

COMMONWEALTH OF PENNSYLVANIA



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February 19, 2026

Via Electronic Filing

Matthew L. Homsher, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Re: Pennsylvania Public Utility Commission
v.
City of Lancaster – Bureau of Water
Docket No. R-2025-3057237

Dear Secretary Homsher:

Pursuant to the Interim Order dated February 9, 2026, enclosed for filing please find the Office of Consumer Advocate's (OCA) Evidence (Testimony and Exhibits) in this proceeding.

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

Respectfully submitted,

/s/ Harrison W. Breitman
Harrison W. Breitman, Esq.
Senior Assistant Consumer Advocate
PA Attorney I.D. # 320580
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Enclosures

cc: Administrative Law Judge Erin Gannon (Via Email Only: egannon@pa.gov)
Certificate of Service

CERTIFICATE OF SERVICE

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2025-3057237
	:	
City of Lancaster – Bureau of Water	:	
	:	

I hereby certify that I have this day filed electronically on the Commission’s electronic filing system and served a true copy of the following documents, the Office of Consumer Advocate’s Evidence (Testimony and Exhibits), upon parties of record in this proceeding in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant), in the manner and upon the persons listed below.

Dated this 19th day of February 2026.

SERVICE BY E-MAIL ONLY

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Dated: February 19, 2026

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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY	:	
COMMISSION	:	
	:	
V.	:	DOCKET NO. R-2025-3057237
	:	
CITY OF LANCASTER – WATER	:	
DEPARTMENT	:	

DIRECT TESTIMONY
OF
LAFAYETTE K. MORGAN, JR.

ON BEHALF OF THE
OFFICE OF CONSUMER ADVOCATE

DECEMBER 17, 2025

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I. Introduction

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Lafayette K. Morgan, Jr. My business address is 10480 Little Patuxent Parkway, Suite 300, Columbia, Maryland, 21044. I am a Public Utilities Consultant working with Exeter Associates, Inc. ("Exeter"). Exeter is a consulting firm specializing in issues pertaining to public utilities.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND QUALIFICATIONS.

A. I received a Master of Business Administration degree from The George Washington University. The major area of concentration for this degree was Finance. I received a Bachelor of Business Administration degree with concentration in Accounting from North Carolina Central University. I was previously a CPA licensed in the state of North Carolina, however, in 2009, I elected to place my license in an inactive status as I focused on start-up activities for other business interests.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE.

A. From May 1984 until June 1990, I was employed by the North Carolina Utilities Commission - Public Staff in Raleigh, North Carolina. I was responsible for analyzing testimony, exhibits, and other data presented by parties before the North Carolina Utilities Commission. I had the additional responsibility of performing the examination of books and records of utilities involved in rate proceedings and summarizing the results into testimony and exhibits for presentation before that Commission. I was also involved in numerous special projects, including participating in compliance and prudence audits of a major utility, and conducting research on several issues affecting natural gas and electric utilities.

From June 1990 until July 1993, I was employed by Potomac Electric Power Company (“Pepco”) in Washington, D.C. At Pepco, I was involved in the preparation of the cost of service, rate base and ratemaking adjustments supporting Columbia's requests for revenue increases in the State of Maryland and the District of Columbia.

From July 1993 through 2010, I was employed by Exeter as a Senior Regulatory Analyst. During that period, I was involved in the analysis of the operations of public utilities, with emphasis on utility rate regulation. I reviewed and analyzed utility rate filings, focusing primarily on revenue requirements determination. This work involved natural gas, water, electric, and telephone companies.

In 2010, I left Exeter to focus on start-up activities for other ongoing business interests. In late 2014, I returned to Exeter continuing to work in a similar capacity as prior to my hiatus.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGULATORY PROCEEDINGS ON UTILITY RATES?

A. Yes. I have previously presented testimony and affidavits on numerous occasions before the Regulatory Commission of Alaska, the Colorado Public Utilities Commission, the Georgia Public Service Commission, the Illinois Commerce commission, the Kansas Corporation Commission, the Kentucky Public Service Commission, the Louisiana Public Service Commission, the Maine Public Utilities Commission, the Maryland Public Service Commission, the Massachusetts Department of Public Utilities the North Carolina Utilities Commission, the Public Utilities Commission of Ohio, the Corporation Commission of Oklahoma, the Pennsylvania Public Utility Commission, the Philadelphia Gas Commission, the Philadelphia Water, Sewer and Storm Water Rate Board, the Public Utilities Commission of Rhode Island,

the Public Service Commission of South Carolina, the Public Utility Commission of Texas, the Vermont Public Service Board, the Virginia Corporation Commission, the West Virginia Public Service Commission, the Wyoming Public Service Commission, and the Federal Energy Regulatory Commission (“FERC”). My resume is attached hereto as Appendix A.

Q. ON WHOSE BEHALF ARE YOU APPEARING?

A. I am presenting this testimony on behalf of the Pennsylvania Office of Consumer Advocate (“OCA”).

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. Exeter has been retained by the OCA to assist in the evaluation of the general rate filing submitted by the City of Lancaster – Water Department (the “City”). I have been asked by the OCA to present my findings with respect to the City’s revenue requirement and its proposed rate increase. I calculate the City’s rate base, pro forma operating income under present rates, and overall revenue deficiency based upon my recommended adjustments to the City’s claims. My findings are based upon incorporating the recommendations and findings of other OCA witnesses who are also presenting testimony in this proceeding.

Q. PLEASE IDENTIFY THE OCA’S OTHER EXPERT WITNESSES WHO ARE PRESENTING TESTIMONY IN THIS PROCEEDING.

A. In addition to my testimony, there are three other witnesses presenting testimony on behalf of the OCA. In OCA Statement No. 2, Mr. David Garrett provides testimony on the appropriate rate of return and cost of capital issues, and also issues related to the determination of the depreciation rates. In OCA Statement No.3, Mr. Jerome Mierzwa is the OCA’s witness who provides testimony on class cost of service and rate design

issues. In OCA Statement No. 4, Ms. LeeAnn Wise will be addressing the City's customer service performance and low-income programs.

Q. IN CONNECTION WITH THIS CASE, HAVE YOU PERFORMED AN EXAMINATION AND REVIEW OF THE CITY'S TESTIMONY AND EXHIBITS?

A. Yes. I have reviewed the City's testimonies, exhibits and its rate filing. I have also reviewed the City's responses to the OCA, the Office of Small Business Advocate ("OSBA"), the Bureau of Technical Utility Services ("TUS") and the Bureau of Investigation & Enforcement ("I&E") interrogatories.

Q. WHAT PERIOD HAVE YOU USED IN MAKING YOUR DETERMINATION OF THE CITY'S REVENUE REQUIREMENTS?

A. I used the Fully Projected Future Test Year (FPFTY) ending March 31, 2027 as the basis for determining the FPFTY year revenue requirements, as filed by the City.

Q. HAVE YOU PREPARED SCHEDULES TO ACCOMPANY YOUR TESTIMONY?

A. Yes. I have prepared Exhibits LKM-1 through LKM-10. Exhibit LKM-1 provides a summary of revenues and expenses under present and proposed rates. Exhibit LKM-2 summarizes my adjustments to the City's FPFTY rate base. Exhibit LKM-3 provides a summary of my adjustments to the FPFTY revenues and expenses and the resulting operating income. The supporting schedules for each of the adjustments that I am recommending to the City's claimed rate base, revenues and operating expenses are presented on Exhibits LKM-4 through LKM-10.

Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

- A. This section, Section I, provides the introductory information to my testimony. Section II presents a summary of my findings and conclusions. In Section III, I document and explain each of the accounting adjustments that I have made to the rate base and operating income to arrive at the test year revenue increase shown on Exhibit LKM-1. Additionally, attached to this testimony, I present the exhibits that support my adjustments and summarize my revenue requirement recommendation. Appendix A, attached to this testimony, provides my resumé which summarizes my professional experience.

II. Summary and Recommendations

Q. PLEASE SUMMARIZE THE RATE RELIEF REQUESTED BY THE CITY IN ITS FILING.

- A. On September 30, 2025, the City filed its base rate case with the Pennsylvania Public Utility Commission (the “Commission”) to increase base utility rates by \$7,005,217 for its Outside City customers, the Commission’s jurisdictional customers. If the City’s entire request is approved, the bill for a residential customer, using 4,500 gallons monthly, with a 5/8-inch meter would increase from \$29.53 to \$38.32 per month or by 29.8%. The bill for a commercial customer with a 2-inch meter using 73,100 gallons per month would increase from \$361.75 to \$460.14 monthly or by 27.2%. The bill for an industrial customer with a 2-inch meter using 419,600 gallons per month would increase from \$1,730.08 to \$2,159.72 monthly or by 24.8%.

According to the City, the proposed rate increase is driven by the need to: (i) to provide sufficient revenues to furnish adequate, safe, and reliable water service; (ii) to ensure compliance with emerging regulations related to utilities; (iii) to provide the cash flow necessary to continue to operate, maintain and renew its facilities and

infrastructure and meet its financial obligations; (iv) to provide sufficient cash flow for once-in-a-generation projects such as replacement of transmission mains; and (v) to provide the opportunity to achieve an adequate rate of return on the original cost of invested capital.

Q. PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS.

A. As shown on Exhibit LKM-1, I have determined that the City's annual revenue should be increased by \$1,862,256 for the FPFTY ending March 31, 2027. This represents a decrease of \$5,142,961 from the City's requested increase of \$7,005,217. This is the amount by which revenues exceed those required to generate an overall rate of return on rate base of 6.64% percent after accounting for the OCA's adjustments to the City's claimed rate base and operating income. The 6.64% overall rate of return represents OCA witness Garrett's findings regarding the City's rate of return. In comparison, the City is seeking an overall rate of return of 7.22 percent.

III. Revenue Requirement Issues

1. City of Lancaster Home Rule Charter

Q. PLEASE SUMMARIZE THE CITY'S RECENT CHANGE IN GOVERNANCE AND SOME OF THE IMPORTANT EFFECTS ON THE CITY'S WATER BUREAU.

A. In the testimony of City witness Tina Campbell, she explains the recent change in the City's governance. According to Ms. Campbell, in the November 5, 2024 general election, the City's Referendum to become a third class city under the Commonwealth of Pennsylvania Home Rule Charter and Optional Plans Law, and its Home Rule

Charter were passed. The City's Home Rule Charter went into effect on January 1, 2025.¹

As would be expected, there are changes in the City's governance attached to The Home Rule Charter. The Home Rule Charter: (i) requires the City to adopt an annual operating budget each year for the General Fund and all Enterprise Funds (the Water Bureau is an Enterprise Fund), and it prescribes that two future years of projected budgets be included in this annual budget; (ii) requires the City to adopt a 5-year Capital budget each year, which includes funding for capital projects for the Water Bureau; and (iii) requires referendum approval for any sale of a public utility system.² With the City's governance change to a Home Rule municipality, City Council must now adopt a long-range capital plan ordinance annually. This annual ordinance should include a five-year capital plan for the Water Fund.³

Budgeting under the current structure is an intricate process that is accomplished over a period of months. Typically, the budgets for the various Funds operating under the City government must first be prepared by the specific Fund, then submitted for inclusion in the City's budget that is ultimately approved. As evidence of the time it takes, the City indicates that its Capital Improvement Plan for the period beginning with the 2026 fiscal year ("FY") was adopted by ordinance on September 23, 2025 even though the Home Rule Charter was adopted on January 1, 2025.⁴ FY 2026 begins on January 1, 2026. Because the document is described as a "Capital Improvement Plan", it is unclear whether that means a Capital Budget for FY 2026 and 2027 were approved concurrently. It should also be noted that a Capital Plan may not

¹ Direct Testimony of Tina Campbell at 2:19 – 3:2.

² City response to OCA-8-5.

³ Direct Testimony of Tina Campbell at 4:11– 15.

⁴ *Id.*

contain the rigors of a Capital Budget. Nevertheless, as explained by the City, the current budgeting process appears to be a departure from the budgeting process prior to the Home Rule Charter.⁵

Q. WHY ARE THE HOME RULE CHANGES SIGNIFICANT FROM A RATEMAKING PERSPECTIVE?

A. As I mentioned earlier, the City-proposed revenue increase is based upon a fully projected future test year which ends March 31, 2027. Consequently, the cost data, on which most of the plant in service is based, does not reflect actual data. Moreover, while the City's Fiscal year is based on the calendar year, the FPFTY is based on the 12 months ending March 31, 2027. Therefore, the FPFTY straddles two future fiscal years, 2026 and 2027. The primary concern I have is that the budgets for both fiscal years have not been available for review.⁶ Also, though the City stated that the 2025 operating budget and the capital budget from 2026 through 2030 for the Water Fund was provided in the minimum filing requirement response Exhibit D-XI-4, they were not included in the filing as stated.⁷ The City has also not made available historical versus actual budget comparisons that would enable one to reach a judgement about the City's ability to reasonably forecast its capital expenditures.

Additionally, given that 2025 is the first year under the Home Rule Charter, no budgets from prior years have been available to assess whether forecasts have dramatically changed since the adoption of the Home Rule Charter. In fact, the City stated that "[h]istorically, the City did not have officially approved construction budgets before the 2026-2030 Capital Budget was approved by the City in 2025."⁸

⁵ City response to OCA-8-5.

⁶ City response to TUS Request No. 9.

⁷ City response to OCA-12-4.

⁸ City response to I&E-RB-2-D.

In OCA-11-3 and OCA-11-14, I requested specific data for the capital projects to determine whether the projections for the claimed projects were appropriately supported from the perspective of costs and timeline. The specific data I requested were: (i) the budget justification documentation for each plant addition/capital project submitted for the project's budget approval; and (ii) the projected monthly expenditures on the projects from commencement to completion. The budget justification document would show unequivocal, detailed information that is pertinent to each project and whether the project cost estimates and timeline are realistic. The documentation requested should be readily available because they should have been used in budgeting approval process by City/Water Fund personnel with the authority to approved capital projects. Yet, the budget justification document was not provided in the City's responses.

Q. WHY IS IT IMPORTANT FOR YOU TO REVIEW THE REQUESTED INFORMATION?

A. The basis for the request information is Act 11. According to Act 11,

Use of future test year.--In discharging its burden of proof the utility may utilize a future test year or a fully projected future test year, which shall be the 12-month period beginning with the first month that the new rates will be placed in effect after application of the full suspension period permitted under section 1308(d) (relating to voluntary changes in rates). The commission shall promptly adopt rules and regulations regarding the information and data to be submitted when and if a future test period or a fully projected future test year is to be utilized. **Whenever a utility utilizes a future test year or a fully projected future test year in any rate proceeding and such future test year or a fully projected test year forms a substantive basis for the final rate determination of the commission, the utility shall provide, as specified by the commission in its final order, appropriate data evidencing the accuracy of the estimates contained in the future test year or a fully projected future test year, [emphasis added] and the commission may after reasonable notice and hearing, in its**

discretion, adjust the utility's rates on the basis of such data. Notwithstanding section 1315 (relating to limitation on consideration of certain costs for electric utilities), the commission may permit facilities which are projected to be in service during the fully projected future test year to be included in the rate base.⁹

Hence, under Act 11, it is not enough to claim FPFTY data for inclusion in rates. The City's Plant in Service (Capital Expenditures) claim in this proceeding appears excessive when compared to its last rate case (Docket No. R-2021-3026682). In Docket No. R-2021-3026682, witness Stephen Campbell provided the City's 5-Year Capital Plan – PUC Jurisdictional Projects for 2022 to 2026.¹⁰ The total cost of the 5-year Capital Plan in Docket No. R-2021-3026682 was \$48,714,150. In contrast, in this proceeding, the total capital expenditure presented by Mr. Campbell for the FTY and the FPFTY (2 years) is \$55,338,177, and only one project (with 2 phases) accounts for \$41,435,315 of that total. Not only is the 2-year capital expenditure higher in this proceeding, the City is also claiming the \$41.4 million for two separate phases of one project will be started and completed in one 12-month period. With such a drastic difference in projected capital expenditure, I believe it is necessary to review the requested budget data.

2. Plant in Service

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO THE CITY'S PLANT IN SERVICE.

A. In its filing, the City presents the original cost measure of value (Rate Base) as of March 31, 2025, March 31, 2026, and March 31, 2027. The net plant in service value is comprised of the original cost less the ratemaking book reserve for the total utility plant

⁹ Public Utility Code (66 PA.C.S.) - Omnibus Amendments Act of Feb. 14, 2012, P.L. 72, No. 11 (Act 11), § 315. Burden of proof.

¹⁰ Docket No. R-2021-3026682, Exhibit SC-2, 5-Year Capital Plan – PUC Jurisdictional Projects for 2022 to 2026.

in service, less customers' advances for construction and contributions in aid of construction. It should be noted that the plant value includes the budget data discussed above.

Based on observed uncertainties, which I discuss below, I am recommending an adjustment to remove the City's FPFTY Plant in Service claims and one FTY Plant in Service claim from the cost of service. As I have explained, the City has not provided the budgets for each of the test years. Hence, there is no way to attest to whether the City's rate base claims are the actual approved budgets. In general, my concern is based on the lack of budget review, and, in certain instances, I add additional comments as it pertains to the project. These are discussed in the section immediately following this section. For each project, I briefly discuss my concerns.

Q. TO THE EXTENT THAT YOU HAVE CONCERNS ABOUT THE INDIVIDUAL PLANT IN SERVICE PROJECTS, PLEASE IDENTIFY THE CONCERNS.

A. The following is a list of projects and the specific concerns:

- **Duke Street Water Main Replacement** (\$254,335) - This project is intended to replace 8-inch water main in Duke Street and has an anticipated completion date of March 2026.¹¹ There has been no expenditure on this project to date.¹² The March 2026 completion date is within the period where no budget data has been provided. It is not certain that the forecast amount of \$254,335 remains reasonable.
- **Security Cameras and Networking at Tanks and Pump Stations - Phase 2** (\$275,000) - The purpose of this project is to install security cameras at the

¹¹ Direct Testimony of Stephen Campbell at 9:41.

¹² City response to TUS-R-11 Attachment.

pump stations and tanks, increasing the level of security for these off-site locations. The project has an anticipated completion date of March 2027.¹³ There has been no expenditure on this project to date.¹⁴ No budget support has been provided.

- **Lampeter Road Stream Restoration** (\$100,000) - The purpose of this project is to protect a 24” DICL main that is being undermined by a stream, at the stream's intersection with Lampeter Road. This project is not scheduled to start construction until Fall of 2026 and ending March 2027. Engineering design is expected to start in December 2025.¹⁵ There has been no expenditure on this project to date.¹⁶ No budget support has been provided.
- **Millersville Water Line Replacement - Manor to Charlotte** (\$555,000) -The purpose of this project is to install a new 8” DICL main, replacing a line that has previously had leaks. This project is being constructed in conjunction with the Borough of Millersville. The engineering design is underway and being performed by the City. It is anticipated to be bid in Spring of 2026 with a start date of late Summer with a completion date of March 2027. There has been no expenditure on this project to date, and no budget support has been provided.¹⁷
- **Vactor** (\$750,000) - The purpose of this item is to procure a Vactor for the transmission and distribution crew. Since this is a piece of equipment, this will be a lump sum purchase. The purchase order was executed on November 11, 2025, but the delivery date has not yet been confirmed. There has been no

¹³ Response to OCA-11-4.

¹⁴ City response to TUS-R-11 Attachment.

¹⁵ Response to OCA-11-4.

¹⁶ City response to TUS-R-11 Attachment.

¹⁷ Response to OCA-11-4.

expenditure on this project to date according to a data request response, and no budget support has been provided.¹⁸

However, if the purchase order was executed in November 2025, then under the City's modified accrual basis of accounting, where expenditures are generally recorded when a liability is incurred,¹⁹ this expenditure should have been reflected in the FTY Plant in Service. Therefore, I am concerned that showing this as a FPFTY expenditure could result in a double count of the expenditure.

- **SCADA – LIMS** (\$75,000) - LIMS is a laboratory information system and will reside on the SCADA (Supervisory Control and Data Acquisition System) platform. The purpose of this project is to organize laboratory data for use in regulatory reporting. LIMS is a database that puts all of the data that is collected from the water laboratory and SCADA system into one centralized location. The contract for this project was signed in October 2025 with GES and work is underway. Three invoices were received and entered into the accounting system, but payment is pending. No budget support has been provided.

However, if the purchase order was executed and invoices were paid in October 2025, then under the City's modified accrual basis of accounting, where expenditures are generally recorded when a liability is incurred, this expenditure should have been reflected in the FTY Plant in Service. Therefore, I am concerned that showing this as a FPFTY expenditure could result in a double count of the expenditure.

¹⁸ Response to OCA-11-4.

¹⁹ Direct Testimony of Tina Campbell at 4:22-5:1.

- **Oyster Point** (\$650,000) - The purpose of this project is to clean the City's MG Oyster Point reservoir and remove sediment build-up. This project specifically covers the bidding and the cleaning of the reservoir. All the reports and other bidding help were incorporated in other accounts; preliminary engineering was done under professional services. This project is scheduled to start with the cleaning in Spring of 2026 and completion in May 2027. No budget support has been provided.

My concern is that evidence needs to be submitted to support the bidding and cleaning costs of \$650,000. Additionally, the reports and other bidding help, and preliminary engineering that were done under professional services and incorporated in other accounts should be identified and removed from the cost of service because they are not annually recurring expenses.

- **Susquehanna Large Diameter Transmission Main (Phase 2 and Phase 3)** (\$41,435,315) - This project involves the installation of 35,400 feet of 42-inch ductile iron pipe and 1500 feet of 8-inch ductile iron pipe. Phase 2 is from the Susquehanna River to the Susquehanna Water Treatment Plant and Phase 3 is from the Susquehanna Water Treatment Plant to the Oyster Point Reservoir. These phases for this project are anticipated to be completed and in-service by March 2027. No budget support has been provided. I also question the completion of two project phases in the same period. Because of the magnitude of dollars, \$10.5 million and \$30.8 million, I do not believe this project is adequately supported. The claimed amounts are based on construction cost estimates, not approved budgets that have been reviewed.

- **Hess Pump Station Upgrade** (\$600,000) - This project includes replacement of the 8" DICAL water main within the building; tapping sleeve and valve, an insertion valve, bypass standpipe and miscellaneous piping and valves for bypass pumping; replacement of the static mixer; ventilation modifications; removal/relocation of the two existing 320-gal chemical storage tanks and feed pump(s) to the new Chemical Storage Building; replacement of the sump pump; installation of a chlorine analyzer; new 6-inch sewer lateral and connection to LASA's sewer on Hess Boulevard to convey the waste stream of the chlorine analyzer; and PCL Panel Modifications. This project is anticipated to be completed and in-service by March 2027. It is anticipated to be bid in Spring of 2026 with a start date of late Summer with a completion date of March 2027. No budget support has been provided.
- **Conestoga Low/High Service Electrical Upgrade** (\$825,000) - This project involves an electrical service upgrade, including a new electrical transformer that will serve the Conestoga Low/High Service Pumping Station. This project is anticipated to be completed and in-service by March 2027. No budget support has been provided.
- **George Street Main Replacement** (\$800,000) - This project involves the replacement of approximately 2,800 feet of 8-inch and 10-inch Main Replacement, East Fredreck to Landis Avenue with ductile iron pipe in Millersville Borough. This project is anticipated to be completed and in-service by March 2027. No budget support has been provided.
- **Lafayette Tank Water Quality Improvements** (\$1,500,000) - This project is for a new inlet feed line for water circulation and a mixing system in the tank to

remove disinfection by-products. The work also includes structural foundation modifications to support the new piping system. This project is anticipated to be completed and in-service by March 2027. No budget support has been provided.

- **Pipes and Valves - Inventory** (\$300,000) - This project procures pipe and valves for inventory. This project is anticipated to be completed and in-service by March 2027. No budget support has been provided.
- **Ceramic Membrane Pilot** (\$450,000) - The City is working with the PADEP to conduct a trial of ceramic membranes. This is the estimated cost of the expected two pilots and a consultant to run the trials and prepare the trial data and report for PADEP approval. This project is anticipated to be completed and in-service by March 2027. No budget support has been provided. There is also a question about how the estimated cost of running the pilot, including the consultant, will be accounted for and passed on to ratepayers.

Q. PLEASE SUMMARIZE YOUR ADJUSTMENT TO PLANT IN SERVICE.

A. On Exhibit LKM-4, I present my adjustment which results in a decrease of approximately \$44.2 million to the City's Plant in Service claim. I have identified, in certain instances, specific concerns about the City's plant in service claim, and beyond that there is a general sense that the claims are not adequately supported. This is because, in the data requests submitted to the City, I specifically requested the budget justification documentation for the FPFTY plant additions. Rather than being provided with the requested documentation, the City provided summaries of the requested plant

additions.²⁰ Therefore, I am removing these costs from the rate base because overall, the claims are not properly supported.

3. Cash Working Capital

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO CASH WORKING CAPITAL.

A. For ratemaking purposes, cash working capital is the investment that a utility needs to have on hand to fund its day-to-day operations. The Company has used the formula method of 1/8th of O&M expenses to determine its cash working capital allowance. Since I have made certain adjustments to O&M expenses, the level of cash working capital must be adjusted to be consistent with the level of operating expenses that I am recommending. On Exhibit LKM-5, I show my calculation of the adjusted cash working capital and present my adjustment which reduces cash working capital by \$657,433.

4. Materials & Supplies

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO MATERIALS & SUPPLIES.

A. The City is claiming Materials & Supplies inventory of \$642,144 in rate base. The City admits that historically it has only carried small inventories of materials and supplies and it has not claimed any inventory of Materials & Supplies in rate base in prior base rate cases.²¹ The rationale for inclusion of Materials & Supplies in this case, according to the City, is that the COVID-19 Pandemic caused delays in the arrival of materials and supplies, and is still causing delays, which affect the start or completion of capital projects. The City does not currently use a material and supply model to calculate needed materials and supplies. The City claims it will purchase meters, valves and pipes in bulk which would be used solely for construction projects. The City also does not

²⁰ Response to OCA-11-3 and OCA-11-4.

²¹ Response to OCA-11-1.

show how the claim amounts were determined but instead references Exhibit SC-2 to support the claim.

In Exhibit SC-2, the City shows that for the FTY, it is claiming \$342,145 for valves, pipes and meters. For the FPFTY, the City is claiming \$300,000 for pipes and valves. Even though these are two separate years, the City totaled the amounts from the two periods and is claiming the total of the two years (\$642,145) as the amount in rate base for Materials & Supplies for the FPFTY.

The adjustment I am recommending is to remove the City's Materials & Supplies claim from rate base for several reasons. First, there is no documentation that substantiates that \$642,145 has been included in the approved budget for Materials & Supplies purchase. Second, the approach of totaling the amounts from two separate years is unreasonable. If one were analyzing what would be considered as representative amount to be held as inventory, each period would be considered separately, the 24-month total excessively exceeds the amount for a 12-month period. Third, the normal approach for inclusion of Materials & Supplies is a 13-month average. The 13-month average is used because the Materials & Supplies balance varies from month-to-month based on use. Under the City's approach, a fixed amount is being included in rate base. Fourth, the FTY Materials & Supplies appear to be purchases for specific projects. The City has not demonstrated that the \$342,145 is a normal level of purchases for a given year. There is also no support for how the FPFTY amount was determined. Finally, it has been approximately four years since the COVID pandemic. It is not reasonable to claim the effects of the pandemic on why the City has not been able to adequately plan deliveries of its materials and supplies. For these reasons, I am recommending the removal of the \$642,145 as presented on Exhibit LKM-6.

5. Reimbursement -Meter Labor

Q. **PLEASE EXPLAIN YOUR ADJUSTMENT TO REIMBURSEMENT-METER LABOR.**

A. The Water Fund is reimbursed by the Sewer Fund for a portion of the Meter Shop cost, presumably for work done for the Sewer Fund. This reimbursement is recorded in Miscellaneous Revenues. The level of Miscellaneous Revenues showed a decrease in the Reimbursement-Meter Labor during the HTY when compared to the previous year. Initially, the City stated that there were fewer operating costs booked to the Meter Shop department in the HTY than the calendar year ended March 31, 2024, which resulted in a decrease in the Sewer Fund's share of costs. However, after further inquiry, the City stated that:

The Reimbursement revenue from the Sewer Fund should be increased with the projected increases with the Meter Shop budget. However, there was a correction made to the Meter Shop labor expense claim in response to I&E-RE-14. Therefore, the reimbursement revenues will be corrected and increased by applying 37% of the corrected Water Fund Meter Shop FPFTY O&M projections in rebuttal testimony.²²

Though the City stated that the Miscellaneous Revenues should be revised, the revised amount has not been made available. In anticipation of the revision, I am recommending an adjustment which restates the cost of service FPFTY to the HTY level as a temporary adjustment until the City provides the revised adjustment. On Exhibit LKM-7, I present this adjustment which increases Miscellaneous Revenues by \$53,936.

²² Response to OCA-12-2.

6. Electric Power Expense.

Q. **PLEASE EXPLAIN YOUR ADJUSTMENT TO ELECTRIC POWER EXPENSE.**

A. The City has proposed an adjustment to Electric Power expense that increases the costs by 54%. Discovery was served on the City to provide documentation showing the derivation of the 54%. However, the response provided did not adequately show the derivation of the increase. Essentially, the support was a note stating that the increase would be 54%. This is of concern because the supporting data provided showed a decrease from the previous period. Because the 54% is a significant increase, I believe it should be adequately supported. Therefore, on Exhibit LKM-8, I am recommending an adjustment to decrease Electric Power expense by \$509,637.

7. Depreciation Expense

Q. **WHAT ADJUSTMENT ARE YOU RECOMMENDING TO DEPRECIATION EXPENSE?**

A. OCA witness David Garrett is recommending changes to the City's proposed depreciation rates. On Exhibit LKM-9, I am recommending an adjustment to decrease depreciation expense to reflect Mr. Garrett's recommendations. This adjustment results in a decrease to Depreciation Expense of \$1,021,101.

In addition to the adjustment to reflect a decrease in depreciation expense resulting from Mr. Garrett's recommended changes to the depreciation rates, I am also decreasing depreciation expense to remove the depreciation expense associated with Plant in Service claims that I have recommended for removal. Given that I have removed these plant items, it is inappropriate to include the related depreciation

expense in the cost of service. This adjustment is presented on Exhibit LKM-10, which results in a decrease in depreciation expense of \$411,242.

Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?

A. Yes, it does.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

CITY OF LANCASTER GENERAL RATE :
INCREASE FILED PURSUANT TO 52 PA. CODE § :
53.45(A) :

DOCKET NO.
R-2025-3057237

DIRECT TESTIMONY
OF
LAFAYETTE K. MORGAN, JR.

Appendix A

LAFAYETTE K. MORGAN, JR.

Mr. Morgan is an independent regulatory consultant focusing in the area of the analysis of the operations of public utilities with particular emphasis on rate regulation. He has reviewed and analyzed utility rate filings, focusing primarily on revenue requirements determination, accounting and regulatory policy and cost recovery mechanisms. This work has included natural gas, water, electric, and telephone utilities.

Education and Qualifications

B.B.A. (Accounting) – North Carolina Central University, 1983

M.B.A. (Finance) – The George Washington University, 1993

C.P.A. – Licensed in the State of North Carolina (Inactive status)

Previous Employment

1993-2010	Senior Regulatory Analyst Exeter Associates, Inc. Columbia, MD
1990-1993	Senior Financial Analyst Potomac Electric Power Company Washington, D.C.
1984-1990	Staff Accountant North Carolina Utilities Commission – Public Staff Raleigh, NC

Professional Experience

As a Staff Accountant with the North Carolina Utilities Commission – Public Staff, Mr. Morgan was responsible for analyzing testimony, exhibits, and other data presented by parties before the Commission. In addition, he performed examinations of the books and records of utilities involved in rate proceedings and summarized the results into testimony and exhibits for presentation before the Commission. Mr. Morgan also participated in several policy proceedings and audits involving regulated utilities.

As a Senior Financial Analyst with Potomac Electric Power Company, Mr. Morgan was a lead analyst and was involved in the preparation of the cost of service, rate base, and ratemaking adjustments supporting the Company's request for revenue increases in its retail jurisdictions.

As a Senior Regulatory Analyst with Exeter Associates, Inc., Mr. Morgan has been involved in the analysis of the operations of public utilities with particular emphasis on rate regulation. He has reviewed and analyzed utility rate filings, focusing primarily on revenue requirements determination, accounting and regulatory policy and cost recovery mechanisms. This work included natural gas, water, electric, and telephone utilities.

Kings Grant Water Company (North Carolina Utilities Commission, Docket No. W-250, Sub 5), 1984. Presented testimony on rate base, cost of service, and revenue and expense adjustments on behalf of the North Carolina Utilities Commission – Public Staff.

Northwood Water Company (North Carolina Utilities Commission, Docket No. W-690, Sub 1), 1985. Presented testimony on rate base, cost of service, and revenue and expense adjustments on behalf of the North Carolina Utilities Commission – Public Staff.

Emerald Village Water System (North Carolina Utilities Commission, Docket No. W-184, Sub 3), 1985. Presented testimony on rate base, cost of service, and revenue and expense adjustments on behalf of the North Carolina Utilities Commission – Public Staff.

General Telephone Company of the South (North Carolina Utilities Commission, Docket No. P-19, Sub 207), July 1986. Presented testimony on the level of cash working capital allowance on behalf of the North Carolina Utilities Commission – Public Staff.

Heins Telephone Company (North Carolina Utilities Commission, Docket No. P-26, Sub 93), November 1986. Presented testimony on rate base, cost of service, and revenue and expense adjustments on behalf of the North Carolina Utilities Commission – Public Staff.

Carolina Power and Light Company (North Carolina Utilities Commission, Docket No. E-2, Sub 537), March 1988. Presented testimony on rate base, cost of service, and revenue and expense adjustments on behalf of the North Carolina Utilities Commission – Public Staff.

Public Service Company of North Carolina, Inc. (North Carolina Utilities Commission, Docket No. G-5, Sub 246), August 1989. Presented testimony on rate base, cash working capital allowance, cost of service, and revenue and expense adjustments on behalf of the North Carolina Utilities Commission – Public Staff.

Conestoga Telephone and Telegraph Company (Pennsylvania Public Utility Commission, Docket No. I-00920015), September 1993. Presented testimony on cost of service on behalf of the Pennsylvania Office of Consumer Advocate.

Louisiana Power and Light Company (Louisiana Public Service Commission, Docket No. U-20925), February 1995. Presented testimony on rate base and working capital issues on behalf of the Louisiana Public Service Commission Staff.

South Central Bell Telephone Company – Louisiana (Louisiana Public Service Commission, Docket No. U-17949, Subdocket E), June 1995. Presented testimony on rate base and working capital issues on behalf of the Louisiana Public Service Commission Staff.

Apollo Gas Company (Pennsylvania Public Utility Commission, Docket No. R-00953378), August 1995. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Carnegie Natural Gas Company (Pennsylvania Public Utility Commission, Docket No. R-00953379), August 1995. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Tennessee Gas Pipeline Company (Federal Energy Regulatory Commission, Docket No. RP95-112), September 1995. Presented testimony rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Virginia-American Water Company (Virginia State Corporation Commission, Case No. PUE-950003), March 1996. Presented testimony on rate base and cost of service issues on behalf of the City of Alexandria.

GTE North, Inc. Interconnection Arbitration (Pennsylvania Public Utility Commission, Docket No. A-310125F0002), September 1996. Presented testimony on the determination of the appropriate resale discount on behalf of the Pennsylvania Office of Consumer Advocate.

United Cities Gas Company (Georgia Public Service Commission, Docket No. 6691-U), October 1996. Presented testimony on rate base and cost of service issues on behalf of the Office of Governor, Consumer Utility Counsel Division.

GTE North, Inc. (Pennsylvania Public Utility Commission, Docket Nos. R-00963666 and R-00963666C001), February 1997. Presented testimony on the determination of the appropriate resale discount on behalf of the Pennsylvania Office of Consumer Advocate.

Consumers Maine Water Company (Maine Public Utilities Commission, Docket No. 96-739), May 1997. Presented testimony on rate base, cost of service, and rate of return issues on behalf of the Maine Office of the Public Advocate.

Pennsylvania-American Water Company (Pennsylvania Public Utility Commission, Docket No. R-00973944), July 1997. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Pennsylvania-American Water Company – Wastewater Operations (Pennsylvania Public Utility Commission, Docket No. R-00973973), July 1997. Presented testimony on rate base, cost of service, depreciation, and rate design issues on behalf of the Pennsylvania Office of Consumer Advocate.

Jackson Purchase Electric Cooperative Corporation (Kentucky Public Service Commission, Case No. 97-224), December 1997. Presented testimony on rate base and cost of service issues on behalf of the Kentucky Office of the Attorney General.

Henderson Union Electric Cooperative Corporation (Kentucky Public Service Commission, Case No. 97-220), January 1998. Presented testimony on the return of patronage capital on behalf of the Kentucky Office of the Attorney General.

Green River Electric Corporation (Kentucky Public Service Commission, Case No. 97-219), January 1998. Presented testimony on the return of patronage capital on behalf of the Kentucky Office of the Attorney General.

Western Kentucky Gas Company (Kentucky Public Service Commission, Case No. 99-070), November 1999. Presented testimony on rate base and cost of service issues on behalf of the Kentucky Office of the Attorney General.

American Broadband, Inc. (Rhode Island Public Utilities Commission, Docket No. 2000-C-3), June 2000. Presented report and testimony on the Company's financing plan on behalf of the Rhode Island Division of Public Utilities and Carriers.

PPL Utilities (Pennsylvania Public Utility Commission, Docket No. R-00005277), October 2000. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

T.W. Phillips Oil and Gas Company (Pennsylvania Public Utility Commission, Docket No. R-00005459), October 2000. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Pike County Light & Power Company (Pennsylvania Public Utility Commission, Docket No. P-00011872), May 2001. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Vermont Gas Systems, Inc. (Vermont Public Service Board, Docket No. 6495), June 2001. Presented testimony on rate base and cost of service issues on behalf of the Vermont Public Service Department.

Community Service Telephone Company (Maine Public Utilities Commission, Docket No. 2001-249), July 2001. Presented joint testimony on rate base and cost of service issues on behalf of the Maine Office of the Public Advocate.

West Virginia-American Water Company (Public Service Commission of West Virginia, Docket No. 01-0326-W-42-T), August 2001. Presented testimony on rate base and cost of service issues on behalf of the Consumer Advocate Division.

Philadelphia Suburban Water Company (Pennsylvania Public Utility Commission, Docket No. R-00016750) February 2002. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Illinois-American Water Company (Illinois Commerce Commission, Docket No. 02-0690) January 2003. Presented testimony on cost of service issues on behalf of Citizens Utility Board.

Pennsylvania-American Water Company (Pennsylvania Public Utility Commission, Docket No. R-00027983), February 2003. Presented testimony addressing surcharge mechanism to recover security costs on behalf of the Pennsylvania Office of Consumer Advocate.

FairPoint New England Telephone Companies (Maine Public Utilities Commission, Docket Nos. 2002-747, 2003-34, 2003-35, 2003-36, and 2003-37), June 2003. Presented testimony on rate base and cost of service issues on behalf of the Maine Office of the Public Advocate.

Pennsylvania-American Water Company (Pennsylvania Public Utility Commission, Docket No. R-00038304), August 2003. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

PPL Electric Utilities Corporation (Pennsylvania Public Utility Commission, Docket No. R-00049255), June 2004. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Entergy Louisiana, Inc. (Louisiana Public Service Commission, Docket No. U-20925 RRF 2004), August 2004. Presented testimony on rate base and cost of service issues on behalf of the Louisiana Public Service Commission Staff.

Vectren Energy Delivery of Indiana (Indiana Utility Regulatory Commission, Cause No. 42598), September 2004. Presented testimony on O&M expense issues on behalf of the Indiana Office of Utility Consumer Counselor.

National Fuel Gas Distribution Corporation (Pennsylvania Public Utility Commission, Docket No. R-00049656), December 2004. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Block Island Power Company (Rhode Island Public Utilities Commission, Docket No. 3655), April 2005. Presented testimony on cash working capital on behalf of the Rhode Island Division of Public Utilities & Carriers.

Verizon New England, Inc. (Maine Public Utilities Commission, Docket No. 2005-155), September 2005. Presented joint testimony with Thomas S. Catlin on rate base and cost of service issues on behalf of the Maine Office of the Public Advocate.

T.W. Phillips Oil and Gas Company (Pennsylvania Public Utility Commission, Docket No. R-00051178), May 2006. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Duquesne Light Company (Pennsylvania Public Utility Commission, Docket No. R-00061346), July 2006. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

National Fuel Gas Distribution Company (Pennsylvania Public Utility Commission, Docket No. R-00061493), September 2006. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Southern Indiana Gas & Electric Co. (Indiana Utility Regulatory Commission, Cause No. 43112), January 2007. Presented testimony on rate base and cost of service issues on behalf of the Indiana Office of Utility Consumer Counsel.

PPL Electric Utilities (Pennsylvania Public Utility Commission, Docket No. R-00072155), July 2007. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Aqua Pennsylvania, Inc. (Pennsylvania Public Utility Commission, Docket No. R-00072711), February 2008. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Equitable Gas Company (Pennsylvania Public Utility Commission, Docket No. R-2008-2029325), October 2008. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

The Narragansett Bay Commission (Rhode Island Public Utilities Commission, Docket No. 4026), April 2009. Presented testimony on rate base and cost of service issues on behalf of the Rhode Island Division of Public Utilities and Carriers.

Maryland-American Water Company (Maryland Public Service Commission, Case No. 9187), July 2009. Presented testimony on rate base and cost of service issues on behalf of the Maryland Office of People's Counsel.

Monongahela Power Company & The Potomac Edison Company, both d/b/a Allegheny Power Company (West Virginia Public Service Commission, Case No. 09-1352-E-42T), February 2010. Presented testimony on rate base and cost of service issues on behalf of the West Virginia Consumer Advocate Division.

PPL Electric Utilities (Pennsylvania Public Utility Commission, Docket No. R-2010-2161694), June 2010. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Pawtucket Water Supply Board (Rhode Island Public Utilities Commission, Docket No. 4550), June 2015. Presented testimony on revenue requirements issues on behalf of the Rhode Island Division of Public Utilities and Carriers.

Columbia Gas of Pennsylvania (Pennsylvania Public Utility Commission, Docket No. R-2015-2468056), June 2015. Presented testimony on rate base and cost of service issues on behalf of the Pennsylvania Office of Consumer Advocate.

Indianapolis Power and Light Company (Indiana Utility Regulatory Commission, Cause No. 44576/44602), July 2015. Presented testimony on revenue requirements issues on behalf of the Indiana Office of Utility Consumer Counselor.

Public Service Company of Oklahoma (Corporation Commission of Oklahoma, Cause No. PUD 201500208), October 2015. Presented testimony on revenue requirements and environmental compliance rider issues on behalf of the United States Department of Defense and the Federal Executive Agencies.

Northern Indiana Public Service Company (Indiana Utility Regulatory Commission, Cause No. 44688), January 2016. Presented testimony on the company's electric division operating revenues, operating expenses and income taxes issues on behalf of the Indiana Office of Utility Consumer Counselor.

Philadelphia Water Department (Philadelphia Water, Sewer And Storm Water Rate Board, FY2017-2018 Rate Proceeding), March 2016. Presented testimony on revenue requirements issues on behalf of the Public Advocate.

Columbia Gas of Maryland (Public Service Commission of Maryland, Case No. 9417), June 2016. Presented testimony on rate base and cost of service issues on behalf of the Office of People's Counsel.

Chesapeake Utilities Corporation (Delaware Public Service Commission, PSC Docket No. 15-1734), August 2016. Presented testimony on rate base and cost of service issues on behalf of the Staff of the Delaware Public Service Commission.

Kent County Water Authority (Public Service Commission of Rhode Island, Docket No. 4611), September 2016. Presented testimony on rate base and cost of service issues on behalf of the Division of Public Utilities and Carriers.

Northern Utilities, Inc. (Maine Public Utilities Commission, Docket No. 2017-00065), August 2017. Assisted the Maine Office of Public Advocate (OPA) with Northern Utilities application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements, the utility's request to renew and modify its alternative rate plan, and its Targeted Infrastructure Replacement Adjustment.

Indiana Michigan Power Company (Indiana Utility Regulatory Commission, Cause No. 44967), November 2017. Presented testimony on rate base, operating revenues and operating expenses issues on behalf of the Indiana Office of Utility Consumer Counselor.

Emera Maine (Maine Public Utilities Commission, Docket No. 2017-00198), December 2017. Assisted the Maine Office of Public Advocate (OPA) with Emera Maine's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements, the utility's request to reflect the changes brought about by the Tax Change and Jobs Act of 2017.

UGI-Electric (Pennsylvania Public Utility Commission, Docket No. R-2017-2640058), April 2018. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with UGI-Electric's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OCA, on accounting issues including test year revenue requirements, the utility's request to reflect the changes brought about by the Tax Change and Jobs Act of 2017.

Philadelphia Water Department (Philadelphia Water, Sewer And Storm Water Rate Board, FY2019-2020 Rate Proceeding), April 2018. Presented testimony on revenue requirements and the Department's three-year rate plan issues on behalf of the Public Advocate.

Westar Energy, Inc. (Westar Energy) and Kansas Gas and Electric Company (KGE), (Kansas State Corporation Commission, Docket No. 18-WSEE-328-RTS), May 2018. Presented testimony on revenue requirements on behalf of the Federal Executive Agencies.

Duquesne Light Company (Pennsylvania Public Utility Commission, Docket No. R-2018-3000124), June 2018. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with UGI-Electric's application for an increase in rates. Presented testimony, on behalf of the OCA, on accounting issues including test year revenue requirements, the utility's request to reflect the changes brought about by the Tax Change and Jobs Act of 2017.

Bangor Natural Gas Company (Maine Public Utilities Commission, Docket No. 2018-00007), June 2018. Assisted the Maine Office of Public Advocate (OPA) Presented testimony, on behalf of the OPA, on the changes brought about by the Tax Change and Jobs Act of 2017.

SUEZ Water Pennsylvania, Inc. (Pennsylvania Public Utility Commission, R-2018-3000834), July 2018. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with SUEZ Water's application for an increase in rates. Presented testimony, on behalf of the OCA, on accounting issues including Rate Base, Operating Income, Inclusion of Costs Related to Expansion Territories and the utility's request to reflect the changes brought about by the Tax Change and Jobs Act of 2017.

Woonsocket Water Division (Public Service Commission of Rhode Island, Docket No. 4879), January 2019. Presented testimony on cost of service issues on behalf of the Division of Public Utilities and Carriers.

Central Maine Power Company (Maine Public Utilities Commission, Docket No. 2018-00194), January 2019. Assisted the Maine Office of Public Advocate (OPA) with Central Maine Power's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements, the utility's request to reflect the changes brought about by the Tax Change and Jobs Act of 2017.

Philadelphia Water Department (Philadelphia Water, Sewer and Storm Water Rate Board, 2019 Tiered Assistance Program Rate Rider Surcharge Rates Proceeding), May 2019. Presented testimony regarding the appropriate adjustments to the 2019 TAP-R determination. Presented testimony on behalf of the Public Advocate.

Newport Water Department (Public Service Commission of Rhode Island, Docket No. 4933), July 2019. Presented testimony on cost of service issues on behalf of the Division of Public Utilities and Carriers.

UGI-Gas (Pennsylvania Public Utility Commission, Docket No. R-2018-3006814), April 2019. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with UGI-Gas' application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OCA, on accounting issues including Rate Base and Net Operating Income.

Columbia Gas of Maryland (Public Service Commission of Maryland, Case No. 9609), August 2019. Presented testimony on rate base and cost of service issues on behalf of the Office of People's Counsel.

Public Service Company of Colorado (Colorado Public Utility Commission, Proceeding No. 19AL-0268E), September 2019. Mr. Morgan provided testimony, on behalf of the Department of Energy and the Federal Executive Agencies, on accounting issues including test year revenue requirements, Rate Base and Net Operating Income.

Northern Utilities, Inc. (Maine Public Utilities Commission, Docket No. 2019-00092), September 2019. Assisted the Maine Office of Public Advocate (OPA) with Northern Utilities application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements and the utility's request to institute a Capital Investment Recovery Mechanism.

Citizens' Electric Company of Lewisburg (Pennsylvania Public Utility Commission, Docket No. R-2019-3008212), October 2019. Provided testimony on Plant in Service, Construction Work in Progress, Materials and Supplies, Customer Deposits, Depreciation Expense, Growth Factor, and The Tax Cuts and Jobs Act. Mr. Morgan provided testimony on behalf of the Pennsylvania Office of Consumer Advocate (OCA).

Valley Energy, Inc. (Pennsylvania Public Utility Commission, Docket No. R-2019-3008209), October 2019. Provided testimony on Plant in Service, Construction Work in Progress, Materials and Supplies, Customer Deposits, Depreciation Expense, Growth Factor, and The Tax Cuts and Jobs Act. Mr. Morgan provided testimony on behalf of the Pennsylvania Office of Consumer Advocate (OCA).

Wellsboro Electric Company (Pennsylvania Public Utility Commission, Docket No. R-2019-3008208), October 2019. Provided testimony on Plant in Service, Construction Work in Progress, Materials and Supplies, Customer Deposits, Depreciation Expense, Growth Factor,

and The Tax Cuts and Jobs Act. Mr. Morgan provided testimony on behalf of the Pennsylvania Office of Consumer Advocate (OCA).

Blue Granite Water Company (Public Service Commission of South Carolina, (Docket No. 2019-290-WS), January 2020. Assisted the South Carolina Department of Consumer Affairs. Presented testimony on accounting policy issues including test year revenue requirements.

UGI-Gas (Pennsylvania Public Utility Commission, Docket No. R-2019-3015162), May 2020. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with UGI-Gas' application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OCA, on accounting issues including Rate Base and Net Operating Income.

Columbia Gas of Maryland (Public Service Commission of Maryland, Case No. 9644), July 2020. Presented testimony on rate base and cost of service issues on behalf of the Office of People's Counsel.

PECO Energy Company - Gas Division (Pennsylvania Public Utility Commission, Docket No. R-2020-3018929), December 2020. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with PECO-Gas' application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OCA, on accounting issues including Rate Base and Net Operating Income.

Philadelphia Water Department (Philadelphia Water, Sewer and Storm Water Rate Board, Fiscal Years 2022 - 2023 Rates Proceeding), March 2021. Presented testimony on revenue requirements and the Department's three-year rate plan issues on behalf of the Public Advocate.

Versant Maine (Maine Public Utilities Commission, Docket No. 2020-00316), April 2021. Assisted the Maine Office of Public Advocate (OPA) with Versant's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements.

Maine Water Company (Maine Public Utilities Commission, Docket No. 2021-00053), April 2021. Assisted the Maine Office of Public Advocate (OPA) with Maine Water Company's Request for Approval of Rate Increase and Rate Smoothing Mechanism Pertaining to The Maine Water Company Biddeford & Saco Division. Mr. Morgan provided testimony, on the authorization of the Rate Smoothing Mechanism.

UGI-Electric (Pennsylvania Public Utility Commission, Docket No. R-2021-3023618), May 2021. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with UGI-Electric's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OCA, on accounting issues including Rate Base and Net Operating Income.

Bangor Natural Gas Company (Maine Public Utilities Commission, Docket No. 2021-00024), June 2021. Assisted the Maine Office of Public Advocate (OPA) with Bangor Natural Gas' application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements.

Philadelphia Gas Works (Philadelphia Gas Commission, Fiscal Year 2021 - 2022 Operating Budget Proceeding), June 2021. Presented testimony on the reasonableness of the Fiscal Year 2022 Operating Budget on behalf of the Public Advocate.

Duquesne Light Company (Pennsylvania Public Utility Commission, Docket No. R-2021-3024750), June 2021. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with Duquesne Light Company's application for an increase in rates. Presented testimony, on behalf of the OCA, on accounting issues including test year revenue requirements.

Columbia Gas of Maryland (Public Service Commission of Maryland, Case No. 9664), July 2021. Presented testimony on rate base and cost of service issues on behalf of the Office of People's Counsel.

Palmetto Wastewater Reclamation, Inc. (Public Service Commission of South Carolina, (Docket No. 2021-153-S), September 2021. Assisted the South Carolina Department of Consumer Affairs. Presented testimony on accounting policy issues including test year revenue requirements.

Maine Water Company (Maine Public Utilities Commission, Docket No. 2021-00289), November 2021. Assisted the Maine Office of Public Advocate (OPA) with Maine Water Company's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements.

City of Lancaster – Water Department (Pennsylvania Public Utility Commission, Docket No. R-2021-3026682), December 2021. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with the City of Lancaster – Water Department's application for an increase in rates. Presented testimony, on behalf of the OCA, on accounting issues including test year revenue requirements.

Maryland Water Service (Public Service Commission of Maryland, Case No. 9671), January 2022. Presented testimony on rate base and cost of service issues on behalf of the Office of People's Counsel.

Commonwealth Edison Company (Illinois Commerce Commission, ICC Docket No. 21-0607 & ICC Docket No. 21-0739 (consolidated), February 2022. Provided testimony related to the review and evaluation of the rate effects of Commonwealth Edison's misconduct admitted in the Deferred Prosecution Agreement between the United States Attorney for the Northern District of Illinois and Commonwealth Edison. Provided testimony on behalf of the Office of the Illinois Attorney General, the City of Chicago, and the Citizens Utility Board.

Philadelphia Gas Works (Philadelphia Gas Commission, Fiscal Year 2022 - 2023 Capital Budget Proceeding), February 2022. Presented testimony proposing several adjustments to Philadelphia Gas Works' Fiscal Year 2023 Capital Budget on behalf of the Public Advocate.

Philadelphia Water Department (Philadelphia Water, Sewer and Storm Water Rate Board, 2022 Tiered Assistance Program Rate Rider Surcharge Rates Proceeding), March 2022. Presented testimony regarding the appropriate adjustments to the 2022 TAP-R determination. Presented testimony on behalf of the Public Advocate.

Philadelphia Water Department (Philadelphia Water, Sewer and Storm Water Rate Board, Fiscal Years 2023 Special Rate Proceeding), April 2022. Presented testimony that demonstrated Philadelphia Water Department's outperformance and proposed a sharing of the utility's outperformance earnings. Presented testimony on behalf of the Public Advocate.

Maine Water Company-Camden& Rockland Division (Maine Public Utilities Commission, Docket No. 2022-00056), June 2022. Assisted the Maine Office of Public Advocate (OPA) with Maine Water Company's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements.

Maine Water Company-Freeport Division (Maine Public Utilities Commission, Docket No. 2022-00057), June 2022. Assisted the Maine Office of Public Advocate (OPA) with Maine Water Company's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements.

Maine Water Company-Millinocket Division (Maine Public Utilities Commission, Docket No. 2022-00058), June 2022. Assisted the Maine Office of Public Advocate (OPA) with Maine Water Company's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements.

Maine Water Company-Oakland Division (Maine Public Utilities Commission, Docket No. 2022-00059), June 2022. Assisted the Maine Office of Public Advocate (OPA) with Maine Water Company's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements.

Columbia Gas of Pennsylvania (Pennsylvania Public Utility Commission, Docket No. R-2022-3031211), June 2022. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with Columbia Gas of Pennsylvania's application for an increase in rates. Presented testimony, on behalf of the OCA, on accounting issues including test year revenue requirements.

Philadelphia Gas Works (Philadelphia Gas Commission, Fiscal Year 2022 - 2023 Operating Budget Proceeding), June 2022. Presented testimony on the reasonableness of the Fiscal Year 2023 Operating Budget on behalf of the Public Advocate.

Columbia Gas of Maryland (Public Service Commission of Maryland, Case No. 9680), July 2022. Presented joint testimony on rate base and cost of service issues on behalf of the Office of People's Counsel.

Oncor Electric Delivery Company (Public Utility Commission of Texas, PUC Docket No. 53601), August 2022. Presented joint testimony on rate base and cost of service issues on behalf of the Department of Defense and Federal Executive Agencies.

Cheyenne Light, Fuel and Power Company d/b/a Black Hills Energy (Wyoming Public Service Commission, Docket No. 20003-214-ER-22), November 2022. Presented testimony, on behalf of Microsoft Corporation, on rate base and cost of service issues.

Central Maine Power Company (Maine Public Utilities Commission, Docket No. 2022-00152), December 2022. Assisted the Maine Office of Public Advocate (OPA) with Central Maine Power's application for an increase in rates. Provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements and the company's request for a multi-year rate plan.

National Fuel Gas Distribution Corporation (Pennsylvania Public Utility Commission, Docket No. R-2022-3035730), January 2023. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with National Fuel Gas Distribution Corporation's application for an increase in rates. Presented testimony, on behalf of the OCA, on accounting issues including test year revenue requirements.

Philadelphia Gas Works (Philadelphia Gas Commission, Fiscal Year 2022 - 2023 Capital Budget Proceeding), February 2023. Presented testimony proposing several adjustments to Philadelphia Gas Works' Fiscal Year 2024 Capital Budget on behalf of the Public Advocate.

Philadelphia Water Department (Philadelphia Water, Sewer and Storm Water Rate Board, 2023 Tiered Assistance Program Rate Rider Surcharge Rates Proceeding), March 2023. Presented testimony regarding the appropriate adjustments to the 2023 TAP-R determination. Presented testimony on behalf of the Public Advocate.

Philadelphia Water Department (Philadelphia Water, Sewer and Storm Water Rate Board, Fiscal Years 2024 - 2025 Rates Proceeding), April 2023. Presented testimony on behalf of the Public Advocate on revenue requirements and issues relating to the Department's proposed two-year rate plan.

Dayton Power and Light Company d/b/a AES Ohio (The Public Utilities Commission of Ohio, Case No. 22-900-EL-SSO), April 2023. Presented testimony addressing the recovery of deferred costs and regulatory assets as part of AES Ohio's Application for Approval of Its Electric Security Plan on behalf of the Office of the Ohio Consumers' Counsel.

Maine Water Company- Biddeford & Saco Division (Maine Public Utilities Commission, Docket No. 2023-00065), June 2023. Assisted the Maine Office of Public Advocate (OPA) with Maine Water Company's application for an increase in rates. Provided testimony, on behalf of the OPA, on accounting issues and test year revenue requirements.

Potomac Edison Company (Public Service Commission of Maryland, Case No. 9695), June 2023. Presented testimony on rate base, cost of service and accounting issues on behalf of the Office of People's Counsel.

Philadelphia Gas Works (Philadelphia Gas Commission, Fiscal Year 2023 - 2024 Operating Budget Proceeding), June 2023. Presented testimony identifying issues and recommendations to be considered in approving the Fiscal Year 2024 Operating Budget on behalf of the Public Advocate.

Northern Utilities, Inc. (Maine Public Utilities Commission, Docket No. 2023-00051), July 2023. Assisted the Maine Office of Public Advocate (OPA) with Northern Utilities application for an increase in rates. Provided testimony, on behalf of the OPA, on accounting issues and test year revenue requirements.

Philadelphia Gas Works (Philadelphia Gas Commission, Fiscal Year 2024 Capital Budget Amendment), August 2023. Presented testimony as to the appropriateness of Philadelphia Gas Works' amendments to the Fiscal Year 2024 Capital Budget on behalf of the Public Advocate.

Evergy Kansas Central, Inc. (Kansas State Corporation Commission, Docket No. 23-EKCE-775-RTS), August 2023. Assisted the U.S. Department of Defense and the Federal Executive Agencies with Evergy Kansas Central, Inc. application for an increase in rates. Provided testimony on accounting issues including test year revenue requirements.

American Transmission Systems, Inc., Mid-Atlantic Interstate Transmission, LLC and Trans-Allegheny Interstate Line Company (Pennsylvania Public Utility Commission, Docket Nos. A-2023-3040481, A-2023-3040482, A-2023-3040483, G-2023-3040484 and G-2023-3040485), August 2023. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with investigation of Joint Applicants application to sell additional equity stake in FirstEnergy Transmission LLC to North American Transmission Company II, L.P. Provided testimony, on behalf of the OCA, identifying issues and recommendations to be considered by the Commission in approving the transaction.

Fitchburg Gas and Electric Light Company d/b/a Unitil (Electric and Gas Divisions) (Massachusetts Department of Public Utilities, Docket Nos. D.P.U. 23-80 & 23-81), December 2023. Assisted the Massachusetts Office of Attorney General (AGO) with Fitchburg Gas and Electric Light Company's application for an increase in rates. Provided testimony, on behalf of the OPA, on accounting issues and test year revenue requirements.

Philadelphia Gas Works (Philadelphia Gas Commission, Fiscal Year 2024 - 2025 Capital Budget Proceeding), February 2024. Presented testimony proposing several adjustments to Philadelphia Gas Works' Fiscal Year 2024 Capital Budget on behalf of the Public Advocate.

Pawtucket Water Supply Board (Rhode Island Public Utilities Commission, Docket No. 23-30-WW), March 2024. Presented testimony on revenue requirements issues on behalf of the Rhode Island Division of Public Utilities and Carriers.

Massachusetts Electric Company and Nantucket Electric Company, d/b/a National Grid (Massachusetts Department of Public Utilities, Docket Nos. D.P.U. 23-150), March 2024. Assisted the Massachusetts Office of Attorney General (AGO) with National Grid's application for an increase in rates. Provided testimony, on behalf of the OPA, on accounting issues and test year revenue requirements.

Philadelphia Water Department (Philadelphia Water, Sewer and Storm Water Rate Board, 2024-Tiered Assistance Program Rate Rider Surcharge Rates Proceeding), April 2024. Presented testimony regarding the appropriate adjustments to the 2024 TAP-R determination. Presented testimony on behalf of the Public Advocate.

Pennsylvania-American Water Company, Manwalamink Water Company and Manwalamink Sewer Company (Pennsylvania Public Utility Commission, Docket Nos. A-2023-3044418, A-2023-3044419, A-2023-3044421, A-2023-3044422), May 2024. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with investigation of Pennsylvania-American application to acquire Manwalamink Water Company and Manwalamink Sewer Company. Provided testimony, on behalf of the OCA, identifying issues and recommendations to be considered by the Commission in approving the transaction.

Veolia Water Pennsylvania, Inc. (Pennsylvania Public Utility Commission, Docket Nos. R-2024-3045192 and R-2024-3045193, May 2024. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with Veolia Water Pennsylvania's application for an increase in rates. Presented testimony, on behalf of the OCA, on accounting issues including test year revenue requirements.

Dominion Energy South Carolina, Inc. (South Carolina Public Service Commission, Docket No. 2024-34-E), June 2024. Assisted the U.S. Department of Defense and the Federal Executive Agencies with Dominion Energy South Carolina, Inc.'s application for an increase in rates. Provided testimony on accounting issues including test year revenue requirements.

Versant Maine (Maine Public Utilities Commission, Docket No. 2023-00336), June 2024. Assisted the Maine Office of Public Advocate (OPA) with Versant's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements.

Maryland Water Service (Public Service Commission of Maryland, Case No. 9729), June 2024. Presented testimony on rate base and cost of service issues on behalf of the Office of People's Counsel.

Philadelphia Gas Works (Philadelphia Gas Commission, Fiscal Year 2024 - 2025 Operating Budget Proceeding), June 2024. Presented testimony identifying issues and recommendations to be considered in approving the Fiscal Year 2025 Operating Budget on behalf of the Public Advocate.

Elizabethtown Gas Company (New Jersey Board of Public Utilities, BPU Docket No. GR24020158), June-August 2024. Assisted the Division of Rate Counsel with the investigation and litigation of Elizabethtown Gas Company's application for an increase in rates. Mr. Morgan investigated the Company's claimed revenue requirement and assisted the Division of Rate Counsel on accounting issues and participated in the settlement negotiations leading to the case resolution.

New Jersey Natural Gas Company (New Jersey Board of Public Utilities, BPU Docket No. GR19020278), July-September 2024. Assisted the Division of Rate Counsel with the investigation and litigation of New Jersey Natural Gas Company's Request for Approval to Implement an Infrastructure Investment Program and Associated Cost Recovery Mechanism.

City of Newport Utilities Department Water Division (Rhode Island Public Utilities Commission, Docket No. 24-30-WW), October 2024. Presented testimony on revenue requirements issues on behalf of the Rhode Island Division of Public Utilities and Carriers.

Staff-Assisted Rate Case for Nine Water Utilities Located in Southern Maryland (Maryland Public Service Commission, Case No. 9750), November 2024. Engaged by the Maryland Office of People's Counsel to review, evaluate and determine the reasonableness of the revenue requirement of the Commission Staff-assisted Rate Case for nine small water utilities.

Maine Water Company-Camden & Rockland Division (Maine Public Utilities Commission, Docket No. 2024-00291), January 2025. Assisted the Maine Office of Public Advocate (OPA) with Maine Water Company's application for an increase in rates. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including test year revenue requirements.

Philadelphia Gas Works (Philadelphia Gas Commission, Fiscal Year 2025 - 2026 Capital Budget Proceeding), February 2025. Presented testimony proposing several adjustments to Philadelphia Gas Works' Fiscal Year 2026 Capital Budget on behalf of the Public Advocate.

City of Woonsocket Water Division (Rhode Island Public Utilities Commission, Docket No. 25-01-WW), April 2025. Presented testimony on revenue requirements issues on behalf of the Rhode Island Division of Public Utilities and Carriers.

Golden Heart Utilities, Inc. and College Utilities Corporation (The Regulatory Commission of Alaska, Docket No. U-24-030 & U-24-031), April 2025. Presented testimony on water and sewer revenue requirements/cost of service issues on behalf of the United States Department of Defense and All Other Federal Executive Agencies.

Philadelphia Water Department (Philadelphia Water, Sewer and Storm Water Rate Board, 2025 Tiered Assistance Program Rate Rider Surcharge Rates Proceeding), April 2025. Presented testimony regarding the appropriate adjustments to the 2025 TAP-R determination. Presented testimony on behalf of the Public Advocate.

Philadelphia Water Department (Philadelphia Water, Sewer and Storm Water Rate Board, Fiscal Years 2026 - 2027 Rates Proceeding), May 2025. Presented testimony on behalf of the Public Advocate on revenue requirements and issues relating to the Department's proposed two-year rate plan.

Philadelphia Gas Works (Philadelphia Gas Commission, Fiscal Year 2025 - 2026 Operating Budget Proceeding), June 2025. Presented testimony identifying issues and recommendations to be considered in approving the Fiscal Year 2026 Operating Budget on behalf of the Public Advocate.

Loring Development Authority (Maine Public Utilities Commission, Docket No. 2024-00300), June 2025. Assisted the Maine Office of Public Advocate (OPA) with the determination Loring Development Authority's initial rates as a regulated utility. Mr. Morgan provided testimony, on behalf of the OPA, on accounting issues including the test year cost of service and revenue requirements.

Pike County Light and Power Company, Leatherstocking Gas Company, LLC, Corning Energy Corporation, ACP Series 3 Partnership L.P., Argo Capital Platform (P) 2017, L.P. Argo Capital Platform (K) Series 3, L.P., ACP Crotona Holdings L.P., ACP Crotona Corp., Argo Infrastructure Partners LLC and Apollo Global Management, Inc. (Pennsylvania Public Utility Commission, A-2025-3055264, A-2025-3055265, A-2025-3055335), September 2025. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with investigation of Apollo Global Management, Inc. application to acquire Pike County Light and Power Company and Leatherstocking Gas Company, LLC,. Provided testimony, on behalf of the OCA, identifying issues and recommendations to be considered by the Commission in approving the transaction.

American Water Works Company, Inc. ("American Water"), Pennsylvania-American Water Company ("PAWC"), Nexus Regulated Utilities, LLC ("Nexus") and Community Utilities of Pennsylvania Inc. ("CUPA") for all the necessary authority, approvals, and certificates of public convenience under Sections 1102 and 1103 of the Pennsylvania Public Utility Code to approve the transfer of control of CUPA from Nexus to American Water. (Pennsylvania Public Utility Commission, A-2025-3055551, A-2025-3055552, A-2025-3055553, A-2025-3055554), October 2025. Assisted the Pennsylvania Office of Consumer Advocate (OCA)

with investigation of Pennsylvania-American Water application to acquire Community Utilities of Pennsylvania Inc. Provided testimony, on behalf of the OCA, identifying issues and recommendations to be considered by the Commission in approving the transaction.

ENERGY CENTER HARRISBURG LLC. (Pennsylvania Public Utility Commission, Docket No. R-2025-3055959, October 2025. Assisted the Pennsylvania Office of Consumer Advocate (OCA) with the evaluation of Energy Center Harrisburg LLC's request for a base rate increase. Presented testimony, on behalf of the OCA, on accounting issues including test year revenue requirements.

Special Projects

Developed a Uniform System of Accounts and Financial Data Collection Template for five countries participating in the National Association of Regulatory Utility Commissioners (NARUC)/East Africa Regional Energy Regulatory Partnership. Also conducted training seminars and participated as a panel member addressing issues in the utility industry from the perspective of the regulator. This work was conducted by NARUC) and the United States Agency for International Development (USAID).

Other Projects

Texas Gas Transmission Corporation (Federal Energy Regulatory Commission, Docket No. RP93-106). Technical analysis and participation in settlement negotiations on cost of service, invested capital, and revenue deficiency on behalf of the Indiana Office of Utility Consumer Counselor.

Natural Gas Pipeline Company of America (Federal Energy Regulatory Commission, Docket No. RP93-36). Technical analysis and participation in settlement negotiations on cost of service, invested capital, and revenue deficiency on behalf of the Indiana Office of Utility Consumer Counselor.

Texas Gas Transmission Company (Federal Energy Regulatory Commission, Docket No. RP94-423). Technical analysis and participation in settlement negotiations on cost of service, invested capital, and revenue deficiency on behalf of the Indiana Office of Utility Consumer Counselor.

Lafourche Telephone Company (Louisiana Public Service Commission, Docket No. U-21181). Analysis and investigation of earnings and appropriate rate of return on behalf of the Louisiana Public Service Commission Staff.

Natural Gas Pipeline Company of America (Federal Energy Regulatory Commission, Docket No. RP95-326). Technical analysis and participation in settlement negotiations on cost of service, invested capital, and revenue deficiency on behalf of the Indiana Office of Utility Consumer Counselor.

Pymatuning Independent Telephone Company (Pennsylvania Public Utility Commission, Docket No. R-00953502). Technical analysis and development of settlement position in the Company's rate case on behalf of the Pennsylvania Office of Consumer Advocate.

Illinois Bell Telephone Company (Illinois Commerce Commission, Docket No. 96-0172). Technical analysis of the Company's annual rate filing pursuant to its Price Cap Plan on behalf of Citizens Utility Board.

Illinois Bell Telephone Company (Illinois Commerce Commission, Docket No. 97-0157). Technical analysis of the Company's annual rate filing pursuant to its Price Cap Plan on behalf of Citizens Utility Board.

TDS Telecom (Pennsylvania Public Utility Commission, Docket Nos. R-00973892 and R-00973893). Technical analysis regarding rate base, cost of service, rate design, and rate of return, and assistance in settlement negotiations in the Company's rate case and alternative regulatory filing on behalf of the Pennsylvania Office of Consumer Advocate.

Appalachian Power Company (Virginia State Corporation Commission, Case No. PUE 960301). Technical analysis regarding rate base and cost of service and assistance in settlement negotiations in the Company's rate case and alternative regulatory filing on behalf of the Virginia Office of the Attorney General.

Central Maine Power Company (Maine Public Utilities Commission, Docket No. 97-580). Technical analysis regarding attrition and accounting issues in the Company's Transmission and Distribution unbundling proceeding on behalf of the Maine Public Utilities Commission Staff.

Illinois Bell Telephone Company (Illinois Commerce Commission, Docket No. 98-0259). Technical Analysis of the Company's annual rate filing pursuant to its Price Cap Plan on behalf of Citizens Utility Board.

Maine Public Service Company (Maine Public Utilities Commission, Docket No. 98-577). Technical analysis regarding attrition and accounting issues in the Company's Transmission and Distribution unbundling proceeding on behalf of the Maine Public Utilities Commission Staff.

Bangor Hydro-Electric Company (Maine Public Utilities Commission, Docket No. 97-596). Technical analysis regarding attrition and accounting issues in the Company's Transmission and Distribution unbundling proceeding on behalf of the Maine Public Utilities Commission Staff.

TDS Telecom (Maine Public Utilities Commission, Docket Nos. 98-894, 98-895, 98-904, 98-906, 98-911, and 98-912). Technical analysis regarding accounting issues and access rate changes on behalf of the Maine Office of the Public Advocate.

Mid-Maine Telecom (Maine Public Utilities Commission, Docket No. 2000-810). Technical analysis regarding accounting issues and access rate changes on behalf of the Maine Office of the Public Advocate.

Unitel, Inc. (Maine Public Utilities Commission, Docket No. 2000-813). Technical analysis regarding accounting issues and access rate changes on behalf of the Maine Office of the Public Advocate.

Hydraulics International, Inc. (Armed Services Board of Contract Appeals, ASBCA No. 51285). Technical analysis and support relating to the Economic Adjustment Clause claim on behalf of the Air Force Materiel Command.

Tidewater Telecom and Lincolnville Telephone Company (Maine Public Utilities Commission, Docket Nos. 2002-100 and 2002-99). Technical analysis regarding accounting issues and access rate changes on behalf of the Maine Office of the Public Advocate.

TDS Telecom (Vermont Public Service Board, Docket No. 6576). Technical analysis regarding rate base, cost of service, and depreciation expense on behalf of the Vermont Department of Public Service.

CenterPoint Energy-Entex (Louisiana Public Service Commission, Docket No. U-26720, Subdocket A). Technical analysis regarding rate base and cost of service on behalf of the Louisiana Public Service Commission Staff.

CenterPoint Energy-Arkla (Louisiana Public Service Commission, Docket No. U-27676). Technical analysis regarding rate base and cost of service on behalf of the Louisiana Public Service Commission Staff.

Provided technical analysis and support on behalf of the Louisiana Public Service Commission Staff relating to CLECO Power LLC Rate Stabilization Plan.

Provided technical analysis and support on behalf of the Louisiana Public Service Commission Staff relating to CLECO Power LLC post-Katrina power purchases.

Provided technical analysis and support on behalf of the Louisiana Public Service Commission Staff relating to Entergy Louisiana LLC recovery of storm damage costs.

Westar Energy, Inc. (Westar Energy) and Kansas Gas and Electric Company (KGE), (Kansas State Corporation Commission, Docket No. 17-WSEE-147-RTS). Technical analysis regarding rate base and cost of service on behalf of the Federal Executive Agencies.

Westar Energy, Inc. (Westar Energy) and Kansas Gas and Electric Company (KGE), (Kansas State Corporation Commission, Docket No. 17-WSEE-147-RTS). Technical analysis regarding rate base and cost of service on behalf of the Federal Executive Agencies.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

CITY OF LANCASTER GENERAL RATE :
INCREASE FILED PURSUANT TO 52 PA. CODE :
§ 53.45(A) :

DOCKET NO.
R-2025-3057237

EXHIBITS ACCOMPANYING
DIRECT TESTIMONY
OF
LAFAYETTE K. MORGAN, JR.

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Summary of Operating Income
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Company Amounts at Present Rates	OCA Adjustments	Amounts After OCA Adjustments	Pro Forma Change in Revenues	Amounts After Change in Revenues
	<u>Operating Revenues</u>					
1	Total Water Sales	\$ 22,608,086 ^{1/}	\$ -	\$ 22,608,086	\$ -	\$ 22,608,086
2	Total Other Revenues	541,565 ^{1/}	53,936	595,501	-	595,501
3	Revenue Increase	-	-	-	1,862,256	1,862,256
4	Total Operating Revenues	<u>23,149,651</u>	<u>53,936</u>	<u>23,203,587</u>	<u>1,862,256</u>	<u>25,065,843</u>
5						
6	<u>Operating Expenses</u>					
7	O&M Expenses	12,541,449 ^{2/}	(509,637)	12,031,812	-	12,031,812
8	Depreciation	4,396,657 ^{2/}	(1,780,393)	2,616,264	-	2,616,264
9	Taxes, Other Than Income	-	-	-	-	-
10	State Income Taxes	-	-	-	-	-
11	Federal Income Taxes	-	-	-	-	-
12						
13	Total Operating Expenses	<u>16,938,106</u>	<u>(2,290,030)</u>	<u>14,648,076</u>	<u>-</u>	<u>14,648,076</u>
14						
15	Net Operating Income	<u>\$ 6,211,545</u>	<u>\$ 2,343,966</u>	<u>\$ 8,555,511</u>	<u>\$ 1,862,256</u>	<u>\$ 10,417,767</u>
16						
17	Rate Base	<u>\$ 190,410,495</u>		<u>\$ 156,894,088</u>		<u>\$ 156,894,088</u>
18						
19	Return On Rate Base	<u>3.26%</u>		<u>5.45%</u>		<u>6.64%</u>

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Summary of Revenue Increase at OCA Rate of Return
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount	Source
1	Adjusted Rate Base	\$ 156,894,088	Exhibit LKM-2, Page 2
2	Required Rate of Return	6.64%	OCA Witness Garrett
3	Net Operating Income Required	\$ 10,417,767	
4	Net Operating Income at Present Rates	8,555,511	Exhibit LKM-1, Page 1
5	Income Deficiency/(Surplus)	\$ 1,862,256	
6	Revenue Multiplier	1.000000	
7			
8	Required Change in Company Revenue	\$ 1,862,256	

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Summary of Rate Base
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount per Company Filing ^{1/}	OCA Rate Base Adjustments	Amount After OCA Adjustments
1	Original Cost of Utility Plant in Service	\$ 378,696,047	\$ (44,179,650)	\$ 334,516,397
2	Accumulated Depreciation	<u>(112,012,625)</u>	<u>-</u>	<u>(112,012,625)</u>
3	Net Plant in Service	266,683,422	(44,179,650)	222,503,772
4	Other Rate Base Items:			
5	Customer Advances for Construction	(544,557)	-	(544,557)
6	Accumulated Depreciation	<u>267,704</u>	<u>-</u>	<u>267,704</u>
7	Subtotal	(276,853)	-	(276,853)
8	Customer Advances for Construction	(14,390,926)	-	(14,390,926)
9	Accumulated Depreciation	<u>3,558,786</u>	<u>-</u>	<u>3,558,786</u>
10	Subtotal	(10,832,140)	-	(10,832,140)
11	Materials and Supplies	642,144	(642,144)	-
12	Cash Working Capital	<u>2,156,056</u>	<u>(657,433)</u>	<u>1,498,623</u>
13	Total Rate Base	\$ 258,372,629	\$ (44,837,083)	\$ 212,893,402
14	Outside City Allocation Factor	<u>0.736960784 ^{2/}</u>	<u>0.736960784 ^{2/}</u>	<u>0.736960784 ^{2/}</u>
15	Outside City Total Rate Base	<u>\$ 190,410,495</u>	<u>\$ (33,043,172)</u>	<u>\$ 156,894,088</u>

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Summary of Rate Base Adjustments
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Source	Amount
1	Rate Base per Company Filing	Exhibit LKM-2, Page 1	<u>\$ 258,372,629</u>
2			
3			
4	OCA Adjustments:		
5	Adjustment to Reflect Revised Rate Base Components	Exhibit LKM - 4	\$ (44,179,650)
6	Adjustment to Materials & Supplies	Exhibit LKM - 6	(642,144)
7	Reflect OCA's Adjustment in Cash Working Capital	Exhibit LKM - 5	<u>(657,433)</u>
8			
9	Total Ratemaking Adjustments		<u>\$ (45,479,227)</u>
10			
11	Adjusted Rate Base per OCA		<u><u>\$ 212,893,402</u></u>

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Summary of Adjustments to Income Before Income Taxes
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount	Source
1	Operating Income per Company	<u>\$ 6,211,545</u>	Exhibit LKM-1
2			
3	<u>OCA Adjustments:</u>		
4	Adjustment to Reimbursement -Meter Labor	\$ 53,936	Exhibit LKM-7
5	Adjustment to Power Expense	509,637	Exhibit LKM-8
6	Adjustment to reflect Change in Depreciation Rates	1,369,152	Exhibit LKM-9
7	Adjustment to Depreciation Expense- Plant Change	411,242	Exhibit LKM-10
8			
9	Total OCA Adjustments	<u>2,343,966</u>	
10			
11	Total OCA Adjustments	<u>\$ 8,555,511</u>	

CITY OF LANCASTER – BUREAU OF WATER
 Outside City Revenue Requirement
 Summary of Adjustments to Operating Income
 For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Operating Revenues	O&M Expenses	Depreciation & Amortization	Operating Income Before Income Taxes
1	Amount per Company	\$ 23,149,651	\$ 12,541,449	\$ 4,396,657	\$ 6,211,545
2					
3	<u>OCA Adjustments:</u>				
4	Adjustment to Reimbursement -Meter Labor	\$ 53,936	\$ -	\$ -	\$ 53,936
5	Adjustment to Power Expense	-	(509,637)	-	509,637
6	Adjustment to reflect Change in Depreciation Rates	-	-	(1,369,152)	1,369,152
7	Adjustment to Depreciation Expense- Plant Change	-	-	(411,242)	411,242
8					
9					
10	Total OCA Adjustments	\$ 53,936	\$ (509,637)	\$ (1,780,393)	\$ 2,343,966
11					
12	Total Adjusted Income Before Income Taxes	\$ 23,203,587	\$ 12,031,812	\$ 2,616,264	\$ 8,555,511

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Adjustment to Remove Unsupported Plant in Service
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Completion Date ^{1/}	Remove Projected Cost ^{1/}	Reverse Retirement Costs ^{1/}	Net Change in Plant
1	<u>Plant in Service:</u> ^{1/}				
2	FTY Plant				
3	Duke Street Water Line Replacement	Mar-26	\$ (254,335)	\$ 25,000	\$ (229,335)
4	FPFTY Plant				
5	Security Cameras and networking - phase 2 at tanks and pump stations	Mar-27	(275,000)	-	(275,000)
6	Lampeter Road Stream Restoration	Mar-27	(100,000)	-	(100,000)
7	Hess PS Upgrade	Mar-27	(600,000)	60,000	(540,000)
8	Conestoga Low/High Service Electrical Upgrade	Mar-27	825,000	-	825,000
9	George Street Line Replacement	Mar-27	(800,000)	80,000	(720,000)
10	Susquehanna LDTM (phase 2)	Mar-27	(10,592,529)	530,000	(10,062,529)
11	Susquehanna LDTM (phase 3)	Mar-27	(30,842,786)	1,540,000	(29,302,786)
12	Millersville Water Line Replacement - Manor to Charlotte	Mar-27	(555,000)	55,000	(500,000)
13	Lafayette Tank (Water Quality Improvements)	Mar-27	(1,500,000)	150,000	(1,350,000)
14	Vactor	Mar-27	(750,000)	-	(750,000)
15	SCADA - LIMS	Mar-27	(75,000)	-	(75,000)
16	Ceramic Membrane pilot	Mar-27	(450,000)	-	(450,000)
17	Oyster Point Reservoir Cleaning	Mar-27	(650,000)	-	(650,000)
18	Total Adjustment to Plant in Service		<u>\$ (46,619,650)</u>	<u>\$ 2,440,000</u>	<u>\$ (44,179,650)</u>

Notes:

^{1/} Exhibit SC-2.

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Adjustment to Cash Working Capital
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	FPFTY Revenue Adjustment
1	Total O&M Expenses per City	12,541,449 ^{1/}
2	Adjustments to O&M Expenses:	
3	Power Expense	(509,637)
4	Sick Leave Bonus and Vested Absences	<u>(42,831)</u>
5	Total Reductions for Cash Working Capital	<u>(552,468)</u>
6	Annualized Operating Adjustment per City	11,988,981 ^{1/}
7	Cash Working Capital Factor	<u>0.125</u>
8	OCA Working Capital Requirement	\$ 1,498,623
9	City 's Working Capital Requirement	<u>2,156,056</u>
10	Adjustment to Cash Working Capital	<u><u>\$ (657,433)</u></u>

Notes:

^{1/} Exhibit GRH-1, Exhibit 5.

^{2/} Exhibit LKM-4, Page 2.

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Adjustment to Materials & Supplies
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount
1	City's Materials & Supplies Claim	\$ 642,144 ^{1/}
2		
3	Adjustment to Materials & Supplies	\$ (642,144)

Notes:

^{1/} TUS-R-12_ Exhibit GRH-1_REV, Rate Tab.

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Adjustment to Reimbursement -Meter Labor
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount
	Restore City's Decrease in Reimbursement -	
1	Meter Labor	\$ 53,936 ^{1/}
2		
3	Adjustment to Reimbursement -Meter Labor	<u>\$ 53,936</u>

^{1/} Exhibit DI-1, Page 1.

Notes:

^{1/} TUS-R-12_ Exhibit GRH-1_REV, Rate Tab.

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Adjustment to Power Expense
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount
1	City's Increase in Electric Power Expense	\$ 685,733 ^{1/}
2	Jurisdictional Allocation Factor	<u>74.32%</u>
3	Adjustment to O&M Expenses	<u><u>\$ (509,637)</u></u>

Notes:

^{1/} Exhibit GRH-1, Schedule 6, Page 5.

CITY OF LANCASTER – BUREAU OF WATER

Adjustment to reflect Change in Depreciation Rates
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount ^{1/}
1	City's Revised Annualized FPFTY Depreciation Expense	\$ 4,695,088
2	City's Annualized FPFTY Depreciation Expense	<u>6,064,240</u>
3	Adjustment to Depreciation Expense	\$ (1,369,152)
4	Jurisdictional Allocation Factor	<u>74.579%</u>
5	Adjustment to Outside City Depreciation Expense	<u><u>\$ (1,021,101)</u></u>

Note:

^{1/} Garrett Depreciation Workpapers d42

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Adjustment to Depreciation Expense
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Completion Date
1	Net Change in Plant in Service	\$ (44,179,650) ^{1/}
2	Jurisdictional Factor	73.70%
3	Composite Depreciation Rate	1.26%
4	Adjustment to Depreciation Expense	<u>\$ (411,242)</u>

Notes:

^{1/} Exhibit LKM-4.

^{2/} Garrett Depreciation Workpapers d42

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

City of Lancaster – Bureau of Water

:
:
:
:
:
:

Docket No. R-2025-3057237

VERIFICATION

I, Lafayette K. Morgan, hereby state that the facts set forth in my Direct Testimony, OCA Statement 1, are true and correct (or are true and correct to the best of my knowledge, information, and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: December 17, 2025

Signature:


Lafayette K. Morgan Jr.

Consultant Address: Exeter Associates, Inc.
10480 Little Patuxent Parkway
Suite 300
Columbia, MD 21044-3575

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission :
v. : Docket No. R-2025-3057237
City of Lancaster – Bureau of Water :**

DIRECT TESTIMONY

OF

DAVID J. GARRETT

ON BEHALF OF

THE PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

December 17, 2025

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Exhibit DJG-15	Detailed Rate Comparison – 2025
Exhibit DJG-16	Depreciation Rate Development – 2025
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Exhibit DJG-18	Depreciation Rate Development – 2026
Exhibit DJG-19	Detailed Rate Comparison – 2027
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APPENDICES

Appendix A:	Discounted Cash Flow Model Theory
Appendix B:	Capital Asset Pricing Model Theory
Appendix C:	The Depreciation System
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Appendix E:	Actuarial Analysis

1 **I. INTRODUCTION**

2 **Q. State your name and occupation.**

3 A. My name is David J. Garrett. I am a consultant specializing in public utility regulation. I
4 am the managing member of Resolve Utility Consulting PLLC.

5 **Q. Summarize your educational background and professional experience.**

6 A. I received a B.B.A. with a major in Finance, an M.B.A., and a Juris Doctor from the
7 University of Oklahoma. I worked in private legal practice for several years before
8 accepting a position as assistant general counsel at the Oklahoma Corporation Commission
9 in 2011. At the commission, I worked in the Office of General Counsel in regulatory
10 proceedings. In 2012, I began working for the Public Utility Division as a regulatory
11 analyst providing testimony in regulatory proceedings. After leaving the commission, I
12 formed Resolve Utility Consulting PLLC, where I have represented various consumer
13 groups and state agencies in utility regulatory proceedings, primarily in the areas of cost of
14 capital and depreciation. I am a Certified Depreciation Professional with the Society of
15 Depreciation Professionals. I am also a Certified Rate of Return Analyst with the Society
16 of Utility and Regulatory Financial Analysts. A more complete description of my
17 qualifications and regulatory experience is included in my curriculum vitae.¹

18 **Q. On whose behalf are you testifying in this proceeding?**

19 A. I am testifying on behalf of the Pennsylvania Office of Consumer Advocate (“OCA”).

¹ Exhibit DJG-1.

1 **Q. Describe the purpose and scope of your testimony in this proceeding.**

2 A. My testimony addresses the City of Lancaster's (the "City") proposed rate of return in
3 response to the direct testimony of City witness Harold Walker. I also address the City's
4 depreciation study and proposed depreciation rates in response to the direct testimony of
5 City witness John Spanos.

6 **Q. Please describe the organization of your testimony.**

7 A. In the executive summary below, I provide an overview of the cost of capital issues, my
8 recommendations, and my response to the City's testimony on these issues. In the sections
9 that follow, I discuss the legal standards governing the awarded return issue as well as the
10 general concepts involved in estimating the cost of equity. I discuss the concepts of risk
11 and return. I provide detailed analysis of the Discounted Cash Flow ("DCF") Model, the
12 Capital Asset Pricing Model ("CAPM"), including my results for these models and my
13 responses to Mr. Walker's results. In addition, I discuss my recommendation to reject the
14 City's proposed depreciation rates, which are based on a methodology that effectively
15 results in accelerated capital recovery.

16 **II. EXECUTIVE SUMMARY**

17 **A. Rate of Return Summary**

18 **Q. Please summarize your rate of return recommendation to the Commission.**

19 A. The key points of my testimony are as follows:

- 20 • The Commission should reject the City's proposed return on equity ("ROE") of
21 10.90% as excessive and unsupported. An objective cost of equity analysis shows

1 that the City’s market-determined cost of equity is notably lower than the City’s
2 proposed ROE.

- 3 • Based on the results of my financial modeling using the DCF and CAPM models,
4 I recommend that the Commission authorize an ROE of 8.8% for the City.
- 5 • My proposed adjustment to the City’s ROE results in an overall weighted rate of
6 return of 6.64%. Adopting my recommended adjustment to the authorized rate of
7 return would result in a revenue requirement reduction of \$5,142,961.²

8 **B. Depreciation Summary**

9 **Q. Please summarize the City’s proposed depreciation rates.**

10 A. The City’s proposed depreciation rates amount to a total annual depreciation accrual of
11 \$6.1 million based on plant balances at March 31, 2027.³ The City’s proposed depreciation
12 rates are based on the depreciation study sponsored by Mr. Spanos, which is based on plant
13 balances as of March 31, 2025 (the “2025 Study”), March 31, 2026 (the “2026 Study”),
14 and March 31, 2027 (the “2027 Study”). Mr. Spanos applied the equal life group (“ELG”)
15 method to calculate his proposed remaining lives for the City’s depreciable plant.

16 **Q. Please summarize your adjustments to the City’s proposed depreciation rates.**

17 A. I recommend that the Commission authorize depreciation rates for the City’s assets that are
18 calculated using the average life group (“ALG”) method. The key points of my testimony
19 are as follows:

² See OCA Statement No. 1.

³ Exhibit DJG-14.

- The Commission should reject the City’s continued use of the ELG method, which effectively results in an accelerated form of cost recovery from consumers. The City’s use of the ELG method, rather than the widely applied ALG method, increases the annual depreciation accrual charged to customers by \$1.2 million in the 2025 Study, by \$1.2 million in the 2026 Study, and by \$1.4 million in the 2027 Study. In other words, even if there are no adjustments to the net salvage rates, service life, or other depreciation parameters for any accounts in the depreciation study, using the majority-view ALG method alone will result in significantly fairer rates for customers. In addition, in the pending PPL Electric Utilities Corporation base rate case before the Commission (Docket No. R-2025-3057164), Mr. Spanos is proposing ALG depreciation rates.⁴
- The results of my application of the ALG method to the City’s depreciation studies are summarized in the table below.⁵

**Figure 1:
Summary Depreciation Accrual Adjustment – 2025 Study**

Plant Function	Lancaster Accrual	OCA Accrual	OCA Adjustment
Structures and Improvements	\$ 2,657,792	\$ 1,825,398	\$ (832,394)
Transmission and Distribution	2,238,325	1,865,124	(373,201)
General Plant	322,075	330,523	8,448
TOTAL PLANT STUDIED	\$ 5,218,192	\$ 4,021,044	\$ (1,197,148)

⁴ Direct Testimony of John J. Spanos, Docket No. R-2025-3057164 (Sep. 30, 2025).

⁵ Exhibit DJG-17; *see also* Exhibits DJG-18 through DJG-23 for detailed depreciation rate calculations and comparisons for the 2024 Study, 2025 Study, and 2026 Study.

1
2

**Figure 2:
Summary Depreciation Accrual Adjustment – 2026 Study**

Plant Function	Lancaster Accrual	OCA Accrual	OCA Adjustment
Structures and Improvements	\$ 2,679,825	\$ 1,814,406	\$ (865,419)
Transmission and Distribution	2,314,194	1,948,261	(365,933)
General Plant	371,578	377,075	5,497
TOTAL PLANT STUDIED	\$ 5,365,597	\$ 4,139,742	\$ (1,225,855)

3
4

**Figure 3:
Summary Depreciation Accrual Adjustment – 2027 Study**

Plant Function	Lancaster Accrual	OCA Accrual	OCA Adjustment
Structures and Improvements	\$ 2,670,954	\$ 1,805,053	\$ (865,901)
Transmission and Distribution	2,977,604	2,471,854	(505,750)
General Plant	415,682	418,182	2,500
TOTAL PLANT STUDIED	\$ 6,064,240	\$ 4,695,088	\$ (1,369,152)

5
6

The evidence supporting my recommendations are discussed in more detail in my testimony.

1 **PART ONE: RATE OF RETURN**

2 **III. REGULATORY STANDARDS**

3 **Q. Discuss the legal standards governing the awarded rate of return on capital**
4 **investments for regulated utilities.**

5 A. In *Wilcox v. Consolidated Gas Co. of New York*,⁶ the Supreme Court first addressed the
6 meaning of a fair rate of return for public utilities. The Court found that “the amount of
7 risk in the business is a most important factor” in determining the appropriate allowed rate
8 of return.⁷ Later, in two landmark cases, the Court set forth the standards by which utilities
9 are allowed to earn a return on capital investments. In *Bluefield Water Works &*
10 *Improvement Co. v. Public Service Commission of West Virginia*,⁸ the Court held:

11 A public utility is entitled to such rates as will permit it to earn a return on
12 the value of the property which it employs for the convenience of the
13 public . . . but it has no constitutional right to profits such as are realized or
14 anticipated in highly profitable enterprises or speculative ventures. The
15 return should be reasonably sufficient to assure confidence in the financial
16 soundness of the utility and should be adequate, under efficient and
17 economical management, to maintain and support its credit and enable it to
18 raise the money necessary for the proper discharge of its public duties.⁹

19 In *Federal Power Commission v. Hope Natural Gas City*,¹⁰ the Court expanded on the
20 guidelines set forth in *Bluefield* and stated:

⁶ *Wilcox v. Consolidated Gas Co. of New York*, 212 U.S. 19 (1909).

⁷ *Id.* at 48.

⁸ *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923).

⁹ *Id.* at 692-93.

¹⁰ *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

1 From the investor or company point of view it is important that there be
2 enough revenue not only for operating expenses but also for the capital costs
3 of the business. These include service on the debt and dividends on the
4 stock. By that standard the return to the equity owner should be
5 commensurate with returns on investments in other enterprises having
6 corresponding risks. That return, moreover, should be sufficient to assure
7 confidence in the financial integrity of the enterprise, so as to maintain its
8 credit and to attract capital.¹¹

9 The cost of capital models I have employed in this case are in accordance with the
10 foregoing legal standards.

11 **Q. Should the awarded rate of return be based on the City's actual cost of capital?**

12 A. Yes. The *Hope* Court makes it clear that the allowed return should be based on the actual
13 cost of capital. Moreover, the awarded return must also be fair, just, and reasonable under
14 the circumstances of each case. Under the rate base rate of return model, a utility should
15 be allowed to recover all its reasonable expenses, its capital investments through
16 depreciation, and a return on its capital investments sufficient to satisfy the required return
17 of its investors. The "required return" from the investors' perspective is synonymous with
18 the "cost of capital" from the utility's perspective. Scholars agree that the allowed rate of
19 return should be based on the actual cost of capital:

20 Since by definition the cost of capital of a regulated firm represents
21 precisely the expected return that investors could anticipate from other
22 investments while bearing no more or less risk, and since investors will not
23 provide capital unless the investment is expected to yield its opportunity
24 cost of capital, the correspondence of the definition of the cost of capital
25 with the court's definition of legally required earnings appears clear.¹²

¹¹ *Id.* at 603 (emphasis added).

¹² A. Lawrence Kolbe, James A. Read, Jr. & George R. Hall, *The Cost of Capital: Estimating the Rate of Return for Public Utilities*, p. 21 (The MIT Press 1984).

1 The models I have employed in this case closely estimate the City's market-based cost of
2 equity. If the Commission sets the awarded return based on my lower, and more
3 reasonable, rate of return, it will comply with the U.S. Supreme Court's standards, allow
4 the City to maintain its financial integrity, and satisfy the claims of its investors. On the
5 other hand, if the Commission sets the allowed rate of return *higher* than the true cost of
6 capital, it arguably results in an inappropriate transfer of wealth.

7 **Q. What does this standard mean for determining the awarded return and the cost of**
8 **capital?**

9 A. It is important to understand that the *awarded* return and the *cost* of capital are different
10 but related concepts. The two concepts are related in that the legal and technical standards
11 encompassing this issue require that the awarded return reflects the true cost of capital. On
12 the other hand, the two concepts are different in that the legal standards do not mandate
13 that awarded returns exactly match the cost of capital. Awarded returns are set through the
14 regulatory process and may be influenced by factors other than objective market drivers.
15 The cost of capital, on the other hand, should be evaluated objectively and be closely tied
16 to economic realities. In other words, the cost of capital is driven by stock prices,
17 dividends, growth rates, and — most importantly — it is driven by risk. The cost of capital
18 can be estimated by financial models used by firms, investors, and academics around the
19 world for decades. The problem is, with respect to regulated utilities, there has been a trend
20 in which awarded returns fail to closely track with actual market-based cost of capital as
21 further discussed below. To the extent this occurs, the results are detrimental to ratepayers
22 and the state's economy.

1 **Q. Describe the economic impact that occurs when the awarded return strays too far**
2 **from the U.S. Supreme Court's cost of equity standard.**

3 A. When the awarded ROE is set far above the *cost* of equity, it runs the risk of violating the
4 U.S. Supreme Court's standards that the awarded return should be *based on the cost of*
5 *capital*. Establishing an awarded return that far exceeds the true cost of capital effectively
6 prevents the awarded returns from changing along with economic conditions. This is
7 especially true given the fact that regulators tend to be influenced by the awarded returns
8 in other jurisdictions, regardless of the various unknown factors influencing those awarded
9 returns. This is yet another reason why it is crucial for regulators to focus on the market-
10 based *cost* of equity, rather than awarded returns from other jurisdictions. Awarded returns
11 may be influenced by settlements and other political factors not based on true market
12 conditions. In contrast, the market-based cost of equity as estimated through objective
13 models is not influenced by these factors but is instead driven by market-based factors. If
14 regulators rely too heavily on the awarded returns from other jurisdictions, it can create a
15 cycle over time that bears little relation to the market-based cost of equity.

16 **IV. GENERAL CONCEPTS AND METHODOLOGY**

17 **Q. Discuss your approach to estimating the cost of equity in this case.**

18 A. While a competitive firm must estimate its own cost of capital to assess the profitability of
19 competing capital projects, regulators determine a utility's cost of capital to establish a fair
20 rate of return. The legal standards set forth above do not include specific guidelines
21 regarding the models that must be used to estimate the cost of equity. Over the years,
22 however, regulatory commissions have consistently relied on several models. The models
23 I have employed in this case have been the two most widely used and accepted in regulatory

proceedings for many years. These models are the DCF Model and the CAPM. The specific inputs and calculations for these models are described in more detail below.

Q. Please explain why multiple models are used to estimate the cost of equity.

A. The models used to estimate the cost of equity attempt to measure the return on equity required by investors by estimating several different inputs. It is preferable to use multiple models because the results of any one model may contain a degree of imprecision, especially depending on the reliability of the inputs used at the time of conducting the model. By using multiple models, the analyst can compare the results of the models and look for outlying results and inconsistencies. Likewise, if multiple models produce a similar result, it may indicate a narrower range for the cost of equity estimate.

Q. Please discuss the benefits of choosing a proxy group of companies in conducting cost of capital analyses.

A. The cost of equity models in this case can be used to estimate the cost of capital of any individual, publicly-traded company. There are advantages, however, to conducting cost of capital analyses on a “proxy group” of companies that are comparable to the target company. First, it is better to assess the financial soundness of a utility by comparing it to a group of other financially sound utilities. Second, using a proxy group provides more reliability and confidence in the overall results because there is a larger sample size. Finally, the use of a proxy group is often a pure necessity when the target company is a subsidiary that is not publicly traded. This is because the financial models used to estimate the cost of equity require information from publicly-traded firms, such as stock prices and dividends.

1 **Q. Describe the proxy group you selected in this case.**

2 A. In this case, I chose to use the same proxy group as Mr. Walker used.¹³ Thus, the difference
3 in our cost of equity estimates is primarily due to the inputs of our financial models, rather
4 than the composition of the proxy group.

5 **V. RISK AND RETURN CONCEPTS**

6 **Q. Please discuss the general relationship between risk and return.**

7 A. As discussed above, risk is the most important factor for the Commission to consider when
8 determining the allowed return. There is a direct relationship between risk and return: the
9 more (or less) risk an investor assumes, the larger (or smaller) return the investor will
10 demand. There are two primary types of risk: firm-specific risk and market risk. Firm-
11 specific risk affects individual companies, while market risk affects all companies in the
12 market to varying degrees.

13 **Q. Discuss the differences between firm-specific risk and market risk.**

14 A. Firm-specific risk affects individual companies, rather than the entire market. For example,
15 a competitive firm might overestimate customer demand for a new product, resulting in
16 reduced sales revenue. This is an example of a firm-specific risk called “project risk.”¹⁴
17 There are several other types of firm-specific risks, including: (1) “financial risk” — the
18 risk that equity investors of leveraged firms face as residual claimants on earnings; (2)
19 “default risk” — the risk that a firm will default on its debt securities; and (3) “business

¹³ Exhibit DJG-2.

¹⁴ Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset*, pp. 62-63 (3rd ed., John Wiley & Sons, Inc. 2012).

1 risk” — which encompasses all other operating and managerial factors that may result in
2 investors realizing less than their expected return in that particular company.

3 While firm-specific risk affects individual companies, market risk affects all
4 companies in the market to varying degrees. Examples of market risk include interest rate
5 risk, inflation risk, and the risk of major socio-economic events. When there are changes
6 in these risk factors, they affect all firms in the market to some extent.¹⁵

7 Analysis of the U.S. market in 2001 provides a good example for contrasting firm-
8 specific risk and market risk. During that year, Enron Corp.’s stock fell from \$80 per share
9 and the company filed for bankruptcy at the end of the year. If an investor’s portfolio had
10 held only Enron stock at the beginning of 2001, this irrational investor would have lost the
11 entire investment by the end of the year due to assuming the full exposure of Enron’s firm-
12 specific risk (in that case, imprudent management). On the other hand, a rational,
13 diversified investor who invested the same amount of capital in a portfolio holding every
14 stock in the S&P 500 would have had a much different result that year. The rational
15 investor would have been relatively unaffected by the fall of Enron because her portfolio
16 included 499 other stocks. Each of those stocks, however, would have been affected by
17 various *market* risk factors that occurred that year, including the terrorist attacks on
18 September 11th, which affected all stocks in the market. Thus, the rational investor would
19 have incurred a relatively minor loss due to market risk factors, while the irrational investor
20 would have lost everything due to firm-specific risk factors.

