EXHIBIT Q

FAIR MARKET VALUE APPRAISAL
GANNETT FLEMING VALUATION AND
RATE CONSULTANTS, INC.

# WILLISTOWN TOWNSHIP
## WASTEWATER SYSTEM ASSETS

FAIR MARKET VALUE APPRAISAL

AT

JUNE 28, 2021

Prepared by:
GANNETT FLEMING
VALUATION AND RATE CONSULTANTS, LLC

Valley Forge, Pennsylvania

Gannett Fleming

*Excellence Delivered* ***As Promised***

July 29, 2021

VIA EMAIL

Mr. William C. Packer
Vice President Controller
Aqua Pennsylvania Wastewater, Inc.
762 W. Lancaster Ave
Bryn Mawr, PA 19010

**Re: Fair Market Value Appraisal**

Dear Mr. Packer:

In accordance with your request, we have prepared a fair market value appraisal of Willistown Township's wastewater system assets ("Wastewater System") as of June 28, 2021.

Fair market value is defined as "the price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts." (The International Glossary of Business Valuation Standards)

Based on our analysis, as described in the attached appraisal report, the estimate of the fair market value of the Wastewater System as of June 28, 2021 is $25,613,000 (rounded).

Our appraisal was developed consistent with the Uniform Standards of Professional Appraisal Practices. Our fair market value appraisal of the Wastewater System was based on the Cost, Market, and Income Approaches to valuation. We used seven methods under the Cost, Market, and Income Approaches to valuation: Original Cost Method, Replacement Cost Method, Capitalization of Earnings Method, Market Multiple Discounted Cash Flow Method, Capitalization Discounted Cash Flow Method, Market Multiples Method, and the Selected Transactions Method.

The attached narrative appraisal presents our findings and conclusions regarding the fair market value of the Wastewater System's assets of June 28, 2021. The report describes the valuation methodologies employed and the Exhibits that present the valuation results.

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The results of the analyses and calculations completed for each applicable approach are detailed throughout the report and the Exhibits and are summarized as follows:

| Valuation Approach | Indicated Value |
|---|---|
| Cost Approach | $31,128,594 |
| Income Approach | 24,381,001 |
| Market Approach | 21,330,105 |

We thank Aqua for this opportunity to provide valuation services in connection with the fair market value appraisal of the Wastewater System's assets.

Respectfully Submitted,

GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC

HAROLD WALKER, III
Manager, Financial Studies

HW:amp

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## INTRODUCTION

Introduction and Summary. The following narrative report presents our findings and conclusions regarding the fair market value of the wastewater system assets of the Willistown Township as of June 28, 2021. The report describes the valuation methodologies employed and the Exhibits that present the valuation results. Based upon the analyses, we believe the fair market value of the Willistown Township's wastewater system assets is $25.6 million. This conclusion is based upon the values suggested by the Cost, Income, and Market approaches. During our analysis we found indications of value that ranged from $21.3 million to $31.1 million. However, most of the appropriate indicated values approximated $25.6 million.

Description of the Assignment. Gannett Fleming Valuation and Rate Consultants, LLC was retained by Aqua Pennsylvania Wastewater, Inc. ("Aqua") to estimate the fair market value of Willistown Township's wastewater system assets ("Wastewater System") as of June 28, 2021.

Standard and Premise of Value. The fair market value appraisal of the Wastewater System complies with the Uniform Standards of Professional Appraisal Practices, employing the cost, market, and income approaches. Fair market value is defined as "the price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts."[1]

As stated, the standard of value for this engagement is fair market value. The premise of value is the going concern. The going concern premise of business value assumes that the business

1 The International Glossary of Business Valuation Standards

will continue running normally using all its assets to produce income and will continue operating beyond the valuation date.

We valued the Wastewater System's assets as a group under the premise that the assets collectively comprise an ongoing operating business enterprise. Additionally, in accordance with 66 Pa. C.S. Section 1329, the original source of funding for any part of the Wastewater System's assets was not relevant to the determination of the value of said assets.

Intended Use of the Valuation. The intended use of the valuation is to comply with 66 Pa. C.S. Section 1329, Valuation of Acquired Water and Wastewater Systems and conduct a fair market value appraisal of the Wastewater System in compliance with the Uniform Standards of Professional Appraisal Practices, employing the cost, market, and income approaches.

Client and Users. The client is Aqua Pennsylvania Wastewater, Inc. The intended users of the valuation are Aqua Pennsylvania Wastewater, Inc., and the Pennsylvania Public Utility Commission ("PUC").

Extraordinary Assumptions. There were no extraordinary assumptions required for this appraisal.

Hypothetical Conditions. There were no hypothetical conditions assumed for this appraisal.

Limiting Conditions. We accepted all information and data provided by the Willistown Township and/or Aqua as it pertains to this assignment "as is" after a limited review. That is, we neither audited nor verified any data, engineering assessment, financial record or operating data provided for this assignment. We assumed all title to all assets included in the appraisal is good and marketable, no hidden defects in the property or soil and no hazardous conditions or materials exist which could affect the assets.

Site Inspection. We viewed or observed the Wastewater System's facilities on July 27, 2021. We also relied on engineering assessment of the Wastewater System's facilities report, "Willistown Township Sewerage Facilities Engineering Assessment and Original Cost" and related files prepared by Pennoni Associates Inc., to confirm the condition of the Wastewater System's property and equipment.

Sources of Information. The following sources of information were reviewed during the assignment:

"Willistown Township Sewerage Facilities Engineering Assessment and Original Cost" and related files prepared by Pennoni Associates Inc.;

Township/Aqua provided electronic files (e.g., PDF and Excel);

Wastewater System's Customer data;

Wastewater System's Fee Schedule;

Wastewater System's 537 Plan;

Wastewater System's Chapter 94 Reports;

Wastewater System's Sewage Service and Treatment Agreements;

Asset Purchase Agreement;

Willistown Township's Audited Financials (2016 - 2019);

Willistown Township's Budgets for Wastewater System (2020 - 2021);

Blue Chip Financial Forecasts;

US Census Bureau, various data files;

Value Line Investment Survey; and

S&P Capital IQ.

Description of the Willistown Township. Willistown Township is located along the eastern boundary of Chester County, in southeastern Pennsylvania. Willistown Township borders Malvern Borough and the Townships of Tredyffrin, Easttown, Westtown, East Goshen, and East Whiteland in Chester County, and Newtown Township and Edgmont Township in Delaware County. Willistown Township is the 9th largest land mass of Chester County's 73 municipalities and was the 14th most populous with 10,905 people (2015) and 4,533 housing units (2015). Willistown Township consists of 18.1 square miles and lies approximately 20 miles northwest of Philadelphia, Pennsylvania. According to U.S. Census figures, Willistown Township's population grew 4.9% from 2000 to 2010, while population in Pennsylvania grew 3.4% and 15.1% in Chester County.

Description of the Wastewater System. Willistown Township owns and operates the Wastewater System which consists of a wastewater treatment plant with spray irrigation fields and aeration lagoons, six pump stations, two booster stations, about 41 miles of mains, approximately 721 manholes, associated infrastructure and appurtenances, and related land and land rights.

Wastewater from the Township's Willistown Chase and Penn's Preserve subdivisions are conveyed to the Wastewater System's Penn's Preserve wastewater treatment plant. The Penn's Preserve Wastewater Treatment Plant was constructed in 1997-1998 and contains one Aerated Lagoon, one Storage Lagoon, three Floating Aerators, three Spray Pumps, a Service Building, a Sodium Hypochlorite Disinfection System, and a Spray Irrigation System.

The Wastewater System accepts flows from the adjoining municipalities of East Whiteland Township and Malvern Borough. All Wastewater System wastewater not treated at the Penn's

Preserve wastewater treatment plant or the Ridley Creek wastewater treatment plant[2] is conveyed via the Valley Creek Trunk Sewer through Tredyffrin and Easttown Townships to the Valley Forge Sewer Authority Wastewater Treatment Plant in Schuylkill Township for treatment.

The Wastewater System's six pump stations are: Pump Station #1, Pump Station #2, Pump Station #3, Pump Station #4, Penn's Preserve Pump Station (PS 5), and the Dovecote Pump Station. The Wastewater System's two booster stations include Booster Pump Station #1 and Booster Pump Station #2. The Wastewater System has approximately 78,137 linear feet of force and low-pressure mains ranging in size from 1.5 to 14 inches diameter and were installed between 1977 to 2009. The force mains consist of high density poly ethylene ("HDPE"), ductile iron ("DIP") and polyvinyl chloride ("PVC") pipe.

The Wastewater System's 136,419 linear feet of gravity sewer collection mains consist of 8-inch, 10-inch, 12-inch, 15-inch, 16-inch, and 18-inch diameter pipe which was installed between 1977 to 2017. About 79% of the gravity mains were installed in the 1970s, 17% between 1980 and 1999, and 4% after 1999. The mains consist of asbestos-cement ("ACP"), cast iron ("CIP"), DIP, PVC and vitrified clay ("VCP") pipe. There are 721 manholes and 2,294 service laterals in the system.

Willistown Township utilizes one enterprise fund to account for the Wastewater System's operations. Willistown Township's audited financial statements reflect the use of the full accrual accounting, which measures revenues when earned and expenses when a liability is incurred, regardless of the timing of related cash flows. For the year ended December 31, 2019, (shown on Exhibit 1) the Wastewater System had reported revenues of $2.211 million and expenses of

2 Wastewater from 21 homes in Willistown Township is conveyed to the East Goshen Township sanitary sewer system and ultimately treated at the Ridley Creek Wastewater Treatment Plant.

$2.353 million. At the same point in time, the Wastewater System was capitalized with $5.474 million of fund equity and Willistown Township's long-term debt attributable to the Wastewater System was $4.391 million. At the same point in time, the Wastewater System had total assets of $10.513 million, including $4.887 net utility plant.

The Wastewater System is exempt from PUC regulation as a municipal utility. The Wastewater System's rate requirements are established by the needed funds to run the system. Most municipalities, including Wastewater System, use a Government Accounting Standards Board ("GASB") process of accounting or the PA Department of Community and Economic Development ("DCED") versus Financial Accounting Standards Board ("FASB") method of accounting used by investor-owned utilities ("IOU"). Municipalities are not typically concerned with the return on and the return of their investments of their utility systems since they deem they are providing a public service to their taxpayers. Municipalities typically expense (i.e., maintenance expense) renewals replacement, and customer collection services capital expenditures and they do not typically fully account for the replacement of all capital assets which are all typically capitalized (i.e., construction of capital asset, construction expenditure, etc.) and "booked" at original cost by IOUs. For these reasons, we do not believe Wastewater System's financial statements should be fully relied upon without recognizing their limitations.

As shown on Exhibit 2, the Wastewater System provides service to 2,294 customers within a population of 11,214 people and services approximately 4,961 Equivalent Dwelling Units ("EDU"). EDUs are estimated to increase by 40 EDUs through 2025.

Demographics and Growth for the Wastewater System. As shown on Exhibit 3, Table 3.1, according to U.S. Census figures, the U.S. population grew 9.7% from 2000 to 2010, and the population in Pennsylvania grew 3.4%. During this same period, Chester County's population

grew 15.1% and Willistown Township's population grew 4.9% (Exhibit 3, Table 3.2). Willistown Township's population growth was ranked 817 of the 2,572 municipalities in Pennsylvania.

The Census Bureau and planning agencies provide population projections for future time periods. Population projections are a primary indicator of expected future growth, and they help determine predictable demand for utility services, housing, roads, business services and facilities. The Delaware Valley Regional Planning Commission ("DVRPC") publishes population projections and employment projections for Willistown Township and the nine Delaware Valley counties ("Nine DVRPC Counties"). The DVRPC counties include Bucks County, Chester County, Delaware County, Montgomery County and Philadelphia County, in Pennsylvania, and Burlington County, Camden County, Gloucester County, and Mercer County, in New Jersey.

As shown on Page 2 of Exhibit 3, Table 3.3, Willistown Township's population growth is projected to be about 113% the growth rate projected for the Nine DVRPC Counties during each five-year period from 2015 through 2045. Willistown Township's project population growth places them in the upper 60 percent or 60th percentile of the 369 municipalities analyzed by DVRPC. Page 3 of Exhibit 3, Table 3.4 shows Willistown Township's employment growth is projected to be about 91% the growth rate projected growth rate projected for the Nine DVRPC Counties during each five-year period from 2015 through 2045.

Currently, there are approximately 11,214 people (Exhibit 2) in the Wastewater System's service area. There are 4,835 housing units in the Wastewater System's service area, and the ratio of people to households is 2.32 persons per household. The Wastewater System's service area density is 4.9 people per customer based on an estimated population of 11,214 and 2,294 customers. The Wastewater System's service area density is higher than the 3.6 per customer

density of water and wastewater systems (see Table 2 in this report) indicating lower market penetration.

HISTORY AND NATURE OF THE BUSINESS

Economic Outlook. The valuation date (June 28, 2021) is the specific date at which the value of the Wastewater System is based. Generally, only the circumstances existing at the valuation date and events occurring up to the valuation date are considered. Events which could affect the value may occur after the valuation date.

An outbreak of a new strain of coronavirus was first reported in Wuhan, China in late 2019 and quickly spread around the world. A coronavirus is a kind of common virus that causes an infection in sinuses, or upper throat. The World Health Organization ("WHO") declared the spread of the infection a pandemic. The WHO named the virus SARS-CoV-2, and the disease COVID-19.

We do not believe the appraised value of the long-lived Wastewater System assets is materially impacted by COVID-19 or its related relatively short-term events. The Wastewater System's customer base is not heavily dependent on customers from sectors of the economy providing tourism and travel, employment services, mining/oil and gas (energy), and leisure and hospitality which have been most impacted by COVID-19's related short-term events. Therefore, even on a short-term basis, the Wastewater System's revenues and cash flows should not be materially impacted on a relative basis.

Nevertheless, we have included subsequent information in Appendix B (Known Impact of COVID-19) regarding COVID-19's known impact for informational purposes only and does not affect the determination of value as of the specified valuation date of June 28, 2021.

In the valuation of any company, the general economic outlook as of the valuation date is important since it influences how investors perceive alternative investment opportunities at that point in time. As part of our analysis, we considered the forecasts for the U.S. economy that prevailed as of June 28, 2021. We focused on the forecasts and economic commentary presented in Blue Chip Financial Forecasts in the June 1, 2021 edition. Some of these economic forecasts are presented in Table 1.

Economic Indicators

| | Latest Qtr | Consensus Forecasts | |
|---|---|---|---|
| | 1Q 2021 | 2Q 2021 | 3Q 2021 |
| Key Assumptions | | | |
| Real GDP | 6.4 | 9.3 | 6.9 |
| GDP Price Index | 4.3 | 3.3 | 2.5 |
| Consumer Price Index | 3.7 | 4.8 | 2.6 |
| Interest Rates | | | |
| 3-mo. Treasury Bills | 0.05 | 0.0 | 0.1 |
| 10 Year Notes | 1.32 | 1.7 | 1.8 |
| 30 Year Notes | 2.07 | 2.4 | 2.5 |
| Aaa Corporate Bond Yield | 2.88 | 3.0 | 3.1 |
| Baa Corporate Bond Yield | 3.35 | 3.8 | 4.0 |
| State & Local Bonds | 2.68 | 2.6 | 2.7 |
| Home Mortgage Rate | 2.88 | 3.1 | 3.3 |

**Table 1**

Industry Review. A review of the industry in which the company operates is important in determining value. The trends and stability of the specific economic environment affecting operations need to be reviewed to gain further insight regarding the prospects and risks associated with the industry and each company.

The wastewater utility industry has a Standard Industrial Classification ("SIC") code of

4952 (Sewerage Systems), has sewer utilities, and includes establishments primarily engaged in the collection and disposal of wastes conducted through a sewer system, including such treatment processes as may be provided. There are currently 2,104 U.S. Businesses with a SIC code of 4952.

The wastewater utility industry is a fragmented industry, although not as fragmented as the water supply industry. According to the U.S. Environmental Protection Agency's ("EPA") most recent survey of publicly owned wastewater treatment facilities in 2012, there are approximately 15,000 such facilities in the nation, serving approximately 76% of the U.S. population. Eighty percent of domestic wastewater systems are government owned rather than IOUs. Currently, there are no wastewater utility companies that have actively traded stock.

A comparative industry to the wastewater utility industry is the water supply industry. A comparative industry to the wastewater utility industry is the water supply industry. The water utility industry has a Standard Industrial Classification ("SIC") code of 4941 (Water Supply), has water utilities, and includes establishments primarily engaged in distributing water for sale for residential, commercial, and industrial uses. Government controlled establishments such as municipal service districts and public utilities dominate the industry. Private companies or IOUs are active in the construction and improvement of water supply facilities and infrastructure. There are currently 11,283 U.S. Businesses with a SIC code of 4941.

The water supply industry is the most fragmented of the major utility industries with more than 53,000 community water systems in the U.S. (82% of which serve less than 3,300 customers). The nation's water systems range in size from large municipally owned systems, such as the New York City water system that serves approximately 9 million people, to small systems, where a few customers share a common well.

An estimated 14% of all water suppliers are managed or owned by IOUs. IOUs consist of companies with common stock that is either actively traded or inactively traded, as well as companies that are closely held, or not publicly traded. Currently (June 28, 2021), there are only about nine investor-owned water utility companies with publicly traded stock in the U.S.

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

The larger IOUs have been following an aggressive acquisition program to expand their operations by acquiring smaller wastewater and water systems. Generally, they enter a new market by acquiring one or several wastewater or water utilities. After their initial entry into a new market, the larger investor-owned water utility companies continually seek to expand their market share and services through the acquisition of wastewater and water utility businesses and operations that can be integrated with their existing operations. Such acquisitions may allow a company to expand market share and increase asset utilization by eliminating duplicate management, administrative, and operational functions.

Acquisitions of small, independent utilities can often add earning assets without necessarily incurring the costs associated with the Safe Drinking Water Act ("SDWA") if such acquisitions are contiguous to the potential purchaser.

In summary, the result of increased capital spending, to meet the SDWA requirements[3] and to replace the aging infrastructure of many systems, has moved the wastewater and water industries toward consolidation. Moreover, Federal and State regulations and controls concerning water quality are still in the process of being developed and it is not possible to predict the scope or the enforceability of regulations or standards which may be established in the future, or the cost and effect of existing and potential regulations and legislation upon the sewer and water systems. However, as a small to medium sized wastewater system, the Wastewater System faces the cost of compliance with significantly limited financial resources when compared to larger IOU water utilities.

QUANTITATIVE AND QUALITATIVE ANALYSIS

Comparison Review. The comparison review considers the financial and operating statistics for the Wastewater System, and a group of companies ("Comparable Group") that operate in the same basic or similar industry as the Wastewater System. Since no marketplace exists for the common stock of the Wastewater System, an alternative to estimate the value of the Wastewater System is to analyze the price investors are willing to pay for the publicly traded common stock of companies that are like the Wastewater System. We list the Comparable Group chosen for study in Table 2.

The companies in the Comparable Group were selected based upon: (1) the availability of financial information; (2) inclusion in the S&P Capital IQ database; (3) a June 28, 2021 market

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

value of common stock, the product of multiplying the closing stock price by the number of common shares outstanding, greater than $200.0 million; (4) a June 28, 2021 total enterprise value (the sum of market value, preferred stock and total debt) greater than $450.0 million; (5) were not the subject of a known acquisition at June 28, 2021; (6) with a Standard Industrial Classification (SIC) of 4941 (i.e., Water Supply Facilities and Infrastructure) and (7) with a North American Industry Classification System (NAICS) of 221310 (i.e., Water Supply and Irrigation Systems). The eight companies ("Comparable Group") that met the criteria for selection are listed in Table 2.

| Acquisition Date Size Statistics | | | | |
|---|---|---|---|---|
| | Revenues (Mill. $) | Customers | Population | Customer Density |
| Willistown Township Wastewater System Assets | $2.149 | 2,294 | 11,214 | 4.9 |
| Comparable Group | | | | |
| American States Water Co | $473.869 | 286,341 | 1,000,000 | 3.5 |
| American Water Works Co Inc | 3,610.000 | 3,496,000 | 15,000,000 | 4.3 |
| Artesian Resources -CL A | 83.595 | 95,640 | 300,000 | 3.1 |
| California Water Service Gp | 714.557 | 543,000 | 2,000,000 | 3.7 |
| Essential Utilities, Inc. | 889.692 | 1,798,803 | 5,000,000 | 2.8 |
| Middlesex Water Co | 134.598 | 122,200 | 500,000 | 4.1 |
| SJW Corp | 420.482 | 389,293 | 1,614,866 | 4.1 |
| York Water Co | 51.578 | 72,681 | 202,000 | 2.8 |
| Median | $447.176 | 337,817 | 1,307,433 | 3.6 |

**Table 2**

We believe that similar economic, industry and business risks have affected the Comparable Group as those faced by the Wastewater System. However, consideration must be

given to the fact that no two companies are exactly alike. Table 2 presents comparative statistics regarding total revenues, customers, population of the area served, and customer density (population ÷ customers). On average, the Comparable Group are larger than the Wastewater System. The relative size difference between the group and the Wastewater System suggests that the risk of the Wastewater System is greater than the Comparable Group. We will discuss the difference in risk resulting from size later in this report.

Financial Review. We conducted a financial review that considered the financial and operating statistics for the Wastewater System and the Comparable Group for the three-year period, 2017 to 2019. It is our opinion that the economic, industry and business risks affecting the Comparable Group selected are similar to those faced by the Wastewater System. However, consideration must be given to the fact that no two companies are exactly alike.

The determination of reasonable water rates and sewer rates for the Comparable Group is subject to rate regulation. For the Comparable Group, rate regulation serves as a substitute for competition in the marketplace since utility companies are precluded from exercising complete control over the price to be charged their customers. Under rate regulation, a cost of service formula is used to set the price for service charged to customers. The cost of service formula equates revenues to the sum of annual operating expenses, taxes other than income, depreciation expense, income taxes, and the product of the rate base times a fair rate of return.

It is the responsibility of the utility seeking changes in rates to present sufficient evidence to their regulators in support of their request. Historically, the Wastewater System's rates have not considered a fair rate of return nor taxes. That is, the Wastewater System's rates would have been higher and their financial results would have been healthier if they included a provision for a fair rate of return and taxes. Consequently the results of the Wastewater System's historical

financial performance shown on Exhibits 4 and 6 should be viewed with this knowledge.

Financial Benchmark Analysis. To gain insight into the risk differences between the Wastewater System and the Comparable Group, we reviewed financial ratios and coverages. Unfortunately, there is no single measure that best indicates investment risk from an investor's perspective. However, from a creditor's viewpoint, the best measure of investment risk is debt rating. The debt rating process generally provides a good measure of investment risk for common stockholders because the factors considered in the debt rating process are usually relevant factors that a common stock investor would consider in assessing the risk of an investment.

The types of financial benchmarks applied by credit rating agencies such as Standard and Poor's ("S&P") for rating IOU public utility debt are broader than the traditional measure of financial risk, leverage. Besides reviewing the amounts of leverage employed (i.e., percentage of debt used in the capital structure), S&P also focuses on earnings protection and cash flow adequacy. During the period 2017-2019, the Wastewater System's financial benchmark ratios show (Exhibit 4) higher investment risk than the Comparable Group based on coverage and cash flow.

Risk Analysis. From an operations standpoint, the Wastewater System and the Comparable Group are indistinguishable. Both are required to meet SDWA and CWA requirements and are also required to provide safe and reliable services to their customers.

A basic premise of finance is the tradeoff between risk and return. That is, the higher the perceived risk, the higher the required return. Conversely, the lower the perceived risk, the lower the required return.

As mentioned previously, size is a determinant of risk. Based on size, the Wastewater System's risk is higher than the Comparable Group given Wastewater System's relatively small

size. Table 2 details the size difference between the Wastewater System and the Comparable Group. As shown on Table 2, the Wastewater System is many times smaller than the Comparable Group.

Size is a determinant of risk because the loss of a large customer impacts a small company much more than a large company because a large customer of a small company usually accounts for a larger percentage of the small company's sales. Further, a larger company has much more diversification in customer mix, economic conditions, source of supplies, weather, demographic, and financing than the Wastewater System. Because the larger Comparable Group has a more diverse geographic operation than the Wastewater System, it enables them to sustain earnings fluctuations caused by adverse weather conditions in one portion of its service territory. Further, the larger Comparable Group has a more diverse customer base and is less susceptible to local downturns associated with regional economic conditions than the Wastewater System.

Exhibit 5, Table 5.1, provides an illustration which shows company size has been inversely related to returns and the volatility of their common stock. Specifically, Ibbotson Associates sorted 3,113 publicly traded common stocks based on size of market value (market price multiplied by the number of shares) and placed them into four different portfolios (quartiles). The common stock quartile return and the resultant size premium, column B, increased at an increasing rate as you move from a larger stock quartile to a smaller stock quartile. Similarly, the total risk, or standard deviation of annual returns (a measure of risk), also increased with decreasing company size (column C).

