; and 3) wastewater customers with service charge discounts.

20. As a result of COVID-19 and the Company's measures to mitigate its impact on customers, the Company has experienced increased costs attributed to COVID-19, including, but not limited to, increased uncollectible expense, incremental O&M expenses, costs related to financing activity to ensure adequate liquidity during the public health emergency and foregone reconnection and late fees.

21. On July 2, 2020, the Board issued an order in Docket No. AO20060471² which authorized each of the State's regulatory utilities to create a COVID-19 related regulatory asset by

² *I/M/O New Jersey Board of Public Utilities' Response to the Covid-19 Pandemic*, Order Authorizing Establishment of a Regulatory Asset for Incremental COVID-19 Related Expenses (BPU Docket No. AO0060471) ("July 2 Order").

deferring their prudently incurred incremental costs related to the COVID-19 pandemic beginning on March 9, 2020. The regulatory asset period is currently set to expire on December 31, 2022. Consistent with the terms of the July 2 Order, the Company has projected deferred COVID-19 related costs of \$15,967,435 through December 31, 2021, as discussed further in the testimony of Company witness Jamie Hawn.

22. Pursuant to the July 2 Order which provides that a utility may seek recovery of its deferred COVID-19 related costs in a base rate case, the Company seeks to recover its COVID-19 regulatory asset costs as part of this proceeding and respectfully requests that such recovery be amortized over a three-year period. The annual amortization amounts to \$5,322,478.³

V. UNCOLLECTIBLE ADJUSTMENT CLAUSE

23. As a result of the COVID-19 pandemic, the Company has recently experienced volatility in its uncollectibles expense. Accordingly, the Company seeks to implement an Uncollectible Adjustment Clause (“UAC”) to protect itself and customers from such variations on a going-forward basis.

24. Under the UAC, the Company proposes to reconcile its actual uncollectible expense to the base level of uncollectibles authorized by the Board in this proceeding, with any variance to be recovered from or credited to customers over a subsequent period.

25. This symmetrical reconciliation serves the interests of both the Company and customers by safeguarding against the variability and uncertainty of the Company’s uncollectibles expense.

³ The Company will update with actuals as part of this proceeding.

VI. REVENUE NORMALIZATION AND DECLINING USAGE

26. The declining consumption trend among water companies is well supported and has a material and ongoing impact on the Company's ability to recover the revenues authorized in setting rates. As discussed in the Direct Testimony of Company witness Charles B. Rea, after normalization of the impacts of weather and COVID-19, the statistical analysis of residential and commercial water usage indicates a downward trend for both classes.

27. Specifically, the Company's analysis demonstrates a continuing annual system-wide decline of 1.2% and 0.4% per year in residential and commercial usage, respectively, and a trend of declining usage into the foreseeable future.

28. Therefore, the Company proposes to normalize revenues in this case to account for these downward trends.

VII. PERFORMANCE PAY

29. Petitioner is seeking full cost recovery of its employee expenses, including its market-based total compensation. The Company's total compensation philosophy aligns the interests of our customers, employees and investors. The plan emphasizes operational goals, including customer service, environmental compliance, and a safe work environment, as well as certain financial goals.

30. As discussed in the Direct Testimonies of Messrs. Thomas Shroba and Robert Mustich, the Company's market-based total compensation package, including performance pay, is necessary for the Company to attract, retain, and motivate the talent needed to run the Company successfully and efficiently. Performance pay also benefits both the Company and customers by providing incentives to employees to continue delivering excellent service to customers. The operational components of the Company's performance compensation plans measure performance

that can most directly influence customer satisfaction, health and safety, and environmental excellence. Customers derive direct and demonstrable benefits from the Company's focus on these key measures in the plan.

31. As part of this case, the Company is submitting a study of the Company's market-based total compensation conducted by a third-party consultant, Willis Towers Watson, and supported by Company witness Robert Mustich (the "Compensation Study"). The Compensation Study assessed the Company's total compensation philosophy, including its short-term and long-term performance pay programs; comparing them to peer utilities and industry generally. The Compensation Study is confidential, trade secret and/or proprietary and will be provided to parties after execution of an NDA.

32. The Compensation Study results show that when performance pay is included in the total compensation program, NJAWC employees are generally within the range of market median indicating that the Company's compensation practices are reasonable. The Compensation Study also concluded that the Company's long-term and short-term performance pay programs are reasonable.

33. In addition, the Company's overall total direct compensation is in line with the market, and thus, is a reasonable and prudently incurred cost of service that is appropriate for inclusion in rates.

VIII. RATE DESIGN PROPOSAL

34. Petitioner is presenting in this case a cost of service study which was prepared by Company witness Mr. Rea.

35. The Company proposes to complete the alignment of Rate Schedules A-1, and A-10 that was agreed to in the settlement approved by the BPU in the 2019 Rate Case by aligning the volumetric rates in those two schedules. As a result, Rate Schedule A-10 will be eliminated.

36. The Company also proposes to increase the monthly service charge in Schedule A-15 from \$14.00 per month for a 5/8" meter to \$17.59 per month to close the gap between the monthly service charges for Haddonfield customers and the rest of the NJAWC's customer base.

37. With respect to monthly meter charges, the Company seeks to increase such charges for Schedule A-16 (Roxbury) to \$13.30 per month for a 5/8" meter and to increase the volumetric charge for Roxbury customers from \$3.7150 per thousand gallons to \$4.8622 per thousand gallons.

38. The Company proposes to merge Service Area 2 for Private Fire into Rate Schedule L-3 in this case. As a result, Rate Schedule L-4 will be eliminated.

39. In addition, the Company proposes to reduce the variation in public fire rates which currently range from \$26.83 per month for Schedule M-11 to \$74.50 for Schedules M-9 and M-5.

IX. AFFORDABILITY

40. Water and wastewater services are essential and the Company acknowledges the need for such services to be affordable. To that end, the Company has conducted an affordability study regarding the impact on customer bills as a result of the proposed rates in this case (the "Affordability Study").

41. As discussed in the Direct Testimony of Company witness Mr. Rea, the Affordability Study concludes that the Company's water service is currently affordable for most residential customers. The Affordability Study also indicates that the Company's water service will remain affordable under proposed rates.

X. TARIFF PROPOSALS

42. The Company proposes a number of Tariff changes discussed in the Direct Testimony of Jamie Hawn. The changes proposed by Ms. Hawn are designed to conform the Tariff to the relief requested in this case.

XI. TESTIMONY AND EXHIBITS INCORPORATED HEREIN

43. The Company submits herewith, and incorporates as a part hereof, all documents and exhibits required to accompany such a Petition pursuant to the Board's rules of practice as set forth in N.J.A.C. 14:1-5.12.

44. Attached hereto and incorporated herein are the Direct Testimony (Exhibits) and Schedules submitted on behalf of the following witnesses:

- a. Mark McDonough, President, NJAWC, whose testimony includes an overview of the Company and the primary issues driving the Company's filing (Exhibit P-3);
- b. Thomas Shroba, Vice President of Operations, NJAWC, whose testimony includes an overview of the Company's operations, its commitment to water quality, environmental compliance, safety, improving water efficiency, as well as the Company's proposed staffing levels and compensation philosophy (Exhibit P-4);
- c. Donald C. Shields, Vice President, Engineering for the Eastern Division, American Water Works Service Company "Service Company", whose testimony addresses the recovery of capital expenditures incurred since the Company's last rate case, the Company's plan regarding the engineered coating of steel structures, and some of the risks and challenges for water utilities associated with increased regulation and climate variability (Exhibit P-5);
- d. John S. Tomac, Senior Director of Rates and Regulatory for the Eastern Division, whose testimony supports the Company's revenue requirement calculation, rate base and capital structure, as well as the Company's proposal for an uncollectible adjustment clause and the rate base value of assets expected to be acquired by the Company during the pendency of this proceeding (Exhibit P-6);
- e. Jamie D. Hawn, Senior Manager of Rates and Regulatory for NJAWC, whose testimony includes the Company's request for recovery of expenses in this proceeding, the Company's pro forma adjustments to Operations and Maintenance ("O&M") expense, Taxes other than Income, Income Taxes, proposed recovery for deferred COVID-related expenses and the proposed tariff modifications and (Exhibit P-7);

- f. Charles B. Rea, Director, Rates and Regulatory for Service Company, whose testimony sponsors a cost of service study, rate design for both water and wastewater service, the determination of Post-Test Year revenues at present and proposed rates, the Company's analysis of residential, commercial, and public authorities water consumption as it relates to the impact of the COVID-19 pandemic on water usage and long-term trends in water usage and the Company's affordability analyses for water and wastewater service(Exhibit P-8);
- g. Ann Bulkley, Principal of The Brattle Group, whose testimony discusses cost of capital issues including the proposed return on equity, capital structure and overall cost of capital (Exhibit P-9);
- h. Patrick L. Baryenbruch, President of Baryenbruch & Company, LLC, whose testimony discusses the reasonableness of the Service Company costs (Exhibit P-10);
- i. Robert V. Mustich, Managing Director and East Region Rewards Business Leader for Willis Towers Watson, whose testimony addresses the reasonableness of the Company's compensation program, and benchmarks the Company's compensation expense against national and regional peer groups (Exhibit P-11); and
- j. Harold M. Walker, Manager, Financial Studies for Gannett Fleming Valuation and Rate Consultants, LLC, whose testimony presents the Company's cash working capital allowances (Exhibit P-12).

45. Attached hereto and incorporated herein is Exhibit P-2, which includes Schedule Nos. RR and 1 through 18 in support of this Petition.

XII. PROPOSED PROCEDURAL SCHEDULE

46. The Company respectfully proposes the adoption of the following procedural schedule for the conduct of this proceeding:

February 28, 2022	Service of first round discovery
March 21, 2022	Responses to first round discovery due
April 6, 2022	Public Hearings
April 11, 2022	Service of second round discovery
April 26, 2022	Second round discovery responses due
April 28, 2022	Company files 9+3 update
May 9, 2022	Service of 9+3 update discovery
May 20, 2022	Responses to discovery on 9+3 update due

Week of May 23, 2022	Discovery/Settlement Conferences
Week of May 30, 2022	Discovery/Settlement Conferences
June 20, 2022	Rate Counsel and Intervenor Direct Testimony Due
June 27, 2022	Serve discovery on Rate Counsel and Intervenor Direct Testimony
July 11, 2022	Responses to discovery on Rate Counsel and Intervenor testimony due
July 21, 2022	Company files 12+0 update
July 25, 2022	Company, Rate Counsel and Intervenors file Rebuttal Testimony
August 1, 2022	Serve discovery on Rebuttal Testimony
August 8, 2022	Responses to rebuttal discovery due
August 15, 2022	Surrebuttal Testimony
August 22, 2022	Evidentiary Hearings begin (subject to ALJ's availability)

XIII. MISCELLANEOUS

47. Petitioner is serving notice and a copy of this Petition, together with a copy of the exhibits and schedules annexed hereto on the Division of Rate Counsel and the Department of Law and Public Safety, as well as via electronic mail. Due to the COVID-19 pandemic, and in accordance with the BPU's March 19, 2020 and May 20, 2020 Orders issued in BPU Docket No. EO20030254, hard copies will not be provided to the Board at this time, but can be provided at a later time, as needed. Notice of this filing and the effect thereof will be served by mail upon the clerk of the Board of Chosen Freeholders and County Executive Officers of those counties in the Company's service territory, as well as upon the clerks of the respective municipalities within the Company's service territory. Such notice will be given at least 20 days prior to the date set for the initial public hearing and shall include and specify the time and place of said hearing. The counties and municipalities upon whom service of said notice will be made are shown in NJAWC's tariff.

48. Customers will be notified of this filing, and the effect thereof, together with the time and place of hearing by publication at least 20 days prior to the date set for hearing in newspapers published and circulated within the Company's service territory. A copy of the form of notice is attached as Exhibit P-1B.

49. Proof of Service of the Notices referred to herein will be served upon the parties and filed with the Board and Office of Administrative Law.

50. The reasons for the proposed increase in rates requested by the Company are as follows:

a. To recognize in rates its investments to continue to provide safe, adequate and reliable service to existing and new customers of Petitioner, which have been put into service since the Company's last base rate case, as well as the opportunity to earn its requested return on equity on those investments. These investments are not currently included in rate base and Petitioner currently bears carrying charges and depreciation expense associated with these facilities.

b. To recover increased costs, not previously recovered in rates.

c. To provide the Company with an opportunity to earn a reasonable return on its net investment.

d. To establish rates which will be sufficient to enable the Company, under efficient and economical operation, to maintain and support its financial integrity and to raise such funds as may be necessary for the proper discharge of its public duties.

e. To provide earnings sufficient to attract investors and provide sufficient cash flow to fund the Company's operations.

f. To enable the Company to continue to provide safe, adequate and proper service to its customers.

51. Petitioner respectfully submits that the rates, tariff modifications and other relief requested by it are in all respects just and reasonable.

WHEREFORE, the Company respectfully requests that the Board find, determine and rule as follows:

a. that the proposed rates submitted with this Petition are just and reasonable and should be made effective;

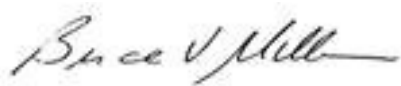
b. that the proposed tariff revisions requested herein and herewith are necessary and reasonable; and

c. that the Company may have such other further relief as requested herein and as the Board may deem reasonable and proper under the circumstances presented to it in this case.

Respectfully submitted,

CULLEN AND DYKMAN

Attorneys for New Jersey-American Water
Company, Inc.

By: 
Bruce V. Miller

DATED: January 14, 2022

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VERIFICATION

John S. Tomac, of full age, being duly sworn, according to law, deposes and says:


1. I am the Senior Director, Rates and Regulatory, of New Jersey-American Water Company, Inc., and am authorized to make this Verification on behalf of this company.

2. I have read the contents of the foregoing Petition and hereby verify that the statements therein contained are true and accurate to the best of my knowledge and belief.

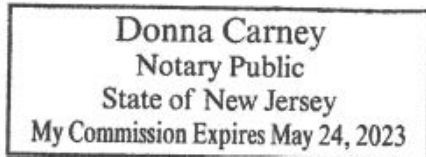


John S. Tomac
Senior Director, Rates and Regulatory

Sworn to and subscribed before
me this 14th day of January, 2022



Notary Public



NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 - Water and Wastewater

NEW JERSEY-AMERICAN WATER COMPANY, INC.

TARIFF FOR WATER AND WASTEWATER SERVICE

By: [Mark McDonough](#), President
1 Water Street, Camden, New Jersey 08102

Deleted: Cheryl Norton

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Third Revised Sheet: No. 1
Superseding Second Revised Sheet: No. 1

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By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Fifth ~~Sixth~~ Revised Sheet: No. 2
Superseding ~~Fifth~~ Revised Sheet: No. 2

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AN INTRODUCTION TO CUSTOMERS

The approved tariff located in the Company's office at 1 Water Street, Camden, NJ, and on its website at <https://www.amwater.com/njaw/customer-service-billing/your-water-and-wastewater-rates>, is available for your review. The Company is obligated to keep its tariff current, including any changes approved by the Board of Public Utilities. The Company is required to maintain it in exactly the same format as the Company's tariff on file at the Board of Public Utilities, 44 South Clinton Avenue, 9th Floor, Trenton, NJ.

The Company's Customer Service personnel can be reached at 1-800-272-1325 for assistance. If, after you review this tariff and discuss it with appropriate Company employees, you still have questions regarding clarification or interpretations, please contact the Board of Public Utilities, Division of Water at 1-609-633-9800 or the Board's Division of Customer Assistance at 1-800-624-0241, or at www.nj.gov/bpu/.

Deleted: 1-800-652-6987. Customers in Service Areas 2 and 3, as defined in the section titled "Area Served", can also call ...

You have the right to review this tariff at the Company's offices or at the Board's office in Trenton. Your inquiries will be handled by the Board's Staff in an expeditious manner in order to protect your rights as well as those of the water and/or wastewater Company. Please feel free to exercise this right by telephone or by visiting the Board's offices at any time between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, or by writing a letter. The letter should contain the writer's name, address and phone number, including the area code. If the writer is a customer of record, the account number should be included.

The Company also has available in its office a leaflet entitled "The Utility Customer's Bill of Rights." This is a summary document; it does not include all customer rights or utility obligations.

New Jersey-American Water hereby adopts the rules and regulations promulgated by the Board of Public Utilities of the State of New Jersey, some of which are referenced herein, and all of which are herein adopted and incorporated by reference. New Jersey-American Water provides water and wastewater service to various municipalities, all in the State of New Jersey.

The Board of Public Utilities is responsible for the final interpretation and enforcement of a utility's tariff provisions and rates. The utility is bound by New Jersey's statutes and the Board's regulations. If a conflict should exist in the tariff that is detrimental to the customer, the Board's regulations supersede the tariff provision absent specific approval to the contrary by the NJ Board of Public Utilities. A utility company may provide for more liberal treatment than that provided for in the Board's regulations.

Tariff B.P.U. No. 8 - Water and Wastewater is divided into a water section and a wastewater section, preceded by standard terms and conditions which are universally applicable, standard terms and conditions applicable to water service only, and standard terms and conditions applicable to wastewater service only. Tables of contents for each section precede a series of sequentially numbered and lettered tariff rate schedules. The tables of contents denote the appropriate rate schedule applicability for all classes of service and are an integral part of this tariff.

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November 1, 2020 ¶

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Fifth Revised Sheet: No. 3
Superseding Fourth Revised Sheet: No. 3

DEFINITIONS - WATER

The following are definitions of specific terms that are used in this document:

- 1- "Board" or "BPU" shall mean the New Jersey Board of Public Utilities.
- 2- "Company" or "New Jersey-American Water" shall mean New Jersey-American Water Company, Inc. or, as applicable, any predecessor entity.
- 3- "Connecting line" is the portion of pipe that starts at the curb stop and conveys domestic water and/or fire service to the customer. The customer and/or premises owner owns, and is responsible for the operation and maintenance of the connecting line.
- 4- "Curb stop" is the fitting attached to the service line, and is used primarily for turning on and shutting off water at the curb in emergencies, for purposes of repair or to discontinue service to a customer.
- 5- "Customer" means a person that is an end-user, a customer of record or both, as defined in N.J.A.C. 14:3-1.1. "Customer of Record" means the person that applies for utility service and is identified in the account records of a public utility as the person responsible for payment of the public utility bill. A customer may or may not be an end-user. "End User" means a person who receives, uses, or consumes water or wastewater service. An end user may or may not be a customer of record.
- 6- "DEP" shall mean the New Jersey Department of Environmental Protection.
- 7- "End User" means a person who receives, uses, or consumes water or receives wastewater or fire protection service. An end user may or may not be a customer or a premises owner.
- 8- "Extension" is an addition to the existing system of mains, intended to service more than one customer, either at the time of installation or in the future.
- 9- "Interruptible Service" means service which may be interrupted in the sole discretion of the Company on not less than three (3) hours' notice to the customer by telephone or otherwise.
- 10- "Main" is a pipe or conduit for conveying water or wastewater. A "water main" will exclusively convey water and a "sewer main" will exclusively convey wastewater.
- 11- "Meter" is a device to measure the quantity of water, wastewater and/or the rate of flow delivered to or from a customer.
- 12- "Meter pit" is a structure that houses a small meter or meters less than or equal to 2-inches. Unless agreed to by the Company and the customer, it is installed, furnished and maintained by the Company.
- 13- "Meter vault" is a structure that houses a meter or meters larger than 2-inches. Unless explicitly agreed to by the Company and the customer in writing, it is located and designed by the Company, and constructed, installed, furnished and maintained by the Customer at the sole expense to the customer. The Company will ensure that the vault is kept clear of any of its equipment that is no longer in service, to the extent possible.
- 14- "Person" means an individual, firm, joint venture, partnership, co-partnership, corporation, association, State, county, municipality, public agency or authority, bi-state or interstate agency or authority, public utility, regulated entity, cable television company, cooperation association, or joint stock association, trust, limited liability company, governmental entity, or other legal entity, and includes any trustee, receiver, assignee, or personal representative thereof. (N.J.A.C. 14:3-1.1)
- 15- "Premises" is defined as follows:
 - a) A building under one-roof, owned or leased by one customer and occupied as one place of business or residence.
 - b) A combination of buildings, owned or leased by one customer in one common enclosure, occupied by one family or business.
 - c) A combination of buildings, such as a garden type apartment, owned or leased by one customer, in one common enclosure, none of the individual buildings of which is adapted to separate ownership.

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One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Superseding [Fifth](#) Revised Sheet: No. 4
[Fourth](#) Revised Sheet: No. 4

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DEFINITIONS – WATER (Continued)

- d) The one side of a double house having a solid vertical partition wall, so that it may be adapted to separate ownership.
 - e) A building owned or leased by one person, of more than one apartment and using in common one hall and one entrance.
 - f) A building owned or leased by one person, having a number of apartments or offices, and using a common one hall and one or more means of entrance.
 - g) A public building or a single plot such as a park or a playground.
 - h) A building or combination of buildings owned by one customer or entity located on contiguous property not intersected or intervened by another customer or entity.
- 16- "Premises owner" is the party who possesses the exclusive right to hold, use, benefit from, enjoy, convey, transfer, and otherwise dispose of the property. A premises owner may or may not be the customer of record or end-user, as defined in N.J.A.C. 14:3-1.1.
- 17- "PWAC" or "Purchased water adjustment clause" is a provision that authorizes a utility to adjust its rates to compensate for an increase or decrease in the cost of water purchased from a water purveyor. (N.J.A.C. 14:9-7.2)
- 18- "PWAC Year" shall mean the twelve-month period beginning each April 1 and ending March 31 of the following calendar year.
- 19- "Residential customer" means a customer who receives service from a regulated entity for use in a residence. (N.J.A.C. 14:3-1.1)
- 20- "Sales for Resale Customer" means a municipal water system, a Municipal Utilities Authority, a County Utilities Authority, a Water Supply Authority, district or commission or a water utility regulated by the Board.
- 21- "Service line" is the portion of pipe that starts from a main and ends at the curb stop. The service line is owned, operated and maintained by the Company. (N.J.A.C. 14:3-8)
- 22- "Tap" is the fitting inserted in the main to which the service line is attached. It is used to facilitate the tapping of the main and for shutting off water in case of repairs to the service line.
- 23- "Tariff," as referred to herein, is the entire "Tariff for Water and Wastewater Service" as the same may be amended or revised from time to time in accordance with N.J.A.C. 14:3-1.3, Tariffs.
- 24- "Uncollectible Adjustment Clause" or "UAC" is a provision that authorizes a utility to adjust its rates to compensate for an increase or decrease in uncollectible expense.
- 25- "Water connection" includes all service line, taps and curb stops necessary to supply customers with water at their premises from the Company's water mains.
- 26- "Water service" is the act of providing water to a customer.

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By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
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1 Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Fourth Revised Sheet: No. 5
Superseding Third Revised Sheet: No. 5

DEFINITIONS - WASTEWATER

The following are definitions of specific terms that used hereafter in the tariff. Additional definitions are set forth in the Definitions section of the tariff for water and wastewater service.

- 1- "New Account" as herein used shall be defined as an account opened as the result of the construction of a new building.
- 2- "Building Drain" shall mean that part of the lowest horizontal piping of a drainage system which receives the discharge from drainage pipes inside the walls of the building terminating five (5) feet outside the face of the building wall from whence it becomes known as the building sewer.
- 3- "Building Sewer" shall mean the extension from the building drain to service lateral line and/or other point of connection to the Company wastewater collection system.
- 4- "Biochemical Oxygen Demand", denoted hereinafter as "B.O.D.", shall mean the quantity of oxygen utilized (demanded) in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days when incubated at 20°C.
- 5- "Suspended Solids" shall mean solids that either float on the surface of or are carried in suspension in water, wastewater or industrial wastes, and which are removable by laboratory filtering.
- 6- "pH" shall mean the logarithm to the base ten of the reciprocal of the weight of hydrogen ions in moles per liter of solution.
- 7- "Garbage" shall mean solid wastes from domestic and commercial preparation, cooking, dispensing or marketing of food or food products and from the handling, storage and sale of produce.
- 8- "Properly Shredded Garbage" shall mean garbage that has been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in the sewerage system with no particle greater than one-half inch (1/2") in any dimension.
- 9- "PSTAC" or "Purchased wastewater treatment adjustment clause" is a provision that authorizes a utility to adjust its rates to compensate for an increase or decrease in the cost of wastewater treatment purchased from a wastewater treatment purveyor. (N.J.A.C. 14:9-7.2)
- 10- "PSTAC Year" shall mean the twelve-month period beginning each April 1 and ending March 31 of the following calendar year.
- 11- "Slug" shall mean the discharge of water, sewerage, or industrial waste which in concentration of any constituent or in quantity of flow exceeds for any period of duration longer than fifteen (15) minutes more than five (5) times the average twenty-four hour flow or concentration under normal operating conditions.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Sixth Revised Sheet: No. 6
Superseding Fifth Revised Sheet: No. 6

AN OVERVIEW OF CUSTOMER RIGHTS

- (1) No public utility shall refuse to furnish or supply service to a qualified applicant. N.J.A.C. 14:3-3.1
- (2) The utility shall not place the name of a second individual on the account of a residential customer unless specifically requested by said second individual. (N.J.A.C. 14:3-3.2(b))
- (3) A customer has the right to have any complaint against the utility handled promptly by that utility. (Board Order, Docket No. CO8602155)
- (4) Each utility shall, upon request, furnish its customers with such information as is reasonable in order that the customers may obtain safe, adequate and proper service. N.J.A.C. 14:3-3.3(a)) Each utility shall inform its customers, where peculiar or unusual circumstances prevail, as to the conditions under which sufficient and satisfactory service may be secured from its system. (N.J.A.C. 14:3-3.3(c)) Each utility shall supply its customers with information on the furnishing and performance of service in a manner that tends to conserve energy resources and preserve the quality of the environment. N.J.A.C. 14:3-3.3(d)

GENERAL RULES

- 1- The Company will endeavor to provide a regular and uninterrupted supply of water through its facilities. However, if service shall be interrupted, irregular, or defective, or fail because of breakdown or emergency, the Company will not be liable for damage, inconvenience or lost income resulting there from.
- 2- A customer's responsibility to pay for service continues from the time service is commenced, pursuant to his/her application, until written notice is received by the Company of a change of ownership or occupancy of the premises or written notice is received by the Company to discontinue the applicable service. Upon receipt of such notice, the Company will arrange for a final meter reading and billing. No allowance will be made in case of non-occupancy, unless the Company is notified in writing as stated above.
- 3- The Company does not undertake to render any special service or maintain any fixed pressure. In the event of an accident or for other reasons, the Company may shut off the water in its mains and pipes and may restrict the use of water whenever the public welfare may require it. All customers requiring an uninterrupted supply or a uniform pressure of water for any purpose, such as steam boilers, are cautioned to provide their own means of providing such special uninterrupted service. When the supply is to be interrupted or curtailed, the Company will endeavor to give notice.
- 4- The Company does not undertake to supply any uniform quality of water for special purposes, such as laboratories, manufacturing or processing plants, swimming pools, bleaching or dyeing plants, or laundries. Customers requiring water of special quality, or water free from discoloration or turbidity, are required to provide their own means of treating water, or provide such other protection as may be deemed necessary for the purpose required.
- 5- The location of meters and the arrangement of the fittings and piping are subject to inspection and approval of the Company and should meet Company's requirements presented herein.
- 6- Neither by inspection approval nor failure to approve, nor in any other way, does the Company give any guarantee, or assume any responsibility, expressed or implied, as to the adequacy, safety or characteristics of any structures, equipment, pipes, appliances or devices owned, installed or maintained by the customer or leased by the customer from third parties.
- 7- The Company will not be liable for any loss, injury, casualty, or damage resulting from the supply or use of water service, or from the presence or operation of the Company's structures, equipment, pipes, appliances or devices on the customer's premises.
- 8- No unauthorized person is permitted to turn the water on or off at any street valve, corporation stop, curb stop, or other street connection, or disconnect or remove any meter without the consent of the Company.
- 9- No agent or employee of the Company shall have authority to bind it, by any promise, agreement, or representation not provided in this tariff, or in any way inconsistent therewith.

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One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Fifth Revised Sheet: No. 7
Superseding Fourth Revised Sheet: No. 7

GENERAL RULES (Continued)

- 10- Exempt rates are charged for service rendered to those customers entitled to statutory relief pursuant to N.J.S.A. 54:30A-50, et seq.
- 11- The quantity of water recorded by the meter shall be taken to be the amount delivered to the customer, except where the meter has been found to be registering fast by more than one and one-half percent (1.5%) or has ceased to register.
- 12- All service provided by the Company except public fire protection shall be metered. Thus, no unmetered water service connections are permitted except as otherwise set forth herein or approved by the Company.
- 13- The Company shall own and provide without charge for each customer supplied on a measured basis, a meter and such appurtenances related to the meter as are customarily furnished by the Company, such as encoders, radio transmitters, meter pits (but not meter vaults), or other devices designed to facilitate the collection of accurate and efficient meter reads.
- 14- The Company requires that all meters be housed inside meter pits (for meters that are less than or equal to 2-inches) or meter vaults (for meters that are larger than 2-inches). Where more than one service type exists (domestic, private fire protection or irrigation) all meters shall be housed inside a meter vault if any one meter is greater than two inches. The Customer is responsible for the installation and maintenance of meter vaults. All meter pits and meter vaults will be located outside of the Customer's structure in a location acceptable to the express approval of the Water Company. Notwithstanding the foregoing, the Company may grant an exception to this rule on a case by case basis at the Company's discretion.
- 15- The Company maintains and repairs meters except in case of misuse or damage by the customer or the customer's invitees, agents, representatives or contractors, in which case the Company shall charge the customer for repairing and replacing the meter, said charge to be based on the costs related to the removing, repairing, replacing and/or resetting the meter. The charge will be made in accordance with Rate Schedule P-2.
- 16- Where more than one rate schedule is available to particular customers, the utility shall have at all times the duty to assist such customers in the selection of the rate schedule most favorable for their individual requirements and to make every reasonable effort to insure that such customers are served under the most advantageous schedule.
- 17- Upon the request of a customer, the Company shall send a Spanish language version of the notice of discontinuance for nonpayment. N.J.A.C. 14:3-3A.3(e)
- 18- The Company reserves the right to require any customer having unusual requirements of demand, services or supply to enter into a special written contract, which contract shall provide for the mutual obligations of the customer and Company. Special contracts will be filed with the Board.
- 19- In case of fraud, deception, illegal use, or when it is clearly indicated that the customer is preparing to leave, the Company may demand immediate payment of accounts and terminate service without further notice.
- 20- The Company reserves the right to change, take from or add to this tariff and the Standard Terms and Conditions, to the extent permitted by law, or permitted by the applicable regulations of the state regulatory body having jurisdiction.
- 21- For all materials furnished or services rendered to any governmental agency or unit of the United States, New Jersey, or sub-unit thereof, that is not covered by any other tariff provision or rate schedule, and which pertain to hydrants, meters or situations involving emergencies, the charges will be 10% more than the total of the following applicable items:
 - (a) Equipment and materials: actual costs;
 - (b) Labor charges: actual costs (including base plus fringe); and,
 - (c) Other charges: actual costs (such as permits, police protection, contractor labor, restoration, etc.).

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One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Fourth Revised Sheet: No. 8
Superseding Third Revised Sheet: No. 8

STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

DEPOSITS

1. If after notice of the methods of establishing credit and being afforded an opportunity, a customer has not established satisfactory credit, the utility may require a deposit. The deposit amount shall be determined in accordance with N.J.A.C. 14:3-3.4.
2. The utility must furnish a receipt to any customer posting a deposit. The deposit will be returned with simple interest at a rate established annually by the Board of Public Utilities. Once the customer has established satisfactory credit with the utility, the deposit shall be returned to the customer with interest due. The customer has the option of receiving the deposit refund either by a check or a credit on the account. If a residential customer's deposit is not returned, the utility shall credit the customer's account with the accrued interest once every twelve months, in accordance with N.J.A.C. 14:3-3.5.
3. Where a water or wastewater utility furnishes unmetered service, for which payment is received in advance, it may not require a deposit. N.J.A.C. 14:3-3.4(j)
4. The Company shall review a residential customer's account at least once every year and a nonresidential customer's account at least once every two years to determine whether the customer has established credit satisfactory to the Company. If this review indicates that the customer has met the utility's standard requirements for establishing credit, the utility shall refund the customer's deposit. N.J.A.C. 14:3-3.5, Return of deposits, interest on deposits.
5. If the deposit has remained with the Company for at least three months, without default, it will be returned to the customer with simple interest on an annual basis at a rate established annually by the Board of Public Utilities. Deposits shall cease to bear interest upon the discontinuance of service.

FORM OF BILL FOR METERED SERVICE

6. All bills will be computed in accordance with the rates of the Company as shown in this Tariff, and as the same may be amended or revised from time to time. Rates are subject to such changes as the state regulatory body having jurisdiction may require, authorize or allow.
7. A customer has fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted to pay a bill. A water and/or wastewater company may not discontinue water or wastewater service unless it has provided written notice giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. This written notice shall be sent by first class mail, apart from the bill and as a separate mailing. (N.J.A.C. 14:3-3A.3 (c)) The notice shall not be given until after the expiration of the said fifteen (15) day time to pay a bill. (N.J.A.C. 14:3-3A.3(b)) The notice shall contain sufficient information for the customer to notify the Board of Public Utilities of the nature of the dispute. The utility shall make a good faith effort to determine which of its residential customers are over 65 years of age, and shall make good faith efforts to notify such customers of discontinuance of service by telephone in addition to notice by regular mail. This effort may consist of an appropriate inquiry set forth on the notice informing customers that they may designate a third party to receive notice of discontinuance.
8. Bills rendered must contain the following information: (a) the meter readings at the beginning and end of the billing period; (b) the dates on which the meter is read; (c) the number and kind of units measured; (d) identification of applicable rate schedule or statement that the applicable rate schedule will be furnished upon request; (e) the amount of the bill; (f) a distinctive marking to indicate an estimated, averaged, or remote meter index and web address and telephone number where the customer can obtain a description of the method used; (g) an explanation or statement of any conversion from meter reading to billing units or any other calculations or factors used in determining the bill; and (h) the gross receipts and franchise tax statement. N.J.A.C. 14:3-7.2

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One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Fourth Revised Sheet: No. 9
Superseding Third Revised Sheet: No. 9

STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

FORM OF BILL FOR METERED SERVICE (Continued)

9. Estimated Billing. If for any reason a utility cannot read a customer's meter, the utility may use estimated billing in accordance with N.J.A.C. 14:3-7.2(c). Customers may request a special reading for a meter where a high bill or other reason exists to believe the meter reading used for billing purposes is in error. Rules concerning estimated bills for residential customers are as follows:
- The Company shall maintain a regular meter reading schedule and make a reasonable effort to read all meters.
 - The Company, upon request, must make available to all customers a postage-paid business reply card on which the customer may mark the meter reading. Said card shall have appropriate explanation. The utility must permit the customer to telephone the meter reading to the utility. The customer reading is to be used in lieu of an estimated reading, provided the reading is received in time for billing.
 - When the Company estimates an account for four consecutive billing periods (monthly accounts), or two consecutive billing periods (bi-monthly and quarterly accounts), the Company must initiate a program to mail a notice marked "Important Notice" to the customer on the fifth and seventh months explaining that a meter reading must be obtained and said notice must explain the penalty for failure to complete an actual meter reading. After all reasonable means to obtain a meter reading have been exhausted, the Company may discontinue service provided at least eight months have passed since the last meter reading was obtained, the Board of Public Utilities has been so notified, and the customer has been properly notified by prior mailing. If service is discontinued and subsequently restored, the utility may charge a reconnection charge equal to the reconnection charge for restoring service after discontinuance for non-payment. The reconnection charge shall become due when service is restored, whether the Company or an authorized professional physically restores service. Unauthorized reconnections shall be considered theft of service. Unauthorized reconnections by a customer no longer in arrears, shall be considered tampering with utility facilities.
 - The Company must submit to the Board of Public Utilities a statement detailing their estimating procedures.
 - An estimated bill must be clearly designated as such.
 - If low estimates result in a customer receiving an actual bill that is at least twenty five percent (25%) greater than the prior estimated bill, the Company shall allow the customer to amortize the excess amount. The amortization will be in equal installments over a period of time equal to the period when no actual meter reading was taken by the customer or the Company. (7) Annually, the Company shall notify all customers of their rights to amortize as set forth in N.J.A.C. 14:3-7.2.

BUDGET BILLING

10. The Company will make available to residential customers whose accounts do not reflect past-due balances the option to pay their bills on a monthly, budgeted basis. The budget billing plan year will be a twelve (12)-month time frame and allows a customer to pay a predetermined monthly amount, based upon the customer's average usage. If a customer is a new customer with little or no prior history of utility use, the monthly budget amount shall be determined using a reasonable estimate of likely usage. The budget billing plan will be made available to eligible customers by bill insert or bill message at least twice in each twelve (12)-month period.

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One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Fourth Revised Sheet: No. 10
Superseding Third Revised Sheet: No. 10

STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

BUDGET BILLING (Continued)

11. The Company will "true up" the actual cost of service rendered as determined by actual meter readings and the actual monthly budgeted amount at the beginning of the budget plan year, and at least once during the budget plan year if the true-up performed during the customer's budget plan year reveals an increase or decrease of twenty-five (25) percent or more in the monthly budget amount, the Company will adjust the budget billing plan up or down, if necessary. There shall be no more than one such adjustment during the budget plan year. The Company will notify the customer of any change in the budget billing amount prior to such change.
12. A final bill for the budget plan year shall be issued in the last month of the budget plan year, and shall contain the month's monthly budget amount, plus an adjustment of any difference between said amount and the actual cost of service rendered during the budget plan year. Payment of this final balance due is required before the customer will be allowed to participate in the budget billing program for the upcoming budget billing plan year.
13. The Company shall notify the budget billing plan customers in writing of a revised monthly budget amount at least ten (10) working days before the due date the initial bill of the next budget plan year. Should the customer opt out of the budget billing plan, payment of the total charges incurred to date will be due immediately, or, in the alternative, agree to enter into a deferred payment agreement according to N.J.A.C. 14:3-7.7; or a credit will be applied to the account, whichever is applicable. The plan bill shall contain the information required by N.J.A.C. 14:3-7.2, Form of Bill for Metered Service, N.J.A.C. 14:3-7.3 Form of Bill for Unmetered Service, and N.J.A.C. 14:3-7.4, Method of Billing.
14. Should the customer breach the terms of the budget billing plan by failing to make the monthly payments as required under the plan or by having a budget billing plan payment returned due to insufficient funds, the Company reserves the right to terminate the customer's participation from the program; payment of total charges incurred to date will be due immediately, or, in the alternative, the Company and the customer will agree to enter into a deferred payment agreement according to N.J.A.C. 14:3-7.7.

FINANCIAL AID

15. The Company understands that from time to time its customers may have difficulty paying their water and/or wastewater bills issued by the Company. If at any time customers find that they cannot pay their water and/or wastewater bill by the due date, the Company requests that the customers contact the Company's Customer Service Center, prior to the due date, to work out a payment arrangement with the Company to avoid a shut-off of service, at 1-800-652-6987.
16. In addition to working out payment arrangements with customers in times of financial difficulty, the Company has also established a residential customer assistance program for its low-income customers who are having difficulty paying their water and/or wastewater bills issued by the Company. This residential customer assistance program, called the H2O Help to Others Assistance Program, is designed to provide financial assistance to qualified residential customers to pay their water and/or wastewater bills and protect them from an unnecessary discontinuance of their water and/or wastewater service. A grant from the H2O Help to Others Assistance Program may be awarded to cover a portion or all of the residential customer's outstanding bill based on the customer's ability to pay, income level and the availability of funds in the program. For more information about this program, please contact NJ Shares at 1-877-652-9426 or any subsequent program administrator whose contact information may be found on the Company's web site.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Fifth Revised Sheet: No. 11
Superseding Fourth Revised Sheet: No. 11

STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

FINANCIAL AID (Continued)

17. The Company established a second residential customer assistance program for customers with a total annual income at or below 300% of the Federal Poverty guidelines called the H2O Help to Others Low Income Payment Program ("LIPP") or Discount Program. Through this program, the Company will provide a discount off of the customer's monthly bill. The actual H2O LIPP discount is set equal to the customer's applicable water Fixed Service Charge (not greater than a 1" meter charge). If the customer is also provided wastewater service by the Company, the customer is also eligible for a wastewater service discount equal to the water service discount amount, in an amount not to exceed the wastewater service charge. Residential customers who need help and qualify for the H2O LIPP should call the NJ Shares toll free number at 1-877-652-9426 or any subsequent program administrator whose contact information may be found on the Company's web site. Upon acceptance into the LIPP, residential customers who receive Social Security benefits or Medicare coverage can qualify for a credit equal to the current DSIC surcharge rate per Rate Schedule K on their monthly bill (not greater than the current 1" DSIC surcharge).
18. Upon acceptance into the LIPP, qualifying residential customers will be offered the opportunity to enroll in the Company's Conservation Program. Conservation Program offerings are free of charge to residential customers enrolled in the LIPP and can include instructions on performing a home water audit, a retrofit kit for use with certain appliances and fixtures, and a leak repair of fixtures for which the customer is responsible (value up to \$300).

DEFERRED PAYMENT ARRANGEMENTS

19. A customer is entitled to at least one deferred payment plan in one year. In the case of a residential customer who receives more than one utility service from the same utility (ex: water and wastewater; gas and electric) and the amount which is in arrears is a combination of those services, the utility shall offer a separate deferred payment agreement for each service based on the outstanding balance for that service. (N.J.A.C. 14:3-7.7(b)2) The Company must renegotiate the deferred payment agreement should the customer document a significant change in financial situation. The Company must also issue a new discontinuance notice each time it intends to shut off service, including defaults on the terms of the agreement. In the case of a residential customer who receives more than one utility service from the same utility and has subsequently entered into an agreement for each separate service, default on one such payment agreement shall constitute grounds for discontinuance of only that service. N.J.A.C. 14:3-7.7(f)

DISCONTINUANCE OF SERVICE

20. A water and wastewater utility shall not discontinue service because of nonpayment of bills in cases where a charge is in dispute provided the undisputed charges are paid (N.J.A.C. 14:3-3A.2(e)5) and a request is made to the Board within five (5) days for investigation of the disputed charge. The Company must advise the customer of their right to appeal to the Board of Public Utilities. N.J.A.C. 14:3-7.6(b)
21. Basis for Discontinuance of Service. The Company shall have the right to suspend or curtail or discontinue service for any of the following reasons (N.J.A.C. 14:3-3A.1(a)):
- a. For the purpose of making permanent or temporary repairs, changes or improvement in any part of its system;
 - b. For compliance in good faith with any governmental order or directive, regardless of whether such order or directive subsequently may be held to be invalid;
 - c. For non-payment of a valid bill due for service furnished at a present or previous location, in accordance with N.J.A.C. 14:3-3A.2. However, non-payment for business service shall not be a reason for discontinuance of residence service except in cases of diversion of service pursuant to N.J.A.C. 14:3-7.8;

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Fifth Revised Sheet: No. 12
Superseding Fourth Revised Sheet: No. 12

STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

DISCONTINUANCE OF SERVICE (Continued)

- d. For nonpayment of a deposit, in accordance with N.J.A.C. 14: 3-3A.9;
 - e. For any of the following acts or omissions on the part of the customer:
 - (i) Refusal of reasonable access to the customer's premises in accordance with N.J.A.C. 14:3-3.6;
 - (ii) tampering with any facility of the Company;
 - (iii) fraudulent representation in relation to the use of service;
 - (iv) customer moving from the premises, unless the customer requests that service be continued;
 - (v) providing service to others without approval of the Company;
 - (vi) refusal to contract for service where such contract is required;
 - (vii) connecting and operating equipment in such manner as to produce disturbing effects on the service of the Company or other customers;
 - (viii) failure of the customer to comply with reasonable Standard Terms and Conditions;
 - (ix) where the condition of the customer's installation presents a hazard to life or property; or
 - (x) failure of a customer to repair any faulty facility of the customer.
22. Public Utilities shall not discontinue residential service except between the hours of 8:00 a.m. and 4:00 p.m. Monday through Thursday unless there is a safety-related emergency. There shall be no involuntary discontinuance of service on Fridays, Saturdays or Sundays or on the day before a New Jersey State holiday or on a New Jersey State holiday, absent such emergency. N.J.A.C. 14:3-3A.1(c)
23. Should a customer be more than 15 days delinquent in paying the monthly bill for service, or violate one or more of the standard terms and conditions of service contained in this or subsequent tariffs of the Company, the Company may discontinue service by giving 10 days' written notice of disconnection to the customer and, for wastewater service, a copy of such notice to the local Board of Health.
24. Notices herein of discontinuance of service shall be sent by first class mail, apart from the bill and as a separate mailing. (N.J.A.C. 14:3-3A.3(b)2) Customers are advised that it is illegal to operate a dwelling without adequately functioning wastewater facilities, and that the Company is required to notify local health authorities of wastewater service termination.
25. Medical Emergency. Notwithstanding the following, at the end of the period of medical emergency the customer remains liable to the Company for the charges for services rendered during the period of non-discontinuance, subject to the provisions of N.J.A.C. 14:3-7.6. (N.J.A.C. 14:3-3A.2(i)). Residential service may not be discontinued for non-payment for a period of 90 days if a medical emergency exists within the premises and which would be aggravated by the shut off so long as the customer provides the Company with reasonable proof of his or her inability to pay and a licensed medical professional's written statement as to the existence of the emergency, its nature and probable duration, and how the termination of service will aggravate the medical emergency. This period of non-discontinuance may be extended as set forth in N.J.A.C. 14:3-3A.2(j). The Company reserves the right to contest the validity of any claimed medical emergency before the BPU.
26. Utilities shall annually notify all residential customers that, upon request, notice of discontinuance of service will be sent to a designated third party as well as to the customer of record. This provision shall not apply if Company makes a good faith effort to contact all residential customers by telephone prior to discontinuance and file with the Board a statement setting forth such procedure. N.J.A.C. 14:3-3A.4)

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Fifth Revised Sheet: No. 13
Superseding Fourth Revised Sheet: No. 13

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STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

DISCONTINUANCE OF SERVICE (Continued)

27. The Company shall make every reasonable attempt to determine when a landlord-tenant relationship is known to exist, and if the tenants are not the customers of record but are end-users, as these terms are defined at N.J.A.C. 14:3-1.1. Discontinuance of service is prohibited unless the utility has given a 15-day written notice to the owner of the premises or to the customer of record to whom the last preceding bill was rendered. The utility shall use its best efforts to determine the names and addresses of each tenant, in order to provide such notice, for example, through mailings to landlords requesting a list of tenants. The utility shall use its best efforts to provide copies of the discontinuance notice to all tenants. In addition, the utility shall provide the tenant(s) with a fifteen (15) day written notice, which shall be hand delivered, mailed, or posted in a conspicuous area of the premises and in the common areas of multiple family premises. N.J.A.C. 14:3-3A.6(a) If a utility uses posting as the method of notice, each utility shall use its best efforts to also place a copy of the notice on each tenant's car windshield or under the door of each tenant's dwelling. In the case of tenants of single and two-family dwellings, each tenant shall also be provided with a 15-day individual notice. Each utility shall offer the tenant(s) continued service to be billed to the tenant(s) unless the utility demonstrates that such billing is not feasible. Tenants seeking continuation of service under this provision shall supply the utility with a copy of a valid lease or rental agreement. The continuation of service to a tenant shall not be conditioned upon payment by the tenant of any outstanding bills due upon the account of any other person. The utility shall not be held to the requirements of this provision if the existence of a landlord-tenant relationship could not be reasonably ascertained. N.J.A.C. 14:3-3A.6(b)
28. The utility shall have the right of reasonable access to customer's premises, and to all property furnished by the utility, at all reasonable times for the purpose of inspection of customer's premises incident to the rendering of service, reading meters, or inspecting, testing, or repairing its facilities used in connection with supplying the service, for the discontinuance of service for nonpayment after proper notice, or for the removal of its property. (N.J.A.C. 14:3-3.6(a)) Service can be discontinued for refusal of reasonable access to customer's premises for necessary purposes in connection with rendering of service, including meter and remote reading device installation, reading or testing, or the maintenance or removal of the utility's property. (N.J.A.C. 14:3-3A.1(a)5.i) Reconnection fees as shown on Rate Schedule P-2 and Rate Schedule 9-A will be charged upon restoration of service.
29. It is the responsibility of a customer who wishes to voluntarily discontinue his or her service to notify the Company and request a final reading. A customer wishing to discontinue service shall give notice to the utility. Within 48 hours of said notice, the utility shall discontinue service or obtain a meter reading for the purpose of calculating a final bill. Where such notice is not received by the utility, the customer shall be liable for service until the final reading of the meter is taken. Notice to discontinue service will not relieve a customer from any minimum or guaranteed payment under any contract or rate in accordance with the Standard Terms and Conditions on Sheet Nos. 23 and 24, nor will it mitigate any of the obligations on the Company's General Metered Rate Schedules. In accordance with N.J.A.C. 14:3-3A.1(b).
30. If a customer wishes to have his service physically disconnected, then written notice as set forth within this tariff is required prior to such disconnection provided, however, that nothing herein shall operate to prevent the Company from discontinuing service at any time under conditions and for reasons set forth in this tariff; and provided further, that nothing herein shall be construed to prevent the making of contracts for extension of service or other special conditions.
31. When a customer is physically disconnected (water service) or the service lateral is plugged (wastewater service) for non-payment of a bill for, or violation of the standard terms and conditions of service, the customer will be required to pay, in addition to any outstanding or delinquent amount, the Company's actual cost of reconnection or \$350.00, whichever is more, before service is restored. See Rate Schedules P-2 and 9-A. Wastewater service customers who remove plugs from their service laterals, and water customers who operate the curb stop to restore service after disconnection are tampering with Company property and may be charged with theft of service.

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¶
By: Cheryl Norton, President¶
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B.P.U. No. 8 – Water and Wastewater

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STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

RESTORATION OF SERVICE

32. Service shall be restored within 12 hours upon proper application when: 1. all of the conditions under which service was discontinued are corrected; and 2. payment of all charges due is received at the utility or at an authorized payment center and the utility has received notice of the payment. Any other provision notwithstanding, the utility shall restore service within 12 hours if there is a complaint involving such matters before the Board and Board staff so directs the utility. N.J.A.C. 14:3-3A.9. See Rate Schedules P-2 and 9-A for restoration of service charges. Restoration of water service performed outside of normal business hours as shown on Rate Schedule P-2 will be subject to the Emergency Reconnection service charge of \$100 as shown on that Rate Schedule P-2.

THEFT OF SERVICE

33. Whenever the Company reconnects service to a customer under the following conditions, a charge will be rendered for providing this service as described in Rate Schedule P-2 or 9-A.
- a. Whenever the Company has determined that a customer's service has been reconnected without the permission of the Company after service has been terminated for non-payment of bills or violation of the Company's tariff, the Company will terminate the customer's service for a second time and give written notice to the customer that if service is reconnected again without the permission of the Company, it will be necessary for the Company to excavate and physically disconnect service. A reconnection charge will be applied as set forth in Rate Schedules P-2 or 9-A of the present tariff.
 - b. Customers in default in the payment of a bill may be required to furnish a deposit or increase their existing deposit in an amount sufficient to secure the payment of future bills. Service shall not be discontinued for failure to make such deposit except after proper notice to the customer. If a customer who has made a deposit fails to pay a bill, the Company may apply such deposit insofar as is necessary to liquidate the bill and may require that the deposit be restored to its original amount. N.J.A.C. 14:3-3.4(f)
34. The Company has certain rights under the law to obtain the cessation of acts constituting theft of service that have been committed in violation of N.J.S.A. 2C:20-8, as well as complete restitution for any losses or damages it has suffered as a result of said acts. Customers who tamper with Company property to illegally restore service after being shut off for nonpayment or any other reason under N.J.A.C. 14:3-3A et seq. may be subject to fees pursuant to Rate Schedule P-2 and Rate Schedule 9-A and responsible for payment of any resulting damages.

LATE PAYMENT CHARGE

35. Should a nonresidential customer fail to make payment as specified under Terms of Payment in the Rate Schedules the Company may, on the twenty-sixth (26th) day, assess a late charge equivalent to 1/12th the prime rate as published in the Money Rates column in *The Wall Street Journal*. Service to state, county or municipal government entities will not be subject to a late payment charge. The charge will be applied to the previous billed amount that is not paid at the time the next monthly bill is prepared. The amount of the late payment charge to be applied to the Customer's account shall be calculated by multiplying the previous unpaid bill amount by the late charge rate. When payment is received by the Company from a Customer who has an unpaid balance which includes charges for late payment, the Customer's payment shall be applied first to the oldest aged unpaid bill amount and its applicable late charge, and then to the next oldest aged bill amount and late charge. Notwithstanding the foregoing shut off provisions in accordance with N.J.A.C. 14:3-3A will still apply to past due accounts.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Third Revised Sheet: No. 15
Superseding Second Revised Sheet: No. 15

STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

METER

36. The utility must provide for one free water meter test during any twelve (12) month period if the customer so requests it. (N.J.A.C. 14:3-4.5) A meter of a customer who has a complaint filed with the Board reflecting on the accuracy of the meter shall not be removed from service by the utility during the pendency of said complaint or during the following thirty (30) days unless otherwise authorized or directed by the Board. (N.J.A.C. 14:3-4.8(c)) When a billing dispute is known to exist, the water utility shall, prior to removing the meter, advise the customer that they may have the meter tested by the utility or may have the Board witness a testing of the meter by the utility, and that in any event the customer may have the test witnessed by a third party. (N.J.A.C. 14:3-4.5(c)) A meter test arising from a billing dispute may be appropriate in instances which include, but not limited to, unexplained increased consumption, crossed meters, consumption while an account is vacant or any other instance where the meter's accuracy might be an issue in a bill dispute. (N.J.A.C. 14:3-4.5 (d)) The customer can apply to the Board for a Board inspector to test the customer's meter. (N.J.A.C. 14:3-4.5(e)) For such a test, a fee, in accordance with N.J.S.A. 48:2-56, shall be paid to the Board by the customer at the time the application is made. N.J.A.C. 14:3-4.5(f)
37. If more than one meter test is made within a twelve (12) month period at the request of the customer and the meter is found to be accurate, the Company shall charge the customer for this meter test at the rate set forth in Rate Schedule P-2 for each additional test. (N.J.A.C. 14:3-4.5). If the meter is found to register fast by more than one and one-half percent (1.5%) of the water passed through the meter at full capacity, the customer will not be charged for the test. N.J.A.C. 14:3-4.6
38. Whenever a water meter is found to be registering fast by more than one and one-half percent, an adjustment of charges shall be made in accordance with the regulations which can be found at N.J.A.C. 14:3-4.6.
39. If a meter is found to be registering less than 100 percent of the service provided, the utility shall not adjust the charges retrospectively or require the customer to repay the amount undercharged, except if: 1) the meter was tampered with; 2) the meter failed to register at all; or 3) the circumstances are such that the customer should reasonably have known that the bill did not reflect the actual usage. In cases where the meter registers zero usage for an entire billing period, and the customer has knowingly taken and received water service, the customer shall be deemed to have reasonable knowledge that the meter may be defective or malfunctioning. If a meter is found to be registering less than 100 percent of the service provided because of theft or tampering, the utility may require immediate payment of the amount the customer was undercharged. In cases of a charge to a customer's account under 2 or 3 above, the customer shall be allowed to amortize the payments for a period of time equal to that period of time during which the customer was undercharged.
40. A water utility must maintain records of customers' accounts for each billing period occurring within a six year period. Such records shall contain all information necessary to permit computation of the bill. N.J.A.C. 14:3-6.1(b)
41. When the meter is not located inside the customer's building but outside in a meter pit, the customer shall not make connections or alterations inside the meter pit. All such connections are to be made outside of the meter pit on the customer's side of the meter. The meter pit or vault shall be installed at a location acceptable to, and with the express approval of, the Company. The Company may install, at the Company's discretion, radio transmitters or other remote meter reading devices on its meters and appurtenances as needed to promote efficient and accurate meter reads. Failure to comply with this requirement will be considered tampering with facilities of the Company and the customer will be subject to charges for repairs to damaged equipment and/or discontinuance of service.
42. When the customer's usage is obtained through an electronic ("encoder") read, that usage shall be deemed actual. No adjustment shall be made for a meter that is found to be registering less than 100 percent except in the case of meter tampering, non-registering meters or in circumstances in which the customer should reasonably have known that the bill did not reflect the actual usage. N.J.A.C. 14:3-4.6(d)

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B.P.U. No. 8 – Water and Wastewater

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STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

METER (Continued)

43. A customer having two or more meters (excluding meters for Service to Privately Owned Fire Protection Systems under applicable Rate Schedules set forth in the tariff) on the same premises will be charged at the tariff rate for the quantity of water equivalent to the sum registered on all of the meters on the premises, subject to a facilities charge equal to the sum of the facilities charges for each meter. Private Fire Protection services will be charged separately, in agreement to the present tariff.

APPLICATIONS FOR SERVICE

44. Inquiry for a water or wastewater service connection may be made by mail, telephone (888.237.1333) or via the Company's website at www.amwater.com/njaw, and the Company will provide and submit to the applicant, if necessary, any and all forms required to be filled out and signed by the owner, or their agents, for the premises to be supplied, including the identity of the customer of record before any new connection shall be installed. The application will not be processed until all forms are completed in full and any required supporting documentation is provided. Customers must agree to the terms, conditions and rates for service as set forth in this and subsequent tariffs of the Company.
45. Such inquiry shall be made in a reasonable time before such service is required for new buildings and premises not previously supplied to allow for the installation of service lines and accessories by the Company, as hereinafter defined.
46. Separate inquiry shall be made for each premises and for each type of service requested to be furnished (i.e. consumptive, irrigation, construction, wastewater, etc.)
47. Water connections shall be made by the Company subject to the prior existence of a main that is adequately sized in terms of capacity and pressure required for the specific water connection within a public right of way or water company easement abutting the property or premises to be served except in the case where the location of the connection is proposed to be on the long side of a divided (raised or grass) state highway, in which case the customer will be required to enter into an extension agreement. The acceptance of such inquiries for service shall in no way obligate the Company to extend its distribution mains to abut the property or premises except as hereinafter provided.
48. The connection shall be in accordance with the applicable laws including but not limited to those of the BPU, DEP and all federal, state and local agencies.
49. In areas where the billing for wastewater service is based on the volume of water supplied to the premise by the Company, the Company will provide wastewater service only where the water used on the premises is measured by a water meter, subject to the limitations described within this paragraph, below. Where wastewater service is provided and water used on the premises is not supplied by the Company, then the water so used shall be measured by a meter furnished and installed by the Company at a location approved by the Company subject to the limitations described within this paragraph, below. Said wastewater charges shall be based on the volume of water supplied to the premises and measured by the water meter, unless the Company determines that, due to such issues as adverse ground conditions or due to other such unforeseen circumstances, or as required by other tariff provisions herein, it is impracticable or imprudent to install a water meter at the customer's premises in order to base wastewater service charges on the volume of water supplied to the premises as measured by said meter. In such situations, wastewater service billing will be based upon a flat rate, or a minimum usage as established by the applicable rate schedule within this tariff. In instances where a customer's water comes from a well, the Company will make a reasonable effort to install a meter on said well for purposes of determining wastewater service based on water consumption. However; should conditions in or around the well cause the meter to malfunction 2 times after installation, the Company has the right to remove the meter and to bill wastewater service on a flat rate, or a minimum usage as established by the applicable rate schedule within this tariff.

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One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Fifth Revised Sheet: No. 17
Superseding Fourth Revised Sheet: No. 17

STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

APPLICATIONS FOR SERVICE (CONTINUED)

50. The Company is not obligated to install more than one service and meter for each property or premises. Furthermore, in those instances where more than one service is requested the Company reserves the right to recapture all costs associated with the additional service(s).
51. Physical connections, such as cross-connections, interconnections, valves, pumps, or similar devices, either permanent or temporary, connecting the pipelines or facilities of the Company with other pipelines or facilities supplied with water from other sources will not be permitted without the express written consent of the Company. Water which has once been drawn from the Company's distribution network and used for any purpose or stored in tanks, is considered an unapproved source of supply.
52. The Company may require a cross-connection protective device on a customer's service, in accordance with N.J.A.C. 7:10-10, which will be purchased and installed at the expense of the customer. The cross-connection device shall be of the type approved by the Company. Inspection and testing at intervals, in accordance to N.J.A.C. 7:10-10, will be performed at the expense of the customer.
53. No device or connection is permitted between pipes carrying water from the mains of the Company and any portion of the plumbing system of the premises, which may under any condition permit back-flow or back-siphonage unless prior written permission has been granted by the Company.
54. Customers requesting a relocation of their service line will be required to pay a fee for the new service line and elimination of the existing service line.
55. Customers requesting a relocation of a Public Fire Hydrant will be required to pay a fee for its relocation.
56. Installation of electronic meter reading devices and other equipment designed to facilitate efficient and accurate meter reads, protect the integrity of the water system and/or quality of the water supplied by the Company may be required from any customer as a condition of service at the discretion of the Company.
57. Water sales to customers or entities using trucks or tanks that require additional attention can affect the Company's daily operations. A surcharge may be applied as listed in Rate Schedule P-1 of the present tariff.
58. A deposit may be required to guarantee payment for water service used for general construction and contracting purposes in an amount equal to the cost of the meter furnished. The deposit, less the cost of repairs to the meter, if any, will be refunded after surrender of the meter and payment of all charges for water supplied through it.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Fifth Revised Sheet: No. 18
Superseding Fourth Revised Sheet: No. 18

STANDARD TERMS AND CONDITIONS
WATER

WATER SERVICE AND CONNECTING LINES

Company Side – Service Lines

1. The Company is responsible for the installation and maintenance of the service line.
2. Only employees of the Company or persons duly authorized to do so by the Company are permitted to operate or otherwise access the curb stop.
3. No service line shall be used to supply more than one customer unless authorized in advance by the Company in writing.
4. Where two or more customers are supplied through a single service line, the customers and/or premises owner must provide a suitable location(s) for a separate meter and separate shut-off valve that will be dedicated to each customer. The piping of the building must be so arranged that each customer can be supplied through an independent meter, shut off valve and piping system as may be required by the Company, at the Company's sole discretion. The meter pit or vault shall be installed at a location acceptable to, and with the express approval of, the Company. Failure to comply with this provision may result in termination of service to all accounts serviced by a single connecting line when service to one account must be discontinued for non-payment or failure to otherwise comply with the terms and conditions of service provided for herein. Notice provisions outlined on Sheet No. 13, paragraph 27, will apply.
5. No single building or single group of buildings in one common enclosure and under one ownership shall be supplied by more than one of the same type of service line (i.e., only one domestic line and one fire line).

Customer Side – Connecting Lines

6. Connecting lines are owned, installed, maintained and repaired by the premises owner at the premises owner's sole expense. The connecting line should be maintained in a condition conducive for the Company to perform the services required to serve its customers. If the connecting pipe is not so maintained, any failure of this pipe following the operation of the curb stop by the Company will be the responsibility of the premises owner. While performing its duties, if the Company notices that the connecting pipe or other premises owner-owned and maintained appurtenances appear to be in poor condition, the Company will attempt to notify the premises owner of such, including that the owner may desire to contact a licensed plumber for a professional evaluation and/or repair of the connecting pipe and appurtenances. Failure to repair a leaking connecting line is grounds for termination of water service. N.J.A.C. 14:3-3A.1(a)5.
7. Notwithstanding any other provision of this tariff, the Company may, at its own expense, and with the permission of the customer, replace a customer's connecting line that is i) made of lead pipe, ii) made of pipe lined with lead or iii) made of ferrous-based pipe material capable of retaining lead particles.
 - a. After the Company replaces the customer's connecting line, as described above, the customer will continue to own and be responsible for the connecting line, including maintenance of such line, in accordance with this tariff. The Company will offer the customer a warranty of the workmanship of its installation of the new connecting line for a period of 12 months following the date the customer signs the replacement agreement with the Company, with the Company's liability limited to the cost of repairing or replacing the customer's connecting line during that time. Except for the Company's limited liability under the 12-month workmanship warranty, the Company will not own nor assume any liability or responsibility with respect to the customer connecting line. The customer will agree to release and hold the Company harmless the Company, its contractors and subcontractors from and against all claims, liability and costs resulting from acts and omissions of Company and/or its approved contractors and/or subcontractors in installing the Customer service line pursuant to the replacement agreement.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Eighth Revised Sheet: No. 19
Superseding Seventh Revised Sheet: No. 19

STANDARD TERMS AND CONDITIONS
WATER

WATER SERVICE AND CONNECTING LINES

Customer Side – Connecting Lines (continued)

8. Connecting lines should be installed, without sharp bends, at right angles to the line of the street and shall be installed in the trench not less than 3-1/2 feet in depth to avoid damage and possible interruption to service caused by freezing. Other utility service lines shall not be installed in the same trench as the connecting line. No attachment shall be made to the connecting line between the curb stop and the meter except as otherwise authorized by the Company. Unauthorized attachments are grounds for termination of service. N.J.A.C. 14:3-3A.1(a)5.ii
9. Connecting lines should not be less than ¾ inch in inside diameter.
10. A customer must install a water pressure reducing valve where required by State of New Jersey plumbing code. If a water pressure reducing valve is required to be installed, the customer must install a pressure relief valve (collectively both are referred to as the "Valves"). In all cases, the costs of installation and maintenance of the Valves shall be borne by the customer. The customer shall own and be obligated to maintain the Valves. The Company will not be liable for damage due to meter failures if the customer is located in a high pressure zone and does not have a pressure reducing valve or has a pressure reducing valve downstream from a water meter that is installed inside the premises.
11. For meters less than or equal to 2 inches the pressure reducing valve will be located on the downstream side of the meter if the meter is located outside of the customer's premises and on the upstream side of the meter, if the meter is located inside of the customer's premises. For meters greater than 2 inches the pressure reducing valve will always be located on the upstream side of the meter.
12. The customer is required to make all changes in the connecting line due to changes in grade, relocation of mains, or other causes only if such changes are mandated by a municipality, county, state or other governmental body.

WATER MAIN EXTENSIONS

13. The Company will extend water service in accordance with all applicable laws of the State of New Jersey and Board of Public Utilities regulations and orders including N.J.A.C. 14:3-8.1 et seq. Mains will be extended to the mid-point of property frontage for residential properties, and along the entire frontage for commercial properties, regardless of where the service stub is installed.

Information on how to apply for a water main extension can be found on the Company's website at <https://amwater.com/njaw/about-us/doing-business-with-us>. The application form can be downloaded, filled out and faxed in to the Company at the fax number provided on the application.

CUSTOMER'S PREMISES

14. The Company may refuse to provide a water connection, or furnish water through a connection pipe already installed, when a customer's piping system is not installed in accordance with the regulations of the Company and of the municipality in which the premises are located; or when the system on the premises is not at sufficient depth to prevent freezing.
15. Customers shall not permit access to the meter and other appliances of the Company except by authorized employees of the Company or properly authorized state or local inspectors.
16. In all cases the customers should not interfere with property of the Company, but should immediately notify the Company of any problem.
17. It is the sole responsibility of each customer to ensure that all piping and appurtenances within a customer's premises comply with state, municipal and other public health regulations in force with respect hereto including state and local plumbing codes. The piping and appurtenances shall be maintained in a condition conducive for the Company to perform the services required to serve the customer.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

[Second Revised Sheet: No. 20](#)
Superseding [First Revised Sheet: No. 20](#)

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STANDARD TERMS AND CONDITIONS
WATER

CUSTOMER'S PREMISES (CONTINUED)

18. In any premises where devices are used which might produce a back pressure, such as steam boilers, carbonation equipment for soft drinks, booster pumps, etc., a check valve shall be installed by the customer at the meter. In the event such check valve is installed, pressure relief valves should be provided by the customer in the system.
19. In any premises where an auxiliary water source is available, the pipes carrying water from the mains of the Company are required to be marked in some distinctive manner for ready identification.

PRIVATE FIRE PROTECTION SERVICE

20. Customers desiring a separate service connection for private fire service are required to make separate written application for such service on forms prescribed by the Company. Private fire service installations are made in accordance with the provisions of this tariff regarding the installation of service and connecting pipes and other facilities.
21. Service lines designated for private fire protection are installed for customers requiring a private fire service to supply sprinkler heads, [hydrants](#) or hose connections. Any connection in which sprinkler heads and/or hose connections are supplied through a domestic service connection [are considered "multi-use"](#), are not considered as part of a private fire protection service, and shall not be deemed as part of this section. The utility shall have the right to suspend or curtail or discontinue service for any of the following acts or omissions on the part of the customer: tampering with any facility of the utility; fraudulent representation in relation to the use of service; and connecting and operating in such manner as to produce disturbing effects on the service of the utility or other customers. (N.J.A.C. 14:3-3A.1(a)5)
22. The connection shall be in accordance with the applicable laws including but not limited to those of the BPU, DEP and all federal, state and local agencies
23. Unless specified by the Company, dedicated private fire service lines [and facilities, including hydrants](#), are to be used exclusively for fire protection purposes and should be equipped with special meters.
24. No water should be used through private fire protection facilities except for permitted testing purposes or in case of fire. The use of private fire protection facilities for other reasons will result in termination of service following notification pursuant to N.J.A.C. 14:3-3A.1(d).
25. Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for private fire protection.
26. A "multi-use" service is not a private fire service. Please refer to Schedule P-3 for the terms and conditions regarding multi-use service.
27. The Company shall not be liable for any loss, injury, casualty or damage resulting from fire or water, or other agency, resulting from the supply or use of water service or the failure thereof, which may occur on account of the installation or presence of a private fire service connection, or from the presence or operation of the Company's structures, equipment, pipes, appliances or devices on the customer's premises, or connected therewith.
28. The Company may not discontinue water service unless it has provided written notice giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. However, in case of fraud, illegal use, or when it is clearly indicated that the customer is preparing to leave, immediate payment of accounts may be required, and service may be discontinued without further notice.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Fifth Revised Sheet: No. 21
Superseding Fourth Revised Sheet: No. 21

STANDARD TERMS AND CONDITIONS
WATER

PUBLIC FIRE PROTECTION SERVICE

29. Upon application or request by a duly authorized representative of a municipality in the Company's service area, the Company will install fire hydrants for purposes of public fire protection. The locations of such hydrants are selected by agreement between officials of the municipalities and representatives of the Company after careful consideration. Municipalities or the designated customer of record (e.g. local fire district) shall pay the Company a charge for service to public fire hydrants within that municipality as provided in the applicable rate schedule set forth in this tariff.

MULTI-USE SERVICE

30. Multi-use service is only available to franchise customers who submit a completed application to the Company. By applying for multi-use service, the customer agrees to be responsible for all claims, costs and liability for personal injury, death and/or property damage, resulting from the customer's individual water system, unless caused by the negligence of the water utility. A "multi-use" service is not a private fire service. Please refer to Schedule P-3 for the terms and conditions regarding multi-use service.

31. All multi-use service lines shall be metered and the meter shall be located in a meter pit or vault located outside of the Customer's structure. The meter pit or vault shall be installed at a location acceptable to the express approval of the Water Company.

32. If a customer requests a change in meter size associated with a multi-service meter, the customer must re-apply for service and re-certify each item addressed below and in Rate Schedule P-3.

33. By applying for multi-use service, and operating the same, the customer agrees:

- a. The customer has complied with all of the terms and conditions set forth on Rate Schedule P-3;
- b. To include a backflow prevention device(s) as defined at N.J.A.C. 7:10-1.3, and as specified at N.J.A.C. 7:10-10.3;
- c. To be solely responsible for all costs and expenses relating to the installation, operation, maintenance, repair and replacement of the customer's water system, including the fire suppression system and backflow prevention device(s);
- d. To ensure that the customer's water system complies with the applicable requirements of the Uniform Construction Code in effect at the time of system installation, including any applicable building, plumbing and fire protection sub-codes;
- e. To ensure that the customer's water system is maintained in accordance with all applicable law so as to protect against backflow, back-siphonage and contamination of the potable water system; and
- f. To be subject to disconnection under the standard terms and conditions as apply to fire protection service or multi-use service in accordance with the Board's rules governing discontinuance of such service at N.J.A.C. 14:3-3A.4(k) and N.J.A.C. 14:9-8.3.

EMERGENCY RESPONSES DUE TO EXTRAORDINARY DEMAND AND/OR DIMINISHED SUPPLY

34. Discontinuance of service for failure to comply with use restrictions. For compliance by the utility in good faith with any governmental order or directive, notwithstanding that such order or directive subsequently may be held to be invalid, the Company may, upon reasonable notice, suspend, curtail, or discontinue service pursuant to N.J.S.A. 48:2-23, N.J.S.A. 48:2-24, and N.J.A.C. 14:3-3A for any of the following acts or omissions on the part of the customer:

- a. Connecting or operating any piping or other facility, including but not limited to, lawn sprinkling on the customer's premises in such a manner as to adversely affect the safety or adequacy of service provided to other customers present or prospective; or

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Sixth Revised Sheet: No. 22
Superseding Fifth Revised Sheet: No. 22

STANDARD TERMS AND CONDITIONS
WATER

EMERGENCY RESPONSES DUE TO EXTRAORDINARY DEMAND AND/OR DIMINISHED SUPPLY

Discontinuance of service for failure to comply with use restrictions (continued)

- b. Continuing waste of water by customers after notice from the utility through improper or imperfect pipes, fixtures, or failure to comply with restrictions; or
 - c. Failure to comply with the standard terms and conditions contained in this tariff or failure to comply with any state law, or the rules, regulations, orders or restrictions of any governmental authority having jurisdiction.
35. Water service shall be restored when the conditions under which such service was discontinued, as specified above, are corrected and upon the payment of the SPECIAL RESTORATION OF SERVICE CHARGE of \$100.00 for each restoration.
36. The Company will endeavor to provide a regular and uninterrupted supply of water through its facilities. However, if because of emergencies beyond the control of the Company, including governmental mandate, service is interrupted, irregular, defective or fails, the Company will not be liable for damages or inconvenience resulting there from. In the event of an extraordinary demand and/or diminished supply, or when operational issues make such actions desirable, including, among other things, protecting the integrity of the system and permit conditions, the Company may restrict the use of water whenever the public welfare may require it and, if necessary, may shut off the water in its mains and pipes. In such cases the Company shall advise its customers by placing a prominent advertisement detailing the conditions and restrictions in a newspaper of general circulation in the utility service area. The notice will state the purpose and probable duration of the restriction or discontinuance. Failure to provide regular and uninterrupted service due to breakdowns is covered under other sections of this tariff.
37. The Company may restrict water service during certain periods, where the Company advises the Board of Public Utilities, in order to protect the public water supply, or otherwise to comply with any regulations, orders or decrees issued by the Governor of New Jersey or the Department of Environmental Protection, or any successor agency or department pursuant to the Water Supply Management Act, or other statutes or regulations of the state or federal government. Such interruptions or restrictions shall be reported to the Department of Environmental Protection, if necessary, and the Board by each utility by the speediest means of communications available, promptly followed by a detailed written report, pursuant to the provisions of N.J.A.C. 14:3-3.7 et seq. Thereafter the utility shall provide weekly reports for the duration of the emergency.
38. When the supply of water to individual customers is to be discontinued or curtailed for the customer's failure to comply with emergency water restrictions imposed because of extraordinary demand or diminished supply, the Company shall advise such customer(s) by placing a door tag on the front door of the home of the individual(s) in violation of the restrictions, at least twenty-four (24) hours prior to discontinuance or curtailment, or by giving another form of notice acceptable to the Board. The Company will advise business and commercial customers, in writing, by mailing a notice to the customers' billing address. In the case of door tags, they shall be sequentially numbered and include the date, time and nature of the violation and the procedure for restoration of service. All such notices shall be accounted for by the utility.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Sixth Revised Sheet: No. 23
Superseding Fifth Revised Sheet: No. 23

STANDARD TERMS AND CONDITIONS
WASTEWATER

A. SEWER MAIN EXTENSIONS

Applicability

Applicable to all wastewater service customers served by the Company.

1. The Company will extend wastewater service in accordance with all applicable laws, regulations and orders of the State of New Jersey and Board of Public Utilities including N.J.A.C. 14:3-8, et seq.
2. Mains will be extended to the mid-point of property frontage for residential properties, and along the entire frontage for commercial properties, regardless of where the service stub is installed.
3. Documentation on how standard sewer main extensions are handled can be found on the Company's website at <https://amwater.com/njaw/about-us/doing-business-with-us>.
4. Please also refer to item number 6 in the Application for Service Connection section of the Standard Terms and Conditions on page 76.

B. CALCULATION OF WINTER QUARTER CONSUMPTION

Applicability

Applicable to wastewater service customers served by the Company in in the Statewide Wastewater Collection Area (Lakewood), Tewksbury Township, Service Area 1D, the former Applied Wastewater Management Service Area ("Applied"), Plumsted Township, and in Elk Township, Rate Schedules 2-A, 6-A, 10-A and 12-A, respectively.

Sewer Usage Charge

The volume of sewer use is assumed to equal water meter registration. Monthly Sewer Usage Charges shall be determined based upon winter quarter consumption, but in no case less than 2,000 gallons per month. Winter quarter consumption shall be determined based on an initial water meter reading taken in December of one year with the concluding meter reading taken approximately 90 days thereafter in March of the following year.

The Monthly Sewer Usage Charge shall be determined as follows:

Meters read in January, February and March

The Sewer Usage Charge for each respective month shall be determined by multiplying the applicable monthly usage times applicable volumetric charges.

Meters read in April through December

The Sewer Usage Charge for each month April through December shall be based on the Monthly Usage Constant, equal to one-third of the winter quarter consumption, but in no case less than 2,000 gallons per month, multiplied by applicable volumetric charges.

In the case of new customers, the volume of sewer use shall be determined as follows:

1. New Customers in an Existing Dwelling or Premises for Which Actual Full Period Winter Quarter Usage History is Available.
Determination of the monthly use constant shall be based on the last known full period winter quarter usage at that property, but in no case less than 2,000 gallons per month. This monthly use constant will be used for billing purposes until the customer receives the January bill in the following year. The January and subsequent bills will be calculated in accordance with the method described in this Tariff for determining the monthly Sewer Usage Charge.

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B.P.U. No. 8 – Wastewater

Seventh Revised Sheet: No. 24
Superseding Sixth Revised Sheet: No. 24

STANDARD TERMS AND CONDITIONS
WASTEWATER

B. CALCULATION OF WINTER QUARTER CONSUMPTION (CONTINUED)

2. Existing or New Customers in an Existing or New Dwelling or Premises for Which No Full Period Winter Quarter History has Been Established.

a. For service established outside of the winter quarter:

Determination of the monthly use constant shall be based on 12,000 gallons per quarter (a monthly usage constant of 4,000 gallons) until the customer receives the January bill in the following year. The January and subsequent bills will be calculated in accordance with the method described in this Tariff for determining the monthly Sewer Usage Charge.

b. For service established during the winter quarter:

Determination of the monthly use constant will be based upon the actual usage during the winter quarter with a minimum of 12,000 gallons (a monthly usage constant of 4,000 gallons). This monthly use constant will be used for billing purposes until the customer receives the January bill in the following year. The January and subsequent bills will be calculated in accordance with the method described in this Tariff for determining the monthly Sewer Usage Charge.

C. SPECIAL REQUIREMENTS RELATING TO WASTEWATER SERVICE – COLLECTION SYSTEMS

Applicability

Applicable to wastewater service customers served by the Company in the [Borough of Bound Brook, Egg Harbor City, the Borough of Haddonfield, Howell Township, Lakewood Township, the Borough of Mount Ephraim and Ocean City](#).

1. Separate and independent wastewater service lines shall be installed for each customer. All building drains and building sewers shall be the responsibility of the customer and shall be installed and maintained by the customer.
2. No customer shall discharge or cause to be discharged into the Company's system any storm water, surface water, ground water, roof runoff, sub-surface drainage, foundation or basement sump drainage, uncontaminated cooling water or unpolluted industrial process water.
3. No customer shall discharge or cause to be discharged into the Company's system the following described substances, materials, waters, or wastes without the prior written approval of the Company. Such wastes can harm either the sewerage system or treatment process and/or equipment, have an adverse effect upon the receiving stream for the treated wastewater, or can otherwise endanger life, limb or property or create a nuisance. In forming the opinions as to whether or not to permit the discharge, the Company will consider the effect upon receiving sewers, as well as the conditions placed upon the Company by its service agreements with the local treatment Utilities Authorities that treat the wastewater the Company collects.
4. The customer shall be responsible for maintaining and repairing the "building drain" and "building sewer."
5. The customer shall be responsible for installing and maintaining a backwater valve in buildings that have fixtures below grade level. In the event of a gray water backup, the Company shall not be liable for any damage or inconvenience resulting from the absence/malfunctioning of this appurtenance.
6. The Company reserves the right upon completion of its findings to:
 - a. Reject the wastes.
 - b. Require pretreatment to an acceptable condition for discharge.
 - c. Require flow equalization.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Fourth Revised Sheet: No. 25
Superseding Third Revised Sheet: No. 25

STANDARD TERMS AND CONDITIONS
WASTEWATER

C. SPECIAL REQUIREMENTS RELATING TO WASTEWATER SERVICE – COLLECTION SYSTEMS (CONTINUED)

7. In the event pretreatment facilities or flow equalization is required, the design and construction of such facilities shall be subject to approval of the Company and operation of said facilities shall be subject to inspection by the Company. Monitoring and/or sampling equipment shall be installed and operated by the customer as deemed necessary by the Company to ascertain proper operation of the pretreatment facilities.
8. The wastes requiring written approval are:
 - a. Any liquid or vapor having a temperature in excess of 150°F.
 - b. Any waters or waste waters containing phenols.
 - c. Any waters or wastes having a pH in excess of 9.5.
 - d. Any water containing unusual concentrations of inert suspended solids, such as, but not limited to, diatomaceous earth, lime and lime slurries or of dissolved solids such as but not limited to sodium chloride or sodium sulfate.
 - e. Any water or waste water containing excessive discoloration.
 - f. Waste water having unusual "B.O.D." concentration, suspended solids concentration or high chlorine demand in such quantities as to constitute a significant load on the treatment plant.
 - g. Unusual volume of flow or concentrations of wastes constituting "slugs" as hereinbefore defined.
 - h. Water or wastes containing substances not amenable to biological treatment processes as defined by a wastewater treatment plant owner or operator.
9. No customers shall discharge or cause to be discharged any of the following described waters or wastes to the sewers:
 - a. Any gasoline, benzene, naptha, paints, lacquers, fuel oil or other flammable or explosive liquid, solid or gas which by reason of its nature or quality may cause fire or explosion or which, in any way, may be injurious to personnel or the sewer system.
 - b. Any water or wastes containing toxic or poisonous solids, liquids, or gases in sufficient quantity either singly or by interaction with other wastes to injure or interfere with any wastewater treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving waters of the wastewater treatment plant.
 - c. Any waters or wastes having a pH of lower than 5.5 or having any other corrosive property capable of causing damage or hazard to the sewerage system and/or personnel of the Company.
 - d. Plating mill waste water or other industrial process water containing spent pickle liquor, concentrated plating solutions, chromium, zinc and similar toxic heavy metals, cyanides and cleaning solvents.
 - e. Any radioactive material.
 - f. Any water or wastes containing fats, wax, grease, tar, oils or any other substances, whether emulsified or not which may solidify or become viscous at temperatures between 32° and 150°F or which would impair, impede, affect, interfere with, or endanger personnel or the sewer system.
 - g. Any garbage not properly shredded.
 - h. Any solids of such size or characteristic capable of causing obstruction to the flow in sewers, such as, but not limited to, ashes, cinders, sand, mud, straw, metal shavings, glass, rags, feathers, tar, plastic, wood, paunch manure, hair fleshings, offal, entrails, etc.

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR19121516 dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Twelfth Revised Sheet: No. 26
Superseding Eleventh Revised Sheet: No. 26

STANDARD TERMS AND CONDITIONS
WASTEWATER

C. SPECIAL REQUIREMENTS RELATING TO WASTEWATER SERVICE – COLLECTION SYSTEMS (CONTINUED)

10. Any customer discharging industrial wastes shall provide and maintain a control manhole suitable to facilitate observation, sampling and measurement of the wastes. The Company (and the local treatment Utilities Authorities that treat the wastewater the Company collects) shall have the right to inspect, sample, measure and analyze waste water as they deem necessary.

D. SPECIAL REQUIREMENTS RELATING TO WASTEWATER SERVICE – TREATMENT SYSTEMS

Applicability

Applicable to wastewater service to customers served by the Company in Service Area 1D, the former Applied Wastewater Management Service Area ("Applied"), Plumsted Township, and Tewksbury Township, except as specifically provided elsewhere in this tariff.

1. The within rates are applicable to normal sewerage, as defined by the New Jersey Department of Environmental Protection, namely 250 ppm.5 – day B.O.D. The utility company reserves the right to require pretreatment of the wastewater prior to discharge into sewers in the event that the wastewater contains harmful substances such as gasoline, PCBs, oil, explosive liquids, phenols, acids, alkalines, lint, excessive detergents or any other substance as defined by NJDEP. Each customer shall be fully responsible for proper use of the wastewater system and shall therefore not discharge any chemicals or contaminants which are toxic and which may cause damage to the wastewater system's electrical, mechanical, biological, or physical process components or may harm either the groundwater, soil or atmosphere, as listed on Schedule A on Sheet No. 27, as it may be periodically updated. Any cost involved in repairs of damage to the Company's facilities, environmental damages and penalties or fines levied against the utility caused by the introduction by the customer of unacceptable or harmful substances shall be the responsibility of the customer.
2. In accordance with the National Standard Plumbing Code adopted by the Uniform Construction Code of the State of New Jersey, no storm drainage system of a building shall be connected directly or indirectly to the sanitary drainage system. The company adopts the above provision and prohibits the drainage of storm water into its collecting system. Each customer shall be responsible to prevent any surface water or groundwater from entering into the wastewater system and therefore shall not connect or allow to be connected to the system any sump pumps, basement or crawl space drains, roof gutters, downspouts, or floor drains, and shall properly maintain all pipes and clean-outs to assure a watertight connection. Improperly discharging effluent from a non-approved drainage or collection system shall be considered the basis for immediate termination of service pursuant to N.J.A.C. 14:3-3A.1 et seq. The Company will provide notice of the termination of service to the extent reasonably possible.
3. Garbage disposal units are not permitted unless specifically authorized by the Company.
4. Each customer shall prevent damage to all system components located on the property being served, including components located within easement area; maintain the grass growth and prevent the growth of trees, shrubs, and ornamentals within the easement areas; maintain and repair pipes connecting the home to the septic tank to prevent clogging and leaking; and to notify the Company of any damage which may occur to system components.
5. Because the wastewater system can only handle a limited quantity of water, each residential customer may discharge no more than the maximum average of 350 gallons per day, or 32,000 gallons per quarter, of wastewater. In order to verify compliance with this provision, each customer must allow a representative of the Company to inspect all plumbing components upon request and to obtain all water meter readings as may be required.
6. Customers may not trespass on Company property or enter any Company facility without a representative of the Company being present.

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One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Ninth Revised Sheet: No. 27
Superseding Eighth Revised Sheet: No. 27

STANDARD TERMS AND CONDITIONS
WASTEWATER

C. SPECIAL REQUIREMENTS RELATING TO WASTEWATER SERVICE – TREATMENT SYSTEMS
(CONTINUED)

7. A customer may permanently terminate service by giving notice to the Company, which shall terminate service within five (5) business days of receipt of each notification. Temporary discontinuance of wastewater service is not permitted and each customer shall pay the applicable fixed service charge and minimum monthly charge (i.e., "RATES"), per month or per quarter, as applicable, unless and until such time as a replacement customer commences service at the premise. Customers are advised that it is illegal to operate a dwelling without adequate functioning wastewater facilities, and that the Company is required to notify local health authorities of wastewater service termination.

SCHEDULE A

I. MATERIALS NOT TO BE DISPOSED THROUGH SEWER SYSTEM

Grease
Wipes (baby, cleaning, flushable, wet)
Gloves (latex, rubber)
Food scraps
Plastics
Gasoline or motor fuels
Paint and paint thinners
Used motor oils
Petroleum solvents
Pesticides (solids or liquids)
Herbicides (solids or liquids)
Engine coolants (antifreeze)
Acids
Water softener backwash
Photographic development solutions

II. MAXIMUM PERMITTED DISCHARGE CONCENTRATIONS

"Biochemical Oxygen Demand" – 250mg/L
Chemical oxygen demand – 351 mg/L
Total organic carbon – 99 mg/L
Total solids – 1,608 mg/L
Volatile solids – 295 mg/L
Total suspended solids – 75 mg/L
Volatile suspended solids – 62 mg/L
Calcium – 59 mg/L
Magnesium – 33 mg/L
Sodium – 218 mg/L
Chlorine – 218 mg/L
Oil and grease – 22 mg/L
Total dissolved solids – 872 mg/L
Total Kjeldahl nitrogen – 60.7 mg – N/L
Ammonia nitrogen – 53.3 mg – NL
Phosphorus – 6.3 mg – P/L
Turbidity – 45 NTU
Ph – 5-9
Alkaline – 479 mg CaCo3/L
Hardness – 327 mg CaCo3/L
Volatile organics by GC/MS – Non-detectable
Pesticides – Non-detectable
Herbicides – Non-detectable

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One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – WaterTenth Revised Sheet: No. 28
Superseding Ninth Revised Sheet: No. 28

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AREA SERVED – WATER SERVICE

This tariff shall apply to the service area of the Company, which includes all or part of the following municipalities and all other places as may be permitted by law. This tariff shall also apply to other systems under contract wherever served. Hereafter, and unless otherwise specified herein,

- **Service Area 1** refers to the water service area of New Jersey-American Water Company as it existed prior to January 1, 2007;
- **Service Area 2** refers to the water service area of the former Elizabethtown Water Company;
- **Service Area 3** refers to the water service area of the former Mount Holly Water Company;
- **Service Area 1A** refers to the water service area of the former South Jersey Water Supply Company;
- **Service Area 1B** refers to the water service area of the former Pennsgrove Water Supply Company;
- **Service Area 1C** refers to the service area of the former Shorelands Water Company;
- **Service Area 1D** refers to the service area of the former Applied Wastewater Management, Inc. ("Applied"); and
- **Service Area 1E** refers to the service area including all customers formerly served by the Borough of Haddonfield or located within the geographic boundaries of Haddonfield; and
- **Service Area 1F** refers to the service area of the former Roxbury Water Company.
- **Service Area 1G** refers to the service area of the former Egg Harbor City Water & Sewer Utility.

Unless otherwise indicated, all municipalities and customers referenced below having no numeric designation next to their names were served by New Jersey-American Water Company as it existed prior to January 1, 2007. All municipalities and customers with a (2) designation next to their names were served by the former Elizabethtown Water Company prior to January 1, 2007; with a (3) designation next to their names were previously served by the former Mount Holly Water Company prior to January 1, 2007; with a (1A) designation next to their names were previously served by the former South Jersey Water Supply Company prior to November 1, 2007; with a (1B) designation next to their names were previously served by the former Pennsgrove Water Supply Company prior to November 1, 2007; with a (1C) next to their names were previously served by Applied Wastewater Management, Inc. prior to September 1, 2010; with a (1F) designation were previously served by Roxbury Water Company prior to January 1, 2019; and with a (1G) designation were previously served by the Egg Harbor City Water & Sewer Utility prior to [date]. Where a municipality was served in part by two of the former water companies listed above, service provided by New Jersey-American Water Company as it existed prior to January 1, 2007 shall be identified by a (1) designation. All municipalities for which the Company provides water service only to a portion of the municipality are reflected by a double asterisk (**) designation.

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Atlantic CountyFranchise Customers

<u>Cities</u>	<u>Townships</u>
Absecon	Egg Harbor
Egg Harbor	Galloway (1)(1G)
Linwood	Mullica (1G)

Northfield
Pleasantville
Somers Point

Deleted: Galloway **

Deleted: Maple Shade**

Deleted: Mt. Laurel **

Deleted: Mt. Holly (3)¶
Pemberton **¶Deleted: Riverside¶
Southampton (3)¶
Springfield (3) **¶

Deleted: Westampton (3)

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November 1, 2020 ¶Deleted: Issued: October 30,
2020¶

¶ By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
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entered in¶
Docket No. WR19121516
dated October 28, 2020.

Burlington CountyFranchise Customers

<u>Boroughs</u>	<u>Townships</u>
Palmyra	Burlington **
Riverton	Cinnaminson
	Delanco
	Delran
	Eastampton (3)
	Edgewater Park
	Hainesport (3)
	Lumberton (3)
	Mansfield (3)

Resale Customers

Evesham Township MUA
Township of Moorestown
Medford Township
Mt. Laurel Township MUA
Township of Maple Shade

(Continued)

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1 Water Street, Camden, NJ 08102
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Docket No. WR2201 dated

Township of Haddon
Aqua New Jersey
Borough of Berlin
Merchantville-Pennsauken
Water Commission
Winslow Township MUA
Pine Hill Borough MUA
Audubon Park
Ancora Psychiatric Hospital

Middle Township Water District #2

Township of Livingston
City of Orange
Township of South Orange Village
Borough of Essex Fells

Deptford Township MUA
East Greenwich Township
Mantua Township MUA
Township of West Deptford
City of Woodbury
Borough of Pitman
Borough of Woodbury Heights
Borough of Glassboro
Borough of National Park
Aqua New Jersey
Borough of Clayton

Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Ninth Revised Sheet: No. 30
Superseding Eighth Revised Sheet: No. 30

AREA SERVED – WATER SERVICE
(Continued)

Hunterdon County

Franchise Customers

<u>Boroughs</u>	<u>Townships</u>
Frenchtown	Raritan (2) Readington (2)** Tewksbury (2) (1D)**

Mercer County

Franchise Customers

<u>Boroughs</u>	<u>Townships</u>
Princeton (2)	Hopewell (2) ** Lawrence (2)** West Windsor (2)

Resale Customers

Borough of Hopewell (2)

Middlesex County

Franchise Customers

<u>Boroughs</u>	<u>Townships</u>
Dunellen (2) Jamesburg Middlesex (2)** South Plainfield (2) **	Cranbury (2) Edison (2)** Monroe ** Piscataway (2) ** Plainsboro (2) ** South Brunswick (2) **

Resale Customers

Township of Edison
Township of South Brunswick (2)
Middlesex Water Co. (2)

Monmouth County

Franchise Customers

<u>Boroughs</u>	<u>Cities</u>
Allenhurst Bradley Beach Deal Eatontown Fair Haven Highlands Interlaken Little Silver Monmouth Beach Neptune City Oceanport Red Bank ** Rumson Sea Bright Shrewsbury Tinton Falls Union Beach West Long Branch	Asbury Park Long Branch
	<u>Townships</u>
	Aberdeen ** Colts Neck ** Freehold ** Hazlet (1C) Holmdel **(1C) Howell ** Middletown Neptune (incl. Ocean Grove) Ocean Shrewsbury
	<u>Villages</u>
	Loch Arbour

Resale Customers

Borough of Avon
Borough of Belmar
Lake Como Borough
Borough of Matawan
Borough of Red Bank
Borough of Keansburg
Farmingdale Borough
Aberdeen Township (1C)
Keyport Borough (1C)

(Continued)

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One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Ninth Revised Sheet: No. 31
Superseding Eighth Revised Sheet: No. 31

AREA SERVED – WATER SERVICE
(Continued)

Morris County

<u>Franchise Customers</u>		<u>Resale Customers</u>
<u>Boroughs</u>	<u>Townships</u>	
Mendham	Chatham	Township of East Hanover
Florham Park **	Chester (2) (1D)**	
Chester	Harding **	
	Long Hill (formerly Passaic)	
	Mendham **	
	Mt. Olive (1) (1D)**	
	Roxbury (1F)	

Ocean County

<u>Franchise Customers</u>		<u>Resale Customers</u>
<u>Boroughs</u>	<u>Townships</u>	
Bay Head	Berkeley**	Borough of Point Pleasant
Lavallette **	Brick**	
Mantoloking	Toms River (formerly Dover)**	
	Lakewood	
	Plumsted (3)	

Passaic County

<u>Franchise Customers</u>	
<u>Boroughs</u>	<u>Townships</u>
West Paterson **	Little Falls

Salem County

<u>Franchise Customers</u>	
<u>Boroughs</u>	<u>Townships</u>
Pennsgrove (1B)	Carneys Point (1B)
	Oldmans (1B)

Somerset County

<u>Franchise Customers</u>		<u>Resale Customers</u>
<u>Boroughs</u>	<u>Townships</u>	
Bernardsville	Bedminster (1) & (2)	Franklin Township (2)
Bound Brook (2)	Bernards	Rocky Hill Borough
Far Hills	Branchburg (2)	
Manville (2)	Bridgewater (2)	
Millstone (2)	Franklin (2) **	
North Plainfield (2)	Green Brook (2)	
Peapack and Gladstone (2)	Hillsborough (2)	
Raritan (2)	Montgomery (2)	
Rocky Hill	Warren (1) & (2)	
Somerville (2)		
South Bound Brook (2)		
Watchung (1) & (2)		

(Continued)

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Third Revised Sheet: No. 32
Superseding Second Revised Sheet: No. 32

AREA SERVED – WATER SERVICE
(Continued)

Union County

<u>Franchise Customers</u>		<u>Resale Customers</u>
<u>Boroughs</u>	<u>Townships</u>	
Fanwood (2)	Berkeley Heights	City of Elizabeth (2)
Garwood (2)	Clark (2)	Winfield Mutual Housing Corporation (2)
Kenilworth (2)	Cranford (2)	City of Rahway
Mountainside (2)	Hillside (1) & (2)	
New Providence	Scotch Plains (2)	
Roselle (2)	Springfield	
Roselle Park (2)	Union (1) & (2)	
<u>Cities</u>	<u>Towns</u>	
Summit	Westfield (2)	
Linden (2)		
Plainfield (2)		

Warren County

<u>Franchise Customers</u>	
<u>Boroughs</u>	<u>Townships</u>
Washington	Franklin
	Mansfield
<u>Towns</u>	Oxford **
Belvidere	Washington
	White

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One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

~~Fourth~~ Revised Sheet: No. 33
Superseding ~~Third~~ Revised Sheet: No. 33

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WATER SERVICE RATE SCHEDULES
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Public Fire – Area 3 – General	M-6	39.5
Public Fire – Area 1A – General	M-7	39.6
Public Fire – Area 1B – General	M-8	39.7
Public Fire – Area 1C – General	M-9	39.8
Public Fire – Area 1D – General	M-10	39.9
Public Fire – Area 1F – General	M-11	39.10
Public Fire – Area 1G – General	M-12	39.11
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Deleted: General Metered –
Area 1B & Area 1C –
General A-10 34.3¶

Deleted: Private Fire – Area
2 – Princeton (exception)
L-4 38.4¶

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¶ By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
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1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 33.1

WATER SERVICE RATE SCHEDULES
TABLE OF CONTENTS

(Continued)

<u>Class of Service</u>	<u>Rate Schedule</u>	<u>Sheet No.</u>
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 34.1
Superseding Original Sheet: No. 34.1

RATE SCHEDULE A-1
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general metered residential, commercial, industrial, and municipal service throughout Service Area 1, Service Area 1A, Service Area 1B, Service Area 1C, Service Area 2, Service Area 3, Service Area 3 Mansfield Township (Homestead) served by the Company, the Columbus section of the Townships of Mansfield and Southampton, Burlington County in Service Area 3, and the Borough of Manville, Somerset County (formerly served by the Borough of Manville Water Utility) located in Service Area 2, and in Service Area 1D, formerly served by Applied Wastewater Management, Inc. ("Applied"), noted on Sheet Nos. 28 – 32, except as specifically provided elsewhere in this tariff. The charge for general metered service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All general metered water service customers shall pay a fixed service charge based on the size of each meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

Size of Meter	Non-Exempt Per Month	Exempt Per Month
5/8"	<u>\$22.09</u>	<u>\$19.07</u>
3/4"	<u>33.15</u>	<u>28.63</u>
1"	<u>55.23</u>	<u>47.69</u>
1 1/2"	<u>110.50</u>	<u>95.41</u>
2"	<u>176.71</u>	<u>152.58</u>
3"	<u>331.39</u>	<u>286.15</u>
4"	<u>552.29</u>	<u>476.88</u>
6"	<u>1,104.48</u>	<u>953.68</u>
8"	<u>1,767.21</u>	<u>1,525.92</u>
10"	<u>2,208.95</u>	<u>1,907.35</u>
12"	<u>2,760.96</u>	<u>2,383.99</u>
16"	<u>4,417.90</u>	<u>3,814.70</u>

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter.

	Gallons Per Month	Rate* Per 100 Gallons	Rate* Per 1,000 Gallons
Non-Exempt	All	<u>\$0.81169</u>	<u>\$8.1169</u>
Exempt	All	<u>\$0.70087</u>	<u>\$7.0087</u>

TERMS OF PAYMENT

Valid bills for general metered water service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – WaterFirst Revised Sheet: No. 34.2
Superseding Original Sheet: No. 34.2**RATE SCHEDULE A-2**
GENERAL METERED SERVICE**APPLICABILITY**

Applicable for general metered sales for resale service throughout the entire territory served, except as specifically provided elsewhere in this tariff. The charge for general metered service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All general metered water service customers shall pay a fixed service charge based on the size of each meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

Size of Meter	Non-Exempt Per Month	Exempt Per Month
5/8"	<u>\$22.09</u>	<u>\$19.07</u>
3/4"	<u>33.15</u>	<u>28.63</u>
1"	<u>55.23</u>	<u>47.69</u>
1 1/2"	<u>110.50</u>	<u>95.41</u>
2"	<u>176.71</u>	<u>152.58</u>
3"	<u>331.39</u>	<u>286.15</u>
4"	<u>552.29</u>	<u>476.88</u>
6"	<u>1,104.48</u>	<u>953.68</u>
8"	<u>1,767.21</u>	<u>1,525.92</u>
10"	<u>2,208.95</u>	<u>1,907.35</u>
12"	<u>2,760.96</u>	<u>2,383.99</u>
16"	<u>4,417.90</u>	<u>3,814.70</u>

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter.

	Gallons Per Month	Rate Per 100 Gallons	Rate Per 1,000 Gallons
Non-Exempt	All	<u>\$0.81169</u>	<u>\$8.1169</u>
Exempt	All	<u>\$0.70087</u>	<u>\$7.0087</u>

TERMS OF PAYMENT

Valid bills for general metered water service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

Issued: January 14, 2022Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 34.3
Superseding Original Sheet: No. 34.3

Reserved for future use.

**Deleted: RATE SCHEDULE
A-10¶
GENERAL METERED
SERVICE¶**

**¶
APPLICABILITY¶**
Applicable for general metered residential, commercial, industrial, municipal and sales for resale service to customers served by the Company in Service Area 1B and Service Area 1C, except as specifically provided elsewhere in this tariff. The charge for general metered service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.¶

**¶
CHARACTER OF SERVICE¶**
Continuous, except as limited by the "Standard Terms and Conditions."¶

**¶
FIXED SERVICE CHARGE¶**
All general metered water service customers shall pay a fixed service charge ba ... [5]

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TERMS OF PAYMENT¶**
Valid bills for general metered water service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving ... [6]

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November 1, 2020 ¶

Deleted: Issued: October 30, 2020¶
¶
By: Cheryl Norton, President¶
One Water Street, Camden, NJ 08102¶
Filed pursuant to Order of the Board of Public Utilities entered in¶
Docket No. WR19121516 dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 34.4
Superseding Original Sheet: No. 34.4

RATE SCHEDULE A-14
IRRIGATION SERVICE

Deleted: - WATER

APPLICABILITY

Applicable to use of water supplied through meters located in Service Area 1D, formerly served by Applied Wastewater Management, Inc. ("Applied"), noted on Sheet Nos. 28 – 32 for the sole purpose of irrigation. Whenever service is established or is discontinued, all applicable fixed service charges shall be prorated to the date of establishment or discontinuance of service. The charge for the general metered service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>
5/8"	<u>\$22.09</u>
3/4"	<u>33.15</u>
1"	<u>55.23</u>
1 1/2"	<u>110.50</u>
2"	<u>176.71</u>
3"	<u>331.39</u>
4"	<u>552.29</u>
6"	<u>1,104.48</u>
8"	<u>1,767.21</u>
10"	<u>2,208.95</u>
12"	<u>2,760.96</u>
16"	<u>4,417.90</u>

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WATER CHARGE

	<u>Gallons Per Month</u>	<u>Rate* Per 100 Gallons</u>	<u>Rate* Per 1,000 Gallons</u>
Non-Exempt	All	<u>\$0.81169</u>	<u>\$8.1169</u>

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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November 1, 2020 ¶

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2020 ¶

¶
By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
Board of Public Utilities
entered in¶
Docket No. WR19121516
dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in

Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 34.5
Original Sheet: No. 34.5

RATE SCHEDULE A-15
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general metered residential, commercial, industrial, municipal and sales for resale service to customers served by the Company in Service Area 1E, Haddonfield, except as specifically provided elsewhere in this tariff. The charge for general metered service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All general metered water service customers shall pay a fixed service charge based on the size of each meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

Size of Meter	Non-Exempt Per Month
5/8"	<u>\$17.59</u>
3/4"	<u>22.38</u>
1"	<u>28.97</u>
1 1/2"	<u>42.95</u>
2"	<u>58.72</u>
3"	<u>93.84</u>
4"	<u>139.74</u>
6"	<u>1,104.48</u>
8"	<u>1,767.21</u>
10"	<u>2,208.95</u>
12"	<u>2,760.96</u>
16"	<u>4,417.90</u>

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter. Meters read and excess water billed monthly in arrears.

	Gallons Per Month	Rate* Per 100 Gallons	Rate* Per 1,000 Gallons
Non-Exempt	All	<u>\$0.81169</u>	<u>\$8.1169</u>

TERMS OF PAYMENT

Valid bills for general metered water service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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2020 ¶
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By: Cheryl Norton, President ¶
One Water Street, Camden,
NJ 08102 ¶
Filed pursuant to Order of the
Board of Public Utilities
entered in ¶
Docket No. WR19121516
dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

[First Revised Sheet: No. 34.6](#)
[Superseding](#) Original Sheet: No. 34.6

RATE SCHEDULE A-16
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general metered service throughout Service Area 1F, Roxbury, served by the Company, except as specifically provided elsewhere in this tariff. The charge for general metered service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, [the Uncollectible Adjustment Clause \(UAC\), as shown on Rate Schedule O-2,](#) as shown on Rate Schedule O-1, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All general metered water service customers shall pay a fixed service charge based on the size of each meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

Size of Meter	Non-Exempt Per Month
5/8"	\$13.30
3/4"	19.90
1"	33.10
1 1/2"	66.30
2"	106.00
3"	198.80
4"	331.40
6"	662.70

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter.

	Gallons Per Month	Rate Per 100 Gallons	Rate Per 1,000 Gallons
Non-Exempt	All	\$0.48099	\$4.8099

TERMS OF PAYMENT

Valid bills for general metered water service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. [N.J.A.C. 14:3-3A.3](#).

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to [N.J.S.A. 58:12A-21\(a\)](#). Exempt consumption charges reflect a water tax of \$.01 multiplied by [0.8634646](#) per 1,000 gallons. This water tax is not applicable for sales for resale service.

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November 1, 2020 ¶

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2020 ¶

¶
By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
Board of Public Utilities
entered in¶
Docket No. WR19121516
dated October 28, 2020.

[Issued: January 14, 2022](#)

[Effective:](#)

[By: Mark McDonough, President](#)

[1 Water Street, Camden, NJ 08102](#)

[Filed pursuant to Order of the Board of Public Utilities entered in](#)
[Docket No. WR2201 dated](#)

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 34.7

RATE SCHEDULE A-17
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general metered service throughout Egg Harbor City, except as specifically provided elsewhere in this tariff. The charge for general metered service shall consist of the total of the Fixed Service Charge and the Water Charge.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All general metered water service customers shall pay a fixed service charge based on the size of each meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>
<u>5/8"</u>	<u>\$34.17</u>
<u>3/4"</u>	<u>34.17</u>
<u>1"</u>	<u>44.19</u>
<u>1 1/2"</u>	<u>251.96</u>
<u>2"</u>	<u>307.43</u>
<u>3"</u>	<u>469.06</u>
<u>4"</u>	<u>515.02</u>

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter.

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
<u>Non-Exempt</u>	<u>All</u>	<u>\$0.7000</u>	<u>\$7.0000</u>

TERMS OF PAYMENT

Valid bills for general metered water service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

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November 1, 2020 ¶

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2020¶
¶
By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
Board of Public Utilities
entered in¶
Docket No. WR19121516
dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 34.8

RATE SCHEDULE A-18
IRRIGATION SERVICE

APPLICABILITY

Applicable to use of water supplied through meters located in Egg Harbor City for the sole purpose of irrigation. Whenever service is established or is discontinued, all applicable fixed service charges shall be prorated to the date of establishment or discontinuance of service. The charge for the general metered irrigation service shall consist of the total of the Fixed Service Charge and the Water Charge.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>
<u>1"</u>	<u>\$7.08</u>
<u>1 1/2"</u>	<u>8.33</u>
<u>2"</u>	<u>16.67</u>

WATER CHARGE

	<u>Gallons Per Month</u>	<u>Rate* Per 100 Gallons</u>	<u>Rate* Per 1,000 Gallons</u>
<u>Non-Exempt</u>	<u>All</u>	<u>\$0.7000</u>	<u>\$7.0000</u>

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

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November 1, 2020 ¶

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2020¶
¶
By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
Board of Public Utilities
entered in¶
Docket No. WR19121516
dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Fourth Revised Sheet: No. 35
Superseding Third Revised Sheet: No. 35

RIDER A
ECONOMIC DEVELOPMENT PROGRAM

ELIGIBILITY:

- Minimum Annual Average Monthly Volume: 35,000 gallons per monthly billing cycle for new customers or a net increase of 35,000 gallons for existing customers meeting the additional provisions below.
- Employment of a minimum of ten (10) new full-time equivalent employees or a 50% increase in the number of new full-time jobs created, whichever is less, who will be employed in the new or expanded space.
- Customer Classes: General Metered Service Commercial and General Metered Service Industrial
 - Customer class exception: Residential uses in Commercial class (Apartments and condominiums) while considered commercial customers, are not eligible for this program.
- New customers who lease, purchase or construct new space for manufacturing, retail, research, office or warehousing.
- Existing customers who lease, purchase or construct new space for manufacturing, retail, research, office or warehousing and/or expand its existing operations.
- Any existing space that is reconverted for use for the purpose of qualifying under this program must have been vacant for a minimum of one (1) year.
- Application to New Jersey American Water shall be made on the Company's form, which must be completed and submitted by the customer and approved by New Jersey American Water, at the Company's discretion, before the customer may participate in the program.
- An annual certification is required. The certification shall be made on the form prescribed by New Jersey American Water by an officer of the customer stating that eligibility requirements have been met. Failure to submit the annual certification shall be grounds for termination of the customer's participation in the program.

BENEFITS:

- Credit on water consumption charge for up to four (4) years. Applicable fixed charges, PWAC charges, and any other applicable charges will continue to be applied at the standard rate, as set forth within this tariff.
- Amount of Credit on Water Consumption Charges:

Year	Amount of Credit
1 st Year	50%
2 nd Year	40%
3 rd Year	25%
4 th Year	10%
- Additional credit of five per cent (5%) on water consumption charges will be added to the above credits for all of the Company's customers who qualify for the Economic Development Program and who are also located in a "priority location" (Urban Enterprise Zone) as defined by the New Jersey Economic Development Authority.

NOTE:

The decision to accept the initial application, or continued participation, of a customer into the program resides with New Jersey American Water, at the Company's discretion. Also, the ability to include customers into the program is subject to available capacity as established through the New Jersey Department of Environmental Protection permitting process.

Failure of the customer to maintain the minimum monthly usage during 2 or more months in a rolling 12-month period shall be grounds to remove the customer from the Economic Development Program.

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR19121516 dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 36.1
Superseding Original Sheet: No. 36.1

RATE SCHEDULE C
SALES FOR RESALE – COMMODITY-DEMAND SERVICE

APPLICABILITY

Applicable to Sales for Resale customers served by the Company who have executed a Commodity-Demand Regional Water Sales Agreement ("Agreement") with an initial term of 10 years and a minimum Nominated Demand, as defined in the Agreement, of 50,000 gallons per day. The charge for service shall consist of the total of the Fixed Service Charge, the Commodity Charge, the Demand Charge, the Purchased Water Adjustment Clause (PWAC) Charge, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, as shown on Rate Schedule O-1, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the terms of the agreement.

FIXED SERVICE CHARGE

All such customers shall pay a monthly fixed service charge based on the size of each meter installed by the Company, in addition to the charge for the commodity of water used and the charge for the demand nominated or experienced, whichever is greater. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

Size of Meter	Non-Exempt Per Month	Exempt Per Month
5/8"	\$22.09	\$19.07
3/4"	33.15	28.63
1"	55.23	47.69
1 1/2"	110.50	95.41
2"	176.71	152.58
3"	331.39	286.15
4"	552.29	476.88
6"	1,104.48	953.68
8"	1,767.21	1,525.92
10"	2,208.95	1,907.35
12"	2,760.96	2,383.99
16"	4,417.90	3,814.70

COMMODITY CHARGE

A charge will be rendered for all water used pursuant to the provisions of the Applicability section of this Rate Schedule C as follows:

	Rate Per 100 Gallons		Rate Per 1,000 Gallons	
Gallons Per Month	Non-Exempt	Exempt	Non-Exempt	Exempt
All	\$0.06350	\$0.05444	\$0.6305	\$0.5444

DEMAND CHARGE

A monthly charge will be rendered for all water available to the customer in accordance with the customer's Nominated Demand, as provided for in the Agreement.

Nominated Demand Charge Per Month			
Rate Per 100 Gallons of Nominated Demand		Rate Per 1,000 Gallons of Nominated Demand	
Non-Exempt	Exempt	Non-Exempt	Exempt
\$7.48600	\$6.46400	\$74.8600	\$64.6400

TERMS OF PAYMENT

Valid bills for sales for resale service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due 30 days after the invoice date. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 36.2
Superseding Original Sheet: No. 36.2

RATE SCHEDULE D
SALES FOR RESALE – OFF-PEAK SERVICE

APPLICABILITY

Applicable to Sales for Resale customers served by the Company who have executed an Off-Peak Water Sales Agreement ("Agreement") with an initial term of 10 years and a minimum Off-Peak Demand, as defined in the Agreement, of 50,000 gallons per day. The charge for service shall consist of the total of the Fixed Service Charge, the Commodity Charge, the Demand Charge, the Purchased Water Adjustment Clause (PWAC) Charge, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, as shown on Rate Schedule O-1, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the terms of the agreement.

FIXED SERVICE CHARGE

All such customers shall pay a monthly fixed service charge based on the size of each meter installed by the Company, in addition to the charge for the commodity of water used and the charge for the demand selected or experienced, whichever is greater. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established for a new customer or discontinued for a customer leaving the system permanently, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service. The fixed service charge shall not be prorated for any service provided during the months of May through September of each year.

Size of Meter	Non-Exempt Per Month	Exempt Per Month
5/8"	\$22.09	\$19.07
3/4"	33.15	28.63
1"	55.23	47.69
1 1/2"	110.50	95.41
2"	176.71	152.58
3"	331.39	286.15
4"	552.29	476.88
6"	1,104.48	953.68
8"	1,767.21	1,525.92
10"	2,208.95	1,907.35
12"	2,760.96	2,383.99
16"	4,417.90	3,814.70

COMMODITY CHARGE

A charge will be rendered for all water used pursuant to the provisions of the Applicability section of this Rate Schedule D as follows:

Gallons Per Month	Rate Per 100 Gallons		Rate Per 1,000 Gallons	
	Non-Exempt	Exempt	Non-Exempt	Exempt
All	\$0.06305	\$0.05444	\$0.6305	\$0.54440

DEMAND CHARGE

A monthly charge will be rendered for all water available to the customer in accordance with the customer's Off-Peak Demand, as provided for in the Agreement. The Demand Rate is 91.96% of the Commodity-Demand Service Demand Rate set forth on Rate Schedule C.

Off-Peak Demand Charge Per Month			
Rate Per 100 Gallons of Off-Peak Demand		Rate Per 1,000 Gallons of Off-Peak Demand	
Non-Exempt	Exempt	Non-Exempt	Exempt
\$6.88500	\$5.94495	\$68.8500	\$59.4495

TERMS OF PAYMENT

Valid bills for sales for resale service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due 30 days after the invoice date. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 36.3
Superseding Original Sheet: No. 36.3

RATE SCHEDULE E
SALES FOR RESALE - MANASQUAN

APPLICABILITY

Applicable to Sales for Resale customers served by the Company in Service Area 1 who have executed Manasquan Reservoir Water Supply System Water Purchase Contracts and either: (1) whose purchases of water and rates of flow are in accordance with the provisions of Appendix A of this Rate Schedule; or, (2) who have executed a Water Resale and Treatment Agreement, in which case the terms of such Agreement, regarding purchase limitations, shall supersede the applicable Appendix A schedule herein.

CHARACTER OF SERVICE

Continuous, except as limited by the terms of the agreement.

FIXED SERVICE CHARGE

All such customers shall pay a Fixed Service Charge based on the size of each meter installed by the Company, in addition to the charge for the quantity of water used, if any, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

Size of Meter	Non-Exempt Per Month	Exempt Per Month
5/8"	<u>\$22.09</u>	<u>\$19.07</u>
3/4"	<u>33.15</u>	<u>28.63</u>
1"	<u>55.23</u>	<u>47.69</u>
1 1/2"	<u>110.50</u>	<u>95.41</u>
2"	<u>176.71</u>	<u>152.58</u>
3"	<u>331.39</u>	<u>286.15</u>
4"	<u>552.29</u>	<u>476.88</u>
6"	<u>1,104.48</u>	<u>953.68</u>
8"	<u>1,767.21</u>	<u>1,525.92</u>
10"	<u>2,208.95</u>	<u>1,907.35</u>
12"	<u>2,760.96</u>	<u>2,383.99</u>
16"	<u>4,417.90</u>	<u>3,814.70</u>

WATER CHARGE

A charge will be made for all water used pursuant to the provisions of the Applicability section of this Rate Schedule E as follows:

	Rate Per 100 Gallons		Rate Per 1,000 Gallons	
	Non-Exempt	Exempt	Non-Exempt	Exempt
Uninterruptible	\$0 <u>2.1026</u>	\$0 <u>1.8155</u>	<u>2.1026</u>	<u>1.8155</u>
Interruptible	\$0 <u>7.1560</u>	\$0 <u>6.1790</u>	<u>7.1560</u>	<u>6.1790</u>

(Continued)

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

[First Revised Sheet: No. 36.3.1](#)
[Superseding](#) Original Sheet: No. 36.3.1

RATE SCHEDULE E
SALES FOR RESALE – MANASQUAN
(Continued)

DEFINITIONS:

UNINTERRUPTIBLE SERVICE

Uninterruptible service is water service to be provided to customers in quantities specified in Appendix A herein or Schedule A of the Water Resale and Treatment Agreement. The Annual Purchase Requirement is the minimum total volume of water per year which will be purchased take-or-pay by the customer from the Company. The Company agrees to provide to the customer the quantity specified in Appendix A herein or Schedule A of the Water Resale and Treatment Agreement unconditionally, except to the extent that: (1) the limitations of Appendix A herein or Schedule A of the Water Resale and Treatment Agreement apply to restrict the quantity of water which the customer may take on a maximum monthly, maximum daily and peak hourly basis; and, (2) in those cases where the contracts have been executed, the provisions of Section 5 of the Agreement, regarding force majeure events, may apply under certain circumstances. The rate may be found on Rate Schedule E of the present tariff.

INTERRUPTIBLE SERVICE

Interruptible service means a supply of water, to the extent that the Company in its reasonable judgment determines that it has excess water available above the Annual Purchase Period Limitations specified in Appendix A herein or Schedule A of the Water Resale and Treatment Agreement, which may be provided to the customer: (1) to meet extraordinary consumer demand requirements; (2) for occasional, temporary, or emergent needs; or (3) in such other circumstances as shall be agreed upon by the Company and the customer. The rate may be found on Rate Schedule E of the present tariff. [In addition to the charge for the quantity of water used, if any, above the Annual Purchase Period Limitations specified in Appendix A herein or Schedule A of the Water Resale and Treatment Agreement, the Purchased Water Adjustment Clause \(PWAC\) Charge, as shown on Rate Schedule O-1 will apply.](#)

TERMS OF PAYMENT

Valid bills for sales for resale service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due 30 days after the invoice date. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by [0.8634646](#) per 1,000 gallons. This water tax is not applicable for sales for resale service.

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By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
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Docket No. WR19121516
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[By: Mark McDonough, President](#)
[1 Water Street, Camden, NJ 08102](#)
[Filed pursuant to Order of the Board of Public Utilities entered in](#)
[Docket No. WR2201 dated](#)

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 36.3.2

RATE SCHEDULE E
SALES FOR RESALE – MANASQUAN

APPENDIX A

Annual Purchase Period: July 1, 1990 through June 30, 1991 and each subsequent 12-month period thereafter.

Uninterruptible Service shall not exceed the limits established for each month, day and hour in each Annual Purchase Period as set forth in the following tables:

Borough of Avon-By-The-Sea

Annual Purchase Requirement: 46.0 Million Gallons Per Year (MGY)

Uninterruptible Service
Annual Purchase Period Limitations

<u>Month</u>	<u>Maximum Monthly Purchase Million Gallons (MG)</u>	<u>Maximum Daily Purchase Million Gallons (MG)</u>	<u>Peak Hourly Purchase Gallons Per Minute (GPM)</u>
January	7	0.30	250
February	7	0.30	250
March	7	0.30	250
April	7	0.30	250
May	3	0.11	90
June	2	0.11	90
July	1	0.05	90
August	2	0.11	90
September	4	0.16	90
October	7	0.30	250
November	7	0.30	250
December	7	0.30	250

Borough of Belmar

Annual Purchase Requirement: 105.0 MGY

Uninterruptible Service
Annual Purchase Period Limitations

<u>Month</u>	<u>Maximum Monthly Purchase (MG)</u>	<u>Maximum Daily Purchase (MG)</u>	<u>Peak Hourly Purchase (GPM)</u>
January	17	1.00	1000
February	17	1.00	1000
March	17	1.00	1000
April	17	1.00	1000
May	0	0.00	0
June	0	0.00	0
July	0	0.00	0
August	0	0.00	0
September	0	0.00	0
October	17	1.00	1000
November	17	1.00	1000
December	17	1.00	1000

(Continued)

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 36.3.3

RATE SCHEDULE E
SALES FOR RESALE – MANASQUAN

APPENDIX A
(Continued)

Borough of Matawan

Annual Purchase Requirement: 121.18 MGY

Uninterruptible Service
Annual Purchase Period Limitations

<u>Month</u>	<u>Maximum Monthly Purchase (MG)</u>	<u>Maximum Daily Purchase (MG)</u>	<u>Peak Hourly Purchase (GPM)</u>
January	24	1.20	900
February	21	1.05	900
March	23	1.15	900
April	21	1.05	900
May	0	0.00	0
June	0	0.00	0
July	0	0.00	0
August	0	0.00	0
September	0	0.00	0
October	23	1.15	900
November	23	1.15	900
December	23	1.15	900

Borough of Red Bank

Annual Purchase Requirement: 200.0 MGY

Uninterruptible Service
Annual Purchase Period Limitations

<u>Month</u>	<u>Maximum Monthly Purchase (MG)</u>	<u>Maximum Daily Purchase (MG)</u>	<u>Peak Hourly Purchase (GPM)</u>
January	51	2.55	2100
February	51	2.55	2100
March	51	2.55	2100
April	34	1.46	1200
May	6	0.30	300
June	6	0.30	300
July	6	0.30	300
August	6	0.30	300
September	6	0.30	300
October	34	1.46	1200
November	62	2.66	2150
December	62	2.66	2150

With mutual consent, the parties may agree to reduce delivery at one point while increasing delivery at the other point.

(Continued)

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One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 36.3.4

RATE SCHEDULE E
SALES FOR RESALE – MANASQUAN

APPENDIX A
(Continued)

Lake Como Borough

Annual Purchase Requirement: 36.5 MGY

Uninterruptible Service
Annual Purchase Period Limitations

<u>Month</u>	<u>Sales for resale Manasquan Maximum Monthly Purchase (MG)</u>	<u>Manasquan Maximum Daily Purchase (MG)</u>	<u>Manasquan Peak Hourly Purchase (GPM)</u>
January	4.0	0.37	300
February	4.0	0.37	300
March	4.0	0.37	300
April	4.0	0.37	300
May	3.65	0.12	400
June	2.45	0.12	500
July	1.23	0.06	450
August	2.45	0.12	400
September	4.8	0.18	350
October	5.0	0.37	350
November	4.0	0.37	300
December	4.0	0.37	300

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By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR19121516 dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 36.4
Superseding Original Sheet: No. 36.4

RATE SCHEDULE F
OPTIONAL INDUSTRIAL WHOLESale

APPLICABILITY

Applicable only to customers that are served by the Company and that (a) use 9,350,000 or more gallons of water per month, each and every month (b) have loading factors (the ratio of maximum demand (peak load) to the average demand (load) during a given period) not in excess of 1.2 times their monthly consumption on an average daily basis, (c) have signed an annual commitment as to their average monthly consumption on an average daily basis. The charge for service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All such customers shall pay a Fixed Service Charge based on the size of the meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or discontinued, all applicable fixed charged shall be prorated to the date of establishment or discontinuance of service as follows:

Size of Meter	Non-Exempt Per Month	Exempt Per Month
5/8"	<u>\$22.09</u> ▼	<u>\$19.07</u> ▼
3/4"	<u>33.15</u> ▼	<u>28.63</u> ▼
1"	<u>55.23</u> ▼	<u>47.69</u> ▼
1 1/2"	<u>110.50</u> ▼	<u>95.41</u> ▼
2"	<u>176.71</u> ▼	<u>152.58</u> ▼
3"	<u>331.39</u> ▼	<u>286.15</u> ▼
4"	<u>552.29</u> ▼	<u>476.88</u> ▼
6"	<u>1,104.48</u> ▼	<u>953.68</u> ▼
8"	<u>1,767.21</u> ▼	<u>1,525.92</u> ▼
10"	<u>2,208.95</u> ▼	<u>1,907.35</u> ▼
12"	<u>2,760.96</u> ▼	<u>2,383.99</u> ▼
16"	<u>4,417.90</u> ▼	<u>3,814.70</u> ▼

WATER CHARGE

Rate Per 100 Gallons		Rate Per 1,000 Gallons	
Non-Exempt	Exempt	Non-Exempt*	Exempt*
\$0 <u>4.2786</u>	\$0 <u>3.6944</u>	<u>\$4.2786</u>	<u>\$3.6944</u>

MINIMUM CONSUMPTION CHARGE

A minimum consumption charge is applicable. The minimum consumption charge is equal to 9,350,000 gallons of water per month multiplied by the appropriate Water Charge herein and the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1.

TERMS OF PAYMENT

Valid bills for sale of water under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

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¶
By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
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1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 36.4.1

RATE SCHEDULE F
OPTIONAL INDUSTRIAL WHOLESALE
(Continued)

TERMS

Bills are rendered monthly in arrears (or quarterly at the sole option of the Company).

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

If monthly consumption on an average daily basis exceeds a load factor of 1.2 times the last (rolling) twelve months average monthly consumption on an average daily basis for three consecutive months, between April 1 and September 30, a customer will be removed from this Rate Schedule and will be billed under the General Metered Service Rate Schedule A-1. A customer can be exempt from the above requirements if they intend to increase their average daily consumption, on a monthly basis [entitled the committed average daily amount (CADA)] for the next twelve months provided they sign an additional written commitment at least one month prior to the period in which they exceed 1.2 times their consumption on an average daily basis.

If a customer's actual amount used is less than the CADA, the customer will be billed at the CADA level. This minimum billing procedure will remain in effect for a period of twelve months from the date the new commitment becomes effective. A customer eliminated from this Rate Schedule will continue to be billed under General Metered Service for a minimum of twelve months and will again be eligible for this schedule if, after twelve months, its monthly consumption on an average daily basis has not exceeded, for three consecutive months, 1.2 times the last twelve-month average monthly consumption.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

[First Revised Sheet: No. 36.5](#)
[Superseding](#) Original Sheet: No. 36.5

RATE SCHEDULE G
SALES FOR RESALE, SERVICE TO OTHER SYSTEMS

APPLICABILITY

Applicable to Sales for Resale customers receiving service from the Company as of December 8, 2008. Applicable to customers served by the Company throughout Service Area 2 that have a contract demand of 500,000 or more gallons per day pursuant to a contract entered into with the Company at the Company's sole option. The charge for metered Service to Other Systems Under Contract shall consist of the total of Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, [and the Uncollectible Adjustment Clause \(UAC\), as shown on Rate Schedule O-2.](#)

CHARACTER OF SERVICE

Continuous, except as limited by written agreement.

WATER CHARGE

Consumption	Rate Per 1,000 Gallons	
	Non-Exempt	Exempt
All water usage	\$3.3038	\$2.8527
	Rate Per 100 Gallons	
	Non-Exempt	Exempt
All water usage	\$0.33038	\$0.28527

TERMS OF PAYMENT

Valid bills for sale of water under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

TERMS

Subject to written agreement.

CONDITIONS

Subject to the ["Standard Terms and Conditions"](#) except as otherwise set forth in this Schedule.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by [0.8634646](#) per 1,000 gallons. This water tax is not applicable for sales for resale service.

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November 1, 2020 ¶

Deleted: Issued: October 30,
2020¶

¶
By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
Board of Public Utilities
entered in¶
Docket No. WR19121516
dated October 28, 2020.

[Issued: January 14, 2022](#)

[Effective:](#)

By: [Mark McDonough, President](#)
[1 Water Street, Camden, NJ 08102](#)
[Filed pursuant to Order of the Board of Public Utilities entered in](#)
[Docket No. WR2201 dated](#)

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 36.6
Superseding Original Sheet: No.36.6

RATE SCHEDULE H
SALES FOR RESALE – PEAKING SERVICE

APPLICABILITY

Applicable to Sales for Resale customers for sales occurring during the Company's peak service period May 1 through September 30 who: (1) do not have a written agreement with the Company for the provision of water service; or (2) whose written agreement with the Company does not contain an annual purchase commitment. This Rate Schedule does not apply to customers taking service under Rate Schedule D (Off-Peak) during non-drought conditions unless otherwise provided for in that customer's agreement. During drought emergencies declared by the Governor, this Rate Schedule will be applied to all surplus water transfers ordered by the Commissioner of the Department of Environmental Protection to mitigate drought. The charge for this service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Interruptible.

FIXED SERVICE CHARGE

All such customers shall pay a fixed service charge, during any month when water is consumed pursuant to this Rate Schedule H, based on the size of each meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate.

Size of Meter	Non-Exempt Per Month	Exempt Per Month
5/8"	\$22.09	\$19.07
3/4"	33.15	28.63
1"	55.23	47.69
1 1/2"	110.50	95.41
2"	176.71	152.58
3"	331.39	286.15
4"	552.29	476.88
6"	1,104.48	953.68
8"	1,767.21	1,525.92
10"	2,208.95	1,907.35
12"	2,760.96	2,383.99
16"	4,417.90	3,814.70

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter.

	Gallons Per Month	Rate Per 100 Gallons	Rate Per 1,000 Gallons
Non-Exempt	All	\$1.07656	\$10.7656
Exempt	All	\$0.92957	\$9.2957

TERMS OF PAYMENT

Valid bills for sales for resale service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due 30 days after the invoice date. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 36.7
Superseding Original Sheet: No. 36.7

RATE SCHEDULE I
EMERGENCY OR BACKUP BULK RATE SALES

APPLICABILITY

Applicable to emergency/backup bulk sales to municipalities or other water purveyors in Service Area 1C, Shorelands, and only by yearly contract between the municipality or other water purveyor and the Company.

CHARACTER OF SERVICE

Continuous, except as limited by "Standard Terms and Conditions".

FIXED SERVICE CHARGE

All such customers shall pay a fixed service charge, during any month when water is consumed pursuant to this Rate Schedule I, based on the size of each meter installed by the Company, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K. Customers with multiple meters shall be charged for each meter at the indicated rate.

Size of Meter	Non-Exempt Per Month	Exempt Per Month
5/8"	<u>\$22.09</u>	<u>\$19.07</u>
3/4"	<u>33.15</u>	<u>28.63</u>
1"	<u>55.23</u>	<u>47.69</u>
1 1/2"	<u>110.50</u>	<u>95.41</u>
2"	<u>176.71</u>	<u>152.58</u>
3"	<u>331.39</u>	<u>286.15</u>
4"	<u>552.29</u>	<u>476.88</u>
6"	<u>1,104.48</u>	<u>953.68</u>
8"	<u>1,767.21</u>	<u>1,525.92</u>
10"	<u>2,208.95</u>	<u>1,907.35</u>
12"	<u>2,760.96</u>	<u>2,383.99</u>
16"	<u>4,417.90</u>	<u>3,814.70</u>

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter.

	Gallons Per Month	Rate Per 100 Gallons	Rate Per 1,000 Gallons
Non-Exempt	All	<u>\$0.63596</u>	<u>\$6.3596</u>
Exempt	All	<u>\$0.54913</u>	<u>\$5.4913</u>

Exempt customers, as defined in N.J.S.A. 54:30A-50, are those public utility corporations which are subject to the payment of a tax based on gross receipts.

Non-Exempt customers are all other customers not entitled to the statutory exemptions provided pursuant to N.J.S.A. 54:30A-50(c). Uninterruptible customers are as defined in the Water Resale and Treatment Agreement.

TERMS OF PAYMENT

Valid bills for sale of water under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 36.8
Superseding Original Sheet: No. 36.8

RATE SCHEDULE J
SALES FOR RESALE – MANASQUAN

APPLICABILITY

Applicable to bulk sales to municipalities or other water purveyors taking water from the New Jersey Water Supply Authority ("NJWSA") delivered through Service Area 1C pursuant to Water Resale and Treatment contractual requirements where they pay the NJWSA directly for the raw water.

FIXED SERVICE CHARGE

All sales for resale service customers shall pay a fixed service charge based on the size of each meter installed, in addition to the charge for the quantity of water used, if any, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K. Customers with multiple meters shall be charged for each meter at the indicated rate.

Size of Meter	Non-Exempt Per Month	Exempt Per Month
5/8"	<u>\$22.09</u>	<u>\$19.07</u>
3/4"	<u>33.15</u>	<u>28.63</u>
1"	<u>55.23</u>	<u>47.69</u>
1 1/2"	<u>110.50</u>	<u>95.41</u>
2"	<u>176.71</u>	<u>152.58</u>
3"	<u>331.39</u>	<u>286.15</u>
4"	<u>552.29</u>	<u>476.88</u>
6"	<u>1,104.48</u>	<u>953.68</u>
8"	<u>1,767.21</u>	<u>1,525.92</u>

WATER CHARGES

A charge will be made for all water used pursuant to the take or pay contractual agreement as follows:

	Non-Exempt Rate Per 1,000 Gallons	Exempt Rate Per 1,000 Gallons
Uninterruptible	<u>\$3.0237</u>	<u>\$2.6108</u>

Exempt customers, as defined in N.J.S.A. 54:30A-50(c), are those public utility corporations which are subject to the payment of a tax based on gross receipts.

Non-Exempt customers are all other customers not entitled to the statutory exemptions provided pursuant to N.J.S.A. 54:30A-50(c). Uninterruptible customers are as defined in the Water Resale and Treatment Agreement.

TERMS OF PAYMENT

Valid bills for sales for resale service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due 30 days after the invoice date. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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November 1, 2020 ¶

Deleted: Issued: October 30,
2020 ¶

¶
By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
Board of Public Utilities
entered in¶
Docket No. WR19121516
dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Twelfth Revised Sheet: No. 37
Superseding Eleventh Revised Sheet: No. 37

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RATE SCHEDULE K
DISTRIBUTION SYSTEM IMPROVEMENT CHARGE

Applicable to all general metered service and sales for resale customers throughout the entire territory served.

CHARACTER

Continuous, except as limited by the "Standard Terms and Conditions".

DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC)

In addition to all other charges for general metered service (GMS) and sales for resale customers throughout the entire territory served, the following charges will be assessed on a fixed, per meter basis for each monthly bill, commencing [date].

Deleted: December 30, 2021

RATE

This charge is in addition to Rate Schedules A-1 through A-16, C, D, E, F, H, I and J.

Size of Meter	Non-Exempt Per Month	Exempt Per Month
5/8"	\$0.00	\$0.00
3/4"	0.00	0.00
1"	0.00	0.00
1 1/2"	0.00	0.00
2"	0.00	0.00
3"	0.00	0.00
4"	0.00	0.00
6"	0.00	0.00
8"	0.00	0.00
10"	0.00	0.00
12"	0.00	0.00
16"	0.00	0.00

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December 30, 2021 ¶

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15, 2021 ¶
¶
By: Mark K. McDonough,
President ¶
One Water Street, Camden,
NJ 08102 ¶
Filed pursuant to Order of the
Board of Public Utilities
entered in ¶
Docket No. WR20030256
dated October 28, 2020.

FILING

The DSIC is authorized pursuant to N.J.A.C. 14:9-10.1 et seq. and the procedures for filing, reviewing, approving and implementing the DSIC are set forth therein. The DSIC is based on the Company's Foundational Filing, which was reviewed and approved by the Board of Public Utilities on October 28, 2020. The approval process included public notice and four public hearings. The notice included proposed surcharge amounts, which were estimated based on projected construction schedules, costs and other factors. Pursuant to the approved Foundational Filing, the Company shall endeavor to make semi-annual DSIC filings at approximately six-month intervals. The DSIC is subject to a maximum amount and other limitations in N.J.A.C. 14:9-10.1 et seq.

TERMS OF PAYMENT

See Rate Schedules for applicable customer classes.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.1
Superseding Original Sheet: No. 38.1

RATE SCHEDULE L-1
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively for private fire protection, throughout Service Area 1, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

<u>Size of Connection</u>	<u>Per Month</u>
For each <u>connection of 2" or less</u>	<u>\$26.60</u>
For each <u>3" connection</u>	<u>59.84</u>
For each <u>4" connection</u>	<u>106.37</u>
For each <u>6" connection</u>	<u>239.34</u>
For each <u>8" connection</u>	<u>425.50</u>
For each <u>10" connection</u>	<u>665.00</u>
For each <u>12" connection</u>	<u>957.60</u>
For each <u>16" connection</u>	<u>1,702.40</u>

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. The use of private fire protection facilities for other reasons will result in termination of service following notification pursuant to N.J.A.C. 14:3-dA.1(d), and water charges will be computed under the General Metered Service Rate Schedule A-1.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-1.

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¶
By: Mark K. McDonough,
President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
Board of Public Utilities
entered in¶
Docket No. WR20030256
dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in

Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.2
Superseding Original Sheet: No. 38.2

RATE SCHEDULE L-2
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively for private fire protection, where multiple customers are served from one private fire service connection, in Service Area 1 in the Townships of Logan and Woolwich, Gloucester County in the area formerly served by Logan Wells Water Company.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

The charge for private fire protection shall consist of the total of the sprinkler head charge based on the number of sprinkler heads, the hydrant charge based on the number of hydrants, as well as the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

Per Month

For each Sprinkler Head	<u>\$1.25</u>
For each Hydrant	<u>\$52.93</u>

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered in monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-1.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-2.

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¶
By: Mark K. McDonough,
President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
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1 Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.3
Superseding Original Sheet: No. 38.3

RATE SCHEDULE L-3
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively for private fire protection throughout Service Area 2, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

1- Service Charge

<u>Size of Connection</u>	<u>Per Month</u>
For each <u>connection of 2" or less</u>	<u>\$51.20</u>
For each <u>3" connection</u>	<u>100.58</u>
For each <u>4" connection</u>	<u>162.18</u>
For each <u>6" connection</u>	<u>300.84</u>
For each <u>8" connection</u>	<u>513.70</u>
For each <u>10" connection</u>	<u>670.81</u>
For each <u>12" connection</u>	<u>965.93</u>
For each <u>16" connection</u>	<u>1,897.94</u>
For each <u>20" connection</u>	<u>3,458.92</u>

2- Hydrant Charge

	<u>Per Month</u>
<u>For each Hydrant</u>	<u>\$62.82</u>

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-1.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-3.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in

Docket No. WR2201 dated

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Deleted: Service Line

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Per
Month ¶
For each Hydrant
attached between

Deleted: 60.20

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meter¶

Deleted: Effective: January
1, 2022 ¶

Deleted: Issued: November
13, 2021¶

... [24]

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.4
Superseding Original Sheet: No. 38.4

Reserved for future use.

**Deleted: RATE SCHEDULE
L-4¶**

**Deleted: PRIVATE FIRE
PROTECTION SERVICE¶**
(NOT APPLICABLE FOR
NEW CUSTOMERS) ¶

**¶
APPLICABILITY¶**
Applicable for service
furnished exclusively to
customers in Service Area 2
existing as of September 1,
1970 for private fire protection
facilities installed without
meters served by the
Company in Princeton,
Mercer County, except as
specifically provided
elsewhere in this tariff.¶

**¶
CHARACTER OF SERVICE¶**
Continuous, except as limited
by the "Standard Terms and
Conditions."¶

**¶
RATES¶**

	<u>Size of Service Line</u>	<u>Per</u>
	<u>Month</u> ¶	
For each 4-inch		
service	\$124.80	¶
For each 6-inch		
service	231.50	¶

**¶
TERMS OF PAYMENT¶**
Valid bills for private fire
protection service furnished
under this schedule are to be
rendered monthly in arrears
(or quarterly at the option of
the Company), and are due
fifteen (15) days from the date
of the postmark on the
envelope in which the bill was
transmitted. All bills shall list
a due date. Thereafter, the
Company may not discontinue
water service unless written
notice is provided giving the
customer at least thirty (30)
days' notice prior to the
proposed discontinuar[... [25]

**Deleted: Effective: January
1, 2022 ¶**

**Deleted: Issued: November
13, 2021¶**

¶
By: Mark K. McDonough,
President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
Board of Public Utilities
entered in¶
Docket No. WR20030256
dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.5
Superseding Original Sheet: No. 38.5

RATE SCHEDULE L-7
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively to private fire protection facilities served by the Company, throughout Service Area 3 and Service Area 1A, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

1- Service Charge

<u>Size of Connection</u>	<u>Per Month</u>
<u>For each connection of 2" or less</u>	<u>\$26.60</u>
<u>For each 3" connection</u>	<u>59.84</u>
<u>For each 4" connection</u>	<u>106.37</u>
<u>For each 6" connection</u>	<u>239.34</u>
<u>For each 8" connection</u>	<u>425.50</u>
<u>For each 10" connection</u>	<u>665.00</u>
<u>For each 12" connection</u>	<u>957.60</u>
<u>For each 16" connection</u>	<u>1,702.40</u>

2- Hydrant Charge

	<u>Per Month</u>
<u>For each Hydrant</u>	<u>\$45.08</u>

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-1.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-7.

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Deleted: 743.00

Deleted: 1,321.00

Deleted: 26.83

Deleted: Effective:
November 1, 2020 ¶

Deleted: Issued: October 30,
2020 ¶

¶
By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
Board of Public Utilities
entered in¶
Docket No. WR19121516
dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in

Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.6
Superseding Original Sheet: No. 38.6

RATE SCHEDULE L-9
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively to private fire protection facilities served by the Company, throughout Service Area 1B, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

1- Service Charge

<u>Size of Connection</u>	<u>Per Month</u>
<u>For each connection of 2" or less</u>	<u>\$31.50</u>
<u>For each 3" connection</u>	<u>70.87</u>
<u>For each 4" connection</u>	<u>125.96</u>
<u>For each 6" connection</u>	<u>283.42</u>
<u>For each 8" connection</u>	<u>503.88</u>
<u>For each 10" connection</u>	<u>787.50</u>
<u>For each 12" connection</u>	<u>1,134.00</u>
<u>For each 16" connection</u>	<u>2,016.00</u>

2- Hydrant Charge

	<u>Per Month</u>
<u>For each Hydrant</u>	<u>\$37.81</u>

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-1.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-9.

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Deleted: Effective:
November 1, 2020 ¶

Deleted: Issued: October 30,
2020 ¶

¶
By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
Board of Public Utilities
entered in¶
Docket No. WR19121516
dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in

Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.7
Superseding Original Sheet: No. 38.7

RATE SCHEDULE L-10
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively to private fire protection facilities served by the Company, throughout Service Area 1C, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Sprinkler services with hose or hydrant connected to them:

<u>Size of Connection</u>	<u>Per Month</u>
<u>For each 3" connection</u>	<u>\$183.00</u>
<u>For each 4" connection</u>	<u>183.00</u>
<u>For each 6" connection</u>	<u>305.00</u>
<u>For each 8" connection</u>	<u>610.00</u>
<u>For each 10" connection</u>	<u>976.00</u>

Sprinkler services without hose or hydrant connected to them:

<u>Size of Connection</u>	<u>Per Month</u>
<u>For each connection of 2" or less</u>	<u>\$65.00</u>
<u>For each 3" connection</u>	<u>136.00</u>
<u>For each 4" connection</u>	<u>227.00</u>
<u>For each 6" connection</u>	<u>454.00</u>
<u>For each 8" connection</u>	<u>726.00</u>
<u>For each 10" connection</u>	<u>1,134.00</u>

Hydrant Charge

<u>Per Month</u>
<u>For each Hydrant</u>
<u>\$70.59</u>

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-1.

(continued)

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in

Docket No. WR2201 dated

Deleted: Service Line

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Deleted: When hydrants are attached between the main and the meter, a charge of \$60.20 per month, per hydrant will be made. In the event no sprinkler service is rendered, then the charge shall be the same as above for each hydrant attached after the meter....

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Deleted: Effective: November 1, 2020 ¶

Deleted: Issued: October 30, 2020 ¶

¶ By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR19121516 dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 38.7.1

RATE SCHEDULE L-10
PRIVATE FIRE PROTECTION SERVICE
(Continued)

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-10.

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR19121516 dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.8
Superseding Original Sheet: No. 38.8

RATE SCHEDULE L-11
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to customers throughout Service Area 1D, formerly served by Applied Wastewater Management, Inc. ("Applied"), for private fire protection service.

CHARACTER OF SERVICE

Continuous, except as limited by "Standard Terms and Conditions".

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

1- Service Charge

Size of <u>Connection</u>	Per Month
For each <u>connection of 2" or less</u>	<u>\$26.60</u>
For each <u>3" connection</u>	<u>59.84</u>
For each <u>4" connection</u>	<u>106.37</u>
For each <u>6" connection</u>	<u>239.34</u>
For each <u>8" connection</u>	<u>425.50</u>
For each <u>10" connection</u>	<u>665.00</u>
For each <u>12" connection</u>	<u>957.60</u>
For each <u>16" connection</u>	<u>1,702.40</u>

2- Hydrant Charge

For each <u>Hydrant</u>	Per Month
	<u>\$33.18</u>

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed service charges shall be prorated to the date of establishment or discontinuance of service.

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-1.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-11.

CONDITIONS

Subject to "Standard Terms and Conditions".

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

Deleted: , including fire hydrants located on other than public streets and right-of-ways...

Deleted: Service Line

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... [28]

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.9
Superseding Original Sheet: No. 38.9

RATE SCHEDULE L-12
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively to private fire protection facilities served by the Company, throughout Service Area 1F, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

For each system:

Per Month
\$32.83

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TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-16.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-12.

Deleted: Effective:
November 1, 2020 ¶

Deleted: Issued: October 30,
2020 ¶
¶
By: Cheryl Norton, President ¶
One Water Street, Camden,
NJ 08102 ¶
Filed pursuant to Order of the
Board of Public Utilities
entered in ¶
Docket No. WR19121516
dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 38.10

RATE SCHEDULE L-13
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively to private fire protection facilities served by the Company, throughout Service Area 1G, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

1- Service Charge

<u>Size of Connection</u>	<u>Per Month</u>
<u>For each connection of 2" or less</u>	<u>\$62.50</u>
<u>For each 3" connection</u>	<u>62.50</u>
<u>For each 4" connection</u>	<u>62.50</u>
<u>For each 6" connection</u>	<u>133.33</u>
<u>For each 8" connection</u>	<u>250.00</u>
<u>For each 12" connection</u>	<u>583.33</u>

2- Hydrant Charge

	<u>Per Month</u>
<u>For each Hydrant</u>	<u>\$10.42</u>

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-17.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-13.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

Deleted: Effective:
November 1, 2020 ¶

Deleted: Issued: October 30,
2020 ¶

¶
By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
Board of Public Utilities
entered in¶
Docket No. WR19121516
dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.1
Superseding Original Sheet: No. 39.1

RATE SCHEDULE M-1
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company throughout Service Areas 1 and 1E, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

<u>Hydrant Charge</u>	<u>Per Month</u>
<u>For each</u> Hydrant	<u>\$57.82</u>

TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

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November 1, 2020 ¶

Deleted: Issued: October 30,
2020 ¶
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By: Cheryl Norton, President ¶
One Water Street, Camden,
NJ 08102 ¶
Filed pursuant to Order of the
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Docket No. WR19121516
dated October 28, 2020.

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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet No. 39.2
Superseding Original Sheet: No. 39.2

RATE SCHEDULE M-2
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company in Service Area 1 in the Townships of Logan and Woolwich, Gloucester County in the area formerly served by Logan Wells Water Company as well as in Ortley Beach and the Pelican Island System in Toms River Township, Ocean County.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

	<u>Per Month</u>
<u>For each</u> Hydrant	<u>\$52.93</u>

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CHARGE¶

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TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

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November 1, 2020 ¶

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By: Cheryl Norton, President¶
One Water Street, Camden,
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Issued: January 14, 2022

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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.3
Superseding Original Sheet: No. 39.3

RATE SCHEDULE M-3
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company in Service Area 1 in the Townships of Howell and Freehold, Monmouth County in the area formerly served by Adelphia Water Company.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

<u>Hydrant Charge</u>	<u>Per Month</u>
<u>For each</u> Hydrant	<u>\$53.20</u>

TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

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CHARGE ¶

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November 1, 2020 ¶

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2020 ¶
¶
By: Cheryl Norton, President ¶
One Water Street, Camden,
NJ 08102 ¶
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Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.4
Superseding Original Sheet: No. 39.4

RATE SCHEDULE M-5
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company throughout Service Area 2.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

▼ The amount of the bill will reflect the hydrant charge as defined hereafter for each tariff zone located in Service Area 2 as defined in Rate Schedule M-5.

<u>Tariff Zone</u>	<u>For each Hydrant</u> <u>Per Month</u>
2A	<u>\$51.95</u> ▼
2C	<u>57.82</u> ▼
2D	<u>59.18</u> ▼
2E	<u>61.58</u> ▼
2F	<u>61.58</u> ▼
2G	<u>61.58</u> ▼
2H	<u>63.74</u> ▼
2I	<u>65.78</u> ▼
2J	<u>66.67</u> ▼
2K	<u>70.59</u> ▼
2L	<u>70.59</u> ▼

TERMS AND PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

TERM

Continuous until water service within municipality is permanently discontinued.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule. ▼

(Continued)

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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
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Docket No. WR2201 dated ▼

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CHARGE ¶

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November 1, 2020 ¶

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By: Cheryl Norton, President ¶
One Water Street, Camden,
NJ 08102 ¶
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 39.4.1

RATE SCHEDULE M-5
PUBLIC FIRE PROTECTION SERVICE
(Continued)

The table hereafter defines the different tariff zones for Service Area 2:

Tariff Zone	Municipality
2A	<ul style="list-style-type: none"> • Bedminster Township • Franklin Township
2C	<ul style="list-style-type: none"> • Hillside Township
2D	<ul style="list-style-type: none"> • Union Township
2E	<ul style="list-style-type: none"> • Readington Township
2F	<ul style="list-style-type: none"> • Borough of Bound Brook • Dunellen Borough • Garwood Borough • North Plainfield Borough • Plainfield City • Roselle Borough
2G	<ul style="list-style-type: none"> • Cranford Township • Middlesex Borough • Peapack/Gladstone Borough • Roselle Park Borough • South Bound Brook Borough • South Brunswick Township • Town of Westfield • Warren Township
2H	<ul style="list-style-type: none"> • Branchburg Township • Hillsborough Township • Kenilworth Borough • Somerville Borough • Tewksbury Township • Chester Township • Fanwood Borough • Greenbrook Township • Linden City • Montgomery Township • Raritan Borough
2I	<ul style="list-style-type: none"> • Clark Township • Raritan Township • Scotch Plains Township
2J	<ul style="list-style-type: none"> • Bridgewater Township • Cranbury Township • Manville Borough • Millstone Borough • Mountainside Borough • Piscataway Township • South Plainfield Borough • Watchung Borough
2K	<ul style="list-style-type: none"> • Princeton (f/k/a Princeton Township)
2L	<ul style="list-style-type: none"> • Edison Township • Hopewell Township • Lawrence Township • Plainsboro Township • West Windsor Township

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One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.5
Superseding Original Sheet: No. 39.5

RATE SCHEDULE M-6
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to all municipalities for public fire protection service provided by the Company in Service Area 3.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

The amount of the bill will reflect the hydrant charge as defined hereafter for each tariff zone located in Service Area 3 as defined in Rate Schedule M-6.

<u>Tariff Zone</u>	<u>For each Hydrant</u> <u>Per Month</u>
3A	<u>\$35.77</u>
3B	<u>40.26</u>
3C	<u>44.76</u>
3D	<u>49.26</u>
3G	<u>55.99</u>

TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

TERM

Continuous until water service within municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule. The table hereafter defines the different tariff zones for Service Area 3:

Tariff Zone	Municipality
3A	<ul style="list-style-type: none"> Mansfield (Columbus) Township Springfield Township
3B	<ul style="list-style-type: none"> Plumsted Township
3C	<ul style="list-style-type: none"> Mansfield -Homestead Southampton Township
3D	<ul style="list-style-type: none"> Mount Holly Township
3G	<ul style="list-style-type: none"> Eastampton Township Hainesport Township Lumberton Township Medford Township Westampton Township

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CHARGE

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¶
By: Cheryl Norton, President
One Water Street, Camden,
NJ 08102
Filed pursuant to Order of the
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1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.6
Superseding Original Sheet: No. 39.6

RATE SCHEDULE M-7
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company throughout Service Area 1A, except as specifically provided elsewhere in this tariff. Applicable for flat rate fire protection service in the locations where the Company has facilities suitable and adequate for the desired service upon request from the proper authorities.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

	<u>Per Month</u>
<u>For each Hydrant</u>	<u>\$44.46</u>

TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

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CHARGE¶

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November 1, 2020 ¶

Deleted: Issued: October 30,
2020¶

¶
By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
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entered in¶
Docket No. WR19121516
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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.7
Superseding Original Sheet: No. 39.7

RATE SCHEDULE M-8
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company throughout Service Area 1B, except as specifically provided elsewhere in this tariff. Applicable for flat rate fire protection service in the locations where the Company has facilities suitable and adequate for the desired service upon request from the proper authorities.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

<u>Hydrant Charge</u>	<u>Per Month</u>
<u>For each Hydrant</u>	<u>\$37.81</u>

TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

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CHARGE¶

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November 1, 2020 ¶

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2020¶

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By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
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Issued: January 14, 2022

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1 Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.8
Superseding Original Sheet: No. 39.8

RATE SCHEDULE M-9
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company throughout Service Area 1C, except as specifically provided elsewhere in this tariff. Applicable for flat rate fire protection service in the locations where the Company has facilities suitable and adequate for the desired service upon request from the proper authorities.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

<u>Hydrant Charge</u>	<u>Per Month</u>
<u>For each</u> Hydrant	<u>\$70.59</u>

TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

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CHARGE¶

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November 1, 2020 ¶

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By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
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1 Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.9
Superseding Original Sheet: No. 39.9

RATE SCHEDULE M-10
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to the municipality for all fire hydrants on public streets within Service Area 1D, formerly served by Applied Wastewater Management, Inc. ("Applied").

CHARACTER OF SERVICE

Continuous, except as limited by "Standard Terms and Conditions".

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

<u>Hydrant Charge</u>	<u>Per Month</u>
<u>For each Hydrant</u>	<u>\$33.18</u>

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed service charges shall be prorated to the date of establishment or discontinuance of service.

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

CONDITIONS

Subject to "Standard Terms and Conditions".

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November 1, 2020 ¶

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By: Cheryl Norton, President¶
One Water Street, Camden, NJ 08102¶
Filed pursuant to Order of the Board of Public Utilities entered in¶
Docket No. WR19121516 dated October 28, 2020.

Issued: January 14, 2022

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1 Water Street, Camden, NJ 08102
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B.P.U. No. 8 – Water

First Revised Sheet: No. 39.10
Superseding Original Sheet: No. 39.10

RATE SCHEDULE M-11
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to the municipality for all fire hydrants on public streets within Service Area 1F, Roxbury.

CHARACTER OF SERVICE

Continuous, except as limited by "Standard Terms and Conditions".

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

<u>Hydrant Charge</u>	<u>Per Month</u>
<u>For each Hydrant</u>	<u>\$32.83</u>

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed service charges shall be prorated to the date of establishment or discontinuance of service.

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

CONDITIONS

Subject to "Standard Terms and Conditions".

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Hydrant Charge -

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fire hydrant installed by the
Company....

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By: Cheryl Norton, President¶
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1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 39.11

RATE SCHEDULE M-12
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to the municipality for all fire hydrants on public streets within Service Area 1G.

CHARACTER OF SERVICE

Continuous, except as limited by "Standard Terms and Conditions".

RATES

<u>Hydrant Charge</u>	<u>Per Month</u>
<u>For each Hydrant</u>	<u>\$10.42</u>

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed service charges shall be prorated to the date of establishment or discontinuance of service.

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

CONDITIONS

Subject to "Standard Terms and Conditions".

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November 1, 2020 ¶

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By: Cheryl Norton, President¶
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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Fifth Revised Sheet: No. 40
Superseding Fourth Revised Sheet: No. 40

Deleted: Fourth

Deleted: Third

RATE SCHEDULE O-1

PURCHASED WATER ADJUSTMENT CLAUSE (PWAC)

APPLICABILITY

Applicable to all Metered Water Customer classes served by the Company in all service areas for water service, except for Manasquan Uninterruptible Service, and those customers subject to Rate Schedules I and J. The PWAC charge, as defined under the Standard Terms and Conditions of this tariff, is designed to recover the cost of purchased water associated with the normal operations of the Company and allow the Company to achieve a zero or near-zero deferred balance each April 1st on its purchased water costs.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

PURCHASED WATER ADJUSTMENT CLAUSE (PWAC) CHARGE

In addition to all other charges for metered service, the following charges per one hundred gallons or per one thousand gallons for all sales will be made to recover purchased water costs not included in the Water Charge or any other Charge:

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	Gallons Per Month	Rate Per 100 Gallons	Rate Per 1,000 Gallons
Non-Exempt	All	\$0.04221	\$0.4221
Exempt	All	\$0.03646	\$0.3646

The PWAC Charge is also applicable to any difference between the quantity of water actually purchased by the customer and any applicable take-or-pay commitment. ▼

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FILING

The Company shall endeavor to make an annual PWAC filing no later than December 1st of each year proposing a PWAC rate to be effective on or about the following April 1st.

The notice of filing and of public hearing in the annual PWAC proceedings shall include the specific rate change proposed to be implemented on April 1st. The notice shall also include the impact of such potential increases on a benchmark bill.

The annual PWAC filing shall contain, but not be limited to, the following:

1. A reconciliation of actual versus estimated costs and revenues from the last Board approved PWAC charge for purchased water;
2. Projected rates supported by projected volumes, revenues, and projected purchased water costs;
3. Deferred balances and the timeframe over which they are proposed to be collected or returned;
4. A written explanation of the circumstances that caused the deferred balances in (3) above;
5. A written explanation of any significant activities or trends which may affect costs for the prospective period; and
6. Updated tariff sheets to reflect any change to the PWAC rate.

The benchmark bill shall be the average residential water customer bill for a twelve-month period.

(Continued)

Deleted: Effective: July 1, 2021 ¶

Deleted: Issued: July 1, 2021 ¶

By: Mark K. McDonough,
President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
Board of Public Utilities
entered in¶
Docket No. WR20110719
dated June 24, 2021.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in

Docket No. WR2201 dated ▼

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 40.1

RATE SCHEDULE O-1
PURCHASED WATER ADJUSTMENT CLAUSE (PWAC)
(Continued)

PROVISIONS

Interest shall be passed onto customers through the PWAC rates at the beginning of each PWAC Year succeeding any PWAC year in which any monthly purchased water costs over recovery has taken place. Any debit or credit balance in the separate deferred net revenue or separate cost of purchased water accounts shall be determined monthly. Monthly interest shall be calculated on the average of the current and prior month's ending cumulative deferred revenue or cost of purchased water balances. Interest on such water costs shall be calculated utilizing the rate of return on rate base utilized to set rates in the Company's last preceding base rate case, and shall be changed from time to time, consistent with N.J.A.C. 14:9-7.1, et seq.

The clause shall be subject to deferred accounting, consistent with N.J.A.C. 14:9-7.1, et seq.

TERMS OF PAYMENT

See Rate Schedules for applicable customer classes.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR19121516 dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 40.2

RATE SCHEDULE O-2
UNCOLLECTIBLE ADJUSTMENT CLAUSE (UAC)

APPLICABILITY

Applicable to all Water and Wastewater Customer classes served by the Company in all service areas.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

UNCOLLECTIBLE ADJUSTMENT CLAUSE (UAC) CHARGE

The current rates approved in this tariff include a projected uncollectible expense of \$X or X%.

The actual amount of uncollectible expense will be tracked and compared to the authorized amount of uncollectible expense. The Company shall file with the BPU on or before January 25 of each year, the UAC calculation and support for any annual adjustments to be effective under this tariff. The BPU will have 60 days to review the filing. Any under- or over-collection will be recovered or passed back via a surcharge or credit, respectively, from April 1 through December 31.

RATE

In addition to all other charges for service, the following UAC surcharge/credit will be assessed on a fixed basis for each monthly bill, commencing [date]:

_____ \$X

Deleted: ¶
¶

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Third Revised Sheet: No. 41
Superseding Second Revised Sheet: No. 41

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RATE SCHEDULE P-1
MISCELLANEOUS SERVICE

APPLICABILITY

Applicable throughout the entire area served by the Company for Miscellaneous Municipal Service, General Building Construction and Trucked Bulk Water Sales.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

(a) Miscellaneous Municipal Service: Each customer shall pay for all water used for street sprinkling, street or sewer flushing, swimming pools or other miscellaneous uses at the General Metered Service Rates of this tariff as applicable. Water consumption will be determined by metering or by such other method as may be mutually agreed upon by the customer and the Company. Fire hydrants are not to be used for this service without the express consent of the Company in each circumstance where this service is required. No person, other than municipal fire and Company personnel is permitted to operate or take water from any public fire hydrant for street sprinkling, flushing sewers, storm water drains, or any purpose unless authorized by the Company and the fire chief of the municipality in writing and upon the terms and conditions set forth by the fire chief and the Company therein.

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Deleted: A-1 through A-16

(b) Water For Building Construction: Where water service is temporarily furnished for building construction and/or any other temporary use, it shall, wherever practical, be supplied through a meter at the General Metered Service Rates of this tariff as applicable. Should a new service be required to provide this temporary use, the customer shall pay the cost to install and remove the service. No person, other than municipal fire and Company personnel, is permitted to operate or take water from any public fire hydrant for building construction or any purpose unless authorized by the Company and the fire chief of the municipality in writing and upon the terms and conditions set forth by the fire chief and the Company therein.

Deleted: Schedule

Deleted: A-1 through A-16

(c) Bulk Water Sales for water transfers using Trucks and Tanks: Water sales to customers or entities using trucks or tanks to receive water service from the Company that require additional attention may affect the Company's daily operations. A surcharge in the amount of \$50 may be applied for each such request in addition to the water charge as set forth in the applicable General Metered Service Rates of this tariff. If at any time the Company determines that a customer or entity has taken water without permission or proper compensation to the Company under this provision, the Company reserves the right to refuse to sell water to the customer or entity hereunder.

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Deleted: A-1 through A-15

TERMS OF PAYMENT

All charges rendered under this Rate Schedule are in arrears for metered service and in advance for un-metered service. At the option of the Company, a deposit may be required for metered service billed in arrears, in accordance with N.J.A.C. 14:3-3.4, et seq. The Company may not require a deposit for un-metered service billed in advance in accordance with N.J.A.C. 14:3-3.4(i). Bills are due fifteen (15) days from the date of the postmark on the envelope in which the bill is transmitted.

TERM

Continuous until water service to the customer is permanently discontinued.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

Where metered service is provided through a hydrant meter, a deposit equal to the cost of the hydrant meter may be required by the Company. The meter shall be kept safe and accessible during its use. The deposit, less the cost of repairs to the meter, if any, will be returned to the applicant by the Company after surrender of the meter and payment of all charges for water supplied through it.

Deleted: Effective:
November 1, 2020 ¶

Deleted: Issued: October 30,
2020 ¶
¶
By: Cheryl Norton, President ¶
One Water Street, Camden,
NJ 08102 ¶
Filed pursuant to Order of the
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entered in ¶
Docket No. WR19121516
dated October 28, 2020.

Issued: January 14, 2022

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By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in

Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Fourth Revised Sheet: No. 42
Superseding Third Revised Sheet: No. 42

RATE SCHEDULE P-2
MISCELLANEOUS SERVICE –
CHARGES NOT INVOLVING THE USE OF WATER

APPLICABILITY

Applicable to all classes of customers unless specified for the following classes of miscellaneous services throughout the entire area served by the Company.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RECONNECTIONS AND RECONNECTION CHARGE

1. Resumption of service rates due to: discontinuance of service as a result of non-payment of bills; violation of the Company's tariff rules; the voluntary request of the customer when the meter has not been removed (e.g. seasonal requests) or for customer's convenience, are set forth as follows.

Conditions	Rate
<p>Normal working hours</p> <p>For the purpose of requests for reconnection services under this section, normal working hours are as follows:</p> <p>Monday through Friday* 8 AM to 6 PM Saturday* 8 AM to 2 PM</p> <p>*Except for the following holidays: New Year's Day, President's Day, Veteran's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the day after Thanksgiving, and Christmas Day.</p>	\$28.00
<p>After-hours restoration of service</p> <p>The Company has 12 hours from proper application by the customer to restore service, after all of the conditions under which such service was discontinued are corrected and the utility has received notice of payment. Requests for reconnection of service that must be worked all days and times outside of normal working hours as listed above, plus all holidays as listed above, are subject to the after-hours restoration of service rate.</p>	\$100.00

2. Resumption of service when a customer's service has been reconnected without the permission of the Company after service has been terminated by the Company for non-payment of bills or violation of the Company's tariff. The Company will physically disconnect the customer's service for a second time and the customer will be required to pay, in addition to any outstanding or delinquent amount, the Company's actual cost of reconnection or \$350.00, whichever is more, before service is restored. The Company shall give written notice to the customer that if service is reconnected again without the permission of the Company, it will be necessary for the Company to excavate and physically disconnect service and that a reconnection charge of \$500, or the actual cost incurred by the Company to excavate and physically disconnect and reconnect the service, whichever is more, will be made. The Company may also seek criminal prosecution under N.J.S.A. 2C:20-8c as well as civil damages.

(Continued)

Issued: October 30, 2020

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By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 42.1

RATE SCHEDULE P-2
MISCELLANEOUS SERVICE –
CHARGES NOT INVOLVING THE USE OF WATER
(Continued)

3. Requirement for Customer to be Present for Reconnection. Customers must be present on the premises when the Company reconnects a discontinued water service to said premises. Notwithstanding the foregoing, if the customer is not present but has given consent to the Company to reconnect the water service in his, her or its absence, the Company may reconnect the water service. In such case, the customer is solely responsible for any damage incurred by the customer and/or to the customer's premises due to an approved reconnection of service when the customer is not present at the time of said reconnection, provided that the customer will not be responsible for damage due to the sole negligence of the Company.

CROSS CONNECTION INSPECTION CHARGE

A charge of \$75.00 will be imposed by the Company for an inspection of each cross-connection device installed between an unapproved source of supply and the Company's water supply, subject to the availability of Company resources. The customer must provide proof of inspection.

METER TESTING AND REPLACEMENT CHARGE

1. Customer Request for Additional Meter Testing. If a customer requests that the Company test a meter during any twelve (12) month period in which the Company has already provided one free meter test per N.J.A.C. 14:3-4.5, or if the meter first referred to has been in use less than two years, and the meter is found to be accurate, the Company may charge the customer a fee for removing the meter and a fee for testing the meter as follows:

Schedule for removing and replacing a meter

Meter Size	Rate
Meters up to and including 2" in diameter	\$37.00
Meters larger than 2" in diameter	Actual cost

These charges will not exceed the replacement cost of the meter.

Schedule for testing the meter

Meter Size	Rate
All meters from ½ inches up to 1 inch	\$50.00
All meters from 1 ½ inches up to 3 inches	\$75.00
All meters from 4 inches up to 10 inches	\$100.00
All meters from 12 inches and larger	\$125.00

2. Removing, Repairing and Replacing Meters damaged due to negligence of the customer. The Company may impose a charge on any customer who causes damage to a meter as follows:

- (a) Repair Only: Actual cost of materials used to repair the meter, and the actual cost of labor required to repair and reinstall the meter.
- (b) Meter Replacement for Non-repairable Meters: Actual cost of a new meter, materials used to replace the meter, and the actual cost to install the meter, including the cost of labor required to install the meter.

(Continued)

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By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 42.2

RATE SCHEDULE P-2
MISCELLANEOUS SERVICE –
CHARGES NOT INVOLVING THE USE OF WATER
(Continued)

BAD CHECK CHARGE

If the Company receives a negotiable instrument from a customer in payment of a bill, charge, or deposit due, and such instrument is subsequently dishonored or uncollectible for any reason, the Company shall charge the customer a handling charge per instrument of \$15.00.

If a bad check charge is applied to a customer account, that amount, as well as the amount of the dishonored check shall be paid with cash, certified check, money order, bank check, or other means of guaranteed payment before such account shall be deemed paid. Additionally, if a customer presents two checks that are dishonored by the bank as a result of the customer's error, the customer will be required to pay by the methods stated above for a period of twelve months from the date of the last dishonored check.

The provisions of this tariff section shall not be deemed to require a customer to submit to automatic deduction from any bank account, credit card, or by on-line banking but the Company may offer same as an option provided the customer is presented with all other available options offered by the Company.

UNAUTHORIZED USE OF COMPANY FACILITIES

There will be a minimum charge of \$500.00 for unauthorized use of Company facilities plus costs for repair of any damages to Company property resulting therefrom.

TERMS OF PAYMENT

Valid bills furnished under this schedule are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

TERM

Continuous until water service to the customer is permanently discontinued.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

The Company may waive the fees and charges referenced in this Rate Schedule P-2 for a customer who is enrolled in the Company's H2O Help to Others Assistance Program or the H2O Help to Others Discount Program, provided that the customer is not deemed to have been abusing and/or taking advantage of the system, including but not limited to repeatedly requiring service reconnections more than three (3) times in any twelve (12) month period.

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By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Tenth Revised Sheet: No. 43
Superseding Ninth Revised Sheet: No. 43

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RATE SCHEDULE P-3
MULTI-USE SERVICE LINE

APPLICABILITY

The Company will provide an option to customers, upon request and where applicable, to use a “multi-use” service line per N.J.A.C. 14:9-8.3 et seq.

“Multi-use service” means water service that is supplied to a structure through one water line extending from the water main to the structure, and which is used inside the structure for both domestic water service and fire suppression service. A multi-use service is not private fire protection service.

Terms and Conditions not defined specifically below for Multi-Use services shall be the same as those under the STANDARD TERMS AND CONDITIONS.

RATES

Rates applicable to multi-use service are those found in the Company's General Metered Service Rate Schedules in this tariff as applicable.

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TERMS OF PAYMENT

A water utility may terminate a customer's multi-use service for non-payment of a valid water bill for multi-use service, in accordance with the Board's rules governing discontinuance of such service at N.J.A.C. 14:3-3A.4(j) and N.J.A.C. 14:9-8.3.

CONDITIONS

By applying for multi-use service, the customer or builder certifies that:

1. The customer or builder has hydraulically calculated the demand for the customer's or builder's water system, based on the simultaneous domestic and fire sprinkler demand. The customer or builder shall make this calculation in accordance with the Uniform Construction Code and any other applicable state or local codes; and
2. The customer or builder will ensure that the system is installed in accordance with the Uniform Construction Code at N.J.A.C. 5:23; and
3. The customer will, prior to installation of the meter, obtain and provide the Company with a copy of a valid construction permit in accordance with the Uniform Construction Code from the enforcing agency having jurisdiction over the system.

GENERAL TERMS AND CONDITIONS

- 1- By applying for multi-use service, the customer agrees to be responsible for all claims, costs and liability for personal injury, death and/or property damage, resulting from the customer's individual water system, and agrees that the Company shall not be so liable unless caused by the negligence of the water utility. (N.J.A.C. 14:9-8.3(d))
- 2- All multi-use service lines shall be metered, and the meter shall be located in a meter pit or vault located outside of the Customer's structure. The meter pit or vault shall be installed at a location acceptable to the express, advance approval of the Water Company, and otherwise shall comply with the Company's standard terms and conditions.
- 3- If a customer requests a change in meter size associated with a multi-service meter, the customer must re-apply for service and re-certify each item addressed in this Rate Schedule.

(Continued)

Deleted: Effective:
November 1, 2020 ¶

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¶
By: Cheryl Norton, President ¶
One Water Street, Camden,
NJ 08102 ¶
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Docket No. WR19121516
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1 Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 43.1

RATE SCHEDULE P-3
MULTI-USE SERVICE LINE
(Continued)

PROVISION OF SERVICES

By applying for multi-use service, and operating the same, the customer agrees:

1. To include a backflow prevention device(s) as defined at N.J.A.C. 7:10-1.3, and as specified at N.J.A.C. 7:10-10.3;
2. To be solely responsible for all costs and expenses relating to the installation, operation, maintenance, repair and replacement of the customer's water system, including the fire suppression system and backflow prevention device(s);
3. To ensure that the customer's water system complies with the applicable requirements of the Uniform Construction Code in effect at the time of system installation, including any applicable building, plumbing and fire protection sub-codes; and
4. To ensure that the customer's water system is maintained in accordance with all applicable law so as to protect against backflow, back-siphonage and contamination of the potable water system.

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Seventh Revised Sheet: No. 44
Superseding Sixth Revised Sheet: No. 44

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AREA SERVED - WASTEWATER SERVICE

	<u>County</u>	<u>Municipality</u>	<u>All or Portion</u>	<u>Development/Section</u>	<u>Wastewater System</u>
**	<u>Atlantic</u>	<u>City of Egg Harbor</u>	<u>All</u>	<u>N/A</u>	<u>Egg Harbor City</u>
**	<u>Atlantic</u>	<u>Twp. of Galloway</u>	<u>All</u>	<u>N/A</u>	<u>Egg Harbor City</u>
**	<u>Atlantic</u>	<u>Twp. of Mullica</u>	<u>Portion</u>	<u>N/A</u>	<u>Egg Harbor City</u>
A)	Bergen	Twp. of Oakland	Portion	Ramapo River Reserve	Ramapo River Reserve
A)	Burlington	Twp. of Mansfield	Portion	Mapleton (Mansfield Farms)	Mapleton
B)	Burlington	Twp. of Mansfield	Portion	Homestead (Country Walk)	Homestead
D)	Burlington	Twp. of Mansfield	Portion	John Hydock Elementary School	Mapleton
D)	Burlington	Twp. of Mansfield	Portion	Northern Burlington School	Mapleton
**	Camden	Borough of Haddonfield	All	N/A	Haddonfield/CCMUA
**	Camden	Borough of Mount Ephraim	All	N/A	Mount Ephraim
A)	Cape May	Twp. of Middle	Portion	Avalon Country Club	Avalon Links
*	Cape May	Ocean City	All	N/A	Ocean City/CMCMUA
**	Gloucester	Twp. of Elk	All	N/A	Elk Township
A)	Hunterdon	Borough of Bloomsbury	Portion	Fawn Run	Fawn Run
A)	Hunterdon	Twp. of Tewksbury	Portion	Crossroads at Oldwick	Crossroads
*	Hunterdon	Twp. of Tewksbury	Portion	Pottersville	Pottersville
A)	Hunterdon	Twp. of Union	Portion	Village Square	Village Square
A)	Hunterdon	Twp. of Clinton	Portion	Brass Castle	Brass Castle
A)	Hunterdon	Twp. of Union	Portion	Lookout Pointe	Lookout Pointe
A)	Hunterdon	Twp. of Clinton	Portion	Glen Meadows & Twin Oaks	Glen Meadows
A)	Monmouth	Twp. of Upper Freehold	Portion	Four Seasons at Upper Freehold	Beacon Hill
D)	Monmouth	Twp. of Upper Freehold	Portion	Beacon Hill Clubhouse	Beacon Hill
*, **	Monmouth	Twp. of Howell	Portion	N/A	Howell/MRRSA/OCUA
A)	Morris	Twp. of Mount Olive	Portion	Country Oaks	Country Oaks
A)	Morris	Twp. of Chester	Portion	Four Seasons @ Chester	Four Seasons @ Chester
A)	Morris	Twp. of Jefferson	Portion	Peaks @ Jefferson	Jefferson Peaks
A)	Morris	Twp. of Mount Olive	Portion	Morris Chase	Morris Chase
**	Morris	Twp. of Long Hill	All	N/A	Long Hill Township
*	Ocean	Twp. of Lakewood	Portion	N/A	Lakewood/OCUA
**	Ocean	Twp. of Plumsted	Portion	Jensen's Deep Run	Jensen's
**	<u>Somerset</u>	<u>Borough of Bound Brook</u>	<u>All</u>	<u>N/A</u>	<u>Bound Brook</u>
A)	Somerset	Twp. of Hillsborough	Portion	Hillsborough Chase	Hillsborough Chase
A)	Warren	Twp. of Washington	Portion	Hawk Pointe	Hawk Pointe

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KEY:

- A) Community On-Site Water and/or Wastewater System (COWS) (formerly served by Applied)
- B) Homestead (formerly served by Applied)
- C) Reserved
- D) Other Contracts (formerly served by Applied)
- * Wastewater systems served by the Company prior to the merger of Applied Wastewater Management, Inc. ("Applied") into the Company on September 1, 2010.
- ** Systems acquired by the Company after January 1, 2011.

Deleted: Effective:
November 1, 2020 ¶

Deleted: Issued: October 30, 2020 ¶
¶ By: Cheryl Norton, President¶
One Water Street, Camden, NJ 08102¶
Filed pursuant to Order of the Board of Public Utilities entered in¶
Docket No. WR19121516 dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

[Ninth](#) Revised Sheet: No. 45
Superseding [Eighth](#) Revised Sheet: No. 45

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Deleted: Seventh

WASTEWATER SERVICE RATE SCHEDULES
TABLE OF CONTENTS

Rate schedules are applicable for service provided in the entire area served as follows:

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Bound Brook Borough	General Flat Rate Service	18-A	64
Bound Brook Borough	General Metered Service	19-A	65

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Deleted: Effective: November 1, 2020 ¶

Deleted: Issued: October 30, 2020 ¶
¶
By: Cheryl Norton, President ¶
One Water Street, Camden, NJ 08102 ¶
Filed pursuant to Order of the Board of Public Utilities entered in ¶
Docket No. WR19121516 dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

~~Tenth~~ Revised Sheet: No. 46
Superseding ~~Ninth~~ Revised Sheet: No. 46

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RATE SCHEDULE 1-A **GENERAL METERED SERVICE**

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service in the City of Ocean City. The charge for wastewater service shall consist of the total of the Minimum Service Charge, the Sewer Usage Charge and the Purchased Wastewater Treatment Adjustment Clause (PSTAC) Charge, as defined under the Standard Terms and Conditions in this tariff and as shown on Rate Schedule 1-B, and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

MINIMUM SERVICE CHARGE

All wastewater service customers shall pay a Minimum Service Charge in addition to the Sewer Usage Charge, if any. The Minimum Service Charge for a customer is determined every January 1 for the year based on the water usage for the prior July, August and September meter readings ("Summer Quarter Consumption") but in no event will a customer be billed for less than 7,480 gallons per year for wastewater service.

	Gallons Per Month	Rate Per 100 Gallons	Rate Per 1,000 Gallons
Non-Exempt	All	\$1.45000	\$14.5000
Exempt	All	\$1.25200	\$12.5200

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SEWER USAGE CHARGE

The volume of sewer use is assumed to equal water meter registration. Charges shall be based on water consumption as indicated by water meter readings on a monthly or quarterly basis at the option of the Company.

	Gallons Per Month	Rate Per 100 Gallons	Rate Per 1,000 Gallons
Non-Exempt	All	\$0.21750	\$2.1750
Exempt	All	\$0.18750	\$1.8780

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TERMS OF PAYMENT

The following plan for payment of the Annual Minimum Service Charge is offered as a convenience to our customers and, in the case of seasonal service, does not relieve the customer of the liability to pay the entire Annual Minimum Service Charge if wastewater service is rendered for only a portion of the calendar year. In the case of a non-seasonal customer terminating their account, the customer shall be billed for service provided through the date of service termination.

A new customer, initiating service at existing premises, shall be billed for such service as of the account activation date. The new customer account usage will be based on the existing premises last known summer quarter consumption, until the new customer establishes a summer quarter consumption. A new customer account without established summer quarter consumption data will be required to pay a pro-rata share of the Annual Minimum Service Charge, until the new customer establishes a summer quarter consumption. The proration shall be based on the portion of the calendar year for which the customer receives service.

In addition, in the case of a reactivated account, the customer will be required to pay for the charges as if the account had been active as of January 1. The calculated Annual Minimum Service Charge will therefore be billed across the remaining installment billing periods in that calendar year.

For monthly billed customers, one-twelfth of the Minimum Service Charge shall be due and payable upon receipt of the regular bill for wastewater service.

If the Company determines by application of the following criteria that the customer's past record of payments does not warrant application of this payment plan, the Company may require payment of the entire service charge at one time rather than in installments.

1. If a customer has been terminated at least once in the past two years for non-payment of a bill for wastewater service; or,
2. If a customer receives three (3) Final Reminder Notices during a twelve-month period.

Usage charges based upon meter readings shall be billed in monthly in arrears (or quarterly at the option of the Company). Valid bills for service furnished under this schedule are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Deleted: Effective:
November 1, 2020 ¶

Deleted: Issued: October 30,
2020 ¶

¶
By: Cheryl Norton, President¶
One Water Street, Camden,
NJ 08102¶
Filed pursuant to Order of the
Board of Public Utilities
entered in¶
Docket No. WR19121516
dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Seventeenth Revised Sheet: No. 47
Superseding Sixteenth Revised Sheet: No. 47

RATE SCHEDULE 1-B
PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC)

APPLICABILITY

Applicable to all Wastewater Service customer classes including general residential, commercial, industrial and municipal wastewater service in the City of Ocean City. The PSTAC charge, as defined under the Standard Terms and Conditions in this tariff, is designed to recover the cost of purchased wastewater treatment and disposal costs associated with the normal operations of the Company, and allow the Company to achieve a zero or near-zero deferred balance each April 1st on its purchased wastewater treatment and disposal costs.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC) CHARGE

The following are the PSTAC charges per one hundred gallons and per one thousand gallons that will be charged based on the Summer Quarter Consumption as defined in the Minimum Service Charge section of Wastewater-Rate Schedule 1-A to recover purchased wastewater treatment and disposal costs, but in no event will the consumption level for PSTAC be less than 7,480 gallons per year.

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1000 Gallons</u>
Non-Exempt and Exempt	All	\$3.39147	\$33.9147

FILING

The Company shall endeavor to make an annual PSTAC filing no later than December 1st of each year, proposing a PSTAC rate or percentage to be effective on or about the following April 1st.

The notice of filing and of public hearing in the annual PSTAC proceedings shall include the specific rate change proposed to be implemented on April 1st. The notice shall also include the impact of such potential increases on a benchmark bill.

The annual PSTAC filing shall contain, but not be limited to, the following:

1. A reconciliation of actual versus estimated costs and revenues from the last Board approved PSTAC charge for wastewater treatment and disposal;
2. Projected rates supported by projected volumes, revenues, and projected purchased wastewater treatment and disposal costs;
3. Deferred balances and the timeframe over which they are proposed to be collected or returned;
4. A written explanation of the circumstances that caused the deferred balances in (3) above;
5. A written explanation of any significant activities or trends which may affect costs for the prospective period; and
6. Updated tariff sheets to reflect any change to the PSTAC rate.

The benchmark bill shall be the average residential wastewater customer bill for a twelve-month period.

TERMS OF PAYMENT

See Rate Schedule 1-A for applicable customer classes.

(Continued)

Issued: July 1, 2021

Effective: July 1, 2021

By: Mark K. McDonough, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR20110719 dated June 24, 2021.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Original Sheet: No. 47.1

RATE SCHEDULE 1-B
PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC)
(Continued)

PROVISIONS

Interest shall be passed onto customers through the PSTAC rates at the beginning of each PSTAC Year succeeding any PSTAC year in which any net monthly purchased wastewater treatment and disposal costs over recovery has taken place. Any debit or credit balance in the separate deferred revenue or separate cost of wastewater treatment accounts shall be determined monthly. Monthly interest shall be calculated on the average of the current and prior month's ending cumulative deferred revenue or cost of wastewater treatment balances. Interest on such wastewater treatment costs shall be calculated utilizing the rate of return on rate base utilized to set rates in the Company's last preceding base rate case, and shall be changed from time to time, consistent with N.J.A.C. 14:9-7, et seq.

The clause shall be subject to deferred accounting, consistent with N.J.A.C. 14:9-7, et seq.