¹⁵ See Zvi Bodie, Alex Kane & Alan J. Marcus, *Essentials of Investments*, p. 149 (9th ed., McGraw-Hill/Irwin 2013).

1 **Q. Can investors minimize firm-specific risk through portfolio diversification?**

2 A. Yes. A fundamental concept in finance is that firm-specific risk can be minimized through
3 diversification.¹⁶ If someone irrationally invested all their funds in one firm (such as
4 Enron), they would be exposed to all the firm-specific risk *and* the market risk inherent in
5 that single firm. Rational investors, however, are risk-averse and seek to eliminate risk
6 they can control. Investors can essentially eliminate firm-specific risk by adding more
7 stocks to their portfolio through a process called “diversification.”

8 There are two reasons why diversification eliminates firm-specific risk. First, each
9 stock in a diversified portfolio represents a much smaller percentage of the overall portfolio
10 than it would in a portfolio of just one or a few stocks. Thus, any firm-specific action that
11 changes the stock price of one stock in the diversified portfolio will have only a small
12 impact on the entire portfolio.¹⁷

13 The second reason why diversification eliminates firm-specific risk is that the
14 effects of firm-specific actions on stock prices can be either positive or negative for each
15 stock. Thus, in large, diversified portfolios, the net effect of these positive and negative
16 firm-specific risk factors will be essentially zero and will not affect the value of the overall
17 portfolio.¹⁸ Firm-specific risk is also called “diversifiable risk” because it can be easily
18 eliminated through diversification.

¹⁶ See John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do*, pp. 179-80 (3rd ed., South Western Cengage Learning 2010).

¹⁷ See Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset*, p. 64 (3rd ed., John Wiley & Sons, Inc. 2012).

¹⁸ *Id.*

1 **Q. Do investors expect an additional return for assuming firm-specific risks?**

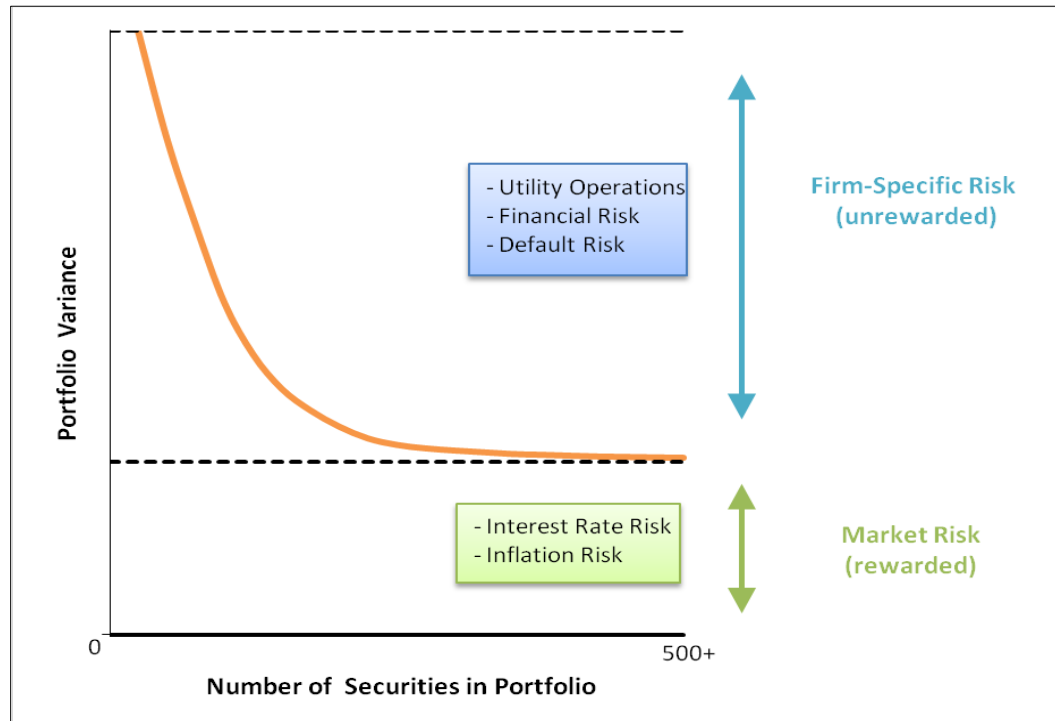
2 A. No. Because investors eliminate firm-specific risk through diversification, they know they
3 cannot expect a higher return for assuming the firm-specific risk in any one company.
4 Thus, the risks associated with an individual firm's operations are not rewarded by the
5 market. In fact, firm-specific risk is also called "unrewarded" risk for this reason. Market
6 risk, on the other hand, cannot be eliminated through diversification. Because market risk
7 cannot be eliminated through diversification, investors expect a return for assuming this
8 type of risk. Market risk is also called "systematic risk." Scholars recognize the fact that
9 market risk, or "systematic risk," is the only type of risk for which investors expect a return
10 for bearing:

11 If investors can cheaply eliminate some risks through diversification, then
12 we should not expect a security to earn higher returns for risks that can be
13 eliminated through diversification. Investors can expect compensation *only*
14 for bearing systematic risk (i.e., risk that cannot be diversified away).¹⁹

15 These important concepts are illustrated in the figure below. Some form of this figure is
16 found in many financial textbooks.

¹⁹ See John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do*, p. 180 (3rd ed., South Western Cengage Learning 2010) (emphasis added).

**Figure 4:
Effects of Portfolio Diversification**



This figure shows that as stocks are added to a portfolio, the amount of firm-specific risk is reduced until it is essentially eliminated. No matter how many stocks are added, however, there remains a certain level of fixed market risk. The level of market risk will vary from firm to firm. Market risk is the only type of risk that is rewarded by the market and is thus the primary type of risk the Commission should consider when determining the allowed return for the utilities it regulates.

Q. Describe how market risk is measured.

A. Investors who want to eliminate firm-specific risk must hold a fully diversified portfolio. To determine the amount of risk that a single stock adds to the overall market portfolio, investors measure the covariance between a single stock and the market portfolio. The

1 result of this calculation is called “beta.”²⁰ Beta represents the sensitivity of a given
2 security to the market as a whole. The market portfolio of all stocks has a beta equal to
3 one. Stocks with betas greater than one are relatively more sensitive to market risk than
4 the average stock. For example, if the market increases (decreases) by 1.0%, a stock with
5 a beta of 1.5 will, on average, increase (decrease) by 1.5%. In contrast, stocks with betas
6 of less than one are less sensitive to market risk, such that if the market increases
7 (decreases) by 1.0%, a stock with a beta of 0.5 will, on average, only increase (decrease)
8 by 0.5%. Thus, stocks with low betas are relatively insulated from market conditions. The
9 beta term is used in the CAPM to estimate the cost of equity, which is discussed in more
10 detail later.²¹

11 **Q. Are public utilities characterized as defensive firms that have low betas, low market**
12 **risk, and are relatively insulated from overall market conditions?**

13 A. Yes. Although market risk affects all firms in the market, it affects different firms to
14 varying degrees. Firms with high betas are affected more than firms with low betas, which
15 is why firms with high betas are riskier. Stocks with betas greater than one are generally
16 known as “cyclical stocks.” Firms in cyclical industries are sensitive to recurring patterns
17 of recession and recovery known as the “business cycle.”²² Thus, cyclical firms are
18 exposed to a greater level of market risk. Securities with betas less than one, on the other
19 hand, are known as “defensive stocks.” Companies in defensive industries, such as public
20 utility companies, “will have low betas and performance that is comparatively unaffected

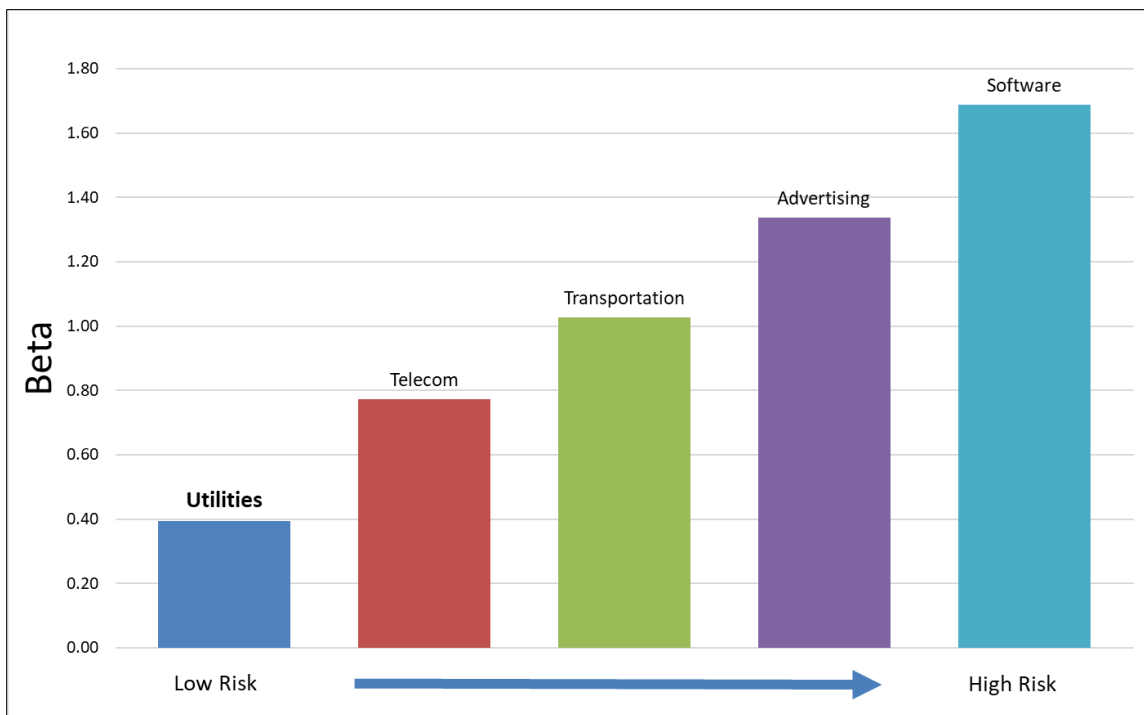
²⁰ *Id.* at 180-81.

²¹ Though it will be discussed in more detail later, Exhibit DJG-9 shows that the average beta of the proxy group was less than 1.0. This confirms the well-known concept that utilities are relatively low-risk firms.

²² See Zvi Bodie, Alex Kane & Alan J. Marcus, *Essentials of Investments*, p. 382 (9th ed., McGraw-Hill/Irwin 2013).

by overall market conditions.”²³ In fact, financial textbooks often use utility companies as prime examples of low-risk, defensive firms. The figure below compares the betas of several industries and illustrates that the utility industry is one of the least risky industries in the U.S. market.²⁴

**Figure 5:
Beta by Industry**



The fact that utilities are defensive firms that are exposed to little market risk is beneficial to society. When the business cycle enters a recession, consumers can be assured

²³ *Id.* at 383.

²⁴ See Betas by Sector (US) available at <http://pages.stern.nyu.edu/~adamodar/> (2018). (After clicking the link, click “Data” then “Current Data” then “Risk / Discount Rate” from the drop down menu, then “Total Beta by Industry Sector”). The exact beta calculations are not as important as illustrating the well-known fact that utilities are very low-risk companies. The fact that the utility industry is one of the lowest risk industries in the country should not change from year to year.

1 that their utility companies will be able to maintain normal business operations and provide
2 safe and reliable service under efficient management. Likewise, utility investors can be
3 confident that utility stock prices will not widely fluctuate. So, while it is recognized and
4 accepted that utilities are defensive firms that experience little market risk and are relatively
5 insulated from market conditions, this fact should also be appropriately reflected in the
6 City's awarded return.

7 **VI. DISCOUNTED CASH FLOW ANALYSIS**

8 **Q. Describe the DCF Model.**

9 A. The DCF Model is based on a fundamental financial model called the "dividend discount
10 model," which maintains that the value of a security is equal to the present value of the
11 future cash flows it generates.²⁵ Cash flows from common stock are paid to investors in
12 the form of dividends. There are several variations of the DCF Model. These versions,
13 along with other formulas and theories related to the DCF Model, are discussed in more
14 detail in Appendix A.

15 **Q. Describe the inputs to the DCF Model.**

16 A. There are three primary inputs in the DCF Model: (1) stock price; (2) dividend; and (3) the
17 long-term growth rate. The stock prices and dividends are known inputs based on recorded
18 data, while the growth rate projection must be estimated. I discuss each of these inputs
19 separately below.

²⁵ Present value (PV) is the current value of a future sum of money or stream of cash flows given a specified rate of return. Present value takes the future value and applies a discount rate or the interest rate that could be earned if invested.

1 **A. Stock Price**

2 **Q. How did you determine the stock price input of the DCF Model?**

3 A. For the stock price (P_0), I used a 30-day average of stock prices for each company in the
4 proxy group.²⁶ Analysts sometimes rely on average stock prices for longer periods (e.g.,
5 60, 90, or 180 days). According to the efficient market hypothesis, however, markets
6 reflect all relevant information available at a particular time, and prices adjust
7 instantaneously to the arrival of new information.²⁷ Past stock prices, in essence, reflect
8 outdated information. The DCF Model used in utility rate cases is a derivation of the
9 dividend discount model, which is used to determine the current value of an asset. Thus,
10 according to the dividend discount model and the efficient market hypothesis, the value for
11 the “ P_0 ” term in the DCF Model should technically be the current stock price, rather than
12 an average.

13 **Q. Why did you use a 30-day average for the current stock price input?**

14 A. Using a short-term average of stock prices for the current stock price input adheres to
15 market efficiency principles while avoiding any irregularities that may arise from using a
16 single current stock price. In the context of a utility rate proceeding, there is a significant
17 length of time between when an application is filed and when testimony is due. Choosing
18 a current stock price for one particular day could raise a separate issue concerning which

²⁶ Exhibit DJG-3.

²⁷ See Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, Vol. 25, No. 2 The Journal of Finance, p. 383 (1970); see also John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do*, p. 357 (3rd ed., South Western Cengage Learning 2010). The efficient market hypothesis was formally presented by Eugene Fama in 1970 and is a cornerstone of modern financial theory and practice.

1 day was chosen to be used in the analysis. In addition, a single stock price on a particular
2 day may be unusually high or low. It is arguably ill-advised to use a single stock price in
3 a model that is ultimately used to set rates for several years, especially if a stock is
4 experiencing some volatility. Thus, it is preferable to use a short-term average of stock
5 prices, which represents a good balance between adhering to well-established principles of
6 market efficiency while avoiding any unnecessary contentions that may arise from using a
7 single stock price on a given day. The stock prices I used in my DCF analysis are based
8 on 30-day averages of adjusted closing stock prices for each company in the proxy group.²⁸

9 **B. Dividend**

10 **Q. Describe how you determined the dividend input of the DCF Model.**

11 A. The dividend term in the DCF Model represents dividends per share (d_0). I used forward-
12 looking annualized dividends published by Yahoo! Finance for the dividend input to my
13 constant growth DCF Model.²⁹ Dividing these dividends by the stock prices for each proxy
14 company results in the dividend yield for each company.³⁰

15 **Q. Are the stock price and dividend inputs for each proxy company a significant issue in**
16 **this case?**

17 A. No. Although my stock price and dividend inputs are more recent than those used by Mr.
18 Walker, there is not a statistically significant difference between them because utility stock
19 prices and dividends are generally quite stable. This is another reason that cost of capital

²⁸ Exhibit DJG-3. Adjusted closing prices, rather than actual closing prices, are ideal for analyzing historical stock prices. The adjusted price provides an accurate representation of the firm's equity value beyond the mere market price because it accounts for stock splits and dividends.

²⁹ Exhibit DJG-4.

³⁰ *Id.*

models such as the CAPM and the DCF Model are well-suited to be conducted on utilities. The differences between my DCF Model and Mr. Walker's DCF Model are primarily driven by differences in our growth rate estimates, which are further discussed below.

C. Growth Rate

Q. Please summarize the growth rate input in the DCF Model.

A. The most critical input in the DCF Model is the growth rate. Unlike the stock price and dividend inputs, the growth rate input (g) must be estimated. As a result, the growth rate is often the most contentious issue related to DCF model inputs in utility rate cases. The DCF model used in this case is based on the sustainable growth valuation model. Under this model, a stock is valued by the present value of its future cash flows in the form of dividends. Before future cash flows are discounted by the cost of equity, however, they must be "grown" into the future by a sustainable growth rate. As stated above, one of the inherent assumptions of this model is that these cash flows in the form of dividends grow at a sustainable rate forever. For young, high-growth firms, estimating the growth rate to be used in the model can be especially difficult, and may require the use of multi-stage growth models. For mature, low-growth firms such as utilities, however, estimating the sustainable growth rate is more transparent. The growth term of the DCF Model is one of the most important, yet least understood, aspects of cost of equity estimations in utility regulatory proceedings. I provide a more detailed explanation on the various determinants of growth below.

1 **Q. Describe the various determinants of growth that can be considered for the growth**
2 **rate input in the DCF Model.**

3 A. Although the DCF Model directly considers the growth of dividends, there are a variety of
4 growth determinants that should be considered when estimating growth rates. It should be
5 noted that these various growth determinants are used primarily to determine the short-
6 term growth rates in multi-stage DCF models. For utility companies, it is necessary to
7 focus primarily on a long-term growth rate in dividends. This is also known as a
8 “sustainable” growth rate, since this is the growth rate assumed for the company’s
9 dividends in perpetuity. That is not to say that these growth determinants cannot be
10 considered when estimating sustainable growth; however, as discussed below, sustainable
11 growth must be constrained much more than short-term growth, especially for young firms
12 with high growth opportunities. Additionally, I briefly discuss these growth determinants
13 here because it may reveal some of the sources of confusion in this area.

14 (1) Historical Growth

15 Looking at a firm’s actual historical experience may theoretically provide a good
16 starting point for estimating short-term growth. However, past growth is not always a good
17 indicator of future growth. Some metrics that might be considered here are a historical
18 growth in revenues, operating income, and net income. Since dividends are paid from
19 earnings, estimating historical earnings growth may provide an indication of future
20 earnings and dividend growth.

21 (2) Analyst Growth Rates

22 Analyst growth rates refer to short-term projections of earnings growth published
23 by institutional research analysts such as Value Line and Bloomberg. Analyst growth rates,

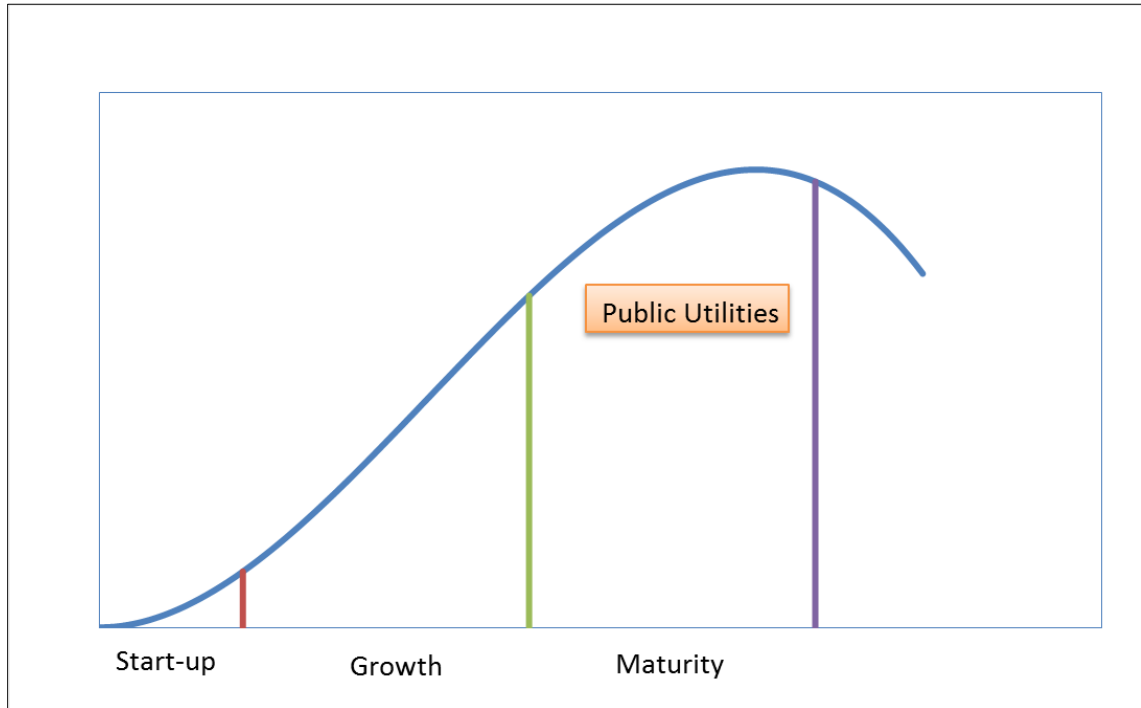
1 including the limitations with using them in the DCF Model to estimate utility cost of
2 equity, are discussed in more detail below.

3 (3) Sustainable Growth Rates

4 In order to make the DCF Model a viable, practical model, an infinite stream of
5 future cash flows must be estimated and then discounted back to the present. Otherwise,
6 each annual cash flow would have to be estimated separately. Some analysts use “multi-
7 stage” DCF Models to estimate the value of high-growth firms through two or more stages
8 of growth, with the final stage of growth being sustainable. However, it is not necessary
9 to use multi-stage DCF Models to analyze the cost of equity of regulated utility companies.
10 This is because regulated utilities are already in their “sustainable,” low growth stage.
11 Unlike most competitive firms, the growth of regulated utilities is constrained by physical
12 service territories and limited primarily by ratepayer and load growth within those
13 territories. The figure below illustrates the well-known business/industry life-cycle pattern.

1
2

**Figure 6:
Industry Life Cycle**



3 In an industry's early stages, there are ample opportunities for growth and profitable
4 reinvestment. In the maturity stage however, growth opportunities diminish, and firms
5 choose to pay out a larger portion of their earnings in the form of dividends instead of
6 reinvesting them in operations to pursue further growth opportunities. Once a firm is in
7 the maturity stage, it is not necessary to consider higher short-term growth metrics in multi-
8 stage DCF Models; rather, it is sufficient to analyze the cost of equity using a stable growth
9 DCF Model with one sustainable growth rate.

1 **Q. Is the aggregate growth rate of the economy typically a limiting factor for the terminal**
2 **growth rate in the DCF Model?**

3 A. Yes. A fundamental concept in finance is that no firm can grow forever at a rate higher
4 than the growth rate of the economy in which it operates.³¹ Thus, the terminal growth rate
5 used in the DCF Model should not exceed the aggregate economic growth rate. This is
6 especially true when the DCF Model is conducted on public utilities because these firms
7 have defined service territories. As stated by Dr. Damodaran: “[i]f a firm is a purely
8 domestic company, either because of internal constraints . . . or external constraints (such
9 as those imposed by a government), the growth rate in the domestic economy will be the
10 limiting value.”³²

11 In fact, it is reasonable to assume that a regulated utility would grow at a rate that
12 is less than the U.S. economic growth rate. Unlike competitive firms, which might increase
13 their growth by launching a new product line, franchising, or expanding into new and
14 developing markets, utility operating companies with defined service territories cannot do
15 any of these things to grow. Gross Domestic Product (“GDP”) is one of the most widely
16 used measures of economic production and is used to measure aggregate economic growth.
17 According to the Congressional Budget Office’s Budget Outlook, the long-term forecast
18 for nominal U.S. GDP growth is 3.7%.³³ For mature companies in mature industries, such
19 as utility companies, the terminal growth rate should not exceed nominal GDP growth.

³¹ See Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 306 (3rd ed., John Wiley & Sons, Inc. 2012).

³² Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 306 (3rd ed., John Wiley & Sons, Inc. 2012).

³³ Congressional Budget Office Long-Term Budget Outlook, <https://www.cbo.gov/publication/59014>.

1 **Q. Did you also consider a variation of the DCF Model that incorporates analysts'**
2 **growth rate projections?**

3 A. Yes. In this case, I present the results of analyst growth variation of my DCF Model
4 because it is commonly presented in rate proceedings and considered by regulators when
5 assessing a utility's authorized ROE.

6 **Q. Please describe the results of your DCF Models?**

7 A. For my DCF Models, I considered two variations: one using analysts' growth rates and
8 one using the maximum sustainable growth rate. The results of these models are 9.2% and
9 6.7%, respectively.

10 **D. Response to Mr. Walker's DCF Model**

11 **Q. Please summarize the results of Mr. Walker's DCF analyses.**

12 A. Mr. Walker's DCF Model produced results as high as 9.9%.³⁴

13 **Q. Does the result of Mr. Walker's DCF Model indicate a reasonable cost of equity**
14 **estimate for the City?**

15 A. No. The primary reason Mr. Walker's DCF results are overstated is his use of
16 unsustainably high growth rates for the proxy group. Mr. Walker considered average
17 growth rates as high as 15.8% for individual companies in the proxy group, and average
18 growth rates as high as 8.3%.³⁵ A growth rate of 15.8% is more than four times the
19 projected annual growth rate of the U.S. economy over the long-run. Even his overall
20 growth rate of 8.1% is more than two times projected U.S. GDP growth. The analysts who
21 publish projected growth rates in dividends and earnings are estimating the growth rate

³⁴ Direct Testimony of Harold Walker, p. 52, lines 6-10.

³⁵ See Direct Testimony of Harold Walker, III, Sch. 13.

1 over the next few years (i.e., short-term growth). It is Mr. Walker who is incorporating
2 these short-term growth rates as perpetual growth rates into his DCF Model. Growth rates
3 that significantly exceed U.S. GDP growth are simply not sustainable. As a result, Mr.
4 Walker's DCF Model results overstate the City's cost of equity.

5 VII. CAPITAL ASSET PRICING MODEL ANALYSIS

6 Q. Please describe the CAPM.

7 A. The CAPM is a market-based model founded on the principle that investors expect higher
8 returns for incurring additional risk.³⁶ The CAPM estimates this expected return. The
9 various assumptions, theories, and equations involved in the CAPM are discussed further
10 in Appendix B. Using the CAPM to estimate the cost of equity of a regulated utility is
11 consistent with the legal standards governing the fair rate of return. The U.S. Supreme
12 Court has recognized that "the amount of *risk* in the business is a most important factor"
13 in determining the allowed rate of return,³⁷ and that "the return to the equity owner should
14 be commensurate with returns on investments in other enterprises having corresponding
15 *risks*."³⁸ The CAPM is a useful model because it directly considers the amount of risk
16 inherent in a business and directly measures the most important component of a fair rate of
17 return analysis: Risk.

³⁶ William F. Sharpe, *A Simplified Model for Portfolio Analysis*, pp. 277-93 (Management Science IX 1963); *see also* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do*, p. 208 (3rd ed., South-Western Cengage Learning 2010).

³⁷ *Wilcox*, 212 U.S. at 48 (emphasis added).

³⁸ *Hope Natural Gas Co.*, 320 U.S. at 603 (emphasis added).

1 **Q. Describe the inputs for the CAPM.**

2 A. The basic CAPM equation requires only three inputs to estimate the cost of equity: (1) the
3 risk-free rate; (2) the beta coefficient; and (3) the equity risk premium. Each input is
4 discussed separately below.

5 **A. The Risk-Free Rate**

6 **Q. Please explain the risk-free rate.**

7 A. The first term in the CAPM is the risk-free rate (R_F). The risk-free rate is simply the level
8 of return investors can achieve without assuming any risk. The risk-free rate represents the
9 bare minimum return that any investor would require on a risky asset. Even though no
10 investment is technically devoid of risk, investors often use U.S. Treasury securities to
11 represent the risk-free rate because they accept that those securities essentially contain no
12 default risk. The Treasury issues securities with different maturities, including short-term
13 Treasury Bills, intermediate-term Treasury Notes, and long-term Treasury Bonds.

14 **Q. Is it preferable to use the yield on long-term Treasury bonds for the risk-free rate in**
15 **the CAPM?**

16 A. Yes. In valuing an asset, investors estimate cash flows over long periods of time. Common
17 stock is viewed as a long-term investment, and the cash flows from dividends are assumed
18 to last indefinitely. As a result, short-term Treasury bill yields are rarely used in the CAPM
19 to represent the risk-free rate. Short-term rates are subject to greater volatility and thus can
20 lead to unreliable estimates. Instead, long-term Treasury bonds are usually used to
21 represent the risk-free rate in the CAPM. I considered a 30-day average of daily Treasury

yield curve rates on 30-year Treasury bonds in my risk-free rate estimate, which resulted in a risk-free rate of 4.66%.³⁹

B. The Beta Coefficient

Q. How is the beta coefficient used in this model?

A. As discussed above, beta represents the sensitivity of a given security to movements in the overall market. The CAPM states that in efficient capital markets, the expected risk premium on each investment is proportional to its beta. Recall that a security with a beta greater than 1.0 is riskier than the market portfolio. Conversely, a security with a beta less than one is less risky than the market portfolio. An index such as the S&P 500 Index is used as a proxy for the market portfolio. The historical betas for publicly traded firms are published by various institutional analysts. Beta may also be calculated through a linear regression analysis, which provides additional statistical information about the relationship between a single stock and the market portfolio. The market portfolio of all stocks has a beta equal to one. Stocks with betas greater than one are relatively more sensitive to market risk than the average stock. In contrast, stocks with betas of less than one are less sensitive to market risk.

Q. Describe the source for the betas you used in your CAPM analysis.

A. I used betas recently published by Value Line Investment Survey. The beta for each proxy company is less than 1.0, and the average beta for the total proxy group is 0.83.⁴⁰ Thus, we have an objective measure to prove the well-known concept that utility stocks are less

³⁹ Exhibit DJG-7.

⁴⁰ Exhibit DJG-8.

1 risky than the average stock in the market. While there is evidence suggesting that betas
2 published by sources such as Value Line may actually overestimate the risk of utilities (and
3 thus overestimate the CAPM), I used the betas published by Value Line in the interest of
4 reasonableness.⁴¹

5 C. The Equity Risk Premium

6 Q. Describe the equity risk premium.

7 A. The final term of the CAPM is the equity risk premium (“ERP”), which is the required
8 return on the market portfolio less the risk-free rate ($R_M - R_F$). In other words, the ERP is
9 the level of return investors expect above the risk-free rate in exchange for investing in
10 risky securities. Many experts agree that “the single most important variable for making
11 investment decisions is the equity risk premium.”⁴² Likewise, the ERP is arguably the
12 single most important factor in estimating the cost of capital in this matter. There are three
13 basic methods that can be used to estimate the ERP: (1) calculating a historical average;
14 (2) taking a survey of experts; and (3) calculating the implied ERP. I will discuss each
15 method in turn, noting advantages and disadvantages of these methods.

16 1. Historical Average

17 Q. Describe the historical equity risk premium.

18 A. The historical ERP may be calculated by simply taking the difference between returns on
19 stocks and returns on government bonds over a certain period of time. Many practitioners

⁴¹ See Appendix B for a more detailed discussion of raw beta calculations and adjustments.

⁴² Elroy Dimson, Paul Marsh & Mike Staunton, *Triumph of the Optimists: 101 Years of Global Investment Returns*, p. 4 (Princeton University Press 2002).

1 rely on the historical ERP as an estimate for the forward-looking ERP because it is easy to
2 obtain. However, there are disadvantages to relying on the historical ERP.

3 **Q. What are the limitations of relying solely on a historical average to estimate the**
4 **current or forward-looking ERP?**

5 A. Some investors may rely on the historic ERP because it is convenient and easy to calculate.
6 But what matters in the CAPM model is the current and forward-looking risk premium.⁴³
7 Some investors may think that a historic ERP provides some indication of what the
8 prospective risk premium is; however, there is empirical evidence to suggest the
9 prospective, forward-looking ERP is actually *lower* than the historical ERP. In a landmark
10 publication on risk premiums around the world, *Triumph of the Optimists*, the authors
11 suggest through extensive empirical research that the prospective ERP is lower than the
12 historical ERP.⁴⁴ This is due in large part to what is known as “survivorship bias” or
13 “success bias” — a tendency for failed companies to be excluded from historical indices.⁴⁵
14 From their extensive analysis, the authors make the following conclusion regarding the
15 prospective ERP:

⁴³ John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do*, p. 330 (3rd ed., South-Western Cengage Learning 2010).

⁴⁴ Elroy Dimson, Paul Marsh & Mike Staunton, *Triumph of the Optimists: 101 Years of Global Investment Returns*, p. 34 (Princeton University Press 2002).

⁴⁵ *Id.* at 194.

1 The result is a forward-looking, geometric mean risk premium for the
2 United States . . . of around 2½ to 4 percent and an arithmetic mean risk
3 premium . . . that falls within a range from a little below 4 to a little above
4 5 percent.⁴⁶

5 Indeed, these results are lower than many reported historical risk premiums. Other noted
6 experts agree:

7 The historical risk premium obtained by looking at U.S. data is biased
8 upwards because of survivor bias. . . The true premium, it is argued, is
9 much lower. This view is backed up by a study of large equity markets over
10 the twentieth century (*Triumph of the Optimists*), which concluded that the
11 historical risk premium is closer to 4%.⁴⁷

12 Regardless of the variations in historic ERP estimates, many leading scholars and
13 practitioners agree that simply relying on a historic ERP to estimate the risk premium going
14 forward is not ideal. Fortunately, “a naïve reliance on long-run historical averages is not
15 the only approach for estimating the expected risk premium.”⁴⁸

16 **Q. Did you rely on the historical ERP as part of your CAPM analysis in this case?**

17 A. No. Due to the limitations of this approach, I primarily relied on the ERP reported in expert
18 surveys and the implied ERP method discussed below.

19 **2. Expert Surveys**

20 **Q. Describe the expert survey approach to estimating the ERP.**

21 A. As its name implies, the expert survey approach to estimating the ERP involves conducting
22 a survey of experts including professors, analysts, chief financial officers, and other

⁴⁶ *Id.*

⁴⁷ Aswath Damodaran, *Equity Risk Premiums: Determinants, Estimation and Implications – The 2015 Edition*, p. 17 (New York University 2015).

⁴⁸ John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do*, p. 330 (3rd ed., South Western Cengage Learning 2010).

executives around the country and asking them what they think the ERP is. The IESE Business School conducts such a survey each year. Its 2025 expert survey reported an average ERP of 5.5%.⁴⁹

3. Implied Equity Risk Premium

Q. Describe the implied equity risk premium approach.

A. The third method of estimating the ERP is arguably the best. The implied ERP relies on the stable growth model proposed by Gordon, often called the “Gordon Growth Model,” which is a basic stock valuation model that has been widely used in finance for many years.⁵⁰ This model is a mathematical derivation of the DCF Model. In fact, the underlying concept in both models is the same: The current value of an asset is equal to the present value of its future cash flows. Instead of using this model to determine the discount rate of one company, we can use it to determine the discount rate for the entire market by substituting the inputs of the model. Specifically, instead of using the current stock price (P_0), we will use the current value of the S&P 500 (V_{500}). Instead of using the dividends of a single firm, we will consider the dividends paid by the entire market. Additionally, we should consider potential dividends. In other words, stock buybacks should be considered in addition to paid dividends, as stock buybacks represent another way for the firm to transfer free cash flow to shareholders. Focusing on dividends alone without considering stock buybacks could understate the cash flow component of the model, and

⁴⁹ Pablo Fernandez, et al., *Survey: Market Risk Premium and Risk-Free Rate used for 54 countries in 2025* (IESE Business School 2024), copy available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5260463
IESE Business School is the graduate business school of the University of Navarra.

⁵⁰ Myron J. Gordon and Eli Shapiro, *Capital Equipment Analysis: The Required Rate of Profit* 102-10 (Management Science Vol. 3, No. 1 Oct. 1956).

ultimately understate the implied ERP. The market dividend yield plus the market buyback yield gives us the gross cash yield to use as our cash flow in the numerator of the discount model. This gross cash yield is increased each year over the next five years by the growth rate. These cash flows must be discounted to determine their present value. The discount rate in each denominator is the risk-free rate (R_F) plus the discount rate (K). Equation 1 below shows how the implied return is calculated. Since the current value of the S&P is known, we can solve for K , the implied market return.⁵¹

**Equation 1:
Implied Market Return**

$$V_{500} = \frac{CY_1(1+g)^1}{(1+R_F+K)^1} + \frac{CY_2(1+g)^2}{(1+R_F+K)^2} + \dots + \frac{CY_5(1+g)^5 + TV}{(1+R_F+K)^5}$$

where:

V_{500}	=	current value of index (S&P 500)
CY_{1-5}	=	average cash yield over last five years (includes dividends and buybacks)
g	=	compound growth rate in earnings over last five years
R_F	=	risk-free rate
K	=	implied market return (this is what we are solving for)
TV	=	terminal value = $CY_5 (1+R_F) / K$

The discount rate is called the “implied” return because it is based on the current value of the index as well as the value of free cash flow to investors projected over the next five years. Thus, based on these inputs, the market is “implying” the expected return; or in other words, based on the current value of all stocks (the index price) and the projected value of future cash flows, the market is telling us the return expected by investors for investing in the market portfolio. After solving for the implied market return (K), we

⁵¹ See Exhibit DJG-9 for detailed calculation.

1 simply subtract the risk-free rate from it to arrive at the implied ERP as shown in the
2 following equation.

3 **Equation 2:**
4 **Implied Equity Risk Premium**

5
$$\text{Implied Expected Market Return} - R_F = \text{Implied ERP}$$

6 **Q. Discuss the results of your implied ERP calculation.**

7 A. After collecting data for the index value, operating earnings, dividends, and buybacks for
8 the S&P 500 over the past six years, I calculated the dividend yield, buyback yield, and
9 gross cash yield for each year. I also calculated the compound annual growth rate (g) from
10 operating earnings. I used these inputs, along with the risk-free rate and current value of
11 the index to calculate a current required return on the U.S. equity market of 9.7%. I
12 subtracted the risk-free rate to arrive at the implied equity risk premium of 5.0%.⁵² Dr.
13 Damodaran, one of the world's leading experts on the ERP, promotes the implied ERP
14 method discussed above. He calculates monthly and annual implied ERPs with this method
15 and publishes his results. Dr. Damodaran's average ERP estimate for December 2025
16 using several implied ERP variations was 4.2%.⁵³ Additionally, Kroll (formerly Duff &
17 Phelps) recently published an ERP estimate of 5.0%.⁵⁴

18 **Q. What are the results of your final ERP estimate?**

19 A. For the final ERP estimate I used in my CAPM analysis, I considered the results of the
20 ERP surveys, the estimated ERP reported by Kroll, the estimated ERP calculated by Dr.

⁵² *Id.*

⁵³ <http://pages.stern.nyu.edu/~adamodar/>

⁵⁴ Kroll, Cost of Capital Inputs Updated to Reflect Heightened Uncertainty in Global Economy (April 15, 2025).

Damodaran, and the implied ERP based on my calculations.⁵⁵ The results are presented in the following figure:

**Figure 7:
Equity Risk Premium Results**

IESE Business School Survey	5.5%
Kroll (Duff & Phelps) Report	5.0%
Damodaran (average)	4.2%
Garrett	5.0%
Average	4.9%

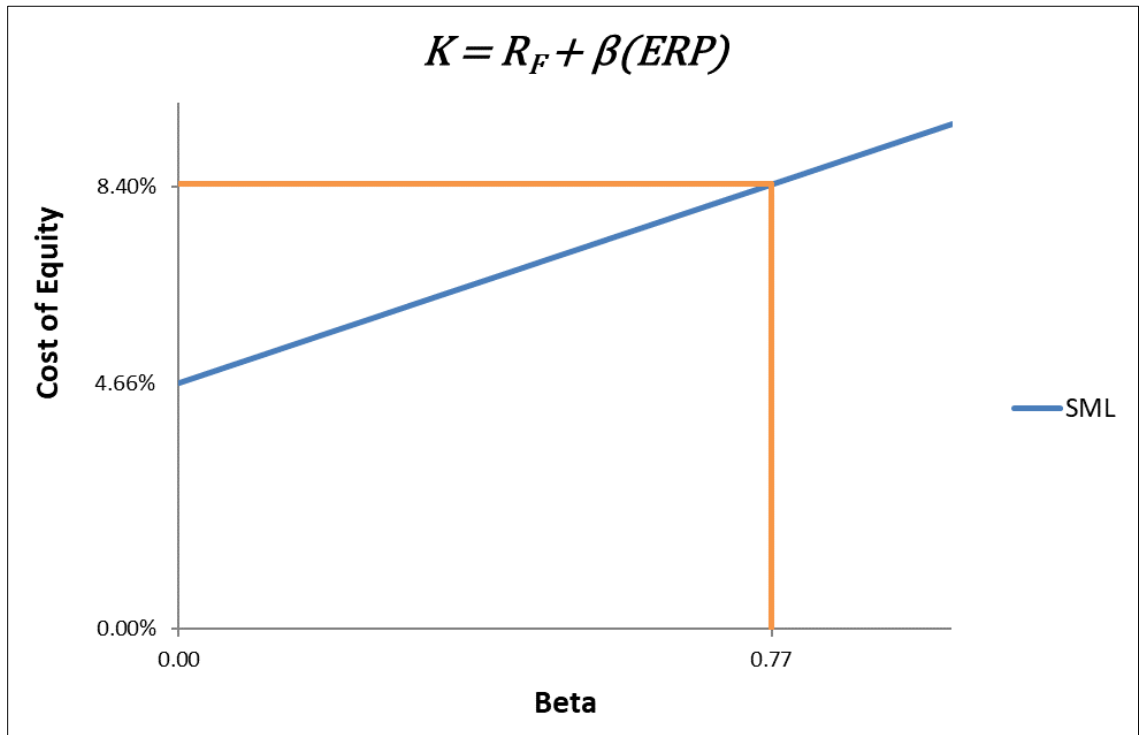
I used the average ERP of 4.9% from these sources in my CAPM.

Q. Please explain the final results of your CAPM analysis.

A. Using the inputs for the risk-free rate, beta, and equity risk premium discussed above, I estimate that the City's CAPM cost of equity is 8.4%. The CAPM can be displayed graphically through what is known as the Security Market Line ("SML"). The figure below shows the expected return (cost of equity) on the y-axis, and the average beta for the proxy group on the x-axis. The SML intercepts the y-axis at the level of the risk-free rate. The slope of the SML is the equity risk premium.

⁵⁵ See also Exhibit DJG-10.

1
2
**Figure 8:
CAPM Graph**



3 The SML provides the rate of return that will compensate investors for the beta risk of that
4 investment. Thus, at an average beta of 0.77 for the proxy group, the CAPM result is 8.4%.

5 **D. Response to Mr. Walker's CAPM Analysis**

6 **Q. Please summarize the results of Mr. Walker's CAPM analysis**

7 A. Mr. Walker's CAPM analysis produced results as high as 12.2%.⁵⁶ In addition to the
8 CAPM, Mr. Walker also conducted another type of risk premium analysis which produced
9 a result as high as 11.2%.⁵⁷

⁵⁶ Direct Testimony of Harold Walker, III, Sch. 19.

⁵⁷ *Id.*

1 **Q. Do the results of Mr. Walker's CAPM and other risk premium analyses indicate a**
2 **reasonable cost of equity estimate for the City?**

3 A. No. The primary factors which cause Mr. Walker's CAPM result to be unreasonably high
4 is his use of an unreasonably high ERP estimate. Mr. Walker's other risk premium analysis
5 is not a valid cost of equity model, and it relies on outdated information. I discuss these
6 issues in more detail below.

7 **1. Equity Risk Premium**

8 **Q. Did Mr. Walker rely on a reasonable measure for the ERP?**

9 A. No, he did not. Mr. Walker used an ERP estimate as high as 9.0% in his CAPM analysis.⁵⁸
10 The ERP is one of three inputs in the CAPM equation, and it is one of the most important
11 factors for estimating the cost of equity in this case. As discussed above, I used three
12 widely accepted methods for estimating the ERP, including consulting expert surveys,
13 calculating the implied ERP based on aggregate market data, and considering the ERPs
14 published by reputable analysts. The average ERP calculated from my research is only
15 4.9%.

16 **Q. Please discuss and illustrate how Mr. Walker's ERP compares with other estimates**
17 **for the ERP.**

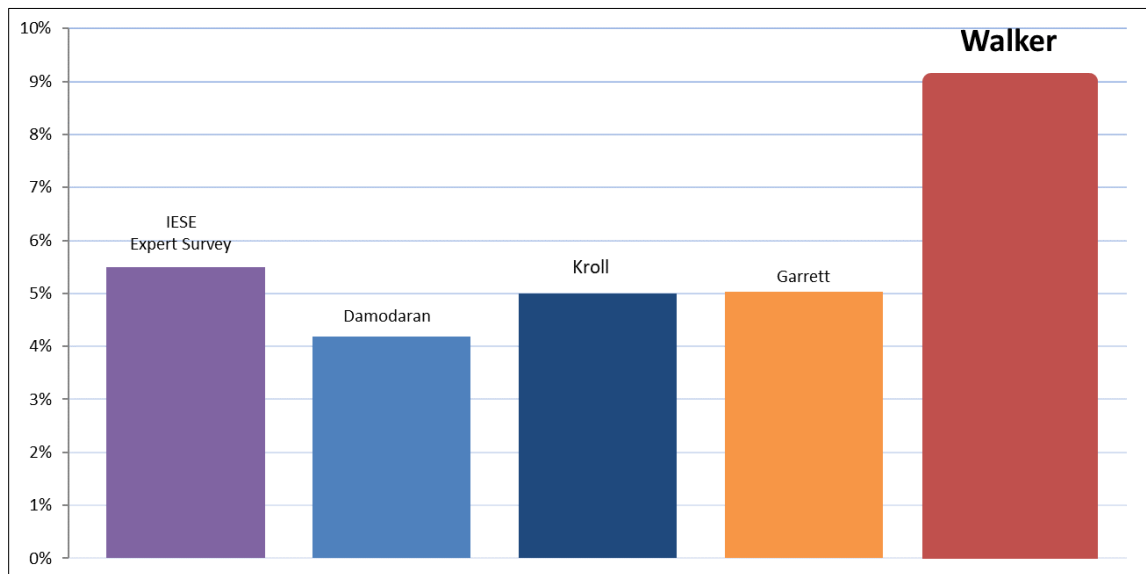
18 A. The 2025 IESE Business School expert survey reports an average ERP of 5.5%. Similarly,
19 Kroll (formerly Duff & Phelps) recently estimated an ERP of 5.0%. Dr. Damodaran, one
20 of the leading experts on the ERP, recently estimated an ERP of only 4.2%.⁵⁹ The chart in

⁵⁸ *Id.* at Sch. 17.

⁵⁹ Aswath Damodaran, *Implied Equity Risk Premium Update*, DAMODARAN ONLINE, <http://pages.stern.nyu.edu/~adamodar/>. Dr. Damodaran estimates several ERPs using various assumptions.

1 the following figure illustrates that Mr. Walker's ERP estimate higher than other
2 reasonable, objective estimates for the ERP.⁶⁰

3 **Figure 9:**
4 **Equity Risk Premium Comparison**



5 When compared with other independent sources for the ERP, as well as my estimate, Mr.
6 Walker's ERP estimate is clearly too high. In fact, it is more than 400 basis points above
7 the average ERP from the other sources I relied on. This factor contributes to Mr. Walker's
8 CAPM results being overstated.

9 **2. Other Risk Premium Analysis**

10 **Q. Please describe Mr. Walker's other risk premium analysis in addition to the CAPM.**

11 A. In addition to the CAPM, which is a risk premium model, Mr. Walker also conducted
12 another type of risk premium model which ultimately produced a result as high as 11.2%.⁶¹

⁶⁰ The ERP estimated by Dr. Damodaran is the highest of several ERP estimates under slightly differing assumptions.

⁶¹ Direct Testimony of Harold Walker, III, Sch. 19.

1 **Q. Does the result of Mr. Walker’s risk premium model indicate a reasonable cost of**
2 **equity for the City?**

3 A. No. First, Mr. Walker’s personal risk premium model adds no marginal value to estimating
4 cost of equity beyond the CAPM – a risk premium mode that resulted in a Nobel Prize in
5 economics and has been used by investors, managers, and analysts around the world for
6 decades. Furthermore, Mr. Walker’s risk premium model considers data from 1928, which
7 is clearly obsolete for the purpose of estimating the City’s current and forward-looking cost
8 of equity.⁶² This contradicts Mr. Walker’s acknowledgement that cost of equity is a
9 forward-looking process.⁶³ Indeed, the process of estimating the cost of equity is
10 inherently current and forward-looking. It may be helpful to look at a relatively short
11 period in the past to help project future market indicators (such as 30 days of stock prices
12 in the DCF Model, or a few years of market operating earnings for the ERP). However,
13 market data which predates the Great Depression is simply not relevant for estimating the
14 City’s cost of equity in 2025. For all of these reasons, the Commission should simply reject
15 the results of Mr. Walker’s risk premium model and focus on the results of the CAPM and
16 DCF Model presented in this case.

17 **VIII. RATE OF RETURN CONCLUSION**

18 **Q. Please summarize your analyses and conclusions regarding the City’s cost of equity.**

19 A. A utility’s awarded ROE should be based on its cost of equity, which can be estimated
20 using various financial models. In estimating the City’s cost of equity, I performed a cost

⁶² *Id.* at Exhibit VVR-12, page 6.

⁶³ *Id.* at Sch. 18.

of equity analysis on a proxy group of utility companies using the two most widely used and widely-accepted financial models for calculating cost of equity in utility rate proceedings: the CAPM and DCF Model. I conducted two variations of both the CAPM and DCF Model. The results are shown in the figure below.

**Figure 10:
Cost of Equity Model Summary**

Model	Cost of Equity
CAPM (at Proxy Debt Ratio)	8.4%
DCF Model (Analyst Growth)	9.2%
DCF Model (Sustainable Growth)	6.7%
Average (CAPM and Analyst-Growth DCF)	8.8%
Recommended ROE	8.8%

Q. Please summarize your recommendation to the Commission regarding the City's authorized rate of return.

A. I am recommending an authorized ROE of 8.8% for the City. This rate is equivalent to the average result of my CAPM and the analyst-growth variation of my DCF Model.

Q. Please summarize your rate of return recommendation.

A. My recommendations are summarized in the following table.

1
2

**Figure 11:
Awarded Rate of Return Recommendation**

<u>Capital Component</u>	<u>Proposed Ratio</u>	<u>Cost Rate</u>	<u>Weighted Cost</u>
Debt	47.0%	4.20%	1.97%
Fund Equity	<u>53.0%</u>	8.80%	<u>4.66%</u>
Total	100.0%		6.64%

3
4

As shown in this figure, adopting my proposed ROE would result in a weighted average authorized rate of return of 6.64%.

1 **PART TWO: DEPRECIATION**

2 **IX. REGULATORY STANDARDS**

3 **Q. Please discuss the standard by which regulated utilities are allowed to recover**
4 **depreciation expense.**

5 A. In *Lindheimer v. Illinois Bell Telephone Co.*, the U.S. Supreme Court stated “depreciation
6 is the loss, not restored by current maintenance, which is due to all the factors causing the
7 ultimate retirement of the property. These factors embrace wear and tear, decay,
8 inadequacy, and obsolescence.”⁶⁴ The *Lindheimer* Court also recognized that the original
9 cost of plant assets, rather than present value or some other measure, is the proper basis for
10 calculating depreciation expense.⁶⁵ Moreover, the *Lindheimer* Court found:

11 [T]he company has the burden of making a convincing showing that the
12 amounts it has charged to operating expenses for depreciation have not been
13 excessive. That burden is not sustained by proof that its general accounting
14 system has been correct. The calculations are mathematical, but the
15 predictions underlying them are essentially matters of opinion.⁶⁶

16 Thus, the Commission must ultimately determine if the City has met its burden of proof by
17 making a convincing showing that its proposed depreciation rates are not excessive.

⁶⁴ *Lindheimer v. Illinois Bell Tel. Co.*, 292 U.S. 151, 167 (1934).

⁶⁵ *Id.* (Referring to the straight-line method, the *Lindheimer* Court stated that “[a]ccording to the principle of this accounting practice, the loss is computed upon the actual cost of the property as entered upon the books, less the expected salvage, and the amount charged each year is one year’s pro rata share of the total amount.”). The original cost standard was reaffirmed by the Court in *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591, 606 (1944). The *Hope* Court stated: “Moreover, this Court recognized in [*Lindheimer*], *supra*, the propriety of basing annual depreciation on cost. By such a procedure the utility is made whole and the integrity of its investment maintained. No more is required.”

⁶⁶ *Id.* at 169.

1 **A. Depreciation System**

2 **Q. Please discuss the definition and general purpose of a depreciation system, as well as**
3 **the specific depreciation system you employed for this project.**

4 A. The legal standards set forth above do not mandate a specific procedure for conducting
5 depreciation analysis. These standards, however, direct that analysts use a system for
6 estimating depreciation rates that will result in the “systematic and rational” allocation of
7 capital recovery for the utility. Over the years, analysts have developed “depreciation
8 systems” designed to analyze grouped property in accordance with this standard. A
9 depreciation system may be defined by several primary parameters, including: 1) a method
10 of allocation; 2) a procedure for applying the method of allocation; 3) a technique of
11 applying the depreciation rate; and 4) a model for analyzing the characteristics of vintage
12 property groups.⁶⁷ In this case, I used the straight-line method, the average life group
13 procedure, the remaining life technique, and the broad group model.⁶⁸

14 **Q. Did both Mr. Spanos and you use the same depreciation system?**

15 A. No. Pertinently, Mr. Spanos used the Equal Life Group (“ELG”) method instead of the
16 average life group (“ALG”) method. I discuss the differences between these methods in
17 more detail below.

⁶⁷ See Wolf & W. Chester Fitch, *Depreciation Systems* 70, 140 (Iowa State University Press 1994).

⁶⁸ See Appendix C for further discussion. The depreciation system will ultimately be used to develop depreciation rates. The depreciation rate is applied to the plant balance for each account to calculate the annual depreciation expense charged to customers. This is a different concept than the accumulated depreciation balance, or depreciation “reserve.” The depreciation reserve acts as a reduction to rate base.

1 **B. Average Life vs Equal Life Method**

2 **Q. Explain the primary difference between the ALG and ELG methods.**

3 A. In the ALG method, a constant accrual rate based on the average life of all property in the
4 group is applied to the surviving property.⁶⁹ In the ELG method, property is divided into
5 subgroups that each have a common life. Pertinently, the ELG method results in higher
6 depreciation rates in the early years of a vintage's life. This fact is confirmed by
7 authoritative depreciation literature. According to Wolf:

8 When contrasted with the average life procedure, the equal life group
9 procedure results in annual accruals that are higher during the early years
10 and lower in the later years.⁷⁰

11 The NARUC Public Utility Depreciation Practices also makes the same conclusion about
12 the equal life procedure:

13 [T]he ELG method results in annual accruals that are higher during the early
14 years of a vintage's life, thereby causing an increase in depreciation expense
15 and revenue requirements during these years.⁷¹

16 In contrast, use of the average life results in the same depreciation rate applied to each age
17 interval.

18 **Q. Based on your experience in other regulatory jurisdictions and knowledge of the**
19 **industry, which method is more commonly used?**

20 A. In my experience, the ALG method is used by analysts and adopted by regulators in the
21 vast majority of jurisdiction and in the vast majority of cases.

⁶⁹ *Id.* at 74-75.

⁷⁰ *Id.* at 93 (emphasis added).

⁷¹ National Association of Regulatory Utility Commissioners, *Public Utility Depreciation Practices* 176 (NARUC 1996) (emphasis added).

1 **Q. Does Mr. Spanos typically use the ALG method in depreciation studies you have**
2 **reviewed?**

3 A. In the vast majority of cases in which I have reviewed Mr. Spanos's depreciation studies,
4 he uses the ALG method.

5 **Q. In the pending application of PPL Electric Utilities Corporation before the**
6 **Commission (Docket No. R-2025-3057164), is Mr. Spanos proposing depreciation**
7 **rates based on the ALG method?**

8 A. Yes, Mr. Spanos proposed ALG depreciation rates in PPL's pending application. Since it
9 is unlikely any intervening party will oppose the ALG method in that case, the Commission
10 will likely be adopting ALG depreciation rates in the PPL case.

11 **Q. Would the application of ELG depreciation rates in this case result in**
12 **intergenerational inequity to current customers?**

13 A. Yes, in my opinion it would. Essentially, under the ELG method, current customers would
14 pay a disproportionated higher share of costs relative to future customers. Proponents of
15 the ELG method often argue that the ELG method is better for customers in the long run
16 because the higher depreciation rates resulting from the ELG method have a decreasing
17 effect on rate base. Although it is technically correct that higher depreciation expense in
18 the present would, all else held constant, result in lower depreciation rates in the future,
19 that does not resolve the issue of intergenerational inequity for current customers. If paying
20 down rate base was the ultimate goal, then current customers could pay off the utility's
21 entire undepreciated plant balance now, and future customers would have much lower rates
22 for many years. That is mathematically accurate, but clearly inequitable.

1 **Q. In order to be applied correctly, would ELG depreciation rates need to be adjusted**
2 **every year?**

3 A. Yes. Unlike the ALG method, depreciation rates calculated under the ELG method would
4 need to be updated every year in order to be technically accurate. This concept is
5 highlighted further in the examples below.

6 **Q. Have you successfully argued for a change from the ELG method to ALG method in**
7 **another jurisdiction?**

8 A. Yes. In Duke Energy Indiana's ("DEI") 2020 rate case, the company proposed ELG
9 depreciation rates, which had been adopted by the Indiana commission in previous cases.

10 In that case, I and other parties argued that the ALG method should be used. The Indiana
11 Commission found as follows:

12 First, with respect to the question of whether the ELG or ALG method
13 should be used, we find the evidence presented by OUCC witness Mr.
14 Garrett and Industrial Group witness Mr. Andrews persuasive, as both
15 witnesses showed that the ELG method results in unreasonably high
16 depreciation rates. ALG depreciation rates result in systematical and
17 rational cost recovery with near term customer rate relief and full cost
18 recovery of utility investments. While we have determined in the past that
19 the ELG methodology was appropriate and acknowledge the weight given
20 to precedent in many prior decisions, we always evaluate each case as it
21 comes before us and do not need to approve the same methodology based
22 on prior decisions, especially in light of a changed landscape. The use of
23 ELG in a higher than average investment cycle has the effect of
24 unnecessarily increasing the near term depreciation expense as compared to
25 the use of ALG.⁷²

26 In the DEI case, the Commission correctly noted that the ELG method can result in
27 unreasonably high depreciation rates. In order for the ELG method to be properly applied,
28 a utility would need to revise depreciation each year. When a utility has made substantial,
29 recent capital investments, depreciation expense calculated under the ELG method will

⁷² Cause No. 45253, Order of the Commission, p. 90, (June 29, 2020).

1 always be higher than the expense calculated under the ALG method. The larger the
2 amount of the investments, the larger the discrepancy will be between the two procedures.

3 **Q. Are you aware of other Public Utility Commissions that have rejected the use of ELG?**

4 A. Yes. The Kentucky Public Service Commission ("Kentucky PSC") found that the ELG
5 procedure front-loads depreciation expense in earlier years and decreases it in the later
6 years of an asset's depreciation life, creating a mismatch of revenues and expenses. The
7 Kentucky PSC states reasoning for rejecting the ELG is as follows:

8 Duke Kentucky proposes, as part of developing its depreciation rates, the
9 continued use of the ELG procedure. The Attorney General recommends
10 the Commission adopt the ALG procedure in developing Duke Kentucky's
11 depreciation rates. The Attorney General contends that the ALG
12 methodology is the predominant method that is used in the electric industry
13 for developing depreciation rates. The Attorney General contends that,
14 under the ELG methodology, the capital recovery periods are accelerated
15 and shortened and, thus, the depreciation rates are greater than if the ALG
16 procedure was used. The Attorney General argues that the ALG procedure
17 is as accurate as the ELG procedure and the ALG procedure smooths the
18 data so that the depreciation rates for the group of assets tend to remain
19 constant. Use of the ALG procedure will result in a decrease in Duke
20 Kentucky's depreciation expense of \$6.920 million.

21 Duke Kentucky requested an increase in depreciation expense of \$6.920
22 million, based on its request to utilize the ELG procedure for computing
23 depreciation rates. As was discussed in the rate base section of this Order,
24 this Commission has found that the ELG procedure does not accurately
25 match revenues and expenses, is front-loaded, and Duke Kentucky is the
26 only Kentucky based utility that utilizes the ELG procedure for computing
27 depreciation rates.

28 Regulatory accounting requires the proper matching of revenues and
29 expense in order to produce fair, just and reasonable rates. The Commission
30 finds Duke Kentucky's proposed ELG procedure does not meet that criteria

and that Duke Kentucky's depreciation expense should be reduced by \$6.920 million.⁷³

Q. Please provide an example of how the ELG method results in higher depreciation rates in earlier years relative to the ALG method.

A. For the following illustration, assume a group of property containing two units, one with an original cost of \$4,000 and a 4-year life and the second with an original cost of \$6,000 and an 8-year life.⁷⁴ Thus, the average life of this group is 6.4 years.⁷⁵ Under the ALG method, the depreciation rate is 15.625% per year ($1/6.4 = 15.625\%$). The following table illustrates this example.

**Figure 1:
ALG Procedure**

Year	Balance	Retired	Rate	Annual Accrual	Accum. Deprec.
1974	10000		15.625%	1563	0
1975	10000		15.625%	1563	1563
1976	10000		15.625%	1563	3125
1977	10000	4000	15.625%	1563	4688
1978	6000		15.625%	938	2250
1979	6000		15.625%	938	3188
1980	6000		15.625%	938	4125
1981	6000	6000	15.625%	938	5063
1982	0				0

As shown in the annual accrual column above, the full \$10,000 is depreciated after eight years. Now, considering the same assumptions presented above, the following tables illustrate the same scenario except that the rate is calculated under the ELG method.

⁷³ In the Matter of: Electronic Application of Duke Energy Kentucky, Inc., Kentucky PSC, Order at pages 26-27, Case No. 2017-00321, (https://psc.ky.gov/pscscf/2017%20Cases/2017-00321//20180413_PSC_ORDER.pdf).

⁷⁴ See Wolf & W. Chester Fitch, *Depreciation Systems* 82 (Iowa State University Press 1994).

⁷⁵ $AL = [(\$4,000 \times 4) + (\$6,000 \times 8)] / \$10,000 = 6.4$ years.

1
2

**Figure 2:
ELG Procedure**

Year	Balance	Retired	Rate	Annual Accrual	Accum. Deprec.
1974	10000		17.50%	1750	0
1975	10000		17.50%	1750	1750
1976	10000		17.50%	1750	3500
1977	10000	4000	17.50%	1750	5250
1978	6000		12.50%	750	3000
1979	6000		12.50%	750	3750
1980	6000		12.50%	750	4500
1981	6000	6000	12.50%	750	5250
1982	0				0

3 As with the ALG example presented above, the full \$10,000 investment is still fully
4 depreciated after eight years. However, there are higher rates and accrual amounts during
5 the earlier years. The reason there is a 17.5% depreciation rate instead of a 15.625%
6 depreciation rate in the early years is because the two units in this group are treated
7 separately under the ELG method. The following table shows how the rates in this example
8 are calculated.

9
10

**Figure 3:
ELG Rate Development**

Group	Group Amount	Group Life	Group Rate	Annual Accrual	
				1974-77	1978-81
A	4000	4	25.00%	1000	
B	6000	8	12.50%	750	750
Annual accruals				1750	750
Balance during interval				10000	6000
Annual accrual rate %				17.50%	12.50%

1 This example is simplified in an attempt to explain the complexities of the ELG method.
2 In this example, the higher rate of 17.5% stayed the same for four years because there are
3 only two units in this simple example, and the rate drops to 12.5% after the first unit retires.

4 **Q. Please summarize your recommendation regarding the depreciation system that**
5 **should be used to calculate the City’s depreciation rates.**

6 A. As demonstrated above, the ALG method results in a fairer application of depreciation
7 rates compared to the ELG method given the realities of ratemaking proceedings. Mr.
8 Spanos’s decision to use the ELG method unnecessarily increases the *annual* depreciation
9 accrual charged to customers by approximately \$1.4 million. The depreciation “accrual”
10 is similar to the concept of depreciation “expense.” I use the term “accrual” to generally
11 describe the amount of dollars resulting from applying a depreciation rate to historical plant
12 balances as of the depreciation study date. The depreciation expense is the annual accrual
13 amount that will actually be charged to customers, and may be based on plant balances at
14 a different date. In other words, even if no other adjustments are made to the depreciation
15 study except the adoption of the majority-view ALG method, it would result in a decrease
16 of \$1.4 million to the City’s proposed annual depreciation accrual. The Commission
17 should adopt my proposed depreciation rates, which were calculated using the ALG
18 method.

19 **X. SERVICE LIFE ANALYSIS**

20 **Q. Describe the methodology used to estimate the service lives of grouped depreciable**
21 **assets.**

22 A. The process used to study industrial property retirement is rooted in the actuarial process
23 used to study human mortality. Just as actuarial analysts study historical human mortality

1 data to predict how long a group of people will live, depreciation analysts study historical
2 plant data to estimate the average lives of property groups. The most common actuarial
3 method used by depreciation analysts is called the “retirement rate method.” In the
4 retirement rate method, original property data, including additions, retirements, transfers,
5 and other transactions, are organized by vintage and transaction year.⁷⁶ The retirement rate
6 method is ultimately used to develop an “observed life table,” (“OLT”) which shows the
7 percentage of property surviving at each age interval. This pattern of property retirement
8 is described as a “survivor curve.” The survivor curve derived from the observed life table,
9 however, must be fitted and smoothed with a complete curve in order to determine the
10 ultimate average life of the group.⁷⁷ The most widely used survivor curves for this curve
11 fitting process were developed at Iowa State University in the early 1900s and are
12 commonly known as the “Iowa curves.”⁷⁸ A more detailed explanation of how the Iowa
13 curves are used in the actuarial analysis of depreciable property is set forth in Appendix C.

14 **Q. Describe how you analyzed the City’s historical retirement data in order to determine**
15 **the most reasonable Iowa curve to apply to each account.**

16 A. The City’s aged property data is used to create OLTs for each account. The data points on
17 the OLT can be plotted to form a curve (the “OLT curve”). The OLT curve is not a
18 theoretical curve; rather, it is actual observed data from the City’s records that indicate the
19 rate of retirement for each property group. An OLT curve by itself, however, is rarely a

⁷⁶ The “vintage” year refers to the year that a group of property was placed in service (aka “placement” year). The “transaction” year refers to the accounting year in which a property transaction occurred, such as an addition, retirement, or transfer (aka “experience” year).

⁷⁷ See Appendix C for a more detailed discussion of the actuarial analysis used to determine the average lives of grouped industrial property.

⁷⁸ See Appendix B for a more detailed discussion of the Iowa curves.

smooth curve, and is often not a “complete” curve (i.e., it does not end at zero percent surviving). In order to calculate average life (the area under a curve), a complete survivor curve is required. The Iowa curves are empirically derived curves based on the extensive studies of the actual mortality patterns of many different types of industrial property. The curve-fitting process involves selecting the best Iowa curve to fit the OLT curve. This can be accomplished through a combination of visual and mathematical curve-fitting techniques, as well as professional judgment.

Q. Is mathematical fitting an important part of the curve-fitting process?

A. Yes. Mathematical curve fitting promotes objective, unbiased results. While mathematical curve-fitting is important, it may not always yield the optimum result. Simply determining which Iowa curve best fits an OLT curve ignores professional judgment that may be needed for specific situations. For example, if there is insufficient historical data in a particular account and the OLT curve derived from that data is relatively short and flat, the mathematically “best” curve may be one with a very long average life. However, when there is sufficient data available, mathematical curve fitting can be used as part of an objective service life analysis.

Q. Should every portion of the OLT curve be given equal weight?

A. Not necessarily. Many analysts have observed that the points towards the end of OLT curves may often have less analytical value than other portions of the curve. Indeed, “[p]oints at the end of the curve are often based on fewer exposures and may be given less weight than points based on larger samples. The weight placed on those points will depend

1 on the size of the exposures.”⁷⁹ In accordance with this standard, an analyst may decide to
2 truncate the tail end of the OLT curve at a certain percent of initial exposures, such as one
3 percent. Using this approach puts greater emphasis on the most valuable portions of the
4 curve. For my analysis in this case, I not only considered the entirety of the OLT curve,
5 but also conducted further analyses that involved fitting Iowa curves to the most significant
6 part of the OLT curve for certain accounts.

7 **Q. Are you recommending service life adjustments in this case based on the following**
8 **analyses?**

9 A. No. In this case, I believe it is more important for the Commission to focus on the ALG
10 vs ELG issue and limit the accelerated form of cost recovery that would unfairly burden
11 customers under the ELG method proposed by Mr. Spanos.

12 **Q. What is your recommendation to the Commission regarding the City’s depreciation**
13 **rates.**

14 A. I recommend the Commission adopt the depreciation rates presented in my exhibits, which
15 were calculated using the same service life parameters proposed in the City’s depreciation
16 study but using the ALG method instead of the ELG method.

17 **Q. Please discuss the imbalance between the book depreciation reserve and the**
18 **theoretical reserve.**

19 A. Exhibit D VI-4 shows a theoretical reserve balance of \$83 million and a book reserve
20 balance of \$105 million. This means Lancaster has collected about \$22 million more in
21 accumulated depreciation than they “should have” based on the current lives and salvage
22 proposed in the depreciation study.

⁷⁹ Wolf & W. Chester Fitch, *Depreciation Systems* 46 (Iowa State University Press 1994).

1 **Q. What is your recommendation to the Commission regarding this overcollection by**
2 **the City?**

3 A. Under the remaining life technique that both Mr. Spanos and I typically use, any reserve
4 imbalance will be automatically allocated over the remaining life of plant. Although I am
5 not making a specific adjustment in this case for a shorter amortization period for the
6 reserve surplus, the reserve imbalance should be monitored going forward. If the reserve
7 surplus increases, the Commission could consider a refund to customers over a shorter time
8 period than the remaining life of plant.

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

10 A. Yes.

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University of Oklahoma Bachelor of Business Administration Major: Finance	Norman, OK 2003

PROFESSIONAL DESIGNATIONS

Society of Depreciation Professionals
Certified Depreciation Professional (CDP)

Society of Utility and Regulatory Financial Analysts
Certified Rate of Return Analyst (CRRA)

WORK EXPERIENCE

Resolve Utility Consulting PLLC <u>Managing Member</u> Provide expert analysis and testimony specializing in depreciation and cost of capital issues for clients in utility regulatory proceedings.	Oklahoma City, OK 2016 – Present
Oklahoma Corporation Commission <u>Public Utility Regulatory Analyst</u> <u>Assistant General Counsel</u> Represented commission staff in utility regulatory proceedings and provided legal opinions to commissioners. Provided expert analysis and testimony in depreciation, cost of capital, incentive compensation, payroll and other issues.	Oklahoma City, OK 2012 – 2016 2011 – 2012
Perebus Counsel, PLLC <u>Managing Member</u> Represented clients in the areas of family law, estate planning, debt negotiations, business organization, and utility regulation.	Oklahoma City, OK 2009 – 2011

Moricoli & Schovanec, P.C.

Associate Attorney

Represented clients in the areas of contracts, oil and gas, business structures and estate administration.

Oklahoma City, OK
2007 – 2009

TEACHING EXPERIENCE

University of Oklahoma

Adjunct Instructor – “Conflict Resolution”

Adjunct Instructor – “Ethics in Leadership”

Norman, OK
2014 – 2021

Rose State College

Adjunct Instructor – “Legal Research”

Adjunct Instructor – “Oil & Gas Law”

Midwest City, OK
2013 – 2015

PROFESSIONAL ASSOCIATIONS

Oklahoma Bar Association

2007 – Present

Society of Depreciation Professionals

Board Member – President

Participate in management of operations, attend meetings,
review performance, organize presentation agenda.

2014 – Present
2017

Society of Utility Regulatory Financial Analysts

2014 – Present

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Pennsylvania Public Utility Commission	The York Water Company, et al	R-2025-3053442 R-2025-3053573	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Pennsylvania Public Utility Commission	UGI Utilities, Inc.	R-2024-3052716	Cost of capital, depreciation rates, net salvage	Pennsylvania Office of Consumer Advocate
Wyoming Public Service Commission	Rocky Mountain Power	20000-671-ER-24	Cost of capital and authorized rate of return	Wyoming Industrial Energy Consumers
Oklahoma Corporation Commission	Public Service Company of Oklahoma	PUD 2023-000086	Cost of capital, depreciation rates, net salvage	Oklahoma Industrial Energy Consumers
Public Service Commission of South Carolina	Piedmont Natural Gas Company	2022-89-G 2024-179-G	Depreciation rates, service lives, net salvage	South Carolina Office of Regulatory Staff
Florida Public Service Commission	Peoples Gas System	20250029-GU	Cost of capital, awarded rate of return, capital structure	Florida Office of Public Counsel
Public Service Commission of the State of Montana	NorthWestern Energy	2024.05.053	Cost of capital, depreciation rates, net salvage	Montana Consumer Counsel and Montana Large Customer Group
New York State Public Service Commission	Niagara Mohawk Power Corporation	24-E-0322 24-G-0323	Depreciation rates, service lives, net salvage, depreciation reserve	Utility Intervention Unit of the New York State Department of State's Division of Consumer Protection
Public Utilities Commission of Ohio	Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company	24-468-EL-AIR, et seq .	Depreciation rates, service lives, net salvage	Office of the Ohio Consumers' Counsel
Public Utility Commission of Texas	El Paso Electric Company	PUC 57568	Depreciation rates, service lives, net salvage	The City of El Paso
Public Service Commission of Utah	Enbridge Gas Utah	25-057-06	Cost of capital, depreciation rates, net salvage	Office of Consumer Services
Pennsylvania Public Utility Commission	Pennsylvania-American Water Company	A-2025-3052983	Fair market value review (Elizabeth Borough)	Pennsylvania Office of Consumer Advocate
Commonwealth of Virginia State Corporation Commission	Virginia Electric and Power Company	PUR-2025-00058	Cost of capital, awarded rate of return, capital structure	Data Center Coalition
Delaware Public Service Commission	Delmarva Power & Light Company	24-1044	Cost of capital, depreciation rates, net salvage	Division of the Public Advocate

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
New York State Public Service Commission	Consolidated Edison Company of New York, Inc.	25-E-0072 25-G-0073	Depreciation rates, service lives, net salvage, depreciation reserve	Utility Intervention Unit of the New York State Department of State's Division of Consumer Protection
Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania	R-2025-3053499	Cost of capital, depreciation rates, net salvage	Pennsylvania Office of Consumer Advocate
Public Utility Commission of Texas	CenterPoint Energy Houston Electric	PUC 58028	System restoration costs	Texas Coast Utilities Coalition
Mississippi Public Service Commission	Atmos Energy Corporation	2025-UN-59	Depreciation rates, service lives, net salvage	Mississippi Public Utilities Staff
Public Service Commission of West Virginia	Appalachian Power Company and Wheeling Power Company	24-0854-E-42T	Cost of capital, awarded rate of return, capital structure	Consumer Advocate Division of the Public Service Commission of West Virginia
Public Service Commission of West Virginia	Appalachian Power Company and Wheeling Power Company	24-0670-E-D	Depreciation rates, service lives, net salvage	Consumer Advocate Division of the Public Service Commission of West Virginia
New Jersey Board of Public Utilities	Atlantic City Electric Company	ER24110854	Cost of capital, awarded rate of return, capital structure	Staff of the New Jersey Board of Public Utilities
Pennsylvania Public Utility Commission	Aqua Pennsylvania, Inc.	A-2022-3033138	Fair market value review (Beaver Falls)	Pennsylvania Office of Consumer Advocate
Mississippi Public Service Commission	Mississippi Power Company	2024-UN-117	Depreciation rates, service lives, net salvage	Mississippi Public Utilities Staff
Public Service Commission of the State of Montana	Montana-Dakota Utilities Company	2024.05.061	Cost of capital, depreciation rates, net salvage	Montana Consumer Counsel
Maryland Public Service Commission	Columbia Gas of Maryland	9754	Cost of capital, depreciation rates, net salvage	Maryland Office of People's Counsel
Railroad Commission of Texas	Atmos Energy, Mid-Tex Division	OS-24-00019196	Depreciation rates, service lives, net salvage	Atmos Texas Municipalities
Wyoming Public Service Commission	Montana-Dakota Utilities Co.	30013-415-GR-24	Depreciation rates, service lives, net salvage	Wyoming Office of Consumer Advocate
Indiana Utility Regulatory Commission	Duke Energy Indiana	46038	Cost of capital, depreciation rates, net salvage	Indiana Office of Utility Consumer Counselor

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Railroad Commission of Texas	Atmos Energy, West Texas Division	OS-24-00018879	Depreciation rates, service lives, net salvage	The Cities of Amarillo, Lubbock, Dalhart, and Channing
Washington Utilities & Transportation Commission	Cascadia Water, LLC	UW-240151	Cost of capital, awarded rate of return, capital structure	Washington Office of Attorney General
Railroad Commission of Texas	West Texas Gas Utility	OS-24-00017816	Cost of capital, depreciation rates, net salvage	Alliance of WTG Municipalities
Maryland Public Service Commission	Washington Gas Light Company	9737	Cost of capital, awarded rate of return, capital structure	Maryland Office of People's Counsel
Railroad Commission of Texas	Texas Gas Services Company	OS-24-00017471	Depreciation rates, service lives, net salvage	The Steering Committee of Cities
Pennsylvania Public Utility Commission	Veolia Water Pennsylvania, Inc.	R-2024-3045192 R-2024-3045193	Cost of capital, depreciation rates, net salvage	Pennsylvania Office of Consumer Advocate
Pennsylvania Public Utility Commission	PECO Energy Company - Gas Division	R-2024-3046932	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Pennsylvania Public Utility Commission	PECO Energy Company - Electric Division	R-2024-3046931	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Oklahoma Corporation Commission	Oklahoma Gas & Electric Company	PUD 2023-000087	Cost of capital, depreciation rates, net salvage	Oklahoma Industrial Energy Consumers
Maryland Public Service Commission	Maryland Water Service, Inc.	9729	Cost of capital, awarded rate of return, capital structure	Maryland Office of People's Counsel
Kansas Corporation Commission	Kansas Gas Service	24-KGSG-610-RTS	Depreciation rates, service lives, net salvage	The Citizens' Utility Ratepayer Board
Pennsylvania Public Utility Commission	FirstEnergy Pennsylvania Electric Company	R-2024-3047068	Depreciation rates, service lives, net salvage	Pennsylvania Office of Consumer Advocate
Maryland Public Service Commission	Chesapeake Utilities Corporation Sandpiper Energy, Inc.	9721	Depreciation rates, service lives, net salvage	Maryland Office of People's Counsel
Pennsylvania Public Utility Commission	Elkton Gas Company Duquesne Light Company	R-2024-3046523	Cost of capital, depreciation rates, net salvage	Pennsylvania Office of Consumer Advocate

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Public Utility Commission of Texas	CenterPoint Energy Houston Electric	PUC 56211	Depreciation rates, service lives, net salvage	Texas Coast Utilities Coalition
Washington Utilities & Transportation Commission	Avista Corporation	UE-240006 UG-240007	Cost of capital, awarded rate of return, capital structure	Washington Office of Attorney General
Public Utility Commission of Texas	AEP Texas Inc.	PUC 56165	Depreciation rates, service lives, net salvage	Cities Served by AEP Texas
Public Utilities Commission of Nevada	Southwest Gas Corporation	23-09012	Depreciation rates, service lives, net salvage	Bureau of Consumer Protection
Public Utilities Commission of the State of California	Southern California Edison	A.23-05-010	Depreciation rates, service lives, net salvage	The Utility Reform Network
Pennsylvania Public Utility Commission	Pennsylvania-American Water Company	R-2023-3043189 R-2023-3043190	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Indiana Utility Regulatory Commission	Northern Indiana Public Service Company	45967	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Massachusetts Department of Public Utilities	Massachusetts Electric Company and Nantucket Electric Company D/B/A National Grid	D.P.U. 23-150	Depreciation rates, service lives, net salvage	Massachusetts Office of the Attorney General, Office of Ratepayer Advocacy
Iowa Utilities Board	Interstate Power and Light Company	RPU-2023-0002	Depreciation rates, service lives, net salvage	Office of Consumer Advocate
Public Service Commission of South Carolina	Duke Energy Carolinas	2023-388-E 2023-403-E	Depreciation rates, service lives, net salvage	South Carolina Office of Regulatory Staff
Indiana Utility Regulatory Commission	Citizens Energy Group	45988	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Railroad Commission of Texas	CenterPoint Energy Resources Corp.	OS-23-00015513	Depreciation rates, service lives, net salvage	Alliance of CenterPoint Municipalities
Indiana Utility Regulatory Commission	CenterPoint Energy Indiana South	45990	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Delaware Public Service Commission	Artesian Water Company, Inc.	23-0601	Cost of capital, depreciation rates, net salvage	Division of the Public Advocate

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Maryland Public Service Commission	Washington Gas Light Company	9704	Cost of capital, awarded rate of return, capital structure	Maryland Office of People's Counsel
Delaware Public Service Commission	Veolia Water Delaware Inc.	23-0598	Cost of capital, awarded rate of return, capital structure	Division of the Public Advocate
Connecticut Public Utilities Regulatory Authority	United Illuminating Company	22-08-08	Depreciation rates, service lives, net salvage	PURA Staff
Public Utility Commission of Texas	Southwestern Public Service Company	PUC 54634	Depreciation rates, service lives, net salvage	Alliance of Xcel Municipalities
Railroad Commission of Texas	SiEnergy, LP	OS-23-00013504	Depreciation rates, service lives, net salvage	Texas municipal intervenor group
Pennsylvania Public Utility Commission	Aqua Pennsylvania, Inc.	A-2022-3034143	Fair market value review	Pennsylvania Office of Consumer Advocate
Wyoming Public Service Commission	Rocky Mountain Power	20000-633-ER-23	Cost of capital and authorized rate of return	Wyoming Industrial Energy Consumers
Maryland Public Service Commission	Potomac Electric Power Company	9702	Depreciation rates, service lives, net salvage	Maryland Office of People's Counsel
Public Utilities Commission of Nevada	Nevada Power Company d/b/a NV Energy	23-06007 23-06008	Depreciation rates, service lives, net salvage	Bureau of Consumer Protection
Public Utilities Commission of Ohio	Northeast Ohio Natural Gas Corp.	23-0154-GA-AIR	Cost of capital, awarded rate of return, capital structure	Office of the Ohio Consumers' Counsel
New York State Public Service Commission	The Brooklyn Union Gas Company and Keyspan Gas East Corporation d/b/a Nation Grid	23-G-0225 23-G-0226	Depreciation rates, service lives, net salvage, depreciation reserve	The City of New York
Idaho Public Utilities Commission	Idaho Power Company	IPC-E-23-11	Cost of capital, awarded rate of return, capital structure	Micron Technology, Inc.
Indiana Utility Regulatory Commission	Indiana Michigan Power Company	45933	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Massachusetts Department of Public Utilities	Fitchburg Gas and Electric Company d/b/a Unitil	D.P.U. 23-80; D.P.U. 23-81	Depreciation rates, service lives, net salvage	Massachusetts Office of the Attorney General, Office of Ratepayer Advocacy

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Kansas Corporation Commission	Evergy Kansas Central, Evergy Kansas South, and Evergy Metro	23-EKCE-775-RTS	Depreciation rates, service lives, net salvage	The Citizens' Utility Ratepayer Board
Delaware Public Service Commission	Delmarva Power & Light Company	22-0897	Cost of capital, awarded rate of return, capital structure	Division of the Public Advocate
Connecticut Public Utilities Regulatory Authority	Connecticut Water Company	23-08-32	Depreciation rates, service lives, net salvage	PURA Staff
Connecticut Public Utilities Regulatory Authority	Connecticut Natural Gas Corporation and The Southern Connecticut Gas Company	23-11-02	Depreciation rates, service lives, net salvage	PURA Staff
Railroad Commission of Texas	Atmos Pipeline – Texas	OS-23-00013758	Depreciation rates, service lives, net salvage	Atmos Texas Municipalities
Wyoming Public Service Commission	Black Hills Wyoming Gas	30026-78-GR-23	Depreciation rates, service lives, net salvage	Wyoming Office of Consumer Advocate
Indiana Utility Regulatory Commission	Indianapolis Power & Light Company d/b/a AES Indiana	45911	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
New Mexico Public Regulation Commission	Southwestern Public Service Company	22-00286-UT	Cost of capital, depreciation rates, net salvage	The New Mexico Large Customer Group; Occidental Permian
Public Utilities Commission of the State of California	Southern California Gas Company San Diego Gas & Electric Company	A.22-05-015 A.22-05-016	Depreciation rates, service lives, net salvage	The Utility Reform Network
Public Utilities Commission of the State of Colorado	Public Service Company of Colorado	22AL-0530E 22AL-0478E	Cost of capital, awarded rate of return, capital structure	Colorado Energy Consumers
New Mexico Public Regulatory Commission	Public Service Company of New Mexico	22-00270-UT	Cost of capital, depreciation rates, net salvage	The Albuquerque Bernalillo County Water Utility Authority
Florida Public Service Commission	Peoples Gas System	20230023-GU 20220219-GU 20220212-GU	Cost of capital, depreciation rates, net salvage	Florida Office of Public Counsel
Maryland Public Service Commission	Potomac Edison Company	9695	Cost of capital, depreciation rates, net salvage	Maryland Office of People's Counsel
Public Service Commission of the State of Montana	Montana-Dakota Utilities Company	2022.11.099	Depreciation rates, service lives, net salvage	Montana Consumer Counsel and Denbury Onshore

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Indiana Utility Regulatory Commission	Indiana-American Water Company	45870	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Public Service Commission of South Carolina	Dominion Energy South Carolina	2023-70-G	Depreciation rates, service lives, net salvage	South Carolina Office of Regulatory Staff
Maryland Public Service Commission	Columbia Gas of Maryland	9701	Cost of capital, awarded rate of return, capital structure	Maryland Office of People's Counsel
Pennsylvania Public Utility Commission	Columbia Water Company	R-2023-3040258	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Maryland Public Service Commission	Baltimore Gas and Electric Company	9692	Depreciation rates, service lives, net salvage	Maryland Office of People's Counsel
Arizona Corporation Commission	Arizona Public Service Company	E-01345A-22-0144	Cost of capital, awarded rate of return, capital structure	Residential Utility Consumer Office
Oklahoma Corporation Commission	Public Service Company of Oklahoma	PUD 2022-000093	Cost of capital, depreciation rates, net salvage	Oklahoma Industrial Energy Consumers
Public Service Commission of the State of Montana	NorthWestern Energy	2022.07.078	Cost of capital, depreciation rates, net salvage	Montana Consumer Counsel and Montana Large Customer Group
Indiana Utility Regulatory Commission	Northern Indiana Public Service Company	45772	Cost of capital, depreciation rates, net salvage	Indiana Office of Utility Consumer Counselor
Public Service Commission of South Carolina	Duke Energy Progress	2022-254-E	Depreciation rates, service lives, net salvage	South Carolina Office of Regulatory Staff
Wyoming Public Service Commission	Cheyenne Light, Fuel and Power Company D/B/A Black Hills Energy	20003-214-ER-22	Depreciation rates, service lives, net salvage	Wyoming Office of Consumer Advocate
Railroad Commission of Texas	Texas Gas Services Company	OS-22-00009896	Depreciation rates, service lives, net salvage	The City of El Paso
Public Utilities Commission of Nevada	Sierra Pacific Power Company	22-06014	Depreciation rates, service lives, net salvage	Bureau of Consumer Protection
Washington Utilities & Transportation Commission	Puget Sound Energy	UE-220066 UG-220067 UG-210918	Depreciation rates, service lives, net salvage	Washington Office of Attorney General

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Public Utility Commission of Texas	Oncor Electric Delivery Company LLC	PUC 53601	Depreciation rates, service lives, net salvage	Alliance of Oncor Cities
Florida Public Service Commission	Florida Public Utilities Company	20220067-GU	Cost of capital, depreciation rates	Florida Office of Public Counsel
Public Utility Commission of Texas	Entergy Texas, Inc.	PUC 53719	Depreciation rates, decommissioning costs	Texas Municipal Group
Florida Public Service Commission	Florida City Gas	2020069-GU	Cost of capital, depreciation rates	Florida Office of Public Counsel
Connecticut Public Utilities Regulatory Authority	Aquarion Water Company of Connecticut	22-07-01	Depreciation rates, service lives, net salvage	PURA Staff
Washington Utilities & Transportation Commission	Avista Corporation	UE-220053 UG-220054 UE-210854	Cost of capital, awarded rate of return, capital structure	Washington Office of Attorney General
Federal Energy Regulatory Commission	ANR Pipeline Company	RP22-501-000	Depreciation rates, service lives, net salvage	Ascent Resources - Utica, LLC
Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania, Inc.	R-2022-3031211	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Public Service Commission of South Carolina	Piedmont Natural Gas Company	2022-89-G	Depreciation rates, service lives, net salvage	South Carolina Office of Regulatory Staff
Pennsylvania Public Utility Commission	UGI Utilities, Inc. - Gas Division	R-2021-3030218	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Public Utilities Commission of the State of California	Pacific Gas & Electric Company	A.21-06-021	Depreciation rates, service lives, net salvage	The Utility Reform Network
Pennsylvania Public Utility Commission	PECO Energy Company - Gas Division	R-2022-3031113	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Oklahoma Corporation Commission	Oklahoma Gas & Electric Company	PUD 202100164	Cost of capital, depreciation rates, net salvage	Oklahoma Industrial Energy Consumers
Massachusetts Department of Public Utilities	NSTAR Electric Company D/B/A Eversource Energy	D.P.U. 22-22	Depreciation rates, service lives, net salvage	Massachusetts Office of the Attorney General, Office of Ratepayer Advocacy

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Michigan Public Service Company	DTE Electric Company	U-20836	Cost of capital, awarded rate of return, capital structure	Michigan Environmental Council and Citizens Utility Board of Michigan
New York State Public Service Commission	Consolidated Edison Company of New York, Inc.	22-E-0064 22-G-0065	Depreciation rates, service lives, net salvage, depreciation reserve	The City of New York
Pennsylvania Public Utility Commission	Aqua Pennsylvania Wastewater / East Whiteland Township	A-2021-3026132	Fair market value estimates for wastewater assets	Pennsylvania Office of Consumer Advocate
Public Service Commission of South Carolina	Kiawah Island Utility, Inc.	2021-324-WS	Cost of capital, awarded rate of return, capital structure	South Carolina Office of Regulatory Staff
Pennsylvania Public Utility Commission	Aqua Pennsylvania Wastewater / Willistown Township	A-2021-3027268	Fair market value estimates for wastewater assets	Pennsylvania Office of Consumer Advocate
Indiana Utility Regulatory Commission	Northern Indiana Public Service Company	45621	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Arkansas Public Service Commission	Southwestern Electric Power Company	21-070-U	Cost of capital, depreciation rates, net salvage	Western Arkansas Large Energy Consumers
Federal Energy Regulatory Commission	Southern Star Central Gas Pipeline	RP21-778-002	Depreciation rates, service lives, net salvage	Consumer-Owned Shippers
Railroad Commission of Texas	Participating Texas gas utilities in consolidated proceeding	OS-21-00007061	Securitization of extraordinary gas costs arising from winter storms	The City of El Paso
Public Service Commission of South Carolina	Palmetto Wastewater Reclamation, Inc.	2021-153-S	Cost of capital, awarded rate of return, capital structure, ring-fencing	South Carolina Office of Regulatory Staff
Public Utilities Commission of the State of Colorado	Public Service Company of Colorado	21AL-0317E	Cost of capital, depreciation rates, net salvage	Colorado Energy Consumers
Pennsylvania Public Utility Commission	City of Lancaster - Water Department	R-2021-3026682	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Public Utility Commission of Texas	Southwestern Public Service Company	PUC 51802	Depreciation rates, service lives, net salvage	The Alliance of Xcel Municipalities
Pennsylvania Public Utility Commission	The Borough of Hanover - Hanover Municipal Waterworks	R-2021-3026116	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Maryland Public Service Commission	Delmarva Power & Light Company	9670	Cost of capital and authorized rate of return	Maryland Office of People's Counsel
Oklahoma Corporation Commission	Oklahoma Natural Gas Company	PUD 202100063	Cost of capital, awarded rate of return, capital structure	Oklahoma Industrial Energy Consumers
Indiana Utility Regulatory Commission	Indiana Michigan Power Company	45576	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Public Utility Commission of Texas	El Paso Electric Company	PUC 52195	Depreciation rates, service lives, net salvage	The City of El Paso
Pennsylvania Public Utility Commission	Aqua Pennsylvania	R-2021-3027385	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Public Service Commission of the State of Montana	NorthWestern Energy	D2021.02.022	Cost of capital, awarded rate of return, capital structure	Montana Consumer Counsel
Pennsylvania Public Utility Commission	PECO Energy Company	R-2021-3024601	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
New Mexico Public Regulation Commission	Southwestern Public Service Company	20-00238-UT	Cost of capital and authorized rate of return	The New Mexico Large Customer Group; Occidental Permian
Oklahoma Corporation Commission	Public Service Company of Oklahoma	PUD 202100055	Cost of capital, depreciation rates, net salvage	Oklahoma Industrial Energy Consumers
Pennsylvania Public Utility Commission	Duquesne Light Company	R-2021-3024750	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Maryland Public Service Commission	Columbia Gas of Maryland	9664	Cost of capital and authorized rate of return	Maryland Office of People's Counsel
Indiana Utility Regulatory Commission	Southern Indiana Gas Company, d/b/a Vectren Energy Delivery of Indiana, Inc.	45447	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Public Utility Commission of Texas	Southwestern Electric Power Company	PUC 51415	Depreciation rates, service lives, net salvage	Cities Advocating Reasonable Deregulation
New Mexico Public Regulatory Commission	Avangrid, Inc., Avangrid Networks, Inc., NM Green Holdings, Inc., PNM, and PNM Resources	20-00222-UT	Ring fencing and capital structure	The Albuquerque Bernalillo County Water Utility Authority

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Indiana Utility Regulatory Commission	Indiana Gas Company, d/b/a Vectren Energy Delivery of Indiana, Inc.	45468	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Public Utilities Commission of Nevada	Nevada Power Company and Sierra Pacific Power Company, d/b/a NV Energy	20-07023	Construction work in progress	MGM Resorts International, Caesars Enterprise Services, LLC, and the Southern Nevada Water Authority
Massachusetts Department of Public Utilities	Boston Gas Company, d/b/a National Grid	D.P.U. 20-120	Depreciation rates, service lives, net salvage	Massachusetts Office of the Attorney General, Office of Ratepayer Advocacy
Public Service Commission of the State of Montana	ABACO Energy Services, LLC	D2020.07.082	Cost of capital and authorized rate of return	Montana Consumer Counsel
Maryland Public Service Commission	Washington Gas Light Company	9651	Cost of capital and authorized rate of return	Maryland Office of People's Counsel
Florida Public Service Commission	Utilities, Inc. of Florida	20200139-WS	Cost of capital and authorized rate of return	Florida Office of Public Counsel
New Mexico Public Regulatory Commission	El Paso Electric Company	20-00104-UT	Cost of capital, depreciation rates, net salvage	City of Las Cruces and Doña Ana County
Public Utilities Commission of Nevada	Nevada Power Company	20-06003	Cost of capital, awarded rate of return, capital structure, earnings sharing	MGM Resorts International, Caesars Enterprise Services, LLC, Wynn Las Vegas, LLC, Smart Energy Alliance, and Circus Circus Las Vegas, LLC
Wyoming Public Service Commission	Rocky Mountain Power	20000-578-ER-20	Cost of capital and authorized rate of return	Wyoming Industrial Energy Consumers
Florida Public Service Commission	Peoples Gas System	20200051-GU 20200166-GU	Cost of capital, depreciation rates, net salvage	Florida Office of Public Counsel
Wyoming Public Service Commission	Rocky Mountain Power	20000-539-EA-18	Depreciation rates, service lives, net salvage	Wyoming Industrial Energy Consumers
Public Service Commission of South Carolina	Dominion Energy South Carolina	2020-125-E	Depreciation rates, service lives, net salvage	South Carolina Office of Regulatory Staff
Pennsylvania Public Utility Commission	The City of Bethlehem	2020-3020256	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Railroad Commission of Texas	Texas Gas Services Company	GUD 10928	Depreciation rates, service lives, net salvage	Gulf Coast Service Area Steering Committee

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Public Utilities Commission of the State of California	Southern California Edison	A.19-08-013	Depreciation rates, service lives, net salvage	The Utility Reform Network
Massachusetts Department of Public Utilities	NSTAR Gas Company	D.P.U. 19-120	Depreciation rates, service lives, net salvage	Massachusetts Office of the Attorney General, Office of Ratepayer Advocacy
Georgia Public Service Commission	Liberty Utilities (Peach State Natural Gas)	42959	Depreciation rates, service lives, net salvage	Public Interest Advocacy Staff
Florida Public Service Commission	Florida Public Utilities Company	20190155-El 20190156-El 20190174-El	Depreciation rates, service lives, net salvage	Florida Office of Public Counsel
Illinois Commerce Commission	Commonwealth Edison Company	20-0393	Depreciation rates, service lives, net salvage	The Office of the Illinois Attorney General
Public Utility Commission of Texas	Southwestern Public Service Company	PUC 49831	Depreciation rates, service lives, net salvage	Alliance of Xcel Municipalities
Public Service Commission of South Carolina	Blue Granite Water Company	2019-290-WS	Depreciation rates, service lives, net salvage	South Carolina Office of Regulatory Staff
Railroad Commission of Texas	CenterPoint Energy Resources	GUD 10920	Depreciation rates and grouping procedure	Alliance of CenterPoint Municipalities
Pennsylvania Public Utility Commission	Aqua Pennsylvania Wastewater / East Norriton Township	A-2019-3009052	Fair market value estimates for wastewater assets	Pennsylvania Office of Consumer Advocate
New Mexico Public Regulation Commission	Southwestern Public Service Company	19-00170-UT	Cost of capital and authorized rate of return	The New Mexico Large Customer Group; Occidental Permian
Indiana Utility Regulatory Commission	Duke Energy Indiana	45253	Cost of capital, depreciation rates, net salvage	Indiana Office of Utility Consumer Counselor
Maryland Public Service Commission	Columbia Gas of Maryland	9609	Depreciation rates, service lives, net salvage	Maryland Office of People's Counsel
Washington Utilities & Transportation Commission	Avista Corporation	UE-190334	Cost of capital, awarded rate of return, capital structure	Washington Office of Attorney General
Indiana Utility Regulatory Commission	Indiana Michigan Power Company	45235	Cost of capital, depreciation rates, net salvage	Indiana Office of Utility Consumer Counselor

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Public Utilities Commission of the State of California	Pacific Gas & Electric Company	18-12-009	Depreciation rates, service lives, net salvage	The Utility Reform Network
Oklahoma Corporation Commission	The Empire District Electric Company	PUD 201800133	Cost of capital, authorized ROE, depreciation rates	Oklahoma Industrial Energy Consumers and Oklahoma Energy Results
Arkansas Public Service Commission	Southwestern Electric Power Company	19-008-U	Cost of capital, depreciation rates, net salvage	Western Arkansas Large Energy Consumers
Public Utility Commission of Texas	CenterPoint Energy Houston Electric	PUC 49421	Depreciation rates, service lives, net salvage	Texas Coast Utilities Coalition
Massachusetts Department of Public Utilities	Massachusetts Electric Company and Nantucket Electric Company	D.P.U. 18-150	Depreciation rates, service lives, net salvage	Massachusetts Office of the Attorney General, Office of Ratepayer Advocacy
Oklahoma Corporation Commission	Oklahoma Gas & Electric Company	PUD 201800140	Cost of capital, authorized ROE, depreciation rates	Oklahoma Industrial Energy Consumers and Oklahoma Energy Results
Public Service Commission of the State of Montana	Montana-Dakota Utilities Company	D2018.9.60	Depreciation rates, service lives, net salvage	Montana Consumer Counsel and Denbury Onshore
Indiana Utility Regulatory Commission	Northern Indiana Public Service Company	45159	Depreciation rates, grouping procedure, demolition costs	Indiana Office of Utility Consumer Counselor
Public Service Commission of the State of Montana	NorthWestern Energy	D2018.2.12	Depreciation rates, service lives, net salvage	Montana Consumer Counsel
Oklahoma Corporation Commission	Public Service Company of Oklahoma	PUD 201800097	Depreciation rates, service lives, net salvage	Oklahoma Industrial Energy Consumers and Wal-Mart
Nevada Public Utilities Commission	Southwest Gas Corporation	18-05031	Depreciation rates, service lives, net salvage	Nevada Bureau of Consumer Protection
Public Utility Commission of Texas	Texas-New Mexico Power Company	PUC 48401	Depreciation rates, service lives, net salvage	Alliance of Texas-New Mexico Power Municipalities
Oklahoma Corporation Commission	Oklahoma Gas & Electric Company	PUD 201700496	Depreciation rates, service lives, net salvage	Oklahoma Industrial Energy Consumers and Oklahoma Energy Results
Maryland Public Service Commission	Washington Gas Light Company	9481	Depreciation rates, service lives, net salvage	Maryland Office of People's Counsel

Utility Regulatory Proceedings

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Indiana Utility Regulatory Commission	Citizens Energy Group	45039	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Public Utility Commission of Texas	Entergy Texas, Inc.	PUC 48371	Depreciation rates, decommissioning costs	Texas Municipal Group
Washington Utilities & Transportation Commission	Avista Corporation	UE-180167	Depreciation rates, service lives, net salvage	Washington Office of Attorney General
New Mexico Public Regulation Commission	Southwestern Public Service Company	17-00255-UT	Cost of capital and authorized rate of return	HollyFrontier Navajo Refining; Occidental Permian
Public Utility Commission of Texas	Southwestern Public Service Company	PUC 47527	Depreciation rates, plant service lives	Alliance of Xcel Municipalities
Public Service Commission of the State of Montana	Montana-Dakota Utilities Company	D2017.9.79	Depreciation rates, service lives, net salvage	Montana Consumer Counsel
Florida Public Service Commission	Florida City Gas	20170179-GU	Cost of capital, depreciation rates	Florida Office of Public Counsel
Washington Utilities & Transportation Commission	Avista Corporation	UE-170485	Cost of capital and authorized rate of return	Washington Office of Attorney General
Wyoming Public Service Commission	Powder River Energy Corporation	10014-182-CA-17	Credit analysis, cost of capital	Private customer
Oklahoma Corporation Commission	Public Service Co. of Oklahoma	PUD 201700151	Depreciation, terminal salvage, risk analysis	Oklahoma Industrial Energy Consumers
Public Utility Commission of Texas	Oncor Electric Delivery Company	PUC 46957	Depreciation rates, simulated analysis	Alliance of Oncor Cities
Nevada Public Utilities Commission	Nevada Power Company	17-06004	Depreciation rates, service lives, net salvage	Nevada Bureau of Consumer Protection
Public Utility Commission of Texas	El Paso Electric Company	PUC 46831	Depreciation rates, interim retirements	City of El Paso
Idaho Public Utilities Commission	Idaho Power Company	IPC-E-16-24	Accelerated depreciation of North Valmy plant	Micron Technology, Inc.