The Comparable Group's market value on June 28, 2021 ranged from $350 million to $28,551 million as shown on Table 5.2 of Exhibit 5. Based on their market value, the Comparable Group's median market quartile was 3. Wastewater System's market value would

place them in quartile 4 based upon Wastewater System's financial statements and since the largest company in quartile 4 on Table 5.1 had a market value of $728 million.

The change in risk adjusted common stock return rate between quartile 3 and quartile 4 (column J) is 97 basis points. The results of the illustration shown on Exhibit 5 suggests the Wastewater System's common equity cost rate could be about 97 basis points higher than the Comparable Group. The history of common stock returns indicates small company stocks are riskier than large company stocks because as one moves from the larger to smaller quartiles, the standard deviation (a measure of risk) of returns increases. Historically, common stock investors have been compensated for taking on this additional risk by the higher returns provided by small company stocks.

In general, it is reasonable to expect small companies to be more risky than large ones. Exhibit 5 shows small company stocks have been riskier over a long period of time than larger company stocks due to the various advantages that larger companies have over smaller companies. For example, small capitalized firms generally have less access to capital and, overall, not as many financial resources. Further, small capitalized stocks have lower trading liquidity than larger ones.

The bond market, particularly the corporate bond market, also differentiates between large and small bond issues, where many large institutional investors such as pension funds and insurance companies require large blocks of bonds for liquidity and performance. Because of this size preference, smaller bond issuers often pay a cost rate premium when compared to larger bond issuers.

A higher return requirement for companies the size of Wastewater System translates into a higher capitalization rate. All else being equal, a higher capitalization rate will produce a lower

value. However, all things are seldom equal as shown by the array of market multiples for the companies that comprise the Comparable Group (Exhibit 17, page 2). As shown on Exhibit 17, the Comparable Group's current market multiples do not suggest a higher capitalization rate due to size as there are numerous other risks affecting the Comparable Group's market values.

Property Plant and Equipment Analysis. The Wastewater System can best be characterized as a wastewater collection system with treatment rights. The Wastewater System does not have the number of large treatment facilities that the Comparable Group has. The Wastewater System's gross property, plant and equipment is in relatively good condition given its age (Exhibit 6, Table 6.1) with 68% of their gross property, plant and equipment remaining undepreciated while 78% of the Comparable Group's gross property, plant and equipment remained undepreciated.[4]

Property Plant and Equipment Analysis for Contributions. Most regulatory commissions determine rates for utilities based on a cost of service formula reflective of gross plant, property, and equipment less accumulated depreciation (i.e., net property, plant, and equipment) being roughly equal to investor provided capital (i.e., debt and equity capital) plus "cost free" capital such as customer contributions. Under 66 Pa. C.S. Section 1329 (Valuation of Acquired Water and Wastewater Systems), the original source of funding for any part of the assets of a selling utility is not relevant to determining the value of a selling utility's assets.

We found a 21% (100% - 79%) difference between the Comparable Group's net property, plant and equipment and the Comparable Group's investor provided capital on the valuation date (Exhibit 6, page 1, Table 6.2). The difference between the Comparable Group's net property,

4 The Wastewater System's gross and net property, plant and equipment is developed on Exhibit 7.

plant and equipment and the Comparable Group's investor provided capital is comprised of "cost free" capital such as customer contributions.[5] This is evidenced by the 21% difference in the Comparable Group's net property, plant and equipment and the Comparable Group's investor provided capital (Exhibit 6, page 1, Table 6.2). Additionally, we verified known components of the Comparable Group's "cost free" capital by reviewing their individual balance sheets (Exhibit 6, page 1, Table 6.2) at year-end 2020.

We did not analyze the Wastewater System's property, plant, and equipment for "cost free" capital, or customer contributions, because the original source of funding for any part of the assets of a selling utility is irrelevant to the valuation process under 66 Pa. C.S. Section 1329.

Capital Expenditures Analysis. The level of capital expenditures required for business purposes is an indicator of risk. Over the last four years, the Comparable Group had annual capital expenditures of about 9% of net plant (Exhibit 6, page 2, Table 6.3). During this same time, 2016-19, the Wastewater System also had annual capital expenditures of about 9% of net plant. Therefore, the Wastewater System historical capital spending was similar to the Comparable Group's median.

Growth Rate Analyses. Higher growth rates are an indication of less risk. A review of the growth rates in revenue, operating income plus depreciation and operating income, reveal that the Wastewater System's revenues have been growing more than the Comparable Group (Exhibit 6, page 4, Table 6.4) over the last three years. Conversely, the Wastewater System's operating income plus depreciation and operating income have been growing less than the Comparable Group. Prospectively, the Wastewater System's growth rates should lag without increased rates

5 Under rate regulation "cost free" capital, such as customer contributions, is subtracted from plant assets in determining the dollar amount of property on which a utility may earn a "fair rate of return" and therefore, "cost free" capital has no economic value to investors.

and a higher level of planned capital additions.

Profit Margin Analyses. Higher profit margins are an indication of less risk. We compared earnings before interest and taxes ("EBIT") to revenues to see how successful the Wastewater System's management has been at generating income from the operation of the business. We also compared operating profitability or earnings before interest, tax, depreciation, and amortization ("EBITDA") divided by total revenue to gain a clearer view of the Wastewater System's core profitability. The Wastewater System's EBITDA profit margins are lower than the Comparable Group's indicating more risk. Similarly, the Wastewater System's EBIT profit margins are lower indicating more risk (Exhibit 6, page 5, Table 6.5).

VALUATION

The purpose of this valuation is to comply with 66 Pa. C.S. Section 1329 (Valuation of Acquired Water and Water Systems) and conduct a fair market value appraisal of the Wastewater System's assets as of June 28, 2021 in compliance with the Uniform Standards of Professional Appraisal Practices, employing the cost, market, and income approaches. Consequently, three basic valuation approaches were considered in this analysis: the cost approach, the income approach, and the market approach.

The Cost Approach. In general terms, the cost approach measures value by determining the amount of money required to replace the future service capability of an asset. The cost approach is based on the premise that an informed purchaser will not pay more for a property than the cost of constructing an equally desirable substitute property, minus applicable depreciation, and assuming no undue delay.

The cost approach can include the use of the: original cost method; trended original cost

method; reproduction cost method; and replacement cost method. From these cost bases, the calculated accrued depreciation (accumulated depreciation) is subtracted.

The original cost method begins with determining the original cost new ("OCN") measure of the cost of the assets when first constructed. The OCN is based on (1) a review and summary of the utility's accounting records, contractors' invoices and bid tabulations to determine the most appropriate data sources of each type of asset; (2) and the "pricing out" of assets using unit costs for each vintage year that property was placed in service.

Under the trended cost method, the trended original cost ("TOC") measures the reproduction cost by multiplying the OCN by specific cost indices. The TOC is based on (1) a review and summary of the OCN at each location to determine those elements that would be replaced-in-kind, those that would be replaced with current methods and technologies and those that would not be replaced; (2) the selection of cost indexes and the calculation of trended original cost for those elements that would be replaced-in-kind; and (3) the estimation of the cost to purchase or construct those elements that would be replaced with current methods and technologies. The TOC is a procedure for estimating reproduction cost new of property and is sometimes used as a substitute for reproduction cost method and may be considered a form of the reproduction cost method, though not as precise.

The reproduction cost method begins with determining the reproduction cost new ("RPCN") by determining the current cost of constructing identical new property. The replacement cost method begins with estimating the replacement cost new ("RCN") based on approximating the current cost of replacing service of existing property with similar new property having the nearest equivalent utility to the property being valued (as defined by the *International Glossary of Business Valuation Terms*).

The RPCN and the RCN methods include the research and verification of the inventory of a company's tangible personal property. Upon verification of the inventory, current material costs, current construction costs, engineering costs, administration costs, interest during construction, and entrepreneurial profit[6] are applied to the inventory listing in order to determine the RPCN and to determine the RCN.

The RPCN method assumes the assets would be recreated under the conditions existing at the date certain or valuation date, using the exact materials, standards, design, layout, and quality of workmanship used to create the original assets. The RCN assumes the assets would be recreated under the conditions existing at the date certain or valuation date, using similar materials, current standards, under current conditions with similarly functional property.

From these cost bases (i.e., OCN, TOC, RPCN and RCN), the calculated accrued depreciation (accumulated depreciation) is subtracted ("LD"). The calculated accrued depreciation is based on the assets' attained ages, and the service life of the assets. The cost bases of depreciable assets are reduced annually by the accumulated depreciation to reflect the loss in the service value of the assets since being constructed.

Depreciation represents the loss in property value from: physical deterioration; functional obsolescence; and external obsolescence. The accrued depreciation represents the sum of the annual depreciation amounts that would have been charged for depreciation at a point in time. Accrued depreciation is a calculated amount that would be in the book reserve account at a point in time using the current depreciation parameters (i.e., average service life). The average service lives of depreciable assets are based on the materials used for construction and how long the

6 The administration costs and entrepreneurial profit are those of the contractors and engineers. The cost of overhead of the entity having the assets constructed can also be included. Generally overhead costs are allocated as part of an asset's cost, and usually represent at least 5% to 15% of infrastructure asset total costs.

depreciable assets are likely to meet service demands.

The range of survivor characteristics usually experienced by utility and industrial properties is encompassed by a system of generalized "survivor curves" known as the Iowa type curves. The accrued depreciation ratio from a survivor curve is a concept that is used to estimate the consumed service capacity of plant at a point in time. The survivor curve is used to find the applicable accrued depreciation factors of the assets to result in the total accumulated depreciation.

The Original Cost Method. For this report, Willistown Township/Aqua provided us a copy of the Engineer's assessment report "Willistown Township Sewerage Facilities Engineering Assessment and Original Cost" and related files prepared by Pennoni Associates Inc., to confirm the condition of the Wastewater System's property and equipment. We utilized the Engineering Assessment and calculated the Original Cost and Related Accrued Depreciation of the Wastewater System as of June 28, 2021 ("OCNLD Study") shown on Exhibit 7.

Page 1 of Exhibit 7 summarizes the original cost and related accrued depreciation by account for the Wastewater System as of June 28, 2021. The original cost was brought forward from page 2 of Exhibit 7 and the accrued depreciation from page 3 of Exhibit 7.

The original cost of the Wastewater System was determined from the Engineering Assessment and is summarized on page 2 of Exhibit 7. A summarizing analysis of the original cost of the Wastewater System by account and vintage year is shown on Exhibit 10.

The accrued depreciation calculation, shown on page 3 of Exhibit 7, was based on recognized methods using estimated survivor characteristics and the straight-line depreciation method. The estimated survivor curves are those used by other Pennsylvania wastewater companies and the material and age of the assets. The average service life procedure was used to apply the methods of depreciation to group properties for which a survivor curve was used to

recognize the existence of life dispersion. The detailed calculations of accrued depreciation applicable to original cost by account and vintage are included in Exhibit 8.

The results of the OCNLD Study established that the OCN of the Wastewater System's utility plant in service as of June 28, 2021 was not less than $19.6 million ($19,641,520 rounded). The OCNLD Study also determined a theoretical calculated accrued depreciation reserve of the utility plant in service of $6.3 million ($6,274,246 rounded) as of June 28, 2021. After factoring in the OCNLD Study's accrued depreciation reserve, the OCNLD of Wastewater System's utility plant in service as of June 28, 2021 was determined to be $13.4 million ($19,641,520 - $6,274,246 = $13,367,274).

The Replacement Cost Method. We utilized the OCN to calculate the trended original cost (TOC) measures, or the replacement cost of the depreciable assets (RCN), by multiplying the OCN by specific transition factors.[7] The result of this analysis is shown in the Replacement Cost and Related Accrued Depreciation of the Wastewater System as of June 28, 2021 ("RCNLD Study") shown on Exhibit 9.

Page 1 of Exhibit 9 summarizes the replacement cost new and related accrued depreciation by account for the Wastewater System as of June 28, 2021. The replacement cost new was brought forward from page 2 of Exhibit 9 and the accrued depreciation from page 3 of Exhibit 9.

The replacement cost new of the Wastewater System (see Exhibit 10) was calculated by trending the original cost measures by multiplying the OCN by Handy-Whitman indices and obsolescence factors. A summarizing analysis of the replacement cost new of the Wastewater System by account and vintage year and related transition factors is shown on Exhibit 10.[8]

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7 We used the TOC method because the mandated use of the Engineering Assessment's original cost essentially dictates the use of TOC over the reproduction cost or the replacement cost methods.
8 All land and land rights were valued at original cost.

The accrued depreciation calculation, shown on page 3 of Exhibit 9, was based on recognized methods using estimated survivor characteristics and the straight-line depreciation method. The estimated survivor curves are those used in the OCNLD Study. The average service life procedure was used to apply the methods of depreciation to group properties for which a survivor curve was used to recognize the existence of life dispersion. The detailed calculations of accrued depreciation applicable to replacement cost new by account and vintage are included in Exhibit 11.

The results of the RCNLD Study established that the RCN of the Wastewater System's utility plant in service as of June 28, 2021 was not less than $53.9 million ($53,933,473 rounded). The RCNLD Study also determined a theoretical calculated accrued depreciation reserve of the utility plant in service of $22.8 million ($22,804,879 rounded) as of June 28, 2021. After factoring in the RCNLD Study's accrued depreciation reserve, the RCNLD of Wastewater System's utility plant in service as of June 28, 2021 was determined to be $31.1 million ($53,933,473 - $22,804,879 = $31,128,594).

The results of the OCNLD and RCNLD Cost Approaches show a range of value for the Wastewater System of $13.4 million to $31.1 million and collectively, indicated value of $31.1 million ($31,128,594 rounded) for the Wastewater System based on the results of the RCNLD.

Benchmark Metrics. Besides providing an indication of value based upon a cost method, the OCN and OCNLD can also provide a meaningful metric to evaluate the reasonableness of other indications of value produced by other valuation methods. For example, the Comparable Group's market value of common equity plus minority interest, preferred stock, and total debt net of cash and cash equivalents ("Enterprise Value") is currently 1.88-times (Exhibit 17, page 2) their OCNLD or net property, plant, and equipment. Similarly, the Comparable Group's Enterprise

Value is currently 1.48-times (Exhibit 17, page 2) their OCN or gross property, plant, and equipment.

The above-mentioned property, plant and equipment "multiples" understate the multiple applicable to the Wastewater System because some of the Comparable Group's property, plant and equipment includes assets that were originally financed with "cost free" capital such as customer contributions.[9] Subtracting customer contributions ("CIAC") from the Comparable Group's property, plant and equipment (Exhibit 17, page 3) based on differences between investor provided capital and OCN results in CIAC adjusted multiples of 2.06-times OCNLD and 1.62-times OCN for the Comparable Group.

Multiplying the Wastewater System's OCN of $19.6 million by the Comparable Group's 1.48-times OCN multiple or the 1.62-times contributions adjusted OCN multiple indicates a range of market value of $29.0 million to $31.8 million for the Wastewater System, similar to the RCNLD of $31.1 million. Further, multiplying the Wastewater System's OCNLD of $13.4 million by the Comparable Group's 1.88-times OCNLD multiple or the 2.06-times contributions adjusted OCNLD multiple indicates a range of market value of $25.2 million to $27.6 million for the Wastewater System, similar to the RCNLD of $31.1 million.[10] The range of market values for the Wastewater System are not a substitute for an appraisal. However, the referenced range of market values for the Wastewater System can be a meaningful metric to evaluate the reasonableness of other indication of value produced by other valuation methods.

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9 Under rate regulation "cost free" capital, such as customer contributions, is subtracted from plant assets in determining the dollar amount of property on which a utility may earn a "fair rate of return" and therefore, "cost free" capital has no economic value to investors.

10 Similarly, multiplying the Wastewater System's number of customers of 2,294 by the Comparable Group's $9,841-times customer multiple indicates a market value of $22.6 million, similar to the RCNLD of $31.1 million.

Comparing the results of the OCNLD method and RCNLD method to the benchmark metrics indicates that the value indicated by the OCNLD method of $13.4 million is inconsistent with the benchmark metrics. Therefore, the results of $31.1 million RCNLD method form the basis for our Cost Approach conclusion of $31.1 million ($31,128,594 rounded) and is used as the Cost Approach as part of our fair market value determination for the Wastewater System.

The Income Approach. Capitalizing or discounting a future income stream to a present value provides an indication of the value of a business. The capitalization or discount rate reflects future growth, business risk, economic factors, financial risk, and industry risk of the assets. The theory behind the income approach is that the value of a business is the future economic benefit that ownership will provide.

The two most common methods of the income approach to valuation are the capitalization of earning or cash flow method and the discounted cash flow method ("DCF"). The capitalization of earning method converts a single base economic income number to a value by dividing it by a capitalization rate. The capitalization of earnings is best suited when the future earnings, or cash flow, can be predicted. The implicit assumption in the capitalization of earning method is that the cash flow is a perpetuity, and the capitalization rate is a constant.

The DCF method uses estimates of future free cash flow and discounts them to arrive at a present value or price of the cash flows. Generally, the DCF analysis begins with an estimate of the Debt Free Net Cash Flow over the next five to twenty years along with a terminal value. In each year, the Debt Free Net Cash Flow is comprised of projected EBIT, minus income taxes, plus projected depreciation, and amortization, plus or minus projected changes in net cash working capital, less projected capital expenditures. The second element of the DCF analysis is the determination of an appropriate discount rate.

The capitalization rate used in the capitalization of earnings method and the discount rate used in the DCF method are related. The discount rate is the opportunity cost rate related to the risk of the cash flows. For the Wastewater System, the appropriate discount rate is the current municipal revenue bond yield on June 28, 2021 of 3.00%. The appropriate IOU discount rate is the current net of tax overall cost of capital (weighted average cost of capital) on June 28, 2021 and ranges from 6.36% to 7.59%.[11] The capitalization rate is simply the discount rate minus the expected growth rate. If no growth is assumed, the capitalization rate is equal to the discount rate.

The capitalization of earnings method is generally a reasonable approach for valuing the Wastewater System as it is currently owned (i.e., non-IOU) and operated. However, change in ownership of the Wastewater System to another large regional municipal authority ("MUNI") or IOU produces a myriad of problems for both the capitalization of earnings method and the DCF Method because any future cash flow estimates would be hypothetical or estimated due to the uncertain nature that would accompany new ownership including future rates, future expenses, future capital expenditures, taxes, and regulation.

For a MUNI, the appropriate discount rate is the current municipal revenue bond, 3.00%, because debt is the only major source of capital available to finance an acquisition (Exhibit 20, pages 2-6). Although a MUNI likely carries equity on their books (balance sheet), all existing equity is already invested in other assets and therefore, cannot be used to finance an acquisition.[12] For valuation purposes, an embedded cost of debt, or the historical cost of all debt issuances

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11 Both the American Society of Appraisers, ASA Business Valuation Standards, 2009, and the National Association of Certified Valuation Analysts, Professional Standards, 2007, use the same definition: "Weighted Average Cost of Capital (WACC). The cost of capital (discount rate) determined by the weighted average, at market values, of the cost of all financing sources in the business enterprise's capital structure."

12 For example, when a municipal or government entity, such as the Commonwealth of Pennsylvania, finance construction of a road or bridge, they only consider the marginal debt cost despite having "equity" reflected on their books (balance sheet).

outstanding is not used because this capital is already invested in assets. Whereas the marginal cost of debt, 3.00%, at the valuation date is used in accordance with accepted valuation practices and used for market valuation purposes.

As discussed previously, for an IOU, the appropriate discount rate is the net of tax overall cost of capital (weighted average cost of capital), 6.36% to 7.59% (Exhibit 20, pages 2-8). In this instance, the net of tax overall cost of capital (weighted average cost of capital) is based on the Comparable Group's market value capital structure of 23.5% debt and 76.5% equity, a market cost of debt of 3.10% and a range of market cost of equity of 7.63% to 9.23%.[13] The Comparable Group's net of tax overall cost of capital (weighted average cost of capital) is used as a proxy to conform to the "hypothetical buyer" or "hypothetical seller" of fair market valuation. Use of the buyer's net of tax overall cost of capital (weighted average cost of capital) would produce an investment valuation, not a fair market valuation.[14]

We began the Income Approach for the Wastewater System by first determining the Debt Free Net Cash Flow to be capitalized or discounted. The Debt Free Net Cash Flow is comprised of EBIT, minus income taxes, plus depreciation and amortization, plus or minus projected changes in net cash working capital, less projected capital expenditures. The development of Wastewater System's Debt Free Net Cash Flow begins on Exhibit 1 and ends on Exhibits 12 through 16.

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13 For example, see http://www.investinganswers.com/financial-dictionary/financial-statement-analysis/weighted-average-cost-capital-wacc-2905. Also see http://www.wallstreetmojo.com/weighted-average-cost-capital-wacc/ , or http://accountingexplained.com/misc/corporate-finance/wacc .

14 We did not use the 6.29% Comparable Group's DSIC (distribution system improvement charge) related net of tax overall cost of capital in our valuation because a "hypothetical buyer" cannot finance an acquisition at such a rate and therefore, its use would provide a meaningless result. Where the 6.29% DSIC related cost was determined based the Comparable Group's book value capital structure of 46.7% debt and 53.3% equity, a cost of debt of 3.10% and a DSIC cost of equity of 9.85%. We note the 6.29% Comparable Group's DSIC related net of tax overall cost of capital falls below the 6.36% to 7.59% range of discount rates used in our Income Approach.

Differences in accounting practices exist between GASB, DCED and FASB because there are differences in their purpose. The GASB's and DCED's impetuses are to make sure government entities are accountable for the money they receive from the public or taxpayers, while the FASB's focus is to help investors and creditors make decisions. These differences in accounting objectives between GASB, DCED and FASB can present a problem when it comes to comparing the financial statements of entities that are either publicly or privately owned, such as the Wastewater System and the Comparable Group.

Exhibit 1 presents the Wastewater System's financial information contained in their financial statements, so it is more consistent with the Comparable Group and more practical for valuation purposes. The information on Exhibit 1 was used to develop Exhibits 12 through 16. As noted previously, the Wastewater System's financial statements and their rates did not include taxes nor a fair rate of return. Accordingly, on Exhibits 13 through 16 we adjusted the Wastewater System's post-2020 financial information for pro forma expenses and returns to be reflective of a MUNI or IOU ownership.

The Capitalization of Earnings Method. The capitalization of earnings method begins with an estimate of the income or cash flow producing capabilities of the business (Exhibit 12) for a recent time period and assumes current ownership and operations. We began the capitalization of earnings method for the Wastewater System by first determining the Debt Free Net Cash Flow to be capitalized. The Debt Free Net Cash Flow is comprised of current EBIT, minus income taxes, plus current depreciation, and amortization, plus or minus projected changes in net cash working capital, less projected capital expenditures. Specifically, our capitalization of earnings method capitalizes Wastewater System's current (2021) budgeted Debt Free Net Cash Flow. The second element of the capitalization of earnings method is the determination of an appropriate

capitalization rate. Our analysis uses the current municipal revenue bond yield on June 28, 2021 of 3.00% (Exhibit 12, line 24) as a capitalization rate.

We computed the Wastewater System's indicated value based on the capitalization of earnings method by dividing the projected Debt Free Net Cash Flow by the capitalization factor. The capitalization factor is equal to the discount rate minus assumed growth in projected Debt Free Net Cash Flow. We considered ranges of growth in the capitalization of earnings method. Based on the current level of rates we concluded a no growth scenario is the most probable for the Wastewater System based on current ownership and operations.

Exhibit 12 shows the results of the capitalization of earnings method. For the Wastewater System, the capitalization of earnings method using a 3.00% capitalization rate (no growth) indicates a value of –$4.3 million (without rate increases) due to the existence of negative debt free net cash flow. Negative debt free net cash flow is indicative of a system which requires adjustments to their rates if they plan to remain operational.

The DCF Method. For the Wastewater System, the DCF method considers two types of discounted cash flow analyses, the EBIT and EBITDA terminal value model ("Market Multiple DCF") and the capitalization of terminal value model ("Capitalization DCF"). We show the results of these models on Exhibits 13 through 16.

The DCF method begins with an estimate of the income or cash flow producing capabilities of the business. Specifically, our DCF methods use estimates of the results of the Wastewater System's operations over the next 20 years. We use two different assumptions for the Wastewater System's future operations in the DCF methods: MUNI ownership shown on Exhibits 13 and 15; and IOU ownership shown on Exhibits 14 and 16.

Under the MUNI ownership the discount rate is the current 3.00% municipal revenue bond yield and under the IOU ownership the discount rate is the current net of tax overall cost of capital, reflecting the upper and lower range of the net of tax overall cost of capital for the Comparable Group of 6.36% to 7.59%. For the Capitalization DCF, the capitalization rate reflects a scenario of no additional growth (i.e., discount rate = capitalization rate) and a scenario of minimal growth of 0.2% (i.e., discount rate – 0.2% growth = capitalization rate) under MUNI ownership and 0.2% growth (i.e., discount rate – 0.2% growth = capitalization rate) under IOU ownership based on inflation, changes in Debt Free Net Cash Flows and the projected population growth.