TERM

Continuous until wastewater service to the customer is permanently discontinued.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR19121516 dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

~~Ninth~~ Revised Sheet: No. 48
Superseding ~~Eighth~~ Revised Sheet: No. 48

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RATE SCHEDULE 2-A
GENERAL METERED SERVICE
STATEWIDE WASTEWATER COLLECTION AREA

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service in the Statewide Wastewater Collection Area (Lakewood). The charge for wastewater service shall consist of the total of the Fixed Service Charge, the Sewer Usage Charge and the Purchased Wastewater Treatment Adjustment Clause (PSTAC) Charge, as defined under the Standard Terms and Conditions in this tariff, shown on Rate Schedule 2-B, and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All wastewater service customers shall pay a Fixed Service Charge in addition to the Sewer Usage Charge, if any, as follows:

	<u>Non-Exempt</u>	<u>Exempt</u>
Fixed Service Charge per customer per month.	\$15.00	\$12.96

SEWER USAGE CHARGE

The volume of sewer use is assumed to equal water meter registration. See Standard Terms and Conditions – Wastewater, Sheet No. 23, for an explanation of how Monthly Sewer Usage Charges are calculated.

Volumetric Charges

	<u>Gallons</u> <u>Per Month</u>	<u>Rate</u> <u>Per 100 Gallons</u>	<u>Rate</u> <u>Per 1,000 Gallons</u>
Non-Exempt	All	\$0.47550	\$4.7550
Exempt	All	\$0.41057	\$4.1057

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TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

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November 1, 2020 ¶

Deleted: Issued: October 30, 2020 ¶
¶
By: Cheryl Norton, President ¶
One Water Street, Camden, NJ 08102 ¶
Filed pursuant to Order of the Board of Public Utilities entered in ¶
Docket No. WR19121516 dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Ninth Revised Sheet: No. 49
Superseding Eighth Revised Sheet: No. 49

RATE SCHEDULE 2-B
PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC)

APPLICABILITY

Applicable to all Wastewater Service customer classes including general residential, commercial, industrial and municipal wastewater service in the Statewide Wastewater Collection Area (Lakewood). The PSTAC charge, as defined under the Standard Terms and Conditions in this tariff, is designed to recover the cost of purchased wastewater treatment and disposal costs associated with the normal operations of the Company, and allow the Company to achieve a zero or near-zero deferred balance each April 1st on its purchased wastewater treatment and disposal costs.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC) CHARGE

In addition to all other charges for general metered service, the following charges per one hundred gallons and per one thousand gallons for all sales will be made to recover purchased wastewater treatment and disposal costs not included in the Sewer Usage Charge or any other Charge as set forth in Rate Schedule 2-A of the current Tariff:

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt and Exempt	All	\$ 0.49209	\$4.9209

FILING

The Company shall endeavor to make an annual PSTAC filing no later than December 1st of each year, proposing a PSTAC rate or percentage to be effective on or about the following April 1st.

The notice of filing and of public hearing in the annual PSTAC proceedings shall include the specific rate change proposed to be implemented on April 1st. The notice shall also include the impact of such potential increases on a benchmark bill.

The annual PSTAC filing shall contain, but not be limited to, the following:

1. A reconciliation of actual versus estimated costs and revenues from the last Board approved PSTAC charge for purchased wastewater treatment and disposal;
2. Projected rates supported by projected volumes, revenues, and projected purchased wastewater treatment and disposal costs;
3. Deferred balances and the timeframe over which they are proposed to be collected or returned;
4. A written explanation of the circumstances that caused the deferred balances in (3) above;
5. A written explanation of any significant activities or trends which may affect costs for the prospective period; and
6. Updated tariff sheets to reflect any change to the PSTAC rate.

The benchmark bill shall be the average residential wastewater customer bill for a twelve-month period.

(Continued)

Issued: July 1, 2021

Effective: July 1, 2021

By: Mark K. McDonough, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR20110719 dated June 24, 2021.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Original Sheet: No. 49.1

RATE SCHEDULE 2-B
PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC)
(Continued)

PROVISIONS

Interest shall be passed onto customers through the PSTAC rates at the beginning of each PSTAC Year succeeding any PSTAC year in which any net monthly purchased wastewater treatment and disposal costs over recovery has taken place. Any debit or credit balance in the separate deferred revenue or separate cost of wastewater treatment accounts shall be determined monthly. Monthly interest shall be calculated on the average of the current and prior month's ending cumulative deferred revenue or cost of wastewater treatment balances. Interest on such wastewater treatment costs shall be calculated utilizing the rate of return on rate base utilized to set rates in the Company's last preceding base rate case, and shall be changed from time to time, consistent with N.J.A.C., 14:9-7, et seq.

The clause shall be subject to deferred accounting, consistent with N.J.A.C. 14:9-7, et seq.

TERMS OF PAYMENT

See Rate Schedules for applicable customer classes.

TERM

Continuous until wastewater service to the customer is permanently discontinued.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR19121516 dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

~~Ninth~~ Revised Sheet: No. 50
Superseding ~~Eighth~~ Revised Sheet: No. 50

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RATE SCHEDULE 3-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service provided by the Company's Adelphia System (service area of the former Adelphia Sewer Company) and other franchise areas within the Township of Howell in Monmouth County. The charge for wastewater service shall consist of the total of the Fixed Service Charge, the Sewer Usage Charge and the Purchased Wastewater Treatment Adjustment Clause (PSTAC) Charge, as defined under the Standard Terms and Conditions in this tariff, shown on Rate Schedule 3-B, and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All wastewater service customers shall pay a Fixed Service Charge in addition to the Sewer Usage Charge, if any, as follows:

	<u>Non-Exempt</u>	<u>Exempt</u>
Fixed Service Charge per customer per month.	\$15.00	\$12.95

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SEWER USAGE CHARGE

The volume of sewer use is assumed to equal water meter registration. Charges shall be based on water consumption as indicated by water meter readings on a monthly basis (or quarterly, at the option of the Company). Where wastewater service is provided and water used on the premise is not supplied or metered by the Company, then a monthly usage constant of 4,000 gallons will be used for billing purposes.

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$0.53300	\$5.3300
Exempt	All	\$0.46022	\$4.6022

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TERMS OF PAYMENT

Valid bills for wastewater service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

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November 1, 2020 ¶

Deleted: Issued: October 30,
2020 ¶
¶
By: Cheryl Norton, President ¶
One Water Street, Camden,
NJ 08102 ¶
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Docket No. WR19121516
dated October 28, 2020.

Issued: January 14, 2022

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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Ninth Revised Sheet: No. 51
Superseding Eighth Revised Sheet: No. 51

RATE SCHEDULE 3-B
PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC)

APPLICABILITY

Applicable to all Wastewater Service customer classes including general residential, commercial, industrial and municipal wastewater service customers provided service by the Company's Adelphia System (service area of the former Adelphia Sewer Company) and other franchise areas within the Township of Howell in Monmouth County. The PSTAC charge, as defined under the Standard Terms and Conditions in this tariff, is designed to recover the cost of purchased wastewater treatment and disposal associated with the normal operations of the Company, and allow the Company to achieve a zero or near-zero deferred balance each April 1st on its purchased wastewater treatment and disposal costs.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC) CHARGE

In addition to all other charges for general metered service, the following charges per one hundred gallons, per one thousand gallons, per 10 cubic feet and per 100 cubic feet for all sales will be made to recover purchased wastewater treatment and disposal costs not included in the Sewer Usage Charge or any other Charge as set forth in Rate Schedule 3-A of the current Tariff:

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt and Exempt	All	\$0.66021	\$6.6021

FILING

The Company shall endeavor to make an annual PSTAC filing no later than December 1st of each year, proposing a PSTAC rate to be effective on or about the following April 1st.

The notice of filing and of public hearing in the annual PSTAC proceedings shall include the specific rate change proposed to be implemented on April 1st. The notice shall also include the impact of such potential increases on a benchmark bill.

The annual PSTAC filing shall contain, but not be limited to, the following:

1. A reconciliation of actual versus estimated costs and revenues from the last Board approved PSTAC charge for purchased wastewater treatment and disposal;
2. Projected rates supported by projected volumes, revenues, and projected purchased wastewater treatment and disposal costs;
3. Deferred balances and the timeframe over which they are proposed to be collected or returned;
4. A written explanation of the circumstances that caused the deferred balances in (3) above;
5. A written explanation of any significant activities or trends which may affect costs for the prospective period; and
6. Updated tariff sheets to reflect any change to the PSTAC rate.

The benchmark bill shall be the average residential wastewater customer bill for a twelve-month period.

(Continued)

Issued: July 1, 2021

Effective: July 1, 2021

By: Mark K. McDonough, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR20110719 dated June 24, 2021.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Original Sheet: No. 51.1

RATE SCHEDULE 3-B
PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC)
(Continued)

PROVISIONS

Interest shall be passed onto customers through the PSTAC rates at the beginning of each PSTAC Year succeeding any PSTAC year in which any net monthly purchased wastewater treatment and disposal costs over recovery has taken place. Any debit or credit balance in the separate deferred revenue or separate cost of wastewater treatment accounts shall be determined monthly. Monthly interest shall be calculated on the average of the current and prior month's ending cumulative deferred revenue or cost of wastewater treatment balances. Interest on such wastewater treatment costs shall be calculated utilizing the rate of return on rate base utilized to set rates in the Company's last preceding base rate case, and shall be changed from time to time, consistent with N.J.A.C. 14:9-7 et seq.

The clause shall be subject to deferred accounting, consistent with N.J.A.C. 14:9-7, et seq.

TERMS OF PAYMENT

See Rate Schedules for applicable customer classes.

TERM

Continuous until wastewater service to the customer is permanently discontinued.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR19121516 dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Superseding ~~Third~~ Revised Sheet: No. 52
~~Second~~ Revised Sheet: No. 52

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RATE SCHEDULE 5-A
GENERAL FLAT RATE SERVICE

APPLICABILITY FOR GENERAL FLAT RATE WASTEWATER SERVICE CUSTOMERS

Applicable to all general flat rate wastewater service customers located in the Company's Tewksbury System (Pottersville - service area of the former Valley Road Sewerage Company) in the Township of Tewksbury in Hunterdon County, and Service Areas noted as (A) and (B), formerly served by Applied Wastewater Management, Inc. ("Applied"), on Sheet No. 44 (COWS) who are not water service customers of NJAWC. The Class A/Class B designations in effect at the time rates were set by the Board in Docket. No. WR11070460 (May 1, 2012) shall remain in effect unless changed by order of the Board. No new Class A designations shall be made except at the discretion of the Company. The Company's charge for wastewater service shall consist of the total of a Flat Rate Service Charge and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule Q-2.

FLAT RATE SERVICE CHARGE – GENERAL FLAT RATE WASTEWATER CUSTOMERS

All wastewater service customers shall pay a flat rate service charge as indicated below.

RATE PER MONTH

CLASS A ~~\$~~82.50

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CLASS B ~~99.68~~

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The Class A/Class B designations in effect at the time rates were set by the Board in Docket. No. WR11070460 (May 1, 2012) are as follows:

CLASS A

- 4 BEDROOM AGE RESTRICTED
- 3 BEDROOM AGE RESTRICTED
- 2 BEDROOM TOWNHOUSE
- 3 BEDROOM TOWNHOUSE AGE RESTRICTED
- 2 BEDROOM AGE RESTRICTED
- 1 BEDROOM TOWNHOUSE

CLASS B

- DETACHED SINGLE FAMILY
- 3 BEDROOM TOWNHOUSE

CHARACTER OF FLAT RATE SERVICE

Continuous (unmetered), except as limited by the "Standard Terms and Conditions."

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Deleted: Effective:
November 1, 2020 ¶

Deleted: Issued: October 30, 2020 ¶
¶
By: Cheryl Norton, President ¶
One Water Street, Camden, NJ 08102 ¶
Filed pursuant to Order of the Board of Public Utilities entered in ¶
Docket No. WR19121516 dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

~~Fourth~~ Revised Sheet: No. 53
Superseding ~~Third~~ Revised Sheet: No. 53

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RATE SCHEDULE 6-A
GENERAL METERED SERVICE

APPLICABILITY FOR GENERAL METERED WASTEWATER SERVICE CUSTOMERS

Applicable to all general metered wastewater service customers located in the Company's Tewksbury System (Pottersville - service area of the former Valley Road Sewerage Company) in the Township of Tewksbury in Hunterdon County, and Service Areas noted as (A) and (B), formerly served by Applied Wastewater Management, Inc. ("Applied"), on Sheet No. 44 (COWS and Homestead) who receive volume-based water service billings from NJAWC. The Company's charge for wastewater service shall consist of the total of the Fixed Service Charge and a Sewer Usage Charge and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

FIXED SERVICE CHARGE – GENERAL METERED WASTEWATER CUSTOMERS

All wastewater service customers shall pay a fixed service charge as indicated below, in addition to the Sewer Usage Charge, if any.

RATE PER MONTH

Non-Exempt \$50.00

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SEWER USAGE CHARGE – GENERAL METERED WASTEWATER CUSTOMERS

The volume of wastewater use is assumed to equal water meter registration. See Standard Terms and Conditions – Wastewater, Sheet No. 23, for an explanation of how Monthly Sewer Usage Charges are calculated.

	Gallons Per Month	Rate Per 100 Gallons	Rate Per 1,000 Gallons
Non-Exempt	All	<u>\$0.80400</u>	<u>\$8.0400</u>

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CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

Deleted: Effective:
November 1, 2020 ¶
Deleted: Issued: October 30, 2020 ¶
¶
By: Cheryl Norton, President ¶
One Water Street, Camden, NJ 08102 ¶
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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

~~Ninth~~ Revised Sheet: No. 54
Superseding ~~Eighth~~ Revised Sheet: No. 54

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RATE SCHEDULE 8-A
OTHER CONTRACTS

APPLICABILITY

Applicable to wastewater service customers located in the Service Areas noted as (D), formerly served by Applied Wastewater Management, Inc. ("Applied"), on Sheet No. 44 (Other Contracts).

CHARACTER OF SERVICE

Continuous (unmetered).

RATES

<u>CLASS</u>	<u>RATE PER MONTH</u>	
Schools	\$ 125.00	Per Formula*
Other	125.00	Per Equivalent Dwelling Units**

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TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered in arrears either monthly or quarterly, at the option of the Company, and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

* Quarterly Charge = \$~~375.00~~ x (Average Daily Enrollment x Student GPD)/300
Where Student GPD is as follows:
NJDEP projected usage per Elementary School student = 15 GPD
NJDEP projected usage per High School student = 25 GPD

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**An equivalent residential customer is based on 235 GPD

Deleted: Effective:
November 1, 2020 ¶

Deleted: Issued: October 30, 2020¶
¶
By: Cheryl Norton, President¶
One Water Street, Camden, NJ 08102¶
Filed pursuant to Order of the Board of Public Utilities entered in¶
Docket No. WR19121516 dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

First Revised Sheet: No. 55
Superseding Original Sheet: No. 55

RATE SCHEDULE 9-A
MISCELLANEOUS SERVICE CHARGES

APPLICABILITY

Applicable to all classes of customers unless specified for the following classes of miscellaneous services throughout the entire area served by the Company.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

BAD CHECK CHARGE

If the Company receives a negotiable instrument from a customer in payment of a bill, charge, or deposit due, and such instrument is subsequently dishonored or uncollectible for any reason, the Company shall charge the customer a handling charge per instrument of \$15.00.

If a bad check charge is applied to a customer account, that amount, as well as the amount of the dishonored check shall be paid with cash, certified check, money order, bank check, or other means of guaranteed payment before such account shall be deemed paid. Additionally, if a customer presents two checks that are dishonored by the bank as a result of the customer's error, the customer will be required to pay by the methods stated above for a period of twelve months from the date of the last dishonored check.

The provisions of this Tariff section shall not be deemed to require a customer to submit to automatic deduction from any bank account, credit card, or by on-line banking but the Company may offer same as an option provided the customer is presented with all other available options offered by the Company.

RESUMPTION OF SERVICE AFTER PHYSICAL DISCONNECTION OR PLUGGING DUE TO NONPAYMENT OF BILLS OR VIOLATION OF THE COMPANY'S RULES

Sewer Service	-	At any time	Greater of \$350.00 or actual cost
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CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

The Company may waive the fees and charges referenced in this Rate Schedule 9-A for a customer who is enrolled in the Company's H2O Help to Others Program or the Low Income Payment Program, provided that the customer is not deemed to have been abusing and/or taking advantage of the system, including but not limited to repeatedly requiring service reconnections more than three (3) times in any twelve (12) month period.

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR19121516 dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

~~Ninth~~ Revised Sheet: No. 56
Superseding ~~Eighth~~ Revised Sheet: No. 56

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RATE SCHEDULE 10-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general flat rate residential, commercial, industrial and municipal wastewater service to customers served by the Company's Jensen's Deep Run System in the Township of Plumsted in Ocean County. The charge for wastewater service shall consist of the total of a Fixed Service Charge, a Sewer Usage Charge, ~~and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.~~

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FIXED SERVICE CHARGE – GENERAL METERED WASTEWATER CUSTOMERS

All wastewater service customers shall pay a fixed service charge as indicated below, in addition to the Sewer Usage Charge, if any.

RATE PER MONTH

Non-Exempt ~~\$30.00~~

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SEWER USAGE CHARGE – GENERAL METERED WASTEWATER CUSTOMERS

The volume of wastewater use is assumed to equal water meter registration. See Standard Terms and Conditions – Wastewater, Sheet No. 23, for an explanation of how Monthly Sewer Usage Charges are calculated.

	Gallons Per Month	Rate Per 100 Gallons	Rate Per 1,000 Gallons
Non-Exempt	All	\$0.85000	\$8.5000

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CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

TERMS OF PAYMENT

Valid bills for wastewater service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

Deleted: Effective:
November 1, 2020 ¶

Deleted: Issued: October 30, 2020 ¶
¶
By: Cheryl Norton, President ¶
One Water Street, Camden, NJ 08102 ¶
Filed pursuant to Order of the Board of Public Utilities entered in ¶
Docket No. WR19121516 dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

~~Ninth~~ Revised Sheet: No. 57
Superseding ~~Eighth~~ Revised Sheet: No. 57

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RATE SCHEDULE 11-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers served by the Company's Haddonfield Collection System in Camden County. The charge for wastewater service shall consist of a Sewer Usage Charge based on the water consumption at the location for the same billing period and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

FIXED SERVICE CHARGE – GENERAL METERED WASTEWATER CUSTOMERS

All wastewater service customers shall pay a fixed service charge as indicated below, in addition to the Sewer Usage Charge, if any.

RATE PER MONTH

Non-Exempt	<u>\$8.00</u>
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SEWER USAGE CHARGE – GENERAL METERED WASTEWATER CUSTOMERS

The volume of wastewater use is assumed to equal water meter registration. Charges shall be based upon water consumption as indicated by water meter readings on a monthly basis (or quarterly, at the option of the Company).

	Gallons Per Month	Rate Per 100 Gallons	Rate Per 1,000 Gallons
Non-Exempt	All	<u>\$0.36500</u>	<u>\$3.6500</u>

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CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

TERMS OF PAYMENT

Valid bills for wastewater service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

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November 1, 2020 ¶

Deleted: Issued: October 30, 2020¶
¶
By: Cheryl Norton, President¶
One Water Street, Camden, NJ 08102¶
Filed pursuant to Order of the Board of Public Utilities entered in¶
Docket No. WR19121516 dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

~~Ninth~~ Revised Sheet: No. 58
Superseding ~~Eighth~~ Revised Sheet: No. 58

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RATE SCHEDULE 12-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service in Elk Township. The charge for wastewater service shall consist of the total of the Fixed Service Charge, the Sewer Usage Charge, ~~and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.~~

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CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All wastewater service customers shall pay a Fixed Service Charge in addition to the Sewer Usage Charge, if any, as follows:

	<u>Non-Exempt</u>
Fixed Service Charge per customer per month.	\$ <u>20.00</u>

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SEWER USAGE CHARGE

The volume of wastewater use is assumed to equal water meter registration. See Standard Terms and Conditions – Wastewater, Sheet No. 23, for an explanation of how Monthly Sewer Usage Charges are calculated.

Volumetric Charges

	<u>Gallons</u>	<u>Rate</u>	<u>Rate</u>
	<u>Per Month</u>	<u>Per 100 Gallons</u>	<u>Per 1,000 Gallons</u>
Non-Exempt	All	\$0. <u>95000</u>	\$ <u>9.5000</u>

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TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

Deleted: Effective:
November 1, 2020 ¶

Deleted: Issued: October 30, 2020¶
¶
By: Cheryl Norton, President¶
One Water Street, Camden, NJ 08102¶
Filed pursuant to Order of the Board of Public Utilities entered in¶
Docket No. WR19121516 dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Fourth Revised Sheet: No. 59
Superseding Third Revised Sheet: No. 59

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RATE SCHEDULE 13-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service in the Borough of Mount Ephraim. The charge for wastewater service shall consist of the Fixed Service Charge.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FLAT RATE SERVICE CHARGE – GENERAL FLAT RATE WASTEWATER CUSTOMERS¹

All wastewater service customers shall pay a flat rate service charge as indicated below.

Rate Per Month Effective [date]	Rate Per Month Effective 7/3/2023	Type of Property
<u>\$1.77</u>	<u>\$1.82</u>	Each additional employee (whether part-time or full-time) over 2 employees for: <ul style="list-style-type: none"> • Post offices • Retail and commercial establishments • Business or professional offices (whether part of a dwelling or not)
<u>\$2.20</u>	<u>\$2.27</u>	<ul style="list-style-type: none"> • Unrecirculated air-conditioning units (per ton of rated capacity)
<u>\$3.53</u>	<u>\$3.64</u>	<ul style="list-style-type: none"> • Self-service laundries (per machine)
<u>\$4.43</u>	<u>\$4.56</u>	<ul style="list-style-type: none"> • Lodges or meeting halls without bar
<u>\$7.08</u>	<u>\$7.29</u>	<ul style="list-style-type: none"> • Post offices with up to 2 employees
<u>\$8.84</u>	<u>\$9.11</u>	<ul style="list-style-type: none"> • Single-family dwelling • Apartment unit • Each additional apartment unit (over 1) • Gas or service stations or garages • Barbershops (whether part of a dwelling or not) • Lodges or meeting halls with bar • Doctors', dentists' and podiatrists' offices (whether part of a dwelling or not) • Retail and commercial establishments, up to 2 employees • Business or professional offices (whether part of a dwelling or not) – up to 2 employees (whether part-time or full-time) • Soda fountains (whether part of a dwelling or not) • Motels, per unit • All other commercial buildings not otherwise set forth herein (up to 2 employees)
<u>\$17.69</u>	<u>\$18.22</u>	<ul style="list-style-type: none"> • Gas or service stations or garages with car washing facilities • Restaurants, luncheonettes, diners, etc. – 1 seat to 25 seats • Drugstores • Bakery or bakery distributing centers • Motels, per unit with kitchenette • Boardinghouses (up to 10 people)

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Deleted: Issued: June 23, 2021 ¶
By: Mark K. McDonough, President ¶
One Water Street, Camden, NJ 08102 ¶
Filed pursuant to Order of the Board of Public Utilities entered in ¶
Docket No. WR19121516 dated October 28, 2020.

¹ The Flat Rate Service Charge will increase by 3% on July 3, 2023 by the terms of the Agreement of Sale between the Borough of Mount Ephraim and New Jersey-American Water Company, Inc.
Issued: January 14, 2022 Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Second Revised Sheet: No. 59.1
Superseding First Revised Sheet: No. 59.1

RATE SCHEDULE 13-A
GENERAL METERED SERVICE
(Continued)

<u>Rate Per</u> <u>Month</u>	<u>Rate Per</u> <u>Month</u> <u>Effective</u> <u>7/3/2023</u>	<u>Type of Property</u>
<u>\$26.52</u>	<u>\$27.32</u>	<ul style="list-style-type: none"> Fish markets Restaurants, luncheonettes, diners, etc. – 26 seats to 50 seats Heavy industry and car washes
<u>\$35.36</u>	<u>\$36.42</u>	<ul style="list-style-type: none"> Drive-in restaurants Taverns or taprooms (whether part of a dwelling or not) Restaurants, luncheonettes, diners, etc. – 51 seats to 75 seats
<u>\$44.21</u>	<u>\$45.54</u>	<ul style="list-style-type: none"> Restaurants, luncheonettes, diners, etc. – 76 seats to 100 seats

CHARACTER OF FLAT RATE SERVICE

Continuous (unmetered), except as limited by the "Standard Terms and Conditions."

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

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2021 ¶

Deleted: Issued: June 23,
2021 ¶

By: Mark K. McDonough,
President ¶
One Water Street, Camden,
NJ 08102 ¶
Filed pursuant to Order of the
Board of Public Utilities
entered in ¶
Docket No. WR19121516
dated October 28, 2020.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

First Revised Sheet: No. 60
Superseding Original Sheet: No. 60

RATE SCHEDULE 14-A
GENERAL FLAT RATE SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers in Long Hill Township who do not receive volume-based water service billings from NJAWC. The Company may require a water meter to be installed by any wastewater customer utilizing a well or other private water system at the property owner's expense. The charge for wastewater service shall consist of the Fixed Service Charge and the Flat Rate Service Charge.

AVAILABILITY OF SERVICE

As the Company has implemented a voluntary sewer connection ban due to excess wastewater flow, all requests for new sewer connections to the Long Hill Township wastewater system will be granted at the sole discretion of the Company.

CHARACTER OF SERVICE

Continuous (unmetered), except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE – WASTEWATER²

All wastewater service customers shall pay a Fixed Service Charge in addition to the Flat Rate Service Charge as indicated below. If a wastewater customer has multiple connections to a single property, only one Fixed Service Charge shall be applied to the wastewater customer.

	<u>RATE PER MONTH</u> <u>Effective 10/23/2022</u>	<u>RATE PER MONTH</u> <u>Effective 10/23/2023</u>	<u>RATE PER MONTH</u> <u>Effective 10/23/2024</u>
Non-Exempt, per unit	\$ <u>15.02</u>	\$ <u>15.47</u>	\$ <u>15.93</u>

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MONTH ¶

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FLAT RATE USAGE CHARGE – WASTEWATER CUSTOMERS³

All wastewater service customers shall pay a Flat Rate Usage charge as indicated below.

	<u>RATE PER MONTH</u> <u>Effective 10/23/2022</u>	<u>RATE PER MONTH</u> <u>Effective 10/23/2023</u>	<u>RATE PER MONTH</u> <u>Effective 10/23/2024</u>
Non-Exempt Residential, per connection	\$ <u>49.36</u>	\$ <u>50.84</u>	\$ <u>52.37</u>
Non-Exempt Commercial, Industrial and Municipal, per connection	\$ <u>103.00</u>	\$ <u>106.09</u>	\$ <u>109.27</u>

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FIXED SERVICE CHARGE DISCOUNT – RESIDENTIAL WASTEWATER CUSTOMERS

Residential wastewater customers of Long Hill Township enrolled in the Township's Senior Discount Program as of October 22, 2020, shall receive a Fixed Service Charge discount of \$40.00 annually, or \$3.33 per month. After October 22, 2020, customers will no longer be added to this Fixed Service Charge Discount program. The Company has a residential customer assistance program for its low-income customers who are having difficulty paying water and/or wastewater bills issued by the Company.

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable Fixed Service Charges and Flat Rate Service Charges shall be prorated to the date of establishment or discontinuance of service.

Deleted: Effective:
November 1, 2020 ¶

Deleted: Issued: October 30,
2020 ¶
By: Cheryl Norton, President ¶
One Water Street, Camden,
NJ 08102 ¶
Filed pursuant to Order of the
Board of Public Utilities
entered in ¶
Docket No. WR19121516
dated October 28, 2020.

² The Fixed Service Charge will increase by 3% on 10/23/2022, 10/23/2023 and 10/23/2024 by the terms of the Agreement of Sale between Long Hill Township and New Jersey-American Water Company, Inc.

³ See footnote 2. The Flat Rate Usage Charge will also increase by 3% on the dates indicated.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

[First Revised Sheet: No. 61](#)
[Superseding](#) Original Sheet: No. 61

RATE SCHEDULE 15-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers in Long Hill Township who receive volume-based water service billings from NJAWC. The charge for wastewater service shall consist of the total of the Fixed Service Charge and the Sewer Usage Charge.

AVAILABILITY OF SERVICE

As the Company has implemented a voluntary sewer connection ban due to excess wastewater flow, all requests for new sewer connections to the Long Hill Township wastewater system will be granted at the sole discretion of the Company.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE⁴

All wastewater service customers shall pay a Fixed Service Charge in addition to the Sewer Usage Charge, as indicated below. If a wastewater customer has multiple connections to a single property, only one Fixed Service Charge shall be applied to the wastewater customer.

	RATE PER MONTH Effective 10/23/2022	RATE PER MONTH Effective 10/23/2023	RATE PER MONTH Effective 10/23/2024
Non-Exempt, per unit	\$15.02	\$15.47	\$15.93

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SEWER USAGE CHARGE⁵

The volume of wastewater used for monthly billing purposes shall be calculated by taking the total water metered (Actual Usage) for the six (6) winter months (January through March and October through December) from the preceding billing year, and dividing that Actual Usage by twelve (12).

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If the meter is not read or incorrectly read for one or more months of the Actual Usage period as determined by the Company, the amount charged for those months shall be equal to the approximate average monthly usage among other billable months during the same period.

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Volumetric Charges

	Gallons Per Month	Rate Per 100 Gallons	Rate Per 1,000 Gallons
Non-Exempt Effective 10/23/2022	All	\$1.88180	\$18.8180
Non-Exempt Effective 10/23/2023		\$1.93830	\$19.3830
Non-Exempt Effective 10/23/2024		\$1.99640	\$19.9640

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FIXED SERVICE CHARGE DISCOUNT – RESIDENTIAL WASTEWATER CUSTOMERS

Residential wastewater customers of Long Hill Township enrolled in the Township's Senior Discount Program as of October 22, 2020, shall receive a Fixed Service Charge discount of \$40.00 annually, or \$3.33 per month. After October 22, 2020, customers will no longer be added to this Fixed Service Charge Discount program. The Company has a residential customer assistance program for its low-income customers who are having difficulty paying water and/or wastewater bills issued by the Company.

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable Fixed Service Charges shall be prorated to the date of establishment or discontinuance of service.

Deleted: Effective:
November 1, 2020 ¶

Deleted: Issued: October 30, 2020 ¶
¶
By: Cheryl Norton, President ¶
One Water Street, Camden,
NJ 08102 ¶
Filed pursuant to Order of the
Board of Public Utilities
entered in ¶
Docket No. WR19121516
dated October 28, 2020.

⁴ The Fixed Service Charge rate will increase by 3% on 10/23/2023 and 10/23/2024 by the terms of the Agreement of Sale between Long Hill Township and New Jersey-American Water Company, Inc.

⁵ See footnote 4. The Sewer Usage Charge will also increase by 3% on the dates indicated.

Issued: January 14, 2022

Effective:

By: [Mark McDonough, President](#)

[1 Water Street, Camden, NJ 08102](#)

[Filed pursuant to Order of the Board of Public Utilities entered in](#)
[Docket No. WR2201](#) dated _____.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Original Sheet: No. 62

RATE SCHEDULE 16-A
GENERAL FLAT RATE SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers in Service Area 1G who do not receive volume-based water service billings from NJAWC. The Company may require a water meter to be installed by any wastewater customer utilizing a well or other private water system at the property owner's expense.

CHARACTER OF SERVICE

Continuous (unmetered), except as limited by the "Standard Terms and Conditions."

FLAT RATE SERVICE CHARGE – WASTEWATER

All wastewater service customers shall pay a Flat Rate Service Charge as indicated below.

RATE PER MONTH

Non-Exempt \$58.33

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable Flat Rate Service Charges shall be prorated to the date of establishment or discontinuance of service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated _____.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Original Sheet: No. 63

RATE SCHEDULE 17-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers in Service Area 1G who receive volume-based water service billings from NJAWC.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All wastewater service customers shall pay a Fixed Service Charge in addition to the Sewer Usage Charge, as indicated below.

<u>Size of Meter</u>	<u>Rate Per Month</u>
<u>5/8"</u>	<u>\$10.83</u>
<u>3/4"</u>	<u>10.83</u>
<u>1"</u>	<u>10.83</u>
<u>1 1/2"</u>	<u>21.67</u>
<u>2"</u>	<u>21.67</u>
<u>3"</u>	<u>21.67</u>
<u>4"</u>	<u>21.67</u>

SEWER USAGE CHARGE

The volume of wastewater use is assumed to equal water meter registration.

Volumetric Charges

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
<u>Non-Exempt</u>	<u>All</u>	<u>\$0.7500</u>	<u>\$7.5000</u>

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable Fixed Service Charges shall be prorated to the date of establishment or discontinuance of service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President

1 Water Street, Camden, NJ 08102

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Docket No. WR2201 dated _____.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Original Sheet: No. 64

RATE SCHEDULE 18-A
GENERAL FLAT RATE SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers in the Borough of Bound Brook who do not receive volume-based water service billings from NJAWC. The Company may require a water meter to be installed by any wastewater customer utilizing a well or other private water system at the property owner's expense.

CHARACTER OF SERVICE

Continuous (unmetered), except as limited by the "Standard Terms and Conditions."

FLAT RATE SERVICE CHARGE – WASTEWATER

All wastewater service customers shall pay a Flat Rate Service Charge as indicated below.

RATE PER MONTH

Non-Exempt \$39.58

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable Flat Rate Service Charges shall be prorated to the date of establishment or discontinuance of service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201 dated _____.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Original Sheet: No. 65

RATE SCHEDULE 19-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers in the Borough of Bound Brook who receive volume-based water service billings from NJAWC.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All wastewater service customers shall pay a Fixed Service Charge in addition to the Sewer Usage Charge, as indicated below.

	<u>RATE PER MONTH</u>
<u>Non-Exempt</u>	<u>\$5.00</u>

SEWER USAGE CHARGE

The volume of wastewater use is assumed to equal water meter registration.

Volumetric Charges

	<u>Gallons</u>	<u>Rate</u>	<u>Rate</u>
	<u>Per Month</u>	<u>Per 100 Gallons</u>	<u>Per 1,000 Gallons</u>
<u>Non-Exempt</u>	<u>All</u>	<u>\$0.64000</u>	<u>\$6.4000</u>

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable Fixed Service Charges shall be prorated to the date of establishment or discontinuance of service.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 - Water and Wastewater

NEW JERSEY-AMERICAN WATER COMPANY, INC.

TARIFF FOR WATER AND WASTEWATER SERVICE

By: Mark McDonough, President
1 Water Street, Camden, New Jersey 08102

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One Water Street, Camden, NJ 08102
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AN INTRODUCTION TO CUSTOMERS

The approved tariff located in the Company's office at 1 Water Street, Camden, NJ, and on its website at <https://www.amwater.com/njaw/customer-service-billing/your-water-and-wastewater-rates>, is available for your review. The Company is obligated to keep its tariff current, including any changes approved by the Board of Public Utilities. The Company is required to maintain it in exactly the same format as the Company's tariff on file at the Board of Public Utilities, 44 South Clinton Avenue, 9th Floor, Trenton, NJ.

The Company's Customer Service personnel can be reached at 1-800-272-1325 for assistance. If, after you review this tariff and discuss it with appropriate Company employees, you still have questions regarding clarification or interpretations, please contact the Board of Public Utilities, Division of Water at 1-609-633-9800 or the Board's Division of Customer Assistance at 1-800-624-0241, or at www.nj.gov/bpu/.

You have the right to review this tariff at the Company's offices or at the Board's office in Trenton. Your inquiries will be handled by the Board's Staff in an expeditious manner in order to protect your rights as well as those of the water and/or wastewater Company. Please feel free to exercise this right by telephone or by visiting the Board's offices at any time between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, or by writing a letter. The letter should contain the writer's name, address and phone number, including the area code. If the writer is a customer of record, the account number should be included.

The Company also has available in its office a leaflet entitled "The Utility Customer's Bill of Rights." This is a summary document; it does not include all customer rights or utility obligations.

New Jersey-American Water hereby adopts the rules and regulations promulgated by the Board of Public Utilities of the State of New Jersey, some of which are referenced herein, and all of which are herein adopted and incorporated by reference. New Jersey-American Water provides water and wastewater service to various municipalities, all in the State of New Jersey.

The Board of Public Utilities is responsible for the final interpretation and enforcement of a utility's tariff provisions and rates. The utility is bound by New Jersey's statutes and the Board's regulations. If a conflict should exist in the tariff that is detrimental to the customer, the Board's regulations supersede the tariff provision absent specific approval to the contrary by the NJ Board of Public Utilities. A utility company may provide for more liberal treatment than that provided for in the Board's regulations.

Tariff B.P.U. No. 8 - Water and Wastewater is divided into a water section and a wastewater section, preceded by standard terms and conditions which are universally applicable, standard terms and conditions applicable to water service only, and standard terms and conditions applicable to wastewater service only. Tables of contents for each section precede a series of sequentially numbered and lettered tariff rate schedules. The tables of contents denote the appropriate rate schedule applicability for all classes of service and are an integral part of this tariff.

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DEFINITIONS - WATER

The following are definitions of specific terms that are used in this document:

- 1- "Board" or "BPU" shall mean the New Jersey Board of Public Utilities.
- 2- "Company" or "New Jersey-American Water" shall mean New Jersey-American Water Company, Inc. or, as applicable, any predecessor entity.
- 3- "Connecting line" is the portion of pipe that starts at the curb stop and conveys domestic water and/or fire service to the customer. The customer and/or premises owner owns, and is responsible for the operation and maintenance of the connecting line.
- 4- "Curb stop" is the fitting attached to the service line, and is used primarily for turning on and shutting off water at the curb in emergencies, for purposes of repair or to discontinue service to a customer.
- 5- "Customer" means a person that is an end-user, a customer of record or both, as defined in N.J.A.C. 14:3-1.1. "Customer of Record" means the person that applies for utility service and is identified in the account records of a public utility as the person responsible for payment of the public utility bill. A customer may or may not be an end-user. "End User" means a person who receives, uses, or consumes water or wastewater service. An end user may or may not be a customer of record.
- 6- "DEP" shall mean the New Jersey Department of Environmental Protection.
- 7- "End User" means a person who receives, uses, or consumes water or receives wastewater or fire protection service. An end user may or may not be a customer or a premises owner.
- 8- "Extension" is an addition to the existing system of mains, intended to service more than one customer, either at the time of installation or in the future.
- 9- "Interruptible Service" means service which may be interrupted in the sole discretion of the Company on not less than three (3) hours' notice to the customer by telephone or otherwise.
- 10- "Main" is a pipe or conduit for conveying water or wastewater. A "water main" will exclusively convey water and a "sewer main" will exclusively convey wastewater.
- 11- "Meter" is a device to measure the quantity of water, wastewater and/or the rate of flow delivered to or from a customer.
- 12- "Meter pit" is a structure that houses a small meter or meters less than or equal to 2-inches. Unless agreed to by the Company and the customer, it is installed, furnished and maintained by the Company.
- 13- "Meter vault" is a structure that houses a meter or meters larger than 2-inches. Unless explicitly agreed to by the Company and the customer in writing, it is located and designed by the Company, and constructed, installed, furnished and maintained by the Customer at the sole expense to the customer. The Company will ensure that the vault is kept clear of any of its equipment that is no longer in service, to the extent possible.
- 14- "Person" means an individual, firm, joint venture, partnership, co-partnership, corporation, association, State, county, municipality, public agency or authority, bi-state or interstate agency or authority, public utility, regulated entity, cable television company, cooperation association, or joint stock association, trust, limited liability company, governmental entity, or other legal entity, and includes any trustee, receiver, assignee, or personal representative thereof. (N.J.A.C. 14:3-1.1)
- 15- "Premises" is defined as follows:
 - a) A building under one-roof, owned or leased by one customer and occupied as one place of business or residence.
 - b) A combination of buildings, owned or leased by one customer in one common enclosure, occupied by one family or business.
 - c) A combination of buildings, such as a garden type apartment, owned or leased by one customer, in one common enclosure, none of the individual buildings of which is adapted to separate ownership.

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DEFINITIONS – WATER (Continued)

- d) The one side of a double house having a solid vertical partition wall, so that it may be adapted to separate ownership.
 - e) A building owned or leased by one person, of more than one apartment and using in common one hall and one entrance.
 - f) A building owned or leased by one person, having a number of apartments or offices, and using a common one hall and one or more means of entrance.
 - g) A public building or a single plot such as a park or a playground.
 - h) A building or combination of buildings owned by one customer or entity located on contiguous property not intersected or intervened by another customer or entity.
- 16- "Premises owner" is the party who possesses the exclusive right to hold, use, benefit from, enjoy, convey, transfer, and otherwise dispose of the property. A premises owner may or may not be the customer of record or end-user, as defined in N.J.A.C. 14:3-1.1.
- 17- "PWAC" or "Purchased water adjustment clause" is a provision that authorizes a utility to adjust its rates to compensate for an increase or decrease in the cost of water purchased from a water purveyor. (N.J.A.C. 14:9-7.2)
- 18- "PWAC Year" shall mean the twelve-month period beginning each April 1 and ending March 31 of the following calendar year.
- 19- "Residential customer" means a customer who receives service from a regulated entity for use in a residence. (N.J.A.C. 14:3-1.1)
- 20- "Sales for Resale Customer" means a municipal water system, a Municipal Utilities Authority, a County Utilities Authority, a Water Supply Authority, district or commission or a water utility regulated by the Board.
- 21- "Service line" is the portion of pipe that starts from a main and ends at the curb stop. The service line is owned, operated and maintained by the Company. (N.J.A.C. 14:3-8)
- 22- "Tap" is the fitting inserted in the main to which the service line is attached. It is used to facilitate the tapping of the main and for shutting off water in case of repairs to the service line.
- 23- "Tariff," as referred to herein, is the entire "Tariff for Water and Wastewater Service" as the same may be amended or revised from time to time in accordance with N.J.A.C. 14:3-1.3, Tariffs.
- 24- "Uncollectible Adjustment Clause" or "UAC" is a provision that authorizes a utility to adjust its rates to compensate for an increase or decrease in uncollectible expense.
- 25- "Water connection" includes all service line, taps and curb stops necessary to supply customers with water at their premises from the Company's water mains.
- 26- "Water service" is the act of providing water to a customer.

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DEFINITIONS - WASTEWATER

The following are definitions of specific terms that used hereafter in the tariff. Additional definitions are set forth in the Definitions section of the tariff for water and wastewater service.

- 1- "New Account" as herein used shall be defined as an account opened as the result of the construction of a new building.
- 2- "Building Drain" shall mean that part of the lowest horizontal piping of a drainage system which receives the discharge from drainage pipes inside the walls of the building terminating five (5) feet outside the face of the building wall from whence it becomes known as the building sewer.
- 3- "Building Sewer" shall mean the extension from the building drain to service lateral line and/or other point of connection to the Company wastewater collection system.
- 4- "Biochemical Oxygen Demand", denoted hereinafter as "B.O.D.", shall mean the quantity of oxygen utilized (demanded) in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days when incubated at 20°C.
- 5- "Suspended Solids" shall mean solids that either float on the surface of or are carried in suspension in water, wastewater or industrial wastes, and which are removable by laboratory filtering.
- 6- "pH" shall mean the logarithm to the base ten of the reciprocal of the weight of hydrogen ions in moles per liter of solution.
- 7- "Garbage" shall mean solid wastes from domestic and commercial preparation, cooking, dispensing or marketing of food or food products and from the handling, storage and sale of produce.
- 8- "Properly Shredded Garbage" shall mean garbage that has been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in the sewerage system with no particle greater than one-half inch (1/2") in any dimension.
- 9- "PSTAC" or "Purchased wastewater treatment adjustment clause" is a provision that authorizes a utility to adjust its rates to compensate for an increase or decrease in the cost of wastewater treatment purchased from a wastewater treatment purveyor. (N.J.A.C. 14:9-7.2)
- 10- "PSTAC Year" shall mean the twelve-month period beginning each April 1 and ending March 31 of the following calendar year.
- 11- "Slug" shall mean the discharge of water, sewerage, or industrial waste which in concentration of any constituent or in quantity of flow exceeds for any period of duration longer than fifteen (15) minutes more than five (5) times the average twenty-four hour flow or concentration under normal operating conditions.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water and Wastewater

Sixth Revised Sheet: No. 6
Superseding Fifth Revised Sheet: No. 6

AN OVERVIEW OF CUSTOMER RIGHTS

- (1) No public utility shall refuse to furnish or supply service to a qualified applicant. N.J.A.C. 14:3-3.1
- (2) The utility shall not place the name of a second individual on the account of a residential customer unless specifically requested by said second individual. (N.J.A.C. 14:3-3.2(b))
- (3) A customer has the right to have any complaint against the utility handled promptly by that utility. (Board Order, Docket No. CO8602155)
- (4) Each utility shall, upon request, furnish its customers with such information as is reasonable in order that the customers may obtain safe, adequate and proper service. N.J.A.C. 14:3-3.3(a)) Each utility shall inform its customers, where peculiar or unusual circumstances prevail, as to the conditions under which sufficient and satisfactory service may be secured from its system. (N.J.A.C. 14:3-3.3(c)) Each utility shall supply its customers with information on the furnishing and performance of service in a manner that tends to conserve energy resources and preserve the quality of the environment. N.J.A.C. 14:3-3.3(d)

GENERAL RULES

- 1- The Company will endeavor to provide a regular and uninterrupted supply of water through its facilities. However, if service shall be interrupted, irregular, or defective, or fail because of breakdown or emergency, the Company will not be liable for damage, inconvenience or lost income resulting there from.
- 2- A customer's responsibility to pay for service continues from the time service is commenced, pursuant to his/her application, until written notice is received by the Company of a change of ownership or occupancy of the premises or written notice is received by the Company to discontinue the applicable service. Upon receipt of such notice, the Company will arrange for a final meter reading and billing. No allowance will be made in case of non-occupancy, unless the Company is notified in writing as stated above.
- 3- The Company does not undertake to render any special service or maintain any fixed pressure. In the event of an accident or for other reasons, the Company may shut off the water in its mains and pipes and may restrict the use of water whenever the public welfare may require it. All customers requiring an uninterrupted supply or a uniform pressure of water for any purpose, such as steam boilers, are cautioned to provide their own means of providing such special uninterrupted service. When the supply is to be interrupted or curtailed, the Company will endeavor to give notice.
- 4- The Company does not undertake to supply any uniform quality of water for special purposes, such as laboratories, manufacturing or processing plants, swimming pools, bleaching or dyeing plants, or laundries. Customers requiring water of special quality, or water free from discoloration or turbidity, are required to provide their own means of treating water, or provide such other protection as may be deemed necessary for the purpose required.
- 5- The location of meters and the arrangement of the fittings and piping are subject to inspection and approval of the Company and should meet Company's requirements presented herein.
- 6- Neither by inspection approval nor failure to approve, nor in any other way, does the Company give any guarantee, or assume any responsibility, expressed or implied, as to the adequacy, safety or characteristics of any structures, equipment, pipes, appliances or devices owned, installed or maintained by the customer or leased by the customer from third parties.
- 7- The Company will not be liable for any loss, injury, casualty, or damage resulting from the supply or use of water service, or from the presence or operation of the Company's structures, equipment, pipes, appliances or devices on the customer's premises.
- 8- No unauthorized person is permitted to turn the water on or off at any street valve, corporation stop, curb stop, or other street connection, or disconnect or remove any meter without the consent of the Company.
- 9- No agent or employee of the Company shall have authority to bind it, by any promise, agreement, or representation not provided in this tariff, or in any way inconsistent therewith.

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GENERAL RULES (Continued)

- 10- Exempt rates are charged for service rendered to those customers entitled to statutory relief pursuant to N.J.S.A. 54:30A-50, et seq.
- 11- The quantity of water recorded by the meter shall be taken to be the amount delivered to the customer, except where the meter has been found to be registering fast by more than one and one-half percent (1.5%) or has ceased to register.
- 12- All service provided by the Company except public fire protection shall be metered. Thus, no unmetered water service connections are permitted except as otherwise set forth herein or approved by the Company.
- 13- The Company shall own and provide without charge for each customer supplied on a measured basis, a meter and such appurtenances related to the meter as are customarily furnished by the Company, such as encoders, radio transmitters, meter pits (but not meter vaults), or other devices designed to facilitate the collection of accurate and efficient meter reads.
- 14- The Company requires that all meters be housed inside meter pits (for meters that are less than or equal to 2-inches) or meter vaults (for meters that are larger than 2-inches). Where more than one service type exists (domestic, private fire protection or irrigation) all meters shall be housed inside a meter vault if any one meter is greater than two inches. The Customer is responsible for the installation and maintenance of meter vaults. All meter pits and meter vaults will be located outside of the Customer's structure in a location acceptable to the express approval of the Water Company. Notwithstanding the foregoing, the Company may grant an exception to this rule on a case by case basis at the Company's discretion.
- 15- The Company maintains and repairs meters except in case of misuse or damage by the customer or the customer's invitees, agents, representatives or contractors, in which case the Company shall charge the customer for repairing and replacing the meter, said charge to be based on the costs related to the removing, repairing, replacing and/or resetting the meter. The charge will be made in accordance with Rate Schedule P-2.
- 16- Where more than one rate schedule is available to particular customers, the utility shall have at all times the duty to assist such customers in the selection of the rate schedule most favorable for their individual requirements and to make every reasonable effort to insure that such customers are served under the most advantageous schedule.
- 17- Upon the request of a customer, the Company shall send a Spanish language version of the notice of discontinuance for nonpayment. N.J.A.C. 14:3-3A.3(e)
- 18- The Company reserves the right to require any customer having unusual requirements of demand, services or supply to enter into a special written contract, which contract shall provide for the mutual obligations of the customer and Company. Special contracts will be filed with the Board.
- 19- In case of fraud, deception, illegal use, or when it is clearly indicated that the customer is preparing to leave, the Company may demand immediate payment of accounts and terminate service without further notice.
- 20- The Company reserves the right to change, take from or add to this tariff and the Standard Terms and Conditions, to the extent permitted by law, or permitted by the applicable regulations of the state regulatory body having jurisdiction.
- 21- For all materials furnished or services rendered to any governmental agency or unit of the United States, New Jersey, or sub-unit thereof, that is not covered by any other tariff provision or rate schedule, and which pertain to hydrants, meters or situations involving emergencies, the charges will be 10% more than the total of the following applicable items:
 - (a) Equipment and materials: actual costs;
 - (b) Labor charges: actual costs (including base plus fringe); and,
 - (c) Other charges: actual costs (such as permits, police protection, contractor labor, restoration, etc.).

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STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

DEPOSITS

1. If after notice of the methods of establishing credit and being afforded an opportunity, a customer has not established satisfactory credit, the utility may require a deposit. The deposit amount shall be determined in accordance with N.J.A.C. 14:3-3.4.
2. The utility must furnish a receipt to any customer posting a deposit. The deposit will be returned with simple interest at a rate established annually by the Board of Public Utilities. Once the customer has established satisfactory credit with the utility, the deposit shall be returned to the customer with interest due. The customer has the option of receiving the deposit refund either by a check or a credit on the account. If a residential customer's deposit is not returned, the utility shall credit the customer's account with the accrued interest once every twelve months, in accordance with N.J.A.C. 14:3-3.5.
3. Where a water or wastewater utility furnishes unmetered service, for which payment is received in advance, it may not require a deposit. N.J.A.C. 14:3-3.4(j)
4. The Company shall review a residential customer's account at least once every year and a nonresidential customer's account at least once every two years to determine whether the customer has established credit satisfactory to the Company. If this review indicates that the customer has met the utility's standard requirements for establishing credit, the utility shall refund the customer's deposit. N.J.A.C. 14:3-3.5, Return of deposits, interest on deposits.
5. If the deposit has remained with the Company for at least three months, without default, it will be returned to the customer with simple interest on an annual basis at a rate established annually by the Board of Public Utilities. Deposits shall cease to bear interest upon the discontinuance of service.

FORM OF BILL FOR METERED SERVICE

6. All bills will be computed in accordance with the rates of the Company as shown in this Tariff, and as the same may be amended or revised from time to time. Rates are subject to such changes as the state regulatory body having jurisdiction may require, authorize or allow.
7. A customer has fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted to pay a bill. A water and/or wastewater company may not discontinue water or wastewater service unless it has provided written notice giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. This written notice shall be sent by first class mail, apart from the bill and as a separate mailing. (N.J.A.C. 14:3-3A.3 (c)) The notice shall not be given until after the expiration of the said fifteen (15) day time to pay a bill. (N.J.A.C. 14:3-3A.3(b)) The notice shall contain sufficient information for the customer to notify the Board of Public Utilities of the nature of the dispute. The utility shall make a good faith effort to determine which of its residential customers are over 65 years of age, and shall make good faith efforts to notify such customers of discontinuance of service by telephone in addition to notice by regular mail. This effort may consist of an appropriate inquiry set forth on the notice informing customers that they may designate a third party to receive notice of discontinuance.
8. Bills rendered must contain the following information: (a) the meter readings at the beginning and end of the billing period; (b) the dates on which the meter is read; (c) the number and kind of units measured; (d) identification of applicable rate schedule or statement that the applicable rate schedule will be furnished upon request; (e) the amount of the bill; (f) a distinctive marking to indicate an estimated, averaged, or remote meter index and web address and telephone number where the customer can obtain a description of the method used; (g) an explanation or statement of any conversion from meter reading to billing units or any other calculations or factors used in determining the bill; and (h) the gross receipts and franchise tax statement. N.J.A.C. 14:3-7.2

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STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

FORM OF BILL FOR METERED SERVICE (Continued)

9. Estimated Billing. If for any reason a utility cannot read a customer's meter, the utility may use estimated billing in accordance with N.J.A.C. 14:3-7.2(c). Customers may request a special reading for a meter where a high bill or other reason exists to believe the meter reading used for billing purposes is in error. Rules concerning estimated bills for residential customers are as follows:
- a. The Company shall maintain a regular meter reading schedule and make a reasonable effort to read all meters.
 - b. The Company, upon request, must make available to all customers a postage-paid business reply card on which the customer may mark the meter reading. Said card shall have appropriate explanation. The utility must permit the customer to telephone the meter reading to the utility. The customer reading is to be used in lieu of an estimated reading, provided the reading is received in time for billing.
 - c. When the Company estimates an account for four consecutive billing periods (monthly accounts), or two consecutive billing periods (bi-monthly and quarterly accounts), the Company must initiate a program to mail a notice marked "Important Notice" to the customer on the fifth and seventh months explaining that a meter reading must be obtained and said notice must explain the penalty for failure to complete an actual meter reading. After all reasonable means to obtain a meter reading have been exhausted, the Company may discontinue service provided at least eight months have passed since the last meter reading was obtained, the Board of Public Utilities has been so notified, and the customer has been properly notified by prior mailing. If service is discontinued and subsequently restored, the utility may charge a reconnection charge equal to the reconnection charge for restoring service after discontinuance for non-payment. The reconnection charge shall become due when service is restored, whether the Company or an authorized professional physically restores service. Unauthorized reconnections shall be considered theft of service. Unauthorized reconnections by a customer no longer in arrears, shall be considered tampering with utility facilities.
 - d. The Company must submit to the Board of Public Utilities a statement detailing their estimating procedures.
 - e. An estimated bill must be clearly designated as such.
 - f. If low estimates result in a customer receiving an actual bill that is at least twenty five percent (25%) greater than the prior estimated bill, the Company shall allow the customer to amortize the excess amount. The amortization will be in equal installments over a period of time equal to the period when no actual meter reading was taken by the customer or the Company. (7) Annually, the Company shall notify all customers of their rights to amortize as set forth in N.J.A.C. 14:3-7.2.

BUDGET BILLING

10. The Company will make available to residential customers whose accounts do not reflect past-due balances the option to pay their bills on a monthly, budgeted basis. The budget billing plan year will be a twelve (12)-month time frame and allows a customer to pay a predetermined monthly amount, based upon the customer's average usage. If a customer is a new customer with little or no prior history of utility use, the monthly budget amount shall be determined using a reasonable estimate of likely usage. The budget billing plan will be made available to eligible customers by bill insert or bill message at least twice in each twelve (12)-month period.

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STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

BUDGET BILLING (Continued)

11. The Company will “true up” the actual cost of service rendered as determined by actual meter readings and the actual monthly budgeted amount at the beginning of the budget plan year, and at least once during the budget plan year if the true-up performed during the customer’s budget plan year reveals an increase or decrease of twenty-five (25) percent or more in the monthly budget amount, the Company will adjust the budget billing plan up or down, if necessary. There shall be no more than one such adjustment during the budget plan year. The Company will notify the customer of any change in the budget billing amount prior to such change.
12. A final bill for the budget plan year shall be issued in the last month of the budget plan year, and shall contain the month’s monthly budget amount, plus an adjustment of any difference between said amount and the actual cost of service rendered during the budget plan year. Payment of this final balance due is required before the customer will be allowed to participate in the budget billing program for the upcoming budget billing plan year.
13. The Company shall notify the budget billing plan customers in writing of a revised monthly budget amount at least ten (10) working days before the due date the initial bill of the next budget plan year. Should the customer opt out of the budget billing plan, payment of the total charges incurred to date will be due immediately, or, in the alternative, agree to enter into a deferred payment agreement according to N.J.A.C. 14:3-7.7; or a credit will be applied to the account, whichever is applicable. The plan bill shall contain the information required by N.J.A.C. 14:3-7.2, Form of Bill for Metered Service, N.J.A.C. 14:3-7.3 Form of Bill for Unmetered Service, and N.J.A.C. 14:3-7.4, Method of Billing.
14. Should the customer breach the terms of the budget billing plan by failing to make the monthly payments as required under the plan or by having a budget billing plan payment returned due to insufficient funds, the Company reserves the right to terminate the customer’s participation from the program; payment of total charges incurred to date will be due immediately, or, in the alternative, the Company and the customer will agree to enter into a deferred payment agreement according to N.J.A.C. 14:3-7.7.

FINANCIAL AID

15. The Company understands that from time to time its customers may have difficulty paying their water and/or wastewater bills issued by the Company. If at any time customers find that they cannot pay their water and/or wastewater bill by the due date, the Company requests that the customers contact the Company’s Customer Service Center, prior to the due date, to work out a payment arrangement with the Company to avoid a shut-off of service, at 1-800-652-6987.
16. In addition to working out payment arrangements with customers in times of financial difficulty, the Company has also established a residential customer assistance program for its low-income customers who are having difficulty paying their water and/or wastewater bills issued by the Company. This residential customer assistance program, called the H2O Help to Others Assistance Program, is designed to provide financial assistance to qualified residential customers to pay their water and/or wastewater bills and protect them from an unnecessary discontinuance of their water and/or wastewater service. A grant from the H2O Help to Others Assistance Program may be awarded to cover a portion or all of the residential customer’s outstanding bill based on the customer’s ability to pay, income level and the availability of funds in the program. For more information about this program, please contact NJ Shares at 1-877-652-9426 or any subsequent program administrator whose contact information may be found on the Company’s web site.

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STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

FINANCIAL AID (Continued)

17. The Company established a second residential customer assistance program for customers with a total annual income at or below 300% of the Federal Poverty guidelines called the H2O Help to Others Low Income Payment Program ("LIPP") or Discount Program. Through this program, the Company will provide a discount off of the customer's monthly bill. The actual H2O LIPP discount is set equal to the customer's applicable water Fixed Service Charge (not greater than a 1" meter charge). If the customer is also provided wastewater service by the Company, the customer is also eligible for a wastewater service discount equal to the water service discount amount, in an amount not to exceed the wastewater service charge. Residential customers who need help and qualify for the H2O LIPP should call the NJ Shares toll free number at 1-877-652-9426 or any subsequent program administrator whose contact information may be found on the Company's web site. Upon acceptance into the LIPP, residential customers who receive Social Security benefits or Medicare coverage can qualify for a credit equal to the current DSIC surcharge rate per Rate Schedule K on their monthly bill (not greater than the current 1" DSIC surcharge).
18. Upon acceptance into the LIPP, qualifying residential customers will be offered the opportunity to enroll in the Company's Conservation Program. Conservation Program offerings are free of charge to residential customers enrolled in the LIPP and can include instructions on performing a home water audit, a retrofit kit for use with certain appliances and fixtures, and a leak repair of fixtures for which the customer is responsible (value up to \$300).

DEFERRED PAYMENT ARRANGEMENTS

19. A customer is entitled to at least one deferred payment plan in one year. In the case of a residential customer who receives more than one utility service from the same utility (ex: water and wastewater; gas and electric) and the amount which is in arrears is a combination of those services, the utility shall offer a separate deferred payment agreement for each service based on the outstanding balance for that service. (N.J.A.C. 14:3-7.7(b)2) The Company must renegotiate the deferred payment agreement should the customer document a significant change in financial situation. The Company must also issue a new discontinuance notice each time it intends to shut off service, including defaults on the terms of the agreement. In the case of a residential customer who receives more than one utility service from the same utility and has subsequently entered into an agreement for each separate service, default on one such payment agreement shall constitute grounds for discontinuance of only that service. N.J.A.C. 14:3-7.7(f)

DISCONTINUANCE OF SERVICE

20. A water and wastewater utility shall not discontinue service because of nonpayment of bills in cases where a charge is in dispute provided the undisputed charges are paid (N.J.A.C. 14:3-3A.2(e)5) and a request is made to the Board within five (5) days for investigation of the disputed charge. The Company must advise the customer of their right to appeal to the Board of Public Utilities. N.J.A.C. 14:3-7.6(b)
21. Basis for Discontinuance of Service. The Company shall have the right to suspend or curtail or discontinue service for any of the following reasons (N.J.A.C. 14:3-3A.1(a)):
- a. For the purpose of making permanent or temporary repairs, changes or improvement in any part of its system;
 - b. For compliance in good faith with any governmental order or directive, regardless of whether such order or directive subsequently may be held to be invalid;
 - c. For non-payment of a valid bill due for service furnished at a present or previous location, in accordance with N.J.A.C. 14:3-3A.2. However, non-payment for business service shall not be a reason for discontinuance of residence service except in cases of diversion of service pursuant to N.J.A.C. 14:3-7.8;

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WATER AND WASTEWATER

DISCONTINUANCE OF SERVICE (Continued)

- d. For nonpayment of a deposit, in accordance with N.J.A.C. 14: 3-3A.9;
- e. For any of the following acts or omissions on the part of the customer:
 - (i) Refusal of reasonable access to the customer's premises in accordance with N.J.A.C. 14:3-3.6;
 - (ii) tampering with any facility of the Company;
 - (iii) fraudulent representation in relation to the use of service;
 - (iv) customer moving from the premises, unless the customer requests that service be continued;
 - (v) providing service to others without approval of the Company;
 - (vi) refusal to contract for service where such contract is required;
 - (vii) connecting and operating equipment in such manner as to produce disturbing effects on the service of the Company or other customers;
 - (viii) failure of the customer to comply with reasonable Standard Terms and Conditions;
 - (ix) where the condition of the customer's installation presents a hazard to life or property; or
 - (x) failure of a customer to repair any faulty facility of the customer.
- 22. Public Utilities shall not discontinue residential service except between the hours of 8:00 a.m. and 4:00 p.m. Monday through Thursday unless there is a safety-related emergency. There shall be no involuntary discontinuance of service on Fridays, Saturdays or Sundays or on the day before a New Jersey State holiday or on a New Jersey State holiday, absent such emergency. N.J.A.C. 14:3-3A.1(c)
- 23. Should a customer be more than 15 days delinquent in paying the monthly bill for service, or violate one or more of the standard terms and conditions of service contained in this or subsequent tariffs of the Company, the Company may discontinue service by giving 10 days' written notice of disconnection to the customer and, for wastewater service, a copy of such notice to the local Board of Health.
- 24. Notices herein of discontinuance of service shall be sent by first class mail, apart from the bill and as a separate mailing. (N.J.A.C. 14:3-3A.3(b)2) Customers are advised that it is illegal to operate a dwelling without adequately functioning wastewater facilities, and that the Company is required to notify local health authorities of wastewater service termination.
- 25. Medical Emergency. Notwithstanding the following, at the end of the period of medical emergency the customer remains liable to the Company for the charges for services rendered during the period of non-discontinuance, subject to the provisions of N.J.A.C. 14:3-7.6. (N.J.A.C. 14:3-3A.2(i)). Residential service may not be discontinued for non-payment for a period of 90 days if a medical emergency exists within the premises and which would be aggravated by the shut off so long as the customer provides the Company with reasonable proof of his or her inability to pay and a licensed medical professional's written statement as to the existence of the emergency, its nature and probable duration, and how the termination of service will aggravate the medical emergency. This period of non-discontinuance may be extended as set forth in N.J.A.C. 14:3-3A.2(j). The Company reserves the right to contest the validity of any claimed medical emergency before the BPU.
- 26. Utilities shall annually notify all residential customers that, upon request, notice of discontinuance of service will be sent to a designated third party as well as to the customer of record. This provision shall not apply if Company makes a good faith effort to contact all residential customers by telephone prior to discontinuance and file with the Board a statement setting forth such procedure. N.J.A.C. 14:3-3A.4)

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STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

DISCONTINUANCE OF SERVICE (Continued)

27. The Company shall make every reasonable attempt to determine when a landlord-tenant relationship is known to exist, and if the tenants are not the customers of record but are end-users, as these terms are defined at N.J.A.C. 14:3-1.1. Discontinuance of service is prohibited unless the utility has given a 15-day written notice to the owner of the premises or to the customer of record to whom the last preceding bill was rendered. The utility shall use its best efforts to determine the names and addresses of each tenant, in order to provide such notice, for example, through mailings to landlords requesting a list of tenants. The utility shall use its best efforts to provide copies of the discontinuance notice to all tenants. In addition, the utility shall provide the tenant(s) with a fifteen (15) day written notice, which shall be hand delivered, mailed, or posted in a conspicuous area of the premises and in the common areas of multiple family premises. N.J.A.C. 14:3-3A.6(a) If a utility uses posting as the method of notice, each utility shall use its best efforts to also place a copy of the notice on each tenant's car windshield or under the door of each tenant's dwelling. In the case of tenants of single and two-family dwellings, each tenant shall also be provided with a 15-day individual notice. Each utility shall offer the tenant(s) continued service to be billed to the tenant(s) unless the utility demonstrates that such billing is not feasible. Tenants seeking continuation of service under this provision shall supply the utility with a copy of a valid lease or rental agreement. The continuation of service to a tenant shall not be conditioned upon payment by the tenant of any outstanding bills due upon the account of any other person. The utility shall not be held to the requirements of this provision if the existence of a landlord-tenant relationship could not be reasonably ascertained. N.J.A.C. 14:3-3A.6(b)
28. The utility shall have the right of reasonable access to customer's premises, and to all property furnished by the utility, at all reasonable times for the purpose of inspection of customer's premises incident to the rendering of service, reading meters, or inspecting, testing, or repairing its facilities used in connection with supplying the service, for the discontinuance of service for nonpayment after proper notice, or for the removal of its property. (N.J.A.C. 14:3-3.6(a)) Service can be discontinued for refusal of reasonable access to customer's premises for necessary purposes in connection with rendering of service, including meter and remote reading device installation, reading or testing, or the maintenance or removal of the utility's property. (N.J.A.C. 14:3-3A.1(a)5.i) Reconnection fees as shown on Rate Schedule P-2 and Rate Schedule 9-A will be charged upon restoration of service.
29. It is the responsibility of a customer who wishes to voluntarily discontinue his or her service to notify the Company and request a final reading. A customer wishing to discontinue service shall give notice to the utility. Within 48 hours of said notice, the utility shall discontinue service or obtain a meter reading for the purpose of calculating a final bill. Where such notice is not received by the utility, the customer shall be liable for service until the final reading of the meter is taken. Notice to discontinue service will not relieve a customer from any minimum or guaranteed payment under any contract or rate in accordance with the Standard Terms and Conditions on Sheet Nos. 23 and 24, nor will it mitigate any of the obligations on the Company's General Metered Rate Schedules. In accordance with N.J.A.C. 14:3-3A.1(b).
30. If a customer wishes to have his service physically disconnected, then written notice as set forth within this tariff is required prior to such disconnection provided, however, that nothing herein shall operate to prevent the Company from discontinuing service at any time under conditions and for reasons set forth in this tariff; and provided further, that nothing herein shall be construed to prevent the making of contracts for extension of service or other special conditions.
31. When a customer is physically disconnected (water service) or the service lateral is plugged (wastewater service) for non-payment of a bill for, or violation of the standard terms and conditions of service, the customer will be required to pay, in addition to any outstanding or delinquent amount, the Company's actual cost of reconnection or \$350.00, whichever is more, before service is restored. See Rate Schedules P-2 and 9-A. Wastewater service customers who remove plugs from their service laterals, and water customers who operate the curb stop to restore service after disconnection are tampering with Company property and may be charged with theft of service.

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STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

RESTORATION OF SERVICE

32. Service shall be restored within 12 hours upon proper application when: 1. all of the conditions under which service was discontinued are corrected; and 2. payment of all charges due is received at the utility or at an authorized payment center and the utility has received notice of the payment. Any other provision notwithstanding, the utility shall restore service within 12 hours if there is a complaint involving such matters before the Board and Board staff so directs the utility. N.J.A.C. 14:3-3A.9. See Rate Schedules P-2 and 9-A for restoration of service charges. Restoration of water service performed outside of normal business hours as shown on Rate Schedule P-2 will be subject to the Emergency Reconnection service charge of \$100 as shown on that Rate Schedule P-2.

THEFT OF SERVICE

33. Whenever the Company reconnects service to a customer under the following conditions, a charge will be rendered for providing this service as described in Rate Schedule P-2 or 9-A.
- a. Whenever the Company has determined that a customer's service has been reconnected without the permission of the Company after service has been terminated for non-payment of bills or violation of the Company's tariff, the Company will terminate the customer's service for a second time and give written notice to the customer that if service is reconnected again without the permission of the Company, it will be necessary for the Company to excavate and physically disconnect service. A reconnection charge will be applied as set forth in Rate Schedules P-2 or 9-A of the present tariff.
 - b. Customers in default in the payment of a bill may be required to furnish a deposit or increase their existing deposit in an amount sufficient to secure the payment of future bills. Service shall not be discontinued for failure to make such deposit except after proper notice to the customer. If a customer who has made a deposit fails to pay a bill, the Company may apply such deposit insofar as is necessary to liquidate the bill and may require that the deposit be restored to its original amount. N.J.A.C. 14:3-3.4(f)
34. The Company has certain rights under the law to obtain the cessation of acts constituting theft of service that have been committed in violation of N.J.S.A. 2C:20-8, as well as complete restitution for any losses or damages it has suffered as a result of said acts. Customers who tamper with Company property to illegally restore service after being shut off for nonpayment or any other reason under N.J.A.C. 14:3-3A et seq. may be subject to fees pursuant to Rate Schedule P-2 and Rate Schedule 9-A and responsible for payment of any resulting damages.

LATE PAYMENT CHARGE

35. Should a nonresidential customer fail to make payment as specified under Terms of Payment in the Rate Schedules the Company may, on the twenty-sixth (26th) day, assess a late charge equivalent to 1/12th the prime rate as published in the Money Rates column in *The Wall Street Journal*. Service to state, county or municipal government entities will not be subject to a late payment charge. The charge will be applied to the previous billed amount that is not paid at the time the next monthly bill is prepared. The amount of the late payment charge to be applied to the Customer's account shall be calculated by multiplying the previous unpaid bill amount by the late charge rate. When payment is received by the Company from a Customer who has an unpaid balance which includes charges for late payment, the Customer's payment shall be applied first to the oldest aged unpaid bill amount and its applicable late charge, and then to the next oldest aged bill amount and late charge. Notwithstanding the foregoing shut off provisions in accordance with N.J.A.C. 14:3-3A will still apply to past due accounts.

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STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

METER

36. The utility must provide for one free water meter test during any twelve (12) month period if the customer so requests it. (N.J.A.C. 14:3-4.5) A meter of a customer who has a complaint filed with the Board reflecting on the accuracy of the meter shall not be removed from service by the utility during the pendency of said complaint or during the following thirty (30) days unless otherwise authorized or directed by the Board. (N.J.A.C. 14:3-4.8(c)) When a billing dispute is known to exist, the water utility shall, prior to removing the meter, advise the customer that they may have the meter tested by the utility or may have the Board witness a testing of the meter by the utility, and that in any event the customer may have the test witnessed by a third party. (N.J.A.C. 14:3-4.5(c)) A meter test arising from a billing dispute may be appropriate in instances which include, but not limited to, unexplained increased consumption, crossed meters, consumption while an account is vacant or any other instance where the meter's accuracy might be an issue in a bill dispute. (N.J.A.C. 14:3-4.5 (d)) The customer can apply to the Board for a Board inspector to test the customer's meter. (N.J.A.C. 14:3-4.5(e)) For such a test, a fee, in accordance with N.J.S.A. 48:2-56, shall be paid to the Board by the customer at the time the application is made. N.J.A.C. 14:3-4.5(f)
37. If more than one meter test is made within a twelve (12) month period at the request of the customer and the meter is found to be accurate, the Company shall charge the customer for this meter test at the rate set forth in Rate Schedule P-2 for each additional test. (N.J.A.C. 14:3-4.5). If the meter is found to register fast by more than one and one-half percent (1.5%) of the water passed through the meter at full capacity, the customer will not be charged for the test. N.J.A.C. 14:3-4.6
38. Whenever a water meter is found to be registering fast by more than one and one-half percent, an adjustment of charges shall be made in accordance with the regulations which can be found at N.J.A.C. 14:3-4.6.
39. If a meter is found to be registering less than 100 percent of the service provided, the utility shall not adjust the charges retrospectively or require the customer to repay the amount undercharged, except if: 1) the meter was tampered with; 2) the meter failed to register at all; or 3) the circumstances are such that the customer should reasonably have known that the bill did not reflect the actual usage. In cases where the meter registers zero usage for an entire billing period, and the customer has knowingly taken and received water service, the customer shall be deemed to have reasonable knowledge that the meter may be defective or malfunctioning. If a meter is found to be registering less than 100 percent of the service provided because of theft or tampering, the utility may require immediate payment of the amount the customer was undercharged. In cases of a charge to a customer's account under 2 or 3 above, the customer shall be allowed to amortize the payments for a period of time equal to that period of time during which the customer was undercharged.
40. A water utility must maintain records of customers' accounts for each billing period occurring within a six year period. Such records shall contain all information necessary to permit computation of the bill. N.J.A.C. 14:3-6.1(b)
41. When the meter is not located inside the customer's building but outside in a meter pit, the customer shall not make connections or alterations inside the meter pit. All such connections are to be made outside of the meter pit on the customer's side of the meter. The meter pit or vault shall be installed at a location acceptable to, and with the express approval of, the Company. The Company may install, at the Company's discretion, radio transmitters or other remote meter reading devices on its meters and appurtenances as needed to promote efficient and accurate meter reads. Failure to comply with this requirement will be considered tampering with facilities of the Company and the customer will be subject to charges for repairs to damaged equipment and/or discontinuance of service.
42. When the customer's usage is obtained through an electronic ("encoder") read, that usage shall be deemed actual. No adjustment shall be made for a meter that is found to be registering less than 100 percent except in the case of meter tampering, non-registering meters or in circumstances in which the customer should reasonably have known that the bill did not reflect the actual usage. N.J.A.C. 14:3-4.6(d)

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STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

METER (Continued)

43. A customer having two or more meters (excluding meters for Service to Privately Owned Fire Protection Systems under applicable Rate Schedules set forth in the tariff) on the same premises will be charged at the tariff rate for the quantity of water equivalent to the sum registered on all of the meters on the premises, subject to a facilities charge equal to the sum of the facilities charges for each meter. Private Fire Protection services will be charged separately, in agreement to the present tariff.

APPLICATIONS FOR SERVICE

44. Inquiry for a water or wastewater service connection may be made by mail, telephone (888.237.1333) or via the Company's website at www.amwater.com/njaw, and the Company will provide and submit to the applicant, if necessary, any and all forms required to be filled out and signed by the owner, or their agents, for the premises to be supplied, including the identity of the customer of record before any new connection shall be installed. The application will not be processed until all forms are completed in full and any required supporting documentation is provided. Customers must agree to the terms, conditions and rates for service as set forth in this and subsequent tariffs of the Company.
45. Such inquiry shall be made in a reasonable time before such service is required for new buildings and premises not previously supplied to allow for the installation of service lines and accessories by the Company, as hereinafter defined.
46. Separate inquiry shall be made for each premises and for each type of service requested to be furnished (i.e. consumptive, irrigation, construction, wastewater, etc.)
47. Water connections shall be made by the Company subject to the prior existence of a main that is adequately sized in terms of capacity and pressure required for the specific water connection within a public right of way or water company easement abutting the property or premises to be served except in the case where the location of the connection is proposed to be on the long side of a divided (raised or grass) state highway, in which case the customer will be required to enter into an extension agreement. The acceptance of such inquiries for service shall in no way obligate the Company to extend its distribution mains to abut the property or premises except as hereinafter provided.
48. The connection shall be in accordance with the applicable laws including but not limited to those of the BPU, DEP and all federal, state and local agencies.
49. In areas where the billing for wastewater service is based on the volume of water supplied to the premise by the Company, the Company will provide wastewater service only where the water used on the premises is measured by a water meter, subject to the limitations described within this paragraph, below. Where wastewater service is provided and water used on the premises is not supplied by the Company, then the water so used shall be measured by a meter furnished and installed by the Company at a location approved by the Company subject to the limitations described within this paragraph, below. Said wastewater charges shall be based on the volume of water supplied to the premises and measured by the water meter, unless the Company determines that, due to such issues as adverse ground conditions or due to other such unforeseen circumstances, or as required by other tariff provisions herein, it is impracticable or imprudent to install a water meter at the customer's premises in order to base wastewater service charges on the volume of water supplied to the premises as measured by said meter. In such situations, wastewater service billing will be based upon a flat rate, or a minimum usage as established by the applicable rate schedule within this tariff. In instances where a customer's water comes from a well, the Company will make a reasonable effort to install a meter on said well for purposes of determining wastewater service based on water consumption. However; should conditions in or around the well cause the meter to malfunction 2 times after installation, the Company has the right to remove the meter and to bill wastewater service on a flat rate, or a minimum usage as established by the applicable rate schedule within this tariff.

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STANDARD TERMS AND CONDITIONS
WATER AND WASTEWATER

APPLICATIONS FOR SERVICE (CONTINUED)

50. The Company is not obligated to install more than one service and meter for each property or premises. Furthermore, in those instances where more than one service is requested the Company reserves the right to recapture all costs associated with the additional service(s).
51. Physical connections, such as cross-connections, interconnections, valves, pumps, or similar devices, either permanent or temporary, connecting the pipelines or facilities of the Company with other pipelines or facilities supplied with water from other sources will not be permitted without the express written consent of the Company. Water which has once been drawn from the Company's distribution network and used for any purpose or stored in tanks, is considered an unapproved source of supply.
52. The Company may require a cross-connection protective device on a customer's service, in accordance with N.J.A.C. 7:10-10, which will be purchased and installed at the expense of the customer. The cross-connection device shall be of the type approved by the Company. Inspection and testing at intervals, in accordance to N.J.A.C. 7:10-10, will be performed at the expense of the customer.
53. No device or connection is permitted between pipes carrying water from the mains of the Company and any portion of the plumbing system of the premises, which may under any condition permit back-flow or back-siphonage unless prior written permission has been granted by the Company.
54. Customers requesting a relocation of their service line will be required to pay a fee for the new service line and elimination of the existing service line.
55. Customers requesting a relocation of a Public Fire Hydrant will be required to pay a fee for its relocation.
56. Installation of electronic meter reading devices and other equipment designed to facilitate efficient and accurate meter reads, protect the integrity of the water system and/or quality of the water supplied by the Company may be required from any customer as a condition of service at the discretion of the Company.
57. Water sales to customers or entities using trucks or tanks that require additional attention can affect the Company's daily operations. A surcharge may be applied as listed in Rate Schedule P-1 of the present tariff.
58. A deposit may be required to guarantee payment for water service used for general construction and contracting purposes in an amount equal to the cost of the meter furnished. The deposit, less the cost of repairs to the meter, if any, will be refunded after surrender of the meter and payment of all charges for water supplied through it.

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STANDARD TERMS AND CONDITIONS
WATER

WATER SERVICE AND CONNECTING LINES

Company Side – Service Lines

1. The Company is responsible for the installation and maintenance of the service line.
2. Only employees of the Company or persons duly authorized to do so by the Company are permitted to operate or otherwise access the curb stop.
3. No service line shall be used to supply more than one customer unless authorized in advance by the Company in writing.
4. Where two or more customers are supplied through a single service line, the customers and/or premises owner must provide a suitable location(s) for a separate meter and separate shut-off valve that will be dedicated to each customer. The piping of the building must be so arranged that each customer can be supplied through an independent meter, shut off valve and piping system as may be required by the Company, at the Company's sole discretion. The meter pit or vault shall be installed at a location acceptable to, and with the express approval of, the Company. Failure to comply with this provision may result in termination of service to all accounts serviced by a single connecting line when service to one account must be discontinued for non-payment or failure to otherwise comply with the terms and conditions of service provided for herein. Notice provisions outlined on Sheet No. 13, paragraph 27, will apply.
5. No single building or single group of buildings in one common enclosure and under one ownership shall be supplied by more than one of the same type of service line (i.e., only one domestic line and one fire line).

Customer Side – Connecting Lines

6. Connecting lines are owned, installed, maintained and repaired by the premises owner at the premises owner's sole expense. The connecting line should be maintained in a condition conducive for the Company to perform the services required to serve its customers. If the connecting pipe is not so maintained, any failure of this pipe following the operation of the curb stop by the Company will be the responsibility of the premises owner. While performing its duties, if the Company notices that the connecting pipe or other premises owner-owned and maintained appurtenances appear to be in poor condition, the Company will attempt to notify the premises owner of such, including that the owner may desire to contact a licensed plumber for a professional evaluation and/or repair of the connecting pipe and appurtenances. Failure to repair a leaking connecting line is grounds for termination of water service. N.J.A.C. 14:3-3A.1(a)5.
7. Notwithstanding any other provision of this tariff, the Company may, at its own expense, and with the permission of the customer, replace a customer's connecting line that is i) made of lead pipe, ii) made of pipe lined with lead or iii) made of ferrous-based pipe material capable of retaining lead particles.
 - a. After the Company replaces the customer's connecting line, as described above, the customer will continue to own and be responsible for the connecting line, including maintenance of such line, in accordance with this tariff. The Company will offer the customer a warranty of the workmanship of its installation of the new connecting line for a period of 12 months following the date the customer signs the replacement agreement with the Company, with the Company's liability limited to the cost of repairing or replacing the customer's connecting line during that time. Except for the Company's limited liability under the 12-month workmanship warranty, the Company will not own nor assume any liability or responsibility with respect to the customer connecting line. The customer will agree to release and hold the Company harmless the Company, its contractors and subcontractors from and against all claims, liability and costs resulting from acts and omissions of Company and/or its approved contractors and/or subcontractors in installing the Customer service line pursuant to the replacement agreement.

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One Water Street, Camden, NJ 08102
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STANDARD TERMS AND CONDITIONS
WATER

WATER SERVICE AND CONNECTING LINES

Customer Side – Connecting Lines (continued)

8. Connecting lines should be installed, without sharp bends, at right angles to the line of the street and shall be installed in the trench not less than 3-1/2 feet in depth to avoid damage and possible interruption to service caused by freezing. Other utility service lines shall not be installed in the same trench as the connecting line. No attachment shall be made to the connecting line between the curb stop and the meter except as otherwise authorized by the Company. Unauthorized attachments are grounds for termination of service. N.J.A.C. 14:3-3A.1(a)5.ii
9. Connecting lines should not be less than ¾ inch in inside diameter.
10. A customer must install a water pressure reducing valve where required by State of New Jersey plumbing code. If a water pressure reducing valve is required to be installed, the customer must install a pressure relief valve (collectively both are referred to as the "Valves"). In all cases, the costs of installation and maintenance of the Valves shall be borne by the customer. The customer shall own and be obligated to maintain the Valves. The Company will not be liable for damage due to meter failures if the customer is located in a high pressure zone and does not have a pressure reducing valve or has a pressure reducing valve downstream from a water meter that is installed inside the premises.
11. For meters less than or equal to 2 inches the pressure reducing valve will be located on the downstream side of the meter if the meter is located outside of the customer's premises and on the upstream side of the meter, if the meter is located inside of the customer's premises. For meters greater than 2 inches the pressure reducing valve will always be located on the upstream side of the meter.
12. The customer is required to make all changes in the connecting line due to changes in grade, relocation of mains, or other causes only if such changes are mandated by a municipality, county, state or other governmental body.

WATER MAIN EXTENSIONS

13. The Company will extend water service in accordance with all applicable laws of the State of New Jersey and Board of Public Utilities regulations and orders including N.J.A.C. 14:3-8.1 et seq. Mains will be extended to the mid-point of property frontage for residential properties, and along the entire frontage for commercial properties, regardless of where the service stub is installed.

Information on how to apply for a water main extension can be found on the Company's website at <https://amwater.com/njaw/about-us/doing-business-with-us>. The application form can be downloaded, filled out and faxed in to the Company at the fax number provided on the application.

CUSTOMER'S PREMISES

14. The Company may refuse to provide a water connection, or furnish water through a connection pipe already installed, when a customer's piping system is not installed in accordance with the regulations of the Company and of the municipality in which the premises are located; or when the system on the premises is not at sufficient depth to prevent freezing.
15. Customers shall not permit access to the meter and other appliances of the Company except by authorized employees of the Company or properly authorized state or local inspectors.
16. In all cases the customers should not interfere with property of the Company, but should immediately notify the Company of any problem.
17. It is the sole responsibility of each customer to ensure that all piping and appurtenances within a customer's premises comply with state, municipal and other public health regulations in force with respect hereto including state and local plumbing codes. The piping and appurtenances shall be maintained in a condition conducive for the Company to perform the services required to serve the customer.

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STANDARD TERMS AND CONDITIONS
WATER

CUSTOMER'S PREMISES (CONTINUED)

18. In any premises where devices are used which might produce a back pressure, such as steam boilers, carbonation equipment for soft drinks, booster pumps, etc., a check valve shall be installed by the customer at the meter. In the event such check valve is installed, pressure relief valves should be provided by the customer in the system.
19. In any premises where an auxiliary water source is available, the pipes carrying water from the mains of the Company are required to be marked in some distinctive manner for ready identification.

PRIVATE FIRE PROTECTION SERVICE

20. Customers desiring a separate service connection for private fire service are required to make separate written application for such service on forms prescribed by the Company. Private fire service installations are made in accordance with the provisions of this tariff regarding the installation of service and connecting pipes and other facilities.
21. Service lines designated for private fire protection are installed for customers requiring a private fire service to supply sprinkler heads, hydrants or hose connections. Any connection in which sprinkler heads and/or hose connections are supplied through a domestic service connection are considered "multi-use", are not considered as part of a private fire protection service, and shall not be deemed as part of this section. The utility shall have the right to suspend or curtail or discontinue service for any of the following acts or omissions on the part of the customer: tampering with any facility of the utility; fraudulent representation in relation to the use of service; and connecting and operating in such manner as to produce disturbing effects on the service of the utility or other customers. (N.J.A.C. 14:3-3A.1(a)5)
22. The connection shall be in accordance with the applicable laws including but not limited to those of the BPU, DEP and all federal, state and local agencies
23. Unless specified by the Company, dedicated private fire service lines and facilities, including hydrants, are to be used exclusively for fire protection purposes and should be equipped with special meters.
24. No water should be used through private fire protection facilities except for permitted testing purposes or in case of fire. The use of private fire protection facilities for other reasons will result in termination of service following notification pursuant to N.J.A.C. 14:3-3A.1(d).
25. Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for private fire protection.
26. A "multi-use" service is not a private fire service. Please refer to Schedule P-3 for the terms and conditions regarding multi-use service.
27. The Company shall not be liable for any loss, injury, casualty or damage resulting from fire or water, or other agency, resulting from the supply or use of water service or the failure thereof, which may occur on account of the installation or presence of a private fire service connection, or from the presence or operation of the Company's structures, equipment, pipes, appliances or devices on the customer's premises, or connected therewith.
28. The Company may not discontinue water service unless it has provided written notice giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. However, in case of fraud, illegal use, or when it is clearly indicated that the customer is preparing to leave, immediate payment of accounts may be required, and service may be discontinued without further notice.

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STANDARD TERMS AND CONDITIONS
WATER

PUBLIC FIRE PROTECTION SERVICE

29. Upon application or request by a duly authorized representative of a municipality in the Company's service area, the Company will install fire hydrants for purposes of public fire protection. The locations of such hydrants are selected by agreement between officials of the municipalities and representatives of the Company after careful consideration. Municipalities or the designated customer of record (e.g. local fire district) shall pay the Company a charge for service to public fire hydrants within that municipality as provided in the applicable rate schedule set forth in this tariff.

MULTI-USE SERVICE

30. Multi-use service is only available to franchise customers who submit a completed application to the Company. By applying for multi-use service, the customer agrees to be responsible for all claims, costs and liability for personal injury, death and/or property damage, resulting from the customer's individual water system, unless caused by the negligence of the water utility. A "multi-use" service is not a private fire service. Please refer to Schedule P-3 for the terms and conditions regarding multi-use service.
31. All multi-use service lines shall be metered and the meter shall be located in a meter pit or vault located outside of the Customer's structure. The meter pit or vault shall be installed at a location acceptable to the express approval of the Water Company.
32. If a customer requests a change in meter size associated with a multi-service meter, the customer must re-apply for service and re-certify each item addressed below and in Rate Schedule P-3.
33. By applying for multi-use service, and operating the same, the customer agrees:
- a. The customer has complied with all of the terms and conditions set forth on Rate Schedule P-3;
 - b. To include a backflow prevention device(s) as defined at N.J.A.C. 7:10-1.3, and as specified at N.J.A.C. 7:10-10.3;
 - c. To be solely responsible for all costs and expenses relating to the installation, operation, maintenance, repair and replacement of the customer's water system, including the fire suppression system and backflow prevention device(s);
 - d. To ensure that the customer's water system complies with the applicable requirements of the Uniform Construction Code in effect at the time of system installation, including any applicable building, plumbing and fire protection sub-codes;
 - e. To ensure that the customer's water system is maintained in accordance with all applicable law so as to protect against backflow, back-siphonage and contamination of the potable water system; and
 - f. To be subject to disconnection under the standard terms and conditions as apply to fire protection service or multi-use service in accordance with the Board's rules governing discontinuance of such service at N.J.A.C. 14:3-3A.4(k) and N.J.A.C. 14:9-8.3.

EMERGENCY RESPONSES DUE TO EXTRAORDINARY DEMAND AND/OR DIMINISHED SUPPLY

34. Discontinuance of service for failure to comply with use restrictions. For compliance by the utility in good faith with any governmental order or directive, notwithstanding that such order or directive subsequently may be held to be invalid, the Company may, upon reasonable notice, suspend, curtail, or discontinue service pursuant to N.J.S.A. 48:2-23, N.J.S.A. 48:2-24, and N.J.A.C. 14:3-3A for any of the following acts or omissions on the part of the customer:
- a. Connecting or operating any piping or other facility, including but not limited to, lawn sprinkling on the customer's premises in such a manner as to adversely affect the safety or adequacy of service provided to other customers present or prospective; or

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STANDARD TERMS AND CONDITIONS
WATER

EMERGENCY RESPONSES DUE TO EXTRAORDINARY DEMAND AND/OR DIMINISHED SUPPLY

Discontinuance of service for failure to comply with use restrictions (continued)

- b. Continuing waste of water by customers after notice from the utility through improper or imperfect pipes, fixtures, or failure to comply with restrictions; or
 - c. Failure to comply with the standard terms and conditions contained in this tariff or failure to comply with any state law, or the rules, regulations, orders or restrictions of any governmental authority having jurisdiction.
35. Water service shall be restored when the conditions under which such service was discontinued, as specified above, are corrected and upon the payment of the SPECIAL RESTORATION OF SERVICE CHARGE of \$100.00 for each restoration.
36. The Company will endeavor to provide a regular and uninterrupted supply of water through its facilities. However, if because of emergencies beyond the control of the Company, including governmental mandate, service is interrupted, irregular, defective or fails, the Company will not be liable for damages or inconvenience resulting there from. In the event of an extraordinary demand and/or diminished supply, or when operational issues make such actions desirable, including, among other things, protecting the integrity of the system and permit conditions, the Company may restrict the use of water whenever the public welfare may require it and, if necessary, may shut off the water in its mains and pipes. In such cases the Company shall advise its customers by placing a prominent advertisement detailing the conditions and restrictions in a newspaper of general circulation in the utility service area. The notice will state the purpose and probable duration of the restriction or discontinuance. Failure to provide regular and uninterrupted service due to breakdowns is covered under other sections of this tariff.
37. The Company may restrict water service during certain periods, where the Company advises the Board of Public Utilities, in order to protect the public water supply, or otherwise to comply with any regulations, orders or decrees issued by the Governor of New Jersey or the Department of Environmental Protection, or any successor agency or department pursuant to the Water Supply Management Act, or other statutes or regulations of the state or federal government. Such interruptions or restrictions shall be reported to the Department of Environmental Protection, if necessary, and the Board by each utility by the speediest means of communications available, promptly followed by a detailed written report, pursuant to the provisions of N.J.A.C. 14:3-3.7 et seq. Thereafter the utility shall provide weekly reports for the duration of the emergency.
38. When the supply of water to individual customers is to be discontinued or curtailed for the customer's failure to comply with emergency water restrictions imposed because of extraordinary demand or diminished supply, the Company shall advise such customer(s) by placing a door tag on the front door of the home of the individual(s) in violation of the restrictions, at least twenty-four (24) hours prior to discontinuance or curtailment, or by giving another form of notice acceptable to the Board. The Company will advise business and commercial customers, in writing, by mailing a notice to the customers' billing address. In the case of door tags, they shall be sequentially numbered and include the date, time and nature of the violation and the procedure for restoration of service. All such notices shall be accounted for by the utility.

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STANDARD TERMS AND CONDITIONS
WASTEWATER

A. SEWER MAIN EXTENSIONS

Applicability

Applicable to all wastewater service customers served by the Company.

1. The Company will extend wastewater service in accordance with all applicable laws, regulations and orders of the State of New Jersey and Board of Public Utilities including N.J.A.C. 14:3-8, et seq.
2. Mains will be extended to the mid-point of property frontage for residential properties, and along the entire frontage for commercial properties, regardless of where the service stub is installed.
3. Documentation on how standard sewer main extensions are handled can be found on the Company's website at <https://amwater.com/njaw/about-us/doing-business-with-us>.
4. Please also refer to item number 6 in the Application for Service Connection section of the Standard Terms and Conditions on page 76.

B. CALCULATION OF WINTER QUARTER CONSUMPTION

Applicability

Applicable to wastewater service customers served by the Company in in the Statewide Wastewater Collection Area (Lakewood), Tewksbury Township, Service Area 1D, the former Applied Wastewater Management Service Area ("Applied"), Plumsted Township, and in Elk Township, Rate Schedules 2-A, 6-A, 10-A and 12-A, respectively.

Sewer Usage Charge

The volume of sewer use is assumed to equal water meter registration. Monthly Sewer Usage Charges shall be determined based upon winter quarter consumption, but in no case less than 2,000 gallons per month. Winter quarter consumption shall be determined based on an initial water meter reading taken in December of one year with the concluding meter reading taken approximately 90 days thereafter in March of the following year.

The Monthly Sewer Usage Charge shall be determined as follows:

Meters read in January, February and March

The Sewer Usage Charge for each respective month shall be determined by multiplying the applicable monthly usage times applicable volumetric charges.

Meters read in April through December

The Sewer Usage Charge for each month April through December shall be based on the Monthly Usage Constant, equal to one-third of the winter quarter consumption, but in no case less than 2,000 gallons per month, multiplied by applicable volumetric charges.

In the case of new customers, the volume of sewer use shall be determined as follows:

1. New Customers in an Existing Dwelling or Premises for Which Actual Full Period Winter Quarter Usage History is Available.

Determination of the monthly use constant shall be based on the last known full period winter quarter usage at that property, but in no case less than 2,000 gallons per month. This monthly use constant will be used for billing purposes until the customer receives the January bill in the following year. The January and subsequent bills will be calculated in accordance with the method described in this Tariff for determining the monthly Sewer Usage Charge.

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STANDARD TERMS AND CONDITIONS
WASTEWATER

B. CALCULATION OF WINTER QUARTER CONSUMPTION (CONTINUED)

2. Existing or New Customers in an Existing or New Dwelling or Premises for Which No Full Period Winter Quarter History has Been Established.

a. For service established outside of the winter quarter:

Determination of the monthly use constant shall be based on 12,000 gallons per quarter (a monthly usage constant of 4,000 gallons) until the customer receives the January bill in the following year. The January and subsequent bills will be calculated in accordance with the method described in this Tariff for determining the monthly Sewer Usage Charge.

b. For service established during the winter quarter:

Determination of the monthly use constant will be based upon the actual usage during the winter quarter with a minimum of 12,000 gallons (a monthly usage constant of 4,000 gallons). This monthly use constant will be used for billing purposes until the customer receives the January bill in the following year. The January and subsequent bills will be calculated in accordance with the method described in this Tariff for determining the monthly Sewer Usage Charge.

C. SPECIAL REQUIREMENTS RELATING TO WASTEWATER SERVICE – COLLECTION SYSTEMS

Applicability

Applicable to wastewater service customers served by the Company in the Borough of Bound Brook, Egg Harbor City, the Borough of Haddonfield, Howell Township, Lakewood Township, the Borough of Mount Ephraim and Ocean City.

1. Separate and independent wastewater service lines shall be installed for each customer. All building drains and building sewers shall be the responsibility of the customer and shall be installed and maintained by the customer.
2. No customer shall discharge or cause to be discharged into the Company's system any storm water, surface water, ground water, roof runoff, sub-surface drainage, foundation or basement sump drainage, uncontaminated cooling water or unpolluted industrial process water.
3. No customer shall discharge or cause to be discharged into the Company's system the following described substances, materials, waters, or wastes without the prior written approval of the Company. Such wastes can harm either the sewerage system or treatment process and/or equipment, have an adverse effect upon the receiving stream for the treated wastewater, or can otherwise endanger life, limb or property or create a nuisance. In forming the opinions as to whether or not to permit the discharge, the Company will consider the effect upon receiving sewers, as well as the conditions placed upon the Company by its service agreements with the local treatment Utilities Authorities that treat the wastewater the Company collects.
4. The customer shall be responsible for maintaining and repairing the "building drain" and "building sewer."
5. The customer shall be responsible for installing and maintaining a backwater valve in buildings that have fixtures below grade level. In the event of a gray water backup, the Company shall not be liable for any damage or inconvenience resulting from the absence/malfunctioning of this appurtenance.
6. The Company reserves the right upon completion of its findings to:
 - a. Reject the wastes.
 - b. Require pretreatment to an acceptable condition for discharge.
 - c. Require flow equalization.

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STANDARD TERMS AND CONDITIONS
WASTEWATER

C. SPECIAL REQUIREMENTS RELATING TO WASTEWATER SERVICE – COLLECTION SYSTEMS
(CONTINUED)

7. In the event pretreatment facilities or flow equalization is required, the design and construction of such facilities shall be subject to approval of the Company and operation of said facilities shall be subject to inspection by the Company. Monitoring and/or sampling equipment shall be installed and operated by the customer as deemed necessary by the Company to ascertain proper operation of the pretreatment facilities.
8. The wastes requiring written approval are:
 - a. Any liquid or vapor having a temperature in excess of 150°F.
 - b. Any waters or waste waters containing phenols.
 - c. Any waters or wastes having a pH in excess of 9.5.
 - d. Any water containing unusual concentrations of inert suspended solids, such as, but not limited to, diatomaceous earth, lime and lime slurries or of dissolved solids such as but not limited to sodium chloride or sodium sulfate.
 - e. Any water or waste water containing excessive discoloration.
 - f. Waste water having unusual "B.O.D." concentration, suspended solids concentration or high chlorine demand in such quantities as to constitute a significant load on the treatment plant.
 - g. Unusual volume of flow or concentrations of wastes constituting "slugs" as hereinbefore defined.
 - h. Water or wastes containing substances not amenable to biological treatment processes as defined by a wastewater treatment plant owner or operator.
9. No customers shall discharge or cause to be discharged any of the following described waters or wastes to the sewers:
 - a. Any gasoline, benzene, naptha, paints, lacquers, fuel oil or other flammable or explosive liquid, solid or gas which by reason of its nature or quality may cause fire or explosion or which, in any way, may be injurious to personnel or the sewer system.
 - b. Any water or wastes containing toxic or poisonous solids, liquids, or gases in sufficient quantity either singly or by interaction with other wastes to injure or interfere with any wastewater treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving waters of the wastewater treatment plant.
 - c. Any waters or wastes having a pH of lower than 5.5 or having any other corrosive property capable of causing damage or hazard to the sewerage system and/or personnel of the Company.
 - d. Plating mill waste water or other industrial process water containing spent pickle liquor, concentrated plating solutions, chromium, zinc and similar toxic heavy metals, cyanides and cleaning solvents.
 - e. Any radioactive material.
 - f. Any water or wastes containing fats, wax, grease, tar, oils or any other substances, whether emulsified or not which may solidify or become viscous at temperatures between 32° and 150°F or which would impair, impede, affect, interfere with, or endanger personnel or the sewer system.
 - g. Any garbage not properly shredded.
 - h. Any solids of such size or characteristic capable of causing obstruction to the flow in sewers, such as, but not limited to, ashes, cinders, sand, mud, straw, metal shavings, glass, rags, feathers, tar, plastic, wood, paunch manure, hair fleshings, offal, entrails, etc.

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STANDARD TERMS AND CONDITIONS
WASTEWATER

C. SPECIAL REQUIREMENTS RELATING TO WASTEWATER SERVICE – COLLECTION SYSTEMS
(CONTINUED)

10. Any customer discharging industrial wastes shall provide and maintain a control manhole suitable to facilitate observation, sampling and measurement of the wastes. The Company (and the local treatment Utilities Authorities that treat the wastewater the Company collects) shall have the right to inspect, sample, measure and analyze waste water as they deem necessary.

D. SPECIAL REQUIREMENTS RELATING TO WASTEWATER SERVICE – TREATMENT SYSTEMS

Applicability

Applicable to wastewater service to customers served by the Company in Service Area 1D, the former Applied Wastewater Management Service Area ("Applied"), Plumsted Township, and Tewksbury Township, except as specifically provided elsewhere in this tariff.

1. The within rates are applicable to normal sewerage, as defined by the New Jersey Department of Environmental Protection, namely 250 ppm.5 – day B.O.D. The utility company reserves the right to require pretreatment of the wastewater prior to discharge into sewers in the event that the wastewater contains harmful substances such as gasoline, PCBs, oil, explosive liquids, phenols, acids, alkalines, lint, excessive detergents or any other substance as defined by NJDEP. Each customer shall be fully responsible for proper use of the wastewater system and shall therefore not discharge any chemicals or contaminants which are toxic and which may cause damage to the wastewater system's electrical, mechanical, biological, or physical process components or may harm either the groundwater, soil or atmosphere, as listed on Schedule A on Sheet No. 27, as it may be periodically updated. Any cost involved in repairs of damage to the Company's facilities, environmental damages and penalties or fines levied against the utility caused by the introduction by the customer of unacceptable or harmful substances shall be the responsibility of the customer.
2. In accordance with the National Standard Plumbing Code adopted by the Uniform Construction Code of the State of New Jersey, no storm drainage system of a building shall be connected directly or indirectly to the sanitary drainage system. The company adopts the above provision and prohibits the drainage of storm water into its collecting system. Each customer shall be responsible to prevent any surface water or groundwater from entering into the wastewater system and therefore shall not connect or allow to be connected to the system any sump pumps, basement or crawl space drains, roof gutters, downspouts, or floor drains, and shall properly maintain all pipes and clean-outs to assure a watertight connection. Improperly discharging effluent from a non-approved drainage or collection system shall be considered the basis for immediate termination of service pursuant to N.J.A.C.14:3-3A.1 et seq. The Company will provide notice of the termination of service to the extent reasonably possible.
3. Garbage disposal units are not permitted unless specifically authorized by the Company.
4. Each customer shall prevent damage to all system components located on the property being served, including components located within easement area; maintain the grass growth and prevent the growth of trees, shrubs, and ornamentals within the easement areas; maintain and repair pipes connecting the home to the septic tank to prevent clogging and leaking; and to notify the Company of any damage which may occur to system components.
5. Because the wastewater system can only handle a limited quantity of water, each residential customer may discharge no more than the maximum average of 350 gallons per day, or 32,000 gallons per quarter, of wastewater. In order to verify compliance with this provision, each customer must allow a representative of the Company to inspect all plumbing components upon request and to obtain all water meter readings as may be required.
6. Customers may not trespass on Company property or enter any Company facility without a representative of the Company being present.

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STANDARD TERMS AND CONDITIONS
WASTEWATER

C. SPECIAL REQUIREMENTS RELATING TO WASTEWATER SERVICE – TREATMENT SYSTEMS
(CONTINUED)

7. A customer may permanently terminate service by giving notice to the Company, which shall terminate service within five (5) business days of receipt of each notification. Temporary discontinuance of wastewater service is not permitted and each customer shall pay the applicable fixed service charge and minimum monthly charge (i.e., "RATES"), per month or per quarter, as applicable, unless and until such time as a replacement customer commences service at the premise. Customers are advised that it is illegal to operate a dwelling without adequate functioning wastewater facilities, and that the Company is required to notify local health authorities of wastewater service termination.

SCHEDULE A

I. MATERIALS NOT TO BE DISPOSED THROUGH SEWER SYSTEM

Grease
Wipes (baby, cleaning, flushable, wet)
Gloves (latex, rubber)
Food scraps
Plastics
Gasoline or motor fuels
Paint and paint thinners
Used motor oils
Petroleum solvents
Pesticides (solids or liquids)
Herbicides (solids or liquids)
Engine coolants (antifreeze)
Acids
Water softener backwash
Photographic development solutions

II. MAXIMUM PERMITTED DISCHARGE CONCENTRATIONS

"Biochemical Oxygen Demand" – 250mg/L
Chemical oxygen demand – 351 mg/L
Total organic carbon – 99 mg/L
Total solids – 1,608 mg/L
Volatile solids – 295 mg/L
Total suspended solids – 75 mg/L
Volatile suspended solids – 62 mg/L
Calcium – 59 mg/L
Magnesium – 33 mg/L
Sodium – 218 mg/L
Chlorine – 218 mg/L
Oil and grease – 22 mg/L
Total dissolved solids – 872 mg/L
Total Kjeldahl nitrogen – 60.7 mg – N/L
Ammonia nitrogen – 53.3 mg – NL
Phosphorus – 6.3 mg – P/L
Turbidity – 45 NTU
Ph – 5-9
Alkaline – 479 mg CaCo3/L
Hardness – 327 mg CaCo3/L
Volatile organics by GC/MS – Non-detectable
Pesticides – Non-detectable
Herbicides – Non-detectable

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Tenth Revised Sheet: No. 28
Superseding Ninth Revised Sheet: No. 28

AREA SERVED – WATER SERVICE

This tariff shall apply to the service area of the Company, which includes all or part of the following municipalities and all other places as may be permitted by law. This tariff shall also apply to other systems under contract wherever served. Hereafter, and unless otherwise specified herein,

- **Service Area 1** refers to the water service area of New Jersey-American Water Company as it existed prior to January 1, 2007;
- **Service Area 2** refers to the water service area of the former Elizabethtown Water Company;
- **Service Area 3** refers to the water service area of the former Mount Holly Water Company;
- **Service Area 1A** refers to the water service area of the former South Jersey Water Supply Company;
- **Service Area 1B** refers to the water service area of the former Pennsgrove Water Supply Company;
- **Service Area 1C** refers to the service area of the former Shorelands Water Company;
- **Service Area 1D** refers to the service area of the former Applied Wastewater Management, Inc. ("Applied"); and
- **Service Area 1E** refers to the service area including all customers formerly served by the Borough of Haddonfield or located within the geographic boundaries of Haddonfield; and
- **Service Area 1F** refers to the service area of the former Roxbury Water Company.
- **Service Area 1G** refers to the service area of the former Egg Harbor City Water & Sewer Utility.

Unless otherwise indicated, all municipalities and customers referenced below having no numeric designation next to their names were served by New Jersey-American Water Company as it existed prior to January 1, 2007. All municipalities and customers with a (2) designation next to their names were served by the former Elizabethtown Water Company prior to January 1, 2007; with a (3) designation next to their names were previously served by the former Mount Holly Water Company prior to January 1, 2007; with a (1A) designation next to their names were previously served by the former South Jersey Water Supply Company prior to November 1, 2007; with a (1B) designation next to their names were previously served by the former Pennsgrove Water Supply Company prior to November 1, 2007; with a (1C) next to their names were previously served by the former Shorelands Water Company prior to April 3, 2017; with a (1D) designation next to their names were previously served by Applied Wastewater Management, Inc. prior to September 1, 2010; with a (1F) designation were previously served by Roxbury Water Company prior to January 1, 2019; and with a (1G) designation were previously served by the Egg Harbor City Water & Sewer Utility prior to [date]. Where a municipality was served in part by two of the former water companies listed above, service provided by New Jersey-American Water Company as it existed prior to January 1, 2007 shall be identified by a (1) designation. All municipalities for which the Company provides water service only to a portion of the municipality are reflected by a double asterisk (**) designation.

Atlantic County

Franchise Customers

<u>Cities</u>	<u>Townships</u>
Absecon	Egg Harbor
Egg Harbor	Galloway (1)(1G)
Linwood	Mullica (1G)

Northfield
Pleasantville
Somers Point

Burlington County

Franchise Customers

<u>Boroughs</u>	<u>Townships</u>
Palmyra	Burlington **
Riverton	Cinnaminson
	Delanco
<u>Cities</u>	Delran
Beverly	Eastampton (3)
	Edgewater Park
	Hainesport (3)
	Lumberton (3)
	Mansfield (3)
	Maple Shade**
	Mt. Laurel **
	Mt. Holly (3)
	Pemberton **
	Riverside
	Southampton (3)
	Springfield (3) **
	Westampton (3)

Resale Customers

Evesham Township MUA
Township of Moorestown
Medford Township
Mt. Laurel Township MUA
Township of Maple Shade

(Continued)

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1 Water Street, Camden, NJ 08102

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B.P.U. No. 8 – Water

Ninth Revised Sheet: No. 29
Superseding Eighth Revised Sheet: No. 29

AREA SERVED – WATER SERVICE
(Continued)

Camden County

<u>Franchise Customers</u>		<u>Resale Customers</u>
<u>Boroughs</u>	<u>Cities</u>	
Audubon	Camden (11 th and 12 th Wards) **	Township of Haddon
Barrington		Aqua New Jersey
Bellmawr **		Borough of Berlin
Clementon **		Merchantville-Pennsauken
Gibbsboro	<u>Townships</u>	Water Commission
Haddon Heights	Cherry Hill **	Winslow Township MUA
Haddonfield (1E)	Gloucester **	Pine Hill Borough MUA
Hi-Nella	Haddon **	Audubon Park
Laurel Springs	Pennsauken **	Ancora Psychiatric Hospital
Lawnside	Voorhees	
Lindenwold		
Magnolia		
Mt. Ephraim		
Oaklyn		
Runnemede		
Somerdale		
Stratford		

Cape May County

<u>Franchise Customers</u>	<u>Resale Customers</u>
<u>Cities</u>	
Ocean City	Middle Township Water District #2
<u>Townships</u>	
Middle **	
Upper	

Essex County

<u>Franchise Customers</u>	<u>Resale Customers</u>
<u>Boroughs</u>	<u>Townships</u>
North Caldwell **	Cedar Grove **
	Irvington
	Livingston **
	Maplewood
	Millburn
	South Orange Village **
	West Orange
	Township of Livingston
	City of Orange
	Township of South Orange Village
	Borough of Essex Fells

Gloucester County

<u>Franchise Customers</u>	<u>Resale Customers</u>
<u>Townships</u>	Deptford Township MUA
East Greenwich **	East Greenwich Township
Elk Township	Mantua Township MUA
Harrison (1A)	Township of West Deptford
Logan (1) & (1B)	City of Woodbury
Mantua**	Borough of Pitman
Woolwich**	Borough of Woodbury Heights
	Borough of Glassboro
	Borough of National Park
	Aqua New Jersey
	Borough of Clayton

(Continued)

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AREA SERVED – WATER SERVICE
(Continued)

Hunterdon County

Franchise Customers	
<u>Boroughs</u>	<u>Townships</u>
Frenchtown	Raritan (2)
	Readington (2)**
	Tewksbury (2) (1D)**

Mercer County

Franchise Customers	
<u>Boroughs</u>	<u>Townships</u>
Princeton (2)	Hopewell (2) **
	Lawrence (2)**
	West Windsor (2)

Resale Customers
Borough of Hopewell (2)

Middlesex County

Franchise Customers	
<u>Boroughs</u>	<u>Townships</u>
Dunellen (2)	Cranbury (2)
Jamesburg	Edison (2)**
Middlesex (2)**	Monroe **
South Plainfield (2) **	Piscataway (2) **
	Plainsboro (2) **
	South Brunswick (2) **

Resale Customers
Township of Edison
Township of South Brunswick (2)
Middlesex Water Co. (2)

Monmouth County

Franchise Customers	
<u>Boroughs</u>	<u>Cities</u>
Allenhurst	Asbury Park
Bradley Beach	Long Branch
Deal	
Eatontown	<u>Townships</u>
Fair Haven	Aberdeen **
Highlands	Colts Neck **
Interlaken	Freehold **
Little Silver	Hazlet (1C)
Monmouth Beach	Holmdel **(1C)
Neptune City	Howell **
Oceanport	Middletown
Red Bank **	Neptune (incl. Ocean Grove)
Rumson	Ocean
Sea Bright	Shrewsbury
Shrewsbury	
Tinton Falls	<u>Villages</u>
Union Beach	Loch Arbour
West Long Branch	

Resale Customers
Borough of Avon
Borough of Belmar
Lake Como Borough
Borough of Matawan
Borough of Red Bank
Borough of Keansburg
Farmingdale Borough
Aberdeen Township (1C)
Keyport Borough (1C)

(Continued)

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Ninth Revised Sheet: No. 31
Superseding Eighth Revised Sheet: No. 31

AREA SERVED – WATER SERVICE
(Continued)

Morris County

<u>Franchise Customers</u>		<u>Resale Customers</u>
<u>Boroughs</u>	<u>Townships</u>	
Mendham	Chatham	Township of East Hanover
Florham Park **	Chester (2) (1D)**	
Chester	Harding **	
	Long Hill (formerly Passaic)	
	Mendham **	
	Mt. Olive (1) (1D)**	
	Roxbury (1F)	

Ocean County

<u>Franchise Customers</u>		<u>Resale Customers</u>
<u>Boroughs</u>	<u>Townships</u>	
Bay Head	Berkeley**	Borough of Point Pleasant
Lavallette **	Brick**	
Mantoloking	Toms River (formerly Dover)**	
	Lakewood	
	Plumsted (3)	

Passaic County

<u>Franchise Customers</u>	
<u>Boroughs</u>	<u>Townships</u>
West Paterson **	Little Falls

Salem County

<u>Franchise Customers</u>	
<u>Boroughs</u>	<u>Townships</u>
Pennsgrove (1B)	Carneys Point (1B)
	Oldmans (1B)

Somerset County

<u>Franchise Customers</u>		<u>Resale Customers</u>
<u>Boroughs</u>	<u>Townships</u>	
Bernardsville	Bedminster (1) & (2)	Franklin Township (2) Rocky Hill Borough
Bound Brook (2)	Bernards	
Far Hills	Branchburg (2)	
Manville (2)	Bridgewater (2)	
Millstone (2)	Franklin (2) **	
North Plainfield (2)	Green Brook (2)	
Peapack and Gladstone (2)	Hillsborough (2)	
Raritan (2)	Montgomery (2)	
Rocky Hill	Warren (1) & (2)	
Somerville (2)		
South Bound Brook (2)		
Watchung (1) & (2)		

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Third Revised Sheet: No. 32
Superseding Second Revised Sheet: No. 32

AREA SERVED – WATER SERVICE
(Continued)

Union County

<u>Franchise Customers</u>		<u>Resale Customers</u>
<u>Boroughs</u>	<u>Townships</u>	
Fanwood (2)	Berkeley Heights	City of Elizabeth (2)
Garwood (2)	Clark (2)	Winfield Mutual Housing Corporation (2)
Kenilworth (2)	Cranford (2)	City of Rahway
Mountainside (2)	Hillside (1) & (2)	
New Providence	Scotch Plains (2)	
Roselle (2)	Springfield	
Roselle Park (2)	Union (1) & (2)	
<u>Cities</u>	<u>Towns</u>	
Summit	Westfield (2)	
Linden (2)		
Plainfield (2)		

Warren County

<u>Franchise Customers</u>	
<u>Boroughs</u>	<u>Townships</u>
Washington	Franklin
	Mansfield
<u>Towns</u>	Oxford **
Belvidere	Washington
	White

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Fourth Revised Sheet: No. 33
Superseding Third Revised Sheet: No. 33

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 33.1

WATER SERVICE RATE SCHEDULES
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(Continued)

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 34.1
Superseding Original Sheet: No. 34.1

RATE SCHEDULE A-1
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general metered residential, commercial, industrial, and municipal service throughout Service Area 1, Service Area 1A, Service Area 1B, Service Area 1C, Service Area 2, Service Area 3, Service Area 3 Mansfield Township (Homestead) served by the Company, the Columbus section of the Townships of Mansfield and Southampton, Burlington County in Service Area 3, and the Borough of Manville, Somerset County (formerly served by the Borough of Manville Water Utility) located in Service Area 2, and in Service Area 1D, formerly served by Applied Wastewater Management, Inc. ("Applied"), noted on Sheet Nos. 28 – 32, except as specifically provided elsewhere in this tariff. The charge for general metered service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All general metered water service customers shall pay a fixed service charge based on the size of each meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>	<u>Exempt Per Month</u>
5/8"	\$22.09	\$19.07
3/4"	33.15	28.63
1"	55.23	47.69
1 1/2"	110.50	95.41
2"	176.71	152.58
3"	331.39	286.15
4"	552.29	476.88
6"	1,104.48	953.68
8"	1,767.21	1,525.92
10"	2,208.95	1,907.35
12"	2,760.96	2,383.99
16"	4,417.90	3,814.70

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter.

	<u>Gallons Per Month</u>	<u>Rate* Per 100 Gallons</u>	<u>Rate* Per 1,000 Gallons</u>
Non-Exempt	All	\$0.81169	\$8.1169
Exempt	All	\$0.70087	\$7.0087

TERMS OF PAYMENT

Valid bills for general metered water service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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B.P.U. No. 8 – Water

First Revised Sheet: No. 34.2
Superseding Original Sheet: No. 34.2

RATE SCHEDULE A-2
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general metered sales for resale service throughout the entire territory served except as specifically provided elsewhere in this tariff. The charge for general metered service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All general metered water service customers shall pay a fixed service charge based on the size of each meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>	<u>Exempt Per Month</u>
5/8"	\$22.09	\$19.07
3/4"	33.15	28.63
1"	55.23	47.69
1 1/2"	110.50	95.41
2"	176.71	152.58
3"	331.39	286.15
4"	552.29	476.88
6"	1,104.48	953.68
8"	1,767.21	1,525.92
10"	2,208.95	1,907.35
12"	2,760.96	2,383.99
16"	4,417.90	3,814.70

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter.

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$0.81169	\$8.1169
Exempt	All	\$0.70087	\$7.0087

TERMS OF PAYMENT

Valid bills for general metered water service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 34.4
Superseding Original Sheet: No. 34.4

RATE SCHEDULE A-14
IRRIGATION SERVICE

APPLICABILITY

Applicable to use of water supplied through meters located in Service Area 1D, formerly served by Applied Wastewater Management, Inc. ("Applied"), noted on Sheet Nos. 28 – 32 for the sole purpose of irrigation. Whenever service is established or is discontinued, all applicable fixed service charges shall be prorated to the date of establishment or discontinuance of service. The charge for the general metered service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>
5/8"	\$22.09
3/4"	33.15
1"	55.23
1 1/2"	110.50
2"	176.71
3"	331.39
4"	552.29
6"	1,104.48
8"	1,767.21
10"	2,208.95
12"	2,760.96
16"	4,417.90

WATER CHARGE

	<u>Gallons Per Month</u>	<u>Rate* Per 100 Gallons</u>	<u>Rate* Per 1,000 Gallons</u>
Non-Exempt	All	\$0.81169	\$8.1169

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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B.P.U. No. 8 – Water

First Revised Sheet: No. 34.5
Original Sheet: No. 34.5

RATE SCHEDULE A-15
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general metered residential, commercial, industrial, municipal and sales for resale service to customers served by the Company in Service Area 1E, Haddonfield, except as specifically provided elsewhere in this tariff. The charge for general metered service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All general metered water service customers shall pay a fixed service charge based on the size of each meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>
5/8"	\$17.59
3/4"	22.38
1"	28.97
1 1/2"	42.95
2"	58.72
3"	93.84
4"	139.74
6"	1,104.48
8"	1,767.21
10"	2,208.95
12"	2,760.96
16"	4,417.90

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter. Meters read and excess water billed monthly in arrears.

	<u>Gallons Per Month</u>	<u>Rate* Per 100 Gallons</u>	<u>Rate* Per 1,000 Gallons</u>
Non-Exempt	All	\$0.81169	\$8.1169

TERMS OF PAYMENT

Valid bills for general metered water service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

Issued: January 14, 2022

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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 34.6
Superseding Original Sheet: No. 34.6

RATE SCHEDULE A-16
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general metered service throughout Service Area 1F, Roxbury, served by the Company, except as specifically provided elsewhere in this tariff. The charge for general metered service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, as shown on Rate Schedule O-1, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All general metered water service customers shall pay a fixed service charge based on the size of each meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>
5/8"	\$13.30
3/4"	19.90
1"	33.10
1 1/2"	66.30
2"	106.00
3"	198.80
4"	331.40
6"	662.70

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter.

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$0.48099	\$4.8099

TERMS OF PAYMENT

Valid bills for general metered water service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 34.7

RATE SCHEDULE A-17
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general metered service throughout Egg Harbor City, except as specifically provided elsewhere in this tariff. The charge for general metered service shall consist of the total of the Fixed Service Charge and the Water Charge.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All general metered water service customers shall pay a fixed service charge based on the size of each meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>
5/8"	\$34.17
3/4"	34.17
1"	44.19
1 1/2"	251.96
2"	307.43
3"	469.06
4"	515.02

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter.

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$0.7000	\$7.0000

TERMS OF PAYMENT

Valid bills for general metered water service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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B.P.U. No. 8 – Water

Original Sheet: No. 34.8

RATE SCHEDULE A-18
IRRIGATION SERVICE

APPLICABILITY

Applicable to use of water supplied through meters located in Egg Harbor City for the sole purpose of irrigation. Whenever service is established or is discontinued, all applicable fixed service charges shall be prorated to the date of establishment or discontinuance of service. The charge for the general metered irrigation service shall consist of the total of the Fixed Service Charge and the Water Charge.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>
1"	\$7.08
1 1/2"	8.33
2"	16.67

WATER CHARGE

	<u>Gallons Per Month</u>	<u>Rate* Per 100 Gallons</u>	<u>Rate* Per 1,000 Gallons</u>
Non-Exempt	All	\$0.7000	\$7.0000

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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RIDER A
ECONOMIC DEVELOPMENT PROGRAM

ELIGIBILITY:

- Minimum Annual Average Monthly Volume: 35,000 gallons per monthly billing cycle for new customers or a net increase of 35,000 gallons for existing customers meeting the additional provisions below.
- Employment of a minimum of ten (10) new full-time equivalent employees or a 50% increase in the number of new full-time jobs created, whichever is less, who will be employed in the new or expanded space.
- Customer Classes: General Metered Service Commercial and General Metered Service Industrial
 - Customer class exception: Residential uses in Commercial class (Apartments and condominiums) while considered commercial customers, are not eligible for this program.
- New customers who lease, purchase or construct new space for manufacturing, retail, research, office or warehousing.
- Existing customers who lease, purchase or construct new space for manufacturing, retail, research, office or warehousing and/or expand its existing operations.
- Any existing space that is reconverted for use for the purpose of qualifying under this program must have been vacant for a minimum of one (1) year.
- Application to New Jersey American Water shall be made on the Company's form, which must be completed and submitted by the customer and approved by New Jersey American Water, at the Company's discretion, before the customer may participate in the program.
- An annual certification is required. The certification shall be made on the form prescribed by New Jersey American Water by an officer of the customer stating that eligibility requirements have been met. Failure to submit the annual certification shall be grounds for termination of the customer's participation in the program.

BENEFITS:

- Credit on water consumption charge for up to four (4) years. Applicable fixed charges, PWAC charges, and any other applicable charges will continue to be applied at the standard rate, as set forth within this tariff.
- Amount of Credit on Water Consumption Charges:

Year	Amount of Credit
1 st Year	50%
2 nd Year	40%
3 rd Year	25%
4 th Year	10%
- Additional credit of five per cent (5%) on water consumption charges will be added to the above credits for all of the Company's customers who qualify for the Economic Development Program and who are also located in a "priority location" (Urban Enterprise Zone) as defined by the New Jersey Economic Development Authority.

NOTE:

The decision to accept the initial application, or continued participation, of a customer into the program resides with New Jersey American Water, at the Company's discretion. Also, the ability to include customers into the program is subject to available capacity as established through the New Jersey Department of Environmental Protection permitting process.

Failure of the customer to maintain the minimum monthly usage during 2 or more months in a rolling 12-month period shall be grounds to remove the customer from the Economic Development Program.

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By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 36.1
Superseding Original Sheet: No. 36.1

RATE SCHEDULE C
SALES FOR RESALE – COMMODITY-DEMAND SERVICE

APPLICABILITY

Applicable to Sales for Resale customers served by the Company who have executed a Commodity-Demand Regional Water Sales Agreement ("Agreement") with an initial term of 10 years and a minimum Nominated Demand, as defined in the Agreement, of 50,000 gallons per day. The charge for service shall consist of the total of the Fixed Service Charge, the Commodity Charge, the Demand Charge, the Purchased Water Adjustment Clause (PWAC) Charge, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, as shown on Rate Schedule O-1, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the terms of the agreement.

FIXED SERVICE CHARGE

All such customers shall pay a monthly fixed service charge based on the size of each meter installed by the Company, in addition to the charge for the commodity of water used and the charge for the demand nominated or experienced, whichever is greater. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

Size of Meter	Non-Exempt Per Month	Exempt Per Month
5/8"	\$22.09	\$19.07
3/4"	33.15	28.63
1"	55.23	47.69
1 1/2"	110.50	95.41
2"	176.71	152.58
3"	331.39	286.15
4"	552.29	476.88
6"	1,104.48	953.68
8"	1,767.21	1,525.92
10"	2,208.95	1,907.35
12"	2,760.96	2,383.99
16"	4,417.90	3,814.70

COMMODITY CHARGE

A charge will be rendered for all water used pursuant to the provisions of the Applicability section of this Rate Schedule C as follows:

Gallons Per Month	Rate Per 100 Gallons		Rate Per 1,000 Gallons	
	Non-Exempt	Exempt	Non-Exempt	Exempt
All	\$0.06350	\$0.05444	\$0.6305	\$0.5444

DEMAND CHARGE

A monthly charge will be rendered for all water available to the customer in accordance with the customer's Nominated Demand, as provided for in the Agreement.

Nominated Demand Charge Per Month			
Rate Per 100 Gallons of Nominated Demand		Rate Per 1,000 Gallons of Nominated Demand	
Non-Exempt	Exempt	Non-Exempt	Exempt
\$7.48600	\$6.46400	\$74.8600	\$64.6400

TERMS OF PAYMENT

Valid bills for sales for resale service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due 30 days after the invoice date. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 36.2
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RATE SCHEDULE D
SALES FOR RESALE – OFF-PEAK SERVICE

APPLICABILITY

Applicable to Sales for Resale customers served by the Company who have executed an Off-Peak Water Sales Agreement ("Agreement") with an initial term of 10 years and a minimum Off-Peak Demand, as defined in the Agreement, of 50,000 gallons per day. The charge for service shall consist of the total of the Fixed Service Charge, the Commodity Charge, the Demand Charge, the Purchased Water Adjustment Clause (PWAC) Charge, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, as shown on Rate Schedule O-1, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the terms of the agreement.

FIXED SERVICE CHARGE

All such customers shall pay a monthly fixed service charge based on the size of each meter installed by the Company, in addition to the charge for the commodity of water used and the charge for the demand selected or experienced, whichever is greater. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established for a new customer or discontinued for a customer leaving the system permanently, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service. The fixed service charge shall not be prorated for any service provided during the months of May through September of each year.

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>	<u>Exempt Per Month</u>
5/8"	\$22.09	\$19.07
3/4"	33.15	28.63
1"	55.23	47.69
1 1/2"	110.50	95.41
2"	176.71	152.58
3"	331.39	286.15
4"	552.29	476.88
6"	1,104.48	953.68
8"	1,767.21	1,525.92
10"	2,208.95	1,907.35
12"	2,760.96	2,383.99
16"	4,417.90	3,814.70

COMMODITY CHARGE

A charge will be rendered for all water used pursuant to the provisions of the Applicability section of this Rate Schedule D as follows:

<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>		<u>Rate Per 1,000 Gallons</u>	
	<u>Non-Exempt</u>	<u>Exempt</u>	<u>Non-Exempt</u>	<u>Exempt</u>
All	\$0.06305	\$0.05444	\$0.6305	\$0.54440

DEMAND CHARGE

A monthly charge will be rendered for all water available to the customer in accordance with the customer's Off-Peak Demand, as provided for in the Agreement. The Demand Rate is 91.96% of the Commodity-Demand Service Demand Rate set forth on Rate Schedule C.

<u>Off-Peak Demand Charge Per Month</u>			
<u>Rate Per 100 Gallons of Off-Peak Demand</u>		<u>Rate Per 1,000 Gallons of Off-Peak Demand</u>	
<u>Non-Exempt</u>	<u>Exempt</u>	<u>Non-Exempt</u>	<u>Exempt</u>
\$6.88500	\$5.94495	\$68.8500	\$59.4495

TERMS OF PAYMENT

Valid bills for sales for resale service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due 30 days after the invoice date. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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B.P.U. No. 8 – Water

First Revised Sheet: No. 36.3
Superseding Original Sheet: No. 36.3

RATE SCHEDULE E
SALES FOR RESALE – MANASQUAN

APPLICABILITY

Applicable to Sales for Resale customers served by the Company in Service Area 1 who have executed Manasquan Reservoir Water Supply System Water Purchase Contracts and either: (1) whose purchases of water and rates of flow are in accordance with the provisions of Appendix A of this Rate Schedule; or, (2) who have executed a Water Resale and Treatment Agreement, in which case the terms of such Agreement, regarding purchase limitations, shall supersede the applicable Appendix A schedule herein.

CHARACTER OF SERVICE

Continuous, except as limited by the terms of the agreement.

FIXED SERVICE CHARGE

All such customers shall pay a Fixed Service Charge based on the size of each meter installed by the Company, in addition to the charge for the quantity of water used, if any, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>	<u>Exempt Per Month</u>
5/8"	\$22.09	\$19.07
3/4"	33.15	28.63
1"	55.23	47.69
1 1/2"	110.50	95.41
2"	176.71	152.58
3"	331.39	286.15
4"	552.29	476.88
6"	1,104.48	953.68
8"	1,767.21	1,525.92
10"	2,208.95	1,907.35
12"	2,760.96	2,383.99
16"	4,417.90	3,814.70

WATER CHARGE

A charge will be made for all water used pursuant to the provisions of the Applicability section of this Rate Schedule E as follows:

	<u>Rate Per 100 Gallons</u>		<u>Rate Per 1,000 Gallons</u>	
	<u>Non-Exempt</u>	<u>Exempt</u>	<u>Non-Exempt</u>	<u>Exempt</u>
Uninterruptible	\$0.21026	\$0.18155	\$2.1026	\$1.8155
Interruptible	\$0.71560	\$0.61790	\$7.1560	\$6.1790

(Continued)

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B.P.U. No. 8 – Water

First Revised Sheet: No. 36.3.1
Superseding Original Sheet: No. 36.3.1

RATE SCHEDULE E
SALES FOR RESALE – MANASQUAN
(Continued)

DEFINITIONS:

UNINTERRUPTIBLE SERVICE

Uninterruptible service is water service to be provided to customers in quantities specified in Appendix A herein or Schedule A of the Water Resale and Treatment Agreement. The Annual Purchase Requirement is the minimum total volume of water per year which will be purchased take-or-pay by the customer from the Company. The Company agrees to provide to the customer the quantity specified in Appendix A herein or Schedule A of the Water Resale and Treatment Agreement unconditionally, except to the extent that: (1) the limitations of Appendix A herein or Schedule A of the Water Resale and Treatment Agreement apply to restrict the quantity of water which the customer may take on a maximum monthly, maximum daily and peak hourly basis; and, (2) in those cases where the contracts have been executed, the provisions of Section 5 of the Agreement, regarding force majeure events, may apply under certain circumstances. The rate may be found on Rate Schedule E of the present tariff.

INTERRUPTIBLE SERVICE

Interruptible service means a supply of water, to the extent that the Company in its reasonable judgment determines that it has excess water available above the Annual Purchase Period Limitations specified in Appendix A herein or Schedule A of the Water Resale and Treatment Agreement, which may be provided to the customer: (1) to meet extraordinary consumer demand requirements; (2) for occasional, temporary, or emergent needs; or (3) in such other circumstances as shall be agreed upon by the Company and the customer. The rate may be found on Rate Schedule E of the present tariff. In addition to the charge for the quantity of water used, if any, above the Annual Purchase Period Limitations specified in Appendix A herein or Schedule A of the Water Resale and Treatment Agreement, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1 will apply.

TERMS OF PAYMENT

Valid bills for sales for resale service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due 30 days after the invoice date. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

(Continued)

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B.P.U. No. 8 – Water

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RATE SCHEDULE E
SALES FOR RESALE – MANASQUAN

APPENDIX A

Annual Purchase Period: July 1, 1990 through June 30, 1991 and each subsequent 12-month period thereafter.

Uninterruptible Service shall not exceed the limits established for each month, day and hour in each Annual Purchase Period as set forth in the following tables:

Borough of Avon-By-The-Sea

Annual Purchase Requirement: 46.0 Million Gallons Per Year (MGY)

Uninterruptible Service
Annual Purchase Period Limitations

<u>Month</u>	<u>Maximum Monthly Purchase Million Gallons (MG)</u>	<u>Maximum Daily Purchase Million Gallons (MG)</u>	<u>Peak Hourly Purchase Gallons Per Minute (GPM)</u>
January	7	0.30	250
February	7	0.30	250
March	7	0.30	250
April	7	0.30	250
May	3	0.11	90
June	2	0.11	90
July	1	0.05	90
August	2	0.11	90
September	4	0.16	90
October	7	0.30	250
November	7	0.30	250
December	7	0.30	250

Borough of Belmar

Annual Purchase Requirement: 105.0 MGY

Uninterruptible Service
Annual Purchase Period Limitations

<u>Month</u>	<u>Maximum Monthly Purchase (MG)</u>	<u>Maximum Daily Purchase (MG)</u>	<u>Peak Hourly Purchase (GPM)</u>
January	17	1.00	1000
February	17	1.00	1000
March	17	1.00	1000
April	17	1.00	1000
May	0	0.00	0
June	0	0.00	0
July	0	0.00	0
August	0	0.00	0
September	0	0.00	0
October	17	1.00	1000
November	17	1.00	1000
December	17	1.00	1000

(Continued)

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B.P.U. No. 8 – Water

Original Sheet: No. 36.3.3

RATE SCHEDULE E
SALES FOR RESALE – MANASQUAN

APPENDIX A
(Continued)

Borough of Matawan

Annual Purchase Requirement: 121.18 MGY

Uninterruptible Service
Annual Purchase Period Limitations

<u>Month</u>	<u>Maximum Monthly Purchase (MG)</u>	<u>Maximum Daily Purchase (MG)</u>	<u>Peak Hourly Purchase (GPM)</u>
January	24	1.20	900
February	21	1.05	900
March	23	1.15	900
April	21	1.05	900
May	0	0.00	0
June	0	0.00	0
July	0	0.00	0
August	0	0.00	0
September	0	0.00	0
October	23	1.15	900
November	23	1.15	900
December	23	1.15	900

Borough of Red Bank

Annual Purchase Requirement: 200.0 MGY

Uninterruptible Service
Annual Purchase Period Limitations

<u>Month</u>	<u>Maximum Monthly Purchase (MG)</u>	<u>Maximum Daily Purchase (MG)</u>	<u>Peak Hourly Purchase (GPM)</u>
January	51	2.55	2100
February	51	2.55	2100
March	51	2.55	2100
April	34	1.46	1200
May	6	0.30	300
June	6	0.30	300
July	6	0.30	300
August	6	0.30	300
September	6	0.30	300
October	34	1.46	1200
November	62	2.66	2150
December	62	2.66	2150

With mutual consent, the parties may agree to reduce delivery at one point while increasing delivery at the other point.

(Continued)

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B.P.U. No. 8 – Water

Original Sheet: No. 36.3.4

RATE SCHEDULE E
SALES FOR RESALE – MANASQUAN

APPENDIX A
(Continued)

Lake Como Borough

Annual Purchase Requirement: 36.5 MGY

Uninterruptible Service
Annual Purchase Period Limitations

<u>Month</u>	Sales for resale Manasquan Maximum Monthly <u>Purchase (MG)</u>	Manasquan Maximum Daily <u>Purchase (MG)</u>	Manasquan Peak Hourly <u>Purchase (GPM)</u>
January	4.0	0.37	300
February	4.0	0.37	300
March	4.0	0.37	300
April	4.0	0.37	300
May	3.65	0.12	400
June	2.45	0.12	500
July	1.23	0.06	450
August	2.45	0.12	400
September	4.8	0.18	350
October	5.0	0.37	350
November	4.0	0.37	300
December	4.0	0.37	300

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR19121516 dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet:: No. 36.4
Superseding Original Sheet: No. 36.4

RATE SCHEDULE F
OPTIONAL INDUSTRIAL WHOLESALE

APPLICABILITY

Applicable only to customers that are served by the Company and that (a) use 9,350,000 or more gallons of water per month, each and every month (b) have loading factors (the ratio of maximum demand (peak load) to the average demand (load) during a given period) not in excess of 1.2 times their monthly consumption on an average daily basis, (c) have signed an annual commitment as to their average monthly consumption on an average daily basis. The charge for service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All such customers shall pay a Fixed Service Charge based on the size of the meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate. Whenever service is established or discontinued, all applicable fixed charged shall be prorated to the date of establishment or discontinuance of service as follows:

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>	<u>Exempt Per Month</u>
5/8"	\$22.09	\$19.07
3/4"	33.15	28.63
1"	55.23	47.69
1 1/2"	110.50	95.41
2"	176.71	152.58
3"	331.39	286.15
4"	552.29	476.88
6"	1,104.48	953.68
8"	1,767.21	1,525.92
10"	2,208.95	1,907.35
12"	2,760.96	2,383.99
16"	4,417.90	3,814.70

WATER CHARGE

<u>Rate Per 100 Gallons</u>		<u>Rate Per 1,000 Gallons</u>	
<u>Non-Exempt</u>	<u>Exempt</u>	<u>Non-Exempt*</u>	<u>Exempt*</u>
\$0.42786	\$0.36944	\$4.2786	\$3.6944

MINIMUM CONSUMPTION CHARGE

A minimum consumption charge is applicable. The minimum consumption charge is equal to 9,350,000 gallons of water per month multiplied by the appropriate Water Charge herein and the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1.

TERMS OF PAYMENT

Valid bills for sale of water under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

(Continued)

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201____ dated _____.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 36.4.1

RATE SCHEDULE F
OPTIONAL INDUSTRIAL WHOLESAL
(Continued)

TERMS

Bills are rendered monthly in arrears (or quarterly at the sole option of the Company).

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

If monthly consumption on an average daily basis exceeds a load factor of 1.2 times the last (rolling) twelve months average monthly consumption on an average daily basis for three consecutive months, between April 1 and September 30, a customer will be removed from this Rate Schedule and will be billed under the General Metered Service Rate Schedule A-1. A customer can be exempt from the above requirements if they intend to increase their average daily consumption, on a monthly basis [entitled the committed average daily amount (CADA)] for the next twelve months provided they sign an additional written commitment at least one month prior to the period in which they exceed 1.2 times their consumption on an average daily basis.

If a customer's actual amount used is less than the CADA, the customer will be billed at the CADA level. This minimum billing procedure will remain in effect for a period of twelve months from the date the new commitment becomes effective. A customer eliminated from this Rate Schedule will continue to be billed under General Metered Service for a minimum of twelve months and will again be eligible for this schedule if, after twelve months, its monthly consumption on an average daily basis has not exceeded, for three consecutive months, 1.2 times the last twelve-month average monthly consumption.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 36.5
Superseding Original Sheet: No. 36.5

RATE SCHEDULE G
SALES FOR RESALE – SERVICE TO OTHER SYSTEMS

APPLICABILITY

Applicable to Sales for Resale customers receiving service from the Company as of December 8, 2008. Applicable to customers served by the Company throughout Service Area 2 that have a contract demand of 500,000 or more gallons per day pursuant to a contract entered into with the Company at the Company's sole option. The charge for metered Service to Other Systems Under Contract shall consist of the total of Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

CHARACTER OF SERVICE

Continuous, except as limited by written agreement.

WATER CHARGE

<u>Consumption</u>	<u>Rate Per 1,000 Gallons</u>	
	<u>Non-Exempt</u>	<u>Exempt</u>
All water usage	\$3.3038	\$2.8527

	<u>Rate Per 100 Gallons</u>	
	<u>Non-Exempt</u>	<u>Exempt</u>
All water usage	\$0.33038	\$0.28527

TERMS OF PAYMENT

Valid bills for sale of water under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

TERMS

Subject to written agreement.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 36.6
Superseding Original Sheet: No.36.6

RATE SCHEDULE H
SALES FOR RESALE – PEAKING SERVICE

APPLICABILITY

Applicable to Sales for Resale customers for sales occurring during the Company's peak service period May 1 through September 30 who: (1) do not have a written agreement with the Company for the provision of water service; or (2) whose written agreement with the Company does not contain an annual purchase commitment. This Rate Schedule does not apply to customers taking service under Rate Schedule D (Off-Peak) during non-drought conditions unless otherwise provided for in that customer's agreement. During drought emergencies declared by the Governor, this Rate Schedule will be applied to all surplus water transfers ordered by the Commissioner of the Department of Environmental Protection to mitigate drought. The charge for this service shall consist of the total of the Fixed Service Charge, the Water Charge, the Purchased Water Adjustment Clause (PWAC) Charge, as shown on Rate Schedule O-1, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K.

CHARACTER OF SERVICE

Interruptible.

FIXED SERVICE CHARGE

All such customers shall pay a fixed service charge, during any month when water is consumed pursuant to this Rate Schedule H, based on the size of each meter installed by the Company. Customers with multiple meters shall be charged for each meter at the indicated rate.

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>	<u>Exempt Per Month</u>
5/8"	\$22.09	\$19.07
3/4"	33.15	28.63
1"	55.23	47.69
1 1/2"	110.50	95.41
2"	176.71	152.58
3"	331.39	286.15
4"	552.29	476.88
6"	1,104.48	953.68
8"	1,767.21	1,525.92
10"	2,208.95	1,907.35
12"	2,760.96	2,383.99
16"	4,417.90	3,814.70

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter.

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$1.07656	\$10.7656
Exempt	All	\$0.92957	\$9.2957

TERMS OF PAYMENT

Valid bills for sales for resale service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due 30 days after the invoice date. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 36.7
Superseding Original Sheet: No. 36.7

RATE SCHEDULE I
EMERGENCY OR BACKUP BULK RATE SALES

APPLICABILITY

Applicable to emergency/backup bulk sales to municipalities or other water purveyors in Service Area 1C, Shorelands, and only by yearly contract between the municipality or other water purveyor and the Company.

CHARACTER OF SERVICE

Continuous, except as limited by "Standard Terms and Conditions".

FIXED SERVICE CHARGE

All such customers shall pay a fixed service charge, during any month when water is consumed pursuant to this Rate Schedule I, based on the size of each meter installed by the Company, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K. Customers with multiple meters shall be charged for each meter at the indicated rate.

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>	<u>Exempt Per Month</u>
5/8"	\$22.09	\$19.07
3/4"	33.15	28.63
1"	55.23	47.69
1 1/2"	110.50	95.41
2"	176.71	152.58
3"	331.39	286.15
4"	552.29	476.88
6"	1,104.48	953.68
8"	1,767.21	1,525.92
10"	2,208.95	1,907.35
12"	2,760.96	2,383.99
16"	4,417.90	3,814.70

WATER CHARGE

In addition to the Fixed Service Charge set forth above, a charge will be made for all water used as registered by the meter.

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$0.63596	\$6.3596
Exempt	All	\$0.54913	\$5.4913

Exempt customers, as defined in N.J.S.A. 54:30A-50, are those public utility corporations which are subject to the payment of a tax based on gross receipts.

Non-Exempt customers are all other customers not entitled to the statutory exemptions provided pursuant to N.J.S.A. 54:30A-50(c). Uninterruptible customers are as defined in the Water Resale and Treatment Agreement.

TERMS OF PAYMENT

Valid bills for sale of water under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 36.8
Superseding Original Sheet: No. 36.8

RATE SCHEDULE J
SALES FOR RESALE – MANASQUAN

APPLICABILITY

Applicable to bulk sales to municipalities or other water purveyors taking water from the New Jersey Water Supply Authority ("NJWSA") delivered through Service Area 1C pursuant to Water Resale and Treatment contractual requirements where they pay the NJWSA directly for the raw water.

FIXED SERVICE CHARGE

All sales for resale service customers shall pay a fixed service charge based on the size of each meter installed, in addition to the charge for the quantity of water used, if any, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, and the Distribution System Improvement Charge (DSIC), as shown on Rate Schedule K. Customers with multiple meters shall be charged for each meter at the indicated rate.

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>	<u>Exempt Per Month</u>
5/8"	\$22.09	\$19.07
3/4"	33.15	28.63
1"	55.23	47.69
1 1/2"	110.50	95.41
2"	176.71	152.58
3"	331.39	286.15
4"	552.29	476.88
6"	1,104.48	953.68
8"	1,767.21	1,525.92

WATER CHARGES

A charge will be made for all water used pursuant to the take or pay contractual agreement as follows:

	<u>Non-Exempt Rate Per 1,000 Gallons</u>	<u>Exempt Rate Per 1,000 Gallons</u>
Uninterruptible	\$3.0237	\$2.6108

Exempt customers, as defined in N.J.S.A. 54:30A-50(c), are those public utility corporations which are subject to the payment of a tax based on gross receipts.

Non-Exempt customers are all other customers not entitled to the statutory exemptions provided pursuant to N.J.S.A. 54:30A-50(c). Uninterruptible customers are as defined in the Water Resale and Treatment Agreement.

TERMS OF PAYMENT

Valid bills for sales for resale service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due 30 days after the invoice date. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

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Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Twelfth Revised Sheet: No. 37
Superseding Eleventh Revised Sheet: No. 37

RATE SCHEDULE K
DISTRIBUTION SYSTEM IMPROVEMENT CHARGE

Applicable to all general metered service and sales for resale customers throughout the entire territory served.

CHARACTER

Continuous, except as limited by the "Standard Terms and Conditions".

DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC)

In addition to all other charges for general metered service (GMS) and sales for resale customers throughout the entire territory served, the following charges will be assessed on a fixed, per meter basis for each monthly bill, commencing [date].

RATE

This charge is in addition to Rate Schedules A-1 through A-16, C, D, E, F, H, I and J.

<u>Size of Meter</u>	<u>Non-Exempt Per Month</u>	<u>Exempt Per Month</u>
5/8"	\$0.00	\$0.00
3/4"	0.00	0.00
1"	0.00	0.00
1 1/2"	0.00	0.00
2"	0.00	0.00
3"	0.00	0.00
4"	0.00	0.00
6"	0.00	0.00
8"	0.00	0.00
10"	0.00	0.00
12"	0.00	0.00
16"	0.00	0.00

FILING

The DSIC is authorized pursuant to N.J.A.C. 14:9-10.1 et seq. and the procedures for filing, reviewing, approving and implementing the DSIC are set forth therein. The DSIC is based on the Company's Foundational Filing, which was reviewed and approved by the Board of Public Utilities on October 28, 2020. The approval process included public notice and four public hearings. The notice included proposed surcharge amounts, which were estimated based on projected construction schedules, costs and other factors. Pursuant to the approved Foundational Filing, the Company shall endeavor to make semi-annual DSIC filings at approximately six-month intervals. The DSIC is subject to a maximum amount and other limitations in N.J.A.C. 14:9-10.1 et seq.

TERMS OF PAYMENT

See Rate Schedules for applicable customer classes.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISION

*Non-Exempt consumption charges reflect a water tax of \$.01 per 1,000 gallons of water consumed pursuant to N.J.S.A. 58:12A-21(a). Exempt consumption charges reflect a water tax of \$.01 multiplied by 0.8634646 per 1,000 gallons. This water tax is not applicable for sales for resale service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.1
Superseding Original Sheet: No. 38.1

RATE SCHEDULE L-1
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively for private fire protection throughout Service Area 1, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

<u>Size of Connection</u>	<u>Per Month</u>
For each connection of 2" or less	\$26.60
For each 3" connection	59.84
For each 4" connection	106.37
For each 6" connection	239.34
For each 8" connection	425.50
For each 10" connection	665.00
For each 12" connection	957.60
For each 16" connection	1,702.40

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. The use of private fire protection facilities for other reasons will result in termination of service following notification pursuant to N.J.A.C. 14:3-dA.1(d), and water charges will be computed under the General Metered Service Rate Schedule A-1.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-1.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201____ dated _____.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.2
Superseding Original Sheet: No. 38.2

RATE SCHEDULE L-2
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively for private fire protection where multiple customers are served from one private fire service connection in Service Area 1 in the Townships of Logan and Woolwich, Gloucester County in the area formerly served by Logan Wells Water Company.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

The charge for private fire protection shall consist of the total of the sprinkler head charge based on the number of sprinkler heads, the hydrant charge based on the number of hydrants, as well as the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

	<u>Per Month</u>
For each Sprinkler Head	\$1.25
For each Hydrant	\$52.93

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered in monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-1.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-2.

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1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.3
Superseding Original Sheet: No. 38.3

RATE SCHEDULE L-3
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively for private fire protection throughout Service Area 2, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

1- **Service Charge**

<u>Size of Connection</u>	<u>Per Month</u>
For each connection of 2" or less	\$51.20
For each 3" connection	100.58
For each 4" connection	162.18
For each 6" connection	300.84
For each 8" connection	513.70
For each 10" connection	670.81
For each 12" connection	965.93
For each 16" connection	1,897.94
For each 20" connection	3,458.92

2- **Hydrant Charge**

<u>Per Month</u>	
For each Hydrant	\$62.82

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-1.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-3.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201____ dated _____.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.4
Superseding Original Sheet: No. 38.4

Reserved for future use.

Issued: January 14, 2022

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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201____ dated _____.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.5
Superseding Original Sheet: No. 38.5

RATE SCHEDULE L-7
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively to private fire protection facilities served by the Company, throughout Service Area 3 and Service Area 1A, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

1- **Service Charge**

<u>Size of Connection</u>	<u>Per Month</u>
For each connection of 2" or less	\$26.60
For each 3" connection	59.84
For each 4" connection	106.37
For each 6" connection	239.34
For each 8" connection	425.50
For each 10" connection	665.00
For each 12" connection	957.60
For each 16" connection	1,702.40

2- **Hydrant Charge**

	<u>Per Month</u>
For each Hydrant	\$45.08

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-1.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-7.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.6
Superseding Original Sheet: No. 38.6

RATE SCHEDULE L-9
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively to private fire protection facilities served by the Company, throughout Service Area 1B, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

1- **Service Charge**

<u>Size of Connection</u>	<u>Per Month</u>
For each connection of 2" or less	\$31.50
For each 3" connection	70.87
For each 4" connection	125.96
For each 6" connection	283.42
For each 8" connection	503.88
For each 10" connection	787.50
For each 12" connection	1,134.00
For each 16" connection	2,016.00

2- **Hydrant Charge**

	<u>Per Month</u>
For each Hydrant	\$37.81

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-1.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-9.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.7
Superseding Original Sheet: No. 38.7

RATE SCHEDULE L-10
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively to private fire protection facilities served by the Company, throughout Service Area 1C, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Sprinkler services with hose or hydrant connected to them:

<u>Size of Connection</u>	<u>Per Month</u>
For each 3" connection	\$183.00
For each 4" connection	183.00
For each 6" connection	305.00
For each 8" connection	610.00
For each 10" connection	976.00

Sprinkler services without hose or hydrant connected to them:

<u>Size of Connection</u>	<u>Per Month</u>
For each connection of 2" or less	\$65.00
For each 3" connection	136.00
For each 4" connection	227.00
For each 6" connection	454.00
For each 8" connection	726.00
For each 10" connection	1,134.00

Hydrant Charge

	<u>Per Month</u>
For each Hydrant	\$70.59

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-1.

(continued)

Issued: January 14, 2022

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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 38.7.1

RATE SCHEDULE L-10
PRIVATE FIRE PROTECTION SERVICE
(Continued)

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-10.

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.8
Superseding Original Sheet: No. 38.8

RATE SCHEDULE L-11
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to customers throughout Service Area 1D, formerly served by Applied Wastewater Management, Inc. ("Applied"), for private fire protection service.

CHARACTER OF SERVICE

Continuous, except as limited by "Standard Terms and Conditions".

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

1- **Service Charge**

<u>Size of Connection</u>	<u>Per Month</u>
For each connection of 2" or less	\$26.60
For each 3" connection	59.84
For each 4" connection	106.37
For each 6" connection	239.34
For each 8" connection	425.50
For each 10" connection	665.00
For each 12" connection	957.60
For each 16" connection	1,702.40

2- **Hydrant Charge**

	<u>Per Month</u>
For each Hydrant	\$33.18

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed service charges shall be prorated to the date of establishment or discontinuance of service.

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice, N.J.A.C. 14:3-3A.3. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-1.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-11.

CONDITIONS

Subject to "Standard Terms and Conditions".

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201____ dated _____.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 38.9
Superseding Original Sheet: No. 38.9

RATE SCHEDULE L-12
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively to private fire protection facilities served by the Company, throughout Service Area 1F, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

For each system:

Per Month
\$32.83

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-16.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-12.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 38.10

RATE SCHEDULE L-13
PRIVATE FIRE PROTECTION SERVICE

APPLICABILITY

Applicable for service furnished exclusively to private fire protection facilities served by the Company, throughout Service Area 1G, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

1- **Service Charge**

<u>Size of Connection</u>	<u>Per Month</u>
For each connection of 2" or less	\$62.50
For each 3" connection	62.50
For each 4" connection	62.50
For each 6" connection	133.33
For each 8" connection	250.00
For each 12" connection	583.33

2- **Hydrant Charge**

	<u>Per Month</u>
For each Hydrant	\$10.42

TERMS OF PAYMENT

Valid bills for private fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least thirty (30) days' notice prior to the proposed discontinuance. The Company will adhere to all applicable notification requirements found in N.J.A.C. 14:3-3A.4(j) before discontinuing service.

TERM

Continuous until water service to the customer is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

No additional charge shall be made for water used in extinguishing fires or for underwriters' tests where service is furnished under this schedule.

Private fire service lines shall be equipped with special meters and are to be used exclusively for fire protection purposes. No water shall be used through these connections except for purposes of underwriters' tests or extinguishment of fire. Any water usage for other purposes will be computed under the General Metered Service Rate Schedule A-17.

Residential customers served by a water service line of two (2) inches or less in diameter will not be imposed a standby fee for fire protection system.

Rooming and boarding houses as defined in the "Rooming and Boarding House Act of 1974" and those residential health care facilities as defined in the "Health Care Facilities Planning Act," upon furnishing to the Company proof in the form of a license or certificate from the appropriate state agency that the particular facility or house is entitled to exemption, will be exempt from the charges of Rate Schedule L-13.

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Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.1
Superseding Original Sheet: No. 39.1

RATE SCHEDULE M-1
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company throughout Service Areas 1 and 1E, except as specifically provided elsewhere in this tariff.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

	<u>Per Month</u>
For each Hydrant	\$57.82

TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet No. 39.2
Superseding Original Sheet: No. 39.2

RATE SCHEDULE M-2
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company in Service Area 1 in the Townships of Logan and Woolwich, Gloucester County in the area formerly served by Logan Wells Water Company as well as in Ortley Beach and the Pelican Island System in Toms River Township, Ocean County.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

	<u>Per Month</u>
For each Hydrant	\$52.93

TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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Docket No. WR2201_____ dated _____.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.3
Superseding Original Sheet: No. 39.3

RATE SCHEDULE M-3
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company in Service Area 1 in the Townships of Howell and Freehold, Monmouth County in the area formerly served by Adelpia Water Company.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

	<u>Per Month</u>
For each Hydrant	\$53.20

TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

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Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.4
Superseding Original Sheet: No. 39.4

RATE SCHEDULE M-5
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company throughout Service Area 2.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

The amount of the bill will reflect the hydrant charge as defined hereafter for each tariff zone located in Service Area 2 as defined in Rate Schedule M-5.

<u>Tariff Zone</u>	<u>For each Hydrant</u> <u>Per Month</u>
2A	\$51.95
2C	57.82
2D	59.18
2E	61.58
2F	61.58
2G	61.58
2H	63.74
2I	65.78
2J	66.67
2K	70.59
2L	70.59

TERMS AND PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

TERM

Continuous until water service within municipality is permanently discontinued.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

(Continued)

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Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201_____ dated _____.

RATE SCHEDULE M-5
PUBLIC FIRE PROTECTION SERVICE
(Continued)

The table hereafter defines the different tariff zones for Service Area 2:

Tariff Zone	Municipality
2A	<ul style="list-style-type: none"> • Bedminster Township • Franklin Township
2C	<ul style="list-style-type: none"> • Hillside Township
2D	<ul style="list-style-type: none"> • Union Township
2E	<ul style="list-style-type: none"> • Readington Township
2F	<ul style="list-style-type: none"> • Borough of Bound Brook • Dunellen Borough • Garwood Borough • North Plainfield Borough • Plainfield City • Roselle Borough
2G	<ul style="list-style-type: none"> • Cranford Township • Middlesex Borough • Peapack/Gladstone Borough • Roselle Park Borough • South Bound Brook Borough • South Brunswick Township • Town of Westfield • Warren Township
2H	<ul style="list-style-type: none"> • Branchburg Township • Hillsborough Township • Kenilworth Borough • Somerville Borough • Tewksbury Township • Chester Township • Fanwood Borough • Greenbrook Township • Linden City • Montgomery Township • Raritan Borough
2I	<ul style="list-style-type: none"> • Clark Township • Raritan Township • Scotch Plains Township
2J	<ul style="list-style-type: none"> • Bridgewater Township • Cranbury Township • Manville Borough • Millstone Borough • Mountainside Borough • Piscataway Township • South Plainfield Borough • Watchung Borough
2K	<ul style="list-style-type: none"> • Princeton (f/k/a Princeton Township)
2L	<ul style="list-style-type: none"> • Edison Township • Hopewell Township • Lawrence Township • Plainsboro Township • West Windsor Township

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR19121516 dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.5
Superseding Original Sheet: No. 39.5

RATE SCHEDULE M-6
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to all municipalities for public fire protection service provided by the Company in Service Area 3.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

The amount of the bill will reflect the hydrant charge as defined hereafter for each tariff zone located in Service Area 3 as defined in Rate Schedule M-6.

<u>Tariff Zone</u>	<u>For each Hydrant Per Month</u>
3A	\$35.77
3B	40.26
3C	44.76
3D	49.26
3G	55.99

TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

TERM

Continuous until water service within municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.
The table hereafter defines the different tariff zones for Service Area 3:

Tariff Zone	Municipality
3A	<ul style="list-style-type: none">• Mansfield (Columbus) Township• Springfield Township
3B	<ul style="list-style-type: none">• Plumsted Township
3C	<ul style="list-style-type: none">• Mansfield -Homestead• Southampton Township
3D	<ul style="list-style-type: none">• Mount Holly Township
3G	<ul style="list-style-type: none">• Eastampton Township• Hainesport Township• Lumberton Township• Medford Township• Westampton Township

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1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.6
Superseding Original Sheet: No. 39.6

RATE SCHEDULE M-7
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company throughout Service Area 1A, except as specifically provided elsewhere in this tariff. Applicable for flat rate fire protection service in the locations where the Company has facilities suitable and adequate for the desired service upon request from the proper authorities.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

	<u>Per Month</u>
For each Hydrant	\$44.46

TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.7
Superseding Original Sheet: No. 39.7

RATE SCHEDULE M-8
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company throughout Service Area 1B, except as specifically provided elsewhere in this tariff. Applicable for flat rate fire protection service in the locations where the Company has facilities suitable and adequate for the desired service upon request from the proper authorities.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

	<u>Per Month</u>
For each Hydrant	\$37.81

TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.8
Superseding Original Sheet: No. 39.8

RATE SCHEDULE M-9
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to municipalities for public fire protection service provided by the Company throughout Service Area 1C, except as specifically provided elsewhere in this tariff. Applicable for flat rate fire protection service in the locations where the Company has facilities suitable and adequate for the desired service upon request from the proper authorities.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

	<u>Per Month</u>
For each Hydrant	\$70.59

TERMS OF PAYMENT

Valid bills for public fire protection service furnished under this schedule are to be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.9
Superseding Original Sheet: No. 39.9

RATE SCHEDULE M-10
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to the municipality for all fire hydrants on public streets within Service Area 1D, formerly served by Applied Wastewater Management, Inc. ("Applied").

CHARACTER OF SERVICE

Continuous, except as limited by "Standard Terms and Conditions".

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

	<u>Per Month</u>
For each Hydrant	\$33.18

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed service charges shall be prorated to the date of establishment or discontinuance of service.

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

CONDITIONS

Subject to "Standard Terms and Conditions".

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

First Revised Sheet: No. 39.10
Superseding Original Sheet: No. 39.10

RATE SCHEDULE M-11
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to the municipality for all fire hydrants on public streets within Service Area 1F, Roxbury.

CHARACTER OF SERVICE

Continuous, except as limited by "Standard Terms and Conditions".

RATES

In addition to the rates below, the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2, shall apply.

Hydrant Charge

	<u>Per Month</u>
For each Hydrant	\$32.83

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed service charges shall be prorated to the date of establishment or discontinuance of service.

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

CONDITIONS

Subject to "Standard Terms and Conditions".

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 39.11

RATE SCHEDULE M-12
PUBLIC FIRE PROTECTION SERVICE

APPLICABILITY

Applicable to the municipality for all fire hydrants on public streets within Service Area 1G.

CHARACTER OF SERVICE

Continuous, except as limited by "Standard Terms and Conditions".

RATES

Hydrant Charge

For each Hydrant

Per Month
\$10.42

TERM

Continuous until water service to the municipality is permanently discontinued. Whenever service is established or is discontinued, all applicable fixed service charges shall be prorated to the date of establishment or discontinuance of service.

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date. Thereafter, the Company may not discontinue water service unless written notice is provided giving the customer at least ten (10) days' notice prior to the proposed discontinuance. The 10 days shall begin on the postmark date of the notice. N.J.A.C. 14:3-3A.3.

CONDITIONS

Subject to "Standard Terms and Conditions".

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Fifth Revised Sheet: No. 40
Superseding Fourth Revised Sheet: No. 40

RATE SCHEDULE O-1
PURCHASED WATER ADJUSTMENT CLAUSE (PWAC)

APPLICABILITY

Applicable to all Metered Water Customer classes served by the Company in all service areas for water service, except for Manasquan Uninterruptible Service, and those customers subject to Rate Schedules I and J. The PWAC charge, as defined under the Standard Terms and Conditions of this tariff, is designed to recover the cost of purchased water associated with the normal operations of the Company and allow the Company to achieve a zero or near-zero deferred balance each April 1st on its purchased water costs.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

PURCHASED WATER ADJUSTMENT CLAUSE (PWAC) CHARGE

In addition to all other charges for metered service, the following charges per one hundred gallons or per one thousand gallons for all sales will be made to recover purchased water costs not included in the Water Charge or any other Charge:

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$0.04221	\$0.4221
Exempt	All	\$0.03646	\$0.3646

The PWAC Charge is also applicable to any difference between the quantity of water actually purchased by the customer and any applicable take-or-pay commitment.

FILING

The Company shall endeavor to make an annual PWAC filing no later than December 1st of each year proposing a PWAC rate to be effective on or about the following April 1st.

The notice of filing and of public hearing in the annual PWAC proceedings shall include the specific rate change proposed to be implemented on April 1st. The notice shall also include the impact of such potential increases on a benchmark bill.

The annual PWAC filing shall contain, but not be limited to, the following:

1. A reconciliation of actual versus estimated costs and revenues from the last Board approved PWAC charge for purchased water;
2. Projected rates supported by projected volumes, revenues, and projected purchased water costs;
3. Deferred balances and the timeframe over which they are proposed to be collected or returned;
4. A written explanation of the circumstances that caused the deferred balances in (3) above;
5. A written explanation of any significant activities or trends which may affect costs for the prospective period; and
6. Updated tariff sheets to reflect any change to the PWAC rate.

The benchmark bill shall be the average residential water customer bill for a twelve-month period.

(Continued)

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RATE SCHEDULE O-1
PURCHASED WATER ADJUSTMENT CLAUSE (PWAC)
(Continued)

PROVISIONS

Interest shall be passed onto customers through the PWAC rates at the beginning of each PWAC Year succeeding any PWAC year in which any monthly purchased water costs over recovery has taken place. Any debit or credit balance in the separate deferred net revenue or separate cost of purchased water accounts shall be determined monthly. Monthly interest shall be calculated on the average of the current and prior month's ending cumulative deferred revenue or cost of purchased water balances. Interest on such water costs shall be calculated utilizing the rate of return on rate base utilized to set rates in the Company's last preceding base rate case, and shall be changed from time to time, consistent with N.J.A.C. 14:9-7.1, et seq.

The clause shall be subject to deferred accounting, consistent with N.J.A.C. 14:9-7.1, et seq.

TERMS OF PAYMENT

See Rate Schedules for applicable customer classes.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 40.2

RATE SCHEDULE O-2
UNCOLLECTIBLE ADJUSTMENT CLAUSE (UAC)

APPLICABILITY

Applicable to all Water and Wastewater Customer classes served by the Company in all service areas.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

UNCOLLECTIBLE ADJUSTMENT CLAUSE (UAC) CHARGE

The current rates approved in this tariff include a projected uncollectible expense of \$X or X%.

The actual amount of uncollectible expense will be tracked and compared to the authorized amount of uncollectible expense. The Company shall file with the BPU on or before January 25 of each year, the UAC calculation and support for any annual adjustments to be effective under this tariff. The BPU will have 60 days to review the filing. Any under- or over-collection will be recovered or passed back via a surcharge or credit, respectively, from April 1 through December 31.

RATE

In addition to all other charges for service, the following UAC surcharge/credit will be assessed on a fixed basis for each monthly bill, commencing [date]:

\$X

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1 Water Street, Camden, NJ 08102

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RATE SCHEDULE P-1
MISCELLANEOUS SERVICE

APPLICABILITY

Applicable throughout the entire area served by the Company for Miscellaneous Municipal Service, General Building Construction and Trucked Bulk Water Sales.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RATES

(a) Miscellaneous Municipal Service: Each customer shall pay for all water used for street sprinkling, street or sewer flushing, swimming pools or other miscellaneous uses at the General Metered Service Rates of this tariff as applicable. Water consumption will be determined by metering or by such other method as may be mutually agreed upon by the customer and the Company. Fire hydrants are not to be used for this service without the express consent of the Company in each circumstance where this service is required. No person, other than municipal fire and Company personnel is permitted to operate or take water from any public fire hydrant for street sprinkling, flushing sewers, storm water drains, or any purpose unless authorized by the Company and the fire chief of the municipality in writing and upon the terms and conditions set forth by the fire chief and the Company therein.

(b) Water For Building Construction: Where water service is temporarily furnished for building construction and/or any other temporary use, it shall, wherever practical, be supplied through a meter at the General Metered Service Rates of this tariff as applicable. Should a new service be required to provide this temporary use, the customer shall pay the cost to install and remove the service. No person, other than municipal fire and Company personnel, is permitted to operate or take water from any public fire hydrant for building construction or any purpose unless authorized by the Company and the fire chief of the municipality in writing and upon the terms and conditions set forth by the fire chief and the Company therein.

(c) Bulk Water Sales for water transfers using Trucks and Tanks: Water sales to customers or entities using trucks or tanks to receive water service from the Company that require additional attention may affect the Company's daily operations. A surcharge in the amount of \$50 may be applied for each such request in addition to the water charge as set forth in the applicable General Metered Service Rates of this tariff. If at any time the Company determines that a customer or entity has taken water without permission or proper compensation to the Company under this provision, the Company reserves the right to refuse to sell water to the customer or entity hereunder.

TERMS OF PAYMENT

All charges rendered under this Rate Schedule are in arrears for metered service and in advance for un-metered service. At the option of the Company, a deposit may be required for metered service billed in arrears, in accordance with N.J.A.C. 14:3-3.4, et seq. The Company may not require a deposit for un-metered service billed in advance in accordance with N.J.A.C. 14:3-3.4(i). Bills are due fifteen (15) days from the date of the postmark on the envelope in which the bill is transmitted.

TERM

Continuous until water service to the customer is permanently discontinued.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

Where metered service is provided through a hydrant meter, a deposit equal to the cost of the hydrant meter may be required by the Company. The meter shall be kept safe and accessible during its use. The deposit, less the cost of repairs to the meter, if any, will be returned to the applicant by the Company after surrender of the meter and payment of all charges for water supplied through it.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Fourth Revised Sheet: No. 42
Superseding Third Revised Sheet: No. 42

RATE SCHEDULE P-2
MISCELLANEOUS SERVICE –
CHARGES NOT INVOLVING THE USE OF WATER

APPLICABILITY

Applicable to all classes of customers unless specified for the following classes of miscellaneous services throughout the entire area served by the Company.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

RECONNECTIONS AND RECONNECTION CHARGE

1. Resumption of service rates due to: discontinuance of service as a result of non-payment of bills; violation of the Company's tariff rules; the voluntary request of the customer when the meter has not been removed (e.g. seasonal requests) or for customer's convenience, are set forth as follows.

Conditions	Rate
<p>Normal working hours</p> <p>For the purpose of requests for reconnection services under this section, normal working hours are as follows:</p> <p>Monday through Friday* 8 AM to 6 PM Saturday* 8 AM to 2 PM</p> <p>*Except for the following holidays: New Year's Day, President's Day, Veteran's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the day after Thanksgiving, and Christmas Day.</p>	\$28.00
<p>After-hours restoration of service</p> <p>The Company has 12 hours from proper application by the customer to restore service, after all of the conditions under which such service was discontinued are corrected and the utility has received notice of payment. Requests for reconnection of service that must be worked all days and times outside of normal working hours as listed above, plus all holidays as listed above, are subject to the after-hours restoration of service rate.</p>	\$100.00

2. Resumption of service when a customer's service has been reconnected without the permission of the Company after service has been terminated by the Company for non-payment of bills or violation of the Company's tariff. The Company will physically disconnect the customer's service for a second time and the customer will be required to pay, in addition to any outstanding or delinquent amount, the Company's actual cost of reconnection or \$350.00, whichever is more, before service is restored. The Company shall give written notice to the customer that if service is reconnected again without the permission of the Company, it will be necessary for the Company to excavate and physically disconnect service and that a reconnection charge of \$500, or the actual cost incurred by the Company to excavate and physically disconnect and reconnect the service, whichever is more, will be made. The Company may also seek criminal prosecution under N.J.S.A. 2C:20-8c as well as civil damages.

(Continued)

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RATE SCHEDULE P-2
MISCELLANEOUS SERVICE –
CHARGES NOT INVOLVING THE USE OF WATER
(Continued)

3. Requirement for Customer to be Present for Reconnection. Customers must be present on the premises when the Company reconnects a discontinued water service to said premises. Notwithstanding the foregoing, if the customer is not present but has given consent to the Company to reconnect the water service in his, her or its absence, the Company may reconnect the water service. In such case, the customer is solely responsible for any damage incurred by the customer and/or to the customer's premises due to an approved reconnection of service when the customer is not present at the time of said reconnection, provided that the customer will not be responsible for damage due to the sole negligence of the Company.

CROSS CONNECTION INSPECTION CHARGE

A charge of \$75.00 will be imposed by the Company for an inspection of each cross-connection device installed between an unapproved source of supply and the Company's water supply, subject to the availability of Company resources. The customer must provide proof of inspection.

METER TESTING AND REPLACEMENT CHARGE

1. Customer Request for Additional Meter Testing. If a customer requests that the Company test a meter during any twelve (12) month period in which the Company has already provided one free meter test per N.J.A.C. 14:3-4.5, or if the meter first referred to has been in use less than two years, and the meter is found to be accurate, the Company may charge the customer a fee for removing the meter and a fee for testing the meter as follows:

Schedule for removing and replacing a meter

Meter Size	Rate
Meters up to and including 2" in diameter	\$37.00
Meters larger than 2" in diameter	Actual cost

These charges will not exceed the replacement cost of the meter.

Schedule for testing the meter

Meter Size	Rate
All meters from 5/8 inches up to 1 inch	\$50.00
All meters from 1 1/2 inches up to 3 inches	\$75.00
All meters from 4 inches up to 10 inches	\$100.00
All meters from 12 inches and larger	\$125.00

2. Removing, Repairing and Replacing Meters damaged due to negligence of the customer. The Company may impose a charge on any customer who causes damage to a meter as follows:

- (a) Repair Only: Actual cost of materials used to repair the meter, and the actual cost of labor required to repair and reinstall the meter.
- (b) Meter Replacement for Non-repairable Meters: Actual cost of a new meter, materials used to replace the meter, and the actual cost to install the meter, including the cost of labor required to install the meter.

(Continued)

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Water

Original Sheet: No. 42.2

RATE SCHEDULE P-2
MISCELLANEOUS SERVICE –
CHARGES NOT INVOLVING THE USE OF WATER
(Continued)

BAD CHECK CHARGE

If the Company receives a negotiable instrument from a customer in payment of a bill, charge, or deposit due, and such instrument is subsequently dishonored or uncollectible for any reason, the Company shall charge the customer a handling charge per instrument of \$15.00.

If a bad check charge is applied to a customer account, that amount, as well as the amount of the dishonored check shall be paid with cash, certified check, money order, bank check, or other means of guaranteed payment before such account shall be deemed paid. Additionally, if a customer presents two checks that are dishonored by the bank as a result of the customer's error, the customer will be required to pay by the methods stated above for a period of twelve months from the date of the last dishonored check.

The provisions of this tariff section shall not be deemed to require a customer to submit to automatic deduction from any bank account, credit card, or by on-line banking but the Company may offer same as an option provided the customer is presented with all other available options offered by the Company.

UNAUTHORIZED USE OF COMPANY FACILITIES

There will be a minimum charge of \$500.00 for unauthorized use of Company facilities plus costs for repair of any damages to Company property resulting therefrom.

TERMS OF PAYMENT

Valid bills furnished under this schedule are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

TERM

Continuous until water service to the customer is permanently discontinued.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

The Company may waive the fees and charges referenced in this Rate Schedule P-2 for a customer who is enrolled in the Company's H2O Help to Others Assistance Program or the H2O Help to Others Discount Program, provided that the customer is not deemed to have been abusing and/or taking advantage of the system, including but not limited to repeatedly requiring service reconnections more than three (3) times in any twelve (12) month period.

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RATE SCHEDULE P-3
MULTI-USE SERVICE LINE

APPLICABILITY

The Company will provide an option to customers, upon request and where applicable, to use a “multi-use” service line per N.J.A.C. 14:9-8.3 et seq.

“Multi-use service” means water service that is supplied to a structure through one water line extending from the water main to the structure, and which is used inside the structure for both domestic water service and fire suppression service. A multi-use service is not private fire protection service.

Terms and Conditions not defined specifically below for Multi-Use services shall be the same as those under the STANDARD TERMS AND CONDITIONS.

RATES

Rates applicable to multi-use service are those found in the Company’s General Metered Service Rate Schedules in this tariff as applicable.

TERMS OF PAYMENT

A water utility may terminate a customer’s multi-use service for non-payment of a valid water bill for multi-use service, in accordance with the Board’s rules governing discontinuance of such service at N.J.A.C. 14:3-3A.4(j) and N.J.A.C. 14:9-8.3.

CONDITIONS

By applying for multi-use service, the customer or builder certifies that:

1. The customer or builder has hydraulically calculated the demand for the customer’s or builder’s water system, based on the simultaneous domestic and fire sprinkler demand. The customer or builder shall make this calculation in accordance with the Uniform Construction Code and any other applicable state or local codes; and
2. The customer or builder will ensure that the system is installed in accordance with the Uniform Construction Code at N.J.A.C. 5:23; and
3. The customer will, prior to installation of the meter, obtain and provide the Company with a copy of a valid construction permit in accordance with the Uniform Construction Code from the enforcing agency having jurisdiction over the system.

GENERAL TERMS AND CONDITIONS

- 1- By applying for multi-use service, the customer agrees to be responsible for all claims, costs and liability for personal injury, death and/or property damage, resulting from the customer’s individual water system, and agrees that the Company shall not be so liable unless caused by the negligence of the water utility. (N.J.A.C. 14:9-8.3(d))
- 2- All multi-use service lines shall be metered, and the meter shall be located in a meter pit or vault located outside of the Customer’s structure. The meter pit or vault shall be installed at a location acceptable to the express, advance approval of the Water Company, and otherwise shall comply with the Company’s standard terms and conditions.
- 3- If a customer requests a change in meter size associated with a multi-service meter, the customer must re-apply for service and re-certify each item addressed in this Rate Schedule.

(Continued)

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201____ dated _____.

RATE SCHEDULE P-3
MULTI-USE SERVICE LINE
(Continued)

PROVISION OF SERVICES

By applying for multi-use service, and operating the same, the customer agrees:

1. To include a backflow prevention device(s) as defined at N.J.A.C. 7:10-1.3, and as specified at N.J.A.C. 7:10-10.3;
2. To be solely responsible for all costs and expenses relating to the installation, operation, maintenance, repair and replacement of the customer's water system, including the fire suppression system and backflow prevention device(s);
3. To ensure that the customer's water system complies with the applicable requirements of the Uniform Construction Code in effect at the time of system installation, including any applicable building, plumbing and fire protection sub-codes; and
4. To ensure that the customer's water system is maintained in accordance with all applicable law so as to protect against backflow, back-siphonage and contamination of the potable water system.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Seventh Revised Sheet: No. 44
Superseding Sixth Revised Sheet: No. 44

AREA SERVED - WASTEWATER SERVICE

	<u>County</u>	<u>Municipality</u>	<u>All or Portion</u>	<u>Development/Section</u>	<u>Wastewater System</u>
**	Atlantic	City of Egg Harbor	All	N/A	Egg Harbor City
**	Atlantic	Twp. of Galloway	All	N/A	Egg Harbor City
**	Atlantic	Twp. of Mullica	Portion	N/A	Egg Harbor City
A)	Bergen	Twp. of Oakland	Portion	Ramapo River Reserve	Ramapo River Reserve
A)	Burlington	Twp. of Mansfield	Portion	Mapleton (Mansfield Farms)	Mapleton
B)	Burlington	Twp. of Mansfield	Portion	Homestead (Country Walk)	Homestead
D)	Burlington	Twp. of Mansfield	Portion	John Hydock Elementary School	Mapleton
D)	Burlington	Twp. of Mansfield	Portion	Northern Burlington School	Mapleton
**	Camden	Borough of Haddonfield	All	N/A	Haddonfield/CCMUA
**	Camden	Borough of Mount Ephraim	All	N/A	Mount Ephraim
A)	Cape May	Twp. of Middle	Portion	Avalon Country Club	Avalon Links
*	Cape May	Ocean City	All	N/A	Ocean City/CMCMUA
**	Gloucester	Twp. of Elk	All	N/A	Elk Township
A)	Hunterdon	Borough of Bloomsbury	Portion	Fawn Run	Fawn Run
A)	Hunterdon	Twp. of Tewksbury	Portion	Crossroads at Oldwick	Crossroads
*	Hunterdon	Twp. of Tewksbury	Portion	Pottersville	Pottersville
A)	Hunterdon	Twp. of Union	Portion	Village Square	Village Square
A)	Hunterdon	Twp. of Clinton	Portion	Brass Castle	Brass Castle
A)	Hunterdon	Twp. of Union	Portion	Lookout Pointe	Lookout Pointe
A)	Hunterdon	Twp. of Clinton	Portion	Glen Meadows & Twin Oaks	Glen Meadows
A)	Monmouth	Twp. of Upper Freehold	Portion	Four Seasons at Upper Freehold	Beacon Hill
D)	Monmouth	Twp. of Upper Freehold	Portion	Beacon Hill Clubhouse	Beacon Hill
*, **	Monmouth	Twp. of Howell	Portion	N/A	Howell/MRRSA/OCUA
A)	Morris	Twp. of Mount Olive	Portion	Country Oaks	Country Oaks
A)	Morris	Twp. of Chester	Portion	Four Seasons @ Chester	Four Seasons @ Chester
A)	Morris	Twp. of Jefferson	Portion	Peaks @ Jefferson	Jefferson Peaks
A)	Morris	Twp. of Mount Olive	Portion	Morris Chase	Morris Chase
**	Morris	Twp. of Long Hill	All	N/A	Long Hill Township
*	Ocean	Twp. of Lakewood	Portion	N/A	Lakewood/OCUA
**	Ocean	Twp. of Plumsted	Portion	Jensen's Deep Run	Jensen's
**	Somerset	Borough of Bound Brook	All	N/A	Bound Brook
A)	Somerset	Twp. of Hillsborough	Portion	Hillsborough Chase	Hillsborough Chase
A)	Warren	Twp. of Washington	Portion	Hawk Pointe	Hawk Pointe

KEY:

- A) Community On-Site Water and/or Wastewater System (COWS) (formerly served by Applied)
- B) Homestead (formerly served by Applied)
- C) Reserved
- D) Other Contracts (formerly served by Applied)
- * Wastewater systems served by the Company prior to the merger of Applied Wastewater Management, Inc. ("Applied") into the Company on September 1, 2010.
- ** Systems acquired by the Company after January 1, 2011.

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1 Water Street, Camden, NJ 08102

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WASTEWATER SERVICE RATE SCHEDULES
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Tenth Revised Sheet: No. 46
Superseding Ninth Revised Sheet: No. 46

RATE SCHEDULE 1-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service in the City of Ocean City. The charge for wastewater service shall consist of the total of the Minimum Service Charge, the Sewer Usage Charge and the Purchased Wastewater Treatment Adjustment Clause (PSTAC) Charge, as defined under the Standard Terms and Conditions in this tariff and as shown on Rate Schedule 1-B, and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

MINIMUM SERVICE CHARGE

All wastewater service customers shall pay a Minimum Service Charge in addition to the Sewer Usage Charge, if any. The Minimum Service Charge for a customer is determined every January 1 for the year based on the water usage for the prior July, August and September meter readings ("Summer Quarter Consumption") but in no event will a customer be billed for less than 7,480 gallons per year for wastewater service.

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$1.45000	\$14.5000
Exempt	All	\$1.25200	\$12.5200

SEWER USAGE CHARGE

The volume of sewer use is assumed to equal water meter registration. Charges shall be based on water consumption as indicated by water meter readings on a monthly or quarterly basis at the option of the Company.

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$0.21750	\$2.1750
Exempt	All	\$0.18750	\$1.8780

TERMS OF PAYMENT

The following plan for payment of the Annual Minimum Service Charge is offered as a convenience to our customers and, in the case of seasonal service, does not relieve the customer of the liability to pay the entire Annual Minimum Service Charge if wastewater service is rendered for only a portion of the calendar year. In the case of a non-seasonal customer terminating their account, the customer shall be billed for service provided through the date of service termination.

A new customer, initiating service at existing premises, shall be billed for such service as of the account activation date. The new customer account usage will be based on the existing premises last known summer quarter consumption, until the new customer establishes a summer quarter consumption. A new customer account without established summer quarter consumption data will be required to pay a pro-rata share of the Annual Minimum Service Charge, until the new customer establishes a summer quarter consumption. The proration shall be based on the portion of the calendar year for which the customer receives service.

In addition, in the case of a reactivated account, the customer will be required to pay for the charges as if the account had been active as of January 1. The calculated Annual Minimum Service Charge will therefore be billed across the remaining installment billing periods in that calendar year.

For monthly billed customers, one-twelfth of the Minimum Service Charge shall be due and payable upon receipt of the regular bill for wastewater service.

If the Company determines by application of the following criteria that the customer's past record of payments does not warrant application of this payment plan, the Company may require payment of the entire service charge at one time rather than in installments.

1. If a customer has been terminated at least once in the past two years for non-payment of a bill for wastewater service; or,
2. If a customer receives three (3) Final Reminder Notices during a twelve-month period.

Usage charges based upon meter readings shall be billed in monthly in arrears (or quarterly at the option of the Company). Valid bills for service furnished under this schedule are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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RATE SCHEDULE 1-B
PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC)

APPLICABILITY

Applicable to all Wastewater Service customer classes including general residential, commercial, industrial and municipal wastewater service in the City of Ocean City. The PSTAC charge, as defined under the Standard Terms and Conditions in this tariff, is designed to recover the cost of purchased wastewater treatment and disposal costs associated with the normal operations of the Company, and allow the Company to achieve a zero or near-zero deferred balance each April 1st on its purchased wastewater treatment and disposal costs.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC) CHARGE

The following are the PSTAC charges per one hundred gallons and per one thousand gallons that will be charged based on the Summer Quarter Consumption as defined in the Minimum Service Charge section of Wastewater-Rate Schedule 1-A to recover purchased wastewater treatment and disposal costs, but in no event will the consumption level for PSTAC be less than 7,480 gallons per year.