Utility Regulatory Proceedings

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Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Idaho Public Utilities Commission	Idaho Power Company	IPC-E-16-23	Depreciation rates, service lives, net salvage	Micron Technology, Inc.
Public Utility Commission of Texas	Southwestern Electric Power Company	PUC 46449	Depreciation rates, decommissioning costs	Cities Advocating Reasonable Deregulation
Massachusetts Department of Public Utilities	Eversource Energy	D.P.U. 17-05	Cost of capital, capital structure, and rate of return	Sunrun Inc.; Energy Freedom Coalition of America
Railroad Commission of Texas	Atmos Pipeline - Texas	GUD 10580	Depreciation rates, grouping procedure	City of Dallas
Public Utility Commission of Texas	Sharyland Utility Company	PUC 45414	Depreciation rates, simulated analysis	City of Mission
Oklahoma Corporation Commission	Empire District Electric Company	PUD 201600468	Cost of capital, depreciation rates	Oklahoma Industrial Energy Consumers
Railroad Commission of Texas	CenterPoint Energy Texas Gas	GUD 10567	Depreciation rates, simulated plant analysis	Texas Coast Utilities Coalition
Arkansas Public Service Commission	Oklahoma Gas & Electric Company	160-159-GU	Cost of capital, depreciation rates, terminal salvage	Arkansas River Valley Energy Consumers; Wal-Mart
Florida Public Service Commission	Peoples Gas	160-159-GU	Depreciation rates, service lives, net salvage	Florida Office of Public Counsel
Arizona Corporation Commission	Arizona Public Service Company	E-01345A-16-0036	Cost of capital, depreciation rates, terminal salvage	Energy Freedom Coalition of America
Nevada Public Utilities Commission	Sierra Pacific Power Company	16-06008	Depreciation rates, net salvage, theoretical reserve	Northern Nevada Utility Customers
Oklahoma Corporation Commission	Oklahoma Gas & Electric Co.	PUD 201500273	Cost of capital, depreciation rates, terminal salvage	Public Utility Division
Oklahoma Corporation Commission	Public Service Co. of Oklahoma	PUD 201500208	Cost of capital, depreciation rates, terminal salvage	Public Utility Division
Oklahoma Corporation Commission	Oklahoma Natural Gas Company	PUD 201500213	Cost of capital, depreciation rates, net salvage	Public Utility Division

Proxy Group Summary

Exhibit DJG-2

Company	Ticker	Market Cap. (\$ millions)	Market Category	Value Line Safety Rank	Financial Strength
American States Water Co	AWR	2,800	Mid Cap	1	A
American Water Works Co Inc	AWK	26,300	Large Cap	2	A
California Water Service Gp	CWT	2,700	Mid Cap	2	B++
Essential Utilities, Inc.	WTRG	10,400	Large Cap	2	A
Middlesex Water Co	MSEX	975	Small Cap	3	A
H2O America	HTO	1,700	Small Cap	2	B++

Value Line Investment Survey

DCF - Stock and Index Prices

Exhibit DJG-3

Ticker	^GSPC	AWR	AWK	CWT	WTRG	MSEX	HTO
30-day Average	6764	73.92	132.02	46.41	39.56	54.02	47.19
Standard Deviation	89.1	1.57	5.38	1.76	0.97	4.04	1.86
12/01/25	6813	73.45	131.00	45.21	39.37	51.25	46.86
11/28/25	6849	73.77	130.07	45.37	39.59	51.31	46.43
11/26/25	6813	74.03	129.85	45.50	39.26	51.17	46.38
11/25/25	6766	74.25	130.39	45.70	39.52	50.63	46.06
11/24/25	6705	73.30	131.51	45.39	39.93	49.87	44.98
11/21/25	6603	73.37	132.74	45.52	40.12	50.01	44.74
11/20/25	6539	71.87	128.13	44.38	38.67	48.59	44.46
11/19/25	6642	71.50	127.12	44.13	38.29	48.85	44.44
11/18/25	6617	72.36	129.91	45.00	39.15	50.53	45.97
11/17/25	6672	73.80	132.68	45.47	39.94	51.62	47.08
11/14/25	6734	74.59	131.62	45.85	39.67	52.14	47.36
11/13/25	6737	74.57	131.46	45.79	39.95	52.20	47.44
11/12/25	6851	74.68	128.94	45.47	39.08	52.29	47.01
11/11/25	6847	75.35	129.18	46.43	39.12	53.37	47.06
11/10/25	6832	74.52	128.12	45.75	38.92	52.35	46.66
11/07/25	6729	74.34	130.01	46.31	39.31	53.20	47.25
11/06/25	6720	74.43	128.67	46.05	39.17	52.45	46.88
11/05/25	6796	73.57	130.13	46.21	39.34	52.71	46.91
11/04/25	6772	74.08	127.26	46.73	38.07	54.50	47.11
11/03/25	6852	71.22	125.17	44.68	37.75	49.58	45.79
10/31/25	6840	70.83	127.61	44.09	38.69	57.08	45.84
10/30/25	6822	71.10	125.89	44.90	38.45	56.53	45.73
10/29/25	6891	72.16	129.23	47.14	38.83	57.61	46.18
10/28/25	6891	74.90	133.95	49.04	40.20	60.57	48.87
10/27/25	6875	75.59	137.11	49.30	40.28	61.54	50.61
10/24/25	6792	75.69	140.69	49.26	40.85	59.95	50.23
10/23/25	6738	76.04	141.67	49.54	40.94	59.95	50.29
10/22/25	6699	75.73	142.81	49.43	41.33	59.64	49.88
10/21/25	6735	75.91	143.24	49.21	41.33	59.61	50.41
10/20/25	6735	76.53	144.50	49.34	41.57	59.62	50.65

All prices are adjusted closing prices reported by Yahoo! Finance, <http://finance.yahoo.com>

DCF - Dividend Yields

Exhibit DJG-4

		[1]	[2]	[3]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield
American States Water Co	AWR	2.02	73.92	2.73%
American Water Works Co Inc	AWK	3.31	132.02	2.51%
California Water Service Gp	CWT	1.20	46.41	2.59%
Essential Utilities, Inc.	WTRG	1.37	39.56	3.46%
Middlesex Water Co	MSEX	1.38	54.02	2.55%
H2O America	HTO	1.68	47.19	3.56%
Average		\$1.83	\$65.52	2.90%

[1] Yahoo Finance

[2] Average stock price from Exhibit DJG-3

[3] = [1] / [2]

DCF - Terminal Growth Rate Determinants

Exhibit DJG-5

DCF Growth Rate Indicators	
DCF Growth Rate Indicators	Rate
Nominal GDP	3.7%
Real GDP	1.6%
Long-Term Growth Ceiling	3.7%

CBO, The 2025 Long-Term Budget Outlook, p. 32

DCF - Final Result

Exhibit DJG-6

		[1]	[2]	[3]	[4]	[5]
Company	Ticker	Dividend Yield	Analyst Growth	Sustainable Growth	DCF Result (Analyst Growth)	DCF Result (Sustainable Growth)
American States Water Co	AWR	2.7%	8.0%	3.7%	11.0%	6.5%
American Water Works Co Inc	AWK	2.5%	8.5%	3.7%	11.2%	6.3%
California Water Service Gp	CWT	2.6%	5.5%	3.7%	8.2%	6.4%
Essential Utilities, Inc.	WTRG	3.5%	6.5%	3.7%	10.2%	7.3%
Middlesex Water Co	MSEX	2.6%	4.5%	3.7%	7.2%	6.3%
H2O America	HTO	3.6%	4.0%	3.7%	7.7%	7.4%
Average		2.9%	6.2%	3.7%	9.2%	6.7%

[1] Dividend Yield from Exhibit DJG-4

[2] Forecasted dividend growth rates - Value Line

[3] Sustainable growth rate from Exhibit DJG-5

[4] Annual Compounding DCF = $D_0 (1 + g) / P_0 + g$ (using analyst growth rate)

[5] Annual Compounding DCF = $D_0 (1 + g) / P_0 + g$ (using sustainable growth rate)

CAPM - Risk-Free Rate Estimate

Exhibit DJG-7

Date	Rate
10/17/25	4.60%
10/20/25	4.58%
10/21/25	4.55%
10/22/25	4.54%
10/23/25	4.58%
10/24/25	4.59%
10/27/25	4.57%
10/28/25	4.55%
10/29/25	4.61%
10/30/25	4.65%
10/31/25	4.67%
11/03/25	4.69%
11/04/25	4.67%
11/05/25	4.74%
11/06/25	4.69%
11/07/25	4.70%
11/10/25	4.71%
11/12/25	4.67%
11/13/25	4.70%
11/14/25	4.74%
11/17/25	4.73%
11/18/25	4.74%
11/19/25	4.75%
11/20/25	4.73%
11/21/25	4.71%
11/24/25	4.68%
11/25/25	4.67%
11/26/25	4.64%
11/28/25	4.67%
12/01/25	4.74%
Average	4.66%

*Daily Treasury Yield Curve Rates on 30-year T-bonds,
<http://www.treasury.gov/resources-center/data-chart-center/interest-rates/>

CAPM - Beta Coefficients

Exhibit DJG-8

Company	Ticker	Beta
American States Water Co	AWR	0.70
American Water Works Co Inc	AWK	0.80
California Water Service Gp	CWT	0.80
Essential Utilities, Inc.	WTRG	0.80
Middlesex Water Co	MSEX	0.75
H2O America	HTO	0.75
Average		0.77

Value Line Betas from Value Line Investment Survey

CAPM - Implied Equity Risk Premium Estimate

Exhibit DJG-9

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Year	Market Value	Operating Earnings	Dividends	Buybacks	Earnings Yield	Dividend Yield	Buyback Yield	Gross Cash Yield
2014	18,245	1,004	350	553	5.50%	1.92%	3.03%	4.95%
2015	17,900	885	382	572	4.95%	2.14%	3.20%	5.33%
2016	19,268	920	397	536	4.77%	2.06%	2.78%	4.85%
2017	22,821	1,066	420	519	4.67%	1.84%	2.28%	4.12%
2018	21,027	1,282	456	806	6.10%	2.17%	3.84%	6.01%
2019	26,760	1,305	485	729	4.88%	1.81%	2.72%	4.54%
2020	31,659	1,019	480	520	3.22%	1.52%	1.64%	3.16%
2021	40,356	1,739	511	882	4.31%	1.27%	2.18%	3.45%
2022	32,133	1,656	565	923	5.15%	1.76%	2.87%	4.63%
2023	36,870	1,790	588	795	4.85%	1.60%	2.16%	3.75%
2024	49,805	1,968	630	943	3.95%	1.26%	1.89%	3.16%
Cash Yield	4.36%	[9]						
Growth Rate	6.96%	[10]						
Risk-free Rate	4.66%	[11]						
Current Index Value	6,764	[12]						
	[13]	[14]	[15]	[16]	[17]			
Year	1	2	3	4	5			
Expected Dividends	315	337	361	386	413			
Expected Terminal Value					8574			
Present Value	287	280	273	266	5657			
Intrinsic Index Value	6764	[18]						
Required Return on Market	9.7%	[19]						
Implied Equity Risk Premium	5.0%	[20]						

[1-4] S&P Quarterly Press Releases, data found at <https://us.spindices.com/indices/equity/sp-500> (additional info tab) (all dollar figures are in \$ billions)

[1] Market value of S&P 500

[5] = [2] / [1]

[6] = [3] / [1]

[7] = [4] / [1]

[8] = [6] + [7]

[9] = Average of [8]

[10] = Compound annual growth rate of [2] = $(\text{end value} / \text{beginning value})^{1/10} - 1$

[11] Risk-free rate from DJG risk-free rate exhibit

[12] 30-day average of closing index prices from DJG stock price exhibit

[13-16] Expected dividends = $[9] * [12] * (1 + [10])^0$; Present value = $\text{expected dividend} / (1 + [11] + [19])^0$

[17] Expected terminal value = $\text{expected dividend} * (1 + [11]) / [19]$; Present value = $(\text{expected dividend} + \text{expected terminal value}) / (1 + [11] + [19])^0$

[18] = Sum([13-17]) present values.

[19] = [20] + [11]

[20] Internal rate of return calculation setting [18] equal to [12] and solving for the discount rate

CAPM - Equity Risk Premium Results

IESE Business School Survey	5.5%	[1]
Kroll (Duff & Phelps) Report	5.0%	[2]
Damodaran (average)	4.2%	[3]
Garrett	<u>5.0%</u>	[4]
Average	4.9%	

CAPM - Final Results

Exhibit DJG-11

		[1]	[2]
Company	Ticker	Beta	CAPM Result
American States Water Co	AWR	0.70	8.1%
American Water Works Co Inc	AWK	0.80	8.6%
California Water Service Gp	CWT	0.80	8.6%
Essential Utilities, Inc.	WTRG	0.80	8.6%
Middlesex Water Co	MSEX	0.75	8.4%
H2O America	HTO	0.75	8.4%
Average			8.4%
Risk-free Rate	[3]	4.7%	
Equity Risk Premium	[4]	4.9%	

[1] From Exhibit DJG-8

[2] = [3] + [1] * [4]

[3] From Exhibit DJG-7

[4] From Exhibit DJG-10

Cost of Equity Summary

Exhibit DJG-12

Model	Cost of Equity
CAPM (at Proxy Debt Ratio)	8.4%
DCF Model (Analyst Growth)	9.2%
DCF Model (Sustainable Growth)	6.7%
Average (CAPM and Analyst-Growth DCF)	8.8%
Recommended ROE	8.8%

Final Rate of Return Recommendation

Exhibit DJG-13

<u>Capital Component</u>	<u>Proposed Ratio</u>	<u>Cost Rate</u>	<u>Weighted Cost</u>
Debt	47.0%	4.20%	1.97%
Fund Equity	<u>53.0%</u>	8.80%	<u>4.66%</u>
Total	100.0%		6.64%

Summary Rate and Accrual Adjustment

Exhibit DJG-14

Page 1 of 1

<u>2025 DEPRECIATION STUDY</u>							
Plant Function	Plant 3/31/2025	Lancaster Position		OCA Position		OCA Adjustment	
		Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
Structures and Improvements	\$ 136,143,254	1.95%	\$ 2,657,792	1.34%	\$ 1,825,398	-0.61%	\$ (832,394)
Transmission and Distribution	174,346,960	1.28%	2,238,325	1.07%	1,865,124	-0.21%	(373,201)
General Plant	9,671,484	3.33%	322,075	3.42%	330,523	0.09%	8,448
TOTAL PLANT STUDIED	\$ 320,161,699	1.63%	\$ 5,218,192	1.26%	\$ 4,021,044	-0.37%	\$ (1,197,148)

<u>2026 DEPRECIATION STUDY</u>							
Plant Function	Plant 3/31/2026	Lancaster Position		OCA Position		OCA Adjustment	
		Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
Structures and Improvements	\$ 136,800,686	1.96%	\$ 2,679,825	1.33%	\$ 1,814,406	-0.63%	\$ (865,419)
Transmission and Distribution	179,845,271	1.29%	2,314,194	1.08%	1,948,261	-0.20%	(365,933)
General Plant	10,421,484	3.57%	371,578	3.62%	377,075	0.05%	5,497
TOTAL PLANT STUDIED	\$ 327,067,441	1.64%	\$ 5,365,597	1.27%	\$ 4,139,742	-0.37%	\$ (1,225,855)

<u>2027 DEPRECIATION STUDY</u>							
Plant Function	Plant 3/31/2027	Lancaster Position		OCA Position		OCA Adjustment	
		Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
Structures and Improvements	\$ 137,016,686	1.95%	\$ 2,670,954	1.32%	\$ 1,805,053	-0.63%	\$ (865,901)
Transmission and Distribution	223,929,587	1.33%	2,977,604	1.10%	2,471,854	-0.23%	(505,750)
General Plant	10,771,484	3.86%	415,682	3.88%	418,182	0.02%	2,500
TOTAL PLANT STUDIED	\$ 371,717,756	1.63%	\$ 6,064,240	1.26%	\$ 4,695,088	-0.37%	\$ (1,369,152)

Detailed Rate Comparison - 2025

Exhibit DJG-15

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		[1]	[2]		[3]		[4]	
Account No.	Description	Plant 3/31/2025	Lancaster Position		OCA Position		OCA Adjustment	
			Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
Structures and Improvements								
304.20	POWER AND PUMPING STRUCTURES							
	WILLOW STREET BOOSTER STATION - OUTSIDE CITY	2,321,747	2.71%	62,980	1.65%	38,369	-1.06%	-24,611
	LAMPETER BOOSTER STATION - OUTSIDE CITY	6,591	0.00%	0	0.00%	0	0.00%	0
	KISSEL HILL BOOSTER STATION - OUTSIDE CITY	71,619	3.11%	2,228	1.54%	1,103	-1.57%	-1,125
	SUSQUEHANNA RIVER INTAKE AND HIGH SERVICE PUMP STATION - JOINT	867,860	2.68%	23,253	1.28%	11,085	-1.40%	-12,168
	CONESTOGA PUMP STATION - JOINT	2,412,893	3.36%	81,131	1.33%	32,138	-2.03%	-48,993
	HESS BOULEVARD PUMP STATION - OUTSIDE CITY	178,117	2.30%	4,100	1.28%	2,285	-1.02%	-1,815
	CONESTOGA STRAINER BUILDING	1,264,611	2.27%	28,730	1.53%	19,294	-0.74%	-9,436
	DELP ROAD PUMP STATION	972,400	2.28%	22,193	1.55%	15,058	-0.73%	-7,135
	WILLOW VALLEY PUMP STATION	2,501,627	2.15%	53,849	1.64%	41,023	-0.51%	-12,826
	EAST PUMP STATION	2,013,091	2.33%	46,809	1.66%	33,452	-0.67%	-13,357
	SOUTH PUMP STATION	1,078,925	2.10%	22,626	1.66%	17,899	-0.44%	-4,727
	TOTAL ACCOUNT 304.20	13,689,479	2.54%	347,899	1.55%	211,705	-0.99%	-136,194
304.30	PURIFICATION BUILDINGS							
	CONESTOGA CREEK TREATMENT PLANT	7,916,687	2.74%	216,919	1.34%	106,373	-1.40%	-110,546
	SUSQUEHANNA RIVER TREATMENT PLANT	4,594,483	2.03%	93,096	1.20%	55,034	-0.83%	-38,062
	SUSQUEHANNA RIVER INTAKE - CARBON SLURRY BUILDING	9,075	0.00%	0	0.00%	0	0.00%	0
	SUSQUEHANNA MEMBRANE FACILITY	99,362,243	1.77%	1,763,308	1.30%	1,291,179	-0.47%	-472,129
	TOTAL ACCOUNT 304.30	111,882,488	1.85%	2,073,323	1.30%	1,452,587	-0.55%	-620,736
304.61	WATER ADMINISTRATION BUILDING	9,989,367	2.18%	218,061	1.49%	149,333	-0.69%	-68,728
304.62	STORES, SHOP AND GARAGE BUILDINGS	352,846	3.34%	11,773	3.34%	11,773	0.00%	0
304.63	MISCELLANEOUS STRUCTURES AND IMPROVEMENTS	229,074	2.94%	6,736	0.00%	0	-2.94%	-6,736
	Total Structures and Improvements	136,143,254	1.95%	2,657,792	1.34%	1,825,398	-0.61%	-832,394
Transmission and Distribution								
305.00	COLLECTING IMPOUNDING RESERVOIRS	34,130	0.31%	107	0.31%	107	0.00%	0
306.00	LAKE, RIVER AND OTHER INTAKES	465,271	1.39%	6,474	0.86%	3,989	-0.53%	-2,485
330.00	DISTRIBUTION RESERVOIR AND STANDPIPES							
	UNDERGROUND STORAGE RESERVOIR - OYSTER PT (MOUNTVILLE) - JOINT	10,986,347	1.85%	203,283	1.54%	169,154	-0.31%	-34,129
	WILLOW STREET STANDPIPE - OUTSIDE CITY	1,114,501	1.04%	11,568	0.63%	7,067	-0.41%	-4,501
	LAFAYETTE (ROUTE 30 EAST) STANDPIPE - OUTSIDE CITY	2,990,374	1.93%	57,810	1.44%	43,074	-0.49%	-14,736
	LAMPETER ELEVATED TANK - OUTSIDE CITY	150,184	1.71%	2,566	0.46%	698	-1.25%	-1,868
	NEFFSVILLE TANK - OUTSIDE CITY	404,843	1.86%	7,541	0.66%	2,684	-1.20%	-4,857
	BLOSSOM HILL STANDPIPE - OUTSIDE CITY	19,490	0.00%	0	0.00%	0	0.00%	0
	TANK PAINTING - OUTSIDE CITY	177,263	0.00%	0	0.00%	0	0.00%	0

Detailed Rate Comparison - 2025

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Account No.	Description	[1]	[2]		[3]		[4]	
		Plant 3/31/2025	Lancaster Position		OCA Position		OCA Adjustment	
			Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
	FENCING - JOINT	30,027	0.00%	0	0.00%	0	0.00%	0
	SOUTH TANK	10,789,245	1.83%	197,241	1.59%	171,850	-0.24%	-25,391
	TOTAL ACCOUNT 330.00	26,662,273	1.80%	480,009	1.48%	394,527	-0.32%	-85,482
311.00	ELECTRIC PUMPING EQUIPMENT	10,669,428	4.19%	447,145	2.64%	282,105	-1.55%	-165,040
320.00	PURIFICATION SYSTEM							
	TREATMENT PLANT EQUIPMENT	9,690,458	0.65%	63,093	0.97%	93,620	0.32%	30,527
	WILLOW STREET CHLORINE BOOSTER STATION	21,019	0.00%	0	0.00%	0	0.00%	0
	TOTAL ACCOUNT 320.00	9,711,477	0.65%	63,093	0.96%	93,620	0.31%	30,527
331.00	MAINS AND ACCESSORIES							
	CAST IRON, 4 INCH AND UNDER - INSIDE CITY	50,345	0.84%	424	0.95%	478	0.11%	54
	CAST IRON, 4 INCH AND UNDER - OUTSIDE CITY	531,881	1.49%	7,923	1.18%	6,272	-0.31%	-1,651
	TOTAL 4 INCH AND UNDER	582,226	1.43%	8,347	1.16%	6,750	-0.27%	-1,597
	CAST IRON, 6 INCH AND OVER - INSIDE CITY	28,201,966	1.02%	286,469	0.89%	249,705	-0.13%	-36,764
	CAST IRON, 6 INCH AND OVER - OUTSIDE CITY	51,121,947	0.98%	499,210	0.86%	440,854	-0.12%	-58,356
	CAST IRON, 6 INCH AND OVER - JOINT	4,043,600	0.84%	33,839	0.77%	31,291	-0.07%	-2,548
	TOTAL 6 INCH AND OVER	83,367,513	0.98%	819,518	0.87%	721,850	-0.12%	-97,668
	MANHOLES - INSIDE CITY	243,440	1.11%	2,706	1.10%	2,674	-0.01%	-32
	MANHOLES - OUTSIDE CITY	1,139,492	1.42%	16,149	1.19%	13,519	-0.23%	-2,630
	MANHOLES - JOINT	129,079	0.61%	782	0.59%	760	-0.02%	-22
	TOTAL MANHOLES	1,512,011	1.30%	19,637	1.12%	16,954	-0.18%	-2,683
	VALVES AND VALVE BOXES - INSIDE CITY	1,967,767	1.67%	32,937	1.38%	27,144	-0.29%	-5,793
	VALVES AND VALVE BOXES - OUTSIDE CITY	5,058,902	1.58%	80,035	1.34%	67,709	-0.24%	-12,326
	VALVES AND VALVE BOXES - JOINT	253,688	0.74%	1,875	0.89%	2,246	0.15%	371
	TOTAL VALVES AND VALVE BOXES	7,280,357	1.58%	114,847	1.33%	97,098	-0.24%	-17,749
	STEEL - OUTSIDE CITY	858,719	1.67%	14,337	1.42%	12,217	-0.25%	-2,120
	STEEL - JOINT	1,832,100	0.18%	3,277	0.17%	3,138	-0.01%	-139
	TOTAL STEEL	2,690,819	0.65%	17,614	0.57%	15,356	-0.08%	-2,258
	PLASTIC - OUTSIDE CITY	102,283	1.07%	1,093	0.96%	982	-0.11%	-111
	LANCASTER METER PIT - OUTSIDE CITY	11,681	0.00%	0	0.00%	0	0.00%	0
	RELINING	4,320,616	2.08%	89,662	1.73%	74,547	-0.35%	-15,115
	TOTAL ACCOUNT 331.00	99,867,505	1.07%	1,070,718	0.93%	933,537	-0.14%	-137,181
333.00	SERVICES							

Detailed Rate Comparison - 2025

Exhibit DJG-15

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Account No.	Description	[1]	[2]		[3]		[4]	
		Plant 3/31/2025	Lancaster Position		OCA Position		OCA Adjustment	
			Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
	INSIDE CITY	1,953,238	1.29%	25,252	1.22%	23,793	-0.07%	-1,459
	OUTSIDE CITY	5,807,247	1.17%	68,011	1.14%	66,222	-0.03%	-1,789
	TOTAL ACCOUNT 333.00	7,760,486	1.20%	93,263	1.16%	90,015	-0.04%	-3,248
334.00	METERS							
	INSIDE CITY	4,046,102	0.20%	7,969	0.21%	8,327	0.01%	358
	OUTSIDE CITY	10,662,547	0.01%	1,268	0.02%	1,660	0.01%	392
	TOTAL ACCOUNT 334.00	14,708,649	0.06%	9,237	0.07%	9,987	0.01%	750
335.00	FIRE HYDRANTS							
	INSIDE CITY	1,583,147	1.55%	24,608	1.29%	20,450	-0.26%	-4,158
	OUTSIDE CITY	2,884,595	1.51%	43,671	1.28%	36,787	-0.23%	-6,884
	TOTAL ACCOUNT 335.00	4,467,741	1.53%	68,279	1.28%	57,237	-0.25%	-11,042
	Total Transmission and Distribution	174,346,960	1.28%	2,238,325	1.07%	1,865,124	-0.21%	-373,201
	General Plant							
340.00	OFFICE FURNITURE AND EQUIPMENT							
	FURNITURE	183,382	1.10%	2,012	1.10%	2,010	0.00%	-2
	EQUIPMENT	108,602	1.33%	1,443	1.33%	1,439	0.00%	-4
	HARDWARE AND SOFTWARE	1,622,302	2.14%	34,787	2.13%	34,554	-0.01%	-233
	TOTAL ACCOUNT 340.00	1,914,286	2.00%	38,242	1.99%	38,003	-0.01%	-239
341.00	TRANSPORTATION EQUIPMENT							
	AUTOS AND VANS	531,019	5.49%	29,168	6.02%	31,965	0.53%	2,797
	TRUCKS	3,709,060	3.63%	134,629	3.79%	140,593	0.16%	5,964
	TRAILERS	211,484	3.32%	7,019	2.99%	6,316	-0.33%	-703
	TOTAL ACCOUNT 341.00	4,451,563	3.84%	170,816	4.02%	178,874	0.18%	8,058
342.00	STORES EQUIPMENT	12,902	1.06%	137	1.05%	136	-0.01%	-1
343.10	SHOP EQUIPMENT	30,853	0.00%	0	0.00%	0	0.00%	0
343.20	GENERAL	307,411	0.84%	2,584	0.84%	2,578	0.00%	-6
344.00	LABORATORY EQUIPMENT	111,048	0.63%	700	1.28%	1,424	0.65%	724
345.00	CONSTRUCTION EQUIPMENT	1,314,501	4.56%	59,968	4.57%	60,015	0.01%	47
346.00	COMMUNICATION EQUIPMENT	1,432,760	3.35%	47,981	3.34%	47,843	-0.01%	-138
347.00	MISCELLANEOUS EQUIPMENT	96,160	1.71%	1,647	1.72%	1,650	0.01%	3
	Total General Plant	9,671,484	3.33%	322,075	3.42%	330,523	0.09%	8,448

Detailed Rate Comparison - 2025

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Account No.	Description	[1]	[2]		[3]		[4]	
		Plant 3/31/2025	Lancaster Position		OCA Position		OCA Adjustment	
			Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
	TOTAL PLANT STUDIED	320,161,699	1.63%	5,218,192	1.26%	4,021,044	-0.37%	-1,197,148

[1], [2] From Company depreciation study

[3] From Exhibit DJG-16

[4] = [3] - [2]

Depreciation Rate Development - 2025

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Account No.	Description	[1]	[2]		[3]	[4]	[5]	[6]		[7]
		Plant 3/31/2025	Iowa Curve		Book Reserve	Future Accruals	Remaining Life	Total		
			Type	AL				Accrual	Rate	
Structures and Improvements										
304.20	POWER AND PUMPING STRUCTURES									
	WILLOW STREET BOOSTER STATION - OUTSIDE CITY	2,321,747	R3	- 60	82,170	2,239,577	58.37	38,369	1.65%	
	LAMPETER BOOSTER STATION - OUTSIDE CITY	6,591			6,591	0				
	KISSEL HILL BOOSTER STATION - OUTSIDE CITY	71,619	R3	- 60	33,455	38,164	34.61	1,103	1.54%	
	SUSQUEHANNA RIVER INTAKE AND HIGH SERVICE PUMP STATION - JOINT	867,860	R3	- 60	555,824	312,036	28.15	11,085	1.28%	
	CONESTOGA PUMP STATION - JOINT	2,412,893	R3	- 60	1,352,344	1,060,549	33.00	32,138	1.33%	
	HESS BOULEVARD PUMP STATION - OUTSIDE CITY	178,117	R3	- 60	103,892	74,225	32.49	2,285	1.28%	
	CONESTOGA STRAINER BUILDING	1,264,611	R3	- 60	399,260	865,351	44.85	19,294	1.53%	
	DELP ROAD PUMP STATION	972,400	R3	- 60	268,880	703,520	46.72	15,058	1.55%	
	WILLOW VALLEY PUMP STATION	2,501,627	R3	- 60	271,205	2,230,421	54.37	41,023	1.64%	
	EAST PUMP STATION	2,013,091	R3	- 60	30,750	1,982,341	59.26	33,452	1.66%	
	SOUTH PUMP STATION	1,078,925	R3	- 60	53,297	1,025,628	57.30	17,899	1.66%	
	TOTAL ACCOUNT 304.20	13,689,479			3,157,668	10,531,811	49.75	211,705	1.55%	
304.30	PURIFICATION BUILDINGS									
	CONESTOGA CREEK TREATMENT PLANT	7,916,687	R3	- 65	1,883,205	6,033,482	56.72	106,373	1.34%	
	SUSQUEHANNA RIVER TREATMENT PLANT	4,594,483	R3	- 65	2,064,568	2,529,915	45.97	55,034	1.20%	
	SUSQUEHANNA RIVER INTAKE - CARBON SLURRY BUILDING	9,075	R3	- 65	9,075	0				
	SUSQUEHANNA MEMBRANE FACILITY	99,362,243	R3	- 65	33,331,326	66,030,918	51.14	1,291,179	1.30%	
	TOTAL ACCOUNT 304.30	111,882,488			37,288,174	74,594,314	51.35	1,452,587	1.30%	
304.61	WATER ADMINISTRATION BUILDING	9,989,367	S2.5	- 65	1,251,876	8,737,491	58.51	149,333	1.49%	
304.62	STORES, SHOP AND GARAGE BUILDINGS	352,846	SQ		195,510	157,336	13.36	11,773	3.34%	
304.63	MISCELLANEOUS STRUCTURES AND IMPROVEMENTS	229,074	SQ		120,370	108,704	16.14			
	Total Structures and Improvements	136,143,254			42,013,598	94,129,656	51.57	1,825,398	1.34%	
Transmission and Distribution										
305.00	COLLECTING IMPOUNDING RESERVOIRS	34,130	SQ		31,446	2,684	25.10	107	0.31%	
306.00	LAKE, RIVER AND OTHER INTAKES	465,271	S1.5	- 65	334,538	130,733	32.77	3,989	0.86%	
330.00	DISTRIBUTION RESERVOIR AND STANDPIPES									
	UNDERGROUND STORAGE RESERVOIR - OYSTER PT (MOUNTVILLE) - JOINT	10,986,347	R4	- 60	1,977,211	9,009,136	53.26	169,154	1.54%	
	WILLOW STREET STANDPIPE - OUTSIDE CITY	1,114,501	R4	- 60	897,537	216,964	30.70	7,067	0.63%	
	LAFAYETTE (ROUTE 30 EAST) STANDPIPE - OUTSIDE CITY	2,990,374	R4	- 60	949,521	2,040,853	47.38	43,074	1.44%	
	LAMPETER ELEVATED TANK - OUTSIDE CITY	150,184	R4	- 60	140,147	10,037	14.38	698	0.46%	
	NEFFSVILLE TANK - OUTSIDE CITY	404,843	R4	- 60	353,874	50,968	18.99	2,684	0.66%	
	BLOSSOM HILL STANDPIPE - OUTSIDE CITY	19,490			19,490	0				
	TANK PAINTING - OUTSIDE CITY	177,263			177,263	0				

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		[1]	[2]	[3]	[4]	[5]	[6]	[7]
Account No.	Description	Plant 3/31/2025	Iowa Curve Type AL	Book Reserve	Future Accruals	Remaining Life	Total	
							Accrual	Rate
	FENCING - JOINT	30,027		30,027	0			
	SOUTH TANK	10,789,245	R4 - 60	950,841	9,838,404	57.25	171,850	1.59%
	TOTAL ACCOUNT 330.00	26,662,273		5,495,912	21,166,362	53.65	394,527	1.48%
311.00	ELECTRIC PUMPING EQUIPMENT	10,669,428	R2.5 - 40	1,938,278	8,731,150	30.95	282,105	2.64%
320.00	PURIFICATION SYSTEM							
	TREATMENT PLANT EQUIPMENT	9,690,458	S1.5 - 50	7,345,286	2,345,171	25.05	93,620	0.97%
	WILLOW STREET CHLORINE BOOSTER STATION	21,019		21,019	0			
	TOTAL ACCOUNT 320.00	9,711,477		7,366,305	2,345,172	25.05	93,620	0.96%
331.00	MAINS AND ACCESSORIES							
	CAST IRON, 4 INCH AND UNDER - INSIDE CITY	50,345	R2 - 80	31,150	19,195	40.13	478	0.95%
	CAST IRON, 4 INCH AND UNDER - OUTSIDE CITY	531,881	R2 - 80	125,586	406,295	64.78	6,272	1.18%
	TOTAL 4 INCH AND UNDER	582,226		156,736	425,490	63.03	6,750	1.16%
	CAST IRON, 6 INCH AND OVER - INSIDE CITY	28,201,966	R3 - 110	3,381,257	24,820,709	99.40	249,705	0.89%
	CAST IRON, 6 INCH AND OVER - OUTSIDE CITY	51,121,947	R3 - 110	11,145,324	39,976,623	90.68	440,854	0.86%
	CAST IRON, 6 INCH AND OVER - JOINT	4,043,600	R3 - 110	1,907,663	2,135,937	68.26	31,291	0.77%
	TOTAL 6 INCH AND OVER	83,367,513		16,434,244	66,933,269	92.72	721,850	0.87%
	MANHOLES - INSIDE CITY	243,440	R2.5 - 80	100,866	142,574	53.31	2,674	1.10%
	MANHOLES - OUTSIDE CITY	1,139,492	R2.5 - 80	245,995	893,497	66.09	13,519	1.19%
	MANHOLES - JOINT	129,079	R2.5 - 80	110,020	19,059	25.07	760	0.59%
	TOTAL MANHOLES	1,512,011		456,881	1,055,130	62.23	16,954	1.12%
	VALVES AND VALVE BOXES - INSIDE CITY	1,967,767	R2.5 - 70	304,379	1,663,388	61.28	27,144	1.38%
	VALVES AND VALVE BOXES - OUTSIDE CITY	5,058,902	R2.5 - 70	1,302,420	3,756,482	55.48	67,709	1.34%
	VALVES AND VALVE BOXES - JOINT	253,688	R2.5 - 70	192,652	61,036	27.18	2,246	0.89%
	TOTAL VALVES AND VALVE BOXES	7,280,357		1,799,451	5,480,906	56.45	97,098	1.33%
	STEEL - OUTSIDE CITY	858,719	R3 - 70	17,692	841,027	68.84	12,217	1.42%
	STEEL - JOINT	1,832,100	R3 - 70	1,784,803	47,297	15.07	3,138	0.17%
	TOTAL STEEL	2,690,819		1,802,495	888,324	57.85	15,356	0.57%
	PLASTIC - OUTSIDE CITY	102,283	R3 - 65	77,342	24,941	25.41	982	0.96%
	LANCASTER METER PIT - OUTSIDE CITY	11,681	S3 - 50	11,681	0			
	RELINING	4,320,616	R2.5 - 55	935,434	3,385,182	45.41	74,547	1.73%
	TOTAL ACCOUNT 331.00	99,867,505		21,674,264	78,193,241	83.76	933,537	0.93%
333.00	SERVICES							

Depreciation Rate Development - 2025

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Account No.	Description	[1]	[2]		[3]	[4]	[5]	[6]		[7]
		Plant	Iowa Curve		Book	Future	Remaining	Total		
		3/31/2025	Type	AL	Reserve	Accruals	Life	Accrual	Rate	
	INSIDE CITY	1,953,238	R3	- 70	814,520	1,138,718	47.86	23,793	1.22%	
	OUTSIDE CITY	5,807,247	R3	- 70	2,970,291	2,836,956	42.84	66,222	1.14%	
	TOTAL ACCOUNT 333.00	7,760,486			3,784,811	3,975,675	44.17	90,015	1.16%	
334.00	METERS									
	INSIDE CITY	4,046,102	S2.5	- 25	3,891,141	154,961	18.61	8,327	0.21%	
	OUTSIDE CITY	10,662,547	S2.5	- 25	10,634,824	27,723	16.70	1,660	0.02%	
	TOTAL ACCOUNT 334.00	14,708,649			14,525,965	182,684	18.29	9,987	0.07%	
335.00	FIRE HYDRANTS									
	INSIDE CITY	1,583,147	R2.5	- 75	333,635	1,249,512	61.10	20,450	1.29%	
	OUTSIDE CITY	2,884,595	R2.5	- 75	788,856	2,095,739	56.97	36,787	1.28%	
	TOTAL ACCOUNT 335.00	4,467,741			1,122,491	3,345,250	58.45	57,237	1.28%	
	Total Transmission and Distribution	174,346,960			56,274,010	118,072,950	63.31	1,865,124	1.07%	
	General Plant									
340.00	OFFICE FURNITURE AND EQUIPMENT									
	FURNITURE	183,382	SQ	- 25	143,382	40,000	19.90	2,010	1.10%	
	EQUIPMENT	108,602	SQ	- 20	83,704	24,898	17.30	1,439	1.33%	
	HARDWARE AND SOFTWARE	1,622,302	SQ		1,504,818	117,483	3.40	34,554	2.13%	
	TOTAL ACCOUNT 340.00	1,914,286			1,731,904	182,381	4.80	38,003	1.99%	
341.00	TRANSPORTATION EQUIPMENT									
	AUTOS AND VANS	531,019	L4	- 12	211,053	319,966	10.01	31,965	6.02%	
	TRUCKS	3,709,060	S1.5	- 18	2,014,920	1,694,140	12.05	140,593	3.79%	
	TRAILERS	211,484	L3	- 20	112,380	99,104	15.69	6,316	2.99%	
	TOTAL ACCOUNT 341.00	4,451,563			2,338,354	2,113,210	11.81	178,874	4.02%	
342.00	STORES EQUIPMENT	12,902	SQ	- 30	12,318	584	4.30	136	1.05%	
343.10	SHOP EQUIPMENT	30,853	SQ	- 25	30,853	0				
343.20	GENERAL	307,411	SQ	- 20	285,239	22,172	8.60	2,578	0.84%	
344.00	LABORATORY EQUIPMENT	111,048	L3	- 20	104,369	6,680	4.69	1,424	1.28%	
345.00	CONSTRUCTION EQUIPMENT	1,314,501	SQ	- 20	492,297	822,204	13.70	60,015	4.57%	
346.00	COMMUNICATION EQUIPMENT	1,432,760	SQ	- 15	777,315	655,445	13.70	47,843	3.34%	
347.00	MISCELLANEOUS EQUIPMENT	96,160	SQ	- 20	63,652	32,508	19.70	1,650	1.72%	
	Total General Plant	9,671,484			5,836,300	3,835,184	11.60	330,523	3.42%	

Depreciation Rate Development - 2025

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Account No.	Description	[1]	[2]		[3]	[4]	[5]	[6]		[7]
		Plant 3/31/2025	Iowa Curve		Book Reserve	Future Accruals	Remaining Life	Total		
			Type	AL				Accrual	Rate	
	TOTAL PLANT STUDIED	320,161,699			104,123,908	216,037,791	53.73	4,021,044	1.26%	

[1], [3] From Company depreciation study

[2] Average life and Iowa curve shape developed through actuarial analysis and professional judgment

[4] = [1] - [3]

[5] Composite remaining life based on Iowa curve in [2]; see remaining life exhibit for detailed calculations

[6] = [4] / [5]; (some unadjusted figures may be hard coded to match Company proposal)

[7] = [6] / [1]; (some unadjusted figures may be hard coded to match Company proposal)

Detailed Rate Comparison - 2026

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		[1]	[2]		[3]		[4]	
Account No.	Description	Plant 3/31/2026	Lancaster Position		OCA Position		OCA Adjustment	
			Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
Structures and Improvements								
304.20	POWER AND PUMPING STRUCTURES							
	WILLOW STREET BOOSTER STATION - OUTSIDE CITY	2,321,747	2.68%	62,250	1.63%	37,927	-1.05%	-24,323
	LAMPETER BOOSTER STATION - OUTSIDE CITY	6,591	0.00%	0	0.00%	0	0.00%	0
	KISSEL HILL BOOSTER STATION - OUTSIDE CITY	71,619	3.07%	2,198	1.48%	1,063	-1.59%	-1,135
	SUSQUEHANNA RIVER INTAKE AND HIGH SERVICE PUMP STATION - JOINT	867,860	2.63%	22,795	1.21%	10,516	-1.42%	-12,279
	CONESTOGA PUMP STATION - JOINT	2,412,893	3.31%	79,875	1.26%	30,371	-2.05%	-49,504
	HESS BOULEVARD PUMP STATION - OUTSIDE CITY	453,298	4.45%	20,157	1.62%	7,347	-2.83%	-12,810
	CONESTOGA STRAINER BUILDING	1,264,611	2.27%	28,731	1.51%	19,045	-0.76%	-9,686
	DELP ROAD PUMP STATION	972,400	2.27%	22,043	1.53%	14,883	-0.74%	-7,160
	WILLOW VALLEY PUMP STATION	2,501,627	2.15%	53,850	1.63%	40,761	-0.52%	-13,089
	EAST PUMP STATION	2,013,091	2.30%	46,380	1.65%	33,209	-0.65%	-13,171
	SOUTH PUMP STATION	1,078,925	2.09%	22,508	1.65%	17,808	-0.44%	-4,700
	TOTAL ACCOUNT 304.20	13,964,661	2.58%	360,787	1.52%	212,932	-1.06%	-147,855
304.30	PURIFICATION BUILDINGS							
	CONESTOGA CREEK TREATMENT PLANT	7,916,687	2.73%	215,795	1.32%	104,277	-1.41%	-111,518
	SUSQUEHANNA RIVER TREATMENT PLANT	4,594,483	2.01%	92,446	1.18%	54,004	-0.83%	-38,442
	SUSQUEHANNA RIVER INTAKE - CARBON SLURRY BUILDING	9,075	0.00%	0	0.00%	0	0.00%	0
	SUSQUEHANNA MEMBRANE FACILITY	99,744,493	1.78%	1,775,160	1.29%	1,288,313	-0.49%	-486,847
	TOTAL ACCOUNT 304.30	112,264,738	1.86%	2,083,401	1.29%	1,446,594	-0.57%	-636,807
304.61	WATER ADMINISTRATION BUILDING	9,989,367	2.17%	217,124	1.48%	148,143	-0.69%	-68,981
304.62	STORES, SHOP AND GARAGE BUILDINGS	352,846	3.34%	11,776	0.00%	0	-3.34%	-11,776
304.63	MISCELLANEOUS STRUCTURES AND IMPROVEMENTS	229,074	2.94%	6,737	2.94%	6,737	0.00%	0
	Total Structures and Improvements	136,800,686	1.96%	2,679,825	1.33%	1,814,406	-0.63%	-865,419
Transmission and Distribution								
305.00	COLLECTING IMPOUNDING RESERVOIRS	34,130	0.31%	107	0.31%	107	0.00%	0
306.00	LAKE, RIVER AND OTHER INTAKES	465,271	1.37%	6,359	0.83%	3,868	-0.54%	-2,491
330.00	DISTRIBUTION RESERVOIR AND STANDPIPES							
	UNDERGROUND STORAGE RESERVOIR - OYSTER PT (MOUNTVILLE) - JOINT	10,986,347	1.85%	203,497	1.53%	168,340	-0.32%	-35,157
	WILLOW STREET STANDPIPE - OUTSIDE CITY	1,114,501	1.03%	11,480	0.62%	6,889	-0.41%	-4,591
	LAFAYETTE (ROUTE 30 EAST) STANDPIPE - OUTSIDE CITY	2,990,374	2.68%	80,075	1.43%	42,676	-1.25%	-37,399
	LAMPETER ELEVATED TANK - OUTSIDE CITY	150,184	1.58%	2,375	0.36%	544	-1.22%	-1,831
	NEFFSVILLE TANK - OUTSIDE CITY	404,843	1.80%	7,294	0.59%	2,380	-1.21%	-4,914
	BLOSSOM HILL STANDPIPE - OUTSIDE CITY	19,490	0.00%	0	0.00%	0	0.00%	0
	TANK PAINTING - OUTSIDE CITY	177,263	0.00%	0	0.00%	0	0.00%	0

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Account No.	Description	[1]	[2]		[3]		[4]	
		Plant 3/31/2026	Lancaster Position		OCA Position		OCA Adjustment	
			Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
	FENCING - JOINT	30,027	0.00%	0	0.00%	0	0.00%	0
	SOUTH TANK	10,789,245	1.83%	197,237	1.59%	171,395	-0.24%	-25,842
	TOTAL ACCOUNT 330.00	26,662,273	1.88%	501,958	1.47%	392,224	-0.41%	-109,734
311.00	ELECTRIC PUMPING EQUIPMENT	11,082,199	3.76%	417,045	2.58%	285,400	-1.18%	-131,645
320.00	PURIFICATION SYSTEM							
	TREATMENT PLANT EQUIPMENT	10,837,208	0.84%	91,136	1.16%	126,252	0.32%	35,116
	WILLOW STREET CHLORINE BOOSTER STATION	21,019	0.00%	0	0.00%	0	0.00%	0
	TOTAL ACCOUNT 320.00	10,858,227	0.84%	91,136	1.16%	126,252	0.32%	35,116
331.00	MAINS AND ACCESSORIES							
	CAST IRON, 4 INCH AND UNDER - INSIDE CITY	50,345	0.84%	421	0.94%	475	0.10%	54
	CAST IRON, 4 INCH AND UNDER - OUTSIDE CITY	531,881	1.45%	7,697	1.17%	6,227	-0.28%	-1,470
	TOTAL 4 INCH AND UNDER	582,226	1.39%	8,118	1.15%	6,703	-0.24%	-1,415
	CAST IRON, 6 INCH AND OVER - INSIDE CITY	28,201,966	1.01%	284,311	0.88%	249,218	-0.13%	-35,093
	CAST IRON, 6 INCH AND OVER - OUTSIDE CITY	52,697,172	0.98%	516,334	0.86%	455,385	-0.12%	-60,949
	CAST IRON, 6 INCH AND OVER - JOINT	4,043,600	0.83%	33,570	0.77%	31,182	-0.06%	-2,388
	TOTAL 6 INCH AND OVER	84,942,738	0.98%	834,215	0.87%	735,785	-0.12%	-98,430
	MANHOLES - INSIDE CITY	243,440	1.10%	2,680	1.09%	2,662	-0.01%	-18
	MANHOLES - OUTSIDE CITY	1,139,492	1.41%	16,026	1.18%	13,456	-0.23%	-2,570
	MANHOLES - JOINT	129,079	0.60%	771	0.58%	745	-0.02%	-26
	TOTAL MANHOLES	1,512,011	1.29%	19,477	1.12%	16,863	-0.17%	-2,614
	VALVES AND VALVE BOXES - INSIDE CITY	1,967,767	1.65%	32,475	1.37%	27,004	-0.28%	-5,471
	VALVES AND VALVE BOXES - OUTSIDE CITY	5,367,237	1.60%	86,130	1.35%	72,230	-0.25%	-13,900
	VALVES AND VALVE BOXES - JOINT	253,688	0.72%	1,823	0.88%	2,224	0.16%	401
	TOTAL VALVES AND VALVE BOXES	7,588,692	1.59%	120,428	1.34%	101,458	-0.25%	-18,970
	STEEL - OUTSIDE CITY	858,719	1.65%	14,167	1.42%	12,182	-0.23%	-1,985
	STEEL - JOINT	1,832,100	0.17%	3,161	0.16%	3,018	-0.01%	-143
	TOTAL STEEL	2,690,819	0.64%	17,328	0.56%	15,200	-0.08%	-2,128
	PLASTIC - OUTSIDE CITY	102,283	1.05%	1,070	0.94%	966	-0.11%	-104
	LANCASTER METER PIT - OUTSIDE CITY	11,681	0.00%	0	0.00%	0	0.00%	0
	RELINING	4,392,616	2.06%	90,529	1.72%	75,477	-0.34%	-15,052
	TOTAL ACCOUNT 331.00	101,823,066	1.07%	1,091,165	0.94%	952,451	-0.14%	-138,714
333.00	SERVICES							

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Account No.	Description	[1]	[2]		[3]		[4]	
		Plant 3/31/2026	Lancaster Position		OCA Position		OCA Adjustment	
			Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
	INSIDE CITY	3,492,576	1.54%	53,945	1.36%	47,572	-0.18%	-6,373
	OUTSIDE CITY	6,251,138	1.21%	75,901	1.18%	73,524	-0.03%	-2,377
	TOTAL ACCOUNT 333.00	9,743,714	1.33%	129,846	1.24%	121,096	-0.09%	-8,750
334.00	METERS							
	INSIDE CITY	4,046,102	0.20%	7,981	0.20%	8,284	0.00%	303
	OUTSIDE CITY	10,662,547	0.01%	1,277	0.02%	1,678	0.01%	401
	TOTAL ACCOUNT 334.00	14,708,649	0.06%	9,258	0.07%	9,961	0.00%	703
335.00	FIRE HYDRANTS							
	INSIDE CITY	1,583,147	1.53%	24,267	1.28%	20,335	-0.25%	-3,932
	OUTSIDE CITY	2,884,595	1.49%	43,053	1.27%	36,568	-0.22%	-6,485
	TOTAL ACCOUNT 335.00	4,467,741	1.51%	67,320	1.27%	56,903	-0.23%	-10,417
	Total Transmission and Distribution	179,845,271	1.29%	2,314,194	1.08%	1,948,261	-0.20%	-365,933
	General Plant							
340.00	OFFICE FURNITURE AND EQUIPMENT							
	FURNITURE	183,382	1.10%	2,026	1.11%	2,031	0.01%	5
	EQUIPMENT	108,602	1.33%	1,443	1.32%	1,439	-0.01%	-4
	HARDWARE AND SOFTWARE	1,622,302	2.12%	34,429	2.13%	34,486	0.01%	57
	TOTAL ACCOUNT 340.00	1,914,286	1.98%	37,898	1.98%	37,956	0.00%	58
341.00	TRANSPORTATION EQUIPMENT							
	AUTOS AND VANS	531,019	5.37%	28,492	5.91%	31,371	0.54%	2,879
	TRUCKS	4,459,060	4.10%	182,748	4.15%	185,152	0.05%	2,404
	TRAILERS	211,484	3.31%	6,990	2.91%	6,155	-0.40%	-835
	TOTAL ACCOUNT 341.00	5,201,563	4.20%	218,230	4.28%	222,679	0.09%	4,449
342.00	STORES EQUIPMENT	12,902	1.07%	138	1.08%	140	0.01%	2
343.10	SHOP EQUIPMENT	30,853	0.00%	0	0.00%	0	0.00%	0
343.20	GENERAL	307,411	0.84%	2,581	0.84%	2,578	0.00%	-3
344.00	LABORATORY EQUIPMENT	111,048	0.60%	663	1.17%	1,300	0.57%	637
345.00	CONSTRUCTION EQUIPMENT	1,314,501	4.62%	60,775	4.64%	60,981	0.02%	206
346.00	COMMUNICATION EQUIPMENT	1,432,760	3.47%	49,646	3.48%	49,791	0.01%	145
347.00	MISCELLANEOUS EQUIPMENT	96,160	1.71%	1,647	1.72%	1,650	0.01%	3
	Total General Plant	10,421,484	3.57%	371,578	3.62%	377,075	0.05%	5,497

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Account No.	Description	[1]	[2]		[3]		[4]	
		Plant 3/31/2026	Lancaster Position		OCA Position		OCA Adjustment	
			Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
	TOTAL PLANT STUDIED	327,067,441	1.64%	5,365,597	1.27%	4,139,742	-0.37%	-1,225,855

[1], [2] From Company depreciation study

[3] From Exhibit DJG-18

[4] = [3] - [2]

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Account No.	Description	[1]	[2]		[3]	[4]	[5]	[6]		[7]
		Plant 3/31/2026	Iowa Curve		Book Reserve	Future Accruals	Remaining Life	Total		
			Type	AL				Accrual	Rate	
Structures and Improvements										
304.20	POWER AND PUMPING STRUCTURES									
	WILLOW STREET BOOSTER STATION - OUTSIDE CITY	2,321,747	R3	- 60	145,089	2,176,658	57.39	37,927	1.63%	
	LAMPETER BOOSTER STATION - OUTSIDE CITY	6,591			6,591	0				
	KISSEL HILL BOOSTER STATION - OUTSIDE CITY	71,619	R3	- 60	35,682	35,937	33.82	1,063	1.48%	
	SUSQUEHANNA RIVER INTAKE AND HIGH SERVICE PUMP STATION - JOINT	867,860	R3	- 60	579,083	288,777	27.46	10,516	1.21%	
	CONESTOGA PUMP STATION - JOINT	2,412,893	R3	- 60	1,433,417	979,476	32.25	30,371	1.26%	
	HESS BOULEVARD PUMP STATION - OUTSIDE CITY	453,298	R3	- 60	81,153	372,145	50.65	7,347	1.62%	
	CONESTOGA STRAINER BUILDING	1,264,611	R3	- 60	427,967	836,644	43.93	19,045	1.51%	
	DELP ROAD PUMP STATION	972,400	R3	- 60	291,051	681,349	45.78	14,883	1.53%	
	WILLOW VALLEY PUMP STATION	2,501,627	R3	- 60	324,990	2,176,636	53.40	40,761	1.63%	
	EAST PUMP STATION	2,013,091	R3	- 60	77,655	1,935,436	58.28	33,209	1.65%	
	SOUTH PUMP STATION	1,078,925	R3	- 60	75,954	1,002,971	56.32	17,808	1.65%	
	TOTAL ACCOUNT 304.20	13,964,661			3,478,632	10,486,028	49.25	212,932	1.52%	
304.30	PURIFICATION BUILDINGS									
	CONESTOGA CREEK TREATMENT PLANT	7,916,687	R3	- 65	2,100,122	5,816,565	55.78	104,277	1.32%	
	SUSQUEHANNA RIVER TREATMENT PLANT	4,594,483	R3	- 65	2,157,836	2,436,647	45.12	54,004	1.18%	
	SUSQUEHANNA RIVER INTAKE - CARBON SLURRY BUILDING	9,075	R3	- 65	9,075	0				
	SUSQUEHANNA MEMBRANE FACILITY	99,744,493	R3	- 65	34,993,867	64,750,627	50.26	1,288,313	1.29%	
	TOTAL ACCOUNT 304.30	112,264,738			39,260,900	73,003,838	50.47	1,446,594	1.29%	
304.61	WATER ADMINISTRATION BUILDING	9,989,367	S2.5	- 65	1,469,644	8,519,723	57.51	148,143	1.48%	
304.62	STORES, SHOP AND GARAGE BUILDINGS	352,846	SQ		207,279	145,567				
304.63	MISCELLANEOUS STRUCTURES AND IMPROVEMENTS	229,074	SQ		127,100	101,974	15.14	6,737	2.94%	
	Total Structures and Improvements	136,800,686			44,543,555	92,257,130	50.85	1,814,406	1.33%	
Transmission and Distribution										
305.00	COLLECTING IMPOUNDING RESERVOIRS	34,130	SQ		31,552	2,578	24.10	107	0.31%	
306.00	LAKE, RIVER AND OTHER INTAKES	465,271	S1.5	- 65	340,997	124,274	32.13	3,868	0.83%	
330.00	DISTRIBUTION RESERVOIR AND STANDPIPES									
	UNDERGROUND STORAGE RESERVOIR - OYSTER PT (MOUNTVILLE) - JOINT	10,986,347	R4	- 60	2,180,458	8,805,889	52.31	168,340	1.53%	
	WILLOW STREET STANDPIPE - OUTSIDE CITY	1,114,501	R4	- 60	909,128	205,373	29.81	6,889	0.62%	
	LAFAYETTE (ROUTE 30 EAST) STANDPIPE - OUTSIDE CITY	2,990,374	R4	- 60	1,007,235	1,983,139	46.47	42,676	1.43%	
	LAMPETER ELEVATED TANK - OUTSIDE CITY	150,184	R4	- 60	142,715	7,469	13.74	544	0.36%	
	NEFFSVILLE TANK - OUTSIDE CITY	404,843	R4	- 60	361,404	43,438	18.25	2,380	0.59%	
	BLOSSOM HILL STANDPIPE - OUTSIDE CITY	19,490			19,490	0				
	TANK PAINTING - OUTSIDE CITY	177,263			177,263	0				

		[1]	[2]	[3]	[4]	[5]	[6]	[7]
Account No.	Description	Plant 3/31/2026	Iowa Curve Type AL	Book Reserve	Future Accruals	Remaining Life	Total	
							Accrual	Rate
	FENCING - JOINT	30,027		30,027	0			
	SOUTH TANK	10,789,245	R4 - 60	1,148,284	9,640,961	56.25	171,395	1.59%
	TOTAL ACCOUNT 330.00	26,662,273		5,976,005	20,686,269	52.74	392,224	1.47%
311.00	ELECTRIC PUMPING EQUIPMENT	11,082,199	R2.5 - 40	2,348,975	8,733,225	30.60	285,400	2.58%
320.00	PURIFICATION SYSTEM							
	TREATMENT PLANT EQUIPMENT	10,837,208	S1.5 - 50	7,412,001	3,425,206	27.13	126,252	1.16%
	WILLOW STREET CHLORINE BOOSTER STATION	21,019		21,019	0			
	TOTAL ACCOUNT 320.00	10,858,227		7,433,020	3,425,207	27.13	126,252	1.16%
331.00	MAINS AND ACCESSORIES							
	CAST IRON, 4 INCH AND UNDER - INSIDE CITY	50,345	R2 - 80	31,573	18,772	39.51	475	0.94%
	CAST IRON, 4 INCH AND UNDER - OUTSIDE CITY	531,881	R2 - 80	133,511	398,370	63.97	6,227	1.17%
	TOTAL 4 INCH AND UNDER	582,226		165,084	417,142	62.24	6,703	1.15%
	CAST IRON, 6 INCH AND OVER - INSIDE CITY	28,201,966	R3 - 110	3,668,917	24,533,049	98.44	249,218	0.88%
	CAST IRON, 6 INCH AND OVER - OUTSIDE CITY	52,697,172	R3 - 110	11,480,288	41,216,884	90.51	455,385	0.86%
	CAST IRON, 6 INCH AND OVER - JOINT	4,043,600	R3 - 110	1,941,629	2,101,971	67.41	31,182	0.77%
	TOTAL 6 INCH AND OVER	84,942,738		17,090,834	67,851,904	92.22	735,785	0.87%
	MANHOLES - INSIDE CITY	243,440	R2.5 - 80	103,568	139,872	52.55	2,662	1.09%
	MANHOLES - OUTSIDE CITY	1,139,492	R2.5 - 80	262,176	877,316	65.20	13,456	1.18%
	MANHOLES - JOINT	129,079	R2.5 - 80	110,807	18,272	24.51	745	0.58%
	TOTAL MANHOLES	1,512,011		476,551	1,035,460	61.40	16,863	1.12%
	VALVES AND VALVE BOXES - INSIDE CITY	1,967,767	R2.5 - 70	337,241	1,630,526	60.38	27,004	1.37%
	VALVES AND VALVE BOXES - OUTSIDE CITY	5,367,237	R2.5 - 70	1,350,536	4,016,701	55.61	72,230	1.35%
	VALVES AND VALVE BOXES - JOINT	253,688	R2.5 - 70	194,529	59,159	26.60	2,224	0.88%
	TOTAL VALVES AND VALVE BOXES	7,588,692		1,882,306	5,706,386	56.24	101,458	1.34%
	STEEL - OUTSIDE CITY	858,719	R3 - 70	32,033	826,686	67.86	12,182	1.42%
	STEEL - JOINT	1,832,100	R3 - 70	1,788,101	43,999	14.58	3,018	0.16%
	TOTAL STEEL	2,690,819		1,820,134	870,685	57.28	15,200	0.56%
	PLASTIC - OUTSIDE CITY	102,283	R3 - 65	78,436	23,847	24.69	966	0.94%
	LANCASTER METER PIT - OUTSIDE CITY	11,681	S3 - 50	11,681	0			
	RELINING	4,392,616	R2.5 - 55	1,018,052	3,374,564	44.71	75,477	1.72%
	TOTAL ACCOUNT 331.00	101,823,066		22,543,078	79,279,988	83.24	952,451	0.94%
333.00	SERVICES							

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Account No.	Description	[1]	[2]		[3]	[4]	[5]	[6]		[7]
		Plant	Iowa Curve		Book	Future	Remaining	Total		
		3/31/2026	Type	AL	Reserve	Accruals	Life	Accrual	Rate	
	INSIDE CITY	3,492,576	R3	- 70	679,646	2,812,930	59.13	47,572	1.36%	
	OUTSIDE CITY	6,251,138	R3	- 70	2,991,833	3,259,305	44.33	73,524	1.18%	
	TOTAL ACCOUNT 333.00	9,743,714			3,671,479	6,072,235	50.14	121,096	1.24%	
334.00	METERS									
	INSIDE CITY	4,046,102	S2.5	- 25	3,899,233	146,869	17.73	8,284	0.20%	
	OUTSIDE CITY	10,662,547	S2.5	- 25	10,635,890	26,657	15.89	1,678	0.02%	
	TOTAL ACCOUNT 334.00	14,708,649			14,535,123	173,526	17.42	9,961	0.07%	
335.00	FIRE HYDRANTS									
	INSIDE CITY	1,583,147	R2.5	- 75	358,174	1,224,973	60.24	20,335	1.28%	
	OUTSIDE CITY	2,884,595	R2.5	- 75	832,413	2,052,182	56.12	36,568	1.27%	
	TOTAL ACCOUNT 335.00	4,467,741			1,190,587	3,277,154	57.59	56,903	1.27%	
	Total Transmission and Distribution	179,845,271			58,070,816	121,774,456	62.50	1,948,261	1.08%	
	General Plant									
340.00	OFFICE FURNITURE AND EQUIPMENT									
	FURNITURE	183,382	SQ	- 25	145,399	37,983	18.70	2,031	1.11%	
	EQUIPMENT	108,602	SQ	- 20	85,148	23,454	16.30	1,439	1.32%	
	HARDWARE AND SOFTWARE	1,622,302	SQ		1,539,535	82,766	2.40	34,486	2.13%	
	TOTAL ACCOUNT 340.00	1,914,286			1,770,082	144,203	3.80	37,956	1.98%	
341.00	TRANSPORTATION EQUIPMENT									
	AUTOS AND VANS	531,019	L4	- 12	240,206	290,813	9.27	31,371	5.91%	
	TRUCKS	4,459,060	S1.5	- 18	2,163,171	2,295,889	12.40	185,152	4.15%	
	TRAILERS	211,484	L3	- 20	119,401	92,083	14.96	6,155	2.91%	
	TOTAL ACCOUNT 341.00	5,201,563			2,522,779	2,678,785	12.03	222,679	4.28%	
342.00	STORES EQUIPMENT	12,902	SQ	- 30	12,455	447	3.20	140	1.08%	
343.10	SHOP EQUIPMENT	30,853	SQ	- 25	30,853	0				
343.20	GENERAL	307,411	SQ	- 20	287,821	19,590	7.60	2,578	0.84%	
344.00	LABORATORY EQUIPMENT	111,048	L3	- 20	105,069	5,980	4.60	1,300	1.17%	
345.00	CONSTRUCTION EQUIPMENT	1,314,501	SQ	- 20	552,238	762,263	12.50	60,981	4.64%	
346.00	COMMUNICATION EQUIPMENT	1,432,760	SQ	- 15	825,312	607,448	12.20	49,791	3.48%	
347.00	MISCELLANEOUS EQUIPMENT	96,160	SQ	- 20	65,296	30,864	18.70	1,650	1.72%	
	Total General Plant	10,421,484			6,171,904	4,249,580	11.27	377,075	3.62%	

Depreciation Rate Development - 2026

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Account No.	Description	[1]	[2]		[3]	[4]	[5]	[6]		[7]
		Plant	Iowa Curve		Book	Future	Remaining	Total		
		3/31/2026	Type	AL	Reserve	Accruals	Life	Accrual	Rate	
	TOTAL PLANT STUDIED	327,067,441			108,786,275	218,281,166	52.73	4,139,742	1.27%	

[1], [3] From Company depreciation study

[2] Average life and Iowa curve shape developed through actuarial analysis and professional judgment

[4] = [1] - [3]

[5] Composite remaining life based on Iowa curve in [2]; see remaining life exhibit for detailed calculations

[6] = [4] / [5]; (some unadjusted figures may be hard coded to match Company proposal)

[7] = [6] / [1]; (some unadjusted figures may be hard coded to match Company proposal)

Detailed Rate Comparison - 2027

Exhibit DJG-19

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		[1]	[2]		[3]		[4]	
Account No.	Description	Plant 3/31/2027	Lancaster Position		OCA Position		OCA Adjustment	
			Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
Structures and Improvements								
304.20	POWER AND PUMPING STRUCTURES							
	WILLOW STREET BOOSTER STATION - OUTSIDE CITY	2,321,747	2.66%	61,804	1.61%	37,477	-1.05%	-24,327
	LAMPETER BOOSTER STATION - OUTSIDE CITY	6,591	0.00%	0	0.00%	0	0.00%	0
	KISSEL HILL BOOSTER STATION - OUTSIDE CITY	71,619	3.03%	2,168	1.43%	1,021	-1.60%	-1,147
	SUSQUEHANNA RIVER INTAKE AND HIGH SERVICE PUMP STATION - JOINT	867,860	2.56%	22,213	1.14%	9,931	-1.42%	-12,282
	CONESTOGA PUMP STATION - JOINT	2,412,893	3.27%	78,962	1.18%	28,577	-2.09%	-50,385
	HESS BOULEVARD PUMP STATION - OUTSIDE CITY	669,298	4.97%	33,281	1.66%	11,079	-3.31%	-22,202
	CONESTOGA STRAINER BUILDING	1,264,611	2.26%	28,519	1.49%	18,789	-0.77%	-9,730
	DELP ROAD PUMP STATION	972,400	2.25%	21,888	1.51%	14,700	-0.74%	-7,188
	WILLOW VALLEY PUMP STATION	2,501,627	2.14%	53,553	1.62%	40,482	-0.52%	-13,071
	EAST PUMP STATION	2,013,091	2.28%	45,953	1.64%	32,969	-0.64%	-12,984
	SOUTH PUMP STATION	1,078,925	2.07%	22,384	1.64%	17,716	-0.43%	-4,668
	TOTAL ACCOUNT 304.20	14,180,661	2.61%	370,725	1.50%	212,741	-1.11%	-157,984
304.30	PURIFICATION BUILDINGS							
	CONESTOGA CREEK TREATMENT PLANT	7,916,687	2.72%	215,343	1.29%	102,123	-1.43%	-113,220
	SUSQUEHANNA RIVER TREATMENT PLANT	4,594,483	2.01%	92,314	1.15%	52,967	-0.86%	-39,347
	SUSQUEHANNA RIVER INTAKE - CARBON SLURRY BUILDING	9,075	0.00%	0	0.00%	0	0.00%	0
	SUSQUEHANNA MEMBRANE FACILITY	99,744,493	1.77%	1,761,987	1.28%	1,276,869	-0.49%	-485,118
	TOTAL ACCOUNT 304.30	112,264,738	1.84%	2,069,644	1.28%	1,431,959	-0.57%	-637,685
304.61	WATER ADMINISTRATION BUILDING	9,989,367	2.17%	217,134	1.47%	146,903	-0.70%	-70,231
304.62	STORES, SHOP AND GARAGE BUILDINGS	352,846	1.90%	6,715	1.90%	6,715	0.00%	0
304.63	MISCELLANEOUS STRUCTURES AND IMPROVEMENTS	229,074	2.94%	6,736	2.94%	6,736	0.00%	0
Total Structures and Improvements		137,016,686	1.95%	2,670,954	1.32%	1,805,053	-0.63%	-865,901
Transmission and Distribution								
305.00	COLLECTING IMPOUNDING RESERVOIRS	34,130	0.31%	107	0.31%	107	0.00%	0
306.00	LAKE, RIVER AND OTHER INTAKES	565,271	1.88%	10,603	1.03%	5,814	-0.85%	-4,789
330.00	DISTRIBUTION RESERVOIR AND STANDPIPES							
	UNDERGROUND STORAGE RESERVOIR - OYSTER PT (MOUNTVILLE) - JOINT	10,986,347	1.85%	203,623	1.52%	167,497	-0.33%	-36,126
	WILLOW STREET STANDPIPE - OUTSIDE CITY	1,114,501	1.03%	11,459	0.60%	6,700	-0.43%	-4,759
	LAFAYETTE (ROUTE 30 EAST) STANDPIPE - OUTSIDE CITY	4,340,374	3.42%	148,361	1.56%	67,902	-1.86%	-80,459
	LAMPETER ELEVATED TANK - OUTSIDE CITY	150,184	1.58%	2,376	0.26%	388	-1.32%	-1,988
	NEFFSVILLE TANK - OUTSIDE CITY	404,843	1.79%	7,230	0.51%	2,062	-1.28%	-5,168
	BLOSSOM HILL STANDPIPE - OUTSIDE CITY	19,490	0.00%	0	0.00%	0	0.00%	0
	TANK PAINTING - OUTSIDE CITY	177,263	0.00%	0	0.00%	0	0.00%	0

Detailed Rate Comparison - 2027

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Account No.	Description	[1]	[2]		[3]		[4]	
		Plant 3/31/2027	Lancaster Position		OCA Position		OCA Adjustment	
			Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
	FENCING - JOINT	30,027	0.00%	0	0.00%	0	0.00%	0
	SOUTH TANK	10,789,245	1.83%	197,233	1.58%	170,892	-0.25%	-26,341
	TOTAL ACCOUNT 330.00	28,012,273	2.04%	570,282	1.48%	415,441	-0.55%	-154,841
311.00	ELECTRIC PUMPING EQUIPMENT	12,231,199	3.51%	429,882	2.53%	308,893	-0.98%	-120,989
320.00	PURIFICATION SYSTEM							
	TREATMENT PLANT EQUIPMENT	11,087,208	0.88%	97,740	1.19%	132,463	0.31%	34,723
	WILLOW STREET CHLORINE BOOSTER STATION	21,019	0.00%	0	0.00%	0	0.00%	0
	TOTAL ACCOUNT 320.00	11,108,227	0.88%	97,740	1.19%	132,463	0.31%	34,723
331.00	MAINS AND ACCESSORIES							
	CAST IRON, 4 INCH AND UNDER - INSIDE CITY	50,345	0.82%	415	0.94%	472	0.12%	57
	CAST IRON, 4 INCH AND UNDER - OUTSIDE CITY	531,881	1.42%	7,548	1.16%	6,185	-0.26%	-1,363
	TOTAL 4 INCH AND UNDER	582,226	1.37%	7,963	1.14%	6,657	-0.22%	-1,306
	CAST IRON, 6 INCH AND OVER - INSIDE CITY	28,201,966	1.01%	283,991	0.88%	248,725	-0.13%	-35,266
	CAST IRON, 6 INCH AND OVER - OUTSIDE CITY	81,626,893	1.04%	852,359	0.90%	735,244	-0.14%	-117,115
	CAST IRON, 6 INCH AND OVER - JOINT	4,043,600	0.83%	33,507	0.77%	31,076	-0.06%	-2,431
	TOTAL 6 INCH AND OVER	113,872,459	1.03%	1,169,857	0.89%	1,015,045	-0.14%	-154,812
	MANHOLES - INSIDE CITY	243,440	1.08%	2,640	1.09%	2,649	0.01%	9
	MANHOLES - OUTSIDE CITY	1,139,492	1.39%	15,873	1.18%	13,392	-0.21%	-2,481
	MANHOLES - JOINT	129,079	0.57%	741	0.57%	730	0.00%	-11
	TOTAL MANHOLES	1,512,011	1.27%	19,254	1.11%	16,771	-0.16%	-2,483
	VALVES AND VALVE BOXES - INSIDE CITY	1,967,767	1.63%	32,106	1.37%	26,867	-0.26%	-5,239
	VALVES AND VALVE BOXES - OUTSIDE CITY	9,490,769	1.79%	169,547	1.42%	134,847	-0.37%	-34,700
	VALVES AND VALVE BOXES - JOINT	253,688	0.71%	1,800	0.87%	2,203	0.16%	403
	TOTAL VALVES AND VALVE BOXES	11,712,224	1.74%	203,453	1.40%	163,917	-0.34%	-39,536
	STEEL - OUTSIDE CITY	858,719	1.64%	14,085	1.41%	12,149	-0.23%	-1,936
	STEEL - JOINT	1,832,100	0.17%	3,113	0.16%	2,898	-0.01%	-215
	TOTAL STEEL	2,690,819	0.64%	17,198	0.56%	15,046	-0.08%	-2,152
	PLASTIC - OUTSIDE CITY	102,283	1.02%	1,048	0.93%	950	-0.09%	-98
	LANCASTER METER PIT - OUTSIDE CITY	11,681	0.00%	0	0.00%	0	0.00%	0
	RELINING	4,392,616	2.03%	89,337	1.71%	74,945	-0.32%	-14,392
	TOTAL ACCOUNT 331.00	134,876,318	1.12%	1,508,110	0.96%	1,293,331	-0.16%	-214,779
333.00	SERVICES							

Detailed Rate Comparison - 2027

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Account No.	Description	[1]	[2]		[3]		[4]	
		Plant 3/31/2027	Lancaster Position		OCA Position		OCA Adjustment	
			Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
	INSIDE CITY	3,492,576	1.52%	53,144	1.35%	47,270	-0.17%	-5,874
	OUTSIDE CITY	14,368,201	1.61%	230,909	1.40%	201,146	-0.21%	-29,763
	TOTAL ACCOUNT 333.00	17,860,777	1.59%	284,053	1.39%	248,416	-0.20%	-35,637
334.00	METERS							
	INSIDE CITY	4,046,102	0.20%	7,975	0.20%	8,231	0.00%	256
	OUTSIDE CITY	10,662,547	0.01%	1,284	0.02%	1,695	0.01%	411
	TOTAL ACCOUNT 334.00	14,708,649	0.06%	9,259	0.07%	9,926	0.00%	667
335.00	FIRE HYDRANTS							
	INSIDE CITY	1,583,147	1.51%	23,918	1.28%	20,225	-0.23%	-3,693
	OUTSIDE CITY	2,949,595	1.48%	43,650	1.26%	37,237	-0.22%	-6,413
	TOTAL ACCOUNT 335.00	4,532,741	1.49%	67,568	1.27%	57,462	-0.22%	-10,106
	Total Transmission and Distribution	223,929,587	1.33%	2,977,604	1.10%	2,471,854	-0.23%	-505,750
	General Plant							
340.00	OFFICE FURNITURE AND EQUIPMENT							
	FURNITURE	183,382	1.11%	2,038	1.11%	2,044	0.00%	6
	EQUIPMENT	108,602	1.33%	1,443	1.32%	1,439	-0.01%	-4
	HARDWARE AND SOFTWARE	1,704,802	3.62%	61,634	3.63%	61,904	0.01%	270
	TOTAL ACCOUNT 340.00	1,996,786	3.26%	65,115	3.27%	65,386	0.01%	271
341.00	TRANSPORTATION EQUIPMENT							
	AUTOS AND VANS	531,019	5.46%	28,973	5.93%	31,488	0.47%	2,515
	TRUCKS	4,459,060	4.05%	180,674	4.06%	180,913	0.01%	239
	TRAILERS	211,484	3.27%	6,922	2.87%	6,064	-0.40%	-858
	TOTAL ACCOUNT 341.00	5,201,563	4.16%	216,569	4.20%	218,466	0.04%	1,897
342.00	STORES EQUIPMENT	12,902	1.06%	137	1.04%	134	-0.02%	-3
343.10	SHOP EQUIPMENT	30,853	0.00%	0	0.00%	0	0.00%	0
343.20	GENERAL	307,411	0.84%	2,574	0.84%	2,577	0.00%	3
344.00	LABORATORY EQUIPMENT	111,048	0.56%	627	1.09%	1,210	0.53%	583
345.00	CONSTRUCTION EQUIPMENT	1,314,501	4.43%	58,215	4.41%	57,978	-0.02%	-237
346.00	COMMUNICATION EQUIPMENT	1,700,260	4.16%	70,758	4.16%	70,740	0.00%	-18
347.00	MISCELLANEOUS EQUIPMENT	96,160	1.75%	1,687	1.76%	1,689	0.01%	2
	Total General Plant	10,771,484	3.86%	415,682	3.88%	418,182	0.02%	2,500

Detailed Rate Comparison - 2027

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Account No.	Description	[1]	[2]		[3]		[4]	
		Plant 3/31/2027	Lancaster Position		OCA Position		OCA Adjustment	
			Rate	Annual Accrual	Rate	Annual Accrual	Rate	Annual Accrual
	TOTAL PLANT STUDIED	371,717,756	1.63%	6,064,240	1.26%	4,695,088	-0.37%	-1,369,152

[1], [2] From Company depreciation study

[3] From Exhibit DJG-20

[4] = [3] - [2]

Depreciation Rate Development - 2027

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Account No.	Description	[1]	[2]		[3]	[4]	[5]	[6]		[7]
		Plant 3/31/2027	Iowa Curve		Book Reserve	Future Accruals	Remaining Life	Total		
			Type	AL				Accrual	Rate	
Structures and Improvements										
304.20	POWER AND PUMPING STRUCTURES									
	WILLOW STREET BOOSTER STATION - OUTSIDE CITY	2,321,747	R3	- 60	207,312	2,114,436	56.42	37,477	1.61%	
	LAMPETER BOOSTER STATION - OUTSIDE CITY	6,591			6,591	0				
	KISSEL HILL BOOSTER STATION - OUTSIDE CITY	71,619	R3	- 60	37,881	33,738	33.03	1,021	1.43%	
	SUSQUEHANNA RIVER INTAKE AND HIGH SERVICE PUMP STATION - JOINT	867,860	R3	- 60	601,908	265,952	26.78	9,931	1.14%	
	CONESTOGA PUMP STATION - JOINT	2,412,893	R3	- 60	1,513,284	899,609	31.48	28,577	1.18%	
	HESS BOULEVARD PUMP STATION - OUTSIDE CITY	669,298	R3	- 60	82,131	587,167	53.00	11,079	1.66%	
	CONESTOGA STRAINER BUILDING	1,264,611	R3	- 60	456,674	807,937	43.00	18,789	1.49%	
	DELP ROAD PUMP STATION	972,400	R3	- 60	313,124	659,275	44.85	14,700	1.51%	
	WILLOW VALLEY PUMP STATION	2,501,627	R3	- 60	378,775	2,122,851	52.44	40,482	1.62%	
	EAST PUMP STATION	2,013,091	R3	- 60	123,956	1,889,135	57.30	32,969	1.64%	
	SOUTH PUMP STATION	1,078,925	R3	- 60	98,504	980,421	55.34	17,716	1.64%	
	TOTAL ACCOUNT 304.20	14,180,661			3,820,139	10,360,522	48.70	212,741	1.50%	
304.30	PURIFICATION BUILDINGS									
	CONESTOGA CREEK TREATMENT PLANT	7,916,687	R3	- 65	2,316,248	5,600,439	54.84	102,123	1.29%	
	SUSQUEHANNA RIVER TREATMENT PLANT	4,594,483	R3	- 65	2,250,185	2,344,298	44.26	52,967	1.15%	
	SUSQUEHANNA RIVER INTAKE - CARBON SLURRY BUILDING	9,075	R3	- 65	9,075	0				
	SUSQUEHANNA MEMBRANE FACILITY	99,744,493	R3	- 65	36,769,319	62,975,175	49.32	1,276,869	1.28%	
	TOTAL ACCOUNT 304.30	112,264,738			41,344,826	70,919,912	49.53	1,431,959	1.28%	
304.61	WATER ADMINISTRATION BUILDING	9,989,367	S2.5	- 65	1,686,414	8,302,953	56.52	146,903	1.47%	
304.62	STORES, SHOP AND GARAGE BUILDINGS	352,846	SQ		219,060	133,786	19.92	6,715	1.90%	
304.63	MISCELLANEOUS STRUCTURES AND IMPROVEMENTS	229,074	SQ		133,830	95,244	14.14	6,736	2.94%	
	Total Structures and Improvements	137,016,686			47,204,268	89,812,418	49.76	1,805,053	1.32%	
Transmission and Distribution										
305.00	COLLECTING IMPOUNDING RESERVOIRS	34,130	SQ		31,658	2,472	23.10	107	0.31%	
306.00	LAKE, RIVER AND OTHER INTAKES	565,271	S1.5	- 65	348,281	216,990	37.32	5,814	1.03%	
330.00	DISTRIBUTION RESERVOIR AND STANDPIPES									
	UNDERGROUND STORAGE RESERVOIR - OYSTER PT (MOUNTVILLE) - JOINT	10,986,347	R4	- 60	2,383,705	8,602,641	51.36	167,497	1.52%	
	WILLOW STREET STANDPIPE - OUTSIDE CITY	1,114,501	R4	- 60	920,607	193,893	28.94	6,700	0.60%	
	LAFAYETTE (ROUTE 30 EAST) STANDPIPE - OUTSIDE CITY	4,340,374	R4	- 60	955,467	3,384,907	49.85	67,902	1.56%	
	LAMPETER ELEVATED TANK - OUTSIDE CITY	150,184	R4	- 60	145,088	5,096	13.13	388	0.26%	
	NEFFSVILLE TANK - OUTSIDE CITY	404,843	R4	- 60	368,692	36,151	17.53	2,062	0.51%	
	BLOSSOM HILL STANDPIPE - OUTSIDE CITY	19,490			19,490	0				
	TANK PAINTING - OUTSIDE CITY	177,263			177,263	0				

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		[1]	[2]	[3]	[4]	[5]	[6]	[7]
Account No.	Description	Plant	Iowa Curve	Book	Future	Remaining	Total	
		3/31/2027	Type AL	Reserve	Accruals	Life	Accrual	Rate
	FENCING - JOINT	30,027		30,027	0			
	SOUTH TANK	10,789,245	R4 - 60	1,345,727	9,443,518	55.26	170,892	1.58%
	TOTAL ACCOUNT 330.00	28,012,273		6,346,067	21,666,207	52.15	415,441	1.48%
311.00	ELECTRIC PUMPING EQUIPMENT	12,231,199	R2.5 - 40	2,751,267	9,479,933	30.69	308,893	2.53%
320.00	PURIFICATION SYSTEM							
	TREATMENT PLANT EQUIPMENT	11,087,208	S1.5 - 50	7,504,084	3,583,124	27.05	132,463	1.19%
	WILLOW STREET CHLORINE BOOSTER STATION	21,019		21,019	0			
	TOTAL ACCOUNT 320.00	11,108,227		7,525,103	3,583,124	27.05	132,463	1.19%
331.00	MAINS AND ACCESSORIES							
	CAST IRON, 4 INCH AND UNDER - INSIDE CITY	50,345	R2 - 80	31,996	18,349	38.90	472	0.94%
	CAST IRON, 4 INCH AND UNDER - OUTSIDE CITY	531,881	R2 - 80	141,223	390,658	63.16	6,185	1.16%
	TOTAL 4 INCH AND UNDER	582,226		173,219	409,007	61.44	6,657	1.14%
	CAST IRON, 6 INCH AND OVER - INSIDE CITY	28,201,966	R3 - 110	3,953,757	24,248,209	97.49	248,725	0.88%
	CAST IRON, 6 INCH AND OVER - OUTSIDE CITY	81,626,893	R3 - 110	10,594,976	71,031,917	96.61	735,244	0.90%
	CAST IRON, 6 INCH AND OVER - JOINT	4,043,600	R3 - 110	1,975,191	2,068,409	66.56	31,076	0.77%
	TOTAL 6 INCH AND OVER	113,872,459		16,523,924	97,348,535	95.91	1,015,045	0.89%
	MANHOLES - INSIDE CITY	243,440	R2.5 - 80	106,246	137,194	51.79	2,649	1.09%
	MANHOLES - OUTSIDE CITY	1,139,492	R2.5 - 80	278,243	861,249	64.31	13,392	1.18%
	MANHOLES - JOINT	129,079	R2.5 - 80	111,581	17,498	23.96	730	0.57%
	TOTAL MANHOLES	1,512,011		496,070	1,015,941	60.58	16,771	1.11%
	VALVES AND VALVE BOXES - INSIDE CITY	1,967,767	R2.5 - 70	369,709	1,598,058	59.48	26,867	1.37%
	VALVES AND VALVE BOXES - OUTSIDE CITY	9,490,769	R2.5 - 70	1,248,900	8,241,869	61.12	134,847	1.42%
	VALVES AND VALVE BOXES - JOINT	253,688	R2.5 - 70	196,356	57,332	26.03	2,203	0.87%
	TOTAL VALVES AND VALVE BOXES	11,712,224		1,814,965	9,897,259	60.38	163,917	1.40%
	STEEL - OUTSIDE CITY	858,719	R3 - 70	46,202	812,517	66.88	12,149	1.41%
	STEEL - JOINT	1,832,100	R3 - 70	1,791,216	40,884	14.11	2,898	0.16%
	TOTAL STEEL	2,690,819		1,837,417	853,401	56.72	15,046	0.56%
	PLASTIC - OUTSIDE CITY	102,283	R3 - 65	79,510	22,773	23.98	950	0.93%
	LANCASTER METER PIT - OUTSIDE CITY	11,681	S3 - 50	11,681	0			
	RELINING	4,392,616	R2.5 - 55	1,108,540	3,284,076	43.82	74,945	1.71%
	TOTAL ACCOUNT 331.00	134,876,318		22,045,326	112,830,992	87.24	1,293,331	0.96%
333.00	SERVICES							

Depreciation Rate Development - 2027

Exhibit DJG-20

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Account No.	Description	[1]	[2]		[3]	[4]	[5]	[6]		[7]
		Plant	Iowa Curve		Book	Future	Remaining	Total		
		3/31/2027	Type	AL	Reserve	Accruals	Life	Accrual	Rate	
	INSIDE CITY	3,492,576	R3	- 70	733,432	2,759,145	58.37	47,270	1.35%	
	OUTSIDE CITY	14,368,201	R3	- 70	2,675,580	11,692,621	58.13	201,146	1.40%	
	TOTAL ACCOUNT 333.00	17,860,777			3,409,012	14,451,765	58.18	248,416	1.39%	
334.00	METERS									
	INSIDE CITY	4,046,102	S2.5	- 25	3,907,325	138,777	16.86	8,231	0.20%	
	OUTSIDE CITY	10,662,547	S2.5	- 25	10,636,956	25,591	15.10	1,695	0.02%	
	TOTAL ACCOUNT 334.00	14,708,649			14,544,282	164,368	16.56	9,926	0.07%	
335.00	FIRE HYDRANTS									
	INSIDE CITY	1,583,147	R2.5	- 75	382,396	1,200,750	59.37	20,225	1.28%	
	OUTSIDE CITY	2,949,595	R2.5	- 75	875,878	2,073,717	55.69	37,237	1.26%	
	TOTAL ACCOUNT 335.00	4,532,741			1,258,274	3,274,467	56.99	57,462	1.27%	
	Total Transmission and Distribution	223,929,587			58,259,268	165,670,319	67.02	2,471,854	1.10%	
	General Plant									
340.00	OFFICE FURNITURE AND EQUIPMENT									
	FURNITURE	183,382	SQ	- 25	147,416	35,966	17.60	2,044	1.11%	
	EQUIPMENT	108,602	SQ	- 20	86,593	22,010	15.30	1,439	1.32%	
	HARDWARE AND SOFTWARE	1,704,802	SQ		1,574,802	129,999	2.10	61,904	3.63%	
	TOTAL ACCOUNT 340.00	1,996,786			1,808,811	187,975	2.87	65,386	3.27%	
341.00	TRANSPORTATION EQUIPMENT									
	AUTOS AND VANS	531,019	L4	- 12	268,722	262,297	8.33	31,488	5.93%	
	TRUCKS	4,459,060	S1.5	- 18	2,345,993	2,113,067	11.68	180,913	4.06%	
	TRAILERS	211,484	L3	- 20	126,401	85,083	14.03	6,064	2.87%	
	TOTAL ACCOUNT 341.00	5,201,563			2,741,116	2,460,447	11.26	218,466	4.20%	
342.00	STORES EQUIPMENT	12,902	SQ	- 30	12,593	309	2.30	134	1.04%	
343.10	SHOP EQUIPMENT	30,853	SQ	- 25	30,853	0				
343.20	GENERAL	307,411	SQ	- 20	290,403	17,008	6.60	2,577	0.84%	
344.00	LABORATORY EQUIPMENT	111,048	L3	- 20	105,735	5,314	4.39	1,210	1.09%	
345.00	CONSTRUCTION EQUIPMENT	1,314,501	SQ	- 20	612,968	701,533	12.10	57,978	4.41%	
346.00	COMMUNICATION EQUIPMENT	1,700,260	SQ	- 15	879,670	820,590	11.60	70,740	4.16%	
347.00	MISCELLANEOUS EQUIPMENT	96,160	SQ	- 20	66,940	29,220	17.30	1,689	1.76%	
	Total General Plant	10,771,484			6,549,089	4,222,395	10.10	418,182	3.88%	

Depreciation Rate Development - 2027

Exhibit DJG-20

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Account No.	Description	[1]	[2]		[3]	[4]	[5]	[6]		[7]
		Plant	Iowa Curve		Book	Future	Remaining	Total		
		3/31/2027	Type	AL	Reserve	Accruals	Life	Accrual	Rate	
	TOTAL PLANT STUDIED	371,717,756			112,012,625	259,705,131	55.31	4,695,088	1.26%	

[1], [3] From Company depreciation study

[2] Average life and Iowa curve shape developed through actuarial analysis and professional judgment

[4] = [1] - [3]

[5] Composite remaining life based on Iowa curve in [2]; see remaining life exhibit for detailed calculations

[6] = [4] / [5]; (some unadjusted figures may be hard coded to match Company proposal)

[7] = [6] / [1]; (some unadjusted figures may be hard coded to match Company proposal)

***City of Lancaster - Bureau of Water
Water Division***

304.20 Structures - Willow Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	13,250.00	60.00	220.83	8.58	1,895.42
1990	15,067.00	60.00	251.12	28.43	7,138.97
1991	5,903.00	60.00	98.38	29.22	2,875.06
1999	2,000.00	60.00	33.33	35.87	1,195.80
2023	721,226.05	60.00	12,020.43	58.28	700,538.26
2024	1,564,301.27	60.00	26,071.69	59.26	1,545,053.63
<i>Total</i>	2,321,747.32	60.00	38,695.79	58.37	2,258,697.14

Composite Average Remaining Life ... 58.37 Years

***City of Lancaster - Bureau of Water
Water Division***

304.21 Structures - Kissel Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1979	5,569.00	60.00	92.82	20.34	1,887.98
1980	38,673.00	60.00	644.55	21.02	13,548.77
1999	3,000.00	60.00	50.00	35.87	1,793.70
2024	24,377.00	60.00	406.28	59.26	24,077.06
<i>Total</i>	71,619.00	60.00	1,193.65	34.61	41,307.51

Composite Average Remaining Life ... 34.61 Years

***City of Lancaster - Bureau of Water
Water Division***

304.22 Structures - Susquehanna Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	279,298.00	60.00	4,654.97	8.58	39,953.75
1971	25,374.00	60.00	422.90	15.35	6,490.64
1996	318,845.11	60.00	5,314.08	33.32	177,058.80
1999	10,000.00	60.00	166.67	35.87	5,979.00
2000	94,384.76	60.00	1,573.08	36.74	57,797.28
2001	5,940.00	60.00	99.00	37.61	3,723.83
2002	7,890.00	60.00	131.50	38.50	5,062.35
2003	7,832.00	60.00	130.53	39.39	5,141.18
2012	16,500.00	60.00	275.00	47.66	13,107.12
2019	87,900.00	60.00	1,465.00	54.37	79,654.90
2022	13,896.00	60.00	231.60	57.30	13,270.27
<i>Total</i>	867,859.87	60.00	14,464.33	28.15	407,239.11

Composite Average Remaining Life ... 28.15 Years

***City of Lancaster - Bureau of Water
Water Division***

304.23 Structures - Conestoga Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1974	903,813.00	60.00	15,063.55	17.12	257,834.76
1975	118,276.00	60.00	1,971.27	17.74	34,962.81
1976	82,589.00	60.00	1,376.48	18.37	25,284.20
1978	36,333.00	60.00	605.55	19.67	11,911.26
1979	6,165.00	60.00	102.75	20.34	2,090.04
2000	507,711.24	60.00	8,461.85	36.74	310,901.16
2001	122,372.00	60.00	2,039.53	37.61	76,716.01
2009	21,000.00	60.00	350.00	44.85	15,698.32
2014	13,934.60	60.00	232.24	49.56	11,509.81
2020	31,167.00	60.00	519.45	55.34	28,748.92
2021	160,976.00	60.00	2,682.93	56.32	151,104.28
2022	56,382.66	60.00	939.71	57.30	53,843.77
2023	190,683.18	60.00	3,178.05	58.28	185,213.59
2025	161,490.00	60.00	2,691.50	59.88	161,158.77
<i>Total</i>	2,412,892.68	60.00	40,214.87	33.00	1,326,977.68

Composite Average Remaining Life ... 33.00 Years

***City of Lancaster - Bureau of Water
Water Division***

304.24 Structures - Hess Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1995	177,566.32	60.00	2,959.44	32.48	96,127.86
1998	550.51	60.00	9.18	35.01	321.25
<i>Total</i>	178,116.83	60.00	2,968.61	32.49	96,449.11

Composite Average Remaining Life ... 32.49 Years

***City of Lancaster - Bureau of Water
Water Division***

304.25 Structures - Conestoga Building

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2009	1,264,611.00	60.00	21,076.85	44.85	945,346.00
<i>Total</i>	1,264,611.00	60.00	21,076.85	44.85	945,346.00

Composite Average Remaining Life ... 44.85 Years

***City of Lancaster - Bureau of Water
Water Division***

304.26 Structures - Delp Station

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2011	972,399.60	60.00	16,206.66	46.72	757,179.33
<i>Total</i>	972,399.60	60.00	16,206.66	46.72	757,179.33

Composite Average Remaining Life ... 46.72 Years

***City of Lancaster - Bureau of Water
Water Division***

304.27 Structures - Willow Station

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2019	2,501,626.68	60.00	41,693.77	54.37	2,266,971.79
<i>Total</i>	2,501,626.68	60.00	41,693.77	54.37	2,266,971.79

Composite Average Remaining Life ... 54.37 Years

***City of Lancaster - Bureau of Water
Water Division***

304.28 Structures - East Station

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2024	2,013,090.96	60.00	33,551.51	59.26	1,988,321.27
<i>Total</i>	2,013,090.96	60.00	33,551.51	59.26	1,988,321.27

Composite Average Remaining Life ... 59.26 Years

***City of Lancaster - Bureau of Water
Water Division***

304.29 Structures - South Station

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2022	1,078,924.52	60.00	17,982.07	57.30	1,030,340.92
<i>Total</i>	1,078,924.52	60.00	17,982.07	57.30	1,030,340.92

Composite Average Remaining Life ... 57.30 Years

***City of Lancaster - Bureau of Water
Water Division***

304.31 Purification - Conestoga Plant

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1933	217,345.00	65.00	3,343.77	4.46	14,914.41
1942	254.00	65.00	3.91	6.80	26.59
1950	357.00	65.00	5.49	9.20	50.56
1995	11,438.92	65.00	175.98	37.27	6,559.69
1996	471,732.50	65.00	7,257.42	38.13	276,719.62
1997	133,109.57	65.00	2,047.84	38.99	79,842.80
1998	833.13	65.00	12.82	39.86	510.87
1999	54,000.00	65.00	830.77	40.73	33,837.94
2000	106,977.43	65.00	1,645.81	41.61	68,487.22
2001	17,075.00	65.00	262.69	42.50	11,164.28
2004	592,429.46	65.00	9,114.30	45.20	411,970.87
2005	25,634.00	65.00	394.37	46.11	18,185.45
2009	68,862.87	65.00	1,059.43	49.81	52,773.70
2010	17,264.13	65.00	265.60	50.75	13,479.37
2014	108,200.00	65.00	1,664.62	54.54	90,794.71
2019	533,933.55	65.00	8,214.36	59.37	487,677.74
2020	2,185,610.00	65.00	33,624.77	60.34	2,029,018.61
2021	29,364.00	65.00	451.75	61.32	27,701.10
2023	1,358,250.64	65.00	20,896.16	63.28	1,322,278.76
2024	1,962,115.62	65.00	30,186.39	64.26	1,939,828.39
2025	21,900.00	65.00	336.92	64.88	21,858.54
<i>Total</i>	7,916,686.82	65.00	121,795.18	56.72	6,907,681.21

Composite Average Remaining Life ... 56.72 Years

***City of Lancaster - Bureau of Water
Water Division***

304.32 Purification - Susquehanna Plant

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	303,935.00	65.00	4,675.92	11.46	53,565.88
1971	556,636.00	65.00	8,563.63	19.30	165,314.95
1987	111,862.00	65.00	1,720.95	30.72	52,861.27
1995	20,850.00	65.00	320.77	37.27	11,956.51
1996	492,800.34	65.00	7,581.54	38.13	289,078.08
1997	3,660.00	65.00	56.31	38.99	2,195.37
1998	2,466.01	65.00	37.94	39.86	1,512.14
1999	53,500.00	65.00	823.08	40.73	33,524.63
2000	537,851.11	65.00	8,274.63	41.61	344,333.65
2001	3,405.00	65.00	52.38	42.50	2,226.32
2002	73,616.00	65.00	1,132.55	43.39	49,146.72
2003	39,825.00	65.00	612.69	44.30	27,139.23
2004	443,704.88	65.00	6,826.23	45.20	308,548.95
2014	12,977.00	65.00	199.65	54.54	10,889.49
2019	54,685.00	65.00	841.31	59.37	49,947.52
2020	188,419.05	65.00	2,898.75	60.34	174,919.48
2021	56,780.00	65.00	873.54	61.32	53,564.52
2024	1,637,510.63	65.00	25,192.47	64.26	1,618,910.52
<i>Total</i>	4,594,483.02	65.00	70,684.35	45.97	3,249,635.22

Composite Average Remaining Life ... 45.97 Years

***City of Lancaster - Bureau of Water
Water Division***

304.34 Purification - Susquehanna Facility

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2009	25,210.13	65.00	387.85	49.81	19,320.02
2010	93,677,983.18	65.00	1,441,199.72	50.75	73,141,248.20
2011	2,641,059.46	65.00	40,631.68	51.69	2,100,375.60
2012	2,867.09	65.00	44.11	52.64	2,321.85
2022	2,418,940.12	65.00	37,214.46	62.30	2,318,385.48
2024	560,364.25	65.00	8,620.99	64.26	553,999.20
2025	35,819.00	65.00	551.06	64.88	35,751.18
<i>Total</i>	99,362,243.23	65.00	1,528,649.87	51.14	78,171,401.53

Composite Average Remaining Life ... 51.14 Years

***City of Lancaster - Bureau of Water
Water Division***

304.61 Water Administration Building

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: S2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2018	7,722,865.72	65.00	118,813.33	58.25	6,921,356.63
2019	2,161,046.43	65.00	33,246.87	59.25	1,969,940.41
2020	35,724.81	65.00	549.61	60.25	33,114.62
2023	69,730.00	65.00	1,072.77	63.25	67,852.65
<i>Total</i>	9,989,366.96	65.00	153,682.58	58.51	8,992,264.32

Composite Average Remaining Life ... 58.51 Years

***City of Lancaster - Bureau of Water
Water Division***

306.00 Lake, River and Other Intakes

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: S1.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	174,188.00	65.00	2,679.82	17.23	46,169.89
2000	291,082.65	65.00	4,478.19	42.07	188,405.25
<i>Total</i>	465,270.65	65.00	7,158.01	32.77	234,575.14

Composite Average Remaining Life ... 32.77 Years

***City of Lancaster - Bureau of Water
Water Division***

311.00 Electric Pumping Equipment

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 40

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1955	44,660.00	40.00	1,116.50	1.22	1,364.97
1956	276,729.11	40.00	6,918.20	1.49	10,303.87
1965	44,075.00	40.00	1,101.87	3.65	4,027.26
1969	15,838.00	40.00	395.95	4.55	1,802.38
1971	597,738.00	40.00	14,943.39	5.03	75,104.53
1974	84,212.00	40.00	2,105.29	5.79	12,181.89
1975	142,510.00	40.00	3,562.74	6.06	21,576.50
1976	13,113.00	40.00	327.82	6.34	2,078.58
1980	11,367.00	40.00	284.17	7.63	2,167.61
1982	1,584.00	40.00	39.60	8.38	331.99
1990	185,234.00	40.00	4,630.83	12.27	56,798.44
1991	59,203.00	40.00	1,480.07	12.84	19,011.24
1995	136,203.71	40.00	3,405.08	15.34	52,237.96
2002	14,852.00	40.00	371.30	20.30	7,537.48
2005	9,969.43	40.00	249.23	22.62	5,637.71
2006	6,564.00	40.00	164.10	23.42	3,842.51
2007	13,321.00	40.00	333.02	24.22	8,066.96
2008	4,726.85	40.00	118.17	25.04	2,959.08
2011	382,759.00	40.00	9,568.94	27.56	263,676.29
2013	35,077.57	40.00	876.94	29.28	25,675.67
2015	38,350.84	40.00	958.77	31.04	29,756.96
2016	74,165.72	40.00	1,854.14	31.93	59,197.48
2017	222,488.00	40.00	5,562.18	32.83	182,583.59
2018	96,312.08	40.00	2,407.79	33.73	81,217.47
2019	5,837,128.93	40.00	145,927.68	34.64	5,055,445.92
2021	139,864.00	40.00	3,496.59	36.49	127,577.98
2024	2,181,381.44	40.00	54,534.33	39.29	2,142,755.37

***City of Lancaster - Bureau of Water
Water Division***

311.00 Electric Pumping Equipment

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 40

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
<i>Total</i>	10,669,427.68	40.00	266,734.70	30.95	8,254,917.69

Composite Average Remaining Life ... 30.95 Years

***City of Lancaster - Bureau of Water
Water Division***

320.00 Purification System - Treatment Plant

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 50

Survivor Curve: S1.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1906	6,450.00	0.00	0.00	0.00	0.00
1933	353,573.00	50.00	7,071.46	2.19	15,465.52
1940	240.00	50.00	4.80	3.95	18.96
1942	3,963.00	50.00	79.26	4.45	352.91
1943	1,724.00	50.00	34.48	4.70	162.21
1944	125.00	50.00	2.50	4.96	12.39
1948	5,627.00	50.00	112.54	5.98	673.10
1949	5,531.00	50.00	110.62	6.24	690.40
1950	2,660.00	50.00	53.20	6.50	346.00
1951	309.00	50.00	6.18	6.77	41.83
1954	182.00	50.00	3.64	7.58	27.59
1955	362,779.00	50.00	7,255.58	7.86	57,009.36
1956	811,061.00	50.00	16,221.22	8.14	132,006.45
1962	2,400.00	50.00	48.00	9.91	475.66
1963	2,224.00	50.00	44.48	10.22	454.76
1965	11,638.00	50.00	232.76	10.86	2,528.26
1967	10,445.00	50.00	208.90	11.53	2,407.95
1968	2,643.00	50.00	52.86	11.87	627.38
1969	564.00	50.00	11.28	12.22	137.81
1971	1,583,130.60	50.00	31,662.60	12.94	409,580.63
1972	23,217.00	50.00	464.34	13.31	6,178.60
1974	30,485.00	50.00	609.70	14.07	8,578.96
1975	297,705.00	50.00	5,954.10	14.47	86,129.42
1976	449,043.00	50.00	8,980.86	14.87	133,537.02
1977	296,878.00	50.00	5,937.56	15.28	90,735.44
1978	65,023.00	50.00	1,300.46	15.70	20,421.76
1979	23,547.00	50.00	470.94	16.14	7,598.64