We computed the Market Multiple DCF terminal values by multiplying the Wastewater System's projected EBIT and EBITDA by the Comparable Group's adjusted multiples of 21.7-times and 14.8-times, respectively. We computed the Capitalization DCF terminal value by dividing the projected Debt Free Net Cash Flow by the capitalization factor. The capitalization factor is equal to the discount rate minus assumed growth in projected Debt Free Net Cash Flow.

Exhibit 13 shows the results of the DCF method under the MUNI ownership scenario. The results of the Capitalization DCF shown on Exhibit 13 show a range of value for the Wastewater System of $17.6 million to $18.3 million. The results of the Market Multiple DCF shown on Exhibit 13 show a value of $14.9 million. Collectively, the DCF method based on the MUNI ownership scenario indicates a value of $16.6 million for the Wastewater System based on the 0.2% growth assumption.

Exhibit 14 shows the results of the DCF method under the IOU ownership scenario. The results of the Capitalization DCF shown on Exhibit 14 show a range of value for Wastewater System of $9.3 million to $11.5 million. The results of the Market Multiple DCF shown on Exhibit 14 show a range of value of $12.4 million to $14.5 million. Collectively, the DCF method

based on the IOU ownership scenario and a 0.2% growth assumption indicates a value of indicates a value of $11.9 million for the Wastewater System.[15]

The DCF method based on the MUNI ownership scenario indicates a value of $16.6 million and the DCF method based on the IOU ownership scenario indicates a value of $11.9 million. Collectively, the DCF method indicates a value of $14.2 million based on OCNLD.

Change in ownership of the Wastewater System to a MUNI or an IOU produces a myriad of problems for the DCF Method. Under a MUNI purchase, future cash flow estimates are uncertain because they would reflect the actual price paid for the acquisition. Under an IOU purchase and the associated regulation by the PUC, future cash flow estimates are uncertain since regulation by the PUC would result in an unknown determination of rate base and the related depreciation and authorized/achieved earning levels. In the current instance, we know the Market Approach and the Cost Approach (RCNLD) indicate values considerably higher than the OCNLD value.

Therefore, Exhibits 13 and 14 are recalculated on Exhibits 15 and 16 to reflect revenues and cash flows derived from an earnings base between OCNLD and RCNLD. Exhibit 15 shows the results of the DCF method under the MUNI ownership scenario. The results of the Capitalization DCF shown on Exhibit 15 show a range of value for the Wastewater System of $26.5 million to $27.7 million. The results of the Market Multiple DCF shown on Exhibit 15 show a value of $23.9 million. Collectively, the DCF method based on the MUNI ownership

15 If we used the 6.29% Comparable Group's DSIC (distribution system improvement charge) related net of tax overall cost of capital in our valuation shown on Exhibit 14, the results of the Capitalization DCF would show a value for Wastewater System of $11.5 million. Further, the results of the Market Multiple DCF would show a value of $14.7 million and collectively, the DCF method based on the IOU ownership scenario and a 0.2% growth assumption indicates a value of $13.1 million for the Wastewater System. The DCF method based on the MUNI ownership scenario indicates a value of $16.6 million and the DCF method based on the IOU ownership scenario indicates a value of $13.1 million. Collectively, the DCF method indicates a value of $14.9 million based on OCNLD.

scenario indicates a value of $25.8 million for the Wastewater System based on the 0.2% growth assumption.

Exhibit 16 shows the results of the DCF method under the IOU ownership. The results of the Capitalization DCF shown on Exhibit 16 show a range of value for Wastewater System of $17.8 million to $22.0 million. The results of the Market Multiple DCF shown on Exhibit 16 show a range of value of $24.0 million to $28.3 million. Collectively, the DCF method based on the IOU ownership scenario and a 0.2% growth assumption indicates a value of $23.0 million for the Wastewater System.[16]

The DCF method based on the MUNI ownership scenario indicates a value of $25.8 million and the DCF method based on the IOU ownership scenario indicates a value of $23.0 million. Collectively, the DCF method indicates a value of $24.4 million based on the Income Approach.

The Market Approach. There are two methods of doing the Market Approach to valuation: the market multiples method; and the selected transaction method. We developed both the market multiples method and the selected transaction method in our valuation analysis.

The Market Multiples Method. The market multiples method valuation begins by reviewing market price data of corporations engaged in the same or a similar line of business as the Wastewater System. We relied upon market data for the Comparable Group for these purposes since they are equally affected by similar economic, industry, and business risks as the Wastewater System. Since no marketplace exists for the common stock of the Wastewater

16 If we used the 6.29% Comparable Group's DSIC (distribution system improvement charge) related net of tax overall cost of capital in our valuation shown on Exhibit 16, the results of the Capitalization DCF would show a value for Wastewater System of $22.0 million. Further, the results of the Market Multiple DCF would show a value of $28.5 million and collectively, the DCF method based on the IOU ownership scenario and a 0.2% growth assumption indicates a value of $25.4 million for the Wastewater System. The DCF method based on the MUNI ownership scenario indicates a value of $25.8 million and the DCF method based on the IOU ownership scenario using DSIC indicates a value of $25.4 million. Collectively, the DCF method indicates a value of $25.6 million when DSIC is considered.

System, an alternative to estimate the value of the Wastewater System is to analyze the price investors are willing to pay for the publicly traded common stock of companies that are similar to the Wastewater System. The specific market price data reviewed includes the market value of common equity plus minority interest, preferred stock, and total debt net of cash and cash equivalents (i.e., Enterprise Value). Where the market value of common equity is the product of multiplying the closing stock price by the number of common shares outstanding. The Enterprise Value provides an indication of the value of the entire business. The Enterprise Value multiples ("Market Multiples") are shown on Exhibit 17. For the Comparable Group, the Market Multiples were calculated as of June 28, 2021 based on the latest twelve months of financial data available at the appraisal date.

We used the Comparable Group's Enterprise Value on June 28, 2021 and calculated Market Multiples of: revenue ("Revenue"); EBITDA; EBIT; gross property plant and equipment ("GPPE"); net property plant and equipment ("NPPE"); investor provided capital ("ICAP"); utility customers ("Customers"); and population of the area served ("Population").

The next step in the market multiples method valuation was applying the Comparable Group's Market Multiples to corresponding financial and operating statistics of the Wastewater System. The Comparable Group's Market Multiples reflect their capitalization rate of each financial and operating statistic. For example, a Market Multiple of EBIT of 16.14 times equates to a capitalization of EBIT of 6.20% (1 ÷ 16.14 = 6.20%). Each capitalization rate is unique to the entity and the statistic being evaluated and reflects the growth and investment risk of the entity.

We believe that similar economic, industry and business risks have affected the Comparable Group as those faced by the Wastewater System. However, consideration must be given to the fact that no two companies are exactly alike. On average, the utilities in the

Comparable Group are larger than the Wastewater System. The relative size difference between the Comparable Group and Wastewater System suggests that the risk to investors of the Wastewater System is higher than the Comparable Group. Further, based upon our quantitative and qualitative analysis, we concluded that the Wastewater System has more risk than the Comparable Group.

Accordingly, the Comparable Group's Market Multiples are not directly applicable to the Wastewater System. We assumed the higher risk due to the Wastewater System's size is added to the higher risk found in our quantitative and qualitative analysis. This combined risk was assumed to result in the Wastewater System being 20% more risky than the Comparable Group and produces an 75% (100% - 25%) base risk adjustment to the Comparable Group's Market Multiples. We applied the 75% base risk adjustment to all financial multiples. For example, the Comparable Group's ICAP multiple was multiplied by 75% to produce a lower multiple applicable to the Wastewater System to account for risk differences.

The Comparable Group's Market Multiples of Revenue, EBITDA, and EBIT were adjusted for the base risk adjustment to produce multiples applicable to the Wastewater System (Exhibit 17, page 3). The Comparable Group's Market Multiples of GPPE and NPPE were adjusted for the base risk adjustment and for their percentage of property plant and equipment (Exhibit 17, page 3) financed with "cost free" capital such as contributions because "cost free" capital should not be part of this valuation process. The Comparable Group's Market Multiples of Customers and Population were adjusted for the type of assets of the Wastewater System, earnings rate, and growth.

The net risk adjustments to the Comparable Group's Market Multiples are shown on page 1 of Exhibit 17. The adjustments to the Comparable Group's Market Multiples are: 75% of ICAP

(more risk/less growth); 82% of GPPE (more risk/lower growth and contributions); 82% of NPPE (more risk/lower growth and contributions); 75% of Revenue (more risk/lower growth); 75% of EBIT; 75% EBITDA (more risk/lower growth); 83% of Customers (growth, earning rate, and contributions); and 83% Population (growth, earning rate, and contributions).

Page 1 of Exhibit 17 shows the market multiples method indicated values based on: Revenue, EBIT and EBITDA (collectivity called "Income Statement Items"); ICAP, GPPE and NPPE (collectivity called "Capital Items"); and Customers and Population (collectivity called "Demographics Items"). For most municipal utilities, the indicated values based on Income Statement Items are far below the indicated values that are based on Capital Items and those based on Demographics Items. We attribute this to the dollars of Revenue, EBIT and EBITDA do not reflect any provision for taxes while the multiples for the Comparable Group do.[17] Consequently, we do not believe the results of the multiples of Revenue, EBIT and EBITDA are meaningful and should not be used for municipal utilities.

In the market multiples method, the meaningful Market Multiples of the Comparable Group are used to develop an indicated value of the Wastewater System. This is accomplished by multiplying the Wastewater System's financial and operating data by the Comparable Group's median Market Multiples (Exhibit 17, page 1). The results of the market multiples method (Exhibit 17, page 1) show a range of value for the Wastewater System of $19.5 million to $23.5 million and collectively, indicate value of $21.5 million based on the meaningful Market Multiples.

17 The Revenue, EBIT and EBITDA for the Wastewater System also do not include a fair rate of return.

The Selected Transactions Method. The selected transactions method entails analyzing certain public information relating to selected transactions involving the purchase or sales of businesses involved in the same or similar business line. The number of selected transactions available for review is limited because most acquisitions in the water and wastewater industry involve small acquisitions for which no public information exits. Additionally, not all transactions are comparable since some purchase prices may only involve the acquisition of the common stock, purchase prices may be net of cash and others may only involve assets. In any of these instances, the derived multiples (e.g., purchase price as a multiple of: Revenues; EBITDA; EBIT; etc.) would understate (overstate) the multiples involving a purchase price for an entire business enterprise (common stock) or business assets.

The selected transactions method provides a valuation of a business, or assets, at the time the acquisition of that business was completed, rather than the appraisal date market value (June 28, 2021). The change in the Comparable Group's market multiples of NPPE and ICAP, shown in Figure 1, illustrates the change in market valuation over a recent 72-month period.[18] In Figure 1 the Comparable Group's market multiples of NPPE and ICAP were indexed to June 28, 2021 valuation multiples so that the June 28, 2021 valuation multiples have an index value of 100.

18 Note that Figure 1 only depicts change in market valuations based on NPPE and ICAP. Other metrics (e.g., EBIT, Customers, etc.) may reveal different changes in market valuations.

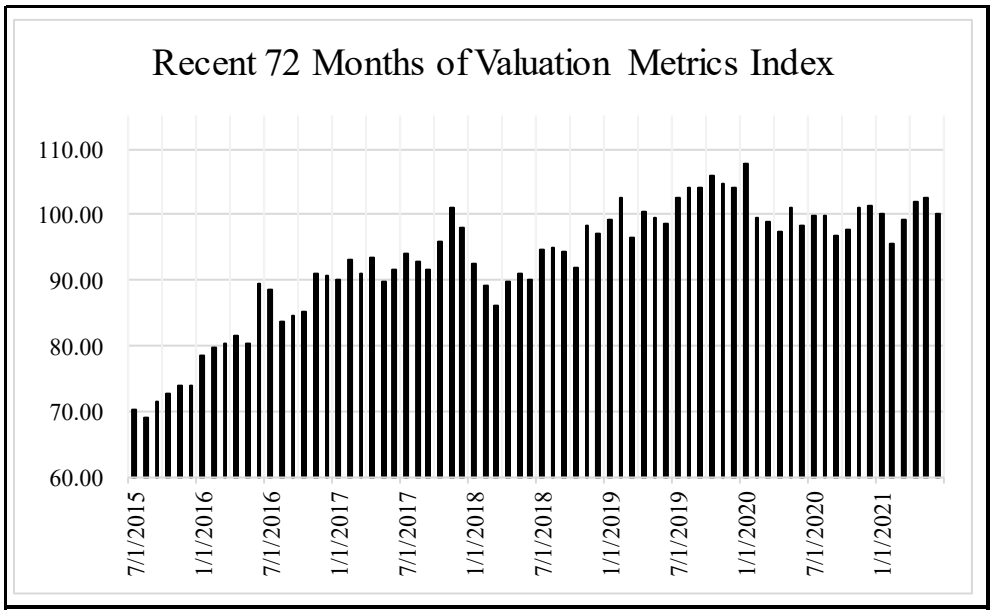


**Figure 1**

The index of the Comparable Group's appraisal date (June 28, 2021) valuation multiples is 4% above the 2021's lowest levels and 2% below 2021's highest levels and 4% above the 2020's lowest levels and 8% below 2020's highest levels. The index of the Comparable Group's June 28, 2021 valuation multiples is 4% higher than 2019's lowest levels and 6% below 2019's highest levels, are 14% higher than 2018's lowest levels and 2% above 2018's highest levels, are 14% to higher than 2017's lowest levels and 1% above 2017's and are 9% to 22% higher than 2016's multiples' index.

Because of the rapid rise in valuation multiples since early 2016 we limited our search for selected transactions to: (1) those that occurred in 2016 or later; (2) purchases of water or sewer systems; (3) assets being purchased; and (4) those that did not discount "cost free" capital/customer contributions in the valuation. The selected transactions that met the stated selection criteria are shown on pages 2 and 3 of Exhibit 18.

Using certain public information, we calculated sales price multiples of selected transactions involving the purchase or sale of businesses that met the stated selection criteria. The calculated sales price multiples included transactions multiples of: ICAP; GPPE; NPPE; Revenue; EBITDA; EBIT; Customers; and Population. As shown on pages 2 and 3 of Exhibit 18, the selected transactions method indicated values based on the Income Statement Items are far different than the Wastewater System's selected transactions method indicated values based on Capital Items and those based on Demographics Items. We attribute this to the fact the selling utilities' dollars of Income Statement Items do not reflect any provision for taxes.[19] Consequently, we do not believe the results of the multiples of Income Statement Items are meaningful.

The selected transaction method relies on and reflects information that was known, ex-ante, at the time the winning purchase bid (price) was offered, and the metrics used are time period sensitive. For example, bids made in 2016 only reflects metrics from 2015 since the results of 2016 could not be known at the time of the bids. The selected transaction method ex-ante information (metrics) is shown on page 2 of Exhibit 18. Complete information only exists for a few of the transactions, with only Customers and Population having ample data for all transactions as is evident from the information shown (Exhibit 18, page 2). Therefore, we supplemented the ex-ante data with ex-post information of GPPE and NPPE (collectivity called "Asset Items") as shown on page 3 of Exhibit 18.

In the selected transactions method, the significant selected transactions multiples of the selling utilities are used to develop an indicated value of the Wastewater System. This is

19 Further, Revenue, EBIT and EBITDA for the Wastewater System also do not include a fair rate of return.

accomplished by multiplying the Wastewater System's financial and operating data by the selling utilities' transactions multiples (Exhibit 18, pages 2 and 3). The results of the selected transactions method (Exhibit 18, page 1) show a range of value for the Wastewater System of $23.0 million to $26.1 million when all transactions are considered and a range of value of $14.3 million to $21.1 million when mostly collection/distribution assets are solely considered. Collectively, the selected transactions method indicates a value of $21.1 million after giving additional weight to the collection/distribution assets selected transactions multiples.

In 2018 two IOUs, Connecticut Water Service, Inc and SJW Group, announced a planned merger with Connecticut Water being acquired by SJW through a stock purchase. SJW Group's purchase of Connecticut Water was approved in late 2019. Although this acquisition is not directly applicable to the Wastewater System, it does provide a range of indicated value for the Wastewater System (Exhibit 18, page 4) which we relied on as a check. In this selected transaction, the significant selected transactions multiples of the selling utilities (Connecticut Water) are used to develop an indicated value of the Wastewater System. This is accomplished by multiplying the Wastewater System's financial and operating data by the selling utilities' transactions multiples. The results of the Connecticut Water selected transactions show a range of value for the Wastewater System of $22.1 million when the reported significant selected transactions multiples are considered and a value of $24.7 million when the reported significant selected transactions multiples have been adjusted for "cost free" capital. Since the Connecticut Water transaction was a stock transaction, we believe it may understate the value of an asset purchase. However, we also note that Connecticut Water was a fully integrated company, was publicly traded which the Wastewater System is not, and therefore, may overstate the value of the Wastewater System.

The results of the market multiples method shown on Exhibit 17 indicate value of $21.5 million. The results of the selected transactions method shown on Exhibit 18 indicate value of $21.1 million. Based on the aforesaid results, the Market Approach to valuation indicates a value of $21.3 million for the Wastewater System based on the results of the market multiples method and the selected transactions method.

Conclusion. We summarize our findings for the Wastewater System on Exhibit 19. Our finding for the Wastewater System is based on the Cost, Market, and Income Approaches to valuation. We used seven methods under the Cost, Market, and Income Approaches to valuation: Original Cost Method, Replacement Cost Method, Capitalization of Earnings Method, Market Multiple Discounted Cash Flow Method, Capitalization Discounted Cash Flow Method, Market Multiples Method, and the Selected Transactions Method.

The results from the market multiple discounted cash flow method and the capitalization discounted cash flow method form the basis for our Income Approach. Our Market Approach is supported by the market multiples method and selected transactions method. The results from the original cost method form the basis for our replacement cost method, and both methods form the basis for our Cost Approach.

We considered the results of each approach as an indicator of value individually, or as independent indicators of value. Therefore, all three approaches to valuation were given consideration in arriving at our estimate of the fair market value conclusion. Based on these facts, our conclusion regarding the fair market value is $25.6 million. Our conclusion regarding the fair market value can be described by the weights and the specific results of the three approaches to valuation that are shown on Exhibit 19. The results of our analyses, shown on Exhibit 19, indicate

a range of value for the Wastewater System of $21.3 million to $31.1 million and collectively indicate a fair market value of $25,613,000 for the Wastewater System.

# APPENDIX A - QUALIFICATIONS

**APPENDIX A**

Professional Qualifications
of
Harold Walker, III
Manager, Financial Studies
Gannett Fleming Valuation and Rate Consultants, LLC.

## EDUCATION

Mr. Walker graduated from Pennsylvania State University in 1984 with a Bachelor of Science Degree in Finance. His studies concentrated on securities analysis and portfolio management with an emphasis on economics and quantitative business analysis. He has also completed the regulation and the rate-making process courses presented by the College of Business Administration and Economics Center for Public Utilities at New Mexico State University. Additionally, he has attended programs presented by The Institute of Chartered Financial Analysts (CFA).

Mr. Walker was awarded the professional designation "Certified Rate of Return Analyst" (CRRA) by the Society of Utility and Regulatory Financial Analysts. This designation is based upon education, experience, and the successful completion of a comprehensive examination. He is also a member of the Society of Utility and Regulatory Financial Analysts (SURFA) and has attended numerous financial forums sponsored by the Society. The SURFA forums are recognized by the Association for Investment Management and Research (AIMR) and the National Association of State Boards of Accountancy for continuing education credits.

Mr. Walker is also a licensed Municipal Advisor Representative (Series 50) by Municipal Securities Rulemaking Board (MSRB) and Financial Industry Regulatory Authority (FINRA).

## BUSINESS EXPERIENCE

In 1996, Mr. Walker joined Gannett Fleming Valuation and Rate Consultants, LLC. In his capacity as Manager, Financial Studies and for the past 25 years, he has continuously studied rates of return requirements for regulated firms. In this regard, he supervised the preparation of rate of return studies in connection with his testimony and in the past, for other individuals. He also assisted and/or developed dividend policy studies, nuclear prudence studies, calculated fixed charge rates for avoided costs involving cogeneration projects, financial decision studies for capital budgeting purposes and developed financial models for determining future capital requirements and the effect of those requirements on investors and ratepayers, valued utility property and common stock for acquisition and divestiture, and assisted in the private placement of fixed capital securities for public utilities.

Head, Gannett Fleming GASB 34 Task Force responsible for developing Governmental Accounting Standards Board (GASB) 34 services and educating Gannett Fleming personnel and

Gannett Fleming clients on GASB 34 and how it may affect them. The GASB 34 related services include inventory of assets, valuation of assets, salvage estimation, annual depreciation rate determination, estimation of depreciation reserve, asset service life determination, asset condition assessment, condition assessment documentation, maintenance estimate for asset preservation, establishment of condition level index, geographic information system (GIS) and data management services, management discussion and analysis (MD&A) reporting, required supplemental information (RSI) reporting, auditor interface, and GASB 34 compliance review.

In 2004, Mr. Walker was elected to serve on the Board of Directors of SURFA. Previously, he served as an ex-officio directors as an advisor to SURFA's existing President. In 2000, Mr. Walker was elected President of SURFA for the 2001-2002 term. Prior to that, he was elected to serve on the Board of Directors of SURFA during the period 1997-1998 and 1999-2000. Currently, he also serves on the Pennsylvania Municipal Authorities Association, Electric Deregulation Committee.

Prior to joining Gannett Fleming Valuation and Rate Consultants, LLC., Mr. Walker was employed by AUS Consultants - Utility Services. He held various positions during his eleven years with AUS, concluding his employment there as a Vice President. His duties included providing and supervising financial and economic studies on behalf of investor owned and municipally owned water, wastewater, electric, natural gas distribution and transmission, oil pipeline and telephone utilities as well as resource recovery companies.

Mr. Walker was also the Publisher of C.A. Turner Utility Reports from 1988 to 1996. C.A. Turner Utility Reports is a financial publication which provides financial data and related ratios and forecasts covering the utility industry. From 1993 to 1994, he became a contributing author for the Fortnightly, a utility trade journal. His column was the Financial News column and focused mainly on the natural gas industry.

**EXPERT TESTIMONY**

Mr. Walker has submitted testimony or been deposed on various topics before regulatory commissions and courts in 26 states including: Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Idaho, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, Nevada, New Jersey, New York, North Carolina, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, and West Virginia. His testimonies covered various subjects including: fair market value, the taking of natural resources, appropriate capital structure and fixed capital cost rates, depreciation, fair rate of return, purchased water adjustments, synchronization of interest charges for income tax purposes, valuation, cash working capital, lead-lag studies, financial analyses of investment alternatives, benchmarking, and fair value.

## PROFESSIONAL AFFILIATIONS

Society of Utility and Regulatory Financial Analysts
- Board of Directors, 1996-2000, 2005-2008
- President, 2000-2002
- Treasurer, 1996-1998

National Association of Water Companies
Pennsylvania Municipal Authorities Association
- Electric Deregulation Committee

## TECHNICAL PUBLICATIONS & PRESENTATIONS

Walker, Harold. Panelist "Now is the Time to Maximize Your Utility's Value." Presented at the Pennsylvania Association of Township Supervisors 97th Annual State Convention, April 2019.

Walker, Harold. Panelist "Fair Market Acquisitions Debate." Presented at National Association of Regulatory Utilities Commissioners Winter Policy Summit, February 2019.

Walker, Harold. Panelist "Fair Market Value Legislation." Presented at the National Association of Water Companies Water Summit, October 2018.

Walker, Harold. Panelist "Leveraging Water & Sewer to Address Roads, Schools, and Pension Obligations." Presented at the Maryland Association of Counties 2018 Summer Conference, August 2018.

Walker, Harold. Panelist "Is the Glass Half Full or Half Empty? Valuing Municipal Water Acquisitions." Presented at the Mid-Atlantic Conference of Regulatory Utilities Commissioners 23rd Annual Education Conference, June 2018.

Walker, Harold. "Valuation and Inventory of Governmental Assets Under GASB 34." Presented at the Society of Depreciation Professionals 21st Annual Conference, September 2007.

Walker, Harold. "The Paradox of State Regulatory Opinions and Investor Behavior." Presented at the National Association of Water Companies New England Chapter conference, November 2006.

Walker, Harold. "Valuation and Inventory Under GASB 34." Presented at the Government Finance Officers Association South Central Pennsylvania Regional Chapter conference, August 2003.

Walker, Harold. "Valuation and Inventory under GASB 34." Presented at the Government Finance Officers Association Southeastern Pennsylvania Regional Chapter conference, April 2002.

Walker, Harold. "GASB 34 & Your Infrastructure." *The Authority,* August 2001, Volume XXXII, No. 4, pages 10-13.

Walker, Harold. "Managing Risk." Conference Chairperson, presented at the Society of Utility & Regulatory Financial Analysts 33rd Financial Forum, April 2001.

Walker, Harold. "Paying for Your MSW System - Waste Generation Fees." Presented at the Federation of New York Solid Waste Association Solid Waste/Recycling Conference and Trade Show, May 2001.