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1000 Gallons</u>
Non-Exempt and Exempt	All	\$3.39147	\$33.9147

FILING

The Company shall endeavor to make an annual PSTAC filing no later than December 1st of each year, proposing a PSTAC rate or percentage to be effective on or about the following April 1st.

The notice of filing and of public hearing in the annual PSTAC proceedings shall include the specific rate change proposed to be implemented on April 1st. The notice shall also include the impact of such potential increases on a benchmark bill.

The annual PSTAC filing shall contain, but not be limited to, the following:

1. A reconciliation of actual versus estimated costs and revenues from the last Board approved PSTAC charge for wastewater treatment and disposal;
2. Projected rates supported by projected volumes, revenues, and projected purchased wastewater treatment and disposal costs;
3. Deferred balances and the timeframe over which they are proposed to be collected or returned;
4. A written explanation of the circumstances that caused the deferred balances in (3) above;
5. A written explanation of any significant activities or trends which may affect costs for the prospective period; and
6. Updated tariff sheets to reflect any change to the PSTAC rate.

The benchmark bill shall be the average residential wastewater customer bill for a twelve-month period.

TERMS OF PAYMENT

See Rate Schedule 1-A for applicable customer classes.

(Continued)

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By: Mark K. McDonough, President
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Docket No. WR20110719 dated June 24, 2021.

RATE SCHEDULE 1-B
PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC)
(Continued)

PROVISIONS

Interest shall be passed onto customers through the PSTAC rates at the beginning of each PSTAC Year succeeding any PSTAC year in which any net monthly purchased wastewater treatment and disposal costs over recovery has taken place. Any debit or credit balance in the separate deferred revenue or separate cost of wastewater treatment accounts shall be determined monthly. Monthly interest shall be calculated on the average of the current and prior month's ending cumulative deferred revenue or cost of wastewater treatment balances. Interest on such wastewater treatment costs shall be calculated utilizing the rate of return on rate base utilized to set rates in the Company's last preceding base rate case, and shall be changed from time to time, consistent with N.J.A.C. 14:9-7, et seq.

The clause shall be subject to deferred accounting, consistent with N.J.A.C. 14:9-7, et seq.

TERM

Continuous until wastewater service to the customer is permanently discontinued.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

Issued: October 30, 2020

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One Water Street, Camden, NJ 08102
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Ninth Revised Sheet: No. 48
Superseding Eighth Revised Sheet: No. 48

RATE SCHEDULE 2-A
GENERAL METERED SERVICE
STATEWIDE WASTEWATER COLLECTION AREA

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service in the Statewide Wastewater Collection Area (Lakewood). The charge for wastewater service shall consist of the total of the Fixed Service Charge, the Sewer Usage Charge and the Purchased Wastewater Treatment Adjustment Clause (PSTAC) Charge, as defined under the Standard Terms and Conditions in this tariff, shown on Rate Schedule 2-B, and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All wastewater service customers shall pay a Fixed Service Charge in addition to the Sewer Usage Charge, if any, as follows:

	<u>Non-Exempt</u>	<u>Exempt</u>
Fixed Service Charge per customer per month.	\$15.00	\$12.96

SEWER USAGE CHARGE

The volume of sewer use is assumed to equal water meter registration. See Standard Terms and Conditions – Wastewater, Sheet No. 23, for an explanation of how Monthly Sewer Usage Charges are calculated.

Volumetric Charges

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$0.47550	\$4.7550
Exempt	All	\$0.41057	\$4.1057

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

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1 Water Street, Camden, NJ 08102

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RATE SCHEDULE 2-B
PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC)

APPLICABILITY

Applicable to all Wastewater Service customer classes including general residential, commercial, industrial and municipal wastewater service in the Statewide Wastewater Collection Area (Lakewood). The PSTAC charge, as defined under the Standard Terms and Conditions in this tariff, is designed to recover the cost of purchased wastewater treatment and disposal costs associated with the normal operations of the Company, and allow the Company to achieve a zero or near-zero deferred balance each April 1st on its purchased wastewater treatment and disposal costs.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC) CHARGE

In addition to all other charges for general metered service, the following charges per one hundred gallons and per one thousand gallons for all sales will be made to recover purchased wastewater treatment and disposal costs not included in the Sewer Usage Charge or any other Charge as set forth in Rate Schedule 2-A of the current Tariff:

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt and Exempt	All	\$ 0.49209	\$4.9209

FILING

The Company shall endeavor to make an annual PSTAC filing no later than December 1st of each year, proposing a PSTAC rate or percentage to be effective on or about the following April 1st.

The notice of filing and of public hearing in the annual PSTAC proceedings shall include the specific rate change proposed to be implemented on April 1st. The notice shall also include the impact of such potential increases on a benchmark bill.

The annual PSTAC filing shall contain, but not be limited to, the following:

1. A reconciliation of actual versus estimated costs and revenues from the last Board approved PSTAC charge for purchased wastewater treatment and disposal;
2. Projected rates supported by projected volumes, revenues, and projected purchased wastewater treatment and disposal costs;
3. Deferred balances and the timeframe over which they are proposed to be collected or returned;
4. A written explanation of the circumstances that caused the deferred balances in (3) above;
5. A written explanation of any significant activities or trends which may affect costs for the prospective period; and
6. Updated tariff sheets to reflect any change to the PSTAC rate.

The benchmark bill shall be the average residential wastewater customer bill for a twelve-month period.

(Continued)

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Original Sheet: No. 49.1

RATE SCHEDULE 2-B
PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC)
(Continued)

PROVISIONS

Interest shall be passed onto customers through the PSTAC rates at the beginning of each PSTAC Year succeeding any PSTAC year in which any net monthly purchased wastewater treatment and disposal costs over recovery has taken place. Any debit or credit balance in the separate deferred revenue or separate cost of wastewater treatment accounts shall be determined monthly. Monthly interest shall be calculated on the average of the current and prior month's ending cumulative deferred revenue or cost of wastewater treatment balances. Interest on such wastewater treatment costs shall be calculated utilizing the rate of return on rate base utilized to set rates in the Company's last preceding base rate case, and shall be changed from time to time, consistent with N.J.A.C. 14:9-7, et seq.

The clause shall be subject to deferred accounting, consistent with N.J.A.C. 14:9-7, et seq.

TERMS OF PAYMENT

See Rate Schedules for applicable customer classes.

TERM

Continuous until wastewater service to the customer is permanently discontinued.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Ninth Revised Sheet: No. 50
Superseding Eighth Revised Sheet: No. 50

RATE SCHEDULE 3-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service provided by the Company's Adelpia System (service area of the former Adelpia Sewer Company) and other franchise areas within the Township of Howell in Monmouth County. The charge for wastewater service shall consist of the total of the Fixed Service Charge, the Sewer Usage Charge and the Purchased Wastewater Treatment Adjustment Clause (PSTAC) Charge, as defined under the Standard Terms and Conditions in this tariff, shown on Rate Schedule 3-B, and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All wastewater service customers shall pay a Fixed Service Charge in addition to the Sewer Usage Charge, if any, as follows:

	<u>Non-Exempt</u>	<u>Exempt</u>
Fixed Service Charge per customer per month.	\$15.00	\$12.95

SEWER USAGE CHARGE

The volume of sewer use is assumed to equal water meter registration. Charges shall be based on water consumption as indicated by water meter readings on a monthly basis (or quarterly, at the option of the Company). Where wastewater service is provided and water used on the premise is not supplied or metered by the Company, then a monthly usage constant of 4,000 gallons will be used for billing purposes.

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$0.53300	\$5.3300
Exempt	All	\$0.46022	\$4.6022

TERMS OF PAYMENT

Valid bills for wastewater service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

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1 Water Street, Camden, NJ 08102

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RATE SCHEDULE 3-B
PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC)

APPLICABILITY

Applicable to all Wastewater Service customer classes including general residential, commercial, industrial and municipal wastewater service customers provided service by the Company's Adelphia System (service area of the former Adelphia Sewer Company) and other franchise areas within the Township of Howell in Monmouth County. The PSTAC charge, as defined under the Standard Terms and Conditions in this tariff, is designed to recover the cost of purchased wastewater treatment and disposal associated with the normal operations of the Company, and allow the Company to achieve a zero or near-zero deferred balance each April 1st on its purchased wastewater treatment and disposal costs.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC) CHARGE

In addition to all other charges for general metered service, the following charges per one hundred gallons, per one thousand gallons, per 10 cubic feet and per 100 cubic feet for all sales will be made to recover purchased wastewater treatment and disposal costs not included in the Sewer Usage Charge or any other Charge as set forth in Rate Schedule 3-A of the current Tariff:

	Gallons Per Month	Rate Per 100 Gallons	Rate Per 1,000 Gallons
Non-Exempt and Exempt	All	\$0.66021	\$6.6021

FILING

The Company shall endeavor to make an annual PSTAC filing no later than December 1st of each year, proposing a PSTAC rate to be effective on or about the following April 1st.

The notice of filing and of public hearing in the annual PSTAC proceedings shall include the specific rate change proposed to be implemented on April 1st. The notice shall also include the impact of such potential increases on a benchmark bill.

The annual PSTAC filing shall contain, but not be limited to, the following:

1. A reconciliation of actual versus estimated costs and revenues from the last Board approved PSTAC charge for purchased wastewater treatment and disposal;
2. Projected rates supported by projected volumes, revenues, and projected purchased wastewater treatment and disposal costs;
3. Deferred balances and the timeframe over which they are proposed to be collected or returned;
4. A written explanation of the circumstances that caused the deferred balances in (3) above;
5. A written explanation of any significant activities or trends which may affect costs for the prospective period; and
6. Updated tariff sheets to reflect any change to the PSTAC rate.

The benchmark bill shall be the average residential wastewater customer bill for a twelve-month period.

(Continued)

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RATE SCHEDULE 3-B
PURCHASED WASTEWATER TREATMENT ADJUSTMENT CLAUSE (PSTAC)
(Continued)

PROVISIONS

Interest shall be passed onto customers through the PSTAC rates at the beginning of each PSTAC Year succeeding any PSTAC year in which any net monthly purchased wastewater treatment and disposal costs over recovery has taken place. Any debit or credit balance in the separate deferred revenue or separate cost of wastewater treatment accounts shall be determined monthly. Monthly interest shall be calculated on the average of the current and prior month's ending cumulative deferred revenue or cost of wastewater treatment balances. Interest on such wastewater treatment costs shall be calculated utilizing the rate of return on rate base utilized to set rates in the Company's last preceding base rate case, and shall be changed from time to time, consistent with N.J.A.C. 14:9-7 et seq.

The clause shall be subject to deferred accounting, consistent with N.J.A.C. 14:9-7, et seq.

TERMS OF PAYMENT

See Rate Schedules for applicable customer classes.

TERM

Continuous until wastewater service to the customer is permanently discontinued.

CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

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One Water Street, Camden, NJ 08102
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RATE SCHEDULE 5-A
GENERAL FLAT RATE SERVICE

APPLICABILITY FOR GENERAL FLAT RATE WASTEWATER SERVICE CUSTOMERS

Applicable to all general flat rate wastewater service customers located in the Company's Tewksbury System (Pottersville - service area of the former Valley Road Sewerage Company) in the Township of Tewksbury in Hunterdon County, and Service Areas noted as (A) and (B), formerly served by Applied Wastewater Management, Inc. ("Applied"), on Sheet No. 44 (COWS) who are not water service customers of NJAWC. The Class A/Class B designations in effect at the time rates were set by the Board in Docket. No. WR11070460 (May 1, 2012) shall remain in effect unless changed by order of the Board. No new Class A designations shall be made except at the discretion of the Company. The Company's charge for wastewater service shall consist of the total of a Flat Rate Service Charge and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

FLAT RATE SERVICE CHARGE – GENERAL FLAT RATE WASTEWATER CUSTOMERS

All wastewater service customers shall pay a flat rate service charge as indicated below.

	<u>RATE PER MONTH</u>
<u>CLASS A</u>	\$82.50
<u>CLASS B</u>	99.68

The Class A/Class B designations in effect at the time rates were set by the Board in Docket. No. WR11070460 (May 1, 2012) are as follows:

CLASS A

4 BEDROOM AGE RESTRICTED
3 BEDROOM AGE RESTRICTED
2 BEDROOM TOWNHOUSE
3 BEDROOM TOWNHOUSE AGE RESTRICTED

2 BEDROOM AGE RESTRICTED

1 BEDROOM TOWNHOUSE

CLASS B

DETACHED SINGLE FAMILY
3 BEDROOM TOWNHOUSE

CHARACTER OF FLAT RATE SERVICE

Continuous (unmetered), except as limited by the "Standard Terms and Conditions."

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201____ dated _____.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Fourth Revised Sheet: No. 53
Superseding Third Revised Sheet: No. 53

RATE SCHEDULE 6-A
GENERAL METERED SERVICE

APPLICABILITY FOR GENERAL METERED WASTEWATER SERVICE CUSTOMERS

Applicable to all general metered wastewater service customers located in the Company's Tewksbury System (Pottersville - service area of the former Valley Road Sewerage Company) in the Township of Tewksbury in Hunterdon County, and Service Areas noted as (A) and (B), formerly served by Applied Wastewater Management, Inc. ("Applied"), on Sheet No. 44 (COWS and Homestead) who receive volume-based water service billings from NJAWC. The Company's charge for wastewater service shall consist of the total of the Fixed Service Charge and a Sewer Usage Charge and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

FIXED SERVICE CHARGE – GENERAL METERED WASTEWATER CUSTOMERS

All wastewater service customers shall pay a fixed service charge as indicated below, in addition to the Sewer Usage Charge, if any.

RATE PER MONTH

Non-Exempt	\$50.00
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SEWER USAGE CHARGE – GENERAL METERED WASTEWATER CUSTOMERS

The volume of wastewater use is assumed to equal water meter registration. See Standard Terms and Conditions – Wastewater, Sheet No. 23, for an explanation of how Monthly Sewer Usage Charges are calculated.

	<u>Gallons</u>	<u>Rate</u>	<u>Rate</u>
	<u>Per Month</u>	<u>Per 100 Gallons</u>	<u>Per 1,000 Gallons</u>
Non-Exempt	All	\$0.80400	\$8.0400

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Ninth Revised Sheet: No. 54
Superseding Eighth Revised Sheet: No. 54

RATE SCHEDULE 8-A
OTHER CONTRACTS

APPLICABILITY

Applicable to wastewater service customers located in the Service Areas noted as (D), formerly served by Applied Wastewater Management, Inc. ("Applied"), on Sheet No. 44 (Other Contracts).

CHARACTER OF SERVICE

Continuous (unmetered).

RATES

<u>CLASS</u>	<u>RATE PER MONTH</u>	
Schools	\$125.00	Per Formula*
Other	125.00	Per Equivalent Dwelling Units**

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered in arrears either monthly or quarterly, at the option of the Company, and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

* Quarterly Charge = $\$375.00 \times (\text{Average Daily Enrollment} \times \text{Student GPD}) / 300$
Where Student GPD is as follows:
NJDEP projected usage per Elementary School student = 15 GPD
NJDEP projected usage per High School student = 25 GPD

**An equivalent residential customer is based on 235 GPD

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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Docket No. WR2201____ dated _____.

RATE SCHEDULE 9-A
MISCELLANEOUS SERVICE CHARGES

APPLICABILITY

Applicable to all classes of customers unless specified for the following classes of miscellaneous services throughout the entire area served by the Company.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

BAD CHECK CHARGE

If the Company receives a negotiable instrument from a customer in payment of a bill, charge, or deposit due, and such instrument is subsequently dishonored or uncollectible for any reason, the Company shall charge the customer a handling charge per instrument of \$15.00.

If a bad check charge is applied to a customer account, that amount, as well as the amount of the dishonored check shall be paid with cash, certified check, money order, bank check, or other means of guaranteed payment before such account shall be deemed paid. Additionally, if a customer presents two checks that are dishonored by the bank as a result of the customer's error, the customer will be required to pay by the methods stated above for a period of twelve months from the date of the last dishonored check.

The provisions of this Tariff section shall not be deemed to require a customer to submit to automatic deduction from any bank account, credit card, or by on-line banking but the Company may offer same as an option provided the customer is presented with all other available options offered by the Company.

RESUMPTION OF SERVICE AFTER PHYSICAL DISCONNECTION OR PLUGGING DUE TO NONPAYMENT OF BILLS OR VIOLATION OF THE COMPANY'S RULES

Sewer Service	-	At any time	Greater of \$350.00 or actual cost
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CONDITIONS

Subject to the "Standard Terms and Conditions" except as otherwise set forth in this Schedule.

SPECIAL PROVISIONS

The Company may waive the fees and charges referenced in this Rate Schedule 9-A for a customer who is enrolled in the Company's H2O Help to Others Program or the Low Income Payment Program, provided that the customer is not deemed to have been abusing and/or taking advantage of the system, including but not limited to repeatedly requiring service reconnections more than three (3) times in any twelve (12) month period.

Issued: October 30, 2020

Effective: November 1, 2020

By: Cheryl Norton, President
One Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR19121516 dated October 28, 2020.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Ninth Revised Sheet: No. 56
Superseding Eighth Revised Sheet: No. 56

RATE SCHEDULE 10-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general flat rate residential, commercial, industrial and municipal wastewater service to customers served by the Company's Jensen's Deep Run System in the Township of Plumsted in Ocean County. The charge for wastewater service shall consist of the total of a Fixed Service Charge, a Sewer Usage Charge, and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

FIXED SERVICE CHARGE – GENERAL METERED WASTEWATER CUSTOMERS

All wastewater service customers shall pay a fixed service charge as indicated below, in addition to the Sewer Usage Charge, if any.

	<u>RATE PER MONTH</u>
Non-Exempt	\$30.00

SEWER USAGE CHARGE – GENERAL METERED WASTEWATER CUSTOMERS

The volume of wastewater use is assumed to equal water meter registration. See Standard Terms and Conditions – Wastewater, Sheet No. 23, for an explanation of how Monthly Sewer Usage Charges are calculated.

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$0.85000	\$8.5000

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

TERMS OF PAYMENT

Valid bills for wastewater service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

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Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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Docket No. WR2201_____ dated _____.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Ninth Revised Sheet: No. 57
Superseding Eighth Revised Sheet: No. 57

RATE SCHEDULE 11-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers served by the Company's Haddonfield Collection System in Camden County. The charge for wastewater service shall consist of a Sewer Usage Charge based on the water consumption at the location for the same billing period and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

FIXED SERVICE CHARGE – GENERAL METERED WASTEWATER CUSTOMERS

All wastewater service customers shall pay a fixed service charge as indicated below, in addition to the Sewer Usage Charge, if any.

	<u>RATE PER MONTH</u>
Non-Exempt	\$8.00

SEWER USAGE CHARGE – GENERAL METERED WASTEWATER CUSTOMERS

The volume of wastewater use is assumed to equal water meter registration. Charges shall be based upon water consumption as indicated by water meter readings on a monthly basis (or quarterly, at the option of the Company).

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$0.36500	\$3.6500

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

TERMS OF PAYMENT

Valid bills for wastewater service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Ninth Revised Sheet: No. 58
Superseding Eighth Revised Sheet: No. 58

RATE SCHEDULE 12-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service in Elk Township. The charge for wastewater service shall consist of the total of the Fixed Service Charge, the Sewer Usage Charge, and the Uncollectible Adjustment Clause (UAC), as shown on Rate Schedule O-2.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All wastewater service customers shall pay a Fixed Service Charge in addition to the Sewer Usage Charge, if any, as follows:

	<u>Non-Exempt</u>
Fixed Service Charge per customer per month.	\$ 20.00

SEWER USAGE CHARGE

The volume of wastewater use is assumed to equal water meter registration. See Standard Terms and Conditions – Wastewater, Sheet No. 23, for an explanation of how Monthly Sewer Usage Charges are calculated.

Volumetric Charges

	<u>Gallons</u>	<u>Rate</u>	<u>Rate</u>
	<u>Per Month</u>	<u>Per 100 Gallons</u>	<u>Per 1,000 Gallons</u>
Non-Exempt	All	\$0.95000	\$9.5000

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Fourth Revised Sheet: No. 59
Superseding Third Revised Sheet: No. 59

RATE SCHEDULE 13-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service in the Borough of Mount Ephraim. The charge for wastewater service shall consist of the Fixed Service Charge.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FLAT RATE SERVICE CHARGE – GENERAL FLAT RATE WASTEWATER CUSTOMERS¹

All wastewater service customers shall pay a flat rate service charge as indicated below.

Rate Per Month Effective [date]	Rate Per Month Effective 7/3/2023	<u>Type of Property</u>
\$1.77	\$1.82	Each additional employee (whether part-time or full-time) over 2 employees for: <ul style="list-style-type: none"> • Post offices • Retail and commercial establishments • Business or professional offices (whether part of a dwelling or not)
\$2.20	\$2.27	<ul style="list-style-type: none"> • Unrecirculated air-conditioning units (per ton of rated capacity)
\$3.53	\$3.64	<ul style="list-style-type: none"> • Self-service laundries (per machine)
\$4.43	\$4.56	<ul style="list-style-type: none"> • Lodges or meeting halls without bar
\$7.08	\$7.29	<ul style="list-style-type: none"> • Post offices with up to 2 employees
\$8.84	\$9.11	<ul style="list-style-type: none"> • Single-family dwelling • Apartment unit • Each additional apartment unit (over 1) • Gas or service stations or garages • Barbershops (whether part of a dwelling or not) • Lodges or meeting halls with bar • Doctors', dentists' and podiatrists' offices (whether part of a dwelling or not) • Retail and commercial establishments, up to 2 employees • Business or professional offices (whether part of a dwelling or not) – up to 2 employees (whether part-time or full-time) • Soda fountains (whether part of a dwelling or not) • Motels, per unit • All other commercial buildings not otherwise set forth herein (up to 2 employees)
\$17.69	\$18.22	<ul style="list-style-type: none"> • Gas or service stations or garages with car washing facilities • Restaurants, luncheonettes, diners, etc. – 1 seat to 25 seats • Drugstores • Bakery or bakery distributing centers • Motels, per unit with kitchenette • Boardinghouses (up to 10 people)

¹ The Flat Rate Service Charge will increase by 3% on July 3, 2023 by the terms of the Agreement of Sale between the Borough of Mount Ephraim and New Jersey-American Water Company, Inc.

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Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Second Revised Sheet: No. 59.1
Superseding First Revised Sheet: No. 59.1

RATE SCHEDULE 13-A
GENERAL METERED SERVICE
(Continued)

<u>Rate Per Month</u>	<u>Rate Per Month Effective 7/3/2023</u>	<u>Type of Property</u>
\$26.52	\$27.32	<ul style="list-style-type: none">• Fish markets• Restaurants, luncheonettes, diners, etc. – 26 seats to 50 seats• Heavy industry and car washes
\$35.36	\$36.42	<ul style="list-style-type: none">• Drive-in restaurants• Taverns or taprooms (whether part of a dwelling or not)• Restaurants, luncheonettes, diners, etc. – 51 seats to 75 seats
\$44.21	\$45.54	<ul style="list-style-type: none">• Restaurants, luncheonettes, diners, etc. – 76 seats to 100 seats

CHARACTER OF FLAT RATE SERVICE

Continuous (unmetered), except as limited by the "Standard Terms and Conditions."

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable fixed charges shall be prorated to the date of establishment or discontinuance of service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

Filed pursuant to Order of the Board of Public Utilities entered in
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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

First Revised Sheet: No. 60
Superseding Original Sheet: No. 60

RATE SCHEDULE 14-A
GENERAL FLAT RATE SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers in Long Hill Township who do not receive volume-based water service billings from NJAWC. The Company may require a water meter to be installed by any wastewater customer utilizing a well or other private water system at the property owner's expense. The charge for wastewater service shall consist of the Fixed Service Charge and the Flat Rate Service Charge.

AVAILABILITY OF SERVICE

As the Company has implemented a voluntary sewer connection ban due to excess wastewater flow, all requests for new sewer connections to the Long Hill Township wastewater system will be granted at the sole discretion of the Company.

CHARACTER OF SERVICE

Continuous (unmetered), except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE – WASTEWATER²

All wastewater service customers shall pay a Fixed Service Charge in addition to the Flat Rate Service Charge as indicated below. If a wastewater customer has multiple connections to a single property, only one Fixed Service Charge shall be applied to the wastewater customer.

	<u>RATE PER MONTH</u> Effective 10/23/2022	<u>RATE PER MONTH</u> Effective 10/23/2023	<u>RATE PER MONTH</u> Effective 10/23/2024
Non-Exempt, per unit	\$15.02	\$15.47	\$15.93

FLAT RATE USAGE CHARGE – WASTEWATER CUSTOMERS³

All wastewater service customers shall pay a Flat Rate Usage charge as indicated below.

	<u>RATE PER MONTH</u> Effective 10/23/2022	<u>RATE PER MONTH</u> Effective 10/23/2023	<u>RATE PER MONTH</u> Effective 10/23/2024
Non-Exempt Residential, per connection	\$49.36	\$50.84	\$52.37
Non-Exempt Commercial, Industrial and Municipal, per connection	\$103.00	\$106.09	\$109.27

FIXED SERVICE CHARGE DISCOUNT – RESIDENTIAL WASTEWATER CUSTOMERS

Residential wastewater customers of Long Hill Township enrolled in the Township's Senior Discount Program as of October 22, 2020, shall receive a Fixed Service Charge discount of \$40.00 annually, or \$3.33 per month. After October 22, 2020, customers will no longer be added to this Fixed Service Charge Discount program. The Company has a residential customer assistance program for its low-income customers who are having difficulty paying water and/or wastewater bills issued by the Company.

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable Fixed Service Charges and Flat Rate Service Charges shall be prorated to the date of establishment or discontinuance of service.

² The Fixed Service Charge will increase by 3% on 10/23/2022, 10/23/2023 and 10/23/2024 by the terms of the Agreement of Sale between Long Hill Township and New Jersey-American Water Company, Inc.

³ See footnote 2. The Flat Rate Usage Charge will also increase by 3% on the dates indicated.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

First Revised Sheet: No. 61
Superseding Original Sheet: No. 61

RATE SCHEDULE 15-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers in Long Hill Township who receive volume-based water service billings from NJAWC. The charge for wastewater service shall consist of the total of the Fixed Service Charge and the Sewer Usage Charge.

AVAILABILITY OF SERVICE

As the Company has implemented a voluntary sewer connection ban due to excess wastewater flow, all requests for new sewer connections to the Long Hill Township wastewater system will be granted at the sole discretion of the Company.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE⁴

All wastewater service customers shall pay a Fixed Service Charge in addition to the Sewer Usage Charge, as indicated below. If a wastewater customer has multiple connections to a single property, only one Fixed Service Charge shall be applied to the wastewater customer.

	<u>RATE PER MONTH</u> Effective 10/23/2022	<u>RATE PER MONTH</u> Effective 10/23/2023	<u>RATE PER MONTH</u> Effective 10/23/2024
Non-Exempt, per unit	\$15.02	\$15.47	\$15.93

SEWER USAGE CHARGE⁵

The volume of wastewater used for monthly billing purposes shall be calculated by taking the total water metered (Actual Usage) for the six (6) winter months (January through March and October through December) from the preceding billing year, and dividing that Actual Usage by twelve (12).

If the meter is not read or incorrectly read for one or more months of the Actual Usage period as determined by the Company, the amount charged for those months shall be equal to the approximate average monthly usage among other billable months during the same period.

Volumetric Charges

	<u>Gallons</u> <u>Per Month</u>	<u>Rate</u> <u>Per 100 Gallons</u>	<u>Rate</u> <u>Per 1,000 Gallons</u>
Non-Exempt Effective 10/23/2022	All	\$1.88180	\$18.8180
Non-Exempt Effective 10/23/2023		\$1.93830	\$19.3830
Non-Exempt Effective 10/23/2024		\$1.99640	\$19.9640

FIXED SERVICE CHARGE DISCOUNT – RESIDENTIAL WASTEWATER CUSTOMERS

Residential wastewater customers of Long Hill Township enrolled in the Township's Senior Discount Program as of October 22, 2020, shall receive a Fixed Service Charge discount of \$40.00 annually, or \$3.33 per month. After October 22, 2020, customers will no longer be added to this Fixed Service Charge Discount program. The Company has a residential customer assistance program for its low-income customers who are having difficulty paying water and/or wastewater bills issued by the Company.

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable Fixed Service Charges shall be prorated to the date of establishment or discontinuance of service.

⁴ The Fixed Service Charge rate will increase by 3% on 10/23/2023 and 10/23/2024 by the terms of the Agreement of Sale between Long Hill Township and New Jersey-American Water Company, Inc.

⁵ See footnote 4. The Sewer Usage Charge will also increase by 3% on the dates indicated.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Original Sheet: No. 62

RATE SCHEDULE 16-A
GENERAL FLAT RATE SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers in Service Area 1G who do not receive volume-based water service billings from NJAWC. The Company may require a water meter to be installed by any wastewater customer utilizing a well or other private water system at the property owner's expense.

CHARACTER OF SERVICE

Continuous (unmetered), except as limited by the "Standard Terms and Conditions."

FLAT RATE SERVICE CHARGE – WASTEWATER

All wastewater service customers shall pay a Flat Rate Service Charge as indicated below.

RATE PER MONTH

Non-Exempt	\$58.33
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TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable Flat Rate Service Charges shall be prorated to the date of establishment or discontinuance of service.

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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Original Sheet: No. 63

RATE SCHEDULE 17-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers in Service Area 1G who receive volume-based water service billings from NJAWC.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All wastewater service customers shall pay a Fixed Service Charge in addition to the Sewer Usage Charge, as indicated below.

<u>Size of Meter</u>	<u>Rate Per Month</u>
5/8"	\$10.83
3/4"	10.83
1"	10.83
1 1/2"	21.67
2"	21.67
3"	21.67
4"	21.67

SEWER USAGE CHARGE

The volume of wastewater use is assumed to equal water meter registration.

Volumetric Charges

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$0.7500	\$7.5000

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable Fixed Service Charges shall be prorated to the date of establishment or discontinuance of service.

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By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Original Sheet: No. 64

RATE SCHEDULE 18-A
GENERAL FLAT RATE SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers in the Borough of Bound Brook who do not receive volume-based water service billings from NJAWC. The Company may require a water meter to be installed by any wastewater customer utilizing a well or other private water system at the property owner's expense.

CHARACTER OF SERVICE

Continuous (unmetered), except as limited by the "Standard Terms and Conditions."

FLAT RATE SERVICE CHARGE – WASTEWATER

All wastewater service customers shall pay a Flat Rate Service Charge as indicated below.

RATE PER MONTH

Non-Exempt	\$39.58
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TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable Flat Rate Service Charges shall be prorated to the date of establishment or discontinuance of service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102

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Docket No. WR2201____ dated _____.

NEW JERSEY-AMERICAN WATER COMPANY, INC.
B.P.U. No. 8 – Wastewater

Original Sheet: No. 65

RATE SCHEDULE 19-A
GENERAL METERED SERVICE

APPLICABILITY

Applicable for general residential, commercial, industrial and municipal wastewater service to customers in the Borough of Bound Brook who receive volume-based water service billings from NJAWC.

CHARACTER OF SERVICE

Continuous, except as limited by the "Standard Terms and Conditions."

FIXED SERVICE CHARGE

All wastewater service customers shall pay a Fixed Service Charge in addition to the Sewer Usage Charge, as indicated below.

	<u>RATE PER MONTH</u>
Non-Exempt	\$5.00

SEWER USAGE CHARGE

The volume of wastewater use is assumed to equal water meter registration.

Volumetric Charges

	<u>Gallons Per Month</u>	<u>Rate Per 100 Gallons</u>	<u>Rate Per 1,000 Gallons</u>
Non-Exempt	All	\$0.64000	\$6.4000

TERMS OF PAYMENT

Valid bills for service furnished under this schedule will be rendered monthly in arrears (or quarterly at the option of the Company), and are due fifteen (15) days from the date of the postmark on the envelope in which the bill was transmitted. All bills shall list a due date.

Whenever service is established or is discontinued, all applicable Fixed Service Charges shall be prorated to the date of establishment or discontinuance of service.

Issued: January 14, 2022

Effective:

By: Mark McDonough, President
1 Water Street, Camden, NJ 08102
Filed pursuant to Order of the Board of Public Utilities entered in
Docket No. WR2201____ dated _____.

**BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES**

IN THE MATTER OF THE PETITION OF	:	AGREEMENT OF
NEW JERSEY AMERICAN WATER	:	NON-DISCLOSURE
COMPANY FOR APPROVAL OF INCREASED	:	
TARIFF RATES AND CHARGES FOR	:	OAL DOCKET NO. PUC _____
WATER AND WASTEWATER SERVICE AND	:	
OTHER TARIFF MODIFICATIONS	:	BPU DOCKET NO. WR2201_____
	:	
	:	

It is hereby AGREED, as of the ____ day of January, 2022, by and among New Jersey-American Water Company (“Petitioner”), the Staff of the New Jersey Board of Public Utilities (“Board Staff”) and Division of Rate Counsel (“Rate Counsel”) (collectively, the “Parties”), who have agreed to execute this Agreement of Non-Disclosure of Information Claimed to be Confidential (“Agreement”), and to be bound thereby that:

WHEREAS, in connection with the above-captioned proceeding before the Board of Public Utilities (the “Board”), Petitioner and/or another party (“Producing Party”) may be requested or required to provide petitions, pre-filed testimony, other documents, analyses and/or other data or information regarding the subject matter of this proceeding that the Producing Party may claim constitutes or contains confidential, proprietary or trade secret information, or which otherwise may be claimed by the Producing Party to be of a market-sensitive, competitive, confidential or proprietary nature (hereinafter sometimes referred to as “Confidential Information” or “Information Claimed to be Confidential”); and

WHEREAS, the Parties wish to enter into this Agreement to facilitate the exchange of information while recognizing that under Board regulations at N.J.A.C. 14:1-12.1 et seq., a request for confidential treatment shall be submitted to the Board’s Custodian of Records (“Custodian”) who is to rule on requests made pursuant to the Open Public Records Act

(“OPRA”), N.J.S.A. 47:1A-1 et seq., unless such information is to be kept confidential pursuant to court or administrative order (including, but not limited to, an Order by an Administrative Law Judge sealing the record or a portion thereof pursuant to N.J.A.C. 1:1-14.1, and the parties acknowledge that an Order by an Administrative Law Judge to seal the record is subject to modification by the Board), and also recognizing that a request may be made to designate any such purportedly confidential information as public through the course of this administrative proceeding; and

WHEREAS, the Parties acknowledge that unfiled discovery materials are not subject to public access under OPRA; and

WHEREAS, the Parties acknowledge that, despite each Party’s best efforts to conduct a thorough pre-production review of all documents and electronically stored information (“ESI”), some work product material and/or privileged material (“Protected Material”) may be inadvertently disclosed to another Party during the course of this proceeding; and

WHEREAS, the undersigned Parties desire to establish a mechanism to avoid waiver of privilege or any other applicable protective evidentiary doctrine as a result of the inadvertent disclosure of Protected Material;

NOW, THEREFORE, the Parties hereto, intending to be legally bound thereby, DO HEREBY AGREE as follows:

1. The inadvertent disclosure of any document or ESI which is subject to a legitimate claim that the document or ESI should have been withheld from disclosure as Protected Material shall not waive any privilege or other applicable protective doctrine for that document or ESI or for the subject matter of the inadvertently disclosed document or ESI if the

Producing Party, upon becoming aware of the disclosure, promptly requests its return and takes reasonable precautions to avoid such inadvertent disclosure.

2. Except in the event that the receiving party or parties disputes the claim, any documents or ESI which the Producing Party deems to contain inadvertently disclosed protected material shall be, upon written request, promptly returned to the Producing Party or destroyed at the Producing Party's option. This includes all copies, electronic or otherwise, of any such documents or ESI. In the event that the Producing Party requests destruction, the receiving party shall provide written confirmation of compliance within thirty (30) days of such written request. In the event that the receiving party disputes the Producing Party's claim as to the protected nature of the inadvertently disclosed material, a single set of copies may be sequestered and retained by and under the control of the receiving party until such time as the Producing Party has received final determination of the issue by the Board or an Administrative Law Judge, provided that the Board has not modified or rejected an order by the Administrative Law Judge.

3. Any such protected material inadvertently disclosed by the Producing Party to the receiving party pursuant to this Agreement shall be and remain the property of the Producing Party.

4. Any Information Claimed to be Confidential that the Producing Party produces to any of the other Parties in connection with the above-captioned proceeding and pursuant to the terms of this Agreement shall be specifically identified and marked by the Producing Party as Confidential Information when provided hereunder. If only portions of a document are claimed to be confidential, the Producing Party shall specifically identify which portions of that document are claimed to be confidential. Additionally, any such Information

Claimed to be Confidential shall be provided in the form and manner prescribed by the Board's regulations at N.J.A.C. 14:1-12 et seq., unless such information is to be kept confidential pursuant to court or administrative order. However, nothing in this Agreement shall require the Producing Party to file a request with the Custodian for a confidentiality determination under N.J.A.C. 14:1-12 et seq. with respect to any Information Claimed to be Confidential that is provided in discovery and not filed with the Board.

5. With respect to documents identified and marked as Confidential Information, if the Producing Party's intention is that not all of the information contained therein should be given protected status, the Producing Party shall indicate which portions of such documents contain the Confidential Information in accordance with the Board's regulations at N.J.A.C. 14:1-12.2 and 12.3. Additionally, the Producing Party shall provide to all signatories of this Agreement full and complete copies of both the proposed public version and the proposed confidential version of any information for which confidential status is sought.

6. With respect to all Information Claimed to be Confidential, it is further agreed that:

(a) Access to the documents designated as Confidential Information, and to the information contained therein, shall be limited to the Party signatories to this Agreement and their identified attorneys, employees, and consultants whose examination of the Information Claimed to be Confidential is required for the conduct of this particular proceeding.

(b) Recipients of Confidential Information shall not disclose the contents of the documents produced pursuant to this Agreement to any person(s) other than their identified employees and any identified experts and consultants whom they may retain in connection with this proceeding, irrespective of whether any such expert is retained specially and

is not expected to testify, or is called to testify in this proceeding. All consultants or experts of any Party to this Agreement who are to receive copies of documents produced pursuant to this Agreement shall have previously executed a copy of the Acknowledgement of Agreement attached hereto as "Attachment 1", which executed Acknowledgement of Agreement shall be forthwith provided to counsel for the Producing Party, with copies to counsel for Board Staff and the Rate Counsel.

(c) No other disclosure of Information Claimed to be Confidential shall be made to any person or entity except with the express written consent of the Producing Party or their counsel, or upon further determination by the Custodian, or order of the Board, the Government Records Council or of any court of competent jurisdiction that may review these matters.

7. The undersigned Parties have executed this Agreement for the exchange of Information Claimed to be Confidential only to the extent that it does not contradict or in any way restrict any applicable Agency Custodian, the Government Records Council, an Administrative Law Judge of the State of New Jersey, the Board, or any court of competent jurisdiction from conducting appropriate analysis and making a determination as to the confidential nature of said information, where a request is made pursuant to OPRA, N.J.S.A. 47:1A-1 et seq. Absent a determination by any applicable Custodian, Government Records Council, an Administrative Law Judge, the Board, or any court of competent jurisdiction that a document(s) is to be made public, the treatment of the documents exchanged during the course of this proceeding and any subsequent appeals is to be governed by the terms of this Agreement.

8. In the absence of a decision by the Custodian, Government Records Council, an Administrative Law Judge, or any court of competent jurisdiction, the acceptance by

the undersigned Parties of information which the Producing Party has identified and marked as Confidential Information shall not serve to create a presumption that the material is in fact entitled to any special status in these or any other proceedings. Likewise, the affidavit(s) submitted pursuant to N.J.A.C. 14:1-12.8 shall not alone be presumed to constitute adequate proof that the Producing Party is entitled to a protective order for any of the information provided hereunder.

9. In the event that any Party seeks to use the Information Claimed to be Confidential in the course of any hearings or as part of the record of this proceeding, the Parties shall seek a determination by the trier of fact as to whether the portion of the record containing the Information Claimed to be Confidential should be placed under seal. Furthermore, if any Party wishes to challenge the Producing Party's designation of the material as Confidential Information, such Party shall provide reasonable notice to all other Parties of such challenge and the Producing Party may make a motion seeking a protective order. In the event of such challenge to the designation of material as Confidential Information, the Producing Party, as the provider of the Information Claimed to be Confidential, shall have the burden of proving that the material is entitled to protected status. However, all Parties shall continue to treat the material as Confidential Information in accordance with the terms of this Agreement, pending resolution of the dispute as to its status by the trier of fact.

10. Confidential Information that is placed on the record of this proceeding under seal pursuant to a protective order issued by the Board, an Administrative Law Judge, provided that the Board has not modified or rejected an order by the Administrative Law Judge, or any court of competent jurisdiction shall remain with the Board under seal after the conclusion of this proceeding. If such Confidential Information is provided to appellate courts for the

purposes of an appeal(s) from this proceeding, such information shall be provided, and shall continue to remain, under seal.

11. This Agreement shall not:

(a) Operate as an admission for any purpose that any documents or information produced pursuant to this Agreement are admissible or inadmissible in any proceeding;

(b) Prejudice in any way the right of the Parties, at any time, on notice given in accordance with the rules of the Board, to seek appropriate relief in the exercise of discretion by the Board for violations of any provision of this Agreement.

12. Within forty five (45) days of the final Board Order resolving the above-referenced proceeding, all documents, materials and other information designated as “Confidential Information,” regardless of format, shall be destroyed or returned to counsel for the Producing Party. In the event that such Board Order is appealed, the documents and materials designated as “Confidential Information” shall be returned to counsel for the Producing Party or destroyed within forty-five (45) days of the conclusion of the appeal.

Notwithstanding the above return requirement, Board Staff and Rate Counsel may maintain in their files copies of all pleadings, briefs, transcripts, discovery and other documents, materials and information designated as “Confidential Information,” regardless of format, exchanged or otherwise produced during these proceedings, provided that all such information and/or materials that contain Information Claimed to be Confidential shall remain subject to the terms of this Agreement. The Producing Party may request consultants who received Confidential Information who have not returned such material to counsel for the

Producing Party as required above to certify in writing to counsel for the Producing Party that the terms of this Agreement have been met upon resolution of the proceeding.

13. The execution of this Agreement shall not prejudice the rights of any Party to seek relief from discovery under any applicable law providing relief from discovery.

14. The Parties agree that one original of this Agreement shall be created for each of the signatory parties for the convenience of all. The signature pages of each original shall be executed by the recipient and transmitted to counsel of record for Joint Petitioners, who shall send a copy of the fully executed document to all counsel of record. The multiple signature pages shall be regarded as, and given the same effect as, a single page executed by all Parties.

IN WITNESS THEREOF, the undersigned Parties do HEREBY AGREE to the form and execution of this Agreement.

**NEW JERSEY-AMERICAN WATER
COMPANY**

By:_____

Bruce Miller, Esq.
Cullen and Dykman

Date:

**ANDREW J. BRUCK
ACTING ATTORNEY GENERAL OF NEW JERSEY**

By:_____

[]
Deputy Attorney General

Date:

**BRIAN O. LIPMAN
DIRECTOR
DIVISION OF RATE COUNSEL**

By:_____

Date:

**BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES**

IN THE MATTER OF THE PETITION OF	:	AGREEMENT OF
NEW JERSEY AMERICAN WATER	:	NON-DISCLOSURE
COMPANY FOR APPROVAL OF INCREASED	:	
TARIFF RATES AND CHARGES FOR	:	OAL DOCKET NO. PUC _____
WATER AND WASTEWATER SERVICE AND	:	
OTHER TARIFF MODIFICATIONS	:	BPU DOCKET NO. WR2201_____
	:	

ACKNOWLEDGMENT OF AGREEMENT

The undersigned is an attorney, employee, consultant and/or expert witness for the Division of Rate Counsel or an intervenor who has received, or is expected to receive, Confidential Information provided by Petitioner or by another party (Producing Party) which has been identified and marked by the Producing Party as “Confidential Information.” The undersigned acknowledges receipt of the Agreement of Non-Disclosure of Information Claimed to be Confidential and agrees to be bound by the terms of the Agreement.

Dated:

By:_____

(Name, Title and Affiliation)

**NOTICE OF FILING OF
PROPOSED RATE INCREASE
AND PUBLIC HEARING**

**ALL PARTIES ARE INVITED TO ATTEND AND
PRESENT THEIR VIEWS**

**IN THE MATTER OF THE PETITION OF NEW JERSEY-AMERICAN WATER
COMPANY, INC. FOR APPROVAL OF INCREASED TARIFF RATES AND CHARGES
FOR WATER AND WASTEWATER SERVICE, AND OTHER TARIFF
MODIFICATIONS**

**OAL DOCKET NO. PUC XXXXX-XXXX
BPU DOCKET NO. WR2201XXXX**

TO OUR CUSTOMERS:

Notice is hereby given that on January 14, 2022, New Jersey-American Water Company, Inc., (the “Company”) filed with the Board of Public Utilities (“Board”), pursuant to N.J.S.A. 48:2-21, N.J.S.A. 48:2-21.1, and N.J.A.C. 14:1-5.12, a petition (“Petition”) seeking to increase rates for water and wastewater service and to implement other tariff revisions. These changes were proposed to become effective for service rendered on or after February 13, 2022, or at such later date as may be determined by the Board. Based on the Company’s total projected operating revenues for the twelve months ending June 30, 2022, the new rates proposed herein will yield additional operating revenues of 94.7 million or 11.71%. The total projected operating revenues include the revenue being recovered through the Distribution System Improvement Charge (“DSIC”) previously approved by this Board, and revenues recovered through the PWAC/PSTAC.

The average residential water customer using 5,520 gallons per month will see their bill increase from \$62.44 to \$69.23, an increase of \$6.78 or 10.86% per month. The actual percentage increase to specific customers will vary according to the applicable rate schedule and level of the customer’s usage. The changes proposed in the Petition will result in the changes indicated in the chart below.

The following comparisons of average present and proposed rates will permit customers to determine the approximate net effect upon them of the proposed increases and adjustments in rates. Any assistance required by customers in this regard will be furnished by the Company upon request. Complete information about the present and proposed rates for every class of

customer is available on the Company's website at www.newjerseyamwater.com by first selecting Customer Service and then Rates Information. Please note that the Board, in its discretion, may apply all or any portion of whatever rate increase the Board may ultimately find just and reasonable to any class or classes of customers or to any rate schedule or schedules, or in a manner different than what the Company has proposed in its filing. Accordingly, the final rates and charges to be determined by the Board in this proceeding may be different than what the Company has described herein. All rates include both a fixed service charge and a consumption charge.

Customer Class	Usage	Rates		Change	
		Current Bill*	Proposed Bill	Amount	Percentage
General Metered Service: All except SA-1B, SA-1C, SA-1E and SA-1F	5,520 gal/mo.				
SA-1B (Pennsgrove) and SA-1C (Shorelands)	5,520 gal/mo.				
SA-1E (Haddonfield)	5,520 gal/mo.				
SA-1F (Roxbury)	5,520 gal/mo.				
SA-1G (Egg Harbor City)	5,520 gal/mo.				
Manasquan Resale	Various				
Optional Industrial Wholesale	Various				
Sales for Resale – CD	Various				
Sales for Resale – SOS	Various				
Private Fire Protection	Various				
Public Fire Protection	Various				
Sewer					
Ocean City	17,000 gal/summer				
Lakewood/Elk Twp.	5,520 gal/mo.				
Adelphia	5,520 gal/mo.				
Former AWWM/Pottersville	5,520 gal/mo.				
Jensen's Run	5,520 gal/mo.				
Haddonfield	5,520 gal/mo.				
Mount Ephraim	Flat Fee				
Egg Harbor City	Various				
Bound Brook	Various				

*Rates include the Purchased Water Adjustment Clause (PWAC) and Purchased Wastewater (Sewer) Treatment Adjustment Clause (PSTAC) as approved by the Board under BPU Docket Number WR20110719 and the fully implemented Distribution System Improvement Charge (DSIC) of \$3.59 for a 5/8" meter expected to be approved by the Board under BPU Docket No. WR20030256, effective July 1, 2022. Currently, the DSIC is \$2.44 for a 5/8" meter, effective December 30, 2021.

In addition to actual rate changes, the Company is proposing other changes and additions to its Tariff, some of which would apply to all customers and others that would apply only to specified customers. These changes include, but are not limited to, changes to various rate schedules.

PLEASE TAKE FURTHER NOTICE that the New Jersey Office of Administrative Law (OAL) has scheduled virtual public comment hearings for the purpose of receiving comments from the public regarding the Company's Petition. Members of the public are invited to participate by telephone and express their views on the proposed rate increase. Such comments will be made a part of the final record in the proceeding.

To participate, use the following instructions:

[Date TBD]

4:30 PM

Call in numbers (callers can use any phone number): _____

Upon calling in, the caller will be prompted to enter the meeting ID of _____ and press the pound or hashtag button (#)

Press the pound or hashtag button (#) a second time (in response to the second electronic prompt)

The caller will then be prompted to enter the password for the public meeting of _____ and press the pound or hashtag button (#)

The caller will then be entered into the waiting room where the OAL IT staff will admit the caller into the public hearing. The caller should mute their phone to prevent background noise. Failure to mute your own line may cause OAL IT staff to mute the caller and the caller would have to disconnect and call back in to participate in the public discussion portion

5:30 PM

Call in numbers (callers can use any phone number): _____

Upon calling in, the caller will be prompted to enter the meeting ID of _____ and press the pound or hashtag button (#)

Press the pound or hashtag button (#) a second time (in response to the second electronic prompt)

The caller will then be prompted to enter the password for the public meeting of _____ and press the pound or hashtag button (#)

The caller will then be entered into the waiting room where the OAL IT staff will admit the caller into the public hearing. The caller should mute their phone to prevent background noise. Failure to mute your own line may cause OAL IT staff to mute the caller and the caller would have to disconnect and call back in to participate in the public discussion portion

Notice of this filing was served upon the clerk, executive or administrator of each municipality and county within the Company's service areas. Such notice has also been served,

together with the Verified Petition, Tariffs, and all other exhibits, upon the Director of the Division of Rate Counsel, who will represent the interests of ratepayers in this proceeding. Any members of the public who wish to inspect the petition at the Board should contact the Board's Division of Case Management at 609-292-0806 or board.secretary@bpu.nj.gov. Copies of the Verified Petition, Tariffs, and all other exhibits are available for inspection at the Company's office at 1 Water Street, Camden, NJ, and can also be found on the Company's website at www.newjerseyamwater.com by first selecting Customer Service and then Rates Information.

Written comments may also be submitted by mail or e-mail. Mail to Aida Camacho, Secretary of the Board of Public Utilities, 44 South Clinton Avenue, 9th Floor, P.O. Box 350, Trenton, NJ 08625-0350, or the Clerk, Office of Administrative Law, P.O. Box 049, Trenton, New Jersey 08625-0049. E-mail comments to board.secretary@bpu.nj.gov. Such comments should be identified with the heading "New Jersey American Water Company Rate Filing: Public Hearing," and contain the OAL Docket Number PUC XXXXX-XXXXX and BPU Docket Number WR2201XXXX assigned to this case. Written and emailed comments will be provided the same weight as statements made at the hearings.

IN ORDER TO ENCOURAGE FULL PARTICIPATION IN THIS OPPORTUNITY FOR VIRTUAL PUBLIC COMMENT, PLEASE SUBMIT ANY REQUESTS FOR NEEDED ACCOMMODATIONS, INCLUDING INTERPRETERS OR VISUAL OR AUDITORY ASSISTANCE, TO THE COMPANY 48 HOURS PRIOR TO THIS HEARING TO DENISE FREE, DIRECTOR OF COMMUNICATIONS AND EXTERNAL AFFAIRS, NJAWC, 856-955-4874, DENISE.FREE@AMWATER.COM.

Any relief determined by the Board of Public Utilities to be just and reasonable may be applied by the Board of Public Utilities in such manner as it may deem appropriate.

NEW-JERSEY AMERICAN WATER COMPANY, INC.

BY: MARK K. MCDONOUGH
PRESIDENT
NEW JERSEY-AMERICAN WATER COMPANY
1 Water Street
Camden, NJ 08102

**New Jersey-American Water Company, Inc.
Revenue Requirement Computation**

New Jersey-American Water Company, Inc.

Docket No. WRxxxxxxx

Witness: John S. Tomac

Exhibit No. P-2, Schedule RR

Page 1 of 1

Line No.		Reference Schedule	Revenue Requirement
1			
2	Proposed Rate Base	15	\$4,267,405,697
3			
4	Rate of Return Required	16	7.4811%
5			
6	Utility Operating Income Under Proposed Rates		319,248,888
7			
8	Utility Operating Income at Post-Test Year Present Rates	4	255,165,441
9			
10	Utility Operating Income Deficiency		64,083,447
11			
12	Gross Revenue Conversion Factor ¹		1.47724
13			
14	Revenue Increase Requested		\$94,666,545
15			
16			
17			
18			
19			
20			
21			
22	<u>¹ Gross Revenue Conversion Factor Calculation</u>		<u>Gross-up Factor</u>
23			100.00000%
24	Less: Uncollectible Expense	7	0.40602%
25	Less: Utility Assessment Fee	12	0.26883%
26	Less: GRAFT Tax	11	13.63671%
27	Sub-total	<u>Statutory Rate</u>	85.68844%
28	Less: FIT	21.00%	17.99457%
29	Revenue Income Percent		67.69387%
30	Revenue Gross-up Factor		1.47724
31			

New Jersey-American Water Company, Inc.
Comparative Balance Sheet

New Jersey-American Water Company, Inc.
Docket No. WRxxxxxxx
Witness: John S. Tomac

Exhibit No. P-2, Schedule 1
Page 1 of 2

Line No.	Account Title	December-20	December-19	December-18
1				
2	Assets and Other Debits			
3				
4	<u>Utility Plant</u>			
5	101-106 Utility Plant	\$6,090,286,219	\$5,652,071,848	\$5,372,883,435
6	107 Construction Work in Progress	156,532,954	159,195,290	79,514,415
7	111-113 Accumulated Provision for Amort & Depreciation	(1,361,075,450)	(1,295,170,793)	(1,211,682,681)
8	114-115 Utility Plant Adjustments	(8,589,301)	4,158,533	4,505,769
9				
10	Net Utility Plant	\$4,877,154,422	\$4,520,254,878	\$4,245,220,938
11				
12	<u>Other Property & Investments</u>			
13	121 Non-Utility Property	\$594,145	\$594,145	\$594,145
14				
15	Total Other Property and Investments	\$594,145	\$594,145	\$594,145
16				
17	<u>Current and Accrued Assets</u>			
18	123-124 Investments	\$31,687,377	\$31,588,515	\$28,714,187
19	131, 135 Cash and Equivalents	2,325,879	4,405,406	3,136,525
20	134 Special Deposits	8,600	27,160	27,160
21	135 Working Funds	0	0	0
22	136 Temporary Cash Investments	0	0	0
23	142 Customer Accounts Receivable	68,759,382	54,258,912	52,725,444
24	143 Other Accounts Receivable	8,793,332	8,563,267	7,039,086
25	144 Accum. Provision for Uncollectible Accounts	(7,050,921)	(3,090,357)	(4,049,315)
26	145-146 Accounts Receivable from Associated Companies	112,342,262	61,587,698	(174,110)
27	151-163 Materials and Supplies	12,061,076	11,209,721	9,519,977
28	165 Prepayments	6,802,077	8,497,024	9,608,228
29	173 Accrued Utility Revenue	36,859,689	34,611,620	36,431,573
30	174 Misc. Current and Accrued assets	720,324	604,979	1,221,121
31				
32	Total Current and Accrued Assets	\$273,309,077	\$212,263,945	\$144,199,876
33				
34	<u>Deferred Debits</u>			
35	181 Unamortized Debt Discount and Expense	\$22,050,880	\$20,337,318	\$19,713,659
36	183-186 Other Deferred Debits	57,470,033	60,047,065	67,762,309
37				
38	Total Deferred Debits	\$79,520,913	\$80,384,383	\$87,475,968
39				
40	Total Assets and Other Debits	\$5,230,578,557	\$4,813,497,351	\$4,477,490,927
41				
42				
43				

New Jersey-American Water Company, Inc.
Comparative Balance Sheet

New Jersey-American Water Company, Inc.
Docket No. WRxxxxxxx
Witness: John S. Tomac

Exhibit No. P-2, Schedule 1
Page 2 of 2

Line No.	Account Title	December-20	December-19	December-18
1				
2	Liabilities and Other Credits			
3	<u>Proprietary Capital</u>			
4	201-203 Common Capital Stock	\$86,974,200	\$86,974,200	\$86,974,200
5	204-206 Preferred Capital Stock	0	0	0
6	207-214 Other Paid-In Capital	1,062,184,889	935,669,227	878,493,562
7	215-216 Appropriated and Unappropriated Earned Surplus	721,364,780	670,863,459	626,032,872
8				
9	Total Proprietary Capital	<u>\$1,870,523,869</u>	<u>\$1,693,506,886</u>	<u>\$1,591,500,634</u>
10				
11	<u>Long-Term Debt</u>			
12	221-224 Bonds & Long Term Debt	\$1,588,728,681	\$1,433,762,425	\$1,383,413,334
13				
14	<u>Current and Accrued Liabilities</u>			
15	231 Notes Payable	\$0	\$0	\$0
16	232 Accounts Payable	92,798,858	80,086,057	60,354,117
17	233,234 Accounts Payable to Associated Companies	354,012,352	322,611,513	178,782,185
18	235 Customer Deposits	0	0	0
19	236 Taxes Accrued	(1,063,848)	(3,583,405)	(1,875,905)
20	237 Interest Accrued	11,800,758	12,367,915	14,265,629
21	238 Dividends Declared			
22	239 Matured Long Term Debt	0	0	0
23	241 Tax Collections Payable	2,255	1,518	2,537
24	242 Misc. Current & Accrued Liabilities	28,855,273	30,149,376	29,441,507
25				
26	Total Current and Accrued Liabilities	<u>\$486,405,648</u>	<u>\$441,632,974</u>	<u>\$280,970,070</u>
27				
28	<u>Deferred Credits</u>			
29	252 Customer Advances for Construction	\$101,557,262	\$74,250,007	\$75,652,149
30	253-255 Other Deferred Credits	461,790,294	487,008,008	491,693,864
31				
32	Total Deferred Credits	<u>\$563,347,556</u>	<u>\$561,258,015</u>	<u>\$567,346,013</u>
33				
34	<u>Operating Reserves</u>			
35	265 Deferred Income Taxes	\$477,738,102	\$440,594,944	\$421,302,499
36				
37	271 Contributions in Aid of Construction	\$243,834,701	\$242,742,107	\$232,958,377
38				
39	Total Liabilities & Other Credits	<u>\$5,230,578,557</u>	<u>\$4,813,497,351</u>	<u>\$4,477,490,927</u>

¹ Account titles reflect 1960 NJ uniform system of accounts

New Jersey-American Water Company, Inc.
Comparative Income Statement

New Jersey-American Water Company, Inc.
Docket No. WRxxxxxxxxx
Witness: John S. Tomac

Exhibit No. P-2, Schedule 2
Page 1 of 1

Line No.	Account Title	December-20	December-19	December-18
1				
2	Utility Operating Income			
3	400 Operating Revenues	\$791,106,652	\$754,452,013	\$717,776,708
4				
5	<u>Operating Expenses</u>			
6	401-402 Operation & Maintenance Expense	254,965,922	250,756,413	247,744,312
7	403 Depreciation Expense	138,336,681	127,426,960	124,392,391
8	404-407 Amortization Expense	1,314,401	1,205,982	1,171,421
9	408 Taxes Other Than Income Taxes	109,652,249	106,047,115	107,728,235
10	409 Amortization of Investment Tax Credit	(371,253)	(336,881)	(338,196)
11	Total Operating Expenses Before Federal Income Taxes	\$503,898,000	\$485,099,589	\$480,698,163
12				
13	<u>Utility Operating Income Before Federal Income Taxes</u>	\$287,208,652	\$269,352,424	\$237,078,545
14	409 Federal Income Taxes	41,222,285	43,121,123	37,720,395
15	Utility Operating Income	\$245,986,367	\$226,231,301	\$199,358,150
16				
17	<u>Other Income</u>			
18	419 Interest and Dividend Income	\$363,336	\$188,728	\$371,667
19	417, 421 Miscellaneous Non-Operating Income	8,134,347	5,687,449	6,853,919
20	422 Gain (Loss) from Disposition of Property	(148,985)	208,130	2,145,963
21	Total Other Income	\$8,348,698	\$6,084,307	\$9,371,549
22				
23	Gross Income	\$254,335,065	\$232,315,608	\$208,729,699
24	<u>Miscellaneous Income Deductions</u>			
25	425 Miscellaneous Amortizations	\$98,975	\$98,975	\$98,975
26	426 Other Income Deductions	86,472	189,761	377,460
27	Total Miscellaneous Income Deductions	185,447	288,736	476,435
28	Income Before Interest Charges	\$254,149,618	\$232,026,872	\$208,253,264
29				
30	<u>Interest Charges</u>			
31	427 Interest on Long Term Debt	\$61,946,961	\$66,801,945	\$64,839,011
32	428-429 Amortization of Debt Discount and Expense	2,611,422	1,874,118	2,026,230
33	431 Bank Debt	1,881,172	4,379,452	2,995,228
34	431 Other	0	0	0
35	432 Interest Charged to Construction	(2,578,309)	(1,856,377)	(2,482,658)
36	Total Interest Charges	\$63,861,246	\$71,199,138	\$67,377,811
37				
38	Net Income	\$190,288,372	\$160,827,734	\$140,875,453
39				
40	<u>Dividends Paid</u>			
41	437 Preferred Stock	\$0	\$0	\$0
42	438 Common Stock	139,715,355	115,223,420	106,386,841
43	Total	\$139,715,355	\$115,223,420	\$106,386,841
44				

¹ Account titles reflect 1960 NJ uniform system of accounts

New Jersey-American Water Company, Inc.
Comparative Balance Sheet

New Jersey-American Water Company, Inc.

Docket No. WRxxxxxxxx

Witness: John S. Tomac

Exhibit No. P-2, Schedule 3

Page 1 of 2

Line No.	Account Title	Balance As Of 11/30/2021
1		
2	Assets and Other Debits	
3		
4	<u>Utility Plant</u>	
5	101-106 Utility Plant	\$6,386,096,006
6	107 Construction Work in Progress	183,234,523
7	111-113 Accumulated Provision for Amort & Depreciation	(1,464,017,156)
8	114-115 Utility Plant Adjustments	35,137,999
9		
10	Net Utility Plant	<u>\$5,140,451,371</u>
11		
12	<u>Other Property & Investments</u>	
13	121 Non-Utility Property	\$594,144
14		
15	Total Other Property and Investments	<u>\$594,144</u>
16		
17	<u>Current and Accrued Assets</u>	
18	123-124 Investments	(\$226,847)
19	131, 135 Cash and Equivalents	2,061,297
20	134 Special Deposits	2,230,000
21	135 Working Funds	0
22	136 Temporary Cash Investments	0
23	142 Customer Accounts Receivable	82,613,659
24	143 Other Accounts Receivable	11,484,564
25	144 Accum. Provision for Uncollectible Accounts	(18,615,960)
26	145-146 Accounts Receivable from Associated Companies	(712,011)
27	151-163 Materials and Supplies	14,400,759
28	165 Prepayments	758,969
29	173 Accrued Utility Revenue	42,045,577
30	174 Misc. Current and Accrued assets	2,815,995
31		
32	Total Current and Accrued Assets	<u>\$138,856,001</u>
33		
34	<u>Deferred Debits</u>	
35	181 Unamortized Debt Discount and Expense	\$20,877,800
36	183-186 Other Deferred Debits	64,089,008
37		
38	Total Deferred Debits	<u>\$84,966,808</u>
39		
40	Total Assets and Other Debits	
41		<u>\$5,364,868,325</u>
42		
43		

New Jersey-American Water Company, Inc.
Comparative Balance Sheet

New Jersey-American Water Company, Inc.

Docket No. WRxxxxxxxx

Witness: John S. Tomac

Exhibit No. P-2, Schedule 3

Page 2 of 2

Line No.	Account Title	Balance As Of 11/30/2021
1		
2	Liabilities and Other Credits	
3	<u>Proprietary Capital</u>	
4	201-203 Common Capital Stock	\$86,974,200
5	204-206 Preferred Capital Stock	0
6	207-214 Other Paid-In Capital	1,177,680,721
7	215-216 Appropriated and Unappropriated Earned Surplus	835,886,353
8		
9	Total Proprietary Capital	<u>\$2,100,541,274</u>
10		
11	<u>Long-Term Debt</u>	
12	221-224 Bonds & Long Term debt	\$1,696,085,872
13		
14	<u>Current and Accrued Liabilities</u>	
15	231 Notes Payable	\$43,578,448
16	232 Accounts Payable	104,883,225
17	233,234 Accounts Payable to Associated Companies	133,972,328
18	235 Customer Deposits	0
19	236 Taxes Accrued	(9,195,806)
20	237 Interest Accrued	16,975,293
21	238 Dividends Declared	0
22	239 Matured Long Term Debt	0
23	241 Tax Collections Payable	3,007
24	242 Misc. Current & Accrued Liabilities	32,389,103
25		
26	Total Current and Accrued Liabilities	<u>\$322,605,598</u>
27		
28	<u>Deferred Credits</u>	
29	252 Customer Advances for Construction	\$120,963,576
30	253-255 Other Deferred Credits	7,664,652
31		
32	Total Deferred Credits	<u>\$128,628,227</u>
33		
34	<u>Operating Reserves</u>	
35	265 Deferred Income Taxes	\$873,443,168
36		
37	271 Contributions in Aid of Construction	\$243,564,184
38		
39	Total Liabilities & Other Credits	<u>\$5,364,868,324</u>
40		
41		
42	¹ Account titles reflect 1960 NJ uniform system of accounts	

New Jersey-American Water Company, Inc.
Operating Income Statement

New Jersey-American Water Company, Inc.

Docket No. WRxxxxxxxx

Witness: John S. Tomac

Exhibit No. P-2, Schedule 4

Page 1 of 1

			Post-Test Year ending March 31, 2023 - Present Rates		Post-Test Year ending March 31, 2023 - Proposed Rates		
Line No.	Reference Schedule	12 Mos ending Test Year June 2022	Adjustments	Post-Test Year Amount	Revenue Deficiency	Post-Test Year Amount	
1	(1)	(2)	(3)	(4)	(5)	(6)	
2							
3	Operating Revenues *	5	\$844,069,533	(\$35,657,821)	\$808,411,712	\$94,666,545	\$903,078,257
4							
5	Operating Expenses						
6	Operation & Maintenance Expense *	6	264,138,065	(34,385,179)	229,752,886	384,365	230,137,251
7	Depreciation & Amortization Expense	8	153,809,233	12,996,533	166,805,766	0	166,805,766
8	Taxes Other Than Income Taxes	10	117,750,149	4,673,129	122,423,278	13,163,891	135,587,169
9							
10	Total Operating Expenses Before Income Taxes		535,697,447	(16,715,517)	518,981,931	13,548,256	532,530,187
11							
12	Utility Operating Income Before FIT		308,372,086	(18,942,305)	289,429,782	81,118,289	370,548,071
13	Federal Income Taxes	14	31,692,873	2,571,468	34,264,341	17,034,840	51,299,181
14							
15	Utility Operating Income		\$276,679,214	(\$21,513,773)	\$255,165,441	\$64,083,449	\$319,248,890
16							
17	Rate Base	15		\$4,267,405,697		\$4,267,405,697	
18							
19	Rate of Return	16		5.9794%		7.4811%	

New Jersey-American Water Company, Inc.
Statement of Operating Revenue

New Jersey-American Water Company, Inc.

Docket No. WRxxxxxxxx

Witness: Charles Rea

Exhibit No. P-2, Schedule 5

Page 1 of 1

Line No.	Test Year Present Rates @ 6/30/2022	Post-Test Year Adjustments	(Col. (1)+(2)) Post-Test Year Present Rates @ 3/31/2023	Increase	(Col. (3)+(4)) Post-Test Year Proposed Rates @ 3/31/2023	(Col. (4)/(3)) Percent Increase
1	(1)	(2)	(3)	(4)	(5)	(6)
2						
3	Total Water Service Revenues:					
4	Metered Service	\$680,555,743	\$37,571,520	\$718,127,263	\$83,126,910	\$801,254,173 12.00%
5	Private Fire Protection Service	26,758,218	57,303	26,815,521	6,047,763	32,863,284 23.00%
6	Public Fire Protection Service	30,705,730	118,336	30,824,066	2,314,210	33,138,276 8.00%
7	Revenues From Water Sales	\$738,019,691	\$37,747,159	\$775,766,850	\$91,488,883	\$867,255,733 12.00%
8						
9	Other Operating Revenues	4,394,932	966,692	5,361,623	0	5,361,623 0.00%
10						
11	Total Water Operating Revenues	\$742,414,623	\$38,713,851	\$781,128,473	\$91,488,883	\$872,617,356 12.00%
12						
13						
14	Revenues From Wastewater Sales	\$24,294,604	\$2,973,008	\$27,267,612	\$3,177,662	\$30,445,274 12.00%
15	Other Operating Revenues	8,318	7,309	15,627	0	15,627 0.00%
16						
17	Total Wastewater Operating Revenues	\$24,302,922	\$2,980,317	\$27,283,239	\$3,177,662	\$30,460,901 12.00%
18						
19	Total Company Operating Revenues					
20	Water and Wastewater Service	\$766,717,544	\$41,694,168	\$808,411,712	\$94,666,545	\$903,078,257 12.00%
21						

New Jersey-American Water Company, Inc.
Docket No. WRxxxxxxxxx
Witness: Jamie D. Hawn

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[illegible]

**New Jersey-American Water Company, Inc.
Uncollectible Expense**

New Jersey-American Water Company, Inc.

Docket No. WRxxxxxxxxx

Witness: Jamie D. Hawn

Exhibit No. P-2, Schedule 7

Page 1 of 1

		Post-Test Year ending March 31, 2023 - Present Rates			Post-Test Year ending March 31, 2023 - Proposed Rates		
Line No.		Total Water	Total Wastewater	Total Company	Total Water	Total Wastewater	Total Company
1							
2	Post-Test Year Revenues - Present Rates	\$781,128,473	\$27,283,239	\$808,411,712	\$862,450,072	\$40,628,185	\$903,078,257
3							
4	Average Write-Off Ratio ¹	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%
5							
6	Post-Test Year Uncollectible Expense at Present Rates	3,171,541	110,776	3,282,317	3,501,723	164,959	3,666,682
7							
8	Adjustment - Present Rate to Proposed Rates				\$330,182	\$54,183	\$384,365
9							
10							
11							
12							
13							
14							
15							
16	¹ Calculation of the Average Write Off Ratio - based on three -year average						
17	12 months ended	12/31/2017	12/31/2018	12/31/2019	3-Year Average		
18	Uncollectible Expense	\$2,257,373	\$2,328,171	\$1,743,800	\$2,109,782		
19	Reserve Balance Beginning of Year	(5,843,806)	(5,024,888)	(4,106,105)	(4,991,600)		
20	Reserve Balance End of Year	(5,024,888)	(4,106,105)	(3,156,646)	(4,095,880)		
21	Net Write-Offs	\$3,076,292	\$3,246,954	\$2,693,259	\$3,005,502		
22							
23	Revenues	\$737,113,568	\$721,810,447	\$761,778,494	\$740,234,169		
24	Average Write-Off Ratio	0.42%	0.45%	0.35%	0.41%		
25							

New Jersey-American Water Company, Inc.
Summary of Depreciation and Amortization

New Jersey-American Water Company, Inc.

Docket No. WRxxxxxxxx

Witness: John S. Tomac

Exhibit No. P-2, Schedule 8

Page 1 of 1

		Test Year ending June 30, 2022			Adjustments			Post-Test Year ending March 31, 2023 - Proposed Rates			
Line No.	Reference Schedule	Total Water	Total Wastewater	Total Company	Total Water	Total Wastewater	Total Company	Total Water	Total Wastewater	Total Company	
1											
2	Depreciation	9	\$147,400,677	\$5,229,145	\$152,629,823	\$6,263,986	\$1,508,170	\$7,772,156	\$153,664,663	\$6,737,315	\$160,401,979
3	Amort. Of Plant Acquisition Adj.	15-9	364,720	3,205	367,925	(96,532)	(1,569)	(98,101)	268,188	1,636	269,824
4	Amort. Of Regulatory Asset		806,329	5,157	811,486	0	0	0	806,329	5,157	811,486
5	Amort. Of COVID-19 Costs	8-5	0	0	0	5,322,478	0	5,322,478	5,322,478	0	5,322,478
6											
7	Total Depreciation and Amortization		\$148,571,726	\$5,237,507	\$153,809,233	\$11,489,932	\$1,506,601	\$12,996,533	\$160,061,658	\$6,744,108	\$166,805,766

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9

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Exhibit No. P-2, Schedule 9
Page 1 of 6

Line No.	Utility Account	NARUC Account	Description	Rate	UPIS Balance @ 11/2021	Net Plant Adds to 06/2022	Net Plant Adds to 12/2022	(Col. 2+3+4) UPIS Balance @ 12/2022	(Col. 1x5) Post-Test Year Expense
				(1)	(2)	(3)	(4)	(5)	(6)
1	304100	311	Struct & Imp-Supply	2.00%	\$59,282,695	\$8,527,325	\$34,890,897	\$102,700,917	\$2,054,018
2	305000	312	Collect & Impound Reservoirs	1.73%	22,182,528	0	0	22,182,528	383,758
3	306000	313	Lake, River & Other Intakes	2.47%	1,423,200	0	0	1,423,200	35,153
4	307000	314	Wells & Springs	2.14%	60,625,787	570,199	2,356,806	63,552,792	1,360,030
5	308000	315	Infiltratrn Galleries & Tunne	1.14%	9,745,367	0	0	9,745,367	111,091
6	309000	316	Supply Mains	1.36%	25,678,175	67,124	0	25,745,299	350,131
7	339200	317	Other P/E-Supply	3.40%	641,353	0	0	641,353	21,806
8	304200	321	Struct & Imp-Pumping	1.69%	73,294,104	0	0	73,294,104	1,238,670
9	310000	323	Power Generation Equip	2.08%	38,232,837	0	0	38,232,837	795,243
10	310200	322	Boiler Plant Equip P	4.88%	299,607	0	0	299,607	14,621
11	311200	325	Pump Eqp Electric	2.34%	141,580,598	45,791	0	141,626,389	3,314,058
12	311300	326	Pump Eqp Diesel	10.61%	6,813,612	0	0	6,813,612	722,924
13	311400	327	Pump Eqp Hydraulic	3.44%	14,476,701	0	0	14,476,701	497,999
14	311500	328	Pump Eqp Other	1.48%	11,545,041	7,758,938	3,072,949	22,376,928	331,179
15	311530	328	Pumping Equipment WT	1.48%	232,192	0	0	232,192	3,436
16	311540	328	Pumping Equipment TD	1.48%	30,072	0	0	30,072	445
17	304300	331	Struct & Imp-Treatment	1.87%	276,758,033	2,831,115	0	279,589,148	5,228,317
18	304310	331	Struct & Imp-Treatment-Handl	1.87%	7,835,773	0	0	7,835,773	146,529
19	320100	332.1	WT Equip Non-Media	2.20%	412,986,441	34,528,726	68,152,337	515,667,505	11,344,685
20	320200	332.2	WT Equip Filter Media	14.03%	26,944,064	0	0	26,944,064	3,780,252
21	339300	332.1	Other P/E-Treatment	1.92%	1,202,555	0	0	1,202,555	23,089
22	339400	332.1	Other P/E-WT Res Hand Equip	3.18%	3,405,227	0	0	3,405,227	108,286
23	304400	341	Struct & Imp-T&D	2.88%	23,167,522	0	0	23,167,522	667,225
24	330000	342	Dist Reservoirs & Standpipes	1.09%	36,023,857	1,837,163	0	37,861,020	412,685
25	330002	342	Tank Original Painting	1.09%	99,272	0	0	99,272	1,082
26	330100	342	Elevated Tanks & Standpipes	1.09%	66,128,562	50,992	0	66,179,554	721,357
27	330200	342	Ground Level Tanks	1.09%	11,291,308	0	0	11,291,308	123,075
28	330300	342	Below Ground Tanks	1.09%	5,440,221	0	0	5,440,221	59,298
29	330400	342	Clearwell	1.09%	85,696	0	0	85,696	934
30	331001	343	TD Mains Not Classified	0.80%	570,074,868	115,251,217	60,000,187	745,326,272	5,962,610
31	331100	343.1	TD Mains 4in & Less	2.76%	54,437,652	0	0	54,437,652	1,502,479
32	331200	343.2	TD Mains 6in to 8in	1.64%	1,012,577,258	0	0	1,012,577,258	16,606,267
33	331300	343.3	TD Mains 10in to 16in	1.11%	615,052,421	6,386,665	0	621,439,086	6,897,974
34	331400	343.4	TD Mains 18in & Grtr	1.26%	266,616,198	0	0	266,616,198	3,359,364
35	332000	344	Fire Mains	10.12%	2,110,553	0	0	2,110,553	213,588
36	333000	345	Services	2.09%	694,043,384	25,201,079	22,509,314	741,753,777	15,502,654
37	334100	346	Meters	3.96%	292,129,745	16,092,634	11,496,483	319,718,863	12,660,867
38	334200	347	Meter Installations	8.32%	174,904,393	0	0	174,904,393	14,552,045
39	334300	347	Meter Vaults	8.32%	66,298,475	0	0	66,298,475	5,516,033
40	335000	348	Hydrants	2.92%	185,519,092	11,273,695	8,234,674	205,027,461	5,986,802
41	336000	345	Backflow Prevention Devices	2.74%	157,637	0	0	157,637	4,319
42	339500	349	Other P/E-TD	19.35%	597,789	0	0	597,789	115,672
43	339600	389	Other P/E-CPS	17.05%	12,130,830	0	0	12,130,830	2,068,307
44	304500	390	Struct & Imp-General	3.45%	94,970,558	0	0	94,970,558	3,276,484
45	304510	390	Struct & Imp-Cap Lease	3.45%	11,022	0	0	11,022	380
46	304600	390.1	Struct & Imp-Offices	1.26%	24,177,503	0	0	24,177,503	304,637
47	304610	390.1	Struct & Imp-HVAC	1.26%	2,674,007	0	0	2,674,007	33,692
48									
49									

Exhibit No. P-2, Schedule 9
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Line	Utility	NARUC			UPIS Balance	UPIS Balance	Net Plant Adds	(Col. 2+3+4)	(Col. 1x5)
No.	Account	Account	Description	Rate	@ 11/2021	to 06/2022	to 12/2022	UPIS Balance @ 12/2022	Post-Test Year Expense
				(1)	(2)	(3)	(4)	(5)	(6)
1	304700	390.2	Struct & Imp-Store,Shop,Gar	2.09%	\$9,941,554	\$0	\$0	\$9,941,554	\$207,778
2	304800	390.3	Struct & Imp-Misc	0.92%	5,636,627	0	0	5,636,627	51,857
3	339100	303	Other P/E-Intangible	3.40%	3,400,506	0	0	3,400,506	115,617
4	340100	391	Office Furniture & Equip	5.40%	12,503,565	1,129,922	766,752	14,400,239	777,613
5	340200	391.2	Comp & Periph Equip	12.36%	13,022,340	0	0	13,022,340	1,609,561
6	340300	391.3	Computer Software	12.26%	151,211,354	0	0	151,211,354	18,538,512
7	340310	391.3	Comp Software Mainframe	0.00%	464,478	0	0	464,478	0
8	340400	391.4	Data Handling Equipment	0.56%	286,298	0	0	286,298	1,603
9	340500	391.5	Other Office Equipment	0.72%	80,254	0	0	80,254	578
10	341001	392.4	Trans Equip Not Classified	3.98%	1,301,995	0	0	1,301,995	51,819
11	341100	392.1	Trans Equip Lt Duty Trks	-1.64%	16,712,856	7,522,614	3,755,668	27,991,137	(459,055)
12	341200	392.2	Trans Equip Hvy Duty Trks	5.83%	20,828,377	0	0	20,828,377	1,214,294
13	341300	392.3	Trans Equip Autos	7.93%	2,354,775	0	0	2,354,775	186,734
14	341400	392.4	Trans Equip Other	4.63%	7,936,403	0	0	7,936,403	367,455
15	342000	393	Stores Equipment	8.03%	1,804,530	0	0	1,804,530	144,904
16	343000	394	Tools,Shop,Garage Equip	5.50%	17,337,918	1,107,835	726,214	19,171,967	1,054,458
17	344000	395	Laboratory Equipment	11.82%	3,694,028	0	0	3,694,028	436,634
18	345000	396	Power Operated Equipment	4.05%	2,696,131	1,477,954	1,043,939	5,218,024	211,330
19	346000	397	Comm Equip Not Classified	3.44%	17,016,512	10,896,180	9,270,159	37,182,852	1,279,090
20	346100	397	Comm Equip Non-Telephone	3.44%	8,225,700	0	0	8,225,700	282,964
21	346190	397	Remote Control & Instrument	3.44%	44,182,127	0	0	44,182,127	1,519,865
22	346200	397	Comm Equip Telephone	3.44%	1,507,935	0	0	1,507,935	51,873
23	347000	398	Misc Equipment	5.03%	24,723,648	0	0	24,723,648	1,243,599
24	348000	399	Other Tangible Property	7.36%	743,099	514,432	0	1,257,531	92,554
25	354200	324	WW Struct & Imp Collection	2.69%	15,694,264	7,273,368	1,961,460	24,929,092	670,593
26	354300	330	WW Struct & Imp Pumping	2.56%	4,461,875	357,093	0	4,818,968	123,366
27	354400	340	WW Struct & Imp Treatment	1.98%	4,536,427	0	0	4,536,427	89,821
28	354500	340	WW Struct & Imp General	2.61%	4,824,133	0	0	4,824,133	125,910
29	354510	340	WW Struct & Imp Gen Leased	0.00%	0	0	0	0	0
30	355200	389	WW Pwr Gen Equip Collection	4.21%	666,666	246,484	0	913,150	38,444
31	355400	389	WW Pwr Gen Equip Treatment	4.06%	636,817	0	0	636,817	25,855
32	360000	323	WW Collection Sewers Forced	1.28%	11,435,937	2,595,105	0	14,031,042	179,597
33	361100	321	WW Collecting Mains	1.03%	175,457,075	5,550,816	312,225	181,320,117	1,867,597
34	361101	322	WW Collecting Mains Other	1.99%	6,019,792	365,975	0	6,385,767	127,077
35	362000	324	WW Special Coll Struct	2.08%	296,381	0	0	296,381	6,165
36	363000	320	WW Services Sewer	2.25%	53,350,929	618,197	526,177	54,495,303	1,226,144
37	364000	389	WW Flow Measuring Devices	2.52%	135,753	0	0	135,753	3,421
38	370000	325	WW Receiving Wells	3.95%	1,859,794	0	0	1,859,794	73,462
39	371100	331	WW Pump Equip Elect	5.19%	18,926,537	678,374	4,753,473	24,358,384	1,264,200
40	371200	332	WW Pump Equip Oth Pwr	4.11%	1,056,724	0	0	1,056,724	43,431
41	371300	332	WW Pump Equip Misc	6.43%	87,035	0	0	87,035	5,596
42	380000	398	WW TD Equipment	3.86%	10,920,010	171,980	7,285,533	18,377,523	709,372
43	380050	398	WW TD Equip Grit Removal	2.64%	0	0	0	0	0
44	380100	398	WW TD Equip Sed Tanks/Acc	2.64%	0	0	0	0	0
45	380200	398	WW TD Equip Sldge/Effl Rmv	2.64%	0	0	0	0	0
46	380250	398	WW TD Equip Sldge Dig Tnk	2.64%	0	0	0	0	0
47	380300	398	WW TD Equip Sldge Dry/Filt	2.64%	0	0	0	0	0
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New Jersey-American Water Company, Inc.
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Witness: John S. Tomac

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Line No.	Utility Account	NARUC Account	Description	Rate	UPIS Balance @ 11/2021	UPIS Balance to 06/2022	Net Plant Adds to 12/2022	(Col. 2+3+4) UPIS Balance @ 12/2022	(Col. 1x5) Post-Test Year Expense
				(1)	(2)	(3)	(4)	(5)	(6)
1	304100	311	Struct & Imp-Supply	2.00%	\$59,282,695	\$8,527,325	\$34,890,897	\$102,700,917	\$2,054,018
2	305000	312	Collect & Impound Reservoirs	1.73%	22,182,528	0	0	22,182,528	383,758
3	306000	313	Lake, River & Other Intakes	2.47%	1,423,200	0	0	1,423,200	35,153
4	307000	314	Wells & Springs	2.14%	60,625,787	570,199	2,356,806	63,552,792	1,360,030
5	308000	315	Infiltratrn Galleries & Tunne	1.14%	9,745,367	0	0	9,745,367	111,090
6	309000	316	Supply Mains	1.36%	25,678,175	67,124	0	25,745,299	350,136
7	339200	317	Other P/E-Supply	3.40%	641,353	0	0	641,353	21,806
8	304200	321	Struct & Imp-Pumping	1.69%	73,294,104	0	0	73,294,104	1,238,670
9	310000	323	Power Generation Equip	2.08%	38,232,837	0	0	38,232,837	795,243
10	310200	322	Boiler Plant Equip P	4.88%	299,607	0	0	299,607	14,621
11	311200	325	Pump Eqp Electric	2.34%	141,580,598	45,791	0	141,626,389	3,314,058
12	311300	326	Pump Eqp Diesel	10.61%	6,813,612	0	0	6,813,612	722,924
13	311400	327	Pump Eqp Hydraulic	3.44%	14,476,701	0	0	14,476,701	497,999
14	311500	328	Pump Eqp Other	1.48%	11,545,041	7,758,938	3,072,949	22,376,928	331,179
15	311530	328	Pumping Equipment WT	1.48%	232,192	0	0	232,192	3,436
16	311540	328	Pumping Equipment TD	1.48%	30,072	0	0	30,072	445
17	304300	331	Struct & Imp-Treatment	1.87%	276,758,033	2,831,115	0	279,589,148	5,228,317
18	304310	331	Struct & Imp-Treatment-Handl	1.87%	7,835,773	0	0	7,835,773	146,529
19	320100	332.1	WT Equip Non-Media	2.20%	412,986,441	34,528,726	68,152,337	515,667,505	11,344,685
20	320200	332.2	WT Equip Filter Media	14.03%	26,944,064	0	0	26,944,064	3,780,252
21	339300	332.1	Other P/E-Treatment	1.92%	1,202,555	0	0	1,202,555	23,089
22	339400	332.1	Other P/E-WT Res Hand Equip	3.18%	3,405,227	0	0	3,405,227	108,286
23	304400	341	Struct & Imp-T&D	2.88%	23,167,522	0	0	23,167,522	667,225
24	330000	342	Dist Reservoirs & Standpipes	1.09%	36,023,857	1,837,163	0	37,861,020	412,685
25	330002	342	Tank Original Painting	1.09%	99,272	0	0	99,272	1,082
26	330100	342	Elevated Tanks & Standpipes	1.09%	66,128,562	50,992	0	66,179,554	721,357
27	330200	342	Ground Level Tanks	1.09%	11,291,308	0	0	11,291,308	123,075
28	330300	342	Below Ground Tanks	1.09%	5,440,221	0	0	5,440,221	59,298
29	330400	342	Clearwell	1.09%	85,696	0	0	85,696	934
30	331001	343	TD Mains Not Classified	0.80%	570,074,868	115,251,217	60,000,187	745,326,272	5,962,610
31	331100	343.1	TD Mains 4in & Less	2.76%	54,437,652	0	0	54,437,652	1,502,479
32	331200	343.2	TD Mains 6in to 8in	1.64%	1,012,577,258	0	0	1,012,577,258	16,606,267
33	331300	343.3	TD Mains 10in to 16in	1.11%	615,052,421	6,386,665	0	621,439,086	6,897,974
34	331400	343.4	TD Mains 18in & Grtr	1.26%	266,616,198	0	0	266,616,198	3,359,364
35	332000	344	Fire Mains	10.12%	2,110,553	0	0	2,110,553	213,588
36	333000	345	Services	2.09%	694,043,384	25,201,079	22,509,314	741,753,777	15,502,654
37	334100	346	Meters	3.96%	292,129,745	16,092,634	11,496,483	319,718,863	12,660,867
38	334200	347	Meter Installations	8.32%	174,904,393	0	0	174,904,393	14,552,045
39	334300	347	Meter Vaults	8.32%	66,298,475	0	0	66,298,475	5,516,033
40	335000	348	Hydrants	2.92%	185,519,092	11,273,695	8,234,674	205,027,461	5,986,802
41	336000	345	Backflow Prevention Devices	2.74%	157,637	0	0	157,637	4,319
42	339500	349	Other P/E-TD	19.35%	597,789	0	0	597,789	115,672
43	339600	389	Other P/E-CPS	17.05%	12,130,830	0	0	12,130,830	2,068,307
44	304500	390	Struct & Imp-General	3.45%	94,970,558	0	0	94,970,558	3,276,484
45	304510	390	Struct & Imp-Cap Lease	3.45%	11,022	0	0	11,022	380
46	304600	390.1	Struct & Imp-Offices	1.26%	24,177,503	0	0	24,177,503	304,637
47	304610	390.1	Struct & Imp-HVAC	1.26%	2,674,007	0	0	2,674,007	33,692
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Line No.	Utility Account	NARUC Account	Description	Rate	UPIS Balance	UPIS Balance	Net Plant Adds	(Col. 2+3+4)	(Col. 1x5)
					@ 11/2021	to 06/2022	to 12/2022	UPIS Balance	Post-Test Year
								@ 12/2022	Expense
				(1)	(2)	(3)	(4)	(5)	(6)
1	354200	324	WW Struct & Imp Collection	2.69%	\$15,694,264	\$7,273,368	\$1,961,460	\$24,929,092	\$670,593
2	354300	330	WW Struct & Imp Pumping	2.56%	4,461,875	357,093	0	4,818,968	123,366
3	354400	340	WW Struct & Imp Treatment	1.98%	4,536,427	0	0	4,536,427	89,821
4	354500	340	WW Struct & Imp General	2.61%	4,824,133	0	0	4,824,133	125,910
5	354510	340	WW Struct & Imp Gen Leased	0.00%	0	0	0	0	0
6	355200	389	WW Pwr Gen Equip Collection	4.21%	666,666	246,484	0	913,150	38,444
7	355400	389	WW Pwr Gen Equip Treatment	4.06%	636,817	0	0	636,817	25,855
8	360000	323	WW Collection Sewers Forced	1.28%	11,435,937	2,595,105	0	14,031,042	179,597
9	361100	321	WW Collecting Mains	1.03%	175,457,075	5,550,816	312,225	181,320,117	1,867,597
10	361101	322	WW Collecting Mains Other	1.99%	6,019,792	365,975	0	6,385,767	127,077
11	362000	324	WW Special Coll Struct	2.08%	296,381	0	0	296,381	6,165
12	363000	320	WW Services Sewer	2.25%	53,350,929	618,197	526,177	54,495,303	1,226,144
13	364000	389	WW Flow Measuring Devices	2.52%	135,753	0	0	135,753	3,421
14	370000	325	WW Receiving Wells	3.95%	1,859,794	0	0	1,859,794	73,462
15	371100	331	WW Pump Equip Elect	5.19%	18,926,537	678,374	4,753,473	24,358,384	1,264,200
16	371200	332	WW Pump Equip Oth Pwr	4.11%	1,056,724	0	0	1,056,724	43,431
17	371300	332	WW Pump Equip Misc	6.43%	87,035	0	0	87,035	5,596
18	380000	398	WW TD Equipment	3.86%	10,920,010	171,980	7,285,533	18,377,523	709,372
19	380050	398	WW TD Equip Grit Removal	2.64%	0	0	0	0	0
20	380100	398	WW TD Equip Sed Tanks/Acc	2.64%	0	0	0	0	0
21	380200	398	WW TD Equip Sldge/Effl Rmv	2.64%	0	0	0	0	0
22	380250	398	WW TD Equip Sldge Dig Tnk	2.64%	0	0	0	0	0
23	380300	398	WW TD Equip Sldge Dry/Filt	2.64%	0	0	0	0	0
24	380350	398	WW TD Equip Sec Trmt Filt	2.64%	0	0	0	0	0
25	380400	398	WW TD Equip Aux Effl Trmt	2.64%	0	0	0	0	0
26	380450	398	WW TD Equip Oth Sew Rem	2.64%	0	0	0	0	0
27	380500	398	WW TD Equip Chem Trmt Plt	2.64%	0	0	0	0	0
28	380600	398	WW TD Equip Oth Disp	2.64%	0	0	0	0	0
29	381000	381	WW Plant Sewers	1.84%	892,429	0	0	892,429	16,421
30	382000	349	WW Outfall Sewer Lines	1.49%	61,963	0	0	61,963	923
31	389100	389	WW Oth Plt & Misc Eqp Intang	4.59%	3,546,796	0	0	3,546,796	162,798
32	389200	389	WW Oth Plt & Misc Eqp Coll	0.00%	0	0	0	0	0
33	389600	389.1	WW Other P/E - CPS	10.43%	19,839	0	0	19,839	2,069
34	390000	391	WW Office Furniture & Equip	1.77%	19,880	8,934	8,934	37,748	668
35	390200	398	WW Computers & Peripheral	31.07%	35,663	0	0	35,663	11,080
36	390300	391	WW Computer Software	0.00%	0	0	0	0	0
37	391000	392	WW Trans Equipment	4.94%	710,883	0	0	710,883	35,118
38	391200	392	WW Trans Equip Hvy Dty Trks	2.62%	350,263	0	0	350,263	9,177
39	393000	394	WW Tool Shop & Garage Equip	14.03%	518,087	125,523	81,746	725,356	101,767
40	394000	398	WW Laboratory Equipment	3.34%	97,257	0	0	97,257	

New Jersey-American Water Company, Inc.
Docket No. WRXXXXXXXXXX
Witness: Jamie D. Hawn

Witness: Jamie D. Hawn

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New Jersey-American Water Company, Inc.
Gross Receipts and Franchise Tax

New Jersey-American Water Company, Inc.
Docket No. WRxxxxxxx
Witness: Jamie D. Hawn

Exhibit No. P-2, Schedule 11
Page 1 of 1

	Post-Test Year ending March 31, 2023 - Present Rates			Adjustments			Post-Test Year ending March 31, 2023 - Proposed Rates			
Line No.	Total Water	Total Wastewater	Total Company	Total Water	Total Wastewater	Total Company	Total Water	Total Wastewater	Total Company	
1										
2										
3	Total Revenues (Exhibit P-2, Schedule 4)	\$781,128,473	\$27,283,239	\$808,411,712	\$81,321,599	\$13,344,946	\$94,666,545	\$862,450,072	\$40,628,185	\$903,078,257
4	Less:						0			
5	Sales to Exempt Utilities	(9,701,832)	0	(9,701,832)	0	0	0	(9,701,832)	0	(9,701,832)
6	Other Operating Revenues	(5,361,623)	(15,627)	(5,377,250)	0	0	0	(5,361,623)	(15,627)	(5,377,250)
7										
8	Basis for Gross Receipts and Franchise Tax (a)	\$766,065,018	\$27,267,612	\$793,332,630	\$81,321,599	\$13,344,946	\$94,666,545	\$847,386,617	\$40,612,558	\$887,999,175
9										
10	Gross Receipts Tax Rate¹ (b)	8.4375%	8.4375%	8.4375%	8.4375%	8.4375%	8.4375%	8.4375%	8.4375%	8.4375%
11	Post-Test Year Gross Receipts Tax Amount (a*b)=(c)	\$64,636,736	\$2,300,705	\$66,937,441	\$6,861,510	\$1,125,980	\$7,987,490	\$71,498,246	\$3,426,685	\$74,924,931
12										
13	Franchise Tax Calculation									
14	Miles of Main (Public) %² (d)	92.7296%	90.6069%	92.6566%	92.7296%	90.6069%	92.4303%	92.7296%	90.6069%	92.6325%
15	Basis for Franchise Tax (a*d)=(e)	\$710,368,806	\$24,706,325	\$735,075,131	\$75,409,170	\$12,091,435	\$87,500,605	\$785,777,976	\$36,797,760	\$822,575,736
16										
17	Franchise Tax Rate³ (f)	5.625%	5.625%	5.625%	5.625%	5.625%	5.625%	5.625%	5.625%	5.625%
18	Post-Test Year Franchise Tax Amount (e*f)=(g)	\$39,958,245	\$1,389,731	\$41,347,976	\$4,241,766	\$680,143	\$4,921,909	\$44,200,011	\$2,069,874	\$46,269,885
19										
20	Total Post-Test Year GRAFT Amount (c+g)=(h)	\$104,594,981	\$3,690,436	\$108,285,417	\$11,103,276	\$1,806,123	\$12,909,399	\$115,698,257	\$5,496,559	\$121,194,816
21										
22	Test Year Expense	104,538,514	668,566	105,207,080		Post-Test Year - Under Present Rates		104,594,981	3,690,436	108,285,417
23										
24	Post-Test Year Adjustment	\$56,467	\$3,021,870	\$3,078,337		Post-Test Year Proposed Adjustment		\$11,103,276	\$1,806,123	\$12,909,399
25										
26	Post-Test Year GRAFT Tax Rate (h/a)=(i)	13.6535%	13.5341%	13.6494%				13.6535%	13.5341%	13.6481%

¹ Tax Rate reflects a combined rate of 8.4375% (Gross Receipts Tax of 7.5% and Surtax of 0.9375%).

² Reflects percent of miles of main in public streets, 94.0275% overall for Water and 83.2906% overall for Wastewater.

³ Tax Rate reflects a combined rate of 5.625% (Franchise Tax of 5% and Surtax of 0.625%).

New Jersey-American Water Company, Inc.
Utility Assessments

New Jersey-American Water Company, Inc.

Docket No. WRxxxxxxxxx

Witness: Jamie D. Hawn

Exhibit No. P-2, Schedule 12

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New Jersey-American Water Company, Inc.
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New Jersey-American Water Company, Inc.
Docket No. WRxxxxxxxxx
Witness: Jamie D. Hawn

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New Jersey-American Water Company, Inc.
Federal Income Tax Calculation

New Jersey-American Water Company, Inc.
Docket No. WRxxxxxxx
Witness: Jamie D. Hawn

Exhibit No. P-2, Schedule 14
Page 1 of 1

		Post-Test Year ending March 31, 2023 - Present Rates			Post-Test Year ending March 31, 2023 - Proposed Rates			
Line No.		Reference Schedule	Total Water	Total Wastewater	Total Company	Total Water	Total Wastewater	Total Company
1								
2	Operating revenue		\$781,128,473	\$27,283,239	\$808,411,712	\$862,450,072	\$40,628,185	\$903,078,257
3								
4	Less:							
5	Operation and maintenance expense	6	\$220,054,061	\$9,698,825	\$229,752,886	\$220,384,243	\$9,753,008	\$230,137,251
6	Depreciation expense	8	153,664,663	6,737,315	160,401,979	153,664,663	6,737,315	160,401,979
7	Amortization of acquisition adjustments	8	268,188	1,636	269,824	268,188	1,636	269,824
8	Taxes other than income	10	118,066,533	4,356,746	122,423,278	129,388,426	6,198,744	135,587,169
9	Interest charges	14-43	71,289,607	3,489,703	74,779,310	71,289,607	3,489,703	74,779,310
10	Permanent book/tax differences		(135,097)	0	(135,097)	(135,097)	0	(135,097)
11	Excess tax depreciation over book	15-20	113,563,568	5,977,030	119,540,598	113,563,568	5,977,030	119,540,598
12								
13	Total deductions		\$676,771,523	\$30,261,255	\$707,032,778	\$688,423,598	\$32,157,436	\$720,581,034
14								
15	Taxable income		\$104,356,950	(\$2,978,016)	\$101,378,935	\$174,026,474	\$8,470,749	\$182,497,224
16								
17	Tax Rate		21.00%	21.00%	21.00%	21.00%	21.00%	21.00%
18								
19	Federal income tax (current)		\$21,914,960	(\$625,383)	\$21,289,577	\$36,545,560	\$1,778,857	\$38,324,417
20								
21								
22	Deferred federal income tax:							
23	Excess tax depreciation over book	15-20	\$113,563,568	\$5,977,030	\$119,540,598	\$113,563,568	\$5,977,030	\$119,540,598
24	Tax rate		21.00%	21.00%	21.00%	21.00%	21.00%	21.00%
25	Net		23,848,349	1,255,176	25,103,526	23,848,349	1,255,176	25,103,526
26	Reverse South Georgia adjustment	15-20	(138,346)	0	(138,346)	(138,346)	0	(138,346)
27								
28	Deferred F.I.T. (accel.depr.)		\$23,710,003	\$1,255,176	\$24,965,179	\$23,710,003	\$1,255,176	\$24,965,179
29								
30	Deferred federal income tax:							
31	Amortization of excess deferred tax-TCJA	15-21	(\$12,375,429)	\$0	(\$12,375,429)	(\$12,375,429)	\$0	(\$12,375,429)
32	Amortization of ITC	15-18	(319,866)	0	(319,866)	(319,866)	0	(319,866)
33	Amortization of flow through tax-prior	15-20	704,879	0	704,879	704,879	0	704,879
34								
35								
36	Total Federal Income Tax		\$33,634,547	\$629,793	\$34,264,341	\$48,265,147	\$3,034,033	\$51,299,181
37								
38	Notes:							
39	(1) Interest synchronization calculation:							
40	Rate Base	15	\$4,068,259,972	\$199,145,725	\$4,267,405,697	\$4,068,259,972	\$199,145,725	\$4,267,405,697
41	Weighted Cost of Debt	16	1.7523%	1.7523%	1.7523%	1.7523%	1.7523%	1.7523%
42								
43	Interest Charges		\$71,289,607	\$3,489,703	\$74,779,310	\$71,289,607	\$3,489,703	\$74,779,310
44								
45								
46								

Statement of Rate Base

Witness: John S. Tomac

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New Jersey-American Water Company, Inc.
Weighted Cost of Capital
Total Company

New Jersey-American Water Company, Inc.

Docket No. WRxxxxxxxxx

Witness: John S. Tomac

Exhibit No. P-2, Schedule 16

Page 1 of 1

Post-Test Year at December 31, 2022

Line No.	Type of Capital	Reference Schedule	Balance Outstanding	Ratios	Cost Rate	Weighted Cost Rate	Pre-tax Rate of Return
1							
2	Long-Term Debt	16-2	\$1,932,697,376	45.4400%	3.8564%	1.7523%	1.7523%
3							
4	Preferred Stock		0	0.0000%		0.0000%	0.0000%
5							
6	Common Equity		2,320,693,726	54.5600%	10.5000%	5.7288%	7.2516%
7							
8			<u>\$4,253,391,102</u>	<u>100.0000%</u>		<u>7.4811%</u>	<u>9.0040%</u>
9							
10							

New Jersey-American Water Company, Inc.
Consolidated Tax Adjustment

New Jersey-American Water Company, Inc.
Docket No. WRxxxxxxxxx
Witness: John S. Tomac
CONFIDENTIAL

Exhibit No. P-2, Schedule 17
Page 1 of 1

CONFIDENTIAL Exhibit P-2, Schedule 17 has been filed with the Records Custodian of the BPU and will be provided
to Staff and Rate Counsel upon execution of an Agreement of Non-Disclosure

**New Jersey-American Water Company, Inc.
Schedule of Payments to Affiliated Companies**

New Jersey-American Water Company, Inc.

Docket No. WRxxxxxxxxx

Exhibit No. P-2, Schedule 18

Witness: Jamie D. Hawn

Page 1 of 1

Line No.	Affiliated Companies	12 Months Ended 6/30/2021
1		
2	American Water Works Company, Inc. ("AWK")	\$0
3		
4	American Water Capital Corporation ("AWCC")	\$46,422,887
5		
6	American Water Works Service Company, Inc. ("AWWSC")	\$69,616,696
7		
8		

BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF
NEW JERSEY-AMERICAN WATER COMPANY, INC.
FOR APPROVAL OF INCREASED TARIFF RATES AND
CHARGES FOR WATER AND WASTEWATER SERVICE, AND
OTHER TARIFF MODIFICATIONS

BPU Docket No. WR2201_____

Direct Testimony of
MARK K. McDONOUGH

January 14, 2022

Exhibit P-3

NEW JERSEY-AMERICAN WATER COMPANY, INC.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.

I. INTRODUCTION, SUMMARY AND PRESENTATION OF WITNESSES

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

A. My name is Mark McDonough, and my business address is 1 Water Street,
Camden, New Jersey 08102.

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

A. I am the President of New Jersey-American Water Company, Inc. (“New Jersey-
American Water”, “NJAWC” or the “Company”).

3. Q. What are your responsibilities in this position?

A. As President of NJAWC, I am responsible for all aspects of its business, including
financial, operations, production, distribution, customer service, engineering and
capital investment planning, employee relations, environmental, and regulatory
affairs. I lead a team of dedicated professionals who are devoted to providing safe
and reliable service to approximately 660,000 water and fire service customers and
49,900 wastewater service customers throughout the State of New Jersey. My goal
is to ensure that all activities of the Company are carried out in compliance with all
local, state and federal laws and regulations, and standards of good business
practice.

4. Q. Please describe your educational background and business experience.

A. Please refer to Appendix A for a summary of my educational background and
business experience.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 **5. Q. Have you previously testified in regulatory proceedings?**

2 A. I have not previously testified before any public utility commission.

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

4 A. The purpose of my testimony in this proceeding is to describe the reasons why the
5 Company is seeking the requested relief in this filing, including the request to
6 increase base rates and implement other regulatory tariff changes. Specifically, I
7 will explain the primary reasons for the proposed revenue increase, the Company's
8 regulatory proposals and how our cost recovery proposals in this case will support
9 the efficient use of water and investment in our system. I believe that it is important
10 that the Board of Public Utilities ("Board" or "BPU") and all of our stakeholders
11 understand the Company's contributions to the State of New Jersey in providing
12 water and wastewater service -- critical services that are vital to our health, welfare
13 and economic well-being.

14 **7. Q. Please list NJAWC's witnesses in this case and a brief summary of their**
15 **testimony.**

16 A. In addition to my Direct Testimony, the following witnesses provide testimony in
17 support of the Company's Request:

18 Thomas Shroba: will testify on the Company's operations, its
19 commitment to water quality, environmental
20 compliance, safety, improving water efficiency, as
21 well as the Company's proposed staffing levels and
22 compensation philosophy.

23 Donald C. Shields: will testify on the Company's capital investment
24 planning process, the recovery of capital expenditures
25 incurred since the Company's last rate case, the plan

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1 for the engineered coating of steel structures, and some
2 of the risks and challenges for water and wastewater
3 utilities associated with increased regulation and
4 climate variability.

5 John S. Tomac: will testify on the Company's revenue requirement,
6 rate base and capital structure, among other regulatory
7 policy issues.

8 Jamie D. Hawn: will testify on the Company's request for recovery of
9 expenses in this proceeding, including the Company's
10 pro forma adjustments to various items, as well as the
11 Company's request for an uncollectible expense
12 adjustment clause, recovery of its COVID-19 deferral
13 and the proposed tariff modifications.

14 Charles B. Rea: will testify on NJAWC's cost of service study and
15 proposed rate design for both water and wastewater
16 service, the determination of Post-Test Year revenues
17 at present and proposed rates, the Company's analysis
18 of residential, commercial, and public authorities water
19 consumption as it relates to the impact of the COVID-
20 19 pandemic on water usage and long-term trends in
21 water usage and the Company's affordability analyses
22 for water and wastewater service.

23 Ann E. Bulkley: will testify on the reasonableness of the Company's
24 cost of equity and its capital structure.

25 Patrick L. Baryenbruch: will testify on the reasonableness of Service Company
26 costs.

27
28 Robert Mustich will testify on the reasonableness of the Company's
29 compensation program and benchmarks the
30 Company's compensation expense against national
31 and regional peer groups.

32
33 Harold Walker will testify on the Company's cash working capital
34 and the lead/lag study.
35

NEW JERSEY-AMERICAN WATER COMPANY, INC.**II. REASONS FOR RELIEF REQUESTED****8. Q. Why is the Company filing this rate case?**

A. New Jersey-American Water has provided service to our customers for over 130 years. Our customers rely on the Company to provide them with safe and reliable water and wastewater services. Providing these services, however, requires us to make ongoing, significant capital investments, as well as to incur a substantial amount of operations and maintenance (“O&M”) expenses. This filing is primarily driven by the capital investment required to maintain and improve our infrastructure. As Company witness Mr. Donald Shields explains, since the effective date of rates in the Company’s last base rate case, the Company has invested, or will invest, approximately \$985 million in capital expenditures through the end of 2022.

9. Q. The basis of this case, then, is fundamentally about investment in New Jersey infrastructure, is that correct?

A. Yes. Nearly 68% of the Company’s proposed revenue increase is driven by investment in New Jersey’s infrastructure. NJAWC has and continues to manage its operations responsibly and effectively to uphold its continued commitment to provide safe and reliable water and wastewater services to our customers at reasonable rates. Moreover, every \$1 million we spend in capital is expected to create or sustain approximately 16 jobs in New Jersey.¹ The benefits of our infrastructure investment are vital to the health and welfare of our customers and

¹ For every \$1 million spent, five direct jobs and 11 indirect jobs are created. <https://www.bafuture.org/sites/default/files/key-topics/attachments/impacts-of-water-utility-sector.pdf>

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1 the state. The investments we make include improving the resiliency of the
2 Company's distribution system and treatment plants, treatment changes to maintain
3 regulatory compliance, technology investments that will integrate with existing
4 systems to enhance service to customers, and management of source of supply and
5 system demands. The Company has invested, or plans to invest, over \$454 million
6 during the twelve months ending June 30, 2022 (the "Test Year"), and projects that
7 an additional \$272 million will be added to its plant in service balance by December
8 31, 2022. Of that \$726 million, \$301 million is DSIC-eligible investment. As
9 noted, the Company will have invested approximately \$985 million in capital
10 improvements since the effective date of rates in the Company's last rate case. By
11 doing so, the Company has created or sustained over 15,000 jobs during that time
12 period.

10. Q. Are O&M expenses driving the Company's proposed rate increase?

14 A. No, they are not. Although the Company is seeking an increase in O&M expenses,
15 as Company witness Tomac explains, New Jersey-American's O&M expense is not
16 much higher than it was more than a decade ago and, moreover, the Company's
17 O&M expense over that period has increased at a rate significantly less than the
18 rate of inflation over that period.

11. Q. When were NJAWC's current rates approved?

20 A. The Board approved NJAWC's base rates in its Order issued and effective October
21 28, 2020, in Docket No. WR19121516. Those rates were based on a test year ended

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 June 30, 2020. As noted above, the Test Year in this case is the 12 months ending
2 June 30, 2022.

3 **12. Q. What amount of rate relief is the Company seeking in this case?**

4 A. NJAWC is seeking an increase of \$94.7 million over revenues authorized in our
5 last base rate case. The proposed increase will provide the Company with an
6 opportunity to recover its cost of service and earn a reasonable return on the capital
7 invested in the system. NJAWC is fully committed to continued investment in the
8 Company's operations at the level and in the manner necessary to continue to
9 provide safe and reliable service for our customers over the long run and is simply
10 seeking the revenues to support doing so.

11 **13. Q. How will the proposed rate increase impact the Company's existing rates?**

12 A. As Mr. Tomac explains, under our proposal the average customer's water bill - who
13 uses 5,520 gallons per month - would increase about \$6.78 per month or \$.23 cents
14 per day. Therefore, in total, the average customer would pay \$2.28 per day for all
15 the water they need for drinking, cooking, cleaning and sanitation. As I explain
16 below, Mr. Rea provides an analysis of the affordability of the Company's water
17 and wastewater services demonstrating that the proposed rate increase has not
18 adversely affected the range of affordability of our service over the past decade.

19 **14. Q. Please describe the importance of the Company's capital investment program.**

20 A. As Mr. Shield's explains in his testimony, the Company's capital investment plan
21 can be divided into two distinct areas: recurring projects ("RPs" or "RP") and
22 investment projects ("IPs" or "IP"). IPs represent investments made to meet

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 environmental or water quality regulations, infrastructure capacity expansion or
2 rehabilitation or replacement of aging facilities. These projects allow the Company
3 to meet the service demands of the community, maintain regulatory compliance and
4 reduce asset failure. RPs are critical investments for both the Company and
5 customers as these investments support the backbone of NJAWC's water and
6 wastewater systems by increasing both system resiliency and reliability. As Mr.
7 Shields explains in his Direct Testimony, many of New Jersey-American Water's
8 capital projects are necessary to anticipate and meet the needs of new
9 environmental, health and safety regulations and to address the effects of climate
10 variability. As Mr. Shields explains there are a host of emerging compounds that
11 must be addressed. These include perfluorooctanoic acid ("PFOA"), 1,4-dioxane,
12 and hexavalent chromium (chromium (VI)). PFOA is prevalent in New Jersey,
13 particularly in groundwater sources that have a history of contamination from other
14 volatile organic compounds. Our customers rely on us to keep current with
15 investment needs so that we can anticipate and treat water to achieve ever-
16 tightening water quality standards and to anticipate situations that might disrupt
17 water or wastewater service reliability. We must also address the effect of climate
18 variability on our system and its reliability. For example, the Raritan Millstone
19 Flood Wall upgrade that our engineering staff planned for was instrumental when
20 the remnants of Hurricane Ida severely impacted the central NJ region and the flood
21 of record resulting from Ida was held back by the recently completed flood wall. In
22 addition, the newly installed backup generators worked to maintain power after loss
23 of the main power feed during power grid failures after Tropical Storm Isaias.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 These carefully planned investments kept millions of people in the region with safe
2 drinking water and reliable sanitation. It is often said that “a picture is worth 1,000
3 words.” The following photo of the clear blue water in a sea of brown floodwaters
4 from the remnants of Hurricane Ida is a testament to the wisdom of the Company’s
5 proactive capital program and the beneficial result made possible by the new
6 Raritan Millstone Flood Wall.



7
8 **15. Q. You mentioned that investments made also help the Company’s employees to**
9 **work more efficiently and productively. Please explain.**

10 A. Mr. Shroba’s testimony chronicles the many ways our investments have allowed us
11 to work smarter and more efficiently. In the following section involving Water
12 Efficiency, I will explain some of the ways capital spending is employed to allow
13 our people to work smarter and more efficiently and discuss the various programs
14 and initiatives we follow to maintain a safe and productive workplace.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**16. Q. Is the Company seeking to recover its full employee compensation costs?**

A. Yes, we are. There is approximately \$10 million of the Company's market-based total compensation costs that historically has not been recognized in rates even though this practice is now well established in both the utility industry and other industries as well. Nevertheless, the Company must pay these costs to remain competitive in the job market so as to attract and retain skilled employees. The testimony of Messrs. Mustich and Shroba establish that New Jersey-American Water's market-based compensation is designed to keep the organization focused on delivering clean, safe, reliable and affordable service while increasing efficiency, decreasing waste, and boosting overall productivity. Mr. Mustich further demonstrates that the market based total compensation paid by the Company to its employees is in line with industry norms and is at, or below, the median for companies and utilities of similar size in the region in which NJAWC must compete to attract and retain a talented workforce. Consequently, the Company's market-based total compensation is a manifestly just, reasonable and prudent expense required to operate our business and it should be reflected fully in rates.

17. Q. Is the attraction and retention of dedicated and talented employees important to the Company's customers?

A. Yes, it is of critical importance. New Jersey-American Water was recently honored by being named Number One in residential customer satisfaction for large Northeast water utilities.² Such an achievement would not have been possible

² <https://www.jdpower.com/business/press-releases/2021-us-water-utility-residential-customer-satisfaction-study>

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1 without the efforts of dedicated and talented employees who focus on providing
2 exceptional service and reliability to our customers. Instilling the drive for
3 excellence exhibited by this award is a key objective of the Company's
4 performance compensation philosophy and it translates directly into benefits to our
5 customers.

6 **18. Q. Is the Company requesting recovery for all its post-test year capital additions?**

7 A. Yes. As demonstrated by Mr. Shields, the Company has a track record of delivering
8 its planned capital investment consistently with projections on a year-to-year basis.
9 All these capital additions are important components of continuing to provide safe
10 and reliable service to our customers. Since these investments will be completed by
11 the time new rates go into effect or shortly thereafter, the Company should have the
12 ability to recover its costs for these investments. In addition, as discussed by Mr.
13 Tomac, it is appropriate to include all post-test year capital investments because
14 they will match the capital structure proposed to fund these investments.

15 **19. Q. Was the Company challenged by the COVID-19 pandemic?**

16 A. Yes, we were. Right from the very start, New Jersey-American Water faced
17 significant challenges from the pandemic. Unlike some businesses that chose, or
18 were forced to shut down, the Company provides essential services that did not
19 make doing so an option. A significant portion of New Jersey's population relies
20 on us to provide water and wastewater service for drinking, cooking, bathing and
21 basic sanitation – all of vital importance during a pandemic. From the very
22 beginning of the pandemic, the well-being of our customers was foremost. New

NEW JERSEY-AMERICAN WATER COMPANY, INC.

Jersey-American Water took action to help protect all customers, including its most vulnerable customers, during the COVID-19 emergency, including the suspension of shut-offs of residential customers for non-payment and reconnection of residential customers who were previously disconnected for non-payment,³ as well as implementing safety protocols for work in the field to service customers. In the face of these challenging conditions, we managed to keep our operations running smoothly and our construction activities on course, with very little preparation time during the onset of this unprecedented event. Again, our J.D. Power Number One standing shows how successful we were in navigating the difficult shoals of the pandemic. Not only were we operating successfully but, in keeping our construction program on course, we continued to provide jobs and investment to the New Jersey economy. At the same time, the Company faced exceptionally difficult operating conditions, with employees required to maintain safe distances and stay at home and with normal operations difficult to achieve. New Jersey-American Water implemented social distancing measures and instructed employees who could perform their jobs remotely to work from home for the safety of its employees and customers. In addition to providing our field employees performing essential work with appropriate personal protective equipment, we also took measures to limit their interaction, including but not limited to:

- Conducting virtual safety meetings
- Staggering shift start times
- Having only one employee per vehicle
- Limiting access to treatment plant control rooms to plant operators

³ The Company also temporarily waived certain eligibility requirements for its H2O Help to Others Program (“H2O Program”) to further help those customers who were economically impacted by COVID-19.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

- Creating back up treatment plant control rooms

We also required all employees to report personal domestic travel in addition to international travel to American Water's safety hotline to assess whether or not self-quarantine measures were warranted. To date, because of these safety measures, no employee in New Jersey contracted the COVID-19 virus at work. All in all, the pandemic imposed significant challenges to our ability to operate and maintain our water and wastewater systems and our Company and its employees rose to that challenge.

III. IMPROVING WATER EFFICIENCY**20. Q. Please explain the concept of water efficiency.**

A. Water efficiency means using improved practices and technologies to deliver safe, reliable and adequate water service more effectively. The Company's water efficiency efforts include supply-side practices, such as reducing non-revenue water losses, using more efficient motors and pumps, pursuing purchasing economies and employing GIS technology, as well as demand-side strategies, such as rate design and public education programs. For example, leak detection programs can reduce the amount of water, pressure, and energy required to deliver the same amount of water to consumers and more efficient pumps and motors reduce power costs; the expanded use of technology helps our crews to be more efficient in locating water and wastewater facilities and quickly access system and customer information on a real-time basis. Improving efficiency saves customers money in the long run, enhances the economy, and protects the environment.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**21. Q. How is the concept of water efficiency relevant to this case?**

A. Improving water efficiency requires achieving a cost-effective mix of prudent investments and improved operations and maintenance management capabilities targeting safety, customer satisfaction, environmental compliance, sustainability, asset performance and operational efficiency. New Jersey-American Water continually strives to develop and implement efficiency measures that deliver steady or improved levels of service to consumers while mitigating cost increases. As discussed in the Direct Testimony of witnesses Messrs. Shields and Shroba, the investments we are making to better serve our customers are primarily in non-revenue producing investments – replacing aging infrastructure, compliance with environmental regulations, and efficiency investments. As we plan our investments, however, we know how important it is to balance the need for system improvements with what our customers pay for water and wastewater service. Consequently, the Company continually strives to find more efficient and cost-effective ways to operate and maintain its business. Our intense focus on controlling expenses produces direct benefits to our customers.

22. Q. Can regulation support New Jersey-American Water's efforts to improve water efficiency?

A. Yes, it can. Our ratemaking proposals are intended to support efforts to improve water efficiency. As mentioned above and explained in the Direct Testimonies of Company Witnesses Shroba and Shields, NJAWC is requesting approval of new rates that reflect the Company's total market-based employee compensation costs

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1 and the recognition of its capital investment through the post test-year period. The
2 Company's ratemaking proposals support the more efficient use of water, more
3 effective maintenance of our system, and more efficient investment in our system.

4 Ultimately, it is our customers who will benefit because these ratemaking tools will:
5 allow New Jersey-American Water to anticipate and plan for a consistency in
6 regulatory oversight necessary to attract capital; properly match cost incurrence
7 with cost recovery; support the Company's continued efforts to use market-based
8 total compensation to drive efficiencies and improve our service to customers; and
9 support more consistent planning and deployment of the most efficient resources.

10 Removing barriers to improving efficiency and needed investment is also in our
11 customers' interests because, over time, it reduces the cost of providing water and
12 wastewater service to customers and promotes the sustainability of our natural
13 resources.

14 **23. Q. What is the Company's ultimate goal with regard to water efficiency?**

15 A. Our goal is to provide quality water and wastewater services as efficiently as
16 possible, and by doing so, to increase the value of the services that we provide our
17 customers.

18 **IV. VALUE OF WATER AND AFFORDABILITY**

19 **24. Q. Do the Company's customers receive good value for the water service the**
20 **Company provides?**

21 A. Absolutely. Most Americans are unaware of the cost of the vast infrastructure
22 required to treat and deliver clean, safe and reliable water to their homes. Americans

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 pay less for tap water than do residents of most other developed nations. Water is
2 also typically the utility that makes up the lowest percentage of household budgets
3 – less than gas, oil, telephone, cable, and electricity.

4 When customers appreciate the true value of water, it not only helps water utilities
5 to continue to provide customers with safe, clean and reliable water service, but it
6 also has the added benefit of encouraging more conservation and helping ensure a
7 sustainable supply for future generations. American Water has joined with other
8 water resource companies and organizations in an industry-wide initiative to
9 enhance customer awareness of what is involved in providing high quality, reliable
10 water service and the relative value of the service as part of the Value of Water
11 Coalition. The Coalition's aim is to educate the public on the importance of clean,
12 safe, and reliable water to and from every home and community and to ensure
13 quality water service for future generations.

14 **25. Q. How does New Jersey-American Water maintain the affordability of its water**
15 **and wastewater services?**

16 A. Our water and wastewater services are critical, and we know how important it is
17 for those services to remain affordable. Company witness Mr. Rea provides an
18 analysis of the affordability of the Company's water and wastewater services
19 demonstrating that, even with the proposed increase, New Jersey-American's
20 services are, and remain, affordable for most of our customers as our rates have
21 held steady in the bill to income ("BTI") range of 0.60%-0.80% since 2010 and are
22 expected to be 0.73% under the Company's proposed rates. The BTI percentage

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1 under our rate proposal is well below the 2.0-2.5% range of a BTI ratio that is
2 generally considered “affordable.” For our more economically vulnerable
3 customers – those with household incomes at or below 150% of Federal Poverty
4 Limit - the average BTI Ratio is approximately 3.25%, for Basic Water Service,
5 which is defined to be 40 gallons of water per household per day. As Mr. Rea
6 explains, this BTI ratio is within the 3.0 to 4.5% BTI range generally considered
7 affordable for low-income customers.

8 In fact, NJAWC’s water service is quite affordable when one considers that all of a
9 customer’s needs for drinking, cooking, cleaning and sanitation are provided for
10 only \$2.28 per day at proposed rates. An important way that we maintain
11 affordability is by continuously seeking to improve our business processes and
12 making investments that improve operational efficiencies, and we have been very
13 successful in doing so, as witnessed by the cost containment in O&M expenses
14 discussed previously. With the monumental investment challenges we face,
15 keeping our costs as low as practicable is paramount.

16 **26. Q. What else is New Jersey-American Water doing to maintain the affordability**
17 **of its services for its customers?**

18 A. In addition to delivering our services in the most efficient, cost-effective ways to
19 benefit all of our customers, New Jersey-American Water also offers several
20 targeted customer assistance programs to help our most vulnerable customers. As
21 Mr. Rea discusses in his Direct Testimony, the Company makes programs available
22 to customers that attenuate the impact of rate increases on them, contributing to the

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 affordability of our rates. NJAWC's residential customers have the option of
2 paying bills under the Company's budget billing plan, and the Company offers its
3 customers flexible payment arrangements through installment agreements if they
4 are financially unable to pay a past due water service bill. In response to COVID-
5 19, the Company offered these payment arrangements for longer periods of time
6 and with no deposit required and continues to do so in accordance with recently
7 passed legislation.⁴

8 NJAWC also assists customers who are experiencing financial hardship through
9 the Company's Help to Others ("H2O") Program. As Mr. Rea explains in his
10 testimony, the H2O Program is available to customers with an annual income at or
11 below 300% of the federal poverty guidelines and is composed of two main
12 components: grants and a discount on the service charge. The grant component is
13 an emergency bill-paying assistance program funded by NJAWC's shareholders
14 and donations from customers who want to help other customers in need. The
15 service charge discount component, funded through rates, provides eligible
16 customers up to a 100% discount on their monthly fixed service charge for water
17 and is also available for our wastewater customers. Finally, in response to the
18 COVID-19 pandemic, NJAWC temporarily waived certain eligibility requirements
19 for certain of these programs to help those customers that may have been
20 economically impacted by COVID-19.

⁴ See S4081, available at <https://legiscan.com/NJ/text/S4081/2020> (passed Dec. 21, 2021).

NEW JERSEY-AMERICAN WATER COMPANY, INC.**V. CUSTOMER COMMITMENT AND COMMUNITY INVOLVEMENT****27. Q. Please describe the Company's commitment to its customers.**

A. Customers are a top priority for the Company. As I mentioned previously, our focus on customers was validated when New Jersey-American Water was named Number One in residential customer satisfaction for large, Northeast water utilities by J.D. Power. Whether it's helping to ensure their health and safety through the work we do and how we do it, striving to provide service in the most cost-effective manner possible over the long term, or undertaking key initiatives to better serve them, customers are and will continue to be our key focus. This is evidenced throughout the testimony provided in this case, but I do want to highlight two customer-specific items. As explained in more detail by Company witness Shroba, the Company has implemented several technological solutions to better serve our customers. These include improvements to our customer service infrastructure, applications for employee use, and enhancements to our customer portal, all of which make it easier for customers to do business with us. The customer portal, for example, has been enhanced to allow for easier, self-service options (e.g., bill payment, service requests), access to consumption information, and conservation advice. In addition, as explained by Company witness Jamie Hawn, the Company is seeking to eliminate credit card fees on a per customer basis. Providing customers with another payment option without a fee will ease the payment process for customers and increase customer satisfaction.

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1 **28. Q. Does New Jersey-American Water play an active role in the communities that**
2 **it serves?**

3 A. Yes. New Jersey-American Water is a responsible corporate citizen and is known
4 for its community involvement and volunteerism. Our management team
5 encourages our employees and their families to be active volunteers in the
6 communities we serve.

7 NJAWC believes that community investment starts with our employees. NJAWC
8 values community service and we encourage our employees to be equally invested
9 in the communities we serve through various charitable endeavors and volunteer
10 activities. NJAWC gives back to the community by supporting innovative,
11 environmental grant programs that improve, protect or restore drinking water
12 supplies and surrounding watersheds. We believe in investing in innovative
13 programs that align with our core business of water and wastewater service and are
14 committed to working with community partners to develop sustainable solutions to
15 local environmental issues. As an organization, NJAWC focuses community
16 investments in four key areas: (1) water and the environment; (2) water and healthy
17 living; (3) environmental education; and (4) community sustainability. The
18 following is an overview of the activities the Company and its employees' support:

- 19 • Each year, our employees participate in our AmerICANs in Action Month
20 of Service – helping neighbors, participating in different community
21 volunteer projects and providing hours of volunteer service to local
22 community-based organizations in need of assistance;

NEW JERSEY-AMERICAN WATER COMPANY, INC.

- 1 • Through the American Water Charitable Foundation (the “Foundation”),
2 NJAWC and American Water support employees in their own charitable
3 endeavors, provide support for targeted disaster relief efforts and provide
4 funding for higher level initiatives related to clean water, conservation,
5 education and sustainability. The Foundation donated more than \$2.1
6 million through the Employee Volunteer and Matching Gift, Disaster
7 Relief and Building Better Communities programs in 2020 – and
8 continues to make a difference every day. Since its inception, the
9 Employee Volunteer and Matching Gift Program has matched
10 approximately \$1.7 million to public charities that are important to
11 American Water employees across the nation and clocked more than
12 42,000 hours of volunteer time; and
- 13 • Over the past ten years, American Water employees have provided
14 approximately \$4.7 million to United Way and loyally contributed their
15 time to this cause.

29. Q. How else does the Company help support the communities it serves?

17 A. In 2021, New Jersey-American Water piloted a new workforce development
18 program in partnership with the Camden non-profit Hopeworks. The concept of the
19 new Water Utility Pipeline (Water UP!) training program is to connect individuals
20 from underserved communities we serve with transformative career opportunities
21 in the water industry. We launched this 11-week program in Camden with eight

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 young adults who learned job skills training through hands on experiences with our
2 employees in the field, as well as other business essentials.

3 The goal is to create a career path for the participants to qualify for entry level
4 utility jobs, with the potential of career placement at the end of the program either
5 within New Jersey-American Water, another American Water subsidiary, or with
6 another company that does business in the utility space. We are aiming to replicate
7 this training program, as well as others, in additional communities where we
8 operate, to continue to create opportunities for young people and to help build a
9 future pipeline of water utility workers.

10 **30. Q. In what other activities has New Jersey-American Water partnered with the**
11 **communities it serves?**

12 A. Through community giving, in-kind donations, partnerships and volunteering,
13 NJAWC demonstrates our commitment to programs that address community-
14 specific needs. We work with a number of community-based partners throughout
15 our service areas to positively impact the overall quality of life where our
16 employees, customers and neighbors live and work. It takes more than a one-time
17 grant or volunteer effort to make a lasting difference – so we seek out and support
18 organizations that understand how to best meet the needs of the community.

19 A few examples of how we take an active part in the communities we serve include:

- 20 • Environmental Grant Program: Providing grants of \$1,000 to \$10,000 for
21 community-based projects that improve, restore and protect our source
22 water and surrounding watersheds.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

- 1 • Toughbooks for Tough Volunteers: Providing ruggedized Toughbook
2 computers to non-profit organizations, primarily qualifying volunteer
3 firefighters and emergency responder departments located within
4 NJAWC's service areas.
- 5 • Speakers' Bureau: Offering our water industry experts to speak at
6 conferences, industry events, organizations and schools, with presentations
7 on all types of water-related topics that can be tailored for audiences of all
8 ages.
- 9 • First Responder Grant Program: Providing grants of up to \$2,000 each to
10 assist volunteer emergency service organizations in our service areas with
11 the purchase of protective gear, lifesaving equipment, tools, training and
12 related activities/materials to support volunteer firefighter and emergency
13 responder operations.
- 14 • Community Events: Contributing to community events, activities and
15 organizations that benefit the growth, sustainability and protection of our
16 service areas, either through small sponsorships or monetary donations, a
17 visit from our H2O On the Go Water Education Van, and/or hosting a table
18 with information for customers.
- 19 • COVID-19 Response Donations: Since the COVID-19 public health
20 emergency began in 2020, New Jersey-American Water has provided over
21 \$100,000 in charitable donations to nonprofit organizations in the state that
22 are providing response, relief and recovery. In 2020, New Jersey-American
23 Water and the American Water Charitable Foundation together provided

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 \$65,000 in donations to the COVID-19 emergency funds of four
2 organizations in New Jersey.⁵ Additionally, the American Water Charitable
3 Foundation provided a \$25,000 grant to the New Jersey Pandemic Relief
4 Fund, as part of the Foundation's community-focused COVID-19 Response
5 Fund. NJAWC also provided \$10,000 in donations to the COVID-19
6 emergency funds of two first responder support organizations in New
7 Jersey. New Jersey-American Water donated \$5,000 each to the EMS
8 Council of New Jersey and the New Jersey Firemen's Home. Additional
9 donations have been and continue to be provided to the Food Bank of South
10 Jersey, Community Food Bank of New Jersey, United Way of Southeastern
11 PA and Southern NJ, United Way of Northern NJ, and Urban Promise for
12 COVID relief programs.

13 **31. Q. Does this conclude your Direct Testimony?**

14 A. Yes, it does.

⁵ NJAWC donated \$15,000 each to Cooper Health Foundation and RWJ Barnabas Health Foundation, and \$10,000 to Inspira Health, to benefit each health provider's COVID-19 Emergency Response Fund.

NEW JERSEY-AMERICAN WATER COMPANY, INC.1 **1. Q. Please describe your educational background.**

2 A. I hold a Bachelor of Science degree from the University of Delaware, a Master of
3 Science degree from the American University and a Juris Doctor from the Antonin Scalia
4 Law School George Mason University. I am admitted to practice law in the States of New
5 Jersey and Maine.

6 **2. Q. What has been your business experience?**

7 A. I have 16 years of experience in the water industry. I joined American Water as a
8 Corporate Counsel for American Water Enterprises Group in 2005 working with the
9 Military Services Group on federal contracts for the provision of water and wastewater
10 services to the United States Department of Defense. I have also served as the Deputy
11 General Counsel and Division General Counsel to American Water Enterprises. In
12 2016, I was appointed the Chief Compliance Officer for American Water and oversaw
13 the compliance and ethics program enterprise-wide. In 2018, I was named President
14 of the Military and Contract Services Group, where I was responsible for all water and
15 wastewater services contracts with the United States Department of Defense and
16 various municipal clients, including the Cities of Camden and North Brunswick, New
17 Jersey. I held that position until April of 2021, when I was named President of New
18 Jersey American Water Company. Prior to coming to American Water, I worked as a
19 trial attorney in private practice in Maine and New Jersey from 1998 to 2005. Between
20 1988 and 1996, I worked as a Special Agent with the Office of Inspector General at the
21 United States General Services Administration, the National Railroad Passenger

NEW JERSEY-AMERICAN WATER COMPANY, INC.

- 1 Corporation, and the United States Department of Energy. My focus was on complex
- 2 fraud investigations and environmental and financial crimes.

BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF
NEW JERSEY-AMERICAN WATER COMPANY, INC.
FOR APPROVAL OF INCREASED TARIFF RATES AND
CHARGES FOR WATER AND WASTEWATER SERVICE, AND
OTHER TARIFF MODIFICATIONS

BPU Docket No. WR2201_____

Direct Testimony of

THOMAS SHROBA

January 14, 2022

Exhibit P-4

NEW JERSEY-AMERICAN WATER COMPANY, INC.**TABLE OF CONTENTS**

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NEW JERSEY-AMERICAN WATER COMPANY, INC.**INTRODUCTION****1. Q. Please state your name and business address.**

A. My name is Thomas Shroba. My business address is 1 Water Street, Camden, NJ 08102.

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

A. I am employed by New Jersey-American Water Company, Inc. ("New Jersey-American Water", "NJAWC", or the "Company") as Vice President of Operations.

3. Q. What are your responsibilities in this position?

A. As Vice President of Operations, I am responsible for leading New Jersey-American Water's operations (production, distribution, field services, construction), water quality/environmental compliance, operational risk management (safety), and business performance (collectively, "Operations") functions. I lead the Company's Operations team by providing goals and directions that strive to increase cost effectiveness, performance, customer service and service quality.

4. Q. Please describe your educational background and business experience.

A. Please refer to Appendix A for a summary of my educational background and business experience.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 **5. Q. Have you previously testified in regulatory proceedings?**

2 A. Yes, I submitted direct and rebuttal testimony for New Jersey-American Water in
3 BPU Docket Nos. WR17090985 and WR19121516.

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

5 A. The purpose of my testimony is to provide an overview of New Jersey-American
6 Water's operations and discuss our commitment to water quality and
7 environmental compliance, health and safety, and customer service, and our
8 continuing efforts to improve water efficiency. My testimony also supports the
9 Company's proposed staffing levels and explains our compensation philosophy.

10 **OVERVIEW OF OPERATIONS AND FACILITIES**

11 **7. Q. As Vice President of Operations, are you generally familiar with New Jersey-**
12 **American Water's operations and the facilities and property that the**
13 **Company maintains to serve customers?**

14 A. Yes.

15 **8. Q. Please describe New Jersey-American Water's operations.**

16 A. NJAWC is the state's largest water utility serving a population of approximately
17 2.8 million people. As of December 31, 2021, NJAWC provides service to
18 approximately 660,000 water and fire service customers and 49,900 wastewater
19 service customers in 190 communities in 18 counties throughout the State of New
20 Jersey.¹ The tan, green, red and orange shaded areas in the service area map

¹ NJAWC also provides water to 30 additional communities through bulk purchase water agreements.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 attached as Schedule TS-1 represent the franchise territory served by NJAWC.
2 New Jersey-American Water's customers are served by field operations
3 employees who report to eight operations centers located in Short Hills,
4 Shrewsbury, Egg Harbor Township, Delran, Plainfield, Belle Mead, Howell, and
5 Washington (Warren County). The operations center locations are also shown on
6 Schedule TS-1. The operating centers are organized into four geographically
7 based management areas (Regions). Also included on Schedule TS-1 are the
8 regulated wastewater systems owned by NJAWC.

9 In addition to providing direct water and wastewater service to its customers,
10 NJAWC also provides regional water supply and "sale for resale" water service
11 to approximately 47 other entities throughout the state. The areas shaded in grey
12 shown on Schedule TS-1 are served by NJAWC through bulk purchase water
13 agreements. The Company has been, and will continue to be, committed to
14 providing regional water supply solutions that are consistent with sound business
15 planning and the water needs identified and coordinated through state and local
16 planning efforts.

17 **9. Q. Please provide an overview of the water assets and facilities of the Company,**
18 **including sources of water supply, treatment facilities, pumping equipment**
19 **and distribution system property.**

20 A. NJAWC currently owns, operates, and provides service through thirty two (32)
21 separate public community water systems in the areas previously described. Each
22 of the water systems includes its own source of supply, production, treatment,

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 storage and distribution facilities. The Company operates seven surface water
2 treatment plants, 119 groundwater production and treatment facilities, and five
3 raw water reservoirs with a combined capacity of 6.2 billion gallons. The average
4 water production budget for 2020 was 275 million gallons per day ("MGD").
5 Within the NJAWC operations structure, the Production Department is
6 responsible for the operations and maintenance of the sources of supply,
7 reservoirs, treatment plants and treated water storage facilities.

8 In addition to these Company-owned surface water and groundwater sources of
9 supply, NJAWC also purchases both raw water and finished (treated) water from
10 several other water suppliers including, but not limited to the following: the
11 Passaic Valley Water Commission ("PVWC"); the Morris County Municipal
12 Utilities Authority ("MCMUA"); the Montclair Water Bureau; the New Jersey
13 Water Supply Authority ("NJWSA"); and the City of Newark. Over 100
14 emergency interconnections are maintained with neighboring water purveyors to
15 enhance reliability of NJAWC and other water systems.

16 **10. Q. Please provide an overview of the Company's wastewater assets and**
17 **facilities.**

18 A. NJAWC currently owns and operates 29 wastewater collection systems, 22 of
19 which also have wastewater treatment facilities. These wastewater treatment
20 facilities incorporate membrane, sequence batch reactor or conventional activated
21 sludge treatment technologies. Six of the collection systems -- Lakewood,
22 Howell (Adelphia section), Ocean City, Washington Borough (Port Collden

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 Mall), Haddonfield, and Mt. Ephraim -- convey collected wastewater to regional
2 wastewater treatment facilities owned and operated by the Ocean County Utilities
3 Authority, the Cape May County Municipal Utilities Authority, the Washington
4 Borough Municipal Utilities Authority, and the Camden County Municipal
5 Utilities Authority, respectively. A statewide wastewater management team is
6 responsible for the remaining 22 wastewater collection and treatment systems.

7 **11. Q. How does NJAWC manage the operations and maintenance of its water and**
8 **wastewater systems?**

9 A. Field Operations is responsible for operating and maintaining transmission and
10 distribution assets, utility service lines, fire services, metering facilities and
11 wastewater collection assets. In addition, Field Operations provides field-level
12 service to customers including meter reading, service requests, and field-related
13 collections activities. Finally, Field Operations works with the Engineering
14 Department and new customers to provide new and replacement services and to
15 coordinate the construction of certain new and replacement or rehabilitated
16 distribution and wastewater collection assets.

17 **12. Q. Please describe the work performed by the Company's Customer and**
18 **Operations Support group.**

19 A. NJAWC operations also includes a Customer and Operations Support group that
20 is based out of our Howell, New Jersey office. This team has several
21 responsibilities including the following: operational performance reporting,
22 management of customer inquiries and complaints, and liaison for the Board of

NEW JERSEY-AMERICAN WATER COMPANY, INC.

Public Utilities (“Board” or “BPU”) contacts; special billing and collections coordination; customer service processes; and liaison with the American Water national customer service center.

13. Q. Please explain Operations’ role in promoting safety and a safe working environment at NJAWC.

A. Operations is responsible for administering the health and safety program, which includes the delivery of all Occupational Safety and Health Administration (“OSHA”) required training, training and qualification of employees, physical security, cyber security, business continuity planning, and event management. We are supported by functional departments within American Water Works Service Company, Inc. (“Service Company”), such as Health & Safety, Learning & Development, Security, and Human Resources, to deliver core operations services. Safety and security metrics are tracked and reviewed monthly.

COMMITMENT TO WATER QUALITY AND ENVIRONMENTAL COMPLIANCE

Overview

14. Q. Please describe New Jersey-American Water’s overall commitment to water quality and environmental compliance.

A. We are acutely aware that water is the only utility intended for customers to ingest, and that our customers rely on NJAWC to provide them with safe and reliable water services. Water quality is of paramount importance to the health and well-being of our customers. Beyond health and safety, we know that NJAWC’s customers are also interested in the aesthetic qualities of the water we

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 treat and deliver to them. We proactively look for ways to optimize treatment
2 capabilities to continue to improve the overall quality of drinking water delivered
3 to our customers and do so in a way that strives to create operational efficiencies
4 that also benefit our customers. The Company's Water Quality and
5 Environmental Compliance program is designed to ensure New Jersey-American
6 Water complies with all drinking water quality, water pollution, residuals
7 management, air pollution and hazardous materials laws and regulations.

8 **15. Q. What specific environmental laws or regulations affect New Jersey-**
9 **American Water?**

10 A. New Jersey-American Water's operations are subject to approximately 11 major
11 state and federal public health and environmental laws, the conformance with
12 which is handled by the Company's Water Quality and Environmental
13 Compliance ("WQ/EC") team. Those 11 major regulatory schemes are: (1) the
14 federal Safe Drinking Water Act and its implementing regulations; (2) the New
15 Jersey Safe Drinking Water Act and its implementing regulations; (3) the federal
16 Clean Water Act and its implementing regulations; (4) the New Jersey
17 Department of Environmental Protection ("NJDEP") Release Protection
18 Program; (5) the federal Clean Air Act and its implementing regulations; (6) the
19 Water Quality Accountability Act ("WQAA"); (7) the New Jersey Safe Dam Act;
20 (8) the Delaware River Basin Commission regulations; (9) the New Jersey Solid
21 and Hazardous Waste rules; (10) the federal Resource Conservation and
22 Recovery Act ("RCRA") and its implementing regulations; and (11) the federal

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Emergency Planning and Community Right-To-Know Act (“EPCRA”). NJAWC’s Operations are also subject to other environmental laws, such as land use regulations, Green Acres, and the Highlands Water Protection and Planning Act.

16. Q. When the federal government has not pre-empted the field, does compliance with the federal law suffice for compliance with New Jersey law?

A. No, it does not. While there is some overlap between the state programs and federal requirements, state and local statutes and regulations can be more restrictive. New Jersey has: (1) more stringent diesel vehicle regulations than the federal Clean Air Act; (2) more stringent diesel backup generator requirements than federal regulations; (3) lower threshold quantities for hazardous materials and petroleum storage regulations; and (4) more stringent regulated drinking water contaminant standards.² For example, federal regulations currently set a maximum contaminant level (“MCL”) for arsenic in drinking water of 10 ug/L (micrograms per liter, or parts per billion); however, the NJDEP MCL is 5 micrograms per liter, giving New Jersey the most protective arsenic drinking water standard in the nation. New Jersey also became the first state to create a binding standard for a perfluorinated compound, PFNA, setting a drinking water limit of 13 parts per trillion (“ppt”). The NJDEP also implemented drinking water limits of 14 ppt for PFOA and 13 ppt for PFOS, two

² NJDEP has also implemented more stringent health advisory levels than the EPA for 17 volatile organic chemicals (“VOCs”).

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1 types of per- and polyfluoralkyl substances known as PFAS. The United States
2 Environmental Protection Agency's ("EPA") current health advisory is 70 ppt for
3 PFOS and PFOA combined. Another example is the Drinking Water Quality
4 Institute's Final Recommendation for establishment of a 1,4-dioxane MCL equal
5 to 0.33 parts per billion. Prior to NJDEP's official recognition of the
6 recommended standard, NJAWC began installing treatment to address this
7 emerging compound. Installing an Advanced Oxidation Process at treatment
8 facilities like Hummocks Groundwater Station and the Delaware River Regional
9 Water Treatment Plant ("DRRWTP") (as described by Mr. Shields in his
10 testimony) will continue to protect public health well before regulations require
11 routine monitoring for 1,4-dioxane. In fact, NJAWC led monitoring and
12 partnership efforts throughout the Delaware River watershed that ultimately
13 identified and eliminated a significant source of 1,4-dioxane that impacted the
14 DRRWTP and numerous other water purveyors.

15 A significant amount of work performed by the WQ/EC Team is ensuring that
16 NJAWC keeps current with these more stringent requirements, and then
17 designing and implementing compliance programs that minimize duplicative
18 efforts while maintaining compliance with both the federal and state
19 requirements. While there is little duplication in reporting requirements –
20 typically a state agency is the primary enforcement agency for the major federal
21 environmental laws – our operations are so pervasively regulated that the
22 Company filed or prepared approximately 3,000 reports or other regulatory

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 filings in 2020 to comply with the 11 different regulatory schemes outlined
2 previously.

3 **17. Q. Please describe New Jersey-American Water's water quality testing**
4 **program under the Safe Drinking Water Act.**

5 A. NJAWC routinely tests water in all of its systems to determine if it is meeting the
6 safety standards established by the federal and state regulatory authorities. Our
7 drinking water is tested both before and after treatment to confirm that it satisfies
8 all chemical and bacteriological criteria. To help protect the public health, we
9 have multiple barriers in the treatment process to help prevent contamination
10 from reaching our customers. We test for the presence of synthetic organic
11 chemicals, inorganic chemicals, VOCs, radionuclides, bacteria, disinfection
12 byproducts, and all other contaminants that the regulators require us to monitor,
13 at the frequency prescribed by the federal and state regulations, and report the
14 results of this testing to the NJDEP on a monthly, quarterly, annual, triennial,
15 sexennial and novennial basis, in accordance with the regulations. In addition, we
16 work with our customers to collect and analyze samples for compliance with the
17 Lead and Copper Rule, as well as participate in the federal Unregulated
18 Contaminant Monitoring Rule programs.

19 In 2021, New Jersey-American Water collected more than 14,000 water
20 chemistry and routine bacteriological samples. Many additional samples are
21 taken to assess process effectiveness, support pilot treatment studies, and monitor
22 emerging contaminant threats. We also collect other bacteriological samples as

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 needed in response to main breaks and similar emergencies. All four regions have
2 a WQ/EC Supervisor who: (1) reviews regulatory documents and sampling
3 history to determine the need and schedule for collecting specific samples; (2)
4 coordinates with operators to verify wells and treatment plants are available for
5 sampling based on maintenance and seasonal operating conditions, and then
6 reconcile availability to the regulatory schedule; (3) orders sampling kits from
7 our laboratories and prepares those kits for operators to use in the field; (4) tracks
8 the collection of samples by operators, the delivery of kits to laboratories, the
9 analysis of the sample by the laboratory, and the receipt of laboratory results; (5)
10 reviews laboratory results for compliance issues, then prepares the data for
11 reporting to regulatory agencies; and (6) both the WQ/EC supervisor and licensed
12 operator complete and submit an internal compliance certification form monthly
13 to audit all regulatory sample requirements.

14 **18. Q. Is water quality sampling the only task required to comply with the New**
15 **Jersey and federal Safe Drinking Water Acts?**

16 A. No. NJDEP also issues permits for each drinking water system, some of which
17 contain other conditions relating to the operation of and recordkeeping for
18 treatment plants and other facilities. The WQ/EC Team, in cooperation with
19 Operations, works to ensure we are complying with those requirements and
20 reports on our compliance as needed. In addition, there are various physical
21 standards our facilities must meet. The WQ/EC Team routinely inspects our
22 facilities to confirm these physical standards are being met. The WQ/EC Team

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 also coordinates with NJDEP to obtain regulatory approvals for the addition of
2 new tanks, treatment plants and other facilities, or variances from approved
3 treatment processes. The WQ/EC Team also oversees implementation of the
4 Cross Connection Control Program to help avoid substances of an unknown
5 quality being introduced into the distribution system by conditions on our
6 customers' premises. Finally, the WQ/EC Team tracks the required levels of
7 operator certifications necessary to comply with drinking water regulations and
8 coordinate with operations management to ensure we have proper operator
9 staffing for our facilities.

10 **19. Q. Please describe NJAWC's program to comply with the National Pollutant**
11 **Discharge Elimination System ("NPDES") with regard to its wastewater**
12 **operations.**

13 A. In New Jersey, EPA has delegated authority to issue NPDES permits ("NJPDES"
14 permits when issued by New Jersey) to the New Jersey Department of
15 Environmental Protection. NJAWC partners with a contractor to: complete and
16 submit NJPDES Permit Renewals or Modification Forms; complete and submit
17 monthly Discharge Monitoring Reports ("DMR"), as required by each facility
18 NPDES permit; collect, submit and oversee regulatory sample testing by an
19 outside (third-party) laboratory for those samples required under each facility
20 NPDES permit, but for which the operator is not certified to perform; and notify
21 the NJDEP Hotline for any event which violates, or could potentially violate, the
22 facility NPDES permit or applicable law.

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1 **20. Q. Is the effluent from New Jersey-American Water's wastewater operations**
2 **regulated?**

3 A. Yes, effluent from our wastewater operations is regulated under NJPDES
4 regulations. We monitor treated wastewater (effluent) prior to its discharge.
5 Through a combination of physical, chemical, and biological treatment processes,
6 the regulated constituents are removed or reduced to acceptable levels, and then
7 discharged into the ground or appropriate waterway.

8 **21. Q. Please describe how New Jersey-American Water manages compliance with**
9 **applicable environmental laws and regulations.**

10 A. The cornerstone of NJAWC's Water Quality and Environmental Compliance
11 program are Environmental Management Plans ("EMPs"). An EMP is a
12 compliance matrix that identifies a regulatory requirement, specifies the person
13 responsible for NJAWC's compliance with that requirement, and contains
14 information on the means the Company is using to achieve compliance. EMP
15 reviews are conducted each quarter to ensure the information remains current.
16 The EMPs contain the requirements for the regulatory schemes outlined
17 previously, including specific permit conditions that regulators impose on
18 individual equipment and facilities as well as general regulatory requirements.

19 **22. Q. How else does New Jersey-American Water manage compliance with**
20 **applicable environmental laws and regulations?**

21 A. The Company uses a laboratory information management system ("LIMS") for
22 managing some of the water quality data and sample reporting requirements. The

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 LIMS sample scheduling feature provides a tool to streamline thousands of water
2 sample tests annually and ensures that the results are tracked and reported as
3 required by the environmental regulators. In addition, NJAWC uses MapCall, an
4 internally-built product, to manage bacteriological sample collection, as well as
5 other NJDEP, EPA, and OSHA requirements, such as environmental permits,
6 incidents, training, and lead and copper site requirements and forms. MapCall is
7 accessible by mobile device, so samples can be collected in the field, permits can
8 be referenced from a remote station, and any other documentation or training
9 document can be pulled up at the time the work is being performed. NJAWC is
10 also working with the Service Company Environmental Management team to
11 finalize implementation of Sample1View. This application manages the
12 scheduling, collection, analysis and reporting of bacteriological samples from
13 utility-operated laboratories. Sample1View provides a combined view and
14 reporting capability for bacteriological samples and the data from the LIMS
15 system for a single view of compliance samples for a user-defined monitoring
16 period. LIMS pre-populates state reports to enable all samples to be tracked
17 from collection to upload in an Excel-based report. The reports are submitted to
18 the Director and the Vice President of Operations as part of a Company sample
19 certification practice. Together, these systems confirm all required samples are
20 completed and submitted each month to help ensure environmental compliance.

21 **23. Q. Please explain how these software systems can be used to support the**
22 **Company's WQ/EC program.**

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1 A. The WQ/EC Team currently utilizes standard spreadsheet programs to track,
2 analyze, and report the voluminous amount of data generated by the Company's
3 operations. The amount of data the Company needs to collect grows as new
4 regulatory requirements are added, such as for PFAS, and the additional rules the
5 NJDEP has for cross-connection controls and the Lead and Copper rule
6 ("LCR"). In addition, most of the regulatory schemes require NJAWC to
7 maintain the data we collect and the reports we submit for 3 to 5 years.

8 The use of software systems such as LIMS, MapCall and Sample1View reduces
9 the manual re-entry of data collected on paper forms or otherwise generated from
10 diverse sources. They also consolidate the information into structured databases
11 with querying and reporting tools, instead of managing it in multiple separate
12 spreadsheets. This allows for better data analysis, which in turn supports better
13 decision making in compliance and operating matters and makes mandatory
14 reporting more efficient.

15 **24. Q. Please describe NJAWC's program to manage cross connections.**

16 A. NJAWC added two Cross Connection Specialists in 2020 to support the
17 Company's enhancement of its cross connection program. The enhanced cross
18 connection program will help the Company protect its water systems and
19 customers from the accidental introduction of contaminants by implementing a
20 proactive program to help prevent water backflow into our networks. The
21 NJAWC Cross Connection Control Program identifies customers that pose an
22 elevated risk to distribution system water quality due to industrial or commercial

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 use or who maintain an unapproved water supply pursuant to N.J.A.C. 7:10-10.2
2 and, in coordination with the NJDEP Physical Connection Permit Program, helps
3 ensure that the appropriate backflow prevention device is installed and tested at
4 the appropriate frequency. Cross Connection Specialists leverage record reviews
5 of water use surveys, plumbing sub-code permit information, State and County
6 Well Permit data, and physical inspections to identify, prioritize and mitigate risk
7 from the potential backflow of water from a service connection to the distribution
8 system.

9 **25. Q. Please describe NJAWC's efforts to protect and monitor source water.**

10 A. NJAWC has established new Source Water Protection Plans ("SWPPs"), building
11 on the work done in the past Source Water Monitoring Plans. Throughout 2021,
12 Water Quality, Engineering, and Production teams at all surface water treatment
13 facilities reviewed and added new potential sources of significant contamination
14 and prioritized land-, water- and transportation-based risks. Mitigation strategies
15 were identified and assigned in the SWPPs. The SWPPs represent a proactive
16 approach to lessening the likelihood and/or consequence of a source water
17 contamination event across all regional operations and prescribe the actions to be
18 taken if a contamination event is expected or observed.

19 **COMMITMENT TO SAFETY**

20 **26. Q. Please describe NJAWC's overall commitment to safety.**

21 A. Protecting the health and safety of our employees and customers and the quality
22 of the water we deliver is the top priority for our Company and is critical to our

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 success. Our co-workers', contractors', and customers' safety is of vital
2 importance, and we focus on it every day. Our goal every single day is to have
3 every NJAWC employee get home in the same or better condition as when they
4 came to work.

5 With the safety of our employees, customers, contractors, and the public in mind,
6 we approach safety with a focus on continuous improvement through the
7 implementation of proactive initiatives, plans, practices and processes that
8 complement and sustain a robust workplace safety program.

9 New Jersey-American Water is also committed to securing assets across our
10 system and recognizes the importance of protecting our water sources, treatment
11 plants, infrastructure, and data from malevolent acts, as demonstrated by our
12 robust security and cyber security programs. In addition, the Company's
13 emergency response program demonstrates the Company's recognition that rapid
14 response and recovery from security incidents are critical to maintaining the water
15 and wastewater systems.

16 **27. Q. Is safety relevant to operational performance?**

17 A. Yes. The Company considers safety to be a core value, as well as a strategy. We
18 ask our employees to place safety first in everything they do. We have a strong
19 commitment to our employees (and their families) to keep them, our customers
20 and the public safe. A safe workplace increases employee morale, increases our

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 commitment to one another, and, in the long run, makes for a more engaged and
2 productive workforce.

New Jersey-American Water's Safety Approach, Plans and Programs**28. Q. Please describe NJAWC's safety program.**

5 A. The Company's safety program includes multiple activities and initiatives to
6 maintain compliance, support employee engagement, and help ensure the safety
7 of our workforce, our customers, and the public. The Operations Leadership
8 Team holds biweekly safety meetings to discuss ongoing programs and the
9 progress of initiatives. Some of the ongoing programs include:

- 10 • Peer-to-Peer Safety Observations (BAPP Teams)
- 11 • Employee Injury Review Meetings
- 12 • Pre-Job Safety Briefing completion prior to every job
- 13 • NovaCare Employee Care Program
- 14 • OSHA compliance and NJAWC required Training
- 15 • Supervisor Inspections and Feedback
- 16 • Near miss, first aid, incident investigations
- 17 • Certified Safe Worker Program
- 18 • Stop Work Authority
- 19 • Utility Mechanic, Field Service Representative, and Maintenance
20 Mechanic Training
- 21 • Fleet meetings which include vehicle safety items and design reviews for
22 new vehicles
- 23 • Accident Prevention Committee meetings

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 **29. Q. What primary safety initiatives were implemented in 2021 to further drive**
2 **safety performance?**

3 A, In addition to the programs noted above, the Company implemented the following
4 primary safety initiatives in 2021:

- 5 • Life Saving Rule program reviews to identify areas for improvement
- 6 • Safety intervention practice to support employees injured multiple times at
7 work over a specific period of time
- 8 • Safety leadership survey and action planning
- 9 • Foreman leadership training
- 10 • Monthly safety leadership forum meetings with frontline personnel

11 **30. Q. How does NJAWC investigate injuries to help prevent future incidents?**

12 A. For incident investigations, New Jersey-American Water utilizes a “5-Why”
13 investigation process coupled with an enterprise-wide online tool called
14 TapRoot® for more significant incidents. TapRoot is a systematic process for
15 identifying root causes of safety incidents. The 5-why investigations must be
16 completed within 72 hours for every injury no matter how minor, vehicle
17 incidents, and selected near misses. A TapRoot must be completed within 7 days
18 for all OSHA recordable injuries and SIF (serious injury/fatality) potential
19 incidents. TapRoot is also used to investigate and identify the root causes of
20 major accidents, everyday incidents, minor near-misses, quality issues, human
21 errors, maintenance problems, productivity issues, manufacturing mistakes, and
22 environmental releases. The systematic TapRoot process is based on in-depth

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1 human factors and equipment reliability research. It is designed to help
2 investigators maintain objectivity during their investigation.

3 The results of these investigations are then considered by the business to evaluate
4 the incident and determine what safety process improvements may be appropriate
5 going forward. American Water also maintains a security hotline that can be used
6 to report a safety near miss or safety/security incident, request security system
7 service, report or request an identification badge or report an operational event.
8 Typically, near misses are submitted online through a link on MySource to the
9 Perspectives platform. The Perspectives platform is used to generate reports and
10 ensure corrective action follow up.

11 **31. Q. How do you promote safety with your contractors?**

12 A. NJAWC utilizes internal and external inspectors to help ensure our contractors
13 are complying with all regulations and maintaining safe work environments. Our
14 inspectors have extensive safety backgrounds and have been selected based on
15 their safety expertise as well as their engineering knowledge. Annual meetings
16 are held with all contractors to refresh them on NJAWC safety program
17 requirements and introduce any new requirements added since the previous year.

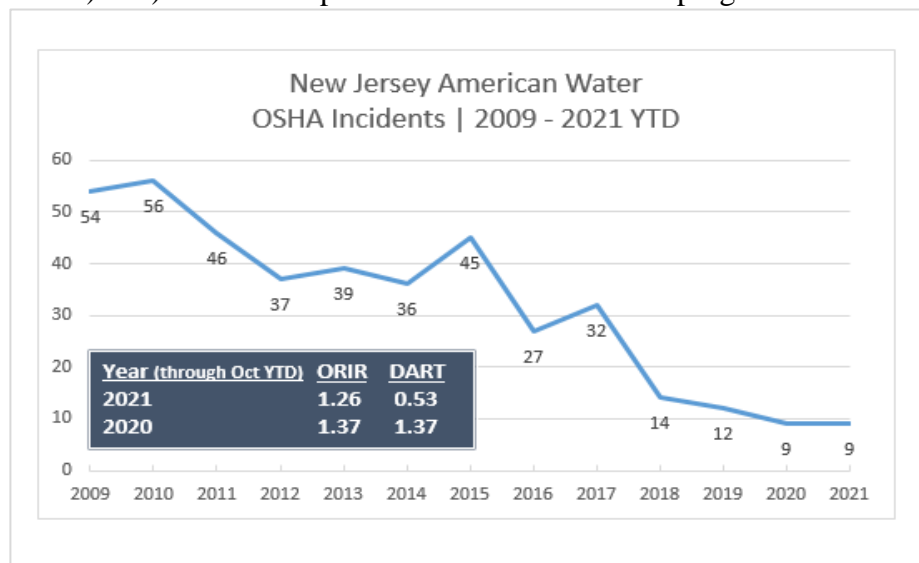
18 ISN is a safety prequalification program utilized by NJAWC for all contractors.
19 Contractors must register with ISN and provide their safety documentation. ISN,
20 with the oversight of NJAWC safety professionals, ensures contractors have all
21 required programs and practices in place. Contractor safety includes everything

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from paperwork in the contractor's office to performance in the field. The ISN system helps manage New Jersey-American Water's risk and our contractors' performance by: having an ISN representative verify the contractors' data; centralizing contractor data into an easy-to-use, online database; providing contractor statistics on health, safety and environmental issues; giving contractors a personalized customer service representative to answer their questions and assist them through the process; and validating that regulatory forms and statistics are submitted properly and accurately.

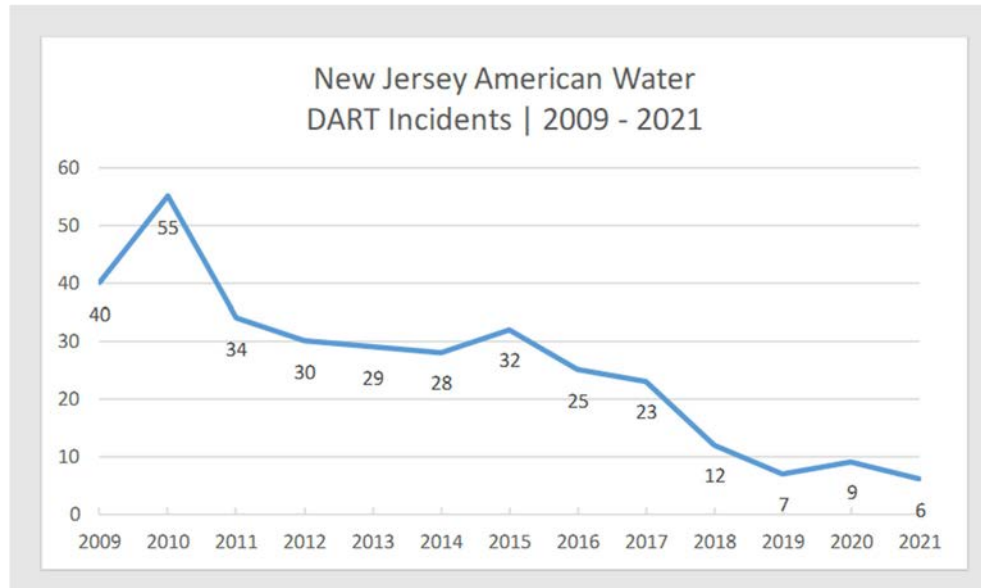
32. Q. How have NJAWC's safety initiatives improved the Company's OSHA recordable injury rate?

A. New Jersey-American Water has experienced a reduction in OSHA recordable incidents since making safety a core value and strategy in 2009. There has been dramatic improvement in both the OSHA recordable incident rate ("ORIR") and severity of the injuries (measured by the days away, restricted or transferred ("DART") rate) since the implementation of our various programs and initiatives:



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1

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4 **33. Q. Has NJAWC experienced a reduction in workers compensation claims due**
 5 **to the safety program and initiatives?**

6 A. Yes, the number of claims has steadily decreased. For example, the Company
 7 has experienced 23 claims year-to-date in 2021, compared to 33 total claims in
 8 2019.

9 **34. Q. How do the safety programs benefit employees?**

10 A. Employees receive direct benefits from strong safety, security and emergency
 11 response programs. Training provides the employee with the ability to identify
 12 hazards; and incident and reporting processes allow employees to report and
 13 assist in identifying root cause and causal factors so actions can be taken to
 14 prevent accidents from occurring. The primary benefit to employees is reduction
 15 of risk of injury on the job. In addition, a safe workplace increases employee

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1 morale, increases our commitment to one another, and in the long run, makes for
2 a more engaged and productive workforce.

3 **35. Q. How do safety programs benefit customers?**

4 A. Customers benefit because the Company, through strong health and safety
5 programs, has enhanced productivity and decreased absenteeism. This means
6 that crews operate with a full staff and can fix problems quicker, reducing any
7 service down time to the customer. In addition, a strong safety culture also
8 reduces safety-related incidents, resulting in lower insurance and workers
9 compensation costs.

10 **36. Q. How do safety programs provide an overall public benefit?**

11 A. The public benefits from NJAWC's safety and security programs because they
12 help us provide safe water and wastewater services. Our safe operations and
13 compliance with occupational safety regulations provide the public with the
14 confidence that the Company operates in a safe and secure manner. In addition,
15 NJAWC crews operate daily in public areas and must protect their worksites from
16 hazards as well as help shield the public from exposure to these hazards.

17 **Physical Security and Cybersecurity**

18 **37. Q. What is New Jersey-American Water doing to address physical security?**

19 A. New Jersey-American Water has taken a comprehensive approach to addressing
20 physical security. Physical security consists of cameras, badge readers and cyber
21 keys that monitor situations and are programmed to limit access to secure areas,
22 including offices, shops, well sites, treatment, pump and lift stations. New Jersey-

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1 American Water uses standards from the American Water Works Association
2 (“AWWA”) and the American Society for Industrial Security (“ASIS”). The
3 Company has strategically placed cameras at critical infrastructure, (e.g., tank and
4 well sites) and secure work locations (e.g., offices and shops). Cameras are
5 connected to a secure line that provides video output to the local operations
6 control rooms and American Water’s central security and reliability control room.

7 Identification badges are issued for the purpose of facility access control at New
8 Jersey-American Water. NJAWC’s policy limits access to all Company-owned
9 and leased property to authorized persons in the conduct of official activities as
10 approved by the local management. All employees must wear and visibly display
11 the identification badge while on any NJAWC property, while on Company
12 business, or while representing the Company publicly or privately. Unauthorized
13 entries are registered as an alarm that is received by the local operations control
14 room and American Water’s central security and reliability control room.

15 CyberLock® systems are integrated at two of the Company’s largest districts,
16 with plans to expand throughout NJAWC’s operations. Keys and locks are
17 programmable with access permissions for each key holder. In addition, a key
18 can be assigned a start and end date, and depending on the work, it can be
19 programmed to allow access to one set of locks from 8 a.m. to 6 p.m. on weekdays
20 and to another set of locks only from 10 a.m. to 4 p.m. on weekends. Setting short-
21 term expiration dates is an excellent way to minimize risk due to lost or stolen
22 keys, and programmed access further ensures the security of our facilities.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**38. Q. How is cybersecurity being addressed?**

A. Cybersecurity technology solutions are vital to reliable and resilient water and wastewater systems. For that reason, cybersecurity is core to the American Water vision of resiliency and sustainability. As we continue to implement intelligent water and wastewater systems, we ensure that industry-leading cyber controls are designed, built and integrated into all aspects of the technology. These controls help protect our existing systems and enable the implementation of secure innovation. Safeguarding the integrity of Company information and systems while enhancing the customer experience is our cybersecurity mission.

The Company's cybersecurity program is consistent with industry best practices, including the National Institute of Standards and Technology ("NIST") Cybersecurity Framework and the AWWA Process Control System Security Guidance for the Water Sector.

Emergency Response**39. Q. Provide an overview of the Company's emergency response program.**

A. Emergency response and recovery is a critical aspect in the operation of water and wastewater systems. NJAWC maintains response plans, agency and industry emergency contacts and attends public and industry specific conferences on emergency response and preparedness in order to continually enhance and sustain Company readiness for various types of emergencies. Integration of the various responders, communications and flow of information during an emergency or natural disaster is critical. NJAWC follows the National Incident Management

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1 System ("NIMS") and Incident Command System ("ICS") protocols and
2 procedures.

3 **40. Q. How does the American Water Operations Security team and the Integrated**
4 **Operations Center support the Company's security programs?**

5 A. American Water Operations Security supports the business in the overall
6 management of physical and cyber security systems at facilities across the
7 country. This includes developing procedures, guidelines and training related to
8 our security systems and processes. Operations Security also conducts internal
9 security reviews and partners with the federal Department of Homeland Security
10 ("DHS") on external security assessments, using the results to develop
11 improvement initiatives and further enhance security controls of company assets
12 and systems. In addition, the Operations Security team provides technical support
13 and guidance to identify potential security vulnerabilities and develop appropriate
14 solutions.

15 Staffed 24 hours a day, seven days a week, the Integrated Operations Center
16 ("IOC") monitors security cameras, alarms and incoming calls. In addition, they
17 have access to the CyberLock system and can view lock and key activity. The
18 IOC also monitors American Water security and technology systems;
19 continuously tracks weather alerts, security threats and intelligence; and serves as
20 a key collaboration point for operations, leadership and functional teams.

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1 The IOC also reviews safety and security situation reports that are entered online
2 through the security portal, which can also be used to report safety near-miss
3 activities, safety or injury incidents, and security incidents. The IOC also has an
4 event information hotline that is used to provide key information about facility
5 closing and other information when an event has been declared (e.g., hurricane,
6 snow emergency).

7 The Company has access to Operational Security and the IOC for assistance in
8 the response to and recovery from an emergency event and in restoring service as
9 quickly as possible.

10 **41. Q. How else does American Water support the Company's security efforts?**

11 A. American Water has developed security awareness training for physical and
12 cybersecurity risks, incident response and emergency preparedness. This training
13 reinforces the shared responsibility for security with all employees, contractors
14 and visitors, and supports a safe and secure work environment. Although the
15 Company works hard to prevent incidents from happening, it must also be
16 prepared for their occurrence. Preparedness exercises are a powerful way to bring
17 solid planning and years of experience to bear on the new and diverse challenges
18 we face. American Water has led dozens of preparedness exercises across the
19 business, while also participating in regional and national level exercises with
20 state and federal partners.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**42. Q. How does New Jersey-American Water prepare for emergencies?**

A. NJAWC has established a business continuity framework, bringing functional and operational teams together for the purpose of reducing risk and enhancing resiliency. As part of the framework, the Company has adopted the nationally recognized ICS, which enables unified emergency response and close, effective coordination with emergency management in the communities we serve.

Each NJAWC district maintains an emergency response plan utilizing the NJDEP format that is reviewed annually. The emergency response plan includes: mutual aid information and procedures; system descriptions; critical system components; event management process; security; incident command system; plan development, maintenance and training; actions plans for various emergency scenarios; emergency contact lists; emergency equipment lists; sampling protocol; and other site-specific data.

Emergency response drills are conducted annually and include large system outages, contamination events, natural disasters, cybersecurity events, and environmental spills. Drills are coordinated by Operations and include on-site mock drills, tabletop exercises and after-action reporting.

43. Q. How do customers benefit from the Company's emergency response program?

A. Emergency response planning is a process that helps the Company explore vulnerabilities, make improvements, and establish procedures to follow during an

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1 emergency. It also encourages strategic partnerships and knowledge sharing
2 between utilities and government agencies. Preparing and practicing a response
3 plan can save lives, prevent illness, enhance system security, minimize property
4 damage, and maximize the resiliency of the water and wastewater service we
5 provide to our customers. The benefits of emergency response planning were
6 fully realized during Tropical Storm Isaias in August of 2020. The storm caused
7 statewide power outages for 1.3 million customers, and for some, it took almost
8 a week before infrastructure was repaired and electricity restored. NJAWC lost
9 utility power to approximately 120 critical water treatment and booster facilities
10 in the aftermath of the storm. All facilities remained in service on emergency
11 generator power until utility power could be restored. Many facilities operated
12 on emergency power for a week. Through the Company's emergency response
13 planning, partnerships with government agencies, utilities, and suppliers, and
14 investment in stationary and mobile emergency generators, not a single customer
15 lost water or wastewater service as a result of the storm.

16 OPERATING AND MAINTENANCE EXPENSE**17 44. Q. What level of O&M expense is the Company seeking in this case?**

18 A. NJAWC is seeking recovery of approximately \$230.1 million in O&M expense
19 which represents expense levels going into 2023. The Company's proposed
20 O&M expense per customer (excluding purchased water and sewer costs) of \$320
21 has increased 4.23% over the average per customer cost of \$307 for the period
22 2010 through 2020. As NJAWC witness Mr. Tomac explains, this compares

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1 favorably to inflation, which increased 15.78% based on the average inflation rate
2 measured over the same ten-year period 2010 through 2020 compared with the
3 estimated inflation rate at the end of 2022.

4 **45. Q. Why is the Company seeking an increase in O&M expense in this case?**

5 A. The Company is requesting an increase in O&M expense in order to continue
6 providing high quality water and wastewater service in the most cost-effective
7 way to our customers over the long term. The Direct Testimony of NJAWC
8 witness Ms. Jamie Hawn discusses NJAWC's specific O&M pro forma
9 adjustments in this case. The requested increase in O&M expense is driven by
10 increases in employee related expenses, increases in the cost of insurance other
11 than group insurance, and increases in our production costs. Our production costs
12 include the chemicals we use to treat water, power, water diversion fees, and
13 waste disposal. Some of the increases in costs for chemicals and waste disposal
14 are driven by new water and wastewater contaminant standards. The increases in
15 insurance and production costs are not unique to NJAWC but rather are national
16 phenomena. As discussed later in my testimony, NJAWC mitigates these
17 increases by leveraging the buying power and expertise of the Service Company.

18 **IMPROVING WATER EFFICIENCY**

19 **46. Q. What is water efficiency?**

20 A. In simple terms, water efficiency means using improved practices and
21 technologies to deliver safe, reliable and adequate water service more effectively.
22 NJAWC's water efficiency efforts cover a wide range and include supply-side

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1 practices, such as leak detection and our geographic information system (“GIS”),
2 as well as demand-side strategies, such as rate design and public education
3 programs. From an operations perspective, improving water efficiency requires
4 operational excellence, which in turn entails achieving a cost-effective mix of
5 prudent investments and improved operations and maintenance management
6 capabilities targeting safety, customer satisfaction, environmental compliance,
7 sustainability, asset performance and operational efficiency. Proactive
8 investment in these improved capabilities improves efficiency in the delivery of
9 water and wastewater service, thus mitigating cost increases in the long run and
10 helping keep rates affordable.

11 **47. Q. Please describe New Jersey-American Water’s efforts to improve water**
12 **efficiency.**

13 A. The Company strives to improve water efficiency through operational excellence,
14 the use of technology, system maintenance, and efforts to manage costs as
15 efficiently as possible to provide a more cost-effective level of service for our
16 customers over the long term. In addition, NJAWC uses various operational and
17 efficiency reviews to further focus on improving customer service and efficiency
18 of production and field operations. The Company also leverages the size and scale
19 of American Water to improve transactional efficiencies through increased
20 automation, the adoption of more effective business practices and a continuous
21 improvement mindset.

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1 **48. Q. How does NJAWC gain efficiencies from its relationship with American**
2 **Water?**

3 A. As a subsidiary of American Water, NJAWC has available to it the resources of
4 the Service Company, which provides access to highly trained professionals who
5 possess expertise in various specialized areas and who work exclusively for
6 American Water's subsidiaries. Not only does NJAWC benefit from getting these
7 services and expertise at cost, through the size and breadth of American Water,
8 NJAWC has continued to increase its purchasing power to obtain discounts and
9 favorable purchasing arrangements on the equipment and supplies needed to
10 manage and maintain our system—including pipes, fittings, and water treatment
11 chemicals—that we otherwise would be unable to obtain were we a separately
12 owned water system. In addition, the Company's ongoing investment in
13 technology enables a better end-to-end view of its water and wastewater business.
14 For example, Service Company's Information Technology Services ("ITS") team
15 works side-by-side with end-users to develop technological solutions engineered
16 with a focus to enhance our employees' effectiveness and to allow our customers
17 to do business with us more easily. These products and applications are designed
18 with ease of use in mind. They take advantage of augmented intelligence
19 technologies that enhance human decision making and continuously learn from
20 their interactions with humans and the environment, meaning information
21 evolves with usage.

22 **49. Q. How is the American Water Supply Chain team utilized by the Company?**

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1 A. All goods and services purchased that can be leveraged across the entire
2 American Water enterprise are done so by the Supply Chain team within Service
3 Company ("Supply Chain") in order to maximize the purchasing power of the
4 entire American Water enterprise. Such goods and services include but are not
5 limited to water treatment chemicals, pipe valves and fittings, meters, engineering
6 services, consulting services, professional services and employee benefits. The
7 value realized from Supply Chain's work are a benefit to all American Water
8 subsidiaries.

9 State-specific and regional services, which include but are not limited to
10 infrastructure and facility maintenance and repairs, are the responsibility of the
11 supply chain team maintained at the state level ("state Supply Chain"). The state
12 Supply Chain's strategic objectives are to leverage state-specific requirements to
13 obtain greatest value across the entire state or specific region(s) within the state.
14 The goal is to obtain the highest quality services at greatest value to the state
15 operating company.

16 **50. Q. What are some of the significant categories in which Supply Chain managed**
17 **to control costs?**

18 A. The following areas are a representative list of ways in which the Supply Chain
19 has worked to control the Company's costs:

20 Water Treatment Chemicals: Annually, Supply Chain solicits bids for all water
21 treatment chemicals. By leveraging the volume of the entire American Water

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1 enterprise, Supply Chain has been successful in securing consistent access to
2 chemicals required to operate New Jersey-American Water on favorable pricing
3 terms. In addition, supply chain can leverage alternate suppliers or work with
4 other American Water affiliates at times when chemical supply is limited.

5 Maintenance Repair and Operating (“MRO”) Supplies: In 2019, Supply Chain
6 conducted multiple bid exercises for MRO Supplies. Supply Chain was able to
7 leverage the volumes across the entire enterprise to lower the overall costs of
8 these products and maintain favorable pricing.

9 Ductile Iron Pipe: Supply Chain can leverage company volumes to secure
10 discounts and thus minimize cost increases at a time where the market price is up
11 more than 50%. In addition, we can leverage our scale to have the shortest
12 delivery lead times in the industry. This allows New Jersey-American Water to
13 complete more infrastructure work in a shorter time at a lower cost.

14 Fleet: In 2020, Supply Chain conducted an RFP for Fleet Management Services.
15 The result was a change to a new fleet management company that offers New
16 Jersey-American Water higher levels of service at a lower price than the previous
17 vendor.

18 Network Repair: In 2021, state Supply Chain competitively bid, negotiated, and
19 established agreements for Network Repair services with a two-year
20 term. Conducting a competitive bid exercise for these services ensured that New

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1 Jersey-American Water is receiving the most competitive pricing for these
2 services.

3 Meter Replacement Services: In 2019, state Supply Chain established two-year
4 agreements for meter replacement services. In 2021, the existing agreements
5 were extended through 2022 with no price increases.

6 Patchwork Paving Services: In 2019, state Supply Chain established two-year
7 agreements for patchwork paving services with multiple contractors in our
8 service territory. The agreements were extended in 2021, holding pricing flat
9 through 2022.

10 Utility Markouts: In 2021, state Supply Chain competitively bid and established
11 an agreement for Utility Markout services. Conducting a competitive bid
12 exercise for these services ensured that New Jersey-American Water is receiving
13 the most competitive pricing for these services.

14 Energy: Supply Chain monitors the energy markets for buying opportunities and
15 coordinates with NJAWC to purchase both electricity and natural gas supply for
16 use in system operations. The goal of our collaboration is to minimize the unit
17 price while also mitigating price risk from an extremely volatile energy market.
18 Most recently, NJAWC purchased electric supply utilizing a reverse auction
19 involving five suppliers in October 2019. The resulting agreement has a five-
20 year term beginning in January 2020 and the pricing structure is 70% fixed and
21 30% index. The fixed/index structure is meant to provide price certainty while

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1 allowing us to participate in the daily market. The index price allowed NJAWC
2 to avoid approximately \$250,000 in energy cost increases. Energy market prices
3 have increased in recent months, which enhances the value of the fixed price
4 portion of the supply agreement. Natural gas supply is also a key part of
5 NJAWC's system operations, and Supply Chain works with the Company to buy
6 natural gas supply using a dollar cost averaging approach to supply purchasing
7 by entering the market periodically when buying opportunities exist.

8 In each instance, New Jersey-American Water and its customers have benefited
9 from leveraging the size and scale of American Water enterprise wide through
10 Supply Chain and leveraging the size and scale of NJAWC through the efforts of
11 state Supply Chain.

12 **51. Q. How is NJAWC using GIS to improve employee effectiveness?**

13 A. Accurate electronic maps ensure that the Company's institutional infrastructure
14 knowledge is readily available for use by employees. To that end, NJAWC has
15 loaded its facilities into GIS so that maps of its water and wastewater system
16 assets are accessible on its internal network. The information available in GIS
17 includes the location and a short description of the facilities, giving an electronic
18 spatial view of the entire system. GIS also helps locate customers that might be
19 affected by related service issues and allows us to more effectively communicate
20 with our customers. We continue to enhance our GIS platform through
21 integration with our SAP Enterprise Asset Management ("EAM") system, our
22 computer-aided design ("CAD") system, MapCall and our PowerPlant fixed asset

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1 records. This integration allows communication across the various platforms that
2 makes data retrieval more efficient. The Company continues to build the GIS
3 platform by adding new assets and retiring old assets to ensure our technicians
4 have access to the most current information while working in the field. In 2021,
5 the Company implemented a 'Digital As-built Workflow' that is focused on
6 standardizing the how, what and when GIS is updated as well as facilitating better
7 integration between GIS and MapCall. This improved the lag time between when
8 the asset was installed to when GIS and other systems are updated. The goal is
9 to keep our GIS current, complete and accurate for our end users.

10 **52. Q. How has NJAWC benefitted from its GIS platform?**

11 A. The location of water quality events, chlorine residuals, maintenance events and
12 pipe failures are all plotted on GIS map layers. The spatially presented
13 information can be used to answer customer water quality inquiries, identify
14 trends and prioritize water main replacement projects.

15 The GIS system is a tool used to assist compliance with federal and state lead
16 service line inventory and management. Known customer and Company service
17 line material data has been loaded into the MapCall service records that is
18 integrated to display on the GIS maps. This will provide employees and
19 customers with a visual representation of known and suspected lead service lines
20 within the service territory.

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1 **53. Q. What work management system is NJAWC using to improve employee**
2 **effectiveness?**

3 A. The Company uses MapCall, a web-based application that enables Operations
4 Production employees, Field Operations employees, and contractors to complete
5 the lifecycle of work orders and assets in the field. Employees can view historical
6 information including work order history on an asset, standard operating practices
7 associated with an asset, maintenance history, O&M manuals, and tap card
8 images. MapCall provides the flexibility to create work orders, configure
9 workflows and report progress while in the field. For example, a supervisor can
10 create a work order to flush a dozen hydrants in a particular area. Using MapCall,
11 the field worker can report progress as flushing is performed, and both the
12 supervisor and others in the field can visually see the progress made toward
13 completing the identified work in real time through the MapCall interface. The
14 same can be done to schedule and monitor other routine work, as well as
15 emergency work, such as main break repairs.

16 MapCall also allows those in the field to communicate water quality and other
17 events more efficiently through preloaded notifications via email to both internal
18 and external stakeholders, including regulators, allowing workers to quickly shift
19 back to focusing on the task at hand and providing quality service to customers.

20 Water main break locations are continually added to the GIS and InfoAsset, a
21 pipe replacement prioritization database, to help identify sections of pipe that

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1 have outlived their useful life. This information is used to prioritize water main
2 replacements by strategically focusing on the pipe with the highest risk of failure.

3 MapCall is a “single pane of glass” for all operational needs including Health &
4 Safety, Environmental & Water Quality and also serves as the transactional
5 engine between Work1View

6 **54. Q. Are there other technology solutions that have been implemented to improve**
7 **employee effectiveness?**

8 A. Yes. In addition to GIS platform enhancements and MapCall, American Water
9 has enhanced employee effectiveness in several ways. These include
10 Customer1View (“C1V”), Meter1View (“Meter1V”) and Work1View (“W1V”);
11 each of which provides more comprehensive and easily accessible information to
12 employees.