***City of Lancaster - Bureau of Water
Water Division***

320.00 Purification System - Treatment Plant

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 50

Survivor Curve: S1.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1980	7,178.00	50.00	143.56	16.58	2,379.74
1982	16,592.00	50.00	331.84	17.49	5,804.21
1991	22,532.00	50.00	450.64	22.19	9,999.32
1993	260,945.00	50.00	5,218.90	23.38	122,010.78
1995	341,396.13	50.00	6,827.92	24.63	168,146.70
1996	444,177.00	50.00	8,883.54	25.27	224,510.62
1997	32,550.29	50.00	651.01	25.93	16,881.77
1999	393,464.01	50.00	7,869.28	27.30	214,864.01
2000	1,112,742.20	50.00	22,254.84	28.01	623,416.90
2001	18,435.00	50.00	368.70	28.74	10,595.33
2004	16,387.00	50.00	327.74	31.01	10,161.77
2008	95,074.00	50.00	1,901.48	34.25	65,126.54
2013	44,935.58	50.00	898.71	38.64	34,724.41
2014	21,232.69	50.00	424.65	39.56	16,797.32
2015	27,844.70	50.00	556.89	40.48	22,545.62
2017	64,748.08	50.00	1,294.96	42.38	54,875.26
2018	103,533.04	50.00	2,070.66	43.34	89,735.31
2019	37,250.67	50.00	745.01	44.31	33,008.52
2020	22,905.86	50.00	458.12	45.28	20,745.02
2021	1,518,475.00	50.00	30,369.49	46.27	1,405,118.45
2023	10,332.00	50.00	206.64	48.25	9,970.83
2024	724,561.02	50.00	14,491.22	49.25	713,696.25
<i>Total</i>	9,690,457.87	48.98	193,680.11	25.05	4,851,313.70

Composite Average Remaining Life ... 25.05 Years

***City of Lancaster - Bureau of Water
Water Division***

330.31 Distribution - Underground Oyster

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	719,532.00	60.00	11,992.14	5.55	66,502.51
1995	3,331.22	60.00	55.52	30.95	1,718.26
1997	251,668.78	60.00	4,194.46	32.79	137,549.00
2001	23,435.00	60.00	390.58	36.56	14,280.51
2022	9,957,839.22	60.00	165,963.18	57.25	9,501,923.96
2023	30,540.50	60.00	509.01	58.25	29,650.58
<i>Total</i>	10,986,346.72	60.00	183,104.88	53.26	9,751,624.82

Composite Average Remaining Life ... 53.26 Years

***City of Lancaster - Bureau of Water
Water Division***

330.32 Distribution - Willow Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1989	5,132.00	60.00	85.53	25.63	2,192.55
1990	892,279.00	60.00	14,871.24	26.50	394,026.14
1991	11,808.00	60.00	196.80	27.37	5,385.93
2014	205,281.84	60.00	3,421.35	49.28	168,610.11
<i>Total</i>	1,114,500.84	60.00	18,574.92	30.70	570,214.72

Composite Average Remaining Life ... 30.70 Years

***City of Lancaster - Bureau of Water
Water Division***

330.33 Distribution - Lafayette Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1968	565,918.00	60.00	9,431.92	10.43	98,420.58
1986	11,410.00	60.00	190.17	23.12	4,396.69
1993	8,723.00	60.00	145.38	29.14	4,236.39
2021	2,404,322.60	60.00	40,071.85	56.25	2,254,236.21
<i>Total</i>	2,990,373.60	60.00	49,839.32	47.38	2,361,289.86

Composite Average Remaining Life ... 47.38 Years

***City of Lancaster - Bureau of Water
Water Division***

330.34 Distribution - Lampeter Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1969	108,318.00	60.00	1,805.29	11.00	19,866.30
1986	41,866.00	60.00	697.76	23.12	16,132.48
<i>Total</i>	150,184.00	60.00	2,503.05	14.38	35,998.78

Composite Average Remaining Life ... 14.38 Years

***City of Lancaster - Bureau of Water
Water Division***

330.35 Distribution - Neffsville Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1976	1,296.00	60.00	21.60	15.54	335.71
1977	247,976.00	60.00	4,132.91	16.24	67,128.31
1978	72,828.00	60.00	1,213.79	16.96	20,584.33
1979	2,122.00	60.00	35.37	17.69	625.50
1986	60,056.00	60.00	1,000.93	23.12	23,141.75
1998	2,265.65	60.00	37.76	33.72	1,273.46
2014	18,299.16	60.00	304.98	49.28	15,030.18
<i>Total</i>	404,842.81	60.00	6,747.35	18.99	128,119.24

Composite Average Remaining Life ... 18.99 Years

***City of Lancaster - Bureau of Water
Water Division***

330.36 Distribution - South Tank

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2022	10,789,245.24	60.00	179,819.88	57.25	10,295,264.43
<i>Total</i>	10,789,245.24	60.00	179,819.88	57.25	10,295,264.43

Composite Average Remaining Life ... 57.25 Years

***City of Lancaster - Bureau of Water
Water Division***

331.11 Mains - Cast 4 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	870.00	80.00	10.87	6.50	70.69
1901	489.00	80.00	6.11	6.79	41.53
1904	643.00	80.00	8.04	7.66	61.56
1905	708.00	80.00	8.85	7.95	70.39
1906	448.00	80.00	5.60	8.24	46.13
1907	644.00	80.00	8.05	8.53	68.67
1908	569.00	80.00	7.11	8.82	62.77
1909	668.00	80.00	8.35	9.12	76.16
1910	941.00	80.00	11.76	9.41	110.67
1918	608.00	80.00	7.60	11.83	89.88
1921	345.00	80.00	4.31	12.78	55.13
1922	877.00	80.00	10.96	13.11	143.69
1923	1,359.00	80.00	16.99	13.44	228.29
1924	78.00	80.00	0.97	13.78	13.43
1925	495.00	80.00	6.19	14.12	87.35
1926	720.00	80.00	9.00	14.46	130.15
1927	1,541.00	80.00	19.26	14.81	285.33
1928	823.00	80.00	10.29	15.17	156.06
1929	542.00	80.00	6.77	15.53	105.24
1935	58.00	80.00	0.72	17.84	12.94
1936	13.00	80.00	0.16	18.25	2.97
1937	166.00	80.00	2.07	18.67	38.73
1946	177.00	80.00	2.21	22.73	50.30
1947	89.00	80.00	1.11	23.22	25.83
1948	165.00	80.00	2.06	23.72	48.92
1953	1,458.00	80.00	18.22	26.31	479.46
1957	11,922.20	80.00	149.03	28.51	4,249.39

***City of Lancaster - Bureau of Water
Water Division***

331.11 Mains - Cast 4 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1961	23.00	80.00	0.29	30.84	8.87
1962	36.00	80.00	0.45	31.44	14.15
1963	36.00	80.00	0.45	32.04	14.42
1973	1,354.00	80.00	16.92	38.45	650.75
2009	21,479.43	80.00	268.49	66.13	17,755.86
<i>Total</i>	50,344.63	80.00	629.31	40.13	25,255.69

Composite Average Remaining Life ... 40.13 Years

***City of Lancaster - Bureau of Water
Water Division***

331.12 Mains - Cast 4 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1920	9,807.50	80.00	122.59	12.46	1,527.58
1922	5,521.00	80.00	69.01	13.11	904.58
1923	377.00	80.00	4.71	13.44	63.33
1924	1,445.00	80.00	18.06	13.78	248.82
1925	659.00	80.00	8.24	14.12	116.29
1926	276.00	80.00	3.45	14.46	49.89
1927	3,585.00	80.00	44.81	14.81	663.79
1928	1,114.00	80.00	13.92	15.17	211.24
1929	1,807.00	80.00	22.59	15.53	350.87
1930	2,262.00	80.00	28.27	15.90	449.62
1931	499.00	80.00	6.24	16.28	101.53
1932	24.00	80.00	0.30	16.66	5.00
1933	511.00	80.00	6.39	17.05	108.89
1935	1,321.00	80.00	16.51	17.84	294.63
1938	124.00	80.00	1.55	19.09	29.59
1939	1,265.00	80.00	15.81	19.52	308.65
1941	6,394.00	80.00	79.92	20.40	1,630.45
1945	125.00	80.00	1.56	22.25	34.77
1946	136.00	80.00	1.70	22.73	38.65
1948	815.00	80.00	10.19	23.72	241.61
1949	157.00	80.00	1.96	24.22	47.53
1950	438.00	80.00	5.47	24.73	135.41
1951	1,387.00	80.00	17.34	25.25	437.78
1952	1,364.00	80.00	17.05	25.78	439.47
1954	1,461.00	80.00	18.26	26.85	490.36
1955	3,840.00	80.00	48.00	27.40	1,315.11
1956	26,801.00	80.00	335.01	27.95	9,364.49

***City of Lancaster - Bureau of Water
Water Division***

331.12 Mains - Cast 4 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1958	194.00	80.00	2.42	29.09	70.53
1959	276.00	80.00	3.45	29.66	102.33
1960	1,407.00	80.00	17.59	30.25	531.94
1962	3,083.00	80.00	38.54	31.44	1,211.43
1963	830.00	80.00	10.37	32.04	332.41
1964	999.00	80.00	12.49	32.65	407.72
1965	757.00	80.00	9.46	33.27	314.79
1966	1,950.00	80.00	24.37	33.89	826.18
1967	50.00	80.00	0.62	34.53	21.58
1974	5,225.00	80.00	65.31	39.13	2,555.49
1994	8,907.00	80.00	111.34	53.83	5,993.07
2001	21,006.03	80.00	262.57	59.45	15,609.32
2004	250.00	80.00	3.12	61.92	193.51
2009	34,614.06	80.00	432.67	66.13	28,613.53
2014	82,673.25	80.00	1,033.41	70.44	72,793.77
2017	46,595.91	80.00	582.45	73.07	42,558.11
2018	125,985.00	80.00	1,574.81	73.95	116,460.20
2024	123,563.50	80.00	1,544.54	79.32	122,514.29
<i>Total</i>	531,881.25	80.00	6,648.50	64.78	430,720.12

Composite Average Remaining Life ... 64.78 Years

***City of Lancaster - Bureau of Water
Water Division***

331.21 Mains - Cast 6 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	142,363.00	110.00	1,294.21	16.17	20,928.96
1901	5,445.00	110.00	49.50	16.53	818.12
1902	4,831.00	110.00	43.92	16.89	741.67
1903	6,172.00	110.00	56.11	17.26	968.18
1904	8,652.00	110.00	78.65	17.63	1,386.75
1905	4,654.00	110.00	42.31	18.01	762.18
1906	3,635.00	110.00	33.05	18.41	608.25
1907	9,232.00	110.00	83.93	18.81	1,578.37
1908	3,434.00	110.00	31.22	19.21	599.84
1909	3,976.00	110.00	36.15	19.63	709.58
1910	5,799.00	110.00	52.72	20.06	1,057.32
1911	20,249.00	110.00	184.08	20.49	3,771.74
1912	5,795.00	110.00	52.68	20.93	1,102.70
1913	1,581.00	110.00	14.37	21.38	307.27
1914	1,762.00	110.00	16.02	21.84	349.81
1915	2,213.00	110.00	20.12	22.31	448.76
1916	2,741.00	110.00	24.92	22.78	567.72
1917	1,990.00	110.00	18.09	23.27	420.95
1919	1,966.00	110.00	17.87	24.27	433.69
1922	3,521.00	110.00	32.01	25.82	826.63
1923	7,893.00	110.00	71.75	26.36	1,891.15
1924	22,098.00	110.00	200.89	26.90	5,404.35
1925	6,175.00	110.00	56.14	27.46	1,541.30
1926	3,560.00	110.00	32.36	28.02	906.80
1927	18,104.00	110.00	164.58	28.59	4,705.36
1928	14,043.00	110.00	127.66	29.17	3,723.76
1929	6,022.00	110.00	54.75	29.76	1,628.96

***City of Lancaster - Bureau of Water
Water Division***

331.21 Mains - Cast 6 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1930	435.00	110.00	3.95	30.35	120.02
1931	803.00	110.00	7.30	30.95	225.95
1932	331.00	110.00	3.01	31.56	94.97
1933	38,890.00	110.00	353.55	32.18	11,376.65
1934	242.00	110.00	2.20	32.80	72.15
1936	1,537.00	110.00	13.97	34.07	476.06
1937	285.00	110.00	2.59	34.72	89.95
1938	1,212.00	110.00	11.02	35.37	389.74
1939	234.00	110.00	2.13	36.03	76.65
1940	1,450.00	110.00	13.18	36.70	483.78
1941	2,617.00	110.00	23.79	37.37	889.17
1943	1,610.00	110.00	14.64	38.74	567.04
1944	1,163.00	110.00	10.57	39.43	416.93
1945	367.00	110.00	3.34	40.13	133.88
1946	7,430.00	110.00	67.55	40.83	2,758.18
1947	8,357.00	110.00	75.97	41.55	3,156.40
1948	18,612.00	110.00	169.20	42.26	7,151.14
1949	13,455.00	110.00	122.32	42.99	5,258.21
1950	19,728.00	110.00	179.35	43.72	7,840.47
1951	11,440.00	110.00	104.00	44.45	4,622.99
1952	8,078.00	110.00	73.44	45.19	3,318.73
1953	15,962.00	110.00	145.11	45.94	6,665.93
1955	10,577.00	110.00	96.15	47.44	4,561.96
1956	20,029.00	110.00	182.08	48.20	8,776.44
1957	21,331.00	110.00	193.92	48.97	9,495.74
1958	15,224.00	110.00	138.40	49.74	6,884.02
1959	30,629.00	110.00	278.45	50.52	14,066.29

***City of Lancaster - Bureau of Water
Water Division***

331.21 Mains - Cast 6 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1960	3,398.00	110.00	30.89	51.30	1,584.68
1961	19,125.00	110.00	173.86	52.09	9,055.90
1962	21,473.00	110.00	195.21	52.88	10,322.26
1963	25,304.00	110.00	230.04	53.67	12,347.07
1964	148,108.94	110.00	1,346.45	54.48	73,348.41
1965	10,896.00	110.00	99.05	55.28	5,475.88
1967	946.00	110.00	8.60	56.90	489.36
1969	21,707.00	110.00	197.34	58.55	11,553.68
1973	220,246.00	110.00	2,002.24	61.89	123,921.22
1974	173,856.00	110.00	1,580.51	62.74	99,157.89
1975	29,336.00	110.00	266.69	63.59	16,958.53
1976	105,250.00	110.00	956.82	64.44	61,660.82
1977	18,631.00	110.00	169.37	65.30	11,060.49
1978	5,535.00	110.00	50.32	66.16	3,329.17
1979	12,441.00	110.00	113.10	67.03	7,581.12
1980	103,816.00	110.00	943.78	67.90	64,084.72
1986	199,065.00	110.00	1,809.68	73.21	132,492.36
1987	773,351.00	110.00	7,030.47	74.11	521,035.29
1988	350,000.00	110.00	3,181.82	75.01	238,676.55
1990	150,558.00	110.00	1,368.71	76.82	105,149.58
1991	575.00	110.00	5.23	77.74	406.35
1992	251,927.00	110.00	2,290.25	78.65	180,131.86
1993	29,404.00	110.00	267.31	79.57	21,269.92
1995	115,972.90	110.00	1,054.30	81.42	85,838.11
1996	77,764.40	110.00	706.95	82.35	58,213.80
1997	138,770.86	110.00	1,261.55	83.28	105,056.99
1999	45,000.00	110.00	409.09	85.15	34,832.44

***City of Lancaster - Bureau of Water
Water Division***

331.21 Mains - Cast 6 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2000	13,328.50	110.00	121.17	86.08	10,430.53
2001	38,848.69	110.00	353.17	87.03	30,734.72
2002	31,000.60	110.00	281.82	87.97	24,792.05
2003	729,328.77	110.00	6,630.27	88.92	589,545.10
2004	12,007.50	110.00	109.16	89.87	9,809.80
2005	786,917.50	110.00	7,153.80	90.82	649,700.13
2009	321,889.74	110.00	2,926.27	94.65	276,968.02
2010	198,909.80	110.00	1,808.27	95.61	172,891.37
2012	751,480.84	110.00	6,831.65	97.54	666,367.55
2013	520,377.90	110.00	4,730.71	98.51	466,021.01
2014	1,021,359.55	110.00	9,285.09	99.48	923,679.98
2015	650,355.76	110.00	5,912.33	100.45	593,903.44
2016	128,898.37	110.00	1,171.80	101.43	118,850.31
2017	1,447,004.13	110.00	13,154.59	102.40	1,347,029.60
2018	996,404.77	110.00	9,058.23	103.38	936,406.36
2019	2,000,957.06	110.00	18,190.53	104.35	1,898,255.08
2022	11,983,043.96	110.00	108,936.85	107.29	11,688,282.01
2024	2,947,461.60	110.00	26,795.13	109.26	2,927,662.61
<i>Total</i>	28,201,966.14	110.00	256,381.73	99.40	25,484,523.70

Composite Average Remaining Life ... 99.40 Years

***City of Lancaster - Bureau of Water
Water Division***

331.22 Mains - Cast 6 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1920	4,628.00	110.00	42.07	24.78	1,042.43
1922	8,996.00	110.00	81.78	25.82	2,112.01
1923	4,469.00	110.00	40.63	26.36	1,070.76
1924	8,428.00	110.00	76.62	26.90	2,061.18
1925	8,492.00	110.00	77.20	27.46	2,119.63
1926	5,250.00	110.00	47.73	28.02	1,337.27
1927	21,783.00	110.00	198.03	28.59	5,661.56
1928	25,657.00	110.00	233.25	29.17	6,803.43
1929	15,804.00	110.00	143.67	29.76	4,275.01
1930	36,960.00	110.00	336.00	30.35	10,197.48
1931	9,763.00	110.00	88.75	30.95	2,747.11
1932	37.00	110.00	0.34	31.56	10.62
1933	49,010.00	110.00	445.55	32.18	14,337.09
1934	941.00	110.00	8.55	32.80	280.56
1935	5,851.00	110.00	53.19	33.43	1,778.19
1936	8,074.00	110.00	73.40	34.07	2,500.79
1937	2,463.00	110.00	22.39	34.72	777.37
1939	39,356.00	110.00	357.78	36.03	12,891.91
1940	14,932.00	110.00	135.75	36.70	4,981.91
1941	84,658.00	110.00	769.62	37.37	28,764.02
1944	1,282.00	110.00	11.65	39.43	459.59
1945	1,907.00	110.00	17.34	40.13	695.68
1946	1,081.00	110.00	9.83	40.83	401.29
1947	1,950.00	110.00	17.73	41.55	736.51
1948	28,091.00	110.00	255.37	42.26	10,793.18
1949	17,684.00	110.00	160.76	42.99	6,910.90
1950	32,958.00	110.00	299.62	43.72	13,098.44

***City of Lancaster - Bureau of Water
Water Division***

331.22 Mains - Cast 6 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1951	24,830.00	110.00	225.73	44.45	10,033.98
1952	123,916.00	110.00	1,126.51	45.19	50,909.07
1953	89,856.00	110.00	816.87	45.94	37,524.97
1954	115,337.00	110.00	1,048.52	46.69	48,953.32
1955	238,925.00	110.00	2,172.05	47.44	103,050.70
1956	918,054.00	110.00	8,345.95	48.20	402,278.87
1957	235,545.00	110.00	2,141.32	48.97	104,855.58
1958	246,624.00	110.00	2,242.04	49.74	111,518.96
1959	199,098.00	110.00	1,809.98	50.52	91,435.27
1960	199,350.00	110.00	1,812.27	51.30	92,968.36
1961	36,269.00	110.00	329.72	52.09	17,173.78
1962	135,125.00	110.00	1,228.41	52.88	64,955.77
1963	331,460.00	110.00	3,013.28	53.67	161,735.72
1964	73,904.00	110.00	671.86	54.48	36,599.69
1965	132,032.00	110.00	1,200.29	55.28	66,353.82
1966	143,802.00	110.00	1,307.29	56.09	73,328.42
1967	83,390.00	110.00	758.09	56.90	43,137.56
1968	66,069.00	110.00	600.63	57.72	34,670.18
1969	857,402.00	110.00	7,794.57	58.55	456,357.46
1970	50,591.00	110.00	459.92	59.38	27,308.77
1971	141,938.00	110.00	1,290.35	60.21	77,693.15
1972	73,343.00	110.00	666.76	61.05	40,704.77
1973	103,234.00	110.00	938.49	61.89	58,084.52
1974	15,013.00	110.00	136.48	62.74	8,562.59
1975	420,871.00	110.00	3,826.10	63.59	243,296.69
1976	30,899.00	110.00	280.90	64.44	18,102.21
1977	404,549.00	110.00	3,677.72	65.30	240,164.72

***City of Lancaster - Bureau of Water
Water Division***

331.22 Mains - Cast 6 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1978	50,408.00	110.00	458.25	66.16	30,319.20
1979	5,645.00	110.00	51.32	67.03	3,439.87
1980	13,377.00	110.00	121.61	67.90	8,257.51
1981	13,521.00	110.00	122.92	68.78	8,454.04
1982	22,347.00	110.00	203.15	69.66	14,151.21
1983	530,691.00	110.00	4,824.47	70.54	340,321.07
1984	25,352.00	110.00	230.47	71.43	16,462.16
1985	67,352.00	110.00	612.29	72.32	44,280.04
1986	178,683.00	110.00	1,624.39	73.21	118,926.64
1987	68,663.00	110.00	624.21	74.11	46,260.81
1988	243,592.00	110.00	2,214.47	75.01	166,113.42
1989	162,394.00	110.00	1,476.31	75.91	112,073.88
1990	2,410,808.00	110.00	21,916.45	76.82	1,683,706.29
1991	135,075.00	110.00	1,227.96	77.74	95,456.54
1992	79,839.00	110.00	725.81	78.65	57,086.17
1993	1,789,422.00	110.00	16,267.49	79.57	1,294,410.87
1994	165,872.00	110.00	1,507.93	80.49	121,376.59
1995	1,053,405.34	110.00	9,576.42	81.42	779,684.97
1996	41,874.19	110.00	380.67	82.35	31,346.68
1997	856,501.08	110.00	7,786.38	83.28	648,417.27
1998	355,878.29	110.00	3,235.26	84.21	272,439.53
1999	241,239.94	110.00	2,193.09	85.15	186,732.80
2000	501,358.82	110.00	4,557.81	86.08	392,350.12
2001	1,409,015.73	110.00	12,809.24	87.03	1,114,727.54
2002	341,572.13	110.00	3,105.20	87.97	273,164.80
2003	410,750.89	110.00	3,734.10	88.92	332,026.08
2004	585,181.51	110.00	5,319.84	89.87	478,077.13

***City of Lancaster - Bureau of Water
Water Division***

331.22 Mains - Cast 6 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2005	1,235,132.04	110.00	11,228.48	90.82	1,019,758.04
2006	858,780.52	110.00	7,807.10	91.77	716,482.05
2007	289,694.67	110.00	2,633.59	92.73	244,211.61
2008	548,646.50	110.00	4,987.70	93.69	467,288.16
2009	598,730.28	110.00	5,443.01	94.65	515,173.73
2010	883,666.86	110.00	8,033.34	95.61	768,078.67
2011	3,125,390.88	110.00	28,412.67	96.57	2,743,940.06
2012	2,468,718.70	110.00	22,442.92	97.54	2,189,109.75
2013	1,878,555.60	110.00	17,077.79	98.51	1,682,328.14
2014	1,843,492.76	110.00	16,759.04	99.48	1,667,186.99
2015	2,665,392.18	110.00	24,230.86	100.45	2,434,030.23
2016	1,840,409.09	110.00	16,731.01	101.43	1,696,943.05
2017	4,116,268.59	110.00	37,420.66	102.40	3,831,872.71
2018	1,881,666.60	110.00	17,106.07	103.38	1,768,362.24
2019	3,159,260.07	110.00	28,720.57	104.35	2,997,106.54
2020	1,178,128.85	110.00	10,710.27	105.33	1,128,145.60
2021	364,705.00	110.00	3,315.50	106.31	352,482.32
2022	4,008,856.89	110.00	36,444.18	107.29	3,910,246.01
2023	261,844.00	110.00	2,380.40	108.28	257,742.81
2025	222,856.68	110.00	2,025.97	109.88	222,607.35
<i>Total</i>	51,121,946.68	110.00	464,745.36	90.68	42,143,764.11

Composite Average Remaining Life ... 90.68 Years

***City of Lancaster - Bureau of Water
Water Division***

331.23 Mains - Cast 6 Inch Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	43,085.00	110.00	391.68	16.17	6,333.98
1905	65,940.00	110.00	599.46	18.01	10,798.95
1908	3,150.00	110.00	28.64	19.21	550.24
1910	12,341.00	110.00	112.19	20.06	2,250.11
1911	6,986.00	110.00	63.51	20.49	1,301.27
1913	195.00	110.00	1.77	21.38	37.90
1915	193.00	110.00	1.75	22.31	39.14
1916	21,427.00	110.00	194.79	22.78	4,437.97
1921	1,348.00	110.00	12.25	25.30	310.00
1922	5,615.00	110.00	51.05	25.82	1,318.24
1924	1,728.00	110.00	15.71	26.90	422.60
1928	10,291.00	110.00	93.55	29.17	2,728.85
1933	208,167.00	110.00	1,892.43	32.18	60,895.94
1940	3,788.00	110.00	34.44	36.70	1,263.83
1949	19,805.00	110.00	180.05	42.99	7,739.79
1951	9,969.00	110.00	90.63	44.45	4,028.54
1953	80,264.00	110.00	729.67	45.94	33,519.23
1954	47,765.00	110.00	434.23	46.69	20,273.25
1955	7,510.00	110.00	68.27	47.44	3,239.14
1956	127,662.00	110.00	1,160.56	48.20	55,939.77
1957	36,851.00	110.00	335.01	48.97	16,404.65
1974	21,478.00	110.00	195.25	62.74	12,249.87
1975	221.00	110.00	2.01	63.59	127.76
1977	7,418.00	110.00	67.44	65.30	4,403.77
1980	19,359.00	110.00	175.99	67.90	11,950.14
1981	1,189,236.00	110.00	10,811.25	68.78	743,572.75
1982	183,288.00	110.00	1,666.26	69.66	116,066.87

***City of Lancaster - Bureau of Water
Water Division***

331.23 Mains - Cast 6 Inch Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1983	138,930.00	110.00	1,263.00	70.54	89,092.91
1987	106,439.00	110.00	967.63	74.11	71,711.91
1989	5,088.00	110.00	46.25	75.91	3,511.41
1991	279,780.00	110.00	2,543.46	77.74	197,718.53
1993	726,108.00	110.00	6,600.99	79.57	525,243.39
1995	37,294.69	110.00	339.04	81.42	27,603.91
1996	140,326.04	110.00	1,275.69	82.35	105,046.94
1997	81,861.61	110.00	744.20	83.28	61,973.63
1999	250,493.98	110.00	2,277.22	85.15	193,895.93
2000	142,198.42	110.00	1,292.71	86.08	111,280.71
<i>Total</i>	4,043,599.74	110.00	36,760.03	68.26	2,509,283.80

Composite Average Remaining Life ... 68.26 Years

***City of Lancaster - Bureau of Water
Water Division***

331.31 Mains - Manholes Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	6,910.00	80.00	86.37	6.14	530.53
1901	1,170.00	80.00	14.62	6.37	93.14
1902	623.00	80.00	7.79	6.57	51.18
1903	998.00	80.00	12.47	6.79	84.74
1904	1,268.00	80.00	15.85	7.01	111.18
1905	1,556.00	80.00	19.45	7.24	140.78
1906	1,638.00	80.00	20.47	7.44	152.43
1907	1,302.00	80.00	16.27	7.67	124.78
1908	1,468.00	80.00	18.35	7.89	144.83
1909	670.00	80.00	8.37	8.12	68.01
1910	132.00	80.00	1.65	8.34	13.75
1911	854.00	80.00	10.67	8.56	91.42
1913	114.00	80.00	1.42	9.03	12.87
1914	268.00	80.00	3.35	9.26	31.01
1915	350.00	80.00	4.37	9.49	41.53
1916	365.00	80.00	4.56	9.73	44.41
1917	299.00	80.00	3.74	9.98	37.29
1918	255.00	80.00	3.19	10.21	32.56
1919	331.00	80.00	4.14	10.46	43.29
1920	101.00	80.00	1.26	10.71	13.53
1921	172.00	80.00	2.15	10.97	23.59
1922	1,032.00	80.00	12.90	11.22	144.78
1923	1,352.00	80.00	16.90	11.49	194.13
1924	2,237.00	80.00	27.96	11.76	328.73
1925	1,037.00	80.00	12.96	12.03	155.96
1926	821.00	80.00	10.26	12.31	126.29
1927	1,884.00	80.00	23.55	12.59	296.54

***City of Lancaster - Bureau of Water
Water Division***

331.31 Mains - Manholes Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1928	3,783.00	80.00	47.29	12.89	609.31
1929	2,604.00	80.00	32.55	13.19	429.20
1930	935.00	80.00	11.69	13.49	157.67
1931	1,533.00	80.00	19.16	13.81	264.55
1932	617.00	80.00	7.71	14.13	108.98
1933	2,725.00	80.00	34.06	14.46	492.65
1934	272.00	80.00	3.40	14.80	50.33
1935	353.00	80.00	4.41	15.15	66.87
1936	81.00	80.00	1.01	15.52	15.71
1937	43.00	80.00	0.54	15.89	8.54
1938	119.00	80.00	1.49	16.27	24.20
1939	144.00	80.00	1.80	16.66	29.99
1940	14.00	80.00	0.17	17.06	2.99
1941	71.00	80.00	0.89	17.47	15.51
1944	109.00	80.00	1.36	18.78	25.58
1945	148.00	80.00	1.85	19.23	35.58
1946	772.00	80.00	9.65	19.70	190.10
1947	599.00	80.00	7.49	20.18	151.08
1948	1,128.00	80.00	14.10	20.67	291.39
1949	744.00	80.00	9.30	21.16	196.83
1950	3,206.00	80.00	40.07	21.68	868.71
1951	943.00	80.00	11.79	22.20	261.66
1952	1,345.00	80.00	16.81	22.73	382.12
1953	1,631.00	80.00	20.39	23.27	474.39
1954	2,085.00	80.00	26.06	23.82	620.89
1955	278.00	80.00	3.47	24.38	84.74
2002	14,343.12	80.00	179.29	59.21	10,615.91

***City of Lancaster - Bureau of Water
Water Division***

331.31 Mains - Manholes Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2004	125,686.92	80.00	1,571.08	60.97	95,783.70
2009	3,807.55	80.00	47.59	65.43	3,113.86
2024	44,113.66	80.00	551.42	79.29	43,722.75
<i>Total</i>	243,440.25	80.00	3,043.00	53.31	162,229.05

Composite Average Remaining Life ... 53.31 Years

***City of Lancaster - Bureau of Water
Water Division***

331.32 Mains - Manholes Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1920	178.00	80.00	2.22	10.71	23.84
1922	430.00	80.00	5.37	11.22	60.32
1923	55.00	80.00	0.69	11.49	7.90
1924	119.00	80.00	1.49	11.76	17.49
1925	1,103.00	80.00	13.79	12.03	165.88
1926	511.00	80.00	6.39	12.31	78.60
1927	1,508.00	80.00	18.85	12.59	237.36
1928	1,923.00	80.00	24.04	12.89	309.73
1929	1,636.00	80.00	20.45	13.19	269.65
1930	500.00	80.00	6.25	13.49	84.31
1931	641.00	80.00	8.01	13.81	110.62
1932	26.00	80.00	0.32	14.13	4.59
1933	79.00	80.00	0.99	14.46	14.28
1934	66.00	80.00	0.82	14.80	12.21
1936	796.00	80.00	9.95	15.52	154.38
1937	107.00	80.00	1.34	15.89	21.25
1938	560.00	80.00	7.00	16.27	113.87
1940	471.00	80.00	5.89	17.06	100.44
1941	62.00	80.00	0.77	17.47	13.54
1944	133.00	80.00	1.66	18.78	31.21
1945	218.00	80.00	2.72	19.23	52.40
1946	184.00	80.00	2.30	19.70	45.31
1947	178.00	80.00	2.22	20.18	44.90
1948	2,092.00	80.00	26.15	20.67	540.41
1949	2,896.00	80.00	36.20	21.16	766.15
1950	3,324.00	80.00	41.55	21.68	900.68
1951	905.00	80.00	11.31	22.20	251.11

***City of Lancaster - Bureau of Water
Water Division***

331.32 Mains - Manholes Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1952	2,925.00	80.00	36.56	22.73	831.00
1953	1,129.00	80.00	14.11	23.27	328.38
1954	4,399.00	80.00	54.99	23.82	1,309.98
1955	2,642.00	80.00	33.02	24.38	805.31
1956	3,110.00	80.00	38.87	24.96	970.16
1969	986.00	80.00	12.32	33.20	409.17
1997	1,500.00	80.00	18.75	54.90	1,029.29
2000	26,840.00	80.00	335.50	57.47	19,281.71
2001	117,362.28	80.00	1,467.03	58.34	85,583.89
2002	21,514.68	80.00	268.93	59.21	15,923.87
2003	61,890.54	80.00	773.63	60.09	46,485.13
2009	44,871.12	80.00	560.89	65.43	36,696.13
2010	127,176.14	80.00	1,589.70	66.33	105,443.06
2011	183,846.52	80.00	2,298.08	67.24	154,511.56
2012	43,280.66	80.00	541.01	68.14	36,866.70
2013	98,116.51	80.00	1,226.45	69.06	84,695.35
2014	50,051.57	80.00	625.64	69.97	43,778.88
2015	39,644.85	80.00	495.56	70.89	35,131.87
2016	27,768.60	80.00	347.11	71.82	24,927.60
2017	81,665.58	80.00	1,020.82	72.74	74,254.42
2018	57,181.40	80.00	714.77	73.67	52,656.06
2019	56,342.70	80.00	704.28	74.60	52,539.17
2022	64,546.56	80.00	806.83	77.41	62,454.74
<i>Total</i>	1,139,491.71	80.00	14,243.63	66.09	941,345.88

Composite Average Remaining Life ... 66.09 Years

***City of Lancaster - Bureau of Water
Water Division***

331.33 Mains - Manholes Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	267.00	80.00	3.34	6.14	20.50
1902	167.00	80.00	2.09	6.57	13.72
1905	2,769.00	80.00	34.61	7.24	250.53
1908	100.00	80.00	1.25	7.89	9.87
1910	285.00	80.00	3.56	8.34	29.69
1911	213.00	80.00	2.66	8.56	22.80
1916	1,162.00	80.00	14.52	9.73	141.39
1921	860.00	80.00	10.75	10.97	117.94
1922	141.00	80.00	1.76	11.22	19.78
1924	179.00	80.00	2.24	11.76	26.30
1927	198.00	80.00	2.47	12.59	31.17
1928	600.00	80.00	7.50	12.89	96.64
1933	3,811.00	80.00	47.64	14.46	688.98
1940	171.00	80.00	2.14	17.06	36.47
1950	312.00	80.00	3.90	21.68	84.54
1951	471.00	80.00	5.89	22.20	130.69
1953	2,923.00	80.00	36.54	23.27	850.18
1954	3,122.00	80.00	39.02	23.82	929.70
1955	278.00	80.00	3.47	24.38	84.74
1956	52,275.00	80.00	653.44	24.96	16,307.04
1957	50,466.00	80.00	630.82	25.54	16,108.69
1971	5,309.00	80.00	66.36	34.59	2,295.36
2000	3,000.00	80.00	37.50	57.47	2,155.18
<i>Total</i>	129,079.00	80.00	1,613.49	25.07	40,451.91

Composite Average Remaining Life ... 25.07 Years

***City of Lancaster - Bureau of Water
Water Division***

331.41 Mains - Valves Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	5,191.00	70.00	74.16	1.35	100.46
1901	555.00	70.00	7.93	1.64	13.01
1902	680.00	70.00	9.71	1.88	18.28
1903	192.00	70.00	2.74	2.16	5.93
1904	253.00	70.00	3.61	2.45	8.84
1905	346.00	70.00	4.94	2.69	13.28
1906	183.00	70.00	2.61	2.98	7.78
1907	93.00	70.00	1.33	3.23	4.30
1908	1,126.00	70.00	16.09	3.52	56.62
1909	358.00	70.00	5.11	3.78	19.33
1910	427.00	70.00	6.10	4.05	24.71
1911	1,676.00	70.00	23.94	4.32	103.38
1912	270.00	70.00	3.86	4.54	17.53
1913	123.00	70.00	1.76	4.79	8.42
1914	136.00	70.00	1.94	5.01	9.73
1915	188.00	70.00	2.69	5.24	14.08
1916	206.00	70.00	2.94	5.46	16.06
1917	117.00	70.00	1.67	5.68	9.50
1918	69.00	70.00	0.99	5.91	5.83
1919	130.00	70.00	1.86	6.11	11.35
1920	160.00	70.00	2.29	6.34	14.49
1921	42.00	70.00	0.60	6.55	3.93
1922	526.00	70.00	7.51	6.78	50.91
1923	538.00	70.00	7.69	6.99	53.73
1924	1,930.00	70.00	27.57	7.22	199.05
1925	964.00	70.00	13.77	7.45	102.66
1926	643.00	70.00	9.19	7.67	70.47

***City of Lancaster - Bureau of Water
Water Division***

331.41 Mains - Valves Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1927	1,574.00	70.00	22.49	7.91	177.85
1928	2,108.00	70.00	30.11	8.14	244.99
1929	1,505.00	70.00	21.50	8.38	180.09
1930	349.00	70.00	4.99	8.61	42.93
1931	465.00	70.00	6.64	8.86	58.83
1932	734.00	70.00	10.49	9.11	95.50
1933	3,851.36	70.00	55.02	9.35	514.37
1934	44.00	70.00	0.63	9.61	6.04
1936	121.00	70.00	1.73	10.13	17.51
1938	117.00	70.00	1.67	10.67	17.84
1940	60.00	70.00	0.86	11.25	9.64
1941	386.00	70.00	5.51	11.55	63.67
1944	69.00	70.00	0.99	12.50	12.32
1945	153.00	70.00	2.19	12.83	28.05
1946	684.00	70.00	9.77	13.18	128.82
1947	357.00	70.00	5.10	13.54	69.06
1948	1,144.00	70.00	16.34	13.91	227.35
1949	1,107.00	70.00	15.81	14.29	226.04
1950	1,118.00	70.00	15.97	14.69	234.58
1951	522.00	70.00	7.46	15.09	112.56
1952	1,534.00	70.00	21.91	15.51	339.93
1953	1,026.00	70.00	14.66	15.94	233.68
1954	879.00	70.00	12.56	16.39	205.76
1955	998.00	70.00	14.26	16.84	240.10
1956	1,034.00	70.00	14.77	17.31	255.70
1957	207.95	70.00	2.97	17.79	52.85
1958	285.00	70.00	4.07	18.28	74.45

***City of Lancaster - Bureau of Water
Water Division***

331.41 Mains - Valves Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1959	595.21	70.00	8.50	18.79	159.77
1960	70.00	70.00	1.00	19.30	19.30
1961	788.00	70.00	11.26	19.84	223.31
1962	96.00	70.00	1.37	20.38	27.95
1963	1,650.00	70.00	23.57	20.93	493.39
1964	6,755.00	70.00	96.50	21.49	2,074.26
1965	893.00	70.00	12.76	22.07	281.58
1967	86.00	70.00	1.23	23.25	28.57
1973	25,946.00	70.00	370.66	27.05	10,025.97
1976	4,697.00	70.00	67.10	29.07	1,950.59
1980	2,249.00	70.00	32.13	31.88	1,024.37
1981	1,063.00	70.00	15.19	32.60	495.12
1990	4,607.00	70.00	65.81	39.43	2,595.33
1995	30,655.00	70.00	437.93	43.46	19,032.13
1996	19,448.00	70.00	277.83	44.28	12,303.55
2000	2,460.50	70.00	35.15	47.64	1,674.42
2001	6,544.55	70.00	93.49	48.49	4,533.26
2002	12,688.76	70.00	181.27	49.34	8,944.33
2003	5,357.84	70.00	76.54	50.21	3,842.85
2004	20,210.66	70.00	288.72	51.07	14,745.98
2006	6,349.00	70.00	90.70	52.82	4,791.00
2008	3,920.00	70.00	56.00	54.59	3,057.07
2009	3,144.00	70.00	44.91	55.48	2,491.86
2010	35,101.80	70.00	501.45	56.38	28,270.21
2012	100,197.45	70.00	1,431.39	58.18	83,276.96
2013	69,383.72	70.00	991.20	59.09	58,565.45
2014	136,181.27	70.00	1,945.45	60.00	116,721.47

***City of Lancaster - Bureau of Water
Water Division***

331.41 Mains - Valves Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2015	86,714.10	70.00	1,238.77	60.91	75,455.65
2016	17,186.45	70.00	245.52	61.83	15,180.34
2017	192,933.89	70.00	2,756.20	62.75	172,956.54
2018	144,991.98	70.00	2,071.31	63.68	131,893.73
2019	266,794.28	70.00	3,811.35	64.61	246,233.44
2022	605,784.41	70.00	8,654.06	67.41	583,355.66
2023	35,575.00	70.00	508.21	68.35	34,735.34
2024	77,095.12	70.00	1,101.36	69.29	76,314.58
<i>Total</i>	1,967,767.30	70.00	28,110.95	61.28	1,722,609.45

Composite Average Remaining Life ... 61.28 Years

***City of Lancaster - Bureau of Water
Water Division***

331.42 Mains - Valves Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1920	133.00	70.00	1.90	6.34	12.05
1922	281.00	70.00	4.01	6.78	27.20
1923	43.00	70.00	0.61	6.99	4.29
1924	55.00	70.00	0.79	7.22	5.67
1925	466.00	70.00	6.66	7.45	49.62
1926	241.00	70.00	3.44	7.67	26.41
1927	657.75	70.00	9.40	7.91	74.32
1928	574.65	70.00	8.21	8.14	66.78
1929	944.00	70.00	13.49	8.38	112.96
1930	668.36	70.00	9.55	8.61	82.21
1931	287.00	70.00	4.10	8.86	36.31
1932	44.00	70.00	0.63	9.11	5.72
1933	966.00	70.00	13.80	9.35	129.02
1934	28.00	70.00	0.40	9.61	3.84
1935	98.00	70.00	1.40	9.86	13.80
1936	451.00	70.00	6.44	10.13	65.25
1937	53.00	70.00	0.76	10.39	7.87
1938	345.00	70.00	4.93	10.67	52.60
1939	940.00	70.00	13.43	10.96	147.16
1940	566.00	70.00	8.09	11.25	90.93
1941	5,001.88	70.00	71.46	11.55	825.07
1944	59.00	70.00	0.84	12.50	10.53
1945	84.00	70.00	1.20	12.83	15.40
1946	63.00	70.00	0.90	13.18	11.86
1947	88.00	70.00	1.26	13.54	17.02
1948	1,433.89	70.00	20.48	13.91	284.96
1949	3,408.00	70.00	48.69	14.29	695.89

***City of Lancaster - Bureau of Water
Water Division***

331.42 Mains - Valves Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1950	1,290.00	70.00	18.43	14.69	270.67
1951	1,130.00	70.00	16.14	15.09	243.66
1952	3,649.05	70.00	52.13	15.51	808.63
1953	5,990.00	70.00	85.57	15.94	1,364.29
1954	5,811.00	70.00	83.01	16.39	1,360.29
1955	10,439.00	70.00	149.13	16.84	2,511.44
1956	39,093.00	70.00	558.47	17.31	9,667.52
1957	5,076.00	70.00	72.51	17.79	1,290.05
1958	6,095.00	70.00	87.07	18.28	1,592.09
1959	4,312.00	70.00	61.60	18.79	1,157.42
1960	5,297.00	70.00	75.67	19.30	1,460.82
1961	71.00	70.00	1.01	19.84	20.12
1962	3,734.00	70.00	53.34	20.38	1,086.95
1963	9,998.32	70.00	142.83	20.93	2,989.77
1965	703.00	70.00	10.04	22.07	221.67
1966	82.00	70.00	1.17	22.66	26.54
1967	517.00	70.00	7.39	23.25	171.74
1968	6,972.00	70.00	99.60	23.86	2,376.77
1969	75,781.10	70.00	1,082.59	24.48	26,500.85
1970	531.00	70.00	7.59	25.11	190.47
1971	2,337.00	70.00	33.39	25.75	859.53
1972	1,076.00	70.00	15.37	26.39	405.71
1974	351.00	70.00	5.01	27.71	138.96
1975	1,706.00	70.00	24.37	28.39	691.88
1980	6,933.00	70.00	99.04	31.88	3,157.83
1985	4,568.00	70.00	65.26	35.57	2,321.25
1986	1,105.00	70.00	15.79	36.33	573.51

***City of Lancaster - Bureau of Water
Water Division***

331.42 Mains - Valves Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1987	4,656.00	70.00	66.51	37.10	2,467.45
1988	9,160.00	70.00	130.86	37.87	4,955.26
1989	7,150.00	70.00	102.14	38.65	3,947.75
1991	5,831.00	70.00	83.30	40.23	3,351.01
1992	4,883.00	70.00	69.76	41.03	2,861.87
1993	10,488.00	70.00	149.83	41.83	6,267.72
1994	11,934.00	70.00	170.49	42.64	7,270.08
1995	44,500.00	70.00	635.71	43.46	27,627.79
1997	13,587.50	70.00	194.11	45.11	8,756.73
1998	18,349.00	70.00	262.13	45.95	12,044.62
1999	18,000.00	70.00	257.14	46.79	12,031.49
2000	60,545.79	70.00	864.94	47.64	41,202.55
2001	112,346.34	70.00	1,604.95	48.49	77,819.72
2002	22,398.48	70.00	319.98	49.34	15,788.73
2003	70,781.22	70.00	1,011.16	50.21	50,767.05
2004	4,316.84	70.00	61.67	51.07	3,149.63
2005	85,432.00	70.00	1,220.46	51.95	63,398.12
2006	9,070.00	70.00	129.57	52.82	6,844.28
2007	14,295.00	70.00	204.21	53.70	10,967.30
2008	6,860.00	70.00	98.00	54.59	5,349.88
2009	1,087,339.88	70.00	15,533.42	55.48	861,798.66
2010	1,065,828.70	70.00	15,226.12	56.38	858,394.69
2011	474,185.13	70.00	6,774.07	57.27	387,984.11
2012	376,044.17	70.00	5,372.06	58.18	312,541.03
2013	42,385.11	70.00	605.50	59.09	35,776.45
2014	343,370.51	70.00	4,905.29	60.00	294,304.14
2015	226,959.20	70.00	3,242.27	60.91	197,492.14

***City of Lancaster - Bureau of Water
Water Division***

331.42 Mains - Valves Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2016	45,546.09	70.00	650.66	61.83	40,229.65
2017	236,521.91	70.00	3,378.88	62.75	212,031.23
2018	105,092.30	70.00	1,501.32	63.68	95,598.50
2019	205,925.29	70.00	2,941.79	64.61	190,055.40
2022	47,685.33	70.00	681.22	67.41	45,919.81
2024	44,807.02	70.00	640.10	69.29	44,353.38
<i>Total</i>	5,058,901.81	70.00	72,270.01	55.48	4,009,683.41

Composite Average Remaining Life ... 55.48 Years

***City of Lancaster - Bureau of Water
Water Division***

331.43 Mains - Valves Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	546.00	70.00	7.80	1.35	10.57
1902	181.00	70.00	2.59	1.88	4.87
1905	3,096.00	70.00	44.23	2.69	118.87
1908	224.00	70.00	3.20	3.52	11.26
1910	563.00	70.00	8.04	4.05	32.58
1911	491.00	70.00	7.01	4.32	30.29
1916	1,541.00	70.00	22.01	5.46	120.11
1921	136.00	70.00	1.94	6.55	12.72
1922	205.00	70.00	2.93	6.78	19.84
1924	449.00	70.00	6.41	7.22	46.31
1927	1,198.00	70.00	17.11	7.91	135.37
1928	1,322.00	70.00	18.89	8.14	153.64
1933	7,740.12	70.00	110.57	9.35	1,033.74
1940	456.00	70.00	6.51	11.25	73.26
1950	1,711.00	70.00	24.44	14.69	359.00
1951	488.00	70.00	6.97	15.09	105.23
1953	2,659.00	70.00	37.99	15.94	605.62
1954	2,862.00	70.00	40.89	16.39	669.96
1955	327.00	70.00	4.67	16.84	78.67
1956	68,586.46	70.00	979.81	17.31	16,961.11
1957	69,794.00	70.00	997.06	17.79	17,737.91
1971	12,152.00	70.00	173.60	25.75	4,469.39
1997	45,800.00	70.00	654.29	45.11	29,516.71
2000	15,000.00	70.00	214.29	47.64	10,207.78
2024	16,160.00	70.00	230.86	69.29	15,996.39

***City of Lancaster - Bureau of Water
Water Division***

331.43 Mains - Valves Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
<i>Total</i>	253,687.58	70.00	3,624.11	27.18	98,511.18

Composite Average Remaining Life ... 27.18 Years

***City of Lancaster - Bureau of Water
Water Division***

331.51 Mains - Steel Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1931	1,141.00	70.00	16.30	6.10	99.51
1948	354.00	70.00	5.06	11.26	56.93
1956	4,942.00	70.00	70.60	14.72	1,039.28
2024	852,281.82	70.00	12,175.47	69.26	843,291.66
<i>Total</i>	858,718.82	70.00	12,267.43	68.84	844,487.38

Composite Average Remaining Life ... 68.84 Years

***City of Lancaster - Bureau of Water
Water Division***

331.52 Mains - Steel Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	889,036.00	70.00	12,700.53	14.72	186,960.56
1957	921,269.00	70.00	13,161.00	15.21	200,217.08
1971	21,795.00	70.00	311.36	23.48	7,309.49
<i>Total</i>	1,832,100.00	70.00	26,172.89	15.07	394,487.14

Composite Average Remaining Life ... 15.07 Years

***City of Lancaster - Bureau of Water
Water Division***

331.61 Mains - Plastic Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1980	102,283.00	65.00	1,573.58	25.41	39,986.10
<i>Total</i>	102,283.00	65.00	1,573.58	25.41	39,986.10

Composite Average Remaining Life ... 25.41 Years

***City of Lancaster - Bureau of Water
Water Division***

331.70 Mains - Relining

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 55

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2008	127,908.00	55.00	2,325.60	39.74	92,424.58
2009	517,680.60	55.00	9,412.36	40.61	382,248.42
2010	757,155.65	55.00	13,766.44	41.49	571,140.72
2011	699,845.68	55.00	12,724.44	42.37	539,138.82
2012	210,146.10	55.00	3,820.83	43.26	165,283.12
2013	200,789.70	55.00	3,650.72	44.15	161,186.38
2014	232,128.00	55.00	4,220.50	45.05	190,133.26
2015	33,033.60	55.00	600.61	45.95	27,600.63
2016	222,940.80	55.00	4,053.46	46.86	189,959.94
2020	321,622.57	55.00	5,847.67	50.55	295,571.61
2021	248,564.71	55.00	4,519.35	51.48	232,639.69
2022	365,125.63	55.00	6,638.64	52.41	347,939.39
2023	383,675.08	55.00	6,975.90	53.35	372,162.58
<i>Total</i>	4,320,616.12	55.00	78,556.51	45.41	3,567,429.13

Composite Average Remaining Life ... 45.41 Years

***City of Lancaster - Bureau of Water
Water Division***

333.01 Services - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1966	4,805.00	70.00	68.64	20.25	1,390.15
1967	6,135.00	70.00	87.64	20.87	1,829.26
1968	14,500.00	70.00	207.14	21.51	4,455.44
1969	11,773.00	70.00	168.19	22.15	3,725.67
1970	12,715.00	70.00	181.64	22.81	4,143.44
1971	15,768.00	70.00	225.26	23.48	5,288.19
1972	20,334.00	70.00	290.49	24.16	7,016.79
1973	28,211.00	70.00	403.01	24.84	10,011.54
1974	23,471.00	70.00	335.30	25.54	8,562.42
1975	56,673.00	70.00	809.62	26.25	21,249.45
1976	22,243.00	70.00	317.76	26.96	8,566.96
1977	80,703.00	70.00	1,152.90	27.69	31,921.76
1978	67,636.00	70.00	966.23	28.42	27,461.18
1979	81,610.00	70.00	1,165.86	29.17	34,002.70
1981	50,713.00	70.00	724.47	30.67	22,222.00
1982	14,098.00	70.00	201.40	31.44	6,332.76
1983	5,028.00	70.00	71.83	32.22	2,314.16
1984	5,925.00	70.00	84.64	33.00	2,793.50
1985	6,265.00	70.00	89.50	33.79	3,024.51
1986	12,562.00	70.00	179.46	34.59	6,208.08
1987	18,801.00	70.00	268.59	35.40	9,507.71
1988	15,013.00	70.00	214.47	36.21	7,766.26
1989	46,806.00	70.00	668.66	37.03	24,763.18
1990	64,887.00	70.00	926.96	37.86	35,095.41
1991	55,128.00	70.00	787.54	38.70	30,475.96
1992	38,584.00	70.00	551.20	39.54	21,793.59
1993	55,584.00	70.00	794.06	40.39	32,070.62

***City of Lancaster - Bureau of Water
Water Division***

333.01 Services - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1995	35,000.00	70.00	500.00	42.10	21,051.73
1996	7,085.00	70.00	101.21	42.97	4,349.54
1999	5,288.11	70.00	75.54	45.62	3,445.98
2002	21,031.10	70.00	300.44	48.31	14,514.33
2004	37,099.20	70.00	529.99	50.13	26,570.56
2009	9,518.87	70.00	135.98	54.78	7,449.22
2012	100,197.45	70.00	1,431.39	57.62	82,478.14
2013	69,383.72	70.00	991.20	58.57	58,058.86
2014	136,181.27	70.00	1,945.45	59.53	115,817.52
2015	86,714.10	70.00	1,238.77	60.49	74,937.30
2016	17,186.45	70.00	245.52	61.46	15,088.87
2017	192,933.89	70.00	2,756.20	62.42	172,053.60
2018	132,853.98	70.00	1,897.92	63.39	120,315.49
2019	266,794.28	70.00	3,811.35	64.37	245,322.55
<i>Total</i>	1,953,238.42	70.00	27,903.44	47.86	1,335,446.39

Composite Average Remaining Life ... 47.86 Years

***City of Lancaster - Bureau of Water
Water Division***

333.02 Services - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1941	6,014.37	70.00	85.92	8.87	761.99
1947	190.00	70.00	2.71	10.88	29.54
1948	210.00	70.00	3.00	11.26	33.77
1949	460.00	70.00	6.57	11.64	76.52
1955	5,859.00	70.00	83.70	14.24	1,191.80
1956	14,109.00	70.00	201.56	14.72	2,967.06
1957	107,383.25	70.00	1,534.05	15.21	23,337.33
1958	30,863.96	70.00	440.91	15.72	6,931.94
1959	41,386.00	70.00	591.23	16.24	9,602.36
1960	12,400.00	70.00	177.14	16.77	2,971.23
1961	12,006.00	70.00	171.51	17.32	2,971.24
1962	12,772.00	70.00	182.46	17.88	3,262.69
1963	14,737.00	70.00	210.53	18.46	3,885.92
1964	880.00	70.00	12.57	19.04	239.39
1965	15,032.00	70.00	214.74	19.64	4,218.11
1966	33,604.00	70.00	480.06	20.25	9,722.08
1967	35,795.00	70.00	511.36	20.87	10,672.90
1968	21,149.00	70.00	302.13	21.51	6,498.49
1969	22,820.00	70.00	326.00	22.15	7,221.60
1970	15,098.00	70.00	215.69	22.81	4,919.99
1971	18,927.00	70.00	270.39	23.48	6,347.64
1972	23,886.00	70.00	341.23	24.16	8,242.50
1973	36,725.00	70.00	524.64	24.84	13,033.00
1974	34,531.00	70.00	493.30	25.54	12,597.20
1975	109,159.00	70.00	1,559.42	26.25	40,928.99
1976	196,364.00	70.00	2,805.20	26.96	75,630.21
1977	112,380.00	70.00	1,605.43	27.69	44,451.47

***City of Lancaster - Bureau of Water
Water Division***

333.02 Services - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1978	130,046.00	70.00	1,857.80	28.42	52,800.54
1979	327,888.00	70.00	4,684.12	29.17	136,614.12
1980	112,580.00	70.00	1,608.29	29.92	48,113.10
1981	99,692.00	70.00	1,424.17	30.67	43,684.17
1982	130,235.00	70.00	1,860.50	31.44	58,500.95
1983	66,799.00	70.00	954.27	32.22	30,744.57
1984	142,200.00	70.00	2,031.43	33.00	67,043.91
1985	83,234.00	70.00	1,189.06	33.79	40,182.33
1986	166,892.00	70.00	2,384.17	34.59	82,477.22
1987	249,780.00	70.00	3,568.29	35.40	126,314.39
1988	211,760.00	70.00	3,025.15	36.21	109,543.89
1989	268,580.00	70.00	3,836.86	37.03	142,094.94
1990	144,599.00	70.00	2,065.70	37.86	78,209.21
1991	161,727.00	70.00	2,310.39	38.70	89,406.22
1992	22,998.00	70.00	328.54	39.54	12,990.08
1993	100,902.00	70.00	1,441.46	40.39	58,218.00
1994	19,312.00	70.00	275.89	41.24	11,378.35
1996	23,200.00	70.00	331.43	42.97	14,242.68
1997	51,250.00	70.00	732.14	43.85	32,102.35
1998	10,274.00	70.00	146.77	44.73	6,564.98
1999	35,435.99	70.00	506.23	45.62	23,091.73
2000	87,549.18	70.00	1,250.70	46.51	58,168.76
2001	187,377.99	70.00	2,676.83	47.41	126,899.68
2002	22,691.45	70.00	324.16	48.31	15,660.20
2003	29,339.00	70.00	419.13	49.22	20,629.69
2005	54,000.00	70.00	771.43	51.05	39,385.29
2010	80,556.96	70.00	1,150.82	55.72	64,127.73

***City of Lancaster - Bureau of Water
Water Division***

333.02 Services - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2011	73,538.61	70.00	1,050.55	56.67	59,534.49
2012	165,544.97	70.00	2,364.93	57.62	136,269.34
2013	23,988.36	70.00	342.69	58.57	20,072.96
2014	75,057.51	70.00	1,072.25	59.53	63,833.85
2015	226,959.20	70.00	3,242.28	60.49	196,135.47
2016	45,546.09	70.00	650.66	61.46	39,987.25
2017	236,521.91	70.00	3,378.89	62.42	210,924.31
2018	105,092.30	70.00	1,501.32	63.39	95,173.90
2019	190,390.19	70.00	2,719.86	64.37	175,067.50
2020	445,019.00	70.00	6,357.42	65.34	415,398.93
2021	263,950.00	70.00	3,770.72	66.32	250,067.18
<i>Total</i>	5,807,247.29	70.00	82,960.77	42.84	3,554,401.24

Composite Average Remaining Life ... 42.84 Years

***City of Lancaster - Bureau of Water
Water Division***

334.01 Meters - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 25

Survivor Curve: S2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1987	16,028.00	25.00	641.12	2.49	1,599.53
1988	13,087.00	25.00	523.48	2.73	1,430.31
1989	2,981.00	25.00	119.24	2.98	355.10
1990	3,010.00	25.00	120.40	3.23	389.21
1991	78,718.00	25.00	3,148.72	3.50	11,010.40
1992	187,732.00	25.00	7,509.28	3.77	28,318.38
1993	147,999.00	25.00	5,919.96	4.06	24,013.88
1994	39,485.08	25.00	1,579.40	4.35	6,876.04
1995	26,877.15	25.00	1,075.09	4.66	5,013.63
1996	52,645.66	25.00	2,105.83	4.99	10,502.07
1997	20,552.48	25.00	822.10	5.33	4,378.25
1999	9,100.00	25.00	364.00	6.05	2,203.03
2000	3,559.72	25.00	142.39	6.44	917.41
2005	940.50	25.00	37.62	8.73	328.49
2006	6,732.00	25.00	269.28	9.27	2,495.76
2007	7,128.00	25.00	285.12	9.84	2,804.22
2008	4,565.00	25.00	182.60	10.43	1,905.29
2009	9,836.32	25.00	393.45	11.07	4,354.26
2016	31,734.32	25.00	1,269.37	16.49	20,936.63
2021	3,345,438.42	25.00	133,817.55	21.26	2,844,652.51
2024	37,952.48	25.00	1,518.10	24.25	36,813.91
<i>Total</i>	4,046,102.13	25.00	161,844.10	18.61	3,011,298.33

Composite Average Remaining Life ... 18.61 Years

***City of Lancaster - Bureau of Water
Water Division***

334.02 Meters - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 25

Survivor Curve: S2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1973	956.00	0.00	0.00	0.00	0.00
1974	128.00	0.00	0.00	0.00	0.00
1975	132.00	0.00	0.00	0.00	0.00
1976	106.00	25.00	4.24	0.50	2.12
1977	1,861.00	25.00	74.44	0.57	42.14
1978	10,256.00	25.00	410.24	0.70	287.84
1979	921.00	25.00	36.84	0.86	31.80
1980	439.00	25.00	17.56	1.04	18.25
1981	12,200.00	25.00	488.00	1.23	597.84
1985	27,880.00	25.00	1,115.20	2.04	2,278.56
1986	30,797.00	25.00	1,231.88	2.27	2,790.60
1987	115,115.00	25.00	4,604.60	2.49	11,488.02
1988	90,663.00	25.00	3,626.52	2.73	9,908.81
1989	22,564.00	25.00	902.56	2.98	2,687.87
1990	22,315.00	25.00	892.60	3.23	2,885.48
1991	119,884.00	25.00	4,795.36	3.50	16,768.35
1992	194,882.00	25.00	7,795.28	3.77	29,396.92
1993	563,258.00	25.00	22,530.32	4.06	91,392.59
1994	272,399.32	25.00	10,895.97	4.35	47,436.35
1995	179,870.15	25.00	7,194.81	4.66	33,552.77
1996	352,320.94	25.00	14,092.84	4.99	70,283.09
1997	137,543.52	25.00	5,501.74	5.33	29,300.63
1999	67,875.00	25.00	2,715.00	6.05	16,431.96
2000	65,761.00	25.00	2,630.44	6.44	16,947.88
2001	55,344.45	25.00	2,213.78	6.85	15,172.96
2002	39,990.00	25.00	1,599.60	7.29	11,655.52
2003	67,478.30	25.00	2,699.13	7.74	20,898.20

***City of Lancaster - Bureau of Water
Water Division***

334.02 Meters - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 25

Survivor Curve: S2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2004	49,970.00	25.00	1,998.80	8.22	16,437.53
2005	10,920.50	25.00	436.82	8.73	3,814.17
2006	118,214.00	25.00	4,728.56	9.27	43,825.62
2007	129,717.00	25.00	5,188.68	9.84	51,031.90
2008	68,165.00	25.00	2,726.60	10.43	28,449.96
2009	75,690.00	25.00	3,027.60	11.07	33,505.80
2010	44,256.68	25.00	1,770.27	11.73	20,772.74
2011	36,769.31	25.00	1,470.77	12.44	18,292.88
2019	802,421.00	25.00	32,096.84	19.30	619,360.80
2021	6,792,253.76	25.00	271,690.17	21.26	5,775,506.62
2024	81,230.27	25.00	3,249.21	24.25	78,793.38
<i>Total</i>	10,662,547.20	23.03	426,453.28	16.70	7,122,047.94

Composite Average Remaining Life ... 16.70 Years

***City of Lancaster - Bureau of Water
Water Division***

335.01 Hydrants - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	1,758.00	75.00	23.44	3.85	90.33
1901	1,359.00	75.00	18.12	4.13	74.81
1902	1,143.00	75.00	15.24	4.40	67.04
1903	1,099.00	75.00	14.65	4.63	67.92
1904	2,248.00	75.00	29.97	4.89	146.44
1905	1,823.00	75.00	24.31	5.13	124.75
1906	1,663.00	75.00	22.17	5.35	118.57
1907	1,765.00	75.00	23.53	5.58	131.29
1908	1,578.00	75.00	21.04	5.81	122.24
1909	2,263.00	75.00	30.17	6.01	181.49
1910	1,769.00	75.00	23.59	6.24	147.14
1911	5,355.00	75.00	71.40	6.46	461.48
1912	1,983.20	75.00	26.44	6.67	176.33
1913	984.00	75.00	13.12	6.89	90.41
1914	560.00	75.00	7.47	7.12	53.14
1915	709.00	75.00	9.45	7.33	69.27
1916	616.00	75.00	8.21	7.55	62.05
1917	537.00	75.00	7.16	7.79	55.74
1921	188.00	75.00	2.51	8.70	21.80
1922	2,479.00	75.00	33.05	8.93	295.32
1923	633.00	75.00	8.44	9.18	77.46
1924	3,815.32	75.00	50.87	9.41	478.78
1925	295.00	75.00	3.93	9.66	37.99
1926	262.00	75.00	3.49	9.91	34.62
1927	2,896.17	75.00	38.62	10.16	392.18
1928	1,464.00	75.00	19.52	10.41	203.28
1929	1,082.00	75.00	14.43	10.68	154.05

***City of Lancaster - Bureau of Water
Water Division***

335.01 Hydrants - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1930	147.00	75.00	1.96	10.94	21.44
1931	414.00	75.00	5.52	11.21	61.89
1932	302.00	75.00	4.03	11.49	46.28
1933	58.00	75.00	0.77	11.77	9.10
1936	116.00	75.00	1.55	12.67	19.60
1937	142.00	75.00	1.89	12.99	24.59
1938	350.00	75.00	4.67	13.31	62.13
1940	142.00	75.00	1.89	13.99	26.49
1943	100.00	75.00	1.33	15.09	20.12
1944	174.00	75.00	2.32	15.47	35.90
1946	1,343.00	75.00	17.91	16.28	291.57
1947	839.00	75.00	11.19	16.70	186.85
1948	2,414.00	75.00	32.19	17.14	551.59
1949	1,083.00	75.00	14.44	17.58	253.87
1950	3,035.00	75.00	40.47	18.04	729.85
1951	2,810.00	75.00	37.47	18.51	693.34
1952	854.00	75.00	11.39	18.98	216.16
1953	3,605.50	75.00	48.07	19.47	936.16
1954	5,658.00	75.00	75.44	19.98	1,507.15
1955	866.47	75.00	11.55	20.49	236.73
1956	1,868.42	75.00	24.91	21.01	523.52
1957	1,561.00	75.00	20.81	21.55	448.59
1958	1,252.00	75.00	16.69	22.10	368.91
1959	1,914.00	75.00	25.52	22.66	578.17
1960	309.00	75.00	4.12	23.23	95.69
1961	641.00	75.00	8.55	23.80	203.45
1962	2,247.00	75.00	29.96	24.39	730.77

***City of Lancaster - Bureau of Water
Water Division***

335.01 Hydrants - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1963	1,622.00	75.00	21.63	24.99	540.51
1964	9,590.00	75.00	127.87	25.60	3,273.45
1973	5,076.00	75.00	67.68	31.48	2,130.57
1975	21,532.00	75.00	287.09	32.88	9,438.82
1976	33,098.00	75.00	441.31	33.59	14,821.68
1977	18,500.00	75.00	246.67	34.30	8,460.98
1978	30,432.00	75.00	405.76	35.03	14,212.63
1979	31,328.00	75.00	417.71	35.76	14,936.10
1980	31,372.00	75.00	418.29	36.49	15,265.16
1981	15,675.00	75.00	209.00	37.24	7,783.25
1990	10,235.00	75.00	136.47	44.23	6,035.98
1995	12,420.00	75.00	165.60	48.32	8,001.88
1996	5,040.00	75.00	67.20	49.16	3,303.33
1999	2,144.11	75.00	28.59	51.69	1,477.79
2000	5,625.00	75.00	75.00	52.55	3,941.04
2001	16,070.40	75.00	214.27	53.41	11,443.51
2002	62,333.76	75.00	831.12	54.27	45,106.90
2003	13,669.18	75.00	182.26	55.14	10,049.91
2004	15,092.88	75.00	201.24	56.02	11,272.41
2005	3,774.62	75.00	50.33	56.90	2,863.42
2006	7,924.00	75.00	105.65	57.78	6,104.39
2007	2,908.00	75.00	38.77	58.66	2,274.60
2008	6,104.00	75.00	81.39	59.56	4,847.09
2009	8,150.80	75.00	108.68	60.45	6,569.69
2012	50,098.72	75.00	667.98	63.16	42,190.04
2013	34,691.86	75.00	462.56	64.07	29,636.14
2014	68,090.64	75.00	907.87	64.98	58,998.06

***City of Lancaster - Bureau of Water
Water Division***

335.01 Hydrants - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2015	43,357.05	75.00	578.09	65.90	38,097.35
2016	8,593.23	75.00	114.58	66.82	7,656.18
2017	96,466.95	75.00	1,286.22	67.75	87,136.63
2018	66,426.99	75.00	885.69	68.67	60,822.66
2019	133,397.14	75.00	1,778.63	69.60	123,795.31
2022	605,784.41	75.00	8,077.12	72.41	584,842.68
2024	29,950.70	75.00	399.34	74.29	29,667.64
<i>Total</i>	1,583,146.52	75.00	21,108.59	61.10	1,289,813.63

Composite Average Remaining Life ... 61.10 Years

***City of Lancaster - Bureau of Water
Water Division***

335.02 Hydrants - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	71.00	75.00	0.95	3.85	3.65
1905	50.00	75.00	0.67	5.13	3.42
1920	465.98	75.00	6.21	8.47	52.63
1922	1,396.50	75.00	18.62	8.93	166.36
1923	213.00	75.00	2.84	9.18	26.07
1924	347.32	75.00	4.63	9.41	43.58
1925	516.00	75.00	6.88	9.66	66.45
1926	692.00	75.00	9.23	9.91	91.44
1927	2,838.68	75.00	37.85	10.16	384.40
1928	4,414.00	75.00	58.85	10.41	612.90
1929	2,055.00	75.00	27.40	10.68	292.58
1930	4,217.64	75.00	56.24	10.94	615.15
1931	841.00	75.00	11.21	11.21	125.72
1933	2,799.00	75.00	37.32	11.77	439.36
1935	668.00	75.00	8.91	12.37	110.14
1936	2,002.00	75.00	26.69	12.67	338.24
1937	235.00	75.00	3.13	12.99	40.70
1938	1,610.00	75.00	21.47	13.31	285.81
1939	4,354.69	75.00	58.06	13.65	792.41
1940	1,834.00	75.00	24.45	13.99	342.16
1941	2,437.00	75.00	32.49	14.35	466.19
1944	283.00	75.00	3.77	15.47	58.39
1945	413.00	75.00	5.51	15.87	87.41
1946	384.00	75.00	5.12	16.28	83.37
1947	292.00	75.00	3.89	16.70	65.03
1948	3,580.18	75.00	47.74	17.14	818.06
1949	993.00	75.00	13.24	17.58	232.77

***City of Lancaster - Bureau of Water
Water Division***

335.02 Hydrants - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1950	4,862.45	75.00	64.83	18.04	1,169.32
1951	1,480.00	75.00	19.73	18.51	365.17
1952	14,171.00	75.00	188.95	18.98	3,586.97
1953	19,679.00	75.00	262.39	19.47	5,109.60
1954	10,815.07	75.00	144.20	19.98	2,880.86
1955	19,729.00	75.00	263.05	20.49	5,390.25
1956	54,124.00	75.00	721.65	21.01	15,165.24
1957	1,300.00	75.00	17.33	21.55	373.59
1958	12,363.32	75.00	164.84	22.10	3,642.94
1959	11,295.00	75.00	150.60	22.66	3,411.91
1960	34,314.52	75.00	457.53	23.23	10,626.66
1961	2,187.00	75.00	29.16	23.80	694.13
1962	9,644.00	75.00	128.59	24.39	3,136.42
1963	21,929.87	75.00	292.40	24.99	7,307.84
1964	6,281.24	75.00	83.75	25.60	2,144.04
1965	10,475.00	75.00	139.67	26.22	3,661.63
1966	17,434.00	75.00	232.45	26.85	6,240.60
1967	9,684.00	75.00	129.12	27.48	3,548.51
1968	1,859.00	75.00	24.79	28.13	697.15
1969	64,518.00	75.00	860.24	28.78	24,759.70
1970	1,608.00	75.00	21.44	29.44	631.28
1971	670.00	75.00	8.93	30.11	269.01
1972	2,785.00	75.00	37.13	30.79	1,143.49
1975	4,620.00	75.00	61.60	32.88	2,025.23
1980	20,420.00	75.00	272.27	36.49	9,936.08
1982	37,125.00	75.00	495.00	37.99	18,805.59
1985	6,594.00	75.00	87.92	40.28	3,541.77

***City of Lancaster - Bureau of Water
Water Division***

335.02 Hydrants - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1986	3,694.00	75.00	49.25	41.06	2,022.33
1987	12,278.00	75.00	163.71	41.84	6,850.26
1988	24,011.00	75.00	320.15	42.63	13,648.95
1990	997.00	75.00	13.29	44.23	587.97
1991	10,488.00	75.00	139.84	45.04	6,297.96
1992	8,875.00	75.00	118.33	45.85	5,425.42
1993	12,747.00	75.00	169.96	46.67	7,931.79
1994	11,118.00	75.00	148.24	47.49	7,040.22
1996	55,500.00	75.00	740.00	49.16	36,375.99
1997	39,929.28	75.00	532.39	50.00	26,617.56
1998	21,844.00	75.00	291.25	50.84	14,807.51
1999	15,623.99	75.00	208.32	51.69	10,768.53
2000	196,426.69	75.00	2,619.02	52.55	137,622.16
2001	152,447.98	75.00	2,032.64	53.41	108,556.11
2002	72,073.41	75.00	960.98	54.27	52,154.85
2003	39,893.84	75.00	531.92	55.14	29,330.91
2004	18,866.09	75.00	251.55	56.02	14,090.50
2005	32,544.93	75.00	433.93	56.90	24,688.56
2006	20,888.50	75.00	278.51	57.78	16,091.80
2007	23,587.31	75.00	314.50	58.66	18,449.67
2008	23,605.00	75.00	314.73	59.56	18,744.36
2009	142,351.20	75.00	1,898.01	60.45	114,737.57
2010	75,600.00	75.00	1,008.00	61.35	61,840.71
2011	32,775.00	75.00	437.00	62.25	27,204.96
2012	135,503.50	75.00	1,806.71	63.16	114,112.65
2013	22,834.18	75.00	304.46	64.07	19,506.51
2014	104,656.75	75.00	1,395.42	64.98	90,681.26

***City of Lancaster - Bureau of Water
Water Division***

335.02 Hydrants - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2015	156,943.60	75.00	2,092.58	65.90	137,904.58
2016	50,743.05	75.00	676.57	66.82	45,209.75
2017	230,140.94	75.00	3,068.54	67.75	207,881.63
2018	69,328.15	75.00	924.37	68.67	63,479.06
2019	167,917.10	75.00	2,238.89	69.60	155,830.55
2022	134,406.00	75.00	1,792.08	72.41	129,759.64
2023	82,137.00	75.00	1,095.16	73.35	80,328.24
2024	239,848.95	75.00	3,197.98	74.29	237,582.20
<i>Total</i>	2,884,594.90	75.00	38,461.22	56.97	2,191,072.10

Composite Average Remaining Life ... 56.97 Years

***City of Lancaster - Bureau of Water
Water Division***

341.01 Transportation - Autos and Vans

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 12

Survivor Curve: L4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2012	19,325.63	12.00	1,610.46	2.28	3,679.18
2017	9,978.18	12.00	831.51	4.57	3,797.07
2018	16,045.40	12.00	1,337.11	5.41	7,228.54
2019	23,720.46	12.00	1,976.70	6.31	12,468.37
2020	57,220.00	12.00	4,768.32	7.26	34,630.54
2021	25,929.98	12.00	2,160.83	8.25	17,828.78
2023	84,902.45	12.00	7,075.18	10.25	72,520.88
2025	293,897.00	12.00	24,491.34	11.88	290,835.58
<i>Total</i>	531,019.10	12.00	44,251.46	10.01	442,988.94

Composite Average Remaining Life ... 10.01 Years

***City of Lancaster - Bureau of Water
Water Division***

341.02 Transportation - Trucks

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 18

Survivor Curve: S1.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1990	225.00	18.00	12.50	0.51	6.32
1992	12,034.00	18.00	668.56	0.92	615.95
1997	8,318.00	18.00	462.11	2.15	991.81
1999	180,930.91	18.00	10,051.71	2.67	26,848.32
2000	7,153.69	18.00	397.43	2.95	1,170.91
2005	16,088.58	18.00	893.81	4.52	4,041.74
2006	88,685.02	18.00	4,926.94	4.89	24,090.12
2008	272,204.92	18.00	15,122.49	5.69	86,112.92
2009	147,221.86	18.00	8,178.99	6.14	50,189.13
2011	21,923.57	18.00	1,217.98	7.11	8,662.06
2012	175,296.52	18.00	9,738.69	7.65	74,504.09
2013	134,521.00	18.00	7,473.38	8.23	61,481.96
2014	52,392.33	18.00	2,910.68	8.84	25,737.08
2015	218,563.91	18.00	12,142.43	9.50	115,358.57
2017	106,193.71	18.00	5,899.65	10.95	64,581.30
2019	144,946.20	18.00	8,052.56	12.57	101,205.10
2020	210,103.07	18.00	11,672.39	13.44	156,891.13
2021	643,443.39	18.00	35,746.83	14.35	513,004.12
2022	409,452.50	18.00	22,747.35	15.29	347,892.69
2023	57,491.33	18.00	3,193.96	16.26	51,942.14
2024	801,870.49	18.00	44,548.33	17.25	768,514.96
<i>Total</i>	3,709,060.00	18.00	206,058.75	12.05	2,483,842.42

Composite Average Remaining Life ... 12.05 Years

***City of Lancaster - Bureau of Water
Water Division***

341.03 Transportation - Trailers

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 20

Survivor Curve: L3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1967	500.00	0.00	0.00	0.00	0.00
1978	2,942.00	20.00	147.10	0.50	73.55
2004	7,487.21	20.00	374.37	5.89	2,205.62
2008	2,185.00	20.00	109.25	6.70	732.17
2021	173,968.97	20.00	8,698.59	16.26	141,430.37
2022	24,401.00	20.00	1,220.07	17.25	21,047.38
<i>Total</i>	211,484.18	16.67	10,549.38	15.69	165,489.08

Composite Average Remaining Life ... 15.69 Years

***City of Lancaster - Bureau of Water
Water Division***

344.00 Laboratory Equipment

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 20

Survivor Curve: L3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1927	53.00	0.00	0.00	0.00	0.00
1933	3,556.00	0.00	0.00	0.00	0.00
1937	30.00	0.00	0.00	0.00	0.00
1939	150.00	0.00	0.00	0.00	0.00
1940	131.00	0.00	0.00	0.00	0.00
1942	24.00	0.00	0.00	0.00	0.00
1945	125.00	0.00	0.00	0.00	0.00
1946	273.00	0.00	0.00	0.00	0.00
1949	92.00	0.00	0.00	0.00	0.00
1950	58.00	0.00	0.00	0.00	0.00
1951	195.00	0.00	0.00	0.00	0.00
1956	1,110.00	0.00	0.00	0.00	0.00
1965	1,790.00	0.00	0.00	0.00	0.00
1967	6,225.00	0.00	0.00	0.00	0.00
1968	420.00	0.00	0.00	0.00	0.00
1974	630.00	0.00	0.00	0.00	0.00
1975	2,762.00	0.00	0.00	0.00	0.00
1978	4,023.00	20.00	201.15	0.50	100.58
1979	1,290.00	20.00	64.50	0.57	37.05
1980	21,755.00	20.00	1,087.77	0.71	772.56
1981	2,057.00	20.00	102.85	0.87	89.44
1982	1,800.00	20.00	90.00	1.04	93.74
2001	52,135.00	20.00	2,606.79	5.33	13,895.62
2018	10,364.40	20.00	518.23	13.38	6,934.87

***City of Lancaster - Bureau of Water
Water Division***

344.00 Laboratory Equipment

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2025
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 20

Survivor Curve: L3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
<i>Total</i>	111,048.40	5.83	4,671.29	4.69	21,923.86

Composite Average Remaining Life ... 4.69 Years

***City of Lancaster - Bureau of Water
Water Division***

304.20 Structures - Willow Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	13,250.00	60.00	220.83	8.25	1,821.10
1990	15,067.00	60.00	251.12	27.64	6,941.64
1991	5,903.00	60.00	98.38	28.43	2,796.93
1999	2,000.00	60.00	33.33	35.01	1,167.12
2023	721,226.05	60.00	12,020.43	57.30	688,749.49
2024	1,564,301.27	60.00	26,071.69	58.28	1,519,430.54
<i>Total</i>	2,321,747.32	60.00	38,695.79	57.39	2,220,906.81

Composite Average Remaining Life ... 57.39 Years

***City of Lancaster - Bureau of Water
Water Division***

304.21 Structures - Kissel Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1979	5,569.00	60.00	92.82	19.67	1,825.72
1980	38,673.00	60.00	644.55	20.34	13,110.78
1999	3,000.00	60.00	50.00	35.01	1,750.68
2024	24,377.00	60.00	406.28	58.28	23,677.77
<i>Total</i>	71,619.00	60.00	1,193.65	33.82	40,364.94

Composite Average Remaining Life ... 33.82 Years

***City of Lancaster - Bureau of Water
Water Division***

304.22 Structures - Susquehanna Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	279,298.00	60.00	4,654.97	8.25	38,387.12
1971	25,374.00	60.00	422.90	14.79	6,254.95
1996	318,845.11	60.00	5,314.08	32.48	172,610.98
1999	10,000.00	60.00	166.67	35.01	5,835.58
2000	94,384.76	60.00	1,573.08	35.87	56,432.61
2001	5,940.00	60.00	99.00	36.74	3,637.41
2002	7,890.00	60.00	131.50	37.61	4,946.31
2003	7,832.00	60.00	130.53	38.50	5,025.14
2012	16,500.00	60.00	275.00	46.72	12,848.07
2019	87,900.00	60.00	1,465.00	53.40	78,235.19
2022	13,896.00	60.00	231.60	56.32	13,043.84
<i>Total</i>	867,859.87	60.00	14,464.33	27.46	397,257.19

Composite Average Remaining Life ... 27.46 Years

***City of Lancaster - Bureau of Water
Water Division***

304.23 Structures - Conestoga Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1974	903,813.00	60.00	15,063.55	16.52	248,776.60
1975	118,276.00	60.00	1,971.27	17.12	33,741.12
1976	82,589.00	60.00	1,376.48	17.74	24,413.60
1978	36,333.00	60.00	605.55	19.01	11,512.03
1979	6,165.00	60.00	102.75	19.67	2,021.11
2000	507,711.24	60.00	8,461.85	35.87	303,560.36
2001	122,372.00	60.00	2,039.53	36.74	74,935.50
2009	21,000.00	60.00	350.00	43.93	15,374.07
2014	13,934.60	60.00	232.24	48.61	11,288.85
2020	31,167.00	60.00	519.45	54.37	28,243.51
2021	160,976.00	60.00	2,682.93	55.34	148,486.75
2022	56,382.66	60.00	939.71	56.32	52,925.04
2023	190,683.18	60.00	3,178.05	57.30	182,096.78
2025	161,490.00	60.00	2,691.50	59.26	159,502.98
<i>Total</i>	2,412,892.68	60.00	40,214.87	32.25	1,296,878.31

Composite Average Remaining Life ... 32.25 Years

***City of Lancaster - Bureau of Water
Water Division***

304.24 Structures - Hess Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1995	147,721.39	60.00	2,462.02	31.66	77,937.09
1998	487.71	60.00	8.13	34.16	277.70
2026	305,088.93	60.00	5,084.82	59.88	304,463.16
<i>Total</i>	453,298.03	60.00	7,554.97	50.65	382,677.94

Composite Average Remaining Life ... 50.65 Years

***City of Lancaster - Bureau of Water
Water Division***

304.25 Structures - Conestoga Building

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2009	1,264,611.00	60.00	21,076.85	43.93	925,820.18
<i>Total</i>	1,264,611.00	60.00	21,076.85	43.93	925,820.18

Composite Average Remaining Life ... 43.93 Years

***City of Lancaster - Bureau of Water
Water Division***

304.26 Structures - Delp Station

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2011	972,399.60	60.00	16,206.66	45.78	741,988.21
<i>Total</i>	972,399.60	60.00	16,206.66	45.78	741,988.21

Composite Average Remaining Life ... 45.78 Years

***City of Lancaster - Bureau of Water
Water Division***

304.27 Structures - Willow Station

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2019	2,501,626.68	60.00	41,693.77	53.40	2,226,566.99
<i>Total</i>	2,501,626.68	60.00	41,693.77	53.40	2,226,566.99

Composite Average Remaining Life ... 53.40 Years

***City of Lancaster - Bureau of Water
Water Division***

304.28 Structures - East Station

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2024	2,013,090.96	60.00	33,551.51	58.28	1,955,347.06
<i>Total</i>	2,013,090.96	60.00	33,551.51	58.28	1,955,347.06

Composite Average Remaining Life ... 58.28 Years

***City of Lancaster - Bureau of Water
Water Division***

304.29 Structures - South Station

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2022	1,078,924.52	60.00	17,982.07	56.32	1,012,760.36
<i>Total</i>	1,078,924.52	60.00	17,982.07	56.32	1,012,760.36

Composite Average Remaining Life ... 56.32 Years

***City of Lancaster - Bureau of Water
Water Division***

304.31 Purification - Conestoga Plant

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1933	217,345.00	65.00	3,343.77	4.21	14,087.47
1942	254.00	65.00	3.91	6.54	25.55
1950	357.00	65.00	5.49	8.88	48.75
1995	11,438.92	65.00	175.98	36.43	6,410.91
1996	471,732.50	65.00	7,257.42	37.27	270,516.68
1997	133,109.57	65.00	2,047.84	38.13	78,082.45
1998	833.13	65.00	12.82	38.99	499.73
1999	54,000.00	65.00	830.77	39.86	33,112.47
2000	106,977.43	65.00	1,645.81	40.73	67,035.12
2001	17,075.00	65.00	262.69	41.61	10,931.46
2004	592,429.46	65.00	9,114.30	44.30	403,718.30
2005	25,634.00	65.00	394.37	45.20	17,825.69
2009	68,862.87	65.00	1,059.43	48.88	51,784.78
2010	17,264.13	65.00	265.60	49.81	13,230.53
2014	108,200.00	65.00	1,664.62	53.59	89,206.93
2019	533,933.55	65.00	8,214.36	58.40	479,703.21
2020	2,185,610.00	65.00	33,624.77	59.37	1,996,265.89
2021	29,364.00	65.00	451.75	60.34	27,260.17
2023	1,358,250.64	65.00	20,896.16	62.30	1,301,788.55
2024	1,962,115.62	65.00	30,186.39	63.28	1,910,150.99
2025	21,900.00	65.00	336.92	64.26	21,651.24
<i>Total</i>	7,916,686.82	65.00	121,795.18	55.78	6,793,336.87

Composite Average Remaining Life ... 55.78 Years

***City of Lancaster - Bureau of Water
Water Division***

304.32 Purification - Susquehanna Plant

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	303,935.00	65.00	4,675.92	11.05	51,658.28
1971	556,636.00	65.00	8,563.63	18.69	160,020.73
1987	111,862.00	65.00	1,720.95	29.93	51,509.16
1995	20,850.00	65.00	320.77	36.43	11,685.32
1996	492,800.34	65.00	7,581.54	37.27	282,598.11
1997	3,660.00	65.00	56.31	38.13	2,146.97
1998	2,466.01	65.00	37.94	38.99	1,479.18
1999	53,500.00	65.00	823.08	39.86	32,805.88
2000	537,851.11	65.00	8,274.63	40.73	337,032.89
2001	3,405.00	65.00	52.38	41.61	2,179.89
2002	73,616.00	65.00	1,132.55	42.50	48,132.92
2003	39,825.00	65.00	612.69	43.39	26,587.54
2004	443,704.88	65.00	6,826.23	44.30	302,368.11
2014	12,977.00	65.00	199.65	53.59	10,699.06
2019	54,685.00	65.00	841.31	58.40	49,130.78
2020	188,419.05	65.00	2,898.75	59.37	172,095.90
2021	56,780.00	65.00	873.54	60.34	52,711.91
2024	1,637,510.63	65.00	25,192.47	63.28	1,594,142.83
<i>Total</i>	4,594,483.02	65.00	70,684.35	45.12	3,188,985.45

Composite Average Remaining Life ... 45.12 Years

***City of Lancaster - Bureau of Water
Water Division***

304.34 Purification - Susquehanna Facility

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2009	25,210.13	65.00	387.85	48.88	18,957.98
2010	93,677,983.18	65.00	1,441,199.72	49.81	71,790,990.20
2011	2,641,059.46	65.00	40,631.68	50.75	2,062,068.15
2012	2,867.09	65.00	44.11	51.69	2,280.13
2022	2,418,940.12	65.00	37,214.46	61.32	2,281,954.36
2024	560,364.25	65.00	8,620.99	63.28	545,523.58
2025	35,819.00	65.00	551.06	64.26	35,412.14
2026	382,250.00	65.00	5,880.77	64.88	381,526.27
<i>Total</i>	99,744,493.23	65.00	1,534,530.64	50.26	77,118,712.81

Composite Average Remaining Life ... 50.26 Years

***City of Lancaster - Bureau of Water
Water Division***

304.61 Water Administration Building

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: S2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2018	7,722,865.72	65.00	118,813.33	57.26	6,802,928.19
2019	2,161,046.43	65.00	33,246.87	58.25	1,936,764.61
2020	35,724.81	65.00	549.61	59.25	32,565.59
2023	69,730.00	65.00	1,072.77	62.25	66,779.96
<i>Total</i>	9,989,366.96	65.00	153,682.58	57.51	8,839,038.36

Composite Average Remaining Life ... 57.51 Years

***City of Lancaster - Bureau of Water
Water Division***

306.00 Lake, River and Other Intakes

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: S1.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	174,188.00	65.00	2,679.82	16.86	45,176.38
2000	291,082.65	65.00	4,478.19	41.27	184,809.76
<i>Total</i>	465,270.65	65.00	7,158.01	32.13	229,986.14

Composite Average Remaining Life ... 32.13 Years

***City of Lancaster - Bureau of Water
Water Division***

311.00 Electric Pumping Equipment

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 40

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1955	42,612.20	40.00	1,065.30	0.98	1,047.94
1956	264,732.49	40.00	6,618.29	1.22	8,091.20
1965	42,888.24	40.00	1,072.20	3.44	3,690.32
1969	15,496.80	40.00	387.42	4.32	1,675.52
1971	586,217.24	40.00	14,655.38	4.79	70,182.34
1974	82,833.75	40.00	2,070.84	5.52	11,438.81
1975	140,305.77	40.00	3,507.63	5.79	20,296.26
1976	12,920.78	40.00	323.02	6.06	1,956.25
1980	11,232.98	40.00	280.82	7.28	2,044.20
1982	1,567.23	40.00	39.18	8.00	313.27
1990	183,953.88	40.00	4,598.83	11.71	53,837.50
1991	58,814.44	40.00	1,470.36	12.27	18,034.32
1995	135,484.73	40.00	3,387.11	14.69	49,759.09
2002	14,798.80	40.00	369.97	19.55	7,233.62
2005	9,939.52	40.00	248.49	21.83	5,425.65
2006	6,545.37	40.00	163.63	22.62	3,701.41
2007	13,285.43	40.00	332.13	23.42	7,777.18
2008	4,714.93	40.00	117.87	24.22	2,855.28
2011	381,952.47	40.00	9,548.78	26.71	255,020.48
2013	35,012.04	40.00	875.30	28.41	24,869.20
2015	38,287.40	40.00	957.18	30.15	28,862.18
2016	74,050.88	40.00	1,851.27	31.04	57,457.12
2017	222,162.46	40.00	5,554.04	31.93	177,325.29
2018	96,180.47	40.00	2,404.50	32.83	78,929.99
2019	5,829,591.87	40.00	145,739.25	33.73	4,915,942.97
2021	139,704.82	40.00	3,492.61	35.56	124,203.23
2024	2,179,333.94	40.00	54,483.15	38.35	2,089,526.69

***City of Lancaster - Bureau of Water
Water Division***

311.00 Electric Pumping Equipment

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 40

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2026	457,578.55	40.00	11,439.42	39.88	456,227.40
<i>Total</i>	11,082,199.48	40.00	277,053.96	30.60	8,477,724.71

Composite Average Remaining Life ... 30.60 Years

***City of Lancaster - Bureau of Water
Water Division***

320.00 Purification System - Treatment Plant

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 50

Survivor Curve: S1.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1906	6,450.00	0.00	0.00	0.00	0.00
1933	353,573.00	50.00	7,071.46	1.93	13,674.19
1940	240.00	50.00	4.80	3.70	17.76
1942	3,963.00	50.00	79.26	4.20	332.98
1943	1,724.00	50.00	34.48	4.45	153.52
1944	125.00	50.00	2.50	4.70	11.76
1948	5,627.00	50.00	112.54	5.72	644.03
1949	5,531.00	50.00	110.62	5.98	661.61
1950	2,660.00	50.00	53.20	6.24	332.03
1951	309.00	50.00	6.18	6.50	40.19
1954	182.00	50.00	3.64	7.31	26.60
1955	362,779.00	50.00	7,255.58	7.58	54,999.63
1956	811,061.00	50.00	16,221.22	7.86	127,455.19
1962	2,400.00	50.00	48.00	9.60	460.92
1963	2,224.00	50.00	44.48	9.91	440.78
1965	11,638.00	50.00	232.76	10.54	2,453.55
1967	10,445.00	50.00	208.90	11.19	2,337.87
1968	2,643.00	50.00	52.86	11.53	609.31
1969	564.00	50.00	11.28	11.87	133.88
1971	1,583,130.60	50.00	31,662.60	12.57	398,091.29
1972	23,217.00	50.00	464.34	12.94	6,006.60
1974	30,485.00	50.00	609.70	13.68	8,343.40
1975	297,705.00	50.00	5,954.10	14.07	83,778.87
1976	449,043.00	50.00	8,980.86	14.47	129,913.22
1977	296,878.00	50.00	5,937.56	14.87	88,285.98
1978	65,023.00	50.00	1,300.46	15.28	19,873.12
1979	23,547.00	50.00	470.94	15.70	7,395.40

***City of Lancaster - Bureau of Water
Water Division***

320.00 Purification System - Treatment Plant

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 50

Survivor Curve: S1.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1980	7,178.00	50.00	143.56	16.14	2,316.35
1982	16,592.00	50.00	331.84	17.03	5,650.73
1991	22,532.00	50.00	450.64	21.62	9,740.82
1993	260,945.00	50.00	5,218.90	22.78	118,869.61
1995	341,396.13	50.00	6,827.92	24.00	163,836.52
1996	444,177.00	50.00	8,883.54	24.63	218,769.02
1997	32,550.29	50.00	651.01	25.27	16,452.64
1999	393,464.01	50.00	7,869.28	26.61	209,412.80
2000	1,112,742.20	50.00	22,254.84	27.30	607,649.60
2001	18,435.00	50.00	368.70	28.01	10,328.26
2004	16,387.00	50.00	327.74	30.23	9,908.72
2008	95,074.00	50.00	1,901.48	33.42	63,540.12
2013	44,935.58	50.00	898.71	37.73	33,911.26
2014	21,232.69	50.00	424.65	38.64	16,407.77
2015	27,844.70	50.00	556.89	39.56	22,028.13
2017	64,748.08	50.00	1,294.96	41.43	53,643.85
2018	103,533.04	50.00	2,070.66	42.38	87,746.26
2019	37,250.67	50.00	745.01	43.34	32,286.32
2020	22,905.86	50.00	458.12	44.31	20,297.31
2021	1,518,475.00	50.00	30,369.49	45.28	1,375,228.94
2023	10,332.00	50.00	206.64	47.26	9,765.28
2024	724,561.02	50.00	14,491.22	48.25	699,233.22
2026	1,146,750.00	50.00	22,934.99	49.88	1,143,883.50
<i>Total</i>	10,837,207.87	49.00	216,615.10	27.13	5,877,380.70

Composite Average Remaining Life ... 27.13 Years

***City of Lancaster - Bureau of Water
Water Division***

330.31 Distribution - Underground Oyster

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	719,532.00	60.00	11,992.14	5.24	62,879.76
1995	3,331.22	60.00	55.52	30.04	1,667.86
1997	251,668.78	60.00	4,194.46	31.87	133,665.16
2001	23,435.00	60.00	390.58	35.61	13,909.13
2022	9,957,839.22	60.00	165,963.18	56.25	9,336,235.39
2023	30,540.50	60.00	509.01	57.25	29,142.22
<i>Total</i>	10,986,346.72	60.00	183,104.88	52.31	9,577,499.51

Composite Average Remaining Life ... 52.31 Years

***City of Lancaster - Bureau of Water
Water Division***

330.32 Distribution - Willow Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1989	5,132.00	60.00	85.53	24.79	2,120.08
1990	892,279.00	60.00	14,871.24	25.63	381,208.78
1991	11,808.00	60.00	196.80	26.50	5,214.36
2014	205,281.84	60.00	3,421.35	48.29	165,213.90
<i>Total</i>	1,114,500.84	60.00	18,574.92	29.81	553,757.12

Composite Average Remaining Life ... 29.81 Years

***City of Lancaster - Bureau of Water
Water Division***

330.33 Distribution - Lafayette Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1968	565,918.00	60.00	9,431.92	9.90	93,367.97
1986	11,410.00	60.00	190.17	22.31	4,242.34
1993	8,723.00	60.00	145.38	28.25	4,106.65
2021	2,404,322.60	60.00	40,071.85	55.26	2,214,242.87
<i>Total</i>	2,990,373.60	60.00	49,839.32	46.47	2,315,959.83

Composite Average Remaining Life ... 46.47 Years

***City of Lancaster - Bureau of Water
Water Division***

330.34 Distribution - Lampeter Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1969	108,318.00	60.00	1,805.29	10.43	18,837.92
1986	41,866.00	60.00	697.76	22.31	15,566.14
<i>Total</i>	150,184.00	60.00	2,503.05	13.74	34,404.07

Composite Average Remaining Life ... 13.74 Years

***City of Lancaster - Bureau of Water
Water Division***

330.35 Distribution - Neffsville Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1976	1,296.00	60.00	21.60	14.85	320.75
1977	247,976.00	60.00	4,132.91	15.54	64,234.79
1978	72,828.00	60.00	1,213.79	16.24	19,714.89
1979	2,122.00	60.00	35.37	16.96	599.77
1986	60,056.00	60.00	1,000.93	22.31	22,329.34
1998	2,265.65	60.00	37.76	32.79	1,238.29
2014	18,299.16	60.00	304.98	48.29	14,727.44
<i>Total</i>	404,842.81	60.00	6,747.35	18.25	123,165.27

Composite Average Remaining Life ... 18.25 Years

***City of Lancaster - Bureau of Water
Water Division***

330.36 Distribution - South Tank

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2022	10,789,245.24	60.00	179,819.88	56.25	10,115,742.08
<i>Total</i>	10,789,245.24	60.00	179,819.88	56.25	10,115,742.08

Composite Average Remaining Life ... 56.25 Years

***City of Lancaster - Bureau of Water
Water Division***

331.11 Mains - Cast 4 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	870.00	80.00	10.87	6.21	67.51
1901	489.00	80.00	6.11	6.50	39.73
1904	643.00	80.00	8.04	7.37	59.21
1905	708.00	80.00	8.85	7.66	67.79
1906	448.00	80.00	5.60	7.95	44.54
1907	644.00	80.00	8.05	8.24	66.31
1908	569.00	80.00	7.11	8.53	60.67
1909	668.00	80.00	8.35	8.82	73.69
1910	941.00	80.00	11.76	9.12	107.29
1918	608.00	80.00	7.60	11.52	87.55
1921	345.00	80.00	4.31	12.46	53.74
1922	877.00	80.00	10.96	12.78	140.15
1923	1,359.00	80.00	16.99	13.11	222.66
1924	78.00	80.00	0.97	13.44	13.10
1925	495.00	80.00	6.19	13.78	85.23
1926	720.00	80.00	9.00	14.12	127.05
1927	1,541.00	80.00	19.26	14.46	278.55
1928	823.00	80.00	10.29	14.81	152.38
1929	542.00	80.00	6.77	15.17	102.78
1935	58.00	80.00	0.72	17.44	12.65
1936	13.00	80.00	0.16	17.84	2.90
1937	166.00	80.00	2.07	18.25	37.87
1946	177.00	80.00	2.21	22.25	49.23
1947	89.00	80.00	1.11	22.73	25.29
1948	165.00	80.00	2.06	23.22	47.89
1953	1,458.00	80.00	18.22	25.78	469.76
1957	11,922.20	80.00	149.03	27.95	4,165.71

***City of Lancaster - Bureau of Water
Water Division***

331.11 Mains - Cast 4 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1961	23.00	80.00	0.29	30.25	8.70
1962	36.00	80.00	0.45	30.84	13.88
1963	36.00	80.00	0.45	31.44	14.15
1973	1,354.00	80.00	16.92	37.78	639.43
2009	21,479.43	80.00	268.49	65.28	17,527.83
<i>Total</i>	50,344.63	80.00	629.31	39.51	24,865.22

Composite Average Remaining Life ... 39.51 Years

***City of Lancaster - Bureau of Water
Water Division***

331.12 Mains - Cast 4 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1920	9,807.50	80.00	122.59	12.14	1,488.44
1922	5,521.00	80.00	69.01	12.78	882.26
1923	377.00	80.00	4.71	13.11	61.77
1924	1,445.00	80.00	18.06	13.44	242.74
1925	659.00	80.00	8.24	13.78	113.47
1926	276.00	80.00	3.45	14.12	48.70
1927	3,585.00	80.00	44.81	14.46	648.03
1928	1,114.00	80.00	13.92	14.81	206.27
1929	1,807.00	80.00	22.59	15.17	342.66
1930	2,262.00	80.00	28.27	15.53	439.21
1931	499.00	80.00	6.24	15.90	99.19
1932	24.00	80.00	0.30	16.28	4.88
1933	511.00	80.00	6.39	16.66	106.41
1935	1,321.00	80.00	16.51	17.44	288.00
1938	124.00	80.00	1.55	18.67	28.93
1939	1,265.00	80.00	15.81	19.09	301.86
1941	6,394.00	80.00	79.92	19.96	1,594.98
1945	125.00	80.00	1.56	21.78	34.03
1946	136.00	80.00	1.70	22.25	37.82
1948	815.00	80.00	10.19	23.22	236.56
1949	157.00	80.00	1.96	23.72	46.54
1950	438.00	80.00	5.47	24.22	132.60
1951	1,387.00	80.00	17.34	24.73	428.79
1952	1,364.00	80.00	17.05	25.25	430.52
1954	1,461.00	80.00	18.26	26.31	480.45
1955	3,840.00	80.00	48.00	26.85	1,288.82
1956	26,801.00	80.00	335.01	27.40	9,178.69