Walker, Harold. "Statement No. 34 of the Government Accounting Standards Board." Presented at the Pennsylvania Association of Township Supervisors 79th Annual State Convention, April 2001.

Walker, Harold. "Cost of Capital Issues." Presented at the National Association of Water Companies New England Chapter conference, October 2000.

Walker, Harold, Timothy Hartman, and Mark Everett. "Waste Generation Study: Life After Flow Control." Presented at Waste Con 2000, October 1999.

Walker, Harold, and Timothy Hartman. "The Enhancement of Revenues Through a Waste Generation Study." Presented at SWANA's Planning and Management Symposium, July 1999.

# APPENDIX B - KNOWN IMPACT OF COVID-19

## APPENDIX B

Known Impact of COVID-19

On March 11, 2020, the World Health Organization ("WHO") declared a quickly spreading coronavirus infection a pandemic ("COVID-19"). A coronavirus is a kind of common virus that causes an infection in sinuses, or upper throat. An outbreak of a new strain of coronavirus was first reported in Wuhan, China in late 2019 and quickly spread around the world. The WHO named the virus SARS-CoV-2, and the disease COVID-19. A pandemic is a disease outbreak that spreads widely across countries or continents. Categorizing a disease as a pandemic does not signify lethality nor economic calamity. Rather, labeling a disease as a pandemic indicates its spread over a wide geographic area and affecting a high proportion of the population.

The valuation date (June 28, 2021) is the specific date at which the value of the Wastewater System is based. Generally, only the circumstances existing at the valuation date and events occurring up to the valuation date are considered. Events which could affect the value may occur after the valuation date but have no bearing on an appraised value.

Nevertheless, we have included subsequent information since the valuation date in this appendix (Appendix B) regarding COVID-19's known impact for informational purposes only and this information does not affect the determination of value as of our valuation date of June 28, 2021.

The United States Environmental Protection Agency ("EPA") is providing information on drinking water and wastewater to provide clarity to the public regarding COVID-19. According to EPA, the COVID-19 virus has not been detected in drinking-water supplies. Based on current

evidence, the risk to water supplies is low.[20] EPA has also stated that wastewater treatment plants treat the COVID-19 virus, "wastewater treatment plants treat viruses and other pathogens. Coronavirus, which causes COVID-19, is a type of virus that is particularly susceptible to disinfection. Standard treatment and disinfectant processes at wastewater treatment plants are expected to be effective."[21] EPA sent a "letter to Governors in all 50 states, territories, tribes and Washington, DC, requesting that water and wastewater workers, as well as the manufacturers and suppliers who provide vital services and materials to the water sector, are considered essential workers and businesses by state authorities when enacting restrictions to curb the spread of COVID-19."[22]

In response to COVID-19 the Federal Reserve has provided monetary and fiscal stimulus to increase liquidity in the form of new fiscal stimulus programs and rate cuts. "For context, new fiscal stimulus and total fiscal deficits in the US are roughly double the levels seen in 2008-2009, and the US fiscal deficit we project for 2020 of 15%-18% is only matched by deficits seen at the height of WWII in 1942-1943."[23] The combined result of these actions by the Federal Reserve and investors' flight to quality have resulted in artificial and historically low risk-free rates as measured by the 30-year treasury bond yield. Public utility bond yields have not fluctuated to the degree which yields of 30-year treasury bonds have. This is evident by the initial widening of the yield spread or default spread shown in **Table 3** (below) from pre-COVID-19 levels compared to the 30-year treasury bond yield low of 0.99% on March 9, 2000. Recently, the yield spread, or default spread, has returned much closer to the pre-COVID-19 levels.

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20 https://www.epa.gov/coronavirus, 5/27/20.
21 https://www.epa.gov/coronavirus/do-wastewater-treatment-plants-treat-covid-19 ,7/31/20.
22 https://www.epa.gov/coronavirus/coronavirus-and-drinking-water-and-wastewater, 5/27/20
23 https://www.jpmorgan.com/jpmpdf/1320748588999.pdf, 5/29/20.

| | | | Bond Yields | | | Yield Spread | |
|---|---|---|---|---|---|---|---|
| | | | 30-Year Treasury Bond | A Rated Public Utility Bond | Baa Rated Public Utility Bond | A Rated Yield LESS 30-Year Bond | Baa Rated LESS 30-Year Bond |
| | Monthly | Sep-2019 | 2.16 | 3.37 | 3.71 | 1.21 | 1.55 |
| | Monthly | Oct-2019 | 2.19 | 3.39 | 3.72 | 1.20 | 1.53 |
| | Monthly | Nov-2019 | 2.28 | 3.43 | 3.76 | 1.15 | 1.48 |
| | Monthly | Dec-2019 | 2.30 | 3.40 | 3.73 | 1.10 | 1.43 |
| | Daily | 1/30/20 | 2.04 | 3.13 | 3.45 | 1.09 | 1.41 |
| | Daily | 2/27/20 | 1.79 | 3.03 | 3.34 | 1.24 | 1.55 |
| * | Daily | 3/9/20 | 0.99 | 2.76 | 3.27 | 1.77 | 2.28 |
| ** | Daily | 6/28/21 | 2.10 | 3.10 | 3.34 | 1.00 | 1.24 |
| | Daily | 7/27/21 | 1.89 | 2.92 | 3.18 | 1.03 | 1.29 |

*** - 30-year Treasury yield low**
**** - Valuation date of current appraisal**

**Table 3**

Prior to the COVID-19 pandemic, the previous all-time market high for the S&P 500 Index occurred on February 19, 2020. After February 19, 2020, the COVID-19 pandemic resulted in large-scale economic shutdowns, produced widespread stock market turbulence, and generally resulted in decreased financial asset prices for some sectors of the economy. As a result, by March 23, 2020 the S&P 500 index had decline by 34% from its February 19, 2020 peak. More recently, between June 28, 2021 and July 27, 2021, the S&P 500 Index reached several new all-time highs and is currently 97% above its March 23, 2020 closing price. During this entire period of widespread stock market turbulence, the asset prices reflected in water utility and wastewater utility market valuations have remained relatively steady as demonstrated by the Comparison

Group's market multiples shown in **Table 4** below.[24]

| | Water Utility Comparsion Group Enterprise Value as a Multiple of | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Invest. Capital | Gross PP&E | Net PP&E | Rev. | EBITDA | EBIT | Customers | Population |
| | (x) | (x) | (x) | (x) | (x) | (x) | ($) | ($) |
| 12/31/2017 | 2.04 | 1.20 | 1.57 | 6.00 | 15.07 | 21.23 | $7,348 | $1,994 |
| 4/30/2018 | 1.94 | 1.17 | 1.54 | 6.11 | 14.48 | 20.78 | $7,131 | $1,843 |
| 11/30/2018 | 1.90 | 1.17 | 1.55 | 7.06 | 16.34 | 23.99 | $7,538 | $2,120 |
| 2/28/2019 | 2.03 | 1.20 | 1.59 | 7.34 | 16.48 | 24.10 | $8,042 | $2,303 |
| 6/30/2019 | 2.25 | 1.40 | 1.83 | 7.88 | 18.03 | 26.89 | $8,368 | $2,463 |
| 12/31/2019 | 2.00 | 1.35 | 1.76 | 8.30 | 20.08 | 29.37 | $9,631 | $2,879 |
| * 6/28/2021 | 2.06 | 1.48 | 1.88 | 8.41 | 19.75 | 28.93 | $9,841 | $3,037 |
| 7/27/2021 | 2.19 | 1.56 | 1.97 | 8.83 | 20.77 | 29.98 | $11,304 | $3,250 |

*** - Valuation date of current appraisal**

Comment:

Valuation date of 12/31/2017 from East Bradford Township A-2018-3001582
http://www.puc.state.pa.us/about_puc/consolidated_case_view.aspx?Docket=A-2018-3001582
Valuation date of 04/30/2018 from Exeter Township – A-2018-3004933
http://www.puc.state.pa.us/about_puc/consolidated_case_view.aspx?Docket=A-2018-3004933
Valuation date of 11/30/2018 from Cheltenham Township – A-2019-3008491
http://www.puc.state.pa.us/about_puc/consolidated_case_view.aspx?Docket=A-2019-3008491
Valuation date of 02/28/2019 from East Norriton – A-2019-3009052
http://www.puc.state.pa.us/about_puc/consolidated_case_view.aspx?Docket=A-2019-3009052
Valuation date of 06/30/2019 from Borough of Kane Authority – A-2019-3014248
http://www.puc.state.pa.us/about_puc/consolidated_case_view.aspx?Docket=A-2019-3014248
Valuation date of 12/31/2019 from DELCORA – A-2019-3015173
http://www.puc.state.pa.us/about_puc/consolidated_case_view.aspx?Docket=A-2019-3015173

**Table 4**

Even though most of the US may likely be affected by COVID-19's related economic effects, we believe those effects will vary greatly from place-to-place dependent on the nature of

24 The first six spot dates and the related multiples shown in the market multiples Table 4 were taken from recent Gannett Fleming appraisals filed with the PA PUC.

the business sectors which comprise each local economy and their concentration within the local economy. We do not believe the appraised value of the long-lived Wastewater System assets will be materially impacted by the COVID-19 or its related relatively short-term events. The Wastewater System's customer base is not heavily dependent on customers from sectors of the economy providing tourism and travel, employment services, mining/oil and gas (energy), and leisure and hospitality which have been most impacted by COVID-19's related short-term events. Therefore, even on a short-term basis, the Wastewater System's revenues and cash flows should not be materially impacted on a relative basis.

# COMPLIANCE & APPRAISAL CERTIFICATION

# Compliance with Uniform Standards of Professional Appraisal Practice (USPAP) 2020-2021

## Fulfillment of Requirements for a Personal Property Appraisal and Report

- **State the identity of the client and any intended users, by name or type:**

  The client is Aqua Pennsylvania Wastewater, Inc. The intended users of the valuation are Aqua Pennsylvania Wastewater, Inc., and the Pennsylvania Public Utility Commission.

- **State the intended use of the appraisal**

  The intended use of the valuation is to comply with 66 Pa. C.S. Section 1329, Valuation of Acquired Water and Wastewater Systems and conduct a fair market value appraisal of Willistown Township's Wastewater System assets in compliance with the Uniform Standards of Professional Appraisal Practices, employing the cost, market, and income approaches.

- **Describe information sufficient to identify the property, real, personal, and intangible, involved in the appraisal, including the physical and economic property characteristics relevant to the assignment.**

  Willistown Township owns and operates the Wastewater System which consists of a wastewater treatment plant with spray irrigation fields and aeration lagoons, six pump stations, two booster stations, about 41 miles of mains, approximately 721 manholes, associated infrastructure and appurtenances, and related land and land rights.

  Wastewater from the Township's Willistown Chase and Penn's Preserve subdivisions are conveyed to the Wastewater System's Penn's Preserve wastewater treatment plant. The Penn's Preserve Wastewater Treatment Plant was constructed in 1997-1998 and contains of one Aerated Lagoon, one Storage Lagoon, three Floating Aerators, three Spray Pumps, a Service Building, a Sodium Hypochlorite Disinfection System, and a Spray Irrigation System.

  Wastewater from 21 homes in Willistown Township is conveyed to the East Goshen Township sanitary sewer system and ultimately treated at the Ridley Creek Wastewater Treatment Plant.

  The Wastewater System accepts flows from the adjoining municipalities of East Whiteland Township and Malvern Borough. All Wastewater System wastewater not treated at the Penn's Preserve wastewater treatment plant or the Ridley Creek wastewater treatment plant is conveyed via the Valley Creek Trunk Sewer through

Tredyffrin and Easttown Townships to the Valley Forge Sewer Authority Wastewater Treatment Plant in Schuylkill Township for treatment.

The Wastewater System's six pump stations are: Pump Station #1, Pump Station #2, Pump Station #3, Pump Station #4, Penn's Preserve Pump Station (PS 5), and the Dovecote Pump Station. The Wastewater System's two booster stations include Booster Pump Station #1 and Booster Pump Station #2. The Wastewater System has approximately 78,137 linear feet of force and low-pressure mains ranging in size from 1.5 to 14 inches diameter and were installed between 1977 to 2009. The force mains consist of high density poly ethylene ("HDPE"), ductile iron ("DIP") and polyvinyl chloride ("PVC") pipe.

The Wastewater System's 136,419 linear feet of gravity sewer collection mains consist of 8-inch, 10-inch, 12-inch, 15-inch, 16-inch, and 18-inch diameter pipe which was installed between 1977 to 2017. About 79% of the gravity mains were installed in the 1970s, 17% between 1980 and 1999, and 4% after 1999. The mains consist of asbestos-cement ("ACP"), cast iron ("CIP"), DIP, PVC, and vitrified clay ("VCP") pipe. There are 721 manholes and 2,294 service laterals in the system.

Willistown Township's Wastewater System land and land rights include land used for wastewater treatment, collection, and transmission, about 41 miles of mains, 6 pump stations, two booster stations and multiple easements and rights-of-way necessary to operate the Wastewater System.

- **State the type and definition of value and cite the source of the definition, including whether the opinion of value is in terms of cash or of financing terms equivalent to cash, or based on non-market financing or financing with unusual conditions or incentives**

Fair market value is defined as:

> "The price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts." The International Glossary of Business Valuation Standards

# Compliance with Uniform Standards of Professional Appraisal Practice (USPAP) 2020-2021

## Fulfillment of Requirements for a Personal Property Appraisal and Report

- **State the effective date of the appraisal and the date of the report**

  The effective date of the appraisal is as of June 28, 2021 and the appraisal report date is July 29, 2021.

- **Describe sufficient information to disclose to the client and any other intended users of the appraisal the scope of work used to develop the appraisal**

  Conduct a fair market value appraisal of the Willistown Township's Wastewater System assets in compliance with the Uniform Standards of Professional Appraisal Practices, employing the cost, market, and income approaches.

  The premise of value is going concern and the assets are valued as a group under the premise that they collectively comprise an ongoing operating business enterprise.

  We accepted all information and data provided by the Willistown Township and Aqua Pennsylvania Wastewater, Inc. as it pertains to this assignment "as is" after a limited review. That is, we neither audited nor verify any data, original cost data, financial records or operating data provided for this assignment.

  The appraisal considered all three approaches to value: the cost, income and market. Briefly the scopes of work for each are as follows:

  The cost approach utilized the original cost method and replacement cost method. The reproduction cost method was calculated by trending (trended cost method) the asset inventory developed by Pennoni Associates Inc. from its original cost new inventory. The original cost method determined the original cost new measure of the cost of the assets when first constructed. The original cost new inventory was trended using the Handy Whitman Index of Public Utility Construction Costs for the water industry to produce the reproduction cost new and converted to replacement cost new after obsolescence was factored. The calculated accrued depreciation was determined for the original cost new and for the replacement cost new. The calculated accrued depreciation was based on the assets' attained ages, and the service life of the assets. The cost basis of depreciable assets was reduced annually by the accumulated depreciation to reflect the loss in the service value of the assets since being constructed. All land and land rights were valued at original cost.

  Income Approach - The income approach utilized the capitalization of earning (cash flow) method and the discounted cash flow method. The capitalization of earning method converted a single base economic income number to a value by

dividing it by a capitalization rate. The discounted cash flow method used estimates of future debt free net cash flow and discounted them to arrive at a present value or price of the cash flows. The capitalization rate and the discount rate were developed based on market debt and equity rates at the appraisal date. The discounted cash flow method reflected two types of discounted cash flow analyses, the EBIT and EBITDA terminal value model and a capitalization of terminal value model.

Market Approach - The market approach was developed based on the market multiples method and the selected transaction method. The market multiples method was based on the market price data of publicly traded corporations engaged in the same or a similar line of business as the Wastewater System. The market price data of these comparable publicly traded corporations was used to calculate the market multiples for the comparable publicly traded corporations at the appraisal date. The selected transactions method used certain public information relating to the purchase or sales of businesses involved in the same or a similar business line as the Wastewater System to calculated market multiples at the time of transaction (sale/purchase). The calculated market multiples determined by the market multiples method and the selected transaction method were then multiplied by the corresponding the Wastewater System financial and operating statistic to produce an indicated value for the Wastewater System.

Reconciliation of the Valuation Approaches - The fair market value conclusion was based on reconciliation of each of the three approaches to value and the intended purpose of the appraisal.

- **Clearly and conspicuously:**
  - **State all extraordinary assumptions and hypothetical conditions;**

    There were no extraordinary assumptions required or hypothetical conditions in this appraisal.

  - **State that their use might have affected the assignment results**

    Not applicable.

- **Clearly and accurately disclose all assumptions, extraordinary assumptions, hypothetical conditions, and limiting conditions used in the assignment**

  Not applicable.

- **Describe the information analyzed, the appraisal procedures followed, and the reasoning that supports the analyses, opinions, and conclusions**

  See scope of work above.

- **State the use of the real estate existing as of the date of value and the use of the real estate reflected in the appraisal**

  Willistown Township's Wastewater System land and land rights include land used for wastewater treatment, collection, and transmission, about 41 miles of mains, 6 pump stations, two booster stations and multiple easements and rights-of-way necessary to operate the Wastewater System.

  The Willistown Township Wastewater System's land and land rights were assumed to be used for the operation of the Wastewater System for the appraisal.

- **State and describe the support and rationale for the appraiser's opinion of the highest and best use of the real estate**

  All land and land rights were assumed to be used for the operation of the Wastewater System for the appraisal, were valued at original cost, and not at highest and best use of the real estate.

- **State and explain any permitted departures from specific requirements of STANDARD 1 and the reason for excluding any of the usual valuation approaches. The appraisal then becomes a limited appraisal - a limited appraisal report must contain a prominent section that clearly identifies the extent of the appraisal process performed and the departures taken**

  No departures for Standard 1 were made.

- **Include a signed certification in accordance with Standards Rule 2-3**

  See attached for signed certification.

# APPRAISAL CERTIFICATION

## Willistown Township, Pennsylvania

## Willistown Township

## Wastewater System Assets

## Fair Market Value Appraisal Report

## As of June 28, 2021

Gannett Fleming Valuation and Rate Consultants, LLC certify that, to the best of its knowledge and belief:

- The statements of fact contained in this report are true and correct.

- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are our personal, impartial, and unbiased professional analyses, opinions, and conclusions.

- Gannett Fleming Valuation and Rate Consultants, LLC has not performed an appraisal of the Willistown Township Wastewater System prior to this current appraisal.

- Gannett Fleming Valuation and Rate Consultants, LLC, nor its professional staff has any present or prospective interest in the property that is the subject of this report, and has no interest or bias with respect to the parties involved.

- We have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.

- Our engagement in this assignment is not contingent upon developing or reporting predetermined results.

- Our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.

- Our analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice (2020-2021)

# APPRAISAL CERTIFICATION

## Willistown Township, Pennsylvania

## Willistown Township

## Wastewater System Assets

## Fair Market Value Appraisal Report

## As of June 28, 2021

— The signers of this report relied upon Gregory R. Herbert, Rate Analyst at Gannett Fleming Valuation and Rate Consultants, LLC, who viewed or observed the property that is the subject of this report.

— Individuals providing significant appraisal assistance to the person signing this certification include: John J. Spanos, President, Joanna Lappin, Depreciation Analyst and Gregory R. Herbert, Rate Analyst at Gannett Fleming Valuation and Rate Consultants, LLC.

Gannett Fleming Valuation and Rate Consultants, LLC

By,

HAROLD WALKER, III

Manager, Financial Studies

EXHIBITS

Willistown Township Wastewater System Assets
Selected Audited Financial Information

| | 12-Months Ended December 31: | | | |
|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 |
| Gross property, plant & equipment | 7,652,651 | 7,976,084 | 7,799,427 | 8,673,707 |
| Accumulated depreciation | 2,823,990 | 3,317,549 | 3,309,006 | 3,786,175 |
| Net property, plant & equipment | 4,828,661 | 4,658,535 | 4,490,421 | 4,887,532 |
| Assets | 8,351,137 | 8,020,903 | 10,335,767 | 10,513,795 |
| Debt Current | 250,100 | 258,300 | 262,400 | 266,500 |
| Debt | 4,952,947 | 4,681,223 | 4,405,399 | 4,125,475 |
| Equity | 1,992,069 | 1,339,727 | 5,100,937 | 5,474,746 |
| Total Capital | 7,195,116 | 6,279,250 | 9,768,736 | 9,866,721 |
| OPERATING REVENUES | | | | |
| Charges for services | 1,901,840 | 2,016,468 | 2,011,578 | 2,211,380 |
| Other operating income | 0 | 0 | 0 | 0 |
| TOTAL OPERATING REVENUES | 1,901,840 | 2,016,468 | 2,011,578 | 2,211,380 |
| Expenses | 3,818,757 | 2,155,928 | 1,423,308 | 1,876,648 |
| Depreciation | 481,692 | 493,559 | 505,633 | 477,169 |
| TOTAL OPERATING EXPENSES | 4,300,449 | 2,649,487 | 1,928,941 | 2,353,817 |
| CAPX | 0 | 323,433 | 513,332 | 874,280 |
| Interest | 144,332 | 134,656 | 127,153 | 119,404 |
| Principal | 255,324 | 263,524 | 271,724 | 275,824 |
| Transfer (net of CAPX fund) | 0 | 0 | 0 | 0 |

Source of Information: Audited Financial Statements (2016-2019)

Willistown Township Wastewater System Assets
Population, Housing Units, Customers and EDUs
Customer Count

| | 2020 | Population To Customers |
|---|---|---|
| Population | 11,214 | 4.9 |
| Housing Units | 4,835 | |
| Average Size | 2.32 | |

| | Current |
|---|---|
| Customers | |
| Residential & Commercial | 2,294 |
| Total | 2,294 |
| | |
| Total EDUs | 4,961 |

Projected New EDUs

| | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| New EDUs | 1 | 13 | 13 | 13 | 0 |

Population and Housing Units (2020)

| Total Population | Population in Households | Total Housing Units | Vacancy Rate | Population per Housing Unit |
|---|---|---|---|---|
| 11,214 | 10,995 | 4,835 | 5.7% | 2.32 |

**TABLE 3.1 US Population Census Counts, 2000 & 2010**

| State | Population 2000 | Population 2010 | Percentage Change |
|---|---|---|---|
| Alabama | 4,447,351 | 4,779,736 | 7.5% |
| Alaska | 626,931 | 710,231 | 13.3% |
| Arizona | 5,130,632 | 6,392,017 | 24.6% |
| Arkansas | 2,673,400 | 2,915,918 | 9.1% |
| California | 33,871,653 | 37,253,956 | 10.0% |
| Colorado | 4,302,015 | 5,029,196 | 16.9% |
| Connecticut | 3,405,602 | 3,574,097 | 4.9% |
| Delaware | 783,600 | 897,934 | 14.6% |
| District of Columbia | 572,059 | 601,723 | 5.2% |
| Florida | 15,982,824 | 18,801,310 | 17.6% |
| Georgia | 8,186,816 | 9,687,653 | 18.3% |
| Hawaii | 1,211,537 | 1,360,301 | 12.3% |
| Idaho | 1,293,956 | 1,567,582 | 21.1% |
| Illinois | 12,419,647 | 12,830,632 | 3.3% |
| Indiana | 6,080,517 | 6,483,802 | 6.6% |
| Iowa | 2,926,382 | 3,046,355 | 4.1% |
| Kansas | 2,688,824 | 2,853,118 | 6.1% |
| Kentucky | 4,042,285 | 4,339,367 | 7.3% |
| Louisiana | 4,468,958 | 4,533,372 | 1.4% |
| Maine | 1,274,923 | 1,328,361 | 4.2% |
| Maryland | 5,296,507 | 5,773,552 | 9.0% |
| Massachusetts | 6,349,105 | 6,547,629 | 3.1% |
| Michigan | 9,938,480 | 9,883,640 | -0.6% |
| Minnesota | 4,919,492 | 5,303,925 | 7.8% |
| Mississippi | 2,844,656 | 2,967,297 | 4.3% |
| Missouri | 5,596,683 | 5,988,927 | 7.0% |
| Montana | 902,195 | 989,415 | 9.7% |
| Nebraska | 1,711,265 | 1,826,341 | 6.7% |
| Nevada | 1,998,257 | 2,700,551 | 35.1% |
| New Hampshire | 1,235,786 | 1,316,470 | 6.5% |
| New Jersey | 8,414,347 | 8,791,894 | 4.5% |
| New Mexico | 1,819,046 | 2,059,179 | 13.2% |
| New York | 18,976,821 | 19,378,102 | 2.1% |
| North Carolina | 8,046,485 | 9,535,483 | 18.5% |
| North Dakota | 642,200 | 672,591 | 4.7% |
| Ohio | 11,353,145 | 11,536,504 | 1.6% |
| Oklahoma | 3,450,652 | 3,751,351 | 8.7% |
| Oregon | 3,421,436 | 3,831,074 | 12.0% |
| Pennsylvania | 12,281,054 | 12,702,379 | 3.4% |
| Rhode Island | 1,048,319 | 1,052,567 | 0.4% |
| South Carolina | 4,011,816 | 4,625,364 | 15.3% |
| South Dakota | 754,844 | 814,180 | 7.9% |
| Tennessee | 5,689,267 | 6,346,105 | 11.5% |
| Texas | 20,851,790 | 25,145,561 | 20.6% |
| Utah | 2,233,198 | 2,763,885 | 23.8% |
| Vermont | 608,827 | 625,741 | 2.8% |
| Virginia | 7,079,030 | 8,001,024 | 13.0% |
| Washington | 5,894,141 | 6,724,540 | 14.1% |
| West Virginia | 1,808,350 | 1,852,994 | 2.5% |
| Wisconsin | 5,363,715 | 5,686,986 | 6.0% |
| Wyoming | 493,782 | 563,626 | 14.1% |
| Total - States & D.C. | 281,424,603 | 308,745,538 | 9.7% |

Source: U.S. Census Bureau, Population Division

**TABLE 3.2 Pennsylvania Population Census by County and Municipality, 2000 & 2010**

| Geographic Area | Population 2000 | Population 2010 | Percentage Change | Municipal Growth Rank |
|---|---|---|---|---|
| Pennsylvania | 12,281,054 | 12,702,379 | 3.4% | - |
| Chester County | 433,501 | 498,886 | 15.1% | - |
| Willistown township | 10,011 | 10,497 | 4.9% | 817 out of 2,572 |

Source: U.S. Census Bureau,Census 2000 & 2010 Redistricting Data (Public Law 94-171) Summary File.