13 C1V has been implemented by the Company to better serve our customers in a
14 way that also improves our efficiency. C1V provides improved access to
15 customer information (e.g., premise and service order history, meter details,
16 billing and payment information) to field service representatives (“FSRs”) who
17 regularly interact with our customers. This means that FSRs can view the same
18 information as customer service representatives (“CSRs”) located at the customer
19 service center (“CSC”). This allows our FSRs to review customer information
20 that can help them address the customer’s issue and provide customers
21 information while speaking with them, rather than having to contact the CSC for

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1 information or requiring customers themselves to follow up with the CSC. FSRs
2 can also update customer information and record notes on customer interactions
3 on the spot, providing other employees that serve our customers' timely access to
4 the most up-to-date information.

5 Meter1Vis another application that supports our continued efficiency. Meter 1V
6 monitors key attributes for each meter, including manufacturer, size, installation
7 date, location (both on a map and whether it's located inside or outside), customer
8 information, and historical data, such as past alarms, work orders, customer
9 contacts and visits, and reading and billing information. This provides local
10 operations supervisors and managers a real-time view of meter performance and
11 reports such as Inactive with Consumption, Unexpected Zeros, and Consecutive
12 Estimates. The system has the ability to more easily monitor and manage length
13 of service meter replacements and identify and address potentially problem
14 meters in a timelier manner.

15 In addition, all this information is available to, and can updated by, our employees
16 and contractors while they're in the field so, here again, they have a full, real-
17 time, view of information they can use to better serve our customers.

18 W1V is a single view for managing customer service order work in the field,
19 customer information and meter information. W1V includes a real-time
20 operations map to see work orders with optimized routing, as well as other types
21 of work and alerts happening nearby. In addition, using W1V, FSRs can manage

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1 their own work based on the day's demands by adding or deferring undated work,
2 and putting orders on hold to do emergency work needed at another location.
3 Supervisors can also reroute work as appropriate. W1V has been integrated with
4 C1V for easy access to customer information during field visits. It has also been
5 integrated with Meter1V and MapCall to provide FSRs one point of access for all
6 information needs. Taken together, these types of improvements will continue to
7 drive a better customer experience and level of satisfaction.

8 **55. Q. Please describe the Company's advanced metering infrastructure ("AMI")**
9 **technology strategy?**

10 A. New Jersey-American Water is using a "hybrid" approach to AMI deployment to
11 leverage the fixed network technology already deployed in the short term and to
12 transition slowly to a modern, smart endpoint system following the 10-year length
13 of service meter change requirements. The AMI system will not be a single
14 technology but an integration of two technologies that provide an intelligent
15 connection between the customer and the water utility. The systems that will be
16 utilized are as follows:

17 **Fixed-Network System:**

18 With AMI fixed-network systems, meter reading is accomplished by meter
19 transmission units ("MTU's") installed on each meter. The MTUs collect real-
20 time water use readings from the meter and transmit them via radio signals to data
21 collection units ("DCUs") that are owned by the utility.

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1 The Company has approximately 542,000 Neptune R900 MTU's installed
2 because of previous length of service meter replacement requirements. The R900
3 MTU's are in use as drive by advanced meter reading ("AMR") units and can be
4 migrated to a fixed network AMI system that can collect reads using a network
5 of fixed antennas. The AMI fixed network system will allow for remote reading
6 of our meters at customers' homes and businesses. Currently, approximately
7 40,000 customers are set up on a fixed network system. The Company plans to
8 deploy additional antennas over the next three years to capture 80% of the R900
9 customer reads.

Smart Endpoints (Cellular-Network Systems):

11 AMI cellular-network systems utilize smart endpoint cellular endpoints installed
12 on each meter to transmit the meter data via an existing 3rd party cellular
13 infrastructure to a central database system for analysis and reporting.

14 The smart endpoint utilizes a cell-based network provided by major companies
15 such as AT&T and Verizon to capture daily interim customer reads and eliminates
16 the requirements of a fixed data collector network. The new smart endpoint will
17 replace our existing R900 MTU's and will be installed following the length of
18 service schedule over the next 10 years starting in 2022. The fixed network
19 system will be gradually retired over the 10-year period as the smart endpoint
20 deployment reaches saturation.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**56. Q. Why is NJAWC installing AMI technology?**

A. The transition to an AMI program will enable strategic and permanent improvements in safety, customer experience, operational efficiencies, and environmental benefits. The Company looks forward to leveraging AMI to empower customers with near real-time consumption data to enable smart water use choices, enhance customer communication regarding customer water consumption patterns and unusually high-water use, optimize NJAWC's ability to measure and address non-revenue water, and improve water system operations and management, among other things. Implementation of AMI will allow NJAWC to realign its business processes and redeploy personnel previously focused on meter reading to other work, as discussed below.

57. Q. How will AMI improve customer service?

A. The implementation of AMI will increase billing accuracy and reduce the likelihood of estimated bills (e.g., due to weather events or other obstacles to accessing customer meters) by automatically providing timely, accurate reads through the network. In addition, re-reads will be reduced due to the human factor being removed from obtaining the actual read. With the planned implementation of a meter data management system in 2022, the Company will also be able to more efficiently collect, organize, analyze, and communicate large quantities of meter data. Customers will have access to near real-time water usage data which will allow them to identify opportunities for conservation and bill reducing tips to enable smart water use choices. AMI data can be used to uncover irregularities

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1 that may signal a leak, meter tampering or water theft. The system will enable
2 the communication of high use water alerts and continuous flow alerts. AMI is
3 an example of how prudent investment in technology can produce a wide range
4 of customer benefits.

5 **58. Q. How does AMI improve employee and public safety?**

6 A. Having employees in the field reading meters in potentially unsafe environments,
7 inconvenient locations, inclement weather, and exposed to vehicular traffic,
8 animals, and the like, creates an exposure to potential injuries and accidents.
9 Being able to read meters remotely reduces this potential risk, both for injuries to
10 our employees and injuries and damage to third parties.

11 **59. Q. How will AMI benefit the environment?**

12 A. The AMI technology helps conserve water by providing timely information to
13 customers so they can adjust their usage and enables the early identification of
14 customer leaks. AMI reduces fuel consumption by eliminating the need to drive
15 by premises to collect reads. The technology will also eliminate the need to roll a
16 truck to complete certain high volume service orders such as “Move in-Move out
17 orders”. The reduction in truck rolls and meter reading vehicles will reduce our
18 carbon footprint and supports New Jersey’s Energy Master Plan.

19 **60. Q. How will AMI improve water efficiency?**

20 A. The deployment of AMI will reduce the number of full time employees needed
21 to read meters and maintain the system. Over the next few years, NJAWC will

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1 be able to redeploy some of the full-time positions to length of service meter
2 replacement work and lead service line material identification requirements.

3 **61. Q. How does NJAWC protect the data transmitted across the AMI network?**

4 A. All of the meter reads are encrypted before they are transmitted from the meter
5 across the Company owned network to the cellular carrier and ultimately to the
6 Company's meter read collection database.

7 **62. Q. How else is NJAWC using technology to improve customer service?**

8 A. Our web-based customer portal, MyWater, has been enhanced to provide
9 expanded self-service capabilities for online payment assistance, bill and usage
10 review, service requests, and viewing service and emergency alerts. The portal
11 is available 24/7 and is more user friendly, accessible, and compliant with the
12 Americans with Disabilities Act by, for example, using more graphical
13 information. MyWater also has a "single pane of glass" for the customer service
14 representative and the customer. They have a greater ability to view a high bill
15 due to a past due amount or high-water usage by month to help facilitate quicker
16 resolutions.

17 The customer service infrastructure has been upgraded to improve interactions
18 with customers and make customer information more easily accessible in the
19 field. In addition to the tools described above, upgrades include replacing our
20 CSC call management software and meter data management solution. Our new
21 CSC telephone software system improves call routing, automates many call

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1 handling tasks and uses voice prompts to gather information, all of which serve
2 to minimize the time customers have to spend on the telephone. CSR One View
3 provides CSRs access to relevant customer information more efficiently by
4 bringing together information from multiple sources into a single, easy to use
5 view. This will lead to more effective customer communications, service and
6 outreach, as well as more effective utilization of CSC resources. A multichannel
7 (email/call/text/chatbots/Alexa/Google) capability will be available to allow
8 customers select and manage communications. The system also enables
9 customers to select and manage payment preferences. CSR One View has been
10 being integrated with MyWater to enable communications with customers via
11 online chat.

12 **63. Q. Are there technology solutions NJAWC is implementing to operate systems**
13 **with improved efficiency, resiliency, and security?**

14 A. Yes. NJAWC continues to focus on Automation and Controls (also referred to
15 SCADA) capital projects throughout our operational areas. These upgrades
16 continue to target the installation of field instrumentation, network security
17 devices, the replacement of legacy remote terminal units (“RTUs”), along with
18 enhancements to human machine interface (“HMI”) software, and the
19 standardization of data and its consolidation via high-speed connections. These
20 upgrades have equipped our operational sites with components that provide more
21 advanced programming and connectivity capabilities and robust security
22 monitoring, along with redundancy to ensure operational continuity.

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1 Focused efforts have yielded the standardization of programming to help protect
2 operational assets along with enhancing water treatment process controls and
3 monitoring. An example is the automation of filter controls that provide
4 supplemental alarming and interlocks. These additional layers of protection assist
5 in meeting all state and federal regulatory requirements while providing the best
6 service to our customers. Implemented technologies have provided additional
7 tools for mobile solutions for Operations, allowing for secure access to internal
8 systems to make operational decisions. To address the increased cybersecurity
9 threats, additional security solutions, protocols and procedures are continually
10 being implemented to ensure that all infrastructure is properly protected and
11 monitored.

12 **64. Q. Are there other technology solutions NJAWC is implementing to improve**
13 **water efficiency?**

14 A. Yes. The Company is implementing an advanced analytic program. The
15 advanced analytics program is building a QuickSight dashboard that displays
16 current data from enterprise systems (MapCall, W1V, SAP, etc.) and compares
17 the information to targets to help measure and improve performance, capacity,
18 quality, reliability and environmental compliance. Example reports are service
19 order performance, operations performance, health and safety, system delivery,
20 call center and customer results, non-revenue water, and water quality.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**System Maintenance**

65. Q. Please describe the key components of NJAWC system maintenance activities.

A. Keeping abreast of system maintenance is the hallmark of a healthy water distribution system. Among its core activities, NJAWC staff diligently completes annual maintenance programs, including length of service meter replacements, fire hydrant maintenance and valve exercising programs. These programs help us ensure that our assets are performing as expected, so that we can continue to provide the high quality, reliable service our customers have come to expect. In 2020, the Company replaced 37,567 meters, inspected all 47,134 fire hydrants and exercised 113,843 valves.

66. Q. What is the guiding document used to establish maintenance program targets?

A. NJAWC's state-wide Asset Management Plan ("AMP") is the guiding document for maintenance plan targets. The AMP was implemented by April 19, 2019 as required by the WQAA.

67. Q. Is New Jersey-American Water meeting its operational obligations under the Safe Drinking Water Act?

A. Yes. The Company certified compliance with the Safe Drinking Water Act when submitting the certification for the WQAA on December 22, 2021.

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1 **68. Q. What other maintenance programs support the Company's efficient**
2 **operation of its system?**

3 A. NJAWC completes several programs designed to keep its water system operating
4 efficiently. Pipeline replacement programs, described throughout the testimony
5 of Company witness Donald Shields, water flushing programs and a Condition-
6 Based Maintenance Program are among them.

7 **69. Q. Please explain the Condition-Based Maintenance Program.**

8 A. NJAWC employs a Condition-Based Maintenance Program on a rotating basis at
9 facilities where electrical equipment is used. This equipment includes pumps,
10 motors, and electrical panels. In addition to visual, mechanical, and audible
11 inspections, a host of other in-depth inspections are performed. For example,
12 thermal imaging tests are performed to determine excessive heat on electrical
13 equipment such as motors, electrical panels, transformers, and safety switches.
14 Vibration inspections are performed to determine deflection in a pump shaft,
15 which is an indicator of potentially damaged pump or motor bearings. The
16 Condition-Based Maintenance Program also includes electrical tests to determine
17 proper operation of disconnects, breakers, fuses, contactors, voltage/protective
18 equipment devices, etc. After the inspections are performed, a report is generated
19 that categorizes severe or critical issues for immediate attention, as well as less
20 severe issues for subsequent attention.

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1 **70. Q. How do NJAWC's system maintenance efforts enhance operational**
2 **efficiency?**

3 A. System maintenance helps reduce failures and unexpected repairs, which are
4 disruptive and expensive to correct. One of the byproducts of an adequately
5 maintained system is fewer unexpected failures, which rarely occur at convenient
6 times and, again, are costly to repair.

7 **Non-Revenue Water**

8 **71. Q. What is non-revenue water ("NRW")?**

9 A. Non-revenue water is the difference between system delivery and water sales.
10 Typically, NRW is measured as a volume or a percentage of system delivery
11 based on a 12-month rolling average. Composed of several disparate elements,
12 NRW is not just leakage; it also includes, among other things, water for
13 firefighting, annual flushing, theft, and meter inaccuracies.

14 **72. Q. Please describe the Company's efforts to reduce its level of NRW.**

15 A. In addition to utilizing its DSIC mechanism to accelerate the replacement of aging
16 infrastructure in the Company's service territory, NJAWC addresses apparent and
17 real NRW losses using various industry-endorsed processes and practices,
18 including an annual water loss management plan, water audits, and leak detection
19 methods that are described below.

20 **73. Q. What is the Annual Water Loss Management Plan?**

21 A. The Company's Annual Water Loss Management Plan incorporates water
22 accountability and loss control processes and practices promulgated by the

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1 AWWA. The processes and practices are found in the 4th Edition of the AWWA
2 Manual 36 publication, *Water Audits and Loss Control Programs*. Incorporated
3 by reference is AWWA Water Audit software, currently versions 5.0 and 6.0,
4 which includes an additional auditing capability which “grades” the validity of
5 the water audit input data. The grading measure also provides guidance on the
6 means to improve data collection and therefore the functionality of the water
7 audit.

8 **74. Q. Has NJAWC performed water audits throughout its system?**

9 A. Yes. NJAWC has performed extensive water audits throughout its service
10 territory. Beginning in 2013, water audits have been completed annually for
11 systems in the jurisdiction of the Delaware River Basin Commission (“DRBC”).

12 Beginning in 2016, the Company submitted water audits to NJDEP for systems
13 that were impacted by the NJDEP 2016 drought warning.

14 In addition, in the latest closed calendar year (2020), the Company performed
15 water audits for all our qualifying systems.

16 Thus, the Company has completed water audits of all its systems that have the
17 proper parameters for a standard water audit – that is, 24 of 29 systems. While
18 the Company tracks NRW performance and other indicators for every operating
19 system, water audits have limited applicability for very small systems. Where
20 customer density is less than 32 connections per mile and system overall size is
21 less than 5,000 customers, the water audit benefits are limited. This is also true

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1 for systems that have system delivery of less than 100,000 gallons per day. For
2 these small systems, NJAWC performs a basic water balance. A basic water
3 balance compiles system delivery and sales data for a discrete area. Both data
4 elements are tracked over many years. Trends in the data are then used to
5 determine if the system is operating efficiently or if there is excessive water loss
6 which requires remedial actions.

7 **75. Q. What indicators are reported within the water audit?**

8 A. The water audit provides five key indicators as reported by the Reporting
9 Worksheet of the AWWA Water Audit Software. These indicators are:

- 10 1) Apparent Losses: The sum of unauthorized consumption, customer
11 metering inaccuracies, and systematic data handling errors;
- 12 2) Real Losses: Total water losses less Apparent Losses;
- 13 3) NRW: Total water losses including unbilled metered, unbilled unmetered,
14 and authorized Company use;
- 15 4) Financial Indicators: NRW as a percentage by volume supplied and NRW
16 as a percentage by cost of operating system; and
- 17 5) Operational Efficiency: Unavoidable Annual Real Losses (“UARL”),
18 Current Annual Real Losses (“CARL”), and Infrastructure Leakage Index (“ILI”)
19 or CARL/UARL. The indicator of system performance is the ILI. The ILI is a
20 highly effective performance indicator for comparing (benchmarking) the
21 performance of utilities in operational management of real losses.

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1 **76. Q. How does NJAWC use the information it gathers through its water audits to**
2 **manage NRW?**

3 A. The information gathered is analyzed and action plans are developed for NRW
4 management and reduction as part of NJAWC's overall water loss management
5 strategy.

6 **77. Q. What are the main characteristics of the Company's NRW strategy?**

7 A. The Company's NRW strategy follows the latest industry-accepted standards
8 including the water audit methodology set out above, while also working to
9 maximize customer satisfaction and operational efficiency at an acceptable level
10 of risk. The key elements include the following:

11 1) providing accurate, regular metering of production flows and customer
12 consumption volumes;

13 2) maintaining a system of real time hydraulic data collection and monitoring
14 via SCADA, AMI, or similar system of instruments and data collection
15 technology;

16 3) compiling an annual water audit as a standard business practice for
17 qualifying systems; and

18 4) employing sufficient loss control methods to contain water and revenue
19 losses at economic levels and to minimize system upsets.

20 **78. Q. What efforts has the Company employed to align functional areas of the**
21 **Company to support the NRW efforts?**

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1 A. In 2013, NJAWC established a business unit to manage the Company's non-
2 revenue water. This team of water loss professionals measures and analyzes the
3 losses and advises the Company on the type of water loss management that is
4 appropriate in each district. Programs are statewide and include leak detection,
5 pressure management, water audits, reduction of theft of services, monitoring
6 zero consumption, and leaks on customers' lines. In 2016, the team was realigned
7 with the SCADA team, the work management team (MapCall) and the ITS
8 service technicians. Between 2018 and 2020, further refinements in NRW
9 management structure were implemented. This included assigning Operations
10 Project Managers within the local operations team the task of managing and
11 tracking the field aspects of the NRW program. This realignment allows for a
12 more rapid engagement in data management and quality and engineering
13 opportunities and issues. Examples of these opportunities include reviewing areas
14 of apparent high pressure to determine if additional pressure management or
15 modulation is feasible, creation of additional district metered areas, use of
16 innovative technologies to perform condition assessment and leak detection on
17 transmission mains and supplementing existing leak detection tools with
18 additional equipment. The team has direct input into Company practices on
19 system delivery, sales and NRW. Moreover, the team can directly engage the
20 asset planning group and GIS group and results in better alignment with the
21 various comprehensive planning studies and capital improvement projects
22 associated with the engineering group.

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1 **79. Q. What are real losses?**

2 A. Real losses are physical losses of water from the distribution system, including
3 leakage from pipes and any associated appurtenance and tank overflows.

4 **80. Q. What does the Company do to reduce real losses?**

5 A. In addition to the continued accelerated replacement of aging infrastructure
6 supported by the DSIC, the Company is also addressing real losses through its
7 leak detection efforts. Of course, surfacing leaks are often pinpointed by
8 employees and are quickly repaired, resulting in improvement in reducing real
9 losses. For subsurface leaks, the Company is actively working to identify such
10 leaks and to repair them. The Company's ability to address these leaks quickly
11 saves customers from potential disruptions of service and saves the Company the
12 increased costs associated with losing millions of gallons of treated and pumped
13 water. Employees have been afforded technical training from both internal and
14 external resources and have been provided with new tools to perform proactive
15 leak work. The Company has an established internal goal of repairing 90 percent
16 of all leaks within 96 hours of discovery. (This 96-hour time period provides the
17 time required for mobilization and for One Call mark outs.) As a result, 791 and
18 1,134 miles of mains were proactively or reactively surveyed in 2019 and 2020,
19 respectively. These surveys resulted in the location of 178 leaks in 2019 and 211
20 leaks in 2020. Many of these leaks had no surface indications.

21 **81. Q. Please describe the specific methods that the Company uses to actively**
22 **control leaks.**

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1 A. Leak surveying is typically done on a proactive basis when leaks are suspected to
2 be a significant contributing factor to NRW. Focused, proactive surveys are
3 mainly conducted in the Raritan, Essex/Passaic, and Morris/Warren Districts,
4 where the distribution network is generally older and more prone to failure due
5 to geographic variations and consolidated geology. The Company also has
6 completed numerous leak surveys of its Warren systems utilizing consultants.
7 Currently, these systems are either proactively surveyed or continuously
8 monitored acoustically. We have seen an immediate improvement in the systems'
9 water losses, where leaks on our mains, hydrants, valves and both Company-side
10 and customer-side service lines have been located. During 2019 and 2020, these
11 efforts resulted in the identification and repair of 834 leaks.

12 In addition, the Company provides more leak detection training to targeted
13 Company employees across the state, and the Company has purchased additional
14 equipment (discussed below) for continuous, proactive leak detection work in the
15 Delaware, Coastal North and Coastal South Districts as deemed necessary. For
16 the Essex/Passaic and Raritan Districts, the Company has increased the number
17 of man hours spent on proactive leak surveying. The additional manpower has
18 enabled the leak detection teams to provide multiple benefits: proactively locating
19 leaks prior to surfacing; pinpointing leaks; and supporting permanent acoustic
20 monitoring efforts. Additionally, leak detection on large-diameter transmission
21 mains (water mains 16 inches in diameter and greater) and other high-risk buried

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linear assets, is outsourced to third-party service providers. The result of these activities contributes to the Company's prioritization of pipe rehabilitation.

82. Q. Please describe the way in which NJAWC uses technology to identify leaks.

A. The Company utilizes state of the art active listening technology for leak detection. The EchoShoreDX platform incorporates the latest generation of acoustic sensors that are the result of Echologics' pioneering success with correlating leaks on a variety of pipe materials and large diameter mains. The sensors are built into a standard fire hydrant cap and are capable of identifying extremely faint acoustical noises emitted by leaks before they become detectable by conventional methods. This early detection capability enables the Company to prioritize repairs based on actual need and the most effective allocation of repair crews. The EchoShoreDX is stationary and designed to be deployed as continuous monitoring in an area-wide grid system. Data from the listening nodes is sent directly by cellular communications and uploaded nightly to an internet cloud-based system, processed and graphically displayed on New Jersey-American Water's GIS mapping system. The Company first installed this technology in late 2015 and continues its deployment consistent with district comprehensive planning studies, installing over 9,000 devices (nodes) throughout the state to date.

83. Q. What are apparent losses?

A. Apparent losses are non-physical losses that occur in utility operations due to customer meter inaccuracies, systematic data handling errors in customer billing

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1 systems, and unauthorized consumption. This is water that is consumed, but not
2 properly measured, accounted for, or paid for.

3 **84. Q. What does the Company do to manage apparent losses?**

4 A. An internal team monitors the Company's customer database system and billing
5 system losses. These team members look for inactive accounts/premises with
6 consumption (or vice versa), premise mismatches, and consecutive zero
7 consumptions. These exceptions are processed into work orders that determine
8 and eliminate the issue that caused the exception. Currently in development is the
9 utilization of GIS analytics to allow greater flexibility in reviewing data tables of
10 consumption, rate class, public water system identification number ("PWSID")
11 and pressure gradient. This initiative is in its early stages, and these tools are being
12 customized based upon user experience and results.

13 **85. Q. How does NJAWC's meter program help manage apparent losses?**

14 A. The meter program is managed by our field services teams. We monitor our
15 successful reads on a monthly basis, with a goal of minimizing estimated bills.
16 Additionally, we perform periodic testing of meters in accordance with BPU
17 requirements and engage in meter testing and studies to help manage apparent
18 losses.

19 **86. Q. Please describe how meter testing and meter studies are utilized in managing**
20 **apparent losses.**

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1 A. The Company employs large meter testing and profiling, pressure zone
2 management, and zonal metering studies, which are described below.

3 Large Meter Testing and Profiling

4 Large meter testing and profiling is conducted by both our production (bulk sales
5 and inter-district transfers) and distribution (large customer meters) teams. All
6 production meters were tested in 2020 for flow and scaling accuracy. The
7 Company has also analyzed consumption patterns to determine if the customers'
8 meters are still appropriate for their current consumption rates, and if not, the
9 installation of new meters is recommended. Moreover, where feasible, turbine
10 meters are being replaced with more accurate compound meters.

11 Pressure Zone Management and Zonal Metering Studies

12 Pressure zone management and zonal metering studies are conducted in
13 conjunction with each district's comprehensive planning study ("CPS"). Pressure
14 management helps ensure that we are providing our customers with appropriate
15 pressures in the distribution system. When distribution system pressures are too
16 high, background leakage occurs at a greater rate. Zonal metering is now
17 universally supported and can help the Company determine whether smaller and
18 very well-defined zones within the distribution system should be created.
19 Additional metering sites connected to the SCADA system have been identified
20 to provide additional data for compilation and analysis of NRW. This data will
21 be utilized in determining zonal consumption patterns. The Company is exploring
22 additional options relative to pressure management and district metering,

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1 including an innovative modulation device for pressure reducing valves (“PRV”)
2 in Belvidere, where preliminary results are encouraging. The Belvidere system
3 experienced an improvement of 5% in the NRW volume because of the PRV
4 modulation project. Additional pressure reduction opportunities are being
5 investigated by NJAWC’s Asset Planning group in concert with the Service
6 Company engineering team. Those studies are focused on the Central (Raritan)
7 district and are scheduled for implementation through 2025.

8 **87. Q. How does the Company work to reduce unauthorized consumption?**

9 A. Unauthorized consumption may be determined in a variety of ways. In addition
10 to the approaches discussed above, the Company has continued its Theft of
11 Service (“TOS”) program whereby our employees are educated and encouraged
12 to spot and report any potential water consumption that is not authorized. The
13 TOS program enables us to find unmetered irrigation systems, bypasses,
14 upstream (of the metering point) connections and unauthorized hydrant use, all
15 of which contribute to NRW. Since inception of the program in July of 2008,
16 there have been 1,980 reports of TOS that have been successfully investigated
17 and resolved.

18 **88. Q. Has the Company employed other efforts in managing NRW?**

19 A. Yes. In 2016, the Company realigned internal resources to align the water loss
20 team, SCADA, and work management team into an instrumentation and controls
21 group. A team of information technologists was also assigned to work with this
22 team. Using a third-party integrator, a web-based tool was developed to pull data

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1 from multiple sources to provide one view of NRW and automatically calculate,
2 on a monthly basis, the NRW metrics noted previously. By automating the
3 process, the teams are now focusing on improved analytics to provide targeted
4 guidance on asset management and NRW management. The tool has integrated
5 system delivery, both raw and refined, consumption data, both raw (meter reads)
6 and refined (billed consumption), pressure data, work management data (leaks)
7 and internal and external GIS information.

8 The development of this tool leads to the preparation of an auditing process for
9 system delivery, which follows the water from source, through the metering and
10 data delivery stream, to the data storage database. This has standardized the data
11 process for system delivery, thus improving the quality of the system delivery
12 database. The data now meets the highest level of criteria required in the water
13 audit grading process.

14 **89. Q. What has been the result of the Company's efforts?**

15 A. The Company has reduced levels of NRW through its targeted and enhanced
16 efforts at managing real and apparent losses. The focused efforts have yielded
17 positive results, reducing statewide NRW from 17.3% to 16.4% between year-
18 end 2019 and December 2021. In our Essex/Passaic District in particular, we've
19 been able to reduce NRW from 19.4% to 17.5% over the same period.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**EMPLOYEE LEVELS AND EMPLOYEE COMPENSATION****Employee Levels****90. Q. What is NJAWC's proposed staffing level in this case?**

A. The Company has identified approximately 899 full time equivalent ("FTE") employees as the appropriate staffing level for the Company's water and wastewater operations, which includes part-time employees. The number of employees is based upon each department's and functional area's plans to continue providing safe, adequate, reliable and affordable service to our customers. On a regular basis, monthly, quarterly, and annual performance metrics ranging from safety, customer service, financial, asset creation, asset maintenance and regulatory compliance is reviewed to ensure desired service levels and performance is achieved within each region/department. If an area is underperforming, an assessment is conducted to determine if there is a performance or resource issue. Service needs and related resource requirements are consistent with meeting regulatory requirements, tariff requirements, industry standards, service requests, customer needs, and providing support to the business operations in the most cost-effective way to best serve the long-term interests of our customers. The Direct Testimony of Jamie Hawn explains how the Company's labor and labor-related costs were quantified, including the vacancy ratio applied to the approximately 899 FTEs. As Ms. Hawn notes, the Company's 2020 vacancy rate was higher than historical averages due the temporary suspension of hiring activities as a result of businesses and employees adapting to work from home mandates.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**91. Q. What is the basis for the Company's proposed staffing level?**

A. The additional employees will support the increased capital investment in aging infrastructure, systems added through acquisitions, compliance with increasing water quality regulations, with a focus on employee and contractor safety. Specifically, 9 field employees were added to support the acquisitions of Long Hill Township Wastewater, Bound Brook Boro Wastewater, and Egg Harbor City Water and Wastewater; 2 water quality technicians were added to comply with water quality regulations; 2 employees were added to manage our safety program; and 1 employee to enhance major account management and regulatory matters.

The Company's requested employee complement balances near term cost control with a staffing level that, over time, provides more cost-effective water and wastewater service to our customers. This means rather than simply doing what needs to be done to keep the water flowing and to collect and treat sewage, the Company will have the ability to provide safe, reliable and affordable service in the most cost-effective way to best serve the long-term interests of our customers.

92. Q. Is the Company undertaking any initiatives aimed at ensuring that it is attracting and retaining highly qualified and motivated employees?

A. Yes. Since 2010, American Water has deployed a succession / replenishment initiative across the enterprise, including NJAWC. This initiative is a multi-year effort that focuses on where critical business knowledge resides, and the risks regarding retirement and retention of employees who possess that critical knowledge. The program has evolved to include annual assessments of all

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1 management to identify the development requirements for future leaders.
2 Development opportunities include position reassignments, pre-retirement
3 position overlap, continuing education, leadership and skill training. For critical
4 positions, we are cross training our staff to facilitate knowledge transfer and
5 mentoring. Within the bargaining unit we have specifically developed and deliver
6 training for new Utility Mechanics, Backhoe Operators, Field Service
7 Representatives, Maintenance Mechanics positions. The aim is to document and
8 effectively transfer knowledge to other and new employees over time to avoid a
9 “knowledge vacuum” at the Company when long-tenured employees leave the
10 business.

Compensation

11
12 **93. Q. Please identify the various employee classifications at NJAWC and briefly**
13 **describe how each group is compensated.**

14 A. There are three classifications of employees at NJAWC: union hourly employees,
15 non-union hourly employees, and exempt employees. As Ms. Hawn discusses in
16 her Direct Testimony, union and non-union hourly employees receive base pay
17 and variable pay in the form of overtime pay (in some cases shift premiums and
18 meals), and are eligible for performance pay. Exempt employees receive base
19 pay and are eligible for performance pay. Each classification of employees’ total
20 compensation, therefore, includes fixed pay (base pay) and some form(s) of
21 variable pay (e.g., overtime, shift pay, or performance pay).
22

NEW JERSEY-AMERICAN WATER COMPANY, INC.**94. Q. Does NJAWC have an overall compensation philosophy?**

A. Yes. New Jersey-American Water offers compensation that has allowed it to attract and retain committed, dedicated and highly qualified employees. The Company's overall compensation philosophy is to provide employees with a total compensation package that is market based and competitive with those of comparable organizations with jobs of similar responsibility. As part of its compensation philosophy, NJAWC has chosen to make a portion of its compensation variable, driving continued performance across the enterprise. Specifically, the Company targets its total direct compensation (base and variable compensation) for near the market median (50th percentile). By using a combination of fixed and variable compensation, NJAWC satisfies a dual objective of ensuring competitive market-based compensation for our employees, while continuing to motivate employees to achieve goals that improve performance and efficiency for the benefit of our customers.

95. Q. How should NJAWC's employee compensation expense be assessed by the BPU?

A. Employee compensation is a cost of providing utility service, not unlike any other prudently incurred cost of service recoverable in rates. Employee compensation must therefore be assessed through the same lens as all other operating costs of the Company: if it is prudently incurred and reasonable in amount, relative to what the industry pays for the same services, it should be recoverable through rates. If the Company's overall compensation level is in line with or below the

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 market, regardless of the combination of fixed and variable payments that the
2 employees earn, then the Company's overall compensation expense is reasonable
3 and prudently incurred and should be recoverable.

4 **96. Q. Is the Company's performance compensation program reasonable?**

5 A. Yes. The Company retained the services of Willis Towers Watson ("WTW") to
6 perform a total compensation study to determine if the total direct compensation
7 provided to NJAWC employees, when viewed against the market of talent for
8 employees of similar positions, is at market levels, based on the Company's stated
9 compensation philosophy. The findings of WTW's compensation study are
10 described in the Direct Testimony of Robert V. Mustich. Mr. Mustich and
11 WTW's study reached the following conclusions:

- 12 ○ NJAWC's overall total direct compensation – which includes base
13 compensation and all performance compensation – is within the competitive
14 market range.
- 15 ○ American Water's short-term performance pay program (APP), which is
16 applicable to NJAWC, is comparable to and competitive with plan designs
17 of other utilities.
- 18 ○ American Water's long-term performance pay (LTPP) also applicable to
19 NJAWC, is comparable to and competitive with plan designs of other
20 utilities.
- 21 ○ The various comparative studies performed by WTW show that NJAWC's
22 total direct compensation programs are comparable to and competitive with

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 market practices of other similarly-sized utilities and therefore represent
2 reasonable, market based total compensation.

- 3 ○ Therefore, on a total direct compensation basis, NJAWC's compensation
4 expense is reasonable.

5 **97. Q. Did Mr. Mustich reach any further conclusions regarding NJAWC's**
6 **compensation program?**

7 A. Yes. Mr. Mustich further testified that NJAWC, like the companies it competes
8 with for talent, must provide a competitive total direct compensation opportunity
9 delivered via programs that benefit employees, customers and investors. Mr.
10 Mustich found that "NJAWC attempts to achieve this goal with its balanced and
11 competitive base salary and short-term and long-term performance pay
12 programs."

13 **98. Q. Is the totality of the Company's market based total compensation a**
14 **prudently incurred expense?**

15 A. Yes. As Mr. Mustich has demonstrated in his Direct Testimony, NJAWC's
16 overall total direct compensation – which includes base compensation and all
17 performance compensation – is within the competitive market range. Therefore,
18 NJAWC's total compensation expense is reasonable and prudently incurred.

19 **99. Q. Is providing market based, competitive compensation to employees critical**
20 **to the Company's ability to continue to provide safe and reliable utility**
21 **service?**

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 A. Yes, it is. Recruitment of skilled workers, as well as the retention of existing
2 trained workers, is critical to continuing to provide safe and reliable water and
3 wastewater service for the benefit of all NJAWC customers. Competition among
4 companies to attract and retain the best and highest performing employees is
5 keen. In recruiting new employees or retaining existing employees, both the
6 Company and American Water compete with general industry in surrounding
7 regions and nationally. Without the ability to provide competitive compensation
8 and benefits, the Company would be hampered in its efforts to attract new
9 employees and retain existing employees, particularly when competing with other
10 utilities and other industries for this same pool of talent. This is especially true
11 with respect to employee retention, where the loss of skilled employees imposes
12 a real and added cost on a company which must then recruit and train
13 replacements.

14 The risk of attracting new talent and the resulting cost of doing so is further
15 compounded by the fact that the utility industry as a whole is experiencing a
16 disproportionate impact of our nation's aging workforce. The soon-to-retire
17 "Baby Boomer" generation holds a wealth of knowledge and experience
18 necessary to support the continuation of utility services, while the next generation
19 of qualified talent is diminished in size. This presents a far greater challenge to
20 NJAWC in recruiting replacement, qualified personnel, if its total compensation
21 is not competitive. Therefore, the Company's compensation program must

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 provide employees with a total compensation package on par with those offered
2 by companies with which it competes for employees.

3 **Performance Compensation Plans**

4 **100. Q. How is performance compensation provided to NJAWC employees?**

5 A. Performance pay may be awarded under two plans – the Annual Performance
6 Plan (“APP”) and the Long-Term Performance Plan (“LTPP”). All full-time
7 employees participate in the APP. Eligibility for the LTPP is limited to certain
8 exempt employees.

9 **101. Q. You say all full-time employees participate in the APP; does that include**
10 **union employees?**

11 A. Yes, it does. Our bargaining unit employees became eligible for APP in 2018,
12 with their first payments in 2019.

13 **102. Q. Please describe the key performance objectives underlying the APP.**

14 A. Management and hourly non-union employees’ APP pay is based on a
15 combination of individual performance and achievement of plan goals. Union
16 employees’ performance pay was established through collective bargaining and
17 is based on the achievement of plan goals. For 2021, the APP goals are as
18 follows:

NEW JERSEY-AMERICAN WATER COMPANY, INC.

Annual Performance Plan for 2021

STRATEGY	GOAL	TARGET	WEIGHT
SAFETY & PEOPLE	OSHA Recordable Incident Rate	0.79	10%
	DART Rate (Days Away Restricted or Transferred)	0.5	10%
CUSTOMER	Customer Satisfaction Survey	Top half of benchmarking survey	15%
ENVIRONMENTAL LEADERSHIP	Drinking Water Compliance (based on total NOV's)	20x better than industry average	7.5%
	Drinking Water Quality (based on MCL NOV subset)	10x better than industry average	7.5%
GROWTH	Financial/Earnings Per Share	\$4.18 - \$4.28	50%

1

2 **103. Q. Please describe the LTPP.**

3 A. American Water provides restricted stock units ("RSUs") and performance stock
4 units ("PSUs") as long-term variable compensation under the LTPP. American
5 Water's RSUs and PSUs are based on three-year vesting periods. RSUs are based
6 on time-based vesting and PSUs are based on performance vesting conditions.³

7 **104. Q. How do New Jersey-American Water's performance compensation plans**
8 **benefit customers?**

9 A. The Company's performance compensation plans align the interests of our
10 customers, employees, and investors. The plans emphasize customer service,
11 environmental compliance, a safe work environment, and other operational goals,
12 as well as certain financial goals. All of the APP and LTPP Plans' performance

³ American Water uses a combination of compounded EPS growth and relative total shareholder return ("TSR") ranking over a three-year performance period as the basis for measuring performance for PSU awards. For the portion of American Water's PSUs that are contingent on relative TSR percentile performance, American Water compares performance to its peer group.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

objectives – both operational and financial – focus employees’ efforts in ways that benefit customers.

105. Q. How do the operational goals of the APP benefit customers?

A. The operational goals of the APP are designed to focus plan participants on the performance results that can most directly influence customer satisfaction, health and safety, and environmental performance. Customers benefit from the plan goals because operational performance is improved by controlling costs, capturing efficiencies, promoting effective safety and risk management practices, and enhancing customer service. Performance is determined by goals that directly benefit customers by creating a more productive workforce that is focused on customer satisfaction and achieving efficiency, environmental and safety goals.

106. Q. How do the financial goals of the APP and the LTPP benefit customers?

A. The financial goals of the APP and LTPP are complementary to the operational goals and benefit customers in many ways. Importantly, to achieve performance pay financial goals, such as targeted earnings per share (“EPS”) performance, demands attention to operating efficiency. That is, unless the utility controls its operating costs, it likely will not achieve a targeted EPS. Financial goal-based performance pay ensures that employees at all levels of the organization, and not just the upper ranks, remain focused on increasing efficiency, decreasing waste, and boosting overall productivity. As a result, incentivizing employees to control operating costs unquestionably benefits customers. Consequently, when

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 financial performance is achieved through efficiency, as is the case for New
2 Jersey-American Water, the interests of customers, employees and investors are
3 aligned.

4 **107. Q. Does incentivizing employees to control and reduce operating costs provide**
5 **other customer benefits?**

6 A. Yes. Where NJAWC can reduce operating expenses, it can increase investment
7 in infrastructure without increasing rates, because every dollar of operating
8 expenses saved can fund over \$8 of investment. Therefore, customers also benefit
9 from NJAWC's enhanced ability to invest in the infrastructure that it needs to
10 meet its service obligations to customers.

11 **108. Q. Is there other evidence of the tangible benefit to customers from NJAWC's**
12 **performance pay programs?**

13 A. Yes. Again, it is important to consider the impact a utility's financial health has
14 on its access to capital at reasonable rates. NJAWC's customers have benefitted
15 from the Company's access to capital at favorable rates. Because utilities are
16 capital intensive and must routinely and consistently access the capital markets,
17 customers ultimately benefit when their utility has the financial health to do so at
18 reasonable rates. Simply put, a financially healthy utility benefits customers
19 because it enables the utility to meet its service obligations at reasonable
20 financing costs.

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109. Q. How have NJAWC’s customers benefited from NJAWC’s achievement of the safety, customer satisfaction and environmental leadership goals under its performance pay program from the years of 2019 to date?

A. NJAWC’s performance in these areas over the last several years, incentivized by its short-term variable pay plans, makes clear the operational improvements that benefit customers. For example, 2021 year to date results compared to 2019 numbers demonstrate improvement in each of the following operational metrics:

Operational Metric	2019	2021
OSHA Recordable Incident Rate	1.40	1.06
OSHA Days Away/Restricted or Job Transfer Rate	0.82	0.47
JD Power Customer Satisfaction	Top Tier	#1
BPU Inquiries	568	307
Water Quality orders	3,449	3,015

Reducing OSHA incidents increases safety—customer safety and employee safety. No one can credibly dispute the benefits of improved safety. Further, reduced accidents reduce the attendant costs—workers’ compensation, damage repair, etc.—which mitigates the operating costs that customers pay through rates. NJAWC continues to improve its performance in reporting near misses, another illustration of the Company’s high-performing safety culture. Exceptional safety performance reflects an engaged workforce that is focused on providing safe, reliable and affordable service to NJAWC’s customers.

Maintaining and improving high quality customer satisfaction and service quality also provide customer benefits. NJAWC’s customer satisfaction performance goals measure customer contacts at NJAWC’s call centers and in the field. They

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 are benchmarked against other utilities' performance, as reported by third-party
2 customer satisfaction surveys. In 2021, NJAWC ranked first in the Northeast
3 Region for customer satisfaction in J.D. Power's Water Utility Residential
4 Customer Satisfaction Study. J.D. Power's Overall Water Utility Satisfaction
5 Index measures key performance indicators in six areas: delivery (including
6 quality), price, conservation, billing and payment, communications, and customer
7 service.

8 Customer satisfaction often goes hand-in-hand with reducing customer
9 complaints. NJAWC's BPU inquiries for 2021 are down by approximately 46%
10 as compared to 2019 levels.

11 **110. Q. Please summarize why the costs of the Company's market based total**
12 **compensation, including performance-based compensation should be**
13 **recoverable in rates.**

14 A. The Company's performance compensation plans align the interests of our
15 customers, employees, and investors. The market based total compensation
16 philosophy that NJAWC has adopted will allow it to attract and retain its
17 workforce and continue to provide safe and reliable service. The plans contain
18 tangible goals that are designed to do several things, i.e., measure and compensate
19 employees for performance based on delivering clean, safe, reliable and
20 affordable water and wastewater service and providing good customer service
21 when doing so. The operational components measure performance that can most
22 directly influence customer satisfaction, safety, and environmental leadership.

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1 Customers derive a direct benefit from our focus on these key measures in the
2 plan. Further, the plans' well-grounded financial measures keep the organization
3 focused on improved performance at all levels of the organization, particularly in
4 increasing efficiency, decreasing waste, and boosting overall productivity. As
5 discussed earlier, the Company has demonstrated that its overall compensation
6 levels are in line with the market, and thus, are a reasonable and prudently
7 incurred cost of service that is appropriate for inclusion in rates.

8 **111. Q. Does this conclude your direct testimony?**

9 A. Yes, it does.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

Appendix A

1 **Q. Please describe your educational background and professional associations.**

2 A. I hold a Bachelor of Science degree from the New Jersey Institute of Technology, W-
3 2, T-2, and professional engineering licenses. I am a member of the American Water
4 Works Association (“AWWA”).

5 **Q. What has been your business experience?**

6 A. I have 33 years of experience in the water industry. I joined American Water as an
7 Engineering Technician in 1988 inspecting the construction of tanks, booster stations
8 and transmission mains. I also worked with developers and engineers to extend the
9 water system in our system development department. In 1997, I joined the
10 Operations department as a Distribution Supervisor. I have held progressively
11 responsible positions in the operations group including superintendent, manager,
12 director and Sr. Director until being promoted to my current position as VP of
13 operations in November of 2018.

New Jersey American Water Service Area

Schedule TS-1



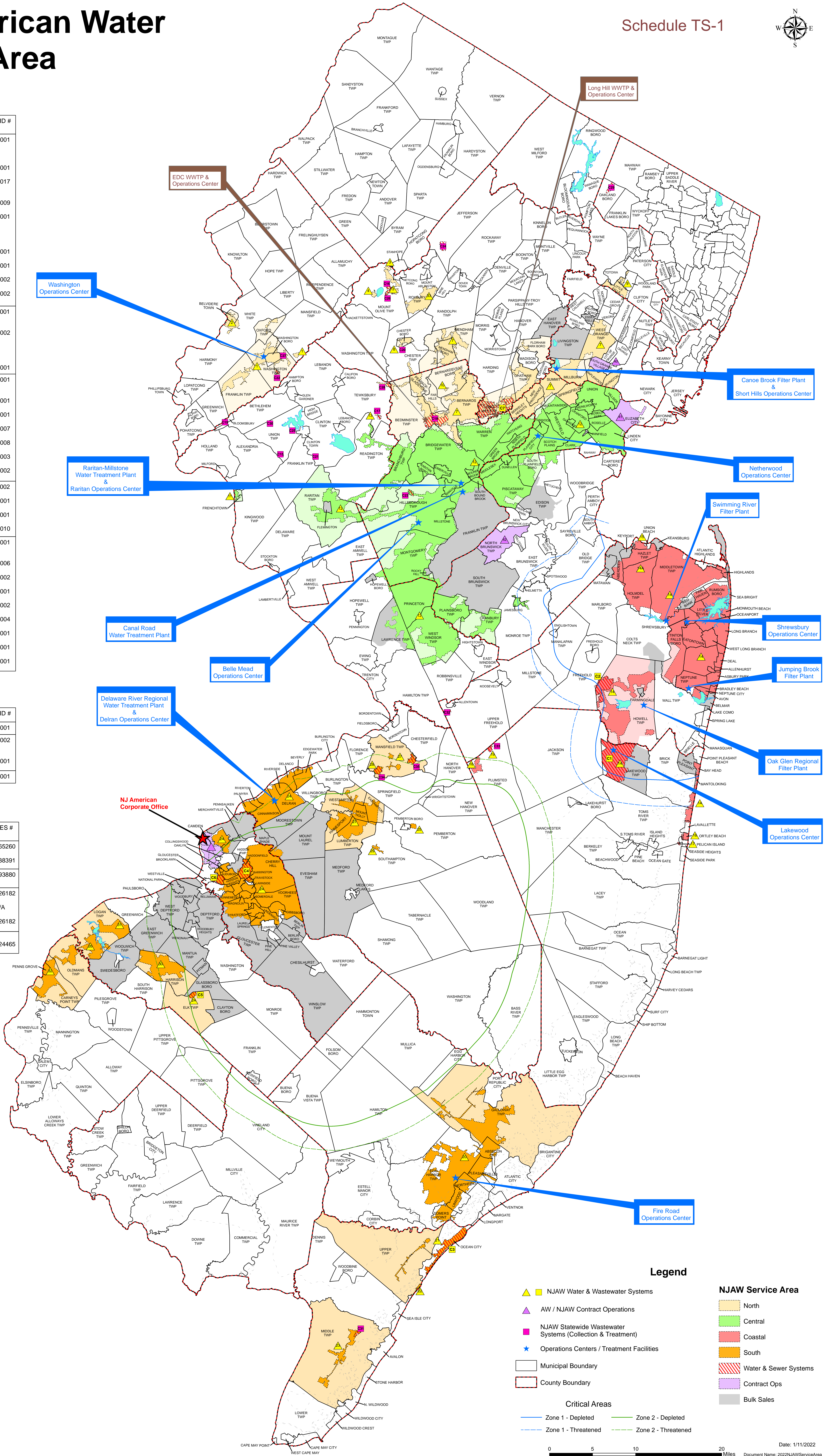
NJAW WATER SYSTEMS					
REGION	DISTRICT	KEY	COUNTY(IES)	WATER SYSTEM	PWSID #
NORTH	PASSAIC		WARREN	WASHINGTON OXFORD MANSFIELD	2121001
			WARREN	BELVIDERE	2103001
			MORRIS	ITC COUNTRY OAKS	1427017
			MORRIS	WEST JERSEY	1427009
			MORRIS ESSEX SOMERSET UNION	PASSAIC BASIN	0712001
			MORRIS	FOUR SEASONS	1407001
			PASSAIC	LITTLE FALLS	1605001
			SOMERSET	TWIN LAKES	1803002
CENTRAL	RARITAN		MORRIS	ROXBURY	1436002
			HUNTERDON	FRENCHTOWN	1011001
			HUNTERDON MIDDLESEX MERCER SOMERSET UNION	RARITAN	2004002
COASTAL	COASTAL NORTH		HUNTERDON	CROSSROADS	1024001
			OCEAN MONMOUTH	COASTAL NORTH	1345001
			MONMOUTH	SHORELANDS	1339001
			MONMOUTH	UNION BEACH	1350001
			OCEAN	ORTLEY BEACH	1507007
			OCEAN	PELICAN ISLAND	1507008
SOUTH	COASTAL SOUTH		OCEAN	NEW EGYPT	1523003
			OCEAN	DEEP RUN	1523002
			ATLANTIC	ATLANTIC COUNTY	0119002
	SOUTHWEST		CAPE MAY	OCEAN CITY	0508001
			CAPE MAY	STRATHMERE	0511001
			CAPE MAY	CAPE MAY CH	0506010
			CAMDEN BURLINGTON	WESTERN	0327001
			BURLINGTON	SUNBURY	0329006
			GLOUCESTER	LOGAN	0809002
			BURLINGTON	MT. HOLLY	0323001
			BURLINGTON	HOMESTEAD	0318002
			BURLINGTON	VINCENTTOWN	0333004
			GLOUCESTER	HARRISON TWP	0808001
			GLOUCESTER	BRIDGEPORT	0809001
			SALEM	PENNSGROVE	1707001

AW / NJAW - CONTRACT OPERATIONS					
REGION	DISTRICT	KEY	COUNTY(IES)	WATER SYSTEM	PWSID #
NORTH	PASSAIC		ESSEX	SOUTH ORANGE	0717001
			UNION	LIBERTY	2004002
CENTRAL	RARITAN		MIDDLESEX	NORTH BRUNSWICK	1215001
SOUTH	SOUTHWEST		CAMDEN	CAMDEN	0408001

NJAW WASTEWATER COLLECTION SYSTEMS					
REGION	DISTRICT	KEY	COUNTY(IES)	WASTEWATER SYSTEM	NPDES #
COASTAL	COASTAL NORTH		OCEAN	LAKEWOOD	NJ0265260
			MONMOUTH	ADELPHI	NJ0538391
SOUTH	COASTAL SOUTH		CAPE MAY	OCEAN CITY	NJ0093880
			CAMDEN	HADDONFIELD	NJ0026182
			GLOUCESTER	ELK	N/A
			CAMDEN	MOUNT EPHRAIM	NJ0026182
NORTH	PASSAIC		MORRIS	LONG HILL TWP	NJ0024465

NJAW STATEWIDE WASTEWATER SYSTEMS (COLLECTION & TREATMENT)				
REGION	KEY	COUNTY(IES)	WASTEWATER SYSTEM	NPDES #
NORTH		HUNTERDON	BRASS CASTLE	NJ0068829
		MORRIS	COUNTRY OAKS	NJ0108928
		HUNTERDON	CROSSROADS	NJ0104396
		SOMERSET	EDC	NJ0033995
		HUNTERDON	FAWN RUN	NJ0058246
		MORRIS	FOUR SEASONS	NJ0071013
		HUNTERDON	GLEN MEADOWS	NJ0100528
		WARREN	HAWK POINTE	NJ0136336
		SOMERSET	HILLSBOROUGH CHASE	NJ0146102
		MORRIS	JEFFERSON PEAK	NJ0133558
		HUNTERDON	LOOKOUT POINTE	NJ0140571
		MORRIS	MORRIS CHASE / MORRIS HUNT	NJ0053422
		WARREN	PORT COLDEN MALL*	N/A
		HUNTERDON	POTTERSVILLE	NJ0022781
		BERGEN	RAMAPO RIVER RES.	NJ0080811
SOUTH		HUNTERDON	VILLAGE SQUARE	NJ0066907
		CAPE MAY	AVALON COUNTRY CLUB	NJ0069884
		MONMOUTH	BEACON HILL	NJ0105228
		OCEAN	DEEP RUN	NJ0080055
		BURLINGTON	HOMESTEAD	NJ0098663
		BURLINGTON	MAPLETON	NJ0108120

* COLLECTION ONLY



Legend

- NJAW Water & Wastewater Systems
- AW / NJAW Contract Operations
- NJAW Statewide Wastewater Systems (Collection & Treatment)
- Operations Centers / Treatment Facilities
- Municipal Boundary
- County Boundary

NJAW Service Area

- North
- Central
- Coastal
- South
- Water & Sewer Systems
- Contract Ops
- Bulk Sales

Critical Areas

- Zone 1 - Depleted
- Zone 2 - Depleted
- Zone 1 - Threatened
- Zone 2 - Threatened

0 5 10 20 Miles

Date: 1/11/2022
Document Name: 2022NJAWServiceArea

BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF
NEW JERSEY-AMERICAN WATER COMPANY, INC.
FOR APPROVAL OF INCREASED TARIFF RATES
AND CHARGES FOR WATER AND WASTEWATER SERVICE, AND
OTHER TARIFF MODIFICATIONS

BPU Docket No. WR2201_____

Direct Testimony of
DONALD C. SHIELDS

January 14, 2022

Exhibit P-5

NEW JERSEY-AMERICAN WATER COMPANY, INC.**TABLE OF CONTENTS**

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NEW JERSEY-AMERICAN WATER COMPANY, INC.

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

2 A. My name is Donald C. Shields, and my current business address is 1 Water Street,
3 Camden, New Jersey 08102.

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

5 A. I am employed by American Water Works Service Company, Inc. (“Service
6 Company”) as Vice President of Engineering supporting New Jersey-American
7 Water Company, Inc. (“NJAWC” or the “Company”), Virginia-American Water
8 Company (“VAWC”) and Maryland-American Water Company (“MAWC”).

9 **3. Q. What are your responsibilities in this position?**

10 A. My present responsibilities include providing oversight, expertise and consultation
11 for comprehensive system planning for use in developing system priorities and
12 projecting capital spending, as well as the planning, design and construction of
13 capital improvement projects for NJAWC, VAWC and MAWC.

14 **4. Q. Please describe your educational background and business experience.**

15 A. Please refer to Appendix A for a summary of my educational background and
16 business experience.

17 **5. Q. Have you previously testified in regulatory proceedings?**

18 A. Yes. I have previously testified on behalf of NJAWC in the Company’s base rate
19 case applications in BPU Docket Nos. WR15010035, WR17090985 and
20 WR19121516, and in the Company’s joint petition for approval of the acquisition
21 of Shorelands Water Company, BPU Docket No. WM16101036. In addition, I

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 have previously testified on behalf of Applied Wastewater Management, Inc. in its
2 base rate case applications in BPU Docket Nos. WR08080550 and WR03030222.

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

4 A. I will explain NJAWC's capital investment planning process and describe and
5 support the Company's investments in water and wastewater utility plant and
6 equipment since the last base rate case through the end of the test year in this case,
7 12 months ending June 30, 2022 ("Test Year") and the six months post-test year
8 ending December 31, 2022 ("Post-Test Year" or "PTY"), totaling approximately
9 \$943.2 million. Although my testimony will highlight certain capital projects
10 through the end of the PTY period, all of our capital investments, including our
11 recurring projects, are reasonable and necessary to continue to provide safe and
12 reliable water and wastewater service for the benefit of our customers. I will also
13 describe the Company's plan for the engineered coating of steel structures. Finally,
14 I describe some of the risks associated with the provision of water service, the
15 provision of wastewater service and the challenges increased climate variability
16 creates for water and wastewater utilities.

17 **7. Q. Do you sponsor any schedules as part of your Direct Testimony?**

18 A. Yes. I am sponsoring Schedule DCS-1 Test Year plant additions and Post-Test
19 Year plant additions supporting the Company's capital expenditures utilized in rate
20 base. The Schedule was prepared by me and under my supervision and direction
21 and will be updated over the course of the proceeding to include actual data for both

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 the full twelve-months for the Test Year as well as the 6-month Post-Test Year
2 period.

3 **I. NEW JERSEY-AMERICAN WATER'S CAPITAL INVESTMENT**
4 **PROGRAM**

5 **8. Q. Please explain the Company's capital investment planning and governance**
6 **process.**

7 A. The Company uses a standardized Capital Program Management ("CPM") process
8 to manage all its capital investments. NJAWC conducts comprehensive planning
9 studies ("CPS") to assess and make project recommendations for its capital assets
10 and evaluates capital needs on an ongoing basis to assess any changed
11 circumstances and ensure that appropriate projects are being prioritized. Capital
12 investment programs and projects are prioritized within an overall strategic
13 planning process, utilizing drivers associated with various asset investment
14 strategies (such as safety, regulatory compliance, capacity, customer satisfaction,
15 etc.) to formulate a five-year strategic capital investment plan, which largely
16 supports the Company's capital construction plan.

17 Detailed design engineering is conducted, and implementation plans are developed
18 for investment projects contained within the five-year strategic capital investment
19 plan. Main replacement projects are examined annually and assigned priorities on
20 a state-wide basis. Numerous factors are considered when determining funding
21 allocations for infrastructure investment, such as current and future service needs,
22 assessments of the physical condition of existing plant, economic and risk factors,
23 performance characteristics, regulatory compliance, financial impacts to customers

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 (rate impact) and the potential to coordinate with municipalities and other utilities
2 in joint improvement projects. The CPM governance process provides for formal
3 approvals and consistent controls that optimize the effectiveness of asset
4 investment. Strategic project planning, budgeting and ongoing reviews ensure that
5 NJAWC can manage a wide variety of projects within the overall cost of its plant
6 construction budget.

7 **9. Q. Please describe the CPS process and project prioritization activities in more**
8 **detail.**

9 A. The CPS process includes a thorough evaluation of demand projections, regulatory
10 requirements, asset service reliability and quality, infrastructure condition, asset
11 impacts on safety and efficiency, customer rates, public fire protection, and
12 environmental sustainability. The CPS identifies, assesses, and provides project
13 recommendations for the Company's capital assets on a multi-year planning
14 horizon and includes a thorough planning level evaluation of each component of
15 utility infrastructure. The Company also undertakes separate studies or evaluations
16 for specific capital projects that emerge between each CPS. Capital investment
17 projects are identified and are prioritized using asset investment strategy
18 considerations of safety, regulatory compliance, capacity and growth, infrastructure
19 renewal, efficiency, resiliency, reliability, and quality of service. Each CPS and
20 any additional prioritization of identified capital investment projects are key inputs
21 to the Company's capital investment plan. Because of the specific nature of the
22 large asset class of distribution system mains, the Company completes a separate

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 distinct evaluation for identifying capital investment priorities in the distribution
2 system. This evaluation is a detailed prioritization modeling of the distribution
3 system piping that, as further described below, assesses service risks associated
4 with pipeline failure risks for all the Company's approximately 9,200 miles of
5 mains.

6 **10. Q. Please describe the distribution system prioritization modeling in more detail.**

7 A. As discussed in the Company's Distribution System Improvement Charge
8 ("DSIC") Foundational Filings, most recently NJBPU Docket No. WR20030256
9 (Appendix A), the Company maintains a GIS-based prioritization model using GIS
10 software and prioritization modeling software for identifying and prioritizing
11 pipeline replacement investments across its systems. The model prioritizes pipe
12 replacements through identification of service risks associated with pipe failure.
13 Pipe failure risks are identified through pipe failure history, pipe material type, the
14 decade pipe was installed, and pipe diameter. Pipe failure history is a significant
15 input into the main replacement prioritization model. These pipe failures are
16 identified not only during the Company's unscheduled main replacement projects
17 but also during pipeline repair work. Pipe failure data is collected and tracked in
18 the Company's GIS system. Consequences of pipe failures, which include customer
19 impacts, are also an input to the prioritization model. Pipe failures not only impact
20 individual customers but can also cause consequences that are major in nature to
21 businesses, hospitals, governmental buildings, and the ability to provide fire
22 service.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**11. Q. How does the Company develop and update its capital investment plan?**

A. Investment projects are profiled in the capital investment plan to address priorities in each CPS in an appropriate time frame. For example, infrastructure capacity expansion investment projects are scheduled based on demand projections. Capital investment projects required to meet environmental or water quality regulations are scheduled for completion before compliance deadlines to allow adequate time for testing and operational performance monitoring of the new facility/assets to ensure compliance. This process ensures the facility operates successfully through varying operating conditions. Rehabilitation projects for service reliability are scheduled with consideration of existing asset characteristics, and risks and impacts of failure on service reliability and quality. The Company's main replacement program is generally planned and managed through the DSIC program, except for any emergency replacement and repair projects.

12. Q. Please describe the general project categories in the Company's capital investment plan.

A. The Company's capital investment plan can be divided into two distinct areas: recurring projects ("RPs" or "RP") and investment projects ("IPs" or "IP"). RPs are designated as such because they are the type of capital projects that the Company undertakes on a frequent and regular basis, require less long-term financial and capital planning than an IP, and can be performed with either the Company's current workforce or existing contractors. IPs on the other hand, are typically projects that require a more significant amount of planning and capital

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 resources. Whether RPs or IPs, all aspects of the Company's capital program are
2 essential to continuing to provide safe and adequate service to NJAWC's customers
3 and support the long-term viability, reliability and resiliency of the Company's
4 water and wastewater systems.

5 **13. Q. Please describe the RPs that are included within the Company's capital**
6 **investment plan.**

7 A. NJAWC's RPs include main projects generally 12 inches in diameter and smaller,
8 reinforcement and replacement of service line and meter setting installations, meter
9 purchases, projects to replace and maintain treatment equipment, vehicle
10 replacements and to a lesser extent the purchase of tools, furniture, and equipment.
11 The Company's RP investments during the Test Year and PTY total approximately
12 \$437.5 million.

13 **14. Q. Are RP projects a critical component of the Company's five-year strategic**
14 **capital investment plan?**

15 A. Yes, RPs are critical investments for both the Company and customers as these
16 investments support the backbone of NJAWC's water systems by increasing both
17 system resiliency and reliability.

18 **15. Q. Please describe how RPs are included within the Company's capital**
19 **investment plan.**

20 A. Recurring construction project costs for the various line items are trended from
21 historical and forecasted data, with specific project details accounted for where
22 available; main replacements are planned in accordance with the Company's

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1 project prioritization plan as described herein. Estimates are prepared for the
2 installation of new mains and service lines, meter settings, and the purchase of new
3 meters based on preliminary plats from the appropriate governmental planning
4 agencies and consultations with developers, homebuilders, and engineering firms.
5 The criteria for evaluating the priority of the recurring projects are engineering
6 requirements, consideration of national, state, and local trends, environmental
7 impact evaluations, and water resource management. NJAWC engineering criteria
8 are based on accepted engineering standards and are developed from regulations,
9 professional standards and NJAWC engineering policies and procedures. The
10 engineering criteria support NJAWC's ability to have a water system that will
11 continue to provide adequate capacity and appropriate levels of reliability to satisfy
12 residential, commercial, industrial, and public authority needs, and provide flows
13 for fire protection.

14 **16. Q. Please describe how IPs are included within the Company's capital investment**
15 **plan.**

16 A. IPs represent investments made to meet environmental or water quality regulations,
17 infrastructure capacity expansion or rehabilitation or replacement of aging
18 facilities. These projects allow the Company to meet the service demands of the
19 community, maintain regulatory compliance, and reduce asset failure.

20 The determination to include an IP within the capital investment plan begins with
21 the development of the anticipated demand projections of the system, the
22 identification of improvements needed to meet those demands and the adoption of

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strategies designed to bring about the correct prioritization and distribution of capital spending for the various requirements of the business. Specific capital planning requirements are addressed in both the short term (one year) and the longer term (five years). Projects are prioritized using objective criteria that validate the need for a project and assess the risk of not doing the project. A key aspect of this planning technique is that it is flexible and can be adjusted as needed to address new priorities, such as unplanned equipment failures, large or sudden growth of a service area and new regulatory requirements.

17. Q. Please describe the Company's recent performance with respect to its capital investment plan.

A. NJAWC has delivered its capital investment plan within 0.96% of the plan cumulatively over the past five years. Capital investment plans, actual capital investment deliveries, and variances to the plan by year are shown in the table below:

NJAWC Net Capital Investment Plan v. Actual Capex				
Year	Plan	Actual	Variance	
2016	\$ 310,129,159	\$ 312,717,235	\$ 2,588,076	0.83%
2017	\$ 395,807,573	\$ 396,832,035	\$ 1,024,462	0.26%
2018	\$ 343,331,837	\$ 347,782,915	\$ 4,451,078	1.30%
2019	\$ 344,838,815	\$ 362,158,711	\$ 17,319,896	5.02%
2020	\$ 438,245,187	\$ 430,413,130	(\$ 7,832,057)	(1.79%)
Cumulative	\$1,832,352,571	\$1,849,904,026	\$17,551,455	0.96%

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1 **18. Q. Does NJAWC focus on control of capital expenditure costs in its normal day-**
2 **to-day activities?**

3 A. Yes. All significant construction work is performed by independent contractors
4 and some significant purchases are completed pursuant to a bid solicitation process.
5 NJAWC maintains a list of qualified bidders, and Service Company annually
6 receives competitive bids for materials and supplies, such as pipe, valves, fittings,
7 meters, chemicals, and other commodity items that are either manufactured or
8 distributed both regionally and nationally through its centralized procurement
9 group. NJAWC has the advantage of being able to purchase these materials and
10 supplies on an as-needed basis at favorable prices. In recent years, Service
11 Company also has undertaken procurement initiatives for services and materials to
12 reduce costs or mitigate price increases through either streamlined selection or
13 utilization of large volume purchasing power. Among the initiatives that have
14 directly impacted capital expenditures are the use of master services agreements
15 with pre-qualified engineering consultants, national vehicle fleet procurement, and
16 national preferred vendor identification. Mr. Shroba describes how NJAWC
17 utilizes the Supply Chain team within Service Company to take advantage of the
18 purchasing power of the entire American Water enterprise and control costs.

19 **19. Q. Please describe some key achievements realized by the capital investment**
20 **program at the Company.**

21 A. There are several key areas that NJAWC has addressed with its capital investment
22 program. First, we've made significant improvement in replacing aging

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1 infrastructure, largely attributable to the DSIC program. Less than ten years ago,
2 approximately 40 percent of NJAWC's water pipe was 70 years old, or older, and
3 nearing the end of its useful life. Today, that percentage is just over 17 percent. In
4 that same period, pipe that is more than 100 years old decreased from 20 percent
5 to 6 percent.

6 Since NJAWC implemented the DSIC program in 2012, the Company has:

- 7 • replaced over 774 miles of main, 102,171 service lines, 14,471 hydrants and
8 25,579 valves.
- 9 • lowered its water main replacement rate from over 500 years to below 110
10 years, which is within the New Jersey Water Quality Accountability Act
11 requirement of 150 years.
- 12 • invested a total of \$1.267 billion in DSIC-eligible system improvement
13 projects to replace or rehabilitate aging infrastructure—that's over \$140
14 million annually since inception of the program.

15 DSIC is a proven regulatory tool that allows for modest surcharges outside of the
16 general rate proceeding for rehabilitating and replacing aging infrastructure, while
17 maintaining BPU oversight.

18 Second, the Company has made significant enhancements for system reliability and
19 resiliency. Some key projects completed within the last five years include:

- 20 • Raritan Millstone Flood Wall and Back up Generation upgrades: while the
21 remnants of Hurricane Ida severely impacted the central New Jersey region, the
22 flood of record resulting from Ida was held back by the recently completed

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1 flood wall. In addition, the newly installed backup generators worked to
2 maintain power after loss of the main power feed. This kept millions of people
3 in the region supplied with safe drinking water and reliable sanitation.

- 4 • Oak Glen Water Treatment Plant Expansion and Back Up Generation upgrades
5 helped alleviate critical water supply issues in the Coastal North Region.
- 6 • Swimming River Clearwell Expansion allowed for the retirement of an over
7 100-year-old gravity main that was identified as a critical risk for the Company
8 and its customers.

9 Lastly, the Company has invested significantly in facilities for regulatory
10 compliance. Of note, the Company has managed projects to treat for (now
11 regulated) perfluorinated compounds (PFOA, PFOS and PFNA) at many facilities
12 throughout the State. These include the following:

- 13 • Baltusrol Groundwater Station – 2 million gallons per day (“MGD”) plant
14 where an anion exchange (“AIX”) resin system was deployed within an existing
15 building for PFOA removal.
- 16 • Hummocks Groundwater station – 1.5 MGD treatment system that includes
17 Granular Activated Carbon (“GAC”) for removal of PFOA/PFOS as well as
18 ultraviolet light and peroxide treatment (also known as Advanced Oxidation)
19 for removal of 1,4-dioxane, a volatile organic carbon (“VOC”) related chemical
20 that is currently expected to have a new maximum contaminant level (“MCL”)

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1 limit issued by New Jersey Department of Environmental Protection
2 (“NJDEP”).¹

- 3 • Nazareth Groundwater Station – 0.16 MGD plant where an AIX resin system
4 was deployed within an existing building for PFOA removal.
- 5 • Short Hills Groundwater Station – 2.8 MGD where an AIX resin system was
6 deployed within an existing building for PFOA removal. NJAWC received the
7 2020 New Jersey Governor’s Environmental Excellence award for this project.
- 8 • Springfield Groundwater Station – 3.0 MGD where an AIX resin system was
9 deployed within an existing building for PFOA removal.

10 As further discussed below in my Direct Testimony, the Company continues to
11 prepare for new and more stringent regulations on emerging compounds and will
12 take early action on planned upgrades and operational mitigation strategies to
13 address these regulatory challenges.

14 **II. DESCRIPTION OF PLANT ADDITIONS**

15 **20. Q. How much capital investment is the Company seeking to recover in this case?**

16 A. Since the effective date of rates in the Company’s last rate case, the Company has
17 invested, or will invest, approximately \$985 million in capital expenditures through
18 the end of 2022. As shown on Schedule DCS-1, beginning July 1, 2021, and
19 through the end of the post-test year, the Company has invested or plans to invest
20 over \$726 million in its water and wastewater facilities. Of that amount, \$454

¹ As noted later in my testimony, the Drinking Water Quality Institute has recommended an MCL of 0.33 parts per billion to NJDEP.

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1 million will be invested during the Test Year and an additional \$272 million will
2 be invested during the Post-Test Year. In total, of the \$726 million in investments,
3 \$301 million is DSIC-eligible investment.

4 **21. Q. Please describe some of the key objectives related to the Company's**
5 **investments and how they benefit customers.**

6 A. The Company's investments since the last rate case address key issues for our
7 customers, including improving asset resiliency, managing source of supply and
8 system demands, renewing aging assets, increasing operational efficiency and
9 maintaining regulatory compliance. The projects the Company undertakes are
10 designed to achieve multiple goals and are essential for the Company to continue
11 to provide safe, adequate and reliable service to our customers in a manner that is
12 in the long-term interest of our customers. For example, many of these projects in
13 Schedule DCS-1 are described below and include improved resiliency and
14 reliability at treatment plants, as well as in the distribution system, managing source
15 of supply both from a treatment and capacity perspective, improved pump
16 efficiency, treatment changes to maintain regulatory compliance and so on.
17 Additional examples include investments that further enhance the Company's
18 hardware, software, and related technology appurtenances and systems. In each
19 instance, these projects support the Company's continued provision of safe,
20 adequate and reliable service to customers.

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1 **22. Q. Please describe generally the capital expenditures through the Test-Year as**
2 **detailed further in Schedule DCS-1.**

3 A. Schedule DCS-1 provides a summary of capital expenditures for the Test Year and
4 Post-Test Year periods. It includes five months of actual capital expenditure data
5 for the period July 1, 2021, through November 30, 2021 and seven months of
6 projected capital expenditure data for the period December 1, 2021 through June
7 30, 2022. As shown on Schedule DCS-1, the total projected plant expenditures
8 including the DSIC spend for the Test Year period are approximately \$451 million.
9 As the Test Year is fully realized, NJAWC will supplement the projected data with
10 actual data through June 30, 2022, in the Company's 9&3 and 12&0 updates to be
11 submitted in this case.

12 **23. Q. Please summarize the Post-Test Year capital expenditures for which NJAWC**
13 **is seeking rate relief in this proceeding as shown on Schedule DCS-1.**

14 A. The Company's Post-Test Year investment of approximately \$289 million is based
15 on projected capital expenditures NJAWC plans to make during the six-month
16 period July 1, 2022, through December 31, 2022. NJAWC's Post-Test Year capital
17 expenditures are known and measurable consistent with Board precedent, including
18 *In Re Elizabethtown Water Company*, BPU Docket No. WR8504330 (May 23,
19 1985). Moreover, NJAWC's Post-Test Year capital expenditures are "prudent and
20 major in nature and consequence," and therefore, have been included in rate base
21 for cost recovery.

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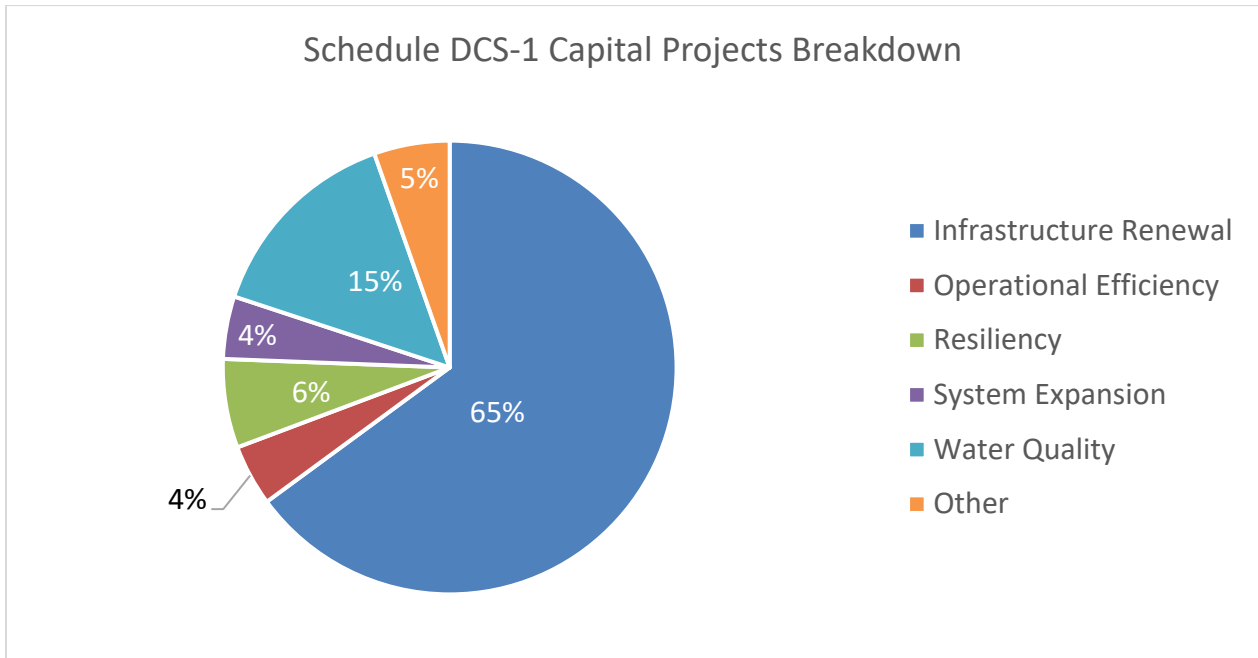
1 **24. Q. Please provide an overview of the investments included in Schedule DCS-1.**

2 A. As described in my Direct Testimony above, the capital program is driven by
3 investments in plant to address the following issues:

- 4 • Infrastructure Renewal
- 5 • Operational efficiency
- 6 • Water Quality
- 7 • System Expansion
- 8 • Resiliency/Reliability
- 9 • Other – administrative and facilities

10 Projects can fall into several categories that meet various identified needs. For
11 example, a filter upgrade project at a remote groundwater station can be identified
12 as an asset renewal project if it is needed to replace outdated technology, which
13 would also qualify it for operational efficiency. In addition, the project could also
14 be categorized as a water quality enhancement should the filtration technology be
15 upgraded to also remove new emerging compounds.

16 As can be seen in the chart below, the vast majority of NJAWC's projects fall into
17 the Infrastructure Renewal category.

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A further explanation and description of these categories is included herein, along with additional details regarding certain projects in each category. Additional information regarding all the projects or line items in Schedule DCS-1 can be provided upon request.

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25. Q. Please describe the Company’s infrastructure and asset renewal investments in more detail.

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A. Asset management is recognized as an industry best practice, and the United States Environmental Protection Agency (“USEPA”) has been directed under American’s Water Infrastructure Act of 2018 (“AWIA”) to require states to incorporate asset management into their capacity plans, with several states having adopted requirements for water utilities to complete asset management plans (“AMPs”). Additionally, under the New Jersey Water Quality Accountability Act (“WQAA”), water utilities are required to maintain an AMP similarly to the AWIA

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1 requirements. NJAWC follows the key steps set forth by both USEPA and WQAA
2 for sound asset management, including maintaining an accurate inventory of assets,
3 providing an assessment of the condition and performance of these assets, with
4 particular emphasis on high-criticality assets, performing risk assessment of assets
5 in terms of their criticality and potential for failure and service disruption, and
6 providing a recommended renewal program that includes operations and
7 maintenance (“O&M”) and inspection.

8 It is well documented that the water and wastewater utility industry is faced with
9 significant capital investment needs to renew aging infrastructure, with estimates
10 topping \$1 trillion across the U.S. needed to maintain and expand service to meet
11 demands over the next 25 years.² Nationwide, water system pipeline replacement
12 rates are in the range of 0.45% per year, which translates to a replacement cycle of
13 approximately 200 years. Through heightened focus on this issue, and as described
14 herein, NJAWC has significantly improved its pipeline replacement rate over the
15 last few years, from near industry average levels in 2011 to a five-year average rate
16 of 0.85% from 2017-2021.

17 NJAWC regularly assesses whether the current asset renewal investment levels, for
18 both above ground and buried assets, are sufficient to maintain appropriate levels
19 of service. NJAWC employs a multi-faceted approach to managing assets,
20 including the use of innovative technologies to detect, mitigate, or repair asset

² See, e.g., American Water Works Association, *Buried No Longer: Confronting America’s Water Infrastructure Challenge* (2012), <https://www.awwa.org/Portals/0/AWWA/Communications/BNLReport.pdf>.

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1 failures; condition-based and/or reliability-centered maintenance; and a risk-based
2 strategic plan and framework for prioritizing and implementing asset renewal while
3 considering the impact on customer rates. Alternative asset renewal technologies,
4 including pipeline rehabilitation, is considered wherever cost-effective.

5 Some examples of infrastructure and asset renewal projects included on Schedule
6 DCS-1 follow:

7 Raritan Millstone Water Treatment Plant (“RMWTP”) Filter Rehabilitations

8 This project includes various phases. The existing RMWTP Filters 1-30 were
9 constructed over the course of many decades since the original plant construction:
10 Filters 1-6 (1920's - original); Filters 7-18 (1950's); Filters 19-24 (1970's) and
11 Filters 25-30 (1980's). All filters are operational and vary in filtration rates ranging
12 from 2.5 to 5 gallons per minute (“GPM”) per square foot (“SF”). Many
13 components, however, are nearing their end of service life, requiring costly and
14 sometimes emergency repairs. In addition, the RMWTP has recently been placed
15 in the Bin 2 Classification regulations of the Long Term 2 Enhanced Surface Water
16 Treatment (“LT2”) Rule, and upgrades to filter performance and reliability are
17 required in order to maintain compliance. The work includes removal and
18 rehabilitation and/or replacement of the filter underdrains, media, gallery piping,
19 valves, flowmeters, filter controls, control room and lab, new air scour blower and
20 piping, water quality (“WQ”) instruments, and associated electrical, mechanical,
21 process, supervisory control and data acquisition (“SCADA”) and security system
22 upgrades.

NEW JERSEY-AMERICAN WATER COMPANY, INC.River Road Main Replacement

This project involved the replacement of various mains and services to enhance the resiliency and reliability of the Coastal North Region, as well as address pressure and flow challenges experienced in the Borough of Rumson in the past. The Company had an opportunity to complete the project in conjunction with Monmouth County, Rumson and Fair Haven as they were executing a repaving project along River Road extending a total length of approximately 2.5 miles. Within these 2.5 miles, there was an 18-inch cast iron water main estimated to be 115 years old, which was heavily tuberculated, causing water quality issues as well as reduced structural integrity. In addition, approximately 36 side street connections were replaced, some of which eliminated dead ends and will improve water quality in the area as a result. During the project, the Company also replaced approximately 300 water services, including fire services and domestic services ranging in sizes between ¾- and 6-inch. Three water crossings were also replaced. The 18-inch cast iron main was replaced with a 16-inch ductile iron pipe (“DIP”) at a total length of 14,500 feet.

Clark Cleaning and Lining

This project consisted of the cleaning and lining of approximately 16,029 linear feet (“LF”) of 6-inch cast iron pipe (“CIP”) with Warren Epoxy 301-01 and included 12 valve replacements and 18 fire hydrant replacements. It also included the installation of approximately 200 LF of 6-inch DIP in various locations to loop and tie-in water mains for improved flow and pressure. In addition to asset

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1 replacement, this project also improves water quality by remediating discolored
2 water issues and enhances reliability and operational efficiency by improving fire
3 flows and reducing operating pressures.

4 Canal Road Flocculation and Sedimentation Basins 1-2 Upgrades

5 The scope of this project is to replace both the flocculation equipment and sludge
6 collection systems in basins 1&2 at the Canal Road Water Treatment Plant. In
7 addition, a Morton-style building will be erected to cover the flocculation basins to
8 aid in freeze reduction of the gear drives during winter months. As such, in
9 addition to asset replacement, this project can also be considered within the
10 reliability category.

11 Diamond Hill Booster Upgrade.

12 The Diamond Hill booster station is a critical facility that is utilized year-round and
13 transfers an average of 4-10 MGD of water supply from the Raritan to the Passaic
14 systems. The existing electrical, mechanical (pumping) and HVAC systems are
15 aging and in need of replacement. In addition, there are potential hydraulic surge
16 issues that could result in water hammer issues along the supply pipeline to the
17 station (which is prestressed concrete cylinder pipe – a material that has a history
18 of failures), which could result in the loss of the station and adversely impact
19 service to customers. Accordingly, this project includes the replacement of all four
20 pumps, motor controls, main transformer and substation, HVAC, and hydraulic
21 surge control mechanical improvements. In addition, the existing emergency

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1 generator diesel storage tank will also be replaced to enhance reliability and
2 resiliency.

3 Roberts Road Booster Station Electric and Generator Upgrades

4 The Roberts Road booster pump station is a critical facility built over 30 years ago
5 with emergency power and equipment at the end of its useful life that is required to
6 run continuously to keep up with demand in the peak summer months. This facility
7 has required frequent repairs, which can be costly and time consuming as certain
8 replacement parts are no longer available. In addition, power outages are frequent
9 in the area and can last several days at a time, which can result in significant service
10 disruptions. As such, this project, which includes the installation of a backup
11 generator with an automatic transfer switch (“ATS”), removal of an existing natural
12 gas drive from pump #2, removal of an existing natural gas generator used for lights
13 and ancillary equipment, both the replacement of existing variable frequency drives
14 (“VFD”) and installation of new VFDs for all pumps, and replacement of pump
15 motors, improves reliability of the station and the system.

16 **26. Q. Please describe the Company’s operational efficiency investments in more**
17 **detail.**

18 A. Targeted capital investment can improve operational efficiency which can
19 decrease, or mitigate increases to, O&M expenses. For example, NJAWC routinely
20 seeks opportunities for energy use reduction when evaluating equipment
21 rehabilitation and replacement needs to continue to support the provision of reliable
22 service. While the primary focus is on pumps and motors, alternative energy

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1 production is also considered, as these technologies are becoming more cost-
2 effective, especially where incentives are available. NJAWC also has identified
3 advanced leak detection methods that can more efficiently identify and address
4 leakage. Reducing water loss has the attendant benefit of reducing the costs
5 associated with producing and pumping the non-revenue water over time. These
6 types of projects, along with technology solutions that improve worker
7 productivity, streamline the customer experience, or improve overall system
8 efficiency to help keep our costs down.

9 Some examples of operational efficiency projects included on Schedule DCS-1
10 follow:

11 Canal Road Water Treatment Plant (“WTP”) Solar Array

12 This project involves the installation of 7.2 megawatt (“MW”) direct current (“dc”)
13 net metered solar array consisting of a roof mount, ground mount and car port type
14 components at the Canal Road WTP that will allow the Company to offset grid
15 energy and enhance reliability at the WTP. The installation of the solar array will
16 be done as a Power Purchase Agreement (“PPA”) with a solar developer. NJAWC
17 has entered a 15-year PPA agreement with the developer which would satisfy over
18 25% of the Canal Road WTPs current electric usage. NJAWC will not own the
19 array but will purchase the electricity from the solar developer for an agreed upon
20 price of \$ 0.0675 per kilowatt-hour (“kWh”).
21

NEW JERSEY-AMERICAN WATER COMPANY, INC.1 Canoe Brook Solar Expansion

2 The Canoe Brook solar expansion will also allow the Company to offset grid energy
3 and enhance reliability at the Canoe Brook WTP. It involves the installation of an
4 8.5 MW dc net metered solar array floating on the Canoe Brook Reservoir #1.
5 NJAWC has entered into a 15-year PPA agreement with the developer which would
6 satisfy 80% - 90% of the Canoe Brook WTP's current electric usage. NJAWC will
7 not own the array but will purchase the electricity from the solar developer for an
8 agreed upon price of \$ 0.0675 per kWh.

9 Like the Canal Road WTP solar array, this net-metered solar project will help the
10 Company reduce its carbon footprint while mitigating costs through the use of a
11 PPA that requires most of the capital outlay and all of maintenance of the solar
12 array to be done by the solar developer. These projects demonstrate the Company's
13 commitment to mitigating costs, increasing reliability and contributing to the state's
14 renewable energy goals.³

15 Phase 4 NRW 2021

16 This project is one of several phases that helps the Company reduce non-revenue
17 water ("NRW") losses with the installation of permanent acoustic monitoring
18 devices. Previous phases of NRW projects have provided for the installation of
19 about 3,700 devices in the Company's North operating area. This project involved

³ The State of New Jersey released the Draft 2019 Energy Master Plan "EMP"), which provides an initial blueprint for the total conversion of New Jersey's energy profile to 100 percent clean energy by 2050. The plan defines clean energy as carbon neutral electricity generation and maximum electrification of the transportation and building sectors to meet or exceed the Global Warming Response Act greenhouse emissions reductions of 80 percent relative to 2006 levels by 2050.

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1 the installation and management of 837 hydrant mounted permanent acoustic
2 monitoring devices (EchoShore DX) for the balance of the North operating area.

3 The 2021 phase included coverage for Millburn/Short Hills and Springfield.

4 North West Orange EchoShore DX Upgrade 2021.

5 This project included the replacement and upgrade of approximately 951
6 EchoShore DX advanced metering infrastructure (“AMI”) fixed nodes nearing the
7 end of the useful life to cellular nodes. Upgrade and continued EchoShore DX
8 coverage in West Orange is critical to the progress that has been made in the North
9 operating area regarding NRW reduction.

10 EchoShore DX Central Region 2021-2022

11 This project includes the purchase, installation, and management of EchoShore DX
12 devices for the Central operating area. The 2021 phase includes coverage for Green
13 Brook, Princeton, North Plainfield, Middlesex, and portions of Bridgewater, as well
14 as replacement of devices in Frenchtown. The 2022 phase will include Linden and
15 North Plainfield.

16 **27. Q. Please describe the Company’s water quality investments in more detail.**

17 A. NJAWC is committed to maintaining compliance with existing drinking water
18 standards and works hard to identify and address potential water quality issues
19 before they become MCL exceedances. Water quality projects are considered
20 high priority as they are related to public health protection of our customers.

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1 As described elsewhere in my testimony, the USEPA's LT2 Rule requires drinking
2 water utilities to monitor source water supplies for the presence of cryptosporidium.
3 NJAWC has found this pathogen to be present in the source water supplies for the
4 Raritan Millstone WTP at levels that necessitate steps be taken to provide additional
5 protection against cryptosporidium under the LT2 Rule. Upgraded filtration
6 facilities have been constructed and placed into service at the WTP and are listed
7 in Schedule DCS-1. Additional capital projects related to LT2 Rule compliance, or
8 any other applicable environmental regulation, are also included to ensure any
9 compliance deadlines are met.

10 Over the past few years, there has been an increasing concern regarding the
11 presence of compounds of emerging concern ("CECs") such as per- and
12 polyfluoroalkyl substances ("PFAS") and 1,4-dioxane in drinking water supplies.
13 Recent advances in analytical methods have revealed the presence of CECs in some
14 drinking water supplies at previously undetectable parts-per-trillion ("ppt") levels.
15 Research is ongoing, but some scientific studies have identified potential health
16 concerns for a number of these compounds even at the low ppt levels. As a result,
17 USEPA has established health advisory levels ("HALs") for some PFAS and other
18 CECs and has begun the process to establish MCLs for PFOA and PFOS. Also, as
19 described elsewhere in my testimony, the State of New Jersey has established
20 MCLs for some CECs, most recently PFAS and PFOA,⁴ in advance of USEPA

⁴ On April 1, 2019, NJDEP proposed new MCLs for PFOA (14ng/l) and PFOS (13ng/l) (aka PFAS) that were adopted on June 1, 2020.

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1 establishing federal limits. The Company has completed or is in the process of
2 completing several projects to meet both existing and proposed state MCLs.

3 Some examples of water quality projects included on Schedule DCS-1 follow:

4 Baltusrol Station PFAS System

5 This project, which addressed PFOA removal and included infrastructure renewal
6 and reliability, included design, construction and commissioning a new 2 MGD
7 PFAS treatment system addition to the existing Baltusrol well facility, including a
8 new pre-filtration system as well as other required process, mechanical, electrical,
9 HVAC, instrumentation and control, and SCADA work. Prior to the final adoption
10 of the PFOA and PFOS MCLs, the levels at the Baltusrol well facility influent
11 ranged from 14.4-19.3 ng/l for PFOA and 5.6 ng/l for PFOS. Thus, the PFAS
12 treatment system was installed to continue operations at the Baltusrol well facility.
13 Finished, treated water sent to the distribution system meets all required standards.

14 Delaware River Regional WTP (“Delran WTP”) Treatment Improvements

15 The improvements at the Delran WTP include belt filter press (“BFP”)
16 replacement, ferric storage and feed system replacement, and the addition of a
17 hydrogen peroxide storage and feed system for treatment of the emerging
18 compound – 1,4-dioxane. The Delran WTP utilizes three (3) Komline-Sanderson
19 BFPs for dewatering water treatment process residuals. The presses were installed
20 at the time of construction of the plant in 1994, are at the end of their useful life and
21 cannot keep up with treating WTP residuals. This project will replace the existing

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1 BFPs and associated appurtenances with three (3) centrifuges dewatering units and
2 three (3) sludge feed pumps, including VFDs and flow meters.

3 Replacement of the ferric storage and feed system will enhance reliability of this
4 portion of the chemical feed system that recent inspections indicate is at the end of
5 its useful life. The addition of hydrogen peroxide is a new treatment process that is
6 proposed to treat 1,4-dioxane which has been detected in raw water quality
7 sampling.

8 1,4-dioxane is a persistent synthetic industrial chemical that is completely
9 immiscible in water. The NJDEP has adopted a limit of 0.4 µg/L for 1,4-dioxane
10 in their Interim Ground Water Standards. In September 2020, the New Jersey
11 Drinking Water Quality Institute (“DWQI”) proposed a MCL of 0.33 µg/L to the
12 NJDEP, which is expected to be promulgated in 2022. While ozonation has been
13 effective in reducing 1,4-dioxane concentrations at the Delran WTP, as the
14 concentrations in the source rise, so do the levels in the plant effluent. This project
15 will add hydrogen peroxide to existing ozone contactors to form powerful oxidizing
16 hydroxyl radicals to oxidize and degrade 1,4-dioxane. In general, the major
17 improvements involve modifying existing rooms and creating new rooms within
18 the WTP to accommodate the new treatment process and installing hydrogen
19 peroxide storage and feed equipment along with new feed piping and accessories
20 from the hydrogen peroxide feed pumps to the application points, providing new
21 control systems and making electrical upgrades to support all equipment, lighting,
22 and ventilation for the hydrogen peroxide room.

NEW JERSEY-AMERICAN WATER COMPANY, INC.Pottersville Well-Gas Membrane

The Pottersville well station, located in the Pottersville gradient in Tewksbury Township, was removed from service due to elevated radon levels. Demand in the Pottersville gradient warrants consideration of rehabilitation and treatment of this facility. NJAWC performed pump tests which revealed the presence of toluene, iron, lead, and zinc, though these were likely due to the pumping equipment, a conclusion supported by water quality data from when the well was last operational. The well, currently listed in a Water Use Registration permit, has a rated production capacity of 0.1 MGD or 69 GPM. After evaluating the feasibility of rehabilitation and different treatment technologies for radon removal, the Company determined that installation of a trailer mounted gas membrane treatment system was the appropriate option to bring the well station back to service.

Oxford Well Station ("OWS") Treatment Upgrades

The OWS treats water from two wells for VOC removal with GAC adsorption and sodium hypochlorite is added for disinfection. Low levels of trichloroethene ("TCE") are treated with a temporary treatment system consisting of seven (7) GAC contactors. As part of its permit renewal process, NJDEP required that the temporary GAC units be replaced with a permanent treatment solution. In addition to the VOC removal, 1,4-dioxane has also been detected at the wells. Because these wells are the primary source of water for Oxford customers, the Company plans to install a new treatment system designed to address VOCs and 1,4-dioxane in

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1 addition to TCEs. The system includes AIX and peroxide for advanced oxidation
2 for 1,4-dioxane removal while also removing the VOC's in the raw water.

3 Kent Avenue Well 1 Arsenic Removal

4 Kent Avenue Well Station has been using Isolux arsenic adsorption system to
5 remove arsenic from local groundwater supply. The existing treatment vessel is
6 undersized and has had significant clogging concerns when pumped at the well's
7 rated capacity. This project includes replacing the Isolux treatment system with an
8 AdEdge Water Technologies arsenic adsorption system, which is more cost
9 effective.

10 **28. Q. Please describe the Company's resiliency and reliability investments in more**
11 **detail.**

12 A. The increasing frequency of extreme weather events and other natural disasters as
13 magnified by climate variability has significantly challenged NJAWC's
14 infrastructure. Water and wastewater systems have been traditionally designed and
15 maintained to provide reliable service under standard design conditions (e.g., 1-in-
16 50 year drought, 1-in-100 year flood, etc.). Such standards, however, are based on
17 historic climate patterns that may no longer be typical. Systems may be expected
18 to cope with more extreme and frequent droughts, floods, power outages, and
19 storms that may impact service. In addition, other man-made events such as source
20 water contamination, and accidental or purposeful damage to facilities may result
21 in significant impacts on customer service and asset integrity.

22

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1 For NJAWC's most critical assets, defined as those with the highest consequence
2 of failure, capital investments to further "harden" systems against identified natural
3 threats are prioritized for implementation. Non-capital solutions are also part of the
4 solutions toolkit to provide more system resiliency in mitigating such risks, such as
5 more robust emergency response plans ("ERPs"), drought management plans,
6 condition-based and/or reliability-centered maintenance, and other operations plans
7 and asset management strategies that enable better preparedness and ultimately
8 more assurance that reliable service can be maintained.

9 In October 2018, Congress passed AWIA, which includes revisions to the Safe
10 Drinking Water Act ("SDWA") that require all water systems serving populations
11 greater than 3,300 people to complete Risk & Resiliency Assessments ("RRAs")
12 and update their ERPs over a three-year period. NJAWC has completed RRA's for
13 affected systems in accordance with compliance deadlines. Capital improvements
14 identified through this process aimed at reducing risk and improving system
15 resiliency are considered for incorporation into the Company's capital plan.

16 Some examples of resiliency and reliability projects included on Schedule DCS-1
17 follow:

18 Phase 2 of Howell-to-Lakewood Transmission Main Project

19 The Howell to Lakewood Transmission Main Project was identified as an important
20 project to provide an additional water supply to both Howell and Lakewood
21 Townships and provide increased flows and reliability to the growing Ocean
22 County area. The Company estimated through its CPS process that demands would

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1 increase from 8.3 MGD to 15 MGD by 2030. This pipeline supports the potential
2 transfer of 6 MGD surplus water from the Howell Township area to the Lakewood
3 Township area. The Phase 1 Lakewood to Howell Transmission Main Project was
4 completed in 2017. The Lakewood to Howell Transmission Main Project Phase 2
5 project route included approximately 11,500 LF of 36-inch DIP main, 2,500 LF of
6 36-inch high density polyethylene (“HDPE”) directional drill and a 335 LF of 36-
7 inch ductile-iron cement lined (“DICL”) pipe for the micro-tunnel crossing of
8 Route 195. There is also a segment of pipeline to eliminate dead-end piping within
9 the distribution system, which also enhances water quality in the area. This part of
10 the project consisted of approximately 6,700 LF of 16-inch DICL pipe and fittings.

Bridgeport-Logan Systems Consolidation Main

11 This project provides for increased flows and reliability after decommissioning of
12 the Bridgeport groundwater station and tank for both PFAS and storage tank
13 structural integrity issues. With the removal of the tank from the system, as well
14 as the loss of supply from the well station decommissioning, available fire flows in
15 the area have been reduced. In order to increase reliability of the system and
16 increase fire flows, this project involved the connection of the Bridgeport system
17 to the Logan system via a new 12-inch transmission main installed along the
18 Southbound side of Route 130, from High Hill Road to Island Avenue, and
19 installation of a new interconnect chamber with a motorized valve, pressure
20 reducing valve (“PRV”), and flow meter.
21
22

NEW JERSEY-AMERICAN WATER COMPANY, INC.1 Coles Ave Booster Replacement

2 The Coles Ave booster pump station (“BPS”) was built in 1969 and supplies the
3 Prospect Avenue gradient with approximately 290 customers. The Coles Ave BPS
4 is located in an old below-grade vault within the Coles Avenue roadway right of
5 way. The pumps are subjected to undue wear due to the damp environment and
6 poor structure of the vault and the facility has reached the end of its useful life. This
7 project includes the replacement of the existing Coles Ave BPS with a new above
8 ground BPS building located adjacent to our Coles Ave standpipe within our
9 easement from Union County on the Watchung Reservation. Not only will this
10 project improve reliability, but it will also improve safety for our employees and
11 our customers by moving it above ground and out of the roadway.

12 Raritan Millstone WTP Ammonia Handling Facility Improvements

13 This project includes design and construction of a new aqua ammonia handling
14 facility to replace the existing anhydrous ammonia handling system at the RMWTP.
15 The existing anhydrous (gas) ammonia handling has been in use for many decades
16 at the RMWTP and is at the end of its useful life. In addition, the use of ammonia
17 gas presents a safety concern and replacement of the system with a suitable, less
18 hazardous alternative would prevent the negative impacts of an accidental release
19 and mitigate safety concerns. The 2017 CPS recommended replacement of the
20 anhydrous system with a 19% ammonium hydroxide (aqua ammonia) system which
21 is less hazardous. A new ammonia building will be constructed on the north side of
22 the filter building and will house two bulk storage tanks, a day tank, transfer pumps,

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1 and feed pumps. Double walled containment piping will be used between the
2 ammonia building and the five feed points, and safety eyewash/showers, SCADA,
3 fire suppression, fire alarm, security and other ancillary work is included in the
4 project. The anhydrous ammonia system will be demolished and retired after the
5 new system has been placed in operation.

6 Jerusalem Rd Booster Station Improvements –

7 This project includes design and construction work to replace the existing below
8 grade Jerusalem Road pump 1 and 2 booster station with a new above grade booster
9 station building with individual mechanical and electrical rooms. The existing
10 booster station has reached the end of its useful life and is in poor condition, with
11 the pumps and electrical equipment requiring upgrades. Servicing this facility also
12 presents a safety hazard, as pumps 1 and 2 are in an underground vault (confined
13 space entry). Improvements are needed for safe and continued operation of the
14 booster station. Targeted piping replacement is also needed at the station to improve
15 hydraulic conveyance. The new booster station will include two 1,500 gpm vertical
16 turbine pumps equipped with VFD's and an emergency backup generator. The new
17 pumps will be installed along with new 16-inch suction and discharge piping.
18 Electrical upgrades to site power and SCADA control functionality will also be
19 included. In addition, a motor-operated control valve MOV (altitude valve) is to be
20 installed for the storage tank.

21

NEW JERSEY-AMERICAN WATER COMPANY, INC.1 Canal Road WTP Ozone Conversion to Liquid Oxygen ("LOx")

2 The existing ozone system was installed during initial plant construction nearly 30
3 years ago. As the system has reached the end of its useful life, maintenance is
4 becoming increasingly challenging; replacement parts are expensive and difficult
5 to find as some of the equipment manufacturers are no longer in business. This
6 project includes design and construction to upgrade the ozone system at Canal Road
7 WTP from an ambient air-fed system to a LOx-fed system. Upgrades will include
8 replacement of three ozone generators, cooling skids, PSUs, ozone destructors,
9 removal of all existing air-prep equipment, and installation of two LOx storage
10 tanks, vaporizers, pressure relief/control valves, and a nitrogen injection system.
11 The LOx-fed ozone generators are smaller and more energy-efficient when
12 compared to the existing air-fed ozone generators. The use of a pure oxygen source
13 for ozone generation allows for the more efficient operation of both the ozone
14 generators as well as other downstream processes.

15 Mill Road Groundwater Supply Station Iron & Manganese Removal

16 In the past, this station has experienced higher levels of iron and manganese. While
17 iron and manganese are secondary drinking water standards, at current levels they
18 do contribute to pipeline clogging (MN deposition within the pipe) as well as
19 deterioration of customer appliances and fixtures from both clogging (MN) and
20 discoloration and staining. These issues can lead to customer complaints and
21 excessive flushing/maintenance. This project provides treatment to address the
22 high levels of iron and manganese detected in the water leaving this facility.

NEW JERSEY-AMERICAN WATER COMPANY, INC.Kent Ave Back-up Well

NJAWC provides water service to customers in the Hunterdon County community of Frenchtown. Source of supply for Frenchtown is derived from four open-hole bedrock wells. The yield capacities of two of the wells tested to be lower than their allocated capacity and improvements to these wells may not be feasible or only result in nominal gain. Consequently, firm capacity supply reserve within the Frenchtown system is limited and failure of any of the wells may result in loss of service to customers. The project includes work to drill a new well near Kent Avenue Well #1 with a pumping capacity of 130 GPM with the intention of increasing firm capacity within Frenchtown system.

29. Q. Please describe the Company's administrative and facilities investments in more detail.

A. While the above categories are broad and generally encompass nearly all projects within the Company's capital program, there are certain projects that may fall into the facilities category. This category can contain elements of each area above. For instance, older facilities may lack important security features, may have inadequate ingress or egress, or may have substandard fire detection and suppression systems. Mechanical and electrical systems may be old and inefficient resulting in higher electric and gas expense charges. And in some cases, the facilities are simply inadequate to handle the materials and equipment necessary to manage the required repairs and replacements for the level of service that customers expect and deserve. Lack of adequate storage space for materials and equipment is often a key driver

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1 for facility improvements. Projects for facility upgrades also include investments
2 in employee offices, restrooms, lockers and other support facilities. These are key
3 investments in infrastructure necessary to attract and retain an engaged workforce.

4 Some examples of administrative and facilities projects included on Schedule
5 DCS-1 follow:

6 Raritan Millstone WTP Flood Risk Reduction Phase 1

7 This is the first part of a multiphase project to address potential buoyancy/uplift
8 impacts on structures resulting from the increased flood stage level of the new flood
9 wall/levee design elevation of 48 feet. A report entitled “RMWTP Buoyancy Study
10 for Flood Risk Reduction Improvements” identified several vulnerable structures
11 (e.g., High-Lift Pumping Station at Filters #13-19 and Filters 19-24, Diesel High-
12 Lift Pumping Station, Summer Filters #31-36, and the Electric High-Lift Pumping
13 Station) that need to be addressed. The work in this phase includes the design and
14 implementation of a wall strengthening system for the pipe gallery under Filters 7-
15 12 as well as the design and implementation of a wall strengthening system for the
16 overflow chamber at the Electric High Lift Pumping Station. Future phases will
17 address the other locations identified in the report.

18 Belle Mead Training Yard Expansion

19 The scope of this project is to expand the training grounds at Belle Mead Operations
20 Center, used for utility mechanic (“UM”) and field service representative (“FSR”)
21 training. Currently, there is one section of DI pipe exposed above ground used for
22 training purposes. The proposed project will add a second above-ground section of

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1 pipe, two hydrants, three sheds (to simulate customer homes), meter pits, and a
2 covered pavilion for training.

3 Netherwood Office Building Upgrades

4 This project will upgrade the existing facility by enhancing the space with a more
5 functional lay-out that can be used to better accommodate a variety of work groups,
6 including the transmission and distribution (“T&D”) field staff, the production
7 group, the FSRs), and GIS personnel. Facility structures will be rehabilitated and
8 relocated as needed to accommodate the changes. Lighting will also be improved
9 and the antiquated fire alarm system will be upgraded. The upgraded facility will
10 provide a better functioning and safer work space for our employees.

11 Long Hill Wastewater Vector Truck Building

12 This project will house a wastewater vector truck and mobile wastewater camera
13 unit, as well as provide some additional office space for the team supporting the
14 Long Hill Township wastewater system. The truck is a vital piece of equipment for
15 plant and system operations and requires storage in an enclosed heated space to
16 prevent freezing of its water tank and appurtenant lines during winter months. The
17 project includes a new 72ft x 40ft steel framed building (3,000 SF footprint with a
18 1,000 SF mezzanine) being built on a re-purposed portion of an existing abandoned
19 concrete foundation. There will also be second garage bay for equipment storage in
20 addition to locker and laundry rooms, as well as caged storage. In addition,
21 renovations are planned for the existing administration building to allow for
22 additional permanent office space meeting all current ADA requirements.

NEW JERSEY-AMERICAN WATER COMPANY, INC.1 Howell Field Operations Center

2 The Company recently relocated from its facilities in Lakewood to the new site
3 located 149 Yellowbrook Road in Howell Township. The facility had been the site
4 of a construction company for nearly 15 years and was well suited for the
5 Company's operations facilities. The Company has completed work to modify the
6 existing facility including conversion of an existing warehouse to a truck storage
7 and maintenance facility as well as conversion of a workshop to a locker
8 room/ready room facility for field personnel. Significant improvements in site
9 security, lighting, site access/egress (driveways and access roads), and grounds
10 (new site backup/emergency generator) have also been completed under prior
11 phases.

12 This particular phase of the project includes renovations to the existing facilities
13 including the meter shop (testing and maintenance), training room, conference
14 rooms, as well as various electrical improvements in the office building.

15 Southwest Operations Center

16 The Southwest Operations Center involves the design and construction of a new
17 55,000 SF facility to accommodate our T&D Operations staff for the Southwest
18 Operating Area since they have outgrown the existing leased facilities in Delran.
19 The operations center will include offices, conference rooms, training areas, garage
20 bays and a storage yard for equipment. The operations will be more centrally
21 located within the operating area should improve efficiencies associated with travel
22 time between work sites.

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1 **30. Q. Are the projects about which you are testifying in this proceeding necessary**
2 **and prudent in order for the Company to continue to provide safe, adequate**
3 **and reliable utility service?**

4 A. Yes, they are. At the highest level, these projects are necessary to continue to
5 provide safe, adequate and reliable water service in a manner that is in the long-
6 term best interest of our customers. For example, plant improvements designed to
7 meet water quality regulations, will minimize the risk of both Notices of Violation
8 (“NOVs”) and MCL violations. Projects aimed at addressing health and safety risks
9 mitigate potential accidents and improve both employee and customer safety.
10 Projects designed to improve energy efficiency help to achieve the goals of
11 improving operational efficiency and reducing energy usage. Replacement of
12 deteriorated assets can reduce the risk of system outages, which helps promote high
13 customer satisfaction. All of these examples show that prudent capital investment
14 is in the best long-term interest of our customers.

15 **III. WATER STORAGE TANK REINVESTMENT PROGRAM**

16 **31. Q. Please describe the Company’s water storage tank reinvestment program**
17 **(“WSTR”), also referred to as Engineered Coating of Steel Structures.**

18 A. The Company invests millions of dollars each year in its WSTR to extend the
19 service life of these critical distribution system storage assets. NJAWC owns and
20 operates 187 structures to store potable water in distribution systems for fire
21 protection, flow equalization and pressure management as well as management of
22 peak demands. Another 58 process tanks are used at treatment plants to provide

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1 potable water to customers across the state. The integrity of these structures is
2 crucial to helping to protect public health and providing safe, adequate and reliable
3 water service to customers. Investments in these structures include the replacement
4 of corroded steel components, safety and security upgrades, and renewal or
5 replacement of existing paint (coating) systems.

6 The WSTR entails an inspection of the interior and exterior structure of the tank, a
7 prioritization program to define an annual program, bidding the work to qualified
8 licensed contractors, awarding contracts and scheduling the work, releasing the
9 tank to the contractor for the replacement of corroded steel components, the
10 installation of new safety and security upgrades, and the coating reinvestment work,
11 followed by disinfecting the tank and returning the tank to service.

12 **32. Q. Please describe the service life considerations for water storage tanks in**
13 **distribution systems.**

14 A. Water storage tanks are generally constructed of steel or concrete, and can be
15 configured as ground level storage tanks, elevated tanks or standpipes. Material of
16 construction and type of tank are dictated by service requirements and cost. Of
17 NJAWC's tank inventory of 245 tanks, 207 are steel and 38 are concrete. If properly
18 designed, constructed and maintained, these tanks can be expected to have service
19 lives of numerous decades despite exposure to harsh environmental conditions. A
20 majority of these tanks are located outside and are exposed to a wide range of air
21 temperature, humidity, water temperatures, wind loading, and seasonal weather
22 conditions. Steel tanks need to be protected from exterior corrosion that can result

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1 from the harsh outdoor environment and interior corrosion that can result from the
2 effects of chlorinated water. This is especially true for coastal areas where salt air
3 is highly corrosive to steel surfaces. In general, minor corrosion spots can be
4 repaired; however, significant corrosion, if left unattended, can lead to structural
5 damage and poor aesthetic conditions. In addition, this corrosion could potentially
6 result in a breach of the tank, which could lead to contamination of the tank contents
7 from infiltration or worse, tank structural failure. Proper inspection, ongoing
8 routine care to address spot corrosion, and major recoating projects can therefore
9 extend the service life of steel tanks. Concrete tanks are generally more costly to
10 construct than steel but do not require the same level of exterior reconditioning.

11 **33. Q. Please describe the importance of the WSTR.**

12 A. Steel tanks require occasional, but significant investment in the coating system.
13 NJAWC utilizes a high-performance engineered coating system on both interior
14 and exterior surfaces of tanks. The service life of the interior and exterior coatings
15 varies depending upon several conditions, but typical high-performance coatings
16 can last up to about 20 years. Installation of new coating systems on existing tanks
17 typically requires removal of existing coatings to bare metal through abrasive
18 blasting and then installation of a new, engineered, three-coat system that will coat
19 the structural metal and extend its useful life significantly. Containment systems
20 are often used to control dust and overspray during blasting and coating
21 installations. Some existing steel structures may have previously been coated with
22 lead-based paint systems. Under those circumstances, the project activities are

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1 supplemented with lead abatement efforts to contain, collect, and properly dispose
2 of possible lead-based residuals and other efforts to help protect workers and the
3 environment.

4 **34. Q. What annual amount is the Company requesting for annual tank**
5 **rehabilitation?**

6 A. The Company estimates its annual rehabilitation costs to be \$6.9 million.

7 **35. Q. What factors are taken into consideration when determining this cost?**

8 A. The detailed tank inspections and subsequent report and recommendations will
9 weigh heavily in determining the actual tank rehabilitation needs and priorities.
10 Further, the various geographical differences in tank location, *i.e.*, tanks located
11 along the coastal regions may have a decreased coating life compared to a tank in
12 more remote wooded regions in the central part of the state.

13 **36. Q. Does the Company complete inspections and development of detailed plans**
14 **and specifications for the WSTR work on an annual basis?**

15 A. Yes, the Company performs inspections and has detailed plans and specifications
16 prepared for the work identified in the inspections every year. It is the foundation
17 for the tank rehabilitation program.

18 **IV. THE RISKS OF FURNISHING WATER AND WASTEWATER SERVICES**

19 **A. Public Water Service**

20 **37. Q. Please provide an overview of the risks associated with furnishing safe and**
21 **adequate water quantity and water quality and complying with drinking water**

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1 **and environmental regulations that apply to NJAWC's water supply facilities**
2 **and operations.**

3 A. Water supply utilities are subject to a complex array of regulations at the federal,
4 state and local levels with respect to water quantity, water quality and other
5 environmental aspects of their facilities and operations. NJAWC's surface water
6 and groundwater sources are subject to run off from upstream sources that can lead
7 to possible contamination and resulting treatment challenges such as
8 cryptosporidium, PFAS, or an unexpected chemical release upstream. These
9 episodic challenges will continue to face the Company, all while needing to meet
10 the everyday requirements imposed by programs administered by the NJDEP.

11 Drinking water quality is addressed by a combination of federal regulations
12 established under the SDWA coupled with state regulations and enforcement. The
13 federal act established the USEPA as the federal regulatory authority on drinking
14 water. Under that authority, USEPA has created standards for contaminant levels
15 in drinking water and a series of mandatory treatment method standards, coupled
16 with monitoring and reporting requirements, and public notification mandates in
17 the event of contaminant level or treatment method noncompliance. The USEPA
18 has granted primacy to the NJDEP, which administers the federal regulatory
19 standards. In recent years there has been an increase in public concern over water
20 quality standards and regulation. This increase has led to growth and increased
21 stringency in USEPA and state drinking water research and regulation.

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1 The following is a brief summary of some of the key risk issues associated with
2 current and prospective regulation of water quantity, quality and other
3 environmental aspects of water supply system operations:

4 In addition to existing rules such as the Long Term 2 Enhanced Surface Water
5 Treatment Rule (“LT2ESWTR”) and Stage 2 Disinfectants and Disinfection
6 Byproducts Rule (“Stage 2 DBPR”) that continue to evolve, the Third Unregulated
7 Contaminant Monitoring Rule (“UCMR 3”) is a rule published by the USEPA in
8 2012 that assesses the prevalence in water supplies of certain contaminants not
9 currently regulated under the SDWA. Certain contaminants have received
10 particular scrutiny under UCMR 3. These include perfluorooctanoic acid
11 (“PFOA”), 1,4-dioxane, and hexavalent chromium (chromium (VI)). PFOA is a
12 perfluorinated compound (“PFC”), a manmade chemical used in a variety of
13 consumer products. PFOA is prevalent in New Jersey, particularly in groundwater
14 sources that have a history of contamination from other VOCs. Previous studies
15 have documented developmental effects from PFOA including liver toxicity,
16 kidney toxicity, immune effects, and cancer. Since the UCMR 3 rule requirement,
17 the NJDEP has enacted MCL levels for PNFA, PFOA, PFOS⁵, at the following
18 limits:

- 19 • PFOA: 14 ng/L, or 0.014 µg/L
- 20 • PFNA: 13 ng/L, or 0.014 µg/L
- 21 • PFOS: 13 ng/L, or 0.014 µg/L

⁵ https://www.nj.gov/dep/newsrel/2020/20_0025.htm

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1 Prior to this regulation, PFOA had a health reference level established by the New
2 Jersey Drinking Water Quality Institute (“NJDWQI”) of 40 ng/L. PFOA has been
3 detected in many system wells above the concentration of the NJDEP MCL. Several
4 wells in the Central Region had been found to have elevated levels of PFOA,
5 including: Charles St, Quinton Ave, Green Brook, Rock Ave Piscataway, Clinton
6 Ave, Netherwood, Hummocks, and Springfield.

7 This NJDEP MCL promulgation for PFOA has had a significant impact on the
8 groundwater supply of NJAWC’s systems. Regulation requires discontinued use of
9 affected wells or installation of treatment systems. Since the implementation of the
10 new limits, NJAWC has discontinued use of PFOA impacted wells at Greenbrook
11 Station, Charles Street Station, Quinton Ave. Station, Rock Avenue Station and
12 Clinton Avenue Station. Many of these stations were repurposed to act as boosters
13 to move surface water into the associated pressure gradients. The Company has
14 mitigated the risks of a system supply deficit which could compromise system
15 integrity if not addressed through its proactive efforts to discontinue the use of
16 certain wells and/or install effective treatment at others. Supply, capacity and
17 distribution system improvements were completed in order to comply with the
18 regulation and to ensure adequate levels of service are provided. As described
19 within my testimony, there are several projects that the Company has completed or
20 will complete that address the PFOA (and broader PFAS) issues throughout the
21 state. Recent completions include Baltusrol Station, Short Hills Station as well as

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1 Springfield Station and Hummocks Station. Treatment for the Netherwood Station
2 is planned and construction expected to start in 2022.⁶

3 Regarding 1,4-dioxane, the state of New Jersey is investigating the regulation of
4 this compound through the Drinking Water Quality institute. Recently the DWQI
5 recommended to the NJDEP that a MCL of 0.33 parts per billion (“ppb”) be
6 approved by the NJDEP for implementation. During this time, NJAWC has actively
7 participated in monitoring both surface water and groundwater systems for 1,4-
8 dioxane. Advanced Oxidation treatment using peroxide and ultraviolet light is in
9 place at the Hummocks station (which also has PFAS removal equipment).
10 Additionally, as indicated elsewhere in my testimony, the Company is installing
11 treatment for 1,4-dioxane at the Delran WTP, in response to increased levels in the
12 Delaware River.⁷

13 As the result of conditions that arose in Flint, Michigan and other jurisdictions
14 across the country, including Newark, increased scrutiny is being placed at all
15 levels concerning lead concentrations in water systems and the adoption⁸ of more
16 stringent requirements under the federal Lead and Copper Rule. The lead issue
17 typically arises not from constituents in source water, but rather from the leaching
18 of lead from older pipes and joints into the water as it passes through household
19 service lines and plumbing. While providing centralized treatment that adjusts the

⁶ In the interim, these wells are not in use. Supply from the Raritan Millstone and Canal Road WTPs is available to serve customers in the region. This station is one of several groundwater stations used for resiliency in Central Region.

⁷ <https://www.nj.gov/dep/14-dioxane/>

⁸ <https://www.epa.gov/newsreleases/epa-announces-intent-strengthen-lead-and-copper-regulations-support-proactive-lead>

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1 pH can, in many cases, help minimize lead corrosion, the fact is that the plumbing
2 in many older communities (including those in NJAWC's service territory) are
3 older lead pipes or contain the type of copper and galvanized pipes with solder
4 joints where lead contamination is an increased risk.

5 The USEPA recently issued and formally adopted Long Term Revisions to the Lead
6 and Copper Rule ("LCR" or "Rule"). Generally, the revisions center around
7 providing for a more protective and enforceable health standard. Key areas that the
8 revised Rule covers include more robust inventory management, strengthened
9 corrosion control, treatment, increased sampling, and improved risk
10 communication. The Rule as promulgated will impose significant additional capital
11 investment requirements and increased operating expenses on all water systems. In
12 addition, the New Jersey legislature has supplemented USEPA's recommendations
13 with legislation (A5343/SS3398) that provides for more stringent inventory and
14 lead line replacement requirements than the revised LCR ("NJ LSL Legislation").⁹

15 Most details of the changes to the Rule, as supplemented by the NJ LSL Legislation,
16 include the following:

- 17 1. Identifying areas most impacted: this will require a lead line inventory for the
18 first time, due in 2024. The NJ LSL Legislation requires a first inventory in
19 January 2022.

⁹ See [https://www.asdwa.org/2021/07/26/nj-governor-signs-law-requiring-all-lead-service-lines-to-be-replaced-in-10-years/#:~:text=10%20Years%20%2D%20ASDWA-.NJ%20Governor%20Signs%20Law%20Requiring%20All%20Lead%20Service,be%20Replaced%20in%2010%20Years&text=Last%20Thursday%20\(7%2F22\),service%20lines%20within%2010%20years;](https://www.asdwa.org/2021/07/26/nj-governor-signs-law-requiring-all-lead-service-lines-to-be-replaced-in-10-years/#:~:text=10%20Years%20%2D%20ASDWA-.NJ%20Governor%20Signs%20Law%20Requiring%20All%20Lead%20Service,be%20Replaced%20in%2010%20Years&text=Last%20Thursday%20(7%2F22),service%20lines%20within%2010%20years;) see also <https://nj.gov/governor/news/news/562021/approved/20210722a.shtml>

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- 1 2. Strengthening Treatment Requirements: a new trigger limit of 10 ppb; systems
2 that currently provide for corrosion control treatment, such as certain NJAWC
3 systems, would be required to optimize the existing treatment scheme. Systems
4 that do not practice corrosion control would be required to complete a corrosion
5 control study.
- 6 3. Replacing Lead Service Lines: The 10 ppb trigger would require the utility to
7 work with the state to set an annual goal of lead service line replacement so that
8 a level below the 10 ppb trigger could be achieved. Also, partial lead service
9 line replacements would not be allowed under the proposed Rule. The NJ LSL
10 Legislation requires all lead service lines to be removed within 10 years,
11 including galvanized lines.
- 12 4. Increased Sampling Reliability: a new sampling techniques and selection
13 criteria to ensure the most at-risk communities receive the greatest sampling
14 efforts.
- 15 5. Improving Risk Communication: 24-hour notification of any action
16 exceedance levels, along with requiring systems to make the lead service line
17 inventory publicly available. There are also additional annual reporting
18 requirements under NJ LSL Legislation.
- 19 6. Protecting Children in Schools: schools are required to sample and test schools
20 and day care facilities in a similar manner to public water systems. The NJ LSL
21 Legislation has additional requirements for schools and other community
22 facilities.

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1 In addition to the items above, NJDEP has shared a few ideas with external
2 stakeholders through various workshops and stakeholder meetings that suggest it is
3 considering changes above and beyond the USEPA revised Rule as published.

4 **38. Q. Are there any additional contaminant testing initiatives from USEPA?**

5 A. Yes, in 2016, the USEPA issued the Fourth Unregulated Contaminant Monitoring
6 Rule (“UCMR 4”), which required monitoring for 30 chemical contaminants¹⁰
7 between 2018 and 2020 using analytical methods developed by the USEPA and
8 consensus organizations to provide a basis for future actions to help protect public
9 health.

10 Following a successful UCMR4 sampling effort, NJAWC has used the resulting
11 data to direct current and future operational mitigations and projects. Specifically,
12 the Company has directed resources and expertise in expanding its utility-owned
13 laboratory cyanotoxin analytical capabilities. Cyanotoxins, especially microcystin,
14 can now be detected at levels far below what was previously possible. Our water
15 quality laboratory staff have trained and supported the efforts of the NJDEP and
16 NJWSA for drinking water reservoir monitoring and management. These
17 capabilities have made proactive WTP and reservoir management programs
18 possible and strengthen the protection of public health for New Jersey drinking
19 water customers. Disinfection byproduct (“DBP”) sampling results have

¹⁰ The 30 chemical contaminants included 10 cyanotoxins (nine cyanotoxins and one cyanotoxin group) and 20 additional contaminants (two metals, eight pesticides plus one pesticide manufacturing byproduct, three brominated haloacetic acid (“HAA”) disinfection byproducts groups, three alcohols, and three semivolatile organic chemicals (“SVOCs”).

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1 highlighted the importance of balancing strong surface water treatment programs,
2 disinfection, and distribution system water quality. Comprehensive programs are
3 in place to manage DBP formation from source water to customer taps.

4 Most recently, the USEPA released the Final Fifth Unregulated Contaminant
5 Monitoring Rule (“UCMR 5”).¹¹ According to the USEPA,

6 UCMR 5 requires sample collection for 30 chemical
7 contaminants between 2023 and 2025 using analytical
8 methods developed by EPA and consensus organizations
9 [].[¹²] This action provides EPA and other interested parties
10 with scientifically valid data on the national occurrence of
11 these contaminants in drinking water. Consistent with EPA’s
12 PFAS Strategic Roadmap, UCMR 5 will provide new data
13 that is critically needed to improve [US]EPA’s
14 understanding of the frequency that 29 PFAS (and lithium)
15 are found in the nation’s drinking water systems and at what
16 levels. This data will ensure science-based decision-making
17 and help prioritize protection of disadvantaged
18 communities.¹³

19 The Company is well prepared to execute this updated sampling plan and, given its
20 track record of implementing solutions for PFAS, plans to engage with USEPA and
21 the NJDEP in helping to provide solutions for providing treatment for these
22 compounds. Given the extensive work done under prior UCMR efforts, the
23 Company expects a significant level of increased operational and capital outlays in
24 future years. In fact, the USEPA has estimated the annual average cost to manage
25 the UCMR5 effort for very large systems to be \$2.2 million.¹⁴ This only includes

¹¹ <https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule>

¹² Planning activities are expected to start in 2022, with final reporting completed in 2026 in accordance with the rule.

¹³ *Id.*

¹⁴ See Federal Register, Vol. 86, No. 245, p. 73135 (Dec. 27, 2021) available at <https://www.govinfo.gov/content/pkg/FR-2021-12-27/pdf/2021-27858.pdf>.

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1 the monitoring and analysis related to the UCMR5 CECs. Should the USEPA or
2 NJDEP decide to implement new MCL's related to any of these compounds, further
3 expenses would be incurred for ongoing monitoring, customer communication, and
4 if needed, capital outlays for system improvements needed to treat for these
5 compounds. As noted by USEPA:

6 The public benefits from the information about whether or
7 not unregulated contaminants are present in their drinking
8 water. If contaminants are not found, consumer confidence
9 in their drinking water should improve. If contaminants are
10 found, related health effects may be avoided when
11 subsequent actions, such as regulations, are implemented,
12 reducing or eliminating those contaminants.¹⁵

13 **B. Public Wastewater Service**

14 **39. Q. Please provide an overview of the risks that environmental regulation poses**
15 **for NJAWC as the owner and operator of public sewer systems.**

16 A. Like the provision of public water supply service, the operation of wastewater
17 collection and treatment systems entails a range of environmental regulatory risks.
18 Sewer operations are also regulated at both the federal and state levels pursuant to
19 a number of statutes and voluminous regulations. At the federal level, sewer
20 systems are regulated pursuant to the Clean Water Act and numerous regulations
21 adopted by the USEPA under that law, which programs are administered by the
22 NJDEP pursuant to regulations adopted in furtherance of setting standards for the
23 construction and operation of sewer treatment systems.

¹⁵ *Id.*

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 The significant risks associated with operating wastewater systems include the
2 following:

3 Effluent limitations imposed on wastewater treatment plant discharges are stringent
4 and can become more stringent over time. The Clean Water Act requires
5 wastewater systems to obtain and comply with National Pollutant Discharge
6 Elimination System (“NPDES”) permits, which, in New Jersey, are issued and
7 enforced by the NJDEP. These NPDES permits establish stringent effluent limits
8 based upon the stricter of: (1) technology-based effluent limits; and (2) water
9 quality based effluent limits.

10 Several NJAWC treatment plants, including the Homestead wastewater treatment
11 plant (“WWTP”) and the Long Hill WWTP face more stringent effluent limits for
12 a series of parameters, particularly lowering ammonia and phosphorous limits due
13 to classification of the receiving stream.

14 More stringent effluent limits may be imposed when technology evolves or stream
15 conditions and discharge requirements change, engendering requirements for
16 significant capital improvements and/or increased operating costs for enhanced
17 treatment performance. Every 3-5 years, NPDES permits are up for renewal, and in
18 any such renewal, more stringent limits may be triggered.

19 Other potential liability risks from wastewater system operations arise from
20 backups, overflows or releases that may occur from the collection system onto
21 private property or into the environment. The Company has deployed level sensing

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 and alarming technology (Telog and SmartCover) which provide effective
2 monitoring for optimized cleaning to help prevent such backups and potential
3 overflows. As an example, some wastewater system operators have been
4 confronted with claims under the federal Comprehensive Environmental Response,
5 Compensation and Liability Act (“CERCLA”) for cleanup of contamination that
6 occurred when wastewater containing “hazardous substances” leaked from
7 wastewater lines into soils or groundwater. While not as extreme, liabilities
8 resulting from wastewater backups into buildings or other unplanned discharges are
9 an inherent part of wastewater system risks.

10 **C. Climate Variability**

11 **40. Q. Does climate variability pose additional risk for water supply utilities such as**
12 **NJAWC?**

13 A. Yes. Whatever the debate may be concerning the causes of climate variability,
14 water supply utilities face the reality of climatic variability and attendant stresses
15 on water resources and system recovery. The recent trend in precipitation
16 throughout Northeastern United States has been towards increases in rainfall
17 intensity and rainfall is also projected to increase in amount and persistence in
18 addition to intensity.¹⁶ That means we can expect more intense high-precipitation
19 events, river and coastal floods, along with high damaging storm events – which

¹⁶ USGCRP, 2018: *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II*, Chapter 18 - Northeast [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 1515 pp. doi: 10.7930/NCA4.2018, available at <https://nca2018.globalchange.gov/chapter/18/>

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1 impact water utilities. In addition, these climate-related disruptions will exacerbate
2 existing aging infrastructure issues experienced by water utilities.¹⁷

3 Recently the remnants of Hurricane Ida devastated much of Central New Jersey.¹⁸

4 The storm claimed five lives and resulted in millions of dollars in property damage.

5 Fortunately, the Company had completed a \$35 million improvement in the

6 RMWTP's floodwall system back in 2018 and as a result of these improvements

7 was able to sustain safe, reliable service throughout the storm event. Additionally,

8 the Company also upgraded its backup generator system that provided

9 uninterrupted power during the event (even though utility side power was

10 interrupted). Had these improvements not been made, hundreds of thousands would

11 have been without safe, reliable water during this event.¹⁹ These investments

12 demonstrated clearly the wisdom and prudence of Company's focus on reducing

13 risk and maintaining safe and reliable service to its customers. Water supply

14 systems are fundamentally resource-dependent and, therefore, the effects of climate

15 variability pose a significant on-going risk and create challenges with regard to

16 maintaining a reliable water supply during the full range of potential future

17 conditions, including even what might be assumed to be "normal" periods. The safe

18 yields of water supply sources have historically been evaluated based on historical

¹⁷ *Id.*

¹⁸ <https://www.tapinto.net/towns/bridgewater-slash-raritan/sections/somerset-county-news/articles/somerset-county-one-of-6-in-new-jersey-named-in-major-disaster-declaration-after-tropical-storm-ida>

¹⁹ https://www.roi-nj.com/2021/09/10/industry/energy-utilities/at-njaw-preparing-for-100-year-floods-that-now-come-every-few-years/?utm_source=ROI-NJ+MAIN+Newsletter+List+%282%2F4%2F19%29&utm_campaign=b8a2a59891-EMAIL_CAMPAIGN_2021_09_09_11_48&utm_medium=email&utm_term=0_6732b2b110-b8a2a59891-44402630

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1 climatic patterns, data from so called “droughts of record” or dry period frequency
2 analysis. Changing climatic conditions, however, suggest that historical hydrologic
3 data (which in many cases only reflect 50-100 years of rainfall and stream flow
4 measurement collection – a quite short period in geologic or climatic time) may not
5 accurately predict future conditions. Thus, the calculated safe yield of streams,
6 reservoirs and groundwater wells are put in question as the effects of climate
7 variability are experienced across the southeastern United States. Thus, in response
8 to climate variability, water supply systems must address the risks posed to the
9 reliability and resilience of their sources. While droughts are the major challenge
10 for water supply systems, heavy precipitation and high-flow events are the concern
11 of wastewater systems.

12 The effects of climate variability impact the resiliency of a system to withstand an
13 event without disrupting service to customers or, if service is interrupted, to
14 restoring the service in a timely manner. Like all large users dependent on
15 electricity from the grid, water utilities must plan for power outages and develop
16 plans for maintaining continuity of operations when such outages occur.
17 Nonetheless, recent weather patterns combined with the issue of aging
18 infrastructure are causing utilities to review traditional planning and design criteria.
19 The design standards for supplies, treatment plants, pump stations and tanks are
20 taken together to achieve a level of zero service outages. The so-called new normal
21 has led experts to look beyond traditional reliability and emergency planning into
22 a world that needs the speed of recovery and resiliency for much more widespread

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1 and damaging events. Updating infrastructure to keep up with the increase in
2 extreme weather and ensuring that adequate service can be maintained for extended
3 time periods after an extreme event is just as important as addressing the aging
4 infrastructure.

5 The Company looks for ways to reduce or mitigate increases in expense in many
6 areas of the business, which also have an environmental benefit. Examples such as
7 increased leak detection allow for more efficient routing of repair crews to the
8 highest priority leaks. Controlling leaks before they create larger issues results in
9 less fuel usage, and minimizes excavation and repair materials; not to mention
10 inconvenience to customers from interruptions in service, detours and, etc. This
11 proactive approach of deploying active leak detection not only minimizes treatment
12 exposure but also helps preserve source water; every gallon that is saved is a gallon
13 that can be provided at a later date, particularly during times of drought.

14 In addition, NJAWC has and will continue to evaluate its systems and
15 systematically look for opportunities to add additional standby power capacity,
16 look for ways to diversify its fuel supply and review and implement various other
17 projects to minimize its potential impact to climate change.

18 **41. Q. Does this conclude your Direct Testimony?**

19 A. Yes, it does.

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Appendix A

1. Q. Please describe your educational background and professional associations.

A. I earned a Bachelor of Mechanical Engineering degree (1991) from Villanova University, Villanova, Pa. I am a registered Professional Engineer in the State of New Jersey and am currently licensed in an inactive status in multiple states including Pennsylvania, Ohio, New York, Missouri, Maryland, and Delaware.

2. Q. What has been your business experience?

A. I have over twenty-six years of experience in the water and wastewater utility engineering field. From 1991 to 2001, I was employed by the Bergen County Utilities Authority ("BCUA") in various engineering positions of increasing responsibility including, Assistant Engineer and Senior Environmental Engineer where I designed, managed, and commissioned multi-disciplined wastewater infrastructure projects. I led projects that were focused on operational efficiency and data collection along with significant plant and collection system improvements. Some examples include:

- Upgrade of all of the BCUA's open channel flow metering equipment.
- Management of permitted overflow level monitoring
- Replacement of 42" PCCP Force Main
- Rehabilitation of 12" Gravity sewers with fold and form lining technology
- Treatment plant additions including addition of Sludge thickening centrifuge and associated equipment; polymer feeds, electrical equipment and controls
- Replacement of Waste Activated Sludge Pumping System

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Appendix A

1 From 2001 through 2011 I was employed by Applied Water Management Inc.
2 (“AWM”), where I worked in various positions of increasing responsibility from staff
3 engineer to Design Build Director (Company Officer). I also held a position of Officer
4 and Director on the Board of Applied Wastewater Management, Inc. (“AWWM”), a
5 New Jersey Board of Public Utilities (“BPU” or “Board”) -regulated subsidiary of
6 AWM. Much of my experience at AWM was in design construction and operations of
7 small, decentralized water and wastewater treatment facilities. My work included
8 responsibility for complete design, construction and facility commissioning for
9 Integrated Biological Membrane Filtration Plants for sewage treatment and discharge
10 to ground water. These plants were designed for strict groundwater discharge limits
11 (Nitrogen) and allowed for a high degree of automation for continuous unattended
12 operation. Water systems design and construction included well stations with treatment
13 (air stripping, disinfection) and distribution equipment (hydro pneumatic tanks,
14 pumping systems, fire flow systems).

15 AWM was a subsidiary company of American Water Works Company, Inc. (“AWW”) until 2011. Upon the completion of the sale of AWM in December 2011, I took a
16 position with AWW as an engineer with the American Water Works Service Company,
17 Inc. (“AWWSC”). I held a Director of Engineering position, primarily supporting
18 business development activities as a technical expert. I also provided engineering
19 support and leadership for various strategic initiatives including wastewater growth
20 opportunities and water/wastewater system planning and infrastructure renewal. In
21

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Appendix A

1 January of 2014 I was appointed to the position of Vice President - Engineering for
2 NJAWC which position I held until being appointed to my current position as Vice
3 President of Engineering for the Eastern Division in September of 2019.

NJAW Additions to Plant in Service 07/01/21 - 12/31/22

Project	Description	Project Total	Est In Service Date
I18-150118-01	CBWTP Mtl Storage&Building Improvem	1,316,003	04/13/20
I18-180031-01	SRWTP's 2nd Clearwell	1,588,555	12/22/20
I18-180050-01	36-inch CI-Rumson PI-Little Silver	1,245,797	04/30/21
I18-180070-02	Tinton/Ave of Mem Main Post DSIC	404,909	10/01/21
I18-150124-01	Baltusrol Station PFAS System, Interim	2,027,712	9/14/2021
I18-250035-03	RMWTP Phase 3: Filters 15-18	3,161,816	9/15/2021
I18-190046-01	Howell-to-Lakewood Trans Ph 2	23,284,202	9/22/2021
I18-180065-01	Tinton Ave 24" Main Replacement/Ext	5,227,827	10/1/2021
I18-130104-01	Bridgeport-Logan Syst Consolidation Main	2,971,481	10/20/2021
I18-180078-01	River Rd Main Replacement Rumson	7,057,739	10/27/2021
I18-260120-02	Central LSL Replacements	4,496,809	10/29/2021
I18-260112-01	2021 Clark C&L	3,200,748	10/31/2021
I18-130052-01	Southwest A&C Upgrades Phase 4 (CPS-A4)	2,104,490	12/31/2021
I18-150112-01	Phase 4 NRW 2021	1,239,755	12/31/2021
I18-150120-01	Pottersville Tank Rechloramination (temp)	468,151	12/31/2021
I18-150129-01	North West Orange DX Upgrade 2021	1,038,339	12/31/2021
I18-180050-02	36-inch CI - Rumson PI - Little Silver	250,000	12/31/2021
I18-180070-01	Tinton/Ave of Mem 24" Main Ph 1/3c/3e/4	1,866,596	12/31/2021
I18-190021-01	Coastal North A&C Upgrades Phase 2	2,184,320	12/31/2021
I18-190022-01	Coastal North A&C Upgrades Phase 3	710,206	12/31/2021
I18-230036-01	Lakewood WW C&L 2020	609,061	12/31/2021
I18-250035-06	RMWTP Control Room	2,017,377	12/31/2021
I18-250101-01	CRWTP:Floc/SedBsn 1-2 CPS:B17	12,646,939	12/31/2021
I18-250120-01	Bridgewater Tank Rechlor	1,588,221	12/31/2021
I18-260066-01	Central A&C Upgrades Ph 6 & 6f CPS:B10	4,608,759	12/31/2021
I18-130131-01	DRRWTP Treatment Improvements	4,327,979	2/28/2022
I18-190041-02	Lakewood Facility Relocation - Ph2	2,787,779	2/28/2022
I18-250035-04	RMWTP Phase 4: Filters 1-6	4,374,129	2/28/2022
I18-250136-01	Belle Mead Training Yard Expansion	530,406	2/28/2022
I18-150119-01	Mendham Low Booster Improvements A5:CPS	3,213,572	3/31/2022
I18-180071-01	Roberts Rd Booster Sta-Gen/Elect Upgrade	1,066,321	3/31/2022
I18-190051-01	Lakewood C&L 2021	4,024,220	4/30/2022
I18-190052-01	Bay Head HDD and Main	1,625,628	4/30/2022
I18-190053-01	James Street Lakewood Water Main	1,712,728	4/30/2022
I18-260129-01	60-in PCCP Piscataway Spot Repairs	3,969,100	4/30/2022
I18-150052-01	Diamond Hill Booster Upgrades	3,009,191	5/31/2022
I18-150052-03	Diamond Hill Booster Upgrades Phase 2	1,102,110	5/31/2022
I18-150079-01	Pottersville Well-Gas Mmbrane B21:CPS	638,235	6/30/2022
I18-180077-01	Turf Reduction Demonstration Project	575,814	6/30/2022
I18-180079-01	Glendola to JB Raw Water Main Insp&Impr	1,222,463	6/30/2022
I18-180080-01	Shrewsbury Ops Backup Generator	587,981	6/30/2022
I18-180084-01	Meridian Building Rehab	1,411,716	6/30/2022
I18-250114-01	RMWTP Flood Risk Reduction Ph I	231,563	6/30/2022
I18-260086-01	Coles Ave Booster Repl CPS:B-2	1,359,857	6/30/2022
I18-260121-01	Netherwood Office Building Upgrades	928,338	6/30/2022
I18-250035-05	RMWTP Phase 5: Filters 7-14	5,487,628	7/31/2022
I18-190050-02	Oak Glen Production & Water Quality Lab - Ph2	2,051,139	8/31/2022
I18-250079-01	RMWTP Ammonia Hand Facility Impr CPS B-6	6,670,095	9/30/2022
I18-350002-01	Phosphorous Removal Project	819,748	10/31/2022
I18-190049-01	Howell Field Ops Center	8,025,097	11/30/2022
I18-350001-01	Long Hill WW Vac Truck Building	5,510,913	6/30/2022
I18-260100-01	Jerusalem Rd Booster Sta Imprv CPS:B1	3,439,611	12/31/2022
I18-250139-01	CRWTP Solar Array (7.2MW)	588,672	12/31/2022
I18-170008-01	Oxford Sta Treatment Upgrades	5,270,243	12/31/2022
I18-220006-01	W 17th Street Lift Station	2,702,490	12/31/2022
I18-280003-01	Glen Meadows - Treat Unit Upgrade (A-4)	3,220,043	12/31/2022
I18-260067-01	Central A&C Upgrades Ph 6a-d CPS:B10	4,738,693	12/31/2022
I18-260108-01	EchoShore DX Central Region 2021-2022	3,719,626	12/31/2022

NJAW Additions to Plant in Service 07/01/21 - 12/31/22

Project	Description	Project Total	Est In Service Date
I18-350003-01	Long Hill PS Improvements Project	1,532,528	12/31/2022
I18-150109-01	Canoe Brook Solar Expansion (PPA)	579,829	12/31/2022
I18-250036-01	CRWTP Ozone Conversion to LOX CPS A-17	20,029,482	12/31/2022
I18-120049-01	Mill Road Station Iron & Mn Removal Proj	17,542,690	12/31/2022
I18-130089-01	Southwest Operations Center	23,464,491	12/31/2022
I18-130114-01	Woodlane Plant Improvements (A3)	10,203,466	12/31/2022
I18-130125-01	Runnemede/Somerdale Detention Mains	833,333	12/31/2022
I18-130143-01	Delran Roof Replacements	1,500,000	12/31/2022
I18-150113-01	Phase 5 NRW 2022	1,475,004	12/31/2022
I18-150132-01	Irvington LSL Replacement	5,011,436	12/31/2022
I18-190054-01	Rt 9 Water Main Replacement - Lkwd	13,995,847	12/31/2022
I18-190055-01	Farmingdale Transmission Loop	5,039,042	12/31/2022
I18-250140-01	Kent Ave Back-up Well	368,590	12/31/2022
I18-250126-01	CRWTP Alum Tank Replacements	2,000,000	12/31/2022
I18-250137-01	Kent Avenue Well 1 Arsenic Removal	1,726,008	12/31/2022
I18-250138-01	BM Ops & RMWTP Admin HVAC Impr	1,013,333	12/31/2022
I18-260122-01	Westfield Structural C&L-E Broad St	5,000,000	12/31/2022
I18-260128-01	Netherwood Ops Center Storage Yard Impro	800,000	12/31/2022
I18-270004-01	Homestead Chem Feed & Storage	2,390,021	12/31/2022
I18-340002-01	2nd Ave Lift Station Replacement	2,618,165	12/31/2022
I18-190045-01	Monterey Backup Well (A-17)	2,269,430	12/31/2022
I18-280005-01	Statewide Sewer A&C Upgrades Ph 1 2022	1,901,990	12/31/2022
Total IP		299,553,625	

NJAW Additions to Plant in Service 07/01/21 - 12/31/22

Project	Description	Project Total	Est In Service Date
RP-A	New Mains	9,776,794	Various
RP-B	Replaced Mains	172,657,193	Various
RP-C	Unscheduled Main Replacements	13,635,392	Various
RP-E	New Hydrants & Valves	5,976,592	Various
RP-F	Replaced Hydrants & Valves	23,792,941	Various
RP-G	New Services	21,450,954	Various
RP-H	Replaced Services	48,449,323	Various
RP-I	New Meters	2,786,162	Various
RP-J	Replaced Meters	36,027,702	Various
RP-K	ITS Equipment & Enterprise Solutions	3,150,083	Various
RP-L	SCADA	3,033,928	Various
RP-M	Security	3,102,572	Various
RP-N	Offices & Facilities	6,440,105	Various
RP-O	Vehicles	18,354,587	Various
RP-P	Tools & Equipment	4,195,749	Various
RP-Q	Plant Process Equipment	31,016,397	Various
DV	Developer Funded Projects	22,279,668	Various
Total RP/DV		426,126,142	

Total Additions to Plant in Service 07/01/2021 - 12/31/22	725,679,767
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BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF
NEW JERSEY-AMERICAN WATER COMPANY, INC.
FOR APPROVAL OF INCREASED TARIFF RATES
AND CHARGES FOR WATER AND WASTEWATER SERVICE, AND
OTHER TARIFF MODIFICATIONS

BPU Docket No. WR2201_____

Direct Testimony of

JOHN S. TOMAC

January 14, 2022

Exhibit P-6

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NEW JERSEY-AMERICAN WATER COMPANY, INC.1 **Introduction**2 **1. Q. Please state your name and business address.**

3 A. My name is John S. Tomac and my business address is 1 Water Street, Camden,
4 New Jersey 08102.

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

6 A. I am employed by American Water Works Service Company, Inc. ("AWWSC" or
7 "Service Company") as the Senior Director of Rates & Regulatory for New Jersey-
8 American Water Company, Inc. ("NJAWC" or the "Company"), Virginia-
9 American Water Company ("VAWC") and Maryland-American Water Company
10 ("MAWC").

11 **3. Q. What are your responsibilities in this position?**

12 A. My present responsibilities include managing the rates and regulatory functions for
13 NJAWC, VAWC, and MAWC focusing on strategic planning in a regulatory
14 environment. As Senior Director of Rates and Regulatory, I am also a member of
15 NJAWC's Senior Management Team, and I participate in the decision-making
16 process for all functional areas of the Company.

17 **4. Q. Please describe your educational background and business experience.**

18 A. Please refer to Appendix A for a summary of my educational background and
19 business experience.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 **5. Q. Have you previously testified in regulatory proceedings?**

2 A. Yes, I have testified before the New Jersey Board of Public Utilities (“BPU”) in
3 BPU Docket Nos. WR17090985 and WR19121516, as well as before the Virginia
4 State Corporation Commission and the West Virginia Public Service Commission.
5 I have also testified extensively before the Connecticut Public Utility Regulatory
6 Authority from 1984 to 2012.

7 **6. Q. Are you generally familiar with the book of accounts and related records of**
8 **the Company?**

9 A. Yes, I am.

10 **7. Q What system is followed in keeping the general books of accounts and related**
11 **records of the Company?**

12 A. The general books of accounts and related records of the Company are kept in
13 conformity with the Uniform System of Accounts (“USOA”).

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

15 A. The purpose of my Direct Testimony is to support the Company’s revenue
16 requirement calculation in this case, which is based on a test year ending June 30,
17 2022, including *pro forma* adjustments to the test year Income Statement and
18 Statement of Rate Base. I will discuss certain elements of the revenue requirement,
19 including the calculation of rate base and related depreciation and amortization
20 expense, as well as the components and computation of the Company’s proposed
21 capital structure. I will also sponsor various financial and accounting data required

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1 by the Board's regulations as set forth in Section 14:1-5.12 of the New Jersey
2 Administrative Code ("NJAC") and update schedules in relation to the Tax Cuts
3 and Jobs Act of 2017. Finally, I will support the rate base value of assets expected
4 to be acquired by the Company during the pendency of this proceeding.

5 **9. Q. Do you sponsor any Schedules in your Direct Testimony?**

6 A. The Schedules listed below are attached to the Petition as Exhibit P-2. I am
7 sponsoring Schedules, RR, 1-4, 8-9 and 15-17 which were prepared by me or under
8 my supervision and direction. Company Witness Hawn will sponsor Schedules 6,
9 7, 10, 11-14 and 18 as part of her Direct Testimony and Company Witness Rea will
10 sponsor Schedule 5 and part of his Direct Testimony.

- 11 • Schedule RR- Revenue Requirement Computation
- 12 • Schedule 1 Comparative Balance Sheet
- 13 • Schedule 2 Comparative Income Statement
- 14 • Schedule 3 Balance Sheet at November 30, 2021
- 15 • Schedule 4 Pro-forma Income Statement under present and proposed rates
- 16 • Schedule 5 Statement of Operating Revenues
- 17 • Schedule 6 Statement of Operating and Maintenance Expenses
- 18 • Schedule 7 Uncollectible Expense
- 19 • Schedule 8 Summary of Depreciation and Amortization
- 20 • Schedule 9 Statement of Depreciation
- 21 • Schedule 10 Statement of Taxes Other than Income Taxes
- 22 • Schedule 11 Gross Receipts and Franchise Tax

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- 1 • Schedule 12 Utility Assessments
- 2 • Schedule 13 Water Monitoring Tax
- 3 • Schedule 14 Federal Income Tax Calculation
- 4 • Schedule 15 Statement of Rate Base
- 5 • Schedule 16 Weighted Cost of Capital
- 6 • Schedule 17 Consolidated Tax Adjustment
- 7 • Schedule 18 Schedule of Payments to Affiliated Companies

8 **TEST YEAR**

9 **10. Q. What test year period is NJAWC using to determine the revenue requirement**
10 **in this proceeding?**

11 A. NJAWC's test year is the twelve-month period ending June 30, 2022 ("Test
12 Year"). This filing utilizes five months of actual data ended November 30, 2021,
13 and seven months of estimated data through June 30, 2022. The actual data has
14 been obtained from the Company's books and records. The estimated data will be
15 replaced with actual data as the case progresses, ultimately containing all actual
16 results in the 12-month update.

17 **11. Q. Has NJAWC included any post-test year adjustments in the determination of**
18 **the proposed revenue requirement?**

19 A. Yes. NJAWC is proposing to reflect changes in capital expenditures through
20 December 31, 2022, and changes in revenues and expenses through March 31,
21 2023, as described later in my Direct Testimony as well as the Direct Testimony of
22 Mr. Donald C. Shields (Exhibit P-5) and Ms. Jamie Hawn (Exhibit P-7). Including

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1 these post-test year adjustments is consistent with standards previously adopted by
2 the Board and provides for an annualization and/or adjustment of revenues,
3 expenses, and capital expenditures through the time period in which they are
4 expected to be in effect. Specifically, the Board's policy concerning post-test year
5 adjustments, as set forth in its order *Re Elizabethtown Water Company*, Docket No.
6 WR8504330, is that utilities are afforded an opportunity to make a record
7 concerning known and measurable changes to: (1) the capital structure that are three
8 months beyond the test year; (2) rate base that are six months beyond the test year;
9 and (3) expenses and revenues that are nine months beyond the test year. The post-
10 test year adjustments included in this case are further discussed below.

11 **12. Q. Please describe the Company's revenue requirement.**

12 A. The Company's revenue requirement is equal to the cost of providing water and
13 fire protection service to approximately 660,000 customers and sewer service to
14 approximately 49,900 customers in 190 communities in 18 counties throughout the
15 State of New Jersey.¹ This includes everything from sourcing water supply,
16 treating and monitoring that supply to support water quality compliance and
17 pumping and distributing adequate supply through approximately 9,420 miles of
18 main, to providing high quality customer service to our customers through customer
19 service center teams, 24-hour emergency call handling, and providing self-service
20 options. These efforts support the Company's continued provision of safe, reliable
21 water, sanitation, and fire protection services to our customers.

¹ NJAWC also provides water to 30 additional communities through bulk purchase water agreements.

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1 To accomplish all of this, the Company incurs costs for which it seeks recovery
2 through the ratemaking process. The Company's costs include a variety of
3 operating expenses, depreciation, and amortization, and various local, state, and
4 federal taxes, combined with an opportunity to earn a fair return on the Company's
5 rate base that supports NJAWC's provision of safe and reliable service to its
6 customers.

7 **13. Q. What is the revenue requirement NJAWC is proposing in this case?**

8 A. The Company's projected revenue requirement, equal to the cost of providing
9 service, is approximately \$903.1 million, as supported by Company witnesses in
10 this proceeding.

11 **14. Q. Please describe how you calculated the Company's revenue deficiency.**

12 A. The Company's revenue deficiency is measured as the difference between the
13 forecasted revenue requirement and the Company's forecasted revenues including
14 the Distribution System Infrastructure Charge ("DSIC") at present rates. The
15 Company's revenue deficiency proposed in this application is calculated to be
16 \$94.7 million which represents an approximate 11.7% overall deficiency. The
17 Company calculated a rate of return of 5.98% under present rates and 7.48% under
18 proposed rates when calculated on the proposed rate base approximating \$4.3
19 billion. The requested increase is also based on a rate of return on common equity
20 of 10.50%.

21

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 **15. Q. What are the overall drivers of the requested increase?**

2 A. The proposed revenue increase in large part is driven by capital investment since
3 the Company's last base rate case (BPU Docket No. WR19121516) (the "2019 Rate
4 Case"). Since the effective date of rates in the 2019 Rate Case, the Company has
5 invested, or will invest, approximately \$985 million in capital expenditures through
6 the end of 2022. Of the proposed increase of \$94.7 million, nearly 68% is driven
7 by new capital investments.

8 **16. Q. Are increases in operations and maintenance ("O&M") expenses a significant**
9 **contributor to the Company's need for rate relief?**

10 A. No. Although O&M expenses are increasing, they are not a particular driver of the
11 rate increase nor are they unusual when they are placed into context. The Company
12 is seeking to recover \$230.1 million in operating expenses, which represents
13 expense levels into 2023. For perspective, the Company's O&M expense in 2010
14 – more than a decade ago – was \$216 million. Although, the Company's proposed
15 O&M expenses have increased since then, and from the 2019 Rate Case, the
16 Company's overall O&M expense remains reasonable. For example, the average
17 per customer O&M cost for the ten-year period 2010 through 2020 was \$307
18 (excluding purchased water and wastewater costs), whereas our proposed O&M
19 cost per customer (excluding purchased water and wastewater costs) is \$320 in this
20 case. This represents a 4.23% increase over that ten-year average, or a compound
21 annual growth rate of 0.42%. In comparison, inflation as measured by the
22 Consumer Price Index ("CPI") increased 15.78% based on the average CPI rate

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1 measured over the same ten-year period 2010 through 2020 compared with the
2 estimated CPI rate at the end of 2022. This represents an annual compound growth
3 rate of 1.48%. If the Company's O&M expense per customer had increased by the
4 CPI rate of 15.78%, O&M expenses proposed in this case would be approximately
5 \$25.6 million higher at pro-forma customer levels. Since those savings would have
6 occurred incrementally over the ten-year period, on average over that ten-year
7 period, the saving would have been \$12.8 million per year (1/2 of \$25.6 million).
8 Given that each dollar of O&M expense that is avoided permits NJAWC to invest
9 \$8 in plant, the O&M savings that the Company has been able achieve over that 10-
10 year period translates into over \$1.0 billion of investment with no additional rate
11 impact on customers. This is a significant achievement and is a testament to the
12 Company's commitment to operating efficiency. As Company witness Mr. Shroba
13 explains in his Direct Testimony, the Company strives to manage costs as
14 efficiently as possible to provide a more cost-effective level of service for our
15 customers over the long term.

17. Q. What is the impact of the proposed rate increase on customer bills?

17 A. As proposed, the average residential water customer's monthly bill, using 5,520
18 gallons per month, would increase \$6.78 from the current charge of \$62.44 to
19 \$69.23, an increase of \$.23 per day. The annual bill for the average residential
20 water customer would be \$830.70 per year, an increase of \$81.38. Even at the
21 proposed rates, water costs remain a good value. Proposed water costs would
22 approximate \$2.28 per day, or \$.0125 per gallon. As Mr. Rea's testimony further

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 demonstrates, the Company's water and wastewater services remain affordable for
2 most of our residential customers.

3 **18. Q. Is the Company seeking any rate relief associated with its wholly owned**
4 **subsidiary, Environmental Disposal Corp. ("EDC")?**

5 A. No. Recovery of expenses and capital expenditures associated with EDC, a
6 wastewater subsidiary of NJAWC, is not requested in this proceeding.

7 **FILING REQUIREMENTS**

8 **19. Q. Please describe Exhibit P-2, Schedules 1 through 4 and Schedule RR.**

9 A. Schedule 1 reflects the Comparative Balance Sheets that have been prepared from
10 the books and records of the Company. None of the statements or schedules
11 contained in this Petition, either present or pro-forma, include any financials for
12 EDC.

13 Schedule 2 is a "Comparative Statement of Income" for the twelve-month periods
14 ended December 31, 2018, 2019 and 2020, respectively, as recorded from the
15 Company's books and records. Schedule 2 also includes dividend payments on
16 preferred and common stock of the Company for each twelve-month ended period.

17 Schedule 3 shows a Balance Sheet for the period ended November 30, 2021.

18 Schedule 4 reflects the Company's income statement on a pro forma basis under
19 present and proposed rates. Column (2) on Schedule 4 indicates the results for the
20 period ending June 30, 2022 (the Test Year) based on five months of actual and
21 seven months of projected data. Annualized and normalized adjustments are made

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1 to the Test Year to reflect known or measurable changes in the Company's
2 operations through March 31, 2023. The result is a pro forma income statement that
3 is representative of the Company's prospective financial condition. Schedules 5, 6,
4 8, 10, and 14-16 support the values on Schedule 4.

5 Schedule RR supports the computation of the proposed revenue increase and the
6 calculation of the gross-up factor. Schedules 4, 7, 11, 12, 15 and 16 support
7 Schedule RR.

8 **Rate Base**

9 **20. Q. Please describe the rate base components as shown on Exhibit P-2,**
10 **Schedule 15.**

11 A. The proposed rate base in this proceeding is approximately \$4.3 billion. Rate base
12 was calculated in the traditional manner and in accordance with past practices. The
13 calculation of rate base starts with utility plant in service ("UPIS") less accumulated
14 depreciation to arrive at net utility plant. Cash working capital, utility plant
15 acquisition adjustments and prepayments were then added to net utility plant.
16 Customer advances for construction and contributions, MTBE and aluminum
17 sulfate litigation settlements, pre-1971 ITC, consolidated FIT tax adjustment and
18 deferred taxes were deducted from net utility plant. The components of rate base
19 are shown on Exhibit P-2, Schedule 15.

20 **21. Q. Please explain how the components of rate base were calculated.**

21 A. The balance for UPIS was calculated starting with the actual balance as of
22 November 2021. Forecast plant additions for the period December 2021 through

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1 June 30, 2022, were then added and estimates for plant retirement for the same
2 period were deducted to develop the estimated Test Year ending balance of June
3 30, 2022. The Company also included forecasted plant additions, reduced for plant
4 retirements for the six-month post-Test Year period ending December 31, 2022
5 (“PTY” or “Post-Test Year”). The Company’s PTY capital expenditures for utility
6 plant include all known and measurable capital projects for that period as well as
7 the roll in of the DSIC capital expenditures. The forecast plant additions are
8 discussed further in the Direct Testimony of Mr. Shields.

9 **22. Q. Please explain the methodology used to compute accumulated depreciation as**
10 **shown on Exhibit P-2, Schedule 15 and all proposed Post-Test Year**
11 **adjustments.**

12 A. The computation of accumulated depreciation as of December 31, 2022, as set forth
13 on Exhibit P-2, Schedule 15 is consistent with prior cases. It begins with the actual
14 balance on November 30, 2021 and computes the additional depreciation expense
15 beginning with that period through June 30, 2022 and then again for the period July
16 1, 2022 through December 31, 2022 on all assets that will be in service at that date.

17 The computation of depreciation expense can be seen on Exhibit P-2, Schedule 9.
18 Depreciation expense uses both the life and cost of removal rate for computation of
19 depreciation expense authorized in the 2019 Rate Case. The accumulated
20 depreciation reserve is reduced for estimated retirements and cost of removal
21 charges through June 30, 2022, and then through December 31, 2022. Projections
22 for retirements are based on a three-year average of retirements for the period July

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 1, 2018 through June 30, 2021. Cost of removal charges are also based on the same
2 three-year average. The accumulated depreciation reserve reflects the continued
3 return to customers of a Non-Legal Asset Retirement Obligation of \$48 million at
4 \$1.2 million a year over a forty-year period as established in the Stipulation of
5 Settlement in Docket No. WR08010020.

6 **23. Q. Please explain the methodology used to compute cash working capital as**
7 **shown on Exhibit P-2, Schedule 15, and any Post-Test Year adjustments.**

8 A. The calculation of cash working capital is provided by Mr. Harold Walker, as
9 described in his Direct Testimony and schedules filed in this case.

10 **24. Q. Did the Company include utility acquisition adjustments in rate base?**

11 A Yes, however, only the acquisition adjustments previously approved by the BPU
12 have been included in rate base. Acquisition adjustments for the Shorelands Water
13 Company, Inc. ("Shorelands") and the Borough of Haddonfield's Water and Sewer
14 System ("Haddonfield") were rejected by the Board in the 2019 Rate Case and that
15 result is on appeal to the Appellate Division of the Superior Court. The Company
16 has not included those acquisition adjustments in rate base in this Petition.² For the
17 proposed purchases of Egg Harbor City's water and wastewater systems as well as
18 the wastewater system of the Village of Bound Brook, there are no acquisition
19 adjustments included in rate base in this filing. I will discuss the acquisitions of Egg

² The Company reserves the right to seek cost recovery of the Shorelands and Haddonfield acquisition adjustments in a future ratemaking proceeding pending the outcome of the appeal currently before the Appellate Division.

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1 Harbor City's water and wastewater systems and the wastewater system of the
2 Village of Bound Brook later in my Direct Testimony.

3 **25. Q. Please explain the methodology used to calculate customer advances and**
4 **contributions in aid of construction and any proposed PTY adjustments.**

5 A. The computation of customer advances begins with the actual balance on
6 November 30, 2021, and adds the number of new advances the Company expects
7 to receive for the period December 1, 2021 through June 30, 2022, and for the
8 period July 1, 2022 through December 31, 2022. For contributions in aid of
9 construction, the rate base balances on June 30, 2022, and December 31, 2022, are
10 each lower than the November 30, 2021 starting balance. This is a result of the
11 amortization of contributions in aid of construction over the life of the underlying
12 assets that the contributions originally funded.

13 **26. Q. Please explain the rate base reduction for the MTBE and Aluminum Sulfate**
14 **Settlements.**

15 A. The Company has received funds from settlements in both the MTBE and
16 Aluminum Sulfate cases. The rate base reduction is the mechanism by which funds
17 received are shared between customers and shareholders.

18 **27. Q. Please explain the rate base reduction for pre-1971 investments tax credits.**

19 A. Investments tax credits taken before 1971 are being amortized through 2050.

20 **28. Q. Has the Company calculated a consolidated tax adjustment ("CTA")**
21 **consistent with the BPU regulation?**

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1 A. Yes. The Company computed its consolidated tax adjustment in accordance with
2 the BPU's regulations consistent with N.J.A.C. 14:1-5.12(a)(11) ("CTA Rule" or
3 "Rule"). Under the Rule promulgated in 2019, the CTA is calculated using each
4 affiliate's taxable income/loss for each of the five consecutive years, (the "five-year
5 look back", including the complete tax year within the utility's test year), using
6 statutory income tax rates or the alternative minimum tax, whichever is applicable.
7 The Rule also provided for rate base to be reduced by 25% of the CTA. In 2021,
8 the Appellate Division of the Superior Court, in an appeal brought by Rate Counsel,
9 upheld the five-year look back period but overturned the 25% rate base reduction
10 and directed that 100% of the CTA go to customers. ("CTA Appeal Decision").
11 The Company in this application has reduced rate base by 100% of the CTA.

12 **29. Q. What is the amount of the CTA and how was it calculated?**

13 A. The Company's calculation of the CTA using the BPU's CTA Rule, as modified
14 by the CTA Appeal Decision, results in a rate base reduction of \$21.4 million. The
15 Company used the years 2016 through 2020 as the five-year look back period due
16 to the availability of completed tax returns for those years.

17 **30. Q. Please explain how the amounts of deferred income taxes were calculated as**
18 **part of rate base?**

19 A. Deferred income taxes are a result of timing differences between book and tax
20 depreciation because of the normalization process. The computation begins with
21 the actual values on November 30, 2021. Deferred taxes are increased by
22 computing the difference between book and tax depreciation times the federal

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 statutory rate of 21% on the capital additions for the period December 1, 2021,
2 through June 30, 2022, and then again for the period July 1, 2022, through
3 December 31, 2022. This computation increases deferred taxes which results in a
4 further reduction to rate base.

5 **31. Q. Why is it important to include all capital additions in the PTY period?**

6 A. Pursuant to the previously-discussed *Elizabethtown* precedent, the Company can
7 record changes to rate base for a period of six months beyond the end of the test
8 year, provided: there is clear likelihood that the proposed utility plant additions will
9 be in service by the end of the six-month period; that the utility plant additions are
10 major in nature and consequence; and that the utility plant additions be
11 substantiated with very reliable data. As the BPU knows and Mr. Shields
12 demonstrates in his testimony, NJAWC has a track record of completing its capital
13 program as planned year after year.³ Consequently, there is no reason to believe
14 that the Company will not do so again in 2022, and the data provided to support the
15 capital investments through December 31, 2022, can be relied upon by the BPU.

16 In addition, although *Elizabethtown* uses the term “major in nature and
17 consequence,” neither it, nor cases decided under it, define exactly what that means.
18 An arbitrary listing of a few larger projects based on a threshold amount that is
19 undefined and often debatable, while not including other projects and
20 improvements just as important in providing service to our customers, disregards

³ Given the timing of this filing and absent a settlement of this case, it is likely that the Post-Test Year utility plant additions in this Petition will be completed and in-service by the time this proceeding is adjudicated.

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1 the fact that the Company should recover its costs for UPIS during the time those
2 rates are in effect. In fact, an arbitrary cost percentage says nothing about the value
3 to customers of one project over another. Considering the level of investments the
4 Company makes every year and its track record of completing the capital
5 investment it plans each year, it is reasonable to allow the Company to recover its
6 capital costs and associated depreciation expense on all assets that are completed,
7 and in service when new rates are in effect. Undue regulatory lag is perpetuated
8 when timely cost recognition is not afforded to these in-service utility plant assets.
9 The Company is simply asking for recovery of its capital investments that are in
10 service and for which the customer is benefiting at the time new rates are in effect.
11 This is not radical ratemaking. In fact, establishing revenue requirements based on
12 a rate base which includes utility plant that is in service is essentially setting rates
13 based on a historical perspective.

14 In addition, as discussed below, the capital additions in this application are funded
15 by the proposed capital structure. Because the PTY capital additions reflect the
16 funding requirements of the capital structure on December 31, 2022, the proposed
17 capital structure has also been brought forward to December 31, 2022, to match
18 rate base.

19 **32. Q. Please explain how future DSIC filings impact the Company's proposed Post-**
20 **Test Year plant additions.**

21 A. The Company will file its fifth foundational filing pursuant to N.J.S.A. 48:2-21 and
22 N.J.A.C. 14:9-10.1 *et seq.* shortly after the filing of this Petition. If approved, the

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1 filing allows for annual revenue increases occurring in six-month intervals over a
2 period of 24-36 months. The revenue increases would commence approximately
3 eight months after approval of the filing, as DSIC related infrastructure is renewed
4 or replaced. If DSIC related infrastructure completed in the PTY is included in rate
5 base for the purpose of computing revenue requirements here, the Company's first
6 DSIC filing after the implementation of a general rate increase will result in a lower
7 DSIC rate. This is a result of eliminating the "gap" period of capital spending that
8 has been included in previous DSIC filings that will now be included in base rates.

9 **Capital Structure**

10 **33. Q. What is the purpose of determining the Company's capital structure?**

11 A. The capital structure is used to compute the Company's weighted average cost of
12 capital ("WACC") in this proceeding. The WACC is the overall rate of return
13 that is applied to the Company's rate base. The Company's WACC reflects,
14 among other things, the rate of return on common equity ("ROE")
15 recommendation presented in the Direct Testimony of Company witness Ms. Ann
16 E. Bulkley.

17 **34. Q. What capital structure did the Company use to calculate the revenue**
18 **requirement in this case?**

19 A. The Company used the capital structure for the forecasted period ending
20 December 31, 2022. The capital structure proposed by the Company is shown on
21 Exhibit P-2, Schedule 16. Schedule 16 indicates the capital structure and WACC
22 on which the Company based its cost of service and revenue requirement in this

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1 case. The proposed capital structure is composed of 45.44% long-term debt and
2 54.56% common equity.

3 **35. Q. Is the Company's proposed capital structure reasonable and appropriate for**
4 **ratemaking?**

5 A Yes. It is virtually the same capital structure used to set rates in the Company's
6 2019 Rate Case. Furthermore, Ms. Bulkley has examined the proposed capital
7 structure and explains that it is reasonable and appropriate. She further explains that
8 NJAWC's equity ratio is well within the range of equity ratios of the proxy group
9 used to determine the Company's rate of return on equity.

10 **36. Q. Why did you choose to forecast the capital structure to the period ending**
11 **December 31, 2022?**

12 A. While *Elizabethtown* generally provides for pro forma capital structure adjustments
13 that extend three months beyond the Test Year, the Company believes it is
14 reasonable and appropriate to look out six months to December 31, 2022, because
15 it is in our customers' best interest to do so. By capturing pro forma adjustments
16 to the capital structure through December 31, 2022, it aligns the Company's capital
17 additions included in rate base with the funding of that rate base.

18 **37. Q. In what manner does the Company currently obtain its long-term and short-**
19 **term debt?**

20 A. The Company primarily utilizes the services of American Water Capital Corp.
21 ("AWCC") to meet its long-term and short-term debt requirements. AWCC is an
22 American Water subsidiary, and an affiliate of NJAWC. AWCC was created to

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1 consolidate the financing activities of the operating subsidiaries, to effect
2 economies of scale on debt issuance and legal costs, to obtain lower interest rates
3 through larger debt issues in the public/private markets, and to use more cost-
4 effective means of obtaining short-term debt (used to bridge the gap between
5 permanent financings) than the bank lines of credit used previously. Participating
6 in AWCC debt issuances has allowed the Company to obtain debt at lower interest
7 rates and incur lower issuance and transaction costs by utilizing the combined size
8 and resources of the larger American Water organization. In addition to financing
9 by AWCC, the Company has also obtained tax-exempt long-term debt financing
10 through the Drinking Water State Revolving Fund Program administered by the
11 New Jersey Infrastructure Bank (“iBank”), formerly known as the New Jersey
12 Environmental Infrastructure Trust (“NJEIT”), and through the New Jersey
13 Economic Development Authority (“NJEDA”).

14 **38. Q. What factors require the Company to seek additional capital?**

15 A. Capital improvements to meet the new and changing regulations in the water
16 industry, to replace aged treatment and distribution facilities, and to continue to
17 provide safe, reliable water and wastewater service to its customers have driven,
18 and will continue to drive, the need for new capital. The Company’s proposed
19 capital structure includes a new long-term debt financing through AWCC in the
20 amount of \$133 million and total borrowings of \$103.6 million through the iBank.
21 NJAWC’s proposed capital structure also includes equity infusions from American
22 Water totaling \$140 million for the forecasted Test Year and PTY period. It is

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1 important that the Company maintain a strong financial position to allow it to
2 continue to attract capital at a reasonable cost, which will assist the Company in its
3 effort to provide service improvements at a cost that is beneficial to its customers
4 over the long-term.

5 **39. Q. Please explain the planned long-term debt financing through AWCC included**
6 **in this filing.**

7 A. The Company's proposed capital structure includes \$133 million of new long-term
8 debt to be placed through AWCC in May 2022. The Company used an expected
9 taxable interest rate of 3.90% for this financing. This rate is based on the rate for a
10 30-year U.S. Treasury bond ("Treasury") for May 2021, plus a credit spread.

11 **40. Q. Why did the Company assume a 30-year term to estimate the interest rate on**
12 **the new long-term AWCC debt issuance?**

13 A. The Company's expectation is that the new long-term debt will be a 30-year taxable
14 offering by AWCC, for which NJAWC will issue a note to AWCC for its share of
15 the total debt placement. The basis for assuming a 30-year term is that it more
16 closely matches the expected life of the utility plant assets being financed than
17 would the use of shorter-term maturities.

18 **41. Q. Will the Company update the interest rate for the new long-term debt**
19 **issuance?**

20 A. Yes, the Company will provide actual rates for the proposed long-term debt
21 issuance once it is completed, likely in its 12+0 filing.

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1 **42. Q. Please explain the planned long-term tax-exempt debt financings through the**
2 **iBank included in this filing.**

3 A. The Company currently has construction loans through the iBank that total \$103.6
4 million. The Company expects that these loans will be converted to long-term debt
5 prior to December 31, 2022, which is the forecasted date of the Company's capital
6 structure in this case.

7 **43. Q. How did you estimate the interest rate for the new iBank loans?**

8 A. The interest rates used in the Company's projections are consistent with NJAWC's
9 most recent financing petition for 2022-2024. The interest rate and other terms of
10 any long-term debt issuance in conjunction with the iBank would be determined by
11 the terms obtained for the NJEIT. The Company will monitor the projected rates
12 and reflect any changes in its update filings through the pendency of this case.

13 **44. Q. Does NJAWC intend to refinance any of its existing long-term debt issues**
14 **during the Test Year or PTY period?**

15 A. No, the Company exhausted the refinancing of its long-term debt in 2020 as
16 demonstrated in the Company's 2019 Rate Case.

17 **45. Q. What is the Company's effective cost of long-term debt?**

18 A. As shown on Exhibit P-2, Schedule 16, the effective cost of long-term debt, based
19 on the projected principal amount outstanding of \$1.93 billion on December 31,
20 2022, is 3.8564%.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 **46. Q. You noted previously that the Company's forecasted capital structure at**
2 **December 31, 2022 reflects the addition of equity infusions from American**
3 **Water totaling \$141 million. When are these infusions expected to occur?**

4 A. The forecasted equity infusion is anticipated to occur in May 2022. This equity
5 infusion will be booked to paid-in capital. The total forecasted common equity
6 balance at December 31, 2022 will be \$2.32 billion.

7 **47. Q. What WACC is the Company requesting in this case?**

8 A. The overall WACC being requested is 7.4811%, as shown on Exhibit No. P-2,
9 Schedule 16. The Company is requesting the ROE be set at 10.5%, which is the
10 ROE recommended by Company witness Ann E. Bulkley, and the cost of long-term
11 debt be set at 3.8564%.

12 **Tax Cuts and Jobs Act of 2017 ("TCJA")**

13 **48. Q. Has the Company submitted an updated amortization schedule for EADIT**
14 **relating to TCJA with this application.**

15 A. Workpaper Schedule 15-21 sets forth the calculation of the amortization of excess
16 accumulated deferred income taxes ("EDIT" or "EADIT") and establishes the
17 amount that will be returned to customers on an annual basis through base rates
18 during the first year rates are in effect ("Rate Year"). The calculation amortizes the
19 components for remeasured EDIT for protected assets over the Average Rate
20 Assumption Method ("ARAM"), and 15 years for the unprotected assets as agreed
21 upon in the Stipulation as adopted by the Board in the 2019 Rate Case. The
22 proposed amortization for EADIT for the Rate Year amounts to \$12,375,429.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 **49. Q. In addition to reducing base rates for the pass-back of EADIT to customers in**
2 **the 2019 Rate Case, the Company also passed back to customers EADIT**
3 **credits relating to the “catch up period”. Were these credits based on actual**
4 **amounts or estimated amounts?**

5 A. Both. The amortization schedule for EADIT presented in the 2019 Rate Case shows
6 the EADIT amortization amounts for the years 2018 through 2021 for the
7 components of both the protected and unprotected related assets. Since EADIT for
8 the unprotected related assets is being returned to customers over 15 years as per
9 the Stipulation, the amortization amounts were based on actual amounts and will
10 not change. The EADIT amortization amounts calculated using ARAM, however,
11 were based on actual amounts for 2018 and estimated amounts for 2019 through
12 2021. Estimated values for ARAM only become known when the Company files
13 its tax return for the relevant years.

14 **50. Q. Did the Company calculate a true-up for the estimated amount of EADIT**
15 **passed back to customers in the 2019 Rate Case?**

16 A. Yes. Workpaper Schedule 15-21 presents the proposed amortization schedule for
17 EADIT for the years 2018 through 2023 using ARAM for protected related assets
18 and a 15-year period for unprotected related assets. Actual amounts are shown for
19 the year 2018 through 2020 while estimated amounts are shown for the years
20 2021 through 2023. The Company calculated a true-up on that workpaper using
21 actual ARAM amounts for 2019 and 2020 versus estimates used in the 2019 Rate
22 Case. The true-up was calculated for the “catch up period” amounts as well as the

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 amount in base rates. The true-up also accounts for the actual amounts of credits
2 passed to customers versus the agreed upon amount of \$32,500,000. The workpaper
3 shows that the calculated credits in the 2019 Rate Case for both the “catch up
4 period” and base rates versus the actual amounts calculated in this filing amounts
5 to \$233,794, meaning customers were passed credits more than the actual amounts.
6 In addition, the amount of EADIT passed back to customers was \$233,774 over the
7 agreed amount of \$32,500,000. These two values completely offset each other,
8 requiring no adjustment.

9 New Acquisitions**10 51. Q. Are there any new acquisitions proposed in this Petition?**

11 A. Yes, the acquisition of Egg Harbor City’s water and wastewater systems as well as
12 the wastewater system of the Borough of Bound Brook have been included in this
13 filing.

**14 52. Q. Please explain the proforma adjustments associated with the two proposed
15 acquisitions.**

16 A. The Company added the value of the systems acquired through the Egg Harbor City
17 and Bound Brook acquisitions to rate base. For Bound Brook, the net plant value
18 of \$4.5 million for the wastewater system⁴ was included in rate base. The Company
19 also included in rate base the purchase price amount of \$21.8 million for Egg
20 Harbor City’s water and wastewater systems. The rate base value is based on the

⁴ The net plant value of \$4.5 million is based on the addition of \$6.8 million to UPIS less \$2.3 million in accumulated depreciation.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 value of the water and wastewater systems as determined under the provisions of
2 the Water Infrastructure Protection Act, N.J.S.A. 58:30-1 et seq, *et seq.* (“WIPA”),
3 which is currently being evaluated in conjunction with BPU Docket No.
4 WM21091150. The value included in rate base will be adjusted based on the
5 outcome of the pending WIPA proceeding if warranted.

6 **53. Q. Has the Company included any acquisitions adjustments in Rate Base in**
7 **conjunction with these acquisitions?**

8 A. No.

9 **54. Q. Does the Company currently own these systems?**

10 A. No, but the Company expects to close on both the acquisitions before new rates go
11 into effect.

12 **CONCLUSION**

13 **55. Q. Does this conclude your Direct Testimony?**

14 A. Yes, it does.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**Appendix A**

1 **Q. Please describe your educational background and business experience.**

2 A. Currently I hold the position of Sr. Director of Rates and Regulation for American Water's
3 Eastern Division which includes New Jersey, Virginia and Maryland. I was promoted to
4 this position in November of 2017. In July of 2014, I joined West Virginia American Water
5 Company as Sr. Manager of Rates and Regulatory Affairs. At West Virginia American, I
6 was responsible for all of the Regulatory Filings including a Rate Case Filing in 2015 and
7 the Companies first DSIC application in 2016. From 2008 to 2014, I was President and
8 Owner of John S. Tomac Consulting LLC, based in North Carolina. The firm provided
9 Management, Financial and Rate Case Services for water utilities throughout the United
10 States. Between 1997 and 2008, I served as President and Chief Financial Officer of
11 Birmingham Utilities Inc., an investor-owned public water utility serving 18 municipalities
12 throughout Connecticut. I was responsible for all the operations and financial aspects of
13 the Company whereby I directed Company growth that increased market capitalization of
14 over four hundred percent, leading to the sale of the Company in 2008. Prior to becoming
15 President of Birmingham Utilities, I was employed for almost 20 years by Aquarion Water
16 Company of Connecticut, the largest investor owned water utility in New England, where
17 I served as Assistant Controller. In that capacity, I was responsible for the regulatory affairs
18 and budgeting activities of the utility's subsidiaries. I was also responsible for the filing of
19 all rate applications, providing testimony on all financial matters of the Company and
20 testifying as an expert witness on those matters. I was also responsible for filing of all SEC
21 and regulatory reports as well as managing all aspects of the accounting department. I
22 previously held a professional membership in the National Association of Water

NEW JERSEY-AMERICAN WATER COMPANY, INC.**Appendix A**

1 Companies (NAWC). I served as a Board Member, Chairman of the Rates and Revenue
2 Committee, Chairman of the New England Chapter and Vice Chairman of the Small Water
3 Committee. I also served as President of the Connecticut Water Works Association and I
4 am currently a member of the American Water Works Association. I am also a faculty
5 member of the National Association of Regulatory Utility Commissioners (NARUC) Rate
6 School. I hold an MBA in Finance from the University of New Haven and a BS degree in
7 Accounting from Central Connecticut State University.

BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF
NEW JERSEY-AMERICAN WATER COMPANY, INC.
FOR APPROVAL OF INCREASED TARIFF RATES AND
CHARGES FOR WATER AND WASTEWATER SERVICE, AND
OTHER TARIFF MODIFICATIONS

BPU Docket No. WR2201_____

Direct Testimony of

JAMIE D. HAWN

January 14, 2022

Exhibit P-7

NEW JERSEY-AMERICAN WATER COMPANY, INC.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.

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

2 A. My name is Jamie D. Hawn, and my business address is 1 Water Street, Camden,
3 New Jersey 08102.

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

5 A. I am employed by American Water Works Service Company, Inc. (“Service
6 Company”) as Senior Manager of Rates and Regulatory for New Jersey-American
7 Water Company, Inc. (“NJAWC,” “New Jersey-American Water” or the
8 “Company”).

9 **3. Q. What are your responsibilities in this position?**

10 A. My responsibilities as Senior Manager of Rates and Regulatory include: 1) leading
11 rates and regulatory activity for the Company, including coordinating with finance,
12 engineering, and legal; 2) supporting the Company in regulatory proceedings, such
13 as rate change applications; 3) preparing rate analyses and studies to evaluate the
14 effect of proposed rates on the revenues, rate of return, and tariff structures;
15 4) executing the implementation of rate orders, including development of the
16 revised tariff pricing necessary to produce the authorized revenue level;
17 5) overseeing the preparation of revenue and capital requirements analyses;
18 6) providing support for financial analyses, including preparing applicable
19 regulatory commission filings; and 7) ensuring compliance with Generally
20 Accepted Accounting Principles (“GAAP”), regulatory requirements, and
21 Company policies.

22

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 **4. Q. Please describe your educational background and business experience.**

2 A. Please refer to Appendix A for a summary of my educational background and
3 business experience.

4 **5. Q. Have you previously testified in regulatory proceedings?**

5 A. Yes. I have testified before the New Jersey Board of Public Utilities (“BPU” or the
6 “Board”) in NJAWC’s previous rate case, BPU Docket No. WR19121516. I also
7 testified in BPU Docket Nos. WR19110465 and WR20110719 regarding
8 NJAWC’s Purchased Water Adjustment Clause (“PWAC”) and the Purchased
9 Wastewater Treatment Adjustment Clause (“PSTAC”). I have also testified before
10 the regulatory commissions in New York, Pennsylvania and West Virginia.

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

12 A. I will support the Company’s request for recovery of expenses in this proceeding,
13 as well as the Company’s pro forma adjustments for the following items:
14 1) Operations and Maintenance (“O&M”) expenses; 2) Taxes other than Income;
15 and 3) Income Taxes. I will also discuss the Company’s regulatory asset for its
16 incremental costs associated with the COVID-19 public health emergency as well
17 as the Company’s proposed tariff modifications, including the Uncollectible
18 Adjustment Clause (“UAC”).

NEW JERSEY-AMERICAN WATER COMPANY, INC.**7. Q. Do you sponsor any schedules in your Direct Testimony?**

A. Yes. I sponsor the Schedules listed below, which were prepared by me or under my supervision and direction. These Schedules support the Company's calculation of expenses:

- Schedule 6 Statement of Operating and Maintenance Expenses
- Schedule 7 Uncollectible Expense
- Schedule 10 Statement of Taxes Other than Income Taxes
- Schedule 11 Gross Receipts and Franchise Tax
- Schedule 12 Utility Assessments
- Schedule 13 Water Monitoring Tax
- Schedule 14 Federal Income Tax Calculation
- Schedule 18 Schedule of Payments to Affiliated Companies

I. OPERATION AND MAINTENANCE EXPENSES**8. Q. What is the Company's overall O&M expense, which it seeks to recover through this proceeding?**

A. The Company is seeking recovery of approximately \$230.1 million in O&M expense. Although this represents an increase over the level of O&M expense requested in the Company's last base rate case, Mr. Tomac explains that New Jersey-American Water's O&M per customer expense (excluding purchased water and wastewater costs) of \$320 has increased 4.23% over the average per customer cost of \$307 for the period 2010 through 2020. This compares favorably to inflation which has increased 15.78% over the same period.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**9. Q. What is the Company's test year period in this proceeding?**

A. The Company's test year period is the twelve months ending June 30, 2022 (the "Test Year"). As Mr. Tomac explains in his Direct Testimony, this filing is based on five months of actual financial data, for the period July 1, 2021 through November 30, 2021, and seven months of projected financial data for the period December 1, 2021 through June 30, 2022. Test Year data was used to calculate the adjustments proposed in Exhibit P-2, Schedule 6. The Company will update its filing to reflect actual data when the information becomes available.