***City of Lancaster - Bureau of Water
Water Division***

331.12 Mains - Cast 4 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1958	194.00	80.00	2.42	28.51	69.15
1959	276.00	80.00	3.45	29.09	100.35
1960	1,407.00	80.00	17.59	29.66	521.68
1962	3,083.00	80.00	38.54	30.84	1,188.31
1963	830.00	80.00	10.37	31.44	326.14
1964	999.00	80.00	12.49	32.04	400.09
1965	757.00	80.00	9.46	32.65	308.95
1966	1,950.00	80.00	24.37	33.27	810.90
1967	50.00	80.00	0.62	33.89	21.18
1974	5,225.00	80.00	65.31	38.45	2,511.21
1994	8,907.00	80.00	111.34	53.04	5,905.58
2001	21,006.03	80.00	262.57	58.63	15,395.12
2004	250.00	80.00	3.12	61.09	190.92
2009	34,614.06	80.00	432.67	65.28	28,246.07
2014	82,673.25	80.00	1,033.41	69.57	71,894.64
2017	46,595.91	80.00	582.45	72.19	42,046.01
2018	125,985.00	80.00	1,574.81	73.07	115,067.70
2024	123,563.50	80.00	1,544.54	78.42	121,120.14
<i>Total</i>	531,881.25	80.00	6,648.50	63.97	425,316.76

Composite Average Remaining Life ... 63.97 Years

***City of Lancaster - Bureau of Water
Water Division***

331.21 Mains - Cast 6 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	142,363.00	110.00	1,294.21	15.82	20,480.32
1901	5,445.00	110.00	49.50	16.17	800.48
1902	4,831.00	110.00	43.92	16.53	725.86
1903	6,172.00	110.00	56.11	16.89	947.54
1904	8,652.00	110.00	78.65	17.26	1,357.21
1905	4,654.00	110.00	42.31	17.63	745.95
1906	3,635.00	110.00	33.05	18.01	595.30
1907	9,232.00	110.00	83.93	18.41	1,544.80
1908	3,434.00	110.00	31.22	18.81	587.10
1909	3,976.00	110.00	36.15	19.21	694.52
1910	5,799.00	110.00	52.72	19.63	1,034.92
1911	20,249.00	110.00	184.08	20.06	3,691.96
1912	5,795.00	110.00	52.68	20.49	1,079.42
1913	1,581.00	110.00	14.37	20.93	300.84
1914	1,762.00	110.00	16.02	21.38	342.45
1915	2,213.00	110.00	20.12	21.84	439.35
1916	2,741.00	110.00	24.92	22.31	555.84
1917	1,990.00	110.00	18.09	22.78	412.17
1919	1,966.00	110.00	17.87	23.76	424.71
1922	3,521.00	110.00	32.01	25.30	809.72
1923	7,893.00	110.00	71.75	25.82	1,853.05
1924	22,098.00	110.00	200.89	26.36	5,294.63
1925	6,175.00	110.00	56.14	26.90	1,510.18
1926	3,560.00	110.00	32.36	27.46	888.59
1927	18,104.00	110.00	164.58	28.02	4,611.42
1928	14,043.00	110.00	127.66	28.59	3,649.88
1929	6,022.00	110.00	54.75	29.17	1,596.84

***City of Lancaster - Bureau of Water
Water Division***

331.21 Mains - Cast 6 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1930	435.00	110.00	3.95	29.76	117.67
1931	803.00	110.00	7.30	30.35	221.55
1932	331.00	110.00	3.01	30.95	93.14
1933	38,890.00	110.00	353.55	31.56	11,158.43
1934	242.00	110.00	2.20	32.18	70.79
1936	1,537.00	110.00	13.97	33.43	467.11
1937	285.00	110.00	2.59	34.07	88.27
1938	1,212.00	110.00	11.02	34.72	382.53
1939	234.00	110.00	2.13	35.37	75.25
1940	1,450.00	110.00	13.18	36.03	474.98
1941	2,617.00	110.00	23.79	36.70	873.14
1943	1,610.00	110.00	14.64	38.05	556.98
1944	1,163.00	110.00	10.57	38.74	409.60
1945	367.00	110.00	3.34	39.43	131.57
1946	7,430.00	110.00	67.55	40.13	2,710.47
1947	8,357.00	110.00	75.97	40.83	3,102.30
1948	18,612.00	110.00	169.20	41.55	7,029.67
1949	13,455.00	110.00	122.32	42.26	5,169.70
1950	19,728.00	110.00	179.35	42.99	7,709.70
1951	11,440.00	110.00	104.00	43.72	4,546.58
1952	8,078.00	110.00	73.44	44.45	3,264.38
1953	15,962.00	110.00	145.11	45.19	6,557.75
1955	10,577.00	110.00	96.15	46.69	4,489.27
1956	20,029.00	110.00	182.08	47.44	8,638.70
1957	21,331.00	110.00	193.92	48.20	9,346.96
1958	15,224.00	110.00	138.40	48.97	6,777.14
1959	30,629.00	110.00	278.45	49.74	13,849.89

***City of Lancaster - Bureau of Water
Water Division***

331.21 Mains - Cast 6 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1960	3,398.00	110.00	30.89	50.52	1,560.52
1961	19,125.00	110.00	173.86	51.30	8,919.09
1962	21,473.00	110.00	195.21	52.09	10,167.71
1963	25,304.00	110.00	230.04	52.88	12,163.85
1964	148,108.94	110.00	1,346.45	53.67	72,269.67
1965	10,896.00	110.00	99.05	54.48	5,396.06
1967	946.00	110.00	8.60	56.09	482.39
1969	21,707.00	110.00	197.34	57.72	11,390.90
1973	220,246.00	110.00	2,002.24	61.05	122,234.75
1974	173,856.00	110.00	1,580.51	61.89	97,819.92
1975	29,336.00	110.00	266.69	62.74	16,731.64
1976	105,250.00	110.00	956.82	63.59	60,842.82
1977	18,631.00	110.00	169.37	64.44	10,914.99
1978	5,535.00	110.00	50.32	65.30	3,285.91
1979	12,441.00	110.00	113.10	66.16	7,482.96
1980	103,816.00	110.00	943.78	67.03	63,261.91
1986	199,065.00	110.00	1,809.68	72.32	130,873.70
1987	773,351.00	110.00	7,030.47	73.21	514,721.81
1988	350,000.00	110.00	3,181.82	74.11	235,808.00
1990	150,558.00	110.00	1,368.71	75.91	103,905.44
1991	575.00	110.00	5.23	76.82	401.58
1992	251,927.00	110.00	2,290.25	77.74	178,035.01
1993	29,404.00	110.00	267.31	78.65	21,024.33
1995	115,972.90	110.00	1,054.30	80.49	84,863.00
1996	77,764.40	110.00	706.95	81.42	57,557.84
1997	138,770.86	110.00	1,261.55	82.35	103,882.74
1999	45,000.00	110.00	409.09	84.21	34,449.36

***City of Lancaster - Bureau of Water
Water Division***

331.21 Mains - Cast 6 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2000	13,328.50	110.00	121.17	85.15	10,316.98
2001	38,848.69	110.00	353.17	86.08	30,401.95
2002	31,000.60	110.00	281.82	87.03	24,525.79
2003	729,328.77	110.00	6,630.27	87.97	583,264.66
2004	12,007.50	110.00	109.16	88.92	9,706.13
2005	786,917.50	110.00	7,153.80	89.87	642,889.86
2009	321,889.74	110.00	2,926.27	93.69	274,156.97
2010	198,909.80	110.00	1,808.27	94.65	171,150.69
2012	751,480.84	110.00	6,831.65	96.57	659,763.36
2013	520,377.90	110.00	4,730.71	97.54	461,439.51
2014	1,021,359.55	110.00	9,285.09	98.51	914,671.84
2015	650,355.76	110.00	5,912.33	99.48	588,157.81
2016	128,898.37	110.00	1,171.80	100.45	117,709.71
2017	1,447,004.13	110.00	13,154.59	101.43	1,334,205.32
2018	996,404.77	110.00	9,058.23	102.40	927,562.47
2019	2,000,957.06	110.00	18,190.53	103.38	1,880,469.64
2022	11,983,043.96	110.00	108,936.85	106.31	11,581,445.59
2024	2,947,461.60	110.00	26,795.13	108.28	2,901,296.35
<i>Total</i>	28,201,966.14	110.00	256,381.73	98.44	25,238,871.12

Composite Average Remaining Life ... 98.44 Years

***City of Lancaster - Bureau of Water
Water Division***

331.22 Mains - Cast 6 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1920	3,993.77	110.00	36.31	24.27	881.01
1922	8,004.27	110.00	72.77	25.30	1,840.74
1923	3,991.79	110.00	36.29	25.82	937.16
1924	7,563.39	110.00	68.76	26.36	1,812.17
1925	7,655.69	110.00	69.60	26.90	1,872.30
1926	4,750.43	110.00	43.19	27.46	1,185.72
1927	19,783.77	110.00	179.85	28.02	5,039.29
1928	23,395.18	110.00	212.68	28.59	6,080.57
1929	14,462.26	110.00	131.48	29.17	3,834.93
1930	33,929.60	110.00	308.45	29.76	9,178.01
1931	8,994.72	110.00	81.77	30.35	2,481.70
1932	34.21	110.00	0.31	30.95	9.63
1933	45,438.16	110.00	413.07	31.56	13,037.25
1934	875.28	110.00	7.96	32.18	256.05
1935	5,459.51	110.00	49.63	32.80	1,627.79
1936	7,555.25	110.00	68.68	33.43	2,296.13
1937	2,311.48	110.00	21.01	34.07	715.94
1939	37,141.99	110.00	337.65	35.37	11,943.52
1940	14,129.28	110.00	128.45	36.03	4,628.35
1941	80,315.94	110.00	730.15	36.70	26,796.60
1944	1,225.11	110.00	11.14	38.74	431.48
1945	1,826.45	110.00	16.60	39.43	654.77
1946	1,037.63	110.00	9.43	40.13	378.53
1947	1,875.65	110.00	17.05	40.83	696.28
1948	27,073.16	110.00	246.12	41.55	10,225.41
1949	17,076.53	110.00	155.24	42.26	6,561.18
1950	31,884.69	110.00	289.86	42.99	12,460.53

***City of Lancaster - Bureau of Water
Water Division***

331.22 Mains - Cast 6 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1951	24,062.61	110.00	218.75	43.72	9,563.16
1952	120,287.49	110.00	1,093.52	44.45	48,609.03
1953	87,368.38	110.00	794.26	45.19	35,894.02
1954	112,309.41	110.00	1,021.00	45.94	46,901.78
1955	232,980.17	110.00	2,118.00	46.69	98,885.47
1956	896,517.22	110.00	8,150.16	47.44	386,676.69
1957	230,307.94	110.00	2,093.71	48.20	100,917.83
1958	241,427.13	110.00	2,194.79	48.97	107,474.08
1959	195,140.75	110.00	1,774.01	49.74	88,239.16
1960	195,600.68	110.00	1,778.19	50.52	89,829.14
1961	35,622.45	110.00	323.84	51.30	16,612.79
1962	132,849.05	110.00	1,207.72	52.09	62,905.53
1963	326,186.55	110.00	2,965.33	52.88	156,800.74
1964	72,789.09	110.00	661.72	53.67	35,517.40
1965	130,145.69	110.00	1,183.14	54.48	64,452.42
1966	141,864.75	110.00	1,289.68	55.28	71,295.35
1967	82,324.14	110.00	748.40	56.09	41,979.25
1968	65,267.66	110.00	593.34	56.90	33,762.89
1969	847,600.15	110.00	7,705.46	57.72	444,784.28
1970	50,042.30	110.00	454.93	58.55	26,635.32
1971	140,476.29	110.00	1,277.06	59.38	75,828.41
1972	72,629.28	110.00	660.27	60.21	39,755.37
1973	102,282.62	110.00	929.84	61.05	56,766.03
1974	14,881.58	110.00	135.29	61.89	8,373.11
1975	417,381.14	110.00	3,794.38	62.74	238,051.22
1976	30,656.89	110.00	278.70	63.59	17,722.10
1977	401,537.68	110.00	3,650.35	64.44	235,241.25

***City of Lancaster - Bureau of Water
Water Division***

331.22 Mains - Cast 6 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1978	50,051.80	110.00	455.02	65.30	29,713.77
1979	5,607.41	110.00	50.98	66.16	3,372.72
1980	13,292.40	110.00	120.84	67.03	8,099.93
1981	13,439.81	110.00	122.18	67.90	8,296.28
1982	22,220.51	110.00	202.00	68.78	13,893.43
1983	527,845.91	110.00	4,798.60	69.66	334,257.67
1984	25,223.07	110.00	229.30	70.54	16,175.03
1985	67,028.73	110.00	609.35	71.43	43,524.69
1986	177,873.88	110.00	1,617.04	72.32	116,941.77
1987	68,368.47	110.00	621.53	73.21	45,504.23
1988	242,604.94	110.00	2,205.50	74.11	163,451.96
1989	161,776.03	110.00	1,470.69	75.01	110,320.41
1990	2,402,133.50	110.00	21,837.60	75.91	1,657,797.84
1991	134,615.76	110.00	1,223.78	76.82	94,015.53
1992	79,585.18	110.00	723.50	77.74	56,242.28
1993	1,784,057.38	110.00	16,218.72	78.65	1,275,629.72
1994	165,403.22	110.00	1,503.67	79.57	119,647.42
1995	1,050,621.40	110.00	9,551.11	80.49	768,790.64
1996	41,770.43	110.00	379.73	81.42	30,916.66
1997	854,505.61	110.00	7,768.24	82.35	639,675.97
1998	355,102.95	110.00	3,228.21	83.28	268,831.98
1999	240,750.27	110.00	2,188.64	84.21	184,304.28
2000	500,404.88	110.00	4,549.14	85.15	387,340.53
2001	1,406,508.59	110.00	12,786.45	86.08	1,100,696.34
2002	341,009.89	110.00	3,100.09	87.03	269,786.28
2003	410,119.20	110.00	3,728.36	87.97	327,983.82
2004	584,341.68	110.00	5,312.20	88.92	472,346.33

***City of Lancaster - Bureau of Water
Water Division***

331.22 Mains - Cast 6 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2005	1,233,497.52	110.00	11,213.62	89.87	1,007,733.40
2006	857,724.94	110.00	7,797.51	90.82	708,160.65
2007	289,363.62	110.00	2,630.58	91.77	241,416.56
2008	548,068.69	110.00	4,982.45	92.73	462,020.02
2009	598,149.32	110.00	5,437.73	93.69	509,450.25
2010	882,872.84	110.00	8,026.12	94.65	759,662.42
2011	3,122,803.72	110.00	28,389.15	95.61	2,714,324.86
2012	2,466,852.51	110.00	22,425.95	96.57	2,165,775.64
2013	1,877,246.19	110.00	17,065.89	97.54	1,664,627.87
2014	1,842,309.96	110.00	16,748.29	98.51	1,649,868.60
2015	2,663,844.40	110.00	24,216.79	99.48	2,409,082.82
2016	1,839,428.66	110.00	16,722.09	100.45	1,679,762.18
2017	4,114,259.25	110.00	37,402.39	101.43	3,793,538.99
2018	1,880,836.30	110.00	17,098.53	102.40	1,750,888.00
2019	3,157,993.81	110.00	28,709.06	103.38	2,967,835.54
2020	1,177,698.49	110.00	10,706.36	104.35	1,117,251.43
2021	364,584.72	110.00	3,314.41	105.33	349,116.86
2022	4,007,668.77	110.00	36,433.38	106.31	3,873,356.22
2023	261,773.66	110.00	2,379.76	107.29	255,334.49
2025	222,808.76	110.00	2,025.54	109.26	221,312.09
2026	1,748,799.13	110.00	15,898.19	109.88	1,746,842.60
<i>Total</i>	52,697,172.44	110.00	479,065.61	90.51	43,362,255.84

Composite Average Remaining Life ... 90.51 Years

***City of Lancaster - Bureau of Water
Water Division***

331.23 Mains - Cast 6 Inch Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	43,085.00	110.00	391.68	15.82	6,198.20
1905	65,940.00	110.00	599.46	17.63	10,568.95
1908	3,150.00	110.00	28.64	18.81	538.55
1910	12,341.00	110.00	112.19	19.63	2,202.44
1911	6,986.00	110.00	63.51	20.06	1,273.74
1913	195.00	110.00	1.77	20.93	37.11
1915	193.00	110.00	1.75	21.84	38.32
1916	21,427.00	110.00	194.79	22.31	4,345.09
1921	1,348.00	110.00	12.25	24.78	303.63
1922	5,615.00	110.00	51.05	25.30	1,291.28
1924	1,728.00	110.00	15.71	26.36	414.02
1928	10,291.00	110.00	93.55	28.59	2,674.70
1933	208,167.00	110.00	1,892.43	31.56	59,727.89
1940	3,788.00	110.00	34.44	36.03	1,240.84
1949	19,805.00	110.00	180.05	42.26	7,609.51
1951	9,969.00	110.00	90.63	43.72	3,961.96
1953	80,264.00	110.00	729.67	45.19	32,975.29
1954	47,765.00	110.00	434.23	45.94	19,947.25
1955	7,510.00	110.00	68.27	46.69	3,187.52
1956	127,662.00	110.00	1,160.56	47.44	55,061.88
1957	36,851.00	110.00	335.01	48.20	16,147.61
1974	21,478.00	110.00	195.25	61.89	12,084.58
1975	221.00	110.00	2.01	62.74	126.05
1977	7,418.00	110.00	67.44	64.44	4,345.84
1980	19,359.00	110.00	175.99	67.03	11,796.71
1981	1,189,236.00	110.00	10,811.25	67.90	734,105.14
1982	183,288.00	110.00	1,666.26	68.78	114,601.28

***City of Lancaster - Bureau of Water
Water Division***

331.23 Mains - Cast 6 Inch Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1983	138,930.00	110.00	1,263.00	69.66	87,977.23
1987	106,439.00	110.00	967.63	73.21	70,842.96
1989	5,088.00	110.00	46.25	75.01	3,469.68
1991	279,780.00	110.00	2,543.46	76.82	195,398.12
1993	726,108.00	110.00	6,600.99	78.65	519,178.90
1995	37,294.69	110.00	339.04	80.49	27,290.33
1996	140,326.04	110.00	1,275.69	81.42	103,863.25
1997	81,861.61	110.00	744.20	82.35	61,280.94
1999	250,493.98	110.00	2,277.22	84.21	191,763.49
2000	142,198.42	110.00	1,292.71	85.15	110,069.29
<i>Total</i>	4,043,599.74	110.00	36,760.03	67.41	2,477,939.55

Composite Average Remaining Life ... 67.41 Years

***City of Lancaster - Bureau of Water
Water Division***

331.31 Mains - Manholes Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	6,910.00	80.00	86.37	5.91	510.85
1901	1,170.00	80.00	14.62	6.14	89.83
1902	623.00	80.00	7.79	6.37	49.60
1903	998.00	80.00	12.47	6.57	81.99
1904	1,268.00	80.00	15.85	6.79	107.66
1905	1,556.00	80.00	19.45	7.01	136.43
1906	1,638.00	80.00	20.47	7.24	148.20
1907	1,302.00	80.00	16.27	7.44	121.16
1908	1,468.00	80.00	18.35	7.67	140.69
1909	670.00	80.00	8.37	7.89	66.10
1910	132.00	80.00	1.65	8.12	13.40
1911	854.00	80.00	10.67	8.34	88.98
1913	114.00	80.00	1.42	8.80	12.53
1914	268.00	80.00	3.35	9.03	30.26
1915	350.00	80.00	4.37	9.26	40.50
1916	365.00	80.00	4.56	9.49	43.31
1917	299.00	80.00	3.74	9.73	36.38
1918	255.00	80.00	3.19	9.98	31.81
1919	331.00	80.00	4.14	10.21	42.26
1920	101.00	80.00	1.26	10.46	13.21
1921	172.00	80.00	2.15	10.71	23.04
1922	1,032.00	80.00	12.90	10.97	141.53
1923	1,352.00	80.00	16.90	11.22	189.67
1924	2,237.00	80.00	27.96	11.49	321.20
1925	1,037.00	80.00	12.96	11.76	152.39
1926	821.00	80.00	10.26	12.03	123.47
1927	1,884.00	80.00	23.55	12.31	289.80

***City of Lancaster - Bureau of Water
Water Division***

331.31 Mains - Manholes Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1928	3,783.00	80.00	47.29	12.59	595.44
1929	2,604.00	80.00	32.55	12.89	419.41
1930	935.00	80.00	11.69	13.19	154.11
1931	1,533.00	80.00	19.16	13.49	258.51
1932	617.00	80.00	7.71	13.81	106.48
1933	2,725.00	80.00	34.06	14.13	481.30
1934	272.00	80.00	3.40	14.46	49.17
1935	353.00	80.00	4.41	14.80	65.32
1936	81.00	80.00	1.01	15.15	15.34
1937	43.00	80.00	0.54	15.52	8.34
1938	119.00	80.00	1.49	15.89	23.63
1939	144.00	80.00	1.80	16.27	29.28
1940	14.00	80.00	0.17	16.66	2.92
1941	71.00	80.00	0.89	17.06	15.14
1944	109.00	80.00	1.36	18.33	24.98
1945	148.00	80.00	1.85	18.78	34.73
1946	772.00	80.00	9.65	19.23	185.58
1947	599.00	80.00	7.49	19.70	147.50
1948	1,128.00	80.00	14.10	20.18	284.50
1949	744.00	80.00	9.30	20.67	192.19
1950	3,206.00	80.00	40.07	21.16	848.16
1951	943.00	80.00	11.79	21.68	255.52
1952	1,345.00	80.00	16.81	22.20	373.20
1953	1,631.00	80.00	20.39	22.73	463.37
1954	2,085.00	80.00	26.06	23.27	606.44
1955	278.00	80.00	3.47	23.82	82.79
2002	14,343.12	80.00	179.29	58.34	10,459.41

***City of Lancaster - Bureau of Water
Water Division***

331.31 Mains - Manholes Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2004	125,686.92	80.00	1,571.08	60.09	94,401.71
2009	3,807.55	80.00	47.59	64.53	3,071.08
2024	44,113.66	80.00	551.42	78.35	43,202.78
<i>Total</i>	243,440.25	80.00	3,043.00	52.55	159,904.59

Composite Average Remaining Life ... 52.55 Years

***City of Lancaster - Bureau of Water
Water Division***

331.32 Mains - Manholes Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1920	178.00	80.00	2.22	10.46	23.28
1922	430.00	80.00	5.37	10.97	58.97
1923	55.00	80.00	0.69	11.22	7.72
1924	119.00	80.00	1.49	11.49	17.09
1925	1,103.00	80.00	13.79	11.76	162.09
1926	511.00	80.00	6.39	12.03	76.85
1927	1,508.00	80.00	18.85	12.31	231.97
1928	1,923.00	80.00	24.04	12.59	302.68
1929	1,636.00	80.00	20.45	12.89	263.50
1930	500.00	80.00	6.25	13.19	82.41
1931	641.00	80.00	8.01	13.49	108.09
1932	26.00	80.00	0.32	13.81	4.49
1933	79.00	80.00	0.99	14.13	13.95
1934	66.00	80.00	0.82	14.46	11.93
1936	796.00	80.00	9.95	15.15	150.79
1937	107.00	80.00	1.34	15.52	20.75
1938	560.00	80.00	7.00	15.89	111.20
1940	471.00	80.00	5.89	16.66	98.08
1941	62.00	80.00	0.77	17.06	13.22
1944	133.00	80.00	1.66	18.33	30.48
1945	218.00	80.00	2.72	18.78	51.16
1946	184.00	80.00	2.30	19.23	44.23
1947	178.00	80.00	2.22	19.70	43.83
1948	2,092.00	80.00	26.15	20.18	527.65
1949	2,896.00	80.00	36.20	20.67	748.10
1950	3,324.00	80.00	41.55	21.16	879.38
1951	905.00	80.00	11.31	21.68	245.22

***City of Lancaster - Bureau of Water
Water Division***

331.32 Mains - Manholes Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1952	2,925.00	80.00	36.56	22.20	811.60
1953	1,129.00	80.00	14.11	22.73	320.75
1954	4,399.00	80.00	54.99	23.27	1,279.49
1955	2,642.00	80.00	33.02	23.82	786.76
1956	3,110.00	80.00	38.87	24.38	947.96
1969	986.00	80.00	12.32	32.52	400.77
1997	1,500.00	80.00	18.75	54.05	1,013.39
2000	26,840.00	80.00	335.50	56.61	18,992.35
2001	117,362.28	80.00	1,467.03	57.47	84,312.44
2002	21,514.68	80.00	268.93	58.34	15,689.11
2003	61,890.54	80.00	773.63	59.21	45,807.65
2009	44,871.12	80.00	560.89	64.53	36,192.02
2010	127,176.14	80.00	1,589.70	65.43	104,006.15
2011	183,846.52	80.00	2,298.08	66.33	152,429.06
2012	43,280.66	80.00	541.01	67.24	36,374.70
2013	98,116.51	80.00	1,226.45	68.14	83,576.16
2014	50,051.57	80.00	625.64	69.06	43,205.11
2015	39,644.85	80.00	495.56	69.97	34,676.37
2016	27,768.60	80.00	347.11	70.89	24,607.56
2017	81,665.58	80.00	1,020.82	71.82	73,310.38
2018	57,181.40	80.00	714.77	72.74	51,992.18
2019	56,342.70	80.00	704.28	73.67	51,883.73
2022	64,546.56	80.00	806.83	76.47	61,697.02
<i>Total</i>	1,139,491.71	80.00	14,243.63	65.20	928,641.85

Composite Average Remaining Life ... 65.20 Years

***City of Lancaster - Bureau of Water
Water Division***

331.33 Mains - Manholes Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	267.00	80.00	3.34	5.91	19.74
1902	167.00	80.00	2.09	6.37	13.29
1905	2,769.00	80.00	34.61	7.01	242.79
1908	100.00	80.00	1.25	7.67	9.58
1910	285.00	80.00	3.56	8.12	28.93
1911	213.00	80.00	2.66	8.34	22.19
1916	1,162.00	80.00	14.52	9.49	137.89
1921	860.00	80.00	10.75	10.71	115.18
1922	141.00	80.00	1.76	10.97	19.34
1924	179.00	80.00	2.24	11.49	25.70
1927	198.00	80.00	2.47	12.31	30.46
1928	600.00	80.00	7.50	12.59	94.44
1933	3,811.00	80.00	47.64	14.13	673.12
1940	171.00	80.00	2.14	16.66	35.61
1950	312.00	80.00	3.90	21.16	82.54
1951	471.00	80.00	5.89	21.68	127.62
1953	2,923.00	80.00	36.54	22.73	830.44
1954	3,122.00	80.00	39.02	23.27	908.07
1955	278.00	80.00	3.47	23.82	82.79
1956	52,275.00	80.00	653.44	24.38	15,933.98
1957	50,466.00	80.00	630.82	24.96	15,742.73
1971	5,309.00	80.00	66.36	33.89	2,249.10
2000	3,000.00	80.00	37.50	56.61	2,122.84
<i>Total</i>	129,079.00	80.00	1,613.49	24.51	39,548.36

Composite Average Remaining Life ... 24.51 Years

***City of Lancaster - Bureau of Water
Water Division***

331.41 Mains - Valves Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	5,191.00	70.00	74.16	1.14	84.76
1901	555.00	70.00	7.93	1.35	10.74
1902	680.00	70.00	9.71	1.64	15.94
1903	192.00	70.00	2.74	1.88	5.16
1904	253.00	70.00	3.61	2.16	7.81
1905	346.00	70.00	4.94	2.45	12.09
1906	183.00	70.00	2.61	2.69	7.03
1907	93.00	70.00	1.33	2.98	3.95
1908	1,126.00	70.00	16.09	3.23	52.02
1909	358.00	70.00	5.11	3.52	18.00
1910	427.00	70.00	6.10	3.78	23.06
1911	1,676.00	70.00	23.94	4.05	96.98
1912	270.00	70.00	3.86	4.32	16.65
1913	123.00	70.00	1.76	4.54	7.98
1914	136.00	70.00	1.94	4.79	9.31
1915	188.00	70.00	2.69	5.01	13.45
1916	206.00	70.00	2.94	5.24	15.43
1917	117.00	70.00	1.67	5.46	9.12
1918	69.00	70.00	0.99	5.68	5.60
1919	130.00	70.00	1.86	5.91	10.98
1920	160.00	70.00	2.29	6.11	13.97
1921	42.00	70.00	0.60	6.34	3.80
1922	526.00	70.00	7.51	6.55	49.20
1923	538.00	70.00	7.69	6.78	52.07
1924	1,930.00	70.00	27.57	6.99	192.74
1925	964.00	70.00	13.77	7.22	99.42
1926	643.00	70.00	9.19	7.45	68.47

***City of Lancaster - Bureau of Water
Water Division***

331.41 Mains - Valves Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1927	1,574.00	70.00	22.49	7.67	172.51
1928	2,108.00	70.00	30.11	7.91	238.19
1929	1,505.00	70.00	21.50	8.14	174.91
1930	349.00	70.00	4.99	8.38	41.76
1931	465.00	70.00	6.64	8.61	57.20
1932	734.00	70.00	10.49	8.86	92.86
1933	3,851.36	70.00	55.02	9.11	501.08
1934	44.00	70.00	0.63	9.35	5.88
1936	121.00	70.00	1.73	9.86	17.04
1938	117.00	70.00	1.67	10.39	17.37
1940	60.00	70.00	0.86	10.96	9.39
1941	386.00	70.00	5.51	11.25	62.01
1944	69.00	70.00	0.99	12.17	12.00
1945	153.00	70.00	2.19	12.50	27.31
1946	684.00	70.00	9.77	12.83	125.41
1947	357.00	70.00	5.10	13.18	67.23
1948	1,144.00	70.00	16.34	13.54	221.30
1949	1,107.00	70.00	15.81	13.91	220.00
1950	1,118.00	70.00	15.97	14.29	228.29
1951	522.00	70.00	7.46	14.69	109.53
1952	1,534.00	70.00	21.91	15.09	330.77
1953	1,026.00	70.00	14.66	15.51	227.36
1954	879.00	70.00	12.56	15.94	200.20
1955	998.00	70.00	14.26	16.39	233.62
1956	1,034.00	70.00	14.77	16.84	248.76
1957	207.95	70.00	2.97	17.31	51.43
1958	285.00	70.00	4.07	17.79	72.43

***City of Lancaster - Bureau of Water
Water Division***

331.41 Mains - Valves Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1959	595.21	70.00	8.50	18.28	155.48
1960	70.00	70.00	1.00	18.79	18.79
1961	788.00	70.00	11.26	19.30	217.32
1962	96.00	70.00	1.37	19.84	27.21
1963	1,650.00	70.00	23.57	20.38	480.31
1964	6,755.00	70.00	96.50	20.93	2,019.93
1965	893.00	70.00	12.76	21.49	274.21
1967	86.00	70.00	1.23	22.66	27.84
1973	25,946.00	70.00	370.66	26.39	9,783.10
1976	4,697.00	70.00	67.10	28.39	1,904.90
1980	2,249.00	70.00	32.13	31.17	1,001.43
1981	1,063.00	70.00	15.19	31.88	484.17
1990	4,607.00	70.00	65.81	38.65	2,543.67
1995	30,655.00	70.00	437.93	42.64	18,674.75
1996	19,448.00	70.00	277.83	43.46	12,074.28
2000	2,460.50	70.00	35.15	46.79	1,644.64
2001	6,544.55	70.00	93.49	47.64	4,453.69
2002	12,688.76	70.00	181.27	48.49	8,789.21
2003	5,357.84	70.00	76.54	49.34	3,776.75
2004	20,210.66	70.00	288.72	50.21	14,495.87
2006	6,349.00	70.00	90.70	51.95	4,711.52
2008	3,920.00	70.00	56.00	53.70	3,007.47
2009	3,144.00	70.00	44.91	54.59	2,451.90
2010	35,101.80	70.00	501.45	55.48	27,820.82
2012	100,197.45	70.00	1,431.39	57.27	81,982.79
2013	69,383.72	70.00	991.20	58.18	57,666.79
2014	136,181.27	70.00	1,945.45	59.09	114,947.96

***City of Lancaster - Bureau of Water
Water Division***

331.41 Mains - Valves Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2015	86,714.10	70.00	1,238.77	60.00	74,322.98
2016	17,186.45	70.00	245.52	60.91	14,955.06
2017	192,933.89	70.00	2,756.20	61.83	170,413.39
2018	144,991.98	70.00	2,071.31	62.75	129,978.77
2019	266,794.28	70.00	3,811.35	63.68	242,692.69
2022	605,784.41	70.00	8,654.06	66.47	575,246.52
2023	35,575.00	70.00	508.21	67.41	34,257.86
2024	77,095.12	70.00	1,101.36	68.35	75,275.48
<i>Total</i>	1,967,767.30	70.00	28,110.95	60.38	1,697,251.13

Composite Average Remaining Life ... 60.38 Years

***City of Lancaster - Bureau of Water
Water Division***

331.42 Mains - Valves Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1920	89.61	70.00	1.28	6.11	7.83
1922	218.55	70.00	3.12	6.55	20.44
1923	34.14	70.00	0.49	6.78	3.30
1924	44.43	70.00	0.63	6.99	4.44
1925	380.12	70.00	5.43	7.22	39.20
1926	198.96	70.00	2.84	7.45	21.19
1927	547.84	70.00	7.83	7.67	60.04
1928	482.12	70.00	6.89	7.91	54.48
1929	798.86	70.00	11.41	8.14	92.84
1930	568.85	70.00	8.13	8.38	68.07
1931	246.01	70.00	3.51	8.61	30.26
1932	37.97	70.00	0.54	8.86	4.80
1933	837.77	70.00	11.97	9.11	109.00
1934	24.44	70.00	0.35	9.35	3.26
1935	85.96	70.00	1.23	9.61	11.80
1936	397.61	70.00	5.68	9.86	56.01
1937	46.98	70.00	0.67	10.13	6.80
1938	306.92	70.00	4.38	10.39	45.57
1939	840.25	70.00	12.00	10.67	128.10
1940	508.00	70.00	7.26	10.96	79.53
1941	4,505.66	70.00	64.37	11.25	723.83
1944	53.73	70.00	0.77	12.17	9.34
1945	76.77	70.00	1.10	12.50	13.71
1946	57.75	70.00	0.82	12.83	10.59
1947	80.95	70.00	1.16	13.18	15.25
1948	1,323.04	70.00	18.90	13.54	255.93
1949	3,154.41	70.00	45.06	13.91	626.89

***City of Lancaster - Bureau of Water
Water Division***

331.42 Mains - Valves Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1950	1,197.88	70.00	17.11	14.29	244.60
1951	1,052.32	70.00	15.03	14.69	220.80
1952	3,408.88	70.00	48.70	15.09	735.05
1953	5,612.39	70.00	80.18	15.51	1,243.70
1954	5,460.45	70.00	78.01	15.94	1,243.68
1955	9,837.92	70.00	140.54	16.39	2,302.95
1956	36,944.54	70.00	527.78	16.84	8,888.20
1957	4,810.30	70.00	68.72	17.31	1,189.56
1958	5,791.40	70.00	82.73	17.79	1,471.86
1959	4,107.91	70.00	58.68	18.28	1,073.03
1960	5,058.93	70.00	72.27	18.79	1,357.91
1961	67.97	70.00	0.97	19.30	18.74
1962	3,583.27	70.00	51.19	19.84	1,015.45
1963	9,615.91	70.00	137.37	20.38	2,799.15
1965	678.98	70.00	9.70	21.49	208.49
1966	79.35	70.00	1.13	22.07	25.02
1967	501.26	70.00	7.16	22.66	162.25
1968	6,771.35	70.00	96.73	23.25	2,249.31
1969	73,726.95	70.00	1,053.24	23.86	25,133.67
1970	517.42	70.00	7.39	24.48	180.94
1971	2,280.55	70.00	32.58	25.11	818.04
1972	1,051.55	70.00	15.02	25.75	386.75
1974	343.90	70.00	4.91	27.05	132.89
1975	1,673.46	70.00	23.91	27.71	662.51
1980	6,834.07	70.00	97.63	31.17	3,043.05
1985	4,518.95	70.00	64.56	34.82	2,247.85
1986	1,093.75	70.00	15.62	35.57	555.79

***City of Lancaster - Bureau of Water
Water Division***

331.42 Mains - Valves Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1987	4,611.25	70.00	65.87	36.33	2,393.32
1988	9,076.81	70.00	129.67	37.10	4,810.25
1989	7,088.45	70.00	101.26	37.87	3,834.62
1991	5,786.21	70.00	82.66	39.43	3,259.63
1992	4,847.54	70.00	69.25	40.23	2,785.83
1993	10,416.18	70.00	148.80	41.03	6,104.81
1994	11,856.57	70.00	169.38	41.83	7,085.59
1995	44,228.01	70.00	631.83	42.64	26,943.30
1997	13,513.26	70.00	193.05	44.28	8,549.00
1998	18,254.75	70.00	260.78	45.11	11,764.63
1999	17,912.52	70.00	255.89	45.95	11,758.10
2000	60,268.64	70.00	860.98	46.79	40,284.54
2001	111,861.90	70.00	1,598.03	47.64	76,124.12
2002	22,307.20	70.00	318.67	48.49	15,451.68
2003	70,510.73	70.00	1,007.30	49.34	49,703.15
2004	4,301.27	70.00	61.45	50.21	3,085.04
2005	85,141.85	70.00	1,216.31	51.07	62,120.69
2006	9,041.09	70.00	129.16	51.95	6,709.29
2007	14,252.02	70.00	203.60	52.82	10,754.67
2008	6,840.67	70.00	97.72	53.70	5,248.25
2009	1,084,458.64	70.00	15,492.26	54.59	845,732.05
2010	1,063,170.15	70.00	15,188.14	55.48	842,642.33
2011	473,079.64	70.00	6,758.28	56.38	381,007.80
2012	375,218.59	70.00	5,360.26	57.27	307,008.47
2013	42,297.92	70.00	604.26	58.18	35,155.01
2014	342,708.70	70.00	4,895.84	59.09	289,273.75
2015	226,547.68	70.00	3,236.39	60.00	194,174.86

***City of Lancaster - Bureau of Water
Water Division***

331.42 Mains - Valves Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2016	45,469.08	70.00	649.56	60.91	39,565.64
2017	236,146.16	70.00	3,373.52	61.83	208,581.64
2018	104,935.83	70.00	1,499.08	62.75	94,070.24
2019	205,639.04	70.00	2,937.70	63.68	187,062.07
2022	47,630.92	70.00	680.44	66.47	45,229.82
2024	44,762.40	70.00	639.46	68.35	43,705.89
2026	330,486.42	70.00	4,721.23	69.88	329,928.80
<i>Total</i>	5,367,237.40	70.00	76,674.80	55.61	4,264,022.64

Composite Average Remaining Life ... 55.61 Years

***City of Lancaster - Bureau of Water
Water Division***

331.43 Mains - Valves Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	546.00	70.00	7.80	1.14	8.91
1902	181.00	70.00	2.59	1.64	4.24
1905	3,096.00	70.00	44.23	2.45	108.19
1908	224.00	70.00	3.20	3.23	10.35
1910	563.00	70.00	8.04	3.78	30.40
1911	491.00	70.00	7.01	4.05	28.41
1916	1,541.00	70.00	22.01	5.24	115.44
1921	136.00	70.00	1.94	6.34	12.32
1922	205.00	70.00	2.93	6.55	19.18
1924	449.00	70.00	6.41	6.99	44.84
1927	1,198.00	70.00	17.11	7.67	131.30
1928	1,322.00	70.00	18.89	7.91	149.38
1933	7,740.12	70.00	110.57	9.11	1,007.02
1940	456.00	70.00	6.51	10.96	71.39
1950	1,711.00	70.00	24.44	14.29	349.38
1951	488.00	70.00	6.97	14.69	102.39
1953	2,659.00	70.00	37.99	15.51	589.23
1954	2,862.00	70.00	40.89	15.94	651.85
1955	327.00	70.00	4.67	16.39	76.55
1956	68,586.46	70.00	979.81	16.84	16,500.69
1957	69,794.00	70.00	997.06	17.31	17,259.73
1971	12,152.00	70.00	173.60	25.11	4,358.96
1997	45,800.00	70.00	654.29	44.28	28,974.83
2000	15,000.00	70.00	214.29	46.79	10,026.25
2024	16,160.00	70.00	230.86	68.35	15,778.58

***City of Lancaster - Bureau of Water
Water Division***

331.43 Mains - Valves Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
<i>Total</i>	253,687.58	70.00	3,624.11	26.60	96,409.80

Composite Average Remaining Life ... 26.60 Years

***City of Lancaster - Bureau of Water
Water Division***

331.51 Mains - Steel Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1931	1,141.00	70.00	16.30	5.84	95.22
1948	354.00	70.00	5.06	10.88	55.03
1956	4,942.00	70.00	70.60	14.24	1,005.27
2024	852,281.82	70.00	12,175.47	68.28	831,317.23
<i>Total</i>	858,718.82	70.00	12,267.43	67.86	832,472.75

Composite Average Remaining Life ... 67.86 Years

***City of Lancaster - Bureau of Water
Water Division***

331.52 Mains - Steel Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	889,036.00	70.00	12,700.53	14.24	180,841.34
1957	921,269.00	70.00	13,161.00	14.72	193,739.03
1971	21,795.00	70.00	311.36	22.81	7,102.35
<i>Total</i>	1,832,100.00	70.00	26,172.89	14.58	381,682.72

Composite Average Remaining Life ... 14.58 Years

***City of Lancaster - Bureau of Water
Water Division***

331.61 Mains - Plastic Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1980	102,283.00	65.00	1,573.58	24.69	38,853.71
<i>Total</i>	102,283.00	65.00	1,573.58	24.69	38,853.71

Composite Average Remaining Life ... 24.69 Years

***City of Lancaster - Bureau of Water
Water Division***

331.70 Mains - Relining

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 55

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2008	127,575.52	55.00	2,319.55	38.88	90,181.03
2009	516,416.51	55.00	9,389.37	39.74	373,155.54
2010	755,410.12	55.00	13,734.70	40.61	557,784.71
2011	698,334.12	55.00	12,696.96	41.49	526,770.23
2012	209,717.10	55.00	3,813.03	42.37	161,559.37
2013	200,406.31	55.00	3,643.74	43.26	157,622.62
2014	231,709.63	55.00	4,212.89	44.15	186,007.73
2015	32,977.81	55.00	599.60	45.05	27,011.73
2016	222,586.53	55.00	4,047.02	45.95	185,978.19
2020	321,226.57	55.00	5,840.47	49.62	289,797.50
2021	248,276.10	55.00	4,514.10	50.55	228,166.09
2022	364,730.44	55.00	6,631.45	51.48	341,362.92
2023	383,283.62	55.00	6,968.78	52.41	365,242.69
2026	79,965.74	55.00	1,453.92	54.88	79,794.02
<i>Total</i>	4,392,616.12	55.00	79,865.60	44.71	3,570,434.39

Composite Average Remaining Life ... 44.71 Years

***City of Lancaster - Bureau of Water
Water Division***

333.01 Services - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1967	1,035.24	70.00	14.79	20.25	299.51
1968	4,692.12	70.00	67.03	20.87	1,399.04
1969	5,139.26	70.00	73.42	21.51	1,579.15
1970	6,617.26	70.00	94.53	22.15	2,094.09
1971	9,219.90	70.00	131.71	22.81	3,004.49
1972	12,950.05	70.00	185.00	23.48	4,343.12
1973	19,120.96	70.00	273.16	24.16	6,598.20
1974	16,674.34	70.00	238.21	24.84	5,917.40
1975	41,703.31	70.00	595.76	25.54	15,213.72
1976	16,861.56	70.00	240.88	26.25	6,322.22
1977	62,710.07	70.00	895.86	26.96	24,152.98
1978	53,680.66	70.00	766.87	27.69	21,233.18
1979	65,974.50	70.00	942.49	28.42	26,786.59
1981	42,365.74	70.00	605.23	29.92	18,105.77
1982	11,955.84	70.00	170.80	30.67	5,238.95
1983	4,324.88	70.00	61.78	31.44	1,942.72
1984	5,164.54	70.00	73.78	32.22	2,377.00
1985	5,531.05	70.00	79.02	33.00	2,607.76
1986	11,223.81	70.00	160.34	33.79	5,418.45
1987	16,986.50	70.00	242.66	34.59	8,394.65
1988	13,705.35	70.00	195.79	35.40	6,930.83
1989	43,140.40	70.00	616.29	36.21	22,316.62
1990	60,329.97	70.00	861.86	37.03	31,918.17
1991	51,664.35	70.00	738.06	37.86	27,943.68
1992	36,419.65	70.00	520.28	38.70	20,133.58
1993	52,809.65	70.00	754.42	39.54	29,828.74
1995	33,615.46	70.00	480.22	41.24	19,805.74

***City of Lancaster - Bureau of Water
Water Division***

333.01 Services - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1996	6,835.57	70.00	97.65	42.10	4,111.44
1999	5,156.83	70.00	73.67	44.73	3,295.16
2002	20,661.05	70.00	295.16	47.41	13,992.47
2004	36,579.08	70.00	522.56	49.22	25,720.54
2009	9,445.34	70.00	134.93	53.84	7,265.18
2012	99,676.25	70.00	1,423.95	56.67	80,694.68
2013	69,069.68	70.00	986.71	57.62	56,855.12
2014	135,647.56	70.00	1,937.82	58.57	113,507.07
2015	86,422.20	70.00	1,234.60	59.53	73,499.13
2016	17,136.95	70.00	244.81	60.49	14,809.55
2017	192,460.63	70.00	2,749.44	61.46	168,971.05
2018	132,578.16	70.00	1,893.98	62.42	118,229.88
2019	266,329.03	70.00	3,804.70	63.39	241,193.43
2026	1,708,961.67	70.00	24,413.77	69.88	1,705,957.15
<i>Total</i>	<i>3,492,576.42</i>	<i>70.00</i>	<i>49,894.01</i>	<i>59.13</i>	<i>2,950,008.19</i>

Composite Average Remaining Life ... 59.13 Years

***City of Lancaster - Bureau of Water
Water Division***

333.02 Services - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1941	5,323.01	70.00	76.04	8.56	651.18
1947	173.66	70.00	2.48	10.52	26.10
1948	192.74	70.00	2.75	10.88	29.96
1949	424.04	70.00	6.06	11.26	68.19
1955	5,525.35	70.00	78.93	13.77	1,087.23
1956	13,349.88	70.00	190.71	14.24	2,715.54
1957	101,934.63	70.00	1,456.21	14.72	21,436.43
1958	29,386.55	70.00	419.81	15.21	6,386.51
1959	39,522.62	70.00	564.61	15.72	8,876.65
1960	11,874.13	70.00	169.63	16.24	2,755.03
1961	11,527.88	70.00	164.68	16.77	2,762.25
1962	12,293.83	70.00	175.63	17.32	3,042.48
1963	14,219.33	70.00	203.13	17.88	3,632.42
1964	851.00	70.00	12.16	18.46	224.40
1965	14,567.25	70.00	208.10	19.04	3,962.76
1966	32,631.24	70.00	466.16	19.64	9,156.61
1967	34,822.36	70.00	497.46	20.25	10,074.57
1968	20,612.01	70.00	294.46	20.87	6,145.83
1969	22,275.48	70.00	318.22	21.51	6,844.62
1970	14,761.99	70.00	210.89	22.15	4,671.57
1971	18,530.95	70.00	264.73	22.81	6,038.69
1972	23,419.51	70.00	334.56	23.48	7,854.31
1973	36,051.17	70.00	515.02	24.16	12,440.42
1974	33,938.65	70.00	484.84	24.84	12,044.18
1975	107,401.74	70.00	1,534.31	25.54	39,181.06
1976	193,402.60	70.00	2,762.90	26.25	72,516.00
1977	110,791.36	70.00	1,582.74	26.96	42,671.64

***City of Lancaster - Bureau of Water
Water Division***

333.02 Services - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1978	128,320.01	70.00	1,833.15	27.69	50,756.48
1979	323,814.03	70.00	4,625.92	28.42	131,473.13
1980	111,263.80	70.00	1,589.48	29.17	46,357.92
1981	98,602.48	70.00	1,408.61	29.92	42,139.56
1982	128,893.00	70.00	1,841.33	30.67	56,479.80
1983	66,156.55	70.00	945.09	31.44	29,717.21
1984	140,910.37	70.00	2,013.01	32.22	64,854.69
1985	82,528.32	70.00	1,178.98	33.00	38,910.13
1986	165,560.40	70.00	2,365.15	33.79	79,926.51
1987	247,914.33	70.00	3,541.64	34.59	122,518.07
1988	210,275.09	70.00	3,003.93	35.40	106,336.66
1989	266,814.93	70.00	3,811.65	36.21	138,023.92
1990	143,709.44	70.00	2,052.99	37.03	76,030.92
1991	160,793.68	70.00	2,297.06	37.86	86,968.42
1992	22,874.18	70.00	326.77	38.70	12,645.35
1993	100,392.01	70.00	1,434.17	39.54	56,704.92
1994	19,221.29	70.00	274.59	40.39	11,090.22
1996	23,105.22	70.00	330.07	42.10	13,897.28
1997	51,053.96	70.00	729.34	42.97	31,342.47
1998	10,237.59	70.00	146.25	43.85	6,412.70
1999	35,318.94	70.00	504.56	44.73	22,568.43
2000	87,281.34	70.00	1,246.88	45.62	56,876.56
2001	186,846.30	70.00	2,669.24	46.51	124,143.00
2002	22,631.84	70.00	323.31	47.41	15,327.16
2003	29,267.90	70.00	418.11	48.31	20,198.85
2005	53,888.92	70.00	769.84	50.13	38,595.41
2010	80,449.30	70.00	1,149.28	54.78	62,957.54

***City of Lancaster - Bureau of Water
Water Division***

333.02 Services - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2011	73,449.47	70.00	1,049.28	55.72	58,469.78
2012	165,361.82	70.00	2,362.31	56.67	133,871.61
2013	23,964.31	70.00	342.35	57.62	19,726.37
2014	74,989.34	70.00	1,071.28	58.57	62,749.53
2015	226,772.60	70.00	3,239.61	59.53	192,862.35
2016	45,512.43	70.00	650.18	60.49	39,331.31
2017	236,363.85	70.00	3,376.63	61.46	207,515.94
2018	105,029.70	70.00	1,500.43	62.42	93,662.85
2019	190,287.71	70.00	2,718.40	63.39	172,328.74
2020	444,807.52	70.00	6,354.40	64.37	409,009.20
2021	263,837.12	70.00	3,769.11	65.34	246,276.35
2026	492,831.57	70.00	7,040.46	69.88	491,965.12
<i>Total</i>	6,251,137.62	70.00	89,302.07	44.33	3,958,319.06

Composite Average Remaining Life ... 44.33 Years

***City of Lancaster - Bureau of Water
Water Division***

334.01 Meters - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 25

Survivor Curve: S2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1987	16,028.00	25.00	641.12	2.27	1,452.34
1988	13,087.00	25.00	523.48	2.49	1,306.03
1989	2,981.00	25.00	119.24	2.73	325.80
1990	3,010.00	25.00	120.40	2.98	358.56
1991	78,718.00	25.00	3,148.72	3.23	10,178.77
1992	187,732.00	25.00	7,509.28	3.50	26,258.36
1993	147,999.00	25.00	5,919.96	3.77	22,324.86
1994	39,485.08	25.00	1,579.40	4.06	6,406.73
1995	26,877.15	25.00	1,075.09	4.35	4,680.46
1996	52,645.66	25.00	2,105.83	4.66	9,820.46
1997	20,552.48	25.00	822.10	4.99	4,099.93
1999	9,100.00	25.00	364.00	5.68	2,067.64
2000	3,559.72	25.00	142.39	6.05	861.78
2005	940.50	25.00	37.62	8.22	309.38
2006	6,732.00	25.00	269.28	8.73	2,351.27
2007	7,128.00	25.00	285.12	9.27	2,642.57
2008	4,565.00	25.00	182.60	9.84	1,795.91
2009	9,836.32	25.00	393.45	10.43	4,105.38
2016	31,734.32	25.00	1,269.37	15.61	19,819.65
2021	3,345,438.42	25.00	133,817.55	20.27	2,712,626.69
2024	37,952.48	25.00	1,518.10	23.25	35,296.21
<i>Total</i>	4,046,102.13	25.00	161,844.10	17.73	2,869,088.76

Composite Average Remaining Life ... 17.73 Years

***City of Lancaster - Bureau of Water
Water Division***

334.02 Meters - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 25

Survivor Curve: S2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1973	956.00	0.00	0.00	0.00	0.00
1974	128.00	0.00	0.00	0.00	0.00
1975	132.00	0.00	0.00	0.00	0.00
1976	106.00	0.00	0.00	0.00	0.00
1977	1,861.00	25.00	74.44	0.50	37.22
1978	10,256.00	25.00	410.24	0.57	232.23
1979	921.00	25.00	36.84	0.70	25.85
1980	439.00	25.00	17.56	0.86	15.16
1981	12,200.00	25.00	488.00	1.04	507.14
1985	27,880.00	25.00	1,115.20	1.83	2,038.77
1986	30,797.00	25.00	1,231.88	2.04	2,516.95
1987	115,115.00	25.00	4,604.60	2.27	10,430.89
1988	90,663.00	25.00	3,626.52	2.49	9,047.81
1989	22,564.00	25.00	902.56	2.73	2,466.08
1990	22,315.00	25.00	892.60	2.98	2,658.21
1991	119,884.00	25.00	4,795.36	3.23	15,501.81
1992	194,882.00	25.00	7,795.28	3.50	27,258.44
1993	563,258.00	25.00	22,530.32	3.77	84,964.48
1994	272,399.32	25.00	10,895.97	4.06	44,198.72
1995	179,870.15	25.00	7,194.81	4.35	31,323.07
1996	352,320.94	25.00	14,092.84	4.66	65,721.54
1997	137,543.52	25.00	5,501.74	4.99	27,438.00
1999	67,875.00	25.00	2,715.00	5.68	15,422.07
2000	65,761.00	25.00	2,630.44	6.05	15,920.18
2001	55,344.45	25.00	2,213.78	6.44	14,263.34
2002	39,990.00	25.00	1,599.60	6.85	10,963.46
2003	67,478.30	25.00	2,699.13	7.29	19,667.28

***City of Lancaster - Bureau of Water
Water Division***

334.02 Meters - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 25

Survivor Curve: S2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2004	49,970.00	25.00	1,998.80	7.74	15,475.83
2005	10,920.50	25.00	436.82	8.22	3,592.28
2006	118,214.00	25.00	4,728.56	8.73	41,288.28
2007	129,717.00	25.00	5,188.68	9.27	48,090.14
2008	68,165.00	25.00	2,726.60	9.84	26,816.76
2009	75,690.00	25.00	3,027.60	10.43	31,590.66
2010	44,256.68	25.00	1,770.27	11.07	19,591.17
2011	36,769.31	25.00	1,470.77	11.73	17,258.40
2019	802,421.00	25.00	32,096.84	18.34	588,628.54
2021	6,792,253.76	25.00	271,690.17	20.27	5,507,454.18
2024	81,230.27	25.00	3,249.21	23.25	75,545.01
<i>Total</i>	10,662,547.20	22.37	426,449.04	15.89	6,777,949.94

Composite Average Remaining Life ... 15.89 Years

***City of Lancaster - Bureau of Water
Water Division***

335.01 Hydrants - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	1,758.00	75.00	23.44	3.60	84.32
1901	1,359.00	75.00	18.12	3.85	69.83
1902	1,143.00	75.00	15.24	4.13	62.92
1903	1,099.00	75.00	14.65	4.40	64.46
1904	2,248.00	75.00	29.97	4.63	138.92
1905	1,823.00	75.00	24.31	4.89	118.76
1906	1,663.00	75.00	22.17	5.13	113.80
1907	1,765.00	75.00	23.53	5.35	125.84
1908	1,578.00	75.00	21.04	5.58	117.38
1909	2,263.00	75.00	30.17	5.81	175.30
1910	1,769.00	75.00	23.59	6.01	141.87
1911	5,355.00	75.00	71.40	6.24	445.40
1912	1,983.20	75.00	26.44	6.46	170.91
1913	984.00	75.00	13.12	6.67	87.49
1914	560.00	75.00	7.47	6.89	51.45
1915	709.00	75.00	9.45	7.12	67.29
1916	616.00	75.00	8.21	7.33	60.18
1917	537.00	75.00	7.16	7.55	54.09
1921	188.00	75.00	2.51	8.47	21.23
1922	2,479.00	75.00	33.05	8.70	287.43
1923	633.00	75.00	8.44	8.93	75.41
1924	3,815.32	75.00	50.87	9.18	466.89
1925	295.00	75.00	3.93	9.41	37.02
1926	262.00	75.00	3.49	9.66	33.74
1927	2,896.17	75.00	38.62	9.91	382.71
1928	1,464.00	75.00	19.52	10.16	198.25
1929	1,082.00	75.00	14.43	10.41	150.24

***City of Lancaster - Bureau of Water
Water Division***

335.01 Hydrants - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1930	147.00	75.00	1.96	10.68	20.93
1931	414.00	75.00	5.52	10.94	60.38
1932	302.00	75.00	4.03	11.21	45.15
1933	58.00	75.00	0.77	11.49	8.89
1936	116.00	75.00	1.55	12.37	19.13
1937	142.00	75.00	1.89	12.67	23.99
1938	350.00	75.00	4.67	12.99	60.61
1940	142.00	75.00	1.89	13.65	25.84
1943	100.00	75.00	1.33	14.71	19.62
1944	174.00	75.00	2.32	15.09	35.00
1946	1,343.00	75.00	17.91	15.87	284.24
1947	839.00	75.00	11.19	16.28	182.15
1948	2,414.00	75.00	32.19	16.70	537.62
1949	1,083.00	75.00	14.44	17.14	247.46
1950	3,035.00	75.00	40.47	17.58	711.45
1951	2,810.00	75.00	37.47	18.04	675.75
1952	854.00	75.00	11.39	18.51	210.71
1953	3,605.50	75.00	48.07	18.98	912.63
1954	5,658.00	75.00	75.44	19.47	1,469.09
1955	866.47	75.00	11.55	19.98	230.81
1956	1,868.42	75.00	24.91	20.49	510.48
1957	1,561.00	75.00	20.81	21.01	437.38
1958	1,252.00	75.00	16.69	21.55	359.79
1959	1,914.00	75.00	25.52	22.10	563.97
1960	309.00	75.00	4.12	22.66	93.34
1961	641.00	75.00	8.55	23.23	198.51
1962	2,247.00	75.00	29.96	23.80	713.17

***City of Lancaster - Bureau of Water
Water Division***

335.01 Hydrants - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1963	1,622.00	75.00	21.63	24.39	527.51
1964	9,590.00	75.00	127.87	24.99	3,195.74
1973	5,076.00	75.00	67.68	30.79	2,084.15
1975	21,532.00	75.00	287.09	32.17	9,236.67
1976	33,098.00	75.00	441.31	32.88	14,508.92
1977	18,500.00	75.00	246.67	33.59	8,284.52
1978	30,432.00	75.00	405.76	34.30	13,918.08
1979	31,328.00	75.00	417.71	35.03	14,631.08
1980	31,372.00	75.00	418.29	35.76	14,957.08
1981	15,675.00	75.00	209.00	36.49	7,627.23
1990	10,235.00	75.00	136.47	43.43	5,926.42
1995	12,420.00	75.00	165.60	47.49	7,864.68
1996	5,040.00	75.00	67.20	48.32	3,247.14
1999	2,144.11	75.00	28.59	50.84	1,453.44
2000	5,625.00	75.00	75.00	51.69	3,876.92
2001	16,070.40	75.00	214.27	52.55	11,259.38
2002	62,333.76	75.00	831.12	53.41	44,387.01
2003	13,669.18	75.00	182.26	54.27	9,891.50
2004	15,092.88	75.00	201.24	55.14	11,096.65
2005	3,774.62	75.00	50.33	56.02	2,819.15
2006	7,924.00	75.00	105.65	56.90	6,011.14
2007	2,908.00	75.00	38.77	57.78	2,240.23
2008	6,104.00	75.00	81.39	58.66	4,774.47
2009	8,150.80	75.00	108.68	59.56	6,472.42
2012	50,098.72	75.00	667.98	62.25	41,584.56
2013	34,691.86	75.00	462.56	63.16	29,215.33
2014	68,090.64	75.00	907.87	64.07	58,167.65

***City of Lancaster - Bureau of Water
Water Division***

335.01 Hydrants - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2015	43,357.05	75.00	578.09	64.98	37,567.30
2016	8,593.23	75.00	114.58	65.90	7,550.77
2017	96,466.95	75.00	1,286.22	66.82	85,947.66
2018	66,426.99	75.00	885.69	67.75	60,002.15
2019	133,397.14	75.00	1,778.63	68.67	122,142.66
2022	605,784.41	75.00	8,077.12	71.47	577,270.34
2024	29,950.70	75.00	399.34	73.35	29,291.15
<i>Total</i>	1,583,146.52	75.00	21,108.59	60.24	1,271,492.32

Composite Average Remaining Life ... 60.24 Years

***City of Lancaster - Bureau of Water
Water Division***

335.02 Hydrants - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	71.00	75.00	0.95	3.60	3.41
1905	50.00	75.00	0.67	4.89	3.26
1920	465.98	75.00	6.21	8.23	51.16
1922	1,396.50	75.00	18.62	8.70	161.92
1923	213.00	75.00	2.84	8.93	25.37
1924	347.32	75.00	4.63	9.18	42.50
1925	516.00	75.00	6.88	9.41	64.75
1926	692.00	75.00	9.23	9.66	89.12
1927	2,838.68	75.00	37.85	9.91	375.11
1928	4,414.00	75.00	58.85	10.16	597.72
1929	2,055.00	75.00	27.40	10.41	285.35
1930	4,217.64	75.00	56.24	10.68	600.49
1931	841.00	75.00	11.21	10.94	122.66
1933	2,799.00	75.00	37.32	11.49	428.89
1935	668.00	75.00	8.91	12.07	107.46
1936	2,002.00	75.00	26.69	12.37	330.10
1937	235.00	75.00	3.13	12.67	39.70
1938	1,610.00	75.00	21.47	12.99	278.81
1939	4,354.69	75.00	58.06	13.31	773.06
1940	1,834.00	75.00	24.45	13.65	333.73
1941	2,437.00	75.00	32.49	13.99	454.66
1944	283.00	75.00	3.77	15.09	56.93
1945	413.00	75.00	5.51	15.47	85.22
1946	384.00	75.00	5.12	15.87	81.27
1947	292.00	75.00	3.89	16.28	63.40
1948	3,580.18	75.00	47.74	16.70	797.35
1949	993.00	75.00	13.24	17.14	226.90

***City of Lancaster - Bureau of Water
Water Division***

335.02 Hydrants - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1950	4,862.45	75.00	64.83	17.58	1,139.83
1951	1,480.00	75.00	19.73	18.04	355.91
1952	14,171.00	75.00	188.95	18.51	3,496.53
1953	19,679.00	75.00	262.39	18.98	4,981.16
1954	10,815.07	75.00	144.20	19.47	2,808.11
1955	19,729.00	75.00	263.05	19.98	5,255.30
1956	54,124.00	75.00	721.65	20.49	14,787.45
1957	1,300.00	75.00	17.33	21.01	364.25
1958	12,363.32	75.00	164.84	21.55	3,552.89
1959	11,295.00	75.00	150.60	22.10	3,328.15
1960	34,314.52	75.00	457.53	22.66	10,365.49
1961	2,187.00	75.00	29.16	23.23	677.28
1962	9,644.00	75.00	128.59	23.80	3,060.90
1963	21,929.87	75.00	292.40	24.39	7,132.02
1964	6,281.24	75.00	83.75	24.99	2,093.14
1965	10,475.00	75.00	139.67	25.60	3,575.53
1966	17,434.00	75.00	232.45	26.22	6,094.21
1967	9,684.00	75.00	129.12	26.85	3,466.44
1968	1,859.00	75.00	24.79	27.48	681.19
1969	64,518.00	75.00	860.24	28.13	24,195.14
1970	1,608.00	75.00	21.44	28.78	617.09
1971	670.00	75.00	8.93	29.44	263.03
1972	2,785.00	75.00	37.13	30.11	1,118.20
1975	4,620.00	75.00	61.60	32.17	1,981.86
1980	20,420.00	75.00	272.27	35.76	9,735.55
1982	37,125.00	75.00	495.00	37.24	18,434.02
1985	6,594.00	75.00	87.92	39.51	3,474.06

***City of Lancaster - Bureau of Water
Water Division***

335.02 Hydrants - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1986	3,694.00	75.00	49.25	40.28	1,984.12
1987	12,278.00	75.00	163.71	41.06	6,721.76
1988	24,011.00	75.00	320.15	41.84	13,396.45
1990	997.00	75.00	13.29	43.43	577.30
1991	10,488.00	75.00	139.84	44.23	6,185.18
1992	8,875.00	75.00	118.33	45.04	5,329.37
1993	12,747.00	75.00	169.96	45.85	7,792.44
1994	11,118.00	75.00	148.24	46.67	6,918.15
1996	55,500.00	75.00	740.00	48.32	35,757.18
1997	39,929.28	75.00	532.39	49.16	26,170.58
1998	21,844.00	75.00	291.25	50.00	14,561.60
1999	15,623.99	75.00	208.32	50.84	10,591.12
2000	196,426.69	75.00	2,619.02	51.69	135,383.32
2001	152,447.98	75.00	2,032.64	52.55	106,809.42
2002	72,073.41	75.00	960.98	53.41	51,322.48
2003	39,893.84	75.00	531.92	54.27	28,868.58
2004	18,866.09	75.00	251.55	55.14	13,870.80
2005	32,544.93	75.00	433.93	56.02	24,306.80
2006	20,888.50	75.00	278.51	56.90	15,846.00
2007	23,587.31	75.00	314.50	57.78	18,170.88
2008	23,605.00	75.00	314.73	58.66	18,463.51
2009	142,351.20	75.00	1,898.01	59.56	113,038.88
2010	75,600.00	75.00	1,008.00	60.45	60,934.93
2011	32,775.00	75.00	437.00	61.35	26,809.91
2012	135,503.50	75.00	1,806.71	62.25	112,474.99
2013	22,834.18	75.00	304.46	63.16	19,229.53
2014	104,656.75	75.00	1,395.42	64.07	89,404.90

***City of Lancaster - Bureau of Water
Water Division***

335.02 Hydrants - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2015	156,943.60	75.00	2,092.58	64.98	135,985.90
2016	50,743.05	75.00	676.57	65.90	44,587.35
2017	230,140.94	75.00	3,068.54	66.82	205,045.09
2018	69,328.15	75.00	924.37	67.75	62,622.71
2019	167,917.10	75.00	2,238.89	68.67	153,750.23
2022	134,406.00	75.00	1,792.08	71.47	128,079.55
2023	82,137.00	75.00	1,095.16	72.41	79,297.56
2024	239,848.95	75.00	3,197.98	73.35	234,567.18
<i>Total</i>	2,884,594.90	75.00	38,461.22	56.12	2,158,370.80

Composite Average Remaining Life ... 56.12 Years

***City of Lancaster - Bureau of Water
Water Division***

341.01 Transportation - Autos and Vans

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 12

Survivor Curve: L4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2012	19,325.63	12.00	1,610.46	2.14	3,444.58
2017	9,978.18	12.00	831.51	3.80	3,159.03
2018	16,045.40	12.00	1,337.11	4.57	6,105.87
2019	23,720.46	12.00	1,976.70	5.41	10,686.20
2020	57,220.00	12.00	4,768.32	6.31	30,076.98
2021	25,929.98	12.00	2,160.83	7.26	15,693.27
2023	84,902.45	12.00	7,075.18	9.25	65,445.70
2025	293,897.00	12.00	24,491.34	11.25	275,528.49
<i>Total</i>	531,019.10	12.00	44,251.46	9.27	410,140.12

Composite Average Remaining Life ... 9.27 Years

***City of Lancaster - Bureau of Water
Water Division***

341.02 Transportation - Trucks

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 18

Survivor Curve: S1.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1990	225.00	18.00	12.50	0.50	6.25
1992	12,034.00	18.00	668.56	0.69	462.33
1997	8,318.00	18.00	462.11	1.90	875.80
1999	180,930.91	18.00	10,051.71	2.41	24,187.32
2000	7,153.69	18.00	397.43	2.67	1,061.54
2005	16,088.58	18.00	893.81	4.17	3,730.94
2006	88,685.02	18.00	4,926.94	4.52	22,279.25
2008	272,204.92	18.00	15,122.49	5.28	79,840.05
2009	147,221.86	18.00	8,178.99	5.69	46,574.12
2011	21,923.57	18.00	1,217.98	6.61	8,048.16
2012	175,296.52	18.00	9,738.69	7.11	69,260.09
2013	134,521.00	18.00	7,473.38	7.65	57,173.78
2014	52,392.33	18.00	2,910.68	8.23	23,945.58
2015	218,563.91	18.00	12,142.43	8.84	107,366.79
2017	106,193.71	18.00	5,899.65	10.20	60,181.65
2019	144,946.20	18.00	8,052.56	11.74	94,505.44
2020	210,103.07	18.00	11,672.39	12.57	146,699.27
2021	643,443.39	18.00	35,746.83	13.44	480,481.12
2022	409,452.50	18.00	22,747.35	14.35	326,448.02
2023	57,491.33	18.00	3,193.96	15.29	48,847.70
2024	801,870.49	18.00	44,548.33	16.26	724,472.20
2026	750,000.00	18.00	41,666.64	17.87	744,790.94
<i>Total</i>	4,459,060.00	18.00	247,725.39	12.40	3,071,238.30

Composite Average Remaining Life ... 12.40 Years

***City of Lancaster - Bureau of Water
Water Division***

341.03 Transportation - Trailers

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 20

Survivor Curve: L3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1967	500.00	0.00	0.00	0.00	0.00
1978	2,942.00	0.00	0.00	0.00	0.00
2004	7,487.21	20.00	374.37	5.72	2,141.98
2008	2,185.00	20.00	109.25	6.44	704.00
2021	173,968.97	20.00	8,698.59	15.28	132,916.54
2022	24,401.00	20.00	1,220.07	16.26	19,837.12
<i>Total</i>	211,484.18	13.33	10,402.27	14.96	155,599.64

Composite Average Remaining Life ... 14.96 Years

***City of Lancaster - Bureau of Water
Water Division***

344.00 Laboratory Equipment

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 20

Survivor Curve: L3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1927	53.00	0.00	0.00	0.00	0.00
1933	3,556.00	0.00	0.00	0.00	0.00
1937	30.00	0.00	0.00	0.00	0.00
1939	150.00	0.00	0.00	0.00	0.00
1940	131.00	0.00	0.00	0.00	0.00
1942	24.00	0.00	0.00	0.00	0.00
1945	125.00	0.00	0.00	0.00	0.00
1946	273.00	0.00	0.00	0.00	0.00
1949	92.00	0.00	0.00	0.00	0.00
1950	58.00	0.00	0.00	0.00	0.00
1951	195.00	0.00	0.00	0.00	0.00
1956	1,110.00	0.00	0.00	0.00	0.00
1965	1,790.00	0.00	0.00	0.00	0.00
1967	6,225.00	0.00	0.00	0.00	0.00
1968	420.00	0.00	0.00	0.00	0.00
1974	630.00	0.00	0.00	0.00	0.00
1975	2,762.00	0.00	0.00	0.00	0.00
1978	4,023.00	0.00	0.00	0.00	0.00
1979	1,290.00	20.00	64.50	0.50	32.25
1980	21,755.00	20.00	1,087.77	0.57	624.82
1981	2,057.00	20.00	102.85	0.71	73.05
1982	1,800.00	20.00	90.00	0.87	78.26
2001	52,135.00	20.00	2,606.79	5.10	13,305.51
2018	10,364.40	20.00	518.23	12.47	6,461.44

***City of Lancaster - Bureau of Water
Water Division***

344.00 Laboratory Equipment

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2026
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 20

Survivor Curve: L3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
<i>Total</i>	111,048.40	5.00	4,470.14	4.60	20,575.33

Composite Average Remaining Life ... 4.60 Years

***City of Lancaster - Bureau of Water
Water Division***

304.20 Structures - Willow Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	13,250.00	60.00	220.83	7.92	1,749.99
1990	15,067.00	60.00	251.12	26.87	6,747.40
1991	5,903.00	60.00	98.38	27.64	2,719.62
1999	2,000.00	60.00	33.33	34.16	1,138.77
2023	721,226.05	60.00	12,020.43	56.32	676,997.46
2024	1,564,301.27	60.00	26,071.69	57.30	1,493,861.32
<i>Total</i>	2,321,747.32	60.00	38,695.79	56.42	2,183,214.56

Composite Average Remaining Life ... 56.42 Years

***City of Lancaster - Bureau of Water
Water Division***

304.21 Structures - Kissel Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1979	5,569.00	60.00	92.82	19.01	1,764.53
1980	38,673.00	60.00	644.55	19.67	12,678.40
1999	3,000.00	60.00	50.00	34.16	1,708.16
2024	24,377.00	60.00	406.28	57.30	23,279.31
<i>Total</i>	71,619.00	60.00	1,193.65	33.03	39,430.40

Composite Average Remaining Life ... 33.03 Years

***City of Lancaster - Bureau of Water
Water Division***

304.22 Structures - Susquehanna Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	279,298.00	60.00	4,654.97	7.92	36,888.26
1971	25,374.00	60.00	422.90	14.25	6,024.26
1996	318,845.11	60.00	5,314.08	31.66	168,221.14
1999	10,000.00	60.00	166.67	34.16	5,693.87
2000	94,384.76	60.00	1,573.08	35.01	55,079.02
2001	5,940.00	60.00	99.00	35.87	3,551.52
2002	7,890.00	60.00	131.50	36.74	4,831.51
2003	7,832.00	60.00	130.53	37.61	4,909.95
2012	16,500.00	60.00	275.00	45.78	12,590.30
2019	87,900.00	60.00	1,465.00	52.44	76,819.22
2022	13,896.00	60.00	231.60	55.34	12,817.89
<i>Total</i>	867,859.87	60.00	14,464.33	26.78	387,426.94

Composite Average Remaining Life ... 26.78 Years

***City of Lancaster - Bureau of Water
Water Division***

304.23 Structures - Conestoga Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1974	903,813.00	60.00	15,063.55	15.92	239,880.75
1975	118,276.00	60.00	1,971.27	16.52	32,555.74
1976	82,589.00	60.00	1,376.48	17.12	23,560.53
1978	36,333.00	60.00	605.55	18.37	11,123.16
1979	6,165.00	60.00	102.75	19.01	1,953.37
2000	507,711.24	60.00	8,461.85	35.01	296,279.16
2001	122,372.00	60.00	2,039.53	35.87	73,166.17
2009	21,000.00	60.00	350.00	43.00	15,051.70
2014	13,934.60	60.00	232.24	47.66	11,069.24
2020	31,167.00	60.00	519.45	53.40	27,740.12
2021	160,976.00	60.00	2,682.93	54.37	145,876.30
2022	56,382.66	60.00	939.71	55.34	52,008.24
2023	190,683.18	60.00	3,178.05	56.32	178,989.69
2025	161,490.00	60.00	2,691.50	58.28	156,857.79
<i>Total</i>	2,412,892.68	60.00	40,214.87	31.48	1,266,111.95

Composite Average Remaining Life ... 31.48 Years

***City of Lancaster - Bureau of Water
Water Division***

304.24 Structures - Hess Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1995	147,721.39	60.00	2,462.02	30.84	75,918.22
1998	487.71	60.00	8.13	33.32	270.83
2026	485,088.93	60.00	8,084.81	59.26	479,120.25
2027	36,000.00	60.00	600.00	59.88	35,926.16
<i>Total</i>	669,298.03	60.00	11,154.97	53.00	591,235.46

Composite Average Remaining Life ... 53.00 Years

***City of Lancaster - Bureau of Water
Water Division***

304.25 Structures - Conestoga Building

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2009	1,264,611.00	60.00	21,076.85	43.00	906,406.74
<i>Total</i>	1,264,611.00	60.00	21,076.85	43.00	906,406.74

Composite Average Remaining Life ... 43.00 Years

***City of Lancaster - Bureau of Water
Water Division***

304.26 Structures - Delp Station

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2011	972,399.60	60.00	16,206.66	44.85	726,906.59
<i>Total</i>	972,399.60	60.00	16,206.66	44.85	726,906.59

Composite Average Remaining Life ... 44.85 Years

***City of Lancaster - Bureau of Water
Water Division***

304.27 Structures - Willow Station

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2019	2,501,626.68	60.00	41,693.77	52.44	2,186,268.68
<i>Total</i>	2,501,626.68	60.00	41,693.77	52.44	2,186,268.68

Composite Average Remaining Life ... 52.44 Years

***City of Lancaster - Bureau of Water
Water Division***

304.28 Structures - East Station

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2024	2,013,090.96	60.00	33,551.51	57.30	1,922,442.16
<i>Total</i>	2,013,090.96	60.00	33,551.51	57.30	1,922,442.16

Composite Average Remaining Life ... 57.30 Years

***City of Lancaster - Bureau of Water
Water Division***

304.29 Structures - South Station

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2022	1,078,924.52	60.00	17,982.07	55.34	995,216.65
<i>Total</i>	1,078,924.52	60.00	17,982.07	55.34	995,216.65

Composite Average Remaining Life ... 55.34 Years

***City of Lancaster - Bureau of Water
Water Division***

304.31 Purification - Conestoga Plant

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1933	217,345.00	65.00	3,343.77	3.95	13,194.54
1942	254.00	65.00	3.91	6.27	24.50
1950	357.00	65.00	5.49	8.55	46.97
1995	11,438.92	65.00	175.98	35.59	6,263.08
1996	471,732.50	65.00	7,257.42	36.43	264,381.04
1997	133,109.57	65.00	2,047.84	37.27	76,332.16
1998	833.13	65.00	12.82	38.13	488.72
1999	54,000.00	65.00	830.77	38.99	32,390.69
2000	106,977.43	65.00	1,645.81	39.86	65,597.91
2001	17,075.00	65.00	262.69	40.73	10,699.68
2004	592,429.46	65.00	9,114.30	43.39	395,511.36
2005	25,634.00	65.00	394.37	44.30	17,468.60
2009	68,862.87	65.00	1,059.43	47.95	50,802.48
2010	17,264.13	65.00	265.60	48.88	12,982.60
2014	108,200.00	65.00	1,664.62	52.64	87,623.40
2019	533,933.55	65.00	8,214.36	57.43	471,748.26
2020	2,185,610.00	65.00	33,624.77	58.40	1,963,622.86
2021	29,364.00	65.00	451.75	59.37	26,820.13
2023	1,358,250.64	65.00	20,896.16	61.32	1,281,332.24
2024	1,962,115.62	65.00	30,186.39	62.30	1,880,551.04
2025	21,900.00	65.00	336.92	63.28	21,320.00
<i>Total</i>	7,916,686.82	65.00	121,795.18	54.84	6,679,202.26

Composite Average Remaining Life ... 54.84 Years

***City of Lancaster - Bureau of Water
Water Division***

304.32 Purification - Susquehanna Plant

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	303,935.00	65.00	4,675.92	10.65	49,812.83
1971	556,636.00	65.00	8,563.63	18.08	154,803.36
1987	111,862.00	65.00	1,720.95	29.16	50,177.45
1995	20,850.00	65.00	320.77	35.59	11,415.87
1996	492,800.34	65.00	7,581.54	36.43	276,188.44
1997	3,660.00	65.00	56.31	37.27	2,098.84
1998	2,466.01	65.00	37.94	38.13	1,446.57
1999	53,500.00	65.00	823.08	38.99	32,090.78
2000	537,851.11	65.00	8,274.63	39.86	329,807.06
2001	3,405.00	65.00	52.38	40.73	2,133.67
2002	73,616.00	65.00	1,132.55	41.61	47,129.15
2003	39,825.00	65.00	612.69	42.50	26,039.09
2004	443,704.88	65.00	6,826.23	43.39	296,221.46
2014	12,977.00	65.00	199.65	52.64	10,509.14
2019	54,685.00	65.00	841.31	57.43	48,316.04
2020	188,419.05	65.00	2,898.75	58.40	169,281.78
2021	56,780.00	65.00	873.54	59.37	51,861.03
2024	1,637,510.63	65.00	25,192.47	62.30	1,569,439.79
<i>Total</i>	4,594,483.02	65.00	70,684.35	44.26	3,128,772.33

Composite Average Remaining Life ... 44.26 Years

***City of Lancaster - Bureau of Water
Water Division***

304.34 Purification - Susquehanna Facility

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2009	25,210.13	65.00	387.85	47.95	18,598.37
2010	93,677,983.18	65.00	1,441,199.72	48.88	70,445,707.94
2011	2,641,059.46	65.00	40,631.68	49.81	2,024,000.38
2012	2,867.09	65.00	44.11	50.75	2,238.55
2022	2,418,940.12	65.00	37,214.46	60.34	2,245,631.44
2024	560,364.25	65.00	8,620.99	62.30	537,070.07
2025	35,819.00	65.00	551.06	63.28	34,870.37
2026	382,250.00	65.00	5,880.77	64.26	377,908.11
<i>Total</i>	99,744,493.23	65.00	1,534,530.64	49.32	75,686,025.23

Composite Average Remaining Life ... 49.32 Years

***City of Lancaster - Bureau of Water
Water Division***

304.61 Water Administration Building

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: S2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2018	7,722,865.72	65.00	118,813.33	56.26	6,684,744.94
2019	2,161,046.43	65.00	33,246.87	57.26	1,903,625.44
2020	35,724.81	65.00	549.61	58.25	32,017.15
2023	69,730.00	65.00	1,072.77	61.25	65,707.39
<i>Total</i>	9,989,366.96	65.00	153,682.58	56.52	8,686,094.93

Composite Average Remaining Life ... 56.52 Years

***City of Lancaster - Bureau of Water
Water Division***

306.00 Lake, River and Other Intakes

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: S1.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	174,188.00	65.00	2,679.82	16.49	44,200.55
2000	291,082.65	65.00	4,478.19	40.48	181,286.45
2026	75,000.00	65.00	1,153.85	64.25	74,134.80
2027	25,000.00	65.00	384.62	64.88	24,951.93
<i>Total</i>	565,270.65	65.00	8,696.47	37.32	324,573.73

Composite Average Remaining Life ... 37.32 Years

***City of Lancaster - Bureau of Water
Water Division***

311.00 Electric Pumping Equipment

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 40

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1955	42,612.20	40.00	1,065.30	0.74	785.98
1956	264,732.49	40.00	6,618.29	0.98	6,510.40
1965	42,888.24	40.00	1,072.20	3.22	3,453.74
1969	15,496.80	40.00	387.42	4.10	1,586.92
1971	586,217.24	40.00	14,655.38	4.55	66,711.97
1974	82,833.75	40.00	2,070.84	5.27	10,920.02
1975	140,305.77	40.00	3,507.63	5.52	19,375.33
1976	12,920.78	40.00	323.02	5.79	1,869.09
1980	11,232.98	40.00	280.82	6.95	1,951.73
1982	1,567.23	40.00	39.18	7.63	298.86
1990	183,953.88	40.00	4,598.83	11.17	51,355.74
1991	58,814.44	40.00	1,470.36	11.71	17,213.13
1995	135,484.73	40.00	3,387.11	14.06	47,616.99
2002	14,798.80	40.00	369.97	18.82	6,961.03
2005	9,939.52	40.00	248.49	21.06	5,233.66
2006	6,545.37	40.00	163.63	21.83	3,572.90
2007	13,285.43	40.00	332.13	22.62	7,512.91
2008	4,714.93	40.00	117.87	23.42	2,760.08
2011	381,952.47	40.00	9,548.78	25.87	247,020.66
2013	35,012.04	40.00	875.30	27.56	24,119.21
2015	38,287.40	40.00	957.18	29.28	28,025.17
2016	74,050.88	40.00	1,851.27	30.15	55,821.76
2017	222,162.46	40.00	5,554.04	31.04	172,378.98
2018	96,180.47	40.00	2,404.50	31.93	76,769.18
2019	5,829,591.87	40.00	145,739.25	32.83	4,784,023.50
2021	139,704.82	40.00	3,492.61	34.64	120,996.16
2024	2,179,333.94	40.00	54,483.15	37.42	2,038,556.71

***City of Lancaster - Bureau of Water
Water Division***

311.00 Electric Pumping Equipment

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 40

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2026	1,346,328.55	40.00	33,658.09	39.29	1,322,488.90
2027	260,250.00	40.00	6,506.23	39.88	259,481.53
<i>Total</i>	12,231,199.48	40.00	305,778.85	30.69	9,385,372.23

Composite Average Remaining Life ... 30.69 Years

***City of Lancaster - Bureau of Water
Water Division***

320.00 Purification System - Treatment Plant

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 50

Survivor Curve: S1.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1906	6,450.00	0.00	0.00	0.00	0.00
1933	353,573.00	50.00	7,071.46	1.68	11,884.53
1940	240.00	50.00	4.80	3.45	16.55
1942	3,963.00	50.00	79.26	3.95	313.08
1943	1,724.00	50.00	34.48	4.20	144.85
1944	125.00	50.00	2.50	4.45	11.13
1948	5,627.00	50.00	112.54	5.47	615.16
1949	5,531.00	50.00	110.62	5.72	633.04
1950	2,660.00	50.00	53.20	5.98	318.19
1951	309.00	50.00	6.18	6.24	38.57
1954	182.00	50.00	3.64	7.04	25.61
1955	362,779.00	50.00	7,255.58	7.31	53,014.30
1956	811,061.00	50.00	16,221.22	7.58	122,962.07
1962	2,400.00	50.00	48.00	9.30	446.43
1963	2,224.00	50.00	44.48	9.60	427.12
1965	11,638.00	50.00	232.76	10.22	2,379.74
1967	10,445.00	50.00	208.90	10.86	2,269.09
1968	2,643.00	50.00	52.86	11.19	591.57
1969	564.00	50.00	11.28	11.53	130.02
1971	1,583,130.60	50.00	31,662.60	12.22	386,832.01
1972	23,217.00	50.00	464.34	12.57	5,838.11
1974	30,485.00	50.00	609.70	13.31	8,112.78
1975	297,705.00	50.00	5,954.10	13.68	81,478.45
1976	449,043.00	50.00	8,980.86	14.07	126,367.76
1977	296,878.00	50.00	5,937.56	14.47	85,890.16
1978	65,023.00	50.00	1,300.46	14.87	19,336.63
1979	23,547.00	50.00	470.94	15.28	7,196.72

***City of Lancaster - Bureau of Water
Water Division***

320.00 Purification System - Treatment Plant

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 50

Survivor Curve: S1.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1980	7,178.00	50.00	143.56	15.70	2,254.39
1982	16,592.00	50.00	331.84	16.58	5,500.78
1991	22,532.00	50.00	450.64	21.06	9,488.48
1993	260,945.00	50.00	5,218.90	22.19	115,802.95
1995	341,396.13	50.00	6,827.92	23.38	159,627.54
1996	444,177.00	50.00	8,883.54	24.00	213,161.22
1997	32,550.29	50.00	651.01	24.63	16,031.89
1999	393,464.01	50.00	7,869.28	25.93	204,064.84
2000	1,112,742.20	50.00	22,254.84	26.61	592,233.23
2001	18,435.00	50.00	368.70	27.30	10,067.04
2004	16,387.00	50.00	327.74	29.48	9,660.88
2008	95,074.00	50.00	1,901.48	32.60	61,982.68
2013	44,935.58	50.00	898.71	36.84	33,108.06
2014	21,232.69	50.00	424.65	37.73	16,023.54
2015	27,844.70	50.00	556.89	38.64	21,517.26
2017	64,748.08	50.00	1,294.96	40.48	52,425.98
2018	103,533.04	50.00	2,070.66	41.43	85,777.23
2019	37,250.67	50.00	745.01	42.38	31,570.67
2020	22,905.86	50.00	458.12	43.34	19,853.22
2021	1,518,475.00	50.00	30,369.49	44.31	1,345,549.35
2023	10,332.00	50.00	206.64	46.27	9,560.70
2024	724,561.02	50.00	14,491.22	47.26	684,818.36
2026	1,334,250.00	50.00	26,684.99	49.25	1,314,242.96
2027	62,500.00	50.00	1,250.00	49.88	62,343.77

***City of Lancaster - Bureau of Water
Water Division***

320.00 Purification System - Treatment Plant

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 50

Survivor Curve: S1.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
<i>Total</i>	11,087,207.87	49.02	221,615.10	27.05	5,993,940.69

Composite Average Remaining Life ... 27.05 Years

***City of Lancaster - Bureau of Water
Water Division***

330.31 Distribution - Underground Oyster

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	719,532.00	60.00	11,992.14	4.96	59,456.21
1995	3,331.22	60.00	55.52	29.14	1,617.83
1997	251,668.78	60.00	4,194.46	30.95	129,811.83
2001	23,435.00	60.00	390.58	34.67	13,539.51
2022	9,957,839.22	60.00	165,963.18	55.26	9,170,597.38
2023	30,540.50	60.00	509.01	56.25	28,634.05
<i>Total</i>	10,986,346.72	60.00	183,104.88	51.36	9,403,656.82

Composite Average Remaining Life ... 51.36 Years

***City of Lancaster - Bureau of Water
Water Division***

330.32 Distribution - Willow Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1989	5,132.00	60.00	85.53	23.95	2,048.35
1990	892,279.00	60.00	14,871.24	24.79	368,609.88
1991	11,808.00	60.00	196.80	25.63	5,044.74
2014	205,281.84	60.00	3,421.35	47.30	161,823.77
<i>Total</i>	1,114,500.84	60.00	18,574.92	28.94	537,526.74

Composite Average Remaining Life ... 28.94 Years

***City of Lancaster - Bureau of Water
Water Division***

330.33 Distribution - Lafayette Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1968	565,918.00	60.00	9,431.92	9.39	88,520.99
1986	11,410.00	60.00	190.17	21.51	4,089.70
1993	8,723.00	60.00	145.38	27.37	3,978.78
2021	2,404,322.60	60.00	40,071.85	54.26	2,174,266.18
2026	1,125,000.00	60.00	18,749.91	59.25	1,110,949.55
2027	225,000.00	60.00	3,749.98	59.88	224,531.64
<i>Total</i>	4,340,373.60	60.00	72,339.21	49.85	3,606,336.83

Composite Average Remaining Life ... 49.85 Years

***City of Lancaster - Bureau of Water
Water Division***

330.34 Distribution - Lampeter Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1969	108,318.00	60.00	1,805.29	9.90	17,870.84
1986	41,866.00	60.00	697.76	21.51	15,006.07
<i>Total</i>	150,184.00	60.00	2,503.05	13.13	32,876.91

Composite Average Remaining Life ... 13.13 Years

***City of Lancaster - Bureau of Water
Water Division***

330.35 Distribution - Neffsville Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1976	1,296.00	60.00	21.60	14.17	306.02
1977	247,976.00	60.00	4,132.91	14.85	61,373.08
1978	72,828.00	60.00	1,213.79	15.54	18,865.10
1979	2,122.00	60.00	35.37	16.24	574.44
1986	60,056.00	60.00	1,000.93	21.51	21,525.93
1998	2,265.65	60.00	37.76	31.87	1,203.32
2014	18,299.16	60.00	304.98	47.30	14,425.24
<i>Total</i>	404,842.81	60.00	6,747.35	17.53	118,273.11

Composite Average Remaining Life ... 17.53 Years

***City of Lancaster - Bureau of Water
Water Division***

330.36 Distribution - South Tank

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 60

Survivor Curve: R4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2022	10,789,245.24	60.00	179,819.88	55.26	9,936,274.52
<i>Total</i>	10,789,245.24	60.00	179,819.88	55.26	9,936,274.52

Composite Average Remaining Life ... 55.26 Years

***City of Lancaster - Bureau of Water
Water Division***

331.11 Mains - Cast 4 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	870.00	80.00	10.87	5.92	64.36
1901	489.00	80.00	6.11	6.21	37.95
1904	643.00	80.00	8.04	7.07	56.86
1905	708.00	80.00	8.85	7.37	65.19
1906	448.00	80.00	5.60	7.66	42.89
1907	644.00	80.00	8.05	7.95	64.03
1908	569.00	80.00	7.11	8.24	58.59
1909	668.00	80.00	8.35	8.53	71.23
1910	941.00	80.00	11.76	8.82	103.80
1918	608.00	80.00	7.60	11.21	85.19
1921	345.00	80.00	4.31	12.14	52.36
1922	877.00	80.00	10.96	12.46	136.60
1923	1,359.00	80.00	16.99	12.78	217.17
1924	78.00	80.00	0.97	13.11	12.78
1925	495.00	80.00	6.19	13.44	83.15
1926	720.00	80.00	9.00	13.78	123.98
1927	1,541.00	80.00	19.26	14.12	271.93
1928	823.00	80.00	10.29	14.46	148.77
1929	542.00	80.00	6.77	14.81	100.36
1935	58.00	80.00	0.72	17.05	12.36
1936	13.00	80.00	0.16	17.44	2.83
1937	166.00	80.00	2.07	17.84	37.02
1946	177.00	80.00	2.21	21.78	48.18
1947	89.00	80.00	1.11	22.25	24.75
1948	165.00	80.00	2.06	22.73	46.89
1953	1,458.00	80.00	18.22	25.25	460.19
1957	11,922.20	80.00	149.03	27.40	4,083.06

***City of Lancaster - Bureau of Water
Water Division***

331.11 Mains - Cast 4 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1961	23.00	80.00	0.29	29.66	8.53
1962	36.00	80.00	0.45	30.25	13.61
1963	36.00	80.00	0.45	30.84	13.88
1973	1,354.00	80.00	16.92	37.12	628.21
2009	21,479.43	80.00	268.49	64.44	17,300.82
<i>Total</i>	50,344.63	80.00	629.31	38.90	24,477.51

Composite Average Remaining Life ... 38.90 Years

***City of Lancaster - Bureau of Water
Water Division***

331.12 Mains - Cast 4 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1920	9,807.50	80.00	122.59	11.83	1,449.80
1922	5,521.00	80.00	69.01	12.46	859.93
1923	377.00	80.00	4.71	12.78	60.25
1924	1,445.00	80.00	18.06	13.11	236.75
1925	659.00	80.00	8.24	13.44	110.70
1926	276.00	80.00	3.45	13.78	47.52
1927	3,585.00	80.00	44.81	14.12	632.62
1928	1,114.00	80.00	13.92	14.46	201.37
1929	1,807.00	80.00	22.59	14.81	334.58
1930	2,262.00	80.00	28.27	15.17	428.94
1931	499.00	80.00	6.24	15.53	96.89
1932	24.00	80.00	0.30	15.90	4.77
1933	511.00	80.00	6.39	16.28	103.97
1935	1,321.00	80.00	16.51	17.05	281.49
1938	124.00	80.00	1.55	18.25	28.29
1939	1,265.00	80.00	15.81	18.67	295.17
1941	6,394.00	80.00	79.92	19.52	1,560.08
1945	125.00	80.00	1.56	21.31	33.30
1946	136.00	80.00	1.70	21.78	37.02
1948	815.00	80.00	10.19	22.73	231.59
1949	157.00	80.00	1.96	23.22	45.57
1950	438.00	80.00	5.47	23.72	129.85
1951	1,387.00	80.00	17.34	24.22	419.90
1952	1,364.00	80.00	17.05	24.73	421.68
1954	1,461.00	80.00	18.26	25.78	470.73
1955	3,840.00	80.00	48.00	26.31	1,262.78
1956	26,801.00	80.00	335.01	26.85	8,995.22

***City of Lancaster - Bureau of Water
Water Division***

331.12 Mains - Cast 4 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1958	194.00	80.00	2.42	27.95	67.79
1959	276.00	80.00	3.45	28.51	98.37
1960	1,407.00	80.00	17.59	29.09	511.54
1962	3,083.00	80.00	38.54	30.25	1,165.58
1963	830.00	80.00	10.37	30.84	319.92
1964	999.00	80.00	12.49	31.44	392.54
1965	757.00	80.00	9.46	32.04	303.17
1966	1,950.00	80.00	24.37	32.65	795.85
1967	50.00	80.00	0.62	33.27	20.79
1974	5,225.00	80.00	65.31	37.78	2,467.52
1994	8,907.00	80.00	111.34	52.26	5,818.87
2001	21,006.03	80.00	262.57	57.82	15,182.02
2004	250.00	80.00	3.12	60.27	188.34
2009	34,614.06	80.00	432.67	64.44	27,880.24
2014	82,673.25	80.00	1,033.41	68.71	71,001.03
2017	46,595.91	80.00	582.45	71.31	41,535.85
2018	125,985.00	80.00	1,574.81	72.19	113,683.07
2024	123,563.50	80.00	1,544.54	77.52	119,730.57
<i>Total</i>	531,881.25	80.00	6,648.50	63.16	419,943.84

Composite Average Remaining Life ... 63.16 Years

***City of Lancaster - Bureau of Water
Water Division***

331.21 Mains - Cast 6 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	142,363.00	110.00	1,294.21	15.48	20,040.75
1901	5,445.00	110.00	49.50	15.82	783.32
1902	4,831.00	110.00	43.92	16.17	710.21
1903	6,172.00	110.00	56.11	16.53	927.35
1904	8,652.00	110.00	78.65	16.89	1,328.28
1905	4,654.00	110.00	42.31	17.26	730.06
1906	3,635.00	110.00	33.05	17.63	582.62
1907	9,232.00	110.00	83.93	18.01	1,511.92
1908	3,434.00	110.00	31.22	18.41	574.61
1909	3,976.00	110.00	36.15	18.81	679.76
1910	5,799.00	110.00	52.72	19.21	1,012.96
1911	20,249.00	110.00	184.08	19.63	3,613.74
1912	5,795.00	110.00	52.68	20.06	1,056.59
1913	1,581.00	110.00	14.37	20.49	294.49
1914	1,762.00	110.00	16.02	20.93	335.28
1915	2,213.00	110.00	20.12	21.38	430.10
1916	2,741.00	110.00	24.92	21.84	544.17
1917	1,990.00	110.00	18.09	22.31	403.54
1919	1,966.00	110.00	17.87	23.27	415.88
1922	3,521.00	110.00	32.01	24.78	793.08
1923	7,893.00	110.00	71.75	25.30	1,815.15
1924	22,098.00	110.00	200.89	25.82	5,187.99
1925	6,175.00	110.00	56.14	26.36	1,479.52
1926	3,560.00	110.00	32.36	26.90	870.64
1927	18,104.00	110.00	164.58	27.46	4,518.82
1928	14,043.00	110.00	127.66	28.02	3,577.01
1929	6,022.00	110.00	54.75	28.59	1,565.16

***City of Lancaster - Bureau of Water
Water Division***

331.21 Mains - Cast 6 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1930	435.00	110.00	3.95	29.17	115.35
1931	803.00	110.00	7.30	29.76	217.21
1932	331.00	110.00	3.01	30.35	91.32
1933	38,890.00	110.00	353.55	30.95	10,942.86
1934	242.00	110.00	2.20	31.56	69.44
1936	1,537.00	110.00	13.97	32.80	458.27
1937	285.00	110.00	2.59	33.43	86.62
1938	1,212.00	110.00	11.02	34.07	375.40
1939	234.00	110.00	2.13	34.72	73.85
1940	1,450.00	110.00	13.18	35.37	466.27
1941	2,617.00	110.00	23.79	36.03	857.26
1943	1,610.00	110.00	14.64	37.37	547.03
1944	1,163.00	110.00	10.57	38.05	402.34
1945	367.00	110.00	3.34	38.74	129.26
1946	7,430.00	110.00	67.55	39.43	2,663.62
1947	8,357.00	110.00	75.97	40.13	3,048.64
1948	18,612.00	110.00	169.20	40.83	6,909.18
1949	13,455.00	110.00	122.32	41.55	5,081.89
1950	19,728.00	110.00	179.35	42.26	7,579.93
1951	11,440.00	110.00	104.00	42.99	4,470.75
1952	8,078.00	110.00	73.44	43.72	3,210.43
1953	15,962.00	110.00	145.11	44.45	6,450.36
1955	10,577.00	110.00	96.15	45.94	4,417.08
1956	20,029.00	110.00	182.08	46.69	8,501.05
1957	21,331.00	110.00	193.92	47.44	9,200.27
1958	15,224.00	110.00	138.40	48.20	6,670.95
1959	30,629.00	110.00	278.45	48.97	13,634.85

***City of Lancaster - Bureau of Water
Water Division***

331.21 Mains - Cast 6 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1960	3,398.00	110.00	30.89	49.74	1,536.51
1961	19,125.00	110.00	173.86	50.52	8,783.11
1962	21,473.00	110.00	195.21	51.30	10,014.09
1963	25,304.00	110.00	230.04	52.09	11,981.73
1964	148,108.94	110.00	1,346.45	52.88	71,197.27
1965	10,896.00	110.00	99.05	53.67	5,316.70
1967	946.00	110.00	8.60	55.28	475.42
1969	21,707.00	110.00	197.34	56.90	11,229.01
1973	220,246.00	110.00	2,002.24	60.21	120,556.89
1974	173,856.00	110.00	1,580.51	61.05	96,488.67
1975	29,336.00	110.00	266.69	61.89	16,505.87
1976	105,250.00	110.00	956.82	62.74	60,028.80
1977	18,631.00	110.00	169.37	63.59	10,770.19
1978	5,535.00	110.00	50.32	64.44	3,242.69
1979	12,441.00	110.00	113.10	65.30	7,385.73
1980	103,816.00	110.00	943.78	66.16	62,442.83
1986	199,065.00	110.00	1,809.68	71.43	129,261.63
1987	773,351.00	110.00	7,030.47	72.32	508,433.48
1988	350,000.00	110.00	3,181.82	73.21	232,950.67
1990	150,558.00	110.00	1,368.71	75.01	102,670.47
1991	575.00	110.00	5.23	75.91	396.83
1992	251,927.00	110.00	2,290.25	76.82	175,945.61
1993	29,404.00	110.00	267.31	77.74	20,779.60
1995	115,972.90	110.00	1,054.30	79.57	83,891.10
1996	77,764.40	110.00	706.95	80.49	56,903.98
1997	138,770.86	110.00	1,261.55	81.42	102,712.18
1999	45,000.00	110.00	409.09	83.28	34,067.41

***City of Lancaster - Bureau of Water
Water Division***

331.21 Mains - Cast 6 Inch Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2000	13,328.50	110.00	121.17	84.21	10,203.52
2001	38,848.69	110.00	353.17	85.15	30,070.99
2002	31,000.60	110.00	281.82	86.08	24,260.25
2003	729,328.77	110.00	6,630.27	87.03	577,000.56
2004	12,007.50	110.00	109.16	87.97	9,602.73
2005	786,917.50	110.00	7,153.80	88.92	636,096.33
2009	321,889.74	110.00	2,926.27	92.73	271,351.95
2010	198,909.80	110.00	1,808.27	93.69	169,413.63
2012	751,480.84	110.00	6,831.65	95.61	653,183.26
2013	520,377.90	110.00	4,730.71	96.57	456,866.30
2014	1,021,359.55	110.00	9,285.09	97.54	905,679.59
2015	650,355.76	110.00	5,912.33	98.51	582,421.83
2016	128,898.37	110.00	1,171.80	99.48	116,570.94
2017	1,447,004.13	110.00	13,154.59	100.45	1,321,400.97
2018	996,404.77	110.00	9,058.23	101.43	918,731.69
2019	2,000,957.06	110.00	18,190.53	102.40	1,862,709.54
2022	11,983,043.96	110.00	108,936.85	105.33	11,474,651.74
2024	2,947,461.60	110.00	26,795.13	107.29	2,874,959.19
<i>Total</i>	28,201,966.14	110.00	256,381.73	97.49	24,993,597.97