**TABLE 3.3 Forecasted Population by County and Municipality, 2015-2045**

| | Population | | | | | | | Percentage Change | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Estimate 2015 | Forecast 2020 | Forecast 2025 | Forecast 2030 | Forecast 2035 | Forecast 2040 | Forecast 2045 | 2015 to 2020 | 2020 to 2025 | 2025 to 2030 | 2030 to 2035 | 2035 to 2040 | 2040 to 2045 | 2015 to 2045 |
| Bucks County | 627,367 | 640,495 | 654,792 | 669,299 | 681,273 | 691,111 | 699,498 | 2.1% | 2.2% | 2.2% | 1.8% | 1.4% | 1.2% | 11.5% |
| Chester County | 515,939 | 543,702 | 571,641 | 599,932 | 624,832 | 645,562 | 662,283 | 5.4% | 5.1% | 4.9% | 4.2% | 3.3% | 2.6% | 28.4% |
| Delaware County | 563,894 | 568,337 | 572,758 | 577,248 | 581,136 | 584,329 | 587,037 | 0.8% | 0.8% | 0.8% | 0.7% | 0.5% | 0.5% | 4.1% |
| Montgomery County | 819,264 | 840,934 | 863,327 | 884,387 | 903,114 | 918,918 | 932,820 | 2.6% | 2.7% | 2.4% | 2.1% | 1.7% | 1.5% | 13.9% |
| Philadelphia County | 1,567,443 | 1,594,787 | 1,616,816 | 1,643,971 | 1,667,290 | 1,683,402 | 1,696,133 | 1.7% | 1.4% | 1.7% | 1.4% | 1.0% | 0.8% | 8.2% |
| Subtotal - Five Pennsylvania Counties | 4,093,907 | 4,188,255 | 4,279,334 | 4,374,837 | 4,457,645 | 4,523,322 | 4,577,771 | 2.3% | 2.2% | 2.2% | 1.9% | 1.5% | 1.2% | 11.8% |
| Burlington County | 450,226 | 459,344 | 468,428 | 475,978 | 482,560 | 488,026 | 492,709 | 2.0% | 2.0% | 1.6% | 1.4% | 1.1% | 1.0% | 9.4% |
| Camden County | 510,923 | 514,006 | 517,073 | 520,189 | 522,886 | 525,101 | 526,997 | 0.6% | 0.6% | 0.6% | 0.5% | 0.4% | 0.4% | 3.1% |
| Gloucester County | 291,479 | 307,766 | 323,969 | 340,425 | 354,677 | 366,383 | 376,308 | 5.6% | 5.3% | 5.1% | 4.2% | 3.3% | 2.7% | 29.1% |
| Mercer County | 371,398 | 377,328 | 383,227 | 389,219 | 394,407 | 398,669 | 402,283 | 1.6% | 1.6% | 1.6% | 1.3% | 1.1% | 0.9% | 8.3% |
| Subtotal - Four New Jersey Counties | 1,624,026 | 1,658,444 | 1,692,697 | 1,725,811 | 1,754,530 | 1,778,179 | 1,798,297 | 2.1% | 2.1% | 2.0% | 1.7% | 1.3% | 1.1% | 10.7% |
| Total - Nine DVRPC Counties | 5,717,933 | 5,846,699 | 5,972,031 | 6,100,648 | 6,212,175 | 6,301,501 | 6,376,068 | 2.3% | 2.1% | 2.2% | 1.8% | 1.4% | 1.2% | 11.5% |
| Willistown Township | 10,905 | 11,177 | 11,448 | 11,724 | 11,962 | 12,158 | 12,324 | 2.5% | 2.4% | 2.4% | 2.0% | 1.6% | 1.4% | 13.0% |

Source: Delaware Valley Regional Planning Commission, June 2016.

**TABLE 3.4 Forecasted Employment by County and Municipality, 2015-2045**

| | Employment | | | | | | | Percentage Change | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Estimate 2015 | Forecast 2020 | Forecast 2025 | Forecast 2030 | Forecast 2035 | Forecast 2040 | Forecast 2045 | 2015 to 2020 | 2020 to 2025 | 2025 to 2030 | 2030 to 2035 | 2035 to 2040 | 2040 to 2045 | 2015 to 2045 |
| Bucks County | 322,731 | 329,645 | 337,203 | 344,859 | 351,310 | 356,671 | 361,124 | 2.1% | 2.3% | 2.3% | 1.9% | 1.5% | 1.2% | 11.9% |
| Chester County | 309,605 | 326,320 | 343,050 | 359,774 | 374,967 | 387,391 | 397,405 | 5.4% | 5.1% | 4.9% | 4.2% | 3.3% | 2.6% | 28.4% |
| Delaware County | 268,054 | 270,167 | 272,269 | 274,401 | 276,248 | 277,763 | 279,050 | 0.8% | 0.8% | 0.8% | 0.7% | 0.5% | 0.5% | 4.1% |
| Montgomery County | 582,443 | 598,434 | 614,469 | 629,563 | 642,996 | 654,966 | 664,385 | 2.7% | 2.7% | 2.5% | 2.1% | 1.9% | 1.4% | 14.1% |
| Philadelphia County | 772,847 | 786,308 | 797,156 | 810,574 | 822,002 | 829,937 | 836,825 | 1.7% | 1.4% | 1.7% | 1.4% | 1.0% | 0.8% | 8.3% |
| Subtotal - Five Pennsylvania Counties | 2,255,680 | 2,310,874 | 2,364,147 | 2,419,171 | 2,467,523 | 2,506,728 | 2,538,789 | 2.4% | 2.3% | 2.3% | 2.0% | 1.6% | 1.3% | 12.6% |
| Burlington County | 241,298 | 246,351 | 251,368 | 255,562 | 258,363 | 261,195 | 263,622 | 2.1% | 2.0% | 1.7% | 1.1% | 1.1% | 0.9% | 9.3% |
| Camden County | 263,582 | 265,169 | 266,753 | 268,359 | 269,750 | 270,892 | 271,869 | 0.6% | 0.6% | 0.6% | 0.5% | 0.4% | 0.4% | 3.1% |
| Gloucester County | 121,382 | 128,161 | 134,902 | 141,752 | 147,682 | 152,554 | 156,686 | 5.6% | 5.3% | 5.1% | 4.2% | 3.3% | 2.7% | 29.1% |
| Mercer County | 286,295 | 290,864 | 295,408 | 300,025 | 304,021 | 307,302 | 310,084 | 1.6% | 1.6% | 1.6% | 1.3% | 1.1% | 0.9% | 8.3% |
| Subtotal - Four New Jersey Counties | 912,557 | 930,545 | 948,431 | 965,698 | 979,816 | 991,943 | 1,002,261 | 2.0% | 1.9% | 1.8% | 1.5% | 1.2% | 1.0% | 9.8% |
| Total - Nine DVRPC Counties | 3,168,237 | 3,241,419 | 3,312,578 | 3,384,869 | 3,447,339 | 3,498,671 | 3,541,050 | 2.3% | 2.2% | 2.2% | 1.8% | 1.5% | 1.2% | 11.8% |
| Willistown Township | 7,896 | 8,118 | 8,275 | 8,436 | 8,616 | 8,769 | 8,741 | 2.8% | 1.9% | 1.9% | 2.1% | 1.8% | -0.3% | 10.7% |

Source: Delaware Valley Regional Planning Commission, September 2016. Base employment data from the National Establishments Time Series (NETS) database, 2010 and 2013.

Comparison of Credit Market Financial Risk Metrics
For Willistown Township Wastewater System Assets
And the Comparable Group
2017 - 2019 (1)

| | Willistown Township Wastewater System Assets | | | Comparable Group | | |
|---|---|---|---|---|---|---|
| | 2019 | 2018 | 2017 | 2019 | 2018 | 2017 |
| Debt Service Coverage | 0.8 | 1.5 | -0.4 | 2.0 | 3.7 | 2.7 |
| Pre-Tax Interest Coverage - Including AFC(2)(x) | -1.2 | 0.6 | -4.7 | 3.6 | 3.6 | 4.4 |
| Post-Tax Interest Coverage - Including AFC(2)(x) | -1.2 | 0.6 | -4.7 | 2.9 | 3.0 | 3.5 |
| GCF / Interest Coverage(3)(x) | 2.8 | 4.6 | -1.0 | 4.7 | 4.9 | 5.9 |
| GCF / Tot. Debt(4)(%) | 4.9 | 9.9 | -5.5 | 15.8 | 18.7 | 23.2 |
| GCF / Construction(5)(%) | 24.6 | 89.8 | -84.8 | 63.0 | 63.2 | 81.8 |

Notes: (1) Average of the achieved results for each individual company based upon the financials as originally reported.
(2) Represents the number of times available earnings, including AFC, cover all interest charges.
(3) GCF or gross cash flow (sum of net income, depreciation, amortization, net deferred income taxes and investment tax credits, less AFC), plus interest charges, divided by interest charges.
(4) GCF (see note 3) as a percentage of total debt.
(5) The percent of GCF (see note 3) which cover gross construction expenditures.

Source: 2017-19 Annual Reports and Budgets
S&P Capital IQ
EXHIBIT 1

Willistown Township Wastewater System Assets
Illustrating the Impact of Size on Risk and Retun
Through Common Stock Returns

**TABLE 5.1 Change in Return and Risk for Size-Quartiles Portfolio of the NYSE/AMEX/NASDAQ Common Stocks (1)**

| | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Beta Adjusted | |
| Market Quartile | Market Quartile Name | Average Quartile Premium 1926-18 (%) | Standard Deviation of Return (%) | Change in Quartile Premium (%) | Largest Market Value in the Quartile (Mill $) | Quartile Beta | Comparison Group Beta | Beta Ratio | Quartile Size Premium (%) | Change in Quartile Premium (%) |
| (Largest Stocks) | | | | | | | | | | |
| 1 | Large-Cap | 0.00 | 19.9 | -- | 1,073,390 | 1.00 | 0.80 | 80% | 0.00 | |
| 2 | Mid-Cap | 0.89 | 24.3 | 0.89 | 13,456 | 1.12 | 0.80 | 71% | 0.64 | 0.64 |
| 3 | Low-Cap | 1.60 | 28.5 | 0.71 | 2,993 | 1.22 | 0.80 | 66% | 1.05 | 0.41 |
| 4 | Mico-Cap | 3.40 | 38.5 | 1.80 | 728 | 1.35 | 0.80 | 59% | 2.01 | 0.97 |
| (Smallest Stocks) | | | | | | | | | | |

Notes: (1) 2019 Ibbotson Stocks, Bonds, Bills, and Inflation (SBBI) Yearbook

**TABLE 5.2 Recent Market Values and Ibbotson Associates Market Quartiles for the Comparable Group**

| | 6/28/2021 Market Value (Mill $) | Market Quartile Name | Market Quartile |
|---|---|---|---|
| Comparable Group | | | |
| American States Water Co | 2,990 | Low-Cap | 3 |
| American Water Works Co Inc | 28,551 | Large-Cap | 1 |
| Artesian Resources -Cl A | 350 | Mico-Cap | 4 |
| California Water Service Gp | 2,858 | Low-Cap | 3 |
| Essential Utilities, Inc. | 11,525 | Mid-Cap | 2 |
| Middlesex Water Co | 1,464 | Low-Cap | 3 |
| SJW Corp | 1,910 | Low-Cap | 3 |
| York Water Co | 609 | Mico-Cap | 4 |
| Median | 2,384 | Low-Cap | 3 |

Willistown Township Wastewater System Assets
Property Plant & Equipment Analysis
Capital Expenditures Analysis
Growth Rate Analyses
Profit Margin Analyses

**TABLE 6.1 Property Plant & Equipment Analysis**

(Current Know Statistics)

| | Gross Property, Plant & Equipment | Net Property, Plant & Equipment | Percentage of Property, Plant & Equipment Not Depreciated |
|---|---|---|---|
| | (Millions of $) | | |
| Willistown Township Wastewater System Assets * | $19.642 | $13.367 | 68% |
| Comparable Group | | | |
| American States Water Company | $2,137.130 | $1,562.452 | 73% |
| American Water Works Company | 26,032.000 | 20,003.000 | 77% |
| Artesian Resources Corporation | 723.349 | 571.627 | 79% |
| California Water Service Group | 3,952.681 | 2,684.936 | 68% |
| Essential Utilities, Inc. | 11,829.738 | 9,627.848 | 81% |
| Middlesex Water Company | 1,022.332 | 831.467 | 81% |
| SJW Group | 3,482.200 | 2,398.276 | 69% |
| The York Water Company | 444.757 | 351.283 | 79% |
| Median | | | 78% |

* - Developed on Exhibit 7.

**TABLE 6.2 Property Plant & Equipment Analysis for Contributions**

(As of 6/28/2021)

| | Net Property, Plant & Equipment | Investor's Capital | Percentage of Property, Plant & Equipment Net of Contributions | 2020 Percentage of Known "Cost Free" Capital |
|---|---|---|---|---|
| | (Millions of $) | | | |
| Comparable Group | | | | |
| American States Water Co | $1,562.452 | $1,230.252 | 79% | 22% |
| American Water Works Co Inc | 20,003.000 | 17,432.000 | 87% | 19% |
| Artesian Resources -CL A | 571.627 | 338.623 | 59% | 39% |
| California Water Service Gp | 2,684.936 | 2,150.889 | 80% | 28% |
| Essential Utilities, Inc. | 9,627.848 | 10,567.063 | 110% | 20% |
| Middlesex Water Co | 831.467 | 649.327 | 78% | 25% |
| SJW Corp | 2,398.276 | 2,479.118 | 103% | 26% |
| York Water Co | 351.283 | 269.306 | 77% | 28% |
| Median | | | 79% | 25% |

Willistown Township Wastewater System Assets
Property Plant & Equipment Analysis
Capital Expenditures Analysis
Growth Rate Analyses
Profit Margin Analyses

**TABLE 6.3 Capital Expenditures Analysis**

| | PP&E-Total Net | | | | Capital Expenditures | | | |
|---|---|---|---|---|---|---|---|---|
| | 2019 | 2018 | 2017 | 2016 | 2019 | 2018 | 2017 | 2016 |
| | (Millions of $) | | | | (Millions of $) | | | |
| Willistown Township Wastewater System Assets | $4.888 | $4.490 | $4.659 | $4.829 | $0.874 | $0.513 | $0.323 | $0.000 |
| Comparable Group | | | | | | | | |
| American States Water Co | $1,437.042 | $1,304.683 | $1,213.264 | $1,159.766 | $151.940 | $126.561 | $113.126 | $129.867 |
| American Water Works Co Inc | 18,335.000 | 17,409.000 | 16,246.000 | 14,992.000 | 1,654.000 | 1,586.000 | 1,434.000 | 1,311.000 |
| Artesian Resources -CL A | 535.013 | 502.527 | 464.384 | 429.383 | 40.677 | 49.053 | 41.094 | 28.251 |
| California Water Service Gp | 2,409.873 | 2,220.873 | 2,036.971 | 1,847.460 | 273.770 | 271.707 | 259.194 | 228.938 |
| Essential Utilities, Inc. | 6,358.657 | 5,930.326 | 5,399.860 | 5,001.615 | 550.273 | 495.737 | 478.089 | 382.996 |
| Middlesex Water Co | 722.044 | 628.476 | 566.718 | 526.907 | 89.125 | 72.094 | 50.301 | 47.375 |
| SJW Corp | 2,230.343 | 1,365.771 | 1,278.025 | 1,180.481 | 164.325 | 135.973 | 141.213 | 129.134 |
| York Water Co | 313.993 | 299.871 | 289.524 | 271.652 | 20.537 | 16.882 | 25.074 | 13.208 |

| | Capital Expenditures / PP&E-Total Net | | | |
|---|---|---|---|---|
| | 2019 | 2018 | 2017 | 2016 |
| Willistown Township Wastewater System Assets | 18% | 11% | 7% | 0% |
| Comparable Group | | | | |
| American States Water Co | 11% | 10% | 9% | 11% |
| American Water Works Co Inc | 9% | 9% | 9% | 9% |
| Artesian Resources -CL A | 8% | 10% | 9% | 7% |
| California Water Service Gp | 11% | 12% | 13% | 12% |
| Essential Utilities, Inc. | 9% | 8% | 9% | 8% |
| Middlesex Water Co | 12% | 11% | 9% | 9% |
| SJW Corp | 7% | 10% | 11% | 11% |
| York Water Co | 7% | 6% | 9% | 5% |
| Median | 9% | 10% | 9% | 9% |

Willistown Township Wastewater System Assets
Property Plant & Equipment Analysis
Capital Expenditures Analysis
Growth Rate Analyses
Profit Margin Analyses

| | Revenues | | | | EBITDA | | | |
|---|---|---|---|---|---|---|---|---|
| | 2019 | 2018 | 2017 | 2016 | 2019 | 2018 | 2017 | 2016 |
| | (Millions of $) | | | | (Millions of $) | | | |
| Willistown Township Wastewater System Assets | $2.211 | $2.012 | $2.016 | $1.902 | $0.335 | $0.588 | ($0.139) | ($1.917) |
| Comparable Group | | | | | | | | |
| American States Water Co | $473.869 | $436.816 | $440.603 | $436.087 | $164.085 | $144.803 | $159.380 | $154.263 |
| American Water Works Co Inc | 3,610.000 | 3,440.000 | 3,357.000 | 3,302.000 | 1,306.476 | 1,154.957 | 1,102.741 | 917.849 |
| Artesian Resources -CL A | 83.595 | 80.411 | 82.235 | 79.089 | 433.284 | 387.423 | 380.137 | 340.460 |
| California Water Service Gp | 714.557 | 698.196 | 676.113 | 609.370 | 30.401 | 25.800 | 26.382 | 25.061 |
| Essential Utilities, Inc. | 889.692 | 838.091 | 809.525 | 819.875 | 147.867 | 140.577 | 127.710 | 122.709 |
| Middlesex Water Co | 134.598 | 138.077 | 130.775 | 132.906 | 38.056 | 33.947 | 35.841 | 28.720 |
| SJW Corp | 420.482 | 397.699 | 389.225 | 339.706 | 86.302 | 83.532 | 68.003 | 63.335 |
| York Water Co | 51.578 | 48.437 | 48.589 | 47.584 | 25.743 | 24.780 | 24.359 | 21.800 |

| | EBIT | | | |
|---|---|---|---|---|
| | 2019 | 2018 | 2017 | 2016 |
| | (Millions of $) | | | |
| Willistown Township Wastewater System Assets | ($0.142) | $0.083 | ($0.633) | ($2.399) |
| Comparable Group | | | | |
| American States Water Co | $128.372 | $104.140 | $120.107 | $115.154 |
| American Water Works Co Inc | 1,220.000 | 1,139.000 | 1,228.000 | 1,147.000 |
| Artesian Resources -CL A | 25.106 | 23.946 | 26.895 | 27.150 |
| California Water Service Gp | 109.924 | 119.686 | 132.592 | 104.015 |
| Essential Utilities, Inc. | 357.241 | 315.347 | 328.967 | 333.298 |
| Middlesex Water Co | 34.318 | 37.766 | 37.967 | 40.060 |
| SJW Corp | 70.089 | 89.694 | 98.079 | 93.116 |
| York Water Co | 22.335 | 21.232 | 22.473 | 22.888 |

Willistown Township Wastewater System Assets
Property Plant & Equipment Analysis
Capital Expenditures Analysis
Growth Rate Analyses
Profit Margin Analyses

**TABLE 6.4 Growth Rate Analyses**

| | Revenue Growth | | | EBITDA Growth | | |
|---|---|---|---|---|---|---|
| | 2019 | 2018 | 2017 | 2019 | 2018 | 2017 |
| Willistown Township Wastewater System Assets | 9.9% | -0.2% | 6.0% | -43.0% | -523.0% | -92.7% |
| Comparable Group | | | | | | |
| American States Water Co | 8.5% | -0.9% | 1.0% | 13.3% | -9.1% | 3.3% |
| American Water Works Co Inc | 4.9% | 2.5% | 1.7% | 13.1% | 4.7% | 20.1% |
| Artesian Resources -CL A | 4.0% | -2.2% | 4.0% | 11.8% | 1.9% | 11.7% |
| California Water Service Gp | 2.3% | 3.3% | 11.0% | 17.8% | -2.2% | 5.3% |
| Essential Utilities, Inc. | 6.2% | 3.5% | -1.3% | 5.2% | 10.1% | 4.1% |
| Middlesex Water Co | -2.5% | 5.6% | -1.6% | 12.1% | -5.3% | 24.8% |
| SJW Corp | 5.7% | 2.2% | 14.6% | 3.3% | 22.8% | 7.4% |
| York Water Co | 6.5% | -0.3% | 2.1% | 3.9% | 1.7% | 11.7% |
| Median | 5.3% | 2.4% | 1.9% | 12.0% | 1.8% | 9.6% |

| | EBIT Growth | | |
|---|---|---|---|
| | 2019 | 2018 | 2017 |
| Willistown Township Wastewater System Assets | -271.1% | -113.1% | -73.6% |
| Comparable Group | | | |
| American States Water Co | 23.3% | -13.3% | 4.3% |
| American Water Works Co Inc | 7.1% | -7.2% | 7.1% |
| Artesian Resources -CL A | 4.8% | -11.0% | -0.9% |
| California Water Service Gp | -8.2% | -9.7% | 27.5% |
| Essential Utilities, Inc. | 13.3% | -4.1% | -1.3% |
| Middlesex Water Co | -9.1% | -0.5% | -5.2% |
| SJW Corp | -21.9% | -8.5% | 5.3% |
| York Water Co | 5.2% | -5.5% | -1.8% |
| Median | 5.0% | -7.9% | 1.7% |

Willistown Township Wastewater System Assets
Property Plant & Equipment Analysis
Capital Expenditures Analysis
Growth Rate Analyses
Profit Margin Analyses

**TABLE 6.5 Profit Margin Analyses**

| | EBITDA / Revenue - Margin | | |
|---|---|---|---|
| | 2019 | 2018 | 2017 |
| Willistown Township Wastewater System Assets | 15.2% | 29.2% | -6.9% |
| Comparable Group | | | |
| American States Water Co | 34.6% | 33.1% | 36.2% |
| American Water Works Co Inc | 36.2% | 33.6% | 32.8% |
| Artesian Resources -CL A | 518.3% | 481.8% | 462.3% |
| California Water Service Gp | 4.3% | 3.7% | 3.9% |
| Essential Utilities, Inc. | 16.6% | 16.8% | 15.8% |
| Middlesex Water Co | 28.3% | 24.6% | 27.4% |
| SJW Corp | 20.5% | 21.0% | 17.5% |
| York Water Co | 49.9% | 51.2% | 50.1% |
| Median | 31.5% | 28.9% | 30.1% |

| | EBIT / Revenue - Margin | | |
|---|---|---|---|
| | 2019 | 2018 | 2017 |
| Willistown Township Wastewater System Assets | -6.4% | 4.1% | -31.4% |
| Comparable Group | | | |
| American States Water Co | 27.1% | 23.8% | 27.3% |
| American Water Works Co Inc | 33.8% | 33.1% | 36.6% |
| Artesian Resources -CL A | 30.0% | 29.8% | 32.7% |
| California Water Service Gp | 15.4% | 17.1% | 19.6% |
| Essential Utilities, Inc. | 40.2% | 37.6% | 40.6% |
| Middlesex Water Co | 25.5% | 27.4% | 29.0% |
| SJW Corp | 16.7% | 22.6% | 25.2% |
| York Water Co | 43.3% | 43.8% | 46.3% |
| Median | 28.6% | 28.6% | 30.9% |