10. Q. What is the Company's proposed post-test year period for O&M expense adjustments?

A. Consistent with Board precedent in *Elizabethtown*,¹ the Company is proposing certain known and measurable expense adjustments through March 31, 2023 (*i.e.*, nine months after the end of the Test Year (the "Post-Test Year")).

11. Q. How did the Company formulate its pro forma adjustments to expenses?

A. Depending on the expense, the Company used either actual expense from the twelve-month period ended June 30, 2021, and annualized such expenses for known operating conditions, or a three-year average of the expense. Since certain expenses can vary annually, the Company used a three-year average using the twelve months ended June 30, 2019, June 30, 2020, and June 30, 2021 ("June Three Year Average") for pro forma adjustments to normalize these annual variances. For certain other expenses particularly impacted by COVID-19 (*e.g.*, vacancy rate,

¹ Final Order, *Re Elizabethtown Water Company*, BPU Docket No. WR8504330 (May 23, 1985).

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 uncollectible expense) as discussed in greater detail below, a three-year average
2 using the twelve months ended December 31, 2017, December 31, 2018 and
3 December 31, 2019 (the “December Three Year Average”) was used to exclude the
4 effects of COVID-19. Additionally, for certain other expenses, the Company made
5 adjustments for known and measurable conditions and/or applied an inflation factor
6 based on the Consumer Price Index Urban (“CPI-U”). All adjustments are detailed
7 on the Schedules addressed above in Exhibit P-2, filed as part of this case.

8 **12. Q. Please explain why a different three-year average was used for certain**
9 **expenses particularly impacted by COVID-19.**

10 A. The Company used a different three-year average to exclude the impacts of
11 COVID-19 on certain items, such as the vacancy rate and uncollectible expense.
12 Specifically, the 2020 period was excluded because in March 2020, the Company
13 voluntarily implemented a number of measures aimed at assisting customers during
14 the COVID-19 public health emergency, including, but not limited to, suspending
15 service disconnections for non-payment and suspending late fees and interest
16 penalties on past-due accounts.² Due to the moratorium, arrearages started to
17 increase, causing uncollectible expense to spike as customers were experiencing
18 financial hardships. Accordingly, the Company’s uncollectible expenses in 2020
19 were higher than historical averages.

20 The Company’s 2020 vacancy rate was also higher than historical averages

² The Company elected to implement these protective measures prior to Governor Murphy’s issuance of executive orders mandating a moratorium on utility shutoffs, late fees and reconnection fees. *See* Executive Order No. 190 (Mar. 9, 2020); Executive Order No. 246 (June 30, 2021).

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 with businesses and employees adapting to the work from home mandates and, as
2 a result, hiring activities were temporarily suspended. Thus, the Company's use of
3 the December Three Year Average using pre-COVID-19 years is a reasonable
4 approach to developing pro forma expense for uncollectibles and for the calculation
5 of the vacancy rates used to compute compensation expense.

6 **13. Q. Did the Company make any pro forma adjustments to expenses that reflect**
7 **the proposed acquisitions of new water and wastewater systems?**

8 A. Yes. As discussed in the testimony of Company Witness John S. Tomac, the
9 Company is proposing as part of this rate case the acquisition of Egg Harbor City's
10 ("EHC") water and wastewater systems as well as the wastewater system of the
11 Borough of Bound Brook ("BB"). The Company expects to close on both of these
12 acquisitions before new rates go into effect.

13 Accordingly, since the EHC water and wastewater systems and BB wastewater
14 system will be included in future expenses, an adjustment was made for pro forma
15 purposes which is identified on the workpapers associated with the relevant O&M
16 expenses. The additional expense was determined by dividing the pro forma
17 expense by the current number of New Jersey customers, excluding the EHC and
18 BB customers, to determine a per customer cost. This per customer amount was
19 then multiplied by the current customer count for EHC and BB to account for the
20 additional expense amounts for the respective line items.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**Production Costs**

14. Q. Please explain which of the Company's operating expenses are considered

"Production Costs".

A. Production Costs include purchased water, power, chemicals, and waste disposal.

Production Costs vary depending on the amount of water purchased or produced by the Company's treatment plants (*i.e.*, system delivery or water obtained), and delivered to NJAWC's network of water mains. NJAWC's proposed Production Costs are reflected in Exhibit P-2, Schedule 6, lines 2 – 5.

15. Q. Please explain the system delivery impact on Production Costs.

A. System delivery is the amount of treated water that the Company's treatment plants produce and is delivered to NJAWC's network of water mains. Water sales as well as other factors impact the amount of water delivered and therefore the amount of water that needs to be purchased or produced by the plants. This directly impacts the expenses associated with treating and distributing that water. Accordingly, the Company's power, chemical, and waste disposal costs were adjusted to reflect the same level of water sales used in its pro forma revenue adjustments. Thus, if pro forma system delivery is adjusted, either up or down, during this proceeding, the pro forma expense will be adjusted accordingly. Company witness Charles B. Rea supports the Company's pro forma revenue adjustments, among other items in his Direct Testimony.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**16. Q. How did the Company prepare the pro forma expense for Production Costs?**

A. For purchased water, which includes only water diversion fees (as discussed below), the Company used the June Three-Year Average to establish the pro forma expense. For power, chemicals and waste disposal expenses, the Company annualized actual expenses for the twelve-month period ended June 30, 2021, to account for changes in contract pricing, tariff increases, or Company experience based on the June Three-Year Average to develop the pro forma expense. To calculate the Company's expense, a cost per thousand gallons of water was established and applied to the pro forma system delivery to arrive at the total pro forma power, chemical and waste disposal expense.

17. Q. Please describe the types of expenses that are included in Purchased Water costs as shown on Exhibit P-2, Schedule 6, line 2.

A. The costs in this line item include: 1) the water purchased by the Company from third parties; and 2) the Company's expenses for water diversion fees. In this case as well as other previous base rate cases, the Company has excluded all third party purchased water costs as these costs are recovered through the PWAC. The Company has removed these costs since 2007 per Order dated April 2, 2007, in BPU Docket No. WR06030257, which required that all purchased water costs be removed from base rates and recovered through the PWAC. The pro forma expense reflected in Exhibit P-2, Schedule 6, line 2 represents the pro forma expense related only to NJAWC's water diversion fees, which are levied by the State of New Jersey for processing, monitoring, administering and enforcing the water supply allocation

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 program. They also include Delaware River Basin Authority diversion permit fees
2 for water withdrawal. The water diversion fees expense proposed in this case is
3 based on the June Three-Year Average.

4 **18. Q. Please explain the components of purchased power costs.**

5 A. The purchased power costs category includes electricity, natural gas, and diesel
6 expenses (collectively, "Power"), purchased for treating, pumping, and delivering
7 water through over 500 of NJAWC's production and distribution facilities, as well
8 as the collection and treatment of wastewater. The Company contracts with third
9 party suppliers for its electric and gas supplies. The Company's current contract
10 vendor for electric supply is Constellation Power. The delivery of the electric
11 supply contracted with Constellation Power is provided by each facility's local
12 distribution company ("LDC"). Power expense also includes annual costs
13 associated with the Zero Emission Certificate ("ZEC") program, which became
14 effective in April 2019 to maintain the State's carbon-free nuclear fleet.

15 Gas supply contracts remain with Direct Energy. Gas delivery is provided locally
16 by Elizabethtown Gas Company, New Jersey Natural Gas Company, Public Service
17 Electric and Gas, and South Jersey Gas Company.

18

NEW JERSEY-AMERICAN WATER COMPANY, INC.**19. Q. Please explain the Company's adjustments to power expense.**

A. The Company made several adjustments to power expense. The Company annualized the Test Year rates and pricing for certain suppliers and LDCs.³ Additionally, the Company made two reductions to the pro forma power expenses. The first reduction reflects credits that the Company expects to receive from the New Jersey Clean Energy Program for demonstrating efficient energy usage. The credit adjustment is based on the Company's June Three-Year Average. The second reduction reflects rebates from NRG Curtailment Solutions which manages our participation in the demand response market. The Company will receive rebates in exchange for reducing load during peak times. The proposed credits in this petition are also based on a June Three-Year Average. Total credits and rebates reflected in this case total \$496,186.

20. Q. Please explain how the pro forma chemical expense was calculated.

A. Pro forma chemical expense was calculated by modifying the June Three-Year Average usage level for current production methods (*e.g.*, the addition or elimination of certain chemicals) and multiplying the usage levels by the price of the relevant chemicals. The chemical prices are based on the contracted prices for 2022, then increased for the three-year average trend analysis (based on calendar

³ The Company made the following adjustments to its pro forma expense for Production Costs to reflect tariff increases: 1) 3.6% due to Atlantic City Electric Company rate increase approved in July 2021 in BPU Docket No. ER20120746; 2) 17% due to Jersey Central Power & Light's rate increase approved in April 2021 in BPU Docket ER20020146; 3) 11.4% due to New Jersey Natural Gas Company's rate increase approved in November 2021 in BPU Docket GR21030679; 4) 7.7% due to Rockland Electric Company's rate increase approved in December 2021 in BPU Docket No. ER21050823; and 5) 3% due to South Jersey Gas Company's rate increase approved in September 2020 in BPU Docket No. GR20030243.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 years 2020, 2021 and 2022) of annual price changes to bring the 2022 prices to
2 March 2023 levels. The Company will update chemical prices at the time of the
3 9&3 and 12&0 updates to reflect the latest known prices.

4 **21. Q. What are the major exceptions to using the June Three-Year Average quantity**
5 **for this calculation?**

6 A. A major exception to using the June Three-Year Average would be a change in the
7 type of chemicals used at a particular location. Several changes involve
8 adjustments to quantities based on current usage trends and the switching and
9 discontinuance of various chemicals. In many instances, these chemical changes
10 are driven by changes in water quality regulations and source water quality. Due
11 to increased water quality regulations, which include new and revised limits for
12 both raw and finished water, and for emerging compounds, the pro forma expense
13 reflects such changes in the use of chemicals. Please see the Direct Testimony of
14 Company witness Donald Shields for further discussion on this matter.

15 **22. Q. What are the different types of waste disposal costs?**

16 A. Waste disposal expense includes the costs related to the processing and disposal of
17 sludge, solids and residuals at the Company's water and wastewater treatment
18 plants, as well as hauling, permitting, and sampling expenses in its water and
19 wastewater operations. Additionally, waste disposal includes charges from
20 municipalities and authorities for the treatment and release of waste from the
21 Company's collection system sent to their treatment plants. However, waste
22 disposal costs for wastewater associated with Ocean City Sewer, Lakewood Sewer

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 and Adelphia Sewer are recovered by the Company through its PSTAC and thus,
2 are not included in pro forma expenses.

3 **23. Q. Please explain the costs for waste disposal related to water operations.**

4 A. The Company's waste disposal expense is based on different methods for
5 processing water treatment waste at various sites: 1) de-watering and pressing,
6 blending, and hauled offsite; 2) storing sludge for future transportation to a local
7 facility; 3) discharging residuals directly into the local sewer system; 4) wet
8 hauling; and 5) de-watering and pressing, blending, and sold as residential topsoil.
9 Additionally, basin or lagoon sludge removal takes place approximately annually
10 or every fall and spring depending on the residual build-up. All these various
11 methods are contracted to third parties. Waste disposal expense is based on the
12 volume of tons or gallons removed and hauled to a disposal site.

13 In NJAWC's Central Operations, certain location residuals are de-watered and
14 pressed but instead of being hauled to a landfill for disposal, they are combined
15 with subsoil in a 50/50 ratio by a vendor and sold as residential topsoil (known as
16 "beneficial reuse"). This is an environmentally-friendly process producing
17 beneficial reuse which provides an alternative for the Company to dispose of the
18 residuals and reduces costs for customers.

19 **24. Q. Please explain the costs for waste disposal related to the Company's**
20 **wastewater operations.**

21 A. The wastewater waste disposal expenses are for handling and disposing, including
22 hauling and permitting in the statewide sewer operation, the Pottersville operation,

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 and the Elk Township operation. Additionally, there are also charges for dumpster
2 hauling at the Hawk Point, Homestead, Morris Chase and Beacon Hill locations.

3 **Compensation and Compensation-Related Expense**

4 **25. Q. Please describe total compensation expense at New Jersey-American Water.**

5 A. NJAWC's compensation and compensation-related expenses are for employees
6 who support the operations of NJAWC exclusively. Compensation expense is
7 based on the number of full- and part-time employees, which translates into a
8 number that equates to full-time equivalent employees ("FTEs"). There are three
9 classifications of NJAWC employees: union hourly employees, non-union hourly
10 employees, and exempt employees. Union and non-union hourly employees
11 receive base pay and overtime pay (and in some cases, shift premiums and meals),
12 and are eligible for performance pay. Exempt employees receive base pay and are
13 eligible for performance pay. Compensation and compensation-related costs
14 include:

- 15 i. Salaries and Wages
 - 16 a. Base Pay
 - 17 b. Overtime
 - 18 c. Shift Premiums and Meals
 - 19
 - 20 d. Performance Pay
- 21 ii. Payroll Taxes
- 22 iii. Pension
- 23 iv. Group Insurance and Other Post-Retirement Employee Benefits
- 24 ("OPEBs")
- 25

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 v. Other Benefits, including:

- 2 a. 401k
- 3 b. Defined Contribution Plan (“DCP”)
- 4 c. Retiree Medical
- 5 d. Employee Stock Purchase Plan (“ESPP”)
- 6 e. Miscellaneous

7 NJAWC’s proposed compensation and compensation-related pro forma expense is

8 reflected in Exhibit P-2, Schedule 6, lines 6 - 9.

9 **26. Q. Please describe the overall approach to calculating compensation and**

10 **compensation related expenses.**

11 A. As discussed by Company Witness Shroba, the Company has identified 898.9 FTEs

12 as the appropriate staffing level for the Company to continue to provide safe and

13 reliable service to NJAWC’s customers. The Company recognizes, however, that

14 it may not have all positions filled at all times due to employee turnover that the

15 Company experiences in the normal course of business. Thus, for purposes of this

16 filing, the Company has reduced its compensation expense by applying a vacancy

17 rate of 3.7% which reduces the number of FTEs by 33.3. The vacancy rate was

18 calculated using the December Three-Year Average which was used to exclude the

19 impacts from COVID-19, as discussed above. At this time, the gross amount for

20 each of the compensation components was calculated using 898.9 as the FTE count.

21 From that, the Company aggregated the compensation amounts and made two

22 adjustments. The first adjustment was to reduce overall compensation by the

23 vacancy rate of 3.7%, as mentioned above. The second adjustment was to deduct

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 the portion of gross compensation charged to capital with the ratio of 45.24%, as
2 set forth in Table 1 below.

3 **27. Q. Please describe how the capitalization ratios in Table 1 were calculated.**

4 A. The Company calculated a capitalization rate for each category of compensation
5 and compensation-related expenses based on the same methodology from the
6 Company's last rate case. To calculate the capitalization ratios by expense
7 category, the Company used three years of actual capital costs divided by the
8 associated gross costs for the June Three-Year Average period. The resulting
9 capital ratios used in this filing are provided in Table 1 below:

10 **Table 1: Capitalization Ratios**

Expense Category	Workpaper Reference	3-Yr Average Capital Ratio
Compensation	Schedule 6-6	45.24%
Pension	Schedule 6-7	45.55%
Group Insurance	Schedule 6-8	42.79%
Other Post-Retirement Employee Benefits (OPEB)	Schedule 6-8	51.83%
401K	Schedule 6-9	44.13%
Defined Contribution Plan (DCP)	Schedule 6-9	41.00%
Retiree Healthcare (VEBA)	Schedule 6-9	35.98%
Transportation	Schedule 6-12	46.76%
Workers Compensation	Schedule 6-16	45.11%

11 **28. Q. Please describe how the various components of pro forma Salaries and Wages**
12 **were calculated.**

13 A. Salaries and Wages expense is composed of four components: 1) base pay;
14 2) overtime expense; 3) shift premiums and meal compensation required by union

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1 contract; and 4) short- and long-term performance pay for eligible employees. Each
2 component is discussed in greater detail below.

3 Base Pay is the cost related to regular time hours for all employees. To calculate
4 base pay and consistent with the Company's approach in its last rate case, the Post-
5 Test Year hourly rate was multiplied by 1) 2,088 regular hours for all non-union
6 and union hourly employee groups; and 2) 2,080 for all non-union exempt
7 employee groups. For union employees, the Post-Test Year hourly rate was based
8 on the collective bargaining agreement wage rates and effective dates through the
9 end of the Post-Test Year multiplied by 2,088 hours to establish an annual
10 compensation expense by position. For non-union hourly and exempt employees,
11 the Company for pro forma purposes increased the actual 2021 hourly wage rate to
12 account for the annual merit-based wage increase effective in March of each year.

13 Overtime represents the costs associated with non-regular time hours worked by
14 the Company's hourly employees. Overtime was calculated using a June
15 Three-Year Average of actual overtime hours multiplied by a Post-Test Year
16 average pro forma wage rate.

17 Shift Premiums and Meals represents the shift differential paid to union employees
18 and meals paid when a union employee works beyond their normal hours. To
19 determine pro forma Shift Premiums and Meals expense, a June Three-Year
20 Average of each was calculated.

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1 Performance Pay represents the short- and long-term performance compensation
2 for employees paid under the Company's Annual Performance Plan ("APP") for all
3 employees, and Long-Term Performance Plan ("LTPP") paid for eligible
4 employees, respectively. Performance pay was calculated on a position-by-
5 position basis and was based on each position's target percent for both APP and
6 LTPP. The target percent was multiplied by each eligible employee's Post-Test
7 Year base pay to determine the APP and LTPP cost. Company Witnesses Shroba
8 and Mustich support the performance pay program in their direct testimonies.

9 **29. Q. Please describe the Company's request for payroll taxes.**

10 A. NJAWC is seeking recovery for its payroll tax pro forma expense as reflected in
11 Exhibit P-2, Schedule 10, line 4.

12 **30. Q. What do Payroll Taxes represent?**

13 A. Payroll taxes are directly associated with salaries and wages and represent the
14 federal and state taxes imposed on the Company to be paid based on the employee's
15 wages. Payroll taxes include the Federal Insurance Contributions Act, which is
16 divided into two pieces: Old Age and Survivors & Disability Insurance (commonly
17 known as "FICA"), and Hospital Insurance (commonly known as "FICA
18 Medicare"). Payroll taxes must also be paid for Federal Unemployment Tax
19 ("FUTA") and State Unemployment Tax ("SUTA").

20 **31. Q. How was Payroll Tax expense calculated?**

21 A. Each of the four taxes described above (*i.e.*, FICA, FICA Medicare, FUTA and
22 SUTA) were calculated using the current tax rate. Additionally, the June

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1 Three-Year Average increase for the FICA wage limit was applied to the 2021
2 FICA wage limit to estimate the pro forma FICA wage limit.

3 Payroll Taxes are applied to all components of salaries and wages. Base pay and
4 performance pay are calculated by applying the tax rates on a position-by-position
5 basis. Overtime, shift premiums and meals were calculated by applying the tax
6 rates to the gross costs. This gross payroll tax expense was further reduced to
7 account for the 3.7% vacancy rate. Finally, an adjustment was made to deduct the
8 portion of payroll taxes charged to capital projects which is 45.24% (*i.e.*, the
9 capitalization ratio).

10 **32. Q. Please describe the Company's Pension expense.**

11 A. Certain Company employees are eligible for a defined benefit plan/pension benefits
12 upon their retirement. This includes non-union employees hired before January 1,
13 2006, and union employees hired before January 1, 2001.

14 NJAWC's resulting annual pension expense has two components. The first
15 component is the annual pension cost recognition. NJAWC records pension
16 expense according to Financial Accounting Standards Board ("FASB") Accounting
17 Standards Codification Topic 715 or "ASC 715" (formerly Statement of Financial
18 Standards 106). This results in a certain amount of annual cost which is accrued
19 throughout the year. The Company used the 2021 ASC 715 amounts, as provided
20 by Towers Watson, as the basis for the service and non-service costs for pension
21 expense in this application. The service cost portion was reduced by the June
22 Three-Year Average capital ratio of 45.55%.

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1 The second component of pension expense relates to the amortization of a deferred
2 pension asset due to the conversion from contribution accounting (often called
3 “ERISA” accounting) to accrual accounting (formerly FAS 87 accounting). This
4 portion of pension expense continues to be amortized at the levels authorized in
5 BPU Docket No. WR17090985, which are set to expire in 2024.

6 **33. Q. What costs are included in Group Insurance expense as shown on Schedule 6?**

7 A. The costs on this line include both Group Insurance and OPEB expenses.

8 **34. Q. What does Group Insurance expense represent?**

9 A. Group Insurance represents the Company’s costs for providing employees with
10 health, dental and vision coverage, as well as basic life, short- and long-term
11 disability, and accidental death and dismemberment insurances. The Company’s
12 cost for health, dental, and vision plans are partially offset by employee
13 contributions. The costs and contributions vary by plan type.

14 **35. Q. How did you calculate the Company’s Group Insurance expense?**

15 A. The Company calculated Group Insurance expense on a position-by-position basis,
16 according to actual employee plan selections, current plan costs and employee
17 contributions, resulting in a gross cost. To bring the Group Insurance plan costs to
18 the March 2023 level, a three-year average trend analysis (based on calendar years
19 2020, 2021 and 2022) of the changes in the annual plan costs was applied to the
20 2022 prices. The gross pro forma Group Insurance expense was then reduced for
21 the 3.7% level of vacancy and the portion of Group Insurance charged to capital
22 (*i.e.*, 42.79%).

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1 **36. Q. What does OPEB expense represent?**

2 A. OPEB expense represents the accrual cost recognized under ASC 715. Depending
3 on an employee's start date, certain New Jersey-American Water employees are
4 eligible for OPEB upon their retirement. This includes non-union employees hired
5 before January 1, 2006, and union employees hired before January 1, 2001.

6 **37. Q. How did the Company calculate OPEB expense?**

7 A. OPEB expense is based on the Company's 2021 ASC 715 service and non-service
8 cost amounts, provided by Towers Watson. A 51.83% adjustment was made to the
9 service cost component to remove the portion of OPEB expense that will be charged
10 to capital.

11 **38. Q. Please describe the components of Other Benefits expense and how each was**
12 **calculated.**

13 A. Other Benefits expense includes programs such as 401k, DCP, Retiree Medical,
14 ESPP and Miscellaneous Benefits. These costs, except for Miscellaneous Benefits
15 were calculated on a position-by-position basis. The calculations are described
16 below.

17 401k - New Jersey-American Water incurs 401k expense when it matches
18 employee contributions to 401k retirement accounts. For union employees hired
19 before January 1, 2001, and non-union employees hired before January 1, 2006, the
20 Company matches 50% of the first 5% of the employee's contribution (for a
21 maximum match of 2.5%). For the remaining employees, there are two other plans:
22 1) the Company matches 100% of the first 3% and 50% of the next 2% of the

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1 employee's contribution (for a maximum match of 4%); or 2) the Company
2 matches 60% of the first 6% of the employee's contribution (for a maximum match
3 of 3.60%). To compute the gross pro forma 401k costs, the base pay for each
4 participating employee was multiplied by such employee's current match election
5 for their eligible plan. The Company then adjusted the gross pro forma 401k costs
6 by applying a reduction for vacancy level of 3.7% and the 44.13% attributed to
7 capital.

8 DCP - The DCP is a Company-funded retirement savings program for employees
9 not eligible for the defined benefit pension program. Under the DCP program, the
10 Company contributes 5.25% of an employee's Base Pay into a retirement account.
11 DCP expense was calculated on a position-by-position basis. To calculate the DCP
12 expense, the Company multiplied 5.25% by the employee's pro forma Base Pay.
13 The Company then made two adjustments to account for the 3.7% vacancy level
14 and the 41.00% attributed to capital.

15 Retiree Medical - Union employees who are not eligible for OPEBs are entitled
16 to Company-provided retiree medical benefits. The Company contributes \$600 a
17 year per eligible employee to a retiree plan funded through a trust referred to as the
18 Voluntary Employee Benefits Association ("VEBA"). The Company multiplies its
19 current VEBA-eligible number of employees by \$600. Next, the Company applies
20 a 3.7% vacancy level and a deduction of 35.98% to eliminate the portion of VEBA
21 charged to capital.

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1 ESPP - ESPP expense is the Company-funded 15% discount of American Water
2 stock purchases made through payroll deductions by enrolled employees. The pro
3 forma expense was calculated by multiplying each employee's pro forma base pay
4 by their individual contribution amount and applying the 15% Company discount.

5 Miscellaneous Benefits - Miscellaneous benefits refer to various benefits offered to
6 employees such as tuition aid, safety awards and training. Pro forma Miscellaneous
7 Benefits were calculated using a June Three-Year Average.

8 Service Company

9 **39. Q. What services does NJAWC obtain from the Service Company?**

10 A. The services provided by the Service Company include, among others, customer
11 service, water quality testing, innovation and environmental stewardship, human
12 resources, communications, information technology and cyber security, finance,
13 accounting, payroll, tax, legal, engineering, accounts payable, supply chain, and
14 risk management service (collectively, the "Support Services"). The Service
15 Company operates customer service centers in Alton, Illinois and Pensacola,
16 Florida that handle customer calls, billing, collection activities for NJAWC and its
17 public utility affiliates, customer inquiries and correspondence, and service order
18 requests, as well as two Field Resource Coordination Centers responsible for
19 tracking and dispatching service orders for our field representatives and distribution
20 crews and a central laboratory located in Belleville, Illinois.

21

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40. Q. How are Support Services charged to NJAWC?

A. Support Services are charged to NJAWC in two ways: 1) directly to NJAWC at 100% of the cost; or 2) a percentage allocation based on factors such as a per customer allocation across the American Water regulated subsidiaries. Company Witness Patrick Baryenbruch's testimony contains an analysis which demonstrates the reasonableness of the Service Company costs.

41. Q. How were the Support Services calculated for the Post-Test Year?

A. NJAWC's proposed Support Services pro forma expense is reflected in Exhibit P-2, Schedule 6, line 10 which incorporates the annualization of Test-Year expenses as well as known and measurable changes through the Post-Test Year. For example, the Alton, Illinois service center will close in July of 2022 when the building lease expires, and the savings associated with closing that facility are incorporated in the Service Company expense in this case.⁴ Another example includes adjustments to the compensation and related expense portion of Support Services. The Company annualized a base pay increase effective March of each year, then the three-year average merit increase (based on 2019, 2020 and 2021) of 2.88% was applied to non-union employees. For union employees, the actual contract rate increases were applied to derive the pro forma compensation and related expense levels. Lastly, the Company removed certain expenses or one-time costs from its requested pro forma expense, including but not limited to charitable contributions, injuries and damages, and penalties.

⁴ All employees that operate from the Alton facility will continue to work remotely or at another Company location while performing the same functions as they do today

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Rental Expense

42. Q. Please explain NJAWC's rent expense.

A. Rental expense includes rental fees for property, equipment, and other rental costs. Pro forma rental expense contains adjustments for new and terminated leases, as well as known and measurable increases to existing lease contracts. NJAWC's proposed rental pro forma expense is reflected in Exhibit P-2, Schedule 6 – line 11.

43. Q. How was the pro forma rental expense developed?

A. Each rent expense was categorized as property, equipment, or miscellaneous. Through a review of leases/contracts for pricing changes, expiration, or new items, rental charges were analyzed to determine if such costs qualified for the FASB issued Accounting Standards Update 2016-02 – Leases (Topic 842) ("ASC 842") or a non-right-of-use asset. This information was used to develop pro forma expense by category and vendor.

44. Q. Please explain the accounting changes applicable to lease expense.

A. In 2016, FASB issued ASC 842, with an effective date in 2019. FASB issued this update to increase transparency and comparability among entities by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. Under ASC 842, leases are accounted for based on the FASB's "right of use model." This model reasons that a lessee has a financial obligation to make lease payments to the lessor for its right to use the underlying asset during the lease term. Lessees are required to classify leases as either operating or financing.

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1 **45. Q. What impact does ASC 842 have on the pro forma rental expense?**

2 A. The income statement presentation and expense recognition pattern, for leases that
3 qualify as an operating lease under the standard, is such that a single lease cost is
4 typically recognized on a straight-line basis.

5 **46. Q. Please identify leases in the pro forma expense that qualify as an operating**
6 **lease under ASC 842.**

7 A. The Nero Equipment Co., Inc. property lease qualifies as an operating lease under
8 ASC 842. Pro forma costs were derived from a single lease cost recognized on a
9 straight-line basis. The Canon Solutions, Quadiant Leasing USA, Airgas, and
10 Linde LLC equipment leases qualify as operating leases under ASC 842. Pro
11 forma costs were also derived from a single lease cost recognized on a straight-line
12 basis.

13 **47. Q. Are there any other material adjustments you wish to explain?**

14 A. Yes. The Company intends to improve existing property, which is planned to occur
15 by November 2022, that will eliminate the Tinton Industrial Park LLC lease.
16 Additionally, the Company has begun construction to build a facility for its
17 Southwest Operations, which is planned to be complete by the end of 2022 and will
18 eliminate the VCC Oak Avenue lease. These leases have been removed from the
19 pro forma Rent Expense.

20 **Transportation**

21 **48. Q. Please explain the computation of the Company's pro forma transportation**
22 **expense.**

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1 A. Transportation expense includes the costs associated with operating the Company's
2 fleet. Transportation costs include titling, registration, and fleet administration
3 service fees, as well as the fuel, maintenance and repairs for the fleet. For pro forma
4 adjustment purposes, a portion of transportation expense was capitalized based on
5 a capital ratio of 46.76%. NJAWC's proposed transportation pro forma expense is
6 reflected in Exhibit P-2, Schedule 6 - line 12, column 10.

7 **49. Q. Was there a pro forma adjustment that specifically relates to the cost of**
8 **gasoline used to operate the fleet?**

9 A. Yes. The Company proposes an increase for the cost of gasoline due to information
10 obtained from the Energy Information Administration, which contains the official
11 energy statistics of the U.S. Government.⁵ The Company used the East Coast
12 (PADD 1) for the Weekly East Coast All Grades All Formulations Retail Gasoline
13 Prices (dollar per gallon) as of November 29, 2021 over the average annual price
14 for the twelve months ended June 30, 2021 to obtain an increase of \$0.937 per
15 gallon, or 37.70%.

16 **50. Q. How was the fleet maintenance expense calculated for pro forma purposes?**

17 A. Pro forma maintenance expense is based on the June Three-Year Average of
18 maintenance expense.

⁵ See <https://www.eia.gov/petroleum/gasdiesel/>

NEW JERSEY-AMERICAN WATER COMPANY, INC.**Uncollectible Expense and Customer Accounting**

51. Q. How was the Company's pro forma adjustment to uncollectible expense calculated?

A. NJAWC seeks recovery for its uncollectible pro forma expense as reflected in Exhibit P-2, Schedule 6, line 13. The pro forma uncollectible expense was developed using the December Three-Year Average of net write-offs to billed water and sewer revenues. The December Three-Year Average is 0.41%, which is a reduction from 0.43% used in the Company's last base rate case. The December Three-Year Average is applied to total proposed rate revenues to obtain the full amount of Post-Test Year pro forma uncollectible expense. The December Three-Year Average is used to nullify the effect of the COVID-19 pandemic on the most recent uncollectible data as discussed above. The calculation for this adjustment can be found in Exhibit P-2, Schedule 7.

52. Q. Please describe the types of costs included in customer accounting expenses.

A. Customer accounting expense collectively includes items related to customer invoice mailings, bill inserts, collection notices, third party collection agency fees, lock box fees for payment collection, mailing of water quality reports, etc. NJAWC is seeking recovery for its Customer Accounting pro forma expense as reflected in Exhibit P-2, Schedule 6 - line 14.

53. Q. How did the Company calculate its pro forma adjustment to Customer Accounting expense?

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1 A. To calculate the expense adjustment, except for postage and forms as discussed
2 below, the Company utilized the actual expense for the twelve-month period ended
3 June 30, 2021, then inflated it by the CPI of 3.0% which represents inflation through
4 June 30, 2022, and then again by inflation of 2.25% representing nine months of
5 inflation (3.0% CPI/12*9) through March of 2023.

6 **54. Q. Please explain why the application of inflation is appropriate for the Customer**
7 **Accounting expense (excluding postage and forms) pro forma adjustment.**

8 A. The categories of expenses, such as shipping/delivery services, included in these
9 accounts are included in the consumer price index of services for urban consumers
10 which has reflected an increase over the actual expenses. Therefore, the Company
11 believes it to be appropriate to annualize an increase for the Test Year and
12 additionally apply the CPI in the Post-Test Year.

13 **55. Q. How was the Company's pro forma adjustment to postage expense calculated?**

14 A. Postage is measured by the amount of presorted and non-presorted mail that is
15 tracked as it runs through the postage meter each day. The quantities of each
16 category of mailing (dunning and correspondence was based on the calendar 2019
17 to remove any impacts associated with the moratorium) were multiplied by the unit
18 price for that category. No prospective change was made for future rates to be
19 charged by the U.S. Postal Service since no rate increases have been formally
20 announced. In the event the Postal Rate Commission increases rates, the Company
21 will update accordingly. Additionally, the Company adjusted the pro forma
22 expense to reflect customer growth through the Post-Test Year.

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1 **56. Q. How does the Company derive the expense for bill forms?**

2 A. The expense for bill forms is based on the invoices received from the vendor,
3 Transcentra, Inc., based on the percentage of printed materials shipped to addresses
4 within the same state.

5 **57. Q. Is the Company including credit card fees as a cost in this application?**

6 A. Yes. Currently, customers making payments using a credit card, pre-paid debit card
7 or a one-time e-check, pay \$1.95 per transaction. The Company has a contracted
8 rate with a third-party vendor for processing the transactions, which the vendor bills
9 directly to the customer. NJAWC is proposing to provide a no-fee option to
10 customers who make a payment using these methods. Under this proposal, the
11 Company would pay for the third-party vendor fees which would be recovered
12 through the Company's base rates.

13 **58. Q. Do other utility companies in New Jersey offer customers the option of paying**
14 **with a credit card without a fee?**

15 A. Utilities have taken a varied approach. Some, like NJAWC, use vendors that charge
16 a fee and others offer customers the credit card payment option free of charge if the
17 customer enrolls in automatic payment via credit card or for residential only
18 customers.

19 **59. Q. How does the Company's proposal benefit customers?**

20 A. Providing customers with another payment option without a fee will ease the
21 payment process for customers, incentivize paperless billing, and increase customer
22 satisfaction. It also supports the Company's efforts to encourage customers to use

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1 online payment platforms. In addition to being a “green alternative” to submitting
2 payments by mail, the Company anticipates that customer satisfaction will improve
3 with this option.⁶

4 **Regulatory Expense**

5 **60. Q. Please describe the Company’s request for Regulatory Expense.**

6 A. NJAWC is seeking recovery for its regulatory pro forma expense as reflected in
7 Exhibit P-2, Schedule 6 - line 15. The detailed calculation for this adjustment can
8 be found in the Company’s workpaper, Schedule 6-15. The Company will update
9 the estimate throughout this proceeding. Per Board precedent, one half of this
10 expense is amortized over a 24-month period. In the Company’s last base case, a
11 36-month period was used, and those costs will have approximately 12-months
12 remaining when the current base case concludes. Therefore, the remaining
13 regulatory costs associated from the Company’s last base case are also included in
14 this case. The remaining unamortized balances of these regulatory costs will also
15 be amortized over a 24-month period. Additionally, the Company is continuing to
16 amortize the expense associated with the 2019 BPU Management Audit Order
17 issued in BPU Docket No. WA18080849, amortized over a 10-year or 120-month
18 period, the expected interval between management audits.

19

⁶ The 2022 J.D. Power & Associates Water Utility Residential Customer Satisfaction Study found that customers who were given the option of paying by credit card without a fee were more satisfied than those who are charged a credit card fee. The study typically recommends removing the fee to improve customer satisfaction and also suggests “Fee-Free Card Payment” options as a “Best Practice.”

NEW JERSEY-AMERICAN WATER COMPANY, INC.**61. Q. What type of costs are included in regulatory expense?**

A. Regulatory expense includes the costs associated with the Company's consultants, outside legal counsel, and other support associated with this proceeding. Additionally, customer communications, mailings, legal notices, administrative fees, and miscellaneous expenses associated with this application proceeding are also included in regulatory expense.

Insurance Other Than Group**62. Q. Please explain the Company's Insurance Other Than Group expense.**

A. New Jersey-American Water incurs costs related to several types of insurance coverage, including Auto Liability, General Liability, Worker's Compensation and Property. The insurance costs are collectively known as Insurance Other Than Group ("IOTG"). The Company's General Liability, Auto Liability and Workers Compensation premiums are based upon the combination of loss experience (50%) and exposure (50% estimated annual revenue and payroll). Exposure for Auto Liability is based on estimated annual revenues, payroll, and the number of vehicles. Consistent with the underwriting practices of the commercial insurance market, the loss experience is based upon a five-year average of historical loss experience. A five-year average is used to normalize any anomalous years of claims experience.

Property insurance is based on the total insured asset values for New Jersey-American Water as a percentage of total American Water insured asset values. This is also consistent with commercial insurance market underwriting practices. Other

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1 insurances include the Company's directors/officer's liability policies, employed
2 lawyers, pollution, consultation fee, executive risk, information technology
3 policies, aviation of unmanned vehicles, aircraft hull, flood and environmental
4 policies. NJAWC is seeking recovery for its IOTG pro forma expense as reflected
5 in Exhibit P-2, Schedule 6 - line 16.

6 **63. Q. Please explain how the Company quantified its IOTG expense.**

7 A. The majority of the Company's IOTG policies renew annually. The Company has
8 prepared the pro forma expense with the most recent premiums for the policies.
9 For those policies that are scheduled to renew in 2022, the Company will update
10 with the actual 2022 premiums as that information becomes available as part of our
11 9&3 and 12&0 updates.

12 **64. Q. Have you made any other adjustments to compute pro forma expense for**
13 **IOTG?**

14 A. Yes. The Company made additional adjustments that reflect a 10% increase
15 projected by the Company's broker based on the insurance program and property
16 insurance markets to derive the Post-Test Year expense. Specifically, first, we
17 increased the Property and Excess Liability premiums by 10% over the current
18 premium to project anticipated 2022 premiums. As noted above, the Company will
19 update with actual 2022 premium information throughout the Test Year. The
20 projected 10% increase will also be applied to bring the expense to Post-Test Year
21 levels. Second, we applied an adjustment to include the incremental costs
22 associated with the Company's recent acquisitions (*i.e.*, EHC and BB). Finally, the

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1 Workers Compensation premium was capitalized based on the June Three-Year
2 Average capital ratio of 45.11% as set forth in Table 1 above.

3 **Engineered Coating of Steel Structures**

4 **65. Q. Please explain the Company's Engineered Coating of Steel Structures expense.**

5 A. The expense for engineered coating of steel structures reflects the normalized
6 annual cost of coating the Company's numerous tanks and standpipes, as explained
7 in Mr. Shields's testimony. The Company's steel and concrete structures store
8 potable water for fire protection, peak demand equalization and emergency storage
9 throughout the Company's system. As Mr. Shields explains, the Company has
10 prioritized the tanks that require engineered coating. The Company's pro forma
11 expense is based on planned tank rehabilitation projects at a total cost of \$48.6
12 million, or \$6.9 million each year over seven years. NJAWC seeks recovery for its
13 Engineered Coating of Steel Structures pro forma expense as reflected in Exhibit
14 P-2, Schedule 6 - line 17.

15 **Property Sales**

16 **66. Q. Has the Company included in this case any gains from the sale of properties**
17 **that will be shared with the customers?**

18 A. Yes. The Company continues to amortize the recognized gains from its last base
19 case of its former Voorhees location as per BPU Docket No. WM19070825. In
20 accordance with the Order, the gain will be shared 50/50 between customers and
21 the Company. Therefore, the Company proposes to amortize the remaining
22 unamortized balance over a 24-month period to return to customers 50% of the
23 gain. Additionally, the Company also sold a parcel at Aldrich Drive and Lake

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1 Drive, which resulted in a gain of \$74,723. The amount of \$37,362 or 50% of the
2 gain will be amortized over a 24-month period. NJAWC seeks to return the gain
3 to customers as a reduction to operating expense as reflected on Exhibit P-2,
4 Schedule 6 - line 18.

5 **Other Operating Expense**

6 **67. Q. Please discuss Other Operating expenses.**

7 A. Other Operating Expenses, which is a grouping of over 155 small accounts, consist
8 of contracted services, building and maintenance supplies, telecommunication
9 expenses, office supplies and services, advertising and marketing, employee-
10 related expenses, miscellaneous, and maintenance expense. NJAWC seeks
11 recovery for its Other Operating pro forma expense as reflected in Exhibit P-2,
12 Schedule 6 – line 19.

13 **68. Q. How did the Company calculate its pro forma adjustment to Other Operating**
14 **Expenses?**

15 A. For the majority of the Other Operating expenses, the Company utilized the June
16 Three-Year Averages⁷ minus expenses relating to advertising, charitable
17 contributions, and community relations. Because these Other Operating expenses
18 are both too small to individually forecast and are included in the CPI-U, the
19 Company increased these expenses to reflect inflation by applying: 1) the CPI of

⁷ Specifically, the Company used the June Three-Year Average for all Other Operating expenses except for:
1) three expenses related to Markout Contract Services and Software Licenses & Maintenance where the
actual expense was determined to be more indicative of the future expenses than a three-year average; and
2) Low Income Program expense where the Company used actual expenses minus the Company's grant
contributions to the H2O Help to Others Program which provides financial assistance to qualifying water and
wastewater customers.

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1 3.0% which represents inflation through June 30, 2022; and 2) an inflation factor
2 of 2.25% to represent nine months of inflation through March 2023 (3.0%/12*9).

3 **Property Tax Expense**

4 **69. Q. Please explain the Company's Property Tax expense.**

5 A. Property Taxes are owed to the municipalities in which the Company owns real
6 property and buildings. Property taxes are assessed annually and paid quarterly.
7 These payments are recorded through the Company's balance sheet as pre-
8 payments and amortized monthly to expense. NJAWC seeks recovery for its
9 Property Tax pro forma expense as reflected in Exhibit P-2, Schedule 10 – line 3.

10 **70. Q. Please describe how the pro forma adjustment to Property Tax expense was**
11 **calculated.**

12 A. The pro forma property tax expense was calculated by annualizing the August 2021
13 quarterly payment amount. The Company then applied a June Three-Year Average
14 percentage of -0.25%, which was the year over year decrease in annual property tax
15 expense to account for anticipated reductions for the Post-Test Year period.
16 Additionally, adjustments were made to increase property taxes for property and
17 land that is expected to be purchased, as well as for the new southwest operation
18 center that is being constructed in Lawnside, New Jersey. Lastly, the Company
19 decreased the pro forma expense to remove the property taxes for certain tax
20 savings relating to appeals.

21

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1 **71. Q. Please explain the Company's revenue-based taxes.**

2 A. The Company pays state and municipal Gross Receipts and Franchise Excise Taxes
3 ("GRAFT") at a combined rate of approximately 14% on gross revenues, as well
4 as general assessment fees for the BPU Staff and Division of Rate Counsel based
5 on annual gross revenues. Additionally, the Company pays a water monitoring tax
6 of \$0.01 per thousand gallons for all its metered consumption less the amount sold
7 for resale customers. NJAWC seeks recovery for its revenue-based pro forma
8 expense as reflected in Exhibit P-2, Schedule 10 line 5 through line 7, and
9 Schedules 11 through Schedule 13.

10 **72. Q. Please explain the Company's request for Income Taxes.**

11 A. Exhibit P-2, Schedule 14 calculates pro forma current and deferred income
12 expenses under both present rates and proposed rates. Current Tax Expense is
13 calculated as pro forma Operating Revenues less pro forma Tax Deductions. The
14 tax deductions include a reduction for permanent, non-deductible items and an
15 increase for tax depreciation over book depreciation. Deferred Tax Expense is
16 equal to Tax Depreciation Over Book Depreciation times the statutory tax rate of
17 21%. Deferred Tax Expense was also adjusted for the following amortizations:
18 excess deferred tax liabilities under the Reverse South Georgia method, excess
19 deferred taxes associated with the Tax Cut and Jobs Act, deferred taxes associated
20 with investment tax credits, and excess flow through of income tax regulatory
21 assets.

22

NEW JERSEY-AMERICAN WATER COMPANY, INC.**II. COVID-19 REGULATORY ASSET****73. Q. Has the Board addressed the deferral of COVID-19 related costs for utilities?**

A. Yes. On July 2, 2020, the Board issued its Order Authorizing Establishment of a Regulatory Asset for Incremental COVID-19 Related Expenses which, in relevant part, authorized each of the State's regulated utilities to create a COVID-19 related regulatory asset by deferring their prudently incurred incremental costs related to COVID-19. Pursuant to the Board's order issued on September 14, 2021, in Docket No. AO20060471, the regulatory asset period is currently set to expire on December 31, 2022.⁸

74. Q. Please summarize the Company's incremental costs due to the COVID-19 public health emergency.

A. Since March 2020, the Company has experienced increased costs attributable to COVID-19, including increased uncollectible expense, incremental O&M expenses and costs related to financing activity to ensure adequate liquidity during the public health emergency as discussed in greater detail below.

In addition, through a series of regulatory and legislative actions beginning on March 9, 2020,⁹ a moratorium was enacted on service disconnections for unpaid bills.¹⁰ Late fees were also waived for non-residential customers. As a result, the

⁸ See Order, *In the Matter of the New Jersey Board of Public Utilities' Response to the COVID-19 Pandemic*, Docket No. AO20060471 (Sept. 14, 2021).

⁹ See Executive Order No. 190 (Mar. 9, 2020).

¹⁰ On June 14, 2021, Governor Murphy issued Executive Order 246 which declared that the moratorium will end as of June 30, 2021, subject to a "grace period" that will preclude utility service terminations through December 31, 2021.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 Company experienced uncollected revenues due to the suspension of late fees as a
2 result of the public health emergency.

3 Pursuant to the Board's order dated July 2, 2020 in Docket No. AO20060471,
4 NJAWC has been submitting quarterly reports with the Board regarding its
5 COVID-19 deferred costs.

6 **75. Q. How does the Company propose to recover its deferred costs associated with**
7 **the COVID-19 public health emergency?**

8 A. The Company has deferred COVID-19 related costs of \$14,825,245, net of savings
9 as of November 30, 2021. The Company has projected costs through December 31,
10 2021 of \$15,967,435 and seeks to recover this amount over a three-year period.
11 The annual amortization amounts to \$5,322,478 and will be updated with actuals
12 through December 31, 2021. Please see the pro forma amortization as reflected in
13 Exhibit P-2, Schedule 8, Line 5.

14 **Reconnection and Late Fees**

15 **76. Q. Is it reasonable to allow the Company to recover uncollected late and**
16 **reconnection fees?**

17 A. Yes. If not for the moratorium on disconnections for non-payment and late fees,
18 non-residential customers would have incurred late and reconnection fees under the
19 Company's Board-approved tariff. The Company notes that late fee and
20 reconnection fee revenues are a component of our current authorized revenue
21 requirement and therefore not allowing recovery would require higher base rates
22 and charges. The Company is only seeking to recover the late fees and

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 reconnection fees not collected because of the COVID-19 moratorium which
2 amount to \$1,065,106 and \$1,792, respectively, as of November 30, 2021.

3 **Uncollectible Expense**

4 **77. Q. Please discuss the Company's increased uncollectible expense during COVID-**
5 **19.**

6 A. The Company has experienced an increase in uncollectible expense during COVID-
7 19. Prior to COVID-19, uncollectible expense for the calendar years 2017 through
8 2019 averaged \$2,109,782. As of November 30, 2021, the Company's deferred
9 uncollectible expense is \$11,898,071.

10 **Direct Costs**

11 **78. Q. How has the Company determined the incremental expenses it has incurred**
12 **due to COVID-19?**

13 A. Specific tracking numbers were created to capture certain increased O&M expenses
14 related to the public health emergency, such as facility preparedness, personal
15 protective equipment, sanitizers, signage, rental equipment, enhanced cleaning in
16 areas where positive COVID-19 cases have been confirmed, etc. This ensures that
17 only incremental costs are included in the Company's deferral and that these costs
18 are not reflected in the accounts used to establish new rates in this proceeding.
19 These direct costs total¹¹ \$1,971,786 as of November 30, 2021.

¹¹ Direct costs include both the NJAWC and Service Company costs that would have been charged to NJAWC.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 The Company proposes to offset incremental expenses with the cost savings the
2 Company experienced due to decreased travel and conference costs during COVID-
3 19 which amount to \$1,444,440 as of November 30, 2021.¹²

4 **Liquidity Availability Costs**

5 **79. Q. Has the Company deferred any other costs relating to the COVID-19 public**
6 **health emergency for which it seeks recovery as part of this proceeding?**

7 A. Yes. On March 20, 2020, American Water Capital Corp. (“AWCC”) entered into
8 a \$750,000,000 364-day term loan credit facility (the “Term Loan”) and
9 immediately executed a \$500,000,000 draw to ensure adequate liquidity for its
10 regulated operating utilities by retaining that amount in cash. The Company
11 recorded a receivable of \$102,143,810 of the \$500,000,000 loan amount,
12 representing NJAWC’s share of total American Water regulated customers as of
13 March 31, 2020.

14 **80. Q. Regarding the Term Loan, what does NJAWC seek to recover in this**
15 **proceeding?**

16 A. The Company seeks to recover its allocated portion of the interest expense related
17 to the Term Loan, which was paid off effective March 19, 2021. The total principal
18 amount of the loan – \$500,000,000 – carried an interest rate of London Interbank
19 Offered Rate (“LIBOR”) plus 80 basis points, or approximately 1.752% for the first
20 six months of the loan and carried a rate ranging between approximately 0.918%
21 and 0.976% for the remaining months. The monthly interest was allocated based

¹² Travel and conference savings include both NJAWC expenses and Service Company costs that would have been charged to NJAWC.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 upon the Company's share of total American Water customers as of March 31,
2 2020. Total interest charges amounted to \$1,332,930 which have been deferred to
3 the COVID-19 regulatory asset account.

4 **81. Q. Why did American Water enter into the Term Loan?**

5 A. American Water determined that based on its operating cash flow needs, enhanced
6 liquidity in the amount of \$500 million was necessary in the event other sources of
7 financing, particularly commercial paper and AWCC's credit facility of \$2.25
8 billion, were not available at reasonable rates or in sufficient quantity to meet the
9 operating needs of the business. To put this figure into perspective, American
10 Water invests approximately \$1.6 billion annually in capital investments for its
11 regulated utilities. The execution of a term loan during this emergency period was
12 an approach utilized by other utilities and was viewed favorably by rating
13 agencies in 2020 to address the uncertainty and market risk.¹³

14 **82. Q. Why is the interest expense associated with the Term Loan appropriate for**
15 **deferral as a COVID-19 related expense?**

16 A. The enhanced liquidity obtained through this term loan was akin to an insurance
17 policy to protect the Company in the event the COVID-19 public health emergency
18 created an inability to access funds needed to continue to provide safe and reliable
19 service in New Jersey. The interest expense on the Term Loan is equivalent to

¹³ COVID-19: While Most of the U.S. Is Shut Down, Utilities are Open for Business (S&P Global, May 4, 2020).

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 insurance premiums (or to an availability fee), which are paid to mitigate risk and
2 are reasonable whether or not a claim is ever made.

3 **83. Q. Will the Company continue to defer COVID-19 related costs beyond**
4 **December 31, 2021?**

5 A. Yes. The Company's incremental COVID-19 related costs incurred after January
6 1, 2022 through the end of the COVID-19 deferral period (*i.e.*, December 2022)¹⁴
7 will continue to be deferred for recovery in the Company's next rate proceeding.

8 As discussed in greater detail below, the Company proposes to account for
9 variability in uncollectible expense through an Uncollectible Adjustment Clause
10 ("UAC"). Under the UAC, the Company proposes to defer its incremental
11 uncollectible expense incurred between January 1, 2022 through the time new base
12 rates are implemented for recovery in this base rate proceeding. Incremental
13 uncollectible expense incurred after new rates are implemented would be deferred
14 and reconciled through the subsequent UAC filing.

15 **III. UNCOLLECTIBLE ADJUSTMENT CLAUSE**

16 **84. Q. Why is the Company seeking a mechanism to address uncollectibles (or bad**
17 **debt) expense in this proceeding?**

18 A. The Company is seeking the UAC to address fluctuations in bad debt expense on a
19 going forward basis to protect both our customers and the Company. Consistent
20 with its prior base rate cases, the Company has included a pro forma level of

¹⁴ See Order, *In the Matter of the New Jersey Board of Public Utilities' Response to the COVID-19 Pandemic*, Docket No. AO20060471 (Sept. 14, 2021).

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 uncollectible expense within its proposed revenue requirement, using historical
2 write-off experience as the basis for the adjustment. In this case, pro forma
3 uncollectible or bad debt expense is based on the December Three-Year Average.
4 The average amounts for those three years were chosen to eliminate the uncertainty
5 in the current environment as it relates to uncollectibles. In addition, the exclusion
6 of 2020 from the calculation is due to the suspension of disconnections starting in
7 2020, which resulted in a level of net write-off activity for 2020 that is not
8 representative of the Company's historical or projected activity. Because of that
9 uncertainty, and with 2020 and 2021 not being representative of historical or
10 projected activity, the Company proposes the UAC to protect both customers and
11 the Company from unknown but expected fluctuations in this expense going
12 forward. The UAC will reconcile actual incurred uncollectible expense to the base
13 level established in this rate case, with any variance recovered from (or credited to)
14 customers over a subsequent period.

15 **85. Q. Please provide an example of how the UAC will operate, starting with the**
16 **initial filing.**

17 A. The UAC will be a historical mechanism, with any deviation from the authorized
18 base level for the prior twelve-month period included in the mechanism to be
19 collected (or credited) over the subsequent nine-month period. The initial filing
20 will represent more than a full year, dependent upon the effective date of base rates
21 in this proceeding. Based on the end of the anticipated suspension period in this
22 filing, we will assume November 1, 2022, as the effective date of new base rates.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 As such, the initial UAC filing would be made with the BPU on January 25, 2024.

2 The filing will reconcile actual uncollectible expense activity against the level
3 authorized in this proceeding for the period of November 1, 2022 through
4 December 31, 2023. Due to a period of more than one year of new base rates, the
5 authorized level of uncollectible expense will be prorated by month.

6 Once filed with the Board and after its 60 day review, the UAC would be
7 implemented no later than April 1, 2024, collecting the difference, or passing a
8 credit, between the actual and authorized costs for November 1, 2022, through
9 December 31, 2023, over a nine-month period (April 1, 2024, through December
10 31, 2024).

11 On January 25, 2025, the Company would make its second UAC filing, with rates
12 effective no later than April 1, 2025. This filing will include: 1) the difference
13 between the actual uncollectible expense activity for calendar year 2024 against the
14 level authorized, and 2) a true up of the actual amount collected from customers
15 versus the amount authorized in the first UAC filing, for the period November 1,
16 2022, through December 31, 2023.

17 **86. Q. Have any of NJAWC's affiliates implemented a similar mechanism?**

18 A. Yes. Illinois-American Water Company implemented a Bad Debt Expense
19 ("BDE") Rider, effective April 1, 2021. The BDE Rider was initially approved
20 under a two-year pilot, as a direct result of the COVID-19 emergency, with
21 agreement to extend through calendar year 2022.

NEW JERSEY-AMERICAN WATER COMPANY, INC.1 **IV. PROPOSED TARIFF CHANGES – EXHIBIT P-1**

2 **87. Q. Please explain Exhibit P-1 attached to the Petition related to the Company's**
3 **proposed tariff.**

4 A. A clean copy of the proposed Tariff and a redline against the existing Tariff
5 reflecting the Company's proposed changes as a result of this filing are attached to
6 the Petition as Exhibit P-1.

7 **88. Q. Does the proposed Tariff include any new Rate Schedules?**

8 A. Yes. As mentioned above, the Company is adding Rate Schedule O-2 related to
9 the UAC. Additionally, the Company added new Rate Schedules for the newly
10 acquired water and wastewater systems related to EHC and BB.

11 **89. Q. Have other changes been made to the content and/or structure of the Rate**
12 **Schedules in the Tariff?**

13 A. Yes. Rate Schedule A-10 and Rate Schedule L-4 have been eliminated. The
14 Service Areas 1B and 1C have been merged into the Rate Schedule A-1 and Service
15 Area 2 for Private Fire have been merged in Rate Schedule L-3 in this case.
16 Changes have also been made to reduce differences in public fire rates. These rate
17 design changes are discussed more fully by Company Witness Mr. Rea.

18 In addition, the Company has made changes to reflect rate increases authorized by
19 the agreements of sale between: 1) the Company and the Borough of Mount
20 Ephraim, and 2) the Company and Long Hill Township. Changes have also been
21 made to reflect the shifting of certain customers from Private Fire Protection
22 Service in the Townships of Logan and Woolwich.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 **90. Q. What additional Tariff changes are being proposed by the Company?**

2 A. The Company is proposing clarifying language updates which are reflected in

3 Exhibit P-1.

4 **91. Q. Does this conclude your Direct Testimony?**

5 A. Yes, it does.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**Appendix A****1. Q. Please describe your educational background and professional associations.**

A. I am a 2001 graduate of Rowan University where I earned a Bachelor of Science Degree in Business Administration with a specialization in Accounting. I have also attended the Utility Rate School sponsored by the National Association of Regulatory Utility Commissioners ("NARUC").

2. Q. What has been your business experience?

A. Prior to my employment with Service Company, my work history included an accounting internship with Alloy, Silverstein, Shapiro, Adams, Mulford & Co. in Cherry Hill, New Jersey, an audit position with M.D. Oppenheim & Co., PC, in Cherry Hill, New Jersey, and a staff accountant position with A.C. Moore Arts and Crafts, Inc. in Berlin, New Jersey. I began my employment with the Service Company in September 2006 as a General Tax accountant in the General Tax Department. My duties included developing, preparing, and maintaining the general tax account reconciliations for all American Water affiliates, developing general tax Sarbanes-Oxley practices and policies, and making monthly closing journal entries. In June 2007, I transferred to the role of Accountant in the General Accounting/Financial Reporting Department. My duties included preparing quarterly and annual financial reports, monthly closing financials, and monthly account reconciliations for multiple regulated companies of American Water and Service Company. My responsibilities also included external audit coordination and internal controls task management. In October 2010, I transferred to the role of Supervisor in the Accounts Payable

NEW JERSEY-AMERICAN WATER COMPANY, INC.**Appendix A**

1 Department and was responsible for overseeing the end-to-end operations and
2 transaction processing of accounts payable for multiple regulated companies of
3 American Water. In October 2011, I transferred to the position of Financial Analyst II
4 in Rates and Regulation. In July 2013, I was promoted to Financial Analyst III. In
5 January 2017, I was promoted to Senior Manager in Regulatory Services where I
6 supported rate applications and other regulatory filings for American Water's West
7 Virginia and Pennsylvania operating companies. Effective August 2018, I became the
8 Senior Manager of Rates and Regulatory for New Jersey-American Water.

BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF
NEW JERSEY-AMERICAN WATER COMPANY, INC.
FOR APPROVAL OF INCREASED TARIFF RATES AND
CHARGES FOR WATER AND WASTEWATER SERVICE, AND
OTHER TARIFF MODIFICATIONS

BPU Docket No. WR2201_____

Direct Testimony of
CHARLES B. REA

January 14, 2022

Exhibit P-8

NEW JERSEY-AMERICAN WATER COMPANY, INC.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.

INTRODUCTION

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

A. My name is Charles B. Rea. My business address is 5201 Grand Avenue,
Davenport, IA 52801.

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

A. I am employed by the American Water Works Service Company, Inc.
("AWWSC"). My title is Director, Rates & Regulatory.

3. Q. What are your responsibilities in this position?

A. My primary responsibility in my role as Director, Rates and Regulatory is to
serve as a subject matter expert on cost of service, rate design, and revenue
issues. I am responsible for the development and preparation of cost-of-service
analyses and filings and associated rate design analyses, as well as presenting
cost of service and rate design proposals to our internal and external
stakeholders. In addition, I am responsible for revenue forecasting and the
statistical analysis of customer usage for rate case purposes and I am the
Company's subject matter expert on the analysis of the affordability of the
Company's water and wastewater service to its customers.

4. Q. Please describe your educational background and business experience.

A. Please refer to Appendix A for a summary of my educational background and
business experience.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 **5. Q. Have you previously testified in regulatory proceedings?**

2 A. Yes. I provided testimony regarding cost of service and rate design proposals
3 for New Jersey-American Water Company, Inc. (“New Jersey-American,”
4 “NJAWC” or the “Company”) in its previous base rate case, BPU Docket No.
5 WR19121516 and for Virginia-American Water Company, Maryland-
6 American Water Company, West Virginia-American Water Company, Iowa-
7 American Water Company and Missouri-American Water Company and rate
8 design proposals for Indiana-American Water Company. I also have testified
9 on numerous occasions in Iowa, Illinois, and South Dakota on issues regarding
10 energy efficiency and electric and natural gas cost of service and rate design.

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

12 A. I sponsor NJAWC’s cost of service study and proposed rate design for both
13 water and wastewater service and will provide calculations in support of the
14 Company’s proposed rates. I also testify on the Company’s determination of
15 revenues at the period ending March 31, 2023 (“Post-Test Year”) at Present
16 Rates and Proposed Rates. I further provide the Company’s analysis of
17 residential, commercial, and public authorities water consumption as it relates
18 to the impact of the COVID-19 pandemic on water usage and long-term trends
19 in water usage. Finally, I present the Company’s affordability analyses for
20 water and wastewater service.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 **7. Q. Are you sponsoring any schedules and/or exhibits in this proceeding.**

2 A. Yes. I am sponsoring the following Company Schedules and Exhibits that are
3 incorporated herein as part of my Direct Testimony.

- 4 • Schedule CBR-1: NJAWC Class Cost of Service Study
- 5 • Schedule CBR-2: NJAWC Residential Usage Analysis
- 6 • Schedule CBR-3: NJAWC Commercial Usage Analysis
- 7 • Schedule CBR-4: NJAWC Public Authorities Usage Analysis
- 8 • Schedule CBR-5: NJAWC Proposed Rate Design
- 9 • Schedule CBR-6: NJAWC Customer Impact Analysis
- 10 • Schedule CBR-7: NJAWC Water Service Affordability Analysis
- 11 • Schedule CBR-8: NJAWC Wastewater Service Affordability Analysis
- 12 • Exhibit P-2, Schedule 5 – Statement of Operating Revenue

13 **8. Q. Were each of these Schedules prepared by you or under your direction and**
14 **supervision?**

15 A. Yes.

16 **9. Q. How is your Direct Testimony organized?**

17 A. My Direct Testimony is organized into the following seven (7) sections:

- 18 • Cost of Service
- 19 • Statistical Analysis of Customer Usage
- 20 • Declining Use and COVID-19 Adjustments for Customer Usage
- 21 • Revenues

NEW JERSEY-AMERICAN WATER COMPANY, INC.

- Water Rate Design
- Wastewater Rate Design
- Affordability

COST OF SERVICE

10. Q. What is a cost of service study?

A. A cost of service study is an analysis that calculates a utility's total investment and operating costs incurred to provide service to various customer groups, or service classes, for the purpose of establishing cost-based rates. The resulting cost determination process based on the allocation of costs to defined customer groups is called a cost of service study. Because the analysis is done by customer class, the study is often referred to as a "class cost of service study".

11. Q. Does the American Water Works Association ("AWWA") provide guidance on the appropriate methods to be used in conducting cost of service studies?

A. Yes. The AWWA M1 Manual, titled *Principles of Water Rates, Fees, and Charges* provides guidance on the appropriate allocation methodologies to use in allocating different types of costs to customer classes.

12. Q. Has the Company relied on the recommendations made in the AWWA M1 Manual in conducting its cost of service study submitted in this case?

A. Yes. Specifically, the AWWA M1 Manual outlines the use of the Base/Extra capacity method to allocate production and distribution costs to customer

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 classes. The Company uses this Base/Extra capacity method in its class cost of
2 service study as I describe later in my Direct Testimony.

3 **13. Q. Please describe the Company's cost of service study.**

4 A. The Company's cost of service analysis allocates the total revenue requirement
5 for NJAWC water operations to various cost categories listed below. The
6 revenue requirement for each of these cost categories is then allocated to the
7 various customer classes NJAWC serves, with different cost categories
8 allocated to customer classes using a class allocation factor that differs
9 depending on the nature of the costs. In this study, the Company's aggregated
10 cost of water service was allocated to the following customer classifications:

- 11 • General Metered Service
- 12 • Option Industrial Wholesale
- 13 • Sales for Resale – Manasquan
- 14 • Sales for Resale – Commodity Demand
- 15 • Sales for Resale – Sales to Other Systems
- 16 • Private Fire
- 17 • Public Fire

18 Subject to the modification of the Base/Extra calculation I mentioned
19 previously, the study was performed in accordance with generally accepted
20 principles and procedures and results in the relative cost responsibilities of each
21 class of customers. The allocated cost of service provides the primary criteria
22 used in designing customer rates under the Company's proposed rate design to

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 produce the revenues that will yield the proposed revenue requirement in this
2 case.

3 **14. Q. How is the Company's cost of service study organized?**

4 A. The Company's cost of service study attached hereto as Schedule CBR-1 is
5 organized into five different tabs, or sections:

- 6 • The "Account Detail" tab contains rate base, depreciation, and operations
7 and maintenance ("O&M") balances by account and allocates each account
8 to cost category.
- 9 • The "Summary" tab allocates the revenue requirement for each cost
10 category to customer class and summarizes the results of the cost allocations
11 by customer class and business function to derive a total revenue
12 requirement by class and business function. The "Summary" tab also
13 compares the revenue requirements by customer class to Post-Test Year
14 revenues under current rates;
- 15 • The "Usage Statistics" tab contains usage information by customer class
16 and other information necessary to calculate class allocation factors for the
17 "Account Detail" tab;
- 18 • The "Class Allocators" tab provides detailed calculations of all class
19 allocation factors used in the cost of service study; and
- 20 • The "Allocation Summary" tab provides a summary of the class allocation
21 factors.

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1 **15. Q. Is the Company's cost of service analysis performed on a district by district**
2 **or on a consolidated statewide basis?**

3 A. The Company's cost of service analysis is performed on a consolidated
4 statewide basis.

5 **16. Q. What are the various cost categories that the Company uses to group**
6 **individual accounts?**

7 A. The cost categories that the Company assigns to specific accounts are as
8 follows:

- 9 • Variable Cost
- 10 • Capacity Cost
 - 11 ○ Source of Supply
 - 12 ○ Water Pumping
 - 13 ○ Water Treatment
 - 14 ○ Transmission Mains
 - 15 ○ Distribution Mains
 - 16 ○ Storage
- 17 • Metering Cost
- 18 • Service Line Costs
- 19 • Customer Service Costs
- 20 • Fire Hydrants

21 **17. Q. Please describe how individual accounts that make up the Company's**
22 **revenue requirement are assigned to a cost element.**

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 A. Most of the accounts that make up the Company's revenue requirement are
2 directly assigned to a single cost category. Examples of this include net plant
3 for Collecting and Impounding Reservoirs, Purchased Water for water
4 pumping, and Water Treatment labor expenses. Accounts not directly
5 assignable to a single cost category are allocated among cost elements based on
6 appropriate allocation factors. Examples of this include general and intangible
7 plant, miscellaneous rate base deductions, administrative and general ("A&G")
8 expenses, and payroll taxes. These accounts are allocated to cost categories
9 based on net plant, O&M, or labor dollars associated with each cost element
10 depending on the account.

11 **A. VARIABLE COSTS**

12 **18. Q. Please describe what variable costs are and how variable costs are**
13 **allocated to customer classes.**

14 A. Variable costs refer to purchased electric power, purchased water, treatment
15 chemicals and waste disposal costs. These are costs that tend to vary directly
16 with the amount of water consumed and are allocated to customer classes in
17 direct proportion to each class's annual water consumption.

18 **B. CAPACITY COSTS**

19 **19. Q. Please describe what capacity costs are and how capacity costs are**
20 **allocated to customer classes.**

21 A. Capacity costs refer to the cost of owning, operating, and maintaining the
22 Company's water production, pumping, and distribution system that do not vary

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 directly with the amount of water consumed. These costs are allocated to
2 customer classes in a variety of ways as described below but generally are
3 allocated through a methodology known as the Base/Extra capacity method.

4 **1. Base/Extra Capacity Methodology**

5 **20. Q. Please describe the Base/Extra capacity method as it is described in the**
6 **AWWA M1 Manual.**

7 A. The Base/Extra capacity method, as explained in detail in the AWWA M1
8 Manual, is generally accepted as a sound method for allocating the cost of water
9 service and was used by the Company in previous cases. In short, the Base/Extra
10 capacity methodology as described in the AWWA M1 Manual relies upon a
11 combination of the average water consumption across the year for each
12 customer class and each class's estimated maximum daily consumption for the
13 year to allocate the fixed costs of the water production and distribution system
14 to customer classes. The Base/Extra capacity allocator is a two-part allocator,
15 the first part being the "Base" component and the second part being the "Extra"
16 component.

17 The Base component for each class is simply the average daily consumption for
18 the year (total annual sales divided by 365 days). For each class, the "Base"
19 allocation component is each class's average consumption divided by the total
20 sum of average consumption for all classes. The "Extra" component is the
21 difference between the maximum daily consumption for a given class and the
22 average daily consumption for that class. For each class, the "Extra" allocator

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 is each class's extra demand value divided by the total sum of the extra demand
2 values for all customer groups.

3 For each class, the Base/Extra allocator is calculated as a weighted average of
4 the Base and Extra allocators. The Base component is weighted by the total
5 system load factor expressed as a percentage (average daily system production
6 divided by maximum day production), and the Extra component is weighted by
7 one minus the system load factor.

8 **21. Q. Please describe hoe the maximum daily consumption values for each class**
9 **were estimated.**

10 A. Maximum daily consumption values for each customer class are estimated
11 based on daily and hourly consumption data collected via Advanced Metering
12 Infrastructure ("AMI") meter data. For Sales for Resale customer classes,
13 maximum daily consumption values are estimated based on AMI data collected
14 for those customers where data exists, with estimated data used for resale
15 customers where AMI data is not available. For other classes, maximum daily
16 consumption is estimated based on samples of customers across the American
17 Water footprint for which American Water has AMI data. Theses samples,
18 which are selected by customer class and subgroups within each class, are
19 selected such that the customers in each customer class sample have monthly
20 usage characteristics that are nearly identical to monthly usage characteristics
21 that NJAWC customers have and are expected to have during the Post-Test
22 Year period (twelve-month period ending March 31, 2023), thus providing

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1 consistency between the usage characteristics of the customers in each sample
2 and the usage characteristics of NJAWC customers.

3 **2. Source of Supply**

4 **22. Q. Please describe how source of supply costs are allocated to customer**
5 **classes.**

6 A. Source of Supply costs not included in the variable cost section described above
7 are allocated to customer classes on the Modified Base/Extra methodology I
8 have previously described.

9 **23. Q. For purposes of allocating Source of Supply costs to customer classes, are**
10 **all classes included in this allocation?**

11 A. No, they are not. For the purpose of allocating Source of Supply costs, the
12 Manasquan resale customer group is excluded from this allocation. Also,
13 Source of Supply costs are not allocated to fire service classes. All of the
14 Company's Manasquan Resale customers purchase their raw, or untreated,
15 water directly from the New Jersey Water Supply Authority ("NJWSA") via
16 long-term water purchase agreements. Since the NJWSA costs associated with
17 the raw, or untreated, water are borne directly by the individual Manasquan
18 Resale customers, these customers are not allocated our costs associated with
19 Source of Supply. The Company's agreement with each of the Manasquan
20 Resale customers is for the receipt, treatment and delivery of that raw, or
21 untreated, water to their distribution systems. This has been part of the

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Company's traditional rate design and cost of service for numerous past cases and is such again in this case.

3. Water Pumping Costs

24. Q. Please describe how water pumping costs are allocated to customer classes.

A. Similar to Source of Supply, water pumping costs not included in the variable cost section described above, are allocated to customer classes based on the Modified Base/Extra methodology with the Manasquan group included.

4. Water Treatment Costs

25. Q. Please describe how water treatment costs are allocated to customer classes.

A. Water treatment costs are allocated to customer classes based on the Modified Base/Extra capacity method. Water treatment costs are not allocated to fire service classes.

5. Transmission Mains

26. Q. How does the Company distinguish between transmission mains and distribution mains?

A. Generally, for cost allocation purposes, mains 10-inches and larger are classified as serving a transmission function and mains smaller than 10 inches are classified as serving a distribution function.

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1 **27. Q. Are transmission mains costs allocated to all customer groups?**

2 A. Yes. All customer groups are considered to take service from the Company's
3 transmission system and therefore transmission costs are allocated to all
4 customer classes.

5 **28. Q. Please describe how costs associated with transmission mains are allocated**
6 **to customer classes.**

7 A. Costs associated with transmission mains are allocated to each customer class
8 based on the Base/Extra capacity method.

9 **6. Distribution Mains**

10 **29. Q. Are distribution main costs allocated to all customer groups?**

11 A. No. It is often the case that for large customers, service is taken directly from
12 the transmission system (10 inches and above) and therefore it would not be
13 appropriate to allocate costs related to the smaller diameter distribution system
14 to these customers. For each customer class, a calculation is performed to
15 estimate the percentage of water sales served to that class directly from the
16 transmission system. That portion of sales in each class is not subject to an
17 allocation of distribution costs. It is only the distribution-level sales in each
18 class that are allocated distribution-related costs, and that relative level of sales
19 is significantly different for different customer classes.

20 **30. Q. Please describe how costs associated with distribution mains are allocated**
21 **to customer classes.**

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1 A. After removing usage served at the transmission level, costs associated with
2 distribution mains are allocated to customer classes based on the previously
3 defined Base/Extra capacity method that is modified to include a component
4 that recognizes maximum hourly demand (at the distribution level) instead of
5 maximum daily demand. This is appropriate because the transmission main
6 system functions as a conduit from production facilities to the distribution
7 system and is sized to accommodate varying water demands from customers
8 that take service at the distribution level. Sizing at the distribution level needs
9 to accommodate higher demands for shorter periods of time. It is therefore
10 appropriate to consider hourly consumption requirements for distribution mains
11 allocation, as opposed to daily requirements.

12 **31. Q. Aside from the differences between maximum *hourly* consumption and**
13 **maximum *daily* consumption, does the Modified Base/Extra allocator work**
14 **the same way as you have previously described?**

15 A. Yes. In this case, the Base component for each class is the average hourly
16 consumption for the year (total annual sales divided by 8,760 hours). The
17 “Extra” component is calculated as the difference between the maximum hourly
18 consumption for a given class and the average hourly consumption for that
19 class. For each class, the Modified Base/Extra allocator is calculated as a
20 weighted average of the Base and Extra allocators. The Base component is
21 weighted by the total system load factor expressed as a percentage defined this
22 time as average hourly system consumption divided by maximum hourly

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1 system consumption, and the Extra component is weighted by one minus the
2 system load factor.

3 **32. Q. Please describe how the maximum hourly consumption values are**
4 **calculated.**

5 A. Similar to the process used to estimate maximum daily consumption values by
6 customer class, maximum hourly consumption values for each customer class
7 are estimated either through direct AMI metering of NJAWC Sales for Resale
8 customers or from samples of customers across the American Water footprint
9 for which the Company has AMI data. The samples used to estimate maximum
10 hourly consumption are the same samples used to estimate maximum daily
11 consumption to ensure that there is consistency in usage patterns.

12 **7. Storage Costs**

13 **33. Q. Please describe how the Company allocates the revenue requirements**
14 **associated with storage costs to customer classes.**

15 A. Storage costs are allocated to customer class based on the Modified Base/Extra
16 allocator using hourly estimated peak demand for the extra component, like the
17 allocator used to allocate distribution mains costs. For the storage allocator, it
18 is assumed that all fire service capacity requirements are served first from the
19 Company's storage capacity, and the remaining capacity is allocated to non-fire
20 service classes using the Base/Extra hourly allocator.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**C. CUSTOMER-RELATED COSTS****1. Metering Costs**

34. Q. Please describe how the Company allocates the revenue requirements associated with the metering cost component to customer classes.

A. Metering costs are allocated to customer classes based on a weighted number of customers calculation. Customer weights in each class are based on AWWA standard meter equivalents by meter size. These ratios have been used in previous water class cost of service studies by NJAWC and the Company is not proposing to change the ratio of meter equivalencies by meter size in this case.

2. Service Costs

35. Q. Please describe how the Company allocates the revenue requirement associated with the service line cost component to each customer class.

A. Service line costs are allocated to customer classes based on a weighted number of customers calculation and are the same as those used in the last NJAWC water service rate case.

3. Customer Service Costs

36. Q. Please describe how the Company allocates the revenue requirement associated with the customer service cost component to customer classes.

A. Customer service costs are allocated to customer classes based on the total number of customers in each class.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**D. FIRE SERVICE**

37. Q. How are fire service requirements considered in the Company's cost of service analysis?

A. Fire service requirements are determined through a combination of information on firefighting requirements provided by the American Insurance Association. This information relates firefighting requirements in terms of maximum gallons per minute and the duration of time those requirements are needed to provide service for general population levels. Given the population of the NJAWC service territory, a firefighting demand of 40,000 gallons per minute for ten hours was used in the Company's cost of service analysis, which is the same demand used in previous NJAWC cost of service studies. This firefighting demand was split between private fire and public fire customer classes based on the relative potential water demand for each class, which is in turn based on the number and size of service lines and hydrants in each class.

E. OTHER ALLOCATION FACTORS

38. Q. How are Administrative & General ("A&G") costs and cash working capital costs allocated to cost categories and customer classes?

A. A&G costs are generally allocated to cost categories and customer classes on the same basis that direct costs were allocated. For most A&G expenses, costs are allocated the same way that non-A&G direct O&M costs are allocated. A&G costs that are associated with employee costs, however, are allocated

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1 directly based on labor expenses. Cash working capital is allocated based on
2 total O&M expense.

3 **39. Q. How are depreciation costs allocated to cost categories and customer**
4 **classes?**

5 A. Annual depreciation accruals are allocated based on the function of the facilities
6 represented by the depreciation expense for each depreciable plant account. The
7 original cost less depreciation of utility plant in service was similarly allocated
8 for the purpose of developing factors for allocating items such as income taxes
9 and return. These factors are based on the result of allocating other costs and
10 are computed internally in the cost allocation program.

11 **40. Q. How are income taxes and operating income requirements allocated to cost**
12 **categories and customer classes?**

13 A. Income taxes and operating income requirements are allocated to cost
14 categories and customer classes based on the amount of total rate base allocated
15 to each customer class.

16 **41. Q. Please summarize the results of NJAWC's cost of service analysis.**

17 A. The following table provides a summary of the Company's cost of service
18 analysis and shows total Test Year (12 months ending June 30, 2022) and Post-
19 Test Year revenues, cost of service, and the differences between the two by
20 customer class:

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Customer Class	Post Test-Year		
	Revenue at Present Rates	Cost of Service	Difference
General Service	\$635,258,655	\$682,913,411	\$29,654,756
Resale - Manasquan	\$1,568,492	\$2,143,901	\$575,409
Resale – Commodity Demand	\$19,524,406	\$26,023,652	\$6,449,246
Resale – Sales to Other Systems	\$27,737,073	\$38,828,857	\$11,091,784
Optional Industrial Wholesale	\$16,038,637	\$20,335,743	\$4,297,106
Private Fire	\$26,815,521	\$32,864,418	\$6,084,897
Public Fire	\$30,824,066	\$53,978,461	\$23,154,401
Total	\$775,766,850	\$857,088,450	\$81,321,599

QUANTITATIVE STATISTICAL ANALYSIS OF WATER CONSUMPTION

42. Q. Are there revenue adjustments the Company is proposing in this case that require quantitative analysis of water consumption by New Jersey-American’s water customers?

A. Yes. In the next section immediately following this section, I will discuss the development of the revenue projections for all customer classes (Residential, Commercial, Industrial, OPA, and Sales for Resale). In this section I will explain the modeling used to develop the revenue forecasts for the residential, commercial and OPA customers. For those customers, the Company is proposing adjustments for the normalization of the actual billing determinants for the 12-month period ended June 30, 2021, related to trends in declining use, weather normalization, and the impact of the COVID-19 public health emergency on water consumption for New Jersey-American’s water customers. These adjustments require the Company to analyze water consumption and determine (1) if there is a significant and pervasive rate of decline in water use

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1 per customer over time, (2) if there are significant relationships between water
2 consumption and weather conditions in the Company's service territory, and if
3 weather was different from normal in the twelve month period ended June 30,
4 2021, and if so, a weather normalization adjustment to usage is appropriate to
5 reflect more normal weather conditions for the twelve months ending June 30,
6 2022 ("Test Year"), and (3) if the COVID-19 public health emergency has had
7 a significant impact on water consumption for New Jersey-American's
8 customers, again to determine if a COVID-related adjustment to usage is
9 appropriate for the Test Year.

10 **43. Q. How do you determine the parameters and relationships necessary to**
11 **analyze declining water use, weather impacts on water consumption, and**
12 **the impact of COVID-19 on water consumption for the NJAWC's**
13 **customers?**

14 A. The parameters and relationships necessary to analyze declining use, weather,
15 and COVID-19 on water consumption for NJAWC's customers are estimated
16 through the use of statistical linear regression modeling.

17 **44. Q. What is a statistical linear regression model?**

18 A. Statistical linear regression modeling is a commonly used type of mathematical
19 predictive analysis. The overall idea of regression modeling is to examine two
20 things: (1) does a set of independent explanatory variables do a good job of
21 predicting an outcome (dependent) variable, and (2) which independent
22 explanatory variables, in particular, are significant predictors of the dependent

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1 variable, and in what way do they help predict the results of the dependent
2 variable.

3 There are three major uses for statistical linear regression analysis. These major
4 uses are: (1) determining the predictive power of independent explanatory
5 variables; (2) forecasting the effect that independent variables have on a
6 dependent variable; and (3) trend forecasting. First, the regression analysis can
7 be used to identify the strength of the effect that independent explanatory
8 variables have on a dependent variable. A typical question is: "What is the
9 strength of the relationship between summer heat, precipitation, and water
10 sales?" Second, the regression analysis can be used to forecast effects or
11 impacts of changes. That is, the regression analysis helps us understand how
12 much the dependent variable changes with a change in one or more of the
13 independent variables. A typical question is: "How much water sales can the
14 Company expect to lose for each inch of rainfall above normal in any given
15 period?" Third, regression analysis can predict trends and future values. The
16 regression analysis can be used to get point estimates of future values of the
17 dependent variable based on assumed values for the independent variables. A
18 typical question can be: "Given current trends in water sales, what can we
19 expect water sales to be each month next year assuming normal weather?"

20 **45. Q. What does a statistical linear regression model produce?**

21 A. A statistical linear regression analysis is a way of mathematically validating
22 which independent variables have a significant impact on the dependent

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variable – the main factor, the one you are trying to better understand or predict.

A statistical linear regression model produces an equation that describes a historical relationship between a set of independent variables and a single dependent variable that can be used to forecast future values of the dependent variable based on assumed values of the independent variables. An example of such an equation is shown below:

$$\begin{aligned} \text{UPC}_n = & a_0 + (a_1 \times \text{RAIN}_n) + (a_2 \times \text{CDD}_n) + (a_3 \times \text{COVID-19}_n) \\ & + (a_4 \times \text{TIME}_n) \end{aligned}$$

Where: UPC_n = Use per customer in month n

RAIN_n = Rainfall in month n

CDD_n = Cooling Degree Days (“CDD”) in month n

COVID_n = COVID-19 effect in month n (0% to 100%)

TIME_n = Year/Month for month n

and: a_0 = constant term

a_1 = coefficient for RAIN

a_2 = coefficient for CDD

a_3 = coefficient for COVID-19 impact per customer

a_4 = coefficient for TIME (declining use value)

In this example, use per customer is the dependent variable (outcome) and all other variables are independent variables (predictors).

46. Q. Can statistical linear regression models be used to weather normalize historical water sales for different customer classes?

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A. Yes. In the statistical model in the example above, the a_1 coefficient for RAIN can be used to estimate the impact of rainfall on use per customer in any given historical period and estimate the impact of what use per customer would have been if rainfall had been different, especially when actual precipitation was higher or lower than normal. Below is a sample calculation of how weather normalization works with a statistical regression model that uses weather as a strong predictive independent variable that affects the use per customer dependent variable.

$$\text{IMPACT}_n = a_1 \times (\text{ACTUAL RAIN}_n - \text{NORMAL RAIN}_n)$$

Where: IMPACT_n = Weather impact due to abnormal rainfall in period n

ACTUAL RAIN_n = Actual Rainfall (in inches) in period n

NORMAL RAIN_n = Average Rainfall (in inches) in period n

If the value of the a_1 coefficient for rainfall is -0.30 in this example, actual rainfall for the period is 6 inches and normal rainfall for the period is 4 inches, the weather impact for the period due to higher-than-normal rainfall is a negative 600 gallons per customer meaning that the Company sold 600 fewer gallons per customer of water than it otherwise would have $[-0.30 \times (6 - 4) = -0.60]$. If there are multiple weather variables in the statistical regression analysis, this calculation is completed separately for each variable and the sum of the calculations is rolled up into a single weather impact. This approach to weather normalization allows an analyst to independently assess the impact of each weather component, and also allows an analyst to state the weather impacts

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1 over time both in terms of consumption and in terms of revenues by multiplying
2 the consumption impact by a volumetric price.

3 **47. Q. Can statistical linear regression models be used to estimate the impacts of**
4 **COVID-19 on water sales for different customer classes?**

5 A. Yes. In the statistical model example above, the a3 coefficient for COVID-19
6 is the estimate of the impact of the COVID-19 public health emergency on
7 monthly use per customer. The historical data set contains a variable for each
8 month that indicates the assumed qualitative level impact from COVID-19 in
9 that month. In all months prior to April 2020 that value was set at 0%. From
10 April 2020 on, that value is set at 100% when maximum COVID-19 impacts
11 are observed, or at a level less than 100% where we see reduced COVID-19
12 impacts on usage. The coefficient for the COVID-19 impact variable estimates
13 the average monthly use per customer based on the months that have been
14 designated as COVID-19 months. This coefficient can then be used to (1)
15 normalize away the impact of COVID-19 in a manner similar to the weather
16 normalization calculation previously described, and (2) reflect forecasts of
17 future impacts of the COVID-19 public health emergency.

18 **48. Q. Can these models be used to estimate trends in declining use per customer**
19 **for different customer classes?**

20 A. Yes. In the same statistical model example represented above, the a4
21 coefficient for TIME is the estimate of declining use per customer per month.
22 This coefficient measures the rate of decline in use per customer over the

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1 historical data set independent of the effect of any other variable in the model.

2 The historical data set contains a variable for each month that is a timestamp
3 that starts at 1 for the first month in the dataset and increases by 1 for every
4 month going forward. This acts as a trend variable for both historical periods
5 in the dataset and future forecast periods. The coefficient for this trend variable
6 is applied to future increasing values of the trend which results in decreasing
7 forecasts of use per customer.

8 **49. Q. How does one assess the accuracy of a statistical linear regression model?**

9 A. A statistical linear regression model produces a set of statistics that can be used
10 to judge the accuracy and fitness of the model. The most common statistics are
11 (1) the “R-Squared” value, which is a statistical measure in a regression model
12 that determines the proportion of variance in the dependent variable that can be
13 explained by the independent variables, and (2) values and standard deviations
14 for the coefficients, which can be used to determine “t-statistics” and “p-values”
15 which tell how accurately and precisely the different coefficients are being
16 calculated and whether the associated independent variables are strong
17 predictors of the dependent variable.

18 In the equation described above, the “R-Squared” value is a statistic that
19 measures the percentage of variation from time period to time period in the
20 dependent variable (water use per customer) that is explained by the
21 mathematical relationship with the independent variables. The R-Squared can
22 range from 0% (no explanatory ability at all) to 100% (perfect explanatory

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1 accuracy). In general, the higher the R-squared, the better the predictive value
2 of the model.

3 The second major test involves comparisons of the values of each of the model
4 coefficients and their associated standard errors. Because a statistical
5 regression model estimates an explanatory relationship between a dependent
6 variable and a set of independent variables, there will always be some degree
7 of uncertainty around what that explanatory relationship actually is. As a result,
8 each model coefficient has a level of uncertainty around it, and this level of
9 uncertainty is represented by measuring how many standard errors each
10 coefficient is away from zero, which the model also calculates.

11 Dividing the value of each coefficient by its standard error yields a t-statistic
12 which can be used to judge the predictive power of the independent variable
13 that the coefficient represents. For example, in the case of the generic statistical
14 model described above, if the value of the a_1 coefficient for rainfall is -0.30 and
15 the standard error for that coefficient is 0.05 (meaning that the real value of the
16 coefficient could be anywhere between -0.35 and -0.25 with -0.30 being the
17 most likely value), the value of the t-statistic is -6.0 (-0.30 divided by 0.05 =
18 6.0). Generally speaking, t-statistic values greater than 2.0 for positive
19 coefficients or less than -2.0 for negative coefficients indicate an acceptable
20 predictive relationship between that independent variable and the dependent
21 variable of interest. The higher the t-statistic value, the greater the confidence

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1 we have in the coefficient as a predictor. Values between 2.0 and -2.0 indicate
2 that the predictive power of that independent variable may not be very strong.

3 **50. Q. Are there other more qualitative ways to determine whether a statistical**
4 **linear regression model is accurate and produces reasonable results?**

5 A. Yes. There are also several qualitative ways to determine whether a statistical
6 regression model accurately describes the relationship that a chosen set of
7 independent variables has with the dependent variable:

- 8 • **Does the model represent reality?** If it is generally known that water
9 consumption is seasonal and is driven in the summertime by heat and
10 precipitation, it is logical to assume that a statistical model that attempts to
11 describe and predict seasonal water consumption would have explanatory
12 variables related to summer heat and precipitation, and those explanatory
13 variables would be shown to have a strong predictive value in the model.
14 Models that attempt to accurately describe the drivers behind water
15 consumption that do not contain statistically significant coefficients for
16 independent variables that are logically known to drive water consumption
17 are likely not strong predictive models.

- 18 • **Are the signs of the coefficients for major independent variables,**
19 **correct?** If water consumption increases in the summertime with
20 increasing heat and decreases in the summertime with increasing
21 precipitation, it is logical to expect that the coefficients for the independent

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1 variables that represent summertime heat and summertime precipitation
2 would be positive and negative, respectively.

- 3 • **Is the model based on a robust data set?** It is easy for a statistical model
4 with many independent variables and relatively few observations of the
5 dependent variable to accurately explain variation in the dependent variable,
6 but that does not mean that the model has strong predictive power if the data
7 set being analyzed is small in scope. A statistical model that attempts to
8 describe water consumption that has good predictive explanatory power
9 over multiple years of monthly historical data is very useful and accurate in
10 projecting future trends and in explaining how changes in strong predictive
11 independent variables will affect levels of the dependent variable.

- 12 • **Do the impacts on the dependent variable that the model describes**
13 **make logical sense?** It is possible outside of a statistical linear regression
14 model to make ballpark estimates of other facts like the impact of COVID-
15 19 on water consumption and long-term trends in declining use. This can
16 be done with a simple linear plot of annual usage data by year. For example,
17 if a linear plot of annual usage data suggests that there is a downward trend
18 of approximately 1,000 gallons per customer per year, one would expect
19 that a statistical model that is measuring that impact would yield a result
20 that is similar. The same is true when looking at potential impacts of
21 COVID-19 on water consumption. If a visual examination of data suggests
22 that water use per customer for a commercial class has decreased by 2,000
23 gallons per customer in 2020 due to the COVID-19 emergency, it is logical

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1 to expect a statistical regression model that attempts to statistically measure
2 that impact use to yield estimates consistent with that expectation.

DECLINING USE AND COVID-19 ADJUSTMENTS

4 **51. Q. Please describe the statistical linear regression model you are using to**
5 **analyze water consumption data for NJAWC.**

6 A. In this case, we are using multiple regression statistical models for each
7 customer class that relate the dependent variable (i.e., water use per customer)
8 to a collection of independent variables. The models use 120 months of
9 monthly data beginning in October 2011 and running through September 2021.
10 Each regression model uses independent variables that can be broken down into
11 four categories to explain monthly use per customer. The four categories are:

- 12 • **Weather:** The weather variables used in the models are Cooling Degree
13 Days (“CDDs”) and precipitation. These weather variables are a weighted
14 average of current month and lagged month weather readings taken by
15 NOAA at selected weather reporting stations across the state of New Jersey.
16 This weighted average lagged approach is used to account for the
17 differences between billing month sales and calendar month weather.
18 Coefficients from these variables show the impact of weather on monthly
19 use per customer over the 10-year period. Weather variables are modeled as
20 monthly deviations from normal for each month in the data set (actual
21 weather for the month less normal weather for the month for each individual

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1 weather variable). Normal weather is calculated for each month of the year
2 based on weather over a ten-year period period from 2010 through 2019.

- 3 • **Time:** The time variable is a trending variable that notes the passage of
4 time in the model and produces a coefficient that estimates the monthly
5 decline in usage per customer over the 10 year model. The time variable
6 captures the range of conservation efforts that have been implemented by
7 customers over time, such as the installation of more water efficient fixtures
8 and appliances. Time on its own is of no consequence, but it is a powerful
9 variable because it is the medium for capturing the conservation effect.

- 10 • **COVID-19 Indicator:** The COVID-19 indicator variable is a variable set
11 at 0% for months prior to April 2020 and varying levels of 0% to 100% for
12 the months of April 2020 through September 2021 depending on the
13 varying levels of COVID-19 impacts on water consumption observed in the
14 residential and commercial customer classes. The effect of this variable in
15 the model is to look specifically for increases or decreases in use per
16 customer for the April 2020 through September 2021 timeframe that may
17 have happened due to systemic changes in the amounts of water customers
18 use water as a result of the COVID-19 public health emergency.

- 19 • **Monthly indicators:** The monthly indicator variables in the model
20 measure structural monthly and/or seasonal changes in use per customer
21 that cannot be explained by any of the other variables in the model.

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1 **52. Q. What information do these models provide that is useful for developing pro**
2 **forma adjustments to revenues that you are sponsoring in your testimony?**

3 A. Each model produces a set of weather coefficients that can be used to weather-
4 normalize historical sales for the Test Year period, a coefficient that indicates
5 the monthly trend in declining use per customer for each class, and a coefficient
6 that shows for each class the average use per customer impact associated with
7 changes in usage due to COVID-19.

8 **53. Q. Where are your models presented?**

9 A. My residential model is contained in Schedule CBR-2. My commercial model
10 is contained in Schedule CBR-3, and the Public Authority model is in Schedule
11 CBR-4.

12 **54. Q. You previously discussed the various statistical tests used for accuracy and**
13 **predictability. Please discuss the results of these tests for your residential**
14 **and commercial model and why they are appropriate to use in this**
15 **proceeding.**

16 A. As shown in Schedules CBR-2, CBR-3 and CBR-4, the R-Squared statistic for
17 the residential usage model is 96%, the R-Squared statistic for the commercial
18 usage model is 92%, and the R-Squared statistic for the OPA model is 87%.
19 This indicates that in all models, the explanatory variables (weather, COVID-
20 19 impacts, declining use, etc.) do a very good job of explaining the variability
21 in use per customer over time. The values of the coefficients, standard errors,
22 and t-statistics for the major explanatory variables in the models are as follows:

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Residential Model Major Explanatory Variables	Coefficient	Standard Error	t-Statistic
Declining Use Trend	-0.0059	0.0009	-6.3931
Precipitation	-0.3106	0.0287	-10.8206
CDD	0.0078	0.0011	7.0594
COVID-19 Impact	0.4588	0.0889	5.1629

Commercial Model Major Explanatory Variables	Coefficient	Standard Error	t-Statistic
Declining Use Trend	-0.0123	0.0057	-2.1732
Precipitation	-0.9455	0.1888	-5.0070
CDD	0.0294	0.0060	4.9086
COVID-19 Impact	-2.4164	0.5476	-4.4127

OPA Model Major Explanatory Variables	Coefficient	Standard Error	t-Statistic
Declining Use Trend	-0.0257	0.0088	-2.9123
Precipitation	-1.4721	0.2953	-4.9854
CDD	0.0387	0.0094	4.1277
COVID-19 Impact	-4.4395	0.8563	-5.1843

1 The statistics for the individual explanatory independent variables above show
2 a high degree of explanatory power with t-statistics all outside of the +/- 2.00
3 range. Signs for the trend variables are both negative, meaning that usage has
4 been going down steadily over time once weather effects and the effects of
5 COVID-19 have been accounted for. The sign for the precipitation variable in
6 the residential model is also negative as expected, meaning that more rainfall
7 over a summer period results in less seasonal water usage from our residential
8 customers. Signs for the CDD variables are positive meaning that the hotter the
9 weather gets in the summer, customers use more water, which is expected, and
10 the signs for the COVID-19 impact variables indicate that residential usage

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1 went up as a result of COVID-19 and usage for commercial customers went
2 down, which can plainly be seen in Charts 1-6 below in my Direct Testimony.

3 **55. Q. You also mentioned that regression models must also pass common sense**
4 **tests. Please describe the common sense tests which are satisfied by your**
5 **regression models.**

6 A. There are several. As I described earlier, we know that water usage accelerates
7 in hot, dry summer weather. My models clearly pass that test. I have also
8 proposed an adjustment for declining use for customers. Here, too, we know
9 that declining water use per customer is a national trend as demonstrated further
10 below. My adjustment is consistent with that trend.

11 **56. Q. Your regression models also show a trend of declining use per customer.**
12 **Why do you believe that declining use is a valid trend that will continue?**

13 A. The residential consumption patterns for New Jersey-American are similar to
14 those for other American Water state operating companies which have
15 experienced a decline in residential consumption per customer averaging
16 approximately -2.0% per year over the last 10 years. Commercial customers
17 also show declining use per customer, although usually not of the same
18 magnitude. This is not surprising because, according to the 2010 Water
19 Research Foundation (“WRF”) report, “many water utilities across the United
20 States and elsewhere are experiencing declining water sales among

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households.”¹ The report further states: “A pervasive decline in household consumption has been determined at the national and regional levels.”²

57. Q. What is causing the decline in residential and commercial customers’ usage?

A. As I mentioned previously, we look to common sense answers to validate trends. Here, several factors explain and drive the decline in residential customers’ usage. These factors include the incremental introduction of low-flow fixtures and appliances, laws and regulations that create and lead to further reductions in fixture flow-rates, conservation programs and public initiatives that have led to greater consumer water conservation awareness. Like the residential customer class, the commercial customers also avail themselves of more efficient fixtures and appliances.

Plumbing fixtures such as toilets, showerheads, and faucets available to consumers today are more water-efficient than those fixtures manufactured in the past. Similarly, appliances such as dishwashers and washing machines are also more water-efficient. When a customer replaces an older toilet, washing machine, or dishwasher with a new unit, the new unit will almost certainly use less water than the one it replaced. This is equally true for commercial customers. Similarly, construction of new homes or business establishments

¹ Coomes, Paul et al., North America Residential Water Usage Trends Since 1992 – Project #4031, page 1 (Water Research Foundation, 2010).

² *Id.* at xxviii.

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1 result in the installation of water efficient fixtures meeting new, more efficient,
2 regulatory standards.

3 **58. Q. How much water do the new fixtures and appliances save?**

4 A. The Energy Policy Act of 1992 (“EPA92”) mandated the manufacture of
5 water-efficient toilets, showerheads, and faucet fixtures. For example, a toilet
6 manufactured after 1994 must use no more than 1.6 gallons per flush, compared
7 to a pre-1994 toilet, which typically used from 3.5 to 7 gallons per flush. In
8 fact, toilets using only 1.28 gallons per flush or less are becoming more
9 prevalent in the marketplace. Replacing an old toilet with a new one, therefore,
10 can save from 2 to nearly 6 gallons per flush. The United States Environmental
11 Protection Agency (“USEPA”) estimates that there are more than 220 million
12 toilets in the United States, and that approximately 10 million new toilets are
13 sold each year for installation in new homes and businesses or replacement of
14 aging fixtures in existing homes and businesses.

15 The Energy Independence & Security Act of 2007 (“EISA”), which established
16 stringent efficiency standards for dishwashers and washing machines, has
17 further reduced indoor water consumption. Dishwashers manufactured after
18 2009 and washing machines manufactured after 2010 must use 54% and 30%
19 less water, respectively. All other factors being equal, a typical residential
20 household in a new home constructed in 2015, with water efficient toilets,
21 washing machines, dishwashers, and other fixtures, uses approximately 35%
22 less water for indoor purposes than a non-retrofitted home built prior to 1994.

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1 **59. Q. Are there other factors contributing to the continued decline in water**
2 **consumption patterns?**

3 A. Yes. Programs to raise customer awareness and interest in the benefits of
4 conserving water and energy continue to increase. As awareness of water and
5 energy efficiency increases, customers may decide to replace a fixture or
6 appliance even before it has broken. Additionally, customers may further
7 reduce consumption by changing their household or business water use habits
8 in other various ways.

9 **60. Q. Do you expect the customer declining usage trend to continue in the future?**

10 A. Yes. Water efficient fixtures and other drivers such as conservation education
11 and government-mandated standards will continue to drive further efficiency
12 into residential usage per customer. In fact, the trend is well established and
13 continues to affect water usage on the NJAWC system as well as most water
14 utilities across the United States. The rate of the continued trend is dependent
15 on the pace of fixture replacement within the Company's footprint as well as
16 the broadening acceptance of a conservation ethic through raised customer and
17 business awareness programs, government conservation policy, and similar
18 behavior modification related programs.

19 According to an AWWA Journal article dated February 2012, technology is
20 now available for newer, more water efficient products that further improve on
21 EPA92 levels, and there is now a growing movement to codify these more
22 stringent specifications. The introduction of progressive code modifications—

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1 such as the International Code Council's ("ICC's") International Green
2 Construction Code ("IGCC") and the International Association of Plumbing
3 and Mechanical Officials ("IAPMO") Green Plumbing and Mechanical Code
4 Supplement (2011) support uniform implementation of increased water
5 efficiency standards. AWWA research also indicates that this decline in water
6 consumption will continue. An article in the June 2012 issue of the AWWA
7 Journal entitled "Insights into declining single-family residential water
8 demands" states: "[r]educed residential demand is a cornerstone of future urban
9 water resource management. Great progress has been made in the last 15 years
10 and the industry appears poised to realize further demand reductions in the
11 future." ³

12 **61. Q. Is the decline in residential and commercial water consumption showing**
13 **any signs of reaching equilibrium?**

14 A. No. Many of the homes in NJAWC's service territory are older housing stock,
15 built prior to 2000. These homes were constructed with toilets, washing
16 machines, and dishwashers that are more water-intensive than newer fixtures
17 and appliances now on the market. As turnover of household fixtures and
18 appliances continues to occur over time, residential usage will continue to
19 decline accordingly. The regulations mandating water efficient washing
20 machines and dishwashers also are relatively new. Given the life expectancy of

³ DeOreo, William and Mayer, Peter. American Water Works Association Journal. Vol. 104. Issue 6.
http://apps.awwa.org/WaterLibrary/showabstract.aspx?an=JAW_0076117. June 2012

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appliances, it is likely that the replacement of existing appliances, and the corresponding reduction in water used, will continue to occur over time for the indefinite future.

62. Q. Based on your modeling, what impact did weather have on residential and commercial usage?

A. Weather (as defined by CDDs, and precipitation) in the NJAWC service territory was hotter and wetter than normal during the historic 12-month period ending June 2021, which indicates that a net positive adjustment to residential and commercial usage is appropriate. Rainfall was approximately 3.2 inches wetter than normal for the period and there were 105 more CDDs than normal during the period which in total had a net negative impact on usage. The adjustment the Company proposes for weather adds back usage for these classes to represent normal weather going forward. The following table shows the weather adjustment, in gallons per customer, the Company is proposing to bring usage levels for residential, commercial, and OPA customers more in line with normal weather for the Post-Test Year.

Weather Component	Residential	Commercial	OPA
Precipitation	996	3,059	4,763
Cooling Degree Days	-818	-2,904	-3,819
Total	178	155	944

63. Q. What impact did COVID-19 have on residential usage?

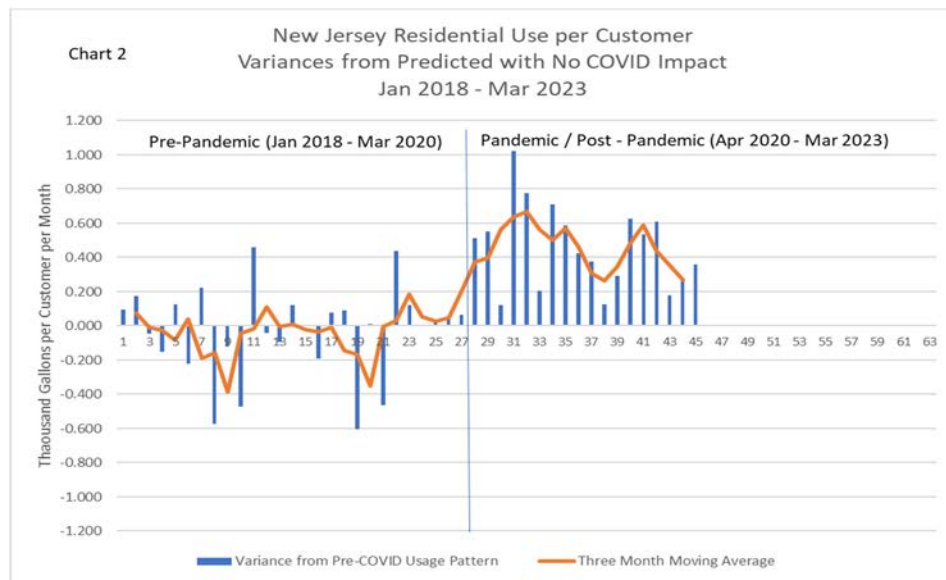
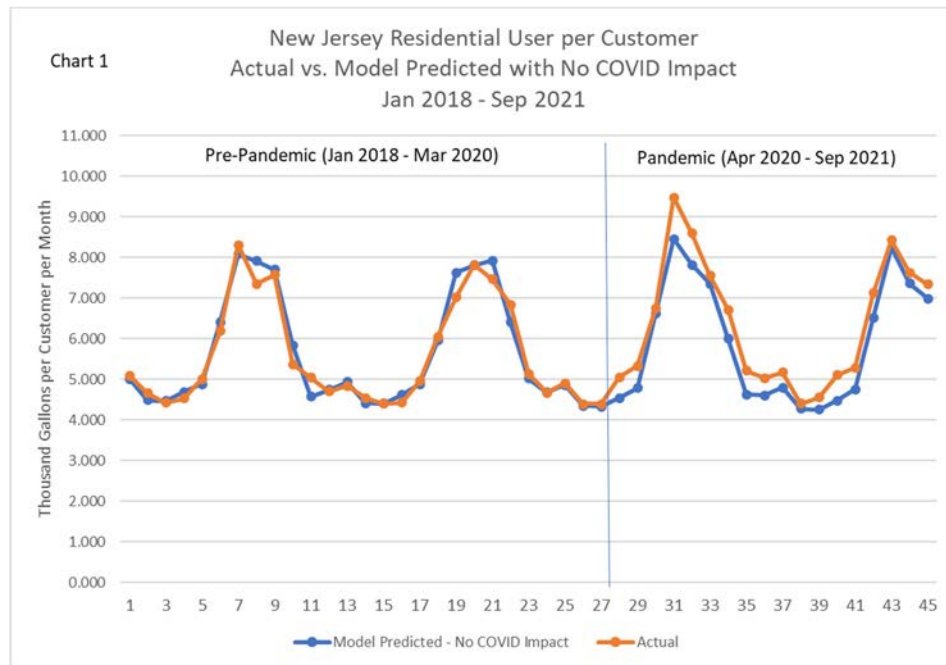
A. The COVID-19 public health emergency has had a significant impact on residential usage. Chart 1 and Chart 2 below show the impact that COVID-19

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1 has had on residential usage. Chart 1 shows actual use per customer from
2 January 2018 through March 2020 (pre-COVID-19) and then from April 2020
3 through September 2021. Chart 1 also contains baseline usage, or model-
4 predicted usage, for the same time periods assuming no COVID-related impact.
5 Chart 2 shows the differences between actuals and baseline usage (no COVID-
6 19 impact) for the same periods with the chart in Chart 2 extending out through
7 the end of the Test Year to provide context on the amount of time that remains
8 for COVID-19 impacts to fully normalize.

9 The data shows that residential usage went up significantly in the Spring and
10 Summer of 2020 due to the public health emergency. We estimate that the total
11 COVID-19-related impact on residential use per customer during the 12 months
12 ended June 30, 2021 was a positive 5,831 gallons per customer. The COVID-
13 19-related impact on residential use per customer peaked in July 2020 at
14 approximately 1,023 gallons per customer per month and has steadily abated
15 since that time. Based on the continuing trend in the abatement of COVID-19-
16 related impacts, we expect residential usage patterns to return to pre-COVID
17 usage patterns during the Post Test-Year. As a result, the Company is proposing
18 a negative corresponding adjustment to residential usage to account for
19 COVID-19-related impacts.

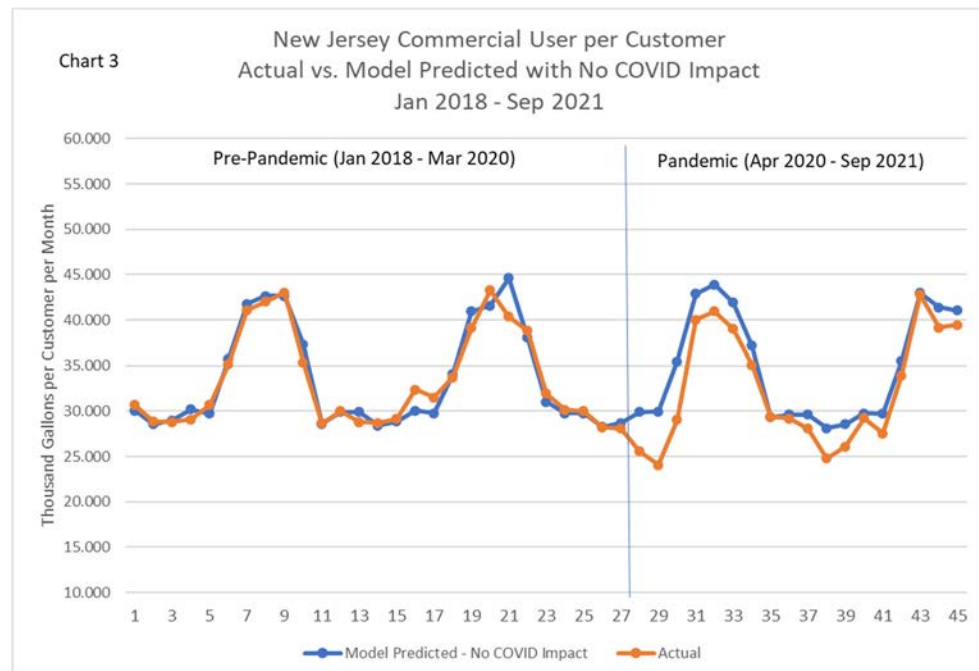
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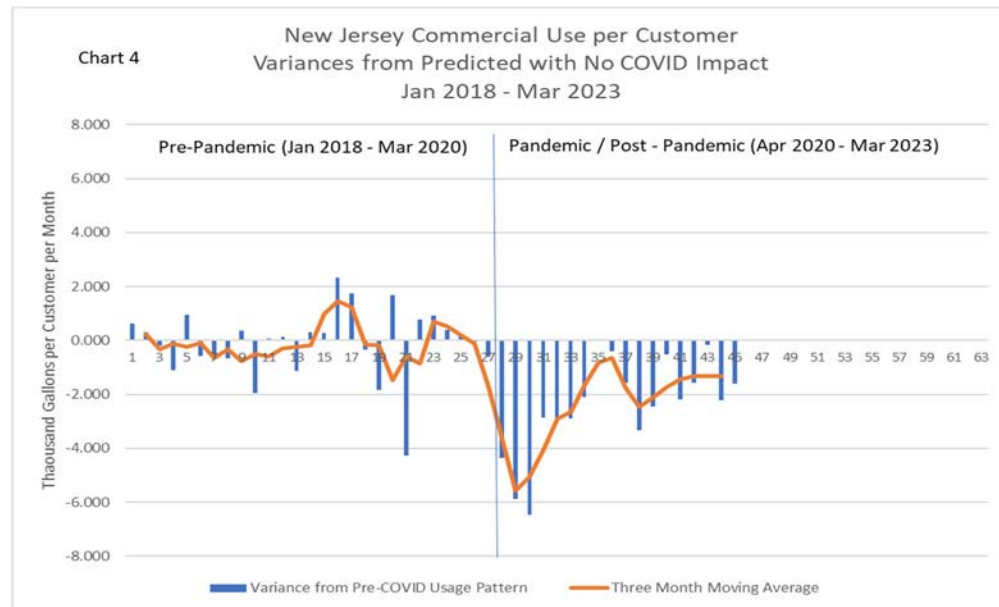


- 1 64. Q. What impact did COVID-19 have on commercial usage?
- 2 A. Chart 3 and Chart 4 show the impact that COVID-19 has had on commercial
- 3 usage, except in this case we are stopping both charts at September 2021. Chart
- 4 4 shows actual commercial use per customer from January 2018 through March
- 5 2020 (pre-COVID-19) and then from April 2020 through September 2021.

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Chart 3 also contains a baseline usage, or model-predicted usage, for the same time periods assuming no COVID-related impact. Chart 4 shows the differences between actuals and baseline usage (no COVID-19 impact) for the same periods. This data shows that there was a significant drop in commercial usage in the three-month period from April through June 2020 after the public health emergency began with a gradual return to more normal levels after June 2020, which has continued through 2021. We estimate that the total COVID-related impact on commercial use per customer during the Test Year was a negative 23,548 gallons per customer and we are therefore proposing a positive corresponding adjustment to commercial use per customer to reflect expected Post-Test Year conditions.



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65. Q. What impact did COVID-19 have on OPA usage?

A. Chart 5 and Chart 6 show the impact that COVID-19 has had on OPA usage.

Chart 5 shows actual OPA use per customer from January 2018 through March 2020 (pre-COVID-19) and then from April 2020 through September 2021.

Chart 5 also contains a baseline usage, or model-predicted usage, for the same time periods assuming no COVID-related impact. Chart 6 shows the

differences between actuals and baseline usage (no COVID-19 impact) for the

same periods. This data shows that there was a significant drop in OPA usage

in the three-month period from April through June 2020 after the public health

emergency began with a full return to more normal levels by the Summer of

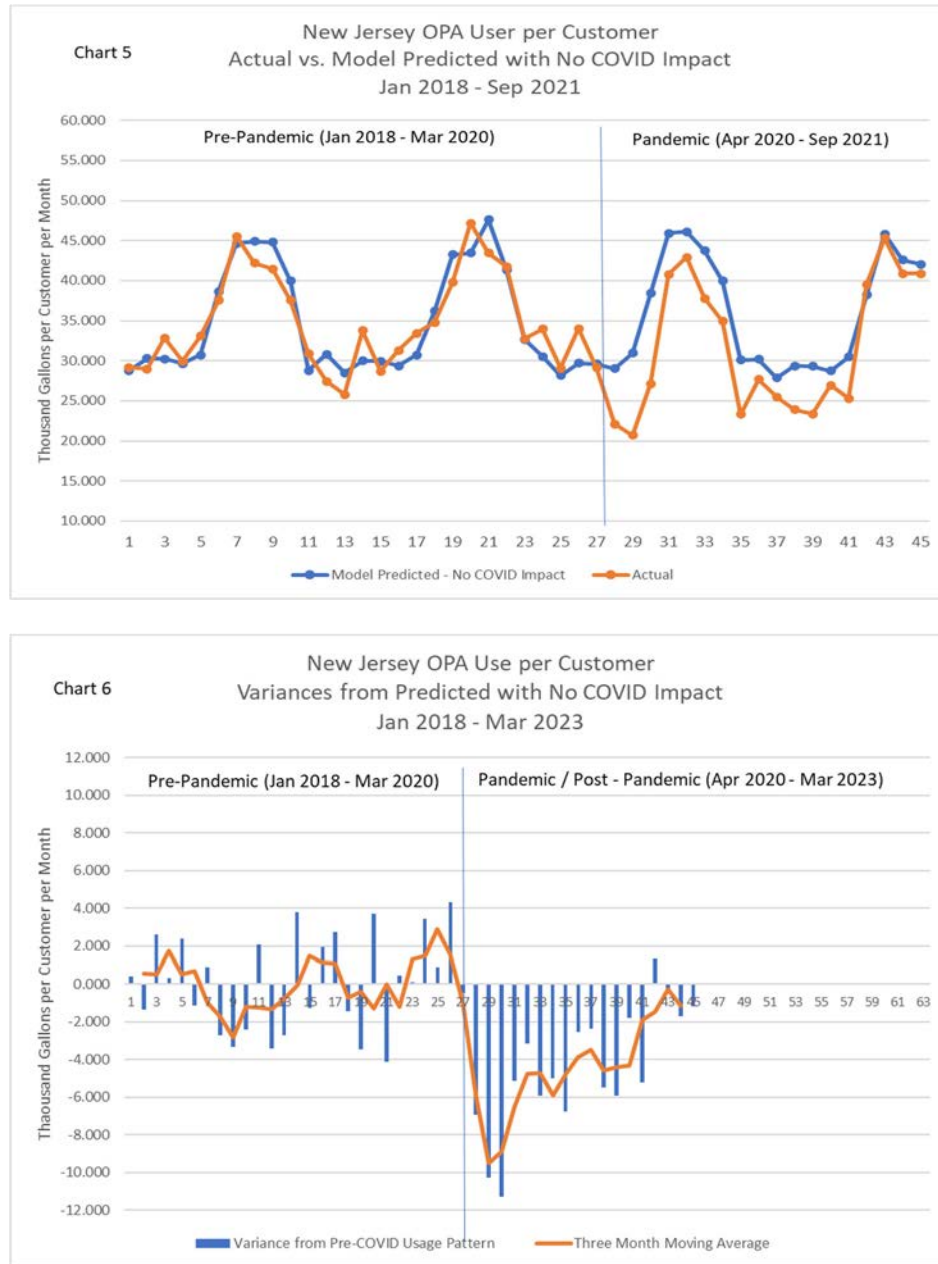
2021. We estimate that the total COVID-related impact on OPA use per

customer during the Test Year was a negative 50,681 gallons per customer and

we are therefore proposing a positive corresponding adjustment to OPA use per

customer to reflect expected Post-Test Year conditions.

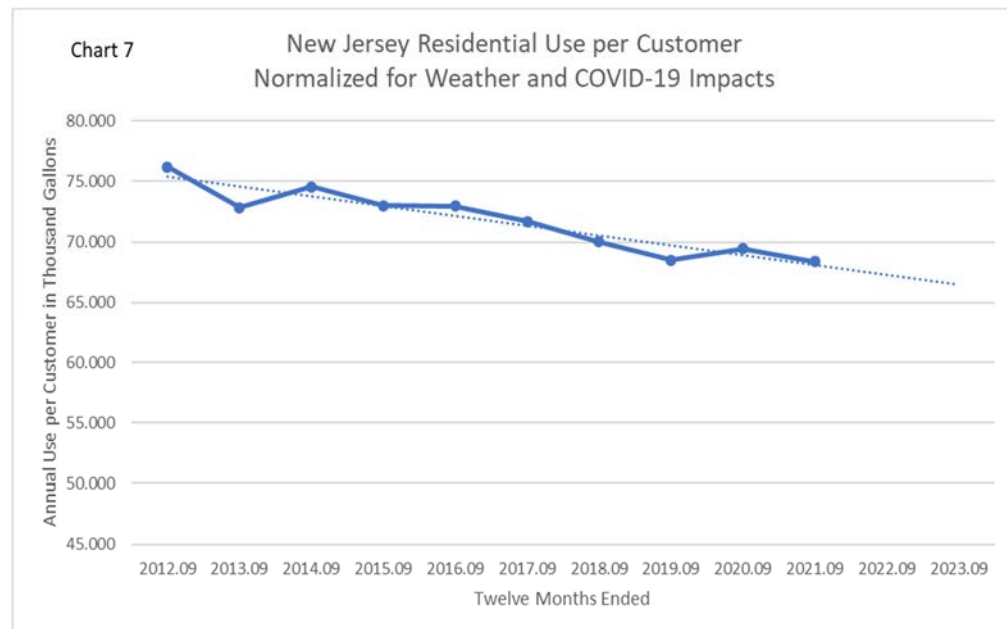
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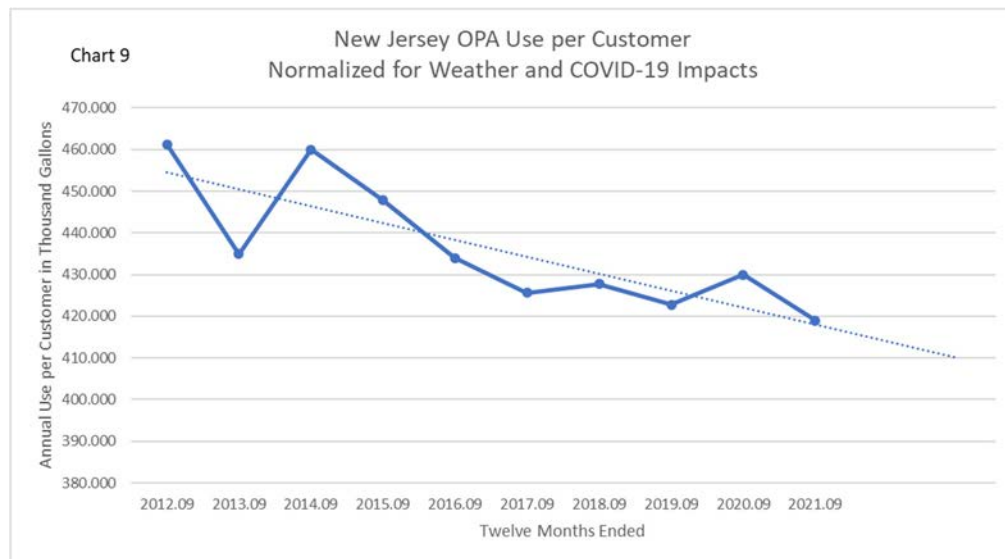
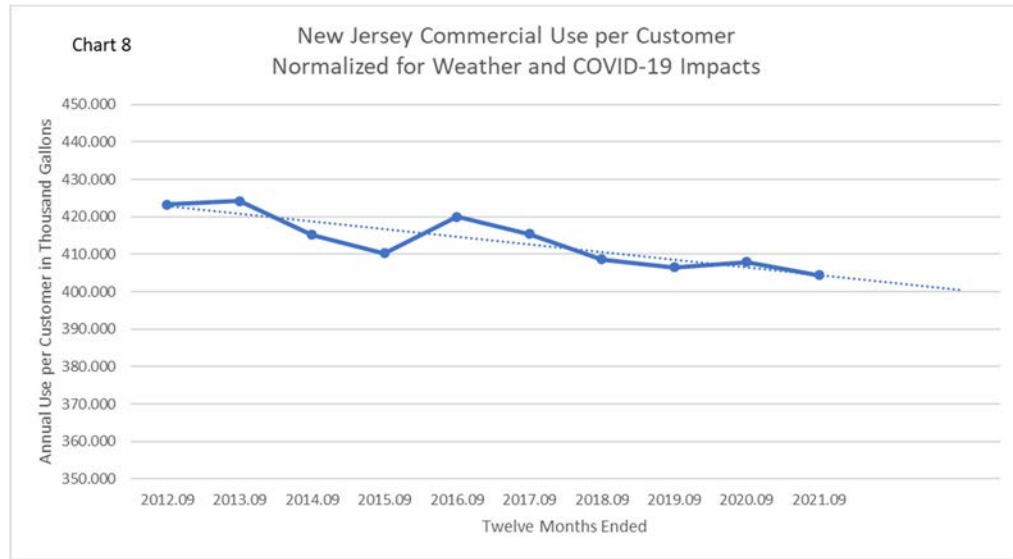
- 1 66. Q. What does your analysis of residential, commercial, and OPA usage show
- 2 in terms of declining usage?
- 3 A. The statistical analysis of residential, commercial, and OPA usage shows that
- 4 once weather effects and the one-time effects of COVID-19 have been
- 5 accounted for, there is a significant downward trend in all three classes. Charts

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7, 8, and 9 below show use per customer for residential, commercial, and OPA customers respectively for the ten years ending September 2021 adjusted for the weather impacts and COVID-19 impacts I have previously described in my Direct Testimony. In all cases, there is a significant and pervasive downward trend. Modeling shows that the usage decline for residential customers is 845 gallons per customer per year, the usage decline for commercial customers is 1,769 gallons per customer, and the usage decline for OPA customers is 3,707 gallons per customer. Extending these adjustments to Test Year consumption levels results in a residential downward adjustment of 1,104 gallons per customer, a commercial downward adjustment of 3,832 gallons per customer, and an OPA downward adjustment of 9,164 gallons per customer.



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- 1 **67. Q. Based on these usage trends, what is the net effect of the sum total of the**
2 **adjustments you are proposing for residential, commercial, and OPA**
3 **usage in this case?**
- 4 A. The following table shows the sum of all the adjustments to residential,
5 commercial, and OPA use per customer related to weather, COVID-19 impacts,
6 and declining usage:

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Use per Customer Adjustments	Residential	Commercial	OPA
Weather	178	155	994
COVID-19	-5,831	23,548	50,681
Declining Use	-1,104	-3,832	-9,164
Total	-6,758	19,871	42,461

68. Q. Did you conduct a separate analysis of usage consumption for residential and commercial customers specifically related to wastewater service?

A. No. The results of these water consumption analyses are also used as the basis for the revenue adjustments I describe later in my Direct Testimony for wastewater revenues for residential and commercial customers in the Company's service territory. We did not separately model usage for wastewater customers.

REVENUES

69. Q. Please explain the development of the Company's Revenue Forecast as set forth in Exhibit P-2, Schedule 5.

A. The process of developing the proposed revenue increase in this case for water and sewer service begins with normalization of the actual billing determinants 12-months ending June 30, 2021. Revenues are projected for the 12-month period ending June 30, 2022 (Test Year), to which various pro forma adjustments were made. The Post Test-Year adjustments made to Test Year revenues result in a revenue calculation at present rates for the forecasted period ending March 31, 2023.

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1 **70. Q. Please describe the development of Test Year revenues for the 12 months**
2 **ending June 30, 2022.**

3 A. Test Year revenues were calculated as normalized billing determinants
4 multiplied by present tariff rates. Adjustments were made to historical
5 residential, commercial, and OPA usage for weather normalization, COVID,
6 and trends in declining usage as I have previously described in my Direct
7 Testimony. General metered service industrial usage were normalized using a
8 three-year average per customer based on the period from July 2019 to June
9 2021.

10 **71. Q. Please describe the development of Post-Test Year revenues at present**
11 **rates.**

12 A. Revenues for Post Test-Year at present rates are based on current rates and
13 projected billing determinants by service classification for the 12-month period
14 ending March 31, 2023, as well as projections for other miscellaneous revenues.
15 These projections of revenues for the Post-Test Year at present rates compared
16 to the calculated revenue requirement for the same period is the basis for the
17 requested increase in this case.

18 **72. Q. How were the revenues by service classification component determined?**

19 A. Generally speaking, forecasted sales were determined by multiplying
20 forecasted customer counts for each class by forecasted use per customer.
21 Meter charge billing determinants were developed by applying forecasted
22 customer growth to the historical distribution of meter billing determinants by

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meter size that existed for the 12-month period ended June 30, 2021 and adding those values to the historical billing determinants. Usage billing determinants were determined by applying forecasted sales to the pattern of usage that exists for the 12-month period ended June 30, 2021. Forecasted billing units for both monthly meter charges and usage were multiplied by current rates to get forecast revenue at present rates.

73. Q. Please describe the calculations for revenues for the General Metered Service (“GMS”) class.

A. Revenues for the GMS class were determined by multiplying forecasted customer counts by forecasted use per customer for each account class. Residential, commercial, industrial, and other public authority organic customer growth or loss was projected using a time series forecasting function to project future customer count based on historical data from 2014 through 2021. Weather normalized customer usage at March 2023, based on the usage modeling I previously discussed in my Direct Testimony, was used to project customer usage for the residential, commercial, and OPA classes. Since rates are being set in this proceeding for a future period, it is important to capture usage per customer for that time period estimated to be at the mid-point of the first year when new rates will be in effect. Usage for the industrial class was determined using a three-year average of usage per customer for periods 12 months ended June 2019, June 2020, and June 2021. Using a three-year average of water usage for industrial customers is an appropriate period to use for

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1 normalizing sales. This time period eliminates short term fluctuations in usage
2 while still reflecting water consumption levels for these customers.

3 **74. Q. Please describe the calculations for the Optional Industrial Wholesale**
4 **(“OIW”) class.**

5 A. Revenue projections for the OIW class are performed on a customer-by-
6 customer basis. Usage for OIW customers were forecasted using the committed
7 annual usage except for two OIW customers. For the two customers that were
8 not forecasted using committed annual usage, the Company used a three-year
9 average of actual usage.

10 **75. Q. Please describe the calculations for the Sales for Resale class.**

11 A. Similar to the OIW class, revenue projections for the Sales for Resale class is
12 done on a customer-by-customer basis. There are a variety of different service
13 offerings for different Sales for Resales customers. Sales projections associated
14 with customers under each of the service offerings are detailed below:

- 15 • Test Year and Post-Test Year pro forma sales for the provision of
16 Manasquan Service is based upon the annual purchase requirement of each
17 customer for uninterruptible service.
- 18 • Pro forma sales from the provision of Commodity-Demand service are
19 forecasted by annualizing each purchaser’s contractual nominated demand.
- 20 • Test Year and Post-Test Year pro forma sales from the provision of Off-
21 Peak Service are based upon annualizing each purchaser’s contractual off-
22 peak demand. For forecasted revenue purposes, the monthly off-peak

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demand rate has been applied to each purchaser's contractual off-peak demand and annualized for the seven-month off-peak service period, while the commodity rate has been applied to the off-peak demand volume of water annualized for the 212-day off-peak service period.

- Pro forma sales from the provision of Service to Other Systems ("SOS") are based on the contract minimum purchase requirements for each customer.
- Pro forma sales from the provision of Peaking Service and Emergency or Backup Bulk Service are based upon a three-year average of water sales for the 12-month periods ended June 2019, June 2020 and June 2021.
- Pro forma sales from the provision of Regular Sales for Resale are based on the contract annual purchase requirement for each customer.

76. Q. Please describe the calculations for the Private Fire and Public Fire classes.

A. Revenue for private fire and public fire was calculated by multiplying the actual number of service connections and hydrants in service and billable at June 2021 by present rates. Pro forma Test Year revenue under present rates was calculated on the same basis utilizing the projected number of connections including growth in the number of connections and hydrants. Organic growth was projected using 3-year average change in count for the 12-month periods ended June 2019, June 2020, and June 2021.

77. Q. Are the Company's Distribution System Improvement Charge ("DSIC") revenues included in the development of Post-Test Year revenues at Present Rates?

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1 A. Yes. DSIC charges are billed to customers as a fixed monthly charge based on
2 meter size. The estimated rates for the second and third DSIC surcharge filings
3 have been added to the base rate meter charges where applicable for the purpose
4 of determining Post-Test Year revenues at present rate revenues.

5 **78. Q. How are DSIC revenues accounted for in proposed rates?**

6 A. The Company is recommending that the present DSIC revenues be rolled into
7 base rates, consistent with N.J.A.C. 14:9-10.6.

8 **79. Q. Please describe the calculations for the Wastewater classes.**

9 A. There are a variety of service offerings for wastewater customers. Details for
10 revenue projections for different groups of customers are outlined below:

- 11 • For Ocean City (Schedule 1-A), pro forma present rate revenues reflect
12 normalized water sales that are based on a three-year average of usage per
13 customer for the 12-month periods ended June 2019, June 2020, and June
14 2021. A three-year average of summer quarter usage for 2019, 2020, 2021
15 (sum of the water sales during the months of July, August, and September)
16 is the basis upon which the annual minimum usage charges are determined.
17 For the wastewater usage charge portion, projected usage was based on a
18 three-year average usage per customer at the 12-month periods ended June
19 2019, June 2020, and June 2021 multiplied by the projected number of
20 customers. Customer growth for the Test Year and Post-Test Year periods
21 is based on time series forecasting function to project future customer count
22 based on historical data from 2014 through 2021. Total projected summer

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1 quarter usage and annual usage are multiplied by current tariff rates to arrive
2 at pro forma present rate revenues.

- 3 • Pro forma present rate revenues for Lakewood, metered Tewksbury
4 Township (Pottersville service area), Plumsted Township (Jensen's Deep
5 Run) and Elk Township reflect annualized water sales based upon a three-
6 year average of usage per customer experienced for each Winter Quarter of
7 2019, 2020, and 2021. Winter quarter water consumption (sum of the water
8 sales during the months of January, February and March) is the basis upon
9 which annual sewer usage charges are determined. For the fixed charge
10 portion, total fixed charge billing units are based on projected number of
11 customers, where customer growth for the Test Year and Post-Test Year
12 periods is based on a time series forecasting function to a project future
13 customer count based on historical data from 2014 through 2021. Total
14 projected annual usage and monthly fixed charge billing determinants are
15 multiplied by current tariff rates to arrive at pro forma present rate revenues.
- 16 • Pro forma present rate revenues for the Adelphia and Haddonfield Systems
17 reflect normalized water sales based on a three-year average of usage per
18 customer for the 12-month periods ended June 2019, June 2020, and June
19 2021. For the fixed charge portion, total fixed charge billing units are based
20 on the projected number of customers, where customer growth for the Test
21 Year and Post-Test Year periods is based on a time series forecasting
22 function to project future customer count based on historical data from 2014
23 through 2021. Total projected annual usage and monthly fixed charge

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1 billing determinants are multiplied by current tariff rates to arrive at pro
2 forma present rate revenues.

- 3 • Pro forma present rate revenues for Statewide flat rate customers are based
4 on the projected number of customers, where customer growth for the Test
5 Year and Post-Test Year periods is based on a time series forecasting
6 function to project future customer count based on historical data from 2014
7 through 2021.
- 8 • Pro forma present rate revenues for Other Contracts are based upon 2021-
9 2022 number of students registered for the school contracts and number of
10 units for the Beacon Hill Clubhouse.
- 11 • Pro forma present rate revenues for Municipal Contracts are based upon the
12 number of billing determinants billed in 2021.

13 **80. Q. How has the Company treated the recovery of its purchased water costs**
14 **and sewage treatment and disposal costs and the associated revenues in this**
15 **base rate case proceeding?**

16 A. The Company has excluded all costs and revenues otherwise recovered through
17 Purchased Water Adjustment Clause ("PWAC") and Purchased Sewerage
18 Treatment Adjustment Clause ("PSTAC") rate schedules. Accordingly, the
19 base rate case filed herein reflects: (1) total pro forma revenues predicated on
20 the application of all tariff rate schedules, with the exception of the PWAC and
21 PSTAC Rate Schedules, to all projected billing units, and (2) the total cost of

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1 providing water and sewer service, with the exception of those costs just
2 described.

3 **81. Q. How were the various components of Other Revenues developed?**

4 A. Revenue projections for Late Payment Fees, Returned Check Charges,
5 Reconnect Fees, After Hours Charges, Usage Data, Application Fees and
6 Frozen Meter revenues are based on three-year average for the 12-month
7 periods ended June 2019, June 2020, and June 2021. Revenue projections for
8 Storage Fees and Rents are adjusted for known and measurable changes in
9 rental agreements and lease agreements to arrive at pro forma revenues.
10 Revenue for Miscellaneous Services is based upon the projected sales of Solar
11 Renewable Energy Credits during the 12-month period ending March 2023.

12 **WATER SERVICE RATE DESIGN**

13 **82. Q. Please discuss some of the important guiding principles associated with**
14 **sound rate design.**

15 A. There are several important principles that pricing analysts and policy makers
16 need to consider when developing appropriate rate design mechanisms for retail
17 water service:

- 18 • **Cost Basis:** An important goal of rate design is to develop prices for water
19 service to retail customers that are intended to recover the Company's
20 approved revenue requirement and that reflect the cost of providing service
21 to customers. Cost of service results inform pricing decisions and guide how

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1 rates should be set such that each customer class contributes to the revenue
2 requirement in accordance with their cost to serve.

- 3 • **Revenue Stability:** Rates should be designed in a way that provides
4 revenue stability to the utility and that can be expected to reasonably recover
5 the utility's revenue requirement over the long run. Consistent recovery of
6 the approved revenue requirement through rates helps the utility to
7 prudently manage and invest in the water delivery system, and poor rate
8 design decisions can hamper the utility's ability to make investments and
9 operate and maintain the water delivery system in a manner consistent with
10 the long-term interest of its customers.

- 11 • **Efficiency of Use:** Rates should be designed to encourage efficient use of
12 water resources by customers. The volumetric charges for water service
13 should appropriately reflect the variable cost of providing water service
14 while also providing customers an appropriate incentive to conserve water
15 and manage their bills. Rates should communicate to customers the full cost
16 of providing water service.

- 17 • **Gradualism:** Changes in rate design should be made to avoid inappropriate
18 levels of rate shock. Rate shock can come both from general increases in
19 revenues that can affect all customers and from changes in rate designs that
20 can cause large increases to specific pockets of customers. Drastic changes
21 in rates can cause customer confusion and dissatisfaction and have adverse
22 effects on the utility's ability to provide quality customer service.

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- **Avoidance of Discrimination:** Rates should not unduly discriminate against particular customer groups or provide different price signals to similarly situated customers taking similar services from the utility.
- **Simplicity and Feasibility:** Rate designs should be relatively simple and easy to understand and easy to communicate and manage and should result in bills that are clear and understandable.

83. Q. Please describe the Company's current rate design for General Meter Service ("GMS") water service.

A. NJAWC's current rate design for GMS customers is generally a flat volumetric rate with a monthly fixed charge that varies with the size of the meter.

- The large majority of GMS customers take service under Schedule A-1 and Schedule A-10. These rates share the same meter charge schedule, which starts at a monthly charge of \$18.50 per month for a 5/8" meter and escalates for larger meter sizes. The volumetric rate for all customers on Rate A-1 is \$6.8884 per thousand gallons and for Rate A-10, the rate is \$6.4376 per thousand gallons.
- In addition to Rates A-1 and A-10, the Company offers water service to customers in the Haddonfield district (Schedule A-15) with a flat monthly fee of \$14.00 per month regardless of the meter size and a volumetric rate of \$6.8884 per thousand gallons. The Company also offers water service to customers in the Roxbury district (Schedule A-16) with a monthly charge

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1 of \$9.50 per month for a 5/8" meter that escalates for larger meter sizes and
2 a flat volumetric rate of \$3.7150 per thousand gallons.

3 **84. Q. Please describe the Company's current rate design for OIW water service.**

4 A. OIW rates are a single volumetric rate and a schedule of monthly meter charges
5 identical to those for GMS rates. The volumetric rate for OIW customers is
6 \$3.78460 per thousand gallons for non-exempt customers and \$3.2687 per
7 thousand gallons for exempt customers. There are six OIW customers on this
8 rate schedule.

9 **85. Q. Please describe the Company's current rate design for Sales for Resale**
10 **customers.**

11 A. Sales for Resale customers take service under a variety of rate classifications
12 with different rate structures:

13 • Rate Schedule A-2 is a schedule with three customers that includes the same
14 meter charge schedule as GMS rates and a volumetric rate of \$6.8884 per
15 thousand gallons.

16 • Rate Schedule C and D are for Commodity-Demand customers. These rates
17 have monthly meter charges that escalate with the size of the meter, and
18 volumetric rates and demand rates for both on-peak and off-peak periods.
19 There are 29 customers on these rate schedules.

20 • Rate Schedules E and J are for service to Manasquan customers. These
21 rates have monthly meter charges that escalate with the size of the meter,

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1 and separate rates for interruptible and non-interruptible service. There are
2 six customers on these rate schedules.

- 3 • Rate Schedule G is for sales to other systems. This rate is for five large
4 customers and has a single volumetric rate of \$2.9574 per thousand gallons
5 for non-exempt customers and \$2.5543 per thousand gallons for exempt
6 customers.
- 7 • Rate Schedule H is for peaking service to five customers. This rate is
8 largely for summertime usage, shares the meter charge schedule with GMS
9 customers, and has a volumetric rate of \$9.1362 for thousand gallons.

10 **86. Q. Please describe the Company's current rate design for fire protection**
11 **service.**

12 A. The Company has rates for both public fire and private fire protection. Public
13 fire rates are all on a flat charge per hydrant, but the charges vary significantly
14 between district with a low charge of \$26.83 per hydrant under Schedule M-11
15 and a high charge of \$74.50 per hydrant under Schedule M-9 and M-5. I will
16 address these variations and the Company's proposal related thereto later in my
17 Direct Testimony.

18 Private fire rates vary depending on the district and the exact type of service
19 being provided, but generally have a flat monthly fee depending on the size of
20 the service line, and some combination of separate fees for hydrants, sprinkler
21 heads, and volumetric rates for actual water consumption depending on the
22 district.

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1 **87. Q. Monthly meter charges are generally the same for all customers regardless**
2 **of the rate schedule under which they take service with the exception of**
3 **fire service. Is the Company proposing to change the monthly meter**
4 **charges in this case?**

5 A. Yes. The Company is proposing to increase monthly meter charges to \$22.09
6 per month for a 5/8" meter, with proportionate increases to other meter sizes.
7 The Company's proposal is to add the DSIC surcharge, based on the capped
8 revenue level, to the current monthly meter charge. Thus, with the exception
9 of the roll-in of the DSIC surcharge into the monthly meter charge, the proposed
10 revenue increase in this case will be implemented through the volumetric rates
11 and the fire service rates.

12 **88. Q. What changes are the Company proposing to make to its rate design for**
13 **water service in this case?**

14 A. The Company is proposing the following changes to its water service rate
15 design:

- 16 • The Company is proposing to complete the alignment of Rate Schedules A-
17 1, and A-10 that was agreed to in the settlement approved by the BPU in
18 Docket No. WR19121516 by aligning the volumetric rates in those two
19 schedules. As a result, Rate Schedule A-10 will be eliminated.
- 20 • The Company is proposing to increase the monthly service charge in
21 Schedule A-15 from \$14.00 per month for a 5/8" meter to \$17.59 per month
22 to close the gap between the monthly service charges for Haddonfield

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1 customers and the rest of the NJAWC's customer base. Like the proposal
2 for meter charges for Rate Schedules A-1 and A-10, the Company's
3 proposal for Rate Schedule A-15 is to add the DSIC surcharge, based on the
4 capped revenue level, to the current monthly meter charge paid by those
5 customers.

- 6 • The Company is proposing to increase monthly meter charges for Schedule
7 A-16 (Roxbury) to \$13.30 per month for a 5/8" meter and to increase the
8 volumetric charge for Roxbury customers from \$3.7150 per thousand
9 gallons to \$4.8622 per thousand gallons. This will make rates for Roxbury
10 approximately 60% of the rates proposed for Schedule A-1.
- 11 • The Company is proposing to reduce the differences in public fire rates.

12 **89. Q. Please address the process you are using to reduce public fire rate**
13 **differences.**

14 A. Currently, there is a wide range of public fire rates. The proposed average rate
15 per hydrant in this application is \$61.58. The Company is proposing to increase
16 rates in each tariff group by \$6 per month or the proposed overall percentage
17 increase in this case whichever is greater up to a maximum level of \$61.58.
18 Hydrants with current rates above the proposed overall average of \$61.58 will
19 not receive an increase. In addition, the Schedule M-5 Zone 2L and M-9 rate of
20 \$74.50 will be reduced to \$70.59, which is the next highest public fire rate in
21 the Company's public fire tariff.

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1 **90. Q. Of the total revenues collected under proposed water rates, how much**
2 **revenue is collected through fixed charges and how much revenue is**
3 **collected through volumetric charges?**

4 A. The Company's total proposed retail water revenue requirement equals
5 \$857,088,450. Of this amount, \$259,377,683 is collected through fixed charges
6 (34% of the total) and \$561,710,766 is collected through volumetric charges
7 (68% of the total).

8 **91. Q. How does this breakdown of fixed and volumetric revenue compare to the**
9 **breakdown of the Company's fixed cost versus variable cost in its revenue**
10 **requirement?**

11 A. Approximately 95% of the Company's water system costs are fixed and only
12 5% of the Company's costs are variable. In contrast, as mentioned above, 34%
13 of the revenues are fixed, while approximately 68% of the revenues are
14 variable. The Company, therefore, relies on variable (or volumetric) revenues
15 for collecting fixed costs.

16 **92. Q. Please describe how the Company is proposing to allocate its proposed**
17 **revenue increase for water service to each customer class.**

18 A. The Company is proposing to allocate its proposed increase in water service
19 revenues according to the following guidelines:

- 20 • Increases for the OIW Class and all of the Sales for Resale classes will be
21 held to the requested overall percentage increase in this case.

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- 1 • Increases to the private fire rate category are proposed based on the overall
2 percentage increase indicated by the Company's class cost of service study.
- 3 • Increases to public fire are proposed as I have previously identified in my
4 Direct Testimony, which will yield an overall increase of approximately
5 7.5%, which is less than the proposed overall increase.
- 6 • The remaining increase will be allocated to GMS customers consistent with
7 the proposed changes in water rate design that I have previously discussed
8 for GMS. In addition, GMS customers will also be allocated a portion of
9 the proposed increase in sewer revenue requirements that I will later discuss
10 in my Direct Testimony.

11 **93. Q. Do you have a schedule that provides the Company's complete proposed**
12 **rate design in this case?**

13 A. Yes. Schedule CBR-5 provides the Company's proposed rate design, which is
14 based on the current rate design as modified by the proposals discussed above.

15 **94. Q. Do you have a schedule that provides information on the impact to**
16 **customers of implementing the Company's proposed rate design?**

17 A. Yes. A complete set of impacts to customers comparing bills under present
18 rates and proposed rates is provided in Schedule CBR-6.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**WASTEWATER SERVICE RATE DESIGN**

95. Q. Please describe the Company's current rate design for sewer service.

A. NJAWC's current rate design for sewer service is generally a flat monthly fixed charge and a volumetric rate that is based either on average summer usage, average winter usage, or total annual usage depending on the district and tariff. There are 19 different tariffs under which wastewater service is or is expected to be offered, and pricing in each tariff is significantly different.

96. Q. Is the Company proposing to make changes to its rate design for sewer service?

A. No. The Company is not proposing to change the rate design (type of billing determinants used) in any wastewater tariff. The Company is proposing to move rates closer together between each district to reduce the disparities in sewer service rates between districts.

97. Q. Please discuss the current disparities in sewer rates and the process you are using to reduce those disparities.

A. While the rate designs for sewer service are different from rate schedule to rate schedule, it is possible to evaluate the rates on a single consistent basis by looking at average monthly residential bills for each district. For example, customers using an average of 5,400 gallons per month for Rate Schedule 11-A Haddonfield, the bill equates to \$21.59. At the same level of usage, the average monthly bill for a customer on Rate Schedule 6-A Pottersville, is

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1 \$88.36. To reduce disparities the Company is proposing the following rate
2 increases:

- 3 • For Schedules 3-A (Adelphia), 11-A (Haddonfield), and 12-A (Elk
4 Township), the Company is proposing a 27.8% increase. This proposed
5 increase will bring lower priced sewer districts closer to the overall sewer
6 system average in terms of typical residential monthly bills. For example,
7 the average Haddonfield customer will now pay \$27.88 instead of \$21.74,
8 but they still remain at the low end of the range.
- 9 • For Schedules 5-A and 6-A (Pottersville) the Company is proposing a 7.0%
10 increase as these districts are the highest price districts in term of typical
11 residential monthly bills.
- 12 • For Schedules 13-A (Mt. Ephraim Sewer Services) 14-A (Long Hill flat
13 charge) and 15-A (Long Hill metered service), the Company is proposing a
14 3% increase per the terms of the Company's acquisition agreements with
15 those customers.
- 16 • For Schedules 16-A, 17-A, 18-A and 19-A (Egg Harbor and Bound Brook),
17 the Company is proposing no increase per the terms of the Company's
18 acquisition agreements with those customers.
- 19 • For all other rate groups, the Company is proposing increases of 13.9% to
20 achieve an overall increase for the Company's sewer service territory of
21 11.7%, which is the overall increase proposed by the Company in this
22 proceeding.

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1 The ultimate result of these increases is to bring the lowest price district
2 (Haddonfield) up to \$27.88 per month for an average residential customer from
3 the current level of \$21.74.

4 **98. Q. What increase is the Company asking for its sewer service revenues?**

5 A. The Company is proposing to increase sewer service revenues by \$3,177,438
6 or 11.7%, which is a percentage equal to the overall percent increase in revenue
7 the Company is proposing in this case. The remaining sewer service revenue
8 requirement not recovered through sewer service rates is proposed to be
9 recovered from GMS water service customers.

10 **99. Q. Do you have a schedule that provides the Company's complete proposed**
11 **rate design for sewer service in this case?**

12 A. Yes. Schedule CBR-5 provides the Company's proposed rate design, which is
13 based on the Company's current rate design.

14 **AFFORDABILITY**

15 **100. Q. Please describe the general concept of affordability for water and**
16 **wastewater service.**

17 A. The concept of affordability for water and wastewater service is based on the
18 idea that everyone should have access to water and wastewater services that are:
19 (1) safe, meaning it complies with EPA regulations and Safe Drinking Water
20 Act standards; (2) reliable, so that it is resilient in the face of floods, droughts,
21 and other climate risks; and (3) affordable. An assessment of affordability

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1 generally compares monthly or annual bills for water or wastewater service to
2 measures of household income.

3 **101. Q. How can one assess the affordability of water and wastewater service and**
4 **what information is needed to complete such an assessment?**

5 A. A common way to assess affordability is to compare annual bills for water
6 and/or wastewater service to some measure of household income in the
7 communities that the utility serves. Such an assessment requires two data
8 points -- the average monthly or annual bill for water and wastewater service
9 and some measure of household income for the target customer population. For
10 the broader residential customer base, the most common household income
11 measure is Median Household Income ("MHI"), which can be measured at a
12 community level and paired with a data set that provides the number of
13 customers served in each community in order to arrive at a weighted number
14 that represents MHI for the Company's service territory as a whole. Alternative
15 measures of income, such as disposable income or hours of labor at minimum
16 wage needed to cover the cost of water and/or wastewater service have also
17 been suggested.⁴

18 When an appropriate measure (or measures) of household income is
19 determined, affordability can then be assessed for the average customer, low-
20 income customers, and a full range of households based on their various income

⁴ Teodoro, Manuel P. "Measuring Household Affordability for Water and Sewer Utilities." Journal AWWA, 2018, doi:10.5942/jawwa.2018.110.0002

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1 levels and bills for water and/or wastewater service. A variety of household
2 income data is readily and publicly available from the U.S. Census Bureau
3 through the American Community Survey at the state, county, and community
4 level.

5 **102. Q. What can different measures of affordability for water and wastewater**
6 **service expressed as a percentage of MHI tell you?**

7 A. Assessing affordability information of water and wastewater service for the
8 entire residential customer population can tell you whether customers in general
9 are having or would have difficulty paying their water bills under the
10 Company's current or proposed tariff structure. Assessing affordability
11 information of water and wastewater service for lower income customers can
12 tell you the number of customers that may be having trouble paying their utility
13 bills, where in the Company's service territory these customers are, and the
14 extent to which those bills are causing customers economic distress. This can,
15 in turn, inform the utility about the size and scope of low-income assistance
16 programs that may be needed to help these vulnerable customers better afford
17 water and wastewater service, both in terms of rate design proposals and
18 customer assistance programs that may include customer grants, tariff
19 discounts, levelized billing, and outreach programs.

20 **103. Q. Has the Company completed an affordability study regarding bills that**
21 **would arise from proposed rates in this case?**

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1 A. Yes. The Company's affordability study for water service is provided in
2 Schedule CBR-7. The Company's affordability study for wastewater water
3 service is provided in Schedule CBR-8.

4 **104. Q. What information does the Company's affordability study provide?**

5 A. The Company's affordability study is two different analyses and provides two
6 basic types of information. This information includes:

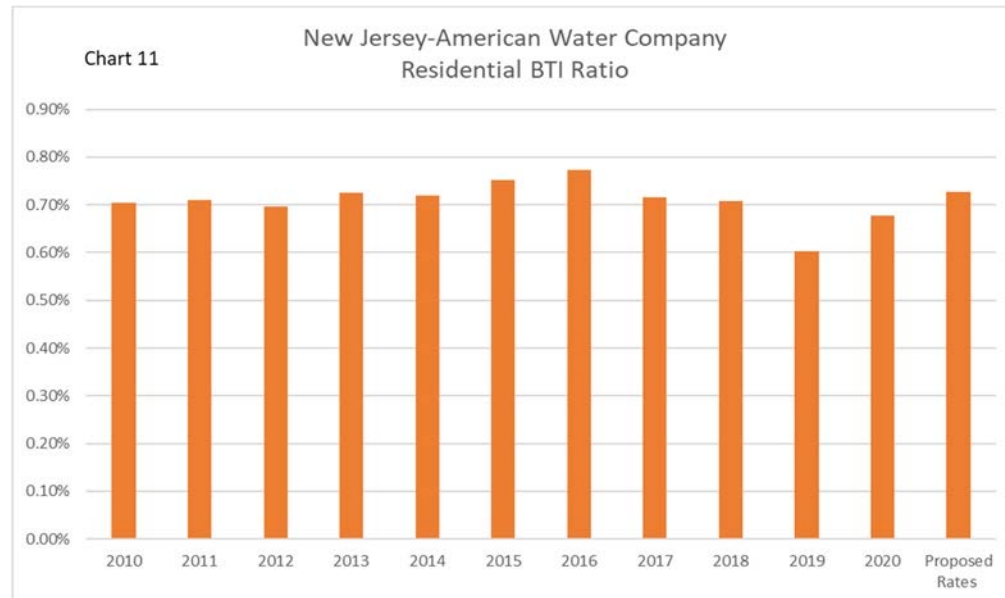
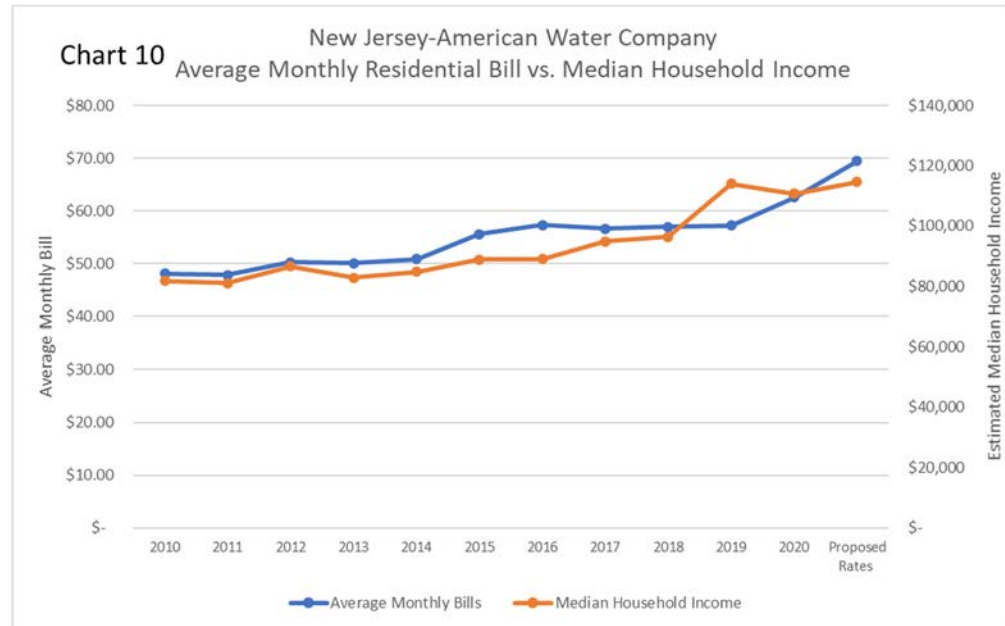
- 7 • Historical comparisons of average monthly bills to MHI shown in actual
8 terms and shown in terms of Bill to Income Ratio ("BTI Ratio") which is
9 defined as estimated annual water bills divided by estimated annual
10 household income.
- 11 • Current information on the estimated number of customers in the service
12 territory, and estimated BTI Ratios for various income levels stated in terms
13 of household income and multiples of the Federal Poverty Level ("FPL").
14 BTI Ratios are calculated for proposed rates in this case.

15 **105. Q. What is the result of your historical comparison of average monthly water**
16 **bills to median household income in the NJAWC service territory?**

17 A. The charts below compare historical average monthly water bills to MHI for
18 New Jersey-American customers from 2010 through 2020 stated in absolute
19 terms and stated in terms of BTI Ratio along with estimated average monthly
20 bills under the Company's proposed rates in this case and estimated MHI for
21 New Jersey-American customers during the first 12-month period following the
22 effective date of new rates. The data shows that BTI Ratios for the residential

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customer base have held steady in the 0.60%-0.80% range since 2010 and are expected to be 0.73% under the Company's proposed rates in this case.



106. Q. What information is needed to do a focused assessment of affordability of water and wastewater service for the Company's most vulnerable customers?

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1 A. A more focused assessment of affordability targeted at the Company's more
2 vulnerable customers can compare annualized bills for "basic water and/or
3 wastewater service" (i.e., service that is necessary and reasonable to meet basic
4 household needs for drinking, cooking, sanitation, and general health service
5 that does not include seasonal discretionary water use) to measures of
6 household income for lower income groups. Such a more focused affordability
7 assessment requires a much more detailed information set that includes:

8 1. Standard measure of defining low-income customers.

9 Typically, a standard measure of income for lower-income centers around
10 various multiples of the FPL, which is set by the federal government and
11 varies depending on the number of persons in the household. For calendar
12 year 2020, 100% of FPL for a three-person household in the lower 48 states
13 was \$21,720 per year. Multiples of FPL can then be used to set low-income
14 benchmarks (50% of FPL, 150% of FPL, 200% of FPL, etc.). It is important
15 to note that FPL is both a function of income and the number of persons in
16 the household, so the estimation of the number of households at different
17 levels of FPL is more complicated than simply understanding income level.

18 2. Number of households in the service territory that qualify as low-income
19 customers.

20 The number of households that fall within different levels of income or
21 different intervals of FPL can best be found through the previously-
22 mentioned U.S. Census Bureau data, which provides this information at a
23 community level. As previously stated, this data can be paired with a data

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1 set that provides the number of customers served by community to
2 determine the estimated percentage of households at different income levels
3 in the service territory. The number of customers at different multiples of
4 FPL can also be estimated by pairing households at different income levels
5 in the service territory with the number of persons per household by income
6 level, which is also available through U.S. Census Bureau data.

7 3. Number of low-income households that are customers of the utility.

8 The number of low-income households in a service territory does not
9 necessarily equate to the number of low-income customers of the utility,
10 because lower income customers are more likely to rent and less likely to
11 own homes than higher income customers. Water and wastewater service
12 to apartment buildings and other multifamily housing units are often in the
13 name of the building owner, and tenants are generally not the utility
14 customers of multifamily housing units. To determine the number of low-
15 income households that are actually low-income customers of the utility,
16 one needs to determine a) the level of home ownership in the community
17 by income level, and b) the percentage of renters in a community that rent
18 other single-family homes (for which those renters are likely the paying
19 customer of record) versus renters that live in apartment buildings and other
20 multifamily units.

21 4. Common understanding of what constitutes basic water service.

22 When looking at the appropriate usage levels to determine affordability for
23 lower income groups, it is not appropriate to rely solely on average usage

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1 levels for a residential customer class in total. A better approach is to
2 identify a usage level that reflects water consumption provided for basic
3 human services (cooking, cleaning, sanitation, and general health
4 requirements), which is then assumed to be constant from month-to-month
5 and not subject to significant seasonality or weather conditions. This
6 standard can be expressed in terms of gallons per resident per day. An
7 advantage of this approach is that a basic water service metric stated in
8 terms of gallons per resident can be paired with the fact that lower income
9 households tend to have lower occupancy rates in terms of persons per
10 household. This information, which is available from U.S. Census Bureau
11 data, can be used to customize a level of usage that accurately reflects basic
12 water service for lower income households.

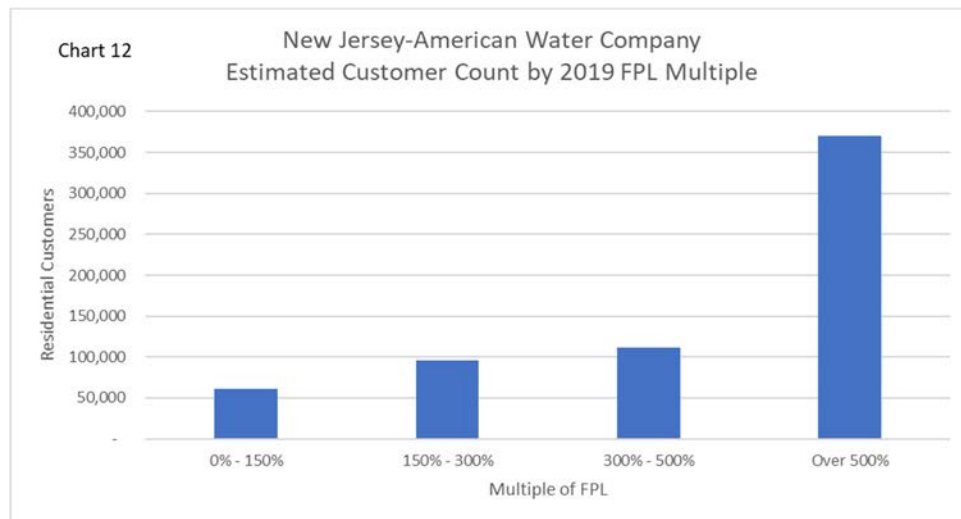
13 An alternative approach is to look at individual customer billing records and
14 identify a median monthly water consumption for all customers with
15 relatively flat non-seasonal usage across the year. The use of a median
16 statistic in this case reduces the impact of very high usage customers.
17 Another alternative is to choose a consecutive period of time during the year
18 (February through April for example) that tends to have the lowest average
19 use per customer over the course of the year and has the least amount of
20 discretionary seasonal water usage, if any at all. This method helps to ensure
21 that the monthly usage used in an affordability analysis represents the least

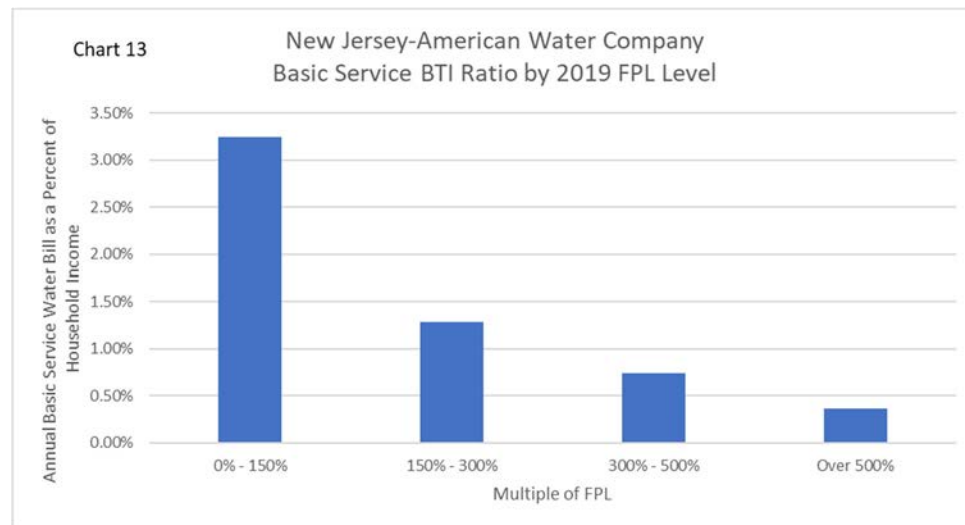
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amount of discretionary water use, and therefore is most representative of basic water usage in a given service territory.

107. Q. What does your affordability study show in terms of the estimated number of customers in New Jersey by household income and how bills for Basic Water Service compare for these customers in terms of BTI Ratios?

A. The charts below show estimated number of customers by multiples of FPL for the Company's residential customers and the BTI Ratios for bills for Basic Water Service for each income group under the Company's proposed rates in this case.



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For the vast majority of our customers, BTI Ratios are less than 2% for Basic Water Service at the Company's proposed rates. The Company estimates that there are approximately 60,000 residential customers with household incomes at or below 150% of FPL which represents approximately 9.5% of the Company's residential customer base. For these customers, the average BTI Ratio is approximately 3.25%, for Basic Water Service, which is defined to be 40 gallons of water per household per day.

108. Q. What conclusions do you draw based on the Company's affordability study?

A. There are two conclusions that can be drawn from Company's affordability study:

- The Company's water service has been and is expected to continue to be affordable for the majority of its residential customers, including under final rates proposed in this case.

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- There are groups of customers for whom affordability of water service may be a concern. That concern, however, is alleviated by the fact that basic water service would comprise only 3.25% of BTI for a lower income customer, which, as shown below, falls within the affordability definition for that group. There are, moreover, customer assistance programs for those customers that attenuate the effect on the BTI in many cases.

109. Q. Is there a generally accepted standard for the affordability of water and wastewater expressed as a percentage of MHI?

A. A benchmark for affordability expressed as a total bill's percentage of MHI is a policy decision; however, bills less than 2.0% or 2.5% of MHI for water and 4.0% to 4.5% of MHI for combined water/wastewater are considered "affordable" by some.⁵ An affordability benchmark for water service of 3.0% to 4.5% of household income has also been proposed specifically for lower income groups.⁶

110. Q. How do the results of the Company's affordability study for wastewater service compare to the results for water service?

A. The following table provides MHI data, average monthly bills for basic service, and BTI ratios for the Company's proposed rates in this proceeding for water

⁵ Teodoro, Manuel P. "Measuring Household Affordability for Water and Sewer Utilities." Journal AWWA, 2018, doi:10.5942/jawwa.2018.110.0002.

⁶ Colton, R. (2020). The Affordability of Water and Wastewater Service in Twelve U.S. Cities: A Social, Business and Environmental Concern prepared for The Guardian (U.S. Office). New York NY. <https://www.theguardian.com/environment/2020/jun/23/full-report-read-in-depth-water-poverty-investigation>

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1 and wastewater service aggregated across the Company's entire service
2 territories for water and wastewater service.

Basic Service Statistics	Median	Average	BTI Ratio
	Household Income	Monthly Bill	
Water Service	\$116,454	\$49.31	0.51%
Wastewater Service	\$92,622	\$54.61	0.71%

3 **111. Q. How is the Company currently addressing concerns for low-income**
4 **customers?**

5 A. NJAWC offers a targeted customer assistance program to help its most
6 vulnerable customers. The H2O Program, administered by New Jersey
7 SHARES,⁷ was created by the Company in 2004 and has been improved over
8 time.⁸ The H2O Program is available to customers with an annual income at or
9 below 300% of the FPL that qualify, and is composed of two main components:
10 grants and a discount on the service charge. The grant component is an
11 emergency bill-paying assistance program funded by NJAWC's shareholders
12 and donations from customers who want to help other customers in need.
13 Eligible customers may receive grants of up to \$500 toward their NJAWC bill.
14 The service charge discount component, funded through rates, provides eligible

⁷ NJ SHARES is a statewide non-profit corporation providing assistance to individuals and families in need of help meeting their energy and utility burden.

⁸ For example, in 2017, NJAWC expanded the income limits from 200% to 300% of the federal poverty level, and in 2019, NJAWC increased the length of time applicants are given to provide documentation to New Jersey SHARES, from three days to 10 days. Most recently, the Company temporarily waived certain eligibility requirements to further enhance access to the program, including requiring a customer contribution and the restriction of receiving a grant only once every three years.

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1 customers up to a 100% discount on their monthly fixed service charge for
2 water and is also available for our wastewater customers. Eligible customers
3 who also receive Social Security benefits or Medicare coverage are also eligible
4 to receive a discount off the monthly DSIC charge, which is based on meter
5 size.

6 In addition, NJAWC's residential customers have the option of paying bills
7 under the Company's budget billing plan, whereby the total service for the
8 succeeding 12-month period is estimated in advance, and bills are rendered
9 monthly on the basis of one-twelfth (1/12) of the 12-month estimate. The
10 Company also offers its customers flexible payment arrangements through
11 installment agreements if they are financially unable to pay a past due water or
12 wastewater service bill.

13 **112. Q. Is the Company proposing any additional programs to further support**
14 **low-income customers?**

15 A. The Company is not proposing any additional programs at this time, but is open
16 to working with Board Staff, Rate Counsel and other key stakeholders to
17 develop a program that makes sense for customers and the Company.

18 **113. Q. Does this conclude your Direct Testimony?**

19 A. Yes, it does.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**Appendix A**

1 **1. Q. Please describe your educational background and professional associations.**

2 A. I received a Bachelor of Arts degree in Computer Science from the University of
3 Illinois at Springfield in 1986 and a Master's degree in Statistics and Operations
4 Research from Southern Illinois University at Edwardsville in 1990.

5 **2. Q. What has been your business experience?**

6 A. I have been employed by AWWSC since January 2018. In my role as Director,
7 Rates and Regulatory, my primary responsibility is to serve as the subject matter
8 expert on cost of service and rate design issues. Previous to my employment with
9 AWWSC, I was employed by MidAmerican Energy Company from June 1990
10 through January 2018. I have over thirty years of utility experience covering a wide
11 range of issues including electric system planning, sales and revenue forecasting,
12 electric load research, marketing, rates, cost of service, and energy efficiency. Most
13 recently at MidAmerican, I was Director, Energy Efficiency and Regulatory
14 Analytics. In that position I had responsibility for planning, evaluation, and
15 operational management of MidAmerican's energy efficiency and demand
16 response programs in Illinois, Iowa, and South Dakota, as well as direct
17 responsibility for electric and natural gas sales and revenue forecasting, electric
18 peak demand forecasting, load research, retail pricing of electric and natural gas
19 products, and electric and natural gas cost of service and rate design.