Composite Average Remaining Life ... 97.49 Years

***City of Lancaster - Bureau of Water
Water Division***

331.22 Mains - Cast 6 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1920	3,993.77	110.00	36.31	23.76	862.76
1922	8,004.27	110.00	72.77	24.78	1,802.92
1923	3,991.79	110.00	36.29	25.30	917.99
1924	7,563.39	110.00	68.76	25.82	1,775.67
1925	7,655.69	110.00	69.60	26.36	1,834.29
1926	4,750.43	110.00	43.19	26.90	1,161.78
1927	19,783.77	110.00	179.85	27.46	4,938.10
1928	23,395.18	110.00	212.68	28.02	5,959.18
1929	14,462.26	110.00	131.48	28.59	3,758.84
1930	33,929.60	110.00	308.45	29.17	8,997.06
1931	8,994.72	110.00	81.77	29.76	2,433.09
1932	34.21	110.00	0.31	30.35	9.44
1933	45,438.16	110.00	413.07	30.95	12,785.38
1934	875.28	110.00	7.96	31.56	251.14
1935	5,459.51	110.00	49.63	32.18	1,597.09
1936	7,555.25	110.00	68.68	32.80	2,252.64
1937	2,311.48	110.00	21.01	33.43	702.49
1939	37,141.99	110.00	337.65	34.72	11,722.65
1940	14,129.28	110.00	128.45	35.37	4,543.46
1941	80,315.94	110.00	730.15	36.03	26,309.23
1944	1,225.11	110.00	11.14	38.05	423.83
1945	1,826.45	110.00	16.60	38.74	643.27
1946	1,037.63	110.00	9.43	39.43	371.99
1947	1,875.65	110.00	17.05	40.13	684.24
1948	27,073.16	110.00	246.12	40.83	10,050.14
1949	17,076.53	110.00	155.24	41.55	6,449.73
1950	31,884.69	110.00	289.86	42.26	12,250.79

***City of Lancaster - Bureau of Water
Water Division***

331.22 Mains - Cast 6 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1951	24,062.61	110.00	218.75	42.99	9,403.66
1952	120,287.49	110.00	1,093.52	43.72	47,805.66
1953	87,368.38	110.00	794.26	44.45	35,306.18
1954	112,309.41	110.00	1,021.00	45.19	46,140.67
1955	232,980.17	110.00	2,118.00	45.94	97,295.37
1956	896,517.22	110.00	8,150.16	46.69	380,515.32
1957	230,307.94	110.00	2,093.71	47.44	99,334.08
1958	241,427.13	110.00	2,194.79	48.20	105,790.11
1959	195,140.75	110.00	1,774.01	48.97	86,869.16
1960	195,600.68	110.00	1,778.19	49.74	88,447.13
1961	35,622.45	110.00	323.84	50.52	16,359.52
1962	132,849.05	110.00	1,207.72	51.30	61,955.14
1963	326,186.55	110.00	2,965.33	52.09	154,453.02
1964	72,789.09	110.00	661.72	52.88	34,990.35
1965	130,145.69	110.00	1,183.14	53.67	63,504.52
1966	141,864.75	110.00	1,289.68	54.48	70,256.08
1967	82,324.14	110.00	748.40	55.28	41,372.70
1968	65,267.66	110.00	593.34	56.09	33,281.70
1969	847,600.15	110.00	7,705.46	56.90	438,462.66
1970	50,042.30	110.00	454.93	57.72	26,260.06
1971	140,476.29	110.00	1,277.06	58.55	74,769.36
1972	72,629.28	110.00	660.27	59.38	39,204.93
1973	102,282.62	110.00	929.84	60.21	55,986.83
1974	14,881.58	110.00	135.29	61.05	8,259.16
1975	417,381.14	110.00	3,794.38	61.89	234,839.13
1976	30,656.89	110.00	278.70	62.74	17,485.00
1977	401,537.68	110.00	3,650.35	63.59	232,120.51

***City of Lancaster - Bureau of Water
Water Division***

331.22 Mains - Cast 6 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1978	50,051.80	110.00	455.02	64.44	29,322.90
1979	5,607.41	110.00	50.98	65.30	3,328.90
1980	13,292.40	110.00	120.84	66.16	7,995.06
1981	13,439.81	110.00	122.18	67.03	8,189.76
1982	22,220.51	110.00	202.00	67.90	13,716.53
1983	527,845.91	110.00	4,798.60	68.78	330,036.96
1984	25,223.07	110.00	229.30	69.66	15,972.47
1985	67,028.73	110.00	609.35	70.54	42,984.13
1986	177,873.88	110.00	1,617.04	71.43	115,501.30
1987	68,368.47	110.00	621.53	72.32	44,948.31
1988	242,604.94	110.00	2,205.50	73.21	161,471.38
1989	161,776.03	110.00	1,470.69	74.11	108,994.52
1990	2,402,133.50	110.00	21,837.60	75.01	1,638,094.10
1991	134,615.76	110.00	1,223.78	75.91	92,903.13
1992	79,585.18	110.00	723.50	76.82	55,582.22
1993	1,784,057.38	110.00	16,218.72	77.74	1,260,780.60
1994	165,403.22	110.00	1,503.67	78.65	118,265.96
1995	1,050,621.40	110.00	9,551.11	79.57	759,986.05
1996	41,770.43	110.00	379.73	80.49	30,565.45
1997	854,505.61	110.00	7,768.24	81.42	632,468.01
1998	355,102.95	110.00	3,228.21	82.35	265,827.19
1999	240,750.27	110.00	2,188.64	83.28	182,260.87
2000	500,404.88	110.00	4,549.14	84.21	383,080.61
2001	1,406,508.59	110.00	12,786.45	85.15	1,088,713.96
2002	341,009.89	110.00	3,100.09	86.08	266,865.30
2003	410,119.20	110.00	3,728.36	87.03	324,461.36
2004	584,341.68	110.00	5,312.20	87.97	467,314.42

***City of Lancaster - Bureau of Water
Water Division***

331.22 Mains - Cast 6 Inch Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2005	1,233,497.52	110.00	11,213.62	88.92	997,084.50
2006	857,724.94	110.00	7,797.51	89.87	700,737.58
2007	289,363.62	110.00	2,630.58	90.82	238,906.34
2008	548,068.69	110.00	4,982.45	91.77	457,254.64
2009	598,149.32	110.00	5,437.73	92.73	504,237.82
2010	882,872.84	110.00	8,026.12	93.69	751,952.35
2011	3,122,803.72	110.00	28,389.15	94.65	2,686,996.94
2012	2,466,852.51	110.00	22,425.95	95.61	2,144,175.46
2013	1,877,246.19	110.00	17,065.89	96.57	1,648,130.18
2014	1,842,309.96	110.00	16,748.29	97.54	1,633,648.54
2015	2,663,844.40	110.00	24,216.79	98.51	2,385,588.38
2016	1,839,428.66	110.00	16,722.09	99.48	1,663,511.57
2017	4,114,259.25	110.00	37,402.39	100.45	3,757,132.43
2018	1,880,836.30	110.00	17,098.53	101.43	1,734,218.83
2019	3,157,993.81	110.00	28,709.06	102.40	2,939,805.81
2020	1,177,698.49	110.00	10,706.36	103.38	1,106,783.50
2021	364,584.72	110.00	3,314.41	104.35	345,871.89
2022	4,007,668.77	110.00	36,433.38	105.33	3,837,639.55
2023	261,773.66	110.00	2,379.76	106.31	253,000.61
2025	222,808.76	110.00	2,025.54	108.28	219,318.97
2026	24,603,714.51	110.00	223,670.32	109.26	24,438,443.90
2027	6,074,805.13	110.00	55,225.55	109.88	6,068,008.73
<i>Total</i>	81,626,892.95	110.00	742,063.29	96.61	71,688,037.19

Composite Average Remaining Life ... 96.61 Years

***City of Lancaster - Bureau of Water
Water Division***

331.23 Mains - Cast 6 Inch Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	43,085.00	110.00	391.68	15.48	6,065.17
1905	65,940.00	110.00	599.46	17.26	10,343.76
1908	3,150.00	110.00	28.64	18.41	527.09
1910	12,341.00	110.00	112.19	19.21	2,155.70
1911	6,986.00	110.00	63.51	19.63	1,246.76
1913	195.00	110.00	1.77	20.49	36.32
1915	193.00	110.00	1.75	21.38	37.51
1916	21,427.00	110.00	194.79	21.84	4,253.89
1921	1,348.00	110.00	12.25	24.27	297.36
1922	5,615.00	110.00	51.05	24.78	1,264.75
1924	1,728.00	110.00	15.71	25.82	405.69
1928	10,291.00	110.00	93.55	28.02	2,621.31
1933	208,167.00	110.00	1,892.43	30.95	58,574.01
1940	3,788.00	110.00	34.44	35.37	1,218.08
1949	19,805.00	110.00	180.05	41.55	7,480.26
1951	9,969.00	110.00	90.63	42.99	3,895.88
1953	80,264.00	110.00	729.67	44.45	32,435.25
1954	47,765.00	110.00	434.23	45.19	19,623.55
1955	7,510.00	110.00	68.27	45.94	3,136.27
1956	127,662.00	110.00	1,160.56	46.69	54,184.51
1957	36,851.00	110.00	335.01	47.44	15,894.20
1974	21,478.00	110.00	195.25	61.05	11,920.12
1975	221.00	110.00	2.01	61.89	124.35
1977	7,418.00	110.00	67.44	63.59	4,288.19
1980	19,359.00	110.00	175.99	66.16	11,643.97
1981	1,189,236.00	110.00	10,811.25	67.03	724,679.66
1982	183,288.00	110.00	1,666.26	67.90	113,142.10

***City of Lancaster - Bureau of Water
Water Division***

331.23 Mains - Cast 6 Inch Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 110

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1983	138,930.00	110.00	1,263.00	68.78	86,866.33
1987	106,439.00	110.00	967.63	72.32	69,977.48
1989	5,088.00	110.00	46.25	74.11	3,427.97
1991	279,780.00	110.00	2,543.46	75.91	193,086.14
1993	726,108.00	110.00	6,600.99	77.74	513,135.34
1995	37,294.69	110.00	339.04	79.57	26,977.79
1996	140,326.04	110.00	1,275.69	80.49	102,683.37
1997	81,861.61	110.00	744.20	81.42	60,590.42
1999	250,493.98	110.00	2,277.22	83.28	189,637.38
2000	142,198.42	110.00	1,292.71	84.21	108,858.76
<i>Total</i>	4,043,599.74	110.00	36,760.03	66.56	2,446,736.68

Composite Average Remaining Life ... 66.56 Years

***City of Lancaster - Bureau of Water
Water Division***

331.31 Mains - Manholes Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	6,910.00	80.00	86.37	5.68	491.02
1901	1,170.00	80.00	14.62	5.91	86.50
1902	623.00	80.00	7.79	6.14	47.83
1903	998.00	80.00	12.47	6.37	79.45
1904	1,268.00	80.00	15.85	6.57	104.17
1905	1,556.00	80.00	19.45	6.79	132.12
1906	1,638.00	80.00	20.47	7.01	143.62
1907	1,302.00	80.00	16.27	7.24	117.80
1908	1,468.00	80.00	18.35	7.44	136.61
1909	670.00	80.00	8.37	7.67	64.21
1910	132.00	80.00	1.65	7.89	13.02
1911	854.00	80.00	10.67	8.12	86.69
1913	114.00	80.00	1.42	8.56	12.20
1914	268.00	80.00	3.35	8.80	29.47
1915	350.00	80.00	4.37	9.03	39.51
1916	365.00	80.00	4.56	9.26	42.23
1917	299.00	80.00	3.74	9.49	35.48
1918	255.00	80.00	3.19	9.73	31.03
1919	331.00	80.00	4.14	9.98	41.28
1920	101.00	80.00	1.26	10.21	12.90
1921	172.00	80.00	2.15	10.46	22.49
1922	1,032.00	80.00	12.90	10.71	138.21
1923	1,352.00	80.00	16.90	10.97	185.41
1924	2,237.00	80.00	27.96	11.22	313.82
1925	1,037.00	80.00	12.96	11.49	148.90
1926	821.00	80.00	10.26	11.76	120.65
1927	1,884.00	80.00	23.55	12.03	283.34

***City of Lancaster - Bureau of Water
Water Division***

331.31 Mains - Manholes Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1928	3,783.00	80.00	47.29	12.31	581.91
1929	2,604.00	80.00	32.55	12.59	409.87
1930	935.00	80.00	11.69	12.89	150.60
1931	1,533.00	80.00	19.16	13.19	252.68
1932	617.00	80.00	7.71	13.49	104.04
1933	2,725.00	80.00	34.06	13.81	470.26
1934	272.00	80.00	3.40	14.13	48.04
1935	353.00	80.00	4.41	14.46	63.82
1936	81.00	80.00	1.01	14.80	14.99
1937	43.00	80.00	0.54	15.15	8.15
1938	119.00	80.00	1.49	15.52	23.08
1939	144.00	80.00	1.80	15.89	28.60
1940	14.00	80.00	0.17	16.27	2.85
1941	71.00	80.00	0.89	16.66	14.78
1944	109.00	80.00	1.36	17.90	24.38
1945	148.00	80.00	1.85	18.33	33.91
1946	772.00	80.00	9.65	18.78	181.19
1947	599.00	80.00	7.49	19.23	143.99
1948	1,128.00	80.00	14.10	19.70	277.77
1949	744.00	80.00	9.30	20.18	187.65
1950	3,206.00	80.00	40.07	20.67	828.18
1951	943.00	80.00	11.79	21.16	249.47
1952	1,345.00	80.00	16.81	21.68	364.45
1953	1,631.00	80.00	20.39	22.20	452.56
1954	2,085.00	80.00	26.06	22.73	592.36
1955	278.00	80.00	3.47	23.27	80.86
2002	14,343.12	80.00	179.29	57.47	10,304.02

***City of Lancaster - Bureau of Water
Water Division***

331.31 Mains - Manholes Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2004	125,686.92	80.00	1,571.08	59.21	93,025.90
2009	3,807.55	80.00	47.59	63.63	3,028.47
2024	44,113.66	80.00	551.42	77.41	42,684.03
<i>Total</i>	243,440.25	80.00	3,043.00	51.79	157,592.82

Composite Average Remaining Life ... 51.79 Years

***City of Lancaster - Bureau of Water
Water Division***

331.32 Mains - Manholes Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1920	178.00	80.00	2.22	10.21	22.73
1922	430.00	80.00	5.37	10.71	57.59
1923	55.00	80.00	0.69	10.97	7.54
1924	119.00	80.00	1.49	11.22	16.69
1925	1,103.00	80.00	13.79	11.49	158.37
1926	511.00	80.00	6.39	11.76	75.09
1927	1,508.00	80.00	18.85	12.03	226.79
1928	1,923.00	80.00	24.04	12.31	295.80
1929	1,636.00	80.00	20.45	12.59	257.51
1930	500.00	80.00	6.25	12.89	80.53
1931	641.00	80.00	8.01	13.19	105.65
1932	26.00	80.00	0.32	13.49	4.38
1933	79.00	80.00	0.99	13.81	13.63
1934	66.00	80.00	0.82	14.13	11.66
1936	796.00	80.00	9.95	14.80	147.29
1937	107.00	80.00	1.34	15.15	20.27
1938	560.00	80.00	7.00	15.52	108.61
1940	471.00	80.00	5.89	16.27	95.77
1941	62.00	80.00	0.77	16.66	12.91
1944	133.00	80.00	1.66	17.90	29.75
1945	218.00	80.00	2.72	18.33	49.95
1946	184.00	80.00	2.30	18.78	43.18
1947	178.00	80.00	2.22	19.23	42.79
1948	2,092.00	80.00	26.15	19.70	515.15
1949	2,896.00	80.00	36.20	20.18	730.43
1950	3,324.00	80.00	41.55	20.67	858.67
1951	905.00	80.00	11.31	21.16	239.42

***City of Lancaster - Bureau of Water
Water Division***

331.32 Mains - Manholes Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1952	2,925.00	80.00	36.56	21.68	792.57
1953	1,129.00	80.00	14.11	22.20	313.26
1954	4,399.00	80.00	54.99	22.73	1,249.77
1955	2,642.00	80.00	33.02	23.27	768.45
1956	3,110.00	80.00	38.87	23.82	926.13
1969	986.00	80.00	12.32	31.84	392.46
1997	1,500.00	80.00	18.75	53.20	997.56
2000	26,840.00	80.00	335.50	55.75	18,704.42
2001	117,362.28	80.00	1,467.03	56.61	83,047.17
2002	21,514.68	80.00	268.93	57.47	15,456.03
2003	61,890.54	80.00	773.63	58.34	45,132.33
2009	44,871.12	80.00	560.89	63.63	35,689.87
2010	127,176.14	80.00	1,589.70	64.53	102,577.37
2011	183,846.52	80.00	2,298.08	65.43	150,351.86
2012	43,280.66	80.00	541.01	66.33	35,884.44
2013	98,116.51	80.00	1,226.45	67.24	82,460.82
2014	50,051.57	80.00	625.64	68.14	42,634.19
2015	39,644.85	80.00	495.56	69.06	34,221.91
2016	27,768.60	80.00	347.11	69.97	24,288.51
2017	81,665.58	80.00	1,020.82	70.89	72,369.16
2018	57,181.40	80.00	714.77	71.82	51,331.17
2019	56,342.70	80.00	704.28	72.74	51,229.59
2022	64,546.56	80.00	806.83	75.53	60,942.13
<i>Total</i>	1,139,491.71	80.00	14,243.63	64.31	915,989.39

Composite Average Remaining Life ... 64.31 Years

***City of Lancaster - Bureau of Water
Water Division***

331.33 Mains - Manholes Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 80

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	267.00	80.00	3.34	5.68	18.97
1902	167.00	80.00	2.09	6.14	12.82
1905	2,769.00	80.00	34.61	6.79	235.11
1908	100.00	80.00	1.25	7.44	9.31
1910	285.00	80.00	3.56	7.89	28.12
1911	213.00	80.00	2.66	8.12	21.62
1916	1,162.00	80.00	14.52	9.26	134.44
1921	860.00	80.00	10.75	10.46	112.47
1922	141.00	80.00	1.76	10.71	18.88
1924	179.00	80.00	2.24	11.22	25.11
1927	198.00	80.00	2.47	12.03	29.78
1928	600.00	80.00	7.50	12.31	92.29
1933	3,811.00	80.00	47.64	13.81	657.68
1940	171.00	80.00	2.14	16.27	34.77
1950	312.00	80.00	3.90	20.67	80.60
1951	471.00	80.00	5.89	21.16	124.61
1953	2,923.00	80.00	36.54	22.20	811.05
1954	3,122.00	80.00	39.02	22.73	886.97
1955	278.00	80.00	3.47	23.27	80.86
1956	52,275.00	80.00	653.44	23.82	15,567.03
1957	50,466.00	80.00	630.82	24.38	15,382.57
1971	5,309.00	80.00	66.36	33.20	2,203.15
2000	3,000.00	80.00	37.50	55.75	2,090.66
<i>Total</i>	129,079.00	80.00	1,613.49	23.96	38,658.86

Composite Average Remaining Life ... 23.96 Years

***City of Lancaster - Bureau of Water
Water Division***

331.41 Mains - Valves Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	5,191.00	70.00	74.16	0.85	62.75
1901	555.00	70.00	7.93	1.14	9.06
1902	680.00	70.00	9.71	1.35	13.16
1903	192.00	70.00	2.74	1.64	4.50
1904	253.00	70.00	3.61	1.88	6.80
1905	346.00	70.00	4.94	2.16	10.69
1906	183.00	70.00	2.61	2.45	6.39
1907	93.00	70.00	1.33	2.69	3.57
1908	1,126.00	70.00	16.09	2.98	47.86
1909	358.00	70.00	5.11	3.23	16.54
1910	427.00	70.00	6.10	3.52	21.47
1911	1,676.00	70.00	23.94	3.78	90.49
1912	270.00	70.00	3.86	4.05	15.62
1913	123.00	70.00	1.76	4.32	7.59
1914	136.00	70.00	1.94	4.54	8.83
1915	188.00	70.00	2.69	4.79	12.87
1916	206.00	70.00	2.94	5.01	14.74
1917	117.00	70.00	1.67	5.24	8.76
1918	69.00	70.00	0.99	5.46	5.38
1919	130.00	70.00	1.86	5.68	10.55
1920	160.00	70.00	2.29	5.91	13.51
1921	42.00	70.00	0.60	6.11	3.67
1922	526.00	70.00	7.51	6.34	47.64
1923	538.00	70.00	7.69	6.55	50.32
1924	1,930.00	70.00	27.57	6.78	186.80
1925	964.00	70.00	13.77	6.99	96.27
1926	643.00	70.00	9.19	7.22	66.32

***City of Lancaster - Bureau of Water
Water Division***

331.41 Mains - Valves Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1927	1,574.00	70.00	22.49	7.45	167.61
1928	2,108.00	70.00	30.11	7.67	231.03
1929	1,505.00	70.00	21.50	7.91	170.05
1930	349.00	70.00	4.99	8.14	40.56
1931	465.00	70.00	6.64	8.38	55.64
1932	734.00	70.00	10.49	8.61	90.28
1933	3,851.36	70.00	55.02	8.86	487.24
1934	44.00	70.00	0.63	9.11	5.72
1936	121.00	70.00	1.73	9.61	16.61
1938	117.00	70.00	1.67	10.13	16.93
1940	60.00	70.00	0.86	10.67	9.15
1941	386.00	70.00	5.51	10.96	60.43
1944	69.00	70.00	0.99	11.85	11.68
1945	153.00	70.00	2.19	12.17	26.60
1946	684.00	70.00	9.77	12.50	122.11
1947	357.00	70.00	5.10	12.83	65.45
1948	1,144.00	70.00	16.34	13.18	215.45
1949	1,107.00	70.00	15.81	13.54	214.14
1950	1,118.00	70.00	15.97	13.91	222.19
1951	522.00	70.00	7.46	14.29	106.59
1952	1,534.00	70.00	21.91	14.69	321.86
1953	1,026.00	70.00	14.66	15.09	221.23
1954	879.00	70.00	12.56	15.51	194.79
1955	998.00	70.00	14.26	15.94	227.31
1956	1,034.00	70.00	14.77	16.39	242.05
1957	207.95	70.00	2.97	16.84	50.03
1958	285.00	70.00	4.07	17.31	70.48

***City of Lancaster - Bureau of Water
Water Division***

331.41 Mains - Valves Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1959	595.21	70.00	8.50	17.79	151.27
1960	70.00	70.00	1.00	18.28	18.28
1961	788.00	70.00	11.26	18.79	211.51
1962	96.00	70.00	1.37	19.30	26.48
1963	1,650.00	70.00	23.57	19.84	467.59
1964	6,755.00	70.00	96.50	20.38	1,966.35
1965	893.00	70.00	12.76	20.93	267.03
1967	86.00	70.00	1.23	22.07	27.12
1973	25,946.00	70.00	370.66	25.75	9,542.69
1976	4,697.00	70.00	67.10	27.71	1,859.49
1980	2,249.00	70.00	32.13	30.46	978.66
1981	1,063.00	70.00	15.19	31.17	473.33
1990	4,607.00	70.00	65.81	37.87	2,492.23
1995	30,655.00	70.00	437.93	41.83	18,319.69
1996	19,448.00	70.00	277.83	42.64	11,847.54
2000	2,460.50	70.00	35.15	45.95	1,615.12
2001	6,544.55	70.00	93.49	46.79	4,374.48
2002	12,688.76	70.00	181.27	47.64	8,634.94
2003	5,357.84	70.00	76.54	48.49	3,711.25
2004	20,210.66	70.00	288.72	49.34	14,246.53
2006	6,349.00	70.00	90.70	51.07	4,632.32
2008	3,920.00	70.00	56.00	52.82	2,958.06
2009	3,144.00	70.00	44.91	53.70	2,412.12
2010	35,101.80	70.00	501.45	54.59	27,374.69
2012	100,197.45	70.00	1,431.39	56.38	80,696.79
2013	69,383.72	70.00	991.20	57.27	56,770.61
2014	136,181.27	70.00	1,945.45	58.18	113,184.14

***City of Lancaster - Bureau of Water
Water Division***

331.41 Mains - Valves Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2015	86,714.10	70.00	1,238.77	59.09	73,193.68
2016	17,186.45	70.00	245.52	60.00	14,730.57
2017	192,933.89	70.00	2,756.20	60.91	167,884.48
2018	144,991.98	70.00	2,071.31	61.83	128,067.57
2019	266,794.28	70.00	3,811.35	62.75	239,169.05
2022	605,784.41	70.00	8,654.06	65.54	567,155.91
2023	35,575.00	70.00	508.21	66.47	33,781.65
2024	77,095.12	70.00	1,101.36	67.41	74,240.73
<i>Total</i>	1,967,767.30	70.00	28,110.95	59.48	1,671,989.35

Composite Average Remaining Life ... 59.48 Years

***City of Lancaster - Bureau of Water
Water Division***

331.42 Mains - Valves Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1920	89.61	70.00	1.28	5.91	7.57
1922	218.55	70.00	3.12	6.34	19.79
1923	34.14	70.00	0.49	6.55	3.19
1924	44.43	70.00	0.63	6.78	4.30
1925	380.12	70.00	5.43	6.99	37.96
1926	198.96	70.00	2.84	7.22	20.52
1927	547.84	70.00	7.83	7.45	58.34
1928	482.12	70.00	6.89	7.67	52.84
1929	798.86	70.00	11.41	7.91	90.27
1930	568.85	70.00	8.13	8.14	66.11
1931	246.01	70.00	3.51	8.38	29.44
1932	37.97	70.00	0.54	8.61	4.67
1933	837.77	70.00	11.97	8.86	105.99
1934	24.44	70.00	0.35	9.11	3.18
1935	85.96	70.00	1.23	9.35	11.48
1936	397.61	70.00	5.68	9.61	54.57
1937	46.98	70.00	0.67	9.86	6.62
1938	306.92	70.00	4.38	10.13	44.40
1939	840.25	70.00	12.00	10.39	124.76
1940	508.00	70.00	7.26	10.67	77.45
1941	4,505.66	70.00	64.37	10.96	705.37
1944	53.73	70.00	0.77	11.85	9.10
1945	76.77	70.00	1.10	12.17	13.35
1946	57.75	70.00	0.82	12.50	10.31
1947	80.95	70.00	1.16	12.83	14.84
1948	1,323.04	70.00	18.90	13.18	249.16
1949	3,154.41	70.00	45.06	13.54	610.20

***City of Lancaster - Bureau of Water
Water Division***

331.42 Mains - Valves Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1950	1,197.88	70.00	17.11	13.91	238.06
1951	1,052.32	70.00	15.03	14.29	214.88
1952	3,408.88	70.00	48.70	14.69	715.25
1953	5,612.39	70.00	80.18	15.09	1,210.19
1954	5,460.45	70.00	78.01	15.51	1,210.03
1955	9,837.92	70.00	140.54	15.94	2,240.70
1956	36,944.54	70.00	527.78	16.39	8,648.32
1957	4,810.30	70.00	68.72	16.84	1,157.27
1958	5,791.40	70.00	82.73	17.31	1,432.19
1959	4,107.91	70.00	58.68	17.79	1,044.01
1960	5,058.93	70.00	72.27	18.28	1,321.45
1961	67.97	70.00	0.97	18.79	18.24
1962	3,583.27	70.00	51.19	19.30	988.21
1963	9,615.91	70.00	137.37	19.84	2,725.02
1965	678.98	70.00	9.70	20.93	203.03
1966	79.35	70.00	1.13	21.49	24.37
1967	501.26	70.00	7.16	22.07	158.06
1968	6,771.35	70.00	96.73	22.66	2,191.75
1969	73,726.95	70.00	1,053.24	23.25	24,490.63
1970	517.42	70.00	7.39	23.86	176.39
1971	2,280.55	70.00	32.58	24.48	797.51
1972	1,051.55	70.00	15.02	25.11	377.19
1974	343.90	70.00	4.91	26.39	129.67
1975	1,673.46	70.00	23.91	27.05	646.65
1980	6,834.07	70.00	97.63	30.46	2,973.87
1985	4,518.95	70.00	64.56	34.07	2,199.64
1986	1,093.75	70.00	15.62	34.82	544.06

***City of Lancaster - Bureau of Water
Water Division***

331.42 Mains - Valves Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1987	4,611.25	70.00	65.87	35.57	2,343.23
1988	9,076.81	70.00	129.67	36.33	4,711.02
1989	7,088.45	70.00	101.26	37.10	3,756.52
1991	5,786.21	70.00	82.66	38.65	3,194.75
1992	4,847.54	70.00	69.25	39.43	2,730.83
1993	10,416.18	70.00	148.80	40.23	5,986.07
1994	11,856.57	70.00	169.38	41.03	6,949.01
1995	44,228.01	70.00	631.83	41.83	26,431.04
1997	13,513.26	70.00	193.05	43.46	8,389.70
1998	18,254.75	70.00	260.78	44.28	11,548.65
1999	17,912.52	70.00	255.89	45.11	11,544.08
2000	60,268.64	70.00	860.98	45.95	39,561.43
2001	111,861.90	70.00	1,598.03	46.79	74,770.32
2002	22,307.20	70.00	318.67	47.64	15,180.47
2003	70,510.73	70.00	1,007.30	48.49	48,841.16
2004	4,301.27	70.00	61.45	49.34	3,031.97
2005	85,141.85	70.00	1,216.31	50.21	61,067.06
2006	9,041.09	70.00	129.16	51.07	6,596.51
2007	14,252.02	70.00	203.60	51.95	10,576.26
2008	6,840.67	70.00	97.72	52.82	5,162.01
2009	1,084,458.64	70.00	15,492.26	53.70	832,009.98
2010	1,063,170.15	70.00	15,188.14	54.59	829,129.89
2011	473,079.64	70.00	6,758.28	55.48	374,951.21
2012	375,218.59	70.00	5,360.26	56.38	302,192.69
2013	42,297.92	70.00	604.26	57.27	34,608.68
2014	342,708.70	70.00	4,895.84	58.18	284,834.97
2015	226,547.68	70.00	3,236.39	59.09	191,224.49

***City of Lancaster - Bureau of Water
Water Division***

331.42 Mains - Valves Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2016	45,469.08	70.00	649.56	60.00	38,971.72
2017	236,146.16	70.00	3,373.52	60.91	205,486.32
2018	104,935.83	70.00	1,499.08	61.83	92,687.04
2019	205,639.04	70.00	2,937.70	62.75	184,346.13
2022	47,630.92	70.00	680.44	65.54	44,593.68
2024	44,762.40	70.00	639.46	67.41	43,105.10
2026	3,588,510.05	70.00	51,264.42	69.29	3,552,178.68
2027	865,507.88	70.00	12,364.40	69.88	864,047.53
<i>Total</i>	9,490,768.91	70.00	135,582.38	61.12	8,287,252.63

Composite Average Remaining Life ... 61.12 Years

***City of Lancaster - Bureau of Water
Water Division***

331.43 Mains - Valves Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	546.00	70.00	7.80	0.85	6.60
1902	181.00	70.00	2.59	1.35	3.50
1905	3,096.00	70.00	44.23	2.16	95.62
1908	224.00	70.00	3.20	2.98	9.52
1910	563.00	70.00	8.04	3.52	28.31
1911	491.00	70.00	7.01	3.78	26.51
1916	1,541.00	70.00	22.01	5.01	110.28
1921	136.00	70.00	1.94	6.11	11.88
1922	205.00	70.00	2.93	6.34	18.57
1924	449.00	70.00	6.41	6.78	43.46
1927	1,198.00	70.00	17.11	7.45	127.57
1928	1,322.00	70.00	18.89	7.67	144.89
1933	7,740.12	70.00	110.57	8.86	979.21
1940	456.00	70.00	6.51	10.67	69.52
1950	1,711.00	70.00	24.44	13.91	340.04
1951	488.00	70.00	6.97	14.29	99.65
1953	2,659.00	70.00	37.99	15.09	573.35
1954	2,862.00	70.00	40.89	15.51	634.22
1955	327.00	70.00	4.67	15.94	74.48
1956	68,586.46	70.00	979.81	16.39	16,055.34
1957	69,794.00	70.00	997.06	16.84	16,791.20
1971	12,152.00	70.00	173.60	24.48	4,249.59
1997	45,800.00	70.00	654.29	43.46	28,434.89
2000	15,000.00	70.00	214.29	45.95	9,846.27
2024	16,160.00	70.00	230.86	67.41	15,561.69

***City of Lancaster - Bureau of Water
Water Division***

331.43 Mains - Valves Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
<i>Total</i>	253,687.58	70.00	3,624.11	26.03	94,336.16

Composite Average Remaining Life ... 26.03 Years

***City of Lancaster - Bureau of Water
Water Division***

331.51 Mains - Steel Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1931	1,141.00	70.00	16.30	5.59	91.13
1948	354.00	70.00	5.06	10.52	53.20
1956	4,942.00	70.00	70.60	13.77	972.45
2024	852,281.82	70.00	12,175.47	67.30	819,374.93
<i>Total</i>	858,718.82	70.00	12,267.43	66.88	820,491.71

Composite Average Remaining Life ... 66.88 Years

***City of Lancaster - Bureau of Water
Water Division***

331.52 Mains - Steel Joint

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1956	889,036.00	70.00	12,700.53	13.77	174,937.45
1957	921,269.00	70.00	13,161.00	14.24	187,397.95
1971	21,795.00	70.00	311.36	22.15	6,897.23
<i>Total</i>	1,832,100.00	70.00	26,172.89	14.11	369,232.62

Composite Average Remaining Life ... 14.11 Years

***City of Lancaster - Bureau of Water
Water Division***

331.61 Mains - Plastic Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 65

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1980	102,283.00	65.00	1,573.58	23.98	37,733.32
<i>Total</i>	102,283.00	65.00	1,573.58	23.98	37,733.32

Composite Average Remaining Life ... 23.98 Years

***City of Lancaster - Bureau of Water
Water Division***

331.70 Mains - Relining

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 55

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2008	127,575.52	55.00	2,319.55	38.02	88,192.70
2009	516,416.51	55.00	9,389.37	38.88	365,046.30
2010	755,410.12	55.00	13,734.70	39.74	545,849.07
2011	698,334.12	55.00	12,696.96	40.61	515,640.56
2012	209,717.10	55.00	3,813.03	41.49	158,194.65
2013	200,406.31	55.00	3,643.74	42.37	154,386.64
2014	231,709.63	55.00	4,212.89	43.26	182,243.16
2015	32,977.81	55.00	599.60	44.15	26,473.34
2016	222,586.53	55.00	4,047.02	45.05	182,317.96
2020	321,226.57	55.00	5,840.47	48.70	284,408.03
2021	248,276.10	55.00	4,514.10	49.62	223,984.57
2022	364,730.44	55.00	6,631.45	50.55	335,187.80
2023	383,283.62	55.00	6,968.78	51.48	358,727.44
2026	79,965.74	55.00	1,453.92	54.29	78,935.76
<i>Total</i>	4,392,616.12	55.00	79,865.60	43.82	3,499,587.98

Composite Average Remaining Life ... 43.82 Years

***City of Lancaster - Bureau of Water
Water Division***

333.01 Services - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1967	1,035.24	70.00	14.79	19.64	290.50
1968	4,692.12	70.00	67.03	20.25	1,357.49
1969	5,139.26	70.00	73.42	20.87	1,532.36
1970	6,617.26	70.00	94.53	21.51	2,033.30
1971	9,219.90	70.00	131.71	22.15	2,917.72
1972	12,950.05	70.00	185.00	22.81	4,220.04
1973	19,120.96	70.00	273.16	23.48	6,412.69
1974	16,674.34	70.00	238.21	24.16	5,753.92
1975	41,703.31	70.00	595.76	24.84	14,799.71
1976	16,861.56	70.00	240.88	25.54	6,151.24
1977	62,710.07	70.00	895.86	26.25	23,513.04
1978	53,680.66	70.00	766.87	26.96	20,675.27
1979	65,974.50	70.00	942.49	27.69	26,095.96
1981	42,365.74	70.00	605.23	29.17	17,651.63
1982	11,955.84	70.00	170.80	29.92	5,109.54
1983	4,324.88	70.00	61.78	30.67	1,895.13
1984	5,164.54	70.00	73.78	31.44	2,319.89
1985	5,531.05	70.00	79.02	32.22	2,545.69
1986	11,223.81	70.00	160.34	33.00	5,291.76
1987	16,986.50	70.00	242.66	33.79	8,200.46
1988	13,705.35	70.00	195.79	34.59	6,773.12
1989	43,140.40	70.00	616.29	35.40	21,816.21
1990	60,329.97	70.00	861.86	36.21	31,208.82
1991	51,664.35	70.00	738.06	37.03	27,333.54
1992	36,419.65	70.00	520.28	37.86	19,698.28
1993	52,809.65	70.00	754.42	38.70	29,194.33
1995	33,615.46	70.00	480.22	40.39	19,395.30

***City of Lancaster - Bureau of Water
Water Division***

333.01 Services - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1996	6,835.57	70.00	97.65	41.24	4,027.42
1999	5,156.83	70.00	73.67	43.85	3,230.17
2002	20,661.05	70.00	295.16	46.51	13,727.46
2004	36,579.08	70.00	522.56	48.31	25,244.57
2009	9,445.34	70.00	134.93	52.91	7,139.21
2012	99,676.25	70.00	1,423.95	55.72	79,347.72
2013	69,069.68	70.00	986.71	56.67	55,916.59
2014	135,647.56	70.00	1,937.82	57.62	111,659.11
2015	86,422.20	70.00	1,234.60	58.57	72,316.31
2016	17,136.95	70.00	244.81	59.53	14,574.39
2017	192,460.63	70.00	2,749.44	60.49	166,322.21
2018	132,578.16	70.00	1,893.98	61.46	116,397.16
2019	266,329.03	70.00	3,804.70	62.42	237,505.55
2026	1,708,961.67	70.00	24,413.77	69.26	1,690,934.95
<i>Total</i>	3,492,576.42	70.00	49,894.01	58.37	2,912,529.77

Composite Average Remaining Life ... 58.37 Years

***City of Lancaster - Bureau of Water
Water Division***

333.02 Services - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1941	5,323.01	70.00	76.04	8.27	629.25
1947	173.66	70.00	2.48	10.17	25.22
1948	192.74	70.00	2.75	10.52	28.97
1949	424.04	70.00	6.06	10.88	65.92
1955	5,525.35	70.00	78.93	13.32	1,051.53
1956	13,349.88	70.00	190.71	13.77	2,626.88
1957	101,934.63	70.00	1,456.21	14.24	20,734.81
1958	29,386.55	70.00	419.81	14.72	6,179.87
1959	39,522.62	70.00	564.61	15.21	8,589.35
1960	11,874.13	70.00	169.63	15.72	2,666.89
1961	11,527.88	70.00	164.68	16.24	2,674.69
1962	12,293.83	70.00	175.63	16.77	2,945.79
1963	14,219.33	70.00	203.13	17.32	3,519.00
1964	851.00	70.00	12.16	17.88	217.39
1965	14,567.25	70.00	208.10	18.46	3,841.16
1966	32,631.24	70.00	466.16	19.04	8,876.74
1967	34,822.36	70.00	497.46	19.64	9,771.46
1968	20,612.01	70.00	294.46	20.25	5,963.33
1969	22,275.48	70.00	318.22	20.87	6,641.82
1970	14,761.99	70.00	210.89	21.51	4,535.94
1971	18,530.95	70.00	264.73	22.15	5,864.29
1972	23,419.51	70.00	334.56	22.81	7,631.73
1973	36,051.17	70.00	515.02	23.48	12,090.65
1974	33,938.65	70.00	484.84	24.16	11,711.43
1975	107,401.74	70.00	1,534.31	24.84	38,114.82
1976	193,402.60	70.00	2,762.90	25.54	70,554.90
1977	110,791.36	70.00	1,582.74	26.25	41,541.04

***City of Lancaster - Bureau of Water
Water Division***

333.02 Services - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1978	128,320.01	70.00	1,833.15	26.96	49,422.86
1979	323,814.03	70.00	4,625.92	27.69	128,083.39
1980	111,263.80	70.00	1,589.48	28.42	45,174.70
1981	98,602.48	70.00	1,408.61	29.17	41,082.60
1982	128,893.00	70.00	1,841.33	29.92	55,084.76
1983	66,156.55	70.00	945.09	30.67	28,989.23
1984	140,910.37	70.00	2,013.01	31.44	63,296.28
1985	82,528.32	70.00	1,178.98	32.22	37,984.06
1986	165,560.40	70.00	2,365.15	33.00	78,057.78
1987	247,914.33	70.00	3,541.64	33.79	119,683.97
1988	210,275.09	70.00	3,003.93	34.59	103,916.94
1989	266,814.93	70.00	3,811.65	35.40	134,929.00
1990	143,709.44	70.00	2,052.99	36.21	74,341.19
1991	160,793.68	70.00	2,297.06	37.03	85,069.51
1992	22,874.18	70.00	326.77	37.86	12,371.95
1993	100,392.01	70.00	1,434.17	38.70	55,498.89
1994	19,221.29	70.00	274.59	39.54	10,856.86
1996	23,105.22	70.00	330.07	41.24	13,613.26
1997	51,053.96	70.00	729.34	42.10	30,707.83
1998	10,237.59	70.00	146.25	42.97	6,284.94
1999	35,318.94	70.00	504.56	43.85	22,123.34
2000	87,281.34	70.00	1,246.88	44.73	55,771.85
2001	186,846.30	70.00	2,669.24	45.62	121,757.70
2002	22,631.84	70.00	323.31	46.51	15,036.88
2003	29,267.90	70.00	418.11	47.41	19,821.36
2005	53,888.92	70.00	769.84	49.22	37,891.94
2010	80,449.30	70.00	1,149.28	53.84	61,880.10

***City of Lancaster - Bureau of Water
Water Division***

333.02 Services - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 70

Survivor Curve: R3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2011	73,449.47	70.00	1,049.28	54.78	57,479.65
2012	165,361.82	70.00	2,362.31	55.72	131,637.01
2013	23,964.31	70.00	342.35	56.67	19,400.73
2014	74,989.34	70.00	1,071.28	57.62	61,727.93
2015	226,772.60	70.00	3,239.61	58.57	189,758.62
2016	45,512.43	70.00	650.18	59.53	38,706.77
2017	236,363.85	70.00	3,376.63	60.49	204,262.86
2018	105,029.70	70.00	1,500.43	61.46	92,210.96
2019	190,287.71	70.00	2,718.40	62.42	169,693.81
2020	444,807.52	70.00	6,354.40	63.39	402,827.47
2021	263,837.12	70.00	3,769.11	64.37	242,603.38
2026	6,911,378.82	70.00	98,734.10	69.26	6,838,475.22
2027	1,698,515.75	70.00	24,264.54	69.88	1,695,529.59
<i>Total</i>	14,368,200.62	70.00	205,260.24	58.13	11,932,142.05

Composite Average Remaining Life ... 58.13 Years

***City of Lancaster - Bureau of Water
Water Division***

334.01 Meters - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 25

Survivor Curve: S2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1987	16,028.00	25.00	641.12	2.04	1,309.92
1988	13,087.00	25.00	523.48	2.27	1,185.85
1989	2,981.00	25.00	119.24	2.49	297.49
1990	3,010.00	25.00	120.40	2.73	328.97
1991	78,718.00	25.00	3,148.72	2.98	9,377.05
1992	187,732.00	25.00	7,509.28	3.23	24,275.01
1993	147,999.00	25.00	5,919.96	3.50	20,700.84
1994	39,485.08	25.00	1,579.40	3.77	5,956.11
1995	26,877.15	25.00	1,075.09	4.06	4,361.01
1996	52,645.66	25.00	2,105.83	4.35	9,167.86
1997	20,552.48	25.00	822.10	4.66	3,833.84
1999	9,100.00	25.00	364.00	5.33	1,938.56
2000	3,559.72	25.00	142.39	5.68	808.81
2005	940.50	25.00	37.62	7.74	291.28
2006	6,732.00	25.00	269.28	8.22	2,214.48
2007	7,128.00	25.00	285.12	8.73	2,489.58
2008	4,565.00	25.00	182.60	9.27	1,692.39
2009	9,836.32	25.00	393.45	9.84	3,869.70
2016	31,734.32	25.00	1,269.37	14.77	18,744.14
2021	3,345,438.42	25.00	133,817.55	19.30	2,582,227.30
2024	37,952.48	25.00	1,518.10	22.25	33,780.72
<i>Total</i>	4,046,102.13	25.00	161,844.10	16.86	2,728,850.90

Composite Average Remaining Life ... 16.86 Years

***City of Lancaster - Bureau of Water
Water Division***

334.02 Meters - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 25

Survivor Curve: S2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1973	956.00	0.00	0.00	0.00	0.00
1974	128.00	0.00	0.00	0.00	0.00
1975	132.00	0.00	0.00	0.00	0.00
1976	106.00	0.00	0.00	0.00	0.00
1977	1,861.00	0.00	0.00	0.00	0.00
1978	10,256.00	25.00	410.24	0.50	205.12
1979	921.00	25.00	36.84	0.57	20.85
1980	439.00	25.00	17.56	0.70	12.32
1981	12,200.00	25.00	488.00	0.86	421.29
1985	27,880.00	25.00	1,115.20	1.62	1,806.74
1986	30,797.00	25.00	1,231.88	1.83	2,252.08
1987	115,115.00	25.00	4,604.60	2.04	9,408.03
1988	90,663.00	25.00	3,626.52	2.27	8,215.22
1989	22,564.00	25.00	902.56	2.49	2,251.80
1990	22,315.00	25.00	892.60	2.73	2,438.87
1991	119,884.00	25.00	4,795.36	2.98	14,280.83
1992	194,882.00	25.00	7,795.28	3.23	25,199.55
1993	563,258.00	25.00	22,530.32	3.50	78,783.74
1994	272,399.32	25.00	10,895.97	3.77	41,089.99
1995	179,870.15	25.00	7,194.81	4.06	29,185.20
1996	352,320.94	25.00	14,092.84	4.35	61,354.12
1997	137,543.52	25.00	5,501.74	4.66	25,657.21
1999	67,875.00	25.00	2,715.00	5.33	14,459.28
2000	65,761.00	25.00	2,630.44	5.68	14,941.74
2001	55,344.45	25.00	2,213.78	6.05	13,398.42
2002	39,990.00	25.00	1,599.60	6.44	10,306.20
2003	67,478.30	25.00	2,699.13	6.85	18,499.52

***City of Lancaster - Bureau of Water
Water Division***

334.02 Meters - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 25

Survivor Curve: S2

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2004	49,970.00	25.00	1,998.80	7.29	14,564.30
2005	10,920.50	25.00	436.82	7.74	3,382.11
2006	118,214.00	25.00	4,728.56	8.22	38,886.25
2007	129,717.00	25.00	5,188.68	8.73	45,305.90
2008	68,165.00	25.00	2,726.60	9.27	25,270.89
2009	75,690.00	25.00	3,027.60	9.84	29,777.16
2010	44,256.68	25.00	1,770.27	10.43	18,471.37
2011	36,769.31	25.00	1,470.77	11.07	16,276.72
2019	802,421.00	25.00	32,096.84	17.40	558,593.49
2021	6,792,253.76	25.00	271,690.17	19.30	5,242,703.91
2024	81,230.27	25.00	3,249.21	22.25	72,301.39
<i>Total</i>	10,662,547.20	21.71	426,374.60	15.10	6,439,721.62

Composite Average Remaining Life ... 15.10 Years

***City of Lancaster - Bureau of Water
Water Division***

335.01 Hydrants - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	1,758.00	75.00	23.44	3.31	77.62
1901	1,359.00	75.00	18.12	3.60	65.18
1902	1,143.00	75.00	15.24	3.85	58.73
1903	1,099.00	75.00	14.65	4.13	60.50
1904	2,248.00	75.00	29.97	4.40	131.85
1905	1,823.00	75.00	24.31	4.63	112.66
1906	1,663.00	75.00	22.17	4.89	108.33
1907	1,765.00	75.00	23.53	5.13	120.78
1908	1,578.00	75.00	21.04	5.35	112.51
1909	2,263.00	75.00	30.17	5.58	168.34
1910	1,769.00	75.00	23.59	5.81	137.04
1911	5,355.00	75.00	71.40	6.01	429.47
1912	1,983.20	75.00	26.44	6.24	164.95
1913	984.00	75.00	13.12	6.46	84.80
1914	560.00	75.00	7.47	6.67	49.79
1915	709.00	75.00	9.45	6.89	65.14
1916	616.00	75.00	8.21	7.12	58.46
1917	537.00	75.00	7.16	7.33	52.47
1921	188.00	75.00	2.51	8.23	20.64
1922	2,479.00	75.00	33.05	8.47	280.00
1923	633.00	75.00	8.44	8.70	73.39
1924	3,815.32	75.00	50.87	8.93	454.51
1925	295.00	75.00	3.93	9.18	36.10
1926	262.00	75.00	3.49	9.41	32.88
1927	2,896.17	75.00	38.62	9.66	372.98
1928	1,464.00	75.00	19.52	9.91	193.46
1929	1,082.00	75.00	14.43	10.16	146.52

***City of Lancaster - Bureau of Water
Water Division***

335.01 Hydrants - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1930	147.00	75.00	1.96	10.41	20.41
1931	414.00	75.00	5.52	10.68	58.94
1932	302.00	75.00	4.03	10.94	44.05
1933	58.00	75.00	0.77	11.21	8.67
1936	116.00	75.00	1.55	12.07	18.66
1937	142.00	75.00	1.89	12.37	23.41
1938	350.00	75.00	4.67	12.67	59.13
1940	142.00	75.00	1.89	13.31	25.21
1943	100.00	75.00	1.33	14.35	19.13
1944	174.00	75.00	2.32	14.71	34.13
1946	1,343.00	75.00	17.91	15.47	277.11
1947	839.00	75.00	11.19	15.87	177.57
1948	2,414.00	75.00	32.19	16.28	524.10
1949	1,083.00	75.00	14.44	16.70	241.20
1950	3,035.00	75.00	40.47	17.14	693.49
1951	2,810.00	75.00	37.47	17.58	658.70
1952	854.00	75.00	11.39	18.04	205.37
1953	3,605.50	75.00	48.07	18.51	889.62
1954	5,658.00	75.00	75.44	18.98	1,432.16
1955	866.47	75.00	11.55	19.47	224.98
1956	1,868.42	75.00	24.91	19.98	497.70
1957	1,561.00	75.00	20.81	20.49	426.49
1958	1,252.00	75.00	16.69	21.01	350.80
1959	1,914.00	75.00	25.52	21.55	550.03
1960	309.00	75.00	4.12	22.10	91.05
1961	641.00	75.00	8.55	22.66	193.63
1962	2,247.00	75.00	29.96	23.23	695.86

***City of Lancaster - Bureau of Water
Water Division***

335.01 Hydrants - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1963	1,622.00	75.00	21.63	23.80	514.81
1964	9,590.00	75.00	127.87	24.39	3,118.85
1973	5,076.00	75.00	67.68	30.11	2,038.06
1975	21,532.00	75.00	287.09	31.48	9,037.71
1976	33,098.00	75.00	441.31	32.17	14,198.18
1977	18,500.00	75.00	246.67	32.88	8,109.70
1978	30,432.00	75.00	405.76	33.59	13,627.81
1979	31,328.00	75.00	417.71	34.30	14,327.87
1980	31,372.00	75.00	418.29	35.03	14,651.63
1981	15,675.00	75.00	209.00	35.76	7,473.30
1990	10,235.00	75.00	136.47	42.63	5,818.04
1995	12,420.00	75.00	165.60	46.67	7,728.32
1996	5,040.00	75.00	67.20	47.49	3,191.47
1999	2,144.11	75.00	28.59	50.00	1,429.30
2000	5,625.00	75.00	75.00	50.84	3,813.05
2001	16,070.40	75.00	214.27	51.69	11,076.21
2002	62,333.76	75.00	831.12	52.55	43,672.82
2003	13,669.18	75.00	182.26	53.41	9,733.64
2004	15,092.88	75.00	201.24	54.27	10,921.74
2005	3,774.62	75.00	50.33	55.14	2,775.19
2006	7,924.00	75.00	105.65	56.02	5,918.19
2007	2,908.00	75.00	38.77	56.90	2,206.01
2008	6,104.00	75.00	81.39	57.78	4,702.32
2009	8,150.80	75.00	108.68	58.66	6,375.44
2012	50,098.72	75.00	667.98	61.35	40,980.69
2013	34,691.86	75.00	462.56	62.25	28,796.06
2014	68,090.64	75.00	907.87	63.16	57,341.72

***City of Lancaster - Bureau of Water
Water Division***

335.01 Hydrants - Inside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2015	43,357.05	75.00	578.09	64.07	37,038.54
2016	8,593.23	75.00	114.58	64.98	7,445.72
2017	96,466.95	75.00	1,286.22	65.90	84,764.42
2018	66,426.99	75.00	885.69	66.82	59,183.42
2019	133,397.14	75.00	1,778.63	67.75	120,494.92
2022	605,784.41	75.00	8,077.12	70.53	569,718.00
2024	29,950.70	75.00	399.34	72.41	28,915.32
<i>Total</i>	1,583,146.52	75.00	21,108.59	59.37	1,253,249.16

Composite Average Remaining Life ... 59.37 Years

***City of Lancaster - Bureau of Water
Water Division***

335.02 Hydrants - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1900	71.00	75.00	0.95	3.31	3.14
1905	50.00	75.00	0.67	4.63	3.09
1920	465.98	75.00	6.21	8.00	49.72
1922	1,396.50	75.00	18.62	8.47	157.73
1923	213.00	75.00	2.84	8.70	24.70
1924	347.32	75.00	4.63	8.93	41.38
1925	516.00	75.00	6.88	9.18	63.14
1926	692.00	75.00	9.23	9.41	86.84
1927	2,838.68	75.00	37.85	9.66	365.57
1928	4,414.00	75.00	58.85	9.91	583.28
1929	2,055.00	75.00	27.40	10.16	278.27
1930	4,217.64	75.00	56.24	10.41	585.64
1931	841.00	75.00	11.21	10.68	119.74
1933	2,799.00	75.00	37.32	11.21	418.43
1935	668.00	75.00	8.91	11.77	104.86
1936	2,002.00	75.00	26.69	12.07	322.07
1937	235.00	75.00	3.13	12.37	38.75
1938	1,610.00	75.00	21.47	12.67	272.01
1939	4,354.69	75.00	58.06	12.99	754.12
1940	1,834.00	75.00	24.45	13.31	325.58
1941	2,437.00	75.00	32.49	13.65	443.45
1944	283.00	75.00	3.77	14.71	55.51
1945	413.00	75.00	5.51	15.09	83.09
1946	384.00	75.00	5.12	15.47	79.23
1947	292.00	75.00	3.89	15.87	61.80
1948	3,580.18	75.00	47.74	16.28	777.28
1949	993.00	75.00	13.24	16.70	221.15

***City of Lancaster - Bureau of Water
Water Division***

335.02 Hydrants - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1950	4,862.45	75.00	64.83	17.14	1,111.05
1951	1,480.00	75.00	19.73	17.58	346.93
1952	14,171.00	75.00	188.95	18.04	3,407.83
1953	19,679.00	75.00	262.39	18.51	4,855.57
1954	10,815.07	75.00	144.20	18.98	2,737.52
1955	19,729.00	75.00	263.05	19.47	5,122.59
1956	54,124.00	75.00	721.65	19.98	14,417.25
1957	1,300.00	75.00	17.33	20.49	355.18
1958	12,363.32	75.00	164.84	21.01	3,464.13
1959	11,295.00	75.00	150.60	21.55	3,245.89
1960	34,314.52	75.00	457.53	22.10	10,111.01
1961	2,187.00	75.00	29.16	22.66	660.63
1962	9,644.00	75.00	128.59	23.23	2,986.59
1963	21,929.87	75.00	292.40	23.80	6,960.30
1964	6,281.24	75.00	83.75	24.39	2,042.78
1965	10,475.00	75.00	139.67	24.99	3,490.65
1966	17,434.00	75.00	232.45	25.60	5,950.91
1967	9,684.00	75.00	129.12	26.22	3,385.13
1968	1,859.00	75.00	24.79	26.85	665.44
1969	64,518.00	75.00	860.24	27.48	23,641.37
1970	1,608.00	75.00	21.44	28.13	603.02
1971	670.00	75.00	8.93	28.78	257.12
1972	2,785.00	75.00	37.13	29.44	1,093.35
1975	4,620.00	75.00	61.60	31.48	1,939.17
1980	20,420.00	75.00	272.27	35.03	9,536.73
1982	37,125.00	75.00	495.00	36.49	18,064.49
1985	6,594.00	75.00	87.92	38.75	3,406.70

***City of Lancaster - Bureau of Water
Water Division***

335.02 Hydrants - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1986	3,694.00	75.00	49.25	39.51	1,946.19
1987	12,278.00	75.00	163.71	40.28	6,594.75
1988	24,011.00	75.00	320.15	41.06	13,145.16
1990	997.00	75.00	13.29	42.63	566.74
1991	10,488.00	75.00	139.84	43.43	6,072.92
1992	8,875.00	75.00	118.33	44.23	5,233.93
1993	12,747.00	75.00	169.96	45.04	7,654.47
1994	11,118.00	75.00	148.24	45.85	6,796.60
1996	55,500.00	75.00	740.00	47.49	35,144.12
1997	39,929.28	75.00	532.39	48.32	25,725.38
1998	21,844.00	75.00	291.25	49.16	14,317.07
1999	15,623.99	75.00	208.32	50.00	10,415.23
2000	196,426.69	75.00	2,619.02	50.84	133,152.83
2001	152,447.98	75.00	2,032.64	51.69	105,071.84
2002	72,073.41	75.00	960.98	52.55	50,496.69
2003	39,893.84	75.00	531.92	53.41	28,407.86
2004	18,866.09	75.00	251.55	54.27	13,652.17
2005	32,544.93	75.00	433.93	55.14	23,927.82
2006	20,888.50	75.00	278.51	56.02	15,600.98
2007	23,587.31	75.00	314.50	56.90	17,893.31
2008	23,605.00	75.00	314.73	57.78	18,184.51
2009	142,351.20	75.00	1,898.01	58.66	111,345.16
2010	75,600.00	75.00	1,008.00	59.56	60,032.79
2011	32,775.00	75.00	437.00	60.45	26,417.23
2012	135,503.50	75.00	1,806.71	61.35	110,841.71
2013	22,834.18	75.00	304.46	62.25	18,953.56
2014	104,656.75	75.00	1,395.42	63.16	88,135.43

***City of Lancaster - Bureau of Water
Water Division***

335.02 Hydrants - Outside

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 75

Survivor Curve: R2.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2015	156,943.60	75.00	2,092.58	64.07	134,071.88
2016	50,743.05	75.00	676.57	64.98	43,967.00
2017	230,140.94	75.00	3,068.54	65.90	202,222.26
2018	69,328.15	75.00	924.37	66.82	61,768.22
2019	167,917.10	75.00	2,238.89	67.75	151,676.10
2022	134,406.00	75.00	1,792.08	70.53	126,403.91
2023	82,137.00	75.00	1,095.16	71.47	78,270.84
2024	239,848.95	75.00	3,197.98	72.41	231,557.47
2026	48,750.00	75.00	650.00	74.29	48,289.28
2027	16,250.00	75.00	216.67	74.88	16,224.41
<i>Total</i>	2,949,594.90	75.00	39,327.88	55.69	2,190,356.69

Composite Average Remaining Life ... 55.69 Years

***City of Lancaster - Bureau of Water
Water Division***

341.01 Transportation - Autos and Vans

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 12

Survivor Curve: L4

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
2012	19,325.63	12.00	1,610.46	1.94	3,129.30
2017	9,978.18	12.00	831.51	3.15	2,618.60
2018	16,045.40	12.00	1,337.11	3.80	5,079.87
2019	23,720.46	12.00	1,976.70	4.57	9,026.51
2020	57,220.00	12.00	4,768.32	5.41	25,777.93
2021	25,929.98	12.00	2,160.83	6.31	13,629.77
2023	84,902.45	12.00	7,075.18	8.25	58,376.71
2025	293,897.00	12.00	24,491.34	10.25	251,037.15
<i>Total</i>	531,019.10	12.00	44,251.46	8.33	368,675.86

Composite Average Remaining Life ... 8.33 Years

***City of Lancaster - Bureau of Water
Water Division***

341.02 Transportation - Trucks

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 18

Survivor Curve: S1.5

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1990	225.00	0.00	0.00	0.00	0.00
1992	12,034.00	18.00	668.56	0.51	338.07
1997	8,318.00	18.00	462.11	1.65	760.32
1999	180,930.91	18.00	10,051.71	2.15	21,573.58
2000	7,153.69	18.00	397.43	2.41	956.32
2005	16,088.58	18.00	893.81	3.85	3,436.79
2006	88,685.02	18.00	4,926.94	4.17	20,566.03
2008	272,204.92	18.00	15,122.49	4.89	73,940.90
2009	147,221.86	18.00	8,178.99	5.28	43,181.44
2011	21,923.57	18.00	1,217.98	6.14	7,473.92
2012	175,296.52	18.00	9,738.69	6.61	64,351.48
2013	134,521.00	18.00	7,473.38	7.11	53,149.58
2014	52,392.33	18.00	2,910.68	7.65	22,267.66
2015	218,563.91	18.00	12,142.43	8.23	99,893.24
2017	106,193.71	18.00	5,899.65	9.50	56,049.30
2019	144,946.20	18.00	8,052.56	10.95	88,148.48
2020	210,103.07	18.00	11,672.39	11.74	136,987.95
2021	643,443.39	18.00	35,746.83	12.57	449,268.42
2022	409,452.50	18.00	22,747.35	13.44	305,752.14
2023	57,491.33	18.00	3,193.96	14.35	45,836.65
2024	801,870.49	18.00	44,548.33	15.29	681,311.95
2026	750,000.00	18.00	41,666.64	17.25	718,802.14
<i>Total</i>	4,459,060.00	17.18	247,712.89	11.68	2,894,046.36

Composite Average Remaining Life ... 11.68 Years

***City of Lancaster - Bureau of Water
Water Division***

341.03 Transportation - Trailers

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 20

Survivor Curve: L3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1967	500.00	0.00	0.00	0.00	0.00
1978	2,942.00	0.00	0.00	0.00	0.00
2004	7,487.21	20.00	374.37	5.54	2,072.64
2008	2,185.00	20.00	109.25	6.24	681.23
2021	173,968.97	20.00	8,698.59	14.32	124,563.72
2022	24,401.00	20.00	1,220.07	15.28	18,642.96
<i>Total</i>	211,484.18	13.33	10,402.27	14.03	145,960.55

Composite Average Remaining Life ... 14.03 Years

***City of Lancaster - Bureau of Water
Water Division***

344.00 Laboratory Equipment

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 20

Survivor Curve: L3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
1927	53.00	0.00	0.00	0.00	0.00
1933	3,556.00	0.00	0.00	0.00	0.00
1937	30.00	0.00	0.00	0.00	0.00
1939	150.00	0.00	0.00	0.00	0.00
1940	131.00	0.00	0.00	0.00	0.00
1942	24.00	0.00	0.00	0.00	0.00
1945	125.00	0.00	0.00	0.00	0.00
1946	273.00	0.00	0.00	0.00	0.00
1949	92.00	0.00	0.00	0.00	0.00
1950	58.00	0.00	0.00	0.00	0.00
1951	195.00	0.00	0.00	0.00	0.00
1956	1,110.00	0.00	0.00	0.00	0.00
1965	1,790.00	0.00	0.00	0.00	0.00
1967	6,225.00	0.00	0.00	0.00	0.00
1968	420.00	0.00	0.00	0.00	0.00
1974	630.00	0.00	0.00	0.00	0.00
1975	2,762.00	0.00	0.00	0.00	0.00
1978	4,023.00	0.00	0.00	0.00	0.00
1979	1,290.00	0.00	0.00	0.00	0.00
1980	21,755.00	20.00	1,087.77	0.50	543.88
1981	2,057.00	20.00	102.85	0.57	59.08
1982	1,800.00	20.00	90.00	0.71	63.92
2001	52,135.00	20.00	2,606.79	4.86	12,672.20
2018	10,364.40	20.00	518.23	11.58	6,002.26

***City of Lancaster - Bureau of Water
Water Division***

344.00 Laboratory Equipment

***Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of March 31, 2027
Based Upon Broad Group/Remaining Life Procedure and Technique***

Average Service Life: 20

Survivor Curve: L3

<i>Year</i>	<i>Original Cost</i>	<i>Avg. Service Life</i>	<i>Avg. Annual Accrual</i>	<i>Avg. Remaining Life</i>	<i>Future Annual Accruals</i>
<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
<i>Total</i>	111,048.40	4.17	4,405.64	4.39	19,341.35

Composite Average Remaining Life ... 4.39 Years

APPENDIX A:

DISCOUNTED CASH FLOW MODEL THEORY

The Discounted Cash Flow (“DCF”) Model is based on a fundamental financial model called the “dividend discount model,” which maintains that the value of a security is equal to the present value of the future cash flows it generates. Cash flows from common stock are paid to investors in the form of dividends. There are several variations of the DCF Model. In its most general form, the DCF Model is expressed as follows:¹

Equation 1: General Discounted Cash Flow Model

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \cdots + \frac{D_n}{(1+k)^n}$$

where:

P_0	=	current stock price
$D_1 \dots D_n$	=	expected future dividends
k	=	discount rate / required return

The General DCF Model would require an estimation of an infinite stream of dividends. Since this would be impractical, analysts use more feasible variations of the General DCF Model, which are discussed further below.

The DCF Models rely on the following four assumptions:

1. Investors evaluate common stocks in the classical valuation framework; that is, they trade securities rationally at prices reflecting their perceptions of value;
2. Investors discount the expected cash flows at the same rate (K) in every future period;

¹ See Zvi Bodie, Alex Kane & Alan J. Marcus, *Essentials of Investments* 410 (9th ed., McGraw-Hill/Irwin 2013).

3. The K obtained from the DCF equation corresponds to that specific stream of future cash flows alone; and
4. Dividends, rather than earnings, constitute the source of value.

The General DCF can be rearranged to make it more practical for estimating the cost of equity. Regulators typically rely on some variation of the Constant Growth DCF Model, which is expressed as follows:

**Equation 2:
Constant Growth Discounted Cash Flow Model**

$$K = \frac{D_1}{P_0} + g$$

where: K = discount rate / required return on equity
 D_1 = expected dividend per share one year from now
 P_0 = current stock price
 g = expected growth rate of future dividends

Unlike the General DCF Model, the Constant Growth DCF Model solves directly for the required return (K). In addition, by assuming that dividends grow at a constant rate, the dividend stream from the General DCF Model may be essentially substituted with a term representing the expected constant growth rate of future dividends (g). The Constant Growth DCF Model may be considered in two parts. The first part is the dividend yield (D_1/P_0), and the second part is the growth rate (g). In other words, the required return in the DCF Model is equivalent to the dividend yield plus the growth rate.

In addition to the four assumptions listed above, the Constant Growth DCF Model relies on four additional assumptions as follows:²

² *Id.* at 254-56.

1. The discount rate (K) must exceed the growth rate (g);
2. The dividend growth rate (g) is constant in every year to infinity;
3. Investors require the same return (K) in every year; and
4. There is no external financing; that is, growth is provided only by the retention of earnings.

Because the growth rate in this model is assumed to be constant, it is important not to use growth rates that are unreasonably high. In fact, the constant growth rate estimate for a regulated utility with a defined service territory should not exceed the growth rate for the economy in which it operates.

APPENDIX B:

CAPITAL ASSET PRICING MODEL THEORY

The Capital Asset Pricing Model (“CAPM”) is a market-based model founded on the principle that investors demand higher returns for incurring additional risk.³ The CAPM estimates this required return. The CAPM relies on the following assumptions:

1. Investors are rational, risk-adverse, and strive to maximize profit and terminal wealth;
2. Investors make choices based on risk and return. Return is measured by the mean returns expected from a portfolio of assets; risk is measured by the variance of these portfolio returns;
3. Investors have homogenous expectations of risk and return;
4. Investors have identical time horizons;
5. Information is freely and simultaneously available to investors.
6. There is a risk-free asset, and investors can borrow and lend unlimited amounts at the risk-free rate;
7. There are no taxes, transaction costs, restrictions on selling short, or other market imperfections; and,
8. Total asset quality is fixed, and all assets are marketable and divisible.⁴

³ William F. Sharpe, *A Simplified Model for Portfolio Analysis* 277-93 (Management Science IX 1963); *see also* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 208 (3rd ed., South Western Cengage Learning 2010).

⁴ *Id.*

While some of these assumptions may appear to be restrictive, they do not outweigh the inherent value of the model. The CAPM has been widely used by firms, analysts, and regulators for decades to estimate the cost of equity capital.

The basic CAPM equation is expressed as follows:

**Equation 3:
Capital Asset Pricing Model**

$$K = R_F + \beta_i(R_M - R_F)$$

where:

K	=	<i>required return</i>
R_F	=	<i>risk-free rate</i>
β	=	<i>beta coefficient of asset i</i>
R_M	=	<i>required return on the overall market</i>

There are essentially three terms within the CAPM equation that are required to calculate the required return (K): (1) the risk-free rate (R_F); (2) the beta coefficient (β); and (3) the equity risk premium ($R_M - R_F$), which is the required return on the overall market less the risk-free rate.

Raw Beta Calculations and Adjustments

A stock's beta equals the covariance of the asset's returns with the returns on a market portfolio, divided by the portfolio's variance, as expressed in the following formula:⁵

**Equation 4:
Beta**

$$\beta_i = \frac{\sigma_{im}}{\sigma_m^2}$$

where:

β_i	=	<i>beta of asset i</i>
σ_{im}	=	<i>covariance of asset i returns with market portfolio returns</i>
σ_m^2	=	<i>variance of market portfolio</i>

⁵ John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 180-81 (3rd ed., South Western Cengage Learning 2010).

Betas that are published by various research firms are typically calculated through a regression analysis that considers the movements in price of an individual stock and movements in the price of the overall market portfolio. The betas produced by this regression analysis are considered “raw” betas. There is empirical evidence that raw betas should be adjusted to account for beta’s natural tendency to revert to an underlying mean.⁶ Some analysts use an adjustment method proposed by Blume, which adjusts raw betas toward the market mean of one.⁷ While the Blume adjustment method is popular due to its simplicity, it is arguably arbitrary, and some would say not useful at all. According to Dr. Damodaran: “While we agree with the notion that betas move toward 1.0 over time, the [Blume adjustment] strikes us as arbitrary and not particularly useful.”⁸ The Blume adjustment method is especially arbitrary when applied to industries with consistently low betas, such as the utility industry. For industries with consistently low betas, it is better to employ an adjustment method that adjusts raw betas toward an industry average, rather than the market average. Vasicek proposed such a method, which is preferable to the Blume adjustment method because it allows raw betas to be adjusted toward an industry average, and also accounts for the statistical accuracy of the raw beta calculation.⁹ In other words, “[t]he Vasicek adjustment seeks to overcome one weakness of the Blume model by not applying the same adjustment to every security; rather, a security-specific adjustment is made depending on the

⁶ See Michael J. Gombola and Douglas R. Kahl, *Time-Series Processes of Utility Betas: Implications for Forecasting Systematic Risk* 84-92 (Financial Management Autumn 1990).

⁷ See Marshall Blume, *On the Assessment of Risk*, Vol. 26, No. 1, The Journal of Finance 1 (1971).

⁸ See Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 187 (3rd ed., John Wiley & Sons, Inc. 2012).

⁹ Oldrich A. Vasicek, *A Note on Using Cross-Sectional Information in Bayesian Estimation of Security Betas* 1233-1239 (Journal of Finance, Vol. 28, No. 5, December 1973).

statistical quality of the regression.”¹⁰ The Vasicek beta adjustment equation is expressed as follows:

**Equation 5:
Vasicek Beta Adjustment**

$$\beta_{i1} = \frac{\sigma_{\beta_{i0}}^2}{\sigma_{\beta_0}^2 + \sigma_{\beta_{i0}}^2} \beta_0 + \frac{\sigma_{\beta_0}^2}{\sigma_{\beta_0}^2 + \sigma_{\beta_{i0}}^2} \beta_{i0}$$

where:

β_{i1}	=	<i>Vasicek adjusted beta for security i</i>
β_{i0}	=	<i>historical beta for security i</i>
β_0	=	<i>beta of industry or proxy group</i>
$\sigma_{\beta_0}^2$	=	<i>variance of betas in the industry or proxy group</i>
$\sigma_{\beta_{i0}}^2$	=	<i>square of standard error of the historical beta for security i</i>

The Vasicek beta adjustment is an improvement on the Blume model because the Vasicek model does not apply the same adjustment to every security. A higher standard error produced by the regression analysis indicates a lower statistical significance of the beta estimate. Thus, a beta with a high standard error should receive a greater adjustment than a beta with a low standard error. As stated in Ibbotson:

¹⁰ 2012 Ibbotson Stocks, Bonds, Bills, and Inflation Valuation Yearbook 77-78 (Morningstar 2012).

While the Vasicek formula looks intimidating, it is really quite simple. The adjusted beta for a company is a weighted average of the company's historical beta and the beta of the market, industry, or peer group. How much weight is given to the company and historical beta depends on the statistical significance of the company beta statistic. If a company beta has a low standard error, then it will have a higher weighting in the Vasicek formula. If a company beta has a high standard error, then it will have lower weighting in the Vasicek formula. An advantage of this adjustment methodology is that it does not force an adjustment to the market as a whole. Instead, the adjustment can be toward an industry or some other peer group. *This is most useful in looking at companies in industries that on average have high or low betas.*¹¹

Thus, the Vasicek adjustment method is statistically more accurate, and is the preferred method to use when analyzing companies in an industry that has inherently low betas, such as the utility industry. The Vasicek method was also confirmed by Gombola, who conducted a study specifically related to utility companies. Gombola concluded that “[t]he strong evidence of autoregressive tendencies in *utility* betas lends support to the application of adjustment procedures such as the . . . adjustment procedure presented by Vasicek.”¹² Gombola also concluded that adjusting raw betas toward the market mean of 1.0 is *too high*, and that “[i]nstead, they should be adjusted toward a value that is less than one.”¹³ In conducting the Vasicek adjustment on betas in previous

¹¹ *Id.* at 78 (emphasis added).

¹² Michael J. Gombola and Douglas R. Kahl, *Time-Series Processes of Utility Betas: Implications for Forecasting Systematic Risk* 92 (Financial Management Autumn 1990) (emphasis added).

¹³ *Id.* at 91-92.

cases, it reveals that utility betas are even lower than those published by Value Line.¹⁴ Gombola's findings are particularly important here, because his study was conducted specifically on utility companies. This evidence indicates that using Value Line's betas in a CAPM cost of equity estimate for a utility company may lead to overestimated results. Regardless, adjusting betas to a level that is *higher* than Value Line's betas is not reasonable, and it would produce CAPM cost of equity results that are too high.

¹⁴ See e.g. Responsive Testimony of David J. Garrett, filed March 21, 2016 in Cause No. PUD 201500273 before the Corporation Commission of Oklahoma (the Company's 2015 rate case), at pp. 56 – 59.

APPENDIX C: THE DEPRECIATION SYSTEM

A depreciation accounting system may be thought of as a dynamic system in which estimates of life and salvage are inputs to the system, and the accumulated depreciation account is a measure of the state of the system at any given time.¹⁵ The primary objective of the depreciation system is the timely recovery of capital. The process for calculating the annual accruals is determined by the factors required to define the system. A depreciation system should be defined by four primary factors: 1) a *method* of allocation; 2) a *procedure* for applying the method of allocation to a group of property; 3) a *technique* for applying the depreciation rate; and 4) a *model* for analyzing the characteristics of vintage groups comprising a continuous property group.¹⁶ The figure below illustrates the basic concept of a depreciation system and includes some of the available parameters.¹⁷

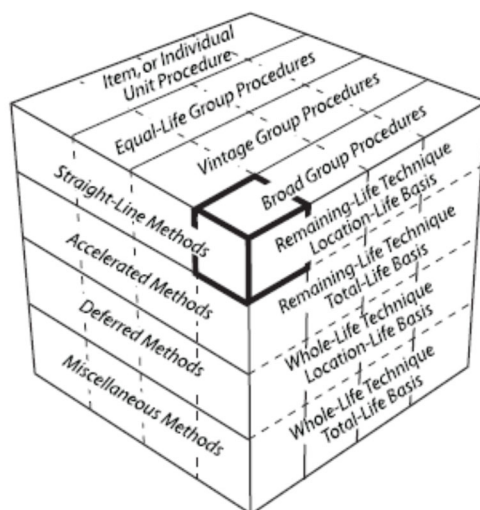
There are hundreds of potential combinations of methods, procedures, techniques, and models, but in practice, analysts use only a few combinations. Ultimately, the system selected must result in the systematic and rational allocation of capital recovery for the utility. Each of the four primary factors defining the parameters of a depreciation system is discussed further below.

¹⁵ See Frank K. Wolf & W. Chester Fitch, *Depreciation Systems* 69-70 (Iowa State University Press 1994).

¹⁶ *Id.* at 70, 139-40.

¹⁷ Edison Electric Institute, *Introduction to Depreciation* (inside cover) (EEI April 2013). Some definitions of the terms shown in this diagram are not consistent among depreciation practitioners and literature due to the fact that depreciation analysis is a relatively small and fragmented field. This diagram simply illustrates the some of the available parameters of a depreciation system.

**Figure 1:
The Depreciation System Cube**



1. Allocation Methods

The “method” refers to the pattern of depreciation in relation to the accounting periods. The method most commonly used in the regulatory context is the “straight-line method” — a type of age-life method in which the depreciable cost of plant is charged in equal amounts to each accounting period over the service life of plant.¹⁸ Because group depreciation rates and plant balances often change, the amount of the annual accrual rarely remains the same, even when the straight-line method is employed.¹⁹ The basic formula for the straight-line method is as follows:²⁰

Equation 6: Straight-Line Accrual

$$\text{Annual Accrual} = \frac{\text{Gross Plant} - \text{Net Salvage}}{\text{Service Life}}$$

¹⁸ National Association of Regulatory Utility Commissioners, *Public Utility Depreciation Practices* 56 (NARUC 1996).

¹⁹ *Id.*

²⁰ *Id.*

Gross plant is a known amount from the utility's records, while both net salvage and service life must be estimated in order to calculate the annual accrual. The straight-line method differs from accelerated methods of recovery, such as the "sum-of-the-years-digits" method and the "declining balance" method. Accelerated methods are primarily used for tax purposes and are rarely used in the regulatory context for determining annual accruals.²¹ In practice, the annual accrual is expressed as a rate which is applied to the original cost of plant in order to determine the annual accrual in dollars. The formula for determining the straight-line rate is as follows:²²

**Equation 7:
Straight-Line Rate**

$$\text{Depreciation Rate \%} = \frac{100 - \text{Net Salvage \%}}{\text{Service Life}}$$

2. Grouping Procedures

The "procedure" refers to the way the allocation method is applied through subdividing the total property into groups.²³ While single units may be analyzed for depreciation, a group plan of depreciation is particularly adaptable to utility property. Employing a grouping procedure allows for a composite application of depreciation rates to groups of similar property, rather than excessively conducting calculations for each unit. Whereas an individual unit of property has a single life, a group of property displays a dispersion of lives and the life characteristics of the group must be described statistically.²⁴ When analyzing mass property categories, it is important that

²¹ *Id.* at 57.

²² *Id.* at 56.

²³ Wolf *supra* n. 15, at 74-75.

²⁴ *Id.* at 74.

each group contains homogenous units of plant that are used in the same general manner throughout the plant and operated under the same general conditions.²⁵

The “average life” and “equal life” grouping procedures are the two most common. In the average life procedure, a constant annual accrual rate based on the average life of all property in the group is applied to the surviving property. While property having shorter lives than the group average will not be fully depreciated, and likewise, property having longer lives than the group average will be over-depreciated, the ultimate result is that the group will be fully depreciated by the time of the final retirement.²⁶ Thus, the average life procedure treats each unit as though its life is equal to the average life of the group. In contrast, the equal life procedure treats each unit in the group as though its life was known.²⁷ Under the equal life procedure the property is divided into subgroups that each has a common life.²⁸

3. Application Techniques

The third factor of a depreciation system is the “technique” for applying the depreciation rate. There are two commonly used techniques: “whole life” and “remaining life.” The whole life technique applies the depreciation rate on the estimated average service life of a group, while the remaining life technique seeks to recover undepreciated costs over the remaining life of the plant.²⁹

In choosing the application technique, consideration should be given to the proper level of the accumulated depreciation account. Depreciation accrual rates are calculated using estimates of service life and salvage. Periodically these estimates must be revised due to changing

²⁵ NARUC *supra* n. 18, at 61-62.

²⁶ See Wolf *supra* n. 15, at 74-75.

²⁷ *Id.* at 75.

²⁸ *Id.*

²⁹ NARUC *supra* n. 18, at 63-64.

conditions, which cause the accumulated depreciation account to be higher or lower than necessary. Unless some corrective action is taken, the annual accruals will not equal the original cost of the plant at the time of final retirement.³⁰ Analysts can calculate the level of imbalance in the accumulated depreciation account by determining the “calculated accumulated depreciation,” (a.k.a. “theoretical reserve” and referred to in these appendices as “CAD”). The CAD is the calculated balance that would be in the accumulated depreciation account at a point in time using *current* depreciation parameters.³¹ An imbalance exists when the actual accumulated depreciation account does not equal the CAD. The choice of application technique will affect how the imbalance is dealt with.

Use of the whole life technique requires that an adjustment be made to accumulated depreciation after calculation of the CAD. The adjustment can be made in a lump sum or over a period of time. With use of the remaining life technique, however, adjustments to accumulated depreciation are amortized over the remaining life of the property and are automatically included in the annual accrual.³² This is one reason that the remaining life technique is popular among practitioners and regulators. The basic formula for the remaining life technique is as follows:³³

³⁰ Wolf *supra* n. 15, at 83.

³¹ NARUC *supra* n. 18, at 325.

³² NARUC *supra* n. 18, at 65 (“The desirability of using the remaining life technique is that any necessary adjustments of [accumulated depreciation] . . . are accrued automatically over the remaining life of the property. Once commenced, adjustments to the depreciation reserve, outside of those inherent in the remaining life rate would require regulatory approval.”).

³³ *Id.* at 64.

**Equation 8:
Remaining Life Accrual**

$$\text{Annual Accrual} = \frac{\text{Gross Plant} - \text{Accumulated Depreciation} - \text{Net Salvage}}{\text{Average Remaining Life}}$$

The remaining life accrual formula is similar to the basic straight-line accrual formula above with two notable exceptions. First, the numerator has an additional factor in the remaining life formula: the accumulated depreciation. Second, the denominator is “average remaining life” instead of “average life.” Essentially, the future accrual of plant (gross plant less accumulated depreciation) is allocated over the remaining life of plant. Thus, the adjustment to accumulated depreciation is “automatic” in the sense that it is built into the remaining life calculation.³⁴

4. Analysis Model

The fourth parameter of a depreciation system, the “model,” relates to the way of viewing the life and salvage characteristics of the vintage groups that have been combined to form a continuous property group for depreciation purposes.³⁵ A continuous property group is created when vintage groups are combined to form a common group. Over time, the characteristics of the property may change, but the continuous property group will continue. The two analysis models used among practitioners, the “broad group” and the “vintage group,” are two ways of viewing the life and salvage characteristics of the vintage groups that have been combined to form a continuous property group.

The broad group model views the continuous property group as a collection of vintage groups that each has the same life and salvage characteristics. Thus, a single survivor curve and a

³⁴ Wolf *supra* n. 15, at 178.

³⁵ See Wolf *supra* n. 15, at 139 (I added the term “model” to distinguish this fourth depreciation system parameter from the other three parameters).

single salvage schedule are chosen to describe all the vintages in the continuous property group. In contrast, the vintage group model views the continuous property group as a collection of vintage groups that may have different life and salvage characteristics. Typically, there is not a significant difference between vintage group and broad group results unless vintages within the applicable property group experienced dramatically different retirement levels than anticipated in the overall estimated life for the group. For this reason, many analysts utilize the broad group procedure because it is more efficient.

APPENDIX D:

IOWA CURVES

Early work in the analysis of the service life of industrial property was based on models that described the life characteristics of human populations.³⁶ This explains why the word “mortality” is often used in the context of depreciation analysis. In fact, a group of property installed during the same accounting period is analogous to a group of humans born during the same calendar year. Each period the group will incur a certain fraction of deaths / retirements until there are no survivors. Describing this pattern of mortality is part of actuarial analysis and is regularly used by insurance companies to determine life insurance premiums. The pattern of mortality may be described by several mathematical functions, particularly the survivor curve and frequency curve. Each curve may be derived from the other so that if one curve is known, the other may be obtained. A survivor curve is a graph of the percent of units remaining in service expressed as a function of age.³⁷ A frequency curve is a graph of the frequency of retirements as a function of age. Several types of survivor and frequency curves are illustrated in the figures below.

1. Development

The survivor curves used by analysts today were developed over several decades from extensive analysis of utility and industrial property. In 1931 Edwin Kurtz and Robley Winfrey used extensive data from a range of 65 industrial property groups to create survivor curves representing the life characteristics of each group of property.³⁸ They generalized the 65 curves

³⁶ Wolf *supra* n. 15, at 276.

³⁷ *Id.* at 23.

³⁸ *Id.* at 34.

into 13 survivor curve types and published their results in *Bulletin 103: Life Characteristics of Physical Property*. The 13 type curves were designed to be used as valuable aids in forecasting probable future service lives of industrial property. Over the next few years, Winfrey continued gathering additional data, particularly from public utility property, and expanded the examined property groups from 65 to 176.³⁹ This resulted in 5 additional survivor curve types for a total of 18 curves. In 1935, Winfrey published *Bulletin 125: Statistical Analysis of Industrial Property Retirements*. According to Winfrey, “[t]he 18 type curves are expected to represent quite well all survivor curves commonly encountered in utility and industrial practices.”⁴⁰ These curves are known as the “Iowa curves” and are used extensively in depreciation analysis in order to obtain the average service lives of property groups. (Use of Iowa curves in actuarial analysis is further discussed in Exhibit DJG-23, Appendix E.)

In 1942, Winfrey published *Bulletin 155: Depreciation of Group Properties*. In Bulletin 155, Winfrey made some slight revisions to a few of the 18 curve types, and published the equations, tables of the percent surviving, and probable life of each curve at five-percent intervals.⁴¹ Rather than using the original formulas, analysts typically rely on the published tables containing the percentages surviving. This is because absent knowledge of the integration technique applied to each age interval, it is not possible to recreate the exact original published table values. In the 1970s, John Russo collected data from over 2,000 property accounts reflecting

³⁹ *Id.*

⁴⁰ Robley Winfrey, *Bulletin 125: Statistical Analyses of Industrial Property Retirements* 85, Vol. XXXIV, No. 23 (Iowa State College of Agriculture and Mechanic Arts 1935).

⁴¹ Robley Winfrey, *Bulletin 155: Depreciation of Group Properties* 121-28, Vol XLI, No. 1 (The Iowa State College Bulletin 1942); see also Wolf *supra* n. 15, at 305-38 (publishing the percent surviving for each Iowa curve, including “O” type curve, at one percent intervals).

observations during the period 1965 – 1975 as part of his Ph.D. dissertation at Iowa State. Russo essentially repeated Winfrey's data collection, testing, and analysis methods used to develop the original Iowa curves, except that Russo studied industrial property in service several decades after Winfrey published the original Iowa curves. Russo drew three major conclusions from his research:⁴²

1. No evidence was found to conclude that the Iowa curve set, as it stands, is not a valid system of standard curves;
2. No evidence was found to conclude that new curve shapes could be produced at this time that would add to the validity of the Iowa curve set; and
3. No evidence was found to suggest that the number of curves within the Iowa curve set should be reduced.

Prior to Russo's study, some had criticized the Iowa curves as being potentially obsolete because their development was rooted in the study of industrial property in existence during the early 1900s. Russo's research, however, negated this criticism by confirming that the Iowa curves represent a sufficiently wide range of life patterns, and that though technology will change over time, the underlying patterns of retirements remain constant and can be adequately described by the Iowa curves.⁴³

Over the years, several more curve types have been added to Winfrey's 18 Iowa curves. In 1967, Harold Cowles added four origin-modal curves. In addition, a square curve is sometimes used to depict retirements which are all planned to occur at a given age. Finally, analysts

⁴² See Wolf *supra* n. 15, at 37.

⁴³ *Id.*

commonly rely on several “half curves” derived from the original Iowa curves. Thus, the term “Iowa curves” could be said to describe up to 31 standardized survivor curves.

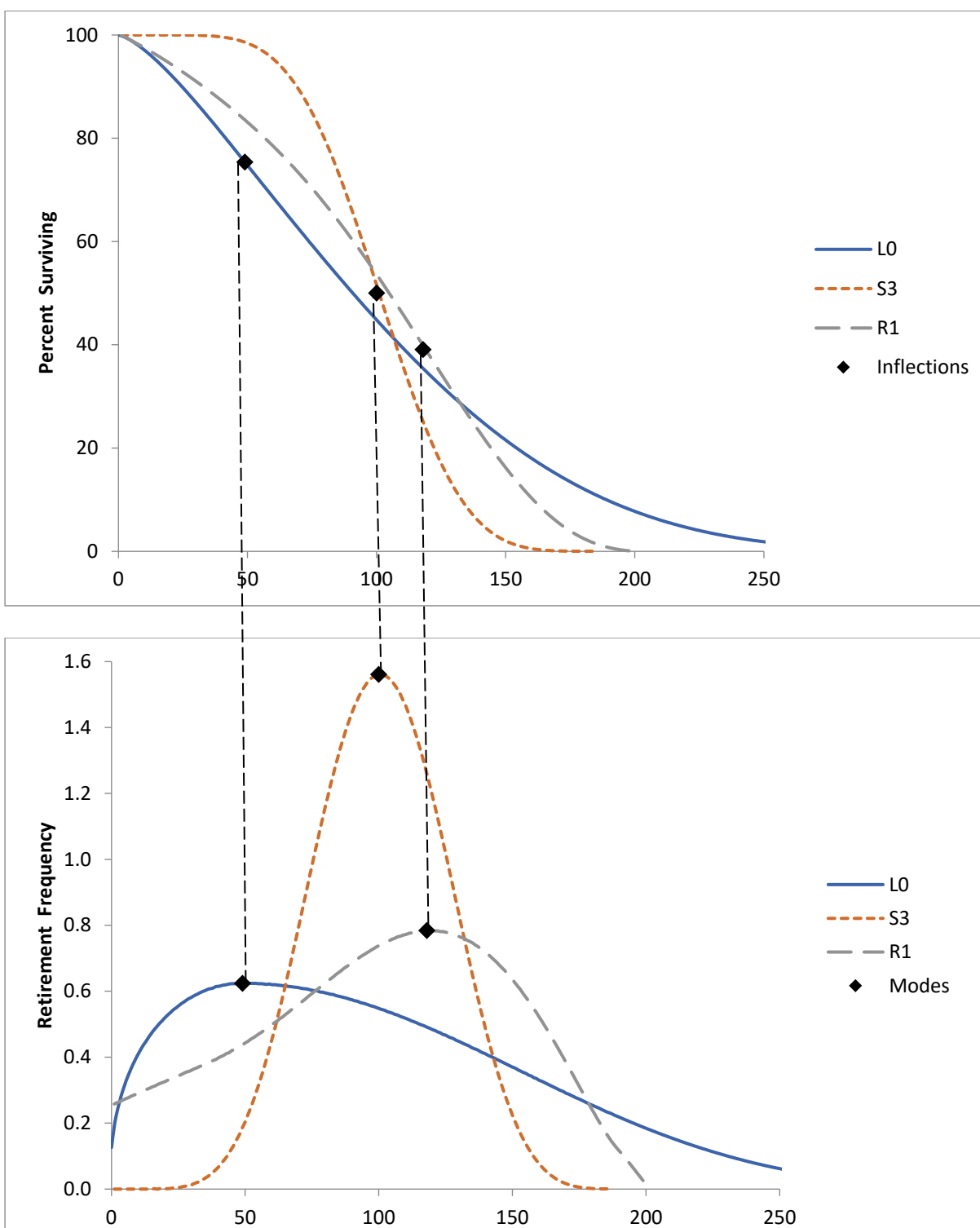
2. Classification

The Iowa curves are classified by three variables: modal location, average life, and variation of life. First, the mode is the percent life that results in the highest point of the frequency curve and the “inflection point” on the survivor curve. The modal age is the age at which the greatest rate of retirement occurs. As illustrated in the figure below, the modes appear at the steepest point of each survivor curve in the top graph, as well as the highest point of each corresponding frequency curve in the bottom graph.

The classification of the survivor curves was made according to whether the mode of the retirement frequency curves was to the left, to the right, or coincident with average service life. There are three modal “families” of curves: six left modal curves (L0, L1, L2, L3, L4, L5); five right modal curves (R1, R2, R3, R4, R5); and seven symmetrical curves (S0, S1, S2, S3, S4, S5, S6).⁴⁴ In the figure below, one curve from each family is shown: L0, S3 and R1, with average life at 100 on the x-axis. It is clear from the graphs that the modes for the L0 and R1 curves appear to the left and right of average life respectively, while the S3 mode is coincident with average life.

⁴⁴ In 1967, Harold A. Cowles added four origin-modal curves known as “O type” curves. There are also several “half” curves and a square curve, so the total amount of survivor curves commonly called “Iowa” curves is about 31 (see NARUC *supra* n. 119, at 68).

Figure 2:
Modal Age Illustration



The second Iowa curve classification variable is average life. The Iowa curves were designed using a single parameter of age expressed as a percent of average life instead of actual age. This was necessary in order for the curves to be of practical value. As Winfrey notes:

Since the location of a particular survivor on a graph is affected by both its span in years and the shape of the curve, it is difficult to classify a group of curves unless one of these variables can be controlled. This is easily done by expressing the age in percent of average life.”⁴⁵

Because age is expressed in terms of percent of average life, any particular Iowa curve type can be modified to forecast property groups with various average lives.

The third variable, variation of life, is represented by the numbers next to each letter. A lower number (e.g., L1) indicates a relatively low mode, large variation, and large maximum life; a higher number (e.g., L5) indicates a relatively high mode, small variation, and small maximum life. All three classification variables – modal location, average life, and variation of life — are used to describe each Iowa curve. For example, a 13-L1 Iowa curve describes a group of property with a 13-year average life, with the greatest number of retirements occurring before (or to the left of) the average life, and a relatively low mode. The graphs below show these 18 survivor curves, organized by modal family.

⁴⁵ Winfrey *supra* n. 40, at 60.

Figure 3:
Type L Survivor and Frequency Curves

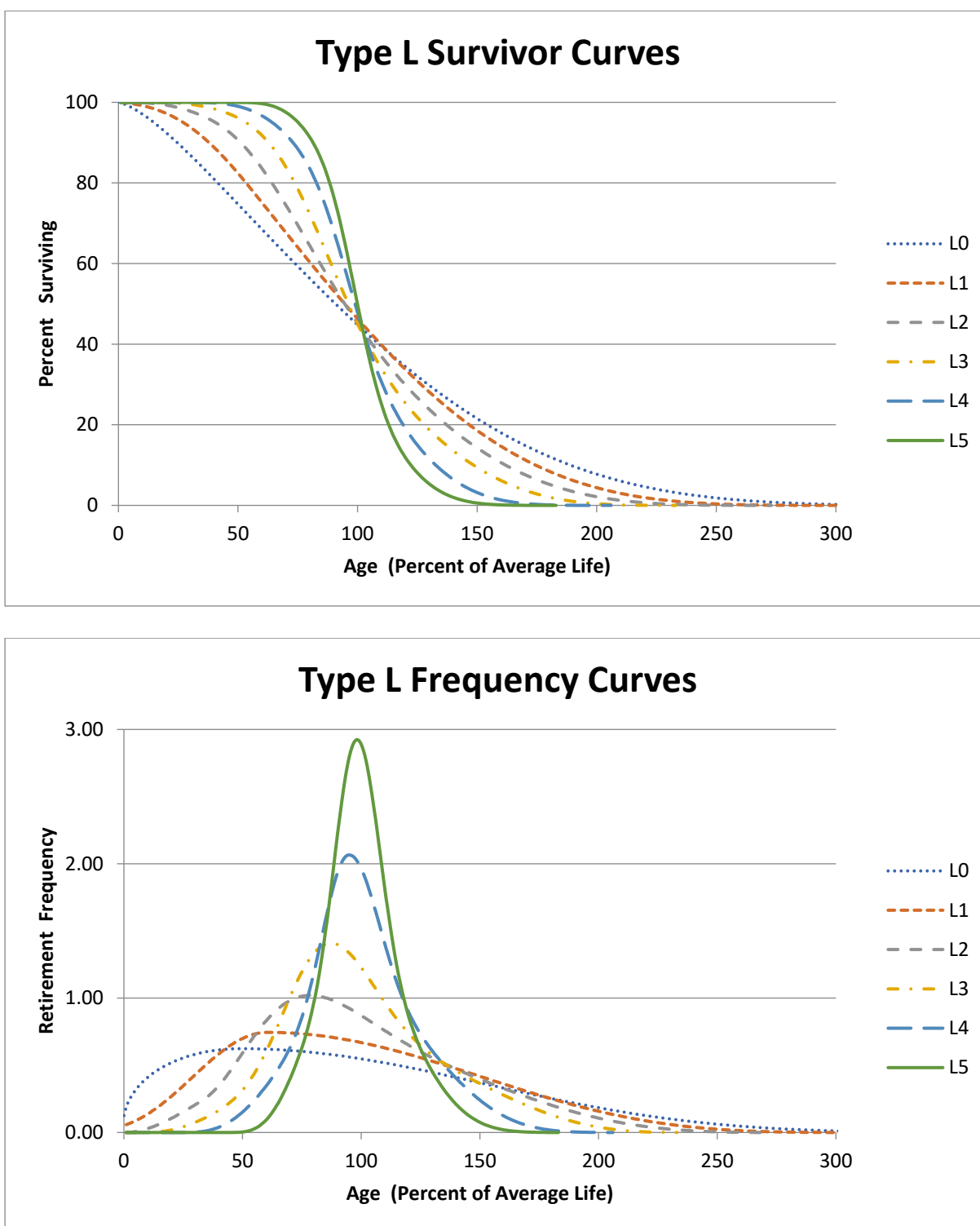


Figure 4:
Type S Survivor and Frequency Curves

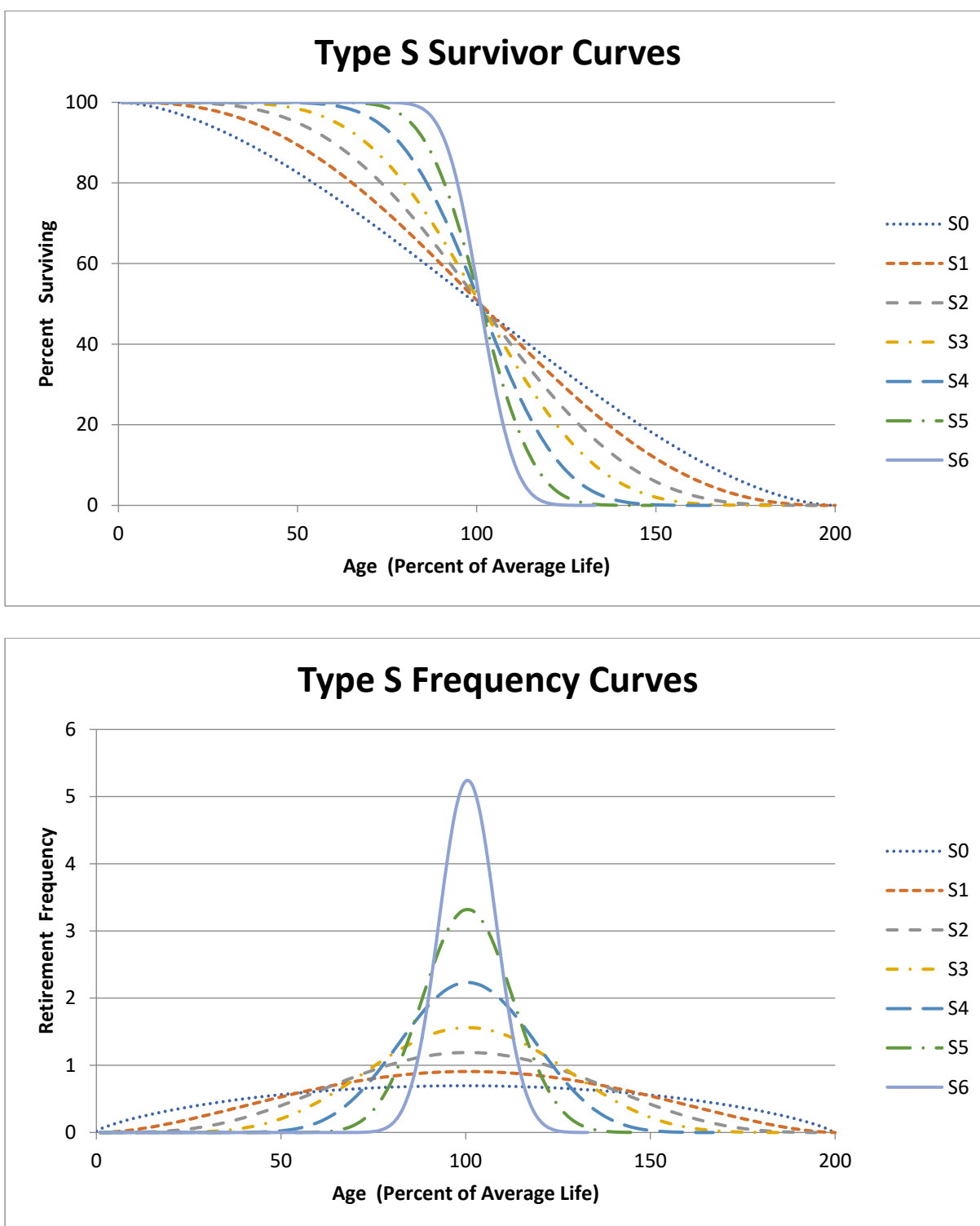
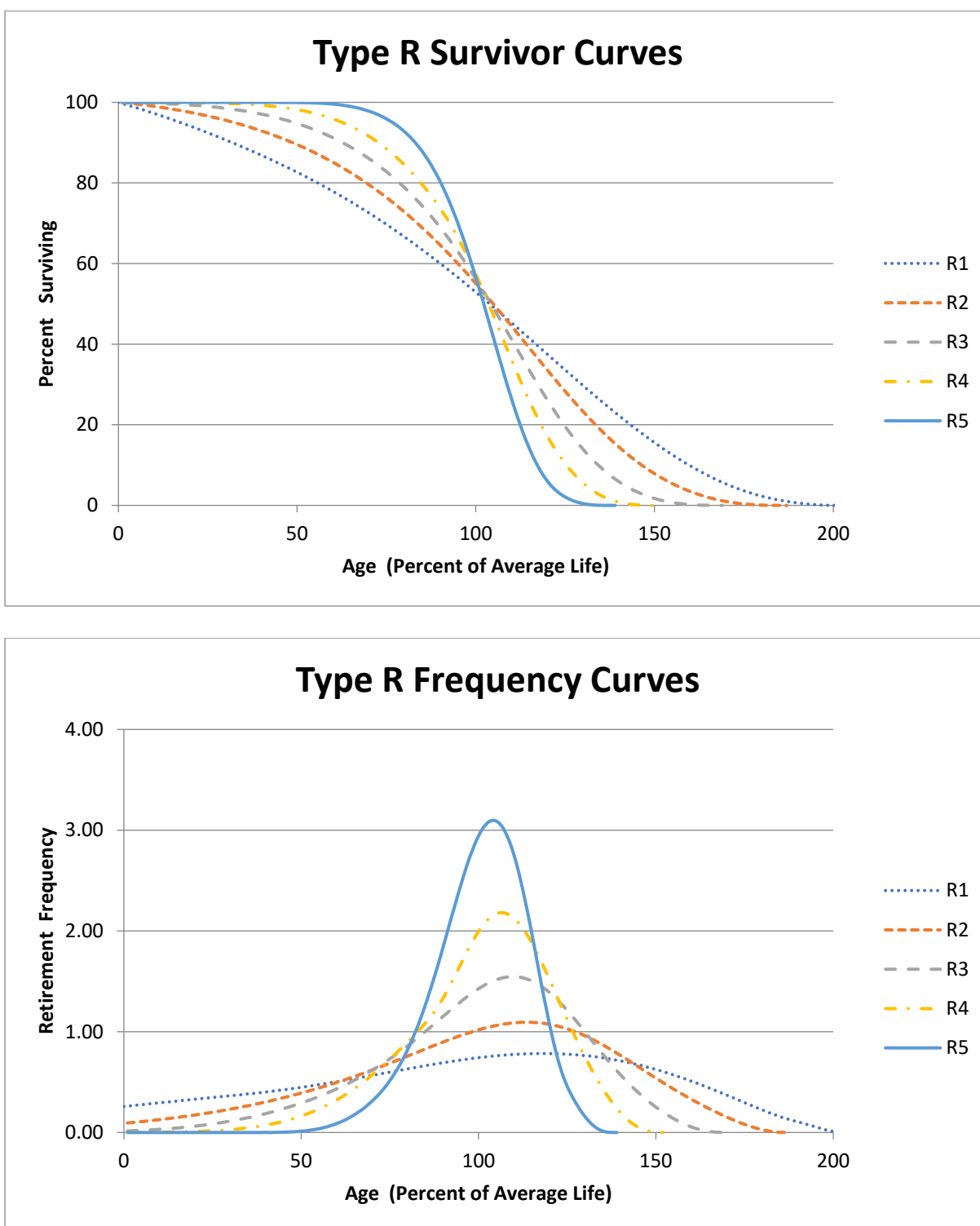


Figure 5:
Type R Survivor and Frequency Curves



As shown in the graphs above, the modes for the L family frequency curves occur to the left of average life (100% on the x-axis), while the S family modes occur at the average, and the R family modes occur after the average.