Source: S&P Capital IQ
EXHIBIT 1

**WILLISTOWN TOWNSHIP**
**WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS**

**SUMMARY OF ORIGINAL COST AND ACCRUED DEPRECIATION**
**OF WASTEWATER SYSTEM AS OF JUNE 28, 2021**

| ACCOUNT | DESCRIPTION | ORIGINAL COST | ACCRUED DEPRECIATION |
|---|---|---|---|
| (1) | (2) | (3) | (4) |
| 353.20 | LAND AND LAND RIGHTS - COLLECTION | 216.00 | |
| 353.30 | LAND AND LAND RIGHTS - PUMPING | 21,606.00 | |
| 353.40 | LAND AND LAND RIGHTS - TREATMENT | 1,500,007.00 | |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 2,146,252.29 | 632,926 |
| 354.40 | STRUCTURES AND IMPROVEMENTS - TREATMENT | 1,448,500.00 | 463,071 |
| 355.00 | POWER GENERATION EQUIPMENT | 344,586.01 | 122,328 |
| 360.10 | FORCE MAINS | 6,823,585.74 | 1,903,481 |
| 361.10 | GRAVITY MAINS | 4,763,458.78 | 1,843,179 |
| 361.12 | GRAVITY MAINS MANHOLES | 1,562,320.53 | 796,143 |
| 363.20 | SERVICES TO CUSTOMERS | 698,453.72 | 329,922 |
| 364.30 | METERS | 23,240.21 | 17,061 |
| 390.70 | COMPUTERS | 36,843.75 | 36,844 |
| 391.70 | TRANSPORTATION EQUIPMENT | 272,449.71 | 129,291 |
| | **TOTAL COMPANY** | **19,641,519.74** | **6,274,246** |

**WILLISTOWN TOWNSHIP**
**WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS**

**SUMMARY OF ANALYSIS OF ORIGINAL COST**
**OF WASTEWATER SYSTEM AS OF JUNE 28, 2021**

| ACCOUNT | DESCRIPTION | ORIGINAL COST |
|---|---|---|
| (1) | (2) | (3) |
| 353.20 | LAND AND LAND RIGHTS - COLLECTION | 216.00 |
| 353.30 | LAND AND LAND RIGHTS - PUMPING | 21,606.00 |
| 353.40 | LAND AND LAND RIGHTS - TREATMENT | 1,500,007.00 |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 2,146,252.29 |
| 354.40 | STRUCTURES AND IMPROVEMENTS - TREATMENT | 1,448,500.00 |
| 355.00 | POWER GENERATION EQUIPMENT | 344,586.01 |
| 360.10 | FORCE MAINS | 6,823,585.74 |
| 361.10 | GRAVITY MAINS | 4,763,458.78 |
| 361.12 | GRAVITY MAINS MANHOLES | 1,562,320.53 |
| 363.20 | SERVICES TO CUSTOMERS | 698,453.72 |
| 364.30 | METERS | 23,240.21 |
| 390.70 | COMPUTERS | 36,843.75 |
| 391.70 | TRANSPORTATION EQUIPMENT | 272,449.71 |
| | **TOTAL COMPANY** | **19,641,519.74** |

**WILLISTOWN TOWNSHIP**
**WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS**

**SUMMARY OF SERVICE LIFE ESTIMATES AND CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF JUNE 28, 2021**

| ACCOUNT | DESCRIPTION | SURVIVOR CURVE | ORIGINAL COST | ACCRUED DEPRECIATION |
|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) |
| 353.20 | LAND AND LAND RIGHTS - COLLECTION | NONDEPRECIABLE | 216.00 | |
| 353.30 | LAND AND LAND RIGHTS - PUMPING | NONDEPRECIABLE | 21,606.00 | |
| 353.40 | LAND AND LAND RIGHTS - TREATMENT | NONDEPRECIABLE | 1,500,007.00 | |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 60-R3 | 2,146,252.29 | 632,926 |
| 354.40 | STRUCTURES AND IMPROVEMENTS - TREATMENT | 65-R2.5 | 1,448,500.00 | 463,071 |
| 355.00 | POWER GENERATION EQUIPMENT | 30-S2 | 344,586.01 | 122,328 |
| 360.10 | FORCE MAINS | 70-R2.5 | 6,823,585.74 | 1,903,481 |
| 361.10 | GRAVITY MAINS | 65-R2.5 | 4,763,458.78 | 1,843,179 |
| 361.12 | GRAVITY MAINS MANHOLES | 60-R3 | 1,562,320.53 | 796,143 |
| 363.20 | SERVICES TO CUSTOMERS | 55-R2.5 | 698,453.72 | 329,922 |
| 364.30 | METERS | 30-L3 | 23,240.21 | 17,061 |
| 390.70 | COMPUTERS | 5-SQ | 36,843.75 | 36,844 |
| 391.70 | TRANSPORTATION EQUIPMENT | 11-S1.5 | 272,449.71 | 129,291 |
| | **TOTAL COMPANY** | | **19,641,519.74** | **6,274,246** |

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 353.20 LAND AND LAND RIGHTS - COLLECTION

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| NONDEPRECIABLE | | | | | | | |
| 1977 | 209.00 | | | | | | |
| 2012 | 1.00 | | | | | | |
| 2015 | 1.00 | | | | | | |
| 2018 | 4.00 | | | | | | |
| 2020 | 1.00 | | | | | | |
| | 216.00 | | | | | | |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 0.00

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 353.30 LAND AND LAND RIGHTS - PUMPING

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AT JUNE 28, 2021

| YEAR | ORIGINAL COST | AVG. LIFE | --ANNUAL ACCRUAL-- RATE | AMOUNT | EXP. | --ACCRUED DEPREC.-- FACTOR | AMOUNT |
|---|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| NONDEPRECIABLE | | | | | | | |
| 1975 | 21,601.00 | | | | | | |
| 1978 | 1.00 | | | | | | |
| 1999 | 1.00 | | | | | | |
| 2001 | 1.00 | | | | | | |
| 2006 | 1.00 | | | | | | |
| 2018 | 1.00 | | | | | | |
| | 21,606.00 | | | | | | |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 0.00

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 353.40 LAND AND LAND RIGHTS - TREATMENT

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| NONDEPRECIABLE | | | | | | | |
| 2001 | 4.00 | | | | | | |
| 2002 | 1.00 | | | | | | |
| 2003 | 2.00 | | | | | | |
| 2006 | 1,500,000.00 | | | | | | |
| | 1,500,007.00 | | | | | | |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 0.00

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 354.30 STRUCTURES AND IMPROVEMENTS - PUMPING

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 60-R3 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1977 | 406,733.04 | 60.00 | 1.67 | 6,792.44 | 21.55 | 0.6408 | 260,647 |
| 1997 | 306,628.72 | 60.00 | 1.67 | 5,120.70 | 37.40 | 0.3767 | 115,498 |
| 1998 | 148,622.00 | 60.00 | 1.67 | 2,481.99 | 38.28 | 0.3620 | 53,801 |
| 2001 | 60,852.08 | 60.00 | 1.67 | 1,016.23 | 40.96 | 0.3173 | 19,310 |
| 2006 | 407,943.57 | 60.00 | 1.67 | 6,812.66 | 45.56 | 0.2407 | 98,180 |
| 2011 | 1,650.00 | 60.00 | 1.67 | 27.56 | 50.28 | 0.1620 | 267 |
| 2014 | 659,984.76 | 60.00 | 1.67 | 11,021.75 | 53.17 | 0.1138 | 75,126 |
| 2015 | 78,018.12 | 60.00 | 1.67 | 1,302.90 | 54.14 | 0.0977 | 7,620 |
| 2019 | 75,820.00 | 60.00 | 1.67 | 1,266.19 | 58.04 | 0.0327 | 2,477 |
| | 2,146,252.29 | | | 35,842.42 | | | 632,926 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.67

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 354.40 STRUCTURES AND IMPROVEMENTS - TREATMENT

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 65-R2.5 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1998 | 1,448,500.00 | 65.00 | 1.54 | 22,306.90 | 44.22 | 0.3197 | 463,071 |
| | 1,448,500.00 | | | 22,306.90 | | | 463,071 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.54

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 355.00 POWER GENERATION EQUIPMENT

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 30-S2 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 2010 | 344,586.01 | 30.00 | 3.33 | 11,474.71 | 19.35 | 0.3550 | 122,328 |
| | 344,586.01 | | | 11,474.71 | | | 122,328 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 3.33

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 360.10 FORCE MAINS

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 70-R2.5 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1977 | 478,562.56 | 70.00 | 1.43 | 6,843.44 | 32.43 | 0.5367 | 256,849 |
| 1993 | 1,274,302.01 | 70.00 | 1.43 | 18,222.52 | 44.91 | 0.3584 | 456,748 |
| 1996 | 110,204.32 | 70.00 | 1.43 | 1,575.92 | 47.43 | 0.3224 | 35,533 |
| 1997 | 54,375.96 | 70.00 | 1.43 | 777.58 | 48.28 | 0.3103 | 16,872 |
| 1998 | 1,756,086.45 | 70.00 | 1.43 | 25,112.04 | 49.13 | 0.2981 | 523,560 |
| 1999 | 126,935.14 | 70.00 | 1.43 | 1,815.17 | 50.00 | 0.2857 | 36,267 |
| 2001 | 50,108.75 | 70.00 | 1.43 | 716.56 | 51.73 | 0.2610 | 13,078 |
| 2006 | 2,370,976.70 | 70.00 | 1.43 | 33,904.97 | 56.16 | 0.1977 | 468,766 |
| 2009 | 602,033.85 | 70.00 | 1.43 | 8,609.08 | 58.86 | 0.1591 | 95,808 |
| | 6,823,585.74 | | | 97,577.28 | | | 1,903,481 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.43

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 361.10 GRAVITY MAINS

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 65-R2.5 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1977 | 2,450,196.64 | 65.00 | 1.54 | 37,733.03 | 27.88 | 0.5711 | 1,399,258 |
| 1978 | 78,212.82 | 65.00 | 1.54 | 1,204.48 | 28.58 | 0.5603 | 43,823 |
| 1980 | 55,387.89 | 65.00 | 1.54 | 852.97 | 30.01 | 0.5383 | 29,816 |
| 1987 | 123,157.25 | 65.00 | 1.54 | 1,896.62 | 35.27 | 0.4574 | 56,330 |
| 1989 | 135,906.68 | 65.00 | 1.54 | 2,092.96 | 36.83 | 0.4334 | 58,899 |
| 1998 | 542,082.68 | 65.00 | 1.54 | 8,348.07 | 44.22 | 0.3197 | 173,298 |
| 2009 | 98,579.05 | 65.00 | 1.54 | 1,518.12 | 53.88 | 0.1711 | 16,865 |
| 2013 | 349,216.32 | 65.00 | 1.54 | 5,377.93 | 57.53 | 0.1149 | 40,132 |
| 2017 | 45,783.38 | 65.00 | 1.54 | 705.06 | 61.24 | 0.0579 | 2,649 |
| 2019 | 644,038.20 | 65.00 | 1.54 | 9,918.19 | 63.12 | 0.0289 | 18,626 |
| 2020 | 240,897.87 | 65.00 | 1.54 | 3,709.83 | 64.06 | 0.0145 | 3,483 |
| | 4,763,458.78 | | | 73,357.26 | | | 1,843,179 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.54

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 361.12 GRAVITY MAINS MANHOLES

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 60-R3 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1977 | 852,602.51 | 60.00 | 1.67 | 14,238.46 | 21.55 | 0.6408 | 546,373 |
| 1978 | 60,191.03 | 60.00 | 1.67 | 1,005.19 | 22.25 | 0.6292 | 37,870 |
| 1980 | 28,900.41 | 60.00 | 1.67 | 482.64 | 23.68 | 0.6053 | 17,494 |
| 1987 | 78,674.85 | 60.00 | 1.67 | 1,313.87 | 29.03 | 0.5162 | 40,610 |
| 1989 | 44,246.95 | 60.00 | 1.67 | 738.92 | 30.64 | 0.4893 | 21,651 |
| 1998 | 290,700.54 | 60.00 | 1.67 | 4,854.70 | 38.28 | 0.3620 | 105,234 |
| 2013 | 207,004.24 | 60.00 | 1.67 | 3,456.97 | 52.20 | 0.1300 | 26,911 |
| | 1,562,320.53 | | | 26,090.75 | | | 796,143 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.67

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 363.20 SERVICES TO CUSTOMERS

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 55-R2.5 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1977 | 280,395.10 | 55.00 | 1.82 | 5,103.19 | 19.12 | 0.6524 | 182,919 |
| 1978 | 26,701.88 | 55.00 | 1.82 | 485.97 | 19.74 | 0.6411 | 17,118 |
| 1980 | 21,555.81 | 55.00 | 1.82 | 392.32 | 21.03 | 0.6176 | 13,314 |
| 1987 | 10,142.36 | 55.00 | 1.82 | 184.59 | 25.90 | 0.5291 | 5,366 |
| 1989 | 9,864.65 | 55.00 | 1.82 | 179.54 | 27.38 | 0.5022 | 4,954 |
| 1993 | 56,967.34 | 55.00 | 1.82 | 1,036.81 | 30.44 | 0.4466 | 25,439 |
| 1996 | 6,930.49 | 55.00 | 1.82 | 126.13 | 32.83 | 0.4031 | 2,794 |
| 1997 | 1,436.91 | 55.00 | 1.82 | 26.15 | 33.64 | 0.3884 | 558 |
| 1998 | 103,666.37 | 55.00 | 1.82 | 1,886.73 | 34.46 | 0.3735 | 38,714 |
| 2001 | 74,049.07 | 55.00 | 1.82 | 1,347.69 | 36.96 | 0.3280 | 24,288 |
| 2013 | 106,743.74 | 55.00 | 1.82 | 1,942.74 | 47.55 | 0.1355 | 14,458 |
| | 698,453.72 | | | 12,711.86 | | | 329,922 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.82

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 364.30 METERS

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 30-L3 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1977 | 9,195.07 | 30.00 | 3.33 | 306.20 | 5.89 | 0.8037 | 7,390 |
| 1978 | 9,908.97 | 30.00 | 3.33 | 329.97 | 6.15 | 0.7950 | 7,878 |
| 2007 | 2,380.00 | 30.00 | 3.33 | 79.25 | 16.63 | 0.4457 | 1,061 |
| 2008 | 1,756.17 | 30.00 | 3.33 | 58.48 | 17.49 | 0.4170 | 732 |
| | 23,240.21 | | | 773.90 | | | 17,061 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 3.33

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 390.70 COMPUTERS

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. 5-SQUARE | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 2015 | 36,843.75 | 5.00 | | | | 1.0000 | 36,844 |
| | 36,843.75 | | | | | | 36,844 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 0.00

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 391.70 TRANSPORTATION EQUIPMENT

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 11-S1.5 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 2015 | 272,449.71 | 11.00 | 9.09 | 24,765.68 | 5.78 | 0.4746 | 129,291 |
| | 272,449.71 | | | 24,765.68 | | | 129,291 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 9.09

**WILLISTOWN TOWNSHIP**
**WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS**

**SUMMARY OF REPLACEMENT COST AND ACCRUED DEPRECIATION**
**OF WASTEWATER SYSTEM AS OF JUNE 28, 2021**

| ACCOUNT | DESCRIPTION | REPLACEMENT COST | ACCRUED DEPRECIATION |
|---|---|---|---|
| (1) | (2) | (3) | (4) |
| 353.20 | LAND AND LAND RIGHTS - COLLECTION | 216.00 | |
| 353.30 | LAND AND LAND RIGHTS - PUMPING | 21,606.00 | |
| 353.40 | LAND AND LAND RIGHTS - TREATMENT | 1,500,007.00 | |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 5,065,682.96 | 2,139,421 |
| 354.40 | STRUCTURES AND IMPROVEMENTS - TREATMENT | 3,275,243.32 | 1,047,063 |
| 355.00 | POWER GENERATION EQUIPMENT | 702,877.15 | 249,521 |
| 360.10 | FORCE MAINS | 16,392,130.07 | 5,179,674 |
| 361.10 | GRAVITY MAINS | 17,731,786.63 | 8,878,516 |
| 361.12 | GRAVITY MAINS MANHOLES | 6,461,159.69 | 3,744,634 |
| 363.20 | SERVICES TO CUSTOMERS | 2,370,003.52 | 1,324,407 |
| 364.30 | METERS | 96,202.15 | 74,605 |
| 390.70 | COMPUTERS | 32,000.87 | 32,001 |
| 391.70 | TRANSPORTATION EQUIPMENT | 284,557.91 | 135,037 |
| | **TOTAL COMPANY** | **53,933,473.27** | **22,804,879** |

**WILLISTOWN TOWNSHIP**
**WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS**

**SUMMARY OF ANALYSIS OF REPLACEMENT COST**
**OF WASTEWATER SYSTEM AS OF JUNE 28, 2021**

| ACCOUNT | DESCRIPTION | REPLACEMENT COST |
|---|---|---|
| (1) | (2) | (3) |
| 353.20 | LAND AND LAND RIGHTS - COLLECTION | 216.00 |
| 353.30 | LAND AND LAND RIGHTS - PUMPING | 21,606.00 |
| 353.40 | LAND AND LAND RIGHTS - TREATMENT | 1,500,007.00 |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 5,065,682.96 |
| 354.40 | STRUCTURES AND IMPROVEMENTS - TREATMENT | 3,275,243.32 |
| 355.00 | POWER GENERATION EQUIPMENT | 702,877.15 |
| 360.10 | FORCE MAINS | 16,392,130.07 |
| 361.10 | GRAVITY MAINS | 17,731,786.63 |
| 361.12 | GRAVITY MAINS MANHOLES | 6,461,159.69 |
| 363.20 | SERVICES TO CUSTOMERS | 2,370,003.52 |
| 364.30 | METERS | 96,202.15 |
| 390.70 | COMPUTERS | 32,000.87 |
| 391.70 | TRANSPORTATION EQUIPMENT | 284,557.91 |
| | **TOTAL COMPANY** | **53,933,473.27** |

**WILLISTOWN TOWNSHIP**
**WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS**

**SUMMARY OF SERVICE LIFE ESTIMATES AND CALCULATED ACCRUED DEPRECIATION RELATED TO REPLACEMENT COST AS OF JUNE 28, 2021**

| ACCOUNT | DESCRIPTION | SURVIVOR CURVE | REPLACEMENT COST | ACCRUED DEPRECIATION |
|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) |
| 353.20 | LAND AND LAND RIGHTS - COLLECTION | NONDEPRECIABLE | 216.00 | |
| 353.30 | LAND AND LAND RIGHTS - PUMPING | NONDEPRECIABLE | 21,606.00 | |
| 353.40 | LAND AND LAND RIGHTS - TREATMENT | NONDEPRECIABLE | 1,500,007.00 | |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 60-R3 | 5,065,682.96 | 2,139,421 |
| 354.40 | STRUCTURES AND IMPROVEMENTS - TREATMENT | 65-R2.5 | 3,275,243.32 | 1,047,063 |
| 355.00 | POWER GENERATION EQUIPMENT | 30-S2 | 702,877.15 | 249,521 |
| 360.10 | FORCE MAINS | 70-R2.5 | 16,392,130.07 | 5,179,674 |
| 361.10 | GRAVITY MAINS | 65-R2.5 | 17,731,786.63 | 8,878,516 |
| 361.12 | GRAVITY MAINS MANHOLES | 60-R3 | 6,461,159.69 | 3,744,634 |
| 363.20 | SERVICES TO CUSTOMERS | 55-R2.5 | 2,370,003.52 | 1,324,407 |
| 364.30 | METERS | 30-L3 | 96,202.15 | 74,605 |
| 390.70 | COMPUTERS | 5-SQ | 32,000.87 | 32,001 |
| 391.70 | TRANSPORTATION EQUIPMENT | 11-S1.5 | 284,557.91 | 135,037 |
| | **TOTAL COMPANY** | | **53,933,473.27** | **22,804,879** |

**WILLISTOWN TOWNSHIP**
**WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS**

**SUMMARY OF REPLACEMENT COST AND TRANSITION FACTORS BY ACCOUNT AND VINTAGE YEAR OF WASTEWATER SYSTEM AS OF JUNE 28, 2021**

| ACCOUNT (1) | DESCRIPTION (2) | VINTAGE YEAR (3) | BASE COST (4) | TRANSITION FACTOR (5) | FACTOR REFERENCE (6) | REPLACEMENT COST (7) |
|---|---|---|---|---|---|---|
| 353.20 | LAND AND LAND RIGHTS - COLLECTION | 1977 | 209.00 | 1.00000 | (1) | 209.00 |
| 353.20 | LAND AND LAND RIGHTS - COLLECTION | 2012 | 1.00 | 1.00000 | (1) | 1.00 |
| 353.20 | LAND AND LAND RIGHTS - COLLECTION | 2015 | 1.00 | 1.00000 | (1) | 1.00 |
| 353.20 | LAND AND LAND RIGHTS - COLLECTION | 2018 | 4.00 | 1.00000 | (1) | 4.00 |
| 353.20 | LAND AND LAND RIGHTS - COLLECTION | 2020 | 1.00 | 1.00000 | (1) | 1.00 |
| 353.30 | LAND AND LAND RIGHTS - PUMPING | 1975 | 21,601.00 | 1.00000 | (1) | 21,601.00 |
| 353.30 | LAND AND LAND RIGHTS - PUMPING | 1978 | 1.00 | 1.00000 | (1) | 1.00 |
| 353.30 | LAND AND LAND RIGHTS - PUMPING | 1999 | 1.00 | 1.00000 | (1) | 1.00 |
| 353.30 | LAND AND LAND RIGHTS - PUMPING | 2001 | 1.00 | 1.00000 | (1) | 1.00 |
| 353.30 | LAND AND LAND RIGHTS - PUMPING | 2006 | 1.00 | 1.00000 | (1) | 1.00 |
| 353.30 | LAND AND LAND RIGHTS - PUMPING | 2018 | 1.00 | 1.00000 | (1) | 1.00 |
| 353.40 | LAND AND LAND RIGHTS - TREATMENT | 2001 | 4.00 | 1.00000 | (1) | 4.00 |
| 353.40 | LAND AND LAND RIGHTS - TREATMENT | 2002 | 1.00 | 1.00000 | (1) | 1.00 |
| 353.40 | LAND AND LAND RIGHTS - TREATMENT | 2003 | 2.00 | 1.00000 | (1) | 2.00 |
| 353.40 | LAND AND LAND RIGHTS - TREATMENT | 2006 | 1,500,000.00 | 1.00000 | (1) | 1,500,000.00 |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 1977 | 406,733.04 | 5.56204 | (2) | 2,262,266.98 |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 1997 | 306,628.72 | 2.30211 | (2) | 705,894.52 |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 1998 | 148,622.00 | 2.26113 | (2) | 336,053.31 |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 2001 | 60,852.08 | 2.01587 | (2) | 122,670.07 |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 2006 | 407,943.57 | 1.63519 | (2) | 667,066.52 |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 2011 | 1,650.00 | 1.30479 | (2) | 2,152.91 |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 2014 | 659,984.76 | 1.20761 | (2) | 797,002.20 |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 2015 | 78,018.12 | 1.17774 | (2) | 91,885.33 |
| 354.30 | STRUCTURES AND IMPROVEMENTS - PUMPING | 2019 | 75,820.00 | 1.06425 | (2) | 80,691.12 |
| 354.40 | STRUCTURES AND IMPROVEMENTS - TREATMENT | 1998 | 1,448,500.00 | 2.26113 | (2) | 3,275,243.32 |
| 355.00 | POWER GENERATION EQUIPMENT | 2010 | 344,586.01 | 2.03977 | (3) | 702,877.15 |
| 360.10 | FORCE MAINS | 1977 | 478,562.56 | 5.45062 | (4) | 2,608,461.36 |
| 360.10 | FORCE MAINS | 1993 | 1,274,302.01 | 2.75078 | (4) | 3,505,322.97 |
| 360.10 | FORCE MAINS | 1996 | 110,204.32 | 2.60472 | (4) | 287,051.37 |
| 360.10 | FORCE MAINS | 1997 | 54,375.96 | 2.54467 | (4) | 138,368.80 |
| 360.10 | FORCE MAINS | 1998 | 1,756,086.45 | 2.48732 | (4) | 4,367,955.87 |
| 360.10 | FORCE MAINS | 1999 | 126,935.14 | 2.44598 | (4) | 310,481.24 |
| 360.10 | FORCE MAINS | 2001 | 50,108.75 | 2.25831 | (4) | 113,161.19 |
| 360.10 | FORCE MAINS | 2006 | 2,370,976.70 | 1.76954 | (4) | 4,195,535.92 |
| 360.10 | FORCE MAINS | 2009 | 602,033.85 | 1.43811 | (4) | 865,791.35 |
| 361.10 | GRAVITY MAINS | 1977 | 2,450,196.64 | 5.45062 | (4) | 13,355,084.16 |
| 361.10 | GRAVITY MAINS | 1978 | 78,212.82 | 5.10405 | (4) | 399,201.85 |
| 361.10 | GRAVITY MAINS | 1980 | 55,387.89 | 4.37129 | (4) | 242,116.37 |
| 361.10 | GRAVITY MAINS | 1987 | 123,157.25 | 3.35741 | (4) | 413,489.93 |
| 361.10 | GRAVITY MAINS | 1989 | 135,906.68 | 2.99322 | (4) | 406,798.64 |
| 361.10 | GRAVITY MAINS | 1998 | 542,082.68 | 2.48732 | (4) | 1,348,335.23 |
| 361.10 | GRAVITY MAINS | 2009 | 98,579.05 | 1.43811 | (4) | 141,767.59 |
| 361.10 | GRAVITY MAINS | 2013 | 349,216.32 | 1.25963 | (4) | 439,883.04 |
| 361.10 | GRAVITY MAINS | 2017 | 45,783.38 | 1.13642 | (4) | 52,029.25 |
| 361.10 | GRAVITY MAINS | 2019 | 644,038.20 | 1.06386 | (4) | 685,163.53 |
| 361.10 | GRAVITY MAINS | 2020 | 240,897.87 | 1.02914 | (4) | 247,917.04 |
| 361.12 | GRAVITY MAINS MANHOLES | 1977 | 852,602.51 | 5.45062 | (4) | 4,647,209.98 |
| 361.12 | GRAVITY MAINS MANHOLES | 1978 | 60,191.03 | 5.10405 | (4) | 307,217.80 |
| 361.12 | GRAVITY MAINS MANHOLES | 1980 | 28,900.41 | 4.37129 | (4) | 126,331.99 |
| 361.12 | GRAVITY MAINS MANHOLES | 1987 | 78,674.85 | 3.35741 | (4) | 264,144.08 |
| 361.12 | GRAVITY MAINS MANHOLES | 1989 | 44,246.95 | 2.99322 | (4) | 132,440.87 |
| 361.12 | GRAVITY MAINS MANHOLES | 1998 | 290,700.54 | 2.48732 | (4) | 723,066.41 |
| 361.12 | GRAVITY MAINS MANHOLES | 2013 | 207,004.24 | 1.25963 | (4) | 260,748.56 |
| 363.20 | SERVICES TO CUSTOMERS | 1977 | 280,395.10 | 5.12230 | (5) | 1,436,268.43 |
| 363.20 | SERVICES TO CUSTOMERS | 1978 | 26,701.88 | 4.91034 | (5) | 131,115.44 |
| 363.20 | SERVICES TO CUSTOMERS | 1980 | 21,555.81 | 4.06857 | (5) | 87,701.35 |
| 363.20 | SERVICES TO CUSTOMERS | 1987 | 10,142.36 | 3.09565 | (5) | 31,397.22 |
| 363.20 | SERVICES TO CUSTOMERS | 1989 | 9,864.65 | 2.75969 | (5) | 27,223.38 |
| 363.20 | SERVICES TO CUSTOMERS | 1993 | 56,967.34 | 2.43836 | (5) | 138,906.66 |
| 363.20 | SERVICES TO CUSTOMERS | 1996 | 6,930.49 | 2.21807 | (5) | 15,372.30 |
| 363.20 | SERVICES TO CUSTOMERS | 1997 | 1,436.91 | 2.20433 | (5) | 3,167.43 |