New Jersey-American Water Company
2022 Cost of Service Study - Functional Allocators to Customer Class

Functional COS	Alloc	Description	General	Optional Ind. Whole.	Manasquan Resale	Resale CD	Resale SOS	Private Fire	Public Fire	Total	Variance
Source of Supply Expense											
Fixed	\$ 35,664,567	2A Base/Extra Daily w/o Manasquan	\$ 28,684,295	\$ 1,561,906	\$ -	\$ 2,109,960	\$ 3,279,370	\$ 29,036	\$ -	\$ 35,664,567	\$ -
Variable	\$ 10,876,598	1A Total Usage w/o Manasquan	\$ 8,143,240	\$ 530,381	\$ -	\$ 922,341	\$ 1,267,944	\$ 12,693	\$ -	\$ 10,876,598	\$ -
Power and Pumping Expenses											
Fixed	\$ 63,886,183	2 Base/Extra Daily	\$ 51,102,225	\$ 2,782,599	\$ 348,322	\$ 3,758,978	\$ 5,842,330	\$ 51,728	\$ -	\$ 63,886,183	\$ -
Variable	\$ 5,557,919	1 Total Usage	\$ 4,128,735	\$ 268,911	\$ 43,333	\$ 467,639	\$ 642,865	\$ 6,435	\$ -	\$ 5,557,919	\$ -
Water Treatment											
Fixed	\$ 118,063,048	2 Base/Extra Daily	\$ 94,438,018	\$ 5,142,302	\$ 643,707	\$ 6,946,673	\$ 10,796,753	\$ 95,595	\$ -	\$ 118,063,048	\$ -
Variable	\$ 24,082,403	1 Total Usage	\$ 17,889,766	\$ 1,165,187	\$ 187,763	\$ 2,026,277	\$ 2,785,527	\$ 27,884	\$ -	\$ 24,082,403	\$ -
Transmission	\$ 137,801,841	4 Base/Extra Daily w/ Fire	\$ 103,613,676	\$ 5,623,354	\$ 699,850	\$ 7,552,548	\$ 11,773,795	\$ 1,855,589	\$ 6,683,029	\$ 137,801,841	\$ -
Distribution	\$ 167,405,298	5 Base/Extra Hourly w/ Fire	\$ 151,402,276	\$ 558,845	\$ 155,456	\$ 536,842	\$ -	\$ 3,210,844	\$ 11,541,035	\$ 167,405,298	\$ -
Storage	\$ 56,626,130	6 Storage	\$ 44,216,645	\$ 1,922,354	\$ -	\$ 1,532,324	\$ 2,439,856	\$ 1,425,709	\$ 5,089,241	\$ 56,626,130	\$ -
Meters	\$ 64,471,109	7 Meters	\$ 63,884,988	\$ 451,339	\$ 37,624	\$ 97,158	\$ -	\$ -	\$ -	\$ 64,471,109	\$ -
Services	\$ 85,398,386	8 Services	\$ 61,377,340	\$ 328,067	\$ 27,348	\$ 70,585	\$ -	\$ 23,595,046	\$ -	\$ 85,398,386	\$ -
Customers	\$ 55,074,009	9 Customers	\$ 54,032,209	\$ 499	\$ 499	\$ 2,327	\$ 415	\$ 1,012,642	\$ 25,419	\$ 55,074,009	\$ -
Hydrants	\$ 32,180,960	10 Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,541,217	\$ 30,639,743	\$ 32,180,960	\$ -
Total	\$ 857,088,450		\$ 682,913,411	\$ 20,335,743	\$ 2,143,901	\$ 26,023,652	\$ 38,828,857	\$ 32,864,418	\$ 53,978,467	\$ 857,088,450	\$ -
			79.68%	2.37%	0.25%	3.04%	4.53%	3.83%	6.30%		
Test Year Water Revenue	\$ 775,766,850		\$ 653,258,655	\$ 16,038,637	\$ 1,568,492	\$ 19,524,406	\$ 27,737,073	\$ 26,815,521	\$ 30,824,066	\$ 775,766,850	\$ -
Other Water Operating Revenues	\$ 5,361,623										
Increase	\$ 81,321,600		\$ 29,654,756	\$ 4,297,106	\$ 575,409	\$ 6,499,246	\$ 11,091,784	\$ 6,048,897	\$ 23,154,401	\$ 81,321,599	\$ (1)
Percent Increase	10.48%		4.54%	26.79%	36.69%	33.29%	39.99%	22.56%	75.12%	10.48%	
Test Year Revenue			\$ 653,258,655	\$ 16,038,637	\$ 1,568,492	\$ 19,524,406	\$ 27,737,073	\$ 26,815,521	\$ 30,824,066	\$ 775,766,850	
Cost of Service Increase			\$ 29,654,756	\$ 4,297,106	\$ 575,409	\$ 6,499,246	\$ 11,091,784	\$ 6,048,897	\$ 23,154,401	\$ 81,321,599	
Adjustments			\$ 41,756,396	\$ (4,297,106)	\$ -	\$ (6,499,246)	\$ (11,091,784)	\$ (6,048,897)	\$ (23,154,401)	\$ (9,335,038)	
Revenue Target			\$ 724,669,807	\$ 17,916,792	\$ 1,752,165	\$ 21,810,751	\$ 30,985,137	\$ 26,815,521	\$ 33,138,276	\$ 857,088,449	
Percent Increase			10.9%	11.71%	11.71%	11.71%	11.71%	0.00%	7.51%	10.48%	
Variable Cost	\$ 42,982,306										
			Increase Caps:	11.71%	11.71%	11.71%	11.71%		11.71%		

New Jersey-American Water Company
2022 Cost of Service Study - Account Detail

Post Test Year		Alloc	Description	Source of Supply		Water Treatment		Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
				Supply	Pumping											
Source of Supply Expense																
Operating Expense																
Purchased Water	\$ 722,032	A	Source of Supply	\$ 722,032	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	722,032	\$ -
Fuel and Power	\$ 10,154,566	A	Source of Supply	\$ 10,154,566	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	10,154,566	\$ -
Chemicals	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Waste Disposal	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Salaries and Wages	\$ 603,437	A	Source of Supply	\$ 603,437	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	603,437	\$ -
Employee Benefits	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Group Insurance	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Benefits	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Support Services	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services	\$ 387,032	A	Source of Supply	\$ 387,032	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	387,032	\$ -
Building Maintenance & Services	\$ 1,257,526	A	Source of Supply	\$ 1,257,526	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1,257,526	\$ -
Telecommunications	\$ 1,423	A	Source of Supply	\$ 1,423	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1,423	\$ -
Office Supplies	\$ 5,259	A	Source of Supply	\$ 5,259	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	5,259	\$ -
Employee Related Expenses	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous	\$ 80,105	A	Source of Supply	\$ 80,105	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	80,105	\$ -
Rents	\$ (1,389)	A	Source of Supply	\$ (1,389)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	(1,389)	\$ -
Transportation	\$ 16,100	A	Source of Supply	\$ 16,100	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	16,100	\$ -
Uncollectible Accounts	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Accounting	\$ 52	A	Source of Supply	\$ 52	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	52	\$ -
Regulatory Expense	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Insurance Other Than Group	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ 13,226,142			\$ 13,226,142	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	13,226,142	\$ -
Maintenance Expense																
Salaries and Wages	\$ 48,111	A	Source of Supply	\$ 48,111	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	48,111	\$ -
Engineered Coating of Steel Structures	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance	\$ 298,922	A	Source of Supply	\$ 298,922	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	298,922	\$ -
	\$ 347,033			\$ 347,033	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	347,033	\$ -
Total SS Expense	\$ 13,573,175			\$ 13,573,175	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	13,573,175	\$ -
Power and Pumping Expenses																
Operating Expense																
Purchased Water	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fuel and Power	\$ 5,557,919	B	Pumping	\$ -	\$ 5,557,919	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	5,557,919	\$ -
Chemicals	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Waste Disposal	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Salaries and Wages	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Employee Benefits	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Group Insurance	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Benefits	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Support Services	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Maintenance & Services	\$ 60	B	Pumping	\$ -	\$ 60	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	60	\$ -
Telecommunications	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Office Supplies	\$ 602	B	Pumping	\$ -	\$ 602	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	602	\$ -
Employee Related Expenses	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous	\$ (118,451)	B	Pumping	\$ -	\$ (118,451)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	(118,451)	\$ -
Rents	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transportation	\$ 15,771	B	Pumping	\$ -	\$ 15,771	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	15,771	\$ -
Uncollectible Accounts	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Accounting	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Regulatory Expense	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Insurance Other Than Group	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ 5,455,902			\$ -	\$ 5,455,902	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	5,455,902	\$ -
Maintenance Expense																
Salaries and Wages	\$ 5,903,083	B	Pumping	\$ -	\$ 5,903,083	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	5,903,083	\$ -
Engineered Coating of Steel Structures	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance	\$ 2,368,970	B	Pumping	\$ -	\$ 2,368,970	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	2,368,970	\$ -
	\$ 8,272,053			\$ -	\$ 8,272,053	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	8,272,053	\$ -
Total Pumping Expense	\$ 13,727,954			\$ -	\$ 13,727,954	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	13,727,954	\$ -
Water Treatment																
Operating Expense																
Purchased Water	\$ -	C	Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fuel and Power	\$ 3,588,927	C	Water Treatment	\$ -	\$ 3,588,927	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	3,588,927	\$ -
Chemicals	\$ 15,970,707	C	Water Treatment	\$ -	\$ 15,970,707	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	15,970,707	\$ -
Waste Disposal	\$ 4,522,769	C	Water Treatment	\$ -	\$ 4,522,769	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	4,522,769	\$ -
Salaries and Wages	\$ 2,695,632	C	Water Treatment	\$ -	\$ 2,695,632	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	2,695,632	\$ -
Employee Benefits	\$ -	C	Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Group Insurance	\$ -	C	Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Benefits	\$ 10,853	C	Water Treatment	\$ -	\$ 10,853	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	10,853	\$ -
Support Services	\$ -	C	Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services	\$ 404,104	C	Water Treatment	\$ -	\$ 404,104	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	404,104	\$ -
Building Maintenance & Services	\$ 921,912	C	Water Treatment	\$ -	\$ 921,912	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	921,912	\$ -
Telecommunications	\$ 6,421	C	Water Treatment	\$ -	\$ 6,421	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	6,421	\$ -
Office Supplies	\$ 148,203	C	Water Treatment	\$ -	\$ 148,203	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	148,203	\$ -
Employee Related Expenses	\$ -	C	Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous	\$ 1,170,842	C	Water Treatment	\$ -	\$ 1,170,842	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1,170,842	\$ -
Rents	\$ 32,773	C	Water Treatment	\$ -	\$ 32,773	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	32,773	\$ -

New Jersey-American Water Company
2022 Cost of Service Study - Account Detail

		Post Test Year	Source of												Total	Variance
			Alloc	Description	Supply	Pumping	Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants		
Transportation		\$ 468	C	Water Treatment	\$ -	\$ -	\$ 468	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 468	\$ -
Uncollectible Accounts		\$ -	C	Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Accounting		\$ 27,614	C	Water Treatment	\$ -	\$ -	\$ 27,614	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 27,614	\$ -
Regulatory Expense		\$ -	C	Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Insurance Other Than Group		\$ -	C	Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ 29,501,225			\$ -	\$ -	\$ 29,501,225	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 29,501,225	\$ -
Maintenance Expense																
Salaries and Wages		\$ 406,317	C	Water Treatment	\$ -	\$ -	\$ 406,317	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 406,317	\$ -
Engineered Coating of Steel Structures		\$ -	C	Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance		\$ 2,078,501	C	Water Treatment	\$ -	\$ -	\$ 2,078,501	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,078,501	\$ -
		\$ 2,484,818			\$ -	\$ -	\$ 2,484,818	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,484,818	\$ -
Total Water Treatment Expense		\$ 31,986,044			\$ -	\$ -	\$ 31,986,044	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 31,986,044	\$ -
Transmission & Distribution Expense																
Operating Expense																
Fuel and Power		\$ 2,465,387	K	Mains	\$ -	\$ -	\$ -	\$ 1,221,144	\$ 1,244,243	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,465,387	\$ -
Chemicals		\$ -	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Waste Disposal		\$ -	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Salaries and Wages		\$ 673,885	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 333,127	\$ 339,429	\$ 1,329	\$ -	\$ -	\$ -	\$ -	\$ 673,885	\$ -
Employee Benefits		\$ -	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Group Insurance		\$ -	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Benefits		\$ 3,300	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 1,631	\$ 1,662	\$ 7	\$ -	\$ -	\$ -	\$ -	\$ 3,300	\$ -
Support Services		\$ -	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services		\$ 4,805,559	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 2,375,572	\$ 2,420,508	\$ 9,479	\$ -	\$ -	\$ -	\$ -	\$ 4,805,559	\$ -
Building Maintenance & Services		\$ 490,068	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 242,259	\$ 246,842	\$ 967	\$ -	\$ -	\$ -	\$ -	\$ 490,068	\$ -
Telecommunications		\$ 18,230	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 9,012	\$ 9,182	\$ 36	\$ -	\$ -	\$ -	\$ -	\$ 18,230	\$ -
Office Supplies		\$ 332,584	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 164,409	\$ 167,519	\$ 656	\$ -	\$ -	\$ -	\$ -	\$ 332,584	\$ -
Employee Related Expenses		\$ -	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous		\$ 679,341	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 335,824	\$ 342,177	\$ 1,340	\$ -	\$ -	\$ -	\$ -	\$ 679,341	\$ -
Rents		\$ 325,888	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 161,099	\$ 164,146	\$ 643	\$ -	\$ -	\$ -	\$ -	\$ 325,888	\$ -
Transportation		\$ 12,133	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 5,998	\$ 6,111	\$ 24	\$ -	\$ -	\$ -	\$ -	\$ 12,133	\$ -
Uncollectible Accounts		\$ -	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Accounting		\$ 2,651	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 1,310	\$ 1,335	\$ 5	\$ -	\$ -	\$ -	\$ -	\$ 2,651	\$ -
Regulatory Expense		\$ -	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Insurance Other Than Group		\$ -	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ 9,809,026			\$ -	\$ -	\$ -	\$ 4,851,386	\$ 4,943,155	\$ 14,485	\$ -	\$ -	\$ -	\$ -	\$ 9,809,026	\$ -
Maintenance Expense																
Salaries and Wages		\$ 2,732,647	2	T/D Maint.. Expense	\$ -	\$ -	\$ -	\$ 395,873	\$ 403,362	\$ 1,468,521	\$ 3,328	\$ 259,535	\$ -	\$ 202,029	\$ 2,732,647	\$ -
Engineered Coating of Steel Structures		\$ -	2	T/D Maint.. Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance		\$ 7,966,519	2	T/D Maint.. Expense	\$ -	\$ -	\$ -	\$ 1,154,095	\$ 1,175,926	\$ 4,281,196	\$ 9,701	\$ 756,625	\$ -	\$ 588,976	\$ 7,966,519	\$ -
		\$ 10,699,166			\$ -	\$ -	\$ -	\$ 1,549,968	\$ 1,579,287	\$ 5,749,717	\$ 13,028	\$ 1,016,160	\$ -	\$ 791,005	\$ 10,699,166	\$ -
Total T&D Expense		\$ 20,508,192			\$ -	\$ -	\$ -	\$ 6,401,354	\$ 6,522,442	\$ 5,764,202	\$ 13,028	\$ 1,016,160	\$ -	\$ 791,005	\$ 20,508,192	\$ -
General Mains Expense																
Maintenance Expense																
Salaries and Wages		\$ 3,172,446	K	Mains	\$ -	\$ -	\$ -	\$ 1,571,361	\$ 1,601,085	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,172,446	\$ -
Engineered Coating of Steel Structures		\$ -	K	Mains	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance		\$ 605,393	K	Mains	\$ -	\$ -	\$ -	\$ 299,860	\$ 305,532	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 605,393	\$ -
		\$ 3,777,839			\$ -	\$ -	\$ -	\$ 1,871,221	\$ 1,906,617	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,777,839	\$ -
General Mains Expense		\$ 3,777,839			\$ -	\$ -	\$ -	\$ 1,871,221	\$ 1,906,617	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,777,839	\$ -
Storage Expense																
Operating Expense																
Salaries and Wages		\$ -	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous		\$ 4,873	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,873	\$ -	\$ -	\$ -	\$ -	\$ 4,873	\$ -
		\$ 4,873			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,873	\$ -	\$ -	\$ -	\$ -	\$ 4,873	\$ -
Maintenance Expense																
Engineered Coating of Steel Structures		\$ 6,941,429	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,941,429	\$ -	\$ -	\$ -	\$ -	\$ 6,941,429	\$ -
Maintenance		\$ -	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ 6,941,429			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,941,429	\$ -	\$ -	\$ -	\$ -	\$ 6,941,429	\$ -
Total Storage Expense		\$ 6,946,301			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,946,301	\$ -	\$ -	\$ -	\$ -	\$ 6,946,301	\$ -
Meter Expense																
Operating Expense																
Salaries and Wages		\$ -	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Telecommunications		\$ -	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ -			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance Expense																
Salaries and Wages		\$ 1,111	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,111	\$ -	\$ -	\$ -	\$ 1,111	\$ -
Maintenance		\$ 14,618	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,618	\$ -	\$ -	\$ -	\$ 14,618	\$ -
		\$ 15,729			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,729	\$ -	\$ -	\$ -	\$ 15,729	\$ -
Total Meter Expense		\$ 15,729			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,729	\$ -	\$ -	\$ -	\$ 15,729	\$ -

Service Expense

New Jersey-American Water Company
2022 Cost of Service Study - Account Detail

Post Test Year		Alloc	Description	Source of Supply		Pumping	Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
Operating Expense																
Salaries and Wages	\$ -	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance Expense																
Salaries and Wages	\$ 1,000,519	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1,000,519	\$ -	\$ -	1,000,519	\$ -
Maintenance	\$ 226,255	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	226,255	\$ -	\$ -	226,255	\$ -
	\$ 1,226,774			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1,226,774	\$ -	\$ -	1,226,774	\$ -
Total Service Expense	\$ 1,226,774			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1,226,774	\$ -	\$ -	1,226,774	\$ -
Hydrant Expense																
Maintenance Expense																
Salaries and Wages	\$ 833,031	J	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	833,031	\$ 833,031	\$ -
Maintenance	\$ 121,921	J	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	121,921	\$ 121,921	\$ -
	\$ 954,952			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	954,952	\$ 954,952	\$ -
Hydrant Expense	\$ 954,952			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	954,952	\$ 954,952	\$ -
Customer Accounts																
Salaries and Wages	\$ 3,416,302	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	3,416,302	\$ -	3,416,302	\$ -
Employee Benefits	\$ -	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Group Insurance	\$ -	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Benefits	\$ 9,149	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	9,149	\$ -	9,149	\$ -
Support Services	\$ -	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services	\$ 32,148	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	32,148	\$ -	32,148	\$ -
Building Maintenance & Services	\$ 32,710	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	32,710	\$ -	32,710	\$ -
Telecommunications	\$ 44,866	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	44,866	\$ -	44,866	\$ -
Office Supplies	\$ 25,662	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	25,662	\$ -	25,662	\$ -
Employee Related Expenses	\$ -	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous	\$ 1,186	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1,186	\$ -	1,186	\$ -
Rents	\$ 3,232	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	3,232	\$ -	3,232	\$ -
Transportation	\$ -	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Uncollectible Accounts	\$ 3,696,175	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	3,696,175	\$ -	3,696,175	\$ -
Customer Accounting	\$ 6,760,987	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	6,760,987	\$ -	6,760,987	\$ -
Regulatory Expense	\$ -	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Insurance Other Than Group	\$ -	I	Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ 14,022,418			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	14,022,418	\$ -	14,022,418	\$ -
Total Customer Accounting Expense	\$ 14,022,418			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	14,022,418	\$ -	14,022,418	\$ -
Administrative & General Expense																
Operating Expense																
Fuel and Power	\$ 58,187	3	Fixed O&M	\$ 2,461	\$ 7,456	\$ 7,213	\$ 6,435	\$ 6,557	\$ 11,600	\$ 26	\$ 2,047	\$ 12,797	\$ 1,593	\$ 58,187	\$ -	\$ -
Salaries and Wages	\$ 28,461,946	4	Labor	\$ 863,068	\$ 7,819,471	\$ 4,108,971	\$ 3,047,156	\$ 3,104,796	\$ 1,947,025	\$ 5,880	\$ 1,669,120	\$ 4,525,377	\$ 1,371,083	\$ 28,461,946	\$ -	\$ -
Employee Benefits	\$ (3,149,845)	4	Labor	\$ (95,515)	\$ (865,370)	\$ (454,734)	\$ (337,225)	\$ (343,604)	\$ (215,475)	\$ (651)	\$ (184,719)	\$ (500,817)	\$ (151,736)	\$ (3,149,845)	\$ -	\$ -
Group Insurance	\$ 8,275,911	3	Fixed O&M	\$ 350,026	\$ 1,060,502	\$ 1,025,923	\$ 915,303	\$ 932,617	\$ 1,649,872	\$ 3,733	\$ 291,142	\$ 1,820,163	\$ 226,632	\$ 8,275,911	\$ -	\$ -
Other Benefits	\$ 3,262,079	3	Fixed O&M	\$ 137,968	\$ 418,013	\$ 404,383	\$ 360,781	\$ 367,605	\$ 650,323	\$ 1,471	\$ 114,758	\$ 717,446	\$ 89,330	\$ 3,262,079	\$ -	\$ -
Support Services	\$ 48,553,529	3	Fixed O&M	\$ 2,053,550	\$ 6,221,805	\$ 6,018,934	\$ 5,369,944	\$ 5,471,522	\$ 9,679,590	\$ 21,900	\$ 1,708,084	\$ 10,678,626	\$ 1,329,615	\$ 48,553,529	\$ -	\$ -
Contract Services	\$ 3,425,154	3	Fixed O&M	\$ 144,865	\$ 438,910	\$ 424,599	\$ 378,817	\$ 385,982	\$ 682,833	\$ 1,545	\$ 120,495	\$ 753,312	\$ 93,796	\$ 3,425,154	\$ -	\$ -
Building Maintenance & Services	\$ 534,571	3	Fixed O&M	\$ 22,609	\$ 68,502	\$ 66,268	\$ 59,123	\$ 60,241	\$ 106,571	\$ 241	\$ 18,806	\$ 117,571	\$ 14,639	\$ 534,571	\$ -	\$ -
Telecommunications	\$ 3,314,992	3	Fixed O&M	\$ 140,206	\$ 424,794	\$ 410,943	\$ 366,633	\$ 373,568	\$ 660,871	\$ 1,495	\$ 116,619	\$ 729,083	\$ 90,779	\$ 3,314,992	\$ -	\$ -
Office Supplies	\$ 2,176,555	3	Fixed O&M	\$ 92,056	\$ 278,911	\$ 269,816	\$ 240,724	\$ 245,277	\$ 433,914	\$ 982	\$ 76,570	\$ 478,701	\$ 59,604	\$ 2,176,555	\$ -	\$ -
Employee Related Expenses	\$ 1,083,140	3	Fixed O&M	\$ 45,811	\$ 138,797	\$ 134,271	\$ 119,794	\$ 122,060	\$ 215,933	\$ 489	\$ 38,104	\$ 238,220	\$ 29,661	\$ 1,083,140	\$ -	\$ -
Miscellaneous	\$ 2,137,034	3	Fixed O&M	\$ 90,385	\$ 273,846	\$ 264,917	\$ 236,353	\$ 240,823	\$ 426,035	\$ 964	\$ 75,180	\$ 470,009	\$ 58,522	\$ 2,137,034	\$ -	\$ -
Rents	\$ 105,657	3	Fixed O&M	\$ 4,469	\$ 13,539	\$ 13,098	\$ 11,685	\$ 11,907	\$ 21,064	\$ 48	\$ 3,717	\$ 23,238	\$ 2,893	\$ 105,657	\$ -	\$ -
Transportation	\$ 3,550,445	3	Fixed O&M	\$ 150,164	\$ 454,965	\$ 440,131	\$ 392,674	\$ 400,101	\$ 707,811	\$ 1,601	\$ 124,902	\$ 780,867	\$ 97,227	\$ 3,550,445	\$ -	\$ -
Uncollectible Accounts	\$ (194,452)	3	Fixed O&M	\$ (8,224)	\$ (24,918)	\$ (24,105)	\$ (21,506)	\$ (21,913)	\$ (38,766)	\$ (88)	\$ (6,841)	\$ (42,767)	\$ (5,325)	\$ (194,452)	\$ -	\$ -
Customer Accounting	\$ 203,788	3	Fixed O&M	\$ 8,619	\$ 26,114	\$ 25,263	\$ 22,539	\$ 22,965	\$ 40,627	\$ 92	\$ 7,169	\$ 44,820	\$ 5,581	\$ 203,788	\$ -	\$ -
Regulatory Expense	\$ 9,070,183	3	Fixed O&M	\$ 23,576	\$ 71,431	\$ 69,102	\$ 61,651	\$ 62,817	\$ 111,129	\$ 251	\$ 19,610	\$ 122,599	\$ 15,265	\$ 9,070,183	\$ -	\$ -
Insurance Other Than Group	\$ -	3	Fixed O&M	\$ 383,619	\$ 1,162,282	\$ 1,124,385	\$ 1,003,148	\$ 1,022,124	\$ 1,808,217	\$ 4,091	\$ 319,084	\$ 1,994,852	\$ 248,383	\$ -	\$ -	\$ -
	\$ 111,426,306			\$ 4,409,715	\$ 17,989,051	\$ 14,329,378	\$ 12,234,026	\$ 12,465,446	\$ 18,899,134	\$ 44,070	\$ 4,513,846	\$ 22,964,096	\$ 3,577,543	\$ 111,426,306	\$ -	\$ -
Maintenance Expense																
Salaries and Wages	\$ 144,775	3	Fixed O&M	\$ 6,123	\$ 18,552	\$ 17,947	\$ 16,012	\$ 16,315	\$ 28,862	\$ 65	\$ 5,093	\$ 31,841	\$ 3,965	\$ 144,775	\$ -	\$ -
Maintenance	\$ 2,073,784	3	Fixed O&M	\$ 87,710	\$ 265,741	\$ 257,077	\$ 229,357	\$ 233,696	\$ 413,426	\$ 935	\$ 72,954	\$ 456,098	\$ 56,790	\$ 2,073,784	\$ -	\$ -
	\$ 2,218,559			\$ 93,833	\$ 284,293	\$ 275,024	\$ 245,369	\$ 250,011	\$ 442,288	\$ 1,001	\$ 78,048	\$ 487,939	\$ 60,754	\$ 2,218,559	\$ -	\$ -
Total A&G Expense	\$ 113,644,865			\$ 4,503,548	\$ 18,273,344	\$ 14,604,401	\$ 12,479,395	\$ 12,715,456	\$ 19,341,422	\$ 45,071	\$ 4,591,894	\$ 23,452,035	\$ 3,638,297	\$ 113,644,865	\$ -	\$ -
Total Operations & Maintenance Exp. (Water)	\$ 220,384,243			\$ 18,076,723	\$ 32,001,299	\$ 46,590,445	\$ 20,751,970	\$ 21,144,516	\$ 32,051,926	\$ 73,828	\$ 6,834,829	\$ 37,474,454	\$ 5,384,254	\$ 220,384,243	\$ -	\$ -
Total Operations & Maintenance Exp. (Sewer)	\$ 9,753,008															
Taxes Other Than Income Tax																
Property Taxes	\$ 6,736,206	5	Net Plant (less gen. and int.)	\$ 296,132	\$ 320,115	\$ 914,898	\$ 1,555,027	\$ 1,844,756	\$ 180,685	\$ 431,902	\$ 843,668	\$ 86,478	\$ 262,546	\$ 6,736,206	\$ -	\$ -
Payroll Taxes	\$ 3,924,581	4	Labor	\$ 119,007	\$ 1,078,217	\$ 566,581	\$ 420,168	\$ 428,116	\$ 268,473	\$ 811	\$ 230,153	\$ 623,998	\$ 189,057	\$ 3,924,581	\$ -	\$ -
Gross Receipts and Surtax	\$ 115,698,257	6	Rate Base	\$ 5,436,157	\$ 5,968,894	\$ 16,777,874	\$ 24,568,022	\$ 29,716,540	\$ 3,759,603	\$ 7,691,554	\$ 14,949,488	\$ 2,117,048	\$ 4,713,076	\$ 115,698,257	\$ -	\$ -
BPUI/DRC Assessment	\$ 2,318,526	6	Rate Base	\$ 108,937	\$ 119,613	\$ 336,219	\$ 492,329	\$ 595,502	\$ 75,340	\$ 154,134	\$ 299,579	\$ 42,424	\$ 94,447	\$ 2,318,526	\$ -	\$ -
Water Monitoring Tax	\$ 634,308	6	Rate Base	\$ 29,803	\$ 32,724	\$ 91,984	\$ 134,693	\$ 162,919	\$ 20,612	\$ 42,168	\$ 81,960	\$ 11,607	\$ 25,839	\$ 634,308	\$ -	\$ -
Other Taxes	\$ 76,548	6	Rate Base	\$ 3,597	\$ 3,949	\$ 11,100	\$ 16,255	\$ 19,661	\$ 2,487	\$ 5,089	\$ 9,891	\$ 1,401	\$ 3,118	\$ 76,548	\$ -	\$ -
	\$ 129,388,426			\$ 5,993,634	\$ 7,523,512	\$ 18,698,655	\$ 27,186,494	\$ 32,767,494	\$ 4,307,200	\$ 8,325,658	\$ 16,414,738	\$ 2,882,957	\$ 5,288,084	\$ 129,388,426	\$ -	\$ -
Total Taxes Other Than Income Taxes (Water)	\$ 129,388,426			\$ 5,993,634	\$ 7,523,512	\$ 18,698,655	\$ 27,186,494	\$ 32,767,494	\$ 4,307,200	\$ 8,325,658	\$ 16,414,738	\$ 2,882,957	\$ 5,288,084	\$ 129,388,426	\$ -	\$ -

New Jersey-American Water Company
2022 Cost of Service Study - Account Detail

	Post Test Year	Alloc	Description	Source of Supply	Pumping	Water Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
Total Taxes Other Than Income Taxes (Sewer)	\$ 6,198,744														
Plant Depreciation															
Intangible Plant															
Organization	\$ -	5	Net Plant (less gen. and int.)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Franchises	\$ -	5	Net Plant (less gen. and int.)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other P/E-Intangible	\$ 115,617	5	Net Plant (less gen. and int.)	\$ 5,083	\$ 5,494	\$ 15,703	\$ 26,690	\$ 31,663	\$ 3,101	\$ 7,413	\$ 14,480	\$ 1,484	\$ 4,506	\$ 115,617	\$ -
Source of Supply															
Land & Land Rights-Supply	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Struct & Imp-Supply	\$ 2,054,018	A	Source of Supply	\$ 2,054,018	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,054,018	\$ -
Collect & Impound Reservoirs	\$ 383,758	A	Source of Supply	\$ 383,758	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 383,758	\$ -
Lake, River & Other Intakes	\$ 35,153	A	Source of Supply	\$ 35,153	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 35,153	\$ -
Wells & Springs	\$ 1,360,030	A	Source of Supply	\$ 1,360,030	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,360,030	\$ -
Supply Mains	\$ 350,136	A	Source of Supply	\$ 350,136	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 350,136	\$ -
Infiltratrn Galleries & Tunne	\$ 111,097	A	Source of Supply	\$ 111,097	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 111,097	\$ -
Other P/E-Supply	\$ 21,806	A	Source of Supply	\$ 21,806	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,806	\$ -
Water Pumping															
Land & Land Rights-Pumping	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Struct & Imp-Pumping	\$ 1,238,670	B	Pumping	\$ -	\$ 1,238,670	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,238,670	\$ -
Boiler Plant Equip P	\$ 14,621	B	Pumping	\$ -	\$ 14,621	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,621	\$ -
Power Generation Equip	\$ 795,243	B	Pumping	\$ -	\$ 795,243	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 795,243	\$ -
Pump Eq Electric	\$ 3,314,058	B	Pumping	\$ -	\$ 3,314,058	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,314,058	\$ -
Pump Eq Diesel	\$ 722,924	B	Pumping	\$ -	\$ 722,924	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 722,924	\$ -
Pump Eq Hydraulic	\$ 497,999	B	Pumping	\$ -	\$ 497,999	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 497,999	\$ -
Pump Eq Other	\$ 331,179	B	Pumping	\$ -	\$ 331,179	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 331,179	\$ -
Water Treatment															
Land & Land Rights-Treatment	\$ -	C	Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Struct & Imp-Treatment	\$ 5,228,317	C	Water Treatment	\$ -	\$ -	\$ 5,228,317	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,228,317	\$ -
Struct & Imp-Treatment-Handl	\$ 146,529	C	Water Treatment	\$ -	\$ -	\$ 146,529	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 146,529	\$ -
Other P/E-Treatment	\$ 23,089	C	Water Treatment	\$ -	\$ -	\$ 23,089	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23,089	\$ -
Other P/E-WT Res Hand Equip	\$ 108,286	C	Water Treatment	\$ -	\$ -	\$ 108,286	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 108,286	\$ -
WT Equip Non-Media	\$ 11,344,685	C	Water Treatment	\$ -	\$ -	\$ 11,344,685	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,344,685	\$ -
WT Equip Filter Media	\$ 3,780,252	C	Water Treatment	\$ -	\$ -	\$ 3,780,252	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,780,252	\$ -
Pumping Equipment WT	\$ 3,436	C	Water Treatment	\$ -	\$ -	\$ 3,436	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,436	\$ -
T&D															
Land & Land Rights-T&D	\$ -	K	Mains	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Struct & Imp-T&D	\$ 667,225	K	Mains	\$ -	\$ -	\$ -	\$ 330,487	\$ 336,738	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 667,225	\$ -
TD Mains Not Classified	\$ 5,962,610	K	Mains	\$ -	\$ -	\$ -	\$ 2,953,372	\$ 3,009,238	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,962,610	\$ -
TD Mains 4in & Less	\$ 1,502,479	E	Distribution	\$ -	\$ -	\$ -	\$ -	\$ 1,502,479	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,502,479	\$ -
TD Mains 6in to 8in	\$ 16,606,267	E	Distribution	\$ -	\$ -	\$ -	\$ -	\$ 16,606,267	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16,606,267	\$ -
TD Mains 10in to 16in	\$ 6,897,974	D	Transmission	\$ -	\$ -	\$ -	\$ 6,897,974	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,897,974	\$ -
TD Mains 18in & Grtr	\$ 3,359,364	D	Transmission	\$ -	\$ -	\$ -	\$ 3,359,364	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,359,364	\$ -
Fire Mains	\$ 213,588	J	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 213,588	\$ 213,588	\$ -
Pumping Equipment TD	\$ 445	K	Mains	\$ -	\$ -	\$ -	\$ 220	\$ 225	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 445	\$ -
Other P/E-TD	\$ 115,672	K	Mains	\$ -	\$ -	\$ -	\$ 57,294	\$ 58,378	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 115,672	\$ -
Storage															
Below Ground Tanks	\$ 59,298	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 59,298	\$ -	\$ -	\$ -	\$ -	\$ 59,298	\$ -
Clearwell	\$ 934	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 934	\$ -	\$ -	\$ -	\$ -	\$ 934	\$ -
Dist Reservoirs & Standpipes	\$ 412,685	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 412,685	\$ -	\$ -	\$ -	\$ -	\$ 412,685	\$ -
Elevated Tanks & Standpipes	\$ 721,357	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 721,357	\$ -	\$ -	\$ -	\$ -	\$ 721,357	\$ -
Ground Level Tanks	\$ 123,075	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 123,075	\$ -	\$ -	\$ -	\$ -	\$ 123,075	\$ -
Tank Original Painting	\$ 1,082	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,082	\$ -	\$ -	\$ -	\$ -	\$ 1,082	\$ -
Meters															
Meters	\$ 12,660,867	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,660,867	\$ -	\$ -	\$ -	\$ 12,660,867	\$ -
Meter installations	\$ 14,552,045	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,552,045	\$ -	\$ -	\$ -	\$ 14,552,045	\$ -
Meter Vaults	\$ 5,516,033	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,516,033	\$ -	\$ -	\$ -	\$ 5,516,033	\$ -
Services															
Services	\$ 15,502,654	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,502,654	\$ -	\$ -	\$ 15,502,654	\$ -
Backflow Prevention Devices	\$ 4,319	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,319	\$ -	\$ -	\$ 4,319	\$ -
Hydrants															
Hydrants	\$ 5,986,802	J	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,986,802	\$ 5,986,802	\$ -
General Plant															
Comm Equip Non-Telephone	\$ 282,964	3	Fixed O&M	\$ 11,968	\$ 36,260	\$ 35,078	\$ 31,295	\$ 31,887	\$ 56,411	\$ 128	\$ 9,955	\$ 62,234	\$ 7,749	\$ 282,964	\$ -
Comm Equip Not Classified	\$ 1,279,090	3	Fixed O&M	\$ 54,099	\$ 163,907	\$ 158,562	\$ 141,465	\$ 144,141	\$ 254,997	\$ 577	\$ 44,998	\$ 281,317	\$ 35,027	\$ 1,279,090	\$ -
Comm Equip Telephone	\$ 51,873	3	Fixed O&M	\$ 2,194	\$ 6,647	\$ 6,430	\$ 5,737	\$ 5,846	\$ 10,341	\$ 23	\$ 1,825	\$ 11,409	\$ 1,421	\$ 51,873	\$ -
Comp & Periph Equip	\$ 1,609,561	3	Fixed O&M	\$ 68,076	\$ 206,254	\$ 199,529	\$ 178,015	\$ 181,382	\$ 320,879	\$ 726	\$ 56,623	\$ 353,999	\$ 44,077	\$ 1,609,561	\$ -
Comp Software Mainframe	\$ -	3	Fixed O&M	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Computer Software	\$ 18,538,512	3	Fixed O&M	\$ 784,078	\$ 2,375,584	\$ 2,298,125	\$ 2,050,330	\$ 2,089,114	\$ 3,695,807	\$ 8,362	\$ 652,174	\$ 4,077,270	\$ 507,668	\$ 18,538,512	\$ -
Data Handling Equipment	\$ 1,603	3	Fixed O&M	\$ 68	\$ 205	\$ 199	\$ 177	\$ 181	\$ 320	\$ 1	\$ 56	\$ 353	\$ 44	\$ 1,603	\$ -
Laboratory Equipment	\$ 436,634	C	Water Treatment	\$ -	\$ -	\$ 436,634	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 436,634	\$ -
Land & Land Rights-General	\$ -	3	Fixed O&M	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Misc Equipment	\$ 1,243,599	3	Fixed O&M	\$ 52,597	\$ 159,359	\$ 154,163	\$ 137,540	\$ 140,142	\$ 247,922	\$ 561	\$ 43,749	\$ 273,511	\$ 34,055	\$ 1,243,599	\$ -
Office Furniture & Equip	\$ 777,613	3	Fixed O&M	\$ 32,889	\$ 99,646	\$ 96,397	\$ 86,003	\$ 87,630	\$ 155,024	\$ 351	\$ 27,356	\$ 171,024	\$ 21,295	\$ 777,613	\$ -
Other Office Equipment	\$ 578	3	Fixed O&M	\$ 24	\$ 74	\$ 72	\$ 64	\$ 65	\$ 115	\$ 0	\$ 20	\$ 127	\$ 16	\$ 578	\$ -

Other Operating Revenue

New Jersey-American Water Company
2022 Cost of Service Study - Account Detail

	Post Test Year	Alloc	Description	Source of Supply	Pumping	Treatment	Water Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
Total Retail Revenue Requirement (Water)	\$ 862,450,073			\$ 46,793,084	\$ 69,720,709	\$ 142,922,962	\$ 138,940,359	\$ 168,782,405	\$ 56,800,355	\$ 64,827,546	\$ 86,091,167	\$ 55,172,116	\$ 32,399,371	\$ 862,450,073	\$ -
Total Retail Revenue Requirement (Sewer)	\$ 40,628,184			\$ 46,541,164	\$ 69,444,102	\$ 142,145,451	\$ 137,801,841	\$ 167,405,298	\$ 56,626,130	\$ 64,471,109	\$ 85,398,386	\$ 55,074,009	\$ 32,180,960	\$ 857,088,450	
check	\$ 903,078,257	(0)													
Plant Account															
Intangible Plant															
Organization	\$ 619,085	5	Net Plant (less gen. and int.)	\$ 27,216	\$ 29,420	\$ 84,083	\$ 142,913	\$ 169,541	\$ 16,606	\$ 39,694	\$ 77,537	\$ 7,948	\$ 24,129	\$ 619,085	\$ -
Franchises	\$ 189,755	5	Net Plant (less gen. and int.)	\$ 8,342	\$ 9,017	\$ 25,772	\$ 43,804	\$ 51,966	\$ 5,090	\$ 12,166	\$ 23,766	\$ 2,436	\$ 7,396	\$ 189,755	\$ -
Other P/E-Intangible	\$ 2,701,309	5	Net Plant (less gen. and int.)	\$ 118,753	\$ 128,370	\$ 366,886	\$ 623,587	\$ 739,772	\$ 72,457	\$ 173,198	\$ 338,322	\$ 34,679	\$ 105,285	\$ 2,701,309	\$ -
Source of Supply															
Land & Land Rights-Supply	\$ 10,048,381	A	Source of Supply	\$ 10,048,381	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,048,381	\$ -
Struct & Imp-Supply	\$ 108,648,460	A	Source of Supply	\$ 108,648,460	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 108,648,460	\$ -
Collect & Impound Reservoirs	\$ 17,923,491	A	Source of Supply	\$ 17,923,491	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,923,491	\$ -
Lake, River & Other Intakes	\$ 7,384,806	A	Source of Supply	\$ 7,384,806	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,384,806	\$ -
Wells & Springs	\$ 39,207,974	A	Source of Supply	\$ 39,207,974	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 39,207,974	\$ -
Supply Mains	\$ 22,924,719	A	Source of Supply	\$ 22,924,719	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,924,719	\$ -
Infiltratrn Galleries & Tunne	\$ 4,785,160	A	Source of Supply	\$ 4,785,160	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,785,160	\$ -
Other P/E-Supply	\$ 612,287	A	Source of Supply	\$ 612,287	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 612,287	\$ -
Water Pumping															
Land & Land Rights-Pumping	\$ 1,205,373	B	Pumping	\$ -	\$ 1,205,373	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,205,373	\$ -
Struct & Imp-Pumping	\$ 47,495,821	B	Pumping	\$ -	\$ 47,495,821	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 47,495,821	\$ -
Boiler Plant Equip P	\$ 149,758	B	Pumping	\$ -	\$ 149,758	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 149,758	\$ -
Power Generation Equip	\$ 33,632,540	B	Pumping	\$ -	\$ 33,632,540	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33,632,540	\$ -
Pump Equip Electric	\$ 86,883,623	B	Pumping	\$ -	\$ 86,883,623	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 86,883,623	\$ -
Pump Equip Diesel	\$ 3,873,792	B	Pumping	\$ -	\$ 3,873,792	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,873,792	\$ -
Pump Equip Hydraulic	\$ 12,972,479	B	Pumping	\$ -	\$ 12,972,479	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,972,479	\$ -
Pump Equip Other	\$ 17,925,728	B	Pumping	\$ -	\$ 17,925,728	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,925,728	\$ -
Water Treatment															
Land & Land Rights-Treatment	\$ 6,924,277	C	Water Treatment	\$ -	\$ -	\$ 6,924,277	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,924,277	\$ -
Struct & Imp-Treatment	\$ 227,596,353	C	Water Treatment	\$ -	\$ -	\$ 227,596,353	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 227,596,353	\$ -
Struct & Imp-Treatment-Handl	\$ 3,344,102	C	Water Treatment	\$ -	\$ -	\$ 3,344,102	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,344,102	\$ -
Other P/E-Treatment	\$ 649,668	C	Water Treatment	\$ -	\$ -	\$ 649,668	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 649,668	\$ -
Other P/E-WT Res Hand Equip	\$ 1,637,608	C	Water Treatment	\$ -	\$ -	\$ 1,637,608	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,637,608	\$ -
WT Equip Non-Media	\$ 400,847,110	C	Water Treatment	\$ -	\$ -	\$ 400,847,110	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 400,847,110	\$ -
WT Equip Filter Media	\$ 13,902,555	C	Water Treatment	\$ -	\$ -	\$ 13,902,555	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 13,902,555	\$ -
Pumping Equipment WT	\$ 165,621	C	Water Treatment	\$ -	\$ -	\$ 165,621	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 165,621	\$ -
T&D															
Land & Land Rights-T&D	\$ 17,268,115	K	Mains	\$ -	\$ -	\$ -	\$ 8,553,161	\$ 8,714,953	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,268,115	\$ -
Struct & Imp-T&D	\$ 15,903,815	K	Mains	\$ -	\$ -	\$ -	\$ 7,877,403	\$ 8,026,412	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,903,815	\$ -
TD Mains Not Classified	\$ 645,530,908	K	Mains	\$ -	\$ -	\$ -	\$ 319,741,331	\$ 325,789,577	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 645,530,908	\$ -
TD Mains 4in & Less	\$ 76,348,793	E	Distribution	\$ -	\$ -	\$ -	\$ -	\$ 76,348,793	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 76,348,793	\$ -
TD Mains 6in to 8in	\$ 943,698,534	E	Distribution	\$ -	\$ -	\$ -	\$ -	\$ 943,698,534	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 943,698,534	\$ -
TD Mains 10in to 16in	\$ 547,266,620	D	Transmission	\$ -	\$ -	\$ -	\$ 547,266,620	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 547,266,620	\$ -
TD Mains 18in & Grtr	\$ 260,488,121	D	Transmission	\$ -	\$ -	\$ -	\$ 260,488,121	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 260,488,121	\$ -
Fire Mains	\$ 1,921,086	J	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,921,086	\$ 1,921,086	\$ -
Pumping Equipment TD	\$ 21,105	K	Mains	\$ -	\$ -	\$ -	\$ 10,454	\$ 10,651	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,105	\$ -
Other P/E-TD	\$ 84,506	K	Mains	\$ -	\$ -	\$ -	\$ 41,857	\$ 42,649	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 84,506	\$ -
Storage															
Below Ground Tanks	\$ 3,782,546	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,782,546	\$ -	\$ -	\$ -	\$ -	\$ 3,782,546	\$ -
Clearwell	\$ (19,067)	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (19,067)	\$ -	\$ -	\$ -	\$ -	\$ (19,067)	\$ -
Dist Reservoirs & Standpipes	\$ 27,155,499	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 27,155,499	\$ -	\$ -	\$ -	\$ -	\$ 27,155,499	\$ -
Elevated Tanks & Standpipes	\$ 37,258,226	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 37,258,226	\$ -	\$ -	\$ -	\$ -	\$ 37,258,226	\$ -
Ground Level Tanks	\$ 9,166,802	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,166,802	\$ -	\$ -	\$ -	\$ -	\$ 9,166,802	\$ -
Tank Original Painting	\$ 77,643	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 77,643	\$ -	\$ -	\$ -	\$ -	\$ 77,643	\$ -
Meters															
Meters	\$ 183,251,162	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 183,251,162	\$ -	\$ -	\$ -	\$ 183,251,162	\$ -
Meter Installations	\$ 94,760,137	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 94,760,137	\$ -	\$ -	\$ -	\$ 94,760,137	\$ -
Meter Vaults	\$ 48,730,578	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 48,730,578	\$ -	\$ -	\$ -	\$ 48,730,578	\$ -
Services															
Services	\$ 627,894,988	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 627,894,988	\$ -	\$ -	\$ 627,894,988	\$ -
Backflow Prevention Devices	\$ 149,527	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 149,527	\$ -	\$ -	\$ 149,527	\$ -
Hydrants															
Hydrants	\$ 188,632,771	J	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 188,632,771	\$ 188,632,771	\$ -
General Plant															
Comm Equip Non-Telephone	\$ 3,345,112	3	Fixed O&M	\$ 141,480	\$ 428,653	\$ 414,677	\$ 369,964	\$ 376,962	\$ 666,876	\$ 1,509	\$ 117,679	\$ 735,707	\$ 91,604	\$ 3,345,112	\$ -
Comm Equip Not Classified	\$ 37,621,877	3	Fixed O&M	\$ 1,591,201	\$ 4,820,988	\$ 4,663,793	\$ 4,160,920	\$ 4,239,628	\$ 7,500,234	\$ 16,969	\$ 1,323,515	\$ 8,274,371	\$ 1,030,257	\$ 37,621,877	\$ -
Comm Equip Telephone	\$ (357,556)	3	Fixed O&M	\$ (15,123)	\$ (45,818)	\$ (44,324)	\$ (39,545)	\$ (40,293)	\$ (161)	\$ (161)	\$ (12,579)	\$ (78,639)	\$ (9,791)	\$ (357,556)	\$ -
Comp & Periph Equip	\$ (4,301,673)	3	Fixed O&M	\$ (181,937)	\$ (551,230)	\$ (533,257)	\$ (475,758)	\$ (484,758)	\$ (857,574)	\$ (1,940)	\$ (151,330)	\$ (946,089)	\$ (117,799)	\$ (4,301,673)	\$ -
Comp Software Mainframe	\$ (4,644,740)	3	Fixed O&M	\$ (196,447)	\$ (595,192)	\$ (575,785)	\$ (513,701)	\$ (523,418)	\$ (925,968)	\$ (2,095)	\$ (163,399)	\$ (1,021,541)	\$ (127,194)	\$ (4,644,740)	\$ -
Computer Software	\$ 51,685,561	3	Fixed O&M	\$ 2,186,018	\$ 6,623,154	\$ 6,407,197	\$ 5,716,341	\$ 5,824,472	\$ 10,303,947	\$ 23,313	\$ 1,818,267	\$ 11,367,469	\$ 1,415,384	\$ 51,685,561	\$ -
Data Handling Equipment	\$ (316,538)	3	Fixed O&M	\$ (13,388)	\$ (40,562)	\$ (39,240)	\$ (35,009)	\$ (35,671)	\$ (63,104)	\$ (143)	\$ (11,136)	\$ (69,618)	\$ (8,668)	\$ (316,538)	\$ -
Laboratory Equipment	\$ 464,642	C	Water Treatment	\$ -	\$ -	\$ 464,642	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 464,642	\$ -
Land & Land Rights-General	\$ 266,051	3	Fixed O&M	\$ 11,253	\$ 34,093	\$ 32,981	\$ 29,425	\$ 29,981	\$ 53,040	\$ 120	\$ 9,360	\$ 58,514	\$ 7,286	\$ 266,051	\$ -

New Jersey-American Water Company
2022 Cost of Service Study - Account Detail

		Post Test Year	Alloc	Description	Source of														Total	Variance
					Supply	Pumping	Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants						
Misc Equipment		\$ 18,727,390	3	Fixed O&M	\$ 792,067	\$ 2,399,788	\$ 2,321,539	\$ 2,071,220	\$ 2,110,399	\$ 3,733,461	\$ 8,447	\$ 658,818	\$ 4,118,811	\$ 512,840	\$ 18,727,390	\$ -				
Office Furniture & Equip		\$ 5,908,423	3	Fixed O&M	\$ 249,894	\$ 757,124	\$ 732,437	\$ 653,462	\$ 1,177,893	\$ 2,665	\$ 207,855	\$ 1,299,470	\$ 161,799	\$ 5,908,423	\$ -					
Other Office Equipment		\$ (419,735)	3	Fixed O&M	\$ (17,753)	\$ (53,786)	\$ (52,032)	\$ (46,422)	\$ (47,300)	\$ (83,678)	\$ (189)	\$ (14,766)	\$ (92,314)	\$ (11,494)	\$ (419,735)	\$ -				
Other P/E-CPS		\$ 1,126,203	3	Fixed O&M	\$ 47,632	\$ 144,315	\$ 139,610	\$ 124,516	\$ 126,912	\$ 224,518	\$ 508	\$ 39,619	\$ 247,692	\$ 30,841	\$ 1,126,203	\$ -				
Other Tangible Property		\$ 965,204	3	Fixed O&M	\$ 40,823	\$ 123,684	\$ 119,651	\$ 106,750	\$ 108,769	\$ 192,421	\$ 435	\$ 33,955	\$ 212,282	\$ 26,432	\$ 965,204	\$ -				
Power Operated Equipment		\$ 4,250,874	3	Fixed O&M	\$ 179,789	\$ 544,721	\$ 526,959	\$ 470,140	\$ 479,033	\$ 847,447	\$ 1,917	\$ 149,543	\$ 934,916	\$ 116,408	\$ 4,250,874	\$ -				
Remote Control & Instrument		\$ 22,422,506	3	Fixed O&M	\$ 948,350	\$ 2,873,292	\$ 2,779,604	\$ 2,479,894	\$ 2,526,804	\$ 4,470,113	\$ 10,114	\$ 788,810	\$ 4,931,496	\$ 614,029	\$ 22,422,506	\$ -				
Stores Equipment		\$ 637,725	3	Fixed O&M	\$ 26,972	\$ 81,720	\$ 79,056	\$ 70,531	\$ 71,866	\$ 127,136	\$ 288	\$ 22,435	\$ 140,258	\$ 17,464	\$ 637,725	\$ -				
Struct & Imp-Cap Lease		\$ 7,304	3	Fixed O&M	\$ 309	\$ 936	\$ 905	\$ 808	\$ 823	\$ 1,456	\$ 3	\$ 257	\$ 1,606	\$ 200	\$ 7,304	\$ -				
Struct & Imp-General		\$ 81,864,414	3	Fixed O&M	\$ 3,462,419	\$ 10,490,369	\$ 10,148,316	\$ 9,054,075	\$ 9,225,342	\$ 16,320,353	\$ 36,925	\$ 2,879,940	\$ 18,004,859	\$ 2,241,817	\$ 81,864,414	\$ -				
Struct & Imp-HVAC		\$ 2,636,848	3	Fixed O&M	\$ 111,524	\$ 337,894	\$ 326,877	\$ 291,631	\$ 297,148	\$ 525,678	\$ 1,189	\$ 92,763	\$ 579,936	\$ 72,209	\$ 2,636,848	\$ -				
Struct & Imp-Misc		\$ (103,463)	3	Fixed O&M	\$ (4,376)	\$ (13,258)	\$ (12,826)	\$ (11,443)	\$ (11,659)	\$ (20,626)	\$ (47)	\$ (3,640)	\$ (22,755)	\$ (2,833)	\$ (103,463)	\$ -				
Struct & Imp-Offices		\$ 17,853,925	3	Fixed O&M	\$ 755,124	\$ 2,287,859	\$ 2,213,260	\$ 1,974,616	\$ 2,011,968	\$ 3,559,329	\$ 8,053	\$ 628,090	\$ 3,926,705	\$ 488,921	\$ 17,853,925	\$ -				
Struct & Imp-Store,Shop,Gar		\$ 5,018,225	3	Fixed O&M	\$ 212,244	\$ 643,052	\$ 622,084	\$ 555,008	\$ 565,506	\$ 1,000,425	\$ 2,263	\$ 176,538	\$ 1,103,684	\$ 137,422	\$ 5,018,225	\$ -				
Tools,Shop,Garage Equip		\$ 13,014,417	3	Fixed O&M	\$ 550,439	\$ 1,667,709	\$ 1,613,331	\$ 1,439,374	\$ 1,466,601	\$ 2,594,532	\$ 5,870	\$ 457,839	\$ 2,862,327	\$ 356,393	\$ 13,014,417	\$ -				
Trans Equip Autos		\$ 188,785	3	Fixed O&M	\$ 7,985	\$ 24,192	\$ 23,403	\$ 20,879	\$ 21,274	\$ 37,636	\$ 85	\$ 6,641	\$ 41,520	\$ 5,170	\$ 188,785	\$ -				
Trans Equip Hvy Duty Trks		\$ 13,215,033	3	Fixed O&M	\$ 558,924	\$ 1,693,417	\$ 1,638,201	\$ 1,461,562	\$ 1,489,209	\$ 2,634,527	\$ 5,961	\$ 464,897	\$ 2,906,450	\$ 361,887	\$ 13,215,033	\$ -				
Trans Equip Lt Duty Trks		\$ 21,534,163	3	Fixed O&M	\$ 910,778	\$ 2,759,457	\$ 2,669,481	\$ 2,381,644	\$ 2,426,696	\$ 4,293,015	\$ 9,713	\$ 757,559	\$ 4,736,118	\$ 589,703	\$ 21,534,163	\$ -				
Trans Equip Not Classified		\$ (48,968)	3	Fixed O&M	\$ (2,071)	\$ (6,275)	\$ (6,070)	\$ (5,416)	\$ (9,762)	\$ (1,341)	\$ (22)	\$ (1,723)	\$ (10,770)	\$ (1,341)	\$ (48,968)	\$ -				
Trans Equip Other		\$ 5,487,680	3	Fixed O&M	\$ 232,099	\$ 703,209	\$ 680,280	\$ 606,929	\$ 618,409	\$ 1,094,015	\$ 2,475	\$ 193,053	\$ 1,206,934	\$ 150,277	\$ 5,487,680	\$ -				
Net Utility Plant		\$ 5,101,673,937			\$ 224,275,816	\$ 242,439,425	\$ 692,898,784	\$ 1,177,701,686	\$ 1,397,127,858	\$ 136,841,859	\$ 327,101,159	\$ 638,953,000	\$ 65,494,462	\$ 198,839,888	\$ 5,101,673,937	\$ -				
Additions to Rate Base																				
Cash Working Capital		\$ 89,700,000	3	Fixed O&M	\$ 3,793,822	\$ 11,494,446	\$ 11,119,654	\$ 9,920,678	\$ 10,108,338	\$ 17,882,442	\$ 40,459	\$ 3,155,591	\$ 19,728,179	\$ 2,456,391	\$ 89,700,000	\$ -				
Utility Plant Acquisition Adjustment		\$ 1,800,240	5	Net Plant (less gen. and int.)	\$ 79,141	\$ 85,550	\$ 244,505	\$ 415,578	\$ 493,008	\$ 48,288	\$ 115,425	\$ 225,469	\$ 23,111	\$ 70,165	\$ 1,800,240	\$ -				
Prepayments		\$ 2,933,888	5	Net Plant (less gen. and int.)	\$ 128,977	\$ 139,423	\$ 398,475	\$ 677,277	\$ 803,465	\$ 78,695	\$ 188,110	\$ 367,451	\$ 37,665	\$ 114,350	\$ 2,933,888	\$ -				
Materials & Supplies		\$ 13,020,230	5	Net Plant (less gen. and int.)	\$ 572,385	\$ 618,741	\$ 1,768,381	\$ 3,005,678	\$ 3,565,678	\$ 349,241	\$ 834,811	\$ 1,630,703	\$ 167,152	\$ 507,469	\$ 13,020,230	\$ -				
Total Additions		\$ 107,454,358			\$ 4,574,325	\$ 12,338,160	\$ 13,531,014	\$ 14,019,203	\$ 14,970,489	\$ 18,358,666	\$ 1,178,805	\$ 5,379,214	\$ 19,956,107	\$ 3,148,375	\$ 107,454,358	\$ -				
Reductions to Rate Base																				
Refund of COR Balance		\$ (31,100,000)	5	Net Plant (less gen. and int.)	\$ (1,367,194)	\$ (1,477,920)	\$ (4,223,938)	\$ (7,179,315)	\$ (8,516,945)	\$ (834,193)	\$ (1,994,021)	\$ (3,895,082)	\$ (399,257)	\$ (1,212,136)	\$ (31,100,000)	\$ -				
Vehicle depreciation capitalize portion		\$ 646,000	5	Net Plant (less gen. and int.)	\$ 28,399	\$ 30,699	\$ 87,738	\$ 149,127	\$ 176,911	\$ 17,328	\$ 41,419	\$ 80,907	\$ 8,293	\$ 25,178	\$ 646,000	\$ -				
Customer Advances for Construction																				
Advances for Construction - Non Taxable Mains		\$ (831,745)	K	Mains	\$ -	\$ -	\$ -	\$ (411,976)	\$ (419,769)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (831,745)	\$ -				
Advances for Construction - Non Taxable Ext Deposits		\$ (24,120,591)	K	Mains	\$ -	\$ -	\$ -	\$ (11,947,298)	\$ (12,173,293)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (24,120,591)	\$ -				
Advances for Construction - Non Taxable Hydrants		\$ -	J	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Advances for Construction - Non Taxable Other		\$ -	K	Mains	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
Advances for Construction - Taxable Mains		\$ (23,288,846)	K	Mains	\$ -	\$ -	\$ -	\$ (11,535,322)	\$ (11,753,525)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (23,288,846)	\$ -				
Advances for Construction - Taxable Ext Deposits		\$ (3,326,978)	K	Mains	\$ -	\$ -	\$ -	\$ (1,647,903)	\$ (1,679,075)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (3,326,978)	\$ -				
Advances for Construction - Taxable Services		\$ (2,495,234)	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (2,495,234)	\$ -	\$ -	\$ -	\$ (2,495,234)	\$ -				
Advances for Construction - Taxable Meters		\$ (831,745)	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (831,745)	\$ -	\$ -	\$ -	\$ (831,745)	\$ -				
Advances for Construction - Taxable Hydrants		\$ (831,745)	J	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (831,745)	\$ -	\$ -				
Advances for Construction - Taxable Mains FIT		\$ (23,288,846)	K	Mains	\$ -	\$ -	\$ -	\$ (11,535,322)	\$ (11,753,525)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (23,288,846)	\$ -				
Advances for Construction - Taxable Services FIT		\$ (2,495,234)	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (2,495,234)	\$ -	\$ -	\$ -	\$ (2,495,234)	\$ -				
Advances for Construction - Taxable Meters FIT		\$ (831,745)	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (831,745)	\$ -	\$ -	\$ -	\$ (831,745)	\$ -				
Advances for Construction - Taxable Hydrants FIT		\$ (831,745)	J	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (831,745)	\$ -	\$ -				
CIAC																				
CIAC-Non Taxable - Mains		\$ (106,608,184)	K	Mains	\$ -	\$ -	\$ -	\$ (52,804,664)	\$ (53,803,520)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (106,608,184)	\$ -				
CIAC-Non Taxable - Ext Dep		\$ (58,595,307)	K	Mains	\$ -	\$ -	\$ -	\$ (29,023,152)	\$ (29,572,155)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (58,595,307)	\$ -				
CIAC-Non Taxable - Services		\$ (979,855)	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (979,855)	\$ -	\$ -	\$ (979,855)	\$ -				
CIAC-Non Taxable - Meters		\$ (1,175,826)	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (1,175,826)	\$ -	\$ -	\$ (1,175,826)	\$ -				
CIAC-Non Taxable - Hydrants		\$ (979,855)	J	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (979,855)	\$ (979,855)	\$ -				
CIAC-Non Taxable - Other		\$ (13,521,994)	K	Mains	\$ -	\$ -	\$ -	\$ (6,697,650)	\$ (6,824,344)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (13,521,994)	\$ -				
CIAC-Taxable - Mains		\$ (4,311,360)	K	Mains	\$ -	\$ -	\$ -	\$ (2,135,483)	\$ (2,175,878)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (4,311,360)	\$ -				
CIAC-Taxable - Ext Dep		\$ (1,959,709)	K	Mains	\$ -	\$ -	\$ -	\$ (970,674)	\$ (989,035)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (1,959,709)	\$ -				
CIAC-Taxable - Services		\$ (5,095,244)	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (5,095,244)	\$ -	\$ -	\$ -	\$ (5,095,244)	\$ -				
CIAC-Taxable - Meters		\$ -	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
CIAC-Taxable - Hydrants		\$ (195,971)	J	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (195,971)	\$ (195,971)	\$ -				
CIAC-Taxable - Other		\$ (1,763,738)	K	Mains	\$ -	\$ -	\$ -	\$ (873,607)	\$ (890,132)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (1,763,738)	\$ -				
CIAC-Taxable - Mains FIT		\$ (587,913)	K	Mains	\$ -	\$ -	\$ -	\$ (291,202)	\$ (296,711)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (587,913)	\$ -				
CIAC-Taxable - Services FIT		\$ (195,971)	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (195,971)	\$ -	\$ -	\$ -	\$ (195,971)	\$ -				
CIAC-Taxable - Meters FIT		\$ -	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
MTBE Settlement																				
Pre-1971 I.T.C.		\$ (217,969)	B	Pumping	\$ -	\$ (4,141,733)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (4,141,733)	\$ -				
Consolidated FIT		\$ (20,312,669)	5	Net Plant (less gen. and int.)	\$ (9,582)	\$ (10,358)	\$ (29,604)	\$ (50,317)	\$ (59,692)	\$ (5,847)	\$ (13,975)	\$ (27,299)	\$ (2,798)	\$ (8,495)	\$ (20,312,669)	\$ -				
Deferred Federal Income Tax		\$ (554,155,677)	5	Net Plant (less gen. and int.)	\$ (892,970)	\$ (965,289)	\$ (2,758,825)	\$ (4,689,101)	\$ (5,562,761)	\$ (544,845)	\$ (1,302,376)	\$ (2,544,036)	\$ (260,771)	\$ (791,695)	\$ (554,155,677)	\$ -				
Excess ADIT-TCIA Liability		\$ (252,440,892)	5	Net Plant (less gen. and int.)	\$ (11,097,610)	\$ (11,996,381)	\$ (34,285,999)	\$ (58,275,003)	\$ (69,132,643)	\$ (6,771,205)	\$ (16,185,611)	\$ (31,616,655)	\$ (3,240,795)	\$ (9,838,990)	\$ (252,440,892)	\$ -				
Total Reductions		\$ (1,140,868,318)			\$ (37,700,317)	\$ (44,895,316)	\$ (116,474,903)	\$ (327,843,555)	\$ (367,185,365)	\$ (23,002,843)	\$ (57,824,367)	\$ (118,668,261)	\$ (11,009,488)	\$ (36,263,903)	\$ (1,140,868,318)	\$ -				
TOTAL RATE BASE (Water)																				
		\$ 4,068,259,977			\$ 191,149,824	\$ 209,882,270	\$ 589,954,895	\$ 863,877,335	\$ 1,044,912,982	\$ 132,197,681	\$ 270,455,598	\$ 525,663,953	\$ 74,441,080	\$ 165,						

New Jersey-American Water Company
2022 Cost of Service Study - Account Detail

	Post Test Year	Alloc	Description	Source of Supply	Pumping	Water Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
Labor	\$ 21,486,522	4		\$ 651,548 0.03032	\$ 5,903,083 0.27473	\$ 3,101,949 0.14437	\$ 2,300,362 0.10706	\$ 2,343,876 0.10909	\$ 1,469,850 0.06841	\$ 4,439 0.00021	\$ 1,260,054 0.05864	\$ 3,416,302 0.15900	\$ 1,035,060 0.04817	\$ 21,486,522 1.00000	
Net Plant	\$ 5,098,163,789	5		\$ 224,121,506 0.04396	\$ 242,272,618 0.04752	\$ 692,422,043 0.13582	\$ 1,176,891,382 0.23085	\$ 1,396,166,580 0.27386	\$ 136,747,706 0.02682	\$ 326,876,101 0.06412	\$ 638,513,375 0.12524	\$ 65,449,399 0.01284	\$ 198,703,079 0.03898	\$ 5,098,163,789 1.00000	
Rate Base	\$ 4,068,259,977	6		\$ 191,149,824 0.04699	\$ 209,882,270 0.05159	\$ 589,954,895 0.14501	\$ 863,877,335 0.21235	\$ 1,044,912,982 0.25685	\$ 132,197,681 0.03249	\$ 270,455,598 0.06648	\$ 525,663,953 0.12921	\$ 74,441,080 0.01830	\$ 165,724,360 0.04074	\$ 4,068,259,977 1.00000	
Variable Cost	\$ 42,982,306			\$ 10,876,598	\$ 5,557,919	\$ 24,082,403	\$ 1,221,144	\$ 1,244,243	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 42,982,306	

New Jersey-American Water Company
2022 Cost of Service Study - Usage Statistics

	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total	
Total Usage	61,193,398	642,259	3,985,616	6,931,044	9,528,122	95,380	-	82,375,818	thousand gallons
Average Day Usage	167,653	1,760	10,919	18,989	26,104	261	-	225,687	thousand gallons
Max Day Capacity Factor	1.62	1.00	1.33	1.00	1.15	---	---	---	
Max Day Usage	271,598	1,760	14,523	18,989	30,020	5,191	18,809	360,890	thousand gallons
Extra Capacity	103,945	-	3,603	-	3,916	4,930	18,809	135,203	thousand gallons
Fire Allocator	-	-	-	-	-	0.2163	0.7837	1.0000	40,000 gpm for 10 hours
Distribution Multiplier	1.00	0.25	0.08	0.08	-	1.00	1.00	N/A	
Average Hourly Usage	6,986	18	36	63	-	11	-	7,114	thousand gallons
Max Hour Capacity Factor	3.15	1.00	2.12	1.00	1.15	---	---	---	
Max Hour Usage	22,004	18	77	63	-	519	1,881	24,563	thousand gallons
Extra Capacity	15,019	-	41	-	-	508	1,881	17,449	thousand gallons
Customers	650,270	6	6	28	5	12,187	306	662,808	
Hydrants	-	-	-	-	-	2,344	46,599	48,943	
Revenue	\$ 653,258,655	\$ 1,568,492	\$ 16,038,637	\$ 19,524,406	\$ 27,737,073	\$ 26,815,521	\$ 30,824,066	\$ 775,766,850	

	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Meter Weighting	Service Weighting
5/8-METER	568,792	1	13	-	-	-	-	1.0	1.0
3/4-METER	18,005	-	4	-	-	-	-	1.5	1.0
1-METER	45,252	2	8	-	-	-	-	2.5	1.7
1.5-METER	4,403	-	13	-	-	-	-	5.0	3.3
2-METER	12,536	2	71	1	-	549	-	8.0	5.3
3-METER	916	1	44	2	-	121	-	15.0	10.0
4-METER	856	3	52	15	-	2,674	-	25.0	16.7
6-METER	201	5	32	11	-	4,567	-	50.0	33.3
8-METER	82	2	11	2	-	1,608	-	80.0	53.3
10-METER	30	-	9	1	-	140	-	100.0	66.7
12-METER	3	-	2	1	-	51	-	125.0	83.3
16-METER	-	-	-	-	-	2	-	200.0	133.3
System Load Factor:	0.6993	322,733	max day - thousand gallons per day				13,447.19	Average system hourly flow on max day	
System Load Factor (fire):	0.6514	346,471	max day with fire - thousand gallons per day				14,436.31	Average system hourly flow on max day	
System Load Factor (Hourly)	0.3984	17,857	max hour - thousand gallons per day						
System Load Factor (Hourly fire)	0.3604	19,738	max hour with fire - thousand gallons per day						

Mains Statistics

Type	Feet	Pct
10-Inch and Larger	13,987,261	0.2851
Under 10-inch	35,067,517	0.7149
Total	49,054,778	1.0000

Storage Statistics

Total Capacity	207,000	Distribution Tanks
Fire Allocation	0.1147	percentage of storage needed for maximum fire protection day
Non-Fire Allocation	0.8853	

New Jersey-American Water Company
2022 Cost of Service Study - Class Allocators

1. VARIABLE COST

Item	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total Units
Total Usage	167,653	1,760	10,919	18,989	26,104	261	-	225,687 Thousand Gallons
Allocator	0.7429	0.0078	0.0484	0.0841	0.1157	0.0012	-	1.0000
Allocator - No Manasquan	0.7487	-	0.0488	0.0848	0.1166	0.0012	-	1.0000

2. BASE/EXTRA DAILY

Item	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total Units
Average Daily Use	167,653	1,760	10,919	18,989	26,104	261	-	225,687 Thousand Gallons
Extra Capacity	103,945	-	3,603	-	3,916			111,464 Thousand Gallons
System Capacity Factor	0.6993							
Average Day Allocator	0.5195	0.0055	0.0338	0.0588	0.0809	0.0008	-	0.6993
Extra Capacity Allocator	0.2804	-	0.0097	-	0.0106	-	-	0.3007
Allocator	0.7999	0.0055	0.0436	0.0588	0.0914	0.0008	-	1.0000
Allocator - No Manasquan	0.8043	-	0.0438	0.0592	0.0920	0.0008	-	1.0000

4. BASE/EXTRA DAILY (w FIRE PROTECTION)

Item	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total Units
Average Daily Use	167,653	1,760	10,919	18,989	26,104	261	-	225,687 Thousand Gallons
Extra Capacity	103,945	-	3,603	-	3,916	4,930	18,809	135,203 Thousand Gallons
System Capacity Factor	0.6514	assuming fire protection						
Average Day Allocator	0.4839	0.0051	0.0315	0.0548	0.0753	0.0008	-	0.6514
Extra Capacity Allocator	0.2680	-	0.0093	-	0.0101	0.0127	0.0485	0.3486
Combined Allocator	0.7519	0.0051	0.0408	0.0548	0.0854	0.0135	0.0485	1.0000

5. BASE/EXTRA HOURLY (w FIRE PROTECTION)

Item	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total Units
Average Hourly Use	6,986	18	36	63	-	11	-	7,114 Thousand Gallons
Extra Capacity	15,019	-	41	-	-	508	1,881	17,449 Thousand Gallons
System Capacity Factor	0.3604	assuming fire protection						
Average Day Allocator	0.3539	0.0009	0.0018	0.0032	-	0.0006	-	0.3604
Extra Capacity Allocator	0.5505	-	0.0015	-	-	0.0186	0.0689	0.6396
Combined Allocator	0.9044	0.0009	0.0033	0.0032	-	0.0192	0.0689	1.0000

New Jersey-American Water Company
2022 Cost of Service Study - Class Allocators

6. STORAGE

Item	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total Units
Average Hourly Use	6,986	-	455	791	1,088	11	-	9,330
Extra Capacity	15,019	-	510	-	163	-----	-----	15,692
Fire Allocator	-	-	-	-	-	0.21630	0.78370	1.00000
System Capacity Factor	0.3604	assuming fire protection						
Average Day Allocator	0.2699	-	0.0176	0.0306	0.0420	0.0004	-	0.3604
Extra Capacity Allocator	0.6121	-	0.0208	-	0.0066	-	-	0.6396
Allocator	0.8820	-	0.0383	0.0306	0.0487	0.0004	-	1.0000
Non-Fire Allocation of Storage	0.88532							
Fire Allocaton of Storage	0.11468							
Non-Fire Allocator	0.7809	-	0.0339	0.0271	0.0431	0.0004	-	0.8853
Fire Allocator	-	-	-	-	-	0.0248	0.0899	0.1147
Combined Allocator	0.7809	-	0.0339	0.0271	0.0431	0.0252	0.0899	1.0000

7. WATER MONITORING TAXES

Item	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total Units
Combined Allocator	0.9389	-	0.0611	-	-	-	-	1.0000

8. MAINS

Item	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total Units
Factor 4	0.7519	0.0051	0.0408	0.0548	0.0854	0.0135	0.0485	1.0000 Thousand Gallons
Factor 5	0.9044	0.0009	0.0033	0.0032	-	0.0192	0.0689	1.0000 Thousand Gallons
Transmission Weighting	0.2851	3,728	Average system hourly load					
Distribution Weighting	0.7149	1,636	Average system hourly load - max day with fire protection (incremental)					
Combined Allocator	0.8609	0.0021	0.0140	0.0179	0.0244	0.0176	0.0631	1.0000

9. HYDRANTS

Item	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total
Total Hydrants	-	-	-	-	-	2,344	46,599	48,943
Allocator	-	-	-	-	-	0.04789	0.95211	1.00000

New Jersey-American Water Company
2022 Cost of Service Study - Class Allocators

10. METERS

Item	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total	Weighting
5/8-METER	568,792	1	13	-	-	-	-	568,806	1.0
3/4-METER	18,005	-	4	-	-	-	-	18,009	1.5
1-METER	45,252	2	8	-	-	-	-	45,262	2.5
1.5-METER	4,403	-	13	-	-	-	-	4,416	5.0
2-METER	12,536	2	71	1	-	-	-	12,610	8.0
3-METER	916	1	44	2	-	-	-	963	15.0
4-METER	856	3	52	15	-	-	-	926	25.0
6-METER	201	5	32	11	-	-	-	249	50.0
8-METER	82	2	11	2	-	-	-	97	80.0
10-METER	30	-	9	1	-	-	-	40	100.0
12-METER	3	-	2	1	-	-	-	6	125.0
16-METER	-	-	-	-	-	-	-	-	200.0
Total	886,358	522	6,262	1,348	-	-	-	894,490	-----
Allocator	0.99091	0.00058	0.00700	0.00151	-	-	-	1.00000	

11. SERVICES

Item	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total	Weighting
5/8-METER	568,792	1	13	-	-	-	-	568,806	1.0
3/4-METER	18,005	-	4	-	-	-	-	18,009	1.0
1-METER	45,252	2	8	-	-	-	-	45,262	1.7
1.5-METER	4,403	-	13	-	-	-	-	4,416	3.3
2-METER	12,536	2	71	1	-	549	-	13,159	5.3
3-METER	916	1	44	2	-	121	-	1,084	10.0
4-METER	856	3	52	15	-	2,674	-	3,600	16.7
6-METER	201	5	32	11	-	4,567	-	4,816	33.3
8-METER	82	2	11	2	-	1,608	-	1,705	53.3
10-METER	30	-	9	1	-	140	-	180	66.7
12-METER	3	-	2	1	-	51	-	57	83.3
16-METER	-	-	-	-	-	2	-	2	133.3
Total	781,466	348	4,177	899	-	300,416	-	1,087,306	-----
Allocator	0.71872	0.00032	0.00384	0.00083	-	0.27629	-	1.00000	

12. CUSTOMERS

Item	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total
Total Customers	650,270	6	6	28	5	12,187	306	662,808
Allocator	0.98108	0.00001	0.00001	0.00004	0.00001	0.01839	0.00046	1.00000

13. METERED CUSTOMERS

Item	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total
Total Customers	650,270	6	6	28	5	12,187	-	662,502
Allocator	0.98154	0.00001	0.00001	0.00004	0.00001	0.01840	-	1.00000

New-Jersey American Water
2022 Cost of Service Study - Allocator Summary

Alloc Description	Source of Supply	Pumping	Water Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total Notes
A Source of Supply	1.00000	-	-	-	-	-	-	-	-	-	1.00000
B Pumping	-	1.00000	-	-	-	-	-	-	-	-	1.00000
C Water Treatment	-	-	1.00000	-	-	-	-	-	-	-	1.00000
D Transmission	-	-	-	1.00000	-	-	-	-	-	-	1.00000
E Distribution	-	-	-	-	1.00000	-	-	-	-	-	1.00000
F Storage	-	-	-	-	-	1.00000	-	-	-	-	1.00000
G Meters	-	-	-	-	-	-	1.00000	-	-	-	1.00000
H Services	-	-	-	-	-	-	-	1.00000	-	-	1.00000
I Customers	-	-	-	-	-	-	-	-	1.00000	-	1.00000
J Hydrants	-	-	-	-	-	-	-	-	-	1.00000	1.00000
K Mains	-	-	-	0.49532	0.50468	-	-	-	-	-	1.00000
1 T/D Oper. Expense	-	-	-	0.49434	0.50369	0.00197	-	-	-	-	1.00000
2 T/D Maint.. Expense	-	-	-	0.14487	0.14761	0.53740	0.00122	0.09498	-	0.07393	1.00000
3 Fixed O&M	0.04229	0.12814	0.12396	0.11060	0.11269	0.19936	0.00045	0.03518	0.21994	0.02738	1.00000
4 Labor	0.03032	0.27473	0.14437	0.10706	0.10909	0.06841	0.00021	0.05864	0.15900	0.04817	1.00000
5 Net Plant (less gen. and int.)	0.04396	0.04752	0.13582	0.23085	0.27386	0.02682	0.06412	0.12524	0.01284	0.03898	1.00000
6 Rate Base	0.04699	0.05159	0.14501	0.21235	0.25685	0.03249	0.06648	0.12921	0.01830	0.04074	1.00000
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Alloc Description	General	Manasquan Resale	Optional Ind. Whole.	Resale CD	Resale SOS	Private Fire	Public Fire	Total Notes
1 Total Usage	0.74286	0.00780	0.04838	0.08414	0.11567	0.00116	-	1.00000
1A Total Usage w/o Manasquan	0.74869	-	0.04876	0.08480	0.11658	0.00117	-	1.00000
2 Base/Extra Daily	0.79989	0.00545	0.04356	0.05884	0.09145	0.00081	-	1.00000
2A Base/Extra Daily w/o Manasquan	0.80428	-	0.04379	0.05916	0.09195	0.00081	-	1.00000
3 ---	-	-	-	-	-	-	-	-
4 Base/Extra Daily w/ Fire	0.75190	0.00508	0.04081	0.05481	0.08544	0.01347	0.04850	1.00000
5 Base/Extra Hourly w/ Fire	0.90441	0.00093	0.00334	0.00321	-	0.01918	0.06894	1.00000
6 Storage	0.78085	-	0.03395	0.02706	0.04309	0.02518	0.08987	1.00000
7 Meters	0.99091	0.00058	0.00700	0.00151	-	-	-	1.00000
8 Services	0.71872	0.00032	0.00384	0.00083	-	0.27629	-	1.00000
9 Customers	0.98108	0.00001	0.00001	0.00004	0.00001	0.01839	0.00046	1.00000
10 Hydrants	-	-	-	-	-	0.04789	0.95211	1.00000
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2022 New Jersey Rate Case
Residential Declining Use Model
REGRESSION MODEL

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.9838
R Square	0.9679
Adjusted R Square	0.9632
Standard Error	0.2702
Observations	120

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	15	228.72	15.2483	208.8786	0.0000
Residual	104	7.59	0.0730		
Total	119	236.32			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	4.5529	0.1065	42.7613	0.0000	4.3417	4.7640	4.3812	4.8161
Jan	0.1946	0.1208	1.6107	0.1103	-0.0450	0.4342	-0.0904	0.4442
Feb	-0.3165	0.1208	-2.6192	0.0101	-0.5562	-0.0769	-0.5977	-0.0631
Mar	-0.3290	0.1209	-2.7224	0.0076	-0.5687	-0.0894	-0.5800	-0.0454
Apr	-0.1061	0.1211	-0.8765	0.3828	-0.3462	0.1339	-0.4491	0.0880
May	0.3436	0.1212	2.8336	0.0055	0.1031	0.5840	0.0664	0.6039
Jun	1.8613	0.1213	15.3507	0.0000	1.6209	2.1018	1.5893	2.1274
Jul	3.4191	0.1212	28.2023	0.0000	3.1787	3.6595	3.0936	3.6314
Aug	3.2202	0.1215	26.4978	0.0000	2.9792	3.4612	3.0495	3.5871
Sep	2.7795	0.1214	22.8993	0.0000	2.5388	3.0202	2.6027	3.1405
Oct	1.5228	0.1209	12.5953	0.0000	1.2831	1.7626	1.1906	1.7252
Nov	0.3010	0.1209	2.4901	0.0144	0.0613	0.5406	-0.0387	0.4958
Trend	-0.0059	0.0009	-6.3931	0.0000	-0.0077	-0.0040	-0.0084	-0.0050
Rain	-0.3106	0.0287	-10.8206	0.0000	-0.3675	-0.2537	-0.2999	-0.1944
CDD	0.0078	0.0011	7.0594	0.0000	0.0056	0.0100	0.0050	0.0095
COVID	0.4588	0.0889	5.1629	0.0000	0.2826	0.6350	0.2478	0.8078

2022 New Jersey Rate Case
Commercial Declining Use Model
REGRESSION MODEL

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.9635
R Square	0.9284
Adjusted R Square	0.9181
Standard Error	1.6658
Observations	120

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	15	3741.81	249.4537	89.8934	0.0000
Residual	104	288.60	2.7750		
Total	119	4030.40			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	29.5025	0.6562	44.9600	0.0000	28.2013	30.8038	4.3812	4.8161
Jan	0.0321	0.7450	0.0431	0.9657	-1.4453	1.5095	-0.0904	0.4442
Feb	-1.4775	0.7451	-1.9831	0.0500	-2.9550	0.0000	-0.5977	-0.0631
Mar	-1.0181	0.7452	-1.3663	0.1748	-2.4958	0.4596	-0.5800	-0.0454
Apr	0.2023	0.7463	0.2711	0.7868	-1.2777	1.6824	-0.4491	0.0880
May	0.6228	0.7473	0.8334	0.4065	-0.8591	2.1047	0.0664	0.6039
Jun	6.0363	0.7477	8.0732	0.0000	4.5536	7.5190	1.5893	2.1274
Jul	12.3933	0.7476	16.5764	0.0000	10.9107	13.8759	3.0936	3.6314
Aug	13.4459	0.7488	17.9554	0.0000	11.9609	14.9309	3.0495	3.5871
Sep	11.9563	0.7491	15.9615	0.0000	10.4708	13.4417	2.6027	3.1405
Oct	8.1092	0.7456	10.8766	0.0000	6.6307	9.5877	1.1906	1.7252
Nov	0.7528	0.7453	1.0101	0.3148	-0.7251	2.2308	-0.0387	0.4958
Trend	-0.0123	0.0057	-2.1732	0.0320	-0.0235	-0.0011	-0.0084	-0.0050
Rain	-0.9455	0.1888	-5.0070	0.0000	-1.3199	-0.5710	-0.2999	-0.1944
CDD	0.0294	0.0060	4.9086	0.0000	0.0175	0.0413	0.0050	0.0095
COVID	-2.4164	0.5476	-4.4127	0.0000	-3.5023	-1.3305	0.2478	0.8078

2022 New Jersey Rate Case
Public Authorities Declining Use Model
REGRESSION MODEL

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.9421
R Square	0.8875
Adjusted R Square	0.8713
Standard Error	2.6050
Observations	120

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	15	5568.87	371.2581	54.7086	0.0000
Residual	104	705.75	6.7861		
Total	119	6274.62			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	29.9711	1.0262	29.2073	0.0000	27.9362	32.0060	4.3812	4.8161
Jan	-2.3096	1.1650	-1.9824	0.0501	-4.6199	0.0007	-0.0904	0.4442
Feb	-0.7704	1.1651	-0.6612	0.5100	-3.0809	1.5401	-0.5977	-0.0631
Mar	-0.8161	1.1653	-0.7003	0.4853	-3.1269	1.4947	-0.5800	-0.0454
Apr	-1.3601	1.1671	-1.1653	0.2466	-3.6745	0.9544	-0.4491	0.0880
May	1.0757	1.1686	0.9204	0.3595	-1.2418	3.3931	0.0664	0.6039
Jun	8.2049	1.1692	7.0173	0.0000	5.8863	10.5236	1.5893	2.1274
Jul	14.4720	1.1692	12.3781	0.0000	12.1535	16.7905	3.0936	3.6314
Aug	15.0570	1.1710	12.8577	0.0000	12.7347	17.3792	3.0495	3.5871
Sep	13.2419	1.1714	11.3044	0.0000	10.9190	15.5648	2.6027	3.1405
Oct	10.4589	1.1659	8.9706	0.0000	8.1469	12.7710	1.1906	1.7252
Nov	1.3872	1.1655	1.1903	0.2366	-0.9240	3.6984	-0.0387	0.4958
Trend	-0.0257	0.0088	-2.9123	0.0044	-0.0433	-0.0082	-0.0084	-0.0050
Rain	-1.4721	0.2953	-4.9854	0.0000	-2.0577	-0.8866	-0.2999	-0.1944
CDD	0.0387	0.0094	4.1277	0.0001	0.0201	0.0573	0.0050	0.0095
COVID	-4.4395	0.8563	-5.1843	0.0000	-6.1376	-2.7413	0.2478	0.8078

New Jersey-American Water Company
2022 Cost of Service Study - Rate Design Comparison

Schedule CBR-5
Rate Design Comparison
Page 1 of 4

Rates for General Service, OIW, and Resale Customers

Meter Size	Group 1 Non-Exempt Current Meter Charge	Group 1 Non-Exempt Proposed Meter Charge	Group 1 Exempt Current Meter Charge	Group 1 Exempt Proposed Meter Charge	Sch. A-15 Current Meter Charge	Sch. A-15 Proposed Meter Charge	Sch. A-16 Current Meter Charge	Sch. A-16 Proposed Meter Charge	Sch. A-17 Current Meter Charge	Sch. A-17 Proposed Meter Charge
5/8" Monthly	\$ 18.50	\$ 22.09	\$ 15.98	\$ 19.07	\$ 14.00	\$ 17.59	\$ 9.50	\$ 13.30	\$ 34.17	\$ 34.17
3/4" Monthly	\$ 27.77	\$ 33.15	\$ 23.99	\$ 28.63	\$ 17.00	\$ 22.38	\$ 17.50	\$ 19.90	\$ 34.17	\$ 34.17
1" Monthly	\$ 46.26	\$ 55.23	\$ 39.96	\$ 47.69	\$ 20.00	\$ 28.97	\$ 25.00	\$ 33.10	\$ 44.19	\$ 44.19
1 1/2" Mthly	\$ 92.55	\$ 110.50	\$ 79.93	\$ 95.41	\$ 25.00	\$ 42.95	\$ 37.50	\$ 66.30	\$ 251.96	\$ 251.96
2" Monthly	\$ 147.99	\$ 176.71	\$ 127.82	\$ 152.58	\$ 30.00	\$ 58.72	\$ 60.00	\$ 106.00	\$ 307.43	\$ 307.43
3" Monthly	\$ 277.55	\$ 331.39	\$ 239.71	\$ 286.15	\$ 40.00	\$ 93.84	\$ 112.50	\$ 198.80	\$ 469.06	\$ 469.06
4" Monthly	\$ 462.55	\$ 552.29	\$ 399.50	\$ 476.88	\$ 50.00	\$ 139.74	\$ 187.50	\$ 331.40	\$ 515.02	\$ 515.02
6" Monthly	\$ 925.00	\$ 1,104.48	\$ 798.92	\$ 953.68	\$ 925.00	\$ 1,104.48	\$ 925.00	\$ 662.70		
8" Monthly	\$ 1,480.05	\$ 1,767.21	\$ 1,278.31	\$ 1,525.92	\$ 1,480.05	\$ 1,767.21				
10" Monthly	\$ 1,850.00	\$ 2,208.95	\$ 1,597.83	\$ 1,907.35	\$ 1,850.00	\$ 2,208.95				
12" Monthly	\$ 2,312.27	\$ 2,760.96	\$ 1,997.10	\$ 2,383.99	\$ 2,312.27	\$ 2,760.96				
16" Monthly	\$ 3,700.00	\$ 4,417.90	\$ 3,195.67	\$ 3,814.70	\$ 3,700.00	\$ 4,417.90				

Note: Group 1 refers to all rate schedules for which monthly meter charges currently apply except for Schedule A-15, A-16, and A-17.

Volumetric Rates		Current Volumetric Charge	Proposed Volumetric Charge
Schedule A-1	All	\$ 6.8884	\$ 8.1169
Schedule A-10	All	\$ 6.4376	\$ 8.1169
Schedule A-14	All	\$ 6.8884	\$ 8.1169
Schedule A-15	All	\$ 6.8884	\$ 8.1169
Schedule A-16	All	\$ 3.7150	\$ 4.8099
Schedule A-17	All	\$ 7.0000	\$ 7.0000
Schedule A-2	All	\$ 6.8884	\$ 8.1169
Schedule F	Non-Exempt	\$ 3.7846	\$ 4.2786
Schedule F	Exempt	\$ 3.2687	\$ 3.6944
Schedule C	Commodity - N.E.	\$ 0.4865	\$ 0.6305
Schedule C	Demand - N.E.	\$ 57.76	\$ 74.86
Schedule C	Commodity - Exempt	\$ 0.4865	\$ 0.5444
Schedule C	Demand - Exempt	\$ 57.76	\$ 64.64
Schedule D	Commodity	\$ 0.5633	\$ 0.6305
Schedule D	Demand	\$ 61.51	\$ 68.85
Schedule G	Non-Exempt	\$ 2.9574	\$ 3.3038
Schedule G	Exempt	\$ 2.5543	\$ 2.8527
Schedule E	Uninterruptible	\$ 1.8350	\$ 2.1026
Schedule E	Interruptible	\$ 6.8884	\$ 7.1560
Schedule H	Non-Exempt	\$ 9.1362	\$ 10.7656
Schedule I	Non-Exempt	\$ 5.3971	\$ 6.3596
Schedule J	Uninterruptible	\$ 2.6389	\$ 3.0237

Current Private Fire Rates

Present Rate	Sch. L-1	Sch. L-2	Sch. L-3	Sch. L-7	Sch. L-9	Sch. L-10 with hose	Sch. L-10 w/o hose	Sch. L-11	Sch. L-12	Sch. L-13
2" service	\$ 20.64	\$ -	\$ 39.40	\$ 20.64	\$ 26.75	\$ 151.65	\$ 50.54	\$ 20.64	\$ -	\$ 62.50
3" service	\$ 46.40	\$ -	\$ 77.40	\$ 46.40	\$ 60.20	\$ 151.65	\$ 106.10	\$ 46.40	\$ -	\$ 62.50
4" service	\$ 82.50	\$ -	\$ 124.80	\$ 82.50	\$ 107.00	\$ 252.75	\$ 176.90	\$ 82.50	\$ -	\$ 62.50
6" service	\$ 185.70	\$ -	\$ 231.50	\$ 185.70	\$ 240.70	\$ 505.50	\$ 353.80	\$ 185.70	\$ -	\$ 133.33
8" service	\$ 330.20	\$ -	\$ 395.30	\$ 330.20	\$ 427.90	\$ 808.80	\$ 566.00	\$ 330.20	\$ -	\$ 250.00
10" service	\$ 516.00	\$ -	\$ 516.20	\$ 516.00	\$ 668.80	\$ 1,253.65	\$ 884.40	\$ 516.00	\$ -	\$ 583.33
12" service	\$ 743.00	\$ -	\$ 743.30	\$ 743.00	\$ 963.00	\$ -	\$ -	\$ 743.00	\$ -	\$ -
16" service	\$ 1,321.00	\$ -	\$ 1,460.50	\$ 1,321.00	\$ 1,712.00	\$ -	\$ -	\$ 1,321.00	\$ -	\$ -
20" service	\$ -	\$ -	\$ 2,661.70	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sprinkler Head	\$ -	\$ 0.93	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Private Hydrants	\$ -	\$ 46.63	\$ 60.20	\$ 26.83	\$ 31.81	\$ 60.20	\$ 60.20	\$ 27.18	\$ 26.83	\$ 10.42
Usage Per TG	\$ 6.8884	\$ -	\$ 6.8884	\$ 6.8884	\$ 6.4376	\$ -	\$ 6.4376	\$ -	\$ -	\$ -

Proposed Private Fire Rates

Present Rate	Sch. L-1	Sch. L-2	Sch. L-3	Sch. L-7	Sch. L-9	Sch. L-10 with hose	Sch. L-10 w/o hose	Sch. L-11	Sch. L-12	Sch. L-13
2" service	\$ 26.60	\$ 26.60	\$ 51.20	\$ 26.60	\$ 31.50	\$ 183.00	\$ 65.00	\$ 26.60	\$ -	\$ 62.50
3" service	\$ 59.84	\$ 59.84	\$ 100.58	\$ 59.84	\$ 70.87	\$ 183.00	\$ 136.00	\$ 59.84	\$ -	\$ 62.50
4" service	\$ 106.37	\$ 106.37	\$ 162.18	\$ 106.37	\$ 125.96	\$ 305.00	\$ 227.00	\$ 106.37	\$ -	\$ 62.50
6" service	\$ 239.34	\$ 239.34	\$ 300.84	\$ 239.34	\$ 283.42	\$ 610.00	\$ 454.00	\$ 239.34	\$ -	\$ 133.33
8" service	\$ 425.50	\$ 425.50	\$ 513.70	\$ 425.50	\$ 503.88	\$ 976.00	\$ 726.00	\$ 425.50	\$ -	\$ 250.00
10" service	\$ 665.00	\$ 665.00	\$ 670.81	\$ 665.00	\$ 787.50	\$ 1,513.00	\$ 1,134.00	\$ 665.00	\$ -	\$ 583.33
12" service	\$ 957.60	\$ 957.60	\$ 965.93	\$ 957.60	\$ 1,134.00	\$ -	\$ -	\$ 957.60	\$ -	\$ -
16" service	\$ 1,702.40	\$ 1,702.40	\$ 1,897.94	\$ 1,702.40	\$ 2,016.00	\$ -	\$ -	\$ 1,702.40	\$ -	\$ -
20" service	\$ -	\$ -	\$ 3,458.92	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sprinkler Head	\$ -	\$ 1.25	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Private Hydrants	\$ -	\$ 52.93	\$ 62.82	\$ 45.08	\$ 37.81	\$ 70.59	\$ 70.59	\$ 33.18	\$ 32.83	\$ 10.42
Usage Per TG	\$ 8.1169	\$ -	\$ 8.1169	\$ 8.1169	\$ 8.1169	\$ -	\$ 8.1169	\$ -	\$ -	\$ -

Public Fire Rates

Schedule		Present Rate	Proposed Rate
Sch M-1 - Statewide	\$	51.76	\$ 57.82
Sch M-2 - Logan/Ortley	\$	46.93	\$ 52.93
Sch M-3 - Adelphia	\$	47.20	\$ 53.20
Sch M-5 Zone 2A	\$	45.95	\$ 51.95
Sch M-5 Zone 2C	\$	51.76	\$ 57.82
Sch M-5 Zone 2D	\$	52.98	\$ 59.18
Sch M-5 Zone 2E	\$	55.41	\$ 61.58
Sch M-5 Zone 2F	\$	55.41	\$ 61.58
Sch M-5 Zone 2G	\$	59.40	\$ 61.58
Sch M-5 Zone 2H	\$	63.74	\$ 63.74
Sch M-5 Zone 2I	\$	65.78	\$ 65.78
Sch M-5 Zone 2J	\$	66.67	\$ 66.67
Sch M-5 Zone 2K	\$	70.59	\$ 70.59
Sch M-5 Zone 2L	\$	74.50	\$ 70.59
Sch M-6 Zone 3A	\$	29.77	\$ 35.77
Sch M-6 Zone 3B	\$	34.26	\$ 40.26
Sch M-6 Zone 3C	\$	38.76	\$ 44.76
Sch M-6 Zone 3D	\$	43.26	\$ 49.26
Sch M-6 Zone 3G	\$	49.99	\$ 55.99
Sch M-7 (SA 1A)	\$	38.46	\$ 44.46
Sch M-8 (SA 1B)	\$	31.81	\$ 37.81
Sch M-9 (SA 1C)	\$	74.50	\$ 70.59
Sch M-10 (SA 1D)	\$	27.18	\$ 33.18
Sch M-11 (SA 1F)	\$	26.83	\$ 32.83
Sch. M-12	\$	10.42	\$ 10.42

Current Sewer Rates

	Ocean City Sch 1-A	Lakewood Sch 2-A	Adelphia Sch 3-A	Gen Class A Sch 5-A	Gen Class B Sch 5-A	State Vol Sch 6-A	Contracts Sch 7-A	Contracts Sch 8-A	Jensen Sch 10-A	Haddonfield Sch 11-A	Elk Sch 12-A	Long Hill Sch 14-A	Long Hill Sch 15-A	Egg Harbor Sch 16-A	Egg Harbor Sch 17-A	Bound Brook Sch 18-A	Bound Brook Sch 19-A
Non-Exempt																	
Min Per TG	\$ 12.25																
Fixed Charge		\$ 15.00	\$ 12.25	\$ 77.12	\$ 93.18	\$ 45.00	\$ 148.75	\$ 110.00	\$ 24.00	\$ 4.20	\$ 17.50	\$ 14.58	\$ 14.58	\$ 58.33	\$ 10.83	\$ 39.58	\$ 5.00
Usage	\$ 2.1500	\$ 3.9520	\$ 4.0340		\$	\$ 8.0300	\$ 2.7370	\$	\$ 8.5622	\$ 3.2202	\$ 6.9300		\$ 18.2700		\$ 7.5000	\$	\$ 6.4000

Proposed Sewer Rates

	Ocean City Sch 1-A	Lakewood Sch 2-A	Adelphia Sch 3-A	Gen Class A Sch 5-A	Gen Class B Sch 5-A	State Vol Sch 6-A	Contracts Sch 7-A	Contracts Sch 8-A	Jensen Sch 10-A	Haddonfield Sch 11-A	Elk Sch 12-A	Long Hill Sch 14-A	Long Hill Sch 15-A	Egg Harbor Sch 16-A	Egg Harbor Sch 17-A	Bound Brook Sch 18-A	Bound Brook Sch 19-A
Non-Exempt																	
Min Per TG	\$ 14.50																
Fixed Charge		\$ 15.00	\$ 15.00	\$ 82.50	\$ 99.68	\$ 50.00	\$ 148.75	\$ 125.00	\$ 30.00	\$ 8.00	\$ 20.00	\$ 15.02	\$ 15.02	\$ 58.33	\$ 10.83	\$ 39.58	\$ 5.00
Usage	\$ 2.1750	\$ 4.7550	\$ 5.3300		\$	\$ 8.0400	\$ 3.1025	\$	\$ 8.5000	\$ 3.6500	\$ 9.5000		\$ 18.8180		\$ 7.5000	\$	\$ 6.4000

	Present Rate	Proposed Rate
Schedule 13-A Mt. Ephraim		
Single Family dwelling	\$ 8.58	\$ 8.84
Unrecirculated Air-Con Unit	\$ 2.14	\$ 2.20
Self service laundries	\$ 3.43	\$ 3.53
Lodges, meeting halls	\$ 4.30	\$ 4.43
Post offices	\$ 6.87	\$ 7.08
Gas Service Stations	\$ 17.17	\$ 17.69
Drive In Restaurants < 50 seats	\$ 25.75	\$ 26.52
Restaurants 51-75 seats	\$ 34.33	\$ 35.36
Restaurants 76-100 seats	\$ 42.92	\$ 44.21
Each additional Employee	\$ 1.72	\$ 1.77

New Jersey-American Water Company

2022 Cost of Service Study - Residential Bill Comparison

Statewide - Schedule A-1

PWAC: \$ 0.4221

Meter Size	Lower Limit	Upper Limit	Current Monthly Bill	Proposed Monthly Bill	Monthly Increase	Percentage Monthly Increase
5/8-METER	-	1,000	\$ 25.74	\$ 26.36	\$ 0.61	2.4%
5/8-METER	1,000	2,000	\$ 33.06	\$ 34.90	\$ 1.84	5.6%
5/8-METER	2,000	3,000	\$ 40.37	\$ 43.44	\$ 3.07	7.6%
5/8-METER	3,000	4,000	\$ 47.68	\$ 51.98	\$ 4.30	9.0%
5/8-METER	4,000	5,000	\$ 54.99	\$ 60.52	\$ 5.53	10.1%
5/8-METER	5,000	6,000	\$ 62.30	\$ 69.05	\$ 6.76	10.8%
5/8-METER	6,000	7,000	\$ 69.61	\$ 77.59	\$ 7.99	11.5%
5/8-METER	7,000	8,000	\$ 76.92	\$ 86.13	\$ 9.21	12.0%
5/8-METER	8,000	9,000	\$ 84.23	\$ 94.67	\$ 10.44	12.4%
5/8-METER	9,000	10,000	\$ 91.54	\$ 103.21	\$ 11.67	12.7%
5/8-METER	10,000	12,000	\$ 102.51	\$ 116.02	\$ 13.51	13.2%
5/8-METER	12,000	14,000	\$ 117.13	\$ 133.10	\$ 15.97	13.6%
5/8-METER	14,000	16,000	\$ 131.75	\$ 150.17	\$ 18.43	14.0%
5/8-METER	16,000	18,000	\$ 146.37	\$ 167.25	\$ 20.88	14.3%
5/8-METER	18,000	20,000	\$ 160.99	\$ 184.33	\$ 23.34	14.5%
5/8-METER	20,000	25,000	\$ 186.58	\$ 214.22	\$ 27.64	14.8%
5/8-METER	25,000	30,000	\$ 223.13	\$ 256.91	\$ 33.78	15.1%
5/8-METER	30,000	35,000	\$ 259.68	\$ 299.61	\$ 39.93	15.4%
5/8-METER	35,000	40,000	\$ 296.23	\$ 342.30	\$ 46.07	15.6%
5/8-METER	40,000	45,000	\$ 332.79	\$ 385.00	\$ 52.21	15.7%
5/8-METER	45,000	50,000	\$ 369.34	\$ 427.69	\$ 58.35	15.8%
5/8-METER	50,000	100,000	\$ 570.38	\$ 662.51	\$ 92.14	16.2%

New Jersey-American Water Company

2022 Cost of Service Study - Residential Bill Comparison

Statewide - Schedule A-10

Meter Size	Lower Limit	Upper Limit	Current Monthly Bill	Proposed Monthly Bill	Monthly Increase	Percentage Monthly Increase
5/8-METER	-	1,000	\$ 25.52	\$ 26.36	\$ 0.84	3.3%
5/8-METER	1,000	2,000	\$ 32.38	\$ 34.90	\$ 2.52	7.8%
5/8-METER	2,000	3,000	\$ 39.24	\$ 43.44	\$ 4.20	10.7%
5/8-METER	3,000	4,000	\$ 46.10	\$ 51.98	\$ 5.88	12.7%
5/8-METER	4,000	5,000	\$ 52.96	\$ 60.52	\$ 7.56	14.3%
5/8-METER	5,000	6,000	\$ 59.82	\$ 69.05	\$ 9.24	15.4%
5/8-METER	6,000	7,000	\$ 66.68	\$ 77.59	\$ 10.92	16.4%
5/8-METER	7,000	8,000	\$ 73.54	\$ 86.13	\$ 12.59	17.1%
5/8-METER	8,000	9,000	\$ 80.40	\$ 94.67	\$ 14.27	17.8%
5/8-METER	9,000	10,000	\$ 87.26	\$ 103.21	\$ 15.95	18.3%
5/8-METER	10,000	12,000	\$ 97.55	\$ 116.02	\$ 18.47	18.9%
5/8-METER	12,000	14,000	\$ 111.27	\$ 133.10	\$ 21.83	19.6%
5/8-METER	14,000	16,000	\$ 124.99	\$ 150.17	\$ 25.19	20.2%
5/8-METER	16,000	18,000	\$ 138.70	\$ 167.25	\$ 28.55	20.6%
5/8-METER	18,000	20,000	\$ 152.42	\$ 184.33	\$ 31.91	20.9%
5/8-METER	20,000	25,000	\$ 176.43	\$ 214.22	\$ 37.78	21.4%
5/8-METER	25,000	30,000	\$ 210.73	\$ 256.91	\$ 46.18	21.9%
5/8-METER	30,000	35,000	\$ 245.03	\$ 299.61	\$ 54.58	22.3%
5/8-METER	35,000	40,000	\$ 279.33	\$ 342.30	\$ 62.97	22.5%
5/8-METER	40,000	45,000	\$ 313.63	\$ 385.00	\$ 71.37	22.8%
5/8-METER	45,000	50,000	\$ 347.93	\$ 427.69	\$ 79.77	22.9%
5/8-METER	50,000	100,000	\$ 536.57	\$ 662.51	\$ 125.95	23.5%

New Jersey-American Water Company

2022 Cost of Service Study - Residential Bill Comparison

Haddonfield - Schedule A-15

Meter Size	Lower Limit	Upper Limit	Current Monthly Bill	Proposed Monthly Bill	Monthly Increase	Percentage Monthly Increase
5/8-METER	-	1,000	\$ 21.24	\$ 21.86	\$ 0.61	2.9%
5/8-METER	1,000	2,000	\$ 28.56	\$ 30.40	\$ 1.84	6.5%
5/8-METER	2,000	3,000	\$ 35.87	\$ 38.94	\$ 3.07	8.6%
5/8-METER	3,000	4,000	\$ 43.18	\$ 47.48	\$ 4.30	10.0%
5/8-METER	4,000	5,000	\$ 50.49	\$ 56.02	\$ 5.53	10.9%
5/8-METER	5,000	6,000	\$ 57.80	\$ 64.55	\$ 6.76	11.7%
5/8-METER	6,000	7,000	\$ 65.11	\$ 73.09	\$ 7.99	12.3%
5/8-METER	7,000	8,000	\$ 72.42	\$ 81.63	\$ 9.21	12.7%
5/8-METER	8,000	9,000	\$ 79.73	\$ 90.17	\$ 10.44	13.1%
5/8-METER	9,000	10,000	\$ 87.04	\$ 98.71	\$ 11.67	13.4%
5/8-METER	10,000	12,000	\$ 98.01	\$ 111.52	\$ 13.51	13.8%
5/8-METER	12,000	14,000	\$ 112.63	\$ 128.60	\$ 15.97	14.2%
5/8-METER	14,000	16,000	\$ 127.25	\$ 145.67	\$ 18.43	14.5%
5/8-METER	16,000	18,000	\$ 141.87	\$ 162.75	\$ 20.88	14.7%
5/8-METER	18,000	20,000	\$ 156.49	\$ 179.83	\$ 23.34	14.9%
5/8-METER	20,000	25,000	\$ 182.08	\$ 209.72	\$ 27.64	15.2%
5/8-METER	25,000	30,000	\$ 218.63	\$ 252.41	\$ 33.78	15.5%
5/8-METER	30,000	35,000	\$ 255.18	\$ 295.11	\$ 39.93	15.6%
5/8-METER	35,000	40,000	\$ 291.73	\$ 337.80	\$ 46.07	15.8%
5/8-METER	40,000	45,000	\$ 328.29	\$ 380.50	\$ 52.21	15.9%
5/8-METER	45,000	50,000	\$ 364.84	\$ 423.19	\$ 58.35	16.0%
5/8-METER	50,000	100,000	\$ 565.88	\$ 658.01	\$ 92.14	16.3%

New Jersey-American Water Company

2022 Cost of Service Study - Residential Bill Comparison

Roxbury - Schedule A-16

Meter Size	Lower Limit	Upper Limit	Current Monthly Bill	Proposed Monthly Bill	Monthly Increase	Percentage Monthly Increase
5/8-METER	-	1,000	\$ 11.57	\$ 15.92	\$ 4.35	37.6%
5/8-METER	1,000	2,000	\$ 15.71	\$ 21.15	\$ 5.44	34.7%
5/8-METER	2,000	3,000	\$ 19.84	\$ 26.38	\$ 6.54	32.9%
5/8-METER	3,000	4,000	\$ 23.98	\$ 31.61	\$ 7.63	31.8%
5/8-METER	4,000	5,000	\$ 28.12	\$ 36.84	\$ 8.73	31.0%
5/8-METER	5,000	6,000	\$ 32.25	\$ 42.08	\$ 9.82	30.5%
5/8-METER	6,000	7,000	\$ 36.39	\$ 47.31	\$ 10.92	30.0%
5/8-METER	7,000	8,000	\$ 40.53	\$ 52.54	\$ 12.01	29.6%
5/8-METER	8,000	9,000	\$ 44.67	\$ 57.77	\$ 13.11	29.3%
5/8-METER	9,000	10,000	\$ 48.80	\$ 63.00	\$ 14.20	29.1%
5/8-METER	10,000	12,000	\$ 55.01	\$ 70.85	\$ 15.84	28.8%
5/8-METER	12,000	14,000	\$ 63.28	\$ 81.32	\$ 18.03	28.5%
5/8-METER	14,000	16,000	\$ 71.56	\$ 91.78	\$ 20.22	28.3%
5/8-METER	16,000	18,000	\$ 79.83	\$ 102.24	\$ 22.41	28.1%
5/8-METER	18,000	20,000	\$ 88.10	\$ 112.71	\$ 24.60	27.9%
5/8-METER	20,000	25,000	\$ 102.58	\$ 131.02	\$ 28.44	27.7%
5/8-METER	25,000	30,000	\$ 123.27	\$ 157.18	\$ 33.91	27.5%
5/8-METER	30,000	35,000	\$ 143.96	\$ 183.34	\$ 39.38	27.4%
5/8-METER	35,000	40,000	\$ 164.64	\$ 209.50	\$ 44.86	27.2%
5/8-METER	40,000	45,000	\$ 185.33	\$ 235.66	\$ 50.33	27.2%
5/8-METER	45,000	50,000	\$ 206.01	\$ 261.82	\$ 55.81	27.1%
5/8-METER	50,000	100,000	\$ 319.78	\$ 405.70	\$ 85.92	26.9%

New Jersey-American Water Company

2022 Cost of Service Study - Commercial/Industrial Bill Comparison

Statewide - Schedule A-1

PWAC: \$ 0.4221

Meter Size	Lower Limit	Upper Limit	Current Monthly Bill	Proposed Monthly Bill	Monthly Increase	Percentage Monthly Increase
5/8-METER	-	1,000	\$ 25.74	\$ 26.36	\$ 0.61	2.4%
5/8-METER	1,000	2,000	\$ 33.06	\$ 34.90	\$ 1.84	5.6%
5/8-METER	2,000	3,000	\$ 40.37	\$ 43.44	\$ 3.07	7.6%
5/8-METER	3,000	4,000	\$ 47.68	\$ 51.98	\$ 4.30	9.0%
5/8-METER	4,000	5,000	\$ 54.99	\$ 60.52	\$ 5.53	10.1%
5/8-METER	5,000	10,000	\$ 76.92	\$ 86.13	\$ 9.21	12.0%
5/8-METER	10,000	15,000	\$ 113.47	\$ 128.83	\$ 15.36	13.5%
5/8-METER	15,000	20,000	\$ 150.02	\$ 171.52	\$ 21.50	14.3%
1-METER	20,000	25,000	\$ 219.72	\$ 247.36	\$ 27.64	12.6%
1-METER	25,000	30,000	\$ 256.27	\$ 290.06	\$ 33.78	13.2%
1-METER	30,000	40,000	\$ 311.10	\$ 354.10	\$ 43.00	13.8%
1-METER	40,000	50,000	\$ 384.21	\$ 439.49	\$ 55.28	14.4%
1-METER	50,000	75,000	\$ 512.14	\$ 588.92	\$ 76.78	15.0%
1-METER	75,000	100,000	\$ 694.90	\$ 802.40	\$ 107.49	15.5%
1-METER	100,000	200,000	\$ 1,151.81	\$ 1,336.08	\$ 184.28	16.0%
1-METER	200,000	300,000	\$ 1,882.86	\$ 2,189.98	\$ 307.13	16.3%
1-METER	300,000	400,000	\$ 2,613.91	\$ 3,043.88	\$ 429.98	16.4%
1-METER	400,000	500,000	\$ 3,344.96	\$ 3,897.78	\$ 552.83	16.5%
1-METER	500,000	1,000,000	\$ 5,538.11	\$ 6,459.48	\$ 921.38	16.6%
1-METER	1,000,000	1,500,000	\$ 9,193.36	\$ 10,728.98	\$ 1,535.63	16.7%
1-METER	1,500,000	2,000,000	\$ 12,848.61	\$ 14,998.48	\$ 2,149.88	16.7%
1-METER	2,000,000	2,500,000	\$ 16,503.86	\$ 19,267.98	\$ 2,764.13	16.7%
1-METER	2,500,000	5,000,000	\$ 27,469.61	\$ 32,076.48	\$ 4,606.88	16.8%
1-METER	5,000,000	10,000,000	\$ 54,883.98	\$ 64,097.73	\$ 9,213.75	16.8%
6-METER			\$ 675,498.10	\$ 788,827.23	\$ 113,329.13	16.8%

Statewide - Schedule A-10

Meter Size	Lower Limit	Upper Limit	Current Monthly Bill	Proposed Monthly Bill	Monthly Increase	Percentage Monthly Increase
1-METER	-	1,000	\$ 25.52	\$ 26.36	\$ 0.84	3.3%
1-METER	1,000	2,000	\$ 32.38	\$ 34.90	\$ 2.52	7.8%
1-METER	2,000	3,000	\$ 39.24	\$ 43.44	\$ 4.20	10.7%
1-METER	3,000	4,000	\$ 46.10	\$ 51.98	\$ 5.88	12.7%
1-METER	4,000	5,000	\$ 52.96	\$ 60.52	\$ 7.56	14.3%
1-METER	5,000	10,000	\$ 73.54	\$ 86.13	\$ 12.59	17.1%
1-METER	10,000	15,000	\$ 107.84	\$ 128.83	\$ 20.99	19.5%
1-METER	15,000	20,000	\$ 142.13	\$ 171.52	\$ 29.39	20.7%
1-METER	20,000	25,000	\$ 209.58	\$ 247.36	\$ 37.78	18.0%
1-METER	25,000	30,000	\$ 243.88	\$ 290.06	\$ 46.18	18.9%
1-METER	30,000	40,000	\$ 295.32	\$ 354.10	\$ 58.78	19.9%
1-METER	40,000	50,000	\$ 363.92	\$ 439.49	\$ 75.57	20.8%
1-METER	50,000	75,000	\$ 483.97	\$ 588.92	\$ 104.96	21.7%
1-METER	75,000	100,000	\$ 655.46	\$ 802.40	\$ 146.94	22.4%
1-METER	100,000	200,000	\$ 1,084.19	\$ 1,336.08	\$ 251.90	23.2%
1-METER	200,000	300,000	\$ 1,770.16	\$ 2,189.98	\$ 419.83	23.7%
1-METER	300,000	400,000	\$ 2,456.13	\$ 3,043.88	\$ 587.76	23.9%
1-METER	400,000	500,000	\$ 3,142.10	\$ 3,897.78	\$ 755.68	24.1%
1-METER	500,000	1,000,000	\$ 5,200.01	\$ 6,459.48	\$ 1,259.48	24.2%
1-METER	1,000,000	1,500,000	\$ 8,629.86	\$ 10,728.98	\$ 2,099.13	24.3%
1-METER	1,500,000	2,000,000	\$ 12,059.71	\$ 14,998.48	\$ 2,938.78	24.4%
1-METER	2,000,000	2,500,000	\$ 15,489.56	\$ 19,267.98	\$ 3,778.43	24.4%
1-METER	2,500,000	5,000,000	\$ 25,779.11	\$ 32,076.48	\$ 6,297.38	24.4%
1-METER	5,000,000	10,000,000	\$ 51,502.98	\$ 64,097.73	\$ 12,594.75	24.5%
4-METER			\$ 76,660.66	\$ 95,292.49	\$ 18,631.83	24.3%

Haddonfield - Schedule A-15

Meter Size	Lower Limit	Upper Limit	Current Monthly Bill		Proposed Monthly Bill		Monthly Increase	Percentage Monthly Increase
1-METER	-	1,000	\$	21.24	\$	21.86	\$ 0.61	2.9%
1-METER	1,000	2,000	\$	28.56	\$	30.40	\$ 1.84	6.5%
1-METER	2,000	3,000	\$	35.87	\$	38.94	\$ 3.07	8.6%
1-METER	3,000	4,000	\$	43.18	\$	47.48	\$ 4.30	10.0%
1-METER	4,000	5,000	\$	50.49	\$	56.02	\$ 5.53	10.9%
1-METER	5,000	10,000	\$	72.42	\$	81.63	\$ 9.21	12.7%
1-METER	10,000	15,000	\$	108.97	\$	124.33	\$ 15.36	14.1%
1-METER	15,000	20,000	\$	145.52	\$	167.02	\$ 21.50	14.8%
1-METER	20,000	25,000	\$	193.46	\$	221.10	\$ 27.64	14.3%
1-METER	25,000	30,000	\$	230.01	\$	263.80	\$ 33.78	14.7%
1-METER	30,000	40,000	\$	284.84	\$	327.84	\$ 43.00	15.1%
1-METER	40,000	50,000	\$	357.95	\$	413.23	\$ 55.28	15.4%
1-METER	50,000	75,000	\$	485.88	\$	562.66	\$ 76.78	15.8%
1-METER	75,000	100,000	\$	668.64	\$	776.14	\$ 107.49	16.1%
1-METER	100,000	200,000	\$	1,125.55	\$	1,309.82	\$ 184.28	16.4%
1-METER	200,000	300,000	\$	1,856.60	\$	2,163.72	\$ 307.13	16.5%
1-METER	300,000	400,000	\$	2,587.65	\$	3,017.62	\$ 429.98	16.6%
1-METER	400,000	500,000	\$	3,318.70	\$	3,871.52	\$ 552.82	16.7%
1-METER	500,000	1,000,000	\$	5,511.85	\$	6,433.22	\$ 921.38	16.7%
1-METER	1,000,000	1,500,000	\$	9,167.10	\$	10,702.72	\$ 1,535.63	16.8%
1-METER	1,500,000	2,000,000	\$	12,822.35	\$	14,972.22	\$ 2,149.88	16.8%
1-METER	2,000,000	2,500,000	\$	16,477.60	\$	19,241.72	\$ 2,764.13	16.8%
1-METER	2,500,000	5,000,000	\$	27,443.35	\$	32,050.22	\$ 4,606.88	16.8%
1-METER	5,000,000	10,000,000	\$	54,857.72	\$	64,071.47	\$ 9,213.75	16.8%

Roxbury - Schedule A-16

Meter Size	Lower Limit	Upper Limit	Current Monthly Bill		Proposed Monthly Bill		Monthly Increase	Percentage Monthly Increase
1-METER	-	1,000	\$	11.57	\$	15.92	\$ 4.35	37.6%
1-METER	1,000	2,000	\$	15.71	\$	21.15	\$ 5.44	34.7%
1-METER	2,000	3,000	\$	19.84	\$	26.38	\$ 6.54	32.9%
1-METER	3,000	4,000	\$	23.98	\$	31.61	\$ 7.63	31.8%
1-METER	4,000	5,000	\$	28.12	\$	36.84	\$ 8.73	31.0%
1-METER	5,000	10,000	\$	40.53	\$	52.54	\$ 12.01	29.6%
1-METER	10,000	15,000	\$	61.21	\$	78.70	\$ 17.49	28.6%
1-METER	15,000	20,000	\$	81.90	\$	104.86	\$ 22.96	28.0%
1-METER	20,000	25,000	\$	118.08	\$	150.82	\$ 32.74	27.7%
1-METER	25,000	30,000	\$	138.77	\$	176.98	\$ 38.21	27.5%
1-METER	30,000	40,000	\$	169.80	\$	216.22	\$ 46.42	27.3%
1-METER	40,000	50,000	\$	211.17	\$	268.54	\$ 57.37	27.2%
1-METER	50,000	75,000	\$	283.57	\$	360.10	\$ 76.53	27.0%
1-METER	75,000	100,000	\$	387.00	\$	490.90	\$ 103.91	26.8%
1-METER	100,000	200,000	\$	645.57	\$	817.90	\$ 172.34	26.7%
1-METER	200,000	300,000	\$	1,059.28	\$	1,341.10	\$ 281.83	26.6%
1-METER	300,000	400,000	\$	1,472.99	\$	1,864.31	\$ 391.32	26.6%
1-METER	400,000	500,000	\$	1,886.70	\$	2,387.51	\$ 500.81	26.5%
1-METER	500,000	1,000,000	\$	3,127.83	\$	3,957.11	\$ 829.29	26.5%
1-METER	1,000,000	1,500,000	\$	5,196.38	\$	6,573.12	\$ 1,376.75	26.5%
1-METER	1,500,000	2,000,000	\$	7,264.93	\$	9,189.13	\$ 1,924.21	26.5%
1-METER	2,000,000	2,500,000	\$	9,333.48	\$	11,805.14	\$ 2,471.67	26.5%
1-METER	2,500,000	5,000,000	\$	15,539.13	\$	19,653.17	\$ 4,114.05	26.5%
1-METER	5,000,000	10,000,000	\$	31,053.25	\$	39,273.24	\$ 8,219.99	26.5%

New Jersey-American Water Company
 2022 Cost of Service Study - Customer Impacts OIW-Resale

GENERAL SERVICE SOS - SCHEDULE A2				Current	Current	Current	Proposed	Proposed	Proposed	
Number	Rate	Demand	Usage	Fixed Revenue	Volumetric Revenue	Total Revenue	Fixed Revenue	Volumetric Revenue	Total Revenue	Increase
1	A2		138,667	\$ 13,254	\$ 1,026,540	\$ 1,039,794	\$ 13,254	\$ 1,196,893	\$ 1,210,147	16.4%
2	A2		240,000	\$ 38,437	\$ 1,776,696	\$ 1,815,133	\$ 38,437	\$ 2,071,536	\$ 2,109,973	16.2%
3	A2		15,965	\$ 6,627	\$ 118,187	\$ 124,815	\$ 6,627	\$ 137,800	\$ 144,428	15.7%
4	A2		34,539	\$ 13,254	\$ 255,691	\$ 268,945	\$ 13,254	\$ 298,123	\$ 311,377	15.8%
5	A2		37,988	\$ 13,254	\$ 281,224	\$ 294,478	\$ 13,254	\$ 327,893	\$ 341,146	15.8%
			467,160	\$ 84,826	\$ 3,458,339	\$ 3,543,164	\$ 84,826	\$ 4,032,245	\$ 4,117,070	16.2%

COMMODITY DEMAND - SCHEDULE C D				Current	Current	Current	Proposed	Proposed	Proposed	
Number	Rate	Demand	Usage	Fixed Revenue	Volumetric Revenue	Total Revenue	Fixed Revenue	Volumetric Revenue	Total Revenue	Increase
6	C	4,944	66,336	\$ 6,627	\$ 402,151	\$ 408,779	\$ 6,627	\$ 446,062	\$ 452,690	10.7%
7	C	7,200	219,000	\$ 6,627	\$ 717,574	\$ 724,202	\$ 6,627	\$ 789,747	\$ 796,374	10.0%
8	C	600	18,250	\$ -	\$ 59,798	\$ 59,798	\$ -	\$ 65,812	\$ 65,812	10.1%
9	C	9,744	296,380	\$ 13,254	\$ 971,117	\$ 984,371	\$ 13,254	\$ 1,068,791	\$ 1,082,045	9.9%
10	C	3,286	99,934	\$ 6,627	\$ 327,443	\$ 334,071	\$ 6,627	\$ 360,377	\$ 367,005	9.9%
11	C	30,000	912,500	\$ 33,132	\$ 2,989,893	\$ 3,023,024	\$ 33,132	\$ 3,290,613	\$ 3,323,744	9.9%
12	C	9,000	273,750	\$ 13,254	\$ 896,968	\$ 910,221	\$ 13,254	\$ 987,184	\$ 1,000,437	9.9%
13	C	19,200	584,000	\$ 21,207	\$ 1,913,531	\$ 1,934,738	\$ 21,207	\$ 2,105,992	\$ 2,127,199	9.9%
14	C	9,600	292,000	\$ 19,881	\$ 956,766	\$ 976,647	\$ 19,881	\$ 1,052,996	\$ 1,072,877	9.9%
15	C	12,432	378,140	\$ 13,254	\$ 1,239,011	\$ 1,252,265	\$ 13,254	\$ 1,363,630	\$ 1,376,884	10.0%
16	C	3,288	100,010	\$ 6,627	\$ 327,692	\$ 334,320	\$ 6,627	\$ 360,651	\$ 367,279	9.9%
17	C	5,400	164,250	\$ 8,748	\$ 538,181	\$ 546,929	\$ 8,748	\$ 592,310	\$ 601,058	9.9%
18	C	12,000	365,000	\$ 13,254	\$ 1,195,957	\$ 1,209,211	\$ 13,254	\$ 1,316,245	\$ 1,329,499	9.9%
19	C	3,456	105,120	\$ 6,627	\$ 344,436	\$ 351,063	\$ 6,627	\$ 379,079	\$ 385,706	9.9%
20	C	1,500	45,625	\$ 6,627	\$ 149,495	\$ 156,122	\$ 6,627	\$ 164,531	\$ 171,158	9.6%
21	C	7,200	219,000	\$ 21,207	\$ 717,574	\$ 738,781	\$ 21,207	\$ 789,747	\$ 810,954	9.8%
22	C	600	18,250	\$ 3,977	\$ 59,798	\$ 63,775	\$ 3,977	\$ 65,812	\$ 69,789	9.4%
23	C	600	18,250	\$ 3,977	\$ 59,798	\$ 63,775	\$ 3,977	\$ 65,812	\$ 69,789	9.4%
24	C	2,520	76,650	\$ 6,627	\$ 251,151	\$ 257,778	\$ 6,627	\$ 276,411	\$ 283,039	9.8%
25	C	1,560	47,450	\$ 6,627	\$ 155,474	\$ 162,102	\$ 6,627	\$ 171,112	\$ 177,739	9.6%
26	C	24,000	730,000	\$ 26,507	\$ 2,391,914	\$ 2,418,421	\$ 26,507	\$ 2,632,490	\$ 2,658,997	9.9%
27	C	14,400	438,000	\$ 6,627	\$ 1,435,148	\$ 1,441,776	\$ 6,627	\$ 1,579,494	\$ 1,586,121	10.0%
28	C	18,000	547,500	\$ 13,254	\$ 1,793,936	\$ 1,807,189	\$ 13,254	\$ 1,974,368	\$ 1,987,621	10.0%
29	C	2,160	65,700	\$ 6,627	\$ 215,272	\$ 221,900	\$ 6,627	\$ 236,924	\$ 243,552	9.8%
30	C	1,500	45,625	\$ 6,627	\$ 149,495	\$ 156,122	\$ 6,627	\$ 164,531	\$ 171,158	9.6%
31	C	8,280	251,850	\$ 11,448	\$ 712,959	\$ 724,407	\$ 11,445	\$ 784,475	\$ 795,920	9.9%
32	D	720	21,840	\$ 6,627	\$ 67,826	\$ 74,454	\$ 6,627	\$ 74,579	\$ 81,206	9.1%
33	D	1,981	59,996	\$ 13,254	\$ 186,515	\$ 199,769	\$ 13,254	\$ 205,087	\$ 218,341	9.3%
34	D	14,854	449,864	\$ 34,460	\$ 1,398,533	\$ 1,432,993	\$ 34,460	\$ 1,537,792	\$ 1,572,252	9.7%
		230,025	6,910,270	\$ 343,595	\$ 22,625,406	\$ 22,969,000	\$ 343,592	\$ 24,902,653	\$ 25,246,245	9.9%

SALES TO OTHER SYSTEMS - SCHEDULE G				Current	Current	Current	Proposed	Proposed	Proposed	
Number	Rate	Demand	Usage	Fixed Revenue	Volumetric Revenue	Total Revenue	Fixed Revenue	Volumetric Revenue	Total Revenue	Increase
35	G		1,642,500	\$ -	\$ 4,857,530	\$ 4,857,530	\$ -	\$ 5,426,492	\$ 5,426,492	11.7%
36	G		1,085,952	\$ -	\$ 3,211,593	\$ 3,211,593	\$ -	\$ 3,587,767	\$ 3,587,767	11.7%
37	G		4,354,170	\$ -	\$ 12,877,022	\$ 12,877,022	\$ -	\$ 14,385,307	\$ 14,385,307	11.7%
38	G		1,350,500	\$ -	\$ 3,993,969	\$ 3,993,969	\$ -	\$ 4,461,782	\$ 4,461,782	11.7%
39	G		1,095,000	\$ -	\$ 2,796,959	\$ 2,796,959	\$ -	\$ 3,123,707	\$ 3,123,707	11.7%
			9,528,122	\$ -	\$ 27,737,073	\$ 27,737,073	\$ -	\$ 30,985,054	\$ 30,985,054	11.7%

PEAKING SERVICE - SCHEDULE H

Number	Rate	Demand	Usage	Current Fixed Revenue	Current Volumetric Revenue	Current Total Revenue	Proposed Fixed Revenue	Proposed Volumetric Revenue	Proposed Total Revenue	Increase
40	H		9,403	\$ 21,207	\$ 90,749	\$ 111,955	\$ 21,207	\$ 106,071	\$ 127,277	13.7%
41	H		-	\$ 55,667	\$ -	\$ 55,667	\$ 55,667	\$ -	\$ 55,667	0.0%
42	H		-	\$ 21,207	\$ -	\$ 21,207	\$ 21,207	\$ -	\$ 21,207	0.0%
43	H		-	\$ 21,207	\$ -	\$ 21,207	\$ 21,207	\$ -	\$ 21,207	0.0%
44	H		-	\$ 21,207	\$ -	\$ 21,207	\$ 21,207	\$ -	\$ 21,207	0.0%
			9,403	\$ 140,493	\$ 90,749	\$ 231,242	\$ 140,493	\$ 106,071	\$ 246,563	6.6%

BULK SERVICE - SCHEDULE I

Number	Rate	Demand	Usage	Current Fixed Revenue	Current Volumetric Revenue	Current Total Revenue	Proposed Fixed Revenue	Proposed Volumetric Revenue	Proposed Total Revenue	Increase
45	I		22,358	\$ 13,254	\$ 120,668	\$ 133,922	\$ 13,254	\$ 142,188	\$ 155,442	16.1%

OPTIONAL INDUSTRIAL WHOLESALE - SCHEDULE F

Number	Rate	Demand	Usage	Current Fixed Revenue	Current Volumetric Revenue	Current Total Revenue	Proposed Fixed Revenue	Proposed Volumetric Revenue	Proposed Total Revenue	Increase
46	OIW		200,750	\$ 13,254	\$ 863,044	\$ 876,298	\$ 13,254	\$ 962,215	\$ 975,469	11.3%
47	OIW		203,305	\$ 541,452	\$ 874,029	\$ 1,415,481	\$ 541,452	\$ 974,461	\$ 1,515,914	7.1%
48	OIW		525,088	\$ 57,257	\$ 2,257,407	\$ 2,314,663	\$ 57,257	\$ 2,516,800	\$ 2,574,057	11.2%
49	OIW		1,460,000	\$ 304,441	\$ 6,276,686	\$ 6,581,127	\$ 304,441	\$ 6,997,926	\$ 7,302,367	11.0%
50	OIW		251,850	\$ 53,015	\$ 1,082,728	\$ 1,135,743	\$ 53,015	\$ 1,207,142	\$ 1,260,157	11.0%
51	OIW		1,344,623	\$ 45,788	\$ 4,993,928	\$ 5,039,716	\$ 45,776	\$ 5,566,334	\$ 5,612,110	11.4%
			3,985,616	\$ 1,015,207	\$ 16,347,822	\$ 17,363,029	\$ 1,015,195	\$ 18,224,878	\$ 19,240,073	10.8%

MANASQUAN - SCHEDULE E J

Number	Rate	Non-Int. Usage	Interruptible Usage	Current Fixed Revenue	Current Volumetric Revenue	Current Total Revenue	Proposed Fixed Revenue	Proposed Volumetric Revenue	Proposed Total Revenue	Increase
52	E		1,600	\$ 15,374	\$ 96,255	\$ 111,629	\$ 15,374	\$ 108,992	\$ 124,367	11.4%
53	E		406	\$ 28,497	\$ 195,683	\$ 224,180	\$ 28,497	\$ 223,890	\$ 252,387	12.6%
54	E		7,655	\$ 38,437	\$ 423,672	\$ 462,109	\$ 38,437	\$ 479,240	\$ 517,677	12.0%
55	E		1,715	\$ 20,544	\$ 235,059	\$ 255,603	\$ 20,544	\$ 267,945	\$ 288,489	12.9%
56	E		22,757	\$ 15,374	\$ 234,476	\$ 249,850	\$ 15,374	\$ 250,192	\$ 265,566	6.3%
57	J		99,974	\$ 20,146	\$ -	\$ 20,146	\$ 20,146	\$ -	\$ 20,146	0.0%
		-	134,107	\$ 138,372	\$ 1,185,144	\$ 1,323,516	\$ 138,372	\$ 1,330,259	\$ 1,468,632	11.0%

New Jersey-American Water Company
Statewide Water Rates

Schedule CBR-7
Tab: Statewide Summary
Page 1 of 1

Analysis is based on ACS Five-Year Survey data for 2019 unless noted otherwise
Monthly Bills are based on rates as proposed in WR2201XXXX
Customer Counts are September 30, 2021

Customer Estimated Median Household Income: \$ 116,454
State Weighted Average Median Household Income: \$ 89,584

Persons per Household 2.66 (calculated from national household size distributions by income level)
Persons per Household 2.75 (calculated from average household size by income level)
Persons per Household 2.47 (calculated from Table B25010 information average household size by income level)

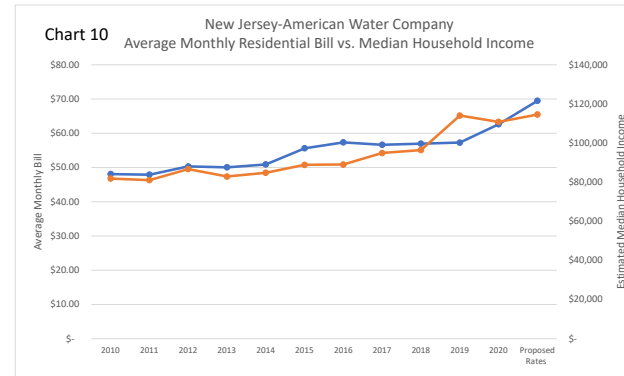
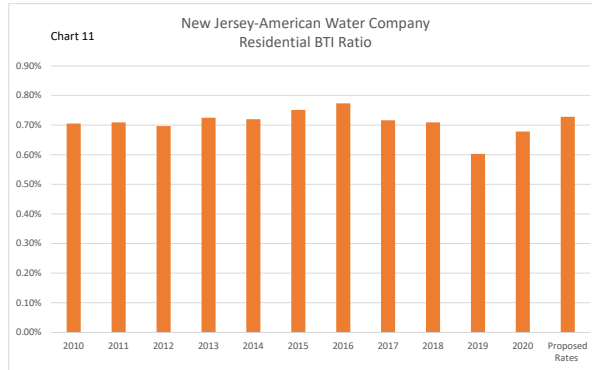
Basic Water Service 40

Income Level	Total	Owner Occupied	Renter Occupied	Average Income	Size	Basic Water Service	Monthly Bill	BTI Ratio	Average Multiple of FPL
0-5k	9,661	7,162	2,499	\$ 3,000	1.78	2,136	\$ 40.33	16.1%	20%
5-10k	7,012	4,460	2,551	\$ 7,500	1.72	2,064	\$ 39.71	6.4%	52%
10-15k	11,288	7,474	3,814	\$ 12,500	1.52	1,824	\$ 37.67	3.6%	90%
15-20k	13,856	9,665	4,191	\$ 17,500	1.68	2,016	\$ 39.30	2.7%	122%
20-25k	15,808	12,074	3,735	\$ 22,500	1.88	2,256	\$ 41.35	2.2%	151%
25-35k	32,286	24,949	7,337	\$ 30,000	2.10	2,520	\$ 43.60	1.7%	191%
35-50k	47,336	39,185	8,151	\$ 42,500	2.25	2,700	\$ 45.15	1.3%	262%
50-75k	82,956	71,841	11,115	\$ 62,500	2.50	3,000	\$ 47.71	0.9%	364%
75-100k	76,794	69,789	7,005	\$ 87,500	2.70	3,240	\$ 49.76	0.7%	483%
100-150k	128,061	120,942	7,119	\$ 125,000	3.00	3,600	\$ 52.83	0.5%	647%
> 150k	212,555	207,246	5,309	\$ 200,000	3.20	3,840	\$ 54.88	0.3%	988%
Total	637,614	574,788	62,826						

FPL Level	Total	Basic Water Service	Monthly Bill	Average Income	BTI Ratio		
0% - 150%	60,741	2,763	\$ 45.68	\$ 16,862	3.25%	Total Average Basic Service Bill: \$	49.31
150% - 300%	95,609	3,334	\$ 50.55	\$ 47,199	1.29%	Average Bill to Income Ratio:	0.51%
300% - 500%	111,566	3,677	\$ 53.48	\$ 86,347	0.74%		
Over 500%	369,698	3,073	\$ 48.33	\$ 159,736	0.36%		
	637,614		\$ 49.31				

New Jersey-American Water Company
Affordability Analysis

Residential Statistics	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Proposed Rates	
NJ Revenue	\$ 321,026,740	\$ 320,030,742	\$ 335,814,771	\$ 331,763,076	\$ 338,717,287	\$ 373,520,552	\$ 388,085,827	\$ 391,289,917	\$ 398,464,810	\$ 405,582,508	\$ 446,821,017		
NJ Sales	46,416,833	42,085,183	42,445,930	40,004,530	40,295,295	42,772,328	42,448,143	40,687,849	39,995,986	40,369,074	43,664,018		
NJ Customers	556,340	556,933	556,271	552,284	554,737	559,626	564,072	575,785	582,888	590,115	594,497		
NJ Median Income	\$ 62,968	\$ 62,338	\$ 66,692	\$ 63,754	\$ 65,243	\$ 68,357	\$ 68,468	\$ 72,997	\$ 74,176	\$ 87,726	\$ 85,239	\$ 88,162	
NJ Customer Median Income	\$ 81,854	\$ 81,035	\$ 86,695	\$ 82,876	\$ 84,812	\$ 88,860	\$ 89,004	\$ 94,891	\$ 96,424	\$ 114,038	\$ 110,805	\$ 114,605	1.2999 Difference between NJ Median Household Income and Median Household Income for NJAWC Customers
NJ Average Price	\$ 6.92	\$ 7.60	\$ 7.91	\$ 8.29	\$ 8.41	\$ 8.73	\$ 9.14	\$ 9.62	\$ 9.96	\$ 10.05	\$ 10.23		
NJ Average Monthly Bill	\$ 48.09	\$ 47.89	\$ 50.31	\$ 50.06	\$ 50.88	\$ 55.62	\$ 57.33	\$ 56.63	\$ 56.97	\$ 57.27	\$ 62.63	\$ 69.51	
NJ Average Monthly Use	6.95	6.30	6.36	6.04	6.05	6.37	6.27	5.89	5.72	5.70	6.12		
NJ BTI Ratio	0.70%	0.71%	0.70%	0.72%	0.72%	0.75%	0.77%	0.72%	0.71%	0.60%	0.68%	0.73%	



New Jersey-American Water Company
Statewide Sewer Rates

Schedule CBR-8
Tab: Statewide Summary
Page 1 of 2

Analysis is based on ACS Five-Year Survey data for 2019 unless noted otherwise
Monthly Bills are based on rates as proposed in WR2201XXXX
Customer Counts are September 30, 2021

Customer Estimated Median Household Income: \$ 92,622
State Weighted Average Median Household Income: \$ 89,584

Persons per Household 2.56 (calculated from national household size distributions by income level)
Persons per Household 2.65 (calculated from average household size by income level)
Persons per Household 3.04 (calculated from Table B25010 information average household size by income level)

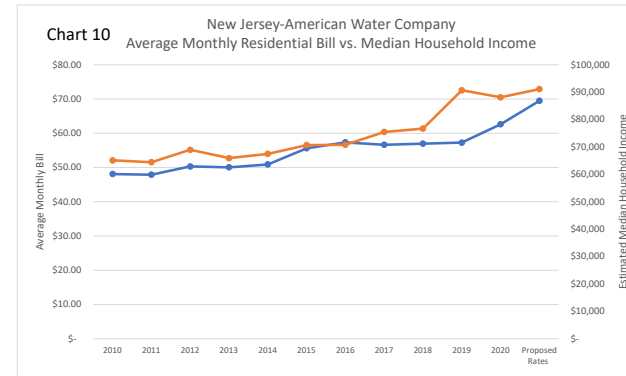
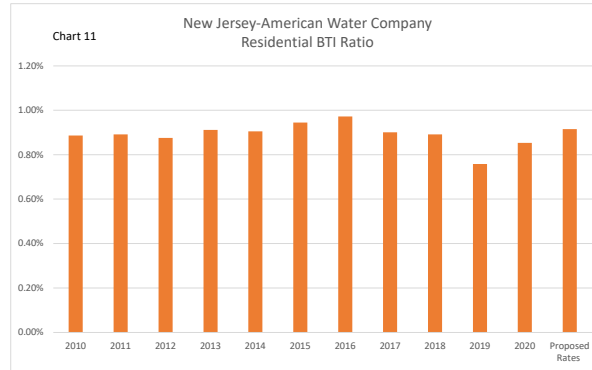
Basic Water Service 40

Income Level	Total	Owner Occupied	Renter Occupied	Average Income	Size	Basic Water Service	Monthly Bill	BTI Ratio	Average Multiple of FPL
0-5k	823	585	238	\$ 3,000	1.78	2,136	\$ 39.91	16.0%	20%
5-10k	586	361	224	\$ 7,500	1.72	2,064	\$ 39.64	6.3%	52%
10-15k	1,231	808	423	\$ 12,500	1.52	1,824	\$ 38.19	3.7%	90%
15-20k	1,520	957	562	\$ 17,500	1.68	2,016	\$ 39.15	2.7%	122%
20-25k	1,430	904	526	\$ 22,500	1.88	2,256	\$ 38.68	2.1%	151%
25-35k	3,212	2,082	1,130	\$ 30,000	2.10	2,520	\$ 45.41	1.8%	191%
35-50k	4,753	3,472	1,281	\$ 42,500	2.25	2,700	\$ 48.05	1.4%	262%
50-75k	6,563	5,155	1,408	\$ 62,500	2.50	3,000	\$ 49.98	1.0%	364%
75-100k	5,542	4,915	627	\$ 87,500	2.70	3,240	\$ 56.49	0.8%	483%
100-150k	8,583	7,849	734	\$ 125,000	3.00	3,600	\$ 61.12	0.6%	647%
> 150k	11,646	11,197	449	\$ 200,000	3.20	3,840	\$ 64.24	0.4%	988%
Total	45,888	38,284	7,604						

FPL Level	Total	Basic Water Service	Monthly Bill	Average Income	BTI Ratio		
0% - 150%	5,979	2,752	\$ 49.43	\$ 17,247	3.44%	Total Average Basic Service Bill: \$	54.61
150% - 300%	8,663	3,174	\$ 54.94	\$ 45,383	1.45%	Average Bill to Income Ratio:	0.71%
300% - 500%	8,564	3,458	\$ 60.06	\$ 82,327	0.88%		
Over 500%	22,683	2,967	\$ 53.79	\$ 153,210	0.42%		
	45,888		\$ 54.61				

New Jersey-American Water Company
Affordability Analysis

Residential Statistics	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Proposed Rates
NJ Revenue	\$ 321,026,740	\$ 320,030,742	\$ 335,814,771	\$ 331,763,076	\$ 338,717,287	\$ 373,520,552	\$ 388,085,827	\$ 391,289,917	\$ 398,464,810	\$ 405,582,508	\$ 446,821,017	
NJ Sales	46,416,833	42,085,183	42,445,930	40,004,530	40,295,295	42,772,328	42,448,143	40,687,849	39,995,986	40,369,074	43,664,018	
NJ Customers	556,340	556,933	556,271	552,284	554,737	559,626	564,072	575,785	582,888	590,115	594,497	
NJ Median Income	\$ 62,968	\$ 62,338	\$ 66,692	\$ 63,754	\$ 65,243	\$ 68,357	\$ 68,468	\$ 72,997	\$ 74,176	\$ 87,726	\$ 85,239	\$ 88,162
NJ Customer Median Income	\$ 65,103	\$ 64,452	\$ 68,953	\$ 65,916	\$ 67,455	\$ 70,675	\$ 70,790	\$ 75,472	\$ 76,691	\$ 90,701	\$ 88,129	\$ 91,151
												1.0339 Difference between NJ Median Household Income and Median Household Income for NJAWC Customers
NJ Average Price	\$ 6.92	\$ 7.60	\$ 7.91	\$ 8.29	\$ 8.41	\$ 8.73	\$ 9.14	\$ 9.62	\$ 9.96	\$ 10.05	\$ 10.23	
NJ Average Monthly Bill	\$ 48.09	\$ 47.89	\$ 50.31	\$ 50.06	\$ 50.88	\$ 55.62	\$ 57.33	\$ 56.63	\$ 56.97	\$ 57.27	\$ 62.63	\$ 69.51
NJ Average Monthly Use	6.95	6.30	6.36	6.04	6.05	6.37	6.27	5.89	5.72	5.70	6.12	
NJ BTI Ratio	0.89%	0.89%	0.88%	0.91%	0.91%	0.94%	0.97%	0.90%	0.89%	0.76%	0.85%	0.92%



BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF
NEW JERSEY-AMERICAN WATER COMPANY, INC.
FOR APPROVAL OF INCREASED TARIFF RATES AND
CHARGES FOR WATER AND WASTEWATER SERVICE, AND
OTHER TARIFF MODIFICATIONS

BPU Docket No. WR2201XXXX

Direct Testimony of

ANN E. BULKLEY

On Behalf of
New Jersey-American Water Company, Inc.

January 14, 2022

Exhibit P-9

NEW JERSEY-AMERICAN WATER COMPANY, INC.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.

Direct Testimony of Ann E. Bulkley

1 **I. WITNESS IDENTIFICATION AND QUALIFICATIONS**

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

3 A. My name is Ann E. Bulkley. I am employed by The Brattle Group (“Brattle”) as a
4 Principal. My business address is One Beacon Street, Suite 2600 Boston, MA
5 02108.

6 **2. Q. On whose behalf are you submitting this testimony?**

7 A. I am submitting this testimony on behalf of New Jersey-American Water Company,
8 Inc. (“NJAWC,” or the “Company”), a wholly-owned subsidiary of American
9 Water Works Company, Inc. (“AWK”).

10 **3. Q. Please describe your background and professional experience in the energy**
11 **and utility industries.**

12 A. I hold a Bachelor’s degree in Economics and Finance from Simmons College and
13 a Master’s degree in Economics from Boston University, with more than 25 years
14 of experience consulting to the energy and utility industry. I have advised
15 numerous energy and utility clients on a wide range of financial and economic
16 issues with primary concentrations in valuation and utility rate matters. Many of
17 these assignments have included the determination of the cost of capital for
18 valuation and ratemaking purposes. My qualifications and testimony listing are
19 presented in more detail in Appendix A.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**II. PURPOSE AND OVERVIEW OF TESTIMONY****4. Q. What is the purpose of your Direct Testimony?**

A. The purpose of my Direct Testimony is to present evidence and provide a recommendation regarding NJAWC's authorized return on equity ("ROE" or "cost of equity") and to assess the reasonableness of its capital structure for ratemaking purposes.

5. Q. Are you sponsoring any schedules in support of your Direct Testimony?

A. Yes. My analyses and recommendations are supported by the data presented in Schedules AEB-1 through AEB-10 which were prepared by me or under my direction.

6. Q. How is the remainder of your testimony organized?

A. Section III provides a summary of my analyses and conclusions. Section IV reviews the regulatory guidelines pertinent to the development of the cost of capital. Section V discusses current and projected capital market conditions and the effect of those conditions on NJAWC's cost of equity. Section VI explains my selection of a proxy group of risk comparable utilities. Section VII describes my analyses and the analytical basis for the recommendation of the appropriate ROE for NJAWC. Section VIII provides a discussion of specific regulatory, business, and financial risks that have a direct bearing on the ROE to be authorized for the Company in this case. Section IX assesses the Company's proposed capital structure as compared to the proxy group. Section X presents my conclusions and recommendations for the market cost of equity and capital structure.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**III. SUMMARY OF ROE ANALYSES AND CONCLUSIONS****7. Q. Please provide a brief overview of the analysis that led to your ROE recommendation.**

A. As discussed in more detail in Section VII, in determining a reasonable recommendation for the Company's ROE, it is important to consider the results of several analytical approaches. To develop my ROE recommendation, I first developed a proxy group of utility companies. I did not limit the proxy group to water utilities but included a broader group of utilities that face similar risk as NJAWC because a proxy group composed only of water utilities would result in a small group of companies for which data is limited. To that proxy group, I applied the Constant Growth form of the Discounted Cash Flow ("DCF") model, the Capital Asset Pricing Model ("CAPM"), the Empirical Capital Asset Pricing Model ("ECAPM"), the Risk Premium Approach and the Expected Earnings Analysis. It is appropriate to rely on several analytical approaches because market conditions affect the assumptions used in each model differently. Therefore, the use of multiple ROE estimation models is beneficial to provide benchmarks and a range of results to consider.

My recommendation also takes into consideration the following risk factors of NJAWC as compared with the proxy group: (1) the Company's capital expenditure requirements; (2) the risks related to environmental and water quality regulation, and (3) the regulatory environment in which the Company operates. Although I did not make any specific adjustments to my ROE estimates for the foregoing factors,

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 I considered each of them when determining where the Company's ROE should
2 fall within the range of analytical results.

3 **8. Q. Please summarize the key factors considered in your analyses and upon which**
4 **you base your recommended ROE.**

5 A. In developing my recommended ROE for NJAWC, I considered the following:

- 6 • The *Hope* and *Bluefield* decisions¹ that established the standards for
7 determining a fair and reasonable allowed ROE, including consistency of
8 the allowed return with the returns of other businesses having similar risk,
9 adequacy of the return to provide access to capital and support credit
10 quality, and the requirement that the end result lead to just and reasonable
11 rates.
- 12 • The effect of current and projected capital market conditions on investors'
13 return requirements.
- 14 • The results of several analytical approaches that provide estimates of the
15 Company's cost of equity.
- 16 • The Company's regulatory, business and financial risks relative to the proxy
17 group of comparable companies, and the implications of those risks.

18 **9. Q. Please explain how you assessed these factors.**

19 A. After considering these factors and the results of my analyses, I relied on the range
20 of results produced by the Constant Growth DCF model, the CAPM, the ECAPM,
21 the Risk Premium analysis and the Expected Earnings Analysis. As shown in

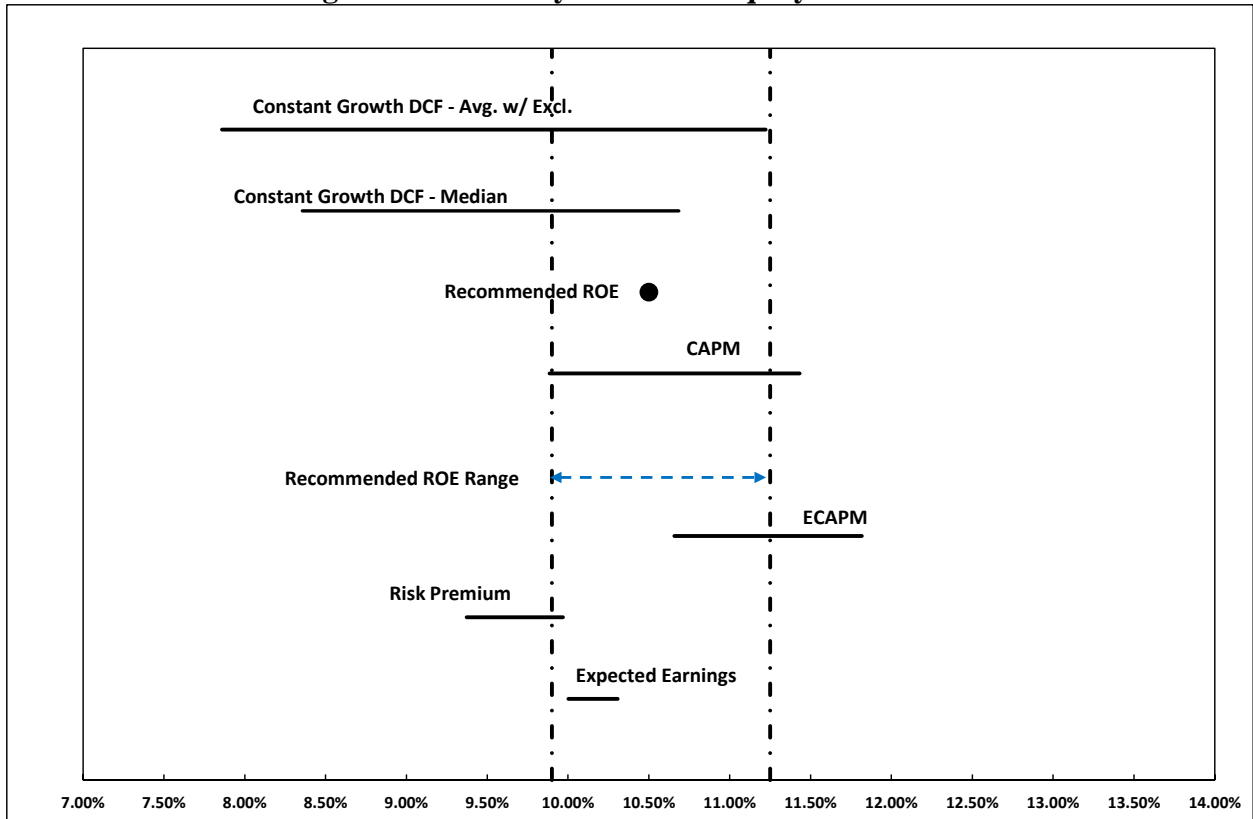
¹ Federal Power Commission v. *Hope Natural Gas Co.*, 320 U.S. 591 (1944); *Bluefield Waterworks & Improvement Co.*, v. Public Service Commission of West Virginia, 262 U.S. 679 (1923).

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1 Figure 1, these ROE estimation models produce a wide range of results. My
2 conclusion as to where, within that range of results, NJAWC's cost of equity falls
3 is based on my assessment of market conditions, and the Company's business and
4 financial risk relative to the proxy group. Although the companies in my proxy
5 group are generally comparable to NJAWC, each company is unique, and no two
6 companies have exactly the same business and financial risk profiles. Accordingly,
7 I considered the Company's business and financial risk in the aggregate in
8 comparison to that of the proxy group companies when determining where
9 NJAWC's ROE falls within the reasonable range of analytical results to account
10 for any residual differences in risk.

11 **10. Q. Please summarize the results of the ROE estimation models that you**
12 **considered to establish the range of ROEs for NJAWC.**

13 A. Figure 1 summarizes the range of results produced by the Constant Growth DCF,
14 CAPM, ECAPM, Risk Premium analysis and Expected Earnings Analysis.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**Figure 1: Summary of Cost of Equity Results**

As shown in Figure 1 (and in Schedule AEB-1), the range of results produced by the ROE estimation models is wide. While it is common to consider multiple models to estimate the cost of equity, it is particularly important when the range of results varies considerably across methodologies. As a result, my ROE recommendation considers the range of results of the Constant Growth DCF model, as well as the results of the CAPM, ECAPM, Risk Premium analysis and Expected Earnings analysis. My ROE recommendation also considers NJAWC's company-specific risk factors and current and prospective capital market conditions.

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1 **11. Q. What is your conclusion regarding the appropriate authorized ROE for**
2 **NJAWC in this proceeding?**

3 A. Considering the analytical results presented in Figure 1, the regulatory, business,
4 and financial risk faced by NJAWC's water and wastewater operations relative to
5 the proxy group, and current capital market conditions, I believe a range from 9.90
6 to 11.25 percent is reasonable, and an authorized ROE of 10.50 percent for NJAWC
7 is appropriate.

8 **12. Q. Please summarize the analysis you conducted in determining that NJAWC's**
9 **requested capital structure is reasonable and appropriate.**

10 A. Based on the analysis presented in Section IX of my testimony, I conclude that
11 NJAWC's proposed 54.56 percent common equity is reasonable. To determine if
12 NJAWC's requested capital structure was reasonable, I reviewed the capital
13 structures of the utility subsidiaries of the proxy companies. As shown in Schedule
14 AEB-10, the results of that analysis demonstrate that the mean equity ratios for the
15 utility operating companies of the proxy group range from 47.44 percent to 60.04
16 percent, with a mean of 55.52 percent.² Comparing the recommended equity ratio
17 to the proxy group demonstrates that the Company's requested equity ratio is
18 approximately equal to, albeit slightly below the mean equity ratio for the utility
19 operating subsidiaries of the proxy group companies.

² The median equity ratio for the proxy group is 55.64 percent.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**IV. REGULATORY PRINCIPLES**

13. Q. Please describe the principles that guide the establishment of the cost of capital for a regulated utility.

A. The United States Supreme Court's *Hope* and *Bluefield* decisions established the standards for determining the fairness or reasonableness of a utility's authorized ROE. Among the standards established by the Court in those cases are: (1) consistency of the return with other businesses having similar or comparable risks; (2) adequacy of the return to support credit quality and access to capital; and (3) the principle that the specific means of arriving at a fair return are not important, only that the end result leads to just and reasonable rates.³

14. Q. Has the State of New Jersey or the New Jersey Board of Public Utilities ("Board" or "BPU") provided similar guidance in establishing the appropriate return on common equity?

A. Yes. Section 48:2-21.25 of the 2020 New Jersey Revised Statutes states that a "Base rate case" is defined as a means of "determining the level of revenues necessary to afford the public utility an opportunity to earn a fair and reasonable rate of return on prudently incurred capital investment in the public utility's rate base."⁴ Furthermore, in its decision in Docket No. ER12111052 for Jersey Central Power and Light Company ("JCP&L"), the Board noted the following:

³ *Bluefield Water Works Co. v. Public Serv. Comm'n* 262 U.S. 679, 692-93; *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591, 603.

⁴ 2020 New Jersey Revised Statutes, Section 48:2-21.25.

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1 Nevertheless, it is incumbent upon this Board to define a fair rate of
2 return for JCP&L commensurate with risks faced by similar
3 companies, sufficient to attract capital and maintain the financial
4 integrity of the enterprise. As the New Jersey Supreme Court has
5 recognized, a privately owned public utility is a complex mechanism
6 that exists to serve a public need but to do so it must have investor
7 appeal. It must be allowed a reasonable return on its investment so
8 that it may have borrowing power at normal business rates to finance
9 its day-to-day operations. See, *Daaleman v. Elizabethtown Gas Co.*,
10 77 N.J. 267, 272 (1978).⁵

11 This guidance is in accordance with the *Hope* and *Bluefield* decisions and the
12 principles that I employed to estimate the ROE for the Company, including the
13 principle that an allowed rate of return must be sufficient to enable regulated
14 companies such as NJAWC to attract capital on reasonable terms.

15 **15. Q. Why is it important for a utility to be allowed the opportunity to earn a return**
16 **that is adequate to attract equity capital on reasonable terms?**

17 A. A return that is adequate to attract capital on reasonable terms enables NJAWC to
18 continue providing safe, reliable and affordable water and wastewater service at
19 just and reasonable rates while maintaining its financial integrity. This is especially
20 important when a utility is embarked on such a significant capital expenditure
21 program, as is NJAWC.

⁵ BPU Docket No. ER12111052, OAL Docket No. PUC16310-12, Order Adopting Initial Decision with Modifications and Clarifications, March 18, 2015, at 71.

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1 **16. Q. Is a utility's ability to attract capital also affected by the ROEs that are**
2 **authorized for other utilities?**

3 A. Yes. Utilities compete directly for capital with other investments of similar risk,
4 which include other water, natural gas and electric utilities. Therefore, the ROE
5 awarded to a utility sends an important signal to investors regarding whether there
6 is regulatory support for financial integrity, dividends, growth, and fair
7 compensation for business and financial risk. The cost of capital represents an
8 opportunity cost to investors. If higher returns are available for other investments
9 of comparable risk, investors have an incentive to direct their capital to those
10 investments. Thus, an authorized ROE significantly below authorized ROEs for
11 other water, natural gas and electric utilities can inhibit the utility's ability to attract
12 capital for investment in NJAWC at reasonable rates.

13 **V. CAPITAL MARKET CONDITIONS**

14 **17. Q. Why is it important to analyze capital market conditions?**

15 A. The ROE estimation models rely on market data that are either specific to the proxy
16 group, in the case of the DCF model, or to the expectations of market risk, in the
17 case of the CAPM. The results of the ROE estimation models can be affected by
18 prevailing market conditions at the time the analysis is performed. While the ROE
19 that is established in a rate proceeding is intended to be forward-looking, the analyst
20 uses current and projected market data, specifically stock prices, dividends, growth
21 rates and interest rates, in the ROE estimation models to estimate the required return
22 for the subject company.

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1 As discussed in the remainder of this section, equity analysts and regulatory
2 commissions have concluded that current market conditions have affected the
3 results of the ROE estimation models. As a result, it is important to consider the
4 effect of these conditions on the ROE estimation models when determining the
5 appropriate range and recommended ROE for a future period. If investors do not
6 expect current market conditions to be sustained in the future, it is possible that the
7 ROE estimation models will not provide an accurate estimate of investors' required
8 return during that rate period. Therefore, it is very important to consider projected
9 market data to estimate the return for that forward-looking period.

10 **18. Q. What factors are affecting the cost of equity for regulated utilities in the**
11 **current and prospective capital markets?**

12 A. The cost of equity for regulated utility companies is currently being affected by the
13 dramatic shifts in market conditions during 2020, the economic recovery in 2021,
14 and the expectations for 2022, and the effect of these changes on the assumptions
15 used in the ROE estimation models. In this section, I discuss current and
16 prospective capital market conditions and how it affects the models used to estimate
17 the cost of equity for regulated utilities.

18 **19. Q. What effect do current and prospective market conditions have on the cost of**
19 **equity for NJAWC?**

20 A. The economy is currently in the recovery phase of the business cycle. During the
21 recovery phase, interest rates and inflation are expected to increase. In fact,
22 inflation is currently at its highest level seen in approximately 30 years while

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1 interest rates have increased from the pandemic lows seen in 2020. Utilities, which
2 are a defensive sector, have historically underperformed the market during periods
3 of economic expansion. Therefore, investors are currently expecting utilities to
4 underperform over the near-term, which means the share prices of utilities will
5 likely decline. A decline in share prices will increase the dividend yields of utilities
6 and thus the cost of equity for utilities is expected to increase over the near-term.
7 This is important because the cost of equity in this proceeding is being estimated
8 for the period that NJAWC's rates will be in effect. Since the cost of equity is
9 expected to increase over the near-term for utilities, ROE estimates based on current
10 market conditions will understate the ROE during the period that the Company's
11 rates will be in effect. For example, the DCF model, which relies on historical
12 averages of share prices, is likely to understate the cost of equity for NJAWC over
13 the near term.

14 **A. Economic Recovery and Performance of the Utility Sector**

15 **20. Q. Do recent economic projections indicate the expectation for a continued**
16 **economic recovery in 2022?**

17 A. Yes. The Federal Open Market Committee ("FOMC") is composed of twelve
18 members including the Board of Governors of the Federal Reserve system and
19 presidents of the Federal Reserve Banks. The FOMC reviews economic and
20 financial conditions, determines the appropriate stance for monetary policy and
21 assesses the risks to its long-run goals of price stability and economic growth. The
22 FOMC issued its Summary of Economic Projections in September 2021, where the

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1 FOMC's median projection for gross domestic product ("GDP") growth from Q4
2 2021 to Q4 2022 is 3.8 percent.⁶ The Congressional Budget Office ("CBO") issued
3 an update to its outlook on economic conditions on July 1, 2021. In that report, the
4 CBO projected strong GDP growth for 2021 and beyond and significant strength in
5 overall economic conditions including:

- 6 • Real GDP growth of 7.4 percent in 2021 and 3.1 percent in 2022, which is
7 a significant change from the negative 2.4 percent growth rate in 2020;
- 8 • Inflation indicators at or above the 2.0 percent threshold in 2021 and
9 continuing through 2031;
- 10 • Labor force expected to be restored to pre-pandemic levels in 2022; and
- 11 • Interest rates on federal borrowing increasing through 2031.⁷

12 These trends indicate strong economic recovery over the next year.

13 **21. Q. Please summarize the monetary policy actions of the Federal Reserve in**
14 **response to COVID-19.**

15 A. In response to the COVID-19 pandemic, the Federal Reserve:

- 16 • decreased the Federal Funds rate twice in March 2020, resulting in a target
17 range of 0.00 percent to 0.25 percent;
- 18 • increased its holdings of both Treasury and mortgaged-back securities;

⁶ Federal Open Market Committee, Summary of Economic Projections, September 22, 2021, at 2.

⁷ Congressional Budget Office, An Update to the Budget and Economic Outlook 2021 to 2031, July 2021.

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- 1 • started expansive programs to support credit to large employers – the
- 2 Primary Market Corporate Credit Facility to provide liquidity for new
- 3 issuances of corporate bonds; and the Secondary Market Corporate Credit
- 4 Facility to provide liquidity for outstanding corporate debt issuances; and
- 5 • supported the flow of credit to consumers and businesses through the Term
- 6 Asset-Backed Securities Loan Facility.

7 In addition, Congress also passed the Coronavirus Aid, Relief, and Economic
8 Security (“CARES”) Act in March 2020, the Consolidated Appropriations Act,
9 2021 in December 2020 and the American Rescue Plan Act in March 2021, which
10 included \$2.2. trillion, \$900 billion and \$1.9 trillion, respectively, in fiscal stimulus
11 aimed at also mitigating the economic effects of COVID-19. These expansive
12 monetary and fiscal programs mitigated the economic effects of the COVID-19
13 pandemic and provided additional support as the economy recovers from the
14 COVID-19 recession.

15 **22. Q. Are there indications the Federal Reserve has started to normalize monetary**
16 **policy?**

17 A. Yes. Most recently at the December 15, 2021 meeting, in response to inflation
18 exceeding the Federal Reserve’s target of 2 percent for a sustained period of time,
19 the Federal Reserve decided to increase the pace of its taper of bond purchases.
20 Beginning in January, the Federal Reserve will reduce asset purchases of Treasuries
21 by \$20 billion and mortgage-backed securities by \$10 billion on a monthly basis.⁸

⁸ Federal Reserve, Press Release, (Dec. 15, 2021).

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1 This change is double the initial plan outlined at the November 2, 2021 meeting
2 which called for reducing asset purchases of Treasuries by \$10 billion and
3 mortgage-backed securities by \$5 billion on a monthly.⁹ Moreover, the Federal
4 Reserves' FOMC is now forecasting three increases in the federal funds rate by the
5 end of 2022¹⁰ which is a substantial increase from the one increase that was
6 forecasted by the FOMC at the September 22, 2021 meeting.¹¹

7 **23. Q. Why has the Federal Reserve decided to normalize monetary policy?**

8 A. The Federal Reserve has accelerated plans to normalize monetary policy in
9 response to increasing inflation. While the Federal Reserve initially viewed
10 inflation as transitory, it has been higher and more persistent than the target levels
11 and is expected to continue in 2022.

12 **24. Q. How significant is the increase in inflation in 2021?**

13 A. Very significant. As shown in Figure 2, the YOY change in the Consumer Price
14 Index ("CPI") published by the Bureau of Labor statistics has increased steadily in
15 2021 rising from 1.37 percent in January to 6.88 percent in November. The 6.288
16 percent YOY in the CPI in November 2021 is significantly greater than any level
17 seen since January 2008.

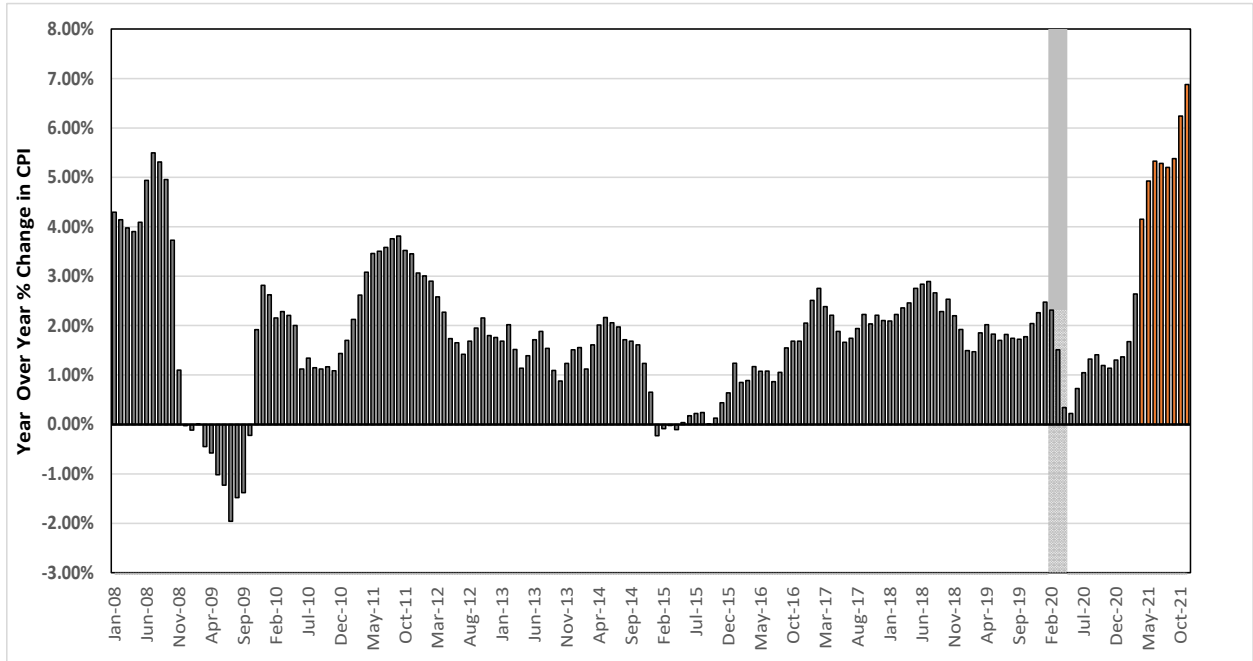
⁹ Federal Reserve, Press Release, (Nov. 3, 2021).

¹⁰ Federal Reserve, Summary of Economic Projections, (Dec. 15, 2021).

¹¹ Federal Reserve, Summary of Economic Projections, (Sept. 22, 2021).

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Figure 2: Consumer Price Index – YOY Percent Change – January 2008 – November 2021¹²



25. Q. What are investors' expectations for inflation over the near-term?

A. Investors expect inflation to persist into 2022. For example, Goldman Sachs forecasts consumer price inflation excluding food and energy costs to still be above 4 percent when the Federal Reserve ends their tapering of bond purchases in 2022.¹³ Similarly, respondents to the recent CNBC Fed Survey, indicated the CPI is expected to rise 3.5 percent in 2022 which is an increase from the September Survey

¹² Source: Bureau of Labor Statistics, shaded area indicates the COVID-19 pandemic recession.

¹³ Kennedy, Simon. "Goldman Now Sees Fed Hiking Rates in July as Inflation Lingers." Bloomberg.com, Bloomberg, 30 Oct. 2021, <https://www.bloomberg.com/news/articles/2021-10-30/goldman-now-sees-fed-hiking-rates-in-july-as-inflation-lingers>.

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1 of 3.00 percent.¹⁴ Finally, Kiplinger recently noted the following regarding
2 inflation expectations over the near-term:

3 Inflation at the end of next year should be about 2.7%, down from
4 6.6% at the end of 2021. It's expected that an easing of supply chain
5 shortages next year will bring some price relief, especially to sky-
6 high motor vehicle prices. But, these shortages are expected to only
7 gradually resolve during 2022. Also, worker shortages may last
8 longer than expected, keeping wage growth high and forcing
9 businesses to pass some of those costs on to consumers. So, inflation
10 should remain higher than its 1.7% average over the past ten years.¹⁵

11 According to Kiplinger, the higher levels of inflation will likely
12 result in the Federal Reserve increasing the federal funds rate in
13 2022 instead of 2023 as originally planned.¹⁶

14 **26. Q. What effect will inflation have on long-term interest rates?**

15 A. Inflation and the Federal Reserve's normalization of monetary policy will likely
16 result in increases in long-term interest rates. Specifically, inflation reduces the
17 purchasing power of the future interest payments an investor expects to receive over
18 the duration of the bond. This risk increases the longer the duration of the bond.
19 As a result, if investors expect increased levels of inflation, they will require higher
20 yields to compensate for the increased risk of inflation which means interest rates
21 will increase.

¹⁴ Liesman, Steve. "Investors Expect a Faster Pace for Fed Rate Hikes, CNBC Survey Shows." CNBC, CNBC, 2 Nov. 2021, <https://www.cnbc.com/2021/11/02/investors-expect-a-faster-pace-for-fed-rate-hikes-cnbc-survey-shows.html>.

¹⁵ Payne, David, "Inflation hits 30-year High," Kiplinger, November 11, 2021.

¹⁶ Ibid.

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27. Q. What have equity analysts said about long-term government bond yields over the near term?

A. Several equity analysts have noted that they expect economic conditions to continue to improve and thus the yields on long-term government bonds to continue to increase through the end of 2022. As shown in Figure 3, according to six different equity analysts, the yield on the 10-year Treasury Bond is expected to range from 1.75 percent to 2.50 percent in 2022 which is 17 to 92 basis points greater than the current 30-day average yield on the 10-year Treasury Bond as of November 30, 2021, of 1.58 percent. Specifically, Morgan Stanley recently noted the following regarding the expectation for long-term government bond yields in 2022:

Continued strong growth in 2022, alongside receding but above-target inflation, keeps the Fed patient, yet gradually moving toward rate hikes, and keeps Treasury yields moving higher.¹⁷

Figure 3: Equity Analysts Forecast of the 10-year Treasury Yield¹⁸

Bank	10-year U.S. Treasury Yield	
	30-day Average as of November 30, 2021	2022 Forecast
Barclays	1.58%	1.75%
Morgan Stanley	1.58%	2.10%
Goldman Sachs	1.58%	2.00%
JP Morgan	1.58%	2.10%
Wells Fargo Investment Institute	1.58%	2.00% - 2.50%
Amundi	1.58%	1.80% - 2.00%

¹⁷ “Factbox: Wall Street Forecasts for the U.S. Dollar and 10-Year Treasury Yield in 2022.” Reuters, Thomson Reuters, 18 Nov. 2021, <https://www.reuters.com/markets/us/wall-street-forecasts-us-dollar-10-year-treasury-yield-2022-2021-11-18/>.

¹⁸ “Factbox: Wall Street Forecasts for the U.S. Dollar and 10-Year Treasury Yield in 2022.” Reuters, Thomson Reuters, 18 Nov. 2021, <https://www.reuters.com/markets/us/wall-street-forecasts-us-dollar-10-year-treasury-yield-2022-2021-11-18/>.

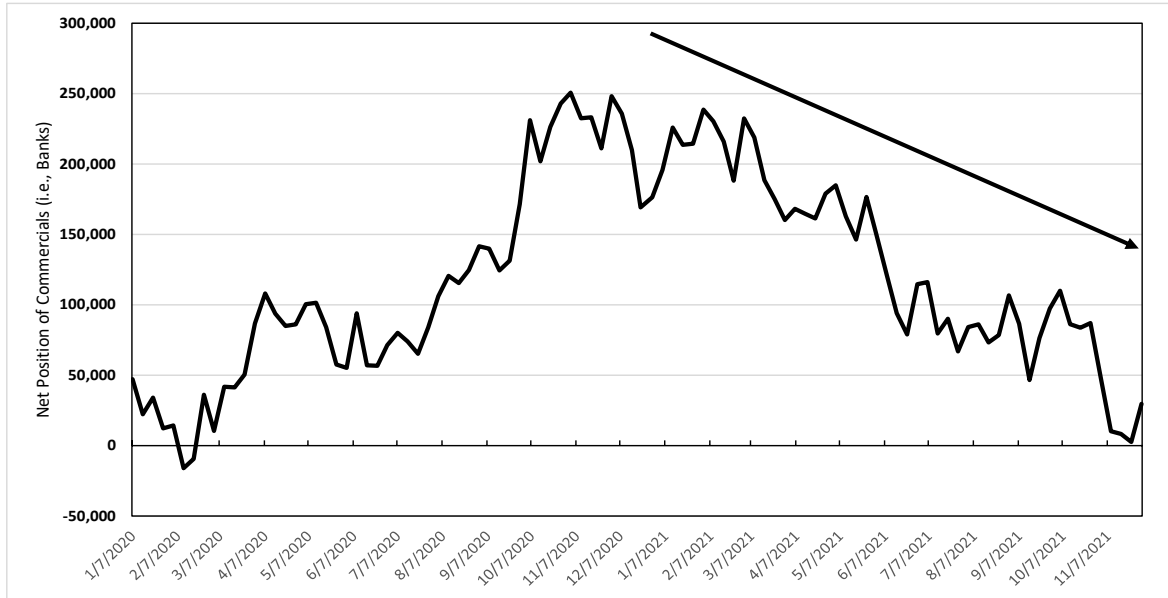
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1 **28. Q. Have you considered any additional indicators which may imply long-term**
2 **interest rates are expected to increase?**

3 A. Yes, I have. I considered the net position of commercials (i.e., banks) in U.S.
4 Treasury Bond futures contracts as reported in the Commitment of Traders
5 ("COT") Report produced by the Commodity Futures Trading Commission
6 ("CFTC"). A net position is defined as the total number of long positions in a
7 futures contract minus the total number of short positions in a futures contract. A
8 long position means that an investor agrees to purchase an asset in the future at a
9 specified price today and therefore profits if the price of the underlying asset
10 increases. Conversely, short position is when an investor agrees to sell an asset at
11 a time in the future at a specified price today and profits if the price of the asset
12 declines. Therefore, if banks are increasing the number of short positions and thus
13 have a declining net position, the banks are assuming that the price of the asset will
14 decline. As shown in Figure 4, the net position of banks in U.S. Treasury Bonds
15 has been decreasing since the end of 2020. Therefore, banks are forecasting a
16 decrease in the price of long-term government bonds and, thus, the yields (which
17 are inversely related to the price) to increase over the near-term.

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Figure 4: Commitment of Traders Report – Net Position of Commercials (i.e., Banks) in U.S. Treasury Bond Futures Contracts¹⁹



29. Q. Are utility share prices correlated to changes in the yields on long-term government bonds?

A. Yes, interest rates and utility share prices are inversely correlated which means, for example, that an increase in interest rates will result in a decline in the share prices of utilities. For example, Goldman Sachs and Deutsche Bank recently examined the sensitivity of share prices of different industries to changes in interest rates over the past five years. Both Goldman Sachs and Deutsche Bank found that utilities had one of the strongest negative relationships with bond yields (i.e., increases in bond yields resulted in the decline of utility share prices).²⁰ Charles Schwab also recently

¹⁹ Commitment of Traders Report, as of October 29, 2021 - <https://www.cftc.gov/MarketReports/CommitmentsofTraders/HistoricalCompressed/index.htm>

²⁰ Lee, Justina. "Wall Street Is Rethinking the Treasury Threat to Big Tech Stocks." Bloomberg.com, 11 Mar. 2021, www.bloomberg.com/news/articles/2021-03-11/wall-street-is-rethinking-the-treasury-threat-to-big-tech-stocks.

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1 noted the inverse relationship between interest rates and utility share prices and
2 concluded that the utility sector tends to underperform during periods of economic
3 growth when interest rates are higher.²¹

4 **30. Q. How do equity analysts expect the utilities sector to perform in an increasing**
5 **interest rate environment?**

6 A. Equity analysts project that utilities are expected to continue to underperform the
7 broader market as interest rates increase. For example, in a recent article, Barron's
8 conducted its Big Money poll of professional investors regarding the outlook for
9 the next twelve months. Approximately 60 percent of respondents projected the
10 yield on the 10-year Treasury Bond will be 2.00 percent or greater at the end of the
11 next twelve months which is an increase from the current 30-day average 10-year
12 Treasury Bond yield as of November 30, 2021 of 1.58 percent.²² Furthermore, the
13 professional investors surveyed by Barron's selected the utility sector as the sector
14 which will perform the worst over the next twelve months indicating they are
15 projecting that utilities will underperform the broader market in 2022.

16 Other equity analysts concur with this conclusion. Fidelity recently recommended
17 underweighting the utility sector and noted that "[w]eak fundamentals and high
18 valuations could be headwinds for utilities and real estate, especially if rates

²¹ Charles Schwab, Schwab Sector Views: Too Early for Defensive Positioning, August 19, 2021.

²² Jasinski, Nicholas. Stocks Are Still the Place to Be, Our Exclusive Big Money Poll Finds. Barron's, 16 Oct. 2021, <https://www.barrons.com/articles/stock-market-covid-economy-outlook-51634312012?mod=hpsubnav&tesla=y>.

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1 increase.”²³ In its 2022 Outlook, Well Fargo classified the utility sector as “most
2 unfavorable” as economic growth continues to rebound and interest rates
3 increase.²⁴ Finally, Charles Schwab has classified the utilities sector overall as
4 “Underperform,” noting negatives for the sector that include “interest rates are
5 expected to recover from recent decline” and “economic recovery makes the sector
6 less attractive, relative to other sectors”.²⁵

7 **31. Q. What is the significance of the inverse relationship between interest rates and**
8 **utility share prices in the current market?**

9 A. As discussed above, the economy is currently in the recovery phase of the business
10 cycle, which is characterized by improving economic growth, increasing inflation,
11 and increasing interest rates. If interest rates increase as expected, then the share
12 prices of utilities will decline. If the prices of utility stocks decline, then the DCF
13 model, which relies on historical averages of share prices, is likely to understate the
14 cost of equity. For example, Figure 5 below summarizes the effect of price on the
15 dividend yield in the Constant Growth DCF model.

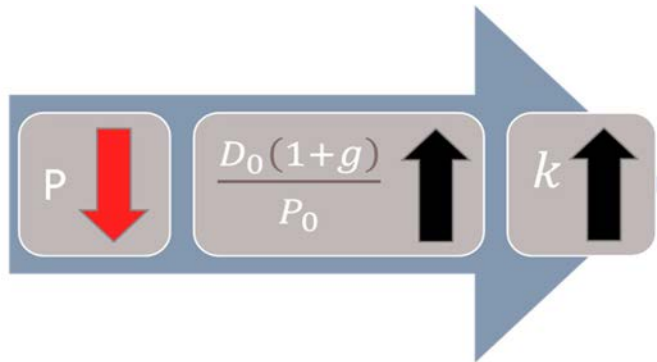
²³ Fidelity, “Q4 2021 sector scorecard,” October 27, 2021.

²⁴ Well Fargo Investment Institute, 2022 Outlook, December 2021.

²⁵ Charles Schwab, “Utilities Sector Rating: Underperform,” November 18, 2021.

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Figure 5: The Effect of a decline in Stock Prices on the Constant Growth DCF model



A decline in stock prices will increase the dividend yields and thus the estimate of the ROE produced by the Constant Growth DCF model. Therefore, this expected change in market conditions supports consideration of the range of ROE results produced by the mean to mean-high DCF results since the mean DCF results would likely understate the cost of equity during the period that the Company's rates will be in effect. Moreover, prospective market conditions warrant consideration of other ROE estimation models such as the CAPM, ECAPM, Risk Premium and Expected Earnings which may better reflect expected market conditions. For example, two out of three inputs to the CAPM (i.e., the market risk premium and risk-free rate) are forward-looking.

B. Conclusion

32. Q. What are your conclusions regarding the effect of current market conditions on the cost of equity for the Company?

A. Over the near-term, investors expect economic growth to continue to rebound and thus inflation and interest rates to increase. Because the share prices of utilities are inversely correlated to the interest rates, an increase in long-term government bond

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1 yields will likely results in a decline in utility share prices which is the reason a
2 number of equity analysts expect the utility sector to underperform over the near-
3 term. The expected underperformance of utilities means that DCF models using
4 recent historical data likely underestimate investors' required return over the period
5 that rates will be in effect. This change in market conditions also support the use
6 of other ROE estimation models such as the CAPM, ECAPM, Risk Premium and
7 Expected Earnings which may better reflect expected market conditions.

8 **VI. PROXY GROUP SELECTION**

9 **33. Q. Please provide a brief profile of NJAWC.**

10 A. NJAWC, a wholly-owned subsidiary of AWK, provides water service to
11 approximately 660,000 water and fire service customers and wastewater service to
12 approximately 49,900 customers in 18 counties throughout the State of New
13 Jersey.²⁶ In 2020, the Company had total operating revenues of \$796 million which
14 for NJAWC's parent company, AWK, represented 24.50 percent of total regulated
15 operating revenues.²⁷ The Company can access debt markets through American
16 Water Capital Corp. ("AWCC") or independently, as NJAWC maintains its own
17 credit ratings. The current credit ratings for NJAWC are as follows: (1) S&P - A
18 (Outlook: Stable); and (2) Moody's – A3 (Outlook: Stable).²⁸ Additionally, the

²⁶ American Water Works Company, Inc., 2020 SEC Form 10-K, at 4.

²⁷ Ibid.

²⁸ S&P Capital IQ.

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1 current credit ratings on senior unsecured debt for AWK and AWCC are as follows:

2 (1) S&P - A (Outlook: Stable); and (2) Moody's – Baa1 (Outlook: Stable).²⁹

3 **34. Q. Why have you used a group of proxy companies to estimate the cost of equity**
4 **for NJAWC?**

5 A. In this proceeding, I am estimating the cost of equity for NJAWC, which is a rate
6 regulated subsidiary of AWK. The proxy companies used in my analyses all
7 possess a set of operating and financial risk characteristics that are substantially
8 comparable to NJAWC, and, therefore, provide a reasonable basis for deriving the
9 appropriate ROE.

10 **35. Q. How did you select the companies in your proxy group?**

11 A. I began with the group of U.S. utilities that Value Line classifies as “Water
12 Utilities” and “Natural Gas Distribution Companies”. That combined group
13 includes 17 domestic U.S. utilities. I simultaneously applied the following
14 screening criteria to select companies that:

- 15 • pay consistent quarterly cash dividends because companies that do not
16 cannot be analyzed using the Constant Growth DCF model;
- 17 • have investment grade long-term issuer ratings from S&P and/or Moody's;
- 18 • are covered by at least two utility industry analysts;
- 19 • have positive long-term earnings growth forecasts from at least two utility
20 industry equity analysts;
- 21 • derive more than 60.00 percent of their total operating income from
22 regulated operations; and

²⁹ S&P Capital IQ.

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- were not parties to a merger or transformative transaction during the analytical periods relied on.

36. Q. Did you consider any additional companies for inclusion in your proxy group?

A. Yes. I also considered the group of 36 companies that Value Line classifies as “Electric Utilities”. In determining which electric utilities would qualify for inclusion in my proxy group, I started by relying on the criteria used to screen the water and natural gas utilities. I then applied two additional screening criteria to only include electric utilities that would be considered risk comparable to NJAWC:

- have owned generation comprising less than 10 percent of the Company’s MWh sales to ultimate customers to ensure that the electric utilities included did not own a substantial amount of generation and therefore had operations that were primarily transmission and distribution; and
- own water and wastewater operations.

37. Q. Did you include AWK in your proxy group?

A. No. Consistent with my general practice of excluding the subject company, or its parent holding company, from the proxy group, I have excluded AWK from my proxy group for NJAWC.

38. Q. What is the composition of your proxy group?

A. The screening criteria discussed above resulted in a proxy group consisting of the companies in Figure .

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Figure 6: Proxy Group

Company	Ticker
American States Water Company	AWR
Atmos Energy Corporation	ATO
California Water Service Group	CWT
Essential Utilities, Inc.	WTRG
Eversource Energy	ES
Middlesex Water Company	MSEX
NiSource Inc.	NI
New Jersey Resources Corporation	NJR
Northwest Natural Gas Company	NWN
ONE Gas Inc.	OGS
SJW Group	SJW
South Jersey Industries, Inc.	SJI
Spire, Inc.	SR
York Water Company	YORW

39. Q. Why did you include electric utilities and natural gas distribution companies in the proxy group?

A. Value Line currently classifies only seven companies as water utilities. Therefore, the universe of water utilities is already small before a set of screening criteria are applied. Additionally, there is currently a trend towards consolidation in the utility industry, which reduces the number of available proxy companies.³⁰ Because there are a small number of companies that are available for inclusion in the proxy group, I also considered electric utilities and natural gas distribution companies that meet the screening criteria.

³⁰ Chediak, Mark, et al. "Utility M&A Is So Hot Not Even Berkshire's Billions Won a Bid." Bloomberg.com, Bloomberg, 3 Jan. 2018, www.bloomberg.com/news/articles/2018-01-03/utility-m-a-is-so-hot-not-even-berkshire-s-billions-won-a-bid.

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1 **40. Q. Are electric utilities and natural gas distribution companies reasonably**
2 **comparable to water utilities to be included in a proxy group used to estimate**
3 **the cost of equity for a water utility?**

4 A. Yes, I believe that it is reasonable to rely on a combined proxy group. As noted
5 above, due to consolidation in the water utility industry, there is only a small group
6 of water companies that can be included in the proxy group. In addition, the
7 screening criteria relied on for my proxy group require that a company derive more
8 than 60 percent of their operating income from regulated operations. Therefore, the
9 electric utilities and natural gas distribution companies included in my proxy group
10 generate a large portion of their operating income from regulated operations similar
11 to NJAWC and the water utilities that will be included in the proxy group. As a
12 result, I believe that it is appropriate to include relevant natural gas and electricity
13 distribution companies in my proxy group. Additionally, when determining the
14 electric utilities to be included in the proxy group, I included only those electric
15 utilities that are primarily responsible for the transmission and distribution of
16 electricity to customers, and that own a water utility, which more closely
17 approximates the risk of NJAWC, as a water and wastewater company.

18 **41. Q. Have other regulators considered the inclusion of natural gas distribution**
19 **companies in the proxy group used to estimate the cost of equity for a water**
20 **utility?**

21 A. Yes. The Massachusetts Department of Public Utilities (“MDPU”), the Florida
22 Public Service Commission (“FPUC”), the Kentucky Public Service Commission

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1 (“KYPSC”) and the Iowa Utilities Board (“IUB”) have considered the results of a
2 proxy group that includes natural gas companies when determining the authorized
3 ROE for water and wastewater utilities. In Docket No. 17-90, the MDPU
4 determined that the use of a natural gas utility proxy group was appropriate for the
5 purpose of demonstrating the comparability of the investment risk of the proxy
6 group to Aquarion Water Company.³¹

7 In Docket No. 20180006-WS, the FPUC modified the methodology used to
8 estimate the ROE for water and wastewater utilities in Florida to include a
9 combined proxy group of natural gas and water utilities.³² The FPUC has
10 previously relied on a natural gas only proxy group to estimate the ROE for water
11 and wastewater utilities³³; however, to increase the size of the proxy group, the
12 FPUC decided to rely on a combined proxy group. Specifically, the FPUC noted:

13 The leverage formula methodology shall be modified to include a
14 combined proxy group of natural gas and WAW utilities as proxy
15 companies in calculating the leverage formula. We find that the
16 selected natural gas utilities and WAW utilities that derive at least
17 50 percent of their revenue from regulated rates. These utilities have
18 market power and are influenced significantly by economic
19 regulation. In Attachment 1, the returns calculated using the proxy
20 group are adjusted to reflect the risks faced by Florida WAW
21 utilities. The updated index consists of five natural gas companies
22 and seven WAW companies that derive at least 50 percent of their

³¹ Massachusetts Department of Public Utilities, Docket No. 17-90, Petition of Aquarion Water Company of Massachusetts, Inc., pursuant to G.L. c. 164, § 94, and G.L. c. 165, § 2, for Approval of a General Rate Increase as set forth in M.D.P.U. No. 3., October 31, 2018, p. 286-287.

³² Docket No. 20180006-WS, In re. Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S., Order No. PSC-2018-0327-PAA-WS, at 7.

³³ Docket No. 170006-WS, In re. Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S., Order No. PSC-17-0249-PAA-WS, at 2.

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1 total revenue from regulated operations. These companies have a
2 median Standard and Poor's bond rating of "A"³⁴

3 In Case No. 2018-00358 for Kentucky-American Water Company ("Kentucky
4 American"), the KYPSC noted that the authorized ROE for Kentucky-American
5 was within the range of DCF and CAPM results produced by Kentucky-American
6 and the Attorney General.³⁵ To develop the DCF and CAPM models, Kentucky
7 American and the Attorney General relied on two proxy groups: (1) a water only
8 proxy group; and (2) a combined proxy group which included natural gas utilities.³⁶

9 Therefore, the KYPSC has also considered, when determining the authorized ROE
10 for a water company, ROE results based on a proxy group that includes both natural
11 gas and water utilities.

12 Finally, In Docket Nos. RPU-2020-00101, TF-2020-0250, the IUB relied on
13 analyses based on proxy groups composed of water and natural gas companies.³⁷

³⁴ Docket No. 20180006-WS, In re. Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S., Order No. PSC-2018-0327-PAA-WS, at 8.

³⁵ Case No. 2018-00358, In the matter of: Electronic Application of Kentucky-American Water Company for an Adjustment of Rates, Order, June 27, 2019, at 66.

³⁶ *Id.*, at 55-56.

³⁷ State of Iowa Department of Commerce Utilities Board, Docket Nos. RPU-2020-00101, TF-2020-0250, June 28, 2021, at 24-25.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**VII. COST OF EQUITY ESTIMATION**

42. Q. Please briefly discuss the ROE in the context of the regulated rate of return (“ROR”).

A. The overall ROR for a regulated utility is based on its weighted average cost of capital, in which the costs of the individual sources of capital are weighted by their respective book values. While the costs of debt and preferred stock can be directly observed, the cost of equity is market-based and, therefore, must be estimated based on observable market data.

43. Q. How is the required ROE determined?

A. The required ROE is estimated by using multiple analytical techniques that rely on market-based data to quantify investor expectations regarding required equity returns, adjusted for certain incremental costs and risks. Quantitative models produce a range of reasonable results from which the market-required ROE is selected. That selection must be based on a comprehensive review of relevant data and information and does not necessarily lend itself to a strict mathematical solution. The key consideration in determining the cost of equity is to ensure that the methodologies employed reasonably reflect investors’ views of the financial markets in general and of the subject company (in the context of the proxy group) in particular.

44. Q. What methods did you use to determine NJAWC’s cost of equity?

A. I considered the results of the Constant Growth DCF model, the CAPM, the ECAPM, the Bond Yield Plus Risk Premium methodology and the Expected

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1 Earnings Analysis. As discussed in more detail below, a reasonable ROE estimate
2 appropriately considers alternative methodologies and the reasonableness of their
3 individual and collective results.

4 **Importance of Multiple Analytical Approaches**

5 **45. Q. Why is it important to use more than one analytical approach?**

6 A. Because the cost of equity is not directly observable, it must be estimated based on
7 both quantitative and qualitative information. When faced with the task of
8 estimating the cost of equity, analysts and investors are inclined to gather and
9 evaluate as much relevant data as reasonably can be analyzed. Several models have
10 been developed to estimate the cost of equity, and I use multiple approaches to
11 estimate the cost of equity. As a practical matter, however, all of the models
12 available for estimating the cost of equity are subject to limiting assumptions or
13 other methodological constraints. Consequently, many well-regarded finance texts
14 recommend using multiple approaches when estimating the cost of equity. For
15 example, Copeland, Koller, and Murrin³⁸ suggest using the CAPM and Arbitrage
16 Pricing Theory model.

17 **46. Q. Is it important given the current market conditions to use more than one**
18 **analytical approach?**

19 A. Yes. Low interest rates and the effects of the investor “flight to quality” can be
20 seen in higher utility share valuations, relative to historical levels and relative to the

³⁸ Tom Copeland, Tim Koller and Jack Murrin, Valuation: Measuring and Managing the Value of Companies, 3rd Ed. (New York: McKinsey & Company, Inc., 2000), at 214.

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1 broader market. Higher utility stock valuations produce lower dividend yields and
2 result in lower cost of equity estimates from a DCF analysis. Low interest rates
3 also affect the CAPM in two ways: (1) the risk-free rate is lower, and (2) because
4 the market risk premium is a function of interest rates, (i.e., it is the return on the
5 broad stock market less the risk-free interest rate), the risk premium should move
6 higher when interest rates are lower. Therefore, it is important to use multiple
7 analytical approaches to moderate the impact that the current low interest rate
8 environment is having on the ROE estimates for the proxy group and, where
9 possible, consider using projected market data in the models to estimate the return
10 for the forward-looking period.

11 **47. Q. Has the Board made similar findings regarding the reliance on multiple**
12 **models?**

13 A. Yes. It is my understanding that in its order in Docket No. ER12111052 for Jersey
14 Central Power and Light Company, the Board noted that rate of return experts use
15 a number of models including the DCF, CAPM, Risk Premium and Comparable
16 Earnings to estimate the return required by investors. Specifically, the Board noted:

17 In determining the cost of equity capital for a regulated utility, rate
18 of return experts typically use a variety of financial models to
19 simulate the returns assertedly required by investors. These include
20 Discounted Cash Flow (DCF) models, Risk Premium models,
21 Capital Asset Pricing Models (CAPM), Comparable Earnings
22 models and variations thereof. However, it is widely acknowledged
23 that these economic models constitute estimates, which, although
24 probative, are not necessarily precise. The imprecision in the
25 estimates provided by these models is more pronounced as a result
26 of the current economic environment still recovering from the Great

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1 Recession, characterized by some as the worst economy since the
2 Great Depression.³⁹

3 In the order, the Board accepted an ROE of 9.75 percent for JCP&L which was
4 supported by the ALJ and ultimately recommended by Staff based on a review of
5 each of the model results presented by the witnesses in the case and recently
6 authorized ROEs in other jurisdictions.⁴⁰ In supporting the recommendation of
7 Staff, the ALJ concluded that the results of each model are affected by multiple
8 factors including current market conditions. Specifically, the ALJ concluded that:

9 [e]ach method has multiple factors, and the parties have offered
10 numerous criticisms of the choices made by opposing expert
11 witnesses. A key consideration concerns the time period used by the
12 experts in selecting a dividend yield under the DCF model or the
13 risk-free rate under the CAPM method due to the fact that interest
14 rates have been at historic lows in recent years. For example, with
15 the CAPM method, Ms. Ahern used interest rates on thirty-year
16 Treasury bonds going as far back as 1926 producing an average of
17 5.32 percent, which led to a risk free rate of 4.17 percent. As Mr.
18 Kahal points out, rates on thirty-year Treasury bonds have been
19 closer to 3.00 percent in recent years. In contrast, Mr. Kahal based
20 the dividend yield under his DCF analysis on results from the six
21 months ending April 2013. Development of the dividend yield from
22 data during a period of historically low interest rates may produce a
23 result which is lower than will prevail when the new rates are in
24 effect. Mr. O'Donnell's analysis in this respect is similar to that of
25 Mr. Kahal.⁴¹

26 Thus, the Board, an ALJ, and Board Staff have all recognized the importance of
27 considering the results of each model presented in the rate case because market

³⁹ BPU Docket No. ER12111052, OAL Docket No. PUC16310-12, Order Adopting Initial Decision with Modifications and Clarifications, March 18, 2015, at 71.