3. Types of Lives

Several other important statistical analyses and types of lives may be derived from an Iowa curve. These include: 1) average life; 2) realized life; 3) remaining life; and 4) probable life. The figure below illustrates these concepts. It shows the frequency curve, survivor curve, and probable life curve. Age M_x on the x-axis represents the modal age, while age AL_x represents the average age. Thus, this figure illustrates an “L type” Iowa curve since the mode occurs before the average.⁴⁶

First, average life is the area under the survivor curve from age zero to maximum life. Because the survivor curve is measured in percent, the area under the curve must be divided by 100% to convert it from percent-years to years. The formula for average life is as follows:⁴⁷

Equation 9: Average Life

$$\text{Average Life} = \frac{\text{Area Under Survivor Curve from Age 0 to Max Life}}{100\%}$$

Thus, average life may not be determined without a complete survivor curve. Many property groups being analyzed will not have experienced full retirement. This results in a “stub” survivor

⁴⁶ From age zero to age M_x on the survivor curve, it could be said that the percent surviving from this property group is decreasing at an increasing rate. Conversely, from point M_x to maximum on the survivor curve, the percent surviving is decreasing at a decreasing rate.

⁴⁷ See NARUC *supra* n. 18, at 71.

curve. Iowa curves are used to extend stub curves to maximum life in order for the average life calculation to be made (see Exhibit DJG-23, Appendix E).

Realized life is similar to average life, except that realized life is the average years of service experienced to date from the vintage's original installations.⁴⁸ As shown in the figure below, realized life is the area under the survivor curve from zero to age RL_x . Likewise, unrealized life is the area under the survivor curve from age RL_x to maximum life. Thus, it could be said that average life equals realized life plus unrealized life.

Average remaining life represents the future years of service expected from the surviving property.⁴⁹ Remaining life is sometimes referred to as "average remaining life" and "life expectancy." To calculate average remaining life at age x , the area under the estimated future portion of the survivor curve is divided by the percent surviving at age x (denoted S_x). Thus, the average remaining life formula is:

**Equation 10:
Average Remaining Life**

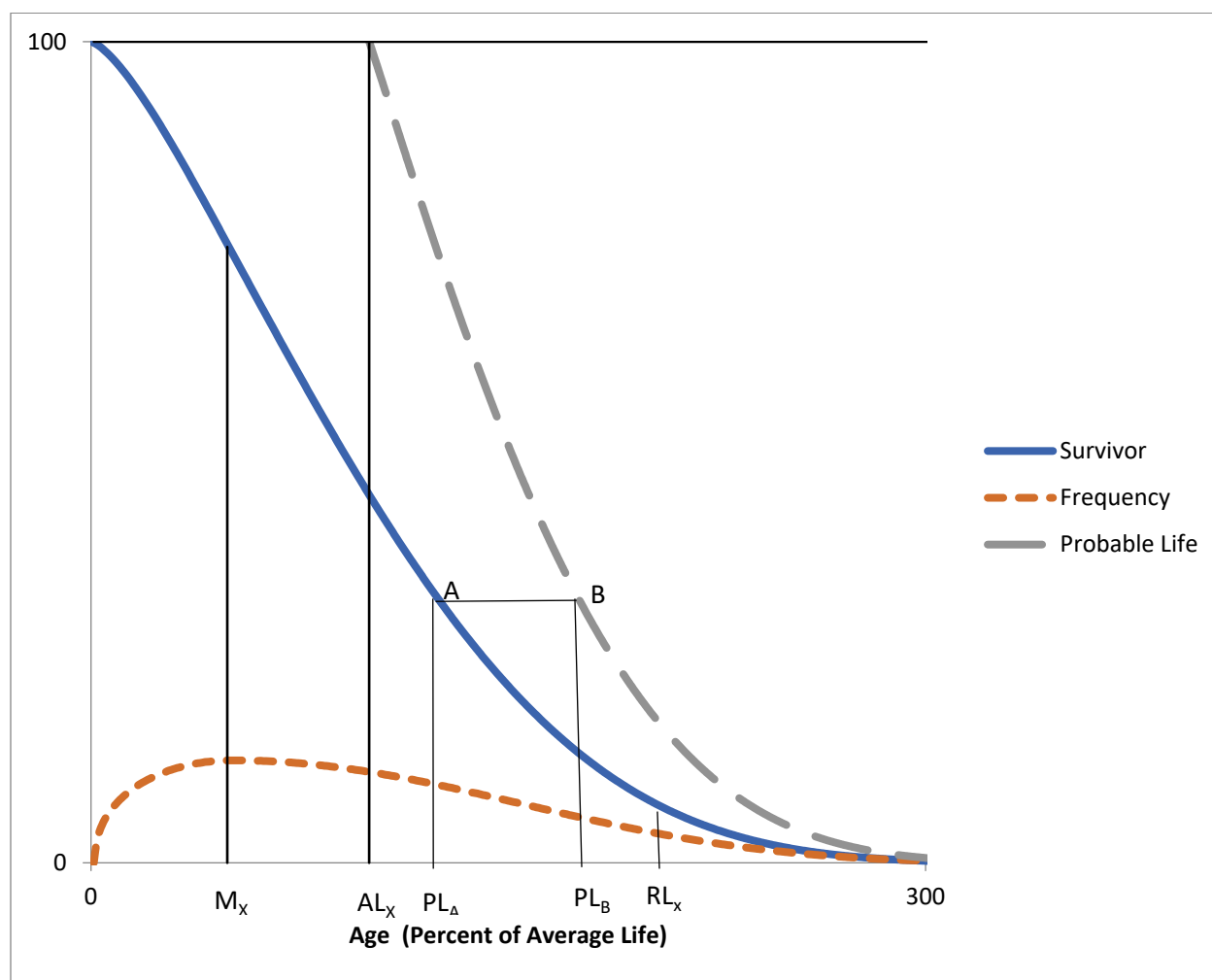
$$\text{Average Remaining Life} = \frac{\text{Area Under Survivor Curve from Age } x \text{ to Max Life}}{S_x}$$

It is necessary to determine average remaining life in order to calculate the annual accrual under the remaining life technique.

⁴⁸ *Id.* at 73.

⁴⁹ *Id.* at 74.

**Figure 6:
Iowa Curve Derivations**



Finally, the probable life may also be determined from the Iowa curve. The probable life of a property group is the total life expectancy of the property surviving at any age and is equal to the remaining life plus the current age.⁵⁰ The probable life is also illustrated in this figure. The probable life at age PL_A is the age at point PL_B . Thus, to read the probable life at age PL_A , see the corresponding point on the survivor curve above at point “A,” then horizontally to point “B” on

⁵⁰ Wolf *supra* n. 15, at 28.

the probable life curve, and back down to the age corresponding to point “B.” It is no coincidence that the vertical line from AL_X connects at the top of the probable life curve. This is because at age zero, probable life equals average life.

APPENDIX E: ACTUARIAL ANALYSIS

Actuarial science is a discipline that applies various statistical methods to assess risk probabilities and other related functions. Actuaries often study human mortality. The results from historical mortality data are used to predict how long similar groups of people who are alive will live today. Insurance companies rely of actuarial analysis in determining premiums for life insurance policies.

The study of human mortality is analogous to estimating service lives of industrial property groups. While some humans die solely from chance, most deaths are related to age; that is, death rates generally increase as age increases. Similarly, physical plant is also subject to forces of retirement. These forces include physical, functional, and contingent factors, as shown in the table below.⁵¹

**Figure 7:
Forces of Retirement**

<u>Physical Factors</u>	<u>Functional Factors</u>	<u>Contingent Factors</u>
Wear and tear Decay or deterioration Action of the elements	Inadequacy Obsolescence Changes in technology Regulations Managerial discretion	Casualties or disasters Extraordinary obsolescence

While actuaries study historical mortality data in order to predict how long a group of people will live, depreciation analysts must look at a utility’s historical data in order to estimate the average lives of property groups. A utility’s historical data is often contained in the Continuing Property Records (“CPR”). Generally, a CPR should contain 1) an inventory of property record

⁵¹ NARUC *supra* n. 18, at 14-15.

units; 2) the association of costs with such units; and 3) the dates of installation and removal of plant. Since actuarial analysis includes the examination of historical data to forecast future retirements, the historical data used in the analysis should not contain events that are anomalous or unlikely to recur.⁵² Historical data is used in the retirement rate actuarial method, which is discussed further below.

The Retirement Rate Method

There are several systematic actuarial methods that use historical data in order to calculate observed survivor curves for property groups. Of these methods, the retirement rate method is superior, and is widely employed by depreciation analysts.⁵³ The retirement rate method is ultimately used to develop an observed survivor curve, which can be fitted with an Iowa curve discussed in Exhibit DJG-23, Appendix D in order to forecast average life. The observed survivor curve is calculated by using an observed life table (“OLT”). The figures below illustrate how the OLT is developed. First, historical property data are organized in a matrix format, with placement years on the left forming rows, and experience years on the top forming columns. The placement year (a.k.a. “vintage year” or “installation year”) is the year of placement of a group of property. The experience year (a.k.a. “activity year”) refers to the accounting data for a particular calendar year. The two matrices below use aged data — that is, data for which the dates of placements, retirements, transfers, and other transactions are known. Without aged data, the retirement rate actuarial method may not be employed. The first matrix is the exposure matrix, which shows the

⁵² *Id.* at 112-13.

⁵³ Anson Marston, Robley Winfrey & Jean C. Hempstead, *Engineering Valuation and Depreciation* 154 (2nd ed., McGraw-Hill Book Company, Inc. 1953).

exposures at the beginning of each year.⁵⁴ An exposure is simply the depreciable property subject to retirement during a period. The second matrix is the retirement matrix, which shows the annual retirements during each year. Each matrix covers placement years 2003–2015, and experience years 2008–2015. In the exposure matrix, the number in the 2009 experience column and the 2003 placement row is \$192,000. This means at the beginning of 2012, there was \$192,000 still exposed to retirement from the vintage group placed in 2003. Likewise, in the retirement matrix, \$19,000 of the dollars invested in 2003 was retired during 2012.

**Figure 8:
Exposure Matrix**

Placement Years	Experience Years Exposures at January 1 of Each Year (Dollars in 000's)								Total at Start of Age Interval	Age Interval
	2008	2009	2010	2011	2012	2013	2014	2015		
2003	261	245	228	211	192	173	152	131	131	11.5 - 12.5
2004	267	252	236	220	202	184	165	145	297	10.5 - 11.5
2005	304	291	277	263	248	232	216	198	536	9.5 - 10.5
2006	345	334	322	310	298	284	270	255	847	8.5 - 9.5
2007	367	357	347	335	324	312	299	286	1,201	7.5 - 8.5
2008	375	366	357	347	336	325	314	302	1,581	6.5 - 7.5
2009		377	366	356	346	336	327	319	1,986	5.5 - 6.5
2010			381	369	358	347	336	327	2,404	4.5 - 5.5
2011				386	372	359	346	334	2,559	3.5 - 4.5
2012					395	380	366	352	2,722	2.5 - 3.5
2013						401	385	370	2,866	1.5 - 2.5
2014							410	393	2,998	0.5 - 1.5
2015								416	3,141	0.0 - 0.5
Total	1919	2222	2514	2796	3070	3333	3586	3827	23,268	

⁵⁴ Technically, the last numbers in each column are “gross additions” rather than exposures. Gross additions do not include adjustments and transfers applicable to plant placed in a previous year. Once retirements, adjustments, and transfers are factored in, the balance at the beginning of the next account period is called an “exposure” rather than an addition.

**Figure 9:
Retirement Matrix**

Placement Years	Experience Years Retirements During the Year (Dollars in 000's)								Total During Age Interval	Age Interval
	2008	2009	2010	2011	2012	2013	2014	2015		
2003	16	17	18	19	19	20	21	23	23	11.5 - 12.5
2004	15	16	17	17	18	19	20	21	43	10.5 - 11.5
2005	13	14	14	15	16	17	17	18	59	9.5 - 10.5
2006	11	12	12	13	13	14	15	15	71	8.5 - 9.5
2007	10	11	11	12	12	13	13	14	82	7.5 - 8.5
2008	9	9	10	10	11	11	12	13	91	6.5 - 7.5
2009		11	10	10	9	9	9	8	95	5.5 - 6.5
2010			12	11	11	10	10	9	100	4.5 - 5.5
2011				14	13	13	12	11	93	3.5 - 4.5
2012					15	14	14	13	91	2.5 - 3.5
2013						16	15	14	93	1.5 - 2.5
2014							17	16	100	0.5 - 1.5
2015								18	112	0.0 - 0.5
Total	74	89	104	121	139	157	175	194	1,052	

These matrices help visualize how exposure and retirement data are calculated for each age interval. An age interval is typically one year. A common convention is to assume that any unit installed during the year is installed in the middle of the calendar year (i.e., July 1st). This convention is called the “half-year convention” and effectively assumes that all units are installed uniformly during the year.⁵⁵ Adoption of the half-year convention leads to age intervals of 0-0.5 years, 0.5-1.5 years, etc., as shown in the matrices.

The purpose of the matrices is to calculate the totals for each age interval, which are shown in the second column from the right in each matrix. This column is calculated by adding each number from the corresponding age interval in the matrix. For example, in the exposure matrix, the total amount of exposures at the beginning of the 8.5-9.5 age interval is \$847,000. This number was calculated by adding the numbers shown on the “stairs” to the left (192+184+216+255=847).

⁵⁵ Wolf *supra* n. 15, at 22.

The same calculation is applied to each number in the column. The amounts retired during the year in the retirements matrix affect the exposures at the beginning of each year in the exposures matrix. For example, the amount exposed to retirement in 2008 from the 2003 vintage is \$261,000. The amount retired during 2008 from the 2003 vintage is \$16,000. Thus, the amount exposed to retirement in 2009 from the 2003 vintage is \$245,000 ($\$261,000 - \$16,000$). The company's property records may contain other transactions which affect the property, including sales, transfers, and adjusting entries. Although these transactions are not shown in the matrices above, they would nonetheless affect the amount exposed to retirement at the beginning of each year.

The totaled amounts for each age interval in both matrices are used to form the exposure and retirement columns in the OLT, as shown in the chart below. This chart also shows the retirement ratio and the survivor ratio for each age interval. The retirement ratio for an age interval is the ratio of retirements during the interval to the property exposed to retirement at the beginning of the interval. The retirement ratio represents the probability that the property surviving at the beginning of an age interval will be retired during the interval. The survivor ratio is simply the complement to the retirement ratio ($1 - \text{retirement ratio}$). The survivor ratio represents the probability that the property surviving at the beginning of an age interval will survive to the next age interval.

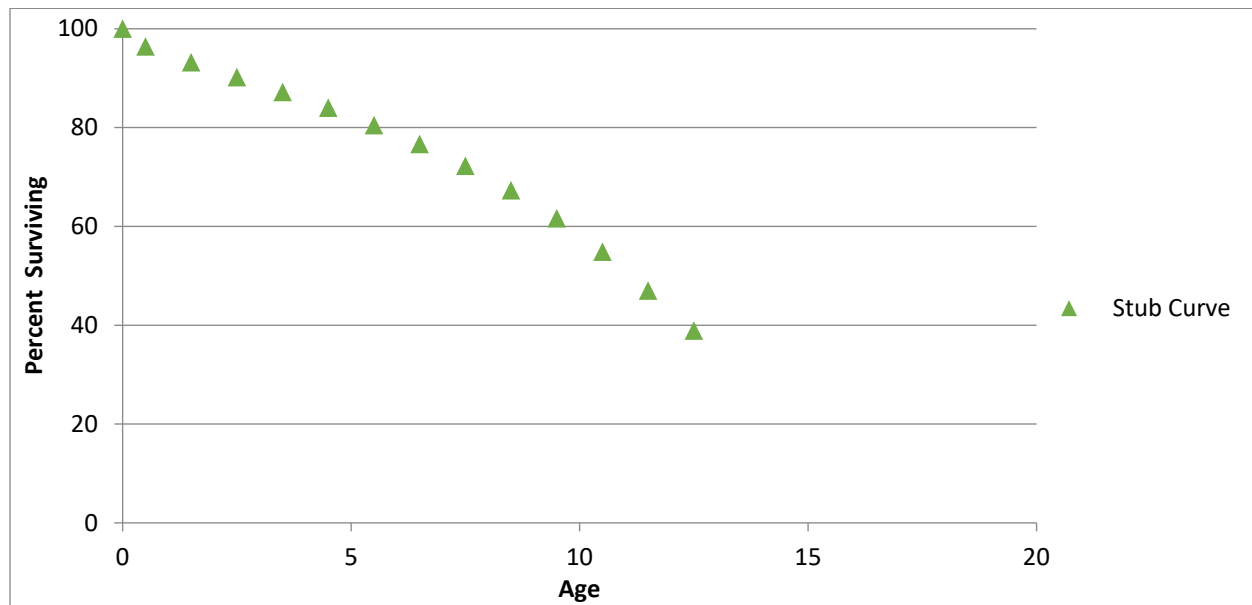
**Figure 10:
Observed Life Table**

Age at Start of Interval	Exposures at Start of Age Interval	Retirements During Age Interval	Retirement Ratio	Survivor Ratio	Percent Surviving at Start of Age Interval
A	B	C	D = C / B	E = 1 - D	F
0.0	3,141	112	0.036	0.964	100.00
0.5	2,998	100	0.033	0.967	96.43
1.5	2,866	93	0.032	0.968	93.21
2.5	2,722	91	0.033	0.967	90.19
3.5	2,559	93	0.037	0.963	87.19
4.5	2,404	100	0.042	0.958	84.01
5.5	1,986	95	0.048	0.952	80.50
6.5	1,581	91	0.058	0.942	76.67
7.5	1,201	82	0.068	0.932	72.26
8.5	847	71	0.084	0.916	67.31
9.5	536	59	0.110	0.890	61.63
10.5	297	43	0.143	0.857	54.87
11.5	131	23	0.172	0.828	47.01
Total	23,268	1,052			38.91

Column F on the right shows the percentages surviving at the beginning of each age interval. This column starts at 100% surviving. Each consecutive number below is calculated by multiplying the percent surviving from the previous age interval by the corresponding survivor ratio for that age interval. For example, the percent surviving at the start of age interval 1.5 is 93.21%, which was calculated by multiplying the percent surviving for age interval 0.5 (96.43%) by the survivor ratio for age interval 0.5 (0.967).

The percentages surviving in Column F are the numbers that are used to form the original survivor curve. This particular curve starts at 100% surviving and ends at 38.91% surviving. An observed survivor curve such as this that does not reach zero percent surviving is called a “stub” curve. The figure below illustrates the stub survivor curve derived from the OLT table above.

Figure 11:
Original “Stub” Survivor Curve



The matrices used to develop the basic OLT and stub survivor curve provide a basic illustration of the retirement rate method in that only a few placement and experience years were used. In reality, analysts may have several decades of aged property data to analyze. In that case, it may be useful to use a technique called “banding” in order to identify trends in the data.

Banding

The forces of retirement and characteristics of industrial property are constantly changing. A depreciation analyst may examine the magnitude of these changes. Analysts often use a technique called “banding” to assist with this process. Banding refers to the merging of several years of data into a single data set for further analysis, and it is a common technique associated with the retirement rate method.⁵⁶ There are three primary benefits of using bands in depreciation analysis:

⁵⁶ NARUC *supra* n. 18, at 113.

1. Increasing the sample size. In statistical analyses, the larger the sample size in relation to the body of total data, the greater the reliability of the result;
2. Smooth the observed data. Generally, the data obtained from a single activity or vintage year will not produce an observed life table that can be easily fit; and
3. Identify trends. By looking at successive bands, the analyst may identify broad trends in the data that may be useful in projecting the future life characteristics of the property.⁵⁷

Two common types of banding methods are the “placement band” method and the “experience band” method.” A placement band, as the name implies, isolates selected placement years for analysis. The figure below illustrates the same exposure matrix shown above, except that only the placement years 2005-2008 are considered in calculating the total exposures at the beginning of each age interval.

⁵⁷ *Id.*

**Figure 12:
Placement Bands**

Placement Years	Experience Years Exposures at January 1 of Each Year (Dollars in 000's)								Total at Start of Age Interval	Age Interval
	2008	2009	2010	2011	2012	2013	2014	2015		
2003	261	245	228	211	192	173	152	131		11.5 - 12.5
2004	267	252	236	220	202	184	165	145		10.5 - 11.5
2005	304	291	277	263	248	232	216	198	198	9.5 - 10.5
2006	345	334	322	310	298	284	270	255	471	8.5 - 9.5
2007	367	357	347	335	324	312	299	286	788	7.5 - 8.5
2008	375	366	357	347	336	325	314	302	1,133	6.5 - 7.5
2009		377	366	356	346	336	327	319	1,186	5.5 - 6.5
2010			381	369	358	347	336	327	1,237	4.5 - 5.5
2011				386	372	359	346	334	1,285	3.5 - 4.5
2012					395	380	366	352	1,331	2.5 - 3.5
2013						401	385	370	1,059	1.5 - 2.5
2014							410	393	733	0.5 - 1.5
2015								416	375	0.0 - 0.5
Total	1919	2222	2514	2796	3070	3333	3586	3827	9,796	

The shaded cells within the placement band equal the total exposures at the beginning of age interval 4.5–5.5 (\$1,237). The same placement band would be used for the retirement matrix covering the same placement years of 2005 – 2008. This of course would result in a different OLT and original stub survivor curve than those that were calculated above without the restriction of a placement band.

Analysts often use placement bands for comparing the survivor characteristics of properties with different physical characteristics.⁵⁸ Placement bands allow analysts to isolate the effects of changes in technology and materials that occur in successive generations of plant. For example, if in 2005 an electric utility began placing transmission poles with a special chemical treatment that extended the service lives of the poles, an analyst could use placement bands to isolate and analyze the effect of that change in the property group's physical characteristics. While placement

⁵⁸ Wolf *supra* n. 15, at 182.

bands are very useful in depreciation analysis, they also possess an intrinsic dilemma. A fundamental characteristic of placement bands is that they yield fairly complete survivor curves for older vintages. However, with newer vintages, which are arguably more valuable for forecasting, placement bands yield shorter survivor curves. Longer “stub” curves are considered more valuable for forecasting average life. Thus, an analyst must select a band width broad enough to provide confidence in the reliability of the resulting curve fit yet narrow enough so that an emerging trend may be observed.⁵⁹

Analysts also use “experience bands.” Experience bands show the composite retirement history for all vintages during a select set of activity years. The figure below shows the same data presented in the previous exposure matrices, except that the experience band from 2011 – 2013 is isolated, resulting in different interval totals.

⁵⁹ NARUC *supra* n. 18, at 114.

**Figure 13:
Experience Bands**

Placement Years	Experience Years Exposures at January 1 of Each Year (Dollars in 000's)								Total at Start of Age Interval	Age Interval
	2008	2009	2010	2011	2012	2013	2014	2015		
2003	261	245	228	211	192	173	152	131		11.5 - 12.5
2004	267	252	236	220	202	184	165	145		10.5 - 11.5
2005	304	291	277	263	248	232	216	198	173	9.5 - 10.5
2006	345	334	322	310	298	284	270	255	376	8.5 - 9.5
2007	367	357	347	335	324	312	299	286	645	7.5 - 8.5
2008	375	366	357	347	336	325	314	302	752	6.5 - 7.5
2009		377	366	356	346	336	327	319	872	5.5 - 6.5
2010			381	369	358	347	336	327	959	4.5 - 5.5
2011				386	372	359	346	334	1,008	3.5 - 4.5
2012					395	380	366	352	1,039	2.5 - 3.5
2013						401	385	370	1,072	1.5 - 2.5
2014							410	393	1,121	0.5 - 1.5
2015								416	1,182	0.0 - 0.5
Total	1919	2222	2514	2796	3070	3333	3586	3827	9,199	

The shaded cells within the experience band equal the total exposures at the beginning of age interval 4.5–5.5 (\$1,237). The same experience band would be used for the retirement matrix covering the same experience years of 2011 – 2013. This of course would result in a different OLT and original stub survivor than if the band had not been used. Analysts often use experience bands to isolate and analyze the effects of an operating environment over time.⁶⁰ Likewise, the use of experience bands allows analysis of the effects of an unusual environmental event. For example, if an unusually severe ice storm occurred in 2013, destruction from that storm would affect an electric utility's line transformers of all ages. That is, each of the line transformers from each placement year would be affected, including those recently installed in 2012, as well as those installed in 2003. Using experience bands, an analyst could isolate or even eliminate the 2013 experience year from the analysis. In contrast, a placement band would not effectively isolate the

⁶⁰ *Id.*

ice storm's effect on life characteristics. Rather, the placement band would show an unusually large rate of retirement during 2013, making it more difficult to accurately fit the data with a smooth Iowa curve. Experience bands tend to yield the most complete stub curves for recent bands because they have the greatest number of vintages included. Longer stub curves are better for forecasting. The experience bands, however, may also result in more erratic retirement dispersion making the curve fitting process more difficult.

Depreciation analysts must use professional judgment in determining the types of bands to use and the band widths. In practice, analysts may use various combinations of placement and experience bands in order to increase the data sample size, identify trends and changes in life characteristics, and isolate unusual events. Regardless of which bands are used, observed survivor curves in depreciation analysis rarely reach zero percent. This is because, as seen in the OLT above, relatively newer vintage groups have not yet been fully retired at the time the property is studied. An analyst could confine the analysis to older, fully retired vintage groups in order to get complete survivor curves, but such analysis would ignore some the property currently in service and would arguably not provide an accurate description of life characteristics for current plant in service. Because a complete curve is necessary to calculate the average life of the property group, however, curve fitting techniques using Iowa curves or other standardized curves may be employed in order to complete the stub curve.

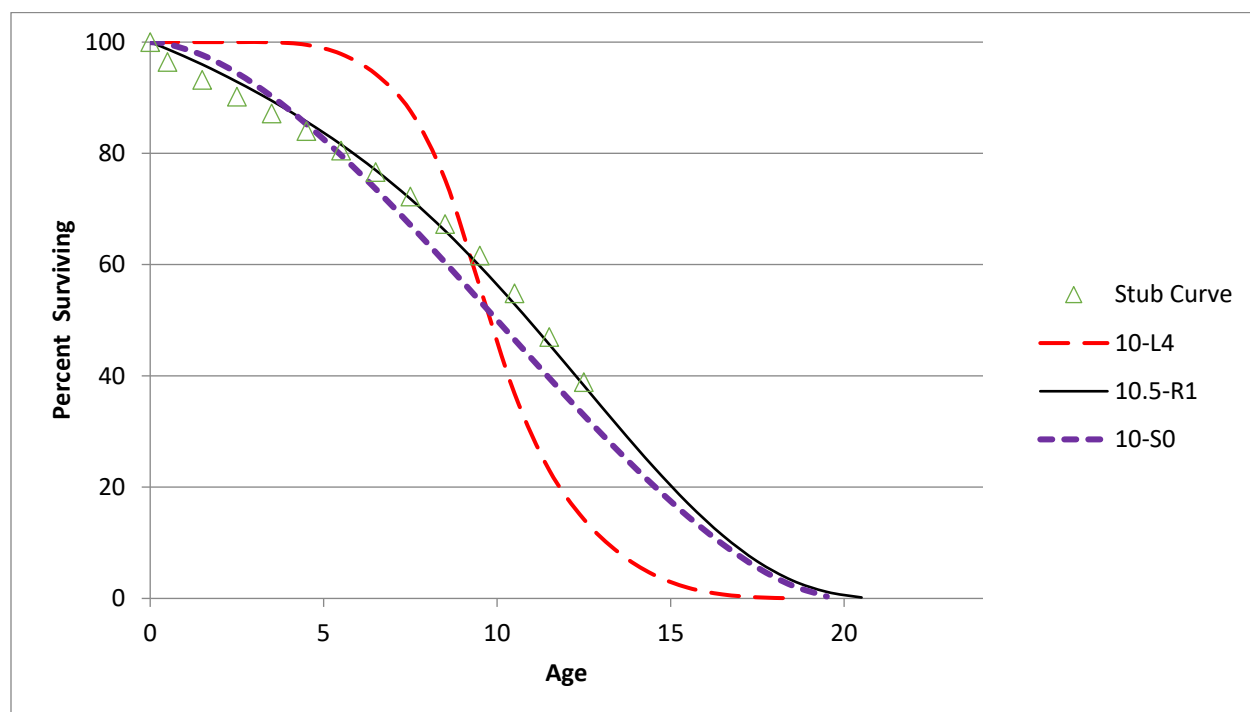
Curve Fitting

Depreciation analysts typically use the survivor curve rather than the frequency curve to fit the observed stub curves. The most commonly used generalized survivor curves used in the curve fitting process are the Iowa curves discussed above. As Wolf notes, if “the Iowa curves are

adopted as a model, an underlying assumption is that the process describing the retirement pattern is one of the 22 [or more] processes described by the Iowa curves.”⁶¹

Curve fitting may be done through visual matching or mathematical matching. In visual curve fitting, the analyst visually examines the plotted data to make an initial judgment about the Iowa curves that may be a good fit. The figure below illustrates the stub survivor curve shown above. It also shows three different Iowa curves: the 10-L4, the 10.5-R1, and the 10-S0. Visually, it is clear that the 10.5-R1 curve is a better fit than the other two curves.

**Figure 14:
Visual Curve Fitting**



In mathematical fitting, the least squares method is used to calculate the best fit. This mathematical method would be excessively time consuming if done by hand. With the use of

⁶¹ Wolf *supra* n. 15, at 46 (22 curves includes Winfrey’s 18 original curves plus Cowles’s four “O” type curves).

modern computer software however, mathematical fitting is an efficient and useful process. The typical logic for a computer program, as well as the software employed for the analysis in this testimony is as follows:

First (an Iowa curve) curve is arbitrarily selected. . . . If the observed curve is a stub curve, . . . calculate the area under the curve and up to the age at final data point. Call this area the realized life. Then systematically vary the average life of the theoretical survivor curve and calculate its realized life at the age corresponding to the study date. This trial and error procedure ends when you find an average life such that the realized life of the theoretical curve equals the realized life of the observed curve. Call this the average life.

Once the average life is found, calculate the difference between each percent surviving point on the observed survivor curve and the corresponding point on the Iowa curve. Square each difference and sum them. The sum of squares is used as a measure of goodness of fit for that particular Iowa type curve. This procedure is repeated for the remaining 21 Iowa type curves. The “best fit” is declared to be the type of curve that minimizes the sum of differences squared.⁶²

Mathematical fitting requires less judgment from the analyst and is thus less subjective. Blind reliance on mathematical fitting, however, may lead to poor estimates. Thus, analysts should employ both mathematical and visual curve fitting in reaching their final estimates. This way, analysts may utilize the objective nature of mathematical fitting while still employing professional judgment. As Wolf notes: “The results of mathematical curve fitting serve as a guide for the analyst and speed the visual fitting process. But the results of the mathematical fitting should be checked visually and the final determination of the best fit be made by the analyst.”⁶³

In the graph above, visual fitting was sufficient to determine that the 10.5-R1 Iowa curve was a better fit than the 10-L4 and the 10-S0 curves. Using the sum of least squares method, mathematical fitting confirms the same result. In the chart below, the percentages surviving from

⁶² Wolf *supra* n. 15, at 47.

⁶³ *Id.* at 48.

the OLT that formed the original stub curve are shown in the left column, while the corresponding percentages surviving for each age interval are shown for the three Iowa curves. The right portion of the chart shows the differences between the points on each Iowa curve and the stub curve. These differences are summed at the bottom. Curve 10.5-R1 is the best fit because the sum of the squared differences for this curve is less than the same sum of the other two curves. Curve 10-L4 is the worst fit, which was also confirmed visually.

**Figure 15:
Mathematical Fitting**

Age Interval	Stub Curve	Iowa Curves			Squared Differences		
		10-L4	10-S0	10.5-R1	10-L4	10-S0	10.5-R1
0.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0
0.5	96.4	100.0	99.7	98.7	12.7	10.3	5.3
1.5	93.2	100.0	97.7	96.0	46.1	19.8	7.6
2.5	90.2	100.0	94.4	92.9	96.2	18.0	7.2
3.5	87.2	100.0	90.2	89.5	162.9	9.3	5.2
4.5	84.0	99.5	85.3	85.7	239.9	1.6	2.9
5.5	80.5	97.9	79.7	81.6	301.1	0.7	1.2
6.5	76.7	94.2	73.6	77.0	308.5	9.5	0.1
7.5	72.3	87.6	67.1	71.8	235.2	26.5	0.2
8.5	67.3	75.2	60.4	66.1	62.7	48.2	1.6
9.5	61.6	56.0	53.5	59.7	31.4	66.6	3.6
10.5	54.9	36.8	46.5	52.9	325.4	69.6	3.9
11.5	47.0	23.1	39.6	45.7	572.6	54.4	1.8
12.5	38.9	14.2	32.9	38.2	609.6	36.2	0.4
SUM					3004.2	371.0	41.0

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

City of Lancaster – Bureau of Water

:
:
:
:
:
:

Docket No. R-2025-3057237

VERIFICATION

I, David J. Garrett, hereby state that the facts set forth in my Direct Testimony, OCA Statement 2, are true and correct (or are true and correct to the best of my knowledge, information, and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: December 17, 2025

Signature: /s/ David J. Garrett
David J. Garrett

Consultant Address: 101 Park Avenue, Suite 1125
Oklahoma City, OK 73120

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC	)	
UTILITY COMMISSION	)	
	)	
v.	)	DOCKET NO. R-2025-3057237
	)	
CITY OF LANCASTER –	)	
BUREAU OF WATER	)	
	)	

DIRECT TESTIMONY OF
JEROME D. MIERZWA

ON BEHALF OF THE
PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

DECEMBER 17, 2025

1 **I. INTRODUCTION**

2 Q. WOULD YOU PLEASE STATE YOUR NAME AND BUSINESS
3 ADDRESS?

4 A. My name is Jerome D. Mierzwa. I am a Principal at and the President of Exeter
5 Associates, Inc (“Exeter”). My business address is 10480 Little Patuxent Parkway,
6 Suite 300, Columbia, Maryland 21044. Exeter specializes in providing public utility-
7 related consulting services.

8 Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND
9 EXPERIENCE.

10 A. I graduated from Canisius College in Buffalo, New York, in 1981 with a Bachelor of
11 Science Degree in Marketing.¹ In 1985, I received a Master’s Degree in Business
12 Administration with a concentration in finance, also from Canisius College. In July
13 1986, I joined National Fuel Gas Distribution Corporation (“NFG Distribution”) as a
14 Management Trainee in the Research and Statistical Services Department (“RSS”).
15 I was promoted to Supervisor RSS in January 1987. While employed with NFG
16 Distribution, I conducted various financial and statistical analyses related to the
17 Company’s market research activity and state regulatory affairs. In April 1987, as part
18 of a corporate reorganization, I was transferred to National Fuel Gas Supply
19 Corporation’s (“NFG Supply”) rate department where my responsibilities included
20 utility cost of service and rate design analysis, expense and revenue requirement
21 forecasting and activities related to federal regulation. I was also responsible for
22 preparing NFG Supply’s Federal Energy Regulatory Commission (“FERC”) Purchase
23 Gas Adjustment (“PGA”) filings and developing interstate pipeline and spot market
24 supply gas price projections. These forecasts were utilized for internal planning

¹ Effective August 1, 2023, Canisius College became Canisius University.

1 purposes as well as in NFG Distribution's Pennsylvania Section 1307(f) purchased
2 gas cost proceedings.

3 In April 1990, I accepted a position as a Utility Analyst with Exeter. In
4 December 1992, I was promoted to Senior Regulatory Analyst. Effective April 1,
5 1996, I became a Principal at Exeter. Since joining Exeter, I have specialized in
6 utility class cost of service and rate design analysis, evaluating the gas purchasing
7 practices and policies of natural gas utilities, sales and rate forecasting, performance-
8 based incentive regulation, revenue requirement analysis, the unbundling of utility
9 services, and the evaluation of customer choice natural gas transportation programs.

10 Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGULATORY
11 PROCEEDINGS ON UTILITY RATES?

12 A. Yes. I have provided testimony on over 500 occasions in proceedings before FERC,
13 utility regulatory commissions in Arkansas, Delaware, Georgia, Illinois, Indiana,
14 Louisiana, Maine, Maryland, Massachusetts, Montana, Nevada, New Hampshire,
15 New Jersey, Ohio, Rhode Island, Texas, South Carolina, Utah, and Virginia, as well
16 as before the Pennsylvania Public Utility Commission ("Commission").

17 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

18 A. On September 30, 2025, The City of Lancaster ("City") filed an application with the
19 Commission to increase the rates for water utility service provided to the customers
20 which it serves that are located outside the corporate limits of the City ("Outside City
21 customers") by \$7.005 million, or 30.9%. The City also provides water service to
22 customers that are located inside the City's corporate limits ("Inside City
23 customers"). However, the rates of Inside City customers are not regulated by the
24 Commission. Exeter was retained by the Pennsylvania Office of Consumer Advocate
25 ("OCA") to review and analyze the revenue requirement claim, class cost of service

1 study (“CCOSS”), and rate design proposals reflected in the City’s application to
2 increase the rates of Outside City customers. My associate, Mr. Lafayette K. Morgan,
3 Jr., addresses the City’s revenue requirement claim. My testimony addresses the
4 City’s CCOSS and rate design proposals.

5 Q. WERE YOU THE OCA’S COST ALLOCATION AND RATE DESIGN
6 WITNESS IN THE CITY’S MOST RECENT PRIOR RATE PROCEEDING
7 IN DOCKET NO. R-2021-3026682?

8 A. Yes, I was.

9 Q. HAVE YOU PREPARED EXHIBITS TO ACCOMPANY YOUR
10 TESTIMONY?

11 A. Yes, I have. Schedule JDM-1 is attached to my testimony.

12 Q. PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS.

13 A. Although I generally find the City’s CCOSS to be reasonable and appropriate for
14 determining cost responsibility for Outside City customers, there are several aspects
15 of the CCOSS with which I disagree. First, water treatment salary and laboratory
16 operation and maintenance (“O&M”) expenses should be functionalized and allocated
17 to each customer class based on average day demands. In the City’s CCOSS, these
18 expenses were functionalized and allocated based on average and maximum day
19 demands. I identified this same concern with the CCOSS filed by the City in its most
20 recent prior proceeding in Docket No. R-2021-3026682, and modified the City’s
21 CCOSS in that proceeding to address this concern. At this point in this proceeding,
22 although I continue to disagree with the City’s proposed allocation of these expenses,
23 I am not proposing to modify the City’s CCOSS to address my concern because
24 modifying the City’s COSS to address my concern would not have a material impact
25 on the results of the City’s CCOSS. However, I reserve the right to subsequently

1 modify the City's CCOSS to functionalize and allocate water treatment salary and
2 laboratory O&M expenses based on average day demands in the event that a party to
3 this proceeding proposes modifications to the City's CCOSS that would result in my
4 allocation of water treatment salary and laboratory O&M expenses based on average
5 day demands having a material impact on the results of the CCOSS.

6 In the CCOSS presented by the City in Docket No. R-2021-3026682, the costs
7 associated with providing Public Fire protection service were allocated to the City's
8 Residential, Commercial, Industrial, and Large Industrial customer classes (retail
9 customer classes). As a result, in Docket No. R-2021-3026682, the City did not
10 propose to collect any of the costs it incurred to provide Public Fire protection service
11 from the municipalities to which it provided Public Fire protection service. I
12 disagreed with the City's proposal in Docket No. R-2021-3026682 not to recover any
13 of the costs associated with providing Public Fire protection service from the
14 municipalities it provided Public Fire protection service. In the settlement agreement
15 adopted and approved in the City's last rate proceeding, the City agreed to propose to
16 allocate in the CCOSS it filed in its next rate proceeding a portion of the costs
17 associated with providing Public Fire protection service to the municipalities in which
18 the City provides Public Fire service. In the CCOSS presented by the City in this
19 proceeding, which is the next rate proceeding after Docket No. R-2021-3026682, the
20 City did not comply with the terms of the settlement agreement approved in its last
21 rate proceeding, and again allocated all of the costs associated with providing Public
22 Fire protection service to the retail customer classes. I recommend that 25% of the
23 costs associated with providing Public Fire protection service be allocated to Public
24 Fire protection service, and that these allocated costs be recovered from the
25 municipalities being provided Public Fire protection service by the City. In this

1 proceeding, I adjust the results of the City's CCOSS to reflect an allocation of 25% of
2 the costs associated with providing Public Fire protection service to Public Fire
3 protection service ("OCA adjusted cost of service").

4 With respect to rate design, the City's proposed 46.2% increase in retail and
5 Other Water Utilities monthly fixed customer charges should be rejected. To provide
6 for gradualism, I recommend that the current customer charges of the retail customer
7 classes and the Other Water Utilities customer class be increased by a percentage no
8 greater than the overall increase assigned to the retail customer classes and the Other
9 Water Utilities customer class in this proceeding. To the extent the Commission
10 authorizes a rate increase for the City which is less than the City's requested increase,
11 the OCA adjusted cost of service for each class cost of service should be
12 proportionately adjusted to reflect the overall increase, or revenue requirement,
13 authorized by the Commission in this proceeding ("authorized cost of service"). The
14 volumetric consumption rates adopted in this proceeding should provide for the
15 recovery of each customer retail customer class's and the Other Water Utilities
16 customer class's authorized cost of service not recovered through the monthly fixed
17 charges collected from each customer class.

18 The current charges for Private Fire should be proportionately adjusted to
19 reflect the Commission approved Private Fire authorized cost of service. Public Fire
20 hydrant charges should be adopted in this proceeding that recover 25% of the
21 Commission approved Public Fire authorized cost of service.

22 Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

23 A. Following this introductory section, my testimony is divided into three additional
24 sections. The first additional section provides an overview of water utility cost of
25 service methodologies. Next, I address the City's CCOSS. In this section I present my

1 recommendations concerning establishing rates for Public Fire protection service. The
2 final additional section of my testimony discusses the distribution of the revenue
3 increase authorized by the Commission, if any, to the Outside City customer classes
4 served by the City and rate design.
5

6 **II. OVERVIEW OF COST OF SERVICE METHODOLOGIES**

7 Q. WHAT IS THE OBJECTIVE OF A COST OF SERVICE STUDY?

8 A. A cost of service study is conducted to assist a utility or commission in determining
9 the level of costs properly recoverable through the rates applicable for the various
10 services provided by the utility from each of the classes to which the utility provides
11 service. Allocation of recoverable costs to each class of service is generally based on
12 usage and cost causation principles.

13 Q. WHAT ARE THE PRIMARY COST OF SERVICE STUDY
14 METHODOLOGIES UTILIZED FOR WATER UTILITIES?

15 A. The two most commonly used and widely recognized methods of allocating costs
16 to customer classes for water utilities are the base-extra capacity method and the
17 commodity-demand method. Both of these methods are set forth in the American
18 Water Works Association's ("AWWA") *Principles of Water Rates, Fees, and*
19 *Charges* ("AWWA M1 Manual").

20 Q. WHAT METHODOLOGY HAS THE CITY UTILIZED FOR ITS CLASS
21 CCOSS?

22 A. The City has utilized the base-extra capacity method in preparing its CCOSS. Under
23 the base-extra capacity method, investment and costs are first classified into four
24 primary functional cost categories: base or average capacity, extra capacity, customer,
25 and fire protection. Once investment and costs are classified to these functional

1 categories, they are allocated to the various customer classes. The City's CCOSS is
2 presented by Mr. Gregory R. Herbert of Gannet Fleming Valuation and Rate
3 Consultants, LLC.

4 Q. PLEASE DESCRIBE IN GREATER DETAIL THE FOUR PRIMARY
5 FUNCTIONAL COST CATEGORIES AND HOW THESE COSTS ARE
6 ALLOCATED TO THE VARIOUS CUSTOMER CLASSES UNDER THE
7 BASE-EXTRA CAPACITY METHOD.

8 A. **Base Costs** are costs that tend to vary with the quantity of water used, plus costs
9 associated with supplying, treating, pumping, and distributing water to customers
10 under average load conditions. Base costs were allocated to the customer classes on
11 the basis of average daily usage in the City's CCOSS.

12 **Extra Capacity Costs** are costs associated with meeting usage requirements
13 in excess of average usage. This includes operating and capital costs for additional
14 plant and system capacity beyond that required for average usage. Extra capacity
15 costs in the City's study have been subdivided into costs necessary to meet maximum
16 day extra demand and maximum hour extra demand. These extra capacity costs were
17 allocated to customer classes on the basis of each class's maximum day and
18 maximum hour usage in excess of average usage.

19 **Customer Costs** are costs associated with serving customers regardless of
20 their usage or demand characteristics. Customer costs include the operating costs
21 related to meters and services, meter reading costs, and billing and collection costs.
22 Customer costs were allocated on the basis of capital cost of meters and services and
23 the number of customer bills.

24 **Fire Protection Costs** are costs associated with providing the facilities to
25 meet the potential peak demand of fire protection service. In the City's CCOSS, fire

1 protection costs have been subdivided into the costs associated with meeting Public
2 Fire Protection and Private Fire Protection demands. The extra capacity costs
3 assigned to fire protection were allocated to Public and Private Fire Protection on the
4 basis of the total relative demands of hydrants and fire service lines.

5

6 **III. EVALUATION OF THE CITY'S CLASS COST OF**
7 **SERVICE STUDY**

8 Q. BEFORE ASSESSING AND EVALUATING THE CITY'S CCOSS AND
9 RATE DESIGN PROPOSALS, DO YOU HAVE ANY PRELIMINARY
10 MATTERS TO ADDRESS?

11 A. Yes. My testimony and analysis are based on the City's proposed revenue
12 requirement. This is standard practice because it allows the cost of service and rate
13 design recommendations of different parties to be compared on a comparable basis.
14 This should not be taken, however, as an endorsement of the City's proposed revenue
15 requirement claim in this proceeding.

16 Q. HAS THE CITY REVISED OR MODIFIED THE CCOSS IT FILED IN ITS
17 INITIAL APPLICATION?

18 A. Yes. In response to the Commission's Bureau of Technical Utility Services ("TUS")
19 discovery request No. 15 (TUS Request No. 15), the City presented a revised CCOSS
20 to correct an error with respect to the number of $\frac{3}{4}$ x 1-inch and 1-inch meters
21 reflected in its initial CCOSS.

22 Q. PLEASE IDENTIFY THE CUSTOMER CLASSES INCLUDED IN THE
23 CITY'S CCOSS.

24 A. The City provides service to five Inside City and seven Outside City customer
25 classes. The Inside City customer classes served by the City are as follows:

- 1 • Residential
- 2 • Commercial
- 3 • Industrial
- 4 • Private Fire
- 5 • Public Fire

6 The City provides service to these same five customer classes outside the
7 City, and also provides service outside the City to a Large Industrial customer class
8 and an Other Water Utilities customer class. In my testimony, I subsequently refer to
9 the Residential, Commercial, Industrial, and Large Industrial customer classes as the
10 retail customer classes. Each of the five Inside and seven Outside City customer
11 classes are included in the City's CCOSS. As subsequently discussed later in my
12 testimony, the costs associated with providing Inside and Outside City Public Fire
13 protection service have been allocated to the retail customer classes in the City's
14 CCOSS.

15 Q. DO YOU HAVE ANY CONCERNS WITH THE CITY'S CCOSS?

16 A. Yes. While the City's CCOSS is generally reasonable, I have several concerns with
17 the CCOSS.

18 Q. PLEASE IDENTIFY THE CONCERNS YOU HAVE WITH THE CITY'S
19 CCOSS.

20 A. I have concerns with the City's functionalization and allocation of certain water
21 treatment salary expenses and laboratory testing O&M expenses. I also have a
22 concern with the City's allocation of 100% of the Public Fire protection service cost
23 of service to the retail customer classes.

1 Q. PLEASE DESCRIBE YOUR CONCERN WITH THE CITY'S
2 FUNCTIONALIZATION AND ALLOCATION OF WATER TREATMENT
3 O&M EXPENSES.

4 A. The City has functionalized and allocated water treatment salary expenses to
5 customer class based on Factor 2 which functionalizes and allocates costs partially
6 based on average day demands and partially based on maximum day demands. Water
7 treatment salaries do not increase on the maximum demand day and, therefore, these
8 expenses should be functionalized and allocated based on average day demands
9 (Factor 1).

10 Q. PLEASE DESCRIBE YOUR CONCERN WITH THE CITY'S
11 FUNCTIONALIZATION AND ALLOCATION OF LABORATORY
12 TESTING O&M EXPENSES.

13 A. Laboratory testing O&M expenses have also been allocated to customer class based
14 on Factor 2 in the City's CCROSS. Like water treatment salaries, laboratory O&M
15 expenses do not increase on the maximum demand day. The frequency of the City's
16 various laboratory tests and the associated expenses are a function of time rather than
17 demands (see the response to OCA-VII-9, attached hereto as Schedule JDM-1).
18 Therefore, laboratory testing expenses should be functionalized and allocated based
19 on average day demands.

20 Q. DID YOU EXPRESS THESE SAME CONCERNS IN DOCKET NO. R-
21 2021-3026682 WITH RESPECT TO THE FUNCTIONALIZATION AND
22 ALLOCATION OF WATER TREATMENT AND LABORATORY
23 EXPENSES IN THE CCROSS FILED BY THE CITY IN THAT
24 PROCEEDING?

1 A. Yes, I did, and I proposed modifying the City's CCOSS to address my concerns.
2 However, at this point of this proceeding, I am not proposing to modify the City's
3 CCOSS to address my concerns related to the functionalization and allocation of
4 water treatment and laboratory expenses. This is because modifying the City's
5 CCOSS to address my concerns would not have a material impact on the results of
6 the City's CCOSS. However, I reserve the right to subsequently modify the City's
7 CCOSS to functionalize and allocate water treatment salary and laboratory O&M
8 expense based on average day demands in the event that a party to this proceeding
9 purposes modifications to the City's CCOSS that would result in my allocation of
10 water treatment salary and laboratory O&M expense based on average day demands
11 having a material impact on the results of the CCOSS.

12 Q. HOW DID THE CITY ALLOCATE THE COSTS ASSOCIATED WITH
13 PROVIDING PUBLIC FIRE PROTECTION SERVICE IN THE CCOSS IT
14 FILED IN DOCKET NO. R-2021-3026682, WHICH WAS THE CITY'S
15 MOST RECENT PRIOR RATE PROCEEDING?

16 A. In the CCOSS filed by the City in Docket No. R-2021-3026682, the City initially
17 identified the costs associated with providing Public Fire protection service, but
18 subsequently reallocated 100% of the Public Fire protection service costs to the retail
19 customer classes in proportion to the number of equivalent 5/8-inch meters in each
20 class. Based on this CCOSS, the City did not propose to collect any of the costs of
21 providing Public Fire protection service from the municipalities it provided Public
22 Fire protection service.

23 Q. WAS THE CITY'S PROPOSED RECOVERY OF PUBLIC FIRE
24 PROTECTION SERVICE COSTS IN DOCKET NO. R-2021-3026682

1 TYPICAL OF HOW WATER UTILITIES IN PENNSYLVANIA COLLECT
2 THESE COSTS?

3 A. No. Most water utilities in Pennsylvania charge municipalities a portion of the cost of
4 providing Public Fire protection service, with the remainder of the costs assigned to
5 the retail classes. There is a specific provision of the Public Utility Code, 66 Pa C.S. §
6 1328, that allows utilities to charge up to 25% of the cost of Public Fire service
7 directly to municipalities.

8 Q. DID YOU AGREE WITH THE CITY'S PROPOSAL IN DOCKET NO. R-
9 2021-3026682 TO ALLOCATE 100% OF PUBLIC FIRE PROTECTION
10 SERVICE COSTS TO THE RETAIL CUSTOMER CLASSES AND TO
11 NOT RECOVER ANY OF THE COSTS ASSOCIATED WITH PUBLIC
12 FIRE PROTECTION SERVICE FROM THE MUNICIPALITIES
13 PROVIDED WITH PUBLIC FIRE PROTECTION SERVICE?

14 A. No, I found the City's position to be unreasonable. The City's rates are set like a
15 public utility for service outside its municipal boundaries and the City should be
16 treated the same way other water utilities are treated. The Pennsylvania General
17 Assembly has made a policy judgment that some of the cost of providing Public Fire
18 protection service should be collected directly from the municipalities in which the
19 service is provided, with the remainder charged to retail customers.

20 There can be no argument that the public policy in the Commonwealth is that
21 municipalities should bear some responsibility for Public Fire service protection
22 costs. This policy makes sense because it is the municipalities that decide to have
23 public fire hydrants and that impose requirements on the water system including
24 required flow rates, distances between hydrants, and so on. Municipalities have at
25 least some ability to control Public Fire costs. Individual customers have no such

1 ability. In Docket No. R-2021-3026682, I recommended that the Commission order
2 the City in its next rate case to propose rates for Public Fire service that collect 25%
3 of the Public Fire cost of service.

4 Q. WHAT DID THE SETTLEMENT AGREEMENT ADOPTED AND
5 APPROVED IN DOCKET NO. R-2021-3026682 PROVIDE WITH
6 RESPECT TO THE PUBLIC FIRE PROTECTION COST OF SERVICE?

7 A. In the settlement agreement in Docket No. R-2021-3026682, the City agreed that in
8 its next rate case the City would allocate a portion of the costs associated with
9 providing Public Fire protection service to the municipalities in which the City
10 provides Public Fire protection service.

11 Q. DID THE CITY COMPLY WITH THE SETTLEMENT AGREEMENT
12 ADOPTED AND APPROVED IN DOCKET NO. R-2021-3026682 WITH
13 RESPECT TO THE RECOVERY OF THE PUBLIC FIRE PROTECTION
14 COST OF SERVICE FROM MUNICIPALITIES?

15 A. No. The City did not comply with the terms of the settlement agreement approved in
16 its last rate proceeding, and the City has again reallocated all of the costs associated
17 with providing Public Fire protection service to retail customers. The City's CCOSS
18 indicates an Outside City Public Fire protection cost of service of \$2.334 million, and
19 the City has reallocated the Public Fire protection cost of service to the retail
20 customer classes in proportion to the number of equivalent 5/8-inch meters in each
21 class.

22 Q. WHY DID THE CITY NOT PROPOSE TO RECOVER A PORTION OF
23 THE COSTS ASSOCIATED WITH PROVIDING PUBLIC FIRE
24 PROTECTION SERVICE TO THE MUNICIPALITIES THE CITY
25 PROVIDES PUBLIC FIRE PROTECTION SERVICE?

1 A. Mr. Herbert claims that if the City proposed to charge the municipalities it provides
2 Public Fire protection service for a portion of the City's cost of providing Public Fire
3 service protection, some of those municipal customers would face an extremely large
4 increase to their annual utility costs.

5 Q. WHAT IS YOUR RESPONSE TO MR. HERBERT'S CLAIM?

6 A. Table 2 in Mr. Herbert's testimony identifies the charges that would be assessed to
7 each municipality the City provides Public Fire protection service if the City were to
8 recover 25% of the Outside City Public Fire protection cost of service from the
9 municipalities provided Public Fire protection by the City. Data request OCA-13-1
10 requested information concerning the annual operating budgets of the municipalities
11 the City provides Public Fire protection service. Based on the response to data request
12 OCA-13-1, in Table 1, I identify the percentage of each municipality's annual
13 operating budget the charges for 25% of the City's cost of providing Public Fire
14 protections service would represent. As shown, the charges for Public Fire protection
15 service would only represent a tiny fraction of each municipality's annual operating
16 budget:

Table 1.
Public Fire Protection Service Charges as a Percent of
Annual Operating Budget

Municipality	Public Fire Charges	Annual Budget	Percent
Lancaster Township	\$61,420	\$11,423,675	0.538%
West Hempfield Township	3,219	8,347,242	0.039%
East Lampeter Township	62,708	36,264,715	0.173%
Mannheim Township	212,846	36,355,255	0.585%
Manor Township	45,711	8,964,170	0.510%
Pequea Township	5,923	3,085,509	0.192%
Warwick Township	129	11,124,129	0.001%
Columbia Borough	129	21,846,192	0.001%
Millersville Borough	20,345	8,847,292	0.230%
Mountville Borough	258	1,677,753	0.015%

1 Q. WHAT DO YOU RECOMMEND IN THIS PROCEEDING WITH
2 RESPECT TO THE PUBLIC FIRE PROTECTION COST OF SERVICE?

3 A. I recommend that the increase authorized by the Commission in this proceeding for
4 service to Outside City customers be revised to reflect the recovery of 25% of the
5 Public Fire protection cost of service from the municipalities receiving Public Fire
6 protection service.

7 Q. HAVE YOU ADJUSTED THE RESULTS OF THE CITY'S CCROSS TO
8 REFLECT AN ALLOCATION OF 25% OF THE PUBLIC FIRE COST OF
9 SERVICE TO PUBLIC FIRE PROTECTION SERVICE?

1 A. Yes. Table 2 provides for each Outside City customer class, a comparison of revenues
2 at present rates, the cost of service under the City's CCOSS where 100% of the Public
3 Fire cost of service was reallocated to retail customer classes, and an adjustment to
4 the cost of service under the City's CCOSS to reflect an assignment of 25% of the
5 Public Fire cost of service to Public Fire protection service (OCA adjusted cost of
6 service). Also identified in Table 2 is the percentage increase in rates that would be
7 experienced by each customer class if rates were increased to the cost of service
8 under the City's CCOSS and rates were increased to the OCA adjusted cost of
9 service.

**Table 2.
Comparison of City and OCA Class Cost of Service Study Results**

	Company Cost of Service			OCA Adjusted Cost of Service		
	Present Rates	Cost of Service	Increase	Adjustment	Cost of Service	Increase
Residential	\$10,728,219	\$14,285,938	33.2%	\$(406,036)	\$13,879,902	29.4%
Commercial	8,358,266	10,796,307	29.2%	(163,430)	10,632,877	27.2%
Industrial	1,531,162	1,985,278	29.7%	(12,545)	1,972,733	28.8%
Large Industrial	1,000,202	1,280,782	28.1%	(1,459)	1,279,323	27.9%
Other Water Utilities	543,555	684,984	26.0%	0	684,984	26.0%
Private Fire	446,683	516,439	15.6%	0	516,439	15.6%
Public Fire	0	0	0.0%	583,469	583,469	N/A
Total Inside City	\$22,608,086	\$29,549,728	30.7%	\$0	\$29,549,728	30.7%

IV. REVENUE DISTRIBUTION AND RATE DESIGN

11 Q. WHAT ARE SOME OF THE PRINCIPLES OF A SOUND REVENUE
12 ALLOCATION AND RATE DESIGN?

13 A. A sound revenue allocation should:

- 1 • Utilize class cost of service study results as a guide;
- 2 • Provide stability and predictability of the rates themselves, with a minimum of
- 3 unexpected changes seriously adverse to ratepayers or the utility (gradualism);
- 4 • Yield the total revenue requirement;
- 5 • Provide for simplicity, certainty, convenience of payment, understandability,
- 6 public acceptability, and feasibility of application; and
- 7 • Reflect fairness in the apportionment of the total cost of service among the
- 8 various customer classes.²

9 Q. WHAT HAS THE CITY PROPOSED WITH RESPECT TO THE
10 DISTRIBUTION OF ITS REQUESTED REVENUE INCREASES TO THE
11 VARIOUS CUSTOMER CLASSES AND RATES IN THIS PROCEEDING?

12 A. The City's proposed rate design for the Outside City Residential, Commercial, and
13 Industrial customer classes maintains a fixed monthly customer charge by meter size,
14 plus a 3-tier declining block volumetric usage rate structure. The proposed rate design
15 for the Large Industrial and Other Water Utilities customer classes maintains a fixed
16 monthly customer charge by meter size and a one-block volumetric usage rate
17 structure. The City has proposed to increase all monthly customer charges by 46.2%.
18 The City claims that volumetric usage rates were increased to move the revenues of
19 each customer class toward the cost of service. The current rates for Private Fire
20 service consist of a fixed monthly charge which varies by diameter of the line serving
21 the customer. The City is proposing to increase all current Private Fire fixed monthly
22 charges by 46.4%. The City is not proposing to assess any of the municipalities it
23 provides Public Fire protection service charges for the service the City currently
24 provides to the municipalities.

² *Principles of Public Utility Rates*, Second Edition, James C. Bonbright, Albert L. Daniels, David R. Kamerschen; Public Utility Reports, Inc. 1988, pages 383-384.

1 Q. DO YOU AGREE WITH THE CITY’S PROPOSAL TO INCREASE FIXED
2 MONTHLY CUSTOMER CHARGES BY 46.2%?

3 A. No. To provide for gradualism, I recommend that the increase in fixed monthly
4 customer charges for the Residential, Commercial, Industrial, Large Industrial, and
5 Other Water Utilities customer classes be limited to the overall system average
6 increase the Commission authorizes for Outside City customers in this proceeding.

7 Q. WHAT DO YOU RECOMMEND WITH RESPECT TO THE
8 VOLUMETRIC CONSUMPTION RATES THAT SHOULD BE ADOPTED
9 IN THIS PROCEEDING?

10 A. First, I recommend that the OCA adjusted cost of service for each customer class be
11 proportionately adjusted to reflect the overall cost of service, or revenue requirement,
12 authorized by the Commission in this proceeding (“authorized cost of service”). The
13 volumetric consumption rates adopted in this proceeding should provide for the
14 recovery of each retail customer’s classes and the Other Water Utilities customer’s
15 classes authorized cost of service not recovered through the monthly fixed charges
16 collected from each customer class.

17 Q. WHAT DO YOU RECOMMEND WITH RESPECT TO THE PRIVATE
18 AND PUBLIC FIRE PROTECTION SERVICE RATES THAT SHOULD BE
19 ADOPTED IN THIS PROCEEDING?

20 A. The current charges for Private Fire should be proportionately adjusted to reflect the
21 Commission approved Private Fire authorized cost of service. Public Fire hydrant
22 charges should be adopted in this proceeding that recover 25% of the Commission
23 approved Public Fire authorized cost of service.

24 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

25 A. Yes, it does.

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**PENNSYLVANIA PUBLIC
UTILITY COMMISSION**

v.

**CITY OF LANCASTER –
BUREAU OF WATER**

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DOCKET NO. R-2025-3057237

**SCHEDULE ACCOMPANYING THE
DIRECT TESTIMONY OF
JEROME D. MIERZWA**

**ON BEHALF OF THE
PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE**

DECEMBER 17, 2025

Pa. PUC v. City of Lancaster – Bureau of Water
Docket No. R-2025-3057237
Interrogatories of the Office of Consumer Advocate
OCA Set 7 to the City of Lancaster

Responsible Witness: Christine Volkay-Hilditch

OCA-7-9. Please identify each water quality test performed by the City's laboratory facilities and explain how frequently each test is performed (daily, weekly, based on usage, etc.)

Response: Please see Attachments OCA-7-9 1 and 2.

Analysis	Frequency	Plant	Distribution	Compliance Analysis
Alkalinity	M-F	X	X	
Aluminum	M-F	X		
Ammonia	M	X		
Chloride	M	X		
Color	M-F	X	X	
Copper	M	X		
Fluoride	M-F	X	X	
Free Chlorine	M-F	X	X	X
Hardness	M-F	X	X	
Iron	M-F	X	X	
Manganese	M,W	X		
Nitrate	M	X		
Orthophosphate	M-F	X	X	
pH	M-F	X	X	
Specific Conductance	M-F	X	X	
Sulfate	M	X		
Temperature	M-F	X	X	
Total Coliform/E. Coli	M-F	X	X	X
Turbidity	M-F	X	X	
UV 254	W	X		

Contaminant Name	Contaminant Group	Monitoring Frequency	Sample Location	# of Samples	When to Sample
Total Chlorine	DDBP	Monthly, If used	Distribution	100	
Free Chlorine	DDBP	Monthly, If used			
Total Coliform Presence	TCR	Monthly			
Turbidity	FILT	4 hrs or Continuous	Plant 300 & 301	1	
Free Chlorine	DDBP	Continuous Analyzer	EP 101 & EP 102	1	
ITHM & HAA5	DDBP	Quarterly	Distribution 701-708	16 total (8 per Contaminant)	2/9, 5/9, 8/9, 11/9 (+3 days for each event)
Nitrate & Nitrite	NTRT		EP 102	1	
PFOA	PFAS		EP 102	1	
IOC's	IOC	Annual	EP 101 & 102	1 each location	Historically Sampled in 2nd Quarter
Nitrate & Nitrite	NTRT		EP 101	1	
Atrazine	SOC		EP 101 & EP 102	1 each location	
20 Regulated VOC's	VOC		EP 101 & EP 102	1 each location	Historically Sampled in 2nd Quarter (Susquehanna Nitrate/Nitrite collected at same time)
Lead Copper Group Contaminant	LCR	Three Years	Distribution	50	06/01/2025-09/30/2025
PFOA	PFAS		EP 101	1	01/01/26-12/31/26
PFOS	PFAS		EP 101 & 102	1 each location	01/01/26-12/31/26
SOC Group	SOC		EP 101 & EP 102	1 each location	2nd & 3rd Quarter 2026
Asbestos	IOC	Nine Years	EP 101 & EP 102	1 each location	01/01/2029-12/31/2031
Combined Uranium	RAD				01/01/26-12/31/26
Gross Alpha Particle Activity, Radium 226, Radium 228	RAD				01/01/2032-12/31/2032

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

City of Lancaster – Bureau of Water

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Docket No. R-2025-3057237

VERIFICATION

I, Jerome D. Mierzwa, hereby state that the facts set forth in my Direct Testimony, OCA Statement 3, are true and correct (or are true and correct to the best of my knowledge, information, and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: December 17, 2025

Signature: /s/ Jerome D. Mierzwa
Jerome D. Mierzwa

Consultant Address: Exeter Associates, Inc.
10480 Little Patuxent Parkway
Suite 300
Columbia, MD 21044-3575

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2025-3057237
	:	
City of Lancaster – Water Department	:	

Direct Testimony of
LeeAnn Wise

On Behalf of
Pennsylvania Office of Consumer Advocate

December 17, 2025

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Appendix A: Background and Qualifications of LeeAnn Wise

Appendix A: Cases testified by LeeAnn Wise

Exhibit 1: ALICE Data

Introduction

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

A. My name is LeeAnn Wise. My business address is 555 Walnut Street, 5th Floor, Forum Place, Harrisburg, Pennsylvania 17101. I am currently employed as a Regulatory Analyst by the Pennsylvania Office of Consumer Advocate (OCA).

Q. Please describe your educational background and qualifications to provide testimony in this case.

A. I have a Master's degree in Business Administration from Shippensburg University and a Bachelor's degree in Professional Accountancy from the University of Pennsylvania. I also attended Michigan State University's Institute of Public Utilities online rate school program. My qualifications are described in Appendix A.

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of the OCA.

Q. Have you previously provided testimony before the Pennsylvania Public Utilities Commission?

A. Yes, a list of cases I have testified in is included in Appendix A.

Purpose of Direct Testimony

Q. Please describe the purpose of your Direct Testimony.

1 **A.** The purpose of my Direct Testimony is to present evidence and analysis regarding the
2 anticipated impact of the proposed rate increase on low-income customers and to assess
3 the adequacy of customer service practices considering the proposed rate changes.

4
5 **City of Lancaster Bureau of Water Service Territory**

6 **Q.** **Please describe the City of Lancaster Bureau of Water’s Service Territory**

7 **A.** The City of Lancaster Bureau of Water (City) provides water to customers located in the
8 City of Lancaster, Lancaster Township, Manheim Township, Millersville Borough, West
9 Lampeter Township, Pequea and portions of Manor, West Hempfield, East Hempfield,
10 and East Lampeter. The City’s water system also provides bulk water for resale to other
11 public water suppliers through service agreements with the East Petersburg Borough
12 Authority, Upper Leacock Township, West Earl Water Authority, East Hempfield Water
13 Authority, and Northwestern Lancaster County Authority (Penn Township).¹

14
15 **Q.** **How many residential customers does the City of Lancaster Bureau of Water serve?**

16 **A.** The City’s water system serves approximately 44,623 residential customers as of 2024.²
17 Of the 44,623 residential customers, 14,960 are located inside the City, and 29,663 are
18 located outside the City and fall under the Commissions jurisdiction.

¹ Direct Testimony Stephen Campbell pg. 3 ln 15-22.

² Direct Testimony Stephen Campbell Pg. 6 ln.2.

Q. How many City of Lancaster Bureau of Water customers are located inside the city and outside the city?

A. The table below illustrates the breakout of customer locations.³

<u>Customer</u>	<u>Inside City</u>	<u>Outside City</u>	<u>Total</u>
Residential	14,960	29,663	44,623
Commerical	1,864	1,892	3,756
Industrial	41	69	110
Total	16,865	31,624	48,489

Impact on Low-Income Customers

Q. How has the City proposed to change rates?

A. The City is proposing an overall rate increase of \$7,005,217 per year or 30.9%. If approved, the total bill for a residential customer living outside of the City with a 5/8-inch meter, using 4,500 gallons per month would increase from \$29.53 to \$38.32 per month or a 29.8% increase.⁵

Q. How many customers in the City's service territory are low-income?

A. The City does not maintain an official record or tracking system for identifying low-income customers. The estimated number of low-income customers serviced by the City is based on data provided by the American Community Survey, which indicates an

³ Direct Testimony Stephen Campbell pg. 6, ln 2.

⁴ Direct Testimony Stephen Campbell Pg. 6 ln.2.

⁵ Public Notice & Press Release September 30, 2025

1 estimated total of 2,504 individuals.⁶ Based on the data provided by the American
2 Community Survey, 8.4% of the City’s customers are low-income.

3
4 **Q. Are you aware of any standards that the City can utilize that will determine whether**
5 **a household could be eligible for low-income programs in Pennsylvania?**

6 **A.** Yes. While the Federal Poverty Level (FPL) is a commonly recognized standard, it does
7 not constitute a realistic measure for determining whether a household possesses
8 sufficient income to meet basic living necessities. Increasingly, attention has shifted
9 toward evaluating a household’s capacity for self-sufficiency through more
10 comprehensive measures, often referred to as “self-sufficiency” or “survival” budgets.
11 One such measure has been developed by the United Way and is known as the ALICE
12 Index, an acronym for “Asset Limited, Income Constrained, Employed.” This index
13 seeks to more accurately represent the financial challenges faced by working households
14 that earn above the federal poverty threshold yet remain unable to afford essential
15 expenses.⁷

16
17 **Q. Are there disadvantages of using the FPL?**

18 **A.** Yes. The current FPL calculations are based on decade old costs and do not reflect
19 current costs for items such as housing, clothing, medical care, and transportation.⁸ In
20 addition, the FPL rates represent the entire U.S. population, failing to account for the
21 differences between rural and urban areas.

⁶ Response to OCA Set 4-2.

⁷ <https://www.unitedforalice.org/>

⁸ <https://usafacts.org/explainers/what-is-the-federal-poverty-level>

1
2 **Q. What does Asset Limited, Income Constrained, Employed (ALICE) measure?**

3 **A.** ALICE provides a realistic view of the number of people living in financial hardship by
4 measuring the minimum cost of basic household necessities to live and work in the
5 current economy. These basic household necessities include housing, childcare, food,
6 transportation, health care, and technology, plus taxes and a contingency fund equal to
7 10% of the household budget.⁹ Incorporating on the cost of these necessities, ALICE
8 builds what is known as Household Survival Budget.¹⁰
9

10 **Q. How does ALICE calculate the Household Survival Budget?**

11 **A.** The Household Survival Budget is calculated by estimating the minimum cost of basics:
12 safe housing, childcare, food, transportation, health care, technology and taxes. These
13 expenses are customized to specific communities. The Household Survival Budget
14 becomes the ALICE threshold. Households with income below 100% of the Federal
15 Poverty Level are counted as living in poverty. Households with income levels above the
16 100% Poverty Level but below the ALICE threshold are classified as ALICE.
17 Using the ALICE thresholds makes it clear what traditional Federal Poverty Level fails to
18 capture. Many working households still cannot afford basic necessities.

⁹ <https://www.unitedforalice.org/>

¹⁰ <https://www.unitedforalice.org/>

Q. Why is ALICE data relevant?

A. The ALICE data is relevant because it illustrates the proportion of City customers who are living at or near a survival budget. Table 1, provided below, presents data specific to Lancaster County showing both the number and percentage of customers whose household incomes fall below the ALICE threshold. The household survival budget is meant to measure the minimum amount that a household can earn and afford life's necessities with little to no government assistance.

Table 1-Low Income Statistics for 2023 Lancaster County¹¹

County	Percent of Total Population in Poverty	Percent of Population at ALICE Threshold	Number of CLWB Customers	Potential Number of Customers at ALICE Threshold
Lancaster County	9%	31%	29,814	9,242

Q. What does the ALICE data show?

A. It shows the likelihood that approximately 9% of customers receiving water from the City live in poverty and 31% live at the ALICE threshold for survival and self-sufficiency. This is critically important for judging whether the impact of the rate increase sought in this case is just and reasonable. Households who are living at or below the ALICE threshold already have difficulty paying for their essential utility service before the proposed increase. This should be considered by the Pennsylvania Public Utility Commission (Commission or PUC) in its analysis of whether the rates proposed are just and reasonable.. While the Company currently offers a Community Action Program,

¹¹ Percentage of ALICE Population* Number of City of Lancaster Bureau Water Customers.

1 which I will address later in my testimony, examination of the ALICE data helps assess
2 whether the scope of the program is appropriate. This analysis also indicates whether
3 expansion may be necessary to better support the City's economically vulnerable
4 customers.

5
6 **Q. What is the City of Lancaster Bureau Water residential customer disconnection**
7 **rates?**

8 From September 2024 through September 2025, a total of nine hundred seventy-nine
9 (979) nonpayment disconnection notices were issued to customers under the jurisdiction
10 of the PUC. During this same period, service disconnections were completed on thirty-six
11 (36) customers.¹² Late fees for the same time period averaged over \$8,000 a month.¹³

12 While the City does not officially track customers' income status, it is a reasonable
13 presumption that a substantial number of the 82 monthly service disconnections affect
14 low-income customers. It can be expected that a rate increase will only continue to drive
15 this number higher.

16
17 **Q. Does the City of Lancaster Bureau Water offer any assistance programs for low-**
18 **income customers?**

19 **A.** The City maintains a Community Action Partnership Program with total annual funding
20 in the amount of \$50,000.¹⁴ The City's Community Action Program operates in a similar
21 manner to hardship programs, providing low-income customers with a lump-sum

¹² Attachment OCA-4-5.

¹³ Attachment OCA-4-5.

¹⁴ Response to OCA Set 4-33.

1 financial credit that does not require repayment. Community Action Program offers
2 meaningful immediate assistance to households experiencing financial distress. To be
3 eligible to participate, a customer must have a shut-off notice, be the account holder, and
4 be at or below 250% FPL.¹⁵ However, the City does not currently offer a bill discount or
5 an arrearage forgiveness program.

6
7 **Q. What is the level of participation in the City of Lancaster Bureau Waters**
8 **Community Action Program?**

9 **A.** Participation in the program was limited, with four customers enrolled in 2024 and five
10 customers enrolled in 2025 through September.¹⁶

11
12 **Q. Do you have any concerns regarding the low level of participation in the**
13 **Community Action Program?**

14 **A.** Yes, I do. My main concern is the very low level of participation. The low participation
15 is likely resulting from the City's lack of outreach, promotion, and education. For
16 example, the City's website has information on their Lead Hazard and Critical Repair
17 programs but makes no mention of the Community Action Program and how to apply.
18 The customer service training manual provided states that when a customer requests a
19 payment plan, the agent reviews the account with the customer.¹⁷ However, there is no
20 mention of providing information on the Community Action Program.

¹⁵ Response to OCA Set 4-33.

¹⁶ Attachment OCA-4-3.

¹⁷ Response to OCA 3-2.

1 In response to discovery OCA-14-5, the City stated that it provides information on the
2 Community Action Program via email, telephone calls, in-person when the City is at a
3 property with a notice, in-person at City offices when providing information to customers
4 with outstanding balances, and handouts City staff distributes to customers. The City also
5 noted they work with the Community Action Partnership of Lancaster County.¹⁸
6

7 **Q. Do you consider the City's outreach programs to be effective?**

8 **A.** While I support the City's efforts to communicate the Community Action Program to its
9 customers, based on the low number of enrolled customers, they do not appear to be
10 targeting low-income households who need Community Action Program assistance. The
11 City also does not mention providing education to low-income customers about what the
12 Community Action Program offers, how to enroll, and how it can help to prevent service
13 termination. The City's website also does not include information regarding the program.
14

15 **Q. Do you have recommendations on how to improve Community Action Program**
16 **participation?**

17 **A.** Yes. First, I recommend the City begin tracking their low-income customers. Having this
18 information is necessary for effective, targeted outreach and will ensure qualified
19 households are not underserved. Using this information, the City can partner with
20 additional community-based organizations, faith groups, and social service agencies to
21 hold targeted outreach enrollment events in neighborhoods that need them the most.

¹⁸ Response to OCA-14-6.

1 Second, I encourage the City to actively review customer accounts regarding late
2 payments or payment plan defaults and proactively reach out to those customers to
3 determine if they may be eligible to participate in the Community Action Program.
4 Although the City currently works with the Community Action Partnership of Lancaster
5 County, additional proactive outreach and education efforts are still needed. I recommend
6 the City publishes information about their current Community Action Program on the
7 front page of its website. Doing so would make this important resource more visible and
8 accessible to low-income residents. Residents visit the City's website to find
9 information, and highlighting the program would help ensure the community is connected
10 to the assistance they need. Increasing partnerships with other community groups,
11 providing targeted communication to low-income households, and offering public
12 information seminars would ensure eligible customers receive education on how the
13 program can be of benefit. By meeting people where they are, and working with
14 community organizations, the City can increase enrollment, reduce disconnections, and
15 connect customers who need assistance that the Community Action Program provides.
16 Third, I would also encourage the City to include a bill insert explaining the CAP
17 program, including how to enroll, and the benefits provided. The mailings should be
18 targeted specifically at low-income customers. Finally, I recommend the City update their
19 training materials to include comprehensive information on the CAP program—
20 specifically, the eligibility criteria, enrollment process, and associated customer benefits.

1 **Q. What is the City of Lancaster Bureau Water’s average residential monthly arrears?**

2 **A.** Table 2¹⁹ below shows the monthly and yearly arrears amounts:

Table 2
Arrear Amounts

Year	Average Monthly \$ of Residential Arrears	Average Yearly \$ of Residential Arrears	Avearage % of Billed Res Acct/Arrears
2022	\$ 38,722.25	\$ 464,667.01	11%
2023	\$ 46,373.60	\$ 556,483.19	13%
2024	\$ 45,343.45	\$ 544,121.36	17%
2025	\$ 43,202.95	\$ 518,435.43	18%

data through Sept.

5 **Q. Do you have any comments or concerns regarding the arrears amounts?**

6 The City’s average annual arrears total is nearly \$500,000 or more. This level of arrears
7 raises concerns regarding cash flow and potential uncollectible debt for the City. This
8 level of arrears may also indicate issues with collections, payment arrangements, or the
9 ability of customers to pay their monthly bill. High arrears increase the uncollectable debt
10 expense which the City can recover from customers in rates. High arrears also indicate
11 potential issues regarding customer assistance and outreach programs. Community
12 Action Programs are designed to lower payment burdens and help to reduce accumulation
13 of arrears for low-income families. Low enrollment would indicate low-income
14 customers are paying standard rates they cannot afford resulting in the City carrying a
15 higher amount of bad debt.

¹⁹ Attachment OCA-4-20.

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Q. How can the City reduce their arrear amount?

A. The City can adopt an Arrearage Management Program (AMP).

Q. What is an AMP and how does it work?

A. Typically, when a customer enrolls in a bill discount and AMP program, their existing arrearage is frozen. For every on-time monthly payment 1/12 of the customer’s pre-program arrearage is forgiven. After twelve months of continuous payments, the entire enrolled arrearage will be fully forgiven.

Q. Do you have recommendations on how to improve the arrear amounts?

A. Yes. First, I recommend the City develop a two-year pilot arrearage management program (AMP) that tracks payment compliance, arrearage balance reduction, and disconnection rates. Utilities often leverage these programs as a way to lower collection costs, reduce total arrearages, assist low-income customers, and reduce disconnections. For example, Community Utilities of Pennsylvania (CUPA) instituted an AMP program that required customers to have a past due balance greater than \$400 and enroll in a 12-month Deferred Payment Arrangement (DPA). The DPA allows customers to have their past due balance spread equally over 12 months. AMP customers who make timely payments and stay current on their monthly bill for six months will have the remaining six monthly DPA payments forgiven. I recommend the City adopt a similar program that would benefit both the customer and the City. As I will describe later in my testimony,

1 the City should also work with the Dollar Energy Fund to help administer and structure
2 the assistance program.

3 Second, I recommend that the City prioritize increasing Community Action Program
4 participation by adopting the measures discussed above, which will help ensure that more
5 eligible residents receive the support they need.

6 Finally, I recommend the City monitor arrears closely, strengthen collections programs,
7 by promoting payment plans and increase enrollment in the Community Action Program
8 and adopt the practice of contacting customers within the first missed billing period to
9 help reduce the arrearage.

10 Arrears management programs that are properly designed and implemented reduce
11 uncollectible expenses, improve customer payment activity, and support long term bill
12 affordability. As such, arrearage management programs benefit both the utility and its
13 low-income customers.

14
15 **Q. Does the City offer a bill discount program?**

16 **A.** No, the City currently does not offer any form of discount bill to low-income customers.
17 Low-income customers are required to pay standard rates, which can lead to unaffordable
18 bills, late payments, and eventual termination.

19
20 **Q. What is the value of offering a bill discount program?**

21 **A.** When customers cannot pay their bills on time, arrears accumulate, collection activity
22 increases, and the City experiences higher levels of bad debt. These costs are ultimately
23 passed onto ratepayers through future rate increases. Offering a bill discount program

1 provides clear benefits to both the customer and the City. For low-income customers it
2 helps to reduce the amount of their monthly bills. For the City, improved payment
3 compliance results in lower arrears and collection costs, and a more consistent and steady
4 revenue source. Additionally, reducing the number of terminations and shut offs will also
5 lead to lower operational costs for the City. Offering a bill discount provides utility
6 burdened customers to retain access to safe water, reducing public health risks.

7
8 **Q. Do you have any recommendations regarding bill discount programs?**

9 **A.** Yes, I recommend the City implement a two-year pilot bill discount program. The City
10 should track the success of the program by recording the number of customers enrolled,
11 amount of discount provided, and reduction of disconnects. There are several methods
12 that are generally used by utilities to assist in providing meaningful affordability to
13 customers. Similar small water utilities such as CUPA have offered percentage discounts
14 on volumetric usage. CUPA currently offers a 35% discount on volumetric usage. I
15 recommend the City adopt a similar percentage discount on volumetric charges for low-
16 income customers. A flat percentage discount simplifies administration and reduces costs.
17 While there are no regulations that require a specific dollar credit or percentage discount
18 that every utility must follow, each utility is required to design discount and arrearage
19 programs with regulatory options outlined in 52 Pa. Code Section 69.265. It is reasonable
20 for the City to establish a pilot program designed to track enrollment rates, cost of
21 discounts to the utility, on-time payment rate, and the average monthly arrearage of
22 participants.

1 **Q. Do you have concerns regarding the level of affordability of the proposed rate**
2 **increase for low-income customers?**

3 **A.** Yes, an increase of \$8.79 per month represents a meaningful financial burden for many
4 households, particularly those on fixed or limited incomes. Although \$8.79 may appear
5 modest when viewed by itself, it amounts to approximately \$105.48 per year and can
6 significantly affect families already struggling to meet essential living costs such as
7 housing, food, and medication.

8 For many residents, especially seniors on a fixed income, individuals with disabilities,
9 and working families at or near the poverty threshold, even modest increases in utility
10 costs can force difficult choices between basic necessities.

11 The absence of a bill discount and an arrears management program adds to this burden.

12 Without such measures, the proposed increase will fall most heavily on those least able to
13 absorb additional costs, which runs counter to principles of equity and affordability that
14 support sound rate-making practices. The low participation rate in Lancaster's
15 Community Action Program is also alarming. Implementing a rate adjustment of this
16 nature, without corresponding affordability protections, risks placing a disproportionate
17 and inequitable financial strain on low-income households.

18
19 **Q. Are there any organizations that can assist the City in regard to low-income**
20 **customers?**

21 **A.** Yes, the City could partner with the Dollar Energy Fund to assist with Community
22 Action Program outreach and administration, along with bill discount and AMP
23 programs.

1
2 **Q. What is the Dollar Energy Fund and how does it work?**

3 **A.** The organization currently operates Pennsylvania’s largest hardship fund and is a
4 national leader in utility assistance. Since 1983, Dollar Energy Fund’s hardship grants
5 have helped more than 758,500 families across its 14-state service territory enabling
6 families to maintain or restore safe and reliable utility services.²⁰ The program is
7 supported through public contributions, which are matched on a dollar-for-dollar basis by
8 participating utility companies. In addition, customers of these utility partners have the
9 option to contribute voluntarily to the Dollar Energy Fund through their monthly utility
10 bills.²¹

11
12 **Q. What type of assistance does the Dollar Energy Fund provide?**

13 **A.** The Dollar Energy Fund administers utility assistance grants to households experiencing
14 financial hardship. The program serves as a “last resort” for customers who may not
15 qualify, or have exhausted eligibility under, federal or state assistance programs such as
16 Low-Income Home Energy Assistance Program (LIHEAP).

17
18 **Q. Are all dollar energy funds the same?**

19 **A.** No. Utilities who partner with the Dollar Energy Fund have several options in designing
20 their specific assistance programs to best fit their customers’ needs.

²⁰ <https://www.dollarenergy.org/>

²¹ <https://www.dollarenergy.org/>

1
2 **Q. What eligibility options do utilities have when partnering with the Dollar Energy**
3 **Fund?**

4 **A.** The utility can set specific income limits, such as the percentage of Federal Poverty
5 Guidelines (e.g. 250% or 150%). Maximum grant amounts can also be set for the
6 program year. A utility can also establish requirements regarding a customer's account
7 balance, for instance, requiring a minimum outstanding balance of at least \$100, or
8 allowing exceptions for specific groups such as senior citizens. Utilities can also mandate
9 that an applicant demonstrate a prior effort to pay their bill within a certain timeframe
10 (e.g., the last 90 days) or require an additional payment to bring the account balance to a
11 restorable level if the grant alone is insufficient. Utilities can establish specific program
12 operation dates for when applications will be accepted, based on factors like account
13 status (e.g., terminated vs. pending termination).

14 As mentioned above, there are many different variations to Dollar Energy grant
15 programs. An advantage this program provides to the utility is that it is customizable to
16 meet the needs of a utilities' customer base.

17
18 **Q. Are there additional restrictions on applying for a Dollar Energy hardship grant?**

19 **A.** Yes. There are several guidelines for applying. All applicants must provide verification of
20 income. The account must be a residential, no apartments with shared utility service. The
21 name on the account must be that of an adult who is currently living in the home. Dollar
22 Energy Fund grants cannot be used to cover security deposits.²²

²² <https://www.dollarenergy.org/program/>

1
2 **Q. How many small/local water companies currently participate in the Dollar Energy**
3 **Fund?**

4 **A.** There are several small/local water companies currently participating in the Dollar
5 Energy Fund. They include Pittsburgh Water, West View Water Authority, Wilkesburg-
6 Penn Joint Water Authority, and Lehigh County Authority.²³ Their involvement shows
7 that the program effectively supports both utilities and their customers. I recommend the
8 City work with the Dollar Energy Fund to assist their low-income customers.
9 Participation in the Dollar Energy Fund would likewise benefit the City and its residents
10 by providing a reliable, established source of customer assistance for those facing
11 financial hardship.
12

13 **Summary of Recommendations Regarding Low-Income Customers**

14 **Q. Do you have recommendations on how the City can assist their low-income**
15 **customers?**

16 **A.** Yes. I have several recommendations outlined below.
17

18 **1. Track low-income customers more effectively**

- 19 • Allow voluntary self-identification
- 20 • Monitor payment patterns for signs of hardship
- 21 • Record participation in external assistance programs
- 22 • Use consented, securely managed data to better understand arrears and anticipate
- 23 customer needs
- 24

25 **2. Strengthen outreach for the Community Action Plan**

- 26 • Highlight Community Action Plan information prominently on the City's website
- 27 • Clearly explain eligibility and available benefits
- 28 • Train all customer service representatives on Community Action Plan details
- 29 • Include targeted bill inserts to boost program awareness and enrollment

²³ <https://www.dollarenergy.org>

1
2 **3. Launch a pilot arrears forgiveness program**

- 3 • Provide a structured process for eligible customers to eliminate past-due balances
4 • Address long-term debt that short-term aid programs do not resolve
5 • Improve customer payment consistency and reduce utility collection costs
6

7 **4. Introduce a pilot bill discount program**

- 8 • Offer income-based bill reductions to improve affordability
9 • Lower arrears, bad debt, and collection/termination expenses
10 • Promote more stable revenue through better payment behavior
11

12 **5. Establish a formal partnership with a community-based assistance organization**

- 13 • Enable access to grant-based financial help for customers in hardship
14 • Reduce the risk of service disconnection and support reliable service delivery
15 • Reinforce the City's commitment to affordability and community support
16

17 Implementing the programs outlined above, the City of Lancaster Bureau Water can
18 demonstrate its continued commitment to affordability, equity, and responsible customer
19 engagement. These programs would not only provide critical relief to vulnerable
20 households but also strengthen our relationship with the communities we serve and
21 improve long-term payment performance.
22

23 **Customer Service**

24 **Q. Has the City experienced any instances or reports of non-compliance or concerns**
25 **related to water quality standards?**

26 **A.** The City is currently non-compliant with the Pennsylvania Department of Environmental
27 Protection (PADEP) Perfluorooctanoic Acid (PFOA) standard which the City believes
28 was caused in large part by the effect of drought conditions on the Conestoga River. The

City is currently working with PADEP to address this matter.²⁴ Between January 2022 through September 2025, the City received the following notices of violations.

<u>Date</u>	<u>Violation</u>
12/28/2022	Fluoride overfeed at the Conestoga Water Treatment Plant
4/22/2025	Failure to calculate a Log Removal Value (LRV)
9/14/2024	PFOA MCL RAA (rolling annual average)
1/24/2025	PFOA MCL RAA (rolling annual average)
3/24/2025	PFOA MCL RAA (rolling annual average)
6/20/2025	PFOA MCL RAA (rolling annual average)
8/12/2025	PFOA MCL RAA (rolling annual average)

Q. What is Perfluorooctanoate Acid (PFOA)?

A. PFOA is a man-made chemical, belonging to the group of per-and polyfluoroalkyl substances (PFAS). It is referred to as a “forever chemical” due to the lack of ability to break down easily, remaining in the environment and human body.

Q. How does PFOA enter water systems?

A. PFOA can enter groundwater from multiple sources, including sewage treatment plants, industrial sites, landfills, and places where it is used in firefighting foam such as airports, firefighter training sites, and military installations. Fish and shellfish can take up PFOA from water contaminated with the chemical.²⁵

²⁴ Response to OCA Set 4-37.

²⁵ https://www.p65warnings.ca.gov/sites/default/files/downloads/factsheets/pfoa_fact_sheet.pdf

1
2 **Q. Does PFOA pose health risks?**

3 **A.** Research has suggested exposure to PFOA can lead to negative health outcomes.
4 Scientific studies have shown exposure to PFOA and lead to a decrease in fertility,
5 development delays in children, cancers including prostate, kidney and testicular. They
6 can also lead to immune system deficiencies, and increased cholesterol levels.²⁶
7

8 **Q. Has the City made their customers aware of contamination in the water system?**

9 **A.** Yes, the City issued public service notices to City Water Customers. The notices were
10 mailed to customers as well as being included in the Company's website and local
11 municipality websites.
12

13 **Q. Did the City of Lancaster Water Bureau notice provide detailed information**
14 **regarding the contaminated water?**

15 **A.** Yes, the City notified its customers of each PFOA present in its system and the fluoride
16 as required by PA DEP.²⁷ The notices provide an explanation for the cause and actions
17 needed to be taken. On September 13, 2024, routine water testing revealed PFOA levels
18 at 16 ng/L, which is above the MCL of 14 ng/L. The elevated levels of PFOA were found
19 in water from the Conestoga Treatment Plant, which sources water from the Conestoga
20 River. However, water from the Susquehanna Treatment Plant has no detectable levels of
21 PFOA or other perfluoroalkyl substances (PFAS).

²⁶ <https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas>

²⁷ Response to OCA 14-2.

1 The City provided an official statement regarding the elevated contamination detected in
2 the water system. The City noted that it is working to address recently identified elevated
3 PFOA levels in the drinking water. The City’s notice states “The City’s water department
4 staff is actively investigating the elevated levels and adjusting the water treatment process
5 at the Conestoga Plant. The issue is expected to be resolved within 12 months. You do
6 not need to switch to bottled water or use alternative water sources. If you have specific
7 health concerns, you may want to consult your doctor. Although this is not an immediate
8 health risk, long-term exposure to PFOA above the MCL can potentially cause adverse
9 health effects, such as developmental issues and immune response problems.”²⁸
10 “PFOA and Perfluorooctane Sulfonate (PFOS) are part of a group of man-made
11 chemicals known as PFAS. These substances have been widely used in industrial
12 applications, firefighting foams, and consumer products like non-stick cookware, carpets,
13 and packaging. They are resistant to heat, water, and oil, and persist both in the
14 environment and in the human body. Most people are exposed to PFAS through various
15 sources, not just drinking water.”
16 “Residents are encouraged to stay informed by visiting the City of Lancaster’s website or
17 contacting the Water Quality Laboratory at 717-291-4818 for more details.
18 Please share this information with others, especially those who may not have received
19 this notice directly, such as people in apartments, nursing homes, schools, and businesses.
20 This news item was adapted from a public notice that was mailed out to City water
21 customers. We are just reiterating the information to make sure residents are aware.”²⁹

²⁸ <https://www.twp.lancaster.pa.us/>

²⁹ <https://www.twp.lancaster.pa.us/>

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Q. Is the City meeting its obligations to provide adequate, efficient, safe water service?

A. While the City is making reasonable efforts to comply with the Department of Environmental Protection’s regulatory requirements, the repeated issuance of contamination notices indicates an ongoing issue regarding maintaining safe and adequate service.

Q. Do you have any recommendations?

A. Yes, I recommend that any rate increase approved by the commission includes a water quality improvement plan along with compliance performance tracking. The City should also enhance their communication to include updates on corrective actions to the water quality. The City should also continue to evaluate options for system improvements to reduce or eliminate future contamination notices for customers.

Conclusion

Q. Does this conclude your direct testimony?

A. Yes, it does. However, I reserve the right to modify or supplement my testimony as necessary.

QUALIFICATIONS OF

LeeAnn Wise

Qualifications of

LeeAnn Wise

Education:

2008 Masters of Business Administration, Shippensburg University

1989 B.S. Professional Accountancy, Pennsylvania State University

Relevant Positions:

March 2025 Regulatory Analyst, Pennsylvania Office of Consumer Advocate

Role Description:

I am currently employed by the Pennsylvania Office of Attorney General, Office of Consumer Advocate (OCA) as a Regulatory Analyst. In this position, my responsibilities include reviewing utility company filings with the Pennsylvania Public Utility Commission (Commission) and analyzing the financial, economic, rate of return, and policy issues that are relevant to the filings. Additionally, I am tasked with preparing recommendations for the OCA's involvement in utility filings with the PA PUC, writing testimony and presenting oral testimony on behalf of the OCA. As part of my role, I also assist in the policy matters regarding low-income issues and customer service subjects.

Relevant Training: I have over fifteen years of experience overseeing and evaluating customer service operations of utility-affiliated and third-party call centers. This includes time at Comcast as Senior Finance Manager, where I provided oversight of performance metrics, evaluating disputes and time to resolve, call-handle times, average speed of answer, and ensuring customer interactions align to policy standards. My training includes a sound understanding of the best practices in customer service delivery, call tracking protocols, and the importance of consistent documentation to support customer communication and reliability.

Provided Case Testimony:

Wellsboro Electric, Docket No. R-2025-3054392

Citizens' Electric, Docket No. R-2025-3054394

Valley Energy, Docket No. R-2025-3054393

Pittsburgh Water, Docket No. R-2025-3055010, R-2025-3055011, R-2025-3055012

PA American Acquisition of CUPA A-2025-3055551

York Water Company Docket No. R-2025-3053442, R-2025-3053573

Conneaut Lake Park Water Docket No. P-2024-3051855, I-2024-3051857

EXHIBIT 1

			Total	Poverty	ALICE	Above ALICE	ALICE Threshold	ALICE Threshold		
Year	County	State	Households	Households	Households	Households	HH under 65	HH over 65	Poverty	% ALICE
2010	Lancaster	PA	194,028	19,665	50,675	123,688	\$ 40,000	\$ 35,000	10%	26%
2012	Lancaster	PA	194,198	20,428	51,212	122,558	\$ 45,000	\$ 35,000	11%	26%
2014	Lancaster	PA	194,764	19,657	51,350	123,757	\$ 45,000	\$ 40,000	10%	26%
2016	Lancaster	PA	196,807	17,330	49,287	130,190	\$ 45,000	\$ 40,000	9%	25%
2018	Lancaster	PA	202,490	16,466	52,569	133,455	\$ 50,000	\$ 40,000	8%	26%
2019	Lancaster	PA	204,701	21,629	48,055	135,017	\$ 50,000	\$ 45,000	11%	23%
2021	Lancaster	PA	210,063	19,047	54,933	136,083	\$ 60,000	\$ 50,000	9%	26%
2022	Lancaster	PA	212,016	19,253	57,587	135,176	\$ 66,286	\$ 54,000	9%	27%
2023	Lancaster	PA	211,669	19,364	65,479	126,826	\$ 69,098	\$ 57,276	9%	31%

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

City of Lancaster – Bureau of Water

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Docket No. R-2025-3057237

VERIFICATION

I, LeeAnn Wise, hereby state that the facts set forth in my Direct Testimony, OCA Statement 4, are true and correct (or are true and correct to the best of my knowledge, information, and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: December 17, 2025

Signature: /s/ LeeAnn Wise
LeeAnn Wise

Address: 555 Walnut Street
Fifth Floor
Harrisburg, PA 17101

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

Docket No.: R-2025-3057237

v.

City of Lancaster Water Department

DIRECT TESTIMONY

OF

LeeAnn Wise

On behalf of the

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

Date Served: December 23, 2025

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A. Introduction

Q. Did the Pennsylvania Public Utility Commission (PUC or Commission) conduct public input hearings for this proceeding?

A. Yes, the Pennsylvania Public Utility Commission (PUC) conducted four (4) Public Input Hearings to gather testimony from ratepayers to learn how the proposed increase would impact them. On Monday, December 15, 2025, two Public Input Hearings were held in-person at Manheim Township Municipal Office Public Meeting Room at 1:00 PM and 6:00 PM. On Tuesday, December 16, 2025, two call-in telephonic Public Input Hearings were held at 1:00 PM and 6:00 PM.

Among the four hearings, a total of 6 consumers testified against the rate increase. This supplemental testimony focuses on public input hearing testimony pertinent to the OCA's overall recommendations set forth in the OCA's Direct Testimony filed on December 17, 2025, or otherwise necessary for the Commission to consider during this proceeding.

B. Affordability

Q. Did Customer have concerns regarding the affordability of rates?

A. Yes, customers expressed their concerns over the affordability of the proposed rate increase. Four distinct customers testified that the City of Lancaster's proposed rate increase of 30% will have a significant impact on affordability. Generally, residents testified that they are continuing to be impacted by rising utility bills including sewer, electricity, and gas. Coupled with the rising cost of groceries, medications, housing, another utility increase would create additional hardships for residents.

1 State Representative Steven C. Mentzer, 97th district of Lancaster County, testified that
2 the extreme rate increase of almost 30% will impact 5 of the 9 municipalities he
3 represents. Residents within his district are already struggling to contend with dramatic
4 increases in sewer rates and potential electric and gas increases. Tr. 72.

5 Ms. Bernadette Margel also testified that “a 30% increase is unjust.” Tr. 83. Ms. Margel
6 testified that she is doing everything she can to conserve water, including not watering
7 the lawn, using grey water, and utilizing rain barrels. Tr. 84-85. Ms. Margel agreed with
8 Representative Mentzer that with the increase costs of utilities, a tax reassessment, and
9 medical coverage, another utility rate increase will be difficult to manage. Ms. Brenda
10 Hershey-Kelly echoed the concerns of witnesses Ms. Margel and Rep. Mentzer regarding
11 financial burden. Tr. 87.

12 Ms. Claire Van Cleve, a retired nurse, also testified that the 30% increase is extremely high.
13 Ms. Van Cleve testified that “I don’t know how a retired person is supposed to pay for this,
14 let alone if someone has an income of \$30,000 or less in Lancaster City. She asked, “What
15 is driving such a large increase?” She further testified that the City should have done a
16 better job of planning for improvements over the years. Tr. 130. During her testimony, Ms.
17 Van Cleve self-identified as a “clean freak” and testified that, if this high of a rate increase
18 would go into effect, she will be forced to limit the number of times she flushes her toilet.
19 Tr. 132.

C. Differences in rates for City and non-City customers

Q. Are customers concerned about different rates for City and Non-City Customers?

A. Yes, Customers expressed their dissatisfaction over Non-City Customers receiving a rate increase while City customers would not be impacted by the proposed rate increase.

Mr. Roy Baldwin, a retiree who lives in Manheim Township's Greenview Terrace Condo Community, testified to his frustration of the inequitable rates for residents living in the City vs. outside the City. He stated that customers receiving water through a 6-inch line currently receive a \$364 bill vs. \$318 inside the City, a 14.4% difference. He does not have a problem paying equal to City residents but should not shoulder the entire 30% requested increase. Tr. 78-79.