**WILLISTOWN TOWNSHIP**
**WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS**

**SUMMARY OF REPLACEMENT COST AND TRANSITION FACTORS BY ACCOUNT AND VINTAGE YEAR OF WASTEWATER SYSTEM AS OF JUNE 28, 2021**

| ACCOUNT (1) | DESCRIPTION (2) | VINTAGE YEAR (3) | BASE COST (4) | TRANSITION FACTOR (5) | FACTOR REFERENCE (6) | REPLACEMENT COST (7) |
|---|---|---|---|---|---|---|
| 363.20 | SERVICES TO CUSTOMERS | 1998 | 103,666.37 | 2.15758 | (5) | 223,668.05 |
| 363.20 | SERVICES TO CUSTOMERS | 2001 | 74,049.07 | 2.01130 | (5) | 148,934.85 |
| 363.20 | SERVICES TO CUSTOMERS | 2013 | 106,743.74 | 1.18272 | (5) | 126,248.41 |
| 364.30 | METERS | 1977 | 9,195.07 | 4.80198 | (6) | 44,154.54 |
| 364.30 | METERS | 1978 | 9,908.97 | 4.61905 | (6) | 45,770.00 |
| 364.30 | METERS | 2007 | 2,380.00 | 1.67820 | (6) | 3,994.12 |
| 364.30 | METERS | 2008 | 1,756.17 | 1.30027 | (6) | 2,283.49 |
| 390.70 | COMPUTERS | 2015 | 36,843.75 | 0.86856 | (7) | 32,000.87 |
| 391.70 | TRANSPORTATION EQUIPMENT | 2015 | 272,449.71 | 1.04444 | (8) | 284,557.91 |
| | **TOTAL COMPANY** | | **19,641,519.74** | | | **53,933,473.27** |

NOTES : (1) Not trended
(2) Handy-Whitman Index of Public Utility Costs, 1/1/21, Cost Trends of Water Utility Construction, North Atlantic Region, Line 8
(3) Handy-Whitman Index of Public Utility Costs, 1/1/21, Cost Trends of Water Utility Construction, North Atlantic Region, Line 9
(4) Handy-Whitman Index of Public Utility Costs, 1/1/21, Cost Trends of Water Utility Construction, North Atlantic Region, Line 34
(5) Handy-Whitman Index of Public Utility Costs, 1/1/21, Cost Trends of Water Utility Construction, North Atlantic Region, Line 39
(6) Handy-Whitman Index of Public Utility Costs, 1/1/21, Cost Trends of Water Utility Construction, North Atlantic Region, Line 40
(7) U.S. Bureau of Labor Statistics, Producer Price Index, Series Title: PPI industry data for Automobile, light truck and utility vehicle mfg, not seasonally adjusted
(8) U.S. Bureau of Labor Statistics, Producer Price Index, Series Title: PPI industry data for Computer & peripheral equipment mfg, not seasonally adjusted

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 353.20 LAND AND LAND RIGHTS - COLLECTION

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO REPLACEMENT COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| NONDEPRECIABLE | | | | | | | |
| 1977 | 209.00 | | | | | | |
| 2012 | 1.00 | | | | | | |
| 2015 | 1.00 | | | | | | |
| 2018 | 4.00 | | | | | | |
| 2020 | 1.00 | | | | | | |
| | 216.00 | | | | | | |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 0.00

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 353.30 LAND AND LAND RIGHTS - PUMPING

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO REPLACEMENT COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| NONDEPRECIABLE | | | | | | | |
| 1975 | 21,601.00 | | | | | | |
| 1978 | 1.00 | | | | | | |
| 1999 | 1.00 | | | | | | |
| 2001 | 1.00 | | | | | | |
| 2006 | 1.00 | | | | | | |
| 2018 | 1.00 | | | | | | |
| | 21,606.00 | | | | | | |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 0.00

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 353.40 LAND AND LAND RIGHTS - TREATMENT

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO REPLACEMENT COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| NONDEPRECIABLE | | | | | | | |
| 2001 | 4.00 | | | | | | |
| 2002 | 1.00 | | | | | | |
| 2003 | 2.00 | | | | | | |
| 2006 | 1,500,000.00 | | | | | | |
| | 1,500,007.00 | | | | | | |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 0.00

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 354.30 STRUCTURES AND IMPROVEMENTS - PUMPING

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO REPLACEMENT COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 60-R3 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1977 | 2,262,266.98 | 60.00 | 1.67 | 37,779.86 | 21.55 | 0.6408 | 1,449,729 |
| 1997 | 705,894.52 | 60.00 | 1.67 | 11,788.44 | 37.40 | 0.3767 | 265,889 |
| 1998 | 336,053.31 | 60.00 | 1.67 | 5,612.09 | 38.28 | 0.3620 | 121,651 |
| 2001 | 122,670.07 | 60.00 | 1.67 | 2,048.59 | 40.96 | 0.3173 | 38,927 |
| 2006 | 667,066.52 | 60.00 | 1.67 | 11,140.01 | 45.56 | 0.2407 | 160,543 |
| 2011 | 2,152.91 | 60.00 | 1.67 | 35.95 | 50.28 | 0.1620 | 349 |
| 2014 | 797,002.20 | 60.00 | 1.67 | 13,309.94 | 53.17 | 0.1138 | 90,723 |
| 2015 | 91,885.33 | 60.00 | 1.67 | 1,534.49 | 54.14 | 0.0977 | 8,974 |
| 2019 | 80,691.12 | 60.00 | 1.67 | 1,347.54 | 58.04 | 0.0327 | 2,636 |
| | 5,065,682.96 | | | 84,596.91 | | | 2,139,421 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.67

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 354.40 STRUCTURES AND IMPROVEMENTS - TREATMENT

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO REPLACEMENT COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 65-R2.5 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1998 | 3,275,243.32 | 65.00 | 1.54 | 50,438.75 | 44.22 | 0.3197 | 1,047,063 |
| | 3,275,243.32 | | | 50,438.75 | | | 1,047,063 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.54

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 355.00 POWER GENERATION EQUIPMENT

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO REPLACEMENT COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 30-S2 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 2010 | 702,877.15 | 30.00 | 3.33 | 23,405.81 | 19.35 | 0.3550 | 249,521 |
| | 702,877.15 | | | 23,405.81 | | | 249,521 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 3.33

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 360.10 FORCE MAINS

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO REPLACEMENT COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 70-R2.5 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1977 | 2,608,461.36 | 70.00 | 1.43 | 37,301.00 | 32.43 | 0.5367 | 1,399,987 |
| 1993 | 3,505,322.97 | 70.00 | 1.43 | 50,126.12 | 44.91 | 0.3584 | 1,256,413 |
| 1996 | 287,051.37 | 70.00 | 1.43 | 4,104.83 | 47.43 | 0.3224 | 92,554 |
| 1997 | 138,368.80 | 70.00 | 1.43 | 1,978.67 | 48.28 | 0.3103 | 42,934 |
| 1998 | 4,367,955.87 | 70.00 | 1.43 | 62,461.77 | 49.13 | 0.2981 | 1,302,262 |
| 1999 | 310,481.24 | 70.00 | 1.43 | 4,439.88 | 50.00 | 0.2857 | 88,708 |
| 2001 | 113,161.19 | 70.00 | 1.43 | 1,618.21 | 51.73 | 0.2610 | 29,535 |
| 2006 | 4,195,535.92 | 70.00 | 1.43 | 59,996.16 | 56.16 | 0.1977 | 829,499 |
| 2009 | 865,791.35 | 70.00 | 1.43 | 12,380.82 | 58.86 | 0.1591 | 137,782 |
| | 16,392,130.07 | | | 234,407.46 | | | 5,179,674 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.43

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 361.10 GRAVITY MAINS

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO REPLACEMENT COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 65-R2.5 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1977 | 13,355,084.16 | 65.00 | 1.54 | 205,668.30 | 27.88 | 0.5711 | 7,626,821 |
| 1978 | 399,201.85 | 65.00 | 1.54 | 6,147.71 | 28.58 | 0.5603 | 223,677 |
| 1980 | 242,116.37 | 65.00 | 1.54 | 3,728.59 | 30.01 | 0.5383 | 130,334 |
| 1987 | 413,489.93 | 65.00 | 1.54 | 6,367.74 | 35.27 | 0.4574 | 189,122 |
| 1989 | 406,798.64 | 65.00 | 1.54 | 6,264.70 | 36.83 | 0.4334 | 176,298 |
| 1998 | 1,348,335.23 | 65.00 | 1.54 | 20,764.36 | 44.22 | 0.3197 | 431,049 |
| 2009 | 141,767.59 | 65.00 | 1.54 | 2,183.22 | 53.88 | 0.1711 | 24,254 |
| 2013 | 439,883.04 | 65.00 | 1.54 | 6,774.20 | 57.53 | 0.1149 | 50,551 |
| 2017 | 52,029.25 | 65.00 | 1.54 | 801.25 | 61.24 | 0.0579 | 3,010 |
| 2019 | 685,163.53 | 65.00 | 1.54 | 10,551.52 | 63.12 | 0.0289 | 19,815 |
| 2020 | 247,917.04 | 65.00 | 1.54 | 3,817.92 | 64.06 | 0.0145 | 3,585 |
| | 17,731,786.63 | | | 273,069.51 | | | 8,878,516 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.54

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 361.12 GRAVITY MAINS MANHOLES

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO REPLACEMENT COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 60-R3 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1977 | 4,647,209.98 | 60.00 | 1.67 | 77,608.41 | 21.55 | 0.6408 | 2,978,072 |
| 1978 | 307,217.80 | 60.00 | 1.67 | 5,130.54 | 22.25 | 0.6292 | 193,292 |
| 1980 | 126,331.99 | 60.00 | 1.67 | 2,109.74 | 23.68 | 0.6053 | 76,473 |
| 1987 | 264,144.08 | 60.00 | 1.67 | 4,411.21 | 29.03 | 0.5162 | 136,343 |
| 1989 | 132,440.87 | 60.00 | 1.67 | 2,211.76 | 30.64 | 0.4893 | 64,807 |
| 1998 | 723,066.41 | 60.00 | 1.67 | 12,075.21 | 38.28 | 0.3620 | 261,750 |
| 2013 | 260,748.56 | 60.00 | 1.67 | 4,354.50 | 52.20 | 0.1300 | 33,897 |
| | 6,461,159.69 | | | 107,901.37 | | | 3,744,634 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.67

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 363.20 SERVICES TO CUSTOMERS

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO REPLACEMENT COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 55-R2.5 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1977 | 1,436,268.43 | 55.00 | 1.82 | 26,140.09 | 19.12 | 0.6524 | 936,964 |
| 1978 | 131,115.44 | 55.00 | 1.82 | 2,386.30 | 19.74 | 0.6411 | 84,057 |
| 1980 | 87,701.35 | 55.00 | 1.82 | 1,596.16 | 21.03 | 0.6176 | 54,168 |
| 1987 | 31,397.22 | 55.00 | 1.82 | 571.43 | 25.90 | 0.5291 | 16,612 |
| 1989 | 27,223.38 | 55.00 | 1.82 | 495.47 | 27.38 | 0.5022 | 13,671 |
| 1993 | 138,906.66 | 55.00 | 1.82 | 2,528.10 | 30.44 | 0.4466 | 62,029 |
| 1996 | 15,372.30 | 55.00 | 1.82 | 279.78 | 32.83 | 0.4031 | 6,196 |
| 1997 | 3,167.43 | 55.00 | 1.82 | 57.65 | 33.64 | 0.3884 | 1,230 |
| 1998 | 223,668.05 | 55.00 | 1.82 | 4,070.76 | 34.46 | 0.3735 | 83,529 |
| 2001 | 148,934.85 | 55.00 | 1.82 | 2,710.61 | 36.96 | 0.3280 | 48,851 |
| 2013 | 126,248.41 | 55.00 | 1.82 | 2,297.72 | 47.55 | 0.1355 | 17,100 |
| | 2,370,003.52 | | | 43,134.07 | | | 1,324,407 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.82

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 364.30 METERS

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO REPLACEMENT COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 30-L3 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 1977 | 44,154.54 | 30.00 | 3.33 | 1,470.35 | 5.89 | 0.8037 | 35,486 |
| 1978 | 45,770.00 | 30.00 | 3.33 | 1,524.14 | 6.15 | 0.7950 | 36,387 |
| 2007 | 3,994.12 | 30.00 | 3.33 | 133.00 | 16.63 | 0.4457 | 1,780 |
| 2008 | 2,283.49 | 30.00 | 3.33 | 76.04 | 17.49 | 0.4170 | 952 |
| | 96,202.15 | | | 3,203.53 | | | 74,605 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 3.33

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 390.70 COMPUTERS

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO REPLACEMENT COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. 5-SQUARE | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 2015 | 32,000.87 | 5.00 | | | | 1.0000 | 32,001 |
| | 32,000.87 | | | | | | 32,001 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 0.00

WILLISTOWN TOWNSHIP
WILLISTOWN TOWNSHIP WASTEWATER SYSTEM ASSETS

ACCOUNT 391.70 TRANSPORTATION EQUIPMENT

CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO REPLACEMENT COST AT JUNE 28, 2021

| YEAR (1) | ORIGINAL COST (2) | AVG. LIFE (3) | --ANNUAL ACCRUAL-- RATE (4) | AMOUNT (5) | EXP. (6) | --ACCRUED DEPREC.-- FACTOR (7) | AMOUNT (8) |
|---|---|---|---|---|---|---|---|
| SURVIVOR CURVE.. IOWA 11-S1.5 | | | | | | | |
| NET SALVAGE PERCENT.. 0 | | | | | | | |
| 2015 | 284,557.91 | 11.00 | 9.09 | 25,866.31 | 5.78 | 0.4746 | 135,037 |
| | 284,557.91 | | | 25,866.31 | | | 135,037 |

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 9.09

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma Operations
Earnings Capitalization Model

| | | | | Budget | Budget |
|---|---|---|---|---|---|
| | Actual | | | | Year 0 |
| | 2018 | 2019 | 2020 | 2021 |
| 1. **OPERATING REVENUES (1)** | | | | |
| 2. Charges for services | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 |
| 3. Other operating revenue | 0 | 0 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 |
| 5. **Total Operating Revenues** | 2,011,578 | 2,211,380 | 2,071,219 | 2,148,508 |
| 6. **Rate Increase** | | | | |
| 7. **OPERATING EXPENSES (1)** | | | | |
| 8. Operating & Maintenance Expenses | 1,423,308 | 1,876,648 | 2,022,629 | 1,969,034 |
| 9. **Operating Expenses Before Depreciation** | 1,423,308 | 1,876,648 | 2,022,629 | 1,969,034 |
| 10. Depreciation (2) | 505,633 | 477,169 | 477,169 | 306,550 |
| 11. **Total Operating Expenses** | 1,928,941 | 2,353,817 | 2,499,798 | 2,275,584 |
| 12. **Operating Income** | 82,637 | (142,437) | (428,579) | (127,076) |
| 13. Revenues (3) | 2,011,578 | 2,211,380 | 2,071,219 | 2,148,508 |
| 14. EBITDA (4) | 588,270 | 334,732 | 48,590 | 179,474 |
| 15. EBIT (5) | 82,637 | (142,437) | (428,579) | (127,076) |
| 16. EBIT | 82,637 | (142,437) | (428,579) | (127,076) |
| 17. (-) Income Taxes | 0 | 0 | 0 | 0 |
| 18. Debt Free Net Income | 82,637 | (142,437) | (428,579) | (127,076) |
| 19. (+) Depreciation & Amortization | 505,633 | 477,169 | 477,169 | 306,550 |
| 20. (-) Capital Expenditures (6) | 513,332 | 874,280 | 25,000 | 304,000 |
| 21. (-) Changes in Working Capital (7) | 4,224 | 4,644 | 4,350 | 4,512 |
| 22. Debt Free Net Cash Flow | $70,714 | ($544,192) | $19,240 | ($129,038) |

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma Operations
Earnings Capitalization Model

| | | 2021 |
|---|---|---|
| | | 3.00% Capitalization Rate Model (No Growth) |
| 23. | Debt Free Net Cash Flow (10) | ($129,038) |
| 24. | Capitalization Factor: (8) | 3.00% |
| 25. | Indicated Value (line 23 ÷ line 24) | ($4,301,262) |
| | | 3.00% Capitalization Rate Model (0.00% Growth) |
| 26. | Debt Free Net Cash Flow (10) | ($129,038) |
| 27. | Capitalization Factor: (9) | 3.00% |
| 28. | Indicated Value (line 26 ÷ line 27) | ($4,301,262) |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma Operations
Earnings Capitalization Model

Notes: (1) Assumptions:

Charges for services - Pre-2022 are actual or budget. Post-2021 based on customer growth (EDU) and average revenue per customer.

OPERATING EXPENSES - increase at 2.5% annually after 2021 unless noted elsewhere. Assumed economies of scale are shown on lines below.

(2) Depreciation - Pre-2022 based on actual depreciation rate plus same rate on half of CAPX. Post-2021 based on depreciation rate plus same rate on half of CAPX.

(3) Line 5.

(4) Line 12 + line 10.

(5) Line 12.

(6) Capital Expenditures - Pre-2022 based on financials/budget. Post-2021 years are estimates at 1.52% of prior year-end GROSS Property, plant and equipment.

(7) Changes in Working Capital - based on water industry 0.21% of revenues.

(8) Discount rate is the the current MUNI discount rate. Capitalization rate ( K ) at 6/28/2021 equal to discount rate, where capitalization rate = K - g.

(9) Discount rate is the current MUNI discount rate. Capitalization rate ( K ) at 6/28/2021 adjusted for stated growth ( g ) where capitalization rate = K - g.

(10) Final year shown, line 22.

**Terms:**

CAPX - Capital Expenditures
CIP - Capital improvement plan
Dep - Depreciation expense
GROSS PPE - GROSS Property, plant and equipment
IOU - Investor owned utility
MUNI - Large regional municipally owned utility
NET PPE - NET Property, plant and equipment

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | | | Budget | Budget | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Actual | | | Year 0 | Year 1 | Year 2 |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,147,607 |
| 3. Other operating revenue | 0 | 0 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 0 | 0 | 0 | 0 | 0 | 0 |
| 6. **Total Operating Revenues** | 2,011,578 | 2,211,380 | 2,071,219 | 2,148,508 | 2,151,309 | 2,154,107 |
| 7. **Rate Increase** | | | | | | |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 1,423,308 | 1,876,648 | 2,022,629 | 1,969,034 | 2,018,260 | 2,068,716 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | 0 | 0 | 0 | (53,544) | (54,882) | (56,254) |
| 12. LESS: EOS - Professional Services | 0 | 0 | 0 | (64,600) | (66,215) | (67,870) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. **Operating Expenses Before Depreciation** | 1,423,308 | 1,876,648 | 2,022,629 | 1,850,890 | 1,897,163 | 1,944,592 |
| 16. Depreciation (2) | 505,633 | 477,169 | 477,169 | 306,550 | 310,089 | 314,092 |
| 17. **Total Operating Expenses** | 1,928,941 | 2,353,817 | 2,499,798 | 2,157,441 | 2,207,252 | 2,258,684 |
| 18. **Operating Income** | 82,637 | (142,437) | (428,579) | (8,933) | (55,943) | (104,577) |
| 19. Revenues (3) | 2,011,578 | 2,211,380 | 2,071,219 | 2,148,508 | 2,151,309 | 2,154,107 |
| 20. EBITDA (4) | 588,270 | 334,732 | 48,590 | 297,618 | 254,146 | 209,515 |
| 21. EBIT (5) | 82,637 | (142,437) | (428,579) | (8,933) | (55,943) | (104,577) |
| 22. EBIT | 82,637 | (142,437) | (428,579) | (8,933) | (55,943) | (104,577) |
| 23. (-) Income Taxes | 0 | 0 | 0 | 0 | 0 | 0 |
| 24. Debt Free Net Income | 82,637 | (142,437) | (428,579) | (8,933) | (55,943) | (104,577) |
| 25. (+) Depreciation & Amortization | 505,633 | 477,169 | 477,169 | 306,550 | 310,089 | 314,092 |
| 26. (-) Capital Expenditures (6) | 513,332 | 874,280 | 25,000 | 304,000 | 302,280 | 306,183 |
| 27. (-) Changes in Working Capital (7) | 4,224 | 4,644 | 4,350 | 4,512 | 4,518 | 4,524 |
| 28. Debt Free Net Cash Flow | $70,714 | ($544,192) | $19,240 | ($10,894) | ($52,651) | ($101,191) |
| 29. PV Time Period (mid-year) | | | | (0.5) | 0.5 | 1.5 |
| | | | | | 1 | 2 |
| 30. Present Value Factor: 3.00% (8) | | | | | 0.9853 | 0.9566 |
| 31. Present Value Debt Free Net Cash Flow | | | | | ($51,877) | ($96,800) |
| | | | | | 1 | 2 |
| 32. Present Value Factor: 2.80% (9) | | | | | 0.9863 | 0.9594 |
| 33. Present Value Debt Free Net Cash Flow | | | | | ($51,930) | ($97,083) |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | Estimated | Estimated | Estimated | Estimated | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 |
| | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 2,153,202 | 2,953,719 | 2,959,922 | 2,972,354 | 3,134,079 | 3,147,242 |
| 3. Other operating revenue | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 796,685 | 0 | 0 | 148,618 | 0 | 0 |
| 6. **Total Operating Revenues** | 2,956,387 | 2,960,219 | 2,966,422 | 3,127,472 | 3,140,579 | 3,153,742 |
| 7. **Rate Increase** | **37%** | | | **5%** | | |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 2,120,434 | 2,173,445 | 2,227,781 | 2,283,476 | 2,340,563 | 2,399,077 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | (57,661) | (59,102) | (60,580) | (62,094) | (63,647) | (65,238) |
| 12. LESS: EOS - Professional Services | (69,567) | (71,306) | (73,089) | (74,916) | (76,789) | (78,709) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. **Operating Expenses Before Depreciation** | 1,993,206 | 2,043,037 | 2,094,112 | 2,146,465 | 2,200,127 | 2,255,130 |
| 16. Depreciation (2) | 318,148 | 322,256 | 326,416 | 330,631 | 334,900 | 339,224 |
| 17. **Total Operating Expenses** | 2,311,355 | 2,365,293 | 2,420,529 | 2,477,096 | 2,535,027 | 2,594,354 |
| 18. **Operating Income** | 645,032 | 594,926 | 545,893 | 650,376 | 605,552 | 559,388 |
| 19. Revenues (3) | 2,956,387 | 2,960,219 | 2,966,422 | 3,127,472 | 3,140,579 | 3,153,742 |
| 20. EBITDA (4) | 963,181 | 917,182 | 872,310 | 981,007 | 940,452 | 898,612 |
| 21. EBIT (5) | 645,032 | 594,926 | 545,893 | 650,376 | 605,552 | 559,388 |
| 22. EBIT | 645,032 | 594,926 | 545,893 | 650,376 | 605,552 | 559,388 |
| 23. (-) Income Taxes | 0 | 0 | 0 | 0 | 0 | 0 |
| 24. Debt Free Net Income | 645,032 | 594,926 | 545,893 | 650,376 | 605,552 | 559,388 |
| 25. (+) Depreciation & Amortization | 318,148 | 322,256 | 326,416 | 330,631 | 334,900 | 339,224 |
| 26. (-) Capital Expenditures (6) | 310,136 | 314,140 | 318,196 | 322,305 | 326,466 | 330,681 |
| 27. (-) Changes in Working Capital (7) | 6,208 | 6,216 | 6,229 | 6,568 | 6,595 | 6,623 |
| 28. Debt Free Net Cash Flow | $646,836 | $596,826 | $547,884 | $652,134 | $607,391 | $561,308 |
| 29. PV Time Period (mid-year) | 2.5 | 3.5 | 4.5 | 5.5 | 6.5 | 7.5 |
| | 3 | 4 | 5 | 6 | 7 | 8 |
| 30. Present Value Factor: 3.00% (8) | 0.9288 | 0.9017 | 0.8755 | 0.8500 | 0.8252 | 0.8012 |
| 31. Present Value Debt Free Net Cash Flow | $600,781 | $538,158 | $479,672 | $554,314 | $501,219 | $449,720 |
| | 3 | 4 | 5 | 6 | 7 | 8 |
| 32. Present Value Factor: 2.80% (9) | 0.9333 | 0.9079 | 0.8831 | 0.8591 | 0.8357 | 0.8129 |
| 33. Present Value Debt Free Net Cash Flow | $603,692 | $541,858 | $483,836 | $560,248 | $507,597 | $456,287 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | Estimated | Estimated | Estimated | Estimated | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Year 9 | Year 10 | Year 11 | Year 12 | Year 13 | Year 14 |
| | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 3,160,461 | 3,316,553 | 3,330,482 | 3,344,470 | 3,492,858 | 3,507,528 |
| 3. Other operating revenue | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 142,221 | 0 | 0 | 133,779 | 0 | 0 |
| 6. **Total Operating Revenues** | 3,309,182 | 3,323,053 | 3,336,982 | 3,484,749 | 3,499,358 | 3,514,028 |
| 7. **Rate Increase** | **5%** | | | **4%** | | |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 2,459,054 | 2,520,530 | 2,583,543 | 2,648,132 | 2,714,335 | 2,782,193 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | (66,869) | (68,540) | (70,254) | (72,010) | (73,811) | (75,656) |
| 12. LESS: EOS - Professional Services | (80,677) | (82,693) | (84,761) | (86,880) | (89,052) | (91,278) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. **Operating Expenses Before Depreciation** | 2,311,508 | 2,369,296 | 2,428,528 | 2,489,242 | 2,551,473 | 2,615,260 |
| 16. Depreciation (2) | 343,604 | 348,040 | 352,534 | 357,086 | 361,697 | 366,366 |
| 17. **Total Operating Expenses** | 2,655,112 | 2,717,336 | 2,781,062 | 2,846,328 | 2,913,169 | 2,981,626 |
| 18. **Operating Income** | 654,070 | 605,717 | 555,920 | 638,421 | 586,189 | 532,402 |
| 19. Revenues (3) | 3,309,182 | 3,323,053 | 3,336,982 | 3,484,749 | 3,499,358 | 3,514,028 |
| 20. EBITDA (4) | 997,674 | 953,757 | 908,454 | 995,507 | 947,885 | 898,768 |
| 21. EBIT (5) | 654,070 | 605,717 | 555,920 | 638,421 | 586,189 | 532,402 |
| 22. EBIT | 654,070 | 605,717 | 555,920 | 638,421 | 586,189 | 532,402 |
| 23. (-) Income Taxes | 0 | 0 | 0 | 0 | 0 | 0 |
| 24. Debt Free Net Income | 654,070 | 605,717 | 555,920 | 638,421 | 586,189 | 532,402 |
| 25. (+) Depreciation & Amortization | 343,604 | 348,040 | 352,534 | 357,086 | 361,697 | 366,366 |
| 26. (-) Capital Expenditures (6) | 334,951 | 339,276 | 343,656 | 348,093 | 352,588 | 357,140 |
| 27. (-) Changes in Working Capital (7) | 6,949 | 6,978 | 7,008 | 7,318 | 7,349 | 7,379 |
| 28. Debt Free Net Cash Flow | $655,773 | $607,503 | $557,790 | $640,096 | $587,949 | $534,249 |
| 29. PV Time Period (mid-year) | 8.5 | 9.5 | 10.5 | 11.5 | 12.5 | 13.5 |
| | 9 | 10 | 11 | 12 | 13 | 14 |
| 30. Present Value Factor: 3.00% (8) | 0.7778 | 0.7552 | 0.7332 | 0.7118 | 0.6911 | 0.6710 |
| 31. Present Value Debt Free Net Cash Flow | $510,061 | $458,786 | $408,972 | $455,621 | $406,331 | $358,481 |
| | 9 | 10 | 11 | 12 | 13 | 14 |
| 32. Present Value Factor: 2.80% (9) | 0.7908 | 0.7692 | 0.7483 | 0.7279 | 0.7081 | 0.6888 |
| 33. Present Value Debt Free Net Cash Flow | $518,586 | $467,291 | $417,394 | $465,926 | $416,326 | $367,991 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | Estimated | Estimated | Estimated | Estimated | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Year 15 | Year 16 | Year 17 | Year 18 | Year 19 | Year 20 |
| | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 3,522,259 | 3,664,387 | 3,679,777 | 3,695,232 | 3,822,075 | 3,838,128 |
| 3. Other operating revenue | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 126,801 | 0 | 0 | 110,857 | 0 | 118,982 |
| 6. **Total Operating Revenues** | 3,655,560 | 3,670,887 | 3,686,277 | 3,812,589 | 3,828,575 | 3,963,610 |
| 7. **Rate Increase** | **4%** | | | **3%** | | **3%** |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 2,851,748 | 2,923,042 | 2,996,118 | 3,071,021 | 3,147,797 | 3,226,491 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | (77,547) | (79,486) | (81,473) | (83,510) | (85,598) | (87,738) |
| 12. LESS: EOS - Professional Services | (93,560) | (95,899) | (98,297) | (100,754) | (103,273) | (105,855) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. **Operating Expenses Before Depreciation** | 2,680,641 | 2,747,657 | 2,816,348 | 2,886,757 | 2,958,926 | 3,032,899 |
| 16. Depreciation (2) | 371,097 | 375,888 | 380,741 | 385,658 | 390,636 | 395,680 |
| 17. **Total Operating Expenses** | 3,051,738 | 3,123,545 | 3,197,089 | 3,272,415 | 3,349,562 | 3,428,579 |
| 18. **Operating Income** | 603,822 | 547,342 | 489,188 | 540,174 | 479,013 | 535,031 |
| 19. Revenues (3) | 3,655,560 | 3,670,887 | 3,686,277 | 3,812,589 | 3,828,575 | 3,963,610 |
| 20. EBITDA (4) | 974,919 | 923,230 | 869,929 | 925,832 | 869,649 | 930,711 |
| 21. EBIT (5) | 603,822 | 547,342 | 489,188 | 540,174 | 479,013 | 535,031 |
| 22. EBIT | 603,822 | 547,342 | 489,188 | 540,174 | 479,013 | 535,031 |
| 23. (-) Income Taxes | 0 | 0 | 0 | 0 | 0 | 0 |
| 24. Debt Free Net Income | 603,822 | 547,342 | 489,188 | 540,174 | 479,013 | 535,031 |
| 25. (+) Depreciation & Amortization | 371,097 | 375,888 | 380,741 | 385,658 | 390,636 | 395,680 |
| 26. (-) Capital Expenditures (6) | 361,751 | 366,422 | 371,153 | 375,945 | 380,799 | 385,716 |
| 27. (-) Changes in Working Capital (7) | 7,677 | 7,709 | 7,741 | 8,006 | 8,040 | 8,324 |
| 28. Debt Free Net Cash Flow | $605,491 | $549,099 | $491,034 | $541,880 | $480,810 | $536,671 |
| 29. PV Time Period (mid-year) | 14.5 | 15.5 | 16.5 | 17.5 | 18.5 | 19.5 |
| | 15 | 16 | 17 | 18 | 19 | 20 |
| 30. Present Value Factor: 3.00% (8) | 0.6514 | 0.6324 | 0.6140 | 0.5961 | 0.5788 | 0.5619 |
| 31. Present Value Debt Free Net Cash Flow | $394,417 | $347,250 | $301,495 | $323,015 | $278,293 | $301,556 |
| | 15 | 16 | 17 | 18 | 19 | 20 |
| 32. Present Value Factor: 2.80% (9) | 0.6700 | 0.6518 | 0.6340 | 0.6168 | 0.6000 | 0.5836 |
| 33. Present Value Debt Free Net Cash Flow | $405,679 | $357,903 | $311,316 | $334,232 | $288,486 | $313,201 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| DCF With Capitalization of Terminal Value Model @ 3.00% | Terminal Value |
|---|---|
| Projected Debt Free Net Cash Flow (10) | $536,671 |
| Divided by Capitalization Factor (8) | 3.00% |
| 20th Year Terminal Value | 17,889,038 |
| 20th Year Present Value Factor (11) | 0.5619 |
| Present Value of Terminal Value | 10,051,851 |
| Present Value Debt Free Net Cash Flow for 20 Years | 7,519,464 |
| Indicated Value | $17,571,315 |

| DCF With EBIT & EBITDA Terminal Value Model - Discount Rate of 3.00% | | Multiples (13) | Terminal Value |
|---|---|---|---|
| Projected EBIT | $535,031 | 21.7 | $11,610,167 |
| Projected EBITDA | 930,711 | 14.8 | 13,774,519 |
| Weighted (1/3 EBIT 2/3 EBITDA) Terminal Value | | | 13,060,283 |
| 20th Year Present Value Factor (11) | | | 0.5619 |
| Present Value of Terminal Value | | | 7,338,573 |
| Present Value Debt Free Net Cash Flow for 20 Years | | | 7,519,464 |
| Indicated Value | | | $14,858,037 |

| DCF With Capitalization of Terminal Value Model @ 2.80% | Terminal Value |
|---|---|
| Projected Debt Free Net Cash Flow (10) | $536,671 |
| Divided by Capitalization Factor (9) | 2.80% |
| 20th Year Terminal Value | 19,166,827 |
| 20th Year Present Value Factor (12) | 0.5619 |
| Present Value of Terminal Value | 10,769,840 |
| Present Value Debt Free Net Cash Flow for 20 Years | 7,519,464 |
| Indicated Value | $18,289,304 |

| DCF With EBIT & EBITDA Terminal Value Model - Discount Rate of 2.80% | | Multiples (13) | Terminal Value |
|---|---|---|---|
| Projected EBIT | $535,031 | 21.7 | $11,610,167 |
| Projected EBITDA | 930,711 | 14.8 | 13,774,519 |
| Weighted (1/3 EBIT 2/3 EBITDA) Terminal Value | | | 13,060,283 |
| 20th Year Present Value Factor (12) | | | 0.5619 |
| Present Value of Terminal Value | | | 7,338,573 |
| Present Value Debt Free Net Cash Flow for 20 Years | | | 7,519,464 |
| Indicated Value | | | $14,858,037 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

Notes: (1) Assumptions:

Charges for services - Pre-2022 are actual or budget. Post-2021 based on customer growth (EDU) and average revenue per customer. Rate increases (Other rate increase line item) are added year after they occur.

Other (Rate Increase) - Assumed purchase by MUNI at end of 2021 with shown rate increases.

OPERATING EXPENSES - increase at 2.5% annually after 2021 unless noted elsewhere. Assumed economies of scale are shown on lines below.
Wages & Benefits - Post-2021 assumed 15% savings due to economies of scale. Increase at 2.5% afterwards.

Professional Services - Post-2021 assumed 50% savings due to economies of scale. Increase at 2.5% afterwards.

No Additional O&M.

(2)

Depreciation - Pre-2022 based on actual depreciation rate plus same rate on half of CAPX. Post-2021 based on depreciation rate plus same rate on half of CAPX.

(3) Line 6.

(4) Line 18 + line 16.

(5) Line 18.

(6) Capital Expenditures - Pre-2022 based on financials/budget. Post-2021 years are estimates at 1.52% of prior year-end GROSS Property, plant and equipment.

(7) Changes in Working Capital - based on water industry 0.21% of revenues.

(8) Discount rate is the the current MUNI discount rate. Capitalization rate ( K ) at 6/28/2021 equal to discount rate, where capitalization rate = K - g.

(9) Discount rate is the current MUNI discount rate. Capitalization rate ( K ) at 6/28/2021 adjusted for stated growth ( g ) where capitalization rate = K - g.

(10) Final year shown, line 28.

(11) Final year shown, line 30.

(12) Final year shown, line 30.

(13) Developed on Market Multiples EXHIBIT 17.

**Terms:**

CAPX - Capital Expenditures
CIP - Capital improvement plan
Dep - Depreciation expense
GROSS PPE - GROSS Property, plant and equipment
IOU - Investor owned utility
MUNI - Large regional municipally owned utility
NET PPE - NET Property, plant and equipment

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | | | Budget | Budget | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Actual | | | Year 0 | Year 1 | Year 2 |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,147,607 |
| 3. Other operating revenue | 0 | 0 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 0 | 0 | 0 | 0 | 0 | 0 |
| 6. **Total Operating Revenues** | 2,011,578 | 2,211,380 | 2,071,219 | 2,148,508 | 2,151,309 | 2,154,107 |
| 7. **Rate Increase** | | | | | | |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 1,423,308 | 1,876,648 | 2,022,629 | 1,969,034 | 2,018,260 | 2,068,716 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | 0 | 0 | 0 | (53,544) | (54,882) | (56,254) |
| 12. LESS: EOS - Professional Services | 0 | 0 | 0 | (64,600) | (66,215) | (67,870) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. ADD: PURTA & Reg Assessment | 0 | 0 | 0 | 0 | 31,363 | 31,368 |
| 16. **Operating Expenses Before Depreciation** | 1,423,308 | 1,876,648 | 2,022,629 | 1,850,890 | 1,928,526 | 1,975,960 |
| 17. Depreciation (2) | 505,633 | 477,169 | 477,169 | 306,550 | 310,089 | 314,092 |
| 18. **Total Operating Expenses** | 1,928,941 | 2,353,817 | 2,499,798 | 2,157,441 | 2,238,615 | 2,290,052 |
| 19. **Operating Income** | 82,637 | (142,437) | (428,579) | (8,933) | (87,306) | (135,945) |
| 20. Revenues (3) | 2,011,578 | 2,211,380 | 2,071,219 | 2,148,508 | 2,151,309 | 2,154,107 |
| 21. EBITDA (4) | 588,270 | 334,732 | 48,590 | 297,618 | 222,783 | 178,147 |
| 22. EBIT (5) | 82,637 | (142,437) | (428,579) | (8,933) | (87,306) | (135,945) |
| 23. EBIT | 82,637 | (142,437) | (428,579) | (8,933) | (87,306) | (135,945) |
| 24. (-) Income Taxes | 0 | 0 | 0 | (2,581) | (25,223) | (39,275) |
| 25. Debt Free Net Income | 82,637 | (142,437) | (428,579) | (6,352) | (62,083) | (96,670) |
| 26. (+) Depreciation & Amortization | 505,633 | 477,169 | 477,169 | 306,550 | 310,089 | 314,092 |
| 27. (-) Capital Expenditures (6) | 513,332 | 874,280 | 25,000 | 304,000 | 302,280 | 306,183 |
| 28. (-) Changes in Working Capital (7) | 4,224 | 4,644 | 4,350 | 4,512 | 4,518 | 4,524 |
| 29. Debt Free Net Cash Flow | $70,714 | ($544,192) | $19,240 | ($8,313) | ($58,791) | ($93,284) |
| 30. PV Time Period (mid-year) | | | | (0.5) | 0.5 | 1.5 |
| 31. Present Value Factor: 6.36% (8) | | | | | 0.9696 | 0.9117 |
| 32. Present Value Debt Free Net Cash Flow | | | | | ($57,004) | ($85,047) |
| | | | | | 1 | 2 |
| 33. Present Value Factor: 7.59% (9) | | | | | 0.9641 | 0.8961 |
| 34. Present Value Debt Free Net Cash Flow | | | | | ($56,681) | ($83,592) |
| | | | | | 1 | 2 |
| 35. Present Value Factor: 6.16% (8) | | | | | 0.9706 | 0.9142 |
| 36. Present Value Debt Free Net Cash Flow | | | | | ($57,063) | ($85,280) |
| | | | | | 1 | 2 |
| 37. Present Value Factor: 7.39% (9) | | | | | 0.9650 | 0.8986 |
| 38. Present Value Debt Free Net Cash Flow | | | | | ($56,734) | ($83,825) |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | Estimated | Estimated | Estimated | Estimated | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 |
| | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 2,153,202 | 3,514,279 | 3,521,659 | 3,536,450 | 3,693,355 | 3,708,867 |
| 3. Other operating revenue | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 1,356,517 | 0 | 0 | 141,458 | 0 | 0 |
| 6. **Total Operating Revenues** | 3,516,219 | 3,520,779 | 3,528,159 | 3,684,408 | 3,699,855 | 3,715,367 |
| 7. **Rate Increase** | **63%** | | | **4%** | | |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 2,120,434 | 2,173,445 | 2,227,781 | 2,283,476 | 2,340,563 | 2,399,077 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | (57,661) | (59,102) | (60,580) | (62,094) | (63,647) | (65,238) |
| 12. LESS: EOS - Professional Services | (69,567) | (71,306) | (73,089) | (74,916) | (76,789) | (78,709) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. ADD: PURTA & Reg Assessment | 31,373 | 39,111 | 39,126 | 39,156 | 40,033 | 40,109 |
| 16. **Operating Expenses Before Depreciation** | 2,024,579 | 2,082,148 | 2,133,238 | 2,185,621 | 2,240,160 | 2,295,239 |
| 17. Depreciation (2) | 318,148 | 322,256 | 326,416 | 330,631 | 334,900 | 339,224 |
| 18. **Total Operating Expenses** | 2,342,728 | 2,404,404 | 2,459,655 | 2,516,252 | 2,575,060 | 2,634,463 |
| 19. **Operating Income** | 1,173,491 | 1,116,375 | 1,068,504 | 1,168,156 | 1,124,795 | 1,080,904 |
| 20. Revenues (3) | 3,516,219 | 3,520,779 | 3,528,159 | 3,684,408 | 3,699,855 | 3,715,367 |
| 21. EBITDA (4) | 1,491,640 | 1,438,631 | 1,394,921 | 1,498,787 | 1,459,695 | 1,420,128 |
| 22. EBIT (5) | 1,173,491 | 1,116,375 | 1,068,504 | 1,168,156 | 1,124,795 | 1,080,904 |
| 23. EBIT | 1,173,491 | 1,116,375 | 1,068,504 | 1,168,156 | 1,124,795 | 1,080,904 |
| 24. (-) Income Taxes | 339,022 | 322,521 | 308,691 | 337,480 | 324,953 | 312,273 |
| 25. Debt Free Net Income | 834,469 | 793,854 | 759,813 | 830,676 | 799,842 | 768,631 |
| 26. (+) Depreciation & Amortization | 318,148 | 322,256 | 326,416 | 330,631 | 334,900 | 339,224 |
| 27. (-) Capital Expenditures (6) | 310,136 | 314,140 | 318,196 | 322,305 | 326,466 | 330,681 |
| 28. (-) Changes in Working Capital (7) | 7,384 | 7,394 | 7,409 | 7,737 | 7,770 | 7,802 |
| 29. Debt Free Net Cash Flow | $835,098 | $794,577 | $760,624 | $831,264 | $800,506 | $769,372 |
| 30. PV Time Period (mid-year) | 2.5 | 3.5 | 4.5 | 5.5 | 6.5 | 7.5 |
| 31. Present Value Factor: 6.36% (8) | 0.8571 | 0.8059 | 0.7577 | 0.7124 | 0.6698 | 0.6297 |
| 32. Present Value Debt Free Net Cash Flow | $715,762 | $640,349 | $576,325 | $592,193 | $536,179 | $484,473 |
| | 3 | 4 | 5 | 6 | 7 | 8 |
| 33. Present Value Factor: 7.59% (9) | 0.8329 | 0.7741 | 0.7195 | 0.6687 | 0.6216 | 0.5777 |
| 34. Present Value Debt Free Net Cash Flow | $695,553 | $615,082 | $547,269 | $555,867 | $497,595 | $444,466 |
| | 3 | 4 | 5 | 6 | 7 | 8 |
| 35. Present Value Factor: 6.16% (8) | 0.8612 | 0.8112 | 0.7641 | 0.7198 | 0.6780 | 0.6387 |
| 36. Present Value Debt Free Net Cash Flow | $719,186 | $644,561 | $581,193 | $598,344 | $542,743 | $491,398 |
| | 3 | 4 | 5 | 6 | 7 | 8 |
| 37. Present Value Factor: 7.39% (9) | 0.8367 | 0.7792 | 0.7255 | 0.6756 | 0.6291 | 0.5858 |
| 38. Present Value Debt Free Net Cash Flow | $698,726 | $619,134 | $551,833 | $561,602 | $503,599 | $450,698 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | Estimated | Estimated | Estimated | Estimated | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Year 9 | Year 10 | Year 11 | Year 12 | Year 13 | Year 14 |
| | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 3,724,444 | 3,870,990 | 3,887,248 | 3,903,575 | 4,057,169 | 4,074,209 |
| 3. Other operating revenue | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 130,356 | 0 | 0 | 136,625 | 0 | 0 |
| 6. **Total Operating Revenues** | 3,861,300 | 3,877,490 | 3,893,748 | 4,046,700 | 4,063,669 | 4,080,709 |
| 7. **Rate Increase** | **4%** | | | **3%** | | |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 2,459,054 | 2,520,530 | 2,583,543 | 2,648,132 | 2,714,335 | 2,782,193 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | (66,869) | (68,540) | (70,254) | (72,010) | (73,811) | (75,656) |
| 12. LESS: EOS - Professional Services | (80,677) | (82,693) | (84,761) | (86,880) | (89,052) | (91,278) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. ADD: PURTA & Reg Assessment | 40,185 | 41,003 | 41,083 | 41,162 | 42,020 | 42,103 |
| 16. **Operating Expenses Before Depreciation** | 2,351,693 | 2,410,299 | 2,469,611 | 2,530,404 | 2,593,493 | 2,657,363 |
| 17. Depreciation (2) | 343,604 | 348,040 | 352,534 | 357,086 | 361,697 | 366,366 |
| 18. **Total Operating Expenses** | 2,695,297 | 2,758,339 | 2,822,145 | 2,887,490 | 2,955,189 | 3,023,729 |
| 19. **Operating Income** | 1,166,003 | 1,119,151 | 1,071,603 | 1,159,210 | 1,108,480 | 1,056,980 |
| 20. Revenues (3) | 3,861,300 | 3,877,490 | 3,893,748 | 4,046,700 | 4,063,669 | 4,080,709 |
| 21. EBITDA (4) | 1,509,607 | 1,467,191 | 1,424,137 | 1,516,296 | 1,470,176 | 1,423,346 |
| 22. EBIT (5) | 1,166,003 | 1,119,151 | 1,071,603 | 1,159,210 | 1,108,480 | 1,056,980 |
| 23. EBIT | 1,166,003 | 1,119,151 | 1,071,603 | 1,159,210 | 1,108,480 | 1,056,980 |
| 24. (-) Income Taxes | 336,858 | 323,323 | 309,586 | 334,896 | 320,240 | 305,362 |
| 25. Debt Free Net Income | 829,145 | 795,828 | 762,017 | 824,314 | 788,240 | 751,618 |
| 26. (+) Depreciation & Amortization | 343,604 | 348,040 | 352,534 | 357,086 | 361,697 | 366,366 |
| 27. (-) Capital Expenditures (6) | 334,951 | 339,276 | 343,656 | 348,093 | 352,588 | 357,140 |
| 28. (-) Changes in Working Capital (7) | 8,109 | 8,143 | 8,177 | 8,498 | 8,534 | 8