⁴⁰ *Id.*, at 10.

⁴¹ BPU Docket No. ER12111052, OAL Docket No. PUC16310-12, Initial Decision, January 8, 2015, at 27.

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1 conditions can have an effect on the results produced by each of the ROE estimation
2 models.

3 **48. Q. What are your conclusions about the results of the DCF and CAPM models?**

4 A. Recent market data that is used as the basis for the assumptions for both models
5 have been affected by market conditions. As a result, relying exclusively on
6 historical assumptions in these models, without considering whether these
7 assumptions are consistent with investors' future expectations, will underestimate
8 the cost of equity that investors would require over the period that the rates in this
9 case are to be in effect. In this instance, relying on the historically low dividend
10 yields that are not expected to continue over the period that the new rates will be in
11 effect will underestimate the ROE for NJAWC.

12 Furthermore, as discussed in Section V above, long-term interest rates have
13 increased since August 2020 and this trend is expected to continue over the near-
14 term as the economy continues to recover from the economic effects of COVID-
15 19. Therefore, the use of current averages of Treasury bond yields as the estimate
16 of the risk-free rate in the CAPM is not appropriate since recent market conditions
17 are not expected to continue over the long-term. Instead, analysts should rely on
18 projected yields of Treasury Bonds in the CAPM. The projected Treasury Bond
19 yields results in CAPM estimates that are more reflective of the market conditions
20 that investors expect during the period that the Company's rates will be in effect.

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1 the extent any of these assumptions is violated, considered judgment and/or specific
2 adjustments should be applied to the results.

3 **51. Q. What market data did you use to calculate the dividend yield in your Constant**
4 **Growth DCF model?**

5 A. The dividend yield in my Constant Growth DCF model is based on the proxy
6 companies' current annual dividend and average closing stock prices over the 30-,
7 90-, and 180-trading days as of November 30, 2021.

8 **52. Q. Why did you use three averaging periods for stock prices?**

9 A. In my Constant Growth DCF model, I use an average of recent trading days to
10 calculate the price term (P_0) in the DCF model to ensure that the ROE is not skewed
11 by anomalous events that may affect stock prices on any given trading day. The
12 averaging period should also be reasonably representative of expected capital
13 market conditions over the long-term. However, by necessity, analysts rely on
14 historical prices which, as discussed above, are currently at unsustainably high
15 levels. Under these circumstances, where current market conditions cannot be
16 expected to continue throughout the rate period, it is important to recognize that
17 current average prices in the Constant Growth DCF model are not consistent with
18 forward-looking market expectations. Therefore, the results of my Constant
19 Growth DCF model using historical data may underestimate the forward-looking
20 cost of equity. As a result, I place more weight on the mean to mean-high results
21 produced by my Constant Growth DCF model.

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1 **53. Q. Did you make any adjustments to the dividend yield to account for periodic**
2 **growth in dividends?**

3 A. Yes. Since utility companies tend to increase their quarterly dividends at different
4 times throughout the year, it is reasonable to assume that dividend increases will be
5 evenly distributed over calendar quarters. Given that assumption, it is reasonable
6 to apply one-half of the expected annual dividend growth rate for purposes of
7 calculating the expected dividend yield component of the DCF model. This
8 adjustment ensures that the expected first year dividend yield is, on average,
9 representative of the coming twelve-month period, and does not overstate the
10 aggregated dividends to be paid during that time.

11 **54. Q. Why is it important to select appropriate measures of long-term growth in**
12 **applying the DCF model?**

13 A. In its Constant Growth form, the DCF model (i.e., Equation [2]) assumes a single
14 long-term growth rate in perpetuity. In order to reduce the long-term growth rate
15 to a single measure, one must assume that the dividend payout ratio remains
16 constant and that earnings per share, dividends per share, and book value per share
17 all grow at the same constant rate. Over the long run, however, dividend growth
18 can only be sustained by earnings growth. For example, earnings growth rates tend
19 to be least influenced by capital allocation decisions that companies may make in
20 response to near-term changes in the business environment. Since such decisions
21 may directly affect near-term dividend payout ratios, estimates of earnings growth

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1 are more indicative of long-term investor expectations than are dividend or book
2 value growth estimates.

3 **55. Q. What sources of long-term growth rates did you rely on in your Constant**
4 **Growth DCF model?**

5 A. My Constant Growth DCF model incorporates the following sources of long-term
6 growth rates: (1) consensus long-term earnings growth estimates from Zacks
7 Investment Research; (2) consensus long-term earnings growth estimates from
8 Thomson First Call (provided by Yahoo! Finance); and (3) long-term earnings
9 growth estimates from Value Line.

10 **56. Q. How did you calculate the expected dividend yield?**

11 A. I adjusted the dividend yield to reflect the growth rate that was being used in that
12 particular scenario. This ensures that the growth rate used in the dividend yield
13 calculation and the growth rate used as the “g” term of the DCF model are internally
14 consistent.

15 **57. Q. How did you calculate the range of results for the Constant Growth DCF**
16 **Models?**

17 A. I calculated the low result for my DCF model using the minimum growth rate (i.e.,
18 the lowest of the First Call, Zacks, and Value Line earnings growth rates) for each
19 of the proxy group companies. Thus, the low result reflects the minimum DCF
20 result for the proxy group. I used a similar approach to calculate the high results,

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using the highest growth rate for each proxy group company. The mean results were calculated using the average growth rates from all sources.

58. Q. Please summarize the results of your Constant Growth DCF analyses.

A. Figure 7 (see also Attachment AEB-4) presents the range of results produced by my proxy group. As shown in Figure 7, for the proxy group, the median and mean DCF results range from 9.45 percent to 9.79 percent, and the median high and mean high results are in the range of 10.60 percent to 11.26 percent. While I also summarize the median low and mean low DCF results, based on the expected underperformance of utility stocks and thus the likelihood that the DCF model is understating the cost of equity, I do not believe it is appropriate to consider the low DCF results at this time.

Figure 7: Summary of Constant Growth DCF Results

<i>Constant Growth DCF – Mean</i>			
	Mean Low	Mean	Mean High
30-Day Average	7.90%	9.53%	11.26%
90-Day Average	7.86%	9.50%	11.23%
180-Day Average	7.82%	9.45%	11.18%
<i>Constant Growth DCF - Median</i>			
	Median Low	Median	Median High
30-Day Average	8.33%	9.79%	10.71%
90-Day Average	8.34%	9.66%	10.74%
180-Day Average	8.41%	9.60%	10.60%

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1 **59. Q. What are your conclusions about the results of the Constant Growth DCF**
2 **model?**

3 A. As discussed previously, one primary assumption of the DCF model is a constant
4 P/E ratio. That assumption is heavily influenced by the market price of utility
5 stocks. Since utility stocks are expected to underperform the broader market over
6 the near-term as interest rates increase, it is important to consider the results of the
7 DCF models with caution because the DCF tends to understate the cost of equity in
8 rising interest rate and higher inflationary environments, which, as discussed
9 previously, currently exist. Therefore, while I have given weight to the results of
10 the Constant Growth DCF model, my recommendation also gives weight to the
11 results of other ROE estimation models.

12 **CAPM Analysis**

13 **60. Q. Please briefly describe the Capital Asset Pricing Model (“CAPM”).**

14 A. The CAPM is a risk premium approach that estimates the cost of equity for a given
15 security as a function of a risk-free return plus a risk premium to compensate
16 investors for the non-diversifiable or “systematic” risk of that security. Systematic
17 risk is the risk inherent in the entire market or market segment. This form of risk
18 cannot be diversified away using a portfolio of assets. Non-systematic risk is the
19 risk of a specific company that can be mitigated through portfolio diversification.

20 The CAPM is defined by four components, each of which must theoretically be a
21 forward-looking estimate:

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$$K_e = r_f + \beta(r_m - r_f) \quad [3]$$

Where:

K_e = the required market ROE;

β = Beta coefficient of an individual security;

r_f = the risk-free ROR; and

r_m = the required return on the market as a whole.

In this specification, the term $(r_m - r_f)$ represents the Market Risk Premium.

According to the theory underlying the CAPM, since unsystematic risk can be diversified away, investors should only be concerned with systematic risk.

Systematic risk is measured by Beta. Beta is a measure of the volatility of a security as compared to the market as a whole. Beta is defined as:

$$\beta = \frac{\text{Covariance}(r_e, r_m)}{\text{Variance}(r_m)} \quad [4]$$

The variance of the market return (i.e., Variance (r_m)) is a measure of the uncertainty of the general market. The covariance between the return on a specific security and the general market (i.e., Covariance (r_e, r_m)) reflects the extent to which the return on that security will respond to a given change in the general market return. Thus, Beta represents the risk of the security relative to the general market.

61. Q. What risk-free rate did you use in your CAPM analysis?

A. I relied on three sources for my estimate of the risk-free rate: (1) the current 30-day average yield on 30-year U.S. Treasury bonds (i.e., 1.97 percent);⁴² (2) the

⁴² Bloomberg Professional, as of November 30, 2021.

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1 projected 30-year U.S. Treasury bond yield for Q1 2022 through Q1 2023 (i.e., 2.46
2 percent);⁴³ and (3) the projected 30-year U.S. Treasury bond yield for 2023 through
3 2027 (i.e., 3.40 percent).⁴⁴

4 **62. Q. Would you place more weight on one of these scenarios?**

5 A. Yes. Based on current market conditions, I place more weight on the results of the
6 projected yields on the 30-year Treasury bonds. As discussed previously, the
7 estimation of the cost of equity in this case should be forward-looking because it is
8 the return that investors would receive over the future rate period. Therefore, the
9 inputs and assumptions used in the CAPM analysis should reflect the expectations
10 of the market at that time. While I have included the results of a CAPM analysis
11 that relies on the current average risk-free rate, this analysis fails to take into
12 consideration the effect of the market's expectations for interest rate increases on
13 the cost of equity.

14 **63. Q. What Beta coefficients did you use in your CAPM analysis?**

15 A. As shown in Schedule AEB-4, I used the Beta coefficients for the proxy group
16 companies as reported by Bloomberg and Value Line. The Beta coefficients
17 reported by Bloomberg were calculated using ten years of weekly returns relative
18 to the S&P 500 Index. Value Line's calculation is based on five years of weekly
19 returns relative to the New York Stock Exchange Composite Index.

⁴³ Blue Chip Financial Forecasts, Vol. 40, No. 12, December 1, 2021, at 2.

⁴⁴ Blue Chip Financial Forecasts, Vol. 40, No. 12, December 1, 2021, at 14.

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1 Additionally, as shown in Schedule AEB-4, I also considered an additional CAPM
2 analysis which relies on the long-term average utility Beta coefficient for the
3 companies in my proxy group. As shown in Schedule AEB-5, the long-term
4 average utility Beta coefficient was calculated as an average of the Value Line Beta
5 coefficients for the companies in my proxy group from 2016 through 2020.

6 **64. Q. How did you estimate the Market Risk Premium in the CAPM?**

7 A. I estimated the Market Risk Premium (“MRP”) as the difference between the
8 implied expected equity market return and the risk-free rate. As shown in Schedule
9 AEB-6, the expected return on the S&P 500 Index is calculated using the Constant
10 Growth DCF model discussed earlier in my testimony for the companies in the S&P
11 500 Index. In my calculation of the market return, I included companies in the S&P
12 500 that: 1) had either a dividend yield or Value Line long-term earnings projection;
13 and 2) had a Value Line long-term earnings growth rate that was greater than 0
14 percent and less than or equal to 20 percent. Based on an estimated market
15 capitalization-weighted dividend yield of 1.58 percent and a weighted long-term
16 growth rate of 11.31 percent, the estimated required market return for the S&P 500
17 Index is 12.97 percent.

18 **65. Q. Have other regulators endorsed the use of a forward-looking market risk**
19 **premium?**

20 A. Yes. The Minnesota Department of Commerce (“Minnesota DOC”) has relied on
21 the Constant Growth DCF model to estimate the market return. In Docket No. G-
22 004/GR-19-511 for Great Plains Natural Gas Company, the Minnesota DOC relied

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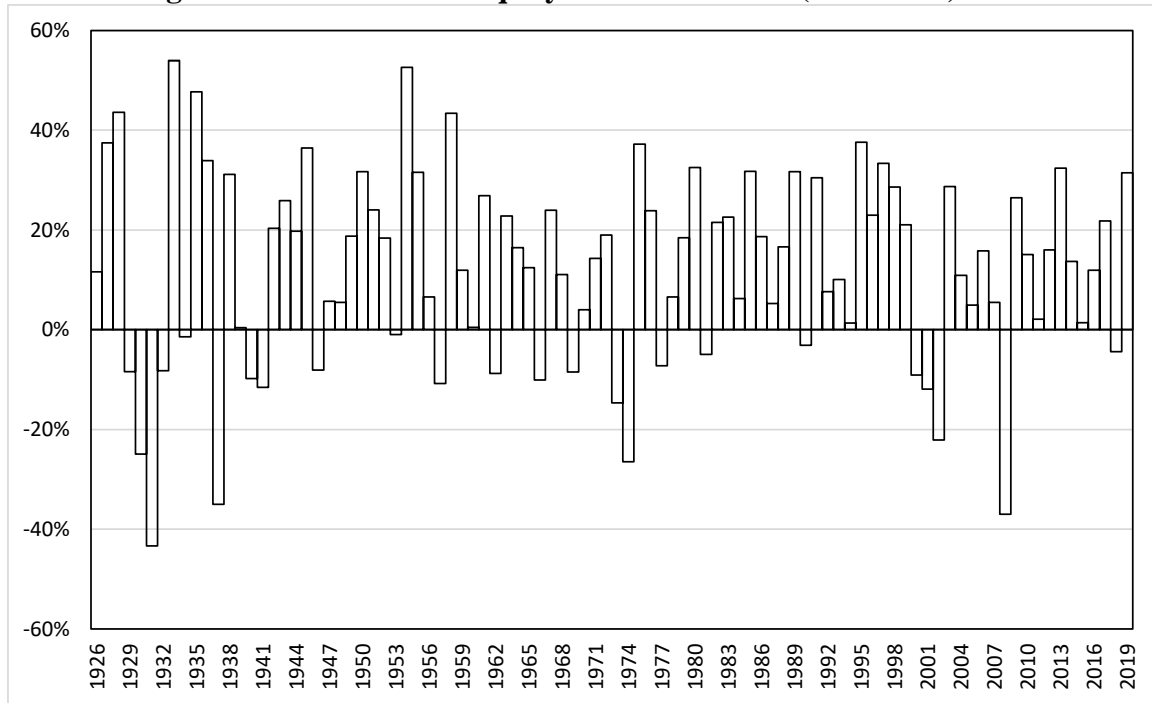
1 on a Constant Growth DCF analysis for the S&P 500 to estimate the market return
2 for the CAPM. Specifically, the Minnesota DOC relied on the dividend yield
3 reported by S&P for the S&P 500 and the three-five year earnings growth estimate
4 for the State Street Global Advisors S&P 500 exchange traded fund (“ETF”) which
5 resulted in a market return of 13.44 percent.⁴⁵ The Minnesota DOC has historically
6 relied on the Constant Growth DCF model to estimate the market return for the
7 CAPM which has in turn been considered by the Minnesota PUC in prior
8 proceedings.⁴⁶

9 **66. Q. How does the current expected market return of 12.97 percent compare to**
10 **observed historical market returns?**

11 A. Given the range of annual equity returns that have been observed over the past 95
12 years (shown in Figure 8 below), a current expected return of 12.97 percent is not
13 unreasonable. In 49 of the past 95 years (i.e., in approximately half of all
14 observations), the realized total equity return was at least 12.97 percent or greater.

⁴⁵ Docket No. G-004/GR-19-511, In the Matter of the Petition By Great Plains Natural Gas Co., a Division of Montana-Dakota Utilities Co., for Authority to Increase Natural Gas Rates in Minnesota (March 3, 2020), at Ex. DER-9, CMA-S-8.

⁴⁶ See Docket No. E017/GR-15-1033, Findings of Fact, Conclusions and Order, May 1, 2017, at 54-56; and Docket No. E015/GR-16-664, Findings of Fact, Conclusions and Order, March 12, 2018, at 60-61.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**Figure 8: Realized U.S. Equity Market Returns (1926-2020)⁴⁷****67. Q. Did you consider another form of the CAPM in your analysis?**

A. Yes. I have also considered the results of an Empirical CAPM (“ECAPM”)⁴⁸ in estimating the cost of equity for NJAWC. The ECAPM calculates the product of the adjusted Beta coefficient and the market risk premium and applies a weight of 75.00 percent to that result. The model then applies a 25.00 percent weight to the market risk premium, without any effect from the Beta coefficient. The results of the two calculations are summed, along with the risk-free rate, to produce the ECAPM result, as noted in Equation [5] below:

$$k_e = r_f + 0.75\beta(r_m - r_f) + 0.25(r_m - r_f) \quad [5]$$

Where:

⁴⁷ Depicts total annual returns on large company stocks, as reported in the 2021 Duff & Phelps SBBI Yearbook.

⁴⁸ See e.g., Roger A. Morin, *New Regulatory Finance*, Public Utilities Reports, Inc., 2006, at 189.

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1 k_e = the required market ROE

2 β = Adjusted Beta coefficient of an individual security

3 r_f = the risk-free rate of return

4 r_m = the required return on the market as a whole

5 In essence, the Empirical form of the CAPM addresses the tendency of the
6 “traditional” CAPM to underestimate the cost of equity for companies with low
7 Beta coefficients such as regulated utilities. In that regard, the ECAPM is not
8 redundant to the use of adjusted Betas; rather, it recognizes the results of academic
9 research indicating that the risk-return relationship is different (in essence, flatter)
10 than estimated by the CAPM, and that the CAPM underestimates the “alpha,” or
11 the constant return term.⁴⁹

12 As with the CAPM, my application of the ECAPM uses the forward-looking market
13 risk premium estimates, the three yields on 30-year Treasury securities noted earlier
14 as the risk-free rate, and the Bloomberg, Value Line, and long-term average Beta
15 coefficients.

16 **68. Q. What are the results of your CAPM analyses?**

17 A. As shown in Figure (see also Schedule AEB-4), my traditional CAPM analyses
18 produces a range of returns from 9.89 percent to 11.43 percent. The ECAPM
19 analysis results range from 10.66 percent to 11.82 percent.

⁴⁹ *Id.*, at 191.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**Figure 2: Forward-Looking CAPM Results**

	Current Risk-Free Rate (1.97%)	Q1 2022- Q1 2023 Projected Risk-Free Rate (2.46%)	2023-2027 Projected Risk-Free Rate (3.40%)
CAPM			
Value Line Beta	11.20%	11.28%	11.43%
Bloomberg Beta	10.69%	10.79%	10.98%
Long-term Avg Beta	9.89%	10.02%	10.29%
Mean	10.59%	10.70%	10.90%
ECAPM			
Value Line Beta	11.64%	11.70%	11.82%
Bloomberg Beta	11.26%	11.33%	11.48%
Long-term Avg Beta	10.66%	10.76%	10.96%
Mean	11.19%	11.26%	11.42%

Bond Yield Plus Risk Premium Analysis**69. Q. Please describe the Bond Yield Plus Risk Premium approach.**

A. In general terms, this approach is based on the fundamental principle that equity investors bear the residual risk associated with equity ownership and therefore require a premium over the return they would have earned as a bondholder. That is, because returns to equity holders have greater risk than returns to bondholders, equity investors must be compensated to bear that risk. Risk premium approaches, therefore, estimate the cost of equity as the sum of the equity risk premium and the yield on a particular class of bonds. In my analysis, I used actual authorized returns for natural gas utility companies as the historical measure of the cost of equity to determine the risk premium.

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1 **70. Q. Why did you conduct this analysis based on the natural gas utility authorized**
2 **ROEs?**

3 A. The data set that is available for the water utilities begins in 2012, which is not a
4 sufficient time period for a time series study such as the Bond Yield Risk Premium
5 analysis. Therefore, I determined that data for natural gas companies is a reasonable
6 proxy since both natural gas distribution companies and water utilities provide a
7 similar service and may be perceived by investor to have a similar risk profile.
8 Furthermore, as I discussed above, I have relied on a combination proxy group that
9 includes natural gas utilities to develop the results of my Constant Growth DCF,
10 CAPM, ECAPM and Expected Earnings analyses under the premise that the risks
11 of natural gas utilities and water utilities are sufficiently similar that the results of
12 the ROE estimation methodologies including natural gas utilities could be used for
13 a water utility. Therefore, I believe it is reasonable and appropriate to rely on this
14 time series analysis of the natural gas utility industry segment.

15 **71. Q. Are there other considerations that should be addressed in conducting this**
16 **analysis?**

17 A. Yes. It is important to recognize both academic literature and market evidence
18 indicating that the equity risk premium (as used in this approach) is inversely
19 related to the level of interest rates. That is, as interest rates increase (decrease),
20 the equity risk premium decreases (increases). Consequently, it is important to
21 develop an analysis that: (1) reflects the inverse relationship between interest rates
22 and the equity risk premium; and (2) relies on recent and expected market

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1 conditions. Such an analysis can be developed based on a regression of the risk
2 premium as a function of U.S. Treasury bond yields. If we let authorized ROEs for
3 natural gas utilities serve as the measure of required equity returns and define the
4 yield on the long-term U.S. Treasury bond as the relevant measure of interest rates,
5 the risk premium simply would be the difference between those two points.⁵⁰

6 **72. Q. Is the Bond Yield Plus Risk Premium analysis relevant to investors?**

7 A. Yes. Investors are aware of ROE awards in other jurisdictions, and they consider
8 those awards as a benchmark for a reasonable level of equity returns for utilities of
9 comparable risk operating in other jurisdictions. Because my Bond Yield Plus Risk
10 Premium analysis is based on authorized ROEs for utility companies relative to
11 corresponding Treasury yields, it provides relevant information to assess the return
12 expectations of investors.

13 **73. Q. What did your Bond Yield Plus Risk Premium analysis reveal?**

14 A. As shown in Figure 10 below, from 1992 through November 2021, there was a
15 strong negative relationship between risk premia and interest rates. To estimate
16 that relationship, I conducted a regression analysis using the following equation:

17
$$RP = a + b(T) \text{ [6]}$$

18 Where:

⁵⁰ See e.g., S. Keith Berry, *Interest Rate Risk and Utility Risk Premia during 1982-93*, Managerial and Decision Economics, Vol. 19, No. 2 (March 1998), in which the author used a methodology similar to the regression approach described below, including using allowed ROEs as the relevant data source, and came to similar conclusions regarding the inverse relationship between risk premia and interest rates. See also Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholders Required Rates of Return*, Financial Management, Spring 1986, at 66.

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1 RP = Risk Premium (difference between allowed ROEs and the yield on 30-
 2 year U.S. Treasury bonds)

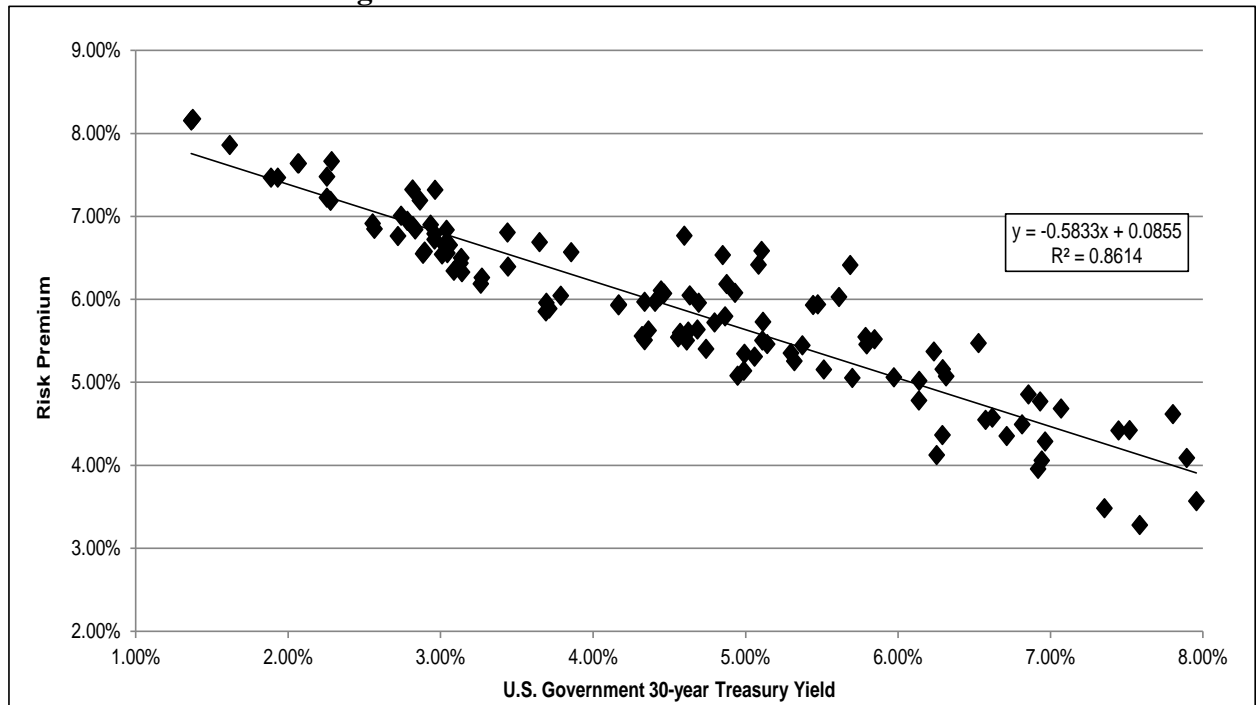
3 a = intercept term

4 b = slope term

5 T = 30-year U.S. Treasury bond yield

6 Data regarding allowed ROEs were derived from 701 natural gas utility rate cases
 7 from 1992 through November 2021 as reported by Regulatory Research Associates
 8 (“RRA”).⁵¹ This equation’s coefficients were statistically significant at the 99.00
 9 percent level.

10 **Figure 10: Risk Premium Results**



11
 12 ⁵¹ This analysis began with a total of 1125 cases and was screened to eliminate limited issue rider cases, transmission-only cases, and cases that were silent with respect to the authorized ROE. After applying those screening criteria, the analysis was based on data for 701 cases.

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1 As shown on Schedule AEB-7, based on the current 30-day average of the 30-year
2 U.S. Treasury bond yield (i.e., 1.97 percent), the risk premium would be 7.40
3 percent, resulting in an estimated ROE of 9.37 percent. Based on the near-term
4 (Q1 2022 – Q1 2023) projections of the 30-year U.S. Treasury bond yield (i.e., 2.46
5 percent), the risk premium would be 7.12 percent, resulting in an estimated ROE of
6 9.58 percent. Based on longer-term (2023-2027) projections of the 30-year U.S.
7 Treasury bond yield (i.e., 3.40 percent), the risk premium would be 6.57 percent,
8 resulting in an estimated ROE of 9.97 percent.

9 **74. Q. How did the results of the Bond Yield Risk Premium inform your**
10 **recommended ROE for NJAWC?**

11 A. I have considered the results of the Bond Yield Risk Premium analysis in setting
12 my recommended ROE for NJAWC. However, as discussed in Section V, of my
13 Direct Testimony, the Federal Reserve's response to recent market events has
14 affected yields on Treasury bonds, which understates the cost of equity using
15 current and even short-term projected bond yields in this methodology.

16 **Expected Earnings Analysis**

17 **75. Q. Have you considered an additional analysis to estimate the cost of equity for**
18 **NJAWC?**

19 A. Yes. I have considered an Expected Earnings analysis based on the projected ROEs
20 for each of the proxy group companies.

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1 **76. Q. What is an Expected Earnings Analysis?**

2 A. The Expected Earnings methodology is a comparable earnings analysis that
3 calculates the earnings that an investor expects to receive on the book value of a
4 stock. The expected earnings analysis is a forward-looking estimate of investors'
5 expected returns. The use of an Expected Earnings approach based on the proxy
6 companies provides a range of the expected returns on a group of risk comparable
7 companies to the subject company. This range is useful in helping to determine the
8 opportunity cost of investing in the subject company, which is relevant in
9 determining a company's ROE.

10 **77. Q. Have any other regulators considered the use of an Expected Earnings**
11 **Analysis?**

12 A. Yes. The WUTC, in its order in Dockets UE-170485 and UG-170486, considered
13 the results of the Comparable Earnings analysis⁵² in establishing the authorized
14 ROE for Avista Corporation. The WUTC noted that it tends to place more weight
15 on the results of the DCF, CAPM and Risk Premium analyses; however, given the
16 wide range of CAPM results presented by the ROE witnesses in the case, the
17 WUTC decided to apply weight to the results of the Comparable Earnings
18 analysis.⁵³ Specifically, the WUTC stated the following:

19 Finally, as additional data points for our consideration of
20 establishing Avista's ROE, we note that two witness, Mr. McKenzie

⁵² The Expected Earnings analysis is a form of the Comparable Earnings analysis that relies exclusively on forward-looking projections.

⁵³ *Wash. Utils. & Transp. Comm'n v. Avista Corp.*, Docket Nos. UE-170485 and UG-170486, Order 07, ¶ 65 (April 26, 2018). Comparable Earnings as discussed in this docket is similar to the Expected Earnings analysis developed in my Direct Testimony.

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1 for Avista and Mr. Parcell for Staff, employ the CE approach to two
2 proxy groups of companies. The respective mid-points of each
3 witnesses' CE analysis are 10.5 and 9.5 percent, respectively, with
4 an average of 10.0 percent. Although we generally do not apply
5 material weight to the CE method, having stronger reliance on the
6 DCF, CAPM and RP methods, we are inclined to include the CE
7 method here given the anomalous CAPM results described
8 previously.⁵⁴

9 **78. Q. How did you develop the Expected Earnings Approach?**

10 A. I relied primarily on the projected ROE capital for the proxy companies as reported
11 by Value Line for the period from 2024-2026. The projected ROEs are adjusted to
12 account for the fact that the ROEs reported by Value Line are calculated on the
13 basis of common shares outstanding at the end of the period, as opposed to average
14 shares outstanding over the period. As shown in Schedule AEB-8, the Expected
15 Earnings analysis results in a mean of 10.31 percent and a median of 10.00 percent.

16 **79. Q. What are your conclusions as to the ROE derived from the DCF, CAPM**
17 **ECAPM, Risk Premium and Expected Earnings analyses?**

18 A. Based the results from these methodologies and the qualitative analyses presented
19 in my Direct Testimony, a reasonable range of ROE results for NJAWC is from
20 9.90 percent to 11.25 percent. I am recommending, however, that the Board set the
21 Company's rate of return on common equity at 10.50 percent. The recommended
22 return of 10.50 percent considers NJAWC's company-specific risks relative to the
23 proxy group. I discuss those company-specific risks below.

⁵⁴ *Ibid.*

NEW JERSEY-AMERICAN WATER COMPANY, INC.**VIII. RISK FACTORS**

80. Q. Do the DCF, CAPM, ECAPM and Expected Earnings results for the proxy group, taken alone, provide an appropriate estimate of the cost of equity for NJAWC?

A. No, they do not. These results provide only a range of the appropriate estimate of the cost of equity for a proxy group of comparable companies. Several additional factors must be considered when determining where NJAWC's cost of equity falls within the range of results. These factors include, but are not limited to business risk, financial risk and regulatory risk. When all of these factors are examined, I conclude that NJAWC faces comparable, albeit slightly higher, risks than the proxy group as a whole.

81. Q. Is NJAWC's risk profile affected by its substantial capital expenditure program?

A. Yes. NJAWC projects that the Company will spend approximately \$2.01 billion on capital investments for the period from 2022-2026, including significant investment to replace aging infrastructure necessary to continue to meet the needs of its customers and to comply with various regulations. This is a substantial increase over the net plant value of \$4.88 billion on December 31, 2020.⁵⁵

⁵⁵ NJAWC, 2020 Annual Report, at 11.

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1 From a credit perspective, the additional pressure on cash flows associated with
2 high levels of capital expenditures exerts corresponding pressure on credit metrics
3 and, therefore, credit ratings. An S&P report explains:

4 [T]here is little doubt that the U.S. electric industry needs to make
5 record capital expenditures to comply with the proposed carbon
6 pollution rules over the next several years, while maintaining safety
7 standards and grid stability. We believe the higher capital spending
8 and subsequent rise in debt levels could strain these companies'
9 financial measures, resulting in an almost consistent negative
10 discretionary cash flow throughout this higher construction period.
11 To meet the higher capital spending requirements, companies will
12 require ongoing and steady access to the capital markets,
13 necessitating that the industry maintains its high credit quality. We
14 expect that utilities will continue to effectively manage their
15 regulatory risk by using various creative means to recover their costs
16 and to finance their necessary higher spending.⁵⁶

17 Although this S&P report refers to electric utilities, the same applies to water
18 utilities, as it is generally regarded that they are the most capital intensive of the
19 utilities. In an August 2016 report, S&P explained the importance of regulatory
20 support for large capital projects:

21 Broad support for all capital spending is the most credit-sustaining.
22 Support for only specific types of capital spending, such as specific
23 environmental projects or system integrity plans, is less so, but still
24 favorable for creditors. Allowance of a cash return on construction
25 work-in-progress or similar ratemaking methods historically were
26 extraordinary measures for use in unusual circumstances, but when
27 construction costs are rising, cash flow support could be crucial to
28 maintain credit quality through the spending program. Even more

⁵⁶ S&P, Ratings Direct, "U.S. Regulated Electric Utilities' Annual Capital Spending is Poised to Eclipse \$100 Billion," July 2014.

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1 favorable are those jurisdictions that present an opportunity for a
2 higher return on capital projects as an incentive to investors.⁵⁷

3 **82. Q. Does NJAWC have a capital tracking mechanism to recover some of the costs**
4 **associated with its capital expenditures plan between rate cases?**

5 A. Yes. NJAWC has a Distribution System Improvement Charge (“DSIC”) which
6 allows NJAWC to recover the costs associated with critical projects, including
7 replacing and rehabilitating aging water mains, fire hydrants and service lines, as
8 well as a newly established Wastewater System Improvement Charge (“WSIC”),
9 which allows NJAWC to recovery costs associated with critical projects on the
10 wastewater side, including replacing and rehabilitating aging collection mains,
11 manholes, laterals and services. The presence of these clauses is certainly a positive
12 aspect of New Jersey regulation however, they have become quite commonplace in
13 utility regulation.

14 **83. Q. Do the proxy group companies also have the ability to recover capital**
15 **investments through a capital tracking mechanism?**

16 A. Yes, the proxy companies have infrastructure and capital recovery mechanisms that
17 address significant capital expenditure requirements. As shown in Schedule AEB-
18 9, the companies in the proxy group have infrastructure replacement recovery
19 mechanisms in approximately 83.33 percent of their operating jurisdictions.

⁵⁷ S&P Global Ratings, “Assessing U.S. Investor-Owned Utility Regulatory Environments,” August 10, 2016, at 7.

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1 Consequently, the presence of the DSIC and the WISC, while positive regulatory
2 mechanisms, do not reduce the Company's risk vis-à-vis that of the proxy group.

3 **84. Q. Have you examined the regulatory mechanisms employed in New Jersey**
4 **compared to those employed by the regulators of your proxy group**
5 **companies?**

6 A. Yes, I have. Exhibit AEB-9 is a compilation of the regulatory mechanism
7 employed by regulators of the proxy group companies compared to the mechanisms
8 employed in New Jersey. On the whole regulation in New Jersey, although
9 supportive, appears to have certain negative ratemaking conventions that render it
10 less supportive than in the jurisdictions regulating the proxy group companies.

11 **85. Q. Is regulation applied to a subject utility examined by rating agencies and other**
12 **analysts?**

13 A. Yes. Both S&P and Moody's consider the overall regulatory framework in
14 establishing credit ratings. Moody's establishes credit ratings based on four key
15 factors: (1) business profile; (2) financial policy; (3) leverage and coverage; and (4)
16 uplift for structural considerations. Within the business profile criteria, stability and
17 predictability of regulatory environment and cost and investment recovery
18 (sufficiency and timeliness) are each given a broad rating factor of 15.0 percent
19 while revenue risk is given a rating factor of 5.0 percent. Therefore, Moody's

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1 assigns regulatory risk a 35.0 percent weighting in the overall assessment of
2 business and financial risk for regulated utilities.⁵⁸

3 S&P also identifies the regulatory framework as an important factor in credit ratings
4 for regulated utilities, stating: “One significant aspect of regulatory risk that
5 influences credit quality is the regulatory environment in the jurisdictions in which
6 a utility operates.”⁵⁹ S&P identifies four specific factors that it uses to assess the
7 credit implications of the regulatory jurisdictions of investor-owned regulated
8 utilities: (1) regulatory stability; (2) tariff-setting procedures and design; (3)
9 financial stability; and (4) regulatory independence and insulation.”⁶⁰

10 **86. Q. How does the regulatory environment in which a utility operates affect its**
11 **access to and cost of capital?**

12 A. The regulatory environment can significantly affect both the access to, and cost of
13 capital in several ways. First, the proportion and cost of debt capital available to
14 utility companies are influenced by the rating agencies’ assessment of the
15 regulatory environment. As noted by Moody’s, “the characteristics and
16 transparency of the concession(s) and regulations under which the utility operates,
17 the track record of the regulatory regime in setting tariffs and applying regulations

⁵⁸ Moody’s Investors Service, Rating Methodology: Regulated Water Utilities, June 8, 2018, at 4.

⁵⁹ Standard & Poor’s, Assessing U.S. Utility Regulatory Environments, August 10, 2016, at 2.

⁶⁰ *Ibid.*

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1 consistently are key elements in assessing the overall stability of a water utility's
2 business profile."⁶¹

3 **87. Q. What are your conclusions regarding the perceived risks related to the New**
4 **Jersey regulatory environment?**

5 A. As discussed throughout this section of my testimony, both Moody's and S&P have
6 identified the supportiveness of the regulatory environment as an important
7 consideration in developing their overall credit ratings for regulated utilities.
8 Considering the regulatory adjustment mechanisms, many of the companies in the
9 proxy group have more timely cost recovery (through forecasted test years, cost
10 recovery trackers and revenue decoupling mechanisms) than NJAWC has in New
11 Jersey. Considering the business and financial risks faced by the Company, I
12 conclude that the range of returns and the authorized ROE for NJAWC should be
13 higher than the median results of the ROE estimation models using the proxy group
14 companies.

15 **IX. CAPITAL STRUCTURE**

16 **88. Q. Is the capital structure of the Company an important consideration in the**
17 **determination of the appropriate ROE?**

18 A. Yes, it is. Assuming other factors equal, a higher debt ratio increases the risk to
19 investors. For debt holders, higher debt ratios result in a greater portion of the
20 available cash flow being required to meet debt service, thereby increasing the risk

⁶¹ Moody's Investors Service, Rating Methodology: Regulated Water Utilities, June 8, 2018, at 7.

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1 associated with the payments on debt. The result of increased risk is a higher
2 interest rate. The incremental risk of a higher debt ratio is more significant for
3 common equity shareholders, who are the residual claimants on the cash flow of
4 the Company. Therefore, the greater the debt service requirement, the less cash
5 flow is available for common equity holders.

6 **89. Q. What is the Company's proposed capital structure?**

7 A. NJAWC is proposing a rate-making capital structure composed of 54.56 percent
8 common equity, and 45.44 percent long-term debt.⁶²

9 **90. Q. Did you conduct any analysis to determine if the requested equity ratio was**
10 **reasonable?**

11 A. Yes, I did. I reviewed the Company's proposed capital structure and the capital
12 structures of the utility operating subsidiaries of the proxy companies.

13 **91. Q. Why is it appropriate to consider the equity ratio for the proxy companies?**

14 A. The determination of the ROE is based on the expected return for a proxy group of
15 companies that are comparable in general risk to NJAWC. The equity ratio is a
16 measure of the financial risk of the company, and the authorized ROE is the return
17 to compensate investors for that risk. If the Board is going to rely on the ROE
18 estimates for the proxy companies to establish the authorized ROE for NJAWC, it
19 is important that the financial risk of NJAWC be similar to the financial risk of the

⁶² Exhibit P-2, Schedule 16.

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1 proxy group. This is accomplished when the equity ratio of the subject company
2 (in this case NJAWC) is within the range established by the proxy group.

3 **92. Q. Please discuss your analysis of the capital structures of the proxy group**
4 **companies.**

5 A. I calculated the mean proportions of common equity, long-term debt and preferred
6 equity for the most recent year for each of the companies in the proxy group at the
7 operating subsidiary level.⁶³ My analysis of the capital structures of the proxy
8 group companies is provided in Schedule AEB-10. As shown in Schedule AEB-
9 10, the mean common equity ratio for the proxy group at the operating subsidiary
10 level was 55.52 percent, within a range from 47.44 percent to 60.04 percent.
11 Comparing NJAWC's proposed common equity ratio of 54.56 percent to the equity
12 ratios of proxy group, NJAWC's equity ratio is somewhat below the mean equity
13 ratio and well within the range of equity ratios established by the proxy group.

14 **93. Q. Are there other factors to be considered in setting the Company's capital**
15 **structure?**

16 A. Yes. The importance of maintaining the financial strength of the Company must
17 be considered in setting the capital structure. Since tax reform occurred in 2017,
18 the credit rating agencies have identified and acted on the deterioration in the
19 financial ratios of utilities, downgrading many utilities that had suffered declines in
20 coverage ratios. S&P and Fitch specifically identified increasing the equity ratio as

⁶³ Long-term debt includes the current portion of long-term debt, assuming that the current portion would be refinanced with debt at maturity.

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1 one approach to ensure that utilities have sufficient cash flows following the federal
2 income tax rate reductions and the loss of bonus depreciation. As S&P noted
3 “[r]egulators must also recognize that tax reform is a strain on utility credit quality,
4 and we expect companies to request stronger capital structures and other means to
5 offset some of the negative impact”.⁶⁴ Furthermore, Moody’s downgraded the
6 rating outlook for the entire utilities sector in June 2018 and has continued to
7 downgrade the ratings of utilities based in part on the negative effects of the TCJA
8 on cash flows.

9 S&P has continued to maintain a negative outlook for the utility industry in 2021.⁶⁵
10 S&P expects continued pressure on cash flows over the near-term as utilities
11 continue to increase leverage to fund capital expenditure plans necessary to reduce
12 greenhouse gas emission and improve safety and reliability.⁶⁶ Furthermore, S&P
13 recently highlighted that prolonged inflation and rising interests could further
14 constrain the credit metrics for utilities over the near-term:

15 Given these observations, and the added concern that inflationary
16 pressure could be accompanied by a rising interest rate environment
17 and wider spreads, we believe that a period of prolonged inflation
18 could further constrain credit metrics for some utilities. Higher rates
19 will also pressure unhedged variable rate borrowings and raise the
20 costs of refinancing fixed-rate debt maturities. This comes as
21 companies in the sector have already added record levels of debt to
22 offset historically high capital spending aimed at modernizing the

⁶⁴ Standard & Poor’s Ratings, “U.S. Tax Reform: For Utilities’ Credit Quality, Challenges Abound”, January 24, 2018, at 5.

⁶⁵ S&P Global Ratings, “North American Regulated Utilities’ Credit Quality Begins the Year on A Downward Path,” April 7, 2021.

⁶⁶ *Ibid.*

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1 grid, building new transmission lines, reducing coal generation, and
2 adding renewable power investments.⁶⁷

3 As a result, the credit ratings agencies continued concerns over the negative effects
4 or the TCJA, inflation, and increased capital expenditures underscores the
5 importance of maintaining adequate cash flow metrics for the industry, as a whole,
6 and NJAWC, particularly, in the context of this proceeding.

7 **94. Q. What are your conclusions about NJAWC's proposed capital structure?**

8 A. Considering the actual capital structures of the proxy group operating companies, I
9 believe that NJAWC's proposed common equity ratio of 54.56 percent is
10 reasonable. The proposed equity ratio is well within the range established by the
11 capital structures of the utility operating subsidiaries of the proxy companies albeit
12 slightly below the mean equity ratio of the group as a whole.

13 **X. CONCLUSIONS AND RECOMMENDATION**

14 **95. Q. What is your conclusion regarding a fair ROE for NJAWC?**

15 A. Figure 11 below provides a summary of my analytical results. Based on these
16 results and the qualitative analyses presented in my Direct Testimony, a reasonable
17 range of ROE results for NJAWC is from 9.90 percent to 11.25 percent. I am
18 recommending that the Board set the Company's rate of return on common equity
19 at 10.50 percent. The recommended return of 10.50 percent considers NJAWC's
20 company-specific risks relative to the proxy group, as discussed in my Direct

⁶⁷ S&P Global Ratings, "Will Rising Inflation Threaten North American Investor-Owned Regulated Utilities' Credit Quality?," July 20, 2021.

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1 Testimony. In addition, the recommended ROE takes into consideration the current
2 conditions in capital markets including the expectation for rising interest rates, and
3 increase in inflationary pressures, both of which increase the cost of capital. This
4 ROE would enable the Company to maintain its financial integrity and therefore its
5 ability to attract capital at reasonable terms under a variety of economic and
6 financial market conditions, while continuing to provide safe, reliable and
7 affordable water and wastewater service to customers in New Jersey.

8

NEW JERSEY-AMERICAN WATER COMPANY, INC.**Figure 11: Summary of Analytical Results**

<i>Constant Growth DCF – Mean</i>			
	Mean Low	Mean	Mean High
30-Day Average	7.90%	9.53%	11.26%
90-Day Average	7.86%	9.50%	11.23%
180-Day Average	7.82%	9.45%	11.18%
Mean	7.86%	9.49%	11.22%
<i>Constant Growth DCF - Median</i>			
	Median Low	Median	Median High
30-Day Average	8.33%	9.79%	10.71%
90-Day Average	8.34%	9.66%	10.74%
180-Day Average	8.41%	9.60%	10.60%
Mean	8.36%	9.68%	10.68%
<i>CAPM</i>			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	11.20%	11.28%	11.43%
Bloomberg Beta	10.69%	10.79%	10.98%
Long-term Avg. Beta	9.89%	10.02%	10.29%
Mean	10.59%	10.70%	10.90%
<i>ECAPM</i>			
Value Line Beta	11.64%	11.70%	11.82%
Bloomberg Beta	11.26%	11.33%	11.48%
Long-term Avg. Beta	10.66%	10.76%	10.96%
Mean	11.19%	11.26%	11.42%
<i>Bond Yield Plus Risk Premium</i>			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Risk Premium Results	9.37%	9.58%	9.97%
<i>Expected Earnings Analysis</i>			
	Mean		Median
Expected Earnings Analysis	10.31%		10.00%

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1

2 **96. Q. What is your conclusion with respect to NJAWC's proposed capital structure?**

3 A. I conclude that NJAWC's proposed rate-making capital structure composed of
4 54.56 percent common equity, and 45.44 percent long-term debt is reasonable when
5 compared to the capital structures of the companies in the proxy group and taking
6 in consideration the effect of the TCJA, and increased capital expenditures on cash
7 flows and therefore should be adopted.

8 **97. Q. Does this conclude your Direct Testimony?**

9 A. Yes.



Ann E. Bulkley
PRINCIPAL

Boston

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With more than 25 years of experience in the energy industry, Ms. Bulkley specializes in regulatory economics for the electric and natural gas sectors, including rate of return, cost of equity, and capital structure issues.

Ms. Bulkley has extensive state and federal regulatory experience, and she has provided expert testimony on the cost of capital in nearly 100 regulatory proceedings before 32 state regulatory commissions and the Federal Energy Regulatory Commission (FERC).

In addition to her regulatory experience, Ms. Bulkley has provided valuation and appraisal services for a variety of purposes, including the sale or acquisition of utility assets, regulated ratemaking, ad valorem tax disputes, and other litigation purposes. In addition, she has experience in the areas of contract and business unit valuation, strategic alliances, market restructuring, and regulatory and litigation support.

Ms. Bulkley is a Certified General Appraiser licensed in the Commonwealth of Massachusetts and the State of New Hampshire.

Prior to joining Brattle, Ms. Bulkley was a Senior Vice President at an economic consultancy, and also held senior positions at several consulting firms.

AREAS OF EXPERTISE

- Regulatory Economics, Finance & Rates
- Regulatory Investigations & Enforcement
- Tax Controversy & Transfer Pricing
- Electricity Litigation & Regulatory Disputes
- M&A Litigation

EDUCATION

- **Boston University**
MA in Economics
- **Simmons College**
BA in Economics and Finance

PROFESSIONAL EXPERIENCE

- **The Brattle Group (2002–Present)**
Principal
- **Concentric Energy Advisors, Inc. (2002–2001)**
Senior Vice President
Vice President
Assistant Vice President
Project Manager
- **Navigant Consulting, Inc. (1995–2002)**
Project Manager
- **Cahners Publishing Company (1995)**
Economist

SELECTED CONSULTING EXPERIENCE & EXPERT TESTIMONY

REGULATORY ANALYSIS AND RATEMAKING

Have provided a range of advisory services relating to regulatory policy analysis and many aspects of utility ratemaking, with specific services including:

- Cost of capital and return on equity testimony, cost of service and rate design analysis and testimony, development of ratemaking strategies
- Development of merchant function exit strategies
- Analysis and program development to address residual energy supply and/or provider of last resort obligations
- Stranded costs assessment and recovery
- Performance-based ratemaking analysis and design

- Many aspects of traditional utility ratemaking (e.g., rate design, rate base valuation)

COST OF CAPITAL

Have provided expert testimony on the cost of capital and capital structure in nearly 100 regulatory proceedings before state and federal regulatory commissions in the United States.

RATEMAKING

Have assisted several clients with analysis to support investor-owned and municipal utility clients in the preparation of rate cases. Sample engagements include:

- Assisted several investor-owned and municipal clients on cost allocation and rate design issues including the development of expert testimony supporting recommended rate alternatives.
- Worked with Canadian regulatory staff to establish filing requirements for a rate review of a newly regulated electric utility. Along with analyzing and evaluating rate application, attended hearings and conducted investigation of rate application for regulatory staff. And prepared, supported, and defended recommendations for revenue requirements and rates for the company. Additionally, developed rates for gas utility for transportation program and ancillary services.

VALUATION

Have provided valuation services to utility clients, unregulated generators, and private equity clients for a variety of purposes, including ratemaking, fair value, ad valorem tax, litigation and damages, and acquisition. Appraisal practices are consistent with the national standards established by the Uniform Standards of Professional Appraisal Practice.

Representative projects/clients have included:

- Prepared appraisals of electric utility transmission and distribution assets for ad valorem tax purposes.
- Prepared appraisals of several hydroelectric generating facilities for ad valorem tax purposes.
- Conducted appraisals of fossil fuel generating facilities for ad valorem tax purposes.
- Conducted appraisals of generating assets for the purposes of unwinding sale-leaseback agreements.
- For a confidential utility client, prepared valuation of fossil and nuclear generation assets for financing purposes for regulated utility client.

- Prepared a valuation of a portfolio of generation assets for a large energy utility to be used for strategic planning purposes. Valuation approach included an income approach, a real options analysis, and a risk analysis.
- Assisted clients in the restructuring of NUG contracts through the valuation of the underlying assets. Performed analysis to determine the option value of a plant in a competitively priced electricity market following the settlement of the NUG contract.
- Prepared market valuations of several purchase power contracts for large electric utilities in the sale of purchase power contracts. Assignment included an assessment of the regional power market, analysis of the underlying purchase power contracts, and a traditional discounted cash flow valuation approach, as well as a risk analysis. Analyzed bids from potential acquirers using income and risk analysis approaches. Prepared an assessment of the credit issues and value at risk for the selling utility.
- Prepared appraisal of a portfolio of generating facilities for a large electric utility to be used for financing purposes.
- Prepared fair value rate base analyses for Northern Indiana Public Service Company for several electric rate proceedings. Valuation approaches used in this project included income, cost, and comparable sales approaches.
- Prepared an appraisal of a fleet of fossil generating assets for a large electric utility to establish the value of assets transferred from utility property.
- Conducted due diligence on an electric transmission and distribution system as part of a buy-side due diligence team.
- Provided analytical support for and prepared appraisal reports of generation assets to be used in ad valorem tax disputes.
- Provided analytical support and prepared testimony regarding the valuation of electric distribution system assets in five communities in a condemnation proceeding.
- Prepared feasibility reports analyzing the expected net benefits resulting from municipal ownership of investor-owned utility operations.
- Prepared independent analyses of proposal for the proposed government condemnation of the investor-owned utilities in Maine and the formation of a public power district.
- Valued purchase power agreements in the transfer of assets to a deregulated electric market.

STRATEGIC AND FINANCIAL ADVISORY SERVICES

Have assisted several clients across North America with analytically-based strategic planning, due diligence, and financial advisory services.

Representative projects include:

- Preparation of feasibility studies for bond issuances for municipal and district steam clients.
- Assisted in the development of a generation strategy for an electric utility. Analyzed various NERC regions to identify potential market entry points. Evaluated potential competitors and alliance partners. Assisted in the development of gas and electric price forecasts. Developed a framework for the implementation of a risk management program.
- Assisted clients in identifying potential joint venture opportunities and alliance partners. Contacted interviewed and evaluated potential alliance candidates based on company-established criteria for several LDCs and marketing companies. Worked with several LDCs and unregulated marketing companies to establish alliances to enter into the retail energy market. Prepared testimony in support of several merger cases and participated in the regulatory process to obtain approval for these mergers.
- Assisted clients in several buy-side due diligence efforts, providing regulatory insight and developing valuation recommendations for acquisitions of both electric and gas properties.

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Arizona Corporation Commission				
Southwest Gas Corporation	12/21	Southwest Gas Corporation	Docket No. G-01551A-21-0368	Return on Equity
Arizona Public Service Company	10/19	Arizona Public Service Company	Docket No. E-01345A-19-0236	Return on Equity
Tucson Electric Power Company	04/19	Tucson Electric Power Company	Docket No. E-01933A-19-0028	Return on Equity
Tucson Electric Power Company	11/15	Tucson Electric Power Company	Docket No. E-01933A-15-0322	Return on Equity
UNS Electric	05/15	UNS Electric	Docket No. E-04204A-15-0142	Return on Equity
UNS Electric	12/12	UNS Electric	Docket No. E-04204A-12-0504	Return on Equity
Arkansas Public Service Commission				
Oklahoma Gas and Electric Co	10/21	Oklahoma Gas and Electric Co	Docket No. D-18-046-FR	Return on Equity

Appendix A

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Arkansas Oklahoma Gas Corporation	10/13	Arkansas Oklahoma Gas Corporation	Docket No. 13-078-U	Return on Equity
California Public Utilities Commission				
San Jose Water Company	05/21	San Jose Water Company	A2105004	Return on Equity
Colorado Public Utilities Commission				
Public Service Company of Colorado	07/21	Public Service Company of Colorado	21AL-0317E	Return on Equity
Public Service Company of Colorado	02/20	Public Service Company of Colorado	20AL-0049G	Return on Equity
Public Service Company of Colorado	05/19	Public Service Company of Colorado	19AL-0268E	Return on Equity
Public Service Company of Colorado	01/19	Public Service Company of Colorado	19AL-0063ST	Return on Equity
Atmos Energy Corporation	05/15	Atmos Energy Corporation	Docket No. 15AL-0299G	Return on Equity
Atmos Energy Corporation	04/14	Atmos Energy Corporation	Docket No. 14AL-0300G	Return on Equity
Atmos Energy Corporation	05/13	Atmos Energy Corporation	Docket No. 13AL-0496G	Return on Equity
Connecticut Public Utilities Regulatory Authority				
United Illuminating	05/21	United Illuminating	Docket No. 17-12-03RE11	Return on Equity
Connecticut Water Company	01/21	Connecticut Water Company	Docket No. 20-12-30	Return on Equity
Connecticut Natural Gas Corporation	06/18	Connecticut Natural Gas Corporation	Docket No. 18-05-16	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Yankee Gas Services Co. d/b/a Eversource Energy	06/18	Yankee Gas Services Co. d/b/a Eversource Energy	Docket No. 18-05-10	Return on Equity
The Southern Connecticut Gas Company	06/17	The Southern Connecticut Gas Company	Docket No. 17-05-42	Return on Equity
The United Illuminating Company	07/16	The United Illuminating Company	Docket No. 16-06-04	Return on Equity
Federal Energy Regulatory Commission				
Florida Gas Transmission	02/21	Florida Gas Transmission	Docket No. RP21-441	Return on Equity
TransCanyon	01/21	TransCanyon	Docket No. ER21-1065	Return on Equity
Duke Energy	12/20	Duke Energy	Docket No. EL21-9-000	Return on Equity
Wisconsin Electric Power Company	08/20	Wisconsin Electric Power Company	Docket No. EL20-57-000	Return on Equity
Panhandle Eastern Pipe Line Company, LP	10/19	Panhandle Eastern Pipe Line Company, LP	Docket Nos. RP19-78-000 RP19-78-001	Return on Equity
Panhandle Eastern Pipe Line Company, LP	08/19	Panhandle Eastern Pipe Line Company, LP	Docket Nos. RP19-1523	Return on Equity
Sea Robin Pipeline Company LLC	11/18	Sea Robin Pipeline Company LLC	Docket# RP19-352-000	Return on Equity
Tallgrass Interstate Gas Transmission	10/15	Tallgrass Interstate Gas Transmission	RP16-137	Return on Equity
Idaho Public Utilities Commission				

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
PacifiCorp d/b/a Rocky Mountain Power	05/21	PacifiCorp d/b/a Rocky Mountain Power	Case No. PAC-E-21-07	Return on Equity
Illinois Commerce Commission				
North Shore Gas Company	02/21	North Shore Gas Company	No. 20-0810	Return on Equity
Indiana Utility Regulatory Commission				
Indiana Michigan Power Co.	07/21	Indiana Michigan Power Co.	IURC Cause No. 45576	Return on Equity
Indiana Gas Company Inc.	12/20	Indiana Gas Company Inc.	IURC Cause No. 45468	Return on Equity
Southern Indiana Gas and Electric Company	10/20	Southern Indiana Gas and Electric Company	IURC Cause No. 45447	Return on Equity
Indiana and Michigan American Water Company	09/18	Indiana and Michigan American Water Company	IURC Cause No. 45142	Return on Equity
Indianapolis Power and Light Company	12/17	Indianapolis Power and Light Company	Cause No. 45029	Fair Value
Northern Indiana Public Service Company	09/17	Northern Indiana Public Service Company	Cause No. 44988	Fair Value
Indianapolis Power and Light Company	12/16	Indianapolis Power and Light Company	Cause No.44893	Fair Value
Northern Indiana Public Service Company	10/15	Northern Indiana Public Service Company	Cause No. 44688	Fair Value
Indianapolis Power and Light Company	09/15	Indianapolis Power and Light Company	Cause No. 44576 Cause No. 44602	Fair Value

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Kokomo Gas and Fuel Company	09/10	Kokomo Gas and Fuel Company	Cause No. 43942	Fair Value
Northern Indiana Fuel and Light Company, Inc.	09/10	Northern Indiana Fuel and Light Company, Inc.	Cause No. 43943	Fair Value
Iowa Department of Commerce Utilities Board				
Iowa-American Water Company	08/20	Iowa-American Water Company	Docket No. RPU-2020-0001	Return on Equity
Kansas Corporation Commission				
Atmos Energy Corporation	08/15	Atmos Energy Corporation	Docket No. 16-ATMG-079-RTS	Return on Equity
Kentucky Public Service Commission				
Kentucky American Water Company	11/18	Kentucky American Water Company	Docket No. 2018-00358	Return on Equity
Maine Public Utilities Commission				
Central Maine Power	10/18	Central Maine Power	Docket No. 2018-194	Return on Equity
Maryland Public Service Commission				
Maryland American Water Company	06/18	Maryland American Water Company	Case No. 9487	Return on Equity
Massachusetts Appellate Tax Board				
Hopkinton LNG Corporation	03/20	Hopkinton LNG Corporation	Docket No.	Valuation of LNG Facility

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
FirstLight Hydro Generating Company	06/17	FirstLight Hydro Generating Company	Docket No. F-325471 Docket No. F-325472 Docket No. F-325473 Docket No. F-325474	Valuation of Electric Generation Assets
Massachusetts Department of Public Utilities				
National Grid USA	11/20	Boston Gas Company	DPU 20-120	Return on Equity
Berkshire Gas Company	05/18	Berkshire Gas Company	DPU 18-40	Return on Equity
Unitil Corporation	01/04	Fitchburg Gas and Electric	DTE 03-52	Integrated Resource Plan; Gas Demand Forecast
Michigan Public Service Commission				
Michigan Gas Utilities Corporation	03/21	Michigan Gas Utilities Corporation	Case No. U-20718	Return on Equity
Wisconsin Electric Power Company	12/11	Wisconsin Electric Power Company	Case No. U-16830	Return on Equity
Michigan Tax Tribunal				
New Covert Generating Co., LLC.	03/18	The Township of New Covert Michigan	MTT Docket No. 000248TT and 16-001888-TT	Valuation of Electric Generation Assets
Covert Township	07/14	New Covert Generating Co., LLC.	Docket No. 399578	Valuation of Electric Generation Assets

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Minnesota Public Utilities Commission				
CenterPoint Energy Resources	11/21	CenterPoint Energy Resources	D-G-008/GR-21-435	Return on Equity
Allete, Inc. d/b/a Minnesota Power	11/21	Allete, Inc. d/b/a Minnesota Power	D-E-015/GR-21-630	Return on Equity
Otter Tail Power Company	11/20	Otter Tail Power Company	E017/GR-20-719	Return on Equity
Allete, Inc. d/b/a Minnesota Power	11/19	Allete, Inc. d/b/a Minnesota Power	E015/GR-19-442	Return on Equity
CenterPoint Energy Resources Corporation d/b/a CenterPoint Energy Minnesota Gas	10/19	CenterPoint Energy Resources Corporation d/b/a CenterPoint Energy Minnesota Gas	G-008/GR-19-524	Return on Equity
Great Plains Natural Gas Co.	09/19	Great Plains Natural Gas Co.	Docket No. G004/GR-19-511	Return on Equity
Minnesota Energy Resources Corporation	10/17	Minnesota Energy Resources Corporation	Docket No. G011/GR-17-563	Return on Equity
Missouri Public Service Commission				
Ameren Missouri	03/21	Ameren Missouri	Docket No. ER-2021-0240 Docket No. GR-2021-0241	Return on Equity
Missouri American Water Company	06/20	Missouri American Water Company	Case No. WR-2020-0344 Case No. SR-2020-0345	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Missouri American Water Company	06/17	Missouri American Water Company	Case No. WR-17-0285 Case No. SR-17-0286	Return on Equity
Montana Public Service Commission				
Montana-Dakota Utilities Co.	06/20	Montana-Dakota Utilities Co.	D2020.06.076	Return on Equity
Montana-Dakota Utilities Co.	09/18	Montana-Dakota Utilities Co.	D2018.9.60	Return on Equity
New Hampshire - Board of Tax and Land Appeals				
Public Service Company of New Hampshire d/b/a Eversource Energy	11/19 12/19	Public Service Company of New Hampshire d/b/a Eversource Energy	Master Docket No. 28873-14-15-16-17PT	Valuation of Utility Property and Generating Assets
New Hampshire Public Utilities Commission				
Public Service Company of New Hampshire	05/19	Public Service Company of New Hampshire	DE-19-057	Return on Equity
New Hampshire-Merrimack County Superior Court				
Northern New England Telephone Operations, LLC d/b/a FairPoint Communications, NNE	04/18	Northern New England Telephone Operations, LLC d/b/a FairPoint Communications, NNE	220-2012-CV-1100	Valuation of Utility Property
New Hampshire-Rockingham Superior Court				
Eversource Energy	05/18	Public Service Commission of New Hampshire	218-2016-CV-00899 218-2017-CV-00917	Valuation of Utility Property
New Jersey Board of Public Utilities				

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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Public Service Electric and Gas Company	10/20	Public Service Electric and Gas Company	EO18101115	Return on Equity
New Jersey American Water Company, Inc.	12/19	New Jersey American Water Company, Inc.	WR19121516	Return on Equity
Public Service Electric and Gas Company	04/19	Public Service Electric and Gas Company	EO18060629 GO18060630	Return on Equity
Public Service Electric and Gas Company	02/18	Public Service Electric and Gas Company	GR17070776	Return on Equity
Public Service Electric and Gas Company	01/18	Public Service Electric and Gas Company	ER18010029 GR18010030	Return on Equity
New Mexico Public Regulation Commission				
Southwestern Public Service Company	07/19	Southwestern Public Service Company	19-00170-UT	Return on Equity
Southwestern Public Service Company	10/17	Southwestern Public Service Company	Case No. 17-00255-UT	Return on Equity
Southwestern Public Service Company	12/16	Southwestern Public Service Company	Case No. 16-00269-UT	Return on Equity
Southwestern Public Service Company	10/15	Southwestern Public Service Company	Case No. 15-00296-UT	Return on Equity
Southwestern Public Service Company	06/15	Southwestern Public Service Company	Case No. 15-00139-UT	Return on Equity
New York State Department of Public Service				
Corning Natural Gas Corporation	07/21	Corning Natural Gas Corporation	Case No. 21-G-0394	Return on Equity
Central Hudson Gas and Electric Corporation	08/20	Central Hudson Gas and Electric Corporation	Electric 20-E-0428 Gas 20-G-0429	Return on Equity
Niagara Mohawk Power Corporation	07/20	National Grid USA	Case No. 20-E-0380 20-G-0381	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Corning Natural Gas Corporation	02/20	Corning Natural Gas Corporation	Case No. 20-G-0101	Return on Equity
New York State Electric and Gas Company Rochester Gas and Electric	05/19	New York State Electric and Gas Company Rochester Gas and Electric	19-E-0378 19-G-0379 19-E-0380 19-G-0381	Return on Equity
Brooklyn Union Gas Company d/b/a National Grid NY KeySpan Gas East Corporation d/b/a National Grid	04/19	Brooklyn Union Gas Company d/b/a National Grid NY KeySpan Gas East Corporation d/b/a National Grid	19-G-0309 19-G-0310	Return on Equity
Central Hudson Gas and Electric Corporation	07/17	Central Hudson Gas and Electric Corporation	Electric 17-E-0459 Gas 17-G-0460	Return on Equity
Niagara Mohawk Power Corporation	04/17	National Grid USA	Case No. 17-E-0238 17-G-0239	Return on Equity
Corning Natural Gas Corporation	06/16	Corning Natural Gas Corporation	Case No. 16-G-0369	Return on Equity
National Fuel Gas Company	04/16	National Fuel Gas Company	Case No. 16-G-0257	Return on Equity
KeySpan Energy Delivery	01/16	KeySpan Energy Delivery	Case No. 15-G-0058 Case No. 15-G-0059	Return on Equity
New York State Electric and Gas Company Rochester Gas and Electric	05/15	New York State Electric and Gas Company Rochester Gas and Electric	Case No. 15-E-0283 Case No. 15-G-0284 Case No. 15-E-0285 Case No. 15-G-0286	Return on Equity
North Dakota Public Service Commission				

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Montana-Dakota Utilities Co.	08/20	Montana-Dakota Utilities Co.	C-PU-20-379	Return on Equity
Northern States Power Company	12/12	Northern States Power Company	C-PU-12-813	Return on Equity
Northern States Power Company	12/10	Northern States Power Company	C-PU-10-657	Return on Equity
Oklahoma Corporation Commission				
Arkansas Oklahoma Gas Corporation	01/13	Arkansas Oklahoma Gas Corporation	Cause No. PUD 201200236	Return on Equity
Oregon Public Service Commission				
PacifiCorp d/b/a Pacific Power & Light	02/20	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-374	Return on Equity
Pennsylvania Public Utility Commission				
American Water Works Company Inc.	04/20	Pennsylvania-American Water Company	Docket No. R-2020-3019369 (water) Docket No. R-2020-3019371 (wastewater)	Return on Equity
American Water Works Company Inc.	04/17	Pennsylvania-American Water Company	Docket No. R-2017-2595853	Return on Equity
South Dakota Public Utilities Commission				
Northern States Power Company	06/14	Northern States Power Company	Docket No. EL14-058	Return on Equity
Texas Public Utility Commission				
Southwestern Public Service Commission	08/19	Southwestern Public Service Commission	Docket No. D-49831	Return on Equity
Southwestern Public Service Company	01/14	Southwestern Public Service Company	Docket No. 42004	Return on Equity

SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Utah Public Service Commission				
PacifiCorp d/b/a Rocky Mountain Power	05/20	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20-035-04	Return on Equity
Virginia State Corporation Commission				
Virginia American Water Company, Inc.	11/21	Virginia American Water Company, Inc.	Docket No. PUR-2021-00255	Return on Equity
Virginia American Water Company, Inc.	11/18	Virginia American Water Company, Inc.	Docket No. PUR-2018-00175	Return on Equity
Washington Utilities Transportation Commission				
Cascade Natural Gas Corporation	06/20	Cascade Natural Gas Corporation	Docket No. UG-200568	Return on Equity
PacifiCorp d/b/a Pacific Power & Light	12/19	PacifiCorp d/b/a Pacific Power & Light	Docket No. UE-191024	Return on Equity
Cascade Natural Gas Corporation	04/19	Cascade Natural Gas Corporation	Docket No. UG-190210	Return on Equity
West Virginia Public Service Commission				
West Virginia American Water Company	04/21	West Virginia American Water Company	Case No. 21-02369-W-42T	Return on Equity
West Virginia American Water Company	04/18	West Virginia American Water Company	Case No. 18-0573-W-42T Case No. 18-0576-S-42T	Return on Equity
Wisconsin Public Service Commission				
Wisconsin Electric Power Company and Wisconsin Gas LLC	03/19	Wisconsin Electric Power Company and Wisconsin Gas LLC	Docket No. 05-UR-109	Return on Equity
Wisconsin Public Service Corp.	03/19	Wisconsin Public Service Corp.	6690-UR-126	Return on Equity

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SPONSOR	DATE	CASE/APPLICANT	DOCKET /CASE NO.	SUBJECT
Wyoming Public Service Commission				
PacifiCorp d/b/a Rocky Mountain Power	03/20	PacifiCorp d/b/a Rocky Mountain Power	Docket No. 20000-578-ER-20	Return on Equity
Montana-Dakota Utilities Co.	05/19	Montana-Dakota Utilities Co.	30013-351-GR-19	Return on Equity

CERTIFICATIONS/ACCREDITATIONS

Certified General Appraiser, licensed in the Commonwealth of Massachusetts and the State of New Hampshire

SUMMARY OF ROE ANALYSES RESULTS

Constant Growth DCF - Mean			
	Mean Low	Mean	Mean High
30-Day Average	7.90%	9.53%	11.26%
90-Day Average	7.86%	9.50%	11.23%
180-Day Average	7.82%	9.45%	11.18%
Constant Growth Average	7.86%	9.49%	11.22%
	Median Low	Median	Median High
30-Day Average	8.33%	9.79%	10.71%
90-Day Average	8.34%	9.66%	10.74%
180-Day Average	8.41%	9.60%	10.60%
Constant Growth Average	8.36%	9.68%	10.68%
CAPM			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	11.20%	11.28%	11.43%
Bloomberg Beta	10.69%	10.79%	10.98%
Long-term Avg. Beta	9.89%	10.02%	10.29%
Average	10.59%	10.70%	10.90%
ECAPM			
Value Line Beta	11.64%	11.70%	11.82%
Bloomberg Beta	11.26%	11.33%	11.48%
Long-term Avg. Beta	10.66%	10.76%	10.96%
Average	11.19%	11.26%	11.42%
Treasury Yield Plus Risk Premium			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Risk Premium Analysis	9.37%	9.58%	9.97%
Risk Premium Mean Result	9.64%		
Expected Earnings Analysis			
	Mean		Median
Expected Earnings Analysis	10.31%		10.00%

Notes:

[1] Constant Growth DCF analysis - Average w/ Exclusions represents the DCF results excluding the results for individual companies that did not meet the minimum threshold of 7 percent.

PROXY GROUP SCREENING DATA AND RESULTS - FINAL PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Company	Ticker	Dividends	S&P Credit Rating Between BBB- and AAA	% Regulated Operating Income > 60%	Announced Merger	Covered by More Than 1 Analyst	Positive Growth Rates from at least two sources (Value Line, Yahoo! First Call, and Zacks)	Electric Companies with < 10% Generation	Electric Companies with Water Operations
American States Water Company	AWR	Yes	A+	81.80%	No	Yes	Yes	n/a	n/a
Atmos Energy Corporation	ATO	Yes	A-	100.00%	No	Yes	Yes	n/a	n/a
California Water Service Group	CWT	Yes	A+	97.67%	No	Yes	Yes	n/a	n/a
Essential Utilities, Inc.	WTRG	Yes	A	97.13%	No	Yes	Yes	n/a	n/a
Eversource Energy	ES	Yes	A-	91.88%	No	Yes	Yes	0.28%	Yes
Middlesex Water Company	MSEX	Yes	A	91.37%	No	Yes	Yes	n/a	n/a
NiSource Inc.	NI	Yes	BBB+	99.56%	No	Yes	Yes	n/a	n/a
New Jersey Resources Corporation	NJR	Yes	A+	67.77%	No	Yes	Yes	n/a	n/a
Northwest Natural Gas Company	NWN	Yes	A+	99.84%	No	Yes	Yes	n/a	n/a
ONE Gas, Inc.	OGS	Yes	BBB+	100.00%	No	Yes	Yes	n/a	n/a
SJW Group	SJW	Yes	A-	99.71%	No	Yes	Yes	n/a	n/a
South Jersey Industries, Inc.	SJI	Yes	BBB	97.52%	No	Yes	Yes	n/a	n/a
Spire, Inc.	SR	Yes	A-	97.04%	No	Yes	Yes	n/a	n/a
York Water Company	YORW	Yes	A-	100.00%	No	Yes	Yes	n/a	n/a

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional

[3] Source: Form 10-K's for 2020, 2019, and 2018

[4] Source: S&P Capital IQ Pro Financial News Releases

[5] Source: Yahoo! Finance and Zacks

[6] Source: Yahoo! Finance, Value Line Investment Survey, and Zacks

[7] Source: S&P Capital IQ Pro

[8] Source: S&P Capital IQ Pro

30-DAY CONSTANT GROWTH DCF -- NJAWC PROXY GROUP

All Proxy Group												
		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
							Yahoo!					
		Annualized	Stock	Dividend	Expected	Value Line	Finance	Zacks	Average			
Company	Ticker	Dividend	Price	Yield	Yield	Growth	Earnings	Earnings	Growth Rate	Low ROE	Mean ROE	High ROE
American States Water Company	AWR	\$1.46	\$92.43	1.58%	1.63%	6.50%	6.70%	n/a	6.60%	8.13%	8.23%	8.33%
Atmos Energy Corporation	ATO	\$2.72	\$93.79	2.90%	3.00%	7.00%	7.40%	7.20%	7.20%	10.00%	10.20%	10.41%
California Water Service Group	CWT	\$0.92	\$62.62	1.47%	1.54%	7.00%	11.70%	n/a	9.35%	8.52%	10.89%	13.26%
Essential Utilities, Inc.	WTRG	\$1.07	\$47.39	2.26%	2.35%	10.00%	6.40%	6.20%	7.53%	8.53%	9.88%	12.38%
Eversource Energy	ES	\$2.41	\$84.47	2.85%	2.94%	6.50%	6.47%	6.30%	6.42%	9.24%	9.37%	9.45%
Middlesex Water Company	MSEX	\$1.16	\$105.96	1.09%	1.12%	5.00%	2.70%	n/a	3.85%	3.81%	4.97%	6.12%
NiSource Inc.	NI	\$0.88	\$25.07	3.51%	3.62%	8.50%	3.52%	6.70%	6.24%	7.09%	9.86%	12.16%
New Jersey Resources Corporation	NJR	\$1.45	\$38.30	3.79%	3.88%	1.50%	6.00%	7.10%	4.87%	5.31%	8.74%	11.02%
Northwest Natural Gas Company	NWN	\$1.93	\$45.93	4.20%	4.32%	5.50%	5.70%	5.00%	5.40%	9.31%	9.72%	10.02%
ONE Gas, Inc.	OGS	\$2.32	\$67.96	3.41%	3.50%	6.50%	2.90%	5.00%	4.80%	6.36%	8.30%	10.02%
SJW Group	SJW	\$1.36	\$69.78	1.95%	2.04%	13.00%	5.70%	n/a	9.35%	7.70%	11.39%	15.08%
South Jersey Industries, Inc.	SJI	\$1.21	\$23.42	5.17%	5.36%	11.50%	5.20%	5.60%	7.43%	10.50%	12.79%	16.96%
Spire, Inc.	SR	\$2.60	\$62.88	4.13%	4.29%	10.00%	7.31%	5.30%	7.54%	9.54%	11.83%	14.34%
York Water Company	YORW	\$0.75	\$48.12	1.56%	1.60%	6.50%	4.90%	n/a	5.70%	6.50%	7.30%	8.11%
Mean				2.85%	2.94%	7.50%	5.90%	6.04%	6.59%	7.90%	9.53%	11.26%
Median				2.88%	2.97%	6.75%	5.85%	6.20%	6.51%	8.33%	9.79%	10.71%

Notes:

- [1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 30-day average as of November 30, 2021
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

90-DAY CONSTANT GROWTH DCF -- NJAWC PROXY GROUP

All Proxy Group												
		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line Earnings Growth	Yahoo! Finance Earnings Growth	Zacks Earnings Growth	Average Growth Rate	Low ROE	Mean ROE	High ROE
American States Water Company	AWR	\$1.46	\$90.33	1.62%	1.67%	6.50%	6.70%	n/a	6.60%	8.17%	8.27%	8.37%
Atmos Energy Corporation	ATO	\$2.72	\$94.57	2.88%	2.98%	7.00%	7.40%	7.20%	7.20%	9.98%	10.18%	10.38%
California Water Service Group	CWT	\$0.92	\$62.25	1.48%	1.55%	7.00%	11.70%	n/a	9.35%	8.53%	10.90%	13.26%
Essential Utilities, Inc.	WTRG	\$1.07	\$48.01	2.23%	2.32%	10.00%	6.40%	6.20%	7.53%	8.50%	9.85%	12.35%
Eversource Energy	ES	\$2.41	\$86.41	2.79%	2.88%	6.50%	6.47%	6.30%	6.42%	9.18%	9.30%	9.38%
Middlesex Water Company	MSEX	\$1.16	\$106.33	1.09%	1.11%	5.00%	2.70%	n/a	3.85%	3.81%	4.96%	6.12%
NiSource Inc.	NI	\$0.88	\$24.90	3.53%	3.64%	8.50%	3.52%	6.70%	6.24%	7.12%	9.88%	12.18%
New Jersey Resources Corporation	NJR	\$1.45	\$37.60	3.86%	3.95%	1.50%	6.00%	7.10%	4.87%	5.39%	8.82%	11.09%
Northwest Natural Gas Company	NWN	\$1.93	\$48.65	3.97%	4.07%	5.50%	5.70%	5.00%	5.40%	9.07%	9.47%	9.78%
ONE Gas, Inc.	OGS	\$2.32	\$69.27	3.35%	3.43%	6.50%	2.90%	5.00%	4.80%	6.30%	8.23%	9.96%
SJW Group	SJW	\$1.36	\$68.63	1.98%	2.07%	13.00%	5.70%	n/a	9.35%	7.74%	11.42%	15.11%
South Jersey Industries, Inc.	SJI	\$1.21	\$23.70	5.10%	5.29%	11.50%	5.20%	5.60%	7.43%	10.44%	12.73%	16.90%
Spire, Inc.	SR	\$2.60	\$65.38	3.98%	4.13%	10.00%	7.31%	5.30%	7.54%	9.38%	11.66%	14.18%
York Water Company	YORW	\$0.75	\$48.04	1.56%	1.60%	6.50%	4.90%	n/a	5.70%	6.50%	7.30%	8.11%
Mean				2.82%	2.91%	7.50%	5.90%	6.04%	6.59%	7.86%	9.50%	11.23%
Median				2.83%	2.93%	6.75%	5.85%	6.20%	6.51%	8.34%	9.66%	10.74%

Notes:

- [1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 90-day average as of November 30, 2021
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

180-DAY CONSTANT GROWTH DCF -- NJAWC PROXY GROUP

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	All Proxy Group	
		Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line Earnings Growth	Yahoo! Finance Earnings Growth	Zacks Earnings Growth	Average Growth Rate	Low ROE	Mean ROE	High ROE
American States Water Company	AWR	\$1.46	\$84.96	1.72%	1.78%	6.50%	6.70%	n/a	6.60%	8.27%	8.38%	8.48%
Atmos Energy Corporation	ATO	\$2.72	\$97.01	2.80%	2.90%	7.00%	7.40%	7.20%	7.20%	9.90%	10.10%	10.31%
California Water Service Group	CWT	\$0.92	\$59.87	1.54%	1.61%	7.00%	11.70%	n/a	9.35%	8.59%	10.96%	13.33%
Essential Utilities, Inc.	WTRG	\$1.07	\$47.32	2.27%	2.35%	10.00%	6.40%	6.20%	7.53%	8.54%	9.89%	12.38%
Eversource Energy	ES	\$2.41	\$85.28	2.83%	2.92%	6.50%	6.47%	6.30%	6.42%	9.22%	9.34%	9.42%
Middlesex Water Company	MSEX	\$1.16	\$94.90	1.22%	1.25%	5.00%	2.70%	n/a	3.85%	3.94%	5.10%	6.25%
NiSource Inc.	NI	\$0.88	\$25.04	3.51%	3.62%	8.50%	3.52%	6.70%	6.24%	7.10%	9.86%	12.16%
New Jersey Resources Corporation	NJR	\$1.45	\$39.56	3.67%	3.75%	1.50%	6.00%	7.10%	4.87%	5.19%	8.62%	10.90%
Northwest Natural Gas Company	NWN	\$1.93	\$51.09	3.78%	3.88%	5.50%	5.70%	5.00%	5.40%	8.87%	9.28%	9.59%
ONE Gas, Inc.	OGS	\$2.32	\$72.71	3.19%	3.27%	6.50%	2.90%	5.00%	4.80%	6.14%	8.07%	9.79%
SJW Group	SJW	\$1.36	\$66.56	2.04%	2.14%	13.00%	5.70%	n/a	9.35%	7.80%	11.49%	15.18%
South Jersey Industries, Inc.	SJI	\$1.21	\$24.54	4.93%	5.11%	11.50%	5.20%	5.60%	7.43%	10.26%	12.55%	16.71%
Spire, Inc.	SR	\$2.60	\$69.62	3.73%	3.88%	10.00%	7.31%	5.30%	7.54%	9.13%	11.41%	13.92%
York Water Company	YORW	\$0.75	\$48.46	1.55%	1.59%	6.50%	4.90%	n/a	5.70%	6.48%	7.29%	8.10%
Mean				2.77%	2.86%	7.50%	5.90%	6.04%	6.59%	7.82%	9.45%	11.18%
Median				2.81%	2.91%	6.75%	5.85%	6.20%	6.51%	8.41%	9.60%	10.60%

Notes:

- [1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals 180-day average as of November 30, 2021
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VL BETA

$$K = R_f + \beta (R_m - R_f)$$

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

Company	Ticker	[1] Current 30-day average of 30-year U.S. Treasury bond yield	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm - Rf)	[5] CAPM ROE	[6] ECAPM ROE
		yield	Beta (β)	Return (Rm)	(Rm - Rf)	CAPM ROE	ROE
American States Water Company	AWR	1.97%	0.65	12.97%	11.00%	9.12%	10.08%
Atmos Energy Corporation	ATO	1.97%	0.80	12.97%	11.00%	10.77%	11.32%
California Water Service Group	CWT	1.97%	0.65	12.97%	11.00%	9.12%	10.08%
Essential Utilities, Inc.	WTRG	1.97%	1.00	12.97%	11.00%	12.97%	12.97%
Eversource Energy	ES	1.97%	0.90	12.97%	11.00%	11.87%	12.14%
Middlesex Water Company	MSEX	1.97%	0.70	12.97%	11.00%	9.67%	10.49%
NiSource Inc.	NI	1.97%	0.85	12.97%	11.00%	11.32%	11.73%
New Jersey Resources Corporation	NJR	1.97%	1.00	12.97%	11.00%	12.97%	12.97%
Northwest Natural Gas Company	NWN	1.97%	0.85	12.97%	11.00%	11.32%	11.73%
ONE Gas, Inc.	OGS	1.97%	0.80	12.97%	11.00%	10.77%	11.32%
SJW Group	SJW	1.97%	0.80	12.97%	11.00%	10.77%	11.32%
South Jersey Industries, Inc.	SJI	1.97%	1.05	12.97%	11.00%	13.52%	13.38%
Spire, Inc.	SR	1.97%	0.85	12.97%	11.00%	11.32%	11.73%
York Water Company	YORW	1.97%	0.85	12.97%	11.00%	11.32%	11.73%
Mean			0.84			11.20%	11.64%
Median						11.32%	11.73%

Notes:

- [1] Source: Bloomberg Professional
 [2] Source: Value Line reports
 [3] Source: Schedule AEB-6
 [4] Equals [3] - [1]
 [5] Equals [1] + [2] x [4]
 [6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & VL BETA

$$K = R_f + \beta (R_m - R_f)$$

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

Company	Ticker	[1] Near-term projected 30-year U.S. Treasury bond yield (Q1 2022 - Q1 2023)	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm - Rf)	[5] CAPM ROE	[6] ECAPM ROE
		yield (Q1 2022 - Q1 2023)	Beta (β)	Return (Rm)	(Rm - Rf)	CAPM ROE	ROE
American States Water Company	AWR	2.46%	0.65	12.97%	10.51%	9.29%	10.21%
Atmos Energy Corporation	ATO	2.46%	0.80	12.97%	10.51%	10.87%	11.39%
California Water Service Group	CWT	2.46%	0.65	12.97%	10.51%	9.29%	10.21%
Essential Utilities, Inc.	WTRG	2.46%	1.00	12.97%	10.51%	12.97%	12.97%
Eversource Energy	ES	2.46%	0.90	12.97%	10.51%	11.92%	12.18%
Middlesex Water Company	MSEX	2.46%	0.70	12.97%	10.51%	9.82%	10.60%
NiSource Inc.	NI	2.46%	0.85	12.97%	10.51%	11.39%	11.79%
New Jersey Resources Corporation	NJR	2.46%	1.00	12.97%	10.51%	12.97%	12.97%
Northwest Natural Gas Company	NWN	2.46%	0.85	12.97%	10.51%	11.39%	11.79%
ONE Gas, Inc.	OGS	2.46%	0.80	12.97%	10.51%	10.87%	11.39%
SJW Group	SJW	2.46%	0.80	12.97%	10.51%	10.87%	11.39%
South Jersey Industries, Inc.	SJI	2.46%	1.05	12.97%	10.51%	13.45%	13.36%
Spire, Inc.	SR	2.46%	0.85	12.97%	10.51%	11.39%	11.79%
York Water Company	YORW	2.46%	0.85	12.97%	10.51%	11.39%	11.79%
Mean						11.28%	11.70%
Median						11.39%	11.79%

Notes:

- [1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 12, December 1, 2021, at 2
 [2] Source: Value Line reports
 [3] Source: Schedule AEB-6
 [4] Equals [3] - [1]
 [5] Equals [1] + [2] x [4]
 [6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & VL BETA

$$K = R_f + \beta (R_m - R_f)$$

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

Company	Ticker	[1] Projected 30-year U.S. Treasury bond yield (2023 - 2027)	[2] Beta (β)	[3] Market Return (Rm)	[4] Market Risk Premium (Rm - Rf)	[5] CAPM ROE	[6] ECAPM ROE
		yield (2023 - 2027)	Beta (β)	Return (Rm)	(Rm - Rf)	CAPM ROE	ROE
American States Water Company	AWR	3.40%	0.65	12.97%	9.57%	9.62%	10.46%
Atmos Energy Corporation	ATO	3.40%	0.80	12.97%	9.57%	11.06%	11.53%
California Water Service Group	CWT	3.40%	0.65	12.97%	9.57%	9.62%	10.46%
Essential Utilities, Inc.	WTRG	3.40%	1.00	12.97%	9.57%	12.97%	12.97%
Eversource Energy	ES	3.40%	0.90	12.97%	9.57%	12.01%	12.25%
Middlesex Water Company	MSEX	3.40%	0.70	12.97%	9.57%	10.10%	10.82%
NiSource Inc.	NI	3.40%	0.85	12.97%	9.57%	11.53%	11.89%
New Jersey Resources Corporation	NJR	3.40%	1.00	12.97%	9.57%	12.97%	12.97%
Northwest Natural Gas Company	NWN	3.40%	0.85	12.97%	9.57%	11.53%	11.89%
ONE Gas, Inc.	OGS	3.40%	0.80	12.97%	9.57%	11.06%	11.53%
SJW Group	SJW	3.40%	0.80	12.97%	9.57%	11.06%	11.53%
South Jersey Industries, Inc.	SJI	3.40%	1.05	12.97%	9.57%	13.45%	13.33%
Spire, Inc.	SR	3.40%	0.85	12.97%	9.57%	11.53%	11.89%
York Water Company	YORW	3.40%	0.85	12.97%	9.57%	11.53%	11.89%
Mean						11.43%	11.82%
Median						11.53%	11.89%

Notes:

- [1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 12, December 1, 2021, at 14
 [2] Source: Value Line reports
 [3] Source: Schedule AEB-6
 [4] Equals [3] - [1]
 [5] Equals [1] + [2] x [4]
 [6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL – CURRENT RISK-FREE RATE & BLOOMBERG BETA

$$K = R_f + \beta (R_m - R_f)$$

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
		Current 30-day average of 30-year U.S. Treasury bond		Market Return (Rm)	Market Risk Premium (Rm – Rf)	CAPM ROE	ECAPM ROE
Company	Ticker	yield	Beta (β)				
American States Water Company	AWR	1.97%	0.64	12.97%	11.00%	9.05%	10.03%
Atmos Energy Corporation	ATO	1.97%	0.76	12.97%	11.00%	10.29%	10.96%
California Water Service Group	CWT	1.97%	0.68	12.97%	11.00%	9.46%	10.34%
Essential Utilities, Inc.	WTRG	1.97%	0.85	12.97%	11.00%	11.30%	11.72%
Eversource Energy	ES	1.97%	0.82	12.97%	11.00%	11.04%	11.52%
Middlesex Water Company	MSEX	1.97%	0.78	12.97%	11.00%	10.53%	11.14%
NiSource Inc.	NI	1.97%	0.82	12.97%	11.00%	10.99%	11.48%
New Jersey Resources Corporation	NJR	1.97%	0.83	12.97%	11.00%	11.14%	11.60%
Northwest Natural Gas Company	NWN	1.97%	0.73	12.97%	11.00%	10.00%	10.75%
ONE Gas, Inc.	OGS	1.97%	0.83	12.97%	11.00%	11.14%	11.60%
SJW Group	SJW	1.97%	0.85	12.97%	11.00%	11.29%	11.71%
South Jersey Industries, Inc.	SJI	1.97%	0.84	12.97%	11.00%	11.24%	11.68%
Spire, Inc.	SR	1.97%	0.78	12.97%	11.00%	10.54%	11.15%
York Water Company	YORW	1.97%	0.87	12.97%	11.00%	11.57%	11.92%
Mean						10.69%	11.26%
Median						11.01%	11.50%

Notes:

- [1] Source: Bloomberg Professional
 [2] Source: Bloomberg Professional
 [3] Source: Schedule AEB-6
 [4] Equals [3] - [1]
 [5] Equals [1] + [2] x [4]
 [6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL – NEAR-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$$K = R_f + \beta (R_m - R_f)$$

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
		Near-term projected 30-year U.S. Treasury bond yield (Q1 2022 - Q1 2023)		Market Return (Rm)	Market Risk Premium (Rm – Rf)	CAPM ROE	ECAPM ROE
Company	Ticker		Beta (β)				
American States Water Company	AWR	2.46%	0.64	12.97%	10.51%	9.23%	10.16%
Atmos Energy Corporation	ATO	2.46%	0.76	12.97%	10.51%	10.41%	11.05%
California Water Service Group	CWT	2.46%	0.68	12.97%	10.51%	9.62%	10.46%
Essential Utilities, Inc.	WTRG	2.46%	0.85	12.97%	10.51%	11.38%	11.77%
Eversource Energy	ES	2.46%	0.82	12.97%	10.51%	11.13%	11.59%
Middlesex Water Company	MSEX	2.46%	0.78	12.97%	10.51%	10.64%	11.22%
NiSource Inc.	NI	2.46%	0.82	12.97%	10.51%	11.08%	11.55%
New Jersey Resources Corporation	NJR	2.46%	0.83	12.97%	10.51%	11.22%	11.66%
Northwest Natural Gas Company	NWN	2.46%	0.73	12.97%	10.51%	10.14%	10.84%
ONE Gas, Inc.	OGS	2.46%	0.83	12.97%	10.51%	11.23%	11.66%
SJW Group	SJW	2.46%	0.85	12.97%	10.51%	11.37%	11.77%
South Jersey Industries, Inc.	SJI	2.46%	0.84	12.97%	10.51%	11.32%	11.73%
Spire, Inc.	SR	2.46%	0.78	12.97%	10.51%	10.65%	11.23%
York Water Company	YORW	2.46%	0.87	12.97%	10.51%	11.63%	11.96%
Mean						10.79%	11.33%
Median						11.10%	11.57%

Notes:

- [1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 12, December 1, 2021, at 2
 [2] Source: Bloomberg Professional
 [3] Source: Schedule AEB-6
 [4] Equals [3] - [1]
 [5] Equals [1] + [2] x [4]
 [6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL – LONG-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$$K = R_f + \beta (R_m - R_f)$$

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
		Projected 30-year U.S. Treasury bond yield (2023 - 2027)		Market Return (Rm)	Market Risk Premium (Rm – Rf)	CAPM ROE	ECAPM ROE
Company	Ticker		Beta (β)				
American States Water Company	AWR	3.40%	0.64	12.97%	9.57%	9.56%	10.41%
Atmos Energy Corporation	ATO	3.40%	0.76	12.97%	9.57%	10.64%	11.22%
California Water Service Group	CWT	3.40%	0.68	12.97%	9.57%	9.92%	10.68%
Essential Utilities, Inc.	WTRG	3.40%	0.85	12.97%	9.57%	11.52%	11.88%
Eversource Energy	ES	3.40%	0.82	12.97%	9.57%	11.29%	11.71%
Middlesex Water Company	MSEX	3.40%	0.78	12.97%	9.57%	10.85%	11.38%
NiSource Inc.	NI	3.40%	0.82	12.97%	9.57%	11.25%	11.68%
New Jersey Resources Corporation	NJR	3.40%	0.83	12.97%	9.57%	11.38%	11.77%
Northwest Natural Gas Company	NWN	3.40%	0.73	12.97%	9.57%	10.39%	11.03%
ONE Gas, Inc.	OGS	3.40%	0.83	12.97%	9.57%	11.38%	11.78%
SJW Group	SJW	3.40%	0.85	12.97%	9.57%	11.51%	11.88%
South Jersey Industries, Inc.	SJI	3.40%	0.84	12.97%	9.57%	11.47%	11.84%
Spire, Inc.	SR	3.40%	0.78	12.97%	9.57%	10.85%	11.38%
York Water Company	YORW	3.40%	0.87	12.97%	9.57%	11.75%	12.05%
Mean						10.98%	11.48%
Median						11.27%	11.69%

Notes:

- [1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 12, December 1, 2021, at 14
 [2] Source: Bloomberg Professional
 [3] Source: Schedule AEB-6
 [4] Equals [3] - [1]
 [5] Equals [1] + [2] x [4]
 [6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VALUE LINE LT AVERAGE BETA

$$K = R_f + \beta (R_m - R_f)$$

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
		Current 30-day average of 30-year U.S. Treasury bond		Market Return (Rm)	Market Risk Premium (Rm - Rf)	CAPM ROE	ECAPM ROE
Company	Ticker	yield	Beta (β)				
American States Water Company	AWR	1.97%	0.71	12.97%	11.00%	9.78%	10.58%
Atmos Energy Corporation	ATO	1.97%	0.68	12.97%	11.00%	9.45%	10.33%
California Water Service Group	CWT	1.97%	0.73	12.97%	11.00%	10.00%	10.74%
Essential Utilities, Inc.	WTRG	1.97%	0.73	12.97%	11.00%	10.00%	10.74%
Eversource Energy	ES	1.97%	0.68	12.97%	11.00%	9.45%	10.33%
Middlesex Water Company	MSEX	1.97%	0.73	12.97%	11.00%	10.00%	10.74%
NiSource Inc.	NI	1.97%	0.63	12.97%	11.00%	8.84%	9.88%
New Jersey Resources Corporation	NJR	1.97%	0.79	12.97%	11.00%	10.66%	11.24%
Northwest Natural Gas Company	NWN	1.97%	0.66	12.97%	11.00%	9.23%	10.16%
ONE Gas, Inc.	OGS	1.97%	0.70	12.97%	11.00%	9.67%	10.49%
SJW Group	SJW	1.97%	0.70	12.97%	11.00%	9.67%	10.49%
South Jersey Industries, Inc.	SJI	1.97%	0.86	12.97%	11.00%	11.43%	11.81%
Spire, Inc.	SR	1.97%	0.71	12.97%	11.00%	9.78%	10.58%
York Water Company	YORW	1.97%	0.77	12.97%	11.00%	10.44%	11.07%
Mean						9.89%	10.66%
Median						9.78%	10.58%

Notes:

- [1] Source: Bloomberg Professional
 [2] Source: Schedule AEB-5
 [3] Source: Schedule AEB-6
 [4] Equals [3] - [1]
 [5] Equals [1] + [2] x [4]
 [6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & VALUE LINE LT AVERAGE BETA

$$K = R_f + \beta (R_m - R_f)$$

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
		Near-term projected 30-year U.S. Treasury bond yield (Q1 2022 - Q1 2023)		Market Return (Rm)	Market Risk Premium (Rm - Rf)	CAPM ROE	ECAPM ROE
Company	Ticker		Beta (β)				
American States Water Company	AWR	2.46%	0.71	12.97%	10.51%	9.92%	10.68%
Atmos Energy Corporation	ATO	2.46%	0.68	12.97%	10.51%	9.61%	10.45%
California Water Service Group	CWT	2.46%	0.73	12.97%	10.51%	10.13%	10.84%
Essential Utilities, Inc.	WTRG	2.46%	0.73	12.97%	10.51%	10.13%	10.84%
Eversource Energy	ES	2.46%	0.68	12.97%	10.51%	9.61%	10.45%
Middlesex Water Company	MSEX	2.46%	0.73	12.97%	10.51%	10.13%	10.84%
NiSource Inc.	NI	2.46%	0.63	12.97%	10.51%	9.03%	10.01%
New Jersey Resources Corporation	NJR	2.46%	0.79	12.97%	10.51%	10.76%	11.31%
Northwest Natural Gas Company	NWN	2.46%	0.66	12.97%	10.51%	9.40%	10.29%
ONE Gas, Inc.	OGS	2.46%	0.70	12.97%	10.51%	9.82%	10.60%
SJW Group	SJW	2.46%	0.70	12.97%	10.51%	9.82%	10.60%
South Jersey Industries, Inc.	SJI	2.46%	0.86	12.97%	10.51%	11.50%	11.87%
Spire, Inc.	SR	2.46%	0.71	12.97%	10.51%	9.92%	10.68%
York Water Company	YORW	2.46%	0.77	12.97%	10.51%	10.55%	11.16%
Mean						10.02%	10.76%
Median						9.92%	10.68%

Notes:

- [1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 12, December 1, 2021, at 2
 [2] Source: Schedule AEB-5
 [3] Source: Schedule AEB-6
 [4] Equals [3] - [1]
 [5] Equals [1] + [2] x [4]
 [6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & VALUE LINE LT AVERAGE BETA

$$K = R_f + \beta (R_m - R_f)$$

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
		Projected 30-year U.S. Treasury bond yield (2023 - 2027)		Market Return (Rm)	Market Risk Premium (Rm - Rf)	CAPM ROE	ECAPM ROE
Company	Ticker		Beta (β)				
American States Water Company	AWR	3.40%	0.71	12.97%	9.57%	10.19%	10.89%
Atmos Energy Corporation	ATO	3.40%	0.68	12.97%	9.57%	9.91%	10.67%
California Water Service Group	CWT	3.40%	0.73	12.97%	9.57%	10.39%	11.03%
Essential Utilities, Inc.	WTRG	3.40%	0.73	12.97%	9.57%	10.39%	11.03%
Eversource Energy	ES	3.40%	0.68	12.97%	9.57%	9.91%	10.67%
Middlesex Water Company	MSEX	3.40%	0.73	12.97%	9.57%	10.39%	11.03%
NiSource Inc.	NI	3.40%	0.63	12.97%	9.57%	9.38%	10.28%
New Jersey Resources Corporation	NJR	3.40%	0.79	12.97%	9.57%	10.96%	11.46%
Northwest Natural Gas Company	NWN	3.40%	0.66	12.97%	9.57%	9.72%	10.53%
ONE Gas, Inc.	OGS	3.40%	0.70	12.97%	9.57%	10.10%	10.82%
SJW Group	SJW	3.40%	0.70	12.97%	9.57%	10.10%	10.82%
South Jersey Industries, Inc.	SJI	3.40%	0.86	12.97%	9.57%	11.63%	11.96%
Spire, Inc.	SR	3.40%	0.71	12.97%	9.57%	10.19%	10.89%
York Water Company	YORW	3.40%	0.77	12.97%	9.57%	10.77%	11.32%
Mean						10.29%	10.96%
Median						10.19%	10.89%

Notes:

- [1] Source: Blue Chip Financial Forecasts, Vol. 40, No. 12, December 1, 2021, at 14
 [2] Source: Schedule AEB-5
 [3] Source: Schedule AEB-6
 [4] Equals [3] - [1]
 [5] Equals [1] + [2] x [4]
 [6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

HISTORICAL BETA - 2016 - 2020

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	Average
American States Water Company	AWR	0.70	0.80	0.75	0.65	0.65	0.71
Atmos Energy Corporation	ATO	0.70	0.70	0.60	0.60	0.80	0.68
California Water Service Group	CWT	0.75	0.80	0.75	0.70	0.65	0.73
Essential Utilities, Inc.	WTRG	0.70	0.70	0.70	0.65	0.90	0.73
Eversource Energy	ES	0.70	0.65	0.60	0.55	0.90	0.68
Middlesex Water Company	MSEX	0.70	0.80	0.75	0.70	0.70	0.73
NiSource Inc.	NI	NMF	0.60	0.50	0.55	0.85	0.63
New Jersey Resources Corporation	NJR	0.80	0.80	0.70	0.70	0.95	0.79
Northwest Natural Gas Company	NWN	0.60	0.70	0.60	0.60	0.80	0.66
ONE Gas, Inc.	OGS	N/A	0.70	0.65	0.65	0.80	0.70
SJW Group	SJW	0.70	0.75	0.65	0.60	0.80	0.70
South Jersey Industries, Inc.	SJI	0.80	0.85	0.80	0.80	1.05	0.86
Spire, Inc.	SR	0.70	0.70	0.65	0.65	0.85	0.71
York Water Company	YORW	0.70	0.80	0.80	0.75	0.80	0.77
Mean		0.71	0.74	0.68	0.65	0.82	0.72

Notes:

[1] Value Line, dated October 16, 2016, November 18, 2016 and December 2, 2016.

[2] Value Line, dated October 13, 2017, November 17, 2017 and December 1, 2017.

[3] Value Line, dated October 12, 2018, November 16, 2018 and November 30, 2018.

[4] Value Line, dated October 11, 2019, November 15, 2019 and November 29, 2019.

[5] Value Line, dated October 9, 2020, November 13, 2020 and November 27, 2020.

[6] Average ([1] - [5])

MARKET RISK PREMIUM DERIVED FROM ANALYSTS' LONG-TERM GROWTH ESTIMATES

[1] Estimated Weighted Average Dividend Yield	1.58%
[2] Estimated Weighted Average Long-Term Growth Rate	11.31%
[3] S&P 500 Estimated Required Market Return	12.97%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outstg	[5] Price	[6] Market Capitalization	[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Value Line Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
LyondellBasell Industries NV	LYB	332.78	87.13	28,995.47	0.10%	5.19%	0.00%	8.00%	0.01%
American Express Co	AXP	774.56	152.30	117,964.88	0.39%	1.13%	0.00%	8.50%	0.03%
Verizon Communications Inc	VZ	4,197.76	50.27	211,021.40	0.70%	5.09%	0.04%	3.50%	0.02%
Broadcom Inc	AVGO	411.62	553.68	227,903.55		2.60%		27.00%	
Boeing Co/The	BA	587.70	197.85	116,276.25		n/a		n/a	
Caterpillar Inc	CAT	540.94	193.35	104,591.14	0.35%	2.30%	0.01%	9.50%	0.03%
JPMorgan Chase & Co	JPM	2,955.27	158.83	469,384.90	1.55%	2.52%	0.04%	7.50%	0.12%
Chevron Corp	CVX	1,927.69	112.87	217,577.92		4.75%		24.00%	
Coca-Cola Co/The	KO	4,319.42	52.45	226,553.58	0.75%	3.20%	0.02%	7.00%	0.05%
AbbVie Inc	ABBV	1,767.88	115.28	203,801.21	0.67%	4.89%	0.03%	6.50%	0.04%
Walt Disney Co/The	DIS	1,817.66	144.90	263,378.35	0.87%	n/a		14.00%	0.12%
FleetCor Technologies Inc	FLT	81.20	207.13	16,818.75	0.06%	n/a		11.00%	0.01%
Extra Space Storage Inc	EXR	133.89	200.00	26,778.40	0.09%	2.50%	0.00%	5.00%	0.00%
Exxon Mobil Corp	XOM	4,233.57	59.84	253,336.65		5.88%		n/a	
Phillips 66	PSX	438.17	69.17	30,308.22	0.10%	5.32%	0.01%	20.00%	0.02%
General Electric Co	GE	1,098.14	94.99	104,312.03	0.35%	0.34%	0.00%	15.00%	0.05%
HP Inc	HPQ	1,152.52	35.28	40,660.87	0.13%	2.83%	0.00%	12.50%	0.02%
Home Depot Inc/The	HD	1,044.24	400.61	418,332.59	1.38%	1.65%	0.02%	8.50%	0.12%
Monolithic Power Systems Inc	MPWR	46.09	553.46	25,510.63		0.43%		20.50%	
International Business Machines Corp	IBM	896.80	117.10	105,015.28	0.35%	5.60%	0.02%	1.50%	0.01%
Johnson & Johnson	JNJ	2,632.60	155.93	410,500.85	1.36%	2.72%	0.04%	10.00%	0.14%
McDonald's Corp	MCD	747.25	244.60	182,776.13	0.60%	2.26%	0.01%	10.50%	0.06%
Merck & Co Inc	MRK	2,525.94	74.91	189,218.47	0.63%	3.68%	0.02%	7.50%	0.05%
3M Co	MMM	576.25	170.04	97,986.06	0.32%	3.48%	0.01%	6.00%	0.02%
American Water Works Co Inc	AWK	181.54	168.57	30,601.86	0.10%	1.43%	0.00%	8.50%	0.01%
Bank of America Corp	BAC	8,184.08	44.47	363,946.22	1.20%	1.89%	0.02%	7.50%	0.09%
Baker Hughes Co	BKR	871.08	23.34	20,331.01	0.07%	3.08%	0.00%	6.00%	0.00%
Pfizer Inc	PFE	5,612.87	53.73	301,579.34	1.00%	2.90%	0.03%	8.00%	0.08%
Procter & Gamble Co/The	PG	2,419.95	144.58	349,876.08	1.16%	2.41%	0.03%	7.00%	0.08%
AT&T Inc	T	7,141.00	22.83	163,029.03	0.54%	9.11%	0.05%	2.50%	0.01%
Travelers Cos Inc/The	TRV	246.01	146.95	36,151.02	0.12%	2.40%	0.00%	8.00%	0.01%
Raytheon Technologies Corp	RTX	1,496.78	80.92	121,119.28	0.40%	2.52%	0.01%	1.50%	0.01%
Analog Devices Inc	ADI	537.41	180.25	96,868.33	0.32%	1.53%	0.00%	11.00%	0.04%
Walmart Inc	WMT	2,788.50	140.63	392,146.47	1.30%	1.56%	0.02%	7.50%	0.10%
Cisco Systems Inc/Delaware	CSCO	4,217.61	54.84	231,293.57	0.77%	2.70%	0.02%	7.00%	0.05%
Intel Corp	INTC	4,067.00	49.20	200,096.40	0.66%	2.83%	0.02%	7.00%	0.05%
General Motors Co	GM	1,451.86	57.87	84,019.14	0.28%	n/a		12.00%	0.03%
Microsoft Corp	MSFT	7,507.98	330.59	2,482,063.11	8.21%	0.75%	0.06%	15.00%	1.23%
Dollar General Corp	DG	233.31	221.30	51,631.50	0.17%	0.76%	0.00%	10.50%	0.02%
Cigna Corp	CI	331.43	191.90	63,601.03	0.21%	2.08%	0.00%	10.00%	0.02%
Kinder Morgan Inc	KMI	2,267.43	15.46	35,054.41	0.12%	6.99%	0.01%	19.00%	0.02%
Citigroup Inc	C	1,984.27	63.70	126,397.81	0.42%	3.20%	0.01%	7.00%	0.03%
American International Group Inc	AIG	830.30	52.60	43,673.67		2.43%		31.50%	
Altria Group Inc	MO	1,836.99	42.64	78,329.21	0.26%	8.44%	0.02%	6.00%	0.02%
HCA Healthcare Inc	HCA	311.02	225.59	70,163.68	0.23%	0.85%	0.00%	13.50%	0.03%
Under Armour Inc	UA	188.65	23.59	4,450.16		n/a		33.00%	
International Paper Co	IP	387.26	45.52	17,628.21	0.06%	4.06%	0.00%	12.00%	0.01%
Hewlett Packard Enterprise Co	HPE	1,308.05	14.35	18,770.52	0.06%	3.34%	0.00%	6.50%	0.00%
Abbott Laboratories	ABT	1,768.29	125.77	222,397.46	0.74%	1.43%	0.01%	11.50%	0.08%
Aflac Inc	AFL	661.53	54.14	35,815.13	0.12%	2.96%	0.00%	11.00%	0.01%
Air Products and Chemicals Inc	APD	221.46	287.44	63,656.46	0.21%	2.09%	0.00%	12.50%	0.03%
Royal Caribbean Cruises Ltd	RCL	254.79	69.82	17,789.44		n/a		n/a	
Hess Corp	HES	309.73	74.52	23,080.86		1.34%		n/a	
Archer-Daniels-Midland Co	ADM	559.44	62.21	34,802.82	0.12%	2.38%	0.00%	9.50%	0.01%
Automatic Data Processing Inc	ADP	421.38	230.89	97,293.35	0.32%	1.80%	0.01%	8.50%	0.03%
Verisk Analytics Inc	VRSK	161.16	224.87	36,240.27	0.12%	0.52%	0.00%	11.50%	0.01%
AutoZone Inc	AZO	20.97	1,817.07	38,100.32	0.13%	n/a		15.00%	0.02%
Avery Dennison Corp	AVY	82.80	205.07	16,978.98	0.06%	1.33%	0.00%	9.00%	0.01%
Enphase Energy Inc	ENPH	134.91	250.00	33,728.00		n/a		40.00%	
MSCI Inc	MSCI	82.45	629.45	51,896.26	0.17%	0.66%	0.00%	16.00%	0.03%
Ball Corp	BLL	323.89	93.45	30,267.89		0.86%		21.00%	
Ceridian HCM Holding Inc	CDAY	151.33	109.40	16,555.61		n/a		n/a	
Carrier Global Corp	CARR	866.59	54.12	46,899.58		0.89%		n/a	
Bank of New York Mellon Corp/The	BK	825.82	54.79	45,246.73	0.15%	2.48%	0.00%	5.00%	0.01%
Otis Worldwide Corp	OTIS	424.77	80.40	34,151.43		1.19%		n/a	
Baxter International Inc	BAX	500.69	74.57	37,336.68	0.12%	1.50%	0.00%	8.50%	0.01%
Becton Dickinson and Co	BDX	284.02	237.14	67,353.45	0.22%	1.47%	0.00%	7.50%	0.02%
Berkshire Hathaway Inc	BRK/B	1,303.48	276.69	360,659.05		n/a		n/a	
Best Buy Co Inc	BBY	245.96	106.86	26,283.71	0.09%	2.62%	0.00%	8.50%	0.01%
Boston Scientific Corp	BSX	1,424.99	38.07	54,249.45	0.18%	n/a		17.50%	0.03%
Bristol-Myers Squibb Co	BMJ	2,219.65	53.63	119,039.56	0.39%	3.65%	0.01%	12.50%	0.05%
Fortune Brands Home & Security Inc	FBHS	135.73	100.53	13,645.34	0.05%	1.03%	0.00%	11.00%	0.00%
Brown-Forman Corp	BF/B	309.72	70.36	21,791.62	0.07%	1.07%	0.00%	13.00%	0.01%
Coterra Energy Inc	CTRA	813.58	20.08	16,336.65		2.49%		n/a	
Campbell Soup Co	CPB	302.11	40.33	12,184.02	0.04%	3.67%	0.00%	5.50%	0.00%
Kansas City Southern	KSU	91.20	290.85	26,524.07	0.09%	0.74%	0.00%	10.50%	0.01%
Hilton Worldwide Holdings Inc	HLT	278.72	135.07	37,646.98		n/a		n/a	
Carnival Corp	CCL	981.05	17.62	17,286.07		n/a		n/a	
Qorvo Inc	QRVO	110.22	146.23	16,117.91		n/a		27.00%	
Lumen Technologies Inc	LUMN	1,023.89	12.34	12,634.85	0.04%	8.10%	0.00%	2.50%	0.00%

STANDARD AND POOR'S 500 INDEX

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Name	Ticker	Shares Outst'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Value Line Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
UDR Inc	UDR	309.19	56.73	17,540.12	0.06%	2.56%	0.00%	6.00%	0.00%
Clorox Co/The	CLX	122.86	162.85	20,008.24	0.07%	2.85%	0.00%	5.00%	0.00%
Paycom Software Inc	PAYC	60.03	437.48	26,260.17	0.09%	n/a		19.50%	0.02%
CMS Energy Corp	CMS	289.70	58.85	17,048.67	0.06%	2.96%	0.00%	6.00%	0.00%
Newell Brands Inc	NWL	425.40	21.47	9,133.34		4.29%		n/a	
Colgate-Palmolive Co	CL	842.85	75.02	63,230.53	0.21%	2.40%	0.01%	4.50%	0.01%
Comerica Inc	CMA	131.15	82.53	10,823.73	0.04%	3.30%	0.00%	2.50%	0.00%
IPG Photonics Corp	IPGP	53.31	164.19	8,752.80	0.03%	n/a		17.00%	0.00%
Conagra Brands Inc	CAG	479.69	30.55	14,654.53	0.05%	4.09%	0.00%	4.50%	0.00%
Consolidated Edison Inc	ED	353.75	77.64	27,465.07	0.09%	3.99%	0.00%	3.00%	0.00%
Corning Inc	GLW	853.41	37.09	31,652.90	0.10%	2.59%	0.00%	20.00%	0.02%
Cummins Inc	CMI	143.03	209.75	30,000.96	0.10%	2.77%	0.00%	7.00%	0.01%
Caesars Entertainment Inc	CZR	213.77	90.07	19,254.62		n/a		n/a	
Danaher Corp	DHR	714.58	321.64	229,836.55		0.26%		21.00%	
Target Corp	TGT	479.12	243.84	116,829.60	0.39%	1.48%	0.01%	15.00%	0.06%
Deere & Co	DE	310.06	345.54	107,138.48		1.22%		21.50%	
Dominion Energy Inc	D	809.91	71.20	57,665.45	0.19%	3.54%	0.01%	12.00%	0.02%
Dover Corp	DOV	143.99	163.85	23,591.94	0.08%	1.22%	0.00%	7.00%	0.01%
Alliant Energy Corp	LNT	250.36	54.79	13,717.28	0.05%	2.94%	0.00%	5.50%	0.00%
Duke Energy Corp	DUK	769.00	97.01	74,600.69	0.25%	4.06%	0.01%	7.00%	0.02%
Regency Centers Corp	REG	171.21	69.34	11,871.91	0.04%	3.61%	0.00%	16.00%	0.01%
Eaton Corp PLC	ETN	398.60	162.06	64,597.12	0.21%	1.88%	0.00%	9.00%	0.02%
Ecolab Inc	ECL	286.57	221.47	63,465.99	0.21%	0.87%	0.00%	6.00%	0.01%
PerkinElmer Inc	PKI	126.20	182.16	22,988.59	0.08%	0.15%	0.00%	12.00%	0.01%
Emerson Electric Co	EMR	594.90	87.84	52,256.02	0.17%	2.35%	0.00%	10.50%	0.02%
EOG Resources Inc	EOG	585.09	87.00	50,902.83	0.17%	3.45%	0.01%	16.00%	0.03%
Aon PLC	AON	220.33	295.77	65,167.60	0.22%	0.69%	0.00%	7.00%	0.02%
Entergy Corp	ETR	200.98	100.34	20,166.43	0.07%	4.03%	0.00%	3.00%	0.00%
Equifax Inc	EFX	122.00	278.65	33,995.86	0.11%	0.56%	0.00%	11.00%	0.01%
IQVIA Holdings Inc	IQV	191.04	259.13	49,504.20	0.16%	n/a		15.50%	0.03%
Gartner Inc	IT	82.24	312.25	25,679.13		n/a		20.50%	
FedEx Corp	FDX	265.65	230.37	61,197.79	0.20%	1.30%	0.00%	13.00%	0.03%
FMC Corp	FMC	126.75	100.19	12,699.18	0.04%	1.92%	0.00%	9.50%	0.00%
Brown & Brown Inc	BRO	282.43	64.41	18,191.12	0.06%	0.64%	0.00%	9.50%	0.01%
Ford Motor Co	F	3,925.39	19.19	75,328.21		2.08%		47.50%	
NextEra Energy Inc	NEE	1,962.14	86.78	170,274.25	0.56%	1.77%	0.01%	10.50%	0.06%
Franklin Resources Inc	BEN	501.80	32.40	16,258.16	0.05%	3.46%	0.00%	8.50%	0.00%
Freepoint-McMoRan Inc	FCX	1,468.47	37.08	54,451.02		0.81%		37.50%	
Gap Inc/The	GPS	373.40	16.53	6,172.35		2.90%		27.00%	
Dexcom Inc	DXCM	96.92	562.59	54,527.35		n/a		n/a	
General Dynamics Corp	GD	279.22	188.97	52,764.77	0.17%	2.52%	0.00%	6.00%	0.01%
General Mills Inc	GIS	605.69	61.77	37,413.59	0.12%	3.30%	0.00%	3.50%	0.00%
Genuine Parts Co	GPC	142.42	127.74	18,192.99	0.06%	2.55%	0.00%	7.00%	0.00%
Atmos Energy Corp	ATO	132.43	90.32	11,960.72	0.04%	3.01%	0.00%	7.00%	0.00%
WW Grainger Inc	GWV	51.52	481.41	24,802.24	0.08%	1.35%	0.00%	5.50%	0.00%
Halliburton Co	HAL	895.12	21.59	19,325.55	0.06%	0.83%	0.00%	9.00%	0.01%
L3Harris Technologies Inc	LHX	196.23	209.08	41,026.72		1.95%		n/a	
Healthpeak Properties Inc	PEAK	539.07	32.86	17,713.91		3.65%		-12.00%	
Catalent Inc	CTLT	171.19	128.66	22,025.05		n/a		21.00%	
Fortive Corp	FTV	358.58	73.87	26,488.16	0.09%	0.38%	0.00%	6.00%	0.01%
Hershey Co/The	HSY	145.39	177.49	25,805.27	0.09%	2.03%	0.00%	6.00%	0.01%
Synchrony Financial	SYF	547.26	44.79	24,511.73	0.08%	1.96%	0.00%	9.50%	0.01%
Hormel Foods Corp	HRL	542.56	41.40	22,461.86	0.07%	2.51%	0.00%	9.00%	0.01%
Arthur J Gallagher & Co	AJG	207.28	162.90	33,765.59	0.11%	1.18%	0.00%	13.50%	0.02%
Mondelez International Inc	MDLZ	1,394.97	58.94	82,219.65	0.27%	2.38%	0.01%	8.00%	0.02%
CenterPoint Energy Inc	CNP	628.87	25.91	16,293.92	0.05%	2.62%	0.00%	9.50%	0.01%
Humana Inc	HUM	128.63	419.71	53,947.01	0.18%	0.67%	0.00%	12.00%	0.02%
Willis Towers Watson PLC	WLTW	124.51	225.84	28,141.02	0.09%	1.42%	0.00%	8.00%	0.01%
Illinois Tool Works Inc	ITW	313.88	232.15	72,867.47	0.24%	2.10%	0.01%	10.50%	0.03%
CDW Corp/DE	CDW	135.72	189.36	25,700.51	0.09%	1.06%	0.00%	10.00%	0.01%
Trane Technologies PLC	TT	237.54	186.65	44,336.84		1.26%		n/a	
Interpublic Group of Cos Inc/The	IPG	393.76	33.19	13,068.73	0.04%	3.25%	0.00%	12.00%	0.01%
International Flavors & Fragrances Inc	IFF	254.55	142.17	36,188.95	0.12%	2.22%	0.00%	7.50%	0.01%
Jacobs Engineering Group Inc	J	128.95	142.56	18,382.97	0.06%	0.59%	0.00%	15.00%	0.01%
Generac Holdings Inc	GNRC	63.09	421.24	26,576.03		n/a		23.50%	
NXP Semiconductors NV	NXPI	265.93	223.36	59,398.79	0.20%	1.01%	0.00%	11.00%	0.02%
Hanesbrands Inc	HBI	349.21	16.15	5,639.66	0.02%	3.72%	0.00%	6.00%	0.00%
Kellogg Co	K	341.12	61.18	20,869.91	0.07%	3.79%	0.00%	3.50%	0.00%
Broadridge Financial Solutions Inc	BR	116.58	168.57	19,651.55	0.07%	1.52%	0.00%	9.50%	0.01%
Kimberly-Clark Corp	KMB	336.72	130.31	43,877.59	0.15%	3.50%	0.01%	5.50%	0.01%
Kimco Realty Corp	KIM	616.43	22.42	13,820.32	0.05%	3.03%	0.00%	10.50%	0.00%
Oracle Corp	ORCL	2,733.69	90.74	248,054.67	0.82%	1.41%	0.01%	10.00%	0.08%
Kroger Co/The	KR	743.64	41.53	30,883.29	0.10%	2.02%	0.00%	6.00%	0.01%
Leggett & Platt Inc	LEG	133.38	40.39	5,387.10	0.02%	4.16%	0.00%	10.00%	0.00%
Lennar Corp	LEN	271.85	105.05	28,558.05	0.09%	0.95%	0.00%	12.00%	0.01%
Eli Lilly & Co	LLY	956.59	248.04	237,273.08	0.79%	1.37%	0.01%	11.00%	0.09%
Bath & Body Works Inc	BBWI	264.37	75.13	19,862.34		0.80%		26.00%	
Charter Communications Inc	CHTR	179.29	646.28	115,872.19		n/a		27.50%	
Lincoln National Corp	LNC	180.71	66.33	11,986.43	0.04%	2.71%	0.00%	9.00%	0.00%
Loews Corp	L	253.68	53.46	13,561.95	0.04%	0.47%	0.00%	12.50%	0.01%
Lowe's Cos Inc	LOW	673.75	244.59	164,791.78	0.55%	1.31%	0.01%	14.50%	0.08%
IDEX Corp	IEX	76.03	224.59	17,075.80	0.06%	0.96%	0.00%	8.00%	0.00%
Marsh & McLennan Cos Inc	MMC	504.90	164.02	82,812.88	0.27%	1.30%	0.00%	12.00%	0.03%
Masco Corp	MAS	244.09	65.90	16,085.33	0.05%	1.43%	0.00%	9.50%	0.01%
S&P Global Inc	SPGI	241.00	455.73	109,830.93	0.36%	0.68%	0.00%	10.50%	0.04%
Medtronic PLC	MDT	1,344.86	106.70	143,496.78	0.47%	2.36%	0.01%	9.00%	0.04%
Viatis Inc	VTRS	1,209.39	12.31	14,887.63		3.57%		n/a	
CVS Health Corp	CVS	1,320.06	89.06	117,564.45	0.39%	2.25%	0.01%	6.00%	0.02%
DuPont de Nemours Inc	DD	518.10	73.96	38,318.97		1.62%		n/a	
Micron Technology Inc	MU	1,118.62	84.00	93,964.42	0.31%	0.48%	0.00%	11.50%	0.04%
Motorola Solutions Inc	MSI	168.90	253.18	42,761.34	0.14%	1.25%	0.00%	7.00%	0.01%

STANDARD AND POOR'S 500 INDEX

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Name	Ticker	Shares Outst'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Value Line Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
Cboe Global Markets Inc	CBOE	106.64	128.94	13,750.55	0.05%	1.49%	0.00%	12.00%	0.01%
Laboratory Corp of America Holdings	LH	95.70	285.33	27,306.08	0.09%	n/a		6.00%	0.01%
Newmont Corp	NEM	797.44	54.92	43,795.13	0.14%	4.01%	0.01%	14.00%	0.02%
NIKE Inc	NKE	1,277.81	169.24	216,255.89		0.72%		27.00%	
NiSource Inc	NI	392.71	24.51	9,625.20	0.03%	3.59%	0.00%	8.50%	0.00%
Norfolk Southern Corp	NSC	243.35	265.27	64,552.13	0.21%	1.64%	0.00%	10.50%	0.02%
Principal Financial Group Inc	PFG	265.07	68.58	18,178.43	0.06%	3.73%	0.00%	6.00%	0.00%
Eversource Energy	ES	343.81	82.27	28,284.92	0.09%	2.93%	0.00%	6.50%	0.01%
Northrop Grumman Corp	NOC	158.54	348.80	55,298.05	0.18%	1.80%	0.00%	8.50%	0.02%
Wells Fargo & Co	WFC	3,987.23	47.78	190,509.99	0.63%	1.67%	0.01%	5.50%	0.03%
Nucor Corp	NUE	285.80	106.26	30,369.00	0.10%	1.52%	0.00%	12.00%	0.01%
PVH Corp	PVH	71.05	106.78	7,586.93	0.03%	0.14%	0.00%	13.50%	0.00%
Occidental Petroleum Corp	OXY	933.98	29.65	27,692.54		0.13%		36.50%	
Omnicom Group Inc	OMC	212.56	67.31	14,307.35	0.05%	4.16%	0.00%	6.00%	0.00%
ONEOK Inc	OKE	445.94	59.84	26,684.87	0.09%	6.25%	0.01%	10.00%	0.01%
Raymond James Financial Inc	RJF	206.16	98.29	20,263.66	0.07%	1.06%	0.00%	6.50%	0.00%
Parker-Hannifin Corp	PH	128.52	302.06	38,819.24	0.13%	1.36%	0.00%	14.00%	0.02%
Rollins Inc	ROL	492.05	33.28	16,375.39	0.05%	1.20%	0.00%	11.50%	0.01%
PPL Corp	PPL	750.72	27.83	20,892.43		5.96%		n/a	
ConocoPhillips	COP	1,318.95	70.13	92,497.75	0.31%	2.62%	0.01%	13.50%	0.04%
PulteGroup Inc	PHM	253.19	50.03	12,666.90	0.04%	1.12%	0.00%	12.50%	0.01%
Pinnacle West Capital Corp	PNW	112.82	65.05	7,338.88		5.23%		0.00%	
PNC Financial Services Group Inc/The	PNC	422.64	197.00	83,260.28	0.28%	2.54%	0.01%	11.50%	0.03%
PPG Industries Inc	PPG	237.40	154.17	36,600.11	0.12%	1.53%	0.00%	3.00%	0.00%
Progressive Corp/The	PGR	584.40	92.94	54,314.14	0.18%	0.43%	0.00%	5.00%	0.01%
Public Service Enterprise Group Inc	PEG	505.66	62.49	31,598.94	0.10%	3.26%	0.00%	3.50%	0.00%
Robert Half International Inc	RHI	111.33	111.17	12,376.56	0.04%	1.37%	0.00%	7.50%	0.00%
Edison International	EIX	379.91	65.28	24,800.39		4.06%		n/a	
Schlumberger NV	SLB	1,402.63	28.68	40,227.51	0.13%	1.74%	0.00%	8.50%	0.01%
Charles Schwab Corp/The	SCHW	1,811.31	77.39	140,176.97	0.46%	0.93%	0.00%	7.00%	0.03%
Sherwin-Williams Co/The	SHW	262.20	331.24	86,849.80	0.29%	0.66%	0.00%	10.50%	0.03%
West Pharmaceutical Services Inc	WST	74.08	442.66	32,792.25	0.11%	0.16%	0.00%	17.00%	0.02%
J M Smucker Co/The	SJM	108.36	126.47	13,704.67	0.05%	3.13%	0.00%	4.00%	0.00%
Snap-on Inc	SNA	53.73	205.91	11,062.51	0.04%	2.76%	0.00%	4.50%	0.00%
AMETEK Inc	AME	231.33	136.50	31,575.86	0.10%	0.59%	0.00%	9.00%	0.01%
Southern Co/The	SO	1,059.80	61.10	64,754.02	0.21%	4.32%	0.01%	6.00%	0.01%
Truist Financial Corp	TFC	1,334.89	59.31	79,172.44	0.26%	3.24%	0.01%	7.00%	0.02%
Southwest Airlines Co	LUV	591.92	44.40	26,281.25		n/a		34.00%	
W R Berkley Corp	WRB	176.64	76.64	13,537.69	0.04%	0.68%	0.00%	14.50%	0.01%
Stanley Black & Decker Inc	SWK	163.03	174.76	28,491.65	0.09%	1.81%	0.00%	6.00%	0.01%
Public Storage	PSA	175.36	327.38	57,407.72	0.19%	2.44%	0.00%	4.00%	0.01%
Arista Networks Inc	ANET	307.28	124.06	38,121.65	0.13%	n/a		4.50%	0.01%
Sysco Corp	SY	512.66	70.04	35,906.43	0.12%	2.68%	0.00%	17.00%	0.02%
Corteva Inc	CTVA	730.27	45.00	32,862.02		1.24%		n/a	
Texas Instruments Inc	TXN	923.53	192.37	177,658.70	0.59%	2.39%	0.01%	9.00%	0.05%
Textron Inc	TXT	220.43	70.80	15,606.09	0.05%	0.11%	0.00%	8.50%	0.00%
Thermo Fisher Scientific Inc	TMO	394.05	632.83	249,365.40	0.83%	0.16%	0.00%	15.00%	0.12%
TJX Cos Inc/The	TJX	1,192.88	69.40	82,785.73	0.27%	1.50%	0.00%	20.00%	0.05%
Globe Life Inc	GL	100.98	86.54	8,738.72	0.03%	0.91%	0.00%	8.00%	0.00%
Johnson Controls International plc	JCI	704.33	74.76	52,655.86	0.17%	1.44%	0.00%	10.00%	0.02%
Ulta Beauty Inc	ULTA	54.36	383.95	20,870.75	0.07%	n/a		15.50%	0.01%
Union Pacific Corp	UNP	642.88	235.64	151,487.30	0.50%	1.82%	0.01%	10.00%	0.05%
Keysight Technologies Inc	KEYS	181.90	194.48	35,375.91	0.12%	n/a		17.00%	0.02%
UnitedHealth Group Inc	UNH	941.85	444.22	418,389.05	1.38%	1.31%	0.02%	12.00%	0.17%
Marathon Oil Corp	MRO	778.54	15.49	12,059.54		1.55%		n/a	
Bio-Rad Laboratories Inc	BIO	24.84	753.20	18,706.48	0.06%	n/a		11.50%	0.01%
Ventas Inc	VTR	399.18	46.92	18,729.34	0.06%	3.84%	0.00%	4.50%	0.00%
VF Corp	VFC	392.78	71.73	28,174.25	0.09%	2.79%	0.00%	9.50%	0.01%
Vornado Realty Trust	VNO	191.68	40.14	7,694.08		5.28%		-19.00%	
Vulcan Materials Co	VMC	132.71	191.64	25,431.59	0.08%	0.77%	0.00%	10.00%	0.01%
Weyerhaeuser Co	WY	749.05	37.61	28,171.58		1.81%		22.00%	
Whirlpool Corp	WHR	60.74	217.74	13,226.18	0.04%	2.57%	0.00%	9.50%	0.00%
Williams Cos Inc/The	WMB	1,215.03	26.79	32,550.65	0.11%	6.12%	0.01%	10.50%	0.01%
WEC Energy Group Inc	WEC	315.44	86.93	27,420.76	0.09%	3.12%	0.00%	6.50%	0.01%
Adobe Inc	ADBE	475.80	669.85	318,714.63	1.05%	n/a		15.50%	0.16%
AES Corp/The	AES	666.71	23.38	15,587.77		2.57%		24.00%	
Amgen Inc	AMGN	563.27	198.88	112,022.34	0.37%	3.54%	0.01%	5.50%	0.02%
Apple Inc	AAPL	16,406.40	165.30	2,711,977.42	8.98%	0.53%	0.05%	17.00%	1.53%
Autodesk Inc	ADSK	219.85	254.19	55,883.67	0.18%	n/a		18.00%	0.03%
Cintas Corp	CTAS	103.41	422.19	43,657.82	0.14%	0.90%	0.00%	13.50%	0.02%
Comcast Corp	CMCSA	4,559.48	49.98	227,882.76	0.75%	2.00%	0.02%	11.00%	0.08%
Molson Coors Beverage Co	TAP	200.59	44.44	8,914.00		3.06%		41.00%	
KLA Corp	KLAC	151.62	408.13	61,881.49	0.20%	1.03%	0.00%	19.50%	0.04%
Marriott International Inc/MD	MAR	325.68	147.56	48,057.78	0.16%	n/a		17.50%	0.03%
McCormick & Co Inc/MD	MKC	249.35	85.82	21,399.39	0.07%	1.72%	0.00%	6.00%	0.00%
PACCAR Inc	PCAR	347.18	83.42	28,961.51	0.10%	1.63%	0.00%	5.00%	0.00%
Costco Wholesale Corp	COST	441.82	539.38	238,311.03	0.79%	0.59%	0.00%	10.50%	0.08%
First Republic Bank/CA	FRC	179.06	209.66	37,541.72	0.12%	0.42%	0.00%	13.50%	0.02%
Stryker Corp	SYK	377.24	236.63	89,266.30	0.30%	1.06%	0.00%	11.00%	0.03%
Tyson Foods Inc	TSN	294.77	78.96	23,275.12	0.08%	2.33%	0.00%	6.00%	0.00%
Lamb Weston Holdings Inc	LW	146.07	51.92	7,583.85	0.03%	1.81%	0.00%	6.00%	0.00%
Applied Materials Inc	AMAT	902.93	147.19	132,901.97	0.44%	0.65%	0.00%	16.50%	0.07%
American Airlines Group Inc	AAL	647.52	17.69	11,454.54		n/a		n/a	
Cardinal Health Inc	CAH	281.79	46.23	13,027.06	0.04%	4.25%	0.00%	12.00%	0.01%
Cerner Corp	CERN	294.22	70.45	20,728.01	0.07%	1.25%	0.00%	11.00%	0.01%
Cincinnati Financial Corp	CINF	161.14	113.90	18,353.96	0.06%	2.21%	0.00%	17.50%	0.01%
ViacomCBS Inc	VIAC	606.71	30.95	18,777.55	0.06%	3.10%	0.00%	7.00%	0.00%
DR Horton Inc	DHI	356.53	97.70	34,832.98	0.12%	0.92%	0.00%	15.50%	0.02%
Electronic Arts Inc	EA	282.81	124.22	35,130.41	0.12%	0.55%	0.00%	12.50%	0.01%
Expeditors International of Washington Inc	EXPD	169.40	121.62	20,602.91	0.07%	0.95%	0.00%	10.00%	0.01%
Fastenal Co	FAST	575.16	59.17	34,032.39	0.11%	1.89%	0.00%	9.00%	0.01%

STANDARD AND POOR'S 500 INDEX

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Name	Ticker	Shares Outs/g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Value Line Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
M&T Bank Corp	MTB	128.69	146.61	18,866.51	0.06%	3.27%	0.00%	8.00%	0.00%
Xcel Energy Inc	XEL	538.68	63.73	34,329.82	0.11%	2.87%	0.00%	6.00%	0.01%
Fiserv Inc	FISV	660.23	96.52	63,725.59	0.21%	n/a		13.00%	0.03%
Fifth Third Bancorp	FITB	683.76	42.15	28,820.36	0.10%	2.85%	0.00%	9.50%	0.01%
Gilead Sciences Inc	GILD	1,254.38	68.93	86,464.69	0.29%	4.12%	0.01%	3.50%	0.01%
Hasbro Inc	HAS	137.95	96.91	13,368.44	0.04%	2.81%	0.00%	11.50%	0.01%
Huntington Bancshares Inc/OH	HBAN	1,446.46	14.84	21,465.48	0.07%	4.18%	0.00%	9.00%	0.01%
Welltower Inc	WELL	435.28	79.62	34,656.60		3.06%		-1.50%	
Biogen Inc	BIIB	146.89	235.74	34,628.56	0.11%	n/a		7.00%	0.01%
Northern Trust Corp	NTRS	207.66	115.70	24,026.38	0.08%	2.42%	0.00%	7.00%	0.01%
Packaging Corp of America	PKG	94.99	130.59	12,404.87	0.04%	3.06%	0.00%	5.00%	0.00%
Paychex Inc	PAYX	360.59	119.20	42,982.45	0.14%	2.21%	0.00%	8.00%	0.01%
People's United Financial Inc	PBCT	428.03	17.04	7,293.55	0.02%	4.28%	0.00%	4.00%	0.00%
QUALCOMM Inc	QCOM	1,120.00	180.56	202,227.20	0.67%	1.51%	0.01%	14.00%	0.09%
Roper Technologies Inc	ROP	105.49	464.15	48,960.86	0.16%	0.53%	0.00%	8.00%	0.01%
Ross Stores Inc	ROST	355.37	109.09	38,766.88	0.13%	1.05%	0.00%	14.00%	0.02%
IDEXX Laboratories Inc	IDXX	84.79	608.07	51,560.69	0.17%	n/a		14.50%	0.02%
Starbucks Corp	SBUX	1,173.20	109.64	128,629.65	0.43%	1.79%	0.01%	16.00%	0.07%
KeyCorp	KEY	931.06	22.44	20,892.94	0.07%	3.48%	0.00%	9.50%	0.01%
Fox Corp	FOXA	320.35	35.71	11,439.59		1.34%		n/a	
Fox Corp	FOX	249.24	33.60	8,374.46		1.43%		n/a	
State Street Corp	STT	365.63	88.97	32,530.01	0.11%	2.56%	0.00%	7.50%	0.01%
Norwegian Cruise Line Holdings Ltd	NCLH	370.03	19.51	7,219.34		n/a		n/a	
US Bancorp	USB	1,482.80	55.34	82,058.04	0.27%	3.32%	0.01%	6.50%	0.02%
A O Smith Corp	AOS	133.19	79.05	10,528.43	0.03%	1.42%	0.00%	10.00%	0.00%
NortonLifeLock Inc	NLOK	581.77	24.85	14,457.06	0.05%	2.01%	0.00%	11.00%	0.01%
T Rowe Price Group Inc	TROW	224.75	199.95	44,938.96	0.15%	2.16%	0.00%	12.00%	0.02%
Waste Management Inc	WM	418.32	160.67	67,210.83	0.22%	1.43%	0.00%	7.50%	0.02%
Constellation Brands Inc	STZ	164.26	225.33	37,013.61	0.12%	1.35%	0.00%	7.00%	0.01%
Xilinx Inc	XLNX	247.88	228.45	56,628.19	0.19%	0.65%	0.00%	8.00%	0.01%
DENTSPLY SIRONA Inc	XRAY	218.61	48.74	10,654.91	0.04%	0.90%	0.00%	5.50%	0.00%
Zions Bancorp NA	ZION	156.46	63.08	9,869.69	0.03%	2.41%	0.00%	7.50%	0.00%
Alaska Air Group Inc	ALK	125.31	48.57	6,086.36		n/a		n/a	
Invesco Ltd	IVZ	461.21	22.33	10,298.75	0.03%	3.05%	0.00%	15.50%	0.01%
Linde PLC	LIN	511.75	318.14	162,808.78		1.33%		n/a	
Intuit Inc	INTU	283.17	652.30	184,709.83	0.61%	0.42%	0.00%	15.00%	0.09%
Morgan Stanley	MS	1,794.41	94.82	170,146.15	0.56%	2.95%	0.02%	8.50%	0.05%
Microchip Technology Inc	MCHP	554.87	83.43	46,292.89	0.15%	1.11%	0.00%	10.50%	0.02%
Chubb Ltd	CB	430.74	179.47	77,305.09	0.26%	1.78%	0.00%	12.50%	0.03%
Hologic Inc	HOLX	251.42	74.73	18,788.69		n/a		25.00%	
Citizens Financial Group Inc	CFG	426.20	47.27	20,146.47	0.07%	3.30%	0.00%	8.50%	0.01%
O'Reilly Automotive Inc	ORLY	67.38	638.16	42,997.94	0.14%	n/a		13.00%	0.02%
Allstate Corp/The	ALL	286.68	108.72	31,167.41	0.10%	2.98%	0.00%	5.00%	0.01%
Equity Residential	EQR	375.02	85.31	31,992.61	0.11%	2.82%	0.00%	2.00%	0.00%
BorgWarner Inc	BWA	239.77	43.28	10,377.29	0.03%	1.57%	0.00%	9.50%	0.00%
Organon & Co	OGN	253.55	29.23	7,411.27		3.83%		n/a	
Host Hotels & Resorts Inc	HST	714.04	15.70	11,210.35	0.04%	n/a		10.00%	0.00%
Incyte Corp	INCY	220.89	67.72	14,958.74		n/a		n/a	
Simon Property Group Inc	SPG	328.61	152.84	50,224.91	0.17%	4.32%	0.01%	1.50%	0.00%
Eastman Chemical Co	EMN	134.44	104.29	14,020.75	0.05%	2.65%	0.00%	10.50%	0.00%
Twitter Inc	TWTR	799.61	43.94	35,134.86		n/a		39.00%	
AvalonBay Communities Inc	AVB	139.74	238.87	33,379.93	0.11%	2.66%	0.00%	1.50%	0.00%
Prudential Financial Inc	PRU	378.00	102.26	38,654.28	0.13%	4.50%	0.01%	4.50%	0.01%
United Parcel Service Inc	UPS	729.16	198.37	144,643.07	0.48%	2.06%	0.01%	11.50%	0.06%
Walgreens Boots Alliance Inc	WBA	865.61	44.80	38,779.42	0.13%	4.26%	0.01%	7.50%	0.01%
STERIS PLC	STE	100.02	218.53	21,858.03	0.07%	0.79%	0.00%	12.00%	0.01%
McKesson Corp	MCK	152.68	216.76	33,095.35	0.11%	0.87%	0.00%	9.50%	0.01%
Lockheed Martin Corp	LMT	275.79	333.32	91,924.99	0.30%	3.36%	0.01%	7.50%	0.02%
AmerisourceBergen Corp	ABC	208.13	115.75	24,091.39	0.08%	1.59%	0.00%	6.50%	0.01%
Capital One Financial Corp	COF	425.62	140.53	59,812.66		1.71%		n/a	
Waters Corp	WAT	61.04	328.07	20,024.08	0.07%	n/a		6.00%	0.00%
Dollar Tree Inc	DLTR	224.96	133.83	30,105.86	0.10%	n/a		8.50%	0.01%
Darden Restaurants Inc	DRI	129.79	137.95	17,903.84	0.06%	3.19%	0.00%	19.50%	0.01%
Match Group Inc	MTCH	283.09	129.99	36,798.22	0.12%	n/a		18.50%	0.02%
Domino's Pizza Inc	DPZ	36.39	524.14	19,071.88	0.06%	0.72%	0.00%	15.00%	0.01%
NVR Inc	NVR	3.48	5,225.34	18,199.86	0.06%	n/a		9.00%	0.01%
NetApp Inc	NTAP	223.63	88.88	19,876.15	0.07%	2.25%	0.00%	6.50%	0.00%
Citrix Systems Inc	CTXS	124.72	80.43	10,031.47	0.03%	1.84%	0.00%	8.00%	0.00%
DXC Technology Co	DXC	252.24	29.99	7,564.65	0.03%	n/a		6.50%	0.00%
Old Dominion Freight Line Inc	ODFL	115.01	355.17	40,848.46	0.14%	0.23%	0.00%	11.50%	0.02%
DaVita Inc	DVA	101.90	94.50	9,629.55	0.03%	n/a		16.00%	0.01%
Hartford Financial Services Group Inc/The	HIG	340.35	66.10	22,497.33	0.07%	2.33%	0.00%	6.50%	0.00%
Iron Mountain Inc	IRM	289.55	45.44	13,157.11	0.04%	5.44%	0.00%	8.50%	0.00%
Estee Lauder Cos Inc/The	EL	231.71	332.07	76,942.28	0.25%	0.72%	0.00%	11.50%	0.03%
Cadence Design Systems Inc	CDNS	277.14	177.46	49,181.44	0.16%	n/a		12.00%	0.02%
Tyler Technologies Inc	TYL	40.98	518.98	21,265.72	0.07%	n/a		14.00%	0.01%
Universal Health Services Inc	UHS	73.12	118.73	8,681.54	0.03%	0.67%	0.00%	11.00%	0.00%
Skyworks Solutions Inc	SKWS	165.39	151.66	25,082.59	0.08%	1.48%	0.00%	13.50%	0.01%
Quest Diagnostics Inc	DGX	122.68	148.68	18,239.32	0.06%	1.67%	0.00%	7.50%	0.00%
Activision Blizzard Inc	ATVI	778.89	58.60	45,642.90	0.15%	0.80%	0.00%	13.00%	0.02%
Rockwell Automation Inc	ROK	115.98	336.20	38,993.15	0.13%	1.33%	0.00%	7.50%	0.01%
Kraft Heinz Co/The	KHC	1,224.04	33.61	41,140.05	0.14%	4.76%	0.01%	1.50%	0.00%
American Tower Corp	AMT	455.41	262.48	119,537.07	0.40%	2.00%	0.01%	9.50%	0.04%
Regeneron Pharmaceuticals Inc	REGN	105.72	636.53	67,293.95	0.22%	n/a		12.50%	0.03%
Amazon.com Inc	AMZN	507.15	3,507.07	1,778,603.54		n/a		30.00%	
Jack Henry & Associates Inc	JKHY	74.04	151.63	11,226.84	0.04%	1.21%	0.00%	10.50%	0.00%
Ralph Lauren Corp	RL	48.74	116.04	5,655.33	0.02%	2.37%	0.00%	11.50%	0.00%
Boston Properties Inc	BXP	156.21	107.84	16,845.36		3.64%		-2.00%	
Amphenol Corp	APH	598.03	80.58	48,189.10	0.16%	0.99%	0.00%	10.50%	0.02%
Howmet Aerospace Inc	HWM	427.22	28.13	12,017.64	0.04%	0.28%	0.00%	12.00%	0.00%
Pioneer Natural Resources Co	PXD	244.13	178.32	43,533.97	0.14%	1.39%	0.00%	20.00%	0.03%

STANDARD AND POOR'S 500 INDEX

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Name	Ticker	Shares Outst'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Value Line Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
Valero Energy Corp	VLO	408.84	66.94	27,367.48	0.09%	5.86%	0.01%	13.00%	0.01%
Synopsys Inc	SNPS	152.50	341.00	52,003.52	0.17%	n/a		13.00%	0.02%
Western Union Co/The	WU	402.01	15.82	6,359.75	0.02%	5.94%	0.00%	8.00%	0.00%
Etsy Inc	ETSY	126.78	274.58	34,811.53		n/a		29.00%	
CH Robinson Worldwide Inc	CHRW	129.99	95.09	12,360.46	0.04%	2.15%	0.00%	9.00%	0.00%
Accenture PLC	ACN	656.74	357.40	234,718.52	0.78%	1.09%	0.01%	10.00%	0.08%
TransDigm Group Inc	TDG	55.25	578.05	31,936.68	0.11%	n/a		16.50%	0.02%
Yum! Brands Inc	YUM	293.13	122.84	36,008.46	0.12%	1.63%	0.00%	11.00%	0.01%
Prologis Inc	PLD	739.75	150.75	111,516.56	0.37%	1.67%	0.01%	8.50%	0.03%
FirstEnergy Corp	FE	544.42	37.66	20,502.86	0.07%	4.14%	0.00%	11.50%	0.01%
VeriSign Inc	VRSN	111.08	239.91	26,648.72	0.09%	n/a		8.50%	0.01%
Quanta Services Inc	PWR	142.50	113.78	16,213.54	0.05%	0.21%	0.00%	12.50%	0.01%
Henry Schein Inc	HSIC	138.67	71.06	9,854.17	0.03%	n/a		6.50%	0.00%
Ameren Corp	AEE	255.41	81.59	20,838.90	0.07%	2.70%	0.00%	6.50%	0.00%
ANSYS Inc	ANSS	87.25	391.48	34,157.80	0.11%	n/a		8.00%	0.01%
NVIDIA Corp	NVDA	2,500.00	326.76	816,900.00	2.70%	0.05%	0.00%	17.00%	0.46%
Sealed Air Corp	SEE	148.16	62.12	9,203.51	0.03%	1.29%	0.00%	13.50%	0.00%
Cognizant Technology Solutions Corp	CTSH	525.25	77.98	40,959.15	0.14%	1.23%	0.00%	7.00%	0.01%
SVB Financial Group	SIVB	58.69	692.33	40,630.77	0.13%	n/a		5.00%	0.01%
Intuitive Surgical Inc	ISRG	357.24	324.34	115,866.25	0.38%	n/a		16.00%	0.06%
Take-Two Interactive Software Inc	TTWO	115.30	165.88	19,125.96	0.06%	n/a		12.00%	0.01%
Republic Services Inc	RSG	317.10	132.26	41,938.98	0.14%	1.39%	0.00%	11.00%	0.02%
eBay Inc	EBAY	626.00	67.46	42,230.23	0.14%	1.07%	0.00%	16.50%	0.02%
Goldman Sachs Group Inc/The	GS	334.79	380.99	127,552.79	0.42%	2.10%	0.01%	7.00%	0.03%
SBA Communications Corp	SBAC	108.78	343.80	37,398.91		0.67%		45.00%	
Sempra Energy	SRE	315.07	119.87	37,767.56	0.12%	3.67%	0.00%	10.00%	0.01%
Moody's Corp	MCO	185.90	390.64	72,619.98	0.24%	0.63%	0.00%	10.00%	0.02%
Booking Holdings Inc	BKNG	41.06	2,101.85	86,308.27	0.29%	n/a		14.00%	0.04%
F5 Inc	FFIV	61.23	227.58	13,934.50	0.05%	n/a		7.00%	0.00%
Akamai Technologies Inc	AKAM	162.48	112.70	18,311.50	0.06%	n/a		9.50%	0.01%
Charles River Laboratories International Inc	CRL	50.46	365.87	18,463.26	0.06%	n/a		7.00%	0.00%
MarketAxess Holdings Inc	MKTX	38.03	352.69	13,411.39	0.04%	0.75%	0.00%	14.00%	0.01%
Devon Energy Corp	DVN	677.00	42.06	28,474.62		7.99%		n/a	
Alphabet Inc	GOOGL	300.81	2,837.95	853,683.74		n/a		n/a	
Bio-Techne Corp	TECH	39.30	472.03	18,548.42	0.06%	0.27%	0.00%	13.00%	0.01%
Teleflex Inc	TFX	46.85	297.42	13,932.64	0.05%	0.46%	0.00%	15.00%	0.01%
Netflix Inc	NFLX	442.95	641.90	284,330.89		n/a		23.50%	
Allegion plc	ALLE	89.70	123.64	11,090.01	0.04%	1.16%	0.00%	9.50%	0.00%
Agilent Technologies Inc	A	302.00	150.90	45,571.80	0.15%	0.56%	0.00%	12.50%	0.02%
Anthem Inc	ANTM	242.72	406.23	98,598.11	0.33%	1.11%	0.00%	13.00%	0.04%
Trimble Inc	TRMB	251.01	85.87	21,554.06	0.07%	n/a		14.00%	0.01%
CME Group Inc	CME	359.40	220.52	79,254.01	0.26%	1.63%	0.00%	8.50%	0.02%
Juniper Networks Inc	JNPR	325.18	31.13	10,122.88	0.03%	2.57%	0.00%	7.00%	0.00%
BlackRock Inc	BLK	151.92	904.61	137,425.64	0.45%	1.83%	0.01%	11.00%	0.05%
DTE Energy Co	DTE	193.75	108.34	20,991.09	0.07%	3.27%	0.00%	2.00%	0.00%
Nasdaq Inc	NDAQ	167.22	203.23	33,984.53	0.11%	1.06%	0.00%	6.50%	0.01%
Celanese Corp	CE	108.87	151.36	16,478.71	0.05%	1.80%	0.00%	6.50%	0.00%
Philip Morris International Inc	PM	1,556.83	85.94	133,793.80	0.44%	5.82%	0.03%	7.00%	0.03%
salesforce.com Inc	CRM	979.00	284.96	278,975.84	0.92%	n/a		20.00%	0.18%
Ingersoll Rand Inc	IR	407.59	58.34	23,778.51		0.14%		n/a	
Huntington Ingalls Industries Inc	HII	40.06	177.51	7,111.23	0.02%	2.66%	0.00%	7.00%	0.00%
MetLife Inc	MET	841.16	58.66	49,342.45	0.16%	3.27%	0.01%	6.50%	0.01%
Under Armour Inc	UA	253.02	20.07	5,078.09		n/a		n/a	
Tapestry Inc	TPR	275.14	40.12	11,038.74	0.04%	2.49%	0.00%	10.00%	0.00%
CSX Corp	CSX	2,217.98	34.66	76,875.29	0.25%	1.08%	0.00%	11.50%	0.03%
Edwards Lifesciences Corp	EW	624.33	107.31	66,997.28	0.22%	n/a		13.00%	0.03%
Ameriprise Financial Inc	AMP	111.89	289.60	32,403.34	0.11%	1.56%	0.00%	13.50%	0.01%
Zebra Technologies Corp	ZBRA	53.44	588.78	31,464.99	0.10%	n/a		13.00%	0.01%
Zimmer Biomet Holdings Inc	ZBH	208.91	119.60	24,985.40	0.08%	0.80%	0.00%	8.50%	0.01%
CBRE Group Inc	CBRE	334.67	95.57	31,984.03	0.11%	n/a		10.50%	0.01%
Mastercard Inc	MA	974.71	314.92	306,955.36	1.02%	0.62%	0.01%	13.00%	0.13%
CarMax Inc	KMX	162.11	141.25	22,898.46	0.08%	n/a		12.50%	0.01%
Intercontinental Exchange Inc	ICE	563.40	130.72	73,648.17	0.24%	1.01%	0.00%	8.00%	0.02%
Fidelity National Information Services Inc	FIS	608.94	104.50	63,633.92		1.49%		28.00%	
Chipotle Mexican Grill Inc	CMG	28.14	1,643.41	46,237.34		n/a		22.00%	
Wynn Resorts Ltd	WYNN	115.66	81.01	9,369.45		n/a		27.00%	
Live Nation Entertainment Inc	LYV	224.66	106.65	23,959.99		n/a		n/a	
Assurant Inc	AIZ	56.98	152.10	8,666.20	0.03%	1.79%	0.00%	15.50%	0.00%
NRG Energy Inc	NRG	244.84	36.02	8,819.10		3.61%		-1.50%	
Regions Financial Corp	RF	953.28	22.75	21,687.19	0.07%	2.99%	0.00%	9.50%	0.01%
Monster Beverage Corp	MNST	529.14	83.78	44,331.27	0.15%	n/a		11.50%	0.02%
Mosaic Co/The	MOS	370.41	34.22	12,675.43		0.88%		33.50%	
Expedia Group Inc	EXPE	146.00	161.09	23,519.78		n/a		n/a	
Evergy Inc	EVER	226.99	63.30	14,368.66	0.05%	3.62%	0.00%	8.00%	0.00%
Discovery Inc	DISCA	169.21	23.27	3,937.45	0.01%	n/a		13.50%	0.00%
CF Industries Holdings Inc	CF	214.48	60.59	12,995.04	0.04%	1.98%	0.00%	19.50%	0.01%
Leidos Holdings Inc	LDOS	140.34	87.91	12,337.20	0.04%	1.64%	0.00%	9.00%	0.00%
APA Corp	APA	363.27	25.77	9,361.57		1.94%		n/a	
Alphabet Inc	GOOG	317.74	2,849.04	905,248.27		n/a		23.50%	
TE Connectivity Ltd	TEL	326.31	153.93	50,229.36	0.17%	1.30%	0.00%	9.00%	0.01%
Cooper Cos Inc/The	COO	49.30	376.47	18,561.48	0.06%	0.02%	0.00%	19.00%	0.01%
Discover Financial Services	DFS	293.08	107.85	31,608.25	0.10%	1.85%	0.00%	16.00%	0.02%
Visa Inc	V	1,669.73	193.77	323,543.78	1.07%	0.77%	0.01%	12.00%	0.13%
Mid-America Apartment Communities Inc	MAA	115.14	206.25	23,747.21	0.08%	1.99%	0.00%	9.00%	0.01%
Xylem Inc/NY	XYL	180.33	121.11	21,839.16	0.07%	0.92%	0.00%	6.50%	0.00%
Marathon Petroleum Corp	MPC	615.59	60.85	37,458.53		3.81%		n/a	
Tractor Supply Co	TSCO	113.82	225.33	25,645.93	0.08%	0.92%	0.00%	11.00%	0.01%
Advanced Micro Devices Inc	AMD	1,207.61	158.37	191,249.20		n/a		29.00%	
ResMed Inc	RMD	145.72	254.85	37,137.51	0.12%	0.66%	0.00%	8.50%	0.01%
Mettler-Toledo International Inc	MTD	22.99	1,514.13	34,803.79	0.12%	n/a		12.50%	0.01%
Copart Inc	CPRT	237.19	145.16	34,430.21	0.11%	n/a		12.00%	0.01%

STANDARD AND POOR'S 500 INDEX

		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Outs/g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Value Line Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
Albemarle Corp	ALB	116.98	266.49	31,172.93	0.10%	0.59%	0.00%	6.50%	0.01%
Fortinet Inc	FTNT	163.50	332.11	54,299.99		n/a		21.00%	
Moderna Inc	MRNA	405.45	352.43	142,892.74		n/a		n/a	
Essex Property Trust Inc	ESS	65.09	339.44	22,093.47		2.46%		-0.50%	
Realty Income Corp	O	565.81	67.92	38,430.02	0.13%	4.35%	0.01%	6.50%	0.01%
Westrock Co	WRK	265.00	43.39	11,498.44	0.04%	2.30%	0.00%	8.00%	0.00%
IHS Markit Ltd	INFO	398.84	127.82	50,979.86	0.17%	0.63%	0.00%	10.50%	0.02%
Westinghouse Air Brake Technologies Corp	WAB	186.82	88.77	16,584.10	0.05%	0.54%	0.00%	9.50%	0.01%
Pool Corp	POOL	40.09	554.12	22,213.56	0.07%	0.58%	0.00%	17.00%	0.01%
Western Digital Corp	WDC	311.62	57.84	18,024.27	0.06%	n/a		1.00%	0.00%
PepsiCo Inc	PEP	1,382.65	159.78	220,920.30	0.73%	2.69%	0.02%	6.50%	0.05%
Diamondback Energy Inc	FANG	181.18	106.73	19,336.81		1.87%		n/a	
ServiceNow Inc	NOW	199.00	647.70	128,892.30		n/a		44.50%	
Church & Dwight Co Inc	CHD	244.15	89.38	21,821.95	0.07%	1.13%	0.00%	8.00%	0.01%
Duke Realty Corp	DRE	380.85	58.33	22,214.98		1.92%		-1.00%	
Federal Realty Investment Trust	FRT	77.79	122.67	9,542.38	0.03%	3.49%	0.00%	1.00%	0.00%
MGM Resorts International	MGM	468.96	39.58	18,561.44		0.03%		25.00%	
American Electric Power Co Inc	AEP	503.65	81.05	40,820.99	0.14%	3.85%	0.01%	6.50%	0.01%
PTC Inc	PTC	117.87	109.58	12,916.41		n/a		n/a	
JB Hunt Transport Services Inc	JBHT	105.01	191.16	20,074.48	0.07%	0.63%	0.00%	10.00%	0.01%
Lam Research Corp	LRCX	140.80	679.85	95,722.20	0.32%	0.88%	0.00%	17.50%	0.06%
Mohawk Industries Inc	MHK	67.73	167.87	11,370.17	0.04%	n/a		10.50%	0.00%
Pentair PLC	PNR	165.48	73.69	12,194.07	0.04%	1.09%	0.00%	12.00%	0.00%
Vertex Pharmaceuticals Inc	VRTX	254.25	186.94	47,529.87	0.16%	n/a		18.50%	0.03%
Amcor PLC	AMCR	1,533.17	11.32	17,355.47	0.06%	4.24%	0.00%	15.00%	0.01%
Meta Platforms Inc	FB	2,366.28	324.46	767,762.56		n/a		21.50%	
T-Mobile US Inc	TMUS	1,249.05	108.81	135,909.57	0.45%	n/a		8.50%	0.04%
United Rentals Inc	URI	72.39	338.74	24,522.74	0.08%	n/a		10.50%	0.01%
ABIOMED Inc	ABMD	45.50	314.78	14,321.55	0.05%	n/a		9.50%	0.00%
Honeywell International Inc	HON	688.42	202.24	139,226.67	0.46%	1.94%	0.01%	10.00%	0.05%
Alexandria Real Estate Equities Inc	ARE	154.96	200.07	31,003.65	0.10%	2.24%	0.00%	12.00%	0.01%
Delta Air Lines Inc	DAL	640.01	36.20	23,168.51		n/a		49.00%	
Seagate Technology Holdings PLC	STX	222.64	102.67	22,858.04	0.08%	2.73%	0.00%	4.00%	0.00%
United Airlines Holdings Inc	UAL	323.61	42.26	13,675.80		n/a		n/a	
News Corp	NWS	199.63	21.55	4,302.03		0.93%		n/a	
Centene Corp	CNC	583.50	71.41	41,667.95	0.14%	n/a		9.50%	0.01%
Martin Marietta Materials Inc	MLM	62.38	403.51	25,171.76	0.08%	0.60%	0.00%	7.00%	0.01%
Teradyne Inc	TER	163.00	152.87	24,918.42	0.08%	0.26%	0.00%	13.50%	0.01%
PayPal Holdings Inc	PYPL	1,174.93	184.89	217,232.81	0.72%	n/a		16.00%	0.12%
Tesla Inc	TSLA	1,004.27	1,144.76	1,149,642.40		n/a		n/a	
DISH Network Corp	DISH	290.36	31.25	9,073.66	0.03%	n/a		2.50%	0.00%
Dow Inc	DOW	739.61	54.93	40,627.00		5.10%		n/a	
Penn National Gaming Inc	PENN	169.51	51.23	8,684.20		n/a		30.00%	
Everest Re Group Ltd	RE	39.37	256.38	10,093.42	0.03%	2.42%	0.00%	11.00%	0.00%
Teledyne Technologies Inc	TDY	46.66	415.29	19,375.35	0.06%	n/a		15.00%	0.01%
News Corp	NWSA	393.04	21.62	8,497.48		0.93%		n/a	
Exelon Corp	EXC	976.76	52.73	51,504.55	0.17%	2.90%	0.00%	5.50%	0.01%
Global Payments Inc	GPN	290.15	119.04	34,539.58	0.11%	0.84%	0.00%	16.50%	0.02%
Crown Castle International Corp	CCI	432.20	181.65	78,509.67	0.26%	3.24%	0.01%	8.50%	0.02%
Aptiv PLC	APT	270.51	160.35	43,376.92	0.14%	n/a		15.50%	0.02%
Advance Auto Parts Inc	AAP	62.36	220.72	13,763.00	0.05%	1.81%	0.00%	11.00%	0.01%
Align Technology Inc	ALGN	78.85	611.53	48,220.98	0.16%	n/a		17.00%	0.03%
Illumina Inc	ILMN	156.30	365.33	57,101.08	0.19%	n/a		10.00%	0.02%
LKQ Corp	LKQ	291.49	55.90	16,294.35	0.05%	1.79%	0.00%	12.00%	0.01%
Nielsen Holdings PLC	NLSN	358.93	19.16	6,877.04		1.25%		n/a	
Garmin Ltd	GRMN	192.32	133.54	25,682.68	0.08%	2.01%	0.00%	10.00%	0.01%
Zoetis Inc	ZTS	473.13	222.04	105,052.90	0.35%	0.45%	0.00%	11.00%	0.04%
Equinix Inc	EQIX	90.04	812.20	73,131.30	0.24%	1.41%	0.00%	17.00%	0.04%
Digital Realty Trust Inc	DLR	283.79	167.74	47,602.43	0.16%	2.77%	0.00%	8.00%	0.01%
Las Vegas Sands Corp	LVS	763.99	35.62	27,213.32	0.09%	n/a		17.00%	0.02%
Discovery Inc	DISCK	330.15	22.71	7,497.62		n/a		n/a	

Notes:

[1] Equals sum of Col. [9]

[2] Equals sum of Col. [11]

[3] Equals ([1] x (1 + (0.5 x [2]))) + [2]

[4] Source: Bloomberg Professional as of November 30, 2021

[5] Source: Bloomberg Professional as of November 30, 2021

[6] Equals [4] x [5]

[7] Equals weight in S&P 500 based on market capitalization [6] if Growth Rate >0% and <20%

[8] Source: Bloomberg Professional, as of November 30, 2021

[9] Equals [7] x [8]

[10] Source: Value Line, as of November 30, 2021

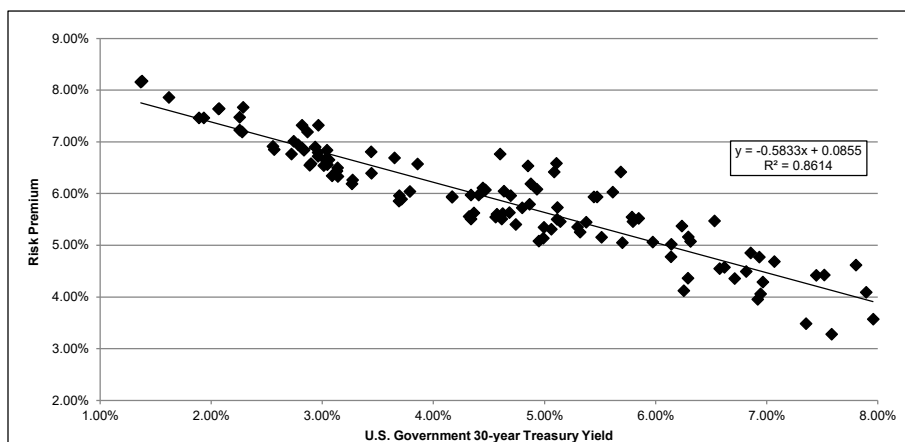
[11] Equals [7] x [10]

Risk Premium -- Natural Gas Utilities

	[1]	[2]	[3]
	Average Authorized Gas ROE	U.S. Govt. 30-year Treasury	Risk Premium
1992.1	12.42%	7.80%	4.62%
1992.2	11.98%	7.89%	4.09%
1992.3	11.87%	7.45%	4.42%
1992.4	11.94%	7.52%	4.42%
1993.1	11.75%	7.07%	4.68%
1993.2	11.71%	6.86%	4.85%
1993.3	11.39%	6.31%	5.07%
1993.4	11.16%	6.14%	5.02%
1994.1	11.12%	6.57%	4.55%
1994.2	10.84%	7.35%	3.48%
1994.3	10.87%	7.58%	3.28%
1994.4	11.53%	7.96%	3.57%
1995.2	11.00%	6.94%	4.06%
1995.3	11.07%	6.71%	4.35%
1995.4	11.61%	6.23%	5.37%
1996.1	11.45%	6.29%	5.16%
1996.2	10.88%	6.92%	3.96%
1996.3	11.25%	6.96%	4.29%
1996.4	11.19%	6.62%	4.58%
1997.1	11.31%	6.81%	4.49%
1997.2	11.70%	6.93%	4.77%
1997.3	12.00%	6.53%	5.47%
1997.4	10.92%	6.14%	4.78%
1998.2	11.37%	5.85%	5.52%
1998.3	11.41%	5.47%	5.94%
1998.4	11.69%	5.10%	6.59%
1999.1	10.82%	5.37%	5.44%
1999.2	11.25%	5.79%	5.46%
1999.4	10.38%	6.25%	4.12%
2000.1	10.66%	6.29%	4.36%
2000.2	11.03%	5.97%	5.06%
2000.3	11.33%	5.79%	5.55%
2000.4	12.10%	5.69%	6.41%
2001.1	11.38%	5.44%	5.93%
2001.2	10.75%	5.70%	5.05%
2001.4	10.65%	5.30%	5.35%
2002.1	10.67%	5.51%	5.15%
2002.2	11.64%	5.61%	6.03%
2002.3	11.50%	5.08%	6.42%
2002.4	11.01%	4.93%	6.08%
2003.1	11.38%	4.85%	6.53%
2003.2	11.36%	4.60%	6.76%
2003.3	10.61%	5.11%	5.50%
2003.4	10.84%	5.11%	5.73%
2004.1	11.06%	4.88%	6.18%
2004.2	10.57%	5.32%	5.25%
2004.3	10.37%	5.06%	5.31%
2004.4	10.66%	4.86%	5.79%
2005.1	10.65%	4.69%	5.96%
2005.2	10.54%	4.47%	6.07%
2005.3	10.47%	4.44%	6.03%
2005.4	10.32%	4.68%	5.63%
2006.1	10.68%	4.63%	6.05%
2006.2	10.60%	5.14%	5.46%
2006.3	10.34%	4.99%	5.34%
2006.4	10.14%	4.74%	5.40%
2007.1	10.52%	4.80%	5.72%
2007.2	10.13%	4.99%	5.14%
2007.3	10.03%	4.95%	5.08%
2007.4	10.12%	4.61%	5.50%
2008.1	10.38%	4.41%	5.97%
2008.2	10.17%	4.57%	5.60%
2008.3	10.55%	4.44%	6.11%
2008.4	10.34%	3.65%	6.69%
2009.1	10.24%	3.44%	6.81%
2009.2	10.11%	4.17%	5.94%
2009.3	9.88%	4.32%	5.56%
2009.4	10.31%	4.34%	5.97%
2010.1	10.24%	4.62%	5.61%
2010.2	9.99%	4.36%	5.62%
2010.3	10.43%	3.86%	6.57%
2010.4	10.09%	4.17%	5.93%
2011.1	10.10%	4.56%	5.54%
2011.2	9.85%	4.34%	5.51%
2011.3	9.65%	3.69%	5.96%
2011.4	9.88%	3.04%	6.84%
2012.1	9.63%	3.14%	6.50%
2012.2	9.83%	2.93%	6.90%
2012.3	9.75%	2.74%	7.01%
2012.4	10.06%	2.86%	7.19%

Risk Premium -- Natural Gas Utilities

	[1]	[2]	[3]
	Average Authorized Gas ROE	U.S. Govt. 30-year Treasury	Risk Premium
2013.1	9.57%	3.13%	6.44%
2013.2	9.47%	3.14%	6.33%
2013.3	9.60%	3.71%	5.89%
2013.4	9.83%	3.79%	6.04%
2014.1	9.54%	3.69%	5.85%
2014.2	9.84%	3.44%	6.39%
2014.3	9.45%	3.26%	6.19%
2014.4	10.28%	2.96%	7.32%
2015.1	9.47%	2.55%	6.91%
2015.2	9.43%	2.88%	6.55%
2015.3	9.75%	2.96%	6.79%
2015.4	9.68%	2.96%	6.72%
2016.1	9.48%	2.72%	6.76%
2016.2	9.42%	2.57%	6.85%
2016.3	9.47%	2.28%	7.19%
2016.4	9.67%	2.83%	6.84%
2017.1	9.60%	3.04%	6.56%
2017.2	9.47%	2.90%	6.58%
2017.3	10.14%	2.82%	7.32%
2017.4	9.70%	2.82%	6.88%
2018.1	9.68%	3.02%	6.66%
2018.2	9.43%	3.09%	6.34%
2018.3	9.71%	3.06%	6.65%
2018.4	9.53%	3.27%	6.26%
2019.1	9.55%	3.01%	6.54%
2019.2	9.73%	2.78%	6.94%
2019.3	9.95%	2.29%	7.66%
2019.4	9.73%	2.25%	7.48%
2020.1	9.35%	1.89%	7.46%
2020.2	9.55%	1.38%	8.17%
2020.3	9.52%	1.37%	8.15%
2020.4	9.47%	1.62%	7.86%
2021.1	9.71%	2.07%	7.64%
2021.2	9.48%	2.25%	7.22%
2021.3	9.40%	1.93%	7.46%
2021.4	9.70%	2.06%	7.64%
AVERAGE	10.45%	4.54%	5.90%
MEDIAN	10.34%	4.61%	5.95%



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.928097
R Square	0.861364
Adjusted R Square	0.860147
Standard Error	0.003878
Observations	116

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.010654	0.010654	708.294437	0.000000
Residual	114	0.001715	0.000015		
Total	115	0.012369			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.08552	0.00106	80.76	0.000000	0.083425	0.087620	0.083425	0.087620
U.S. Govt. 30-year Treasury	(0.58330)	0.02192	(26.61)	0.000000	(0.626714)	(0.539879)	(0.626714)	(0.539879)

	[7]	[8]	[9]
	U.S. Govt. 30-year Treasury	Risk Premium	ROE
Current 30-day average of 30-year U.S. Treasury bond yield [4]	1.97%	7.40%	9.37%
Blue Chip Near-Term Projected Forecast (Q1 2022 - Q1 2023) [5]	2.46%	7.12%	9.58%
Blue Chip Long-Term Projected Forecast (2023-2027) [6]	3.40%	6.57%	9.97%
AVERAGE			9.64%

Notes:

- [1] Source: Regulatory Research Associates, rate cases through November 30, 2021
[2] Source: Bloomberg Professional, quarterly bond yields are the average of each trading day in the quarter
[3] Equals Column [1] - Column [2]
[4] Source: Bloomberg Professional, 30-day average as of November 30, 2021
[5] Source: Blue Chip Financial Forecasts, Vol. 40, No. 12, December 1, 2021, at 2
[6] Source: Blue Chip Financial Forecasts, Vol. 40, No. 12, December 1, 2021, at 14
[7] See notes [4], [5] & [6]
[8] Equals 0.085522 + (-0.583297 x Column [7])
[9] Equals Column [7] + Column [8]

EXPECTED EARNINGS ANALYSIS

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
		Value Line ROE 2024-2026	Value Line Total Capital 2020	Value Line Common Equity Ratio 2020	Total Equity 2020	Value Line Total Capital 2024-2026	Value Line Common Equity Ratio 2024-2026	Total Equity 2024-2026	Compound Annual Growth Rate	Adjustment Factor	Adjusted Return on Common Equity
American States Water Company	AWR	13.00%	1216	52.80%	642	1,620	46.50%	753	3.24%	1.016	13.21%
Atmos Energy Corporation	ATO	7.50%	11323	60.00%	6,794	22,700	60.00%	13,620	14.92%	1.069	8.02%
California Water Service Group	CWT	11.50%	1702	54.10%	921	1,825	59.00%	1,077	3.17%	1.016	11.68%
Essential Utilities, Inc.	WTRG	8.50%	10192	46.00%	4,688	14,500	45.00%	6,525	6.83%	1.033	8.78%
Eversource Energy	ES	9.50%	29842	47.10%	14,056	40,200	44.50%	17,889	4.94%	1.024	9.73%
Middlesex Water Company	MSEX	13.00%	622	55.70%	346	630	60.00%	378	1.77%	1.009	13.11%
NiSource Inc.	NI	11.00%	15058	32.90%	4,954	18,180	40.00%	7,272	7.98%	1.038	11.42%
New Jersey Resources Corporation	NJR	10.00%	4104	44.90%	1,843	5,215	46.50%	2,425	5.64%	1.027	10.27%
Northwest Natural Gas Company	NWN	7.00%	1749	50.80%	888	2,550	57.00%	1,454	10.35%	1.049	7.34%
ONE Gas, Inc.	OGS	6.50%	3816	58.50%	2,232	8,000	53.00%	4,240	13.69%	1.064	6.92%
SJW Group	SJW	9.00%	2205	41.60%	917	1,975	62.00%	1,225	5.95%	1.029	9.26%
South Jersey Industries, Inc.	SJI	13.00%	4437	37.40%	1,660	6,425	37.50%	2,409	7.74%	1.037	13.48%
Spire, Inc.	SR	7.50%	4946	51.00%	2,522	7,500	55.00%	4,125	10.34%	1.049	7.87%
York Water Company	YORW	13.00%	267	53.70%	143	265	62.50%	166	2.94%	1.014	13.19%
Mean											10.31%
Median											10.00%

Notes:

[1] Source: Value Line, October 8, 2021, November 12, 2021, and November 26, 2021

[2] Source: Value Line, October 8, 2021, November 12, 2021, and November 26, 2022

[3] Source: Value Line, October 8, 2021, November 12, 2021, and November 26, 2023

[4] Equals [2] x [3]

[5] Source: Value Line, October 8, 2021, November 12, 2021, and November 26, 2021

[6] Source: Value Line, October 8, 2021, November 12, 2021, and November 26, 2021

[7] Equals [5] x [6]

[8] Equals $([7] / [4])^{(1/5)} - 1$

[9] Equals $2 \times (1 + [8]) / (2 + [8])$

[10] Equals [1] x [9]

COMPARISON OF NJAWC AND PROXY GROUP COMPANIES
RISK ASSESSMENT

				Revenue			Infrastructure			Revenue		
Company	Ticker	State	Utility Type	Requirement	Rate Base	Cost Recovery	Stabilization or					
				Test Year	Valuation	Mechanism	Decoupling	Citations				
American States Water Co	AWR	California	Water	Fully Forecast	Average	Yes	Full	2020 10-K, page 50 (test year), 39 (Decoupling), 27-28 (capital tracker); S&P Global Market Intelligence, Commission Profiles (Rate Base Valuation).				
Atmos Energy Corporation	AWR	California	Electric	Fully Forecast	Average	Yes	Full					
	ATO	Colorado	Gas	Historical	Average	Yes	No	2020 10-K, pages 7-8, 10; S&P Global Market Intelligence, Regulatory Focus: Adjustment				
	ATO	Kansas	Gas	Historical	Year End	Yes	Partial	Clauses, dated November 12, 2019; S&P Global - Market Intelligence Rate Case History				
	ATO	Kentucky	Gas	Fully Forecast	Average	Yes	Partial	(Past Rate Cases), accessed 11/18/21; Atmos - Louisiana Tariff; Atmos - Mississippi Tariff;				
	ATO	Louisiana	Gas	Historical	Year End	Yes	FRP	Atmos - Tennessee Tariff; Atmos - Texas Tariff; Atmos - Virginia Tariff; Atmos VA - Case				
	ATO	Mississippi	Gas	Partially Forecast	Average	Yes	FRP					
	ATO	Tennessee	Gas	Historical	Year End	Yes	FRP					
	ATO	Texas	Gas	Historical	Year End	Yes	FRP					
California Water Service Group	ATO	Virginia	Gas	Historical	Year End	Yes	Partial					
	CWT	California	Water	Fully Forecast	Average	Yes	Full	2020 10-K, page 8-12; S&P Global Market Intelligence, Commission Profiles; Kona Water				
	CWT	Hawaii	Water	Fully Forecast	Average	No	No	Service, Docket No. 2018-0388, Order No. 37124; Washington Water Tariff; New Mexico				
	CWT	New Mexico	Water	Historical	Year End	No	No					
Essential Utilities, Inc.	CWT	Washington	Water	Historical	Year End	Yes	No					
	WTRG	Pennsylvania	Water	Fully Forecast	Year End	Yes	No	2020 10-K, page 8-9; S&P Global Market Intelligence, Commission Profiles.				
	WTRG	Pennsylvania	Gas	Fully Forecast	Year End	Yes	No					
	WTRG	Ohio	Water	Partially Forecast	Year End	Yes	No					
Eversource Energy	WTRG	Illinois	Water	Fully Forecast	Average	Yes	Full					
	WTRG	Texas	Water	Historical	Year End	No	No					
	WTRG	New Jersey	Water	Partially Forecast	Year End	Yes	No					
	WTRG	North Carolina	Water	Historical	Year End	Yes	No					
	WTRG	Indiana	Water	Fully Forecast	Year End	Yes	No					
	WTRG	Virginia	Water	Historical	Year End	Yes	No					
	WTRG	Kentucky	Gas	Fully Forecast	Average	Yes	Partial					
	WTRG	West Virginia	Gas	Historical	Average	No	No					
	ES	Connecticut	Electric	Fully Forecast	Average	Yes	Full	S&P Global Market Intelligence, Regulatory Focus: Adjustment Clauses, dated November				
	ES	Connecticut	Gas	Fully Forecast	Average	Yes	Full	12, 2019; S&P Global Market Intelligence, Commission Profiles; S&P Global - Market				
	ES	Connecticut	Water	Fully Forecast	Average	Yes	Full	Intelligence Rate Case History (Past Rate Cases), accessed 11/18/21; 2020 10-K, page 11-				
	ES	Massachusetts	Electric	Historical	Year End	Yes	Full					
Middlesex Water Company	ES	Massachusetts	Gas	Historical	Year End	Yes	Full					
	ES	Massachusetts	Water	Historical	Year End	Yes	No					
	ES	New Hampshire	Electric	Historical	Year End	Yes	Partial					
	ES	New Hampshire	Water	Historical	Year End	Yes	No					
	MSEX	New Jersey	Water	Partially Forecast	Year End	Yes	No	S&P Global Market Intelligence, Commission Profiles; Middlesex Water Company, Twin				
	MSEX	Delaware	Water	Historical	Average	Yes	No	Lake Utilities, and Tidewater Utilities Tariffs.				
	MSEX	Pennsylvania	Water	Fully Forecast	Year End	No	No					
	NiSource Inc.	NI	Indiana	Electric	Fully Forecast	Year End	Yes	Partial	S&P Global - Market Intelligence Rate Case History (Past Rate Cases), accessed 11/18/21;			
NI		Indiana	Gas	Fully Forecast	Year End	Yes	No	S&P Global Market Intelligence, Commission Profiles; S&P Global Market Intelligence,				
NI		Kentucky	Gas	Fully Forecast	Average	Yes	Partial	Regulatory Focus: Adjustment Clauses, dated November 12, 2019;				
NI		Maryland	Gas	Partially Forecast	Average	Yes	Partial					
NI		Ohio	Gas	Partially Forecast	Year End	Yes	SFV					
NI		Pennsylvania	Gas	Fully Forecast	Year End	Yes	Partial					
NI		Virginia	Gas	Historical	Average	Yes	Partial					
								S&P Global - Market Intelligence Rate Case History (Past Rate Cases), accessed 11/18/21;				
New Jersey Resources Corporation							S&P Global Market Intelligence, Regulatory Focus: Adjustment Clauses, dated November					
Northwest Natural Gas Company	NJR	New Jersey	Gas	Partially Forecast	Year End	Yes	Full	12, 2019.				
	NWN	Oregon	Gas	Fully Forecast	Average	No	Partial	S&P Global - Market Intelligence Rate Case History (Past Rate Cases), accessed 11/18/21;				
ONE Gas, Inc.	NWN	Washington	Gas	Historical	Average	No	No	S&P Global Market Intelligence, Regulatory Focus: Adjustment Clauses, dated November				
	OGS	Kansas	Gas	Historical	Year End	Yes	Partial	S&P Global - Market Intelligence Rate Case History (Past Rate Cases), accessed 11/18/21;				
	OGS	Oklahoma	Gas	Historical	Year End	No	Partial	S&P Global Market Intelligence, Commission Profiles; S&P Global Market Intelligence,				
SJW Group	OGS	Texas	Gas	Historical	Year End	Yes	Partial	Regulatory Focus: Adjustment Clauses, dated November 12, 2019				
	SJW	California	Water	Fully Forecast	Average	Yes	No	2020 10-K, pages 5-9; S&P Global Market Intelligence, Commission Profiles.				
	SJW	Connecticut	Water	Fully Forecast	Average	Yes	Full					
	SJW	Maine	Water	Partially Forecast	Average	Yes	No					
South Jersey Industries, Inc.	SJW	Texas	Water	Historical	Year End	No	No					
	SJI	New Jersey (SJI)	Gas	Partially Forecast	Year End	Yes	Full	S&P Global - Market Intelligence Rate Case History (Past Rate Cases), accessed 11/18/21;				
Spire, Inc.	SJI	New Jersey (ET)	Gas	Partially Forecast	Year End	Yes	Partial	S&P Global Market Intelligence, Regulatory Focus: Adjustment Clauses, dated November				
	SR	Alabama	Gas	Fully Forecast	Average	Yes	FRP	Spire Alabama and Mississippi Tariffs, 2020 10-K pages 128-132; S&P Global Market				
York Water Company	SR	Mississippi	Gas	Historical	Year End	No	FRP	Intelligence, Regulatory Focus: Adjustment Clauses, dated November 12, 2019; S&P Global				
	SR	Missouri - East	Gas	Historical	Year End	Yes	Partial	- Market Intelligence Rate Case History (Past Rate Cases), accessed 11/18/21.				
	SR	Missouri - West	Gas	Historical	Year End	Yes	No					
Proxy Group Totals	YORW	Pennsylvania	Water	Fully Forecast	Year End	Yes	No	S&P Global Market Intelligence, Commission Profiles; 2020 10-K, page 41.				
NJAWC												
				</								

CAPITAL STRUCTURE ANALYSIS

COMMON EQUITY RATIO [1]				
Proxy Group Company	Ticker	2020	2019	MRY
American States Water Company	AWR	56.76%	65.94%	56.76%
Atmos Energy Corporation	ATO	58.31%	58.43%	58.31%
California Water Service Group	CWT	52.23%	46.73%	52.23%
Essential Utilities, Inc.	WTRG	55.83%	54.82%	55.83%
Eversource Energy	ES	54.99%	54.39%	54.99%
Middlesex Water Company	MSEX	59.21%	62.71%	59.21%
NISource Inc.	NI	54.43%	54.33%	54.43%
New Jersey Resources Corporation	NJR	55.45%	58.87%	55.45%
Northwest Natural Gas Company	NWN	47.44%	49.19%	47.44%
One Gas Inc.	OGS	60.04%	63.28%	60.04%
SJW Corporation	SJW	56.03%	55.13%	56.03%
South Jersey Industries, Inc.	SJI	54.73%	52.88%	54.73%
Spire Inc.	SR	58.52%	60.85%	58.52%
York Water Company	YORW	53.27%	56.50%	53.27%
Proxy Group				
MEAN		55.52%	56.72%	55.52%
LOW		47.44%	46.73%	47.44%
HIGH		60.04%	65.94%	60.04%

COMMON EQUITY RATIO - UTILITY OPERATING COMPANIES				
Company Name	Ticker	2020	2019	MRY
Golden State Water / Bear Valley	AWR	56.76%	65.94%	56.76%
Atmos Energy Corporation	ATO	58.31%	58.43%	58.31%
California Water Service	CWT	51.34%	46.46%	51.34%
New Mexico Water Service Water Division	CWT	67.06%	65.26%	67.06%
New Mexico Water Service Sewer Division	CWT	59.47%	56.79%	59.47%
Washington Water Service	CWT	71.93%	52.53%	71.93%
Hawaii Water Service Kaanapali Division	CWT	48.93%	49.76%	48.93%
Hawaii Water Service Pukalani Division	CWT	64.56%	65.06%	64.56%
Aqua Pennsylvania Water	WTRG	51.14%	51.03%	51.14%
Aqua Pennsylvania Wastewater	WTRG	97.07%	95.39%	97.07%
Peoples Natural Gas Company	WTRG	61.48%	56.71%	61.48%
Peoples Gas Company	WTRG	79.59%	71.96%	79.59%
Aqua Ohio Water	WTRG	64.62%	61.27%	64.62%
Aqua Ohio Wastewater	WTRG	72.82%	60.35%	72.82%
Aqua Illinois	WTRG	54.57%	57.96%	54.57%
Aqua Texas	WTRG	50.17%	48.96%	50.17%
Aqua New Jersey, Inc. Water	WTRG	50.28%	59.64%	50.28%
Aqua New Jersey, Inc. Wastewater	WTRG	100.00%	100.00%	100.00%
Aqua North Carolina	WTRG	50.62%	50.65%	50.62%
Aqua Indiana Aboite Division	WTRG	100.00%	100.00%	100.00%
Aqua Indiana Consumers Indiana Div.	WTRG	100.00%	100.00%	100.00%
Aqua Indiana Darlington Div.	WTRG	100.00%	100.00%	100.00%
Aqua Indiana Heir Division	WTRG	100.00%	100.00%	100.00%
Aqua Indiana Sani Tech, Inc.	WTRG	100.00%	100.00%	100.00%
Aqua Indiana Southeastern Utilities	WTRG	100.00%	100.00%	100.00%
Aqua Indiana Wedgewood Park	WTRG	100.00%	100.00%	100.00%
Aqua Indiana White Oak Div.	WTRG	100.00%	100.00%	100.00%
Aqua Indiana Wildwood Shores Div.	WTRG	100.00%	100.00%	100.00%
Aqua Indiana Wymberly Division	WTRG	100.00%	100.00%	100.00%
Aqua Virginia	WTRG	55.23%	49.44%	55.23%
Delta Gas	WTRG	56.93%	60.20%	56.93%
Peoples Gas of WV	WTRG	48.44%	48.10%	48.44%
Connecticut Light and Power Company	ES	55.42%	54.53%	55.42%
Yankee Gas Company	ES	61.97%	60.83%	61.97%
Aquarion Water Company	ES	58.76%	56.60%	58.76%
NSTAR Electric Company	ES	54.95%	55.00%	54.95%
NSTAR Gas Company	ES	55.54%	55.53%	55.54%
Aquarion Water Company	ES	58.76%	56.60%	58.76%
Public Service Company of NH	ES	48.66%	47.77%	48.66%
Aquarion Water Company	ES	58.76%	56.60%	58.76%
Middlesex Water Company	MSEX	59.03%	62.54%	59.03%
Pinelands Water	MSEX	100.00%	100.00%	100.00%
Pinelands WW	MSEX	100.00%	100.00%	100.00%
Twin Lakes Util.	MSEX		100.00%	100.00%
Northern Indiana Public Service Company LLC	NI	58.01%	56.43%	58.01%
Columbia Gas of Kentucky, Inc.	NI	54.68%	54.23%	54.68%
Columbia Gas of Maryland, Inc.	NI	54.95%	52.38%	54.95%
Columbia Gas of Ohio, Inc.	NI	50.45%	53.00%	50.45%
Columbia Gas of Pennsylvania, Inc.	NI	55.68%	55.59%	55.68%
Columbia Gas of Virginia, Inc.	NI	43.69%	42.53%	43.69%
New Jersey Natural Gas Company	NJR	55.45%	58.87%	55.45%
Northwest Natural Gas Company	NWN	47.44%	49.19%	47.44%
Kansas Gas Service Company, Inc.	OGS	60.33%	63.55%	60.33%
Oklahoma Natural Gas Company	OGS	59.85%	63.10%	59.85%
Texas Gas Service Company, Inc.	OGS	59.99%	63.23%	59.99%
San Jose Water	SJW	54.02%	51.46%	54.02%
CT Water	SJW	59.12%	56.58%	59.12%
Avon Water	SJW		92.15%	92.15%
Heritage Village Water	SJW		80.56%	80.56%
Maine Water Co.	SJW	58.39%	54.21%	58.39%
Canyon Lake Water Service Company	SJW		71.88%	71.88%
South Jersey Gas Company	SJI	54.73%	52.88%	54.73%
Spire Alabama Inc.	SR	64.35%	66.82%	64.35%
Spire Gulf Inc.	SR	40.55%	37.18%	40.55%
Spire Mississippi Inc.	SR	100.00%	100.00%	100.00%
Spire Missouri Inc.	SR	56.68%	59.05%	56.68%
York Water Company	YORW	53.27%	56.50%	53.27%

Notes:

[1] Ratios are weighted by actual common capital, preferred equity, and long-term debt of Operating Subsidiaries.