Mr. Michael Debakey also expressed his dissatisfaction with non-city customers paying more for the same water. He testified that "if we're supposed to be using an economy of scale to spread costs equally, doesn't seem that equal." Tr. 146.

D. Water Quality

Q. Do residents have concerns regarding the quality of water?

A. Yes, customers testified to several notifications sent by the City regarding quality of water. Pennsylvania Public Code (66 Pa.C.S. Section 1501) requires utilities to provide just, reasonable, adequate, safe service and facilities. In the case of the City of Lancaster, the safety of drinking water is a customer concern.

1 Ms. Hershey-Kelly testified that the requested rate increase is excessive and unreasonable
2 given the City's documented history of poor water quality and regulatory violations. Tr. 87.
3 She stated that customers should not be required to pay higher rates for water that has failed
4 to meet health-based standards. She further testified that the presence of Perfluorooctanoic
5 Acid (PFOA) in the City of Lancaster's water supply raises serious public health concerns
6 and undermines customer confidence in the safety of the water being delivered. She went
7 on to state, "I think it shows an irresponsibility on the part of the City on who they are
8 handling our water. And thus, is that carrying over to what I consider an irresponsible and
9 excessive rate hike". Tr. 102.

10 Ms. Hershey-Kelly introduced four exhibits into the record: three issued by the City and
11 one issued by the Department of Environmental Protection (DEP). The exhibit, designated
12 as Hershey-Kelley Exhibit 2,¹ documents elevated levels of PFOA in the City's water. As
13 discussed in my Direct Testimony, PFOA is a synthetic chemical that is resistant to heat,
14 water, and oil. It persists in both the environment and the human body.

15 Ms. Hershey-Kelly testified that the City acknowledged these findings in Hershey-Kelley
16 Exhibits 1² which informed customers of the elevated level of PFAS, the cause and what
17 customers should do. Hershey-Kelly Exhibit 3³ is the City's online public notice explaining
18 PFAS, the Bureaus actions, and how to limit PFAS exposure. Hershey-Kelly Exhibit 4⁴ is
19 the City of Lancaster's 2024 Annual Drinking Water Quality Report.

¹ Hershey-Kelly Exhibit 2 (Aug. 6 DEP Report)

² Hershey-Kelly Exhibit 1 (Jan.29 City Letter)

³ Hershey-Kelly Exhibit 3 (City online PFAS info.)

⁴ Hershey-Kelly Exhibit 4 (City 2024 Annual Drinking Water Quality Report)

Ms. Hershey-Kelly submitted these exhibits to support her testimony regarding the City's poor water quality. She also testified that, until the City consistently provides safe drinking water, imposing additional financial burdens on ratepayers is unjustified. Tr. 108.

E. Customer Service

Q. Did Customers testify to Customer Service complaints?

A. Yes, Mr. Debakey testified he experienced an emergency in which there was no water pressure on the water line to his house. When he called the City's main number, the call went straight to voice mail. Tr. 147. Mr. Debakey testified that he had to call the municipal office to find out there was a pressure issue impacting residents. He never received a follow-up call, prompting him to file a complaint with the PUC. Tr. 150.

F. Transparency of the need for rate increase

Q. Did customers have concerns about the need for the rate increase?

A. Yes, Mr. Debakey made several comments regarding the City's lack of communication for the need to increase rates. He stated, if PFAS mitigation or infrastructure investment is the justification for the increase, the City must clearly demonstrate and document how funds will be used. There is little to no public notice provided to suburban ratepayers regarding planned construction, infrastructure upgrades, or capital projects tied to the nearly 30 percent rate increase. A review of the City of Lancaster website reveals no drawings, plans, or documentation explaining how increased revenues will be allocated. There is no

1 demonstrated correlation between increased rates and improved customer service. Tr. 146-
2 147.

3 **G. Conclusion and Recommendations**

4 It is clear from the testimony presented during the public input hearing that customers have
5 concerns regarding affordability of rates, rate differences between City and non-City
6 residents, overall quality of water, customer service, and the need for the rate increase.

7 I recommend the issues raised during the public input hearings be addressed by the City of
8 Lancaster in their rebuttal testimony. I also urge the Commission to thoroughly review the
9 public input hearing responses regarding the proposed rate increase. Customers' concerns
10 and voices must be heard and taken into consideration when determining the final rate
11 increase.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

City of Lancaster – Bureau of Water

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Docket No. R-2025-3057237

VERIFICATION

I, LeeAnn Wise, hereby state that the facts set forth in my Supplemental Direct Testimony, OCA Statement 4-Supp, are true and correct (or are true and correct to the best of my knowledge, information, and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: December 23, 2025

Signature: /s/ LeeAnn Wise
LeeAnn Wise

Address: 555 Walnut Street
Fifth Floor
Harrisburg, PA 17101

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission :
v. : Docket No. R-2025-3057237
City of Lancaster – Bureau of Water :**

REBUTTAL TESTIMONY

OF

DAVID J. GARRETT

ON BEHALF OF

THE PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

January 8, 2026

1 **I. Introduction**

2 **Q. State your name and occupation.**

3 A. My name is David J. Garrett. I am a consultant specializing in public utility regulation. I
4 am the managing member of Resolve Utility Consulting PLLC.

5 **Q. Have you previously filed testimony in this proceeding?**

6 A. Yes. I filed direct testimony in OCA Statement 2 on December 17, 2025, on behalf of the
7 Pennsylvania Office of Consumer Advocate (“OCA”). A summary of my qualifications is
8 included in my direct testimony.

9 **Q. What is the purpose of your rebuttal testimony?**

10 A. My rebuttal testimony addresses the direct testimony of D.C. Patel, who testified on behalf
11 of the Bureau of Investigation and Enforcement (“I&E”). Specifically, I address Mr.
12 Patel’s proposed return on equity (“ROE”) for the City of Lancaster (the “City”).

13 **Q. Please summarize Mr. Patel’s estimated cost of equity and authorized ROE proposal**
14 **for the City.**

15 A. Mr. Patel proposes a tax-adjusted authorized ROE of 7.86% for the City, which is based
16 on the result of his Discounted Cash Flow (“DCF”) Model result of 10.08%.¹

17 **Q. Are you sponsoring any exhibits to your rebuttal testimony?**

18 A. No.

19 **Q. How does Mr. Patel’s estimated cost of equity and proposed ROE for the City**
20 **compare with your estimated cost of equity and proposed ROE.**

21 A. In my direct testimony, I presented evidence supporting my estimated cost of equity of
22 8.8% for the City, which is also the authorized ROE I propose for the City. My proposed

¹ Direct Testimony of D.C. Patel, p. 29, lines 11-15.

1 ROE was based on the results of my DCF and CAPM Models. Since I did not present a
2 tax-adjusted ROE in my testimony, my proposed ROE of 8.8% should be compared with
3 D.C. Patel's estimated cost of equity of 10.08%. Thus, Mr. Patel proposes a significantly
4 higher ROE than I do.

5 **Q. Since Mr. Patel based his proposed ROE on the results of his DCF Model, please**
6 **summarize the results of your application of the DCF Model and explain how it differs**
7 **from Mr. Patel's results.**

8 A. I conducted two variations of the DCF Model. In one variation, I consider long-term annual
9 U.S. GDP growth projections as a cap on the long-term growth rate of each individual
10 company in the proxy group. This "sustainable" DCF Model variation is based on the
11 fundamental principal that no domestic company can achieve annual earnings and/or
12 dividend growth at a rate that exceeds the growth rate of the aggregate economy in which
13 it operates over the long-run (which is measured by U.S. GDP). In the second variation of
14 my DCF Model, I incorporate the short-term dividend growth rate projections published
15 by Value Line. I presented this "analyst growth" variation of my DCF Model because,
16 despite its shortcomings, it is often presented in rate proceedings and considered by
17 regulators. The result of my sustainable growth DCF Model indicates a cost of equity of
18 6.7% for the City, and the result of my analyst-growth DCF Model indicates a cost of equity
19 of 9.2%. The average result of my two DCF Models is 8.0%. This is notably less than Mr.
20 Patel's DCF result of 10.08%.

21 **Q. Why is Mr. Patel's DCF result significantly higher than your result?**

22 A. The primary reason Mr. Patel's DCF Model produced a much higher result than mine is
23 his use of unsustainably high growth rates. Mr. Patel used a composite growth rate for the

1 proxy group of 7.12%.² In contrast, the average growth rate I used for the proxy group
2 was only 6.2% for my analyst-growth DCF Model. The average growth rate for my
3 sustainable growth DCF Model is equal to a projection of long-term U.S. GDP growth,
4 which is only 3.7%.³

5 **Q. Do you believe Mr. Patel's growth rate estimate is reasonable?**

6 A. No. An average growth rate in excess of 7.0% for the proxy group is unreasonably high in
7 my opinion. This growth rate suggests that the proxy group, on average, can achieve
8 dividend (and/or earnings) growth at a rate nearly double the projected annual GDP growth,
9 every year, in perpetuity. From a strict mathematical standpoint, this suggests that the
10 annual earnings of the proxy group would eventually surpass total U.S. GDP, which is
11 obviously impossible. Albeit, it would take a long time for this happen; nonetheless, it
12 shows why the constant annual growth rate (in either dividends or earnings) of any
13 domestic firm should not exceed annual U.S. GDP growth.

14 **Q. Why were the results of Mr. Patel's DCF Model even higher than the analyst growth**
15 **variation of your DCF Model?**

16 A. As discussed in my direct testimony, I presented a variation of the DCF Model that
17 considers the short-term annual growth rate projections estimated by analysts (specifically,
18 Value Line), despite the shortcomings of this approach. Even the result of this variation of
19 the DCF Model indicated a cost of equity of only 9.2%, which is still significantly less than
20 Mr. Patel's result of 10.08%. This is because I used Value Line's projections for dividend
21 growth instead of earnings growth. In the discounted *cash flow* model, the "cash" that is

² I&E Exhibit No. 2, Sch. 6.

³ See Direct Testimony of David J. Garrett, Exhibit DJG-6.

1 being discounted is the dividends paid to investors. While it is true that dividends are paid
2 from earnings, and earnings growth can be an indicator to consider when assessing the
3 growth rate input in the DCF Model, the ultimate form of “cash flow” in the discounted
4 cash flow model, is dividends. In that regard, it is reasonable to consider dividend growth
5 when conducting the DCF Model. This is especially true if short-term earnings growth
6 projections far exceed U.S. GDP growth. If the Commission is inclined to give weight to
7 a DCF Model that uses analysts’ short-term growth rate projections as the long-term growth
8 rate input to the model, it should give more consideration to the dividend growth rate
9 projections of the proxy group rather than the earnings growth rate projections used by Mr.
10 Patel.

11 **Q. Does this conclude your rebuttal testimony?**

12 A. Yes.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

City of Lancaster – Bureau of Water

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Docket No. R-2025-3057237

VERIFICATION

I, David J. Garrett, hereby state that the facts set forth in my Rebuttal Testimony, OCA Statement 2-R, are true and correct (or are true and correct to the best of my knowledge, information, and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: January 8, 2026

Signature:

/s/ David J. Garrett

David J. Garrett

Consultant Address: 101 Park Avenue, Suite 1125
Oklahoma City, OK 73120

**PENNSYLVANIA PUBLIC
UTILITY COMMISSION**

V.

**CITY OF LANCASTER –
BUREAU OF WATER**

DOCKET NO. R-2025-3057237

**REBUTTAL TESTIMONY OF
JEROME D. MIERZWA**

**ON BEHALF OF THE
PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE**

JANUARY 8, 2026

1 **I. INTRODUCTION**

2 Q. WOULD YOU PLEASE STATE YOUR NAME AND BUSINESS ADDRESS?

3 A. My name is Jerome D. Mierzwa. I am a Principal at, and the President of, Exeter
4 Associates, Inc (“Exeter”). My business address is 10480 Little Patuxent Parkway, Suite
5 300, Columbia, Maryland 21044. Exeter specializes in providing public utility-related
6 consulting services.

7 Q. HAVE YOU PREVIOUSLY TESTIFIED IN THIS PROCEEDING?

8 A. Yes. My direct testimony was submitted as OCA Statement 3 in this City of Lancaster
9 (“City”) water base rate proceeding on December 17, 2025.

10 Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

11 A. The purpose of my rebuttal testimony is to respond to certain aspects of the direct
12 testimony submitted by Office of Small Business Advocate (“OSBA”) witness Joseph
13 Kubas in OSBA Statement No. 1.

14 Q. TO WHICH ASPECT OF MR. KUBAS DIRECT TESTIMONY WILL YOU BE
15 RESPONDING?

16 A. Typically in a utility rate proceeding, rates should be established based on the cost of
17 serving each customer class which is determined by a class cost of service study
18 (“CCOSS”). As noted in my direct testimony, in response to the Commissions Bureau of
19 Technical Utility Services (“TUS”) discovery request No. 15 (“TUS Request No. 15”),
20 the City revised the CCOSS presented in its initial application to correct an error
21 discovered by the City. In the revised CCOSS, the indicated cost of service for each
22 customer class differed from the CCOSS presented in the Company’s initial application.
23 However, in the revised CCOSS, the City continued to propose the same rate increases
24 and proposed revenues (revenues distribution) for each customer class included in its
25 initial CCOSS. As a result of the revised CCOSS, Mr. Kubas is proposing to modify the

1 revenue distribution for the customer classes served by the City to reflect the results of
2 the revised CCOSS. My testimony addresses Mr. Kubas' proposed modifications to the
3 City's proposed revenue distribution.

4 Q. HOW DID MR. KUBAS EVALUATE THE REVENUE DISTRIBUTION
5 REFLECTED IN THE CITY'S REVISED CCOSS?

6 A. As discussed in greater detail on pages 9 and 10 of his direct testimony, Mr. Kubas
7 evaluated the City's proposed revenue distribution base on the relative rates of return for
8 each class under the revenue distribution reflected in the City's revised CCOSS. The
9 relative rate of return for a customer class is calculated by dividing the rate of return of a
10 customer class by the system average rate of return. As explained by Mr. Kubas, in a
11 CCOSS, a relative rate of return of 1.0 indicates that the revenue received from that class
12 equals the cost of providing service to that class. A relative rate of return below 1.0
13 indicates that the revenue received from that class is less than the cost of providing
14 service to that class. Conversely, a relative rate of return above 1.0 indicates that the
15 revenue received from that class exceeds the cost of providing service to that class.

16 Q. WHAT WAS MR. KUBAS' CONCERN WITH THE RELATIVE RATES OF
17 RETURN UNDER THE CITY'S REVISED CCOSS?

18 A. Mr. Kubas found that the 0.92 relative rate of return of the Residential class was too low
19 and the 1.4 relative rate of return for the Private Fire class was too high under the City's
20 proposed revenue distribution. Therefore, he proposed an alternative revenue distribution
21 which moved the relative rate of return for each class to approximately 1.0.

22 Q. DO YOU AGREE WITH MR. KUBAS' ALTERNATIVE REVENUE
23 DISTRIBUTION?

24 A. No. As explained in my direct testimony, in the CCOSS presented by the City in its most
25 recent prior base rate proceeding in Docket No. R-2021-3026682, the costs associated

1 with providing Public Fire protection service were allocated to the City's Residential,
2 Commercial, Industrial, and Large Industrial customer classes (retail customer classes).
3 As a result, in Docket No. R-2021-3026682, the City did not propose to collect any of the
4 costs it incurred to provide Public Fire protection service from the municipalities to
5 which it provided Public Fire protection service. I disagreed with the City's proposal in
6 Docket No. R-2021-3026682 not to recover any of the costs associated with providing
7 Public Fire protection service from the municipalities it provided Public Fire protection
8 service. In the settlement agreement adopted and approved in the City's last rate
9 proceeding, the City agreed to propose to allocate in the CCOSS it filed in its next rate
10 proceeding a portion of the costs associated with providing Public Fire protection service
11 to the municipalities in which the City provides Public Fire protection service. In the
12 CCOSS presented by the City in this proceeding, which is the next rate proceeding after
13 Docket No. R-2021-3026682, the City did not comply with the terms of the settlement
14 agreement approved in its last rate proceeding, and again allocated all of the costs
15 associated with providing Public Fire protection service to the retail customer classes. In
16 my direct testimony in this proceeding I recommend that 25% of the costs associated with
17 providing Public Fire protection service be allocated to Public Fire protection service in
18 the City's revised CCOSS, and that these allocated costs be recovered from the
19 municipalities being provided Public Fire protection service by the City. In my direct
20 testimony, I adjust the results of the City's revised CCOSS to reflect an allocation of 25%
21 of the costs associated with providing Public Fire protection service to Public Fire
22 protection service.

23 The alternative revenue distribution proposed by Mr. Kubas is based on the City's
24 revised CCOSS, which failed to allocate any of the Public Fire protection cost of service
25 to the Public Fire customer class. As shown on OSBA Exhibit JK-5, at proposed rates

1 under Mr. Kubas' proposed revenue distribution, the revenues that would be recovered
2 from the Residential class are \$14,432,975. Adjusting the City's revised cost of service
3 study to reflect an allocation of 25% of Public Fire protection costs to the Public Fire
4 class, as shown on Table 2 of my direct testimony, results in a Residential cost of service
5 of \$13,879,902. Thus, Mr. Kubas, proposal would result in the recovery of costs from the
6 Residential class which are 10% higher than the Residential cost of service. Since Mr.
7 Kubas' proposed revenue distribution is based on the City's revised CCOSS which is
8 inconsistent with the terms of the settlement approved in Docket No. R-2021-3026682
9 and would result in the recovery of revenues from the Residential class in excess of the
10 cost of service, Mr. Kubas' proposed alternative revenue distribution should not be
11 accepted or approved.

12 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

13 A. Yes, it does.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

City of Lancaster – Bureau of Water

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Docket No. R-2025-3057237

VERIFICATION

I, Jerome D. Mierzwa, hereby state that the facts set forth in my Rebuttal Testimony, OCA Statement 3-R, are true and correct (or are true and correct to the best of my knowledge, information, and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: January 8, 2026

Signature: /s/ Jerome D. Mierzwa
Jerome D. Mierzwa

Consultant Address: Exeter Associates, Inc.
10480 Little Patuxent Parkway
Suite 300
Columbia, MD 21044-3575

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY
COMMISSION

V.

CITY OF LANCASTER – BUREAU OF WATER

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DOCKET NO. R-2025-3057237

SURREBUTTAL TESTIMONY
OF
LAFAYETTE K. MORGAN, JR.

ON BEHALF OF THE
PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

JANUARY 20, 2026

EXETER
ASSOCIATES, INC.

10480 Little Patuxent Parkway, Suite 300
Columbia, Maryland 21044

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I. Introduction

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Lafayette K. Morgan, Jr. My business address is 10480 Little Patuxent Parkway, Suite 300, Columbia, Maryland, 21044. I am a Public Utilities Consultant working with Exeter Associates, Inc. (“Exeter”). Exeter is a consulting firm specializing in issues pertaining to public utilities.

Q. ARE YOU THE SAME LAFAYETTE K. MORGAN, JR. WHO SUBMITTED PRE-FILED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimonies of City of Lancaster – Water Bureau’s (the “City”) witnesses Tina Campbell, Stephen Campbell and Gregory R. Herbert which were filed on January 8, 2026. In this surrebuttal testimony, I will respond to the witnesses’ disagreement with the adjustments I recommended in my direct testimony and further explain why I continue to recommend the adjustments I made. In certain instances, I have either revised or withdrawn the initial adjustments I recommended.

Q. HAVE YOU PREPARED SCHEDULES TO ACCOMPANY YOUR SURREBUTTAL TESTIMONY?

A. Yes. I have prepared Surrebuttal Schedules LKM-1SR through LKM-10SR. In the City’s rebuttal testimony, certain changes were reflected in its cost of service. As a result, the amounts presented in my cost of service need to be updated to reflect the changes made by the City.

1 Q. HAS THE OCA'S RECOMMENDED INCREASE CHANGED FROM THE
2 AMOUNT YOU PRESENTED IN YOUR DIRECT TESTIMONY?

3 A. Yes. The OCA's revenue requirement has changed as a result of reflecting
4 certain changes made by the City to the cost of service, and also as a result of
5 the changes I have made to the adjustments I recommended in my direct
6 testimony. The changes I made are explained below but they are generally
7 related to the projects the City included in Plant in Service. Since my adjustment
8 to Plant in Service changed, there is also a corresponding effect on the
9 depreciation expense the City is entitled to recover in rates.

10 After reflecting the City's and the OCA's changes to the cost of service,
11 the OCA's recommended increase in rates is \$2,854,613. This amount is
12 \$992,357 more than the \$1,862,256 I recommended in my direct testimony, but
13 \$4,150,604 less than the City's requested increase of \$7,005,217.

14 1. Plant in Service

15 Q. CITY WITNESS TINA CAMPBELL DISAGREES THAT THE CITY DID NOT
16 PROVIDE THE SUPPORTING DOCUMENTATION FOR THE CAPITAL
17 PROJECTS CLAIMED IN THE COST OF SERVICE. PLEASE RESPOND.

18 A. In my direct testimony, I recommended adjustments to the plant in service, in many
19 cases, based on the lack of budget support. In essence, my adjustments were based on
20 the lack of evidence that the projects being claimed for rate base inclusion had been
21 submitted for budget appropriation or approval. There was also no evidence presented
22 by the City that the projects claimed for rate base inclusion were included in an
23 approved budget.

1 Ms. Campbell disagrees with me. In her rebuttal testimony, she defends the
2 City's Plant in Service claims by stating that the City provided a 5-year Capital
3 Improvement Plan which includes the 2026 Capital Budget.¹ She also claims that a
4 copy of the approved budget was provided by the City in a response to discovery.²
5 However, she admits that the 2027 Capital Budget will be approved before September
6 30, 2026,³ but does not provide a specific date for the approval. Hence, currently, there
7 is no approved 2027 capital budget. Ms. Campbell then explains that the City approves
8 the capital budget for one-year periods, and requiring such approval for inclusion in
9 rate base would create an impossibility for the City, because approval of budgets
10 beyond one year is not permitted by the Home Rule Charter.⁴

11 For the purpose of clarifying the record in this proceeding, it is necessary to
12 address certain inaccuracies in the statements made by Ms. Campbell. First, the City's
13 5-year Capital Improvement Plan was not provided in the City's direct filing. It appears
14 that there was an error in the compilation of Exhibit D III, which was attached to the
15 direct testimony of Mr. Herbert.

16 In Mr. Herbert's Rebuttal Testimony, a document entitled "Proposed 2026-
17 2030 Capital Budget" was presented as "Exhibit D IX-4 Attachment". However,
18 another confusion was created in Mr. Herbert's Rebuttal testimony because the
19 attached Filing Requirements cover page was the same incorrect cover sheet that was
20 presented in his direct testimony filing. The confusion appears to have been caused by
21 the letters "X" and "I" being transposed on the cover sheet. Exhibit D XI-4 (not "D
22 IX-4) is the appropriate Filing Requirements reference for "Responses to Quality of

¹ Rebuttal Testimony of Tina Campbell at 2:13.

² Rebuttal Testimony of Tina Campbell at 2, footnote 1.

³ Rebuttal Testimony of Tina Campbell at 2:18-19.

⁴ Rebuttal Testimony of Tina Campbell at 3:2-7.

1 Service Filing Requirements” which addresses the City’s policies and procedures for
2 addressing customer water quality complaints. Nevertheless, the “Proposed 2026-2030
3 Capital Budget” document, presented in rebuttal as “Exhibit D IX-4 Attachment”,
4 appears nowhere in the City’s direct testimony. In Exhibit D IX-4 of its Direct
5 Testimony, the City provided a 16-page document entitled Standard Operating
6 Procedure (SOP), not the “Proposed 2026-2030 Capital Budget” or any other version
7 of the 5-year Capital Improvement Plan.

8 On page 2 of Ms. Tina Campbell’s Rebuttal Testimony, she states that “[t]he
9 City provided a 5-year Capital Improvement Plan, attached to the Direct Testimony of
10 Stephen Campbell as Exhibit SC-2, which includes the 2026 Capital Budget.”⁵ In Mr.
11 Stephen Campbell’s Direct Testimony, Exhibit SC-2 contains one page of budget
12 items, in chart format, with few details.⁶ This one-page budget chart contains only
13 “Mar-26” and “Mar-27” in dates, and thus it does not appear to contain a “5-year capital
14 improvement plan.” Ms. Campbell refers in a footnote to the City’s discovery response
15 to I&E-RB-2-D as providing Exhibit D IX-4 Attachment (the 5-year Capital
16 Improvement Plan). In fact, the response to I&E-RB-2-D states: “The 2026-2030
17 Capital Budget is provided in Exhibit GRH-3, minimum filing requirement – Exhibit
18 D-XI-4 [**Not Exhibit D-IX-4**].” Exhibit D-XI-4 is the same 16-page document entitled
19 Standard Operating Procedure (SOP). Exhibit D V-12 in the City’s Direct Testimony
20 refers to “Exhibit SC-1” as “(the Five-Year Capital Plan)”, but Exhibit SC-1 only
21 contains two-pages of budget items, in chart format, with few details. To my
22 knowledge, the first time Exhibit D IX-4 Attachment entitled “Proposed 2026-2030

⁵ Rebuttal Testimony of Tina Campbell at 2:13-15.

⁶ Direct Testimony of Stephen Campbell at Ex. SC-2.

1 Capital Budget” has been provided by the City is in the Rebuttal Testimony of Mr.
2 Herbert, where it is presented in Exhibit GRH-4R, pages 59 to 72.

3 Q. **DO YOU AGREE WITH MS. CAMPBELL THAT THE CITY HAS PROVIDED**
4 **THE CAPITAL BUDGET TO SUPPORT THE PLANT IN SERVICE CLAIMS**
5 **FOR THE FULLY PROJECTED FUTURE TEST YEAR (“FPFTY”)?**

6 A. No. There are several inconsistencies with the supporting documentation that cause me
7 to be skeptical of the data provided. First, in some instances, Exhibit IX-4 is described
8 as the capital budget. As an example, the response to I&E-RB-2-D and the cover of the
9 document presented as Exhibit GRH-4R, pages 59 to 72 describe the document as the
10 2026-2030 Capital Budget. However, the first page of the document, Exhibit GRH-4R,
11 page 60, describes the document as the “2026 to 2030 Capital Improvement Plan.” A
12 capital improvement plan and a budget are not the same thing. A capital improvement
13 plan is a multi-year plan that serves as a strategic blueprint for future infrastructure
14 needs. While a capital budget is the annual financial document that identifies the
15 specific projects that will be pursued and provides the funding for the projects.

16 Second, according to the capital plan, the FY 2027 capital expenditures total
17 \$16.6 million. This amount differs significantly from the \$50.0 million in capital
18 expenditures (plant additions) that the City is claiming in this proceeding for the
19 FPFTY. Moreover, no evidence has been presented by the City that suggests that the
20 \$50.0 million is the amount presented to City Council to be approved for the FY 2027
21 capital budget.

22 Third, when asked to provide the budget justification documentation for the
23 FPFTY projects, the City failed to do so.⁷ Instead, the City provided brief descriptions

⁷ This information was sought in OCA-11-3 and OCA-11-4.

1 of the project rather than detailed documentation that described the purpose and
2 justification for the project, projected monthly expenditures, supporting cost
3 calculations, including labor, materials, etc.⁸ These are data that one would expect to
4 be readily available for projects submitted for budget approval.

5 Q. **PLEASE COMMENT ON THE DISCUSSION BEGINNING ON PAGE 2, LINE**
6 **4 OF MR. STEPHEN CAMPBELL’S REBUTTAL TESTIMONY.**

7 A. Mr. Campbell provides additional discussion of the City’s capital budgeting process
8 with the intent of providing additional clarity regarding the City’s long-term capital
9 planning and its capital improvement plan.

10 Mr. Campbell differentiates the long-term capital plan from the capital
11 improvement plan. According to Mr. Campbell, a long-term capital plan has a 20 to
12 30-year horizon and does not necessarily include a budget.⁹ Whereas, a capital
13 improvement plan has a shorter time frame which is generally within 5 years. Mr.
14 Campbell goes on to explain that the City’s 5-year Capital Improvement Plan, which
15 was presented as Exhibit SC-1 in his Direct Testimony, was approved by the City
16 Council. He then suggests that under the Home Rule Charter, the approval process is
17 now more rigorous than prior to the City adopting the Home Rule Charter.

18 It appears that the point of Mr. Campbell’s discussion is to imply that there is a
19 level of commitment that ensures the projects will be completed.

20 Q. **DO YOU FIND THIS DISCUSSION TO BE A REASONABLE BASIS TO**
21 **INCLUDE THE CITY’S PLANT IN SERVICE CLAIM, AS FILED, IN RATE**
22 **BASE?**

⁸ *Id.*

⁹ Rebuttal Testimony of Stephen Campbell at 2:14-16.

1 A. No. The plant in service that is allowed to be included in rate base should not be derived
2 from plant that will be placed in service during a 5-year horizon. Instead, the plant that
3 should be included in rate base should be derived based upon those projects that are
4 expected to be completed and placed in service during the FPFTY. This standard is
5 based on Act 11 of 2012, which governs the costs that are allowed to be included in
6 rate base and the cost of service. According to the Commission Final Implementation
7 Order of Act 11:

8 Section 315 of the Code, 66 Pa. C.S. § 315, contains the burden of
9 proof a utility has in various proceedings before the Commission.
10 With the enactment of Act 11, the burden of proof standard for
11 utilities in rate proceedings has been amended to permit use of either
12 a future test year or a “fully-projected future test year” in rate cases.
13 The fully-projected test year is defined as the 12-month period that
14 begins with the first month that the new rates will be placed into
15 effect, after application of the full suspension period permitted under
16 Section 1308(d). See 66 Pa. C.S. § 1308(d). Under this approach, the
17 risks associated with regulatory lag will be substantially reduced
18 because the new rates will be consistent with the test year used to
19 establish those rates for at least the first year.

20 Additionally, new language set forth in Section 315 exempts
21 application of Section 1315 of the Code which, for electric utilities,
22 requires projects to be “used and useful” before being included in the
23 rate base. Thus, the strict statutory bar has been removed to include
24 in rates property that is not used and useful when rates become
25 effective. We stated in the Tentative Implementation Order that Act
26 11 now provides the Commission with discretion in this area and it
27 may now permit facilities that are projected to be in service during
28 the fully-projected future test year to be included in the final
29 determination of the rate base calculation.¹⁰

30 Hence, the burden of proof is on the City to show which projects will be placed in
31 service during the FPFTY. In order for the construction to begin on any of the projects
32 presented on Exhibit SC-2, there must also be an approved budget. Therefore, as I

¹⁰ PaPUC’s Final Implementation Order in Docket No. M-2012-2293611 at page 5.

1 reconsidered the City's Plant in Service claims, I have relied on project spending as an
2 indicator of budget approval.

3 Q. IN YOUR DIRECT TESTIMONY, YOU RECOMMENDED SEVERAL
4 ADJUSTMENTS TO PLANT IN SERVICE PROJECTS. AFTER REVIEWING
5 MR. CAMPBELL'S REBUTTAL TESTIMONY, HAVE YOU REVISED ANY
6 OF YOUR ADJUSTMENTS TO PLANT IN SERVICE?

7 A. Yes. Based my review of Mr. Campbell's testimony, I am withdrawing the following
8 adjustments:

- 9 • **Duke Street Water Main Replacement** - This project is completed and in
10 service. No Adjustment is needed.
- 11 • **Security Cameras and Networking at Tanks and Pump Stations** - This
12 project is underway to provide security cameras at the water tanks and pump
13 stations. Based on the nature of this project, I expect the project to be
14 completed when rates go into effect.
- 15 • **Lampeter Road Stream Restoration** - This project is underway with a
16 signed contract. Budget approval provides authority for City officials to
17 execute a contract. Based on the nature of this project, I expect the project to
18 be completed when rates go into effect.
- 19 • **Hess Pump Station Upgrade** - The City executed a Professional Services
20 Agreement for the project. The design is completed and a PADEP permit
21 was received for the upgrade. It is probable the project will be in service
22 during the FPFTY.
- 23 • **Vactor** – The equipment has been ordered and is expected to be delivered
24 and in service before the FPFTY.

- 1 • **Oyster Point** - The plans and specifications and the construction estimate
2 have been developed. The project will bid in January 2026 and expected to
3 be completed by the FPFTY.
- 4 • **George Street Main Replacement** - The City has entered into a
5 Professional Services Agreement and the project is expected to be completed
6 by the FPFTY.
- 7 • **SCADA – LIMS** - The project appears to be ongoing and expected to be
8 completed by the FPFTY.

9 Q. **PLEASE IDENTIFY AND EXPLAIN THE ADJUSTMENTS YOU CONTINUE**
10 **TO RECOMMEND.**

11 A. I still oppose the inclusion of the following costs in rate base.

- 12 • **Millersville Water Line Replacement - Manor to Charlotte** – This project
13 will be performed in coordination with Millersville Borough. Therefore, the
14 City does not fully control the lifespan of the project with respect to being in
15 service by the FPFTY. The City states that no money will be spent until
16 construction is complete, and the completion date is vague and uncertain.
17 Stated differently, if no money is spent, then there is no capital to recover.
18 Therefore, ratepayers should not pay for a project before it goes into service.
19 This adjustment results in a \$29,355 decrease to the City’s proposed revenue
20 increase.
- 21 • **Susquehanna Large Diameter Transmission Main (Phase 2 and Phase**
22 **3)** – This project involves the installation of 35,400 feet of 42-inch ductile
23 iron pipe and 1,500 feet of 8-inch ductile iron pipe. Phase 2 of this project
24 connects the Susquehanna River to the Susquehanna Water Treatment Plant,

1 and Phase 3 connects the Susquehanna Water Treatment Plant to the Oyster
2 Point Reservoir.¹¹

3 Despite planning work that has been ongoing, the project has not yet
4 been bid. Hence, construction has not begun. After budget approval for large
5 projects, it is not unusual for expenditures to be made for planning,
6 engineering and other pre-construction activities. In fact, those activities are
7 typically used to determine the construction timeline and to ensure the
8 project's materials, equipment, labor, etc. are lined up before construction
9 work begins. More importantly, if the project has not been bid and awarded,
10 the start date of construction is not known. The start of construction governs
11 when the project will be completed.

12 In Mr. Campbell's own words, the best scenario is that the project will
13 be "substantially completed" by March 2027 (the end of the FPFTY).¹²
14 Substantially completed does not equate to being in service. Therefore, the
15 project is not eligible for inclusion in rate base. Mr. Campbell states that "to
16 be awarded less funding than the requested rate increase will jeopardize the
17 project."¹³ It is not permissible to establish rates which allows a utility to
18 pre-collect the cost of plant before the plant is placed in service. That would
19 be tantamount to the inclusion of Construction Work in Progress ("CWIP")
20 in rate base.

21 However, I disagree that current rate recovery of the construction costs
22 before the project is placed in service puts the project in jeopardy. For
23 projects this size, the funding for construction is pre-arranged. In fact, Mr.

¹¹ Direct Testimony of Stephen Campbell at 11:7-15.

¹² Rebuttal Testimony of Stephen Campbell at 6:35-37.

¹³ Rebuttal Testimony of Stephen Campbell at 6:21-22.

1 Campbell mentions partial grant funding from COVID-19 funds through the
2 Commonwealth Fund is available for use on this project.¹⁴ He also mentions
3 PENNVEST funding is expected to be awarded in January 2026.¹⁵ Also, the
4 City Council has approved interim financing.¹⁶ These are the types of
5 funding that puts the project in jeopardy, if not received. But here, the
6 evidence shows that the City has received these sources of funding.

7 Also, the change in the cost of the project is evidence of cost uncertainty
8 which would place ratepayers at risk of over-paying for the project before
9 the costs are known and certain. For these reasons, the Commission should
10 deny recovery of the cost of this project. Removal of Phase 2 of this project
11 results in a \$590,791 decrease to the City's proposed revenue increase.
12 Removal of Phase 3 of this project results in a \$1,720,427 decrease to the
13 City's proposed revenue increase.

- 14 • **Conestoga Low/High Service Electrical Upgrade** – The design work for
15 the project is not completed and the project specifications are not yet known.
16 The change in the cost of the project is evidence of cost uncertainty which
17 would place ratepayers at risk of over-paying for the project before the costs
18 are known and certain. This adjustment results in a \$48,438 decrease to the
19 City's proposed revenue increase.
- 20 • **Lafayette Tank Water Quality Improvements** – The design work for the
21 project is not completed and the City has not yet filed for the PADEP
22 permits. The project has not been bid either. Therefore, there is uncertainty
23 regarding the commencement, and completion, of the project. This

¹⁴ Rebuttal Testimony of Stephen Campbell at 6:8-33.

¹⁵ *Id.*

¹⁶ *Id.*

1 adjustment results in a \$79,261 decrease to the City's proposed revenue
2 increase.

- 3 • **Pipes and Valves - Inventory** – This is essentially an estimate of materials
4 and supplies inventory that is based on past purchases for a specific project. I
5 do not consider this representative of a 13-month average. In my direct
6 testimony, I explained why the City's Materials and Supplies claim is not
7 appropriate. This adjustment results in a \$14,799 decrease to the City's
8 proposed revenue increase.

- 9 • **Ceramic Membrane Pilot** – Mr. Campbell's rebuttal testimony is the first
10 time where this project is described. The City explained that the Ceramic
11 Membranes is a pilot test to determine if the use of ceramic membranes is a
12 more robust and resilient membrane technology than what is currently being
13 used. The replacement of membranes is a maintenance expense item and not
14 a capital expenditure. So, it should not be included in rate base where the
15 City would earn a return on the expense. Hence, I am opposed to the
16 inclusion of these costs in rate base. Moreover, the City is attempting to
17 include these costs in rates without a corresponding decrease in membrane
18 costs that are already included in the cost of service. This approach is
19 inappropriate because, if allowed, ratepayers will be charged more than the
20 normal annual level of costs for membranes. As a result, I recommend the
21 Commission deny inclusion of these costs in rate base. This adjustment
22 results in a \$26,421 decrease to the City's proposed revenue increase.

1 2. Electric Power Expense.

2 Q. **PLEASE RESPOND TO THE CITY'S REBUTTAL TESTIMONY ON ITS**
3 **PURCHASED POWER EXPENSE.**

4 A. In my direct testimony, I explained that the City has proposed an adjustment to Electric
5 Power expense that increases the costs by 54%. I recommended a reversal of the
6 increase in power expense because the City did not adequately support the derivation
7 of the increase. In the Rebuttal Testimony of Mr. Herbert, additional information was
8 provided to support the electricity expense adjustment. In Exhibit GRH-4R, pages 53
9 through 56, the documents show that the 54% increase in electricity costs was the result
10 of an increase in the power supply, not power and delivery. Therefore, it is
11 inappropriate to apply the 54% increase to the total power expense. However, a
12 breakdown of the power supply and delivery costs is not available to me at this time.
13 As a result, I am unable to adjust the power expense to reflect only an increase in power
14 supply expense. Consequently, I am maintaining my adjustment to remove the 54%
15 increase in total power expense. This adjustment decreases electric power expense by
16 \$509,636.

17 Q. **PLEASE SUMMARIZE YOUR SURREBUTTAL TESTIMONY.**

18 A. My surrebuttal testimony provides an update of the OCA's revenue requirement in this
19 proceeding. In the City's rebuttal testimony, certain cost of service components were
20 revised. Specifically, Mr. Herbert lists the following changes made by the City:¹⁷
21 • Reduction in present and proposed rate revenue due to the reclassification of
22 billing determinants of residential customers with ¾-inch x 1-inch meter
23 connections, which were originally classified as 1-inch metered customers.
24 • Change to restrictive diameter squared equivalents of public fire hydrants in
25 the City's cost of service study.

¹⁷ Rebuttal Testimony of Stephen Campbell at 3:15 - 4-2.

- Increase to Other Water Revenues for an inadvertent sign switch to Lien Interests and Costs revenue.
- Increase to Other Water Revenues – Sewer Reimbursement revenue to recover 37% of the Meter Shop FPFTY expense claim.
- Removal of two Plumbing Technician positions with annual salaries of \$65,000 each, as these positions were not approved by the City for the Water Fund’s 2026 budget.
- Increase rate base in response to discovery data request OCA 11-6 and the supplemental response to OCA 11-6.

My surrebuttal testimony and exhibits incorporate those changes. I have also revised certain adjustments in response to the City’s rebuttal testimony. However, there continues to be adjustments where I disagree with the City. The following adjustments summarized the adjustments that I believe are necessary:

Rate Base Adjustments

- Conestoga Low/High Service Electrical Upgrade - \$(825,000)
- Susquehanna LDTM (phase 2) - \$(10,062,529)
- Susquehanna LDTM (phase 3) - \$(29,302,786)
- Millersville Water Line Replacement - Manor to Charlotte - \$(500,000)
- Lafayette Tank (Water Quality Improvements) - \$(1,350,000)
- Ceramic Membrane pilot - \$(450,000)
- Oyster Point Reservoir Cleaning - \$(650,000)
- Materials & Supplies Claim - \$(300,000)
- Working Capital Effect - \$(650,770)

Expense Adjustments

- Power Expense - \$(509,636)
- Change in Depreciation Rate - \$(1,017,143)

1 • Change in Depreciation Expense Related to Plant - \$(404,804)

2 After reflecting the City's and the OCA's changes to the cost of service, the
3 OCA's recommended increase in rates is \$2,854,613.

4 Q. **DOES THIS COMPLETE YOUR SURREBUTTAL TESTIMONY?**

5 A. Yes, it does.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY
COMMISSION

V.

CITY OF LANCASTER – BUREAU OF WATER

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DOCKET NO. R-2025-3057237

EXHIBITS ACCOMPANYING THE
SURREBUTTAL TESTIMONY
OF
LAFAYETTE K. MORGAN, JR.

JANUARY 20, 2026

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Summary of Operating Income
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Company Amounts at Present Rates	OCA Adjustments	Amounts After OCA Adjustments	Pro Forma Change in Revenues	Amounts After Change in Revenues
	<u>Operating Revenues</u>					
1	Total Water Sales	\$ 22,608,086 ^{1/}	\$ -	\$ 22,608,086	\$ -	\$ 22,608,086
2	Total Other Revenues	548,617 ^{1/}	-	548,617	-	548,617
3	Revenue Increase	-	-	-	2,854,613	2,854,613
4	Total Operating Revenues	<u>23,156,703</u>	<u>-</u>	<u>23,156,703</u>	<u>2,854,613</u>	<u>26,011,316</u>
5						
6	<u>Operating Expenses</u>					
7	O&M Expenses	12,454,808 ^{2/}	(509,636)	11,945,172	-	11,945,172
8	Depreciation	4,493,362 ^{2/}	(1,415,848)	3,077,514	-	3,077,514
9	Taxes, Other Than Income	-	-	-	-	-
10	State Income Taxes	-	-	-	-	-
11	Federal Income Taxes	-	-	-	-	-
12						
13	Total Operating Expenses	<u>16,948,170</u>	<u>(1,925,484)</u>	<u>15,022,686</u>	<u>-</u>	<u>15,022,686</u>
14						
15	Net Operating Income	<u>\$ 6,208,533</u>	<u>\$ 1,925,484</u>	<u>\$ 8,134,017</u>	<u>\$ 2,854,613</u>	<u>\$ 10,988,630</u>
16						
17	Rate Base	<u>\$ 197,763,834</u>		<u>\$ 165,491,423</u>		<u>\$ 165,491,423</u>
18						
19	Return On Rate Base	<u>3.14%</u>		<u>4.92%</u>		<u>6.64%</u>

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Summary of Revenue Increase at OCA Rate of Return
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount	Source
1	OCA Adjusted Rate Base	\$ 165,491,423	Exhibit LKM-2SR, Page 2
2	Required Rate of Return	6.64%	OCA Witness Garrett
3	Net Operating Income Required	\$ 10,988,630	
4	Net Operating Income at Present Rates	8,134,017	Exhibit LKM-1S, Page 1
5	Income Deficiency/(Surplus)	\$ 2,854,613	
6	Revenue Multiplier	1.000000	
7			
8	Required Change in Company Revenue	\$ 2,854,613	

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Summary of Rate Base
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount per Company Filing ^{1/}	OCA Rate Base Adjustments	Amount After OCA Adjustments
1	Original Cost of Utility Plant in Service	\$ 386,941,038	\$ (42,490,315)	\$ 344,450,723
2	Accumulated Depreciation	<u>(112,065,658)</u>	<u>-</u>	<u>(112,065,658)</u>
3	Net Plant in Service	274,875,380	(42,490,315)	232,385,065
4	Other Rate Base Items:			
5	Customer Advances for Construction	(544,557)	-	(544,557)
6	Accumulated Depreciation	<u>267,704</u>	<u>-</u>	<u>267,704</u>
7	Subtotal	(276,853)	-	(276,853)
8	Customer Advances for Construction	(14,390,926)	-	(14,390,926)
9	Accumulated Depreciation	<u>3,558,786</u>	<u>-</u>	<u>3,558,786</u>
10	Subtotal	(10,832,140)	-	(10,832,140)
11	Materials and Supplies	300,000	(300,000)	-
12	Cash Working Capital	<u>2,138,563</u>	<u>(650,770)</u>	<u>1,487,793</u>
13	Total Rate Base	\$ 266,204,950	\$ (43,141,085)	\$ 222,763,865
14	Outside City Allocation Factor	<u>0.742900663 ^{2/}</u>	<u>0.742900663 ^{2/}</u>	<u>0.742900663 ^{2/}</u>
15	Outside City Total Rate Base	<u>\$ 197,763,834</u>	<u>\$ (32,049,541)</u>	<u>\$ 165,491,423</u>

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Summary of Rate Base Adjustments
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Source	Amount
1	Rate Base per Company Rebuttal Filing	Exhibit LKM-2S, Page 1	<u>\$266,204,950</u>
2			
3			
4	<u>OCA Adjustments:</u>		
5	Adjustment to Reflect Revised Rate Base Components	Exhibit LKM - 4S	\$ (42,490,315)
6	Adjustment to Materials & Supplies	Exhibit LKM - 6S	(300,000)
7	Reflect OCA's Adjustment in Cash Working Capital	Exhibit LKM - 5S	<u>(650,770)</u>
8			
9	Total Ratemaking Adjustments		<u>\$ (43,441,085)</u>
10			
11	Adjusted Rate Base per OCA		<u><u>\$222,763,865</u></u>

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Summary of Adjustments to Income Before Income Taxes
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount	Source
1	Operating Income per Company	<u>\$ 6,208,533</u>	Exhibit LKM-1SR
2			
3	<u>OCA Adjustments:</u>		
4	Adjustment to Reimbursement -Meter Labor	\$ -	Exhibit LKM-7SR
5	Adjustment to Power Expense	509,636	Exhibit LKM-8SR
6	Adjustment to reflect Change in Depreciation Rates	1,017,144	Exhibit LKM-9SR
7	Adjustment to Depreciation Expense- Plant Change	398,705	Exhibit LKM-10SR
8			
9	Total OCA Adjustments	<u>1,925,484</u>	
10			
11	Total OCA Adjustments	<u>\$ 8,134,017</u>	

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Summary of Adjustments to Operating Income
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Operating Revenues	O&M Expenses	Depreciation & Amortization	Operating Income Before Income Taxes
1	Amount per Company	\$ 23,156,703	\$12,454,808	\$ 4,493,362	\$ 6,208,533
2					
3	<u>OCA Adjustments:</u>				
4	Adjustment to Reimbursement -Meter Labor	\$ -	\$ -	\$ -	\$ -
5	Adjustment to Power Expense	-	(509,636)	-	509,636
6	Adjustment to reflect Change in Depreciation Rates	-	-	(1,017,144)	1,017,144
7	Adjustment to Depreciation Expense- Plant Change	-	-	(398,705)	398,705
8					
9					
10	Total OCA Adjustments	\$ -	\$ (509,636)	\$(1,415,848)	\$ 1,925,484
11					
12	Total Adjusted Income Before Income Taxes	\$ 23,156,703	\$11,945,172	\$ 3,077,514	\$ 8,134,017

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Adjustment to Remove Unsupported Plant in Service
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Completion Date	Remove Projected Cost	Reverse Retirement Costs	Net Change in Plant
1	<u>Plant in Service:</u> ^{1/}				
2	FTY Plant				
3	Duke Street Water Line Replacement	Mar-26	\$ -	\$ -	\$ -
4	FPFTY Plant				
5	Security Cameras and networking - phase 2 at tanks and pump stations	Mar-27	-	-	-
6	Lampeter Road Stream Restoration	Mar-27	-	-	-
7	Hess PS Upgrade	Mar-27	-	-	-
8	Conestoga Low/High Service Electrical Upgrade	Mar-27	(825,000)	-	(825,000)
9	George Street Line Replacement	Mar-27	-	-	-
10	Susquehanna LDTM (phase 2)	Mar-27	(10,592,529)	530,000	(10,062,529)
11	Susquehanna LDTM (phase 3)	Mar-27	(30,842,786)	1,540,000	(29,302,786)
12	Millersville Water Line Replacement - Manor to Charlotte	Mar-27	(555,000)	55,000	(500,000)
13	Lafayette Tank (Water Quality Improvements)	Mar-27	(1,500,000)	150,000	(1,350,000)
14	Vactor	Mar-27	-	-	-
15	SCADA - LIMS	Mar-27	-	-	-
16	Ceramic Membrane pilot	Mar-27	(450,000)	-	(450,000)
17	Oyster Point Reservoir Cleaning	Mar-27	-	-	-
18	Total Adjustment to Plant in Service		<u>\$ (44,765,315)</u>	<u>\$ 2,275,000</u>	<u>\$ (42,490,315)</u>

Notes:

^{1/} Exhibit SC-2.

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Adjustment to Cash Working Capital
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount
1	Total O&M Expenses per City	12,454,808 ^{1/}
2	<u>OCA Adjustments to O&M Expenses:</u>	
3	Power Expense	(509,636)
4	Sick Leave Bonus and Vested Absences	(42,831)
5	Total Reductions for Cash Working Capital	(552,467)
6	Adjusted Operating Expenses	11,902,341 ^{1/}
7	Cash Working Capital Factor	0.125
8	OCA Working Capital Requirement	\$ 1,487,793
9	City 's Working Capital Requirement	2,138,563
10	Adjustment to Cash Working Capital	<u>\$ (650,770)</u>

Notes:

^{1/} Exhibit GRH-1, Schedule 1, Page 3 of 3.

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Adjustment to Materials & Supplies
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount
1	City's Materials & Supplies Claim	\$ 300,000 ^{1/}
2		
3	Adjustment to Materials & Supplies	\$ (300,000)

Notes:

^{1/} TUS-R-12_ Exhibit GRH-1_REV, Rate Tab.

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Adjustment to Reimbursement -Meter Labor
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount
	Restore City's Decrease in Reimbursement -	
1	Meter Labor	\$ -
2		
3	Adjustment to Reimbursement -Meter Labor	\$ -

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Adjustment to Power Expense
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount
1	City's Increase in Electric Power Expense	\$ 685,732 ^{1/}
2	Jurisdictional Allocation Factor	74.32%
3	Adjustment to O&M Expenses	<u>\$ (509,636)</u>

Notes:

^{1/} Exhibit GRH-1-R, Schedule 6, Page 5.

CITY OF LANCASTER – BUREAU OF WATER

Adjustment to reflect Change in Depreciation Rates
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount	^{1/}
1	City's Revised Annualized FPFTY Depreciation Expense	\$ 4,695,088	
2	City's Annualized FPFTY Depreciation Expense	6,064,240	
3	Adjustment to Depreciation Expense	\$ (1,369,152)	
4	Jurisdictional Allocation Factor	74.290%	
5	Adjustment to Outside City Depreciation Expense	\$ (1,017,144)	

Note:

^{1/} Garrett Depreciation Workpapers d42

CITY OF LANCASTER – BUREAU OF WATER
Outside City Revenue Requirement
Adjustment to Depreciation Expense
For the Fully Projected Future Test Year Ending March 31, 2027

Line No.	Description	Amount
1	Net Change in Plant in Service	\$ (42,490,315) ^{1/}
2	Jurisdictional Factor	74.29%
3	Composite Depreciation Rate	1.26% ^{2/}
4	Adjustment to Depreciation Expense	<u>\$ (398,705)</u>

Notes:

^{1/} Surrebuttal Exhibit LKM-4SR.

^{2/} Garrett Depreciation Workpapers d42

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

City of Lancaster – Bureau of Water

:
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:
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:
:

Docket No. R-2025-3057237

VERIFICATION

I, Lafayette K. Morgan, hereby state that the facts set forth in my Surrebuttal Testimony, OCA Statement No. 1-SR, are true and correct (or are true and correct to the best of my knowledge, information, and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: January 20, 2026

Signature:

/s/ Lafayette K. Morgan
Lafayette K. Morgan

Consultant Address:

Exeter Associates, Inc.
10480 Little Patuxent Parkway
Suite 300
Columbia, MD 21044-3575

1 **I. Introduction**

2 **Q. State your name and occupation.**

3 A. My name is David J. Garrett. I am a consultant specializing in public utility regulation. I
4 am the managing member of Resolve Utility Consulting PLLC.

5 **Q. Have you previously filed testimony in this proceeding?**

6 A. Yes. I filed direct testimony in OCA Statement 2 on December 17, 2025, and OCA
7 Statement 2R on January 8, 2026 on behalf of the Pennsylvania Office of Consumer
8 Advocate (“OCA”). A summary of my qualifications is included in my direct testimony.

9 **Q. What is the purpose of your surrebuttal testimony?**

10 A. My surrebuttal testimony responds to the rebuttal testimony of City of Lancaster (the
11 “City”) witness Harold Walker regarding rate of return issues. I also address the rebuttal
12 testimony of the City witness John Spanos regarding depreciation issues.

13 **Q. Did the City’s rebuttal testimony cause you to change any of your positions or**
14 **recommendations discussed in your direct testimony?**

15 A. No. Additionally, to the extent I do not specifically address a statement made in the City’s
16 rebuttal testimony filed in this case, it should not constitute my agreement with such
17 testimony.

18 **Q. Are you sponsoring any exhibits to your surrebuttal testimony?**

19 A. No.

II. Rate of Return

Q. Please summarize your surrebuttal testimony directed to the rebuttal testimony of Mr. Walker.

A. In my surrebuttal testimony to Mr. Walker, I will address the assertions made in his rebuttal testimony regarding my application of the Discounted Cash Flow (“DCF”) Model and the Capital Asset Pricing Model (“CAPM”).

A. DCF Analysis

Q. Please summarize Mr. Walker’s criticisms of your DCF Model.

A. Mr. Walker criticizes the analyst-growth variation of my DCF Model because I used dividend growth, rather than earnings growth, as my primary growth rate indicator in that model. In addition, Mr. Walker suggests that I should have disregarded one of the lower DCF results of my proxy group.

Q. Do you agree with Mr. Walker’s criticisms regarding your applications of the DCF Models?

A. No. Mr. Walker criticizes the fact that I considered dividend growth rather than earnings growth. It is important to reiterate that in the DCF Model, the “cash” that is being discounted is the dividends paid to investors. While it is true that dividends are paid from earnings, and earnings growth can be an indicator to consider when assessing the growth rate input in the DCF Model, the ultimate form of “cash flow” in the discounted cash flow model, is dividends. In that regard, it is perfectly appropriate and reasonable to consider dividend growth when conducting the DCF Model. Moreover, as discussed in my direct testimony, the short-term growth rate estimates published by analysts overstate the annual growth rate that can be achieved by the City (or any utility company in general) over the

1 long run. In other words, they are not sustainable. For example, Value Line projects an
2 annual dividend growth rate of 8.0% for American States Water Co. (AWR) over the next
3 few years. However, in the analyst growth variation of my DCF Model, this short term
4 annual growth rate is applied in perpetuity. Assuming that AWR can achieve an 8.0%
5 dividend (or earnings growth) forever will result in a DCF cost of equity indication that is
6 overstated. This is why I do not recommend the results of my analyst growth variation
7 DCF Model as the authorized ROE for the City.

8 In addition, Mr. Walker suggests that I should disregard the DCF result of 7.2% for
9 Middlesex Water because it is lower than the average DCF result for my proxy group,
10 which is 9.2%. Mr. Walker does not mention that the DCF results of two of the companies
11 in the proxy group are remarkably high. Namely, the DCF results of American States
12 Water Co. and American Water Works Co. were 11.0% and 11.2%, respectively. These
13 results are clearly higher than any reasonable cost of equity estimate for a water utility. As
14 discussed in my direct testimony, I presented the analyst growth variation of the DCF
15 Model in my testimony because it is often presented in regulatory proceedings and
16 considered by regulators. However, this application of the DCF Model has numerous
17 problems, including the use of unsustainably high growth rates. Thus, it is not surprising
18 that it produces unreasonably higher results of some companies. However, I did not
19 eliminate the high or low results from this application of the model. Mr. Walker also states
20 with regard to my DCF result for Middlesex that a “7.20% cost of equity for a water utility
21 is clearly below the zone of reasonableness since it is 3.70-percentage points below Mr.
22 Garrett’s proxy group’s average projected ROE of 10.9%.” The 10.9% Mr. Walker is
23 referring to is the earned ROEs of the proxy group. A cost of equity analysis does not

1 involve earned ROEs. In fact, they are two different concepts. An “expected” or
2 “required” return on equity is what an investor would expect to receive based on the risk
3 of the investment, though the actual earned return may not be the same. If an investor
4 makes an investment in a very risky startup company, she might expect a 100% return due
5 to the high level of risk, but if the project fails, then her earned return would be negative
6 100%. This does not mean her estimated, required return of positive 100% was inaccurate,
7 or that such a high level of required return would not be the same for the next risky startup
8 company. This example highlights that earned returns and expected returns are not just
9 different concepts, but often different amounts.

10 Thus, the Commission should authorize an ROE that is reflective of the City’s cost
11 of equity (the same thing as a required return from an investor’s perspective), not the earned
12 returns of any company or proxy group. While there are several problems with this
13 comparison, the most glaring problem is that it simply creates a feedback loop. Authorized
14 ROEs can directly impact earned ROEs. Thus, if an unreasonably high authorized ROE
15 results in a high earned ROE, and that earned ROE impacts the next authorized ROE, the
16 cycle of unreasonably high authorized ROEs continues (which is likely why Mr. Walker is
17 highlighting this relationship). As discussed in my direct testimony, the City’s *cost* of
18 equity is not likely higher than 8.8%, and the authorized ROE should be reflective of this
19 cost of equity estimate.

20 **Q. Mr. Walker also states that he is not commenting on the results of the sustainable**
21 **growth variation of your DCF Model because you did not ignored the results of the**
22 **model. What is your response to Mr. Walker on this issue?**

23 **A.** I would not characterize my treatment of the sustainable growth variation of my DCF
24 Model as “ignoring” the model entirely. Mr. Walker is correct in that I did not directly

factor the results of this model into my final ROE recommendation. Based on the results of the CAPM in this case, which indicates a cost of equity of 8.4% for Lancaster, I believe the results of the sustainable growth variation of the DCF Model (9.2%) overstate Lancaster's cost of equity. I also believe the results of the sustainable growth variation of the DCF Model (6.7%) likely understate Lancaster's cost of equity based the CAPM results and current market condition. However, in the interest of reasonableness, I directly and mathematically incorporated the result of the analyst growth DCF Model into my overall ROE recommendation of 8.8%, which is an average of my CAPM result (8.4%), and the analyst-growth DCF Model result (9.2%)

B. CAPM Analysis

Q. Please summarize Mr. Walker's criticisms of your CAPM analysis.

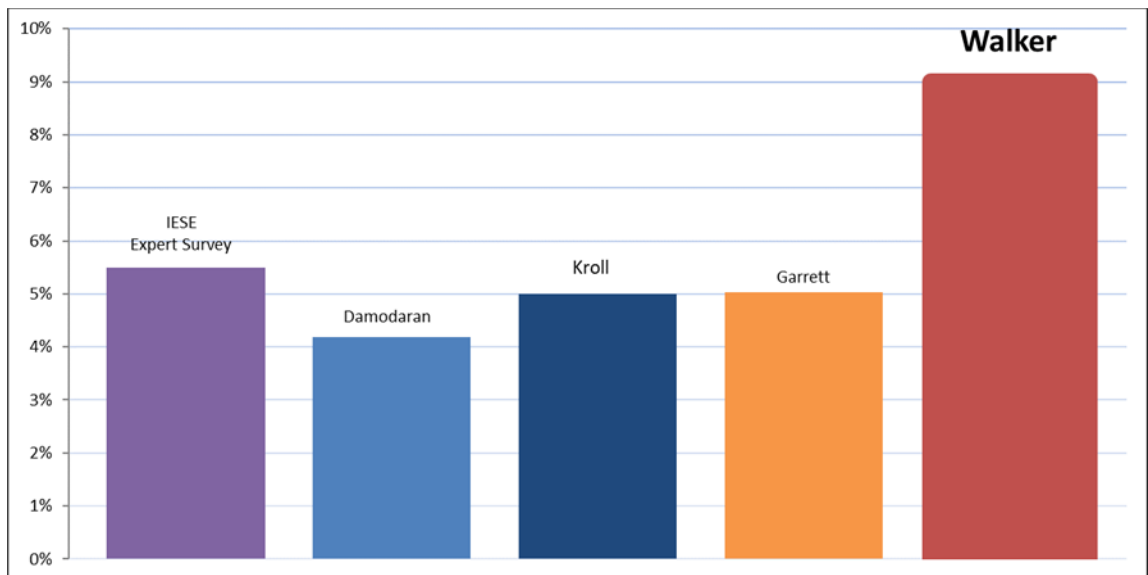
A. Mr. Walker primarily disagrees with my equity risk premium ("ERP") estimate, which is a key input to the CAPM.

Q. Please briefly reiterate the sources you considered for the ERP estimate.

A. The ERP is an important figure for financial and market analysts in all industries, not just utility regulation. Thus, many analysts, managers, investors, and academics are constantly studying and are concerned with obtaining a reliable and accurate estimate of this important number, which can be used in a variety of financial analyses, including the CAPM. All else held constant, a higher ERP will result in a higher indicated cost of equity and apply upward pressure on the authorized ROE. I considered three reliable and objective sources to include in my overall ERP estimate, including the result of the IESE Business School survey of experts, the estimate published by Kroll (formerly Duff & Phelps), and the

1 estimate published by one of the world's leading experts on the issue, Dr. Aswath
2 Damodaran. I also conducted and presented my own ERP estimate, the result of which is
3 similar to those from the other sources. The figure below contrasts the ERP estimates from
4 these sources with the ERP estimated by Mr. Walker.¹

5 **Figure 1:**
6 **Equity Risk Premium Comparison**



7 When compared with other independent sources for the ERP (as well as my estimate),
8 which do not have a wide variance, Mr. Walker's ERP estimate is clearly not within the
9 range of reasonableness. Mr. Walker's claim that investors do not rely on expert survey
10 ERPs as well as the other sources shown in this graph is unfounded. I would argue that
11 investors are more likely to rely on these types of sources for the ERP than Mr. Walker's
12 personal ERP estimate. Effectively, Mr. Walker is suggesting the Commission should

¹ See also Exhibit DJG-10.

1 adopt his ERP estimate over the opinions of thousands of unbiased experts, Kroll (a global
2 financial advisory firm), and one of the world's leading experts on the ERP.

3 **III. Depreciation**

4 **Q. Please summarize Mr. Spanos's criticisms regarding your use of the ALG procedure.**

5 A. Mr. Spanos maintains that the equal life group ("ELG") procedure should be used in this
6 case and not the average life group ("ALG") procedure I propose. He argues that the ELG
7 procedure is more equitable because it recovers cost "over the actual, shorter, service
8 lives."²

9 **Q. What is your response to Mr. Spanos's testimony on this issue.**

10 A. In reading Mr. Spanos's testimony, one could get the impression that Mr. Spanos himself
11 does not also use the ALG in most of the depreciation studies that he conducts. However,
12 based on my experience, Mr. Spanos utilizes the ALG method in the vast majority of
13 depreciation studies I have reviewed that have been sponsored by him and Gannett
14 Fleming. This fact alone should negate any of Mr. Spanos's statements or inferences in
15 his rebuttal testimony suggesting the ALG procedure might not be fair, accurate, or
16 reasonable. In other words, his claim in this case that the ELG procedure is "more
17 equitable"³ would necessarily mean that he is using a *less* equitable procedure in his
18 depreciation studies in other jurisdictions. In reality, the ALG procedure that Mr. Spanos
19 uses a majority of the time is very fair and reasonable (assuming reasonable estimates are

² Rebuttal testimony of John J. Spanos, p. 18, lines 15-17.

³ Id. at p. 18, line 16.

1 made for other depreciation parameters). Furthermore, I do not believe the financial well
2 being of future customers is the primary motivation for the Company's proposal to use the
3 ELG method. Mr. Spanos does not represent either present or future customers in this case,
4 and he exclusively represents utility companies as I understand. Also, in Mr. Spanos's
5 rebuttal testimony, I did not see him rebut the fact that compared with the ALG procedure,
6 the ELG procedure will result in higher depreciation rates for current customers. Likewise,
7 the ELG procedure will result in higher cash flows for the City relative to the ALG
8 procedure.

9 **Q. Did Mr. Spanos rebut the fact that current customers would pay more for the**
10 **Company's assets relative to future customers under the ELG procedure?**

11 A. No. This point is undisputable and is proven mathematically in both Mr. Spanos's
12 testimony and my testimony. Under the ELG procedure proposed by Mr. Spanos (in this
13 jurisdiction), current customers would effectively be subsidizing future customers by
14 paying a larger proportionate share of what is essentially the same asset base. This was
15 demonstrated in an example presented in my direct testimony. In that example, there were
16 two units being depreciated – one with an original cost of \$4,000 and a 4-year life and the
17 second with an original cost of \$6,000 and an 8-year life. Thus, the average life of this
18 group is 6.4 years. Under the ALG procedure, the depreciation rate is 15.625% per year
19 ($1/6.4 = 15.625\%$). Under the ELG procedure, however, there are higher rates and accrual
20 amounts during the earlier years. In reality, the City has numerous units of property that
21 are depreciated on a group basis in each account. Under the ELG procedure, customers
22 rates (not just depreciation rates), would need to be adjusted every year in order for the

1 ELG procedure to produce accurate depreciation rates. Since that is not practical, the vast
2 majority of jurisdictions have adopted the ALG procedure.

3 **Q. Mr. Spanos claims that the ALG method will result in higher rates over time and**
4 **results in intergenerational inequity. What is your response to these arguments?**

5 A. I do not agree with Mr. Spanos's narrative on these issues. Again, Mr. Spanos is attempting
6 to position himself as a representative not only for customers, but very specifically for
7 future customers. In reality, the Company's proposal to use the ELG method results in
8 higher cash flow for the Company in the present, which is likely the primary motivation
9 for the Company's proposal to use the ELG method. From my point of view, it is the ELG
10 method, not the ALG method, that results in intergenerational inequity for customers. To
11 say otherwise would mean that the vast majority of regulatory jurisdictions (using the ALG
12 method) are authorizing inequitable depreciation rates, and have been doing so for decades,
13 which cannot be accurate.

14 **Q. Mr. Spanos claims that you calculated your proposed ALG depreciation rates**
15 **incorrectly. What is your response to these assertions?**

16 A. Mr. Spanos argues that I did not calculate the ALG depreciation rates correctly because I
17 did not use the life span technique for some accounts and I used the same book reserve
18 used by Mr. Spanos. In the depreciation study, Mr. Spanos applies a terminal life span to
19 some accounts, which shortens the depreciation rates compared with rate that would result
20 if the account is treated as mass property. Typically, terminal life dates are not applied to
21 mass property accounts. In that regard, my approach is reasonable. Regarding the issue of
22 the book reserve, I used the same book reserve amounts used by Mr. Spanos. The resulting
23 depreciation rates are primarily driven by the service life and net salvage estimates for each

1 account, and in this case, the depreciation methodology used to calculate the depreciation
2 rates. Accordingly, my proposed depreciation rates are fair and reasonable.

3 **Q. Does this conclude your surrebuttal testimony?**

4 A. Yes.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

City of Lancaster – Bureau of Water

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Docket No. R-2025-3057237

VERIFICATION

I, David J. Garrett, hereby state that the facts set forth in my Surrebuttal Testimony, OCA Statement No. 2-SR, are true and correct (or are true and correct to the best of my knowledge, information, and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: January 20, 2026

Signature:

/s/ David J. Garrett

David J. Garrett

Consultant Address: 101 Park Avenue, Suite 1125
Oklahoma City, OK 73120

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC	)	
UTILITY COMMISSION	)	
	)	
v.	)	DOCKET NO. R-2025-3057237
	)	
CITY OF LANCASTER –	)	
BUREAU OF WATER	)	
	)	

SURREBUTTAL TESTIMONY OF
JEROME D. MIERZWA

ON BEHALF OF THE
PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

JANUARY 20, 2026

1 **I. INTRODUCTION**

2 Q. WOULD YOU PLEASE STATE YOUR NAME AND BUSINESS ADDRESS?

3 A. My name is Jerome D. Mierzwa. I am a Principal at and the President of Exeter
4 Associates, Inc (“Exeter”). My business address is 10480 Little Patuxent Parkway, Suite
5 300, Columbia, Maryland 21044. Exeter specializes in providing public utility-related
6 consulting services.

7 Q. HAVE YOU PREVIOUSLY TESTIFIED IN TESTIMONY IN THIS
8 PROCEEDING?

9 A. Yes. My direct testimony was submitted as OCA Statement 3 on December 17, 2025, and
10 my rebuttal testimony was submitted as OCA Statement 3-R on January 8, 2026.

11 Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

12 A. The purpose of my surrebuttal testimony is to respond to certain aspects of the rebuttal
13 testimony of Gregory R. Herbert presented on behalf of the City of Lancaster (“City”).
14 More specifically, Mr. Herbert is the witness sponsoring the City’s class cost of service
15 (“CCOS”) study and rate design proposals in this proceeding. In my direct testimony I
16 addressed the City’s CCOS study and rate design proposals. In his rebuttal testimony, Mr.
17 Herbert addresses the CCOS study and rate design recommendations I presented in my
18 direct testimony. In this surrebuttal testimony, I respond to Mr. Herbert’s rebuttal
19 testimony with respect to the City’s CCOS study and rate resign proposals.
20

21 **II. WITNESS: GREGORY R. HERBERT**
22

23 Q. IN YOUR DIRECT TESTIMONY YOU NOTED THAT, IN RESPONSE TO
24 BUREAU OF TECHNICAL UTILITY SERVICES DISCOVERY REQUEST
25 NO. 15 (“TUS REQUEST NO. 15”), THE CITY PRESENTED A REVISED
26 CCOS STUDY TO CORRECT AN ERROR WITH RESPECT TO THE

1 NUMBER OF 3/4 X 1-INCH AND 1-INCH METERS REFLECTED IN THE
2 CCOS STUDY INITIALLY FILED BY THE CITY IN THIS PROCEEDING.
3 DOES MR. HERBERT PRESENT ANOTHER REVISED CCOS STUDY IN
4 HIS REBUTTAL TESTIMONY?

5 A. Yes. Mr. Herbert presents another revised CCOS study in his rebuttal testimony as
6 Exhibit GRH-2R. This revised CCOS study reflects the corrections identified in the
7 response to TUS Request No. 15, and several additional minor corrections and
8 adjustments which are described on pages 3 and 4 of his rebuttal testimony. I do not
9 contest these additional corrections and adjustments, and they do not impact the
10 recommendations I presented in my direct testimony concerning the City's CCOS study.
11 The revised CCOS study presented in Exhibit GRH-2R also does not affect my rate
12 design recommendations in this proceeding.

13 Q. IN YOUR DIRECT TESTIMONY, DID YOU FIND THE REVISED CCOS
14 STUDY PRESENTED BY THE CITY IN TUS REQUEST NO. 15 AND THE
15 CITY'S RATE DESIGN PROPOSALS IN THIS PROCEEDING TO BE
16 REASONABLE?

17 A. Although I generally found the City's CCOS study to be reasonable and appropriate for
18 determining cost responsibility for Outside City customers, there were several aspects of
19 the CCOS study with which I disagreed. First, water treatment salary and laboratory
20 operation and maintenance ("O&M") expenses should be functionalized and allocated to
21 each customer class based on average day demands. In the City's CCOS study, these
22 expenses were functionalized and allocated based on average and maximum day
23 demands. Although I disagreed with the functionalization and allocation of these O&M
24 salary expenses, I did not propose to modify the City's CCOS study to address my
25 concern because the impact on the results of the City's CCOS study was not material.

1 In addition, in the settlement agreement adopted and approved in the City's last
2 rate proceeding (Docket No. R-2021-3026682), the City agreed to propose to allocate in
3 the CCOS study it filed in its next rate proceeding, which is this proceeding, a portion of
4 the costs associated with providing Public Fire protection service to the municipalities in
5 which the City provides Public Fire service. In this proceeding, the City did not comply
6 with the terms of the settlement agreement approved by the Commission in its last rate
7 proceeding and allocated all the costs associated with providing Public Fire protection
8 service to the Residential, Commercial, Industrial, and Large Industrial ("retail")
9 customer classes. In my direct testimony, I recommended that 25% of the costs
10 associated with providing Public Fire protection service be allocated to Public Fire
11 protection service in the City's CCOS study, and that these allocated costs be recovered
12 from the municipalities being provided Public Fire protection service by the City.

13 With respect to rate design, to provide for gradualism, I recommended that the
14 City's proposed 46.2% increase in the monthly fixed customer charges of the retail
15 customer classes and the Other Water Utilities customer class be rejected, and that the
16 current customer charges be increased by a percentage no greater than the overall
17 increase authorized by the Commission for the retail customer classes and the Other
18 Water Utility customer class in this proceeding.

19 Q. DID MR. HERBERT AGREE WITH YOUR RECOMMENDATION
20 CONCERNING THE ALLOCATION OF WATER TREATMENT SALARY
21 AND LABORATORY O&M EXPENSES AND REFLECT YOUR
22 RECOMMENDED ALLOCATION IN HIS REVISED CCOS STUDY
23 PRESENTED IN EXHIBIT GRH-2R?

24 A. No. Mr. Herbert claims that the City's water treatment plant is designed to supply water
25 to meet maximum day demands and, therefore, the O&M expenses associated with those

1 facilities, including expenses for labor and laboratory testing, should be allocated
2 partially based on maximum day demands.

3 Q. WHAT IS YOUR RESPONSE TO MR. HERBERT'S CLAIM CONCERNING
4 THE ALLOCATION OF WATER TREATMENT SALARY AND
5 LABORATORY TESTING O&M EXPENSES?

6 A. Mr. Herbert's CCOS study utilizes the American Water Works Association's
7 ("AWWA") base-extra capacity cost of service method. This method is explained in
8 detail in my direct testimony. Under the base-extra capacity method, base functional
9 category costs are allocated to customer class on the basis of average daily demands. The
10 AWWA M1 Manual defines base costs as follows:

11 Base costs are expenses that tend to vary with the total quantity
12 of water used plus those O&M expenses and capital costs
13 associated with service to customers under average load
14 conditions, without elements of costs incurred to meet water-
15 use variations and resulting peaks in demand (7th Edition, page
16 62).

17 Mr. Herbert does not dispute my claim that water treatment salary and laboratory testing
18 O&M expenses do not vary materially with changes in the total quantity of water used.
19 That is, there are no additional water treatment salary and laboratory testing O&M
20 expenses related costs incurred to meet peaks in demand. Therefore, it is appropriate to
21 allocate these expenses based entirely on average day demands, as I have recommended.
22 The capital costs associated with the City's water treatment facilities would continue to
23 be assigned based on the maximum day demand allocation factor, consistent with the
24 approach utilized by Mr. Herbert.

25 Q. DOES THE COMMISSION SPECIFICALLY NEED TO ADDRESS THE
26 ALLOCATION OF WATER TREATMENT SALARY AND LABORATORY
27 TESTING O&M EXPENSES IN THIS PROCEEDING?

1 A. No. As I noted in my direct testimony, although I disagreed with the City's
2 functionalization and allocation of water treatment salary and laboratory testing O&M
3 expenses, I did not propose to modify the City's CCOS study to address my concern.
4 This was because modifying the City's CCOS study to address my concern would not
5 have had a material impact on the results of the City's CCOS study. However, I reserved
6 the right to subsequently modify the City's CCOS study to functionalize and allocate
7 water treatment salary and laboratory testing O&M expenses based on average day
8 demands in the event that a party to this proceeding proposed modifications to the City's
9 CCOS study that would result in an allocation of water treatment salary and laboratory
10 testing O&M expenses based on average day demands having a material impact on the
11 results of the City's CCOS study. No party has proposed modifications to the City's
12 CCOS study that would result in my recommended modification to the allocation of
13 water treatment salary and laboratory testing O&M expenses having a material impact on
14 the results of the CCOS study. As such, I am not proposing to modify the City's CCOS
15 study to reflect this recommendation and, therefore, it is not necessary for the
16 Commission to specifically address this recommendation.

17 Q. WHAT DID YOU RECOMMEND IN YOUR DIRECT TESTIMONY
18 CONCERNING THE CITY'S PROPOSED INCREASES IN CUSTOMER
19 CHARGES?

20 A. In my direct testimony, I noted that the City had proposed to increase the customer
21 charges of the retail and Other Water Utilities customer classes by 46.2%. To provide for
22 gradualism, I recommended that the customer charges be increased by the system average
23 increase authorized by the Commission for Outside City customers in this proceeding.

24 Q. WHAT ARE SOME OF THE PRINCIPLES OF A SOUND REVENUE
25 ALLOCATION AND RATE DESIGN?

1 A. A sound revenue allocation and rate design should:

- 2 • Utilize class cost of service study results as a guide;
- 3 • Provide stability and predictability of the rates themselves, with a minimum of
- 4 unexpected changes seriously adverse to ratepayers or the utility (gradualism);
- 5 • Yield the total revenue requirement;
- 6 • Provide for simplicity, certainty, convenience of payment, understandability,
- 7 public acceptability, and feasibility of application; and
- 8 • Reflect fairness in the apportionment of the total cost of service among the
- 9 various customer classes.¹

10 Q. WHAT WAS MR. HERBERT'S RESPONSE TO YOUR CUSTOMER
11 CHARGE RECOMMENDATION?

12 A. Although Mr. Herbert claims to agree with the concept of gradualism, he claims the
13 overall customer charge increase for the average Residential customer with a 5/8-inch
14 meter is small at only \$3.67 per month. Due to this allegedly small increase, Mr. Herbert
15 recommends that the Commission reject my customer charge recommendation.

16 Q. WHAT IS YOUR RESPONSE TO MR. HERBERT'S RECOMMENDATION
17 THAT THE COMMISSION REJECT YOUR CUSTOMER CHARGE
18 RECOMMENDATION?

19 The City is proposing to increase the customer charge for the average Residential
20 customer with a 5/8-inch meter from \$7.95 to \$11.62. This reflects an increase of 46.2%.
21 The Customer Notice provided by the City in this proceeding indicated that the average
22 Residential customer would experience a rate increase of 29.8%, which is nearly identical
23 to the City's overall requested increase of 30.9%. An increase in customer charges which
24 is more than 1.5 times the overall system increase authorized in this proceeding would be

¹ *Principles of Public Utility Rates*, Second Edition, James C. Bonbright, Albert L. Danielsen, David R. Kamerschen; Public Utility Reports, Inc. 1988, pages 383-384.

1 inconsistent with a sound rate design because the increase would not provide for stability
2 and predictability in rates. Such an increase would also not provide for understandability,
3 also a principle of a sound rate design, since the increase would be significantly in excess
4 of the system average increase and may lead to customer confusion. Therefore, I maintain
5 my position that the increase in the customer charges should be no more than the system
6 average increase authorized by the Commission in this proceeding.

7 Q. AS DISCUSSED IN GREATER DETAIL IN YOUR DIRECT TESTIMONY,
8 YOU RECOMMENDED THAT THE CITY SHOULD CHARGE THE LOCAL
9 MUNICIPALITIES IT PROVIDES PUBLIC FIRE PROTECTION SERVICE
10 FOR 25% OF THE COSTS ASSOCIATED WITH THAT SERVICE. DOES
11 THE CITY AGREE WITH THIS RECOMMENDATION?

12 A. No. Mr. Herbert claims that the City has a long history of not charging the municipalities
13 it provides Public Fire protection service for costs related to the City's water system. He
14 claims that the City believes that collecting costs related to Public Fire from all customers
15 as part of its customer charge is fair and equitable, particularly since the City's proposed
16 customer charge is \$11.62 per month.

17 Q. WHAT IS YOUR RESPONSE TO MR. HERBERT'S POSITION
18 CONCERNING THE RECOVERY OF PUBLIC FIRE PROTECTION COSTS?

19 A. Recovering all Public Fire protection costs through customer charges may not be fair and
20 equitable. For example, typically, if a municipality is assessed Public Fire protection
21 charges, those costs may be collected through property taxes. If a property is rented,
22 property taxes are the responsibility of the property owner, but water bills are frequently
23 the responsibility of the tenant. The property owner benefits from Public Fire protection
24 service as does the renter. Therefore, it would be equitable for the property owner to bear
25 some of the responsibility for Public Fire protection charges. Under the City's current

1 method, all of the responsibility for Public Fire protection costs is on the renter. The
2 City's current method also implicitly assumes that there is a relationship between the size
3 of a customer's water meter and the value of the property protected by Public Fire
4 protection service. This may not always be accurate. For example, a car wash would have
5 a low risk of fire loss but have high-volume water requirements, and a lumber yard or
6 large warehouse would have a high risk of property loss from fire but very low water
7 requirements. I would also note that municipal-owned buildings, parks and play-grounds
8 also benefit from Public Fire protection service. Therefore, the municipalities themselves
9 should pay some direct share of Public Fire Protection service costs.

10 Q. IN YOUR DIRECT TESTIMONY, YOU CLAIMED THAT THE CITY DID
11 NOT COMPLY WITH THE SETTLEMENT IN THE CITY'S MOST RECENT
12 PRIOR RATE PROCEEDING. WHAT DID THE CITY AGREE TO IN THE
13 SETTLEMENT IN THAT PROCEEDING?

14 A. Section III of the "Joint Petition for Complete Settlement of Rate Investigation" filed and
15 approved in the City's last rate proceeding included item 17(h) on page 6 which states:

16 The City will propose to allocate some of the Fire
17 Protection costs for the Commission Jurisdictional
18 area to the municipalities served therein.

19 Q. DO ANY OF THE CCOS STUDIES FILED BY CITY IN THIS PROCEEDING
20 ALLOCATE THE COSTS ASSOCIATED WITH PROVIDING PUBLIC FIRE
21 SERVICE TO THE MUNICIPALITIES TO WHICH THE CITY PROVIDES
22 PUBLIC FIRE SERVICE?

23 A. No. In each of the CCOS studies filed by the City in this proceeding, the costs associated
24 with providing Public Fire protections service have been assigned to the Residential,
25 Commercial, Industrial, and Large Industrial retail customer classes. Public Fire service

1 is not even included as a customer class in any of the CCOS studies filed by the City in
2 this proceeding.

3 Q. WHAT IS MR. HERBERT'S RESPONSE TO YOUR CLAIM CONCERNING
4 THE CITY'S COMPLIANCE WITH THE SETTLEMENT AGREEMENT IN
5 THE PRIOR RATE PROCEEDING?

6 A. Mr. Herbert claims that the City complied with the settlement terms by developing a
7 proposed hydrant rate for Public Fire service based on the costs of Public Fire service.
8 Mr. Herbert claims the terms of the prior settlement did not require that the City agree to
9 charge Public Fire customers these proposed rates. However, if the Commission were to
10 direct the City to charge Public Fire rates to municipalities in this proceeding, Mr.
11 Herbert recommends that this be implemented in over two rate cases. He recommends
12 that in this case 10% of the costs of providing Public Fire service be recovered through
13 Public Fire rates, and in the next rate case, the City propose to recover 25% of Public Fire
14 costs through Public Fire rates.

15 Q. WHAT IS YOUR RESPONSE TO MR. HERBERT'S CLAIM THAT THE CITY
16 DID COMPLY WITH THE TERMS OF THE SETTLEMENT APPROVED IN
17 THE CITY'S LAST RATE CASE?

18 A. In its initial application in this proceeding, the City did not propose to allocate any Public
19 Fire protection costs to the municipalities the City provides Public Fire protection
20 service. As previously indicated, the CCOS studies filed by the City in this proceeding do
21 not even include a Public Fire customer class.

22 Q. WHAT IS YOUR RESPONSE TO MR. HERBERT'S PROPOSAL TO PHASE
23 IN THE IMPLEMENTATION OF PUBLIC FIRE RATES OVER TWO RATE
24 CASES?

1 A. As indicated in Table 1 of my direct testimony, if the City were to collect 25% of the
2 costs associated with providing Public Fire protection service to the municipalities it
3 provides Public Fire protection service as I recommend, the costs charged to each
4 municipality would only represent a tiny fraction of each municipality's operating
5 budget. Therefore, there is no need to phase in the collection of Public Fire protection
6 costs from the municipalities provided Public Fire protection service for gradualism
7 purposes.

8 Q. IN YOUR DIRECT TESTIMONY YOU PRESENTED TABLE 2, WHICH
9 PROVIDED A COMPARISON OF THE RESULTS OF THE REVISED CCOS
10 STUDY FILED BY THE CITY IN RESPONSE TO TUS REQUEST NO. 15,
11 AND THE OCA'S ADJUSTED CCOS STUDY, WHICH REFLECTED AN
12 ALLOCATION OF 25% OF THE PUBLIC FIRE COST OF SERVICE TO THE
13 MUNICIPALITIES BEING PROVIDED PUBLIC FIRE SERVICE BY THE
14 CITY. HAVE YOU REVISED TABLE 2 TO REFLECT A SIMILAR
15 COMPARISON WITH THE CCOS STUDY PRESENTED BY MR. HERBERT
16 IN HIS REBUTTAL TESTIMONY AS EXHIBIT GRH-2R?

17 A. Yes. That comparison is presented below in Table 2S.

Table 2S.
Comparison of City and OCA Class Cost of Service Study Results

	Company Cost of Service			OCA Adjusted Cost of Service		
	Present Rates	Cost of Service	Increase	Adjustment	Cost of Service	Increase
Residential	\$10,728,219	\$14,273,326	33.0%	\$(411,166)	\$13,862,160	29.2%
Commercial	8,358,266	10,796,810	29.2%	(165,494)	10,631,316	27.2%
Industrial	1,531,162	1,985,882	29.7%	(12,703)	1,973,179	28.9%
Large Industrial	1,000,202	1,281,650	28.1%	(1,477)	1,280,173	28.0%
Other Water Utilities	543,555	686,764	26.3%	0	686,764	26.3%
Private Fire	446,683	525,273	17.6%	0	525,273	17.6%
Public Fire	0	0	0.0%	590,840	590,840	N/A
Total Outside City	\$22,608,086	\$29,549,705	30.7%	\$0	\$29,549,705	30.7%

1 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

2 A. Yes, it does.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

City of Lancaster – Bureau of Water

:
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Docket No. R-2025-3057237

VERIFICATION

I, Jerome D. Mierzwa, hereby state that the facts set forth in my Surrebuttal Testimony, OCA Statement No. 3-SR, are true and correct (or are true and correct to the best of my knowledge, information, and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: January 20, 2026

Signature: /s/ Jerome D. Mierzwa
Jerome D. Mierzwa

Consultant Address: Exeter Associates, Inc.
10480 Little Patuxent Parkway
Suite 300
Columbia, MD 21044-3575

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2025-3057237
v.	:	
	:	
City of Lancaster Water Department	:	

SURREBUTTAL TESTIMONY

OF

LeeAnn Wise

On behalf of the

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

Date Served: 1/20/2026

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Introduction

Q. Please state your name and business address.

A. My name is LeeAnn Wise, my business address is 555 Walnut Street, 5th Floor, Forum Place, Harrisburg, PA 17101.

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

A. I am employed by the Office of Consumer Advocate (OCA) as a Senior Regulatory Analyst.

Q. Did you present direct and rebuttal testimony in this case?

A. Yes.

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of my surrebuttal testimony is to respond to aspects of Rebuttal testimony provided by City witness Tina Campbell regarding Low-Income programs, City witness Christine M. Volkay-Hilditch regarding water quality reporting, and I&E witness Christine Wilson regarding low-income programs.

Response to City Witness Campbell

Q. Did the City agree to implement your recommendations on tracking low-income customers?

1 A. No, not entirely. However, the City has agreed to research whether the ALICE data may
2 be useful for future tracking of low-income households in its service territory.¹ The City
3 has also agreed to create an internal working group in 2026 to review the water utility
4 functions including overall financial projections and individual household costs. A
5 discount billing option for low-income customers is part of this discussion, which would
6 help with arrearages. The City will also include in its planned review whether it has the
7 capacity to adopt an AMP, such as the pilot AMP program recommended by me. At this
8 time, the City does not have sufficient information or resources to agree to implement the
9 two-year pilot AMP program proposed.²

10 I encourage the City to track the number of ALICE households they serve, average
11 residential bill levels relative to ALICE income standards, participation in low-income
12 programs, arrears and payment plan arrangements for their ALICE the population. I
13 further recommend that these metrics be updated on an annual basis and summarized for
14 the purpose of evaluating affordability impacts on future rate cases in the City's next base
15 rate case.

16
17 **Q. Has the City provided information on the number of low-income households?**

18 A. Yes, to a degree. The City stated that the concentration of low-income households is
19 much higher within the City of Lancaster limits (customers not under jurisdiction), vs. the
20 local municipalities serve customers (under jurisdiction). However, it should not be
21 discounted that there are also low-income customers living outside the City of Lancaster
22 that have not been confirmed as low-income customers by the City. It is also important to

¹ Rebuttal Testimony Tina Campbell, pg. 3.

² Rebuttal Testimony Tina Campbell, pg. 5.

1 note that customers living outside the City will see a bigger impact from the proposed
2 rate increase compared to non-jurisdictional customers.

3
4 **Q. Did the City agree with your concerns regarding the Community Action Program**
5 **enrollment?**

6 No. During discovery, the City provided response stating that there were only 4
7 customers enrolled in 2024 and 5 in 2025.³ The response was not clear that this was only
8 referring to customers outside the City of Lancaster. In rebuttal, City witness Campbell
9 stated that 95 customers inside the City were enrolled in the plan.⁴

10 Considering that the percentage of low-income customers has a higher concentration
11 within the City, I remain concerned with the small number of outside customer
12 participation given the City's lack of confirming low-income customers. Customers
13 living outside the City may not be aware the Community Action Program is available to
14 outside-city customers. I encourage the City to increase communication and outreach
15 specifically to their customers living outside the City explaining the program and how
16 customers can benefit from participation.

17
18 **Q. Has the City agreed to implement your recommendations related to the Community**
19 **Action Program?**

20 A. Yes. The City has agreed to provide information regarding the Community Action
21 Program on their company website. City witness Campbell also testified that the City will
22 be adding a tab to its water website that includes a list of projects and the purpose of

³ Attachment OCA-4-3.

⁴ Rebuttal Testimony Campbell pg. 4.

1 those projects. I support the City's proposal. However, I would further recommend the
2 information be posted on the front page of the City's website as well as specifically
3 stating the program is open to "all" customers so that outside-City customers are
4 informed that the program is not exclusive to customers living in the City of Lancaster.

5
6 **Q. Has the City agreed to implement your recommendations on Arrearage**
7 **Management Plan (AMP) and Bill Discount Program?**

8 A. No, not entirely. Although the City stated they do not currently have sufficient
9 information or resources to agree to implement a two-year pilot program, the City did
10 agree to create an internal working group in 2026 to review overall financial projections
11 and individual household costs, as well as a discussion on creating a bill discount
12 program.

13 I recommend that the City be required to review their ALICE population when designing
14 a bill discount program and arrears forgiveness program. During the City's next base
15 rate case filing, the City should be required to submit an analysis outlining the total
16 annual program costs, funding methods, estimated eligibility and participation levels,
17 reduction in termination rates, detail the design and financial impacts of arrearage
18 forgiveness. The analysis should also establish program performance metrics such as
19 changes in arrears levels, delinquency rates, shutoffs, and reconnections due to
20 participation in the plan. This analysis should be provided by the City in their next base
21 rate case.

1 **Q. Has the City addressed the transparency issues raised during the public input**
2 **hearings?**

3 A. Yes. The City has agreed to include on their website a list of projects and the purpose of
4 those projects to ensure that customers understand the projects the City is doing and why
5 they are necessary and beneficial.

6
7 **Response to City witness Volkay-Hilditech**

8
9 **Q. Does the City agree with your recommendation to provide a water quality**
10 **improvement plan?**

11 A. No. The City disagrees with my recommendation to provide a water quality improvement
12 plan since the City is currently working with the Pennsylvania Department of
13 Environmental Protection (DEP) to address the PFOA concerns. Given the fact that the
14 City is in compliance with DEP in the last quarter of 2025 and is working with DEP to
15 negotiate a consent order and agreement to ensure that the City addresses PFOA, I agree
16 with City witness Volkay-Hilditech and recommend that the City continue working with
17 DEP regarding compliance regulations as this was a primary concern voiced at the public
18 input hearings.

19
20 **Response to I&E witness Christine Wilson**

1 **Q. What are your concerns with the City’s low-income programs?**

2 As I stated in my direct testimony, participation in the City’s Community Action Program
3 was limited, with only four jurisdictional customers enrolled in 2024 and five customers
4 enrolled in 2025 through September. The program is designed to provide hardship grants
5 of up to \$500 to eligible customers. The low number of participants suggests the need for
6 additional outreach programs to improve participation. The City does not offer any
7 additional low-income programs. Therefore, I recommended that the City should evaluate
8 and consider offering other low-income programs such as an Arrears Management
9 Program (AMP) and a Bill Discount Program.

10
11 **Q. Does I&E witness Wilson agree with your recommendations regarding the**
12 **Community Action Program?**

13 A. Yes, I&E witness Wilson acknowledges in her Rebuttal testimony that there is low
14 participation in the City’s current Community Action Program and agrees that the City
15 should officially track low-income customers to partner with additional community-based
16 organizations to meet those in need. She also agrees with the need to review customer
17 accounts for late payments and payment plans default to proactively reach out to
18 customers to determine Community Action Program eligibility. I&E witness Wilson also
19 agrees that the City should increase its communications on their current Community
20 Action Program plan to include bill inserts, training for customer service employees,
21 along with providing information on the front page of the City’s website.

Q. Does I&E witness Wilson agree with your recommendation regarding a two-year pilot Arrears Management Plan (AMP) and Bill Discount Program?

A. No, I&E witness Wilson does not agree with mt recommendation regarding an AMP or Bill Discount Program.

Q. Why does I&E witness Wilson disagree with your recommendation on the AMP and Bill Discount Program?

A. I&E witness Wilson disagrees with my recommendation for three reasons. First, the City did not express the need for any additional programs as part of the rate case filing. Second, she has concerns about the suggestion that a municipal utility should implement such a program when many of the customers are non-jurisdictional. And finally, I&E witness Wilson notes that I did not offer a budget for the recommended program, no indication of how it should be funded, and no explanation for how a two-year pilot program would be analyzed given that the City does not file rate cases every two years.

Q. Did the City request any additional low-income programs as part of the base rate case filing?

A. The City did not request any additional low-income programs in their base rate filing. However, through discovery, I became aware of the low participation rates in the City's Community Action Program, as well as the high arrears balances. Both of which led me to

1 make recommendations to consider an Arrears Management Program (AMP), a Bill
2 Discount Program, and improve participation in the City's Community Action Program.

3 The absence of the City's request to establish an AMP and Bill Discount Program does not
4 prevent the Commission from requiring one, nor does it reflect the lack of a need for such
5 programs. My recommendation for an AMP and Bill Discount Program is supported by
6 evidence of low Community Action Program participation, high customer arrearages,
7 ongoing affordability concerns facing low-income households, and the successful use of
8 AMPs and Bill Discount Programs demonstrated by other Pennsylvania utilities to reduce
9 arrears and promote consistency in payment behavior.

10 I also recognize that the City also has a portion of their customers who do not fall under
11 the Commission's jurisdiction. The City currently has 29,663 residential jurisdictional
12 customers, representing 66% of their total customer base. To clarify, the OCA's
13 recommendation for establishing an AMP and Bill Discount Program was based solely on
14 jurisdictional customers. However, given the City's arrears balance and higher percentage
15 of low-income customers living inside the City, it is likely non-jurisdictional customers
16 could also benefit from an AMP and Bill Discount Program. The existence of non-
17 jurisdictional customers should not exclude the City from offering an AMP and Bill
18 Discount Program to all customers.

19 These programs are most often funded through Commission approved riders or
20 surcharges, tracked and reconciled to actual program costs, ensuring revenue-neutral
21 recovery. These programs are intended to reduce arrearage amounts and improve
22 payment consistency. The forgiven amounts are treated as regulatory expense and are

generally offset by a reduction in bad debt. AMP and Bill Discount costs are incurred only as customers successfully participate in the program.

Q. Why is I&E witness Wilson opposed to a two-year AMP and Bill Discount Program pilot?

A. According to I&E witness Getachew Bedasa, the historic base rate filing interval for the Water Fund is 60 months.⁵ Therefore, I&E witness Wilson stated a two-year pilot would not make sense. Assuming the City continues to consistently file a base rate case every five years, I would agree with I&E witness Wilson. As such, I recommend that the pilot AMP and Bill Discount Program align with the City's 60-month historical filing interval.

Q. Do you agree with I&E's assertion that Community Utilities of Pennsylvania (CUPA) Bill Discount Program is not comparable to supporting the recommendation for an AMP or Bill Discount Program?

A. No. I acknowledge that CUPA is not a municipal utility, while the City is. However, the reference was not intended to imply regulatory similarity but was instead intended to show that bill discount programs are generally recognized to aid low-income customers.

Q. Do you have any final comments concerning I&E's rebuttal testimony?

A. Yes. I disagree with I&E witness Wilson's statement that it would be impractical to administer low-income programs only to jurisdictional customers. In fact, given the City's arrears balance and percentage of low-income population living within the

⁵ I&E Statement No. 1, p. 27.

1 municipality, the City should consider offering low-income programs to all customers
2 regardless of the Commission's jurisdiction. Extending these programs universally would
3 advance equal treatment among customers. Having such plans available to all customers
4 promotes fairness. I also agree that if the Commission were to approve a bill discount
5 program, it would be funded by the customers who would benefit from the program.

6 I also disagree with the assertion that potential low-income programs for the City should
7 not be compared to Philadelphia Gas Works or Pittsburgh Water, because the PUC
8 regulates the entire utility in those instances with no separation of any jurisdictional and
9 non-jurisdictional customers. The comparison to these two utilities who are fully under
10 PUC jurisdiction was intended to show that low-income programs can be successfully
11 implemented. The difference in jurisdictional control should not eliminate the need for
12 assistance to low-income customers.

13 A low-income pilot program aligning with rate base filings for jurisdictional customers is
14 appropriate and will assist in meeting the needs of low-income customers. Such programs
15 have been implemented by other Pennsylvania utilities and have been proven to help
16 mitigate affordability challenges, encourage timely payments, and reduce disconnections.

17 18 **Conclusion**

19
20 **Q. Please summarize your recommendations.**

21 I recommend the City begin tracking their low-income customers. I encourage the City to
22 utilize the ALICE database to better understand the financial make-up of their customer
23 base. This information will allow the City to partner with additional community-based

1 organizations to deliver targeted enrollment in assistance programs. I encourage the City
2 to track essential metrics related to affordability for ALICE households, average
3 residential bill levels relative to ALICE income standards, participation in low-income
4 programs, arrears and payment plan arrangements for their ALICE the population. I
5 further recommend that these metrics be updated on an annual basis and summarized for
6 the purpose of evaluating affordability impacts on future rate cases in the City's next base
7 rate case. The analysis should also establish program performance metrics such as
8 changes in arrears levels, delinquency rates, shutoffs, and reconnections due to
9 participation in the plan.

10 I also recommend the City actively review customer accounts to identify late payments of
11 payment plans in default and proactively reach out to those customers to determine if
12 they are eligible to participate in the Community Action Program. I also recommend the
13 City update their website with information regarding their Community Action Program,
14 explaining how the program works and that it is available to all customers. The City
15 should also do targeted bill inserts for low-income customers outlining the Community
16 Action Program along with providing additional training for their customer service
17 representatives.

18 Finally, I recommend the City continue to work with Pennsylvania Department of
19 Environmental Protection to address the PFOA concerns.

20
21 **Q. Does this complete your Rebuttal Testimony?**

22 **A. Yes**

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

City of Lancaster – Bureau of Water

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Docket No. R-2025-3057237

VERIFICATION

I, LeeAnn Wise, hereby state that the facts set forth in my Surrebuttal Testimony, OCA Statement No. 4-SR, are true and correct (or are true and correct to the best of my knowledge, information, and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: January 20, 2026

Signature: /s/ LeeAnn Wise
LeeAnn Wise

Address: 555 Walnut Street
Fifth Floor
Harrisburg, PA 17101

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2025-3057237
	:	
City of Lancaster – Bureau of Water	:	
	:	

OCA HEARING EXHIBIT 1

**LIST OF EVIDENCE
TO BE MOVED INTO THE EVIDENTIARY RECORD
BY THE OFFICE OF CONSUMER ADVOCATE**

The Office of Consumer Advocate (OCA) intends to submit the following evidence into the evidentiary record in the above captioned proceedings at the scheduled evidentiary hearings in this proceeding.

DIRECT TESTIMONY

OCA Statement 1:	Direct Testimony of Lafayette K. Morgan consisting of written testimony with signed verification of Lafayette K. Morgan, Public Utilities Consultant, Exeter Associates, Inc., and the following: • Appendix A • Exhibits LKM-1 through LKM-10
OCA Statement 2:	Direct Testimony of David J. Garrett consisting of written testimony with signed verification of David J. Garrett, Managing Member, Resolve Utility Consulting PLLC, and the following: • Exhibits DJG-1 through DJG-23 • Appendix A through Appendix E
OCA Statement 3:	Direct Testimony of Jerome D. Mierzwa consisting of written testimony with signed verification of Jerome D. Mierzwa, Principal and President, Exeter Associates, Inc., and the following: • Schedule JDM-1
OCA Statement 4:	Direct Testimony of LeeAnn Wise consisting of written testimony with signed verification of LeeAnn Wise,

Regulatory Analyst, Office of Consumer Advocate, and the following:

- Appendix A

SUPPLEMENTAL DIRECT TESTIMONY

OCA Statement 4-Supp: Supplemental Direct Testimony of LeeAnn Wise consisting of written testimony with signed verification of LeeAnn Wise, Regulatory Analyst, Office of Consumer Advocate.

REBUTTAL TESTIMONY

OCA Statement 2R: Rebuttal Testimony of David J. Garrett consisting of written testimony along with a signed verification of David J. Garrett, Managing Member, Resolve Utility Consulting PLLC.

OCA Statement 3R: Rebuttal Testimony of Jerome D. Mierzwa consisting of written testimony with signed verification of Jerome D. Mierzwa, Principal and President, Exeter Associates, Inc.

SURREBUTTAL TESTIMONY

OCA Statement 1SR: Surrebuttal Testimony of Lafayette K. Morgan consisting of written testimony with signed verification of Lafayette K. Morgan, Public Utilities Consultant, Exeter Associates, Inc., and the following:

- Exhibits LKM-1SR through LKM-10SR

OCA Statement 2SR: Surrebuttal Testimony of David J. Garrett consisting of written testimony with signed verification of David J. Garrett, Managing Member, Resolve Utility Consulting PLLC.

OCA Statement 3SR: Surrebuttal Testimony of Jerome D. Mierzwa consisting of written testimony with signed verification of Jerome D. Mierzwa, Principal and President, Exeter Associates, Inc.,

OCA Statement 4SR: Surrebuttal Testimony of LeeAnn Wise consisting of written testimony with signed verification of LeeAnn Wise, Regulatory Analyst, Office of Consumer Advocate.

ADDITIONAL EXHIBITS

OCA Hearing Exhibit 1: List of Evidence to be Moved into the Evidentiary
Record by the Office of Consumer Advocate (OCA)