[2] Natural Gas and Water operating subsidiaries where data was unable to be obtained for 2020 and 2019 were removed from the analysis.

CAPITAL STRUCTURE ANALYSIS

LONG-TERM DEBT RATIO [1]				
Proxy Group Company	Ticker	2020	2019	MRY
American States Water Company	AWR	43.24%	34.06%	43.24%
Atmos Energy Corporation	ATO	41.69%	41.57%	41.69%
California Water Service Group	CWT	47.77%	53.27%	47.77%
Essential Utilities, Inc.	WTRG	44.17%	45.18%	44.17%
Eversource Energy	ES	44.35%	44.88%	44.35%
Middlesex Water Company	MSEX	40.43%	36.89%	40.43%
NiSource Inc.	NI	45.57%	45.67%	45.57%
New Jersey Resources Corporation	NJR	44.55%	41.13%	44.55%
Northwest Natural Gas Company	NWN	52.56%	50.81%	52.56%
One Gas Inc.	OGS	39.96%	36.72%	39.96%
SJW Corporation	SJW	43.97%	44.87%	43.97%
South Jersey Industries, Inc.	SJI	45.27%	47.12%	45.27%
Spire Inc.	SR	41.48%	39.15%	41.48%
York Water Company	YORW	46.73%	43.50%	46.73%
Proxy Group				
MEAN		44.41%	43.20%	44.41%
LOW		39.96%	34.06%	39.96%
HIGH		52.56%	53.27%	52.56%

LONG-TERM DEBT RATIO - UTILITY OPERATING COMPANIES				
Company Name	Ticker	2020	2019	MRY
Golden State Water / Bear Valley	AWR	43.24%	34.06%	43.24%
Atmos Energy Corporation	ATO	41.69%	41.57%	41.69%
California Water Service	CWT	48.66%	53.54%	48.66%
New Mexico Water Service Water Division	CWT	32.94%	34.74%	32.94%
New Mexico Water Service Sewer Division	CWT	40.53%	43.21%	40.53%
Washington Water Service	CWT	28.07%	47.47%	28.07%
Hawaii Water Service Kaaupali Division	CWT	51.07%	50.24%	51.07%
Hawaii Water Service Pukalani Division	CWT	35.44%	34.94%	35.44%
Aqua Pennsylvania Water	WTRG	48.86%	48.97%	48.86%
Aqua Pennsylvania Wastewater	WTRG	2.93%	4.61%	2.93%
Peoples Natural Gas Company	WTRG	38.52%	43.29%	38.52%
Peoples Gas Company	WTRG	20.41%	28.04%	20.41%
Aqua Ohio Water	WTRG	35.38%	38.73%	35.38%
Aqua Ohio Wastewater	WTRG	27.18%	39.65%	27.18%
Aqua Illinois	WTRG	45.43%	42.04%	45.43%
Aqua Texas	WTRG	49.83%	51.04%	49.83%
Aqua New Jersey, Inc. Water	WTRG	49.72%	40.36%	49.72%
Aqua New Jersey, Inc. Wastewater	WTRG	0.00%	0.00%	0.00%
Aqua North Carolina	WTRG	49.38%	49.35%	49.38%
Aqua Indiana Aboite Division	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Consumers Indiana Div.	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Darlington Div.	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Heir Division	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Sani Tech, Inc.	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Southeastern Utilities	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Wedgewood Park	WTRG	0.00%	0.00%	0.00%
Aqua Indiana White Oak Div.	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Wildwood Shores Div.	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Wymberly Division	WTRG	0.00%	0.00%	0.00%
Aqua Virginia	WTRG	44.77%	50.56%	44.77%
Delta Gas	WTRG	43.07%	39.80%	43.07%
Peoples Gas of WV	WTRG	51.56%	51.90%	51.56%
Connecticut Light and Power Company	ES	43.30%	44.03%	43.30%
Yankee Gas Company	ES	38.03%	39.17%	38.03%
Aquarion Water Company	ES	41.24%	43.40%	41.24%
NSTAR Electric Company	ES	44.52%	44.43%	44.52%
NSTAR Gas Company	ES	44.46%	44.47%	44.46%
Aquarion Water Company	ES	41.24%	43.40%	41.24%
Public Service Company of NH	ES	51.34%	52.23%	51.34%
Aquarion Water Company	ES	41.24%	43.40%	41.24%
Middlesex Water Company	MSEX	40.62%	37.05%	40.62%
Pinelands Water	MSEX	0.00%	0.00%	0.00%
Pinelands WW	MSEX	0.00%	0.00%	0.00%
Twin Lakes Util.	MSEX		0.00%	0.00%
Northern Indiana Public Service Company LLC	NI	41.99%	43.57%	41.99%
Columbia Gas of Kentucky, Inc.	NI	45.32%	45.77%	45.32%
Columbia Gas of Maryland, Inc.	NI	45.05%	47.62%	45.05%
Columbia Gas of Ohio, Inc.	NI	49.55%	47.00%	49.55%
Columbia Gas of Pennsylvania, Inc.	NI	44.32%	44.41%	44.32%
Columbia Gas of Virginia, Inc.	NI	56.31%	57.47%	56.31%
New Jersey Natural Gas Company	NJR	44.55%	41.13%	44.55%
Northwest Natural Gas Company	NWN	52.56%	50.81%	52.56%
Kansas Gas Service Company, Inc.	OGS	39.67%	36.45%	39.67%
Oklahoma Natural Gas Company	OGS	40.15%	36.90%	40.15%
Texas Gas Service Company, Inc.	OGS	40.01%	36.77%	40.01%
San Jose Water	SJW	45.98%	48.54%	45.98%
CT Water	SJW	40.88%	43.42%	40.88%
Avon Water	SJW		7.85%	7.85%
Heritage Village Water	SJW		19.44%	19.44%
Maine Water Co.	SJW	41.61%	45.79%	41.61%
Canyon Lake Water Service Company	SJW		28.12%	28.12%
South Jersey Gas Company	SJI	45.27%	47.12%	45.27%
Spire Alabama Inc.	SR	35.65%	33.18%	35.65%
Spire Gulf Inc.	SR	59.45%	62.82%	59.45%
Spire Mississippi Inc.	SR	0.00%	0.00%	0.00%
Spire Missouri Inc.	SR	43.32%	40.95%	43.32%
York Water Company	YORW	46.73%	43.50%	46.73%

Notes:

[1] Ratios are weighted by actual common capital, preferred equity, and long-term debt of Operating Subsidiaries.

[2] Natural Gas and Water operating subsidiaries where data was unable to be obtained for 2020 and 2019 were removed from the analysis.

CAPITAL STRUCTURE ANALYSIS

PREFERRED EQUITY RATIO [1]				
Proxy Group Company	Ticker	2020	2019	MRY
American States Water Company	AWR	0.00%	0.00%	0.00%
Atmos Energy Corporation	ATO	0.00%	0.00%	0.00%
California Water Service Group	CWT	0.00%	0.00%	0.00%
Essential Utilities, Inc.	WTRG	0.00%	0.00%	0.00%
Eversource Energy	ES	0.66%	0.72%	0.66%
Middlesex Water Company	MSEX	0.35%	0.40%	0.35%
NiSource Inc.	NI	0.00%	0.00%	0.00%
New Jersey Resources Corporation	NJR	0.00%	0.00%	0.00%
Northwest Natural Gas Company	NWN	0.00%	0.00%	0.00%
One Gas Inc.	OGS	0.00%	0.00%	0.00%
SJW Corporation	SJW	0.00%	0.00%	0.00%
South Jersey Industries, Inc.	SJI	0.00%	0.00%	0.00%
Spire Inc.	SR	0.00%	0.00%	0.00%
York Water Company	YORW	0.00%	0.00%	0.00%
Proxy Group				
MEAN		0.07%	0.08%	0.07%
LOW		0.00%	0.00%	0.00%
HIGH		0.66%	0.72%	0.66%

PREFERRED EQUITY RATIO - UTILITY OPERATING COMPANIES				
Company Name	Ticker	2020	2019	MRY
Golden State Water / Bear Valley	AWR	0.00%	0.00%	0.00%
Atmos Energy Corporation	ATO	0.00%	0.00%	0.00%
California Water Service	CWT	0.00%	0.00%	0.00%
New Mexico Water Service Water Division	CWT	0.00%	0.00%	0.00%
New Mexico Water Service Sewer Division	CWT	0.00%	0.00%	0.00%
Washington Water Service	CWT	0.00%	0.00%	0.00%
Hawaii Water Service Kaaupali Division	CWT	0.00%	0.00%	0.00%
Hawaii Water Service Pukalani Division	CWT	0.00%	0.00%	0.00%
Aqua Pennsylvania Water	WTRG	0.00%	0.00%	0.00%
Aqua Pennsylvania Wastewater	WTRG	0.00%	0.00%	0.00%
Peoples Natural Gas Company	WTRG	0.00%	0.00%	0.00%
Peoples Gas Company	WTRG	0.00%	0.00%	0.00%
Aqua Ohio Water	WTRG	0.00%	0.00%	0.00%
Aqua Ohio Wastewater	WTRG	0.00%	0.00%	0.00%
Aqua Illinois	WTRG	0.00%	0.00%	0.00%
Aqua Texas	WTRG	0.00%	0.00%	0.00%
Aqua New Jersey, Inc. Water	WTRG	0.00%	0.00%	0.00%
Aqua New Jersey, Inc. Wastewater	WTRG	0.00%	0.00%	0.00%
Aqua North Carolina	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Aboite Division	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Consumers Indiana Div.	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Darlington Div.	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Heir Division	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Sani Tech, Inc.	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Southeastern Utilities	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Wedgewood Park	WTRG	0.00%	0.00%	0.00%
Aqua Indiana White Oak Div.	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Wildwood Shores Div.	WTRG	0.00%	0.00%	0.00%
Aqua Indiana Wymberly Division	WTRG	0.00%	0.00%	0.00%
Aqua Virginia	WTRG	0.00%	0.00%	0.00%
Delta Gas	WTRG	0.00%	0.00%	0.00%
Peoples Gas of WV	WTRG	0.00%	0.00%	0.00%
Connecticut Light and Power Company	ES	1.28%	1.44%	1.28%
Yankee Gas Company	ES	0.00%	0.00%	0.00%
Aquarion Water Company	ES	0.00%	0.00%	0.00%
NSTAR Electric Company	ES	0.52%	0.57%	0.52%
NSTAR Gas Company	ES	0.00%	0.00%	0.00%
Aquarion Water Company	ES	0.00%	0.00%	0.00%
Public Service Company of NH	ES	0.00%	0.00%	0.00%
Aquarion Water Company	ES	0.00%	0.00%	0.00%
Middlesex Water Company	MSEX	0.36%	0.40%	0.36%
Pinelands Water	MSEX	0.00%	0.00%	0.00%
Pinelands WW	MSEX	0.00%	0.00%	0.00%
Twin Lakes Util.	MSEX	0.00%	0.00%	0.00%
Northern Indiana Public Service Company LLC	NI	0.00%	0.00%	0.00%
Columbia Gas of Kentucky, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Maryland, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Ohio, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Pennsylvania, Inc.	NI	0.00%	0.00%	0.00%
Columbia Gas of Virginia, Inc.	NI	0.00%	0.00%	0.00%
New Jersey Natural Gas Company	NJR	0.00%	0.00%	0.00%
Northwest Natural Gas Company	NWN	0.00%	0.00%	0.00%
Kansas Gas Service Company, Inc.	OGS	0.00%	0.00%	0.00%
Oklahoma Natural Gas Company	OGS	0.00%	0.00%	0.00%
Texas Gas Service Company, Inc.	OGS	0.00%	0.00%	0.00%
San Jose Water	SJW	0.00%	0.00%	0.00%
CT Water	SJW	0.00%	0.00%	0.00%
Avon Water	SJW		0.00%	0.00%
Heritage Village Water	SJW		0.00%	0.00%
Maine Water Co.	SJW	0.00%	0.00%	0.00%
Canyon Lake Water Service Company	SJW		0.00%	0.00%
South Jersey Gas Company	SJI	0.00%	0.00%	0.00%
Spire Alabama Inc.	SR	0.00%	0.00%	0.00%
Spire Gulf Inc.	SR	0.00%	0.00%	0.00%
Spire Mississippi Inc.	SR	0.00%	0.00%	0.00%
Spire Missouri Inc.	SR	0.00%	0.00%	0.00%
York Water Company	YORW	0.00%	0.00%	0.00%

Notes:

[1] Ratios are weighted by actual common capital, preferred equity, and long-term debt of Operating Subsidiaries.

[2] Natural Gas and Water operating subsidiaries where data was unable to be obtained for 2020 and 2019 were removed from the analysis.

BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF
NEW JERSEY-AMERICAN WATER COMPANY, INC.
FOR APPROVAL OF INCREASED TARIFF RATES AND
CHARGES FOR WATER AND WASTEWATER SERVICE, AND
OTHER TARIFF MODIFICATIONS

BPU Docket No. WR2201_____

Direct Testimony of

PATRICK L. BARYENBRUCH

On Behalf of

New Jersey-American Water Company, Inc.

January 14, 2022

Exhibit P-10

NEW JERSEY-AMERICAN WATER COMPANY, INC.1 **I. INTRODUCTION**2 **1. Q. Please state your name, position and business address.**

3 A. My name is Patrick L. Baryenbruch. I am the President of my own consulting
4 practice, Baryenbruch & Company, LLC, which was established in 1985. In that
5 capacity, I provide consulting services to utilities and their regulators. My business
6 address is 2832 Claremont Road, Raleigh, North Carolina 27608.

7 **2. Q. Summarize your academic and professional background.**

8 A. I received a Bachelor's degree in Accounting from the University of Wisconsin
9 Oshkosh and a Master's in Business Administration degree from the University of
10 Michigan. I am a member of the American Institute of Certified Public Accountants
11 and the North Carolina Association of Certified Public Accountants.

12 I began my career with Arthur Andersen & Company, where I performed financial
13 audits of utilities, banks and finance companies. I left to pursue an M.B.A. degree.
14 Upon graduation from business school, I worked with the management consulting
15 firms of Theodore Barry & Associates and Scott Consulting Group (now
16 ScottMadden) before establishing my own firm.

17 **3. Q. Do you hold any professional certifications?**

18 A. Yes. I am a Certified Public Accountant ("CPA") with an active license from the
19 states of Wisconsin and North Carolina. I am a Certified Information Technology
20 Professional, an accreditation awarded by the American Institute of Certified Public
21 Accountants to CPA professionals who can demonstrate expertise in information

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 technology management. I also hold a Global Information Assurance Certification
2 in cybersecurity from the SANS Institute.

3 **4. Q. Have you provided testimony in other regulatory proceedings on the issue of**
4 **utility/affiliate transactions?**

5 A. Yes. During my career, I have performed more than 120 evaluations of affiliate
6 charges to 41 utility companies. I have acted as an expert witness on utility/affiliate
7 charges in over 80 rate case proceedings before regulators in 20 states. Exhibit PLB-
8 1 presents my previous affiliate transaction-related assignments.

9 **5. Q. What other work experience do you have with the utility industry?**

10 A. Much of my career has been spent as a management consultant for projects related to
11 the utility industry. I have performed consulting assignments for more than 60
12 utilities and 10 public service commissions. I have participated as project manager,
13 lead consultant or staff consultant for 24 commission-ordered management and
14 prudence audits of public utilities. Of these, I have been responsible for evaluating
15 the area of affiliate charges and allocation of corporate expenses in the commission-
16 ordered audits of Connecticut Light and Power, Connecticut Natural Gas, General
17 Water Corporation (now United Water Company), Philadelphia Suburban Water
18 Company (now Aqua America), and Pacific Gas & Electric Company.

19 My firm performed the commission-ordered audit of Southern California Edison's
20 2002, 2003, 2004 and 2005 transactions with its non-regulated affiliate companies.
21 For 20 years, I have also been heavily involved in providing consulting services

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 related to information technology (“IT”) infrastructure within the utility industry.
2 These projects involve improvements in IT business management practices of utility
3 IT organizations, covering processes such as business planning, risk management,
4 performance measurement and reporting, cost recovery, budgeting, cost management
5 and personnel development.

6 I was a member of the project management team for several very large-scale IT
7 implementation projects involving more than 800,000 hours of work performed by
8 hundreds of utility client employees and contractor personnel.

9 **6. Q. Please describe the basis for your Direct Testimony in this case.**

10 A. I am presenting the results of my study that evaluated the services provided by
11 American Water Works Service Company, Inc. (“Service Company”) during the 12
12 months ended June 30, 2021 (the “historical period”) to New Jersey-American Water
13 Company, Inc. (“NJAWC” or “the Company”).

14 **7. Q. Are you sponsoring any exhibits in your testimony?**

15 A. Yes. I am sponsoring PLB-1, which is my CV, and PLB-2, which is the Market to
16 Cost Comparison of Service Company Charges to New Jersey American Water
17 Company. This study was undertaken in conjunction with NJAWC’s rate case and
18 the results are true to the best of my knowledge and belief.

19

NEW JERSEY-AMERICAN WATER COMPANY, INC.

II. OBJECTIVES AND METHODOLOGY

8. Q. What were the objectives of your study?

A. This study was undertaken to answer four questions concerning the services provided by the Service Company to NJAWC, each of which bears on the reasonableness of those charges as incurred during the historical period. First, were the Service Company's charges to NJAWC for various Administrative and General ("A&G") expenses during the historical period in line with the level of such charges to other utilities from their service companies? Second, was NJAWC charged costs that were in line with market value for managerial and professional services provided by the Service Company during the historical period? Third, were historical period costs for customer services provided by Service Company's customer accounts services in line with those of other comparable utilities? Fourth, are the services NJAWC receives from the Service Company necessary?

9. Q. Please describe the methodology you employed in conducting your study relative to the market to cost comparison for NJAWC's Service Company costs.

A. To answer the four questions contemplated in the study, I utilized the following basic methodologies. First, in order to place the overall reasonableness of Service Company charges into context, I compared NJAWC's relevant Service Company charges per regulated retail customer for A&G expenses to the same charges for utility companies that must file the Federal Energy Regulatory Commission ("FERC") Form 60 – Annual Report of Service Companies. This information is

NEW JERSEY-AMERICAN WATER COMPANY, INC.

publicly available and provides a useful comparison of utility service company charges generally. Second, to determine if the value of Service Company charges during the historical period were in line with the market prices of such services, I compared the cost per hour for managerial and professional services provided by Service Company personnel to hourly billing rates that would be charged by outside providers of equivalent services. Third, to determine whether Service Company's charges during the historical period for customer account services were comparable to other utilities I compared NJAWC's customer account services expenses to those of neighboring investor-owned electric utilities. Fourth, to determine the necessity of Service Company services I investigated the services Service Company provided to NJAWC during the historical period and analyzed whether these services would be required if NJAWC were not part of the American Water organization. The methodologies employed and data upon which I relied are all shown in my study set forth as Schedule PLB-2.

III. CONCLUSIONS

10. Q. What conclusions were you able to draw concerning question number 1, whether the A&G costs that Service Company charges to NJAWC were consistent with those charged to other utilities by their respective service companies?

A. I was able to determine that the Service Company's historical period cost per NJAWC customer is reasonable because it is in line with the cost per customer for the proxy service companies. During the historical period, NJAWC was charged \$72

NEW JERSEY-AMERICAN WATER COMPANY, INC.

per customer for A&G-related services provided by the Service Company. This compares to an average of \$115 per customer for service companies reporting to the FERC. Seventeen of the 22 utility service companies that filed a FERC Form 60 for 2020 had a higher per-customer A&G cost than NJAWC's charges from the Service Company.

11. Q. Why is a comparison of A&G costs useful to a determination of the reasonableness of the Service Company's charges to NJAWC?

A. A&G-related services cover the functions identified below and provide a useful comparison because the processes involved in delivering these services are similar across utility types.

Executive Management	Information Technology
Finance	Procurement
Accounting	Rates and Regulatory
Taxes	Legal
Financial Planning and Analysis	Human Resources
Internal Auditing	Customer Services

12. Q. What conclusions were you able to draw concerning question number 2, whether NJAWC received value for services provided by the Service Company?

A. The comparison of the value of services was accomplished by comparing the cost per hour for Service Company managerial and professional services to those of outside service providers to whom these duties could be assigned. Based on my study, I concluded that:

NEW JERSEY-AMERICAN WATER COMPANY, INC.

- (1) NJAWC was charged a reasonable value for managerial and professional services during the 12 months ended June 30, 2021.
- (2) On average, the hourly rates for outside service providers are 85% higher than the Service Company's hourly rates. Consequently, the Company obtains services from Service Company that are considerably below the market prices for such services.
- (3) The managerial and professional services provided by the Service Company are vital and could not be procured externally by NJAWC without careful supervision on the part of NJAWC. If these services were contracted entirely to outside providers, NJAWC would have to add at least five positions to manage activities of outside firms. These positions would be required to ensure the quality and timeliness of services provided.
- (4) If all the managerial and professional services now provided by the Service Company had been outsourced during the historical period, NJAWC would have incurred approximately \$31.6 million in additional expenses. This amount includes the higher cost of outside providers and the cost of five new NJAWC positions needed to direct the outsourced work.
- (5) This Study's hourly rate comparison understates the cost advantages that accrue to NJAWC from its use of the Service Company. Outside service providers generally bill for every hour worked. Service Company exempt personnel, on the other hand, charge a maximum of eight hours per day even when they work more hours. If all overtime hours of Service Company

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 personnel were factored into the hourly rate calculation, the Service Company
2 would have had an even greater annual dollar advantage than the \$31.6
3 million cited above.

4 (6) It would be difficult for NJAWC to find local service providers with the same
5 specialized water and wastewater industry expertise as that possessed by the
6 Service Company staff. Service Company personnel spend substantially all
7 their time serving operating water and wastewater companies. This
8 specialization brings with it a unique knowledge of water and wastewater
9 utility operations and regulation that may not be available from local service
10 providers and provides efficiencies over third-party providers.

11 (7) Most importantly, Service Company fees do not include any profit markup.
12 Only its actual cost of service is being charged to NJAWC.

13 For all these reasons, the Service Company charges to NJAWC are reasonable and
14 below the charges the Company would have to pay were it to source those services
15 from the market.

16 **13. Q. What conclusions were you able to draw concerning question number 3,**
17 **whether the historical period costs of the Service Company's customer account**
18 **services were comparable to such costs incurred by other utilities?**

19 A. Because I found that these costs were comparable to the costs incurred by other
20 utilities for such customer services, I concluded that the costs of the Service
21 Company's customer account services were reasonable. Such costs are below the

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 average of the neighboring electric utility comparison group. This group of
2 companies provides a reasonable proxy group for comparison to a regulated utility
3 such as NJAWC. During the historical period, the per-customer cost of customer
4 account services for NJAWC customers was \$18.03, compared to the 2020 average
5 of \$44.44 for other comparable utilities.

6 **14. Q. What conclusions were you able to draw concerning question number 4,**
7 **whether the services NJAWC receives from the Service Company are**
8 **necessary?**

9 A. As my study demonstrates:

- 10 (1) The services that the Service Company provides are necessary and are
11 required for a water and wastewater utility.
- 12 (2) There is no redundancy or overlap in the services provided by the Service
13 Company to NJAWC.

14 **15. Q. Does this complete your Direct Testimony?**

15 A. Yes.

**Patrick Baryenbruch's Previous Affiliate Transactions
and Rate Case Engagements**

	Client	State	Year	Purpose	Rate Case Witness?
1	Connecticut American Water	Connecticut	1999	Rate Case	Yes
2	Illinois American Water	Illinois	2007	Rate Case	Yes
3	Indiana American Water	Indiana	2017	Rate Case	Yes
4	Iowa American Water	Iowa	2020	Rate Case	Yes
5	Kentucky American Water	Kentucky	2003	Rate Case	Yes
		Kentucky	2006	Rate Case	Yes
		Kentucky	2008	Rate Case	Yes
		Kentucky	2009	Rate Case	Yes
		Kentucky	2018	Rate Case	Yes
6	Massachusetts American Water	Massachusetts	2000	Rate Case	Yes
7	Missouri American Water	Missouri	2002	Rate Case	Yes
		Missouri	2008	Rate Case	Yes
		Missouri	2014	Rate Case	Yes
		Missouri	2016	Rate Case	Yes
		Missouri	2019	Rate Case	Yes
8	New Jersey American Water	New Jersey	2005	Rate Case	Yes
		New Jersey	2007	Rate Case	Yes
		New Jersey	2009	Rate Case	Yes
		New Jersey	2010	Rate Case	Yes
		New Jersey	2014	Rate Case	Yes
		New Jersey	2017	Rate Case	Yes
		New Jersey	2019	Rate Case	Yes
9	New Mexico American Water	New Mexico	2007	Rate Case	Yes
10	New York American Water	New York	2006	Rate Case	Yes
		New York	2010	Rate Case	Yes
		New York	2013	Rate Case	Yes
		New York	2015	Rate Case	Yes
11	Ohio American Water	Ohio	2006	Rate Case	Yes
		Ohio	2010	Rate Case	Yes
12	Pennsylvania American Water	Pennsylvania	2008	Compliance	No
		Pennsylvania	2011	Compliance	No
		Pennsylvania	2014	Compliance	No
		Pennsylvania	2017	Compliance	No
13	Tennessee American Water	Tennessee	2006	Rate Case	Yes
		Tennessee	2010	Rate Case	Yes
14	Virginia American Water	Virginia	1996	Rate Case	Yes
		Virginia	1999	Rate Case	Yes
		Virginia	2000	Rate Case	Yes
		Virginia	2001	Rate Case	Yes
		Virginia	2003	Rate Case	Yes
		Virginia	2007	Rate Case	Yes
		Virginia	2009	Rate Case	Yes
		Virginia	2011	Rate Case	Yes
		Virginia	2014	Rate Case	Yes
15	West Virginia American Water	West Virginia	2002	Rate Case	Yes
		West Virginia	2006	Rate Case	Yes
		West Virginia	2007	Rate Case	Yes
		West Virginia	2009	Rate Case	Yes
		West Virginia	2012	Rate Case	Yes
		West Virginia	2014	Rate Case	Yes
		West Virginia	2017	Rate Case	Yes
16	Atlanta Gas Light (Southern Co)	Georgia	2009	Rate Case	Yes
17	Atmos Energy Corporation	Virginia	2004	Compliance	No
18	Columbia Gas of Kentucky	Kentucky	2015	Rate Case	Yes
19	Columbia Gas of Maryland	Maryland	2015	Rate Case	Yes
20	Columbia Gas of Massachusetts	Massachusetts	2004	Rate Case	Yes
		Massachusetts	2006	Internal Info	No
		Massachusetts	2011	Internal Info	No
		Massachusetts	2012	Internal Info	No
		Massachusetts	2014	Internal Info	No
		Massachusetts	2017	Internal Info	No

Patrick Baryenbruch's Previous Affiliate Transactions and Rate Case Engagements

	Client	State	Year	Purpose	Rate Case Witness?
21	Columbia Gas of Pennsylvania	Pennsylvania	2015	Rate Case	No
		Pennsylvania	2020	Rate Case	Yes
22	Columbia Gas of Virginia	Virginia	2003	Compliance	No
		Virginia	2004	Compliance	No
		Virginia	2005	Rate Case	Yes
		Virginia	2006	Compliance	No
		Virginia	2007	Compliance	No
		Virginia	2008	Compliance	No
		Virginia	2009	Rate Case	Yes
		Virginia	2010	Compliance	No
		Virginia	2011	Compliance	No
		Virginia	2012	Compliance	No
		Virginia	2013	Rate Case	Yes
		Virginia	2014	Compliance	No
		Virginia	2015	Rate Case	Yes
		Virginia	2016	Compliance	No
		Virginia	2017	Rate Case	Yes
		Virginia	2018	Compliance	No
		Virginia	2019	Compliance	No
		Virginia	2020	Compliance	No
23	Northern Indiana Public Service	Indiana	2015	Internal Info	No
		Indiana	2016	Rate Case	Yes
24	Dominion Resources, Inc.	Virginia	2008	Rate Case	Yes
		Virginia	2009	Compliance	No
		Virginia	2010	Compliance	No
		Virginia	2011	Compliance	No
		Virginia	2012	Compliance	No
		Virginia	2014	Compliance	No
		Virginia	2017	Compliance	No
		Virginia	2019	Compliance	No
25	Duke Energy	North Carolina	2006	Compliance	No
26	Elizabethtown Gas (Southern Co)	New Jersey	2008	Rate Case	Yes
27	Electric Transmission Texas	Texas	2016	Rate Case	Yes
28	General Water Works of Rio Rancho	New Mexico	1993	Rate Case	Yes
29	General Water Works of Virginia	Virginia	1992	Rate Case	Yes
30	Po River Water and Sewer	Virginia	1993	Rate Case	Yes
		Virginia	2007	Rate Case	Yes
		Virginia	2008	Rate Case	Yes
31	Progress Energy	North Carolina	2001	Internal Info	No
32	Roanoke Gas	Virginia	2006	Compliance	No
33	Southern California Edison	California	2002	Compliance	No
		California	2003	Compliance	No
		California	2004	Compliance	No
		California	2005	Compliance	No
34	AEP Texas	Texas	2018	Rate Case	Yes
35	Southwestern Electric Power	Texas	2016	Rate Case	Yes
		Texas	2020	Rate Case	Yes
36	Virginia Natural Gas (Southern Co)	Virginia	2004	Compliance	No
		Virginia	2005	Rate Case	Yes
		Virginia	2010	Rate Case	Yes
37	United Water of Pennsylvania	Pennsylvania	2004	Rate Case	Yes
38	Corix Infrastructure/Water Services Corp.	Enterprise	2018	Internal Info	No
		Enterprise	2019	Internal Info	No
39	Massanutten Public Service Company	Virginia	2006	Rate Case	Yes
		Virginia	2008	Rate Case	Yes
		Virginia	2013	Rate Case	Yes
		Virginia	2019	Rate Case	Yes
40	Water Service Corporation Kentucky	Kentucky	2010	Rate Case	Yes
		Kentucky	2012	Rate Case	Yes
		Kentucky	2019	Rate Case	Yes
41	Corix Utilities Oklahoma	Oklahoma	2019	Compliance	Yes
42	Great Basin Water Company	Nevada	2020	Rate Case	Yes
Total Studies					124
Number of Rate Cases					83
Number of Utility Clients					42
Number of States					20

**Market to Cost Comparison of Service Company Charges to
New Jersey American Water Company**

12 Months Ended June 30, 2021

November 2021

**New Jersey American Water Company
Market to Cost Comparison of Service Company Charges
12 Months Ended June 30, 2021**

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I – Introduction

Purpose of This Study

This Market-to-Cost Comparison of American Water Works Service Company, Inc. (Service Company) Charges to New Jersey American Water Company (NJAWC) study (Study) was undertaken to answer four questions concerning the services provided by Service Company to NJAWC:

1. Were the Service Company's charges to NJAWC for administrative and general (A&G)-related services in line with comparable costs charged by service companies to electric utilities during the 12-months ended June 30, 2021?
2. Was NJAWC charged a reasonable value for managerial and professional services provided by the Service Company during the 12 months ended June 30, 2021?
3. Were the 12 months ended June 30, 2021, costs of the Service Company's customer account services comparable to those of other utilities?
4. Are the services NJAWC receives from the Service Company necessary?

Study Results

Concerning question 1, the following conclusion was reached:

- The Service Company's 12 months ended June 30, 2021, cost per NJAWC customer is reasonable compared to costs per customer for electric and combination electric/gas service companies. During the 12 months ended June 30, 2021, NJAWC was charged \$72 per customer for A&G related services provided by the Service Company. This compares to an average of \$115 per customer for service companies reporting to the Federal Energy Regulatory Commission (FERC). Seventeen of the 22 utility service companies that filed a FERC Form 60 for 2020 had higher per-customer A&G costs than NJAWC's charges from the Service Company.

Concerning question 2, the following conclusions were reached from this study:

- NJAWC was charged a reasonable value for managerial and professional services during the 12 months ended June 30, 2021.
- On average, the hourly rates for outside service providers are 85% higher than the Service Company's hourly rates. Consequently, the Company obtains services from Service Company that are considerably below the market prices for such services.
- The managerial and professional services provided by the Service Company are vital and could not be procured externally by NJAWC without careful supervision on the part of NJAWC. If these services were contracted entirely to outside providers, NJAWC would have to add at least five positions to manage activities of outside firms. These positions would be required to ensure the quality and timeliness of services provided.
- If all the managerial and professional services now provided by the Service Company had been outsourced during the 12 months ended June 30, 2021, NJAWC and its customers would have incurred approximately \$31.6 million in additional expenses. This amount includes the higher cost of outside providers and the cost of five new NJAWC positions needed to direct the outsourced work.

I – Introduction

- This Study's hourly rate comparison actually understates the cost advantages that accrue to NJAWC from its use of the Service Company. Outside service providers generally bill for every hour worked. Service Company exempt personnel, on the other hand, charge a maximum of eight hours per day even when they work more hours. If all overtime hours of Service Company personnel were factored into the hourly rate calculation, the Service Company would have had an even greater annual dollar advantage than the \$31.6 million cited above.
- It would be difficult for NJAWC to find local service providers with the same specialized water and wastewater industry expertise as that possessed by the Service Company staff. Service Company personnel spend substantially all their time and bring a wealth of experience serving operating water and wastewater companies. This specialization and experience bring with it a unique knowledge of water and wastewater utility operations and regulation that may not be available from local service providers.
- Service Company fees do not include any profit markup. Only its actual cost of service is being charged to NJAWC.

Concerning question 3, the following conclusion was reached:

- The cost of the Service Company's customer account services is reasonable. Such costs are below the average of the neighboring electric utility comparison group. This group of companies provides a reasonable proxy group for comparison to a regulated utility of the size and scope of the Service Company and NJAWC. During the 12 months ended June 30, 2021, the cost of customer account services for NJAWC customers was \$18.03, compared to the 2020 average of \$44.44 for neighboring electric utilities.

Concerning question 4, the following conclusions were drawn:

- The services that the Service Company provides are necessary and required for a water and wastewater utility.
- There is no redundancy or overlap in the services provided by the Service Company to NJAWC. For all of the services provided (Exhibit 13), there was only one entity primarily responsible for the service.

II – Background

Overview of American Water Works Service Company

American Water's Service Company exists to provide certain shared services to American Water subsidiaries. It follows a service company model used by many utility holding companies that own multiple regulated utilities. By consolidating executive and professional services into a single service company, utility holding companies are able to realize the following benefits for customers:

- **Purchasing Economies** – Common expenses (e.g., insurance, chemicals, piping) can be procured on a much larger scale, thereby providing greater bargaining power for the combined entity compared to individual utility operating companies. A service company facilitates enterprise-wide purchasing programs through its procurement and contract administration functions.
- **Operating Economies of Scale** – A service company is able to deliver services more efficiently because workloads can be balanced across more persons and facilities. For instance, American Water's Service Company is able to maintain one principal data center for the entire organization. This is much more cost-efficient than each operating utility funding its own data center with large, fixed hardware, software and staffing costs.
- **Continuity of Service** – Centralizing service company personnel who perform similar services facilitates job cross-training and sharing of knowledge and expertise. This makes it easier to manage staff turnover and absences and to sustain high levels of service to operating utilities. An individual operating utility might experience considerable disruption if a key professional left and it were necessary to hire outside to fill the vacancy.
- **Maintenance of Enterprise-Wide Standards** – Personnel in American Water's Service Company establish standards for many functions (e.g., engineering designs, operating procedures and maintenance practices). It is easier to align operating utility operations because their implementation is supported by the Service Company.
- **Improved Support and Guidance** – American Water's Service Company provides another dimension of management and financial support and guidance that supplements local operating utility management. The Service Company facilitates standard planning and reporting, which helps ensure that operating utilities meet the requirements of their customers in a cost-effective manner.
- **Retention of Personnel** – A service company organization provides operating utility personnel with another career path beyond what may be available on a local level. These opportunities tend to improve employee retention.

American Water follows the model for other utility service companies in another important regard: its services are provided to affiliate operating utilities, like NJAWC, at cost. American Water's Service Company is not a profit-making entity. It assigns only its actual expenses to the American Water subsidiaries it services.

II – Background

The Service Company provides services to American Water operating companies from the following locations:

- One Water Street – Service Company employees at One Water Street provide corporate governance and service functions, including executive management, finance, accounting, audit, tax, regulatory, external affairs, engineering, supply chain, human resources and benefits services. One Water Street also includes American Water's main Information Technology (IT) Services center for employees, provides software delivery and enhancements and provides local on-site support as well as the IT Service Desk for remote assistance for all employees using personal computers in the performance of their day-to-day activities. Further, One Water Street supports mission-critical systems such as SCADA as well as emerging technologies such as geographic information systems and mobility. It provides technical expertise in project governance and release management while ensuring compliance with all governmental regulations.
- Central Lab – The national trace substance laboratory is located in Belleville, Illinois, and performs testing for all American Water operating companies.
- Customer Relations and Customer Service Centers – Provides customer relations and field resource coordination services from two locations: Belleville, Illinois, and Wilkes Barre, Pennsylvania, and provides customer communication, billing and collection services from various locations.
- Information Technology Services Center – The IT Services Center supports the technology infrastructure required to run business applications and communications systems for American Water's operating companies. American Water's primary data center is an IBM facility in Sterling Forest, New York.
- Haddon Heights IT Services Center – American Water's data center, located in Haddon Heights, New Jersey, maintains data servers for back-up and disaster recovery.
- Regional Support Services – Operating companies are provided with certain support services that are delivered more effectively on a regional basis because individual operating company workloads are not sufficient to warrant maintaining their own full-time staff for these activities. These services require closer proximity to operating companies and therefore are located closer to the operating companies the employees provide service to instead of one of the corporate locations.

Service Company Accounting

Service Company maintains an accounting ledger for recording transactions (e.g., labor, expenses, overhead, capital and other assets, liabilities and equity) in a Service Company ledger separate from affiliates' ledgers. Monthly financial statements are prepared that summarize month-to-date and year-to-date costs, budgets and prior year, with variances and explanations, by category and function. Accounting categories by transaction type are described below:

- Service Company Labor: The Service Company utilizes a system that tracks time and attendance. Employees electronically enter hours worked (including vacation, sick, family leave, etc.) and accounting information (e.g., business unit; formula; pay type) and electronically submit the timesheet for approval. Submitted timesheets are electronically routed to authorized approvers. Time sheets require approval (of hours and accounting information such as formulas, etc.) by an authorized timesheet approver in the employee's home business unit.

II – Background

- **Service Company Expenses:** Expenditures (i.e., standard invoices, purchase orders, electronic disbursements, miscellaneous invoices, recurring invoices, recurring vouchers, and procurement cards) and journal entries require a preparer to enter accounting coding details (e.g., cost center, cost element and Work Breakdown Structure (WBS)) and a reviewer to approve the information in accordance with the corporate Delegation of Authority Policy. Expenditures are processed electronically and are automatically routed to the employee's supervisor for approval. Costs are posted many times daily, in detail, in the business unit selected. Journal entries are submitted as prepared to the appropriate reviewer and posted as approved.
- **Service Company Assets:** Service Company assets are procured directly by Service Company or through a capital leasing arrangement with Laurel Oak Properties (LOP). Service Company capitalizes these LOP leases as Non-Utility Plant assets in accordance with generally accepted accounting principles. Generally speaking, Service Company assets (including hardware, servers, laptops, desktops, servers, storage racks, furniture, laboratory and test equipment, security cameras, monitors and leasehold improvements) are acquired through LOP via a capital lease. LOP, on behalf of the Service Company, will acquire the necessary materials and services to build the assets that are needed for the Service Company to meet its business needs. One Water Street (OWS), which owns the Camden headquarters, is providing furniture, fixtures and office-related equipment for the first 7 years of the lease with the Service Company.
- **Service Company Overhead:** Costs for support personnel (e.g., administrative assistants, mailroom clerks), rents, facility expenses, pension, medical insurance, taxes, general office supplies and other similar expenses are recorded in the ledger of the cost center responsible for incurring the charge. Overhead expenditures are posted using the labor and expense processes noted above, and are recorded, in detail, in the ledger of the cost center responsible for the charge, using an overhead WBS.

Service Company Billing and Clearing

Service Company has developed a billing system that charges directly or allocates costs for services provided to Affiliates. Service Company billing is processed monthly and includes all Service Company costs charged to Affiliates using the WBS element selected for each transaction.

- **WBS element:** Every Service Company transaction (vouchers, journal entries, payroll batch, etc.) requires a WBS element within the account coding string. Each WBS element is configured in SAP with the following: Affiliate(s) to be charged, percent of charge to be billed to each Affiliate (total must equal 100%), receiving object (e.g., Affiliate's cost center) for O&M costs or an Affiliate's WBS element for capital expenditures (CAPEX). WBS elements are configured in SAP with an end date (month/year) to prevent transactions from using an expired WBS during data input.
- **Affiliate Billing Process:** Service Company billing is a two-step process that first calculates allocations of transactions for all non-overhead WBS elements. The second step calculates overhead transaction allocations using the ratio of direct labor (Cost Element 5012000) allocations to Affiliates from the first step above multiplied by the pool of overhead expenses by physical location.
- **Bill Clearing Process:** Service Company billings are cleared through American Water Capital Corp., (an affiliate) monthly via an intercompany journal entry to GL Account 23120000 (Notes Payable – Associated Companies) posted on the last day of the month. Payments are estimated for each Affiliate using the prior month actual billing (current month

II – Background

estimate) with adjustment for prior month actual to estimate (previous month funding) true-up.

III – Service Company Cost Comparison Approach

Service Company Charges

During the 12 months ended June 30, 2021, the Service Company billed NJAWC a total of approximately \$69.8 million, as shown in the table below. These charges were subjected to a market-to-cost-comparison.

	12 Months Ended June 30, 2021
Support Services - O&M	\$ 55,515,700
Support Services - Capital	\$ 14,234,489
Total Service Company Charges	\$ 69,750,189

For purposes of comparing these charges to certain outside benchmarks, Service Company services were placed into three categories:

- Managerial and Professional Services – Includes such services as management, accounting, legal, human resources, engineering and information technology.
- Customer Account Services – Includes customer-related services, such as call center, credit, billing, collection and payment processing.
- Field Resource Coordination Services – Includes tracking and dispatching service orders for field representatives and distribution crews to carry out.

Total 12 months ended June 30, 2021 Service Company dollar and hour charges break down between management and professional services and customer account services as follows:

	12 Months Ended June 30 2021	
	Charges	Hours
Management and Professional Services	\$ 58,518,652	286,525
Customer Account Services	\$ 10,003,906	101,582
Field Resource Coordination Services	\$ 1,227,630	25,370
Total Service Company Charges	\$ 69,750,189	413,477

Service Company Cost Comparison Approach

This Study's first question—whether the Service Company A&G charges during the 12 months ended June 30, 2021, were reasonable—was determined by comparing NJAWC's A&G-related Service Company charges per regulated retail customer to the same charges for utility companies that must file the Federal Energy Regulatory Commission (FERC) Form 60 – Annual Report of Service Companies.

The second question—how the Service Company charges during the 12 months ended June 30, 2021, provided value to NJAWC—was evaluated by comparing the cost per hour for managerial and professional services provided by Service Company personnel to hourly billing rates that would be charged by outside providers of equivalent services. Service Company costs per hour were based on actual charges to NJAWC during the 12 months ended June 30, 2021. Outside providers' billing rates came from surveys or other information from professionals who could perform the services now provided by the Service Company.

The third question—whether Service Company's 12 months ended June 30, 2021 customer account services charges were comparable to other utilities—was addressed by comparing NJAWC's customer account services expenses to those of investor-owned electric utilities. This

III – Service Company Cost Comparison Approach

utility comparison group was selected because the cost of outside providers of customer account services is proprietary and not publicly available. Comparison to electric utilities is appropriate because all utilities, regardless of service type, must perform customer account services activities, including updating customer records for meter reads, printing and mailing bills, and collecting and processing customer payments. Electric utility costs are available from the FERC Form 1; thus, there is appropriate data transparency. The selection of electric utilities from New Jersey and neighboring states provides a sufficiently sized comparison group.

The fourth question—the necessity of Service Company services—was investigated by defining the services provided to NJAWC and determining if these services would be required if NJAWC were not part of the American Water organization.

IV – Question 1 – Reasonableness of Service Company Charges

Methodology

Utility service companies deliver a variety of services. Some may support their regulated utility affiliate's operations-related functions (e.g., transmission, distribution). All utility service companies, however, provide A&G services to their affiliates. This is the case because considerable economies of scale derive from centralizing the management of corporate A&G services such as finance, human resources and information technology. Because A&G-related services are delivered by all utility service companies, this study uses A&G charges per customer as the metric by which to test the reasonableness of affiliate charges.

NJAWC's Service Company A&G Cost per Customer

During the 12 months ended June 30, 2021, NJAWC was charged \$72 per customer by the Service Company for A&G-related services. The calculation of this amount, shown in the table below, starts with total Service Company charges and adjusts for capital and non-A&G function (e.g., engineering, operations and water quality) charges. These adjustments are necessary to develop a per-customer cost that can be compared to the cost of the utility service company comparison group.

	12 Months Ended June 30, 2021
Total Service Company charges	\$ 69,750,189
Less: Capital charges	\$ (14,234,489)
Less: Non-A&G charges	
Engineering	\$ (576,811)
Operations	\$ (2,312,330)
Water Quality	\$ (952,265)
Net A&G Service Company Charges	\$ 51,674,295
NJAWC Customer Count	716,061
NJAWC A&G SC Charges per Customer	\$ 72

Comparison Group A&G Cost Per Customer

Every centralized service company in a holding company system subject to regulation by the FERC must file a Form 60 in accordance with the Public Utility Holding Company Act of 2005, Section 1270, Section 390 of the Federal Power Act, and 18 Code of Federal Regulations paragraph 366.23. The Form 60 is designed to collect financial information from service companies within a holding company structure.

Charges to utility affiliates for the comparison group service companies were obtained from Schedule XVI – Analysis of Charges for Service Associate and Non-Associate Companies (p. 303 to 306) of each entity's FERC Form 60. Information from Form 60 schedule Account 457 – Analysis of Billing – Associate Companies was also used to isolate and eliminate charges to non-regulated affiliates from the cost pool used to calculate A&G expenses per regulated service customer.

For 2020, a Form 60 was filed by service companies associated with 22 utility holding companies. These service companies support utilities that provide regulated electric and, in some cases, gas service to retail customers.

IV – Question 1 – Reasonableness of Service Company Charges

FERC Form 60 shows service company charges to affiliates by FERC account. The table below shows a list of FERC A&G accounts and designates which correspond to services the Service Company provides to NJAWC. Amounts in the designated FERC accounts are included in the calculation of service company A&G expenses per regulated customer.

FERC Account	Included In Cost Calculation
901 - Supervision	X
902 - Meter reading expenses	
903 - Customer records and collection expenses	X
904 - Uncollectible accounts	
905 - Miscellaneous customer accounts expenses	X
907 - Supervision	
908 - Customer assistance expenses	
909 - Informational And Instructional Advertising Expenses	
910 - Miscellaneous Customer Service And Informational Exp	X
911 - Supervision	
912 - Demonstrating and Selling Expenses	
913 - Advertising Expenses	
916 - Miscellaneous Sales Expenses	
920 - Administrative and General Salaries	X
921 - Office Supplies and Expenses	X
923 - Outside Services Employed	X
924 - Property Insurance	X
925 - Injuries and Damages	
926 - Employee Pensions and Benefits	X
928 - Regulatory Commission Expenses	
930.1 - General Advertising Expenses	
930.2 - Miscellaneous General Expenses	X
931 - Rents	X
935 - Maintenance of Structures and Equipment	X

The A&G expenses per regulated utility customer for the 22 utility companies whose service companies filed a Form 60 for 2020 are calculated in Exhibit 1 (page 11).

Exhibit 2 (page 12) shows NJAWC's 12 months ended June 30, 2021 Service Company cost per customer of \$72 to be lower than the average of \$115 per customer for the comparison group service companies. Seventeen of the 22 comparison group service companies had higher per-customer A&G costs than NJAWC's charges from the Service Company. Based on this result, it is possible to conclude that the Service Company's charges to NJAWC are reasonable.

Exhibit 1

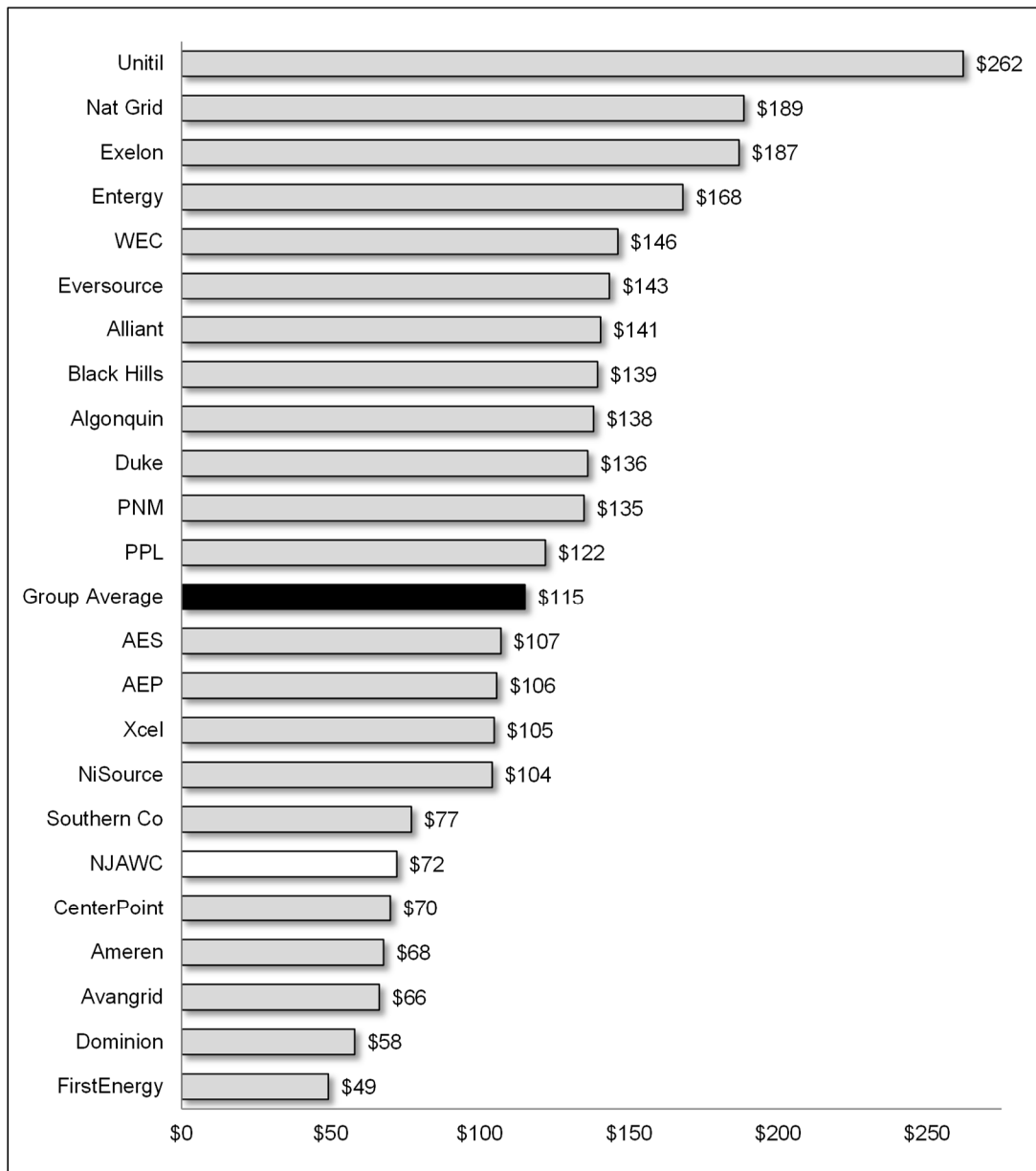
New Jersey American Water Company
Calculation of 2020 Service Company A&G Expenses Per Customer

Utility Company	2020 Regulated Retail Service Company A&G Expenses	Regulated Retail Customers	Cost per Customer
AEP	\$581,431,806	5,500,000	\$ 106
AES	\$84,972,673	793,500	\$ 107
Algonquin	\$93,507,879	677,000	\$ 138
Alliant	\$195,356,017	1,390,000	\$ 141
Ameren	\$223,383,695	3,300,000	\$ 68
Avangrid	\$218,683,477	3,300,000	\$ 66
Black Hills	\$178,511,164	1,280,000	\$ 139
CenterPoint	\$519,740,566	7,427,500	\$ 70
Dominion	\$404,160,305	6,963,000	\$ 58
Duke	\$1,299,912,203	9,541,000	\$ 136
Entergy	\$538,366,404	3,202,000	\$ 168
Eversource	\$575,146,581	4,009,000	\$ 143
Exelon	\$1,869,988,049	10,000,000	\$ 187
FirstEnergy	\$295,447,481	6,000,000	\$ 49
Nat Grid	\$1,319,903,837	7,000,000	\$ 189
NiSource	\$371,616,218	3,569,000	\$ 104
PNM	\$107,797,415	798,700	\$ 135
PPL	\$329,504,996	2,700,000	\$ 122
Southern Co	\$665,433,317	8,630,000	\$ 77
Unitil	\$50,514,408	192,700	\$ 262
WEC	\$335,637,101	2,294,000	\$ 146
Xcel	\$597,442,792	5,700,000	\$ 105
Total/Average	\$10,856,458,384	94,267,400	\$ 115

Source: FERC Form 60; Baryenbruch & Company, LLC, analysis

Exhibit 2

New Jersey American Water Company
Comparison of Service Company A&G Charges Per Customer



Source: Company information; 2020 FERC Form 60; Baryenbruch & Company, LLC, analysis

V – Question 2 – Provision of Services Compared to Market

Methodology

The value of services comparison is accomplished by comparing the cost per hour for Service Company managerial and professional services to those of outside service providers to whom these duties could be assigned. Based on the nature of the Service Company services, it was determined that the following outside providers could perform the categories of services indicated below:

- Management Consultants – executive and administrative management, risk management, human resources and communications services
- Attorneys – legal services
- Certified Public Accountants – accounting, financial and rates and revenues services
- IT Professionals – information technology services
- Professional Engineers – engineering, operations and water quality services.

Service Company's hourly rates were calculated for each of the five outside service provider categories, based on the dollars and hours charged to NJAWC during the 12 months ended June 30, 2021. Hourly billing rates for outside service providers were developed using third party surveys or directly from information furnished by outside providers themselves.

It should be noted that by using the Service Company's hours charged to NJAWC during the 12 months ended June 30, 2021, its hourly rates are actually overstated because some Service Company personnel charge a maximum of 8 hours per day even when they work more. Outside service providers generally bill for every hour worked. If all overtime hours of Service Company personnel had been factored into the hourly rate calculation, Service Company hourly rates would have been lower.

The last step in the market comparison was to compare the Service Company's average cost per hour to the average cost per hour for outside providers.

Service Company Hourly Rates

Exhibit 3 (page 15) details the assignment of 12 months ended June 30, 2021 management and professional Service Company charges by outsider provider category. Exhibit 4 (page 16) shows the same assignment for Service Company management and professional hours charged to NJAWC during the 12 months ended June 30, 2021.

Adjustments to these dollar amounts were necessary to calculate Service Company hourly rates that are directly comparable to those of outside providers. Adjustments were made to the following non-labor Service Company charges for the 12 months ended June 30, 2021:

- Contract Services – The 12 months ended June 30, 2021 Service Company charges to NJAWC include expenses associated with the use of outside professional firms to perform certain enterprise-wide services (e.g., legal, financial audit, actuarial services). These professional fees are excluded from the Service Company hourly rate calculation because the related services have effectively been out-sourced already.
- IT Infrastructure Expenses – Included in the 12 months ended June 30, 2021 Service Company charges to NJAWC are leases, maintenance fees and depreciation related to American Water's enterprise computing and network infrastructure and business applications. An outside provider that would take over operation of this infrastructure

V – Question 2 – Provision of Services Compared to Market

would recover these expenses over and above the cost of personnel necessary to operate the data center.

- **Travel Expenses** – In general, client-related travel expenses incurred by outside service providers are not recovered through their hourly billing rates. Rather, actual out-of-pocket travel expenses are billed to clients in addition to fees for professional services. Thus, it is appropriate to remove these Service Company charges from the hourly rate calculation.
- **Other Expenses** – These are not related to the provision of services by Service Company personnel and have been excluded.

Exhibit 5 (page 17) shows how contract services, travel expenses, IT infrastructure and other Service Company charges are assigned to the four outside provider categories.

Based on the assignment of expenses and hours shown in Exhibits 3 and 4 and the excludable items shown in Exhibit 5, the Service Company's equivalent costs per hour for the 12 months ended June 30, 2021, are calculated below.

	Attorney	Management Consultant	Certified Public Accountant	IT Professional	Professional Engineer	Total
Total management, professional & technical services charges	\$ 1,539,267	\$ 19,055,520	\$ 10,613,991	\$ 22,806,784	\$ 4,503,090	\$ 58,518,652
Less: Exclusions						
Contract services	\$ 49,460	\$ 1,301,309	\$ 1,294,691	\$ 9,675,734	\$ 157,744	\$ 12,478,938
IT infrastructure expenses	\$ -	\$ 3,438,637	\$ -	\$ 2,360,254	\$ -	\$ 5,798,891
Travel expenses	\$ 10,760	\$ 219,121	\$ 221,659	\$ 115,269	\$ 360,453	\$ 927,262
Other expenses	\$ 237,627	\$ 303,704	\$ 458,266	\$ 1,817,483	\$ 371,618	\$ 3,188,699
Total Exclusions	\$ 297,847	\$ 5,262,771	\$ 1,974,616	\$ 13,968,741	\$ 889,816	\$ 22,393,790
Net Service-Related Charges (A)	\$ 1,241,421	\$ 13,792,749	\$ 8,639,375	\$ 8,838,043	\$ 3,613,274	\$ 36,124,862
Total Hours (B)	4,980	84,994	83,094	79,208	34,248	286,525
Average Hourly Rate (A / B)	\$ 249	\$ 162	\$ 104	\$ 112	\$ 106	

New Jersey American Water Company
12 Months Ended June 30, 2021 Service Company Charges by Location and Function

Exhibit 3

		12 Months Ended June 30, 2021 Service Company Charges					
Location	Function	Attorney	Management Consultant	Certified Public Accountant	IT Professional	Professional Engineer	Total
Belleville Lab	Water Quality	\$ -	\$ -	\$ -	\$ -	\$ 952,265	\$ 952,265
Call Centers	Human Resources	\$ -	\$ 798	\$ -	\$ -	\$ -	\$ 798
Corporate	Accounting	\$ -	\$ -	\$ 3,735,620	\$ -	\$ -	\$ 3,735,620
	Administration	\$ -	\$ 7,974,728	\$ -	\$ -	\$ -	\$ 7,974,728
	Audit	\$ -	\$ -	\$ 656,348	\$ -	\$ -	\$ 656,348
	Business Development	\$ -	\$ 483,993	\$ -	\$ -	\$ -	\$ 483,993
	Communications	\$ -	\$ 1,069,471	\$ -	\$ -	\$ -	\$ 1,069,471
	Engineering	\$ -	\$ -	\$ -	\$ -	\$ 3,550,614	\$ 3,550,614
	External Affairs	\$ -	\$ 149,444	\$ -	\$ -	\$ -	\$ 149,444
	Finance	\$ -	\$ 719,164	\$ 3,267,523	\$ -	\$ -	\$ 3,986,687
	Human Resources	\$ -	\$ 3,500,484	\$ -	\$ -	\$ -	\$ 3,500,484
	Information Technology	\$ -	\$ -	\$ -	\$ 732,493	\$ -	\$ 732,493
	Legal	\$ 589,968	\$ -	\$ -	\$ -	\$ -	\$ 589,968
	Operations	\$ -	\$ 1,214,352	\$ -	\$ -	\$ -	\$ 1,214,352
	Supply Chain	\$ -	\$ -	\$ 1,907,655	\$ -	\$ -	\$ 1,907,655
Regional Offices	Administration	\$ -	\$ 3,013,203	\$ -	\$ -	\$ -	\$ 3,013,203
	Business Development	\$ -	\$ 584,168	\$ -	\$ -	\$ -	\$ 584,168
	Engineering	\$ -	\$ -	\$ -	\$ -	\$ 211	\$ 211
	External Affairs	\$ -	\$ 251,502	\$ -	\$ -	\$ -	\$ 251,502
	Finance	\$ -	\$ -	\$ 518,481	\$ -	\$ -	\$ 518,481
	Human Resources	\$ -	\$ 1,346	\$ -	\$ -	\$ -	\$ 1,346
	Legal	\$ 949,299	\$ -	\$ -	\$ -	\$ -	\$ 949,299
	Operations	\$ -	\$ 193,221	\$ -	\$ -	\$ -	\$ 193,221
	Rates & Regulatory	\$ -	\$ -	\$ 528,363	\$ -	\$ -	\$ 528,363
Tech & Innovation	Information Technology	\$ -	\$ 100,353	\$ -	\$ 22,074,291	\$ -	\$ 21,973,938
Total Dollars Charged		\$ 1,539,267	\$ 19,055,520	\$ 10,613,991	\$ 22,806,784	\$ 4,503,090	\$ 58,518,652

New Jersey American Water Company
12 Months Ended June 30, 2021 Service Company Hours by Location and Function

Exhibit 4

Location	Function	12 Months Ended June 30, 2021 Service Company Hours				
		Attorney	Management Consultant	Certified Public Accountant	IT Professional	Professional Engineer
Belleville Lab	Water Quality	-	-	-	-	7,866
Call Centers	Human Resources	-	-	-	-	-
Corporate	Accounting	-	-	36,599	-	-
	Administration	-	10,997	-	-	-
	Audit	-	-	3,032	-	-
	Business Development	-	1,982	-	-	-
	Communications	-	5,839	-	-	-
	Engineering	-	-	-	-	26,382
	External Affairs	-	480	-	-	-
	Finance	-	2,173	16,618	-	-
	Human Resources	-	27,793	-	-	-
	Information Technology	-	-	-	6,875	-
	Legal	1,291	-	-	-	-
	Operations	-	6,713	-	-	-
	Supply Chain	-	-	18,804	-	-
Regional Offices	Administration	-	20,442	-	-	-
	Business Development	-	5,255	-	-	-
	Engineering	-	-	-	-	-
	External Affairs	-	1,969	-	-	-
	Finance	-	-	4,734	-	-
	Human Resources	-	-	-	-	-
	Legal	3,689	-	-	-	-
	Operations	-	1,363	-	-	-
Tech & Innovation	Rates & Regulatory	-	-	3,307	-	-
	Information Technology	-	(11)	-	72,333	-
Total Hours Charged		4,980	84,994	83,094	79,208	34,248
						286,525

Exhibit 5

New Jersey American Water Company
12 Months Ended June 30, 2021 Service Company Charges Excludable from the Hourly Rate Calculation

Charges By Function	Exclusions From Hourly Rate Calculation				
	Contract Services	Enterprise IT Expenses	Travel Expenses	Other Expenses	Total
Accounting	\$ 443,136	\$ -	\$ 66,630	\$ (241,250)	\$ 268,516
Administration	\$ 678,066	\$ 3,438,638	\$ 102,104	\$ 209,298	\$ 4,428,105
Audit	\$ 280,902		\$ 5,982	\$ 1,551	\$ 288,435
Business Development	\$ 4,073	\$ (1)	\$ 38,110	\$ 18,022	\$ 60,205
Communications	\$ 171,392		\$ 16,342	\$ 45,119	\$ 232,854
Engineering	\$ 210,307	\$ -	\$ 57,027	\$ 176,396	\$ 443,730
External Affairs	\$ 106		\$ 9,262	\$ 1,470	\$ 10,838
Finance	\$ 533,882		\$ 99,130	\$ 548,647	\$ 1,181,659
Human Resources	\$ 447,671		\$ 53,302	\$ 29,796	\$ 530,770
Information Technology	\$ 9,675,734	\$ 2,360,254	\$ 115,269	\$ 1,817,483	\$ 13,968,741
Legal	\$ 49,460		\$ 10,760	\$ 237,627	\$ 297,847
Operations	\$ 47,483	\$ -	\$ 22,215	\$ 30,900	\$ 100,598
Rates & Regulatory			\$ 14,370	\$ 197	\$ 14,567
Supply Chain	\$ 36,771		\$ 35,546	\$ 149,122	\$ 221,439
Water Quality	\$ (100,045)	\$ -	\$ 281,211	\$ 164,322	\$ 345,488
Total	\$ 12,478,938	\$ 5,798,891	\$ 927,262	\$ 3,188,699	\$ 22,393,790

Recap By Outside Provider	Exclusions From Hourly Rate Calculation				
	Contract Services	Enterprise IT Expenses	Travel Expenses	Other Expenses	Total
Attorney	\$ 49,460	\$ -	\$ 10,760	\$ 237,627	\$ 297,847
Management Consultant	\$ 1,301,309	\$ 3,438,637	\$ 219,121	\$ 303,704	\$ 5,262,771
Certified Public Accountant	\$ 1,294,691	\$ -	\$ 221,659	\$ 458,266	\$ 1,974,616
IT Professional	\$ 9,675,734	\$ 2,360,254	\$ 115,269	\$ 1,817,483	\$ 13,968,741
Professional Engineer	\$ 157,744	\$ -	\$ 360,453	\$ 371,618	\$ 889,816
Total	\$ 12,478,938	\$ 5,798,891	\$ 927,262	\$ 3,188,699	\$ 22,393,790

V – Question 2 – Provision of Services Compared to Market

Outside Service Provider Hourly Rates

The next step in the market comparison was to obtain the average billing rates for outside service providers. The source of this information and the determination of the average rates are described in the paragraphs that follow.

It should be noted that professionals working for three of the five outside provider categories may be licensed to practice by state regulatory bodies. However, not every professional working for these firms is licensed. For instance, among US certified public accounting firms, only more experienced staff are predominantly CPAs (see table below). Some Service Company employees also have professional licenses. Thus, it is valid to compare the Service Company's hourly rates to those of the outside professional service providers included in this study.

Position	US Average
Partners/Owners	98%
Directors (11+ years experience)	87%
Managers (6-10 years experience)	79%
Sr Associates (4-5 years experience)	50%
Associates (1-3 years experience)	22%
New Professionals	10%

Source: AICPA's National PCPS/TSCPA Management of an Accounting Practice Survey (2010)

Attorneys

An estimate of New Jersey attorney rates was developed from National Law Journal's Survey of Law Firm Economics Report. As shown in Exhibit 6 (page 20), data from this survey has been adjusted for cost-of-living differences between each law firm's location and Camden, New Jersey. The National Law Review billing survey hourly rates data is for 2019. The survey's calculated average rate was escalated to December 31, 2020—the midpoint of the 12 months ended June 30, 2021.

Management Consultants

The cost per hour for management consultants was developed from a survey performed by Rodenhauser & Company LLC, a research company that monitors the consulting industry. The survey includes rates that were in effect during 2020 for firms throughout the United States. Consultants typically do not limit their practice to any one region and must travel to a client's location. Thus, the U.S. national average is appropriate for comparison.

The first step in the calculation, presented in Exhibit 7 (page 21), was to determine an average rate by consultant position level. From these rates, a single weighted average hourly rate was calculated based upon the percent of time that is typically applied to a consulting assignment by each consultant position level. This survey covered hourly rates in effect during 2020.

V – Question 2 – Provision of Services Compared to Market

Certified Public Accountants

The average hourly rate for New Jersey CPAs was developed from a 2018 survey performed by the American Institute of Certified Public Accountants (AICPA). The New Jersey version of this survey was used to develop hourly rates for member firms in New Jersey.

As shown in Exhibit 8 (page 22), a weighted average hourly rate was developed based on a set of accountant positions and a percent of time that is typically applied to an accounting assignment. This survey includes rate information in effect during 2017. (Note: the survey was originally scheduled to be performed during 2020 but was deferred due to the impact of COVID.) The calculated average rate was escalated to December 31, 2020—the midpoint of the 12 months ended June 30, 2021.

Information Technology Professionals

The 2020 average hourly rate for information technology consultants and contractors was developed from two sources: The Service Company for IT contractor rates and a survey performed by Rodenhauser & Company, LLC, for IT consultants. As shown in Exhibit 9 (page 23), that data was compiled and a weighted average was calculated based on a percent of time that is typically applied to an IT consulting assignment, based on Baryenbruch & Company, LLC's, experience.

Professional Engineers

The Company provided hourly rate information for outside engineering firms that provided NJAWC with their rate schedules. As presented in Exhibit 10 (page 24), an average rate was developed for each engineering position level. Then, using the Service Company's percentage mix by engineering position, a weighted average cost per hour was calculated.

Exhibit 6

New Jersey American Water Company
Estimated Billing Rates for New Jersey Attorneys

Average Hourly Billing Rates as of January 1, 2020									
Region	Avg Billing Rates (Note A)		Weighted Avg Rate Calculation			Cost of Living (COL) Adjustment			(X x Y) Adjusted Rate
	Partner	Associate	0.25	0.75	(X)	COL Indices (Note B)		(Y)	
			Partner	Associate	Weighted Average	Region	Camden, NJ	COL Adjustment	
Northeast	\$ 478	\$ 303	\$ 119	\$ 227	\$ 346	121.1	121.2	100.1%	\$ 347
Midwest	\$ 378	\$ 250	\$ 94	\$ 188	\$ 282	94.0	121.2	129.0%	\$ 364
South	\$ 470	\$ 325	\$ 118	\$ 244	\$ 361	94.1	121.2	128.8%	\$ 465
West	\$ 325	\$ 250	\$ 81	\$ 188	\$ 269	108.4	121.2	111.8%	\$ 301
Overall Average Hourly Billing Rate									\$ 369
Escalation to Midpoint of 12 Months Ended June 30, 2021 (December 31, 2020)									
CPI at December 31, 2019									257.0
CPI at December 31, 2020									260.5
Inflation/Escalation (Note C)									1.4%
Average Hourly Billing Rate For Attorneys At December 31, 2020									\$ 374

Note A: 2020 Survey of Law Firm Economics Report, National Law Journal

Note B: Cost of Living Index, Source Council for Community and Economic Research

Note C: U.S. Bureau of Labor Statistics (<http://data.bls.gov/cgi-bin/surveymost>)

Exhibit 7

New Jersey American Water Company
Billing Rates of U.S. Management Consultants

Survey billing rates in effect in 2020 (Note A)					
A. Calculation of Average Hourly Billing Rate by Consultant Position					
Average	Average Hourly Rates (Note A)				
	Analyst Consultant	Associate	Sr. Assoc/ Manager	Principal	Partner
	\$ 227	\$ 273	\$ 334	\$ 515	\$ 641
B. Calculation of Overall Average Hourly Billing Rate Based on a Typical Distribution of Time on an Engagement					
Average Hourly Billing Rate (from above)	Entry-Level Consultant	Associate Consultant	Senior Consultant	Junior Partner	Senior Partner
	\$ 227	\$ 273	\$ 334	\$ 515	\$ 641
Percent of Consulting Assignment	30%	30%	25%	10%	5%
	\$ 68	\$ 82	\$ 84	\$ 52	\$ 32
					Weighted Average
					\$ 317
Average Hourly Billing Rate for Management Consultants During 2020					\$ 317

Note A: Source is Rodenhauser & Company LLC; Baryenbruch & Company, LLC, analysis

Exhibit 8

New Jersey American Water Company
Billing Rates of New Jersey Certified Public Accountants

A. Calculation of Average Hourly Billing Rate by Public Accounting Position Survey billing rates were those in effect in 2017 (Note A)					
Average Hourly Billing Rate (Note A)					
Average Hourly Billing Rate by CPA Firm Position	Staff Accountant	Senior Accountant	Manager	Partner	
	\$ 117	\$ 152	\$ 203	\$ 259	
Percent of Accounting Assignment	30%	30%	20%	20%	Weighted Average
	\$ 35	\$ 45	\$ 41	\$ 52	\$ 173
Escalation to Midpoint of 12 Months Ended June 30, 2021 (December 31, 2020)					
CPI at December 31, 2017					246.5
CPI at December 31, 2020					260.5
Inflation/Escalation (Note B)					5.7%
Average Hourly Billing Rate For New Jersey CPAs At December 31, 2020					\$ 183

Note A: Source is AICPA's 2018 National PCPS/TSCPA Management of an Accounting Practice Survey
(New Jersey edition)

Note B: Source is U.S. Bureau of Labor Statistics (<https://data.bls.gov/cgi-bin/surveymost>)

Exhibit 9

New Jersey American Water Company
Billing Rates of Technology and Innovation Professionals

A. Calculation of Average Hourly Billing Rate by Information Technology Position Survey billing rates were those in effect in 2020 (Note A)						
Average Hourly Billing Rate (Note A)						
Contractor Positions		Consultant Positions				
	Senior					
Contractor	Contractor	Associate	Manager	Partner		
Average Hourly Billing Rate by IT Position Category	\$ 87	\$ 114	\$ 252	\$ 353	\$ 478	
Percent of IT Assignment	25%	25%	25%	15%	10%	Weighted Average
	\$ 22	\$ 29	\$ 63	\$ 53	\$ 48	\$ 214
Average Hourly Billing Rate For IT Professionals During 2020						\$ 214

Note A: Source is American Water Works Service Company, Rodenhauser & Company and Baryenbruch & Company, LLC

Exhibit 10

New Jersey American Water Company
Billing Rates of New Jersey Engineers

A. Calculation of Average 2020 Hourly Rate by Engineer Position (Note A)

Name of Firm	Average Hourly Billing Rates			
	Technician	Engineer	Project Manager	Officer
	Senior Technician	Design Engineer Project Engineer	Sr. Mgr. Engineer	Principal Engineer
Firm #1	\$99	\$111	\$184	\$236
Firm #2	\$150	\$126	\$249	\$390
Firm #3	\$148	\$172	\$262	\$346
Firm #4	\$96	\$131	\$200	\$265
Firm #5	\$78	\$94	\$167	\$210
Firm #6	\$176	\$238	\$309	\$325
Firm #7	\$87	\$126	\$210	\$257
Firm #8	\$87	\$121	\$174	\$203
Firm #9	\$115	\$166	\$190	\$243
Firm #10	\$123	\$133	\$169	\$215
Firm #11	\$101	\$108	\$161	\$201
Firm #12	\$128	\$158	\$244	\$315
Firm #13	\$125	\$126	\$183	\$210
Firm #14	\$113	\$108	\$161	\$201
Firm #15	\$90	\$112	\$179	\$217
Firm #16	\$110	\$111	\$175	\$220
Firm #17	\$60	\$120	na	na
Firm #18	\$98	na	\$155	\$185
Firm #19	\$129	\$127	\$195	\$275
Firm #20	\$108	\$124	\$204	\$230
Firm #21	\$90	na	\$170	\$300
Firm #22	\$98	\$130	\$170	\$240
Firm #23	\$117	\$115	\$171	\$200
Firm #24	\$158	\$175	\$251	\$310

B. Calculation of Overall Average Engineering Hourly Billing Rate

	Technician	Engineer	Project Manager	Officer	
	Senior Technician	Design Engineer Project Engineer	Sr. Mgr. Engineer	Principal Engineer	
Average Hourly Billing Rate (From Above)	\$112	\$133	\$197	\$252	
Typical Percent of Time on an Engineering Assignment	13%	31%	46%	10%	Weighted Average
	\$15	\$41	\$90	\$26	\$172

Note A: Source is American Water Works Service Company information.

V – Question 2 – Provision of Services Compared to Market

Service Company versus Outside Provider Cost Comparison

As shown in the table below, Service Company costs per hour are considerably lower than those of outside providers.

Service Provider	12 Months Ended June 30, 2021		
	Service Company	Outside Provider	Difference-- Service Co. Greater(Less) Than Outside
Attorney	\$ 249	\$ 374	\$ (125)
Management Consultant	\$ 162	\$ 317	\$ (155)
Certified Public Accountant	\$ 104	\$ 183	\$ (79)
IT Professional	\$ 112	\$ 214	\$ (102)
Professional Engineer	\$ 106	\$ 172	\$ (66)

Based on these cost-per-hour differentials and the number of managerial and professional services hours billed to NJAWC during the 12 months ended June 30, 2021, outside service providers would have cost \$30,700,580 more than the Service Company (see table below). Thus, on average, outside providers' hourly rates are 85% higher than those of the Service Company (\$30,700,580 / \$36,124,862).

Service Provider	12 Months Ended June 30, 2021		
	Hourly Rate Difference-- Service Co. Greater(Less) Than Outside	Service Company Hours Charged	Dollar Difference
Attorney	\$ (125)	4,980	\$ (622,500)
Management Consultant	\$ (155)	84,994	\$ (13,174,070)
Certified Public Accountant	\$ (79)	83,094	\$ (6,564,426)
IT Professional	\$ (102)	79,208	\$ (8,079,216)
Professional Engineer	\$ (66)	34,248	\$ (2,260,368)
Service Company Less Than Outside Providers			\$ (30,700,580)

It should be noted that the cost differential associated with using outside providers is even greater than that calculated above because exempt Service Company personnel do not charge more than 8 hours per day even when they work more. Outside providers generally charge clients for all hours worked. Thus, NJAWC would have been charged by outside providers for overtime worked by Service Company personnel who are not paid for that time.

If NJAWC were to use outside service providers rather than the Service Company for managerial and professional services, it would incur other additional expenses besides those associated with higher hourly rates. Managing outside firms who would perform approximately 286,500 hours of work (approximately 159 full-time equivalents at 1,800 "billable" hours per FTE per year) would add a significant workload to the existing NJAWC management team. Thus, it would be necessary for NJAWC to add at least five positions to supervise the outside firms and ensure they deliver quality and timely services. The individuals who would fill this position would need a good understanding of each profession being managed. These persons must also have management experience and the authority necessary to provide credibility with the outside firms. As calculated in the table below, the new positions would add \$902,000 per year to NJAWC's personnel expenses.

V – Question 2 – Provision of Services Compared to Market

Cost of Adding 5 Professional Positions To NJAWC's Staff

	Total
New Position Salary	\$ 110,000
Benefits (at 49%)	\$ 53,900
Office Expenses (15%)	\$ 16,500
Total Cost per Position	\$ 180,400
Number of Positions Required	5
Total Cost of Added NJAWC Staff	\$ 902,000

Thus, the total effect on NJAWC customers of contracting all services now provided by Service Company would be an increase in their costs of \$31,602,580 (\$30,700,580 + \$902,000). Based on the results of this comparison, the Service Company charged NJAWC significantly lower costs than the Company would have been charged had it sourced such services from the competitive market during the 12 months ended June 30, 2021.

VI - Question 3 - Reasonableness of Customer Account Services Costs

Background

Customer account services involve the processes that occur from the time meter-read data is recorded in the customer information system through the printing and mailing of bills, concluding with the collection and processing of customer payments. Customer account services are accomplished by the following utility functions:

- Customer Call Center Operations – customer calls/contact, credit, order taking/disposition, bill collection efforts and outage calls
- Customer Call Center Maintenance – support of phone banks, voice recognition units, call center software applications and telecommunications
- Customer billing – bill printing, stuffing and mailing
- Remittance processing – processing customer payments received in the mail
- Bill payment centers – processing customer payments at locations where customers can pay their bills in person

Comparable electric utility cost information comes from the FERC Form 1 that each utility subject to FERC regulation must file. FERC's chart of accounts is defined in Chapter 18, Part 101 of the Code of Federal Regulations. FERC accounts that contain expenses related to customer account services are Account 903 Customer Accounts Expense – Records and Collection Expense and Account 905 Customer Accounts Expense – Miscellaneous Customer Accounts Expense. Exhibit 11 (page 28) provides FERC's definition of the type of expenses that should be recorded in these accounts.

In addition to the charges in these FERC accounts, labor-related overhead charged to the following FERC accounts must be added to the labor components of Accounts 903 and 905:

- Account 926 Employee Pension and Benefits
- Account 408 Taxes Other Than Income (employer's portion of FICA)

Comparison Group

Electric utilities included in the comparison group are shown in the table below. These are companies whose FERC Form 1 reports show amounts for accounts 903 and 905.

Customer Accounts Expenses Comparison Group			
New York	Central Hudson Gas & Electric Corporation	Pennsylvania	Duquesne Light Company
	Consolidated Edison Company		Metropolitan Edison Company
	New York State Electric & Gas Corporation		PECO Energy Company
	Niagara Mohawk Power Corporation		Pennsylvania Electric Company
	Orange and Rockland Utilities, Inc		Pennsylvania Power Company
	Rochester Gas and Electric Corporation		PPL Electric Utilities Corporation
New Jersey	Atlantic City Electric Company	Delaware	West Penn Power Company
	Jersey Central Power & Light Company		Delmarva Power & Light Company
	Public Service Electric and Gas Company		
	Rockland Electric Company		

New Jersey American Water Company
FERC Account Descriptions

Exhibit 11

903 – Customer Records and Collection Expenses

This account shall include the cost of labor, materials used and expenses incurred in work on customer applications, contracts, orders, credit investigations, billing and accounting, collections and complaints.

Labor

1. Receiving, preparing, recording and handling routine orders for service, disconnections, transfers or meter tests initiated by the customer, excluding the cost of carrying out such orders, which is chargeable to the account appropriate for the work called for by such orders.
2. Investigations of customers' credit and keeping of records pertaining thereto, including records of uncollectible accounts written off.
3. Receiving, refunding or applying customer deposits and maintaining customer deposit, line extension, and other miscellaneous records.
4. Checking consumption shown by meter readers' reports where incidental to preparation of billing data.
5. Preparing address plates and addressing bills and delinquent notices.
6. Preparing billing data.
7. Operating billing and bookkeeping machines.
8. Verifying billing records with contracts or rate schedules.
9. Preparing bills for delivery, and mailing or delivering bills.
10. Collecting revenues, including collection from prepayment meters unless incidental to meter reading operations.
11. Balancing collections, preparing collections for deposit, and preparing cash reports.
12. Posting collections and other credits or charges to customer accounts and extending unpaid balances.
13. Balancing customer accounts and controls.
14. Preparing, mailing, or delivering delinquent notices and preparing reports of delinquent accounts.
15. Final meter reading of delinquent accounts when done by collectors incidental to regular activities.
16. Disconnecting and reconnecting services because of nonpayment of bills.
17. Receiving, recording, and handling of inquiries, complaints, and requests for investigations from customers, including preparation of necessary orders, but excluding the cost of carrying out such orders, which is chargeable to the account appropriate for the work called for by such orders.
18. Statistical and tabulating work on customer accounts and revenues, but not including special analyses for sales department, rate department, or other general purposes, unless incidental to regular customer accounting routines.
19. Preparing and periodically rewriting meter reading sheets.
20. Determining consumption and computing estimated or average consumption when performed by employees other than those engaged in reading meters.

Materials and expenses

21. Address plates and supplies.
22. Cash overages and shortages.
23. Commissions or fees to others for collecting.
24. Payments to credit organizations for investigations and reports.
25. Postage.
26. Transportation expenses, including transportation of customer bills and meter books under centralized billing procedure.
27. Transportation, meals, and incidental expenses.
28. Bank charges, exchange, and other fees for cashing and depositing customers' checks.
29. Forms for recording orders for services, removals, etc.
30. Rent of mechanical equipment.

905 – Miscellaneous Customer Accounts Expenses

This account shall include the cost of labor, materials used and expenses incurred not provided for in other accounts.

Labor

1. General clerical and stenographic work.
2. Miscellaneous labor.

Materials and expenses

3. Communication service.
4. Miscellaneous office supplies and expenses and stationery and printing other than those specifically provided for in accounts 902 and 903.

VI - Question 3 - Reasonableness of Customer Account Services Costs

NJAWC's Cost per Customer

As calculated below, NJAWC's customer account services expense per customer was \$18.03 for the 12 months ended June 30, 2021. The cost pool used to calculate this average includes charges for Service Company services (e.g., call center, billing, payment processing) and postage and forms expenses, which are incurred directly by NJAWC. It is necessary to adjust the Service Company's charges because electric utilities experience an average of 1.25 calls per customer compared to American Water's 0.74 calls per customer during the 12 months ended June 30, 2021. Thus, the Service Company's expenses had to be increased, for comparison purposes, to reflect its costs if it had had 1.25 calls per customer.

New Jersey American Water Company, Inc.		Year Ended June 30, 2021	Adjustment Fewer Calls For	
	Cost Component	Service Co Charges	Water Cos. (A)	Adjusted
Service Company	Call processing, order processing, credit, bill collection, forms, postage	\$ 9,925,223	\$ 1,606,939	\$ 11,532,162
	Customer payment processing			\$ 509,120 (B)
NJAWC	Customer Advocacy			\$ 865,723
			Cost Pool Total	\$ 12,907,005
			Total Customers	716,061
	Year Ended June 30, 2021 Cost per New Jersey American Customer			\$ 18.03
Note A: Adjustment for American Water's fewer calls per customer				
This adjustment is necessary because water utilities experience fewer calls per customer than do electric utilities				
	Call handling expenses	\$ 2,365,990		
Electric utility industry's avg calls/customer	1.25			
American Water's avg calls/customer	0.74			
Percent different	68%		68%	
Total Adjustment		\$ 1,606,939		
Note B: Estimated customer payment processing expenses				
	Number of customer bills	8,485,340		
	Bank charge per item	\$ 0.0600		
Total estimated annual expense		\$ 509,120		

Electric Utility Group Cost per Customer

Exhibit 12 (page 30) shows the calculation of customer account expense per customer for 2020 for the electric utility comparison group. All of the underlying data was taken from the utilities' FERC Form 1.

New Jersey American Water Company
Comparison Group 2020 Customer Account Expense Per Customer

Exhibit 12

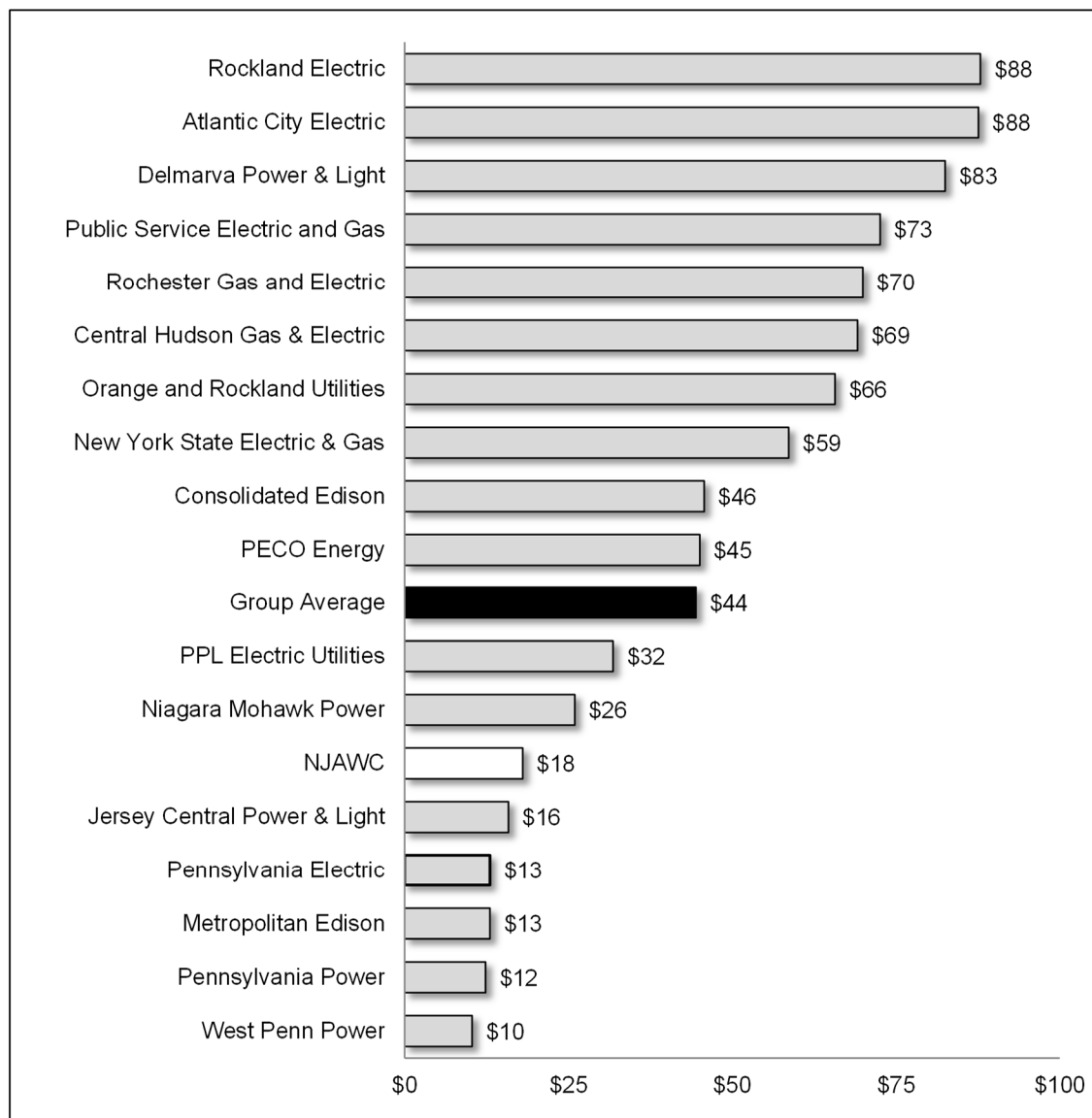
Comparison Group	Customer Accounts Services Cost Pool				Total Customers	Customer Account Services Expenses per Customer
	Employee Benefits					
	Account 903 and 905	Employee Pension and Benefits	Payroll Taxes	Total Cost Pool		
Atlantic City Electric Company	\$ 48,933,026	\$ 179,883	\$ 104,686	\$ 49,217,594	562,054	\$ 87.57
Central Hudson Gas & Electric Corporation	\$ 16,158,542	\$ 276,255	\$ 502,903	\$ 16,937,700	244,943	\$ 69.15
Consolidated Edison Company	\$ 144,479,411	\$ 9,501,046	\$ 6,872,702	\$ 160,853,159	3,517,291	\$ 45.73
Delmarva Power & Light Company	\$ 43,914,962	\$ 103,820	\$ 101,068	\$ 44,119,850	534,749	\$ 82.51
Jersey Central Power & Light Company	\$ 15,450,652	\$ 2,083,330	\$ 598,487	\$ 18,132,469	1,145,080	\$ 15.84
Metropolitan Edison Company	\$ 7,207,514	\$ 235,563	\$ 79,896	\$ 7,522,973	577,500	\$ 13.03
New York State Electric & Gas Corporation	\$ 49,712,838	\$ 2,027,754	\$ 1,451,544	\$ 53,192,136	907,336	\$ 58.62
Niagara Mohawk Power Corporation	\$ 34,345,450	\$ 1,371,807	\$ 1,190,498	\$ 36,907,755	1,421,431	\$ 25.97
Orange and Rockland Utilities, Inc	\$ 13,496,713	\$ 1,463,570	\$ 582,276	\$ 15,542,559	236,634	\$ 65.68
PECO Energy Company	\$ 70,883,132	\$ 1,930,280	\$ 2,463,572	\$ 75,276,984	1,671,433	\$ 45.04
Pennsylvania Electric Company	\$ 7,398,437	\$ 178,363	\$ 85,565	\$ 7,662,364	587,567	\$ 13.04
Pennsylvania Power Company	\$ 2,068,689	\$ (15,774)	\$ 26,225	\$ 2,079,139	168,117	\$ 12.37
PPL Electric Utilities Corporation	\$ 42,367,848	\$ 2,536,441	\$ 1,472,728	\$ 46,377,017	1,457,376	\$ 31.82
Public Service Electric and Gas Company	\$ 147,539,469	\$ (3,572,346)	\$ 3,670,184	\$ 147,637,306	2,033,919	\$ 72.59
Rochester Gas and Electric Corporation	\$ 26,327,491	\$ 363,581	\$ 286,559	\$ 26,977,631	385,873	\$ 69.91
Rockland Electric Company	\$ 5,451,171	\$ 879,031	\$ 178,531	\$ 6,508,733	74,052	\$ 87.89
West Penn Power Company	\$ 7,433,384	\$ 33,069	\$ 57,608	\$ 7,524,061	730,526	\$ 10.30
Total/Average	\$ 683,168,729	\$ 19,575,673	\$ 19,725,029	\$ 722,469,432	16,255,881	\$ 44.44

Source: FERC Form 1; Baryenbruch & Company, LLC, analysis

VI - Question 3 - Reasonableness of Customer Account Services Costs

Summary of Results

As shown in the table below, NJAWC's cost per customer is below the 2020 average cost of the utility comparison group. It can be concluded that NJAWC's 12 months ended June 30, 2021 total customer account expenses are comparable to those of other utilities.



Source: Company information; FERC Form 1; Baryenbruch & Company, LLC, analysis

VII - Question 4 – Need for Service Company Services

Analysis of Services

The final aspect of this Study is an assessment of whether the services provided to NJAWC by the Service Company would be necessary if NJAWC were not part of the American Water organization. The first step in this evaluation was to determine specifically what the Service Company does for NJAWC. Based on discussions with Service Company personnel, the matrix in Exhibit 13 (pages 33-35) was created showing which entity—NJAWC or a Service Company location—is responsible for each of the functions NJAWC requires to ultimately provide service to its customers. This matrix was reviewed to determine: (1) if there was redundancy or overlap in the services being provided by the Service Company and (2) if Service Company services are typical of those needed by a water and wastewater utility.

Upon review of Exhibit 13, the following conclusions can be drawn:

- The services that the Service Company provides are necessary and would be required even if NJAWC were not part of the American Water organization.
- There is no redundancy or overlap in the services provided by the Service Company to NJAWC. For all of the services listed in Exhibit 13, there was only one entity that was primarily responsible for the service.

Exhibit 13
Page 1 of 3New Jersey American Water Company
Designation of Responsibility for Water Utility Functions

Company Function	NJAWC	Performed By:			
		American Water Service Company			
		Customer Call Center	Service Company	IT Service Centers	Central Lab
P - Primarily Responsible					
S - Provides Support					
Engineering and Construction Management					
CPS Preparation	P		S		
Five-Year System Planning	P		S		
Engineering Standards & Policies Development			P		
Project Design					
Major Projects (e.g., new treatment plant)	P		S		
Special Projects	P		S		
Minor Projects (e.g., pipelines)	P				
Construction Project Management					
Major Projects	P		S		
Special Projects	P				
Minor Projects	P				
Hydraulics Review	P				
Developers Extensions	P				
Tank Painting	P				
Water Quality and Purification					
Water Quality Standards Development	P (1)		P (1)		S
Research Studies	S		P		S
Water Quality Program Implementation	P		S		S
Water Treatment Operations & Maintenance	P		S		
Compliance Sampling	P				S
Testing/Other Sampling	P				S
Transmission and Distribution					
Preventive Maintenance Program Development	P		S		
System Maintenance	P		S		
Leak Detection	P		S		
Customer Service					
Community Relations	P				
Customer Contact	P (2)	P (2)			
Call Processing		P			
Service Order Processing	P	S			
Customer Credit		P			
Meter Reading	P			S	
Customer Bill Preparation		P		S	
Bill Collection	S	P		S	
Customer Payment Processing	S		P	S	
Meter Standards Development	S			P	
Meter Testing, Maintenance & Replacement	P				

Note 1: NJAWC responsible for State regulations, Central Services responsible for Federal regulations

Note 2: NJAWC provides in-person customer contact while Service Company call centers provide customer phone contact

Exhibit 13

Page 2 of 3

New Jersey American Water Company
Designation of Responsibility for Water Utility Functions

P - Primarily Responsible S - Provides Support	Performed By:				
	NJAWC	American Water Service Company			
Water Company Function		Customer Call Center	Other Service Company	IT Service Centers	Central Lab
Financial Management					
Financial Planning	P		S		
Financings--Equity			P		
Financings--Long Term Debt & Preferred (Note A)			P		
Short Term Lines of Credit Arrangements(Note A)			P		
Investor Relations			P		
Insurance Program Administration			P		
Loss Control/Safety Program Administration			P		
Pension Fund Asset Management			P		
Cash Management/Disbursements			P		
Internal Auditing			P		
Budgeting and Variance Reporting					
Corporate Guidelines & Instructions			P		
Budget Preparation	P				
Revenue and O&M	P		S		
Depreciation and Interest Expense			P		
Budget Preparation--Service Company Charges		S	P	S	S
Capital Budget Preparation--Projects	P		S		
Capital Budget Preparation--Non-Project Work	P		S		
Prepare Monthly Budget Variance Report (Budget/Plan Analysis)	P P		S		
Prepare Capital Project Budget Status Report	P		S		
Year-End Projections	P		S		
Accounting and Taxes					
Accounts Payable Accounting			P		
Payroll Accounting			P		
Work Order Accounting	S		P		
Fixed Asset Accounting			P		
Journal Entry Preparations--Billing Corrections			P		
Journal Entry Preparation--All Others	S		P		
Financial Statement Preparation			P		
State Commission Reporting	S		P		
Income Taxes--State			P		
Income Taxes--Federal			P		
Property Taxes			P		
Gross Receipts (Town) Taxes			P		

Note A: Lines of credit are the responsibility of American Water Capital Corporation (AWCC). AWCC is also responsible for Corporate financings which may be distributed to the regulated subsidiaries. NJAWC has the ability to issue LTD.

Exhibit 13
Page 3 of 3New Jersey American Water Company
Designation of Responsibility for Water Utility Functions

P - Primarily Responsible S - Provides Support	Performed By:				
	NJAWC	American Water Service Company			
		Customer Call Center	Other Service Company	IT Service Centers	Central Lab
Water Company Function					
Rates					
Rate Studies & Tariff Change Administration	P		S		
Rate Case Planning and Preparation	P		S		
Rate Case Administration	P		S		
Commission Inquiry Response	P		S		
Legal	S		P		
Purchasing and Materials Management – National (pipe, chemicals, meters, etc.)					
Specification Development	S		P		
Bid Solicitation	S		P		
Contract Administration	S		P		
Purchasing and Materials Management – State (state supplier service agreements)					
Specification Development	P		S		
Bid Solicitation	P				
Contract Administration	P				
Ordering	P				
Inventory Management	P				
Human Resources Management					
Benefit Program Development			P		
Benefits Program Administration			P		
Management Compensation Administration			P		
Wage & Salary Program Design			P		
Wage & Salary Administration	S		P		
Labor Negotiations--Wages	S		P		
Labor Negotiations--Benefits	S		P		
Labor Negotiations-- Work Rules	S		P		
Training Program Development	S		P		
Training--Course Delivery	S		P		
Affirmative Action/EEO--Plan Development	S		P		
Affirmative Action/EEO--Implementation	P		S		
Technology & Innovation Services					
IT Operations				P	
Applications Support				P	
Network Administration				P	
Local IT Support	S			P	
Help Desk				P	

VII - Question 4 – Need for Service Company Services

Governance Practices Associated with Service Company Charges

There are several ways by which NJAWC and the Service Company exercise control over Service Company services and charges. The most important of these are described below.

1. **Chief Operating Officer Oversight** – The Chief Operating Officer (COO) is on the Executive Leadership Team (ELT) of American Water. This position is responsible for the overall performance of each operating company in American Water. As part of the ELT, the COO has equal say with other ELT members in major business decisions of American Water and has the ability to monitor Service Company performance quality and spending. The COO also addresses local concerns with each operating company president.
2. **Operating Company Board Oversight** – The NJAWC board of directors includes members of members of the NJAWC management team and external business and community leaders. This diverse board ensures that NJAWC's needs are a factor in the delivery of Service Company services. The NJAWC board meets at a minimum of four times each year and at every meeting financial and operational reports and issues are discussed at length.
3. **Service Company Budget Review/Approval** – The ELT serves as the Board of Directors for the Service Company and must formally approve the budget for Service Company charges for the next year. These budgeted charges are consolidated with the operating company's own spending into an overall budget that must be approved by the operating company's board of directors. NJAWC's president also acts as ex officio and attends the Service Company board meetings.
4. **Major Project Review and Approval** – Before major Service Company non-capital projects are undertaken, they must be reviewed and approved by American Water's ELT, which includes the COO. The COO, with significant input from direct reports, has the ability to impact all new initiatives and projects before they are authorized. Major non-capital projects and initiatives for the Service Company are approved through the Business Planning process. A 3-year technology roadmap of initiatives is developed from American Water's vision, strategy, operational objectives and key business programs. The alignment of these initiatives with enterprise goals is approved by the ELT and key business leaders from various operational and functional areas of American Water. The roadmap is updated annually to produce a rolling 3-year roadmap and investment plan.
5. **Service Company Bill Scrutiny** – NJAWC Finance personnel review the monthly Service Company operating expenses for accuracy and reasonableness. NJAWC Financial Manager discusses the monthly bill with Shared Services Center personnel, and any mistakes or over-charges are credited on a subsequent billing. The NJAWC Finance Manager prepares an actual-to-budget comparison of management fees each month for use in identifying unusual variances. A Service Company actual-to-budget comparison is included in the monthly Financial Review Package (FRP). Unusual variances are researched, explanations are provided and any necessary corrections are made.
6. **Service Company Budget Variance Reporting** – Each month, a summary variance analysis is prepared that explains differences between budgeted and actual Service Company spending. In addition, a more detailed monthly variance report, called the "Statement of Expenses and Billed Charges," is produced by Service Company location and shows actual spending for the month.
7. **Operating Company Budget Variance Reporting** – The "Budget/Plan Analysis," produced monthly by each operating company, has line items for Management Fees and Shared Service Expense (i.e., IT, Call Center, etc.). In this way, Service Company budget versus

VII - Question 4 – Need for Service Company Services

actual charges as charged to the operating company can be monitored and reviewed for the month and year-to-date as compared to prior year, plan and reforecast.

8. Capital Program Management (CPM) – CPM is one of American Water's primary business planning processes. It covers capital and asset planning and is used throughout American Water. CPM provides a full range of governance practices, including a formal protocol for assessing system needs, prioritizing expenditures, managing the capital program, approving project spending, delivering projects and measuring outputs. CPM ensures that:
 - Capital expenditure plans are aligned with the strategic intent of the business
 - The impact of capital expenditures and savings are fully reflected in operating expense plans
 - The effects of these plans are understood and affordable, and
 - Effective controls are in place over budgets (through business plans) and individual capital projects (through appropriate authorization thresholds, management and reporting processes).

The CPM process was designed to optimize the effectiveness of asset investment. The process is managed at two levels for all American Water companies, including all NJAWC Operating Units. Monthly meetings of the CPM are held to review capital spending compared to plan, review new project requests and review updates or modifications to existing projects. The President of NJAWC and others (e.g. NJAWC operations managers and Senior Manager, Finance) participate, as necessary, and provide the data used in the monthly review schedules.

9. Accounting and Financial Reporting – The Service Company follows the same accounting and financial reporting processes as American Water's regulated utilities. During the month, accounting transactions are recorded. At month-end, the Service Company Finance team reviews all transactions. Variance analyses are performed based on month-to-month actual as well as actual to budget to ensure accuracy. Once completed, the service company bill is run and the actuals are "pushed down" and allocated to the states based on predetermined formulas. A conference call is scheduled before the operating companies close their books each month to discuss Service Company performance. This is based at a functional level with explanation reported for any expense variances that meet or exceed certain thresholds. At this time, the operating companies may question expenses and spending for better understanding of results.

BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF
NEW JERSEY-AMERICAN WATER COMPANY, INC.
FOR APPROVAL OF INCREASED TARIFF RATES
AND CHARGES FOR WATER AND WASTEWATER SERVICE, AND
OTHER TARIFF MODIFICATIONS

BPU Docket No. WR2201_____

Direct Testimony of
ROBERT V. MUSTICH
On Behalf of
New Jersey-American Water Company, Inc.

January 14, 2022

Exhibit P-11

NEW JERSEY-AMERICAN WATER COMPANY, INC.

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NEW JERSEY-AMERICAN WATER COMPANY, INC.

I. INTRODUCTION

Q1. Please provide your name, position and business address.

A1. My name is Robert V. Mustich. I am Managing Director and East Region Rewards Business Leader for Willis Towers Watson. Willis Towers Watson is a leading global professional services company which has 45,000 associates throughout the world, and offers solutions in the areas of corporate risk and broking; human capital and benefits; health care exchange solutions; and investment, risk, and reinsurance. My business address is 800 North Glebe Road, Arlington, VA 22203.

Q2. Please state your educational and professional background and experience.

A2. I graduated from American University with a BS/BA in Human Resources Management. I have over 30 years of industry and compensation consulting services experience, have been with Willis Towers Watson for over 24 years, and have assisted management and Boards of Directors at numerous companies in designing and assessing total compensation programs. Since joining the firm in 1997, I have consulted with numerous utilities and serve as a senior member of our utilities industry practice. I have conducted competitive assessments of total compensation for numerous public utilities throughout the U.S. Prior to joining Willis Towers Watson, I was a senior compensation consultant for PricewaterhouseCoopers (formally Coopers and Lybrand, LLP) performing similar compensation consulting services for clients. Prior to that, I held corporate senior staff compensation and benefits positions.

Q3. Please explain Willis Towers Watson's experience in providing compensation and benefits consulting services to organizations such as New Jersey-American Water Company, Inc, ("New Jersey American Water" or the "Company").

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 A3. Willis Towers Watson has extensive experience serving clients in the utility
2 industry, having provided services to approximately 100 utilities in the U.S. within
3 the last year. Because we invest so heavily in our utility industry capabilities, we
4 have rich sources of information regarding industry compensation and benefits that
5 enables us to benchmark New Jersey American Water against similar companies in
6 the U.S. Given Willis Towers Watson's breadth and depth of resources, we are
7 frequently engaged by companies to evaluate the competitiveness of their
8 compensation philosophy, compensation and benefit levels, performance pay
9 design and pay structures, and other consulting services. Willis Towers Watson and
10 I have conducted similar competitive compensation studies for other utility clients.

11 **II. DEFINITIONS**

12 **Q4. Can you please identify some of the key definitions that you will need to**
13 **reference as part of your testimony?**

14 A4. Yes.

15 **Q5. More specifically, please define Target Total Cash Compensation.**

16 A5. Target Total Cash Compensation represents the sum of base salary plus target short-
17 term performance pay.

18 **Q6. Please define Target Total Direct Compensation.**

19 A6. Target Total Direct Compensation represents the sum of base salary, plus target
20 short-term performance pay, plus long-term performance pay.

21 **III. PURPOSE OF TESTIMONY**

22 **Q7. What is the purpose of your testimony?**

23 A7. The purpose of my testimony is to review the Company's stated compensation
24 philosophy to determine if it is reasonably consistent with the compensation

NEW JERSEY-AMERICAN WATER COMPANY, INC.

philosophies of other utility companies and of industry generally. I also reviewed whether the target total direct compensation provided to New Jersey American Water performance pay-eligible employees, when viewed against the markets for talent for employees in similar positions, is within the range of market-based total compensation. Willis Towers Watson specifically focused on the following aspects of New Jersey American Water's program:

- Market-based total compensation philosophy;
- Competitive market positioning of target total direct compensation (base salary plus short-term performance pay plus long-term performance pay)
- Design of short-term performance pay program (the Company's Annual Performance Plan ("APP")); and
- Design of long-term performance pay program (the Company's Long Term Performance Plan ("LTPP")).

Q8. What were the results of your study?

A8. Based on a review of the robust compensation data available, I concluded that New Jersey American Water's compensation philosophy and performance pay plan design were in accord with utilities specifically, and industry generally and that the levels of total direct compensation were reasonable and consistent with market-based total compensation levels, both on a regional and national level.

IV. OVERVIEW OF MARKET-BASED TOTAL COMPENSATION PHILOSOPHY

Q9. Does New Jersey American Water have a defined compensation philosophy?

A9. Yes, American Water Works Company, Inc. ("American Water") has a defined compensation philosophy, which is applicable to New Jersey American Water.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

Q10. How would you describe American Water's compensation philosophy?

A10. American Water's market-based total compensation philosophy is generally to pay salaries that are competitive with those of comparable organizations for jobs of similar responsibility. To carry out this philosophy, American Water's objective is to target total direct compensation (base, short-term performance pay, and long-term performance pay) at the median (50th percentile) of the market, with greater earning opportunity for exceptional performance for fully qualified individuals.

Q11. How does this compensation philosophy compare with other utilities?

A11. It is consistent both with utilities and with other employers. Willis Towers Watson examined the proxy statements for two peer groups: (1) Large Utility Peer Group, which consists of 15 publicly-traded utilities comparable in size to American Water (revenues range from ½ to 3 times American Water's 2020 revenues of \$3.78 billion), and (2) Small Utility Peer Group, which consists of 12 publicly-traded utilities comparable in size to New Jersey American Water (revenues range from \$419M-\$1,523M, compared to New Jersey American Water's 2020 revenue of \$796M). Based on our review, we believe American Water's market-based total compensation philosophy is well-aligned with utility peers, as a majority of both Large Utility Peer Group companies (12 of 15, 80%) and Small Utility Peer Group companies (8 of 12, 67%) target the market median (50th percentile) for some or all pay elements. Our consulting experience also suggests that American Water's median (50th percentile) pay philosophy is comparable to typical market practice found in general industry.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

**V. SUMMARY OF WILLIS TOWERS WATSON'S TOTAL
COMPENSATION STUDY**

Q12. Did you conduct a study of New Jersey American Water's compensation program?

A12. Yes, and a copy of the Study is included as **Schedule RVM-1** to my testimony.

Q13. Please describe how the study was conducted.

A13. Willis Towers Watson utilized three data sources to assess New Jersey American Water's compensation program: As we did in assessing American Water's market-based total compensation philosophy, we assessed the design of its short-term performance pay and long-term performance pay programs using proxy disclosures of groups of public utilities referred to as the (1) Large Utility Peer Group and (2) Small Utility Peer Group. The competitive market positioning of New Jersey American Water's target total direct compensation levels was compared to (3) Willis Towers Watson published compensation surveys.

Q14. How did you define "competitive" for the purposes of your compensation study?

A14. Willis Towers Watson and typical market practice define total compensation as being competitive with the market if it falls in a range that extends between 10% below to 10% above the market median level of total compensation.

Q15. Please describe how you assessed the competitiveness of New Jersey American Water's target total direct compensation levels.

A15. Willis Towers Watson assessed the competitiveness of target total direct compensation provided by New Jersey American Water to its short-term performance pay eligible population based on a selection of New Jersey American Water jobs ("benchmark jobs"). Benchmark jobs are those positions that are

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 common across comparable organizations and for which compensation data are
2 available from published surveys.

3 To conduct this analysis we reviewed compensation data provided to us by New
4 Jersey American Water and examined Willis Towers Watson's compensation
5 surveys in our Compensation Databank (CDB). These surveys are composed of
6 compensation data from over 1,000 U.S. based companies, and Willis Towers
7 Watson has been conducting these surveys for over 30 years.

8 New Jersey American Water's current compensation levels were compared to the
9 market 50th percentile (market median) for two different market perspectives to
10 determine the competitiveness of pay and to validate the alignment with American
11 Water's current market-based total compensation philosophy (targeting
12 compensation at the 50th percentile of market).

13 Willis Towers Watson's assessment of benchmark jobs represents approximately
14 60% of the population of New Jersey American Water employees as of October 20,
15 2021, who are eligible for performance pay. Specific details regarding our study,
16 which includes a detailed description of the study methodology, are included in
17 Schedule RVM-1.

18 **Q16. How did you derive 50th percentile (median) market values?**

19 A16. To derive 50th percentile (median) market values, Willis Towers Watson
20 benchmarked non-industry specific positions (e.g., accounting, human resources,
21 legal) against both energy services (primarily utilities) and general industry survey
22 data, weighted 60% and 40% respectively. This places a greater weight on the
23 energy services market data since this includes regulated entities most similar to
24 New Jersey American Water. This ensures that non-industry specific positions are
25 being compensated competitively given that these positions can be recruited or lost

NEW JERSEY-AMERICAN WATER COMPANY, INC.

to companies in any industry. For positions requiring industry experience, only energy services industry data were used since these positions are generally not found outside of the utility industry.

Q17. Please describe how you determined the competitiveness of New Jersey American Water's target total direct compensation?

A17. Two different market perspectives were examined to validate the competitiveness of New Jersey American Water's target total direct compensation.

A national market perspective was examined which consisted of the entire population of survey participants in Willis Towers Watson's Energy Services and General Industry databases. This perspective represents a U.S. national compensation perspective and is aligned with American Water's compensation philosophy.

A Mid-Atlantic regional perspective including Delaware, New Jersey, New York, and Pennsylvania labor markets was also examined, which consisted of the same entire survey participant population from Willis Towers Watson's Energy Services Industry and General Industry databases but was customized to identify a Mid-Atlantic-specific geographic dataset. This dataset identified employees that work in the four states listed above for companies headquartered anywhere in the United States.

Q18. What were the compensation study results from the national perspective?

A18. Willis Towers Watson and typical market practice considers market competitiveness to be a result that falls within plus or minus 10% of median range. Using a weighted average of all positions reviewed, New Jersey American Water's target total direct compensation is within the range of competitive market median on a national basis by being 2% below market median

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 **Q19. What were the compensation study results from the Mid-Atlantic Regional**
2 **perspective?**

3 A19. From a Mid-Atlantic Regional Perspective, New Jersey American Water's target
4 total direct compensation is within the market median range because it is 4% below
5 market median

6 **Q20. In your opinion and based on the results of the study, are New Jersey**
7 **American Water employees appropriately compensated with market based**
8 **total compensation?**

9 A20. Yes, recognizing that this comparison includes the market-based total
10 compensation New Jersey American Water's employees receive; meaning that
11 performance pay is included in the compensation comparison. In that case, New
12 Jersey American Water employees are generally within the range of the market
13 median. Removing performance pay, however, would drop New Jersey American
14 Water below median on average and outside the median range for positions that the
15 competitive market indicates that performance pay is a meaningful portion of total
16 direct compensation.

17 **VI. SUMMARY OF WILLIS TOWERS WATSON'S SHORT-TERM**
18 **PERFORMANCE PAY PROGRAM ASSESSMENT**

19 **Q21. Did you conduct an assessment of American Water's short-term performance**
20 **pay program?**

21 A21. Yes.

22 **Q22. What was the purpose of your assessment?**

23 A22. This assessment was completed to compare the design of American Water's short-
24 term performance pay program (that is applicable to New Jersey American Water)
25 and its various elements to market practice.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

Q23. What were the findings of the assessment?

A23. Overall, our review indicates that American Water's short-term performance pay program is comparable to and competitive with designs of utility peers, based on a review of the Large Utility Peer Group and the Small Utility Peer Group that I referenced earlier. Like American Water, every company reviewed has a short-term performance pay program that it uses to help attract, motivate and retain critically skilled employees needed to successfully run the business. Companies design their short-term performance pay programs to align with their business strategies and circumstances, so there tends to be a range of practices regarding how the programs are designed.

American Water's short-term performance pay program assesses performance using a balanced scorecard approach, incorporating financial and operational (*i.e.*, safety, customer satisfaction, and environmental leadership) metrics to determine a corporate funding pool. American Water's program requires the achievement of at least 90% of target earnings per share performance (EPS) to ensure the financial viability of the plan before any short-term performance payment can be made to any participant.

American Water's short-term performance pay program design is within the range of market practice for utilities. Specific details regarding our assessment are included in Schedule RVM-1.

Q24. How does New Jersey American Water's balanced scorecard approach to short-term performance pay benefit customers?

A24. The approach that New Jersey American Water uses reflects a balanced approach between financial (50%) and operational metrics (50%). While operational metrics may appear to reflect a more direct benefit to customers, the financial measures

NEW JERSEY-AMERICAN WATER COMPANY, INC.

used in the short-term and long-term performance pay programs send a message to employees that responsible financial stewardship is also important to the Company and its stakeholders, including customers. Strong financial performance enables the Company to invest in resources – both physical and people – that ensure the efficient operation of the Company, which benefits customers.

VII. SUMMARY OF WILLIS TOWERS WATSON'S LONG-TERM PERFORMANCE PAY PROGRAM ASSESSMENT

Q25. Did you conduct an assessment of American Water's long-term performance pay program?

A25. Yes.

Q26. What was the purpose of your assessment?

A26. This assessment was completed to compare the design of American Water's long-term performance pay program (that is applicable to New Jersey American Water) and its various elements to market practice.

Q27. What were the findings of your assessment?

A27. Overall, our review indicates that American Water's long-term performance pay program is comparable to and competitive with designs of utility peers, based on a review of the Large Utility Peer Group and the Small Utility Peer Group referenced earlier. Like American Water, every company in the Large Utility Peer Group and the Small Utility Peer Group has a long-term performance pay program which is used to help attract, motivate and retain key senior level employees needed to successfully run the business. Companies design their long-term performance pay programs to align with their business strategies and circumstances, so there tends to be a range of practices regarding how the programs are designed. American Water's long-term performance pay program design is within the range of market

NEW JERSEY-AMERICAN WATER COMPANY, INC.

practice for utilities and its three-year vesting period aids in retaining experienced and qualified employees because it is designed to have the compensation it provides forfeited if the employee leaves before the plan vests the potential pay. Specific details regarding our assessment are included in Schedule RVM-1.

VIII. OVERALL FINDINGS REGARDING NEW JERSEY AMERICAN WATER'S COMPENSATION PROGRAMS

Q28. What are the overall findings and conclusions of your analysis of the compensation of New Jersey American Water?

A28. Overall, our analysis indicates that New Jersey American Water's total direct compensation programs are comparable to and competitive with market practices of other similarly-sized utilities and are therefore reasonable. New Jersey American Water, like the companies it competes with for talent, has to provide a competitive total direct compensation opportunity delivered via programs that benefit employees, customers and investors. New Jersey American Water attempts to achieve this goal with its balanced and competitive base salary and short-term and long-term performance pay programs. My experience working with both utilities and general industry companies, and the results of the study included as Schedule RVM-1, indicate the programs at New Jersey American Water are within a broad range of market norms and design and produce an appropriate and competitive level of compensation.

Q29. Why is performance pay appropriate for a utility?

A29. First, as our competitive assessment shows, the inclusion of performance pay plans, both short-term and long-term focused plans, is an essential part of a market competitive pay mix. As noted earlier in my testimony, all of the companies in the Large and Small Utility Peer Groups have short-term and long-term performance pay plans in place. In order to attract, retain and motivate the talent needed to

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 successfully run the company, New Jersey American Water needs to provide a
2 market competitive total compensation program, which includes both short-term
3 and long-term performance pay compensation plans. Equally important,
4 performance pay plans allow New Jersey American Water to differentiate pay
5 based on performance and allocate appropriate compensation to the highest
6 performing and most deserving employees.

7 **Q30. Describe the benefits of New Jersey American Water's current compensation**
8 **program compared to a base salary/wage-only approach.**

9 A30. A key benefit of New Jersey American Water's use of short-term and long-term
10 performance pay plans is that they align with competitive market practice and
11 thereby enable New Jersey American Water to compete in the market for talent. A
12 shift to an all base salary program for New Jersey American Water could have
13 unintended consequences. If all or part of the short-term and/or long-term
14 performance pay at New Jersey American Water were eliminated, the Company
15 would likely be forced to increase fixed pay (i.e., base salary) to above market
16 competitive levels of base salary in order to provide total compensation at the
17 market level to attract and retain talent. This would be counter to the pay-for-
18 performance approach New Jersey American Water currently employs, which is to
19 put short-term and long-term performance pay "at risk" meaning pay and market
20 competitiveness is reduced when performance is below expectations and
21 performance pay is not paid. These plans are viewed as important management
22 tools to reinforce performance expectations, which is why they are so universally
23 present in both the utility and general business sectors nationally.

24 **Q31. Does this conclude your testimony?**

25 A31. Yes.

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CONFIDENTIAL AND TRADE SECRET INFORMATION**

2021 General Rate Case Target Total Direct Compensation Study

New Jersey American Water Company

January 3, 2022

BEFORE THE
STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE PETITION OF
NEW JERSEY-AMERICAN WATER COMPANY, INC.
FOR APPROVAL OF INCREASED TARIFF RATES
AND CHARGES FOR WATER AND WASTEWATER SERVICE, AND
OTHER TARIFF MODIFICATIONS

BPU Docket No. WR2201_____

Direct Testimony of
HAROLD WALKER, III

On Behalf of
New Jersey-American Water Company, Inc.

January 14, 2022

Exhibit P-12

NEW JERSEY-AMERICAN WATER COMPANY, INC.

INTRODUCTION

1. Q. Please state your name and address.

A. My name is Harold Walker, III. My business mailing address is P. O. Box 80794,
Valley Forge, Pennsylvania, 19484.

2. Q. By whom are you employed?

A. I am employed by Gannett Fleming Valuation and Rate Consultants, LLC as
Manager, Financial Studies.

3. Q. What is your educational background and employment experience?

A. My educational background, business experience and qualifications are provided at
the end of Exhibit P-12 as Appendix A.

SCOPE OF TESTIMONY

4. Q. What is the purpose of your testimony?

A. The purpose of my testimony is to recommend appropriate working capital
allowances that New Jersey-American Water Company, Inc. ("NJAWC" or
"Company") should be afforded an opportunity to earn on as part of its rate base.
My recommendation is based upon the results of a lead-lag study of NJAWC that
was performed under my direct supervision.

NEW JERSEY-AMERICAN WATER COMPANY, INC.**5. Q. Have you prepared an exhibit presenting the results of your study?**

A. Yes. I have prepared 26 Schedules identified as Schedule HW-1 through Schedule HW-26 summarizing the Company's working capital requirement in this proceeding.

PRINCIPLES OF WORKING CAPITAL**6. Q. Would you please explain the ratemaking principles concerning the inclusion of working capital as an element of rate base?**

A. Yes. The working capital allowance is a component of rate base. A utility's need for working capital was first recognized in the noted Supreme Court case, *Smyth v. Ames*.¹ Among the many benchmarks established in the case was the "property devoted to public use" doctrine as a basis for fixing rates. The case recognized that among the matters to be considered in determining the value of property used was "the sum required to meet operating expenses." Since that time working capital has generally been recognized as a proper item to be included in the rate base on which a utility is entitled to earn a return.

The rationale for the inclusion of working capital in rate base is to compensate investors for the use of that amount of their funds needed by the business over and above the investment in plant and other tangible assets. Working capital bridges the gap between the time funds are provided by investors to provide service to the

¹ Smyth v. Ames, 169 U.S. 466 (1898).

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 customer and the time the revenue requirement is received from the customer as
2 reimbursement for these services.

3 The lead-lag study in this case represents the level of funding required to operate
4 on a day-to-day basis in providing for the cost of service. This is measured by
5 calculating the net lag between (1) the provision of the cost of service and the
6 receipt of the revenue requirement from the Company's customers and (2) the
7 receipt of goods and services used by the Company in providing service and the
8 payment by the Company for those cost of service items.

9 The net lag is multiplied by the average daily cost of service or revenue requirement
10 to determine the working capital requirement. That requirement is included in rate
11 base to provide investors with a return on the funds required by the Company for
12 daily operations.

13 **RESULTS OF THE LEAD-LAG STUDY**

14 **7. Q. What time period does your lead-lag study encompass?**

15 A. The lead-lag study in this case analyzed the revenues and the associated cost of
16 service during the 12 months ended June 30, 2021 to derive the appropriate lag
17 (lead) days. The appropriate lag (lead) days were then used to develop the pro
18 forma 12-months ending June 30, 2022 weighted revenue requirement and

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 associated weighted cost of service to calculate the Company's working capital
2 requirement.²

3 **8. Q. What are the results of the lead-lag study?**

4 A. The lead-lag schedules are set forth in Schedule HW-1 through Schedule HW-26.
5 Schedule HW-1 summarizes NJAWC's working capital requirement of
6 \$89,700,000.

7 **9. Q. Please describe Schedule HW-1.**

8 A. Schedule HW-1 calculates the net lag days and applies the result to the average
9 daily cost of service or revenue requirement. The weighted lag days for the receipt
10 of the revenue requirement is developed at the top of the schedule, with supporting
11 detail shown in Schedule HW-2. Lag days are then computed for cost of service
12 items. The cost of service represents the sum of annual operating and maintenance
13 expenses, depreciation expense, taxes other than income, income taxes, and the
14 operating income (*i.e.*, product of the rate base times the recommended rate of
15 return). The supporting detail of the cost of service items is provided in Schedule
16 HW-3.

17 **10. Q. How did you calculate the working capital requirement shown on Schedule**
18 **HW-1?**

² The Company's working capital requirement and the pro forma 12-months ending June 30, 2022 weighted revenue requirement and associated weighted cost of service schedules will be updated as needed throughout the proceeding.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 A. The working capital requirement shown on Schedule HW-1 was calculated by
2 subtracting the weighted lag days for the cost of service of 14.2 from the weighted
3 average lag days for the revenue requirement of 48.9 to determine the net lag days
4 of 34.7. The 34.7 net lag days is multiplied by the average adjusted daily cost of
5 service or revenue requirement of \$2,583,771. The result is a working capital
6 requirement of approximately \$89,700,000.

7 **11. Q. Please explain the procedures used to determine the lag days for the revenue**
8 **requirement for the Company.**

9 A. Schedule HW-2 summarizes the development of the 48.9 lag days for revenue
10 requirement for the Company. The lag days for revenue requirement are comprised
11 of service period lag, billing lag, and collection lag.

12 **12. Q. Please explain the procedures used to determine the service period lag days**
13 **for the revenue requirement.**

14 A. The lag days for NJAWC's service period and the billing lag are developed on page
15 2 of Schedule HW-2. The service period lag is the average time between actual
16 meter readings, roughly 27.2 days, based on monthly billing. The average time
17 between meter readings, roughly 27.2 days, is divided by two to produce a midpoint
18 for the service period lag of 13.6 days.

19 The next period to be measured is from the meter reading date to the time the
20 customer is billed. The customer billing date is the day when the total billing
21 amount for a cycle is recorded to accounts receivable. The bills are prepared,

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 mailed, and posted to accounts payable 5.2 days after meters are read and the billed
2 amount is recorded to accounts receivable. Adding the midpoint for the service
3 period lag to the billing lag produces a combined 18.8 day service period and billing
4 lag.

5 **13. Q. Please describe the procedure used to calculate the collection lag portion of the**
6 **revenue lag.**

7 A. The collection lag is the average number of days from the date the bills were mailed
8 to the date payments are received. This was determined by summing the daily
9 accounts receivable balance during the test year and dividing by the sum of the
10 daily test year receipts. This results in an average collection lag of 30.1 days for
11 NJAWC as shown on page 3 of Schedule HW- 2.

12 **14. Q. Please summarize the total revenue lag.**

13 A. The total revenue lag of 48.9 days is the sum of the service period and billing lag
14 of 18.8 days and the collection lag of 30.1 days as shown on page 1 of Schedule
15 HW-2.

16 **15. Q. Please explain the revenue adjustment line item shown on Schedule HW-1 for**
17 **the Company.**

18 A. The revenue adjustment line item adds back the purchased water adjustment clause
19 (“PWAC”) and the purchased sewerage treatment adjustment clause (“PSTAC”)
20 that the Company collects as a surcharge and subtracts insurance other than group
21 and property tax expense. The PWAC and PSTAC are included as part of the lead-

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 lag study because the Company has working capital requirements associated with
2 the lag between the payment for the expenses related to the services provided by
3 the PWAC and the PSTAC and receipt of revenues. Insurance other than group
4 and property tax expense are excluded because these two items are included in the
5 prepaid line in rate base.

6 **16. Q. Please explain the calculation of lag days for the cost of service expenses shown**
7 **on Schedule HW-1.**

8 A. On Schedule HW-1 the cost of service expenses are separated into three major sub-
9 accounts based upon the Company's cost of service. The three major sub accounts
10 include: operating expenses; taxes other than income taxes; and income taxes and
11 utility operating income. For each cost of service expense item that is shown, the
12 lag days were calculated for each invoice or account based on the midpoints of the
13 service periods to the dates the Company paid the invoices or accounts. Schedule
14 HW-3 summarizes the lag days for each cost of service expense item and identifies
15 the source schedule.

16 **17. Q. How were the lag days determined for the operating expenses sub account line**
17 **items shown on Schedule HW-1?**

18 A. For most of the operating expenses sub account line items shown, the lag days were
19 determined for each invoice or account sampled based on the midpoints of the
20 service periods to the dates NJAWC paid the invoices or accounts based on varying

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 levels of sampling of data.³ The exceptions were the depreciation and amortization
2 line item and three other expenses line items.⁴ The lag days for the three other
3 expenses line items were assumed to be 25 days, which is equal to the weighted
4 average lag days found for operating expenses (excluding depreciation and
5 amortization) that were sampled. Sampling for the line-item dollars (or expenses)
6 averaged 79% reflecting a range of sampling from 6% to 100% of the total line-
7 item dollars (or expenses) being sampled.

8 For example, the weighted average lag days for purchased water equal 50.2 days
9 (see Schedule HW-4). The lag days for purchased water expense were calculated
10 for each invoice examined based on the midpoints of the service periods to the dates
11 NJAWC paid the invoices. In total, 90% of the purchased water expenses were
12 sampled. Similar analyses were conducted for sewage treatment (see Schedule
13 HW-5), power (see Schedule HW-6), chemicals (see Schedule HW-7), waste
14 disposal (see Schedule HW-8), salaries and wages (see Schedule HW-9), pensions
15 (see Schedule HW-10), group insurance (see Schedule HW-11), other benefits (see
16 Schedule HW-12), support services costs (see Schedule HW-13), rents (see
17 Schedule HW-14), transportation (see Schedule HW-15), customer accounting (see
18 Schedule HW-16), contracted services (see Schedule HW-17), building
19 maintenance and services (see Schedule HW-18), telecommunication expenses (see

³ It should be noted that the number of expense line items sampled were consistent with the number sampled in the 2019 rate case to avoid concerns raised by other parties in rate cases prior to 2019 regarding expense line items not being sampled.

⁴ The three other expenses line items include regulatory expense, engineered coating of steel structures and property sales.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 Schedule HW-19), office supplies and services (see Schedule HW-20), employee
2 related expense travel & entertainment (see Schedule HW-21), miscellaneous
3 expenses (see Schedule HW-22), and maintenance service & supplies (see
4 Schedule HW-23).

5 For uncollectables expense, a zero lag has been assigned to recognize the full
6 revenue lag related to this expense. For the depreciation and amortization line item,
7 a zero lag has been assigned because these are deducted from rate base when the
8 expense is recorded. In total, NJAWC's operating expenses sub account line items
9 have a weighted average 15.2 lag days as shown on Schedule HW-1.

10 **18. Q. Please explain in more detail why a zero lag day should be assigned to the**
11 **depreciation and amortization line item?**

12 A. A zero lag has been assigned because accumulated depreciation, the contra account
13 for the depreciation expense, has been deducted from rate base. The accumulated
14 depreciation account balance always includes an uncollected amount of
15 depreciation expense that is equal to the revenue requirement lag days (i.e., 48.9
16 days). Assigning a zero lag recognizes that investor funding occurred but it has not
17 yet been recovered from customers.

18 **19. Q. How were the lag days determined for the taxes other than income tax sub**
19 **account line items shown on Schedule HW-1?**

20 A. For most of the taxes other than income tax sub account line items shown, the lag
21 days were calculated based on the midpoint of the tax period to the payment date,

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 weighted by the actual amount paid. The exception being the excise tax and Gross
2 Receipts and Franchise Tax ("GRFT") on "proposed increase" line items and the
3 "taxes – other" line item. The taxes other than income tax sub account line items
4 that were calculated based upon the actual amounts paid are shown on Schedule
5 HW-24 for excise tax payments at present rates and GRFT payments at present
6 rates and Schedule HW-25 for payroll taxes. As is evident from reviewing
7 Schedule HW-24, many taxes are paid before the mid-point of the tax period, thus
8 resulting in negative lag days or lead days from the service period.

9 **20. Q. How were the lag days determined for the excise tax on the proposed increase,**
10 **GRFT on the proposed increase, the payroll taxes and taxes - other line item?**

11 A. The lag days assigned to the excise tax and GRFT on the proposed increase line
12 items represent the incremental increase in these taxes resulting from the full
13 approval of the Company's rate request. That is, assuming full approval of the
14 Company's rate request increase will result in an incremental increase in the level
15 of excise tax and GRFT over that which was paid during the test year. This
16 incremental increase in excise tax and GRFT on proposed increase has a lag that is
17 365 days greater than the excise tax payment at present rates and the GRFT at
18 present rates that are developed on Schedule HW-24. The logic for adding the
19 additional 365 days is to account for the difference between the test year and the
20 year following rate implementation.

21 The lag days used for the payroll taxes, Schedule HW-25, reflect the 11.5 lag days
22 determined for the payroll taxes. The lag days for the taxes - other line item were

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 calculated based on an assumed midpoint of a monthly service period, or 15 days,
2 plus an estimated 30 days to pay such expenses. In total, the taxes other than
3 income tax sub account line items have a weighted average 41.0 lag days as shown
4 on Schedule HW-1.

5 **21. Q. Can you please explain in more detail how you calculated the lag days for**
6 **excise tax on present rates and GRFT on present rates in your study?**

7 A. The Company's actual individual payments of the excise tax on present rates and
8 GRFT on present rates and the actual service periods are shown on Schedule HW-
9 24. Based on a review of the Company's 2020 excise tax and GRFT tax forms or
10 worksheets, each of these taxes is comprised of a prepayment portion and a current
11 year portion. However, all the payments for these taxes were made during the 2020
12 base tax year and are, in fact, 2020 taxes. The prepayment portion represents a
13 future year's liability that the State of New Jersey requires to be prepaid in the
14 current year (i.e., 2020). As shown on Schedule HW-24, the excise tax on present
15 rates has a weighted average lag, or negative lag, of -242.4 days. This is comprised
16 of -64.0 lag days, or negative lag, of the current year's portion and -429.0 lag days,
17 or negative lag, of the prepayment portion. Similarly, the GRFT on present rates
18 has a weighted average lag of 33.7 days. This is comprised of 37.4 lag days of the
19 current year's portion and -415.0 lag days, or negative lag, of the prepayment
20 portion.

21 **22. Q. How were the lag days determined for the income taxes and operating income**
22 **sub account line items shown on Schedule HW-1?**

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 A. For the federal taxes (current) sub account line item shown, the lag days were
2 calculated based on the midpoint of the tax period to the payment date, weighted
3 by the percent of the payment required. The derivation of the federal taxes (current)
4 36.8 lag days is shown on Schedule HW-26.

5 For both deferred taxes and utility operating income line items, a zero lag has been
6 assigned. Deferred taxes have been assigned a zero lag because they are deducted
7 from rate base, as they are recorded as part of accumulated deferred taxes. A zero
8 lag has been assigned to utility operating income because it is the property of
9 investors. In total, the income taxes and operating income sub account line items
10 have a weighted average of 3.8 lag days as shown on Schedule HW-1.

11 **23. Q. Please explain in more detail why a zero lag day should be assigned to the**
12 **deferred taxes and utility operating income line items?**

13 A. Concerning deferred taxes, a zero lag has been assigned because accumulated
14 deferred taxes have been deducted from rate base as a source of cost-free funds.
15 As is the case with accumulated depreciation, the deferred taxes account balance
16 always includes an uncollected amount of deferred taxes expense that is equal to
17 the revenue requirement lag days (i.e., 48.9 days). Therefore, the recorded amount
18 of accumulated deferred taxes, deducted from rate base, overstates the actual
19 amount of available cost-free capital by an amount equal to the revenue requirement
20 lag days. Assigning a zero lag recognizes that a portion of these cost-free funds
21 have not been recovered from customers.

NEW JERSEY-AMERICAN WATER COMPANY, INC.

1 A zero lag has been assigned to utility operating income, or return on invested
2 capital, because operating income is the property of investors when it is earned.⁵
3 Further, operating income is earned when service is provided. However, when
4 service is provided, the operating income is not collected simultaneously as is
5 evidenced by the existence of the revenue requirement lag days. This situation is
6 remedied by assigning a zero lag to operating income in recognition that these
7 earnings have not been recovered from customers.⁶

8 **24. Q. Please summarize your determination of the working capital requirement**
9 **shown on Schedule HW-1?**

10 A. NJAWC's working capital requirement shown on Schedule HW-1 was calculated
11 by subtracting the weighted average lag days for the cost of service of 14.2 from
12 the weighted average lag days for the revenue requirement of 48.9 to determine the
13 net lag days of 34.7. The 34.7 net lag days is multiplied by the average daily cost
14 of service or revenue requirement of \$2,583,771. The result is a working capital
15 requirement of \$89,700,000.

16 **25. Q. Does this conclude your direct testimony?**

17 A. Yes, it does.

⁵ Smyth v. Ames, 169 U.S. 466 (1898)

⁶ Atlantic City Electric Company, Board Docket No. 8310-883, August 17, 1984 ("The return on investment is the property of investors when service is provided. Payment from operating income for long and short term debt, preferred stock and common stock dividends require a zero payment lag because the funds used to render these payments are the property of investors of a utility."); Re Public Service Electric and Gas Company, Docket No. 837-620, Decision and Order dated March 23, 1984 (Ex. P-106, P.3); Accounting for Public Utilities, § 5.04[5] ("From a theoretical standpoint, operating income is earned when service is provided, and the operating income is the property of the investors in the company when earned.")

Professional Qualifications
of
Harold Walker, III
Manager, Financial Studies
Gannett Fleming, Inc.

EDUCATION

Mr. Walker graduated from Pennsylvania State University in 1984 with a Bachelor of Science Degree in Finance. His studies concentrated on securities analysis and portfolio management with an emphasis on economics and quantitative business analysis. He has also completed the regulation and the rate-making process courses presented by the College of Business Administration and Economics Center for Public Utilities at New Mexico State University. Additionally, he has attended programs presented by The Institute of Chartered Financial Analysts (CFA).

Mr. Walker was awarded the professional designation "Certified Rate of Return Analyst" (CRRRA) by the Society of Utility and Regulatory Financial Analysts. This designation is based upon education, experience and the successful completion of a comprehensive examination. He is also a member of the Society of Utility and Regulatory Financial Analysts (SURFA) and has attended numerous financial forums sponsored by the Society. The SURFA forums are recognized by the Association for Investment Management and Research (AIMR) and the National Association of State Boards of Accountancy for continuing education credits.

Mr. Walker is also a licensed Municipal Advisor Representative (Series 50) by Municipal Securities Rulemaking Board (MSRB) and Financial Industry Regulatory Authority (FINRA).

BUSINESS EXPERIENCE

Prior to joining Gannett Fleming Valuation and Rate Consultants, LLC., Mr. Walker was employed by AUS Consultants - Utility Services. He held various positions during his eleven years with AUS, concluding his employment there as a Vice President. His duties included providing and supervising financial and economic studies on behalf of investor owned and municipally owned water, wastewater, electric, natural gas distribution and transmission, oil pipeline and telephone utilities as well as resource recovery companies.

In 1996, Mr. Walker joined Gannett Fleming Valuation and Rate Consultants, LLC. In his capacity as Manager, Financial Studies and for the past twenty years, he has continuously studied rates of return requirements for regulated firms. In this regard, he supervised the preparation of rate of return studies in connection with his testimony and in the past, for other individuals. He also assisted and/or developed dividend policy studies, nuclear prudence studies, calculated fixed charge rates for avoided costs involving cogeneration projects, financial decision studies for capital budgeting purposes and developed financial models for determining future capital requirements and the effect of those requirements on investors and ratepayers, valued utility property and common stock for acquisition and divestiture, and assisted in the private placement of fixed capital securities for public utilities.

Head, Gannett Fleming GASB 34 Task Force responsible for developing Governmental Accounting Standards Board (GASB) 34 services, and educating Gannett Fleming personnel and Gannett Fleming clients on GASB 34 and how it may affect them. The GASB 34 related services include inventory of assets, valuation of assets, salvage estimation, annual depreciation rate determination, estimation of depreciation reserve, asset service life determination, asset condition assessment, condition assessment documentation, maintenance estimate for asset preservation, establishment of condition level index, geographic information system (GIS) and data management services, management discussion and analysis (MD&A) reporting, required supplemental information (RSI) reporting, auditor interface, and GASB 34 compliance review.

Mr. Walker was also the Publisher of C.A. Turner Utility Reports from 1988 to 1996. C.A. Turner Utility Reports is a financial publication which provides financial data and related ratios and forecasts covering the utility industry. From 1993 to 1994, he became a contributing author for the Fortnightly, a utility trade journal. His column was the Financial News column and focused mainly on the natural gas industry.

In 2004, Mr. Walker was elected to serve on the Board of Directors of SURFA. Previously, he served as an ex-officio director 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 25 states including: Arizona, California, Colorado, Connecticut, Delaware, Hawaii, 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 market value, the taking of natural resources, appropriate capital structure and fixed capital cost rates, depreciation, fair rate of return, purchased water adjustments, synchronization of interest charges for income tax purposes, valuation, cash working capital, lead-lag studies, financial analyses of investment alternatives, and fair value. The following tabulation provides a listing of the electric power, natural gas distribution, telephone, wastewater, and water service utility cases in which he has been involved as a witness.

<u>Client</u>	<u>Docket No.</u>
Alpena Power Company	U-10020
Armstrong Telephone Company - Northern Division	92-0884-T-42T
Armstrong Telephone Company - Northern Division	95-0571-T-42T
Artesian Water Company, Inc.	90 10
Artesian Water Company, Inc.	06 158
Aqua Illinois Consolidated Water Divisions and Consolidated Sewer Divisions	11-0436
Aqua Illinois Hawthorn Woods Wastewater Division	07 0620/07 0621/08 0067
Aqua Illinois Hawthorn Woods Water Division	07 0620/07 0621/08 0067
Aqua Illinois Kankakee Water Division	10-0194
Aqua Illinois Kankakee Water Division	14-0419
Aqua Illinois Vermilion Division	07 0620/07 0621/08 0067
Aqua Illinois Willowbrook Wastewater Division	07 0620/07 0621/08 0067
Aqua Illinois Willowbrook Water Division	07 0620/07 0621/08 0067
Aqua Pennsylvania 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 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

<u>Client</u>	<u>Docket No.</u>
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
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
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 Bethlehem - Bureau of Water	R-00984375
City of Bethlehem - Bureau of Water	R 00072492
City of Bethlehem - Bureau of Water	R-2013-2390244

<u>Client</u>	<u>Docket No.</u>
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
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
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
Mount Holly Water Company	WR06030257
Nevada Power Company d/b/a NV Energy	20-06003

<u>Client</u>	<u>Docket No.</u>
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 Natural Gas Company	GR19030420
New Jersey Natural Gas Company	GR21030679
Newtown Artesian Water Company	R-911977
Newtown Artesian Water Company	R-00943157
Newtown Artesian Water Company	R-2009-2117550
Newtown Artesian Water Company	R-2011-2230259
Newtown Artesian Water Company	R-2017-2624240
Newtown Artesian Water Company	R-2019-3006904
North Maine Utilities	14-0396
Northern Indiana Fuel & Light Company	38770
Oklahoma Natural Gas Company	PUD-940000477
Palmetto Utilities, Inc.	2020-281-S
Palmetto Wastewater Reclamation, LLC	2018-82-S
Pennichuck Water Works, Inc.	DW 04 048
Pennichuck Water Works, Inc.	DW 06 073
Pennichuck Water Works, Inc.	DW 08 073
Pennsylvania Gas & Water Company (Gas)	R-891261
Pennsylvania Gas & Water Co. (Water)	R 901726
Pennsylvania Gas & Water Co. (Water)	R-911966
Pennsylvania Gas & Water Co. (Water)	R-22404
Pennsylvania Gas & Water Co. (Water)	R-00922482
Pennsylvania Gas & Water Co. (Water)	R-00932667
Philadelphia Gas Works	R-2020-3017206
Public Service Company of North Carolina, Inc.	G-5, Sub 565
Public Service Electric and Gas Company	ER181010029
Public Service Electric and Gas Company	GR18010030
Presque Isle Harbor Water Company	U-9702

<u>Client</u>	<u>Docket No.</u>
Sierra Pacific Power Company d/b/a NV Energy	19-06002
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
Virginia American Water Company	PUR-2018-00175
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

Schedules

**BEFORE THE
NEW JERSEY BOARD OF PUBLIC UTILITIES**

Docket No. WR2201_____

New Jersey American Water

Lead-Lag Schedules

Schedule HW-1 Through Schedule HW-26

**To Accompany the
Direct Testimony of Harold Walker, III
On Working Capital**

NEW JERSEY AMERICAN WATER
 CALCULATION OF CASH WORKING CAPITAL REQUIREMENTS
 BASED ON LEAD-LAG STUDY AS OF JUNE 30, 2021

INDEX TO SCHEDULES

Schedules	Subject Area	Schedule Subject
Schedule HW-1	Total Company	Summary Of Calculation Of Cash Working Capital Requirements
Schedule HW-2, Page 1	Total Company	Summary Of Total Revenue Lag Days
Schedule HW-2, Page 2	Total Company	Service Period Billing Lag Days
Schedule HW-2, Page 3	Total Company	Calculation Of Collection Lag Days
Schedule HW-3	Total Company	Summary of Operating Expenses and Taxes Lag Days
Schedule HW-4	Total Company	Purchased Water
Schedule HW-5	Total Company	Sewage Treatment
Schedule HW-6	Total Company	Power
Schedule HW-7	Total Company	Chemicals
Schedule HW-8	Total Company	Waste Disposal
Schedule HW-9	Total Company	Salaries and Wages
Schedule HW-10	Total Company	Pensions
Schedule HW-11	Total Company	Group Insurance
Schedule HW-12	Total Company	Other Benefits
Schedule HW-13	Total Company	Support Services Costs
Schedule HW-14	Total Company	Rents
Schedule HW-15	Total Company	Transportation
Schedule HW-16	Total Company	Customer Accounting
Schedule HW-17	Total Company	Contracted Services
Schedule HW-18	Total Company	Building Maintenance and Services
Schedule HW-19	Total Company	Telecommunication Expenses
Schedule HW-20	Total Company	Office Supplies and Services
Schedule HW-21	Total Company	Employee Related Expense Travel & Entertainment
Schedule HW-22	Total Company	Miscellaneous Expenses
Schedule HW-23	Total Company	Maintenance Service & Supplies
Schedule HW-24	Total Company	Excise Tax
Schedule HW-24	Total Company	GRFT
Schedule HW-25	Total Company	Payroll Taxes
Schedule HW-26	Total Company	Federal Income Taxes (Current)

TOTAL COMPANY

CALCULATION OF CASH WORKING CAPITAL REQUIREMENTS
BASED ON LEAD-LAG STUDY AS OF JUNE 30, 2021

Description	Pro Forma 12 Mos Ended 6/30/2020	(Lead)/Lag Days		Weighted Amount
		Schedule Reference	Days	
(1)	(2)	(3)	(4)	(5)
<u>Operating Revenues</u>				
Water, Sewer, & Other	\$903,078,257			
Revenue Adjustments *	39,997,996			
Subtotal Operating Revenues	943,076,253	2	48.9	\$46,116,428,772
<u>Operating Expenses</u>				
Purchased Water	34,439,450	3	50.2	\$1,728,860,390
Sewage Treatment	18,646,171	3	16.2	302,067,970
Power	22,442,968	3	25.4	570,051,387
Chemicals	16,178,085	3	36.2	585,646,677
Waste Disposal	6,379,022	3	47.2	301,089,838
Salaries and Wages	51,928,504	3	11.5	597,177,796
Pensions	(3,233,927)	3	-2.5	8,084,818
Group Insurance	8,631,311	3	10.2	88,039,372
Other Benefits	3,398,208	3	10.6	36,021,005
Support Services Costs	48,864,048	3	-3.1	-151,478,549
Rents	475,274	3	-6.2	-2,946,699
Transportation	3,673,752	3	40.8	149,889,082
Uncollectible Accounts Expense	3,282,317	3	0.0	0
Customer Accounting	7,044,953	3	62.3	438,900,572
Regulatory Expense	560,998	3	25.0	14,024,950
Engineered Coating of Steel Structures	6,941,429	3	25.0	173,535,725
Property Sales	(81,076)	3	25.0	-2,026,900
Contracted Services	11,695,717	3	42.3	494,728,829
Building Maintenance and Services	3,500,134	3	45.5	159,256,097
Telecommunication Expenses	3,419,853	3	28.6	97,807,796
Office Supplies and Services	2,725,040	3	64.2	174,947,568
Advertising & Marketing Expenses	0	3	0.0	0
Employee Related Expense	1,092,714	3	35.6	38,900,618
Miscellaneous Expenses	4,098,191	3	25.7	105,323,509
Maintenance Service & Supplies	16,876,570	3	45.7	771,259,249
Depreciation & Amortization	166,805,766	3	0.0	0
Subtotal Operating Expenses	439,785,472		15.2	6,679,161,100

TOTAL COMPANY

CALCULATION OF CASH WORKING CAPITAL REQUIREMENTS
BASED ON LEAD-LAG STUDY AS OF JUNE 30, 2021

Description	Pro Forma 12 Mos Ended 6/30/2020	(Lead)/Lag Days		Weighted Amount
		Schedule Reference	Days	
(1)	(2)	(3)	(4)	(5)
<u>Taxes Other Than Income</u>				
Excise Tax at Present Rates	12,031,713	3	-242.4	-2,916,487,231
GRFT at Present Rates	96,253,704	3	33.7	3,243,749,825
Excise Tax on Proposed Increase	1,434,377	3	122.6	175,854,620
GRFT on Proposed Increase	11,475,022	3	398.7	4,575,091,271
Payroll Taxes	4,069,860	3	11.5	46,803,390
Taxes - Other	3,143,043	3	45.0	141,436,935
Subtotal Taxes Other Than Income	128,407,719		41.0	5,266,448,810
<u>Income Taxes & Utility Operating Income</u>				
Federal Taxes	38,324,417	3	36.8	1,410,338,546
Deferred Taxes	12,974,763	3	0.0	0
Total Income Taxes	51,299,180		27.5	1,410,338,546
Utility Operating Income	323,583,882		0.0	0
Subtotal Income Taxes and Return	374,883,062		3.8	1,410,338,546
Total Expenses, Taxes & Income	\$943,076,253		14.2	\$13,355,948,456
Cash Working Capital Requirement (48.9 - 14.2) = 34.7 Days			34.7	
Pro Forma Daily Operating Expenses (\$943,076,253 divided by 365 days) =	\$2,583,771			
Cash Working Capital Requirement (\$2,583,771 x 34.7 Days = \$89,656,854)				\$89,656,854
			Rounded =	\$89,700,000

* - Revenue Adjustments

ADD: Purchased Water	\$38,035,317
ADD: Sewage Treatment	18,278,899
LESS: Insurance Other Than Group	9,136,770
LESS: Property Taxes	7,179,450

Total Revenue Adjustments \$39,997,996

TOTAL COMPANY

CALCULATION OF CASH WORKING CAPITAL REQUIREMENTS
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

<u>Description</u> (1)	<u>Amount</u> (2)	<u>Weighted Amount</u> (3)	<u>(Lead)/ Lag Days</u> (4)=(3)/(2)
<u>Operating Revenues - Water, Sewer, & Other:</u>			
Service Period & Billing Lag: (From mid-point of service period to posting date. See page 2 of this Schedule)	\$800,892,709	\$15,056,782,929	18.8
Collection Lag: (Sum of daily accounts receivable balance divided by the sum of daily receipts. See page 3 of this Schedule)	800,892,709	24,084,842,703	30.1
Total Revenue Lag Days			<u>48.9</u>

TOTAL COMPANY

CALCULATION OF SERVICE PERIOD AND BILLING LAG

<u>Description</u>	<u>Calculation of Lag</u>
(1)	(2)
Sampled Weighted Service Lag (Jun 2021)	\$162,597,656
Sampled Billing Total (Jun 2021)	11,941,928
Midpoint Service Period Lag Days	13.6
Sampled Weighted Billing Lag (Jun 2021)	61,912,707
Sampled Billing Total (Jun 2021)	11,941,928
Billing Lag Days	5.2
Total Service Period & Billing Lag Days	18.8

TOTAL COMPANY

CALCULATION OF COLLECTION LAG

<u>Description</u> <u>(1)</u>	<u>Amount</u> <u>(1)</u>
Sum of Net Daily Accounts Receivable Balance in a Year	\$ 24,084,842,703
Divided By The Sum of Daily Receipts in a Year	<u>800,892,709</u>
Total Service Period Collection Lag	<u><u>30.1</u></u>

TOTAL COMPANYSUMMARY OF OPERATING EXPENSES AND TAXES LAG DAYS
BASED ON LEAD-LAG STUDY AS OF JUNE 30, 2021

Description (1)	Schedule Reference (2)	Amount (3)	Weighted Amount (4)	(Lead)/ Lag Days (5)=(4)/(3)
<u>Operating Expenses & Taxes*</u>				
Purchased Water	Schedule HW-4	31,865,865	1,599,666,423	50.2
Sewage Treatment	Schedule HW-5	11,625,713	188,336,546	16.2
Power	Schedule HW-6	8,526,220	216,565,978	25.4
Chemicals	Schedule HW-7	4,641,860	168,035,318	36.2
Waste Disposal	Schedule HW-8	1,881,142	88,789,889	47.2
Salaries and Wages	Schedule HW-9	82,164,166	944,887,909	11.5
Pensions	Schedule HW-10			-2.5
Group Insurance	Schedule HW-11	15,410,104	157,183,061	10.2
Other Benefits	Schedule HW-12	4,261,302	45,169,796	10.6
Support Services Costs	Schedule HW-13	54,776,126	-169,805,992	-3.1
Rents	Schedule HW-14	351,621	-2,180,048	-6.2
Transportation	Schedule HW-15	715,165	29,178,720	40.8
Uncollectible Accounts Expense**				0.0
Customer Accounting	Schedule HW-16	513,203	31,972,541	62.3
Regulatory Expense***				25.0
Engineered Coating of Steel Structures***				25.0
Property Sales***				25.0
Contracted Services	Schedule HW-17	1,591,512	67,320,942	42.3
Building Maintenance and Services	Schedule HW-18	879,244	40,005,581	45.5
Telecommunication Expenses	Schedule HW-19	1,611,786	46,097,092	28.6
Office Supplies and Services	Schedule HW-20	409,025	26,259,427	64.2
Employee Related Expense Travel & Entertainment	Schedule HW-21	366,709	13,054,855	35.6
Miscellaneous Expenses	Schedule HW-22	1,509,653	38,798,085	25.7
Maintenance Service & Supplies	Schedule HW-23	928,176	42,417,658	45.7
Depreciation & Amortization**				0.0
Excise Tax	Schedule HW-24	11,873,083	-2,877,574,097	-242.4
GRFT	Schedule HW-24	90,710,726	3,056,951,466	33.7
Excise Tax Increase****				122.6
GRFT Increase****				398.7
Payroll Taxes	Schedule HW-25	6,587,821	75,759,942	11.5
Taxes - Other*****				45.0
Federal Income Taxes (Current)	Schedule HW-26			36.8
Deferred Taxes**				0.0

* Lag days for expenses are calculated from the mid-point of the service period to the payment date. (See Schedules 4 - 28.)

** Lag days are assumed to be 0.

*** Lag days are assumed to be equal to the weighted average lag days found for operating expenses (excluding depreciation).

**** Represent the incremental increase in these taxes resulting from the full approval of the Company's rate request. The incremental increase in excise tax and GRFT on proposed increase is 365 days greater than the excise tax payment and the GRFT at present rates.

***** Lag days for other expenses and other taxes are estimated based on 15 days for the midpoint of the previous month (service period) plus 30 days to the payment date.

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR PURCHASED WATER
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

Month of Payment	(Lead)/ Lag Days	Amount	Weighted Amount
(1)	(2)	(3)	(4)
July-20	49.7	\$3,493,700.90	\$173,689,203.15
August-20	53.0	2,598,562.04	137,633,864.69
September-20	46.3	2,721,405.43	125,957,799.24
October-20	52.2	3,566,667.38	186,301,131.63
November-20	52.3	2,648,942.90	138,527,875.09
December-20	41.9	1,785,167.11	74,759,373.82
January-21	59.3	3,000,742.45	177,976,978.10
February-21	50.3	2,504,932.98	126,086,462.02
March-21	50.9	2,122,738.24	108,095,494.33
April-21	48.8	3,511,430.07	171,520,512.00
May-21	47.4	1,943,605.17	92,048,360.11
June-21	44.3	1,967,970.33	87,259,088.97
Total Purchased Water	50.2	\$31,865,865.00	\$1,599,856,143.12

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR SEWAGE TREATMENT
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

Month of Payment	(Lead)/ Lag Days	Amount	Weighted Amount
(1)	(2)	(3)	(4)
July-20	19.0	\$6,473.20	\$122,762.64
August-20	5.6	3,721,419.23	20,772,508.83
September-20	51.8	39,460.30	2,043,182.11
October-20	21.0	9,638.91	202,812.43
November-20	(2.5)	1,565,064.00	-3,927,439.45
December-20	43.2	2,171,545.56	93,806,027.02
January-21	24.6	79,214.68	1,951,644.61
February-21	26.8	12,671.38	340,090.55
March-21	29.6	2,319,463.12	68,589,519.32
April-21	77.9	47,230.04	3,679,368.79
May-21	0.3	1,642,846.33	478,453.53
June-21	48.9	10,685.96	523,026.70
Total Sewage Treatment	16.2	\$11,625,712.71	\$188,581,957.06

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR POWER
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

<u>Month of Payment</u>	<u>(Lead)/ Lag Days</u>	<u>Amount</u>	<u>Weighted Amount</u>
(1)	(2)	(3)	(4)
July-20	26.1	\$759,094.07	\$19,828,144.38
August-20	25.1	775,995.95	19,499,950.72
September-20	27.5	751,913.80	20,679,236.64
October-20	30.0	861,196.03	25,794,834.10
November-20	21.2	521,755.05	11,048,599.40
December-20	23.7	665,549.58	15,775,609.60
January-21	22.1	636,353.09	14,064,688.17
February-21	22.6	684,016.75	15,426,213.05
March-21	29.9	735,386.40	22,012,295.44
April-21	26.6	744,727.00	19,836,123.01
May-21	24.1	608,356.67	14,642,100.81
June-21	<u>22.9</u>	<u>781,875.20</u>	<u>17,871,839.47</u>
Total Power	<u>25.4</u>	<u>\$8,526,219.59</u>	<u>\$216,479,634.76</u>

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR CHEMICALS
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

<u>Month of Payment</u>	<u>(Lead)/ Lag Days</u>	<u>Amount</u>	<u>Weighted Amount</u>
(1)	(2)	(3)	(4)
July-20	19.3	\$138,830.30	\$2,676,875.75
August-20	36.9	487,820.37	18,011,181.63
September-20	36.7	538,947.21	19,799,318.81
October-20	38.4	575,274.77	22,104,543.46
November-20	35.3	358,447.65	12,637,072.00
December-20	36.3	434,272.35	15,782,365.45
January-21	46.1	453,897.10	20,907,640.29
February-21	35.7	276,135.29	9,852,126.67
March-21	34.8	233,002.72	8,115,200.78
April-21	35.2	294,571.29	10,381,253.60
May-21	36.3	493,794.00	17,920,972.45
June-21	<u>28.1</u>	<u>356,866.57</u>	<u>10,038,190.07</u>
 Total Chemicals	 <u>36.2</u>	 <u>\$4,641,859.62</u>	 <u>\$168,226,740.96</u>

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR WASTE DISPOSAL
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

<u>Month of Payment</u>	<u>(Lead)/ Lag Days</u>	<u>Amount</u>	<u>Weighted Amount</u>
(1)	(2)	(3)	(4)
July-20	48.0	\$21,805.95	\$1,046,685.60
August-20	47.8	223,803.86	10,704,799.84
September-20	35.2	134,745.96	4,746,005.20
October-20	102.9	152,562.18	15,695,042.64
November-20	31.9	303,228.28	9,678,365.05
December-20	64.2	237,009.06	15,207,993.93
January-21	38.0	156,822.71	5,963,721.41
March-21	116.5	32,571.06	3,794,528.49
April-21	41.0	56,015.44	2,296,633.04
May-21	38.4	264,075.81	10,144,100.89
June-21	<u>32.1</u>	<u>298,501.41</u>	<u>9,589,711.25</u>
Total Waste Disposal	<u>47.2</u>	<u>\$1,881,141.72</u>	<u>\$88,867,587.32</u>

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR SALARIES AND WAGES
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

<u>Facts</u>	<u>(Lead)/ Lag Days</u>	<u>Amount</u>	<u>Weighted Amount</u>
(1)	(2)	(3)	(4)

All company employees are paid for a two week period (i.e., Days 1 through 14).

Pay date is five days following the end of the payroll period
 (i.e., Day 19, where $19 = 14 + 5$).

Lag days are 11.5 days [$19 - 7.5 = 11.5$; where $7.5 = (1 + 14 = 15 \div 2 = 7.5)$]

	<u>11.5</u>	<u>\$82,164,166.00</u>	<u>\$944,887,909.00</u>
Total Salaries and Wages	<u>11.5</u>	<u>\$82,164,166.00</u>	<u>\$944,887,909.00</u>

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR PENSIONS
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

<u>Service Period</u>		<u>Payment</u>	<u>(Lead)/</u>		<u>Weighted</u>
<u>From</u>	<u>To</u>	<u>Date</u>	<u>Lag Days</u>	<u>Amount</u>	<u>Amount</u>
(1)	(2)	(3)	(4)	(5)	(6)
1/1/2020	12/31/2020	8/13/2020	42.5	25%	10.6
1/1/2020	12/31/2020	11/16/2020	137.5	25%	34.4
1/1/2021	12/31/2021	2/11/2021	(141.0)	25%	(35.3)
1/1/2021	12/31/2021	5/14/2021	(49.0)	25%	(12.3)
Total Pensions			(2.5)	100%	(2.5)

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR GROUP INSURANCE
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

<u>Month of Payment</u> (1)	<u>(Lead)/ Lag Days</u> (2)	<u>Amount</u> (3)	<u>Weighted Amount</u> (4)
July-20	10.5	\$1,206,735.64	\$12,670,724.22
August-20	10.5	1,198,001.69	12,579,017.75
September-20	10.0	1,196,843.31	11,965,530.67
October-20	9.5	1,192,252.68	11,326,400.46
November-20	10.5	1,190,893.80	12,504,384.90
December-20	10.5	1,194,424.69	12,541,459.25
January-21	10.5	1,272,603.20	13,362,333.60
February-21	10.0	1,265,470.45	12,651,729.45
March-21	10.5	1,263,613.29	13,267,939.55
April-21	10.5	1,266,077.39	13,293,812.60
May-21	10.5	1,270,070.31	13,335,738.26
June-21	<u>9.5</u>	<u>1,893,117.58</u>	<u>17,984,617.01</u>
Total Group Insurance	<u>10.2</u>	<u>\$15,410,104.03</u>	<u>\$157,483,687.69</u>

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR OTHER BENEFITS
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

<u>Month of Payment</u> (1)	<u>(Lead)/ Lag Days</u> (2)	<u>Amount</u> (3)	<u>Weighted Amount</u> (4)
July-20	11.0	\$322,952.00	\$3,552,472.00
August-20	10.5	324,306.73	3,405,278.93
September-20	10.3	487,042.51	5,032,488.47
October-20	11.0	323,872.94	3,562,602.34
November-20	10.0	324,161.66	3,241,616.60
December-20	10.5	324,078.80	3,401,947.92
January-21	11.0	326,840.73	3,595,248.03
February-21	10.5	334,620.34	3,513,920.50
March-21	10.6	536,327.00	5,703,568.22
April-21	10.5	346,463.20	3,638,141.89
May-21	10.5	348,500.67	3,658,334.81
June-21	<u>11.0</u>	<u>262,134.94</u>	<u>2,883,484.34</u>
Total Other Benefits	<u>10.6</u>	<u>\$4,261,301.52</u>	<u>\$45,189,104.05</u>

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR SUPPORT SERVICES COSTS
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

Month of Payment	(Lead)/ Lag Days	Amount	Weighted Amount
(1)	(2)	(3)	(4)
July-20	(3.0)	\$4,180,693.14	-\$12,542,079.42
August-20	(5.0)	4,698,417.06	-23,492,085.30
September-20	(5.5)	4,880,190.44	-26,841,047.42
October-20	(2.0)	4,561,031.89	-9,122,063.78
November-20	0.5	4,294,327.87	2,147,163.94
December-20	(2.0)	4,086,869.81	-8,173,739.62
January-21	(5.0)	4,969,772.92	-24,848,864.60
February-21	(3.5)	4,840,273.67	-16,940,957.85
March-21	(6.0)	4,285,130.95	-25,710,785.70
April-21	3.5	5,149,777.92	18,024,222.72
May-21	(5.0)	4,546,534.74	-22,732,673.70
June-21	(4.5)	4,283,105.93	-19,273,976.69
Total Support Services Costs	(3.1)	\$54,776,126.34	-\$169,506,887.42

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR RENTS
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

Month of Payment	(Lead)/ Lag Days	Amount	Weighted Amount
(1)	(2)	(3)	(4)
July-20	14.0	\$18,857.70	\$264,007.80
August-20	12.0	30,357.70	364,292.40
September-20	2.5	11,500.00	28,750.00
October-20	(7.0)	11,500.00	-80,500.00
November-20	16.0	49,215.40	789,706.15
December-20	(14.7)	60,715.40	-893,727.10
January-21	(24.5)	17,686.00	-433,307.00
February-21	(19.0)	18,857.70	-358,296.30
March-21	1.1	41,857.70	46,955.65
April-21	(21.9)	30,357.70	-664,407.90
May-21	(22.2)	30,357.70	-675,444.45
June-21	(19.3)	30,357.70	-584,834.80
Total Rents	(6.2)	\$351,620.70	-\$2,196,805.55

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR TRANSPORTATION
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

<u>Month of Payment</u> (1)	<u>(Lead)/ Lag Days</u> (2)	<u>Amount</u> (3)	<u>Weighted Amount</u> (4)
August-20	59.5	\$126,797.26	\$7,544,436.97
September-20	56.3	168,144.79	9,460,648.61
October-20	4.7	199,250.35	938,716.65
November-20	51.8	150,860.45	7,809,176.85
December-20	3.0	3,109.27	9,327.81
February-21	50.3	12,364.81	622,232.95
April-21	54.6	28,673.10	1,564,952.58
May-21	49.8	10,863.52	540,940.74
June-21	<u>43.5</u>	<u>15,101.16</u>	<u>656,900.46</u>
Total Transportation	<u>40.8</u>	<u>\$715,164.71</u>	<u>\$29,147,333.62</u>

TOTAL COMPANY

CALCULATION OF LEAD DAYS FOR CUSTOMER ACCOUNTING
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

<u>Month of Payment</u> (1)	<u>(Lead)/ Lag Days</u> (2)	<u>Amount</u> (3)	<u>Weighted Amount</u> (4)
July-20	60.2	\$54,892.36	\$3,306,492.89
August-20	42.2	42,770.02	1,804,101.26
September-20	60.9	84,601.11	5,154,097.13
October-20	57.3	50,095.16	2,871,792.70
November-20	63.6	34,158.12	2,171,840.35
December-20	66.8	10,215.12	682,746.65
January-21	81.4	64,208.51	5,225,354.68
February-21	59.7	36,473.02	2,175,970.62
March-21	58.8	41,151.73	2,417,916.34
April-21	59.6	34,294.44	2,045,213.00
May-21	66.0	1,934.40	127,670.40
June-21	<u>68.2</u>	<u>58,408.92</u>	<u>3,980,864.45</u>
Total Customer Accounting	<u>62.3</u>	<u>\$513,202.91</u>	<u>\$31,964,060.45</u>

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR CONTRACTED SERVICES
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

Month of Payment	(Lead)/ Lag Days	Amount	Weighted Amount
(1)	(2)	(3)	(4)
July-20	103.5	\$42,263.29	\$4,372,927.72
August-20	42.0	136,867.73	5,752,482.39
September-20	29.0	118,535.77	3,435,809.67
October-20	20.5	160,188.15	3,280,400.12
November-20	49.4	45,407.73	2,243,561.77
December-20	34.9	180,874.12	6,317,986.85
January-21	48.2	76,520.41	3,688,394.07
February-21	35.5	64,255.51	2,280,658.03
March-21	35.5	164,318.37	5,837,813.34
April-21	20.4	255,627.81	5,223,914.40
May-21	79.8	249,292.07	19,890,289.68
June-21	51.0	97,360.67	4,963,835.32
Total Contracted Services	42.3	\$1,591,511.63	\$67,288,073.33

TOTAL COMPANY

CALCULATION OF LEAD DAYS FOR BUILDING MAINTENANCE AND SERVICES
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

Month of Payment	(Lead)/ Lag Days	Amount	Weighted Amount
(1)	(2)	(3)	(4)
July-20	11.3	\$427,429.85	\$4,820,407.81
August-20	113.3	56,070.31	6,353,962.41
September-20	69.5	23,925.19	1,663,933.43
October-20	106.7	46,660.16	4,980,898.23
November-20	72.0	24,953.85	1,796,764.58
December-20	66.2	23,530.36	1,557,948.09
January-21	67.2	25,884.30	1,738,395.53
February-21	68.0	28,816.75	1,958,282.73
March-21	53.4	41,465.64	2,216,293.04
April-21	69.7	49,445.77	3,444,408.09
May-21	80.6	77,723.83	6,267,205.70
June-21	59.5	53,337.53	3,172,591.46
Total Building Maintenance and Services	45.5	\$879,243.54	\$39,971,091.07

TOTAL COMPANY

CALCULATION OF LEAD DAYS FOR TELECOMMUNICATION EXPENSES
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

<u>Month of Payment</u>	<u>(Lead)/ Lag Days</u>	<u>Amount</u>	<u>Weighted Amount</u>
(1)	(2)	(3)	(4)
July-20	39.6	\$251,824.33	\$9,967,948.52
August-20	31.2	153,144.72	4,781,793.79
September-20	29.7	148,892.18	4,424,047.51
October-20	0.9	62,531.41	53,680.39
November-20	31.7	170,901.75	5,415,914.50
December-20	39.8	181,206.93	7,210,061.76
January-21	39.6	203,214.34	8,042,152.52
February-21	13.7	86,163.37	1,181,842.35
March-21	16.9	101,585.61	1,720,357.67
April-21	4.5	62,834.91	285,396.50
May-21	23.2	113,179.84	2,628,994.85
June-21	<u>5.5</u>	<u>76,307.06</u>	<u>418,309.17</u>
Total Telecommunicatio n Expenses	<u>28.6</u>	<u>\$1,611,786.45</u>	<u>\$46,130,499.52</u>

TOTAL COMPANY

CALCULATION OF LEAD DAYS FOR OFFICE SUPPLIES AND SERVICES
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

Month of Payment	(Lead)/ Lag Days	Amount	Weighted Amount
(1)	(2)	(3)	(4)
July-20	76.0	\$28,266.93	\$2,148,286.68
September-20	70.5	60,568.74	4,272,614.76
October-20	72.0	28,820.73	2,075,092.56
November-20	69.5	29,287.06	2,035,450.67
January-21	88.1	55,673.00	4,907,232.51
February-21	68.0	27,838.88	1,893,043.84
March-21	45.0	51,479.35	2,317,637.10
April-21	38.9	70,285.54	2,732,576.18
June-21	68.3	56,805.12	3,879,023.15
Total Office Supplies and Services	64.2	\$409,025.35	\$26,260,957.44

TOTAL COMPANY

CALCULATION OF LEAD DAYS FOR EMPLOYEE RELATED EXPENSE TRAVEL & ENTERTAINMENT
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

Month of Payment	(Lead)/ Lag Days	Amount	Weighted Amount
(1)	(2)	(3)	(4)
September-20	29.9	\$320,347.00	\$9,571,283.00
December-20	76.0	16,906.88	1,284,922.88
January-21	74.5	29,455.52	2,194,436.24
Total Employee Related Expense Travel & Entertainment	35.6	\$366,709.40	\$13,050,642.12

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR MISCELLANEOUS EXPENSES
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

Month of Payment	(Lead)/ Lag Days	Amount	Weighted Amount
(1)	(2)	(3)	(4)
July-20	9.4	\$54,562.83	\$514,212.10
August-20	44.0	113,448.74	4,994,700.35
September-20	75.1	116,710.51	8,760,399.97
October-20	55.1	105,218.61	5,801,948.22
November-20	41.1	147,961.56	6,080,843.45
December-20	24.4	240,016.80	5,846,828.26
January-21	22.2	151,023.24	3,360,222.36
February-21	46.9	196,326.72	9,204,675.80
March-21	(39.1)	102,868.42	-4,022,615.00
April-21	(26.9)	129,158.57	-3,470,515.85
May-21	44.4	45,120.41	2,004,914.96
June-21	(2.3)	107,236.71	-245,328.54
Total Miscellaneous Expenses	25.7	\$1,509,653.12	\$38,830,286.07

TOTAL COMPANY

CALCULATION OF LEAD DAYS FOR MAINTENANCE SERVICE & SUPPLIES
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

Month of Payment	(Lead)/ Lag Days	Amount	Weighted Amount
(1)	(2)	(3)	(4)
August-20	24.5	\$33,001.01	\$810,159.04
September-20	39.9	15,135.28	603,734.77
October-20	25.8	38,970.74	1,005,814.76
November-20	23.8	66,940.97	1,594,225.94
December-20	43.6	61,284.11	2,672,144.47
January-21	18.2	88,988.36	1,617,729.20
February-21	69.1	40,802.01	2,820,209.73
March-21	45.7	113,777.45	5,199,485.90
April-21	14.1	196,448.11	2,773,787.00
May-21	102.6	196,441.58	20,159,156.03
June-21	40.8	76,386.71	3,120,336.26
Total Maintenance Service & Supplies	45.7	\$928,176.33	\$42,376,783.10

TOTAL COMPANY
CALCULATION OF LEAD DAYS FOR EXCISE TAX
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

	<u>Service Period</u>		<u>Payment</u>	<u>(Lead)/</u>		<u>Weighted</u>
	<u>From</u>	<u>To</u>	<u>Date</u>	<u>Lag Days</u>	<u>Amount</u>	<u>Amount</u>
	(1)	(2)	(3)	(4)	(5)	(6)
<u>Excise Tax Payments (Used for present rates calculation)(1)</u>						
PRE - W - EX	1/1/22	12/31/22	4/29/21	(429.0)	\$5,593,307.00	-\$2,399,528,703.00
PRE - S - EX	1/1/22	12/31/22	4/29/21	(429.0)	170,321.00	-73,067,709.00
PRE - - EX	1/1/22	12/31/22	4/29/21	(429.0)	38,281.00	-16,422,549.00
Curr - W - EX	1/1/21	12/31/21	4/29/21	(64.0)	5,867,830.00	-375,541,120.00
Curr - S - EX	1/1/21	12/31/21	4/29/21	(64.0)	165,071.00	-10,564,544.00
Curr - - EX	1/1/21	12/31/21	4/29/21	(64.0)	38,273.00	-2,449,472.00
Total Excise Tax Payments for State Use				(242.4)	\$11,873,083.00	-\$2,877,574,097.00
<u>GRFT Tax Payments (Used for present rates calculation)(1)</u>						
PRE - W - FR & GR	1/1/22	12/31/22	5/13/21	(415.0)	\$721,399.00	-\$299,380,585.00
PRE - S - FR & GR	1/1/22	12/31/22	5/13/21	(415.0)	19,736.00	-8,190,440.00
PRE - - FR & GR	1/1/22	12/31/22	5/13/21	(415.0)	770.00	-319,550.00
Curr - W - FR & GR	1/1/21	12/31/21	5/13/21	(50.0)	30,972,515.00	-1,548,625,750.00
Curr - S - FR & GR	1/1/21	12/31/21	5/13/21	(50.0)	949,837.00	-47,491,850.00
Curr - - FR & GR	1/1/21	12/31/21	5/13/21	(50.0)	214,368.00	-10,718,400.00
Curr - W - FR & GR	1/1/20	12/31/20	8/13/20	42.5	29,500,340.00	1,253,764,450.00
Curr - S - FR & GR	1/1/20	12/31/20	8/13/20	42.5	889,764.00	37,814,970.00
Curr - - FR & GR	1/1/20	12/31/20	8/13/20	42.5	211,796.00	9,001,330.00
Curr - W - FR & GR	1/1/20	12/31/20	11/12/20	133.5	25,286,007.00	3,375,681,934.50
Curr - S - FR & GR	1/1/20	12/31/20	11/12/20	133.5	762,654.00	101,814,309.00
Curr - - FR & GR	1/1/20	12/31/20	11/12/20	133.5	181,540.00	24,235,590.00
Curr - - FR & GR	1/1/20	12/31/20	12/18/20	169.5	1,000,000.00	169,500,000.00
Total GRFT Tax Payments				33.7	\$90,710,726.00	\$3,057,086,008.50
<u>Summary - GRFT Tax Payments (Used for present rates calculation)</u>						
Total GRFT Tax Payments - Current Year				37.4	\$89,968,821.00	\$3,364,976,583.50
Total GRFT Tax Payments - Future Year				(415.0)	741,905.00	-307,890,575.00
Total GRFT Tax Payments				33.7	\$90,710,726.00	\$3,057,086,008.50

Notes: (1) The abbreviation used are: Pre - Future Year; Curr - Current Year; W - Water; S - Sewer;
EX - Excise Tax Payments; GR - Gross Receipts; and FT - Franchise Payment.

TOTAL COMPANY
 CALCULATION OF LEAD DAYS FOR PAYROLL TAXES
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

<u>Facts</u>	<u>(Lead)/ Lag Days</u>	<u>Amount</u>	<u>Weighted Amount</u>
(1)	(2)	(3)	(4)

All company employees are paid for a two week period (i.e., Days 1 through 14).

Pay date is five days following the end of the payroll period
 (i.e., Day 19, where $19 = 14 + 5$).

Lag days are 11.5 days [$19 - 7.5 = 11.5$; where $7.5 = (1 + 14 = 15 \div 2 = 7.5)$]

	<u>11.5</u>	<u>\$6,587,821.00</u>	<u>\$75,759,941.50</u>
Total Payroll Taxes	<u><u>11.5</u></u>	<u><u>\$6,587,821.00</u></u>	<u><u>\$75,759,941.50</u></u>

TOTAL COMPANY

CALCULATION OF LEAD DAYS FOR FEDERAL INCOME TAXES (CURRENT)
BASED ON LEAD-LAG STUDY FOR THE TWELVE MONTHS ENDED JUNE 30, 2021

<u>Service Period</u>		<u>Payment</u>	<u>(Lead)/</u>	<u>Amount</u>	<u>Weighted</u>
<u>From</u>	<u>To</u>	<u>Date</u>	<u>Lag Days</u>		<u>Amount</u>
(1)	(2)	(3)	(4)	(5)	(6)
<u>Federal Income Taxes (Current)</u>					
1/1/2020	12/31/2020	9/15/2020	75.5	25%	18.9
1/1/2020	12/31/2020	12/15/2020	166.5	25%	41.6
1/1/2021	12/31/2021	4/15/2021	(78.0)	25%	(19.5)
1/1/2021	12/31/2021	6/15/2021	(17.0)	25%	(4.3)
Total Federal Income Taxes (Current)			<u>36.8</u>	<u>100%</u>	<u>36.8</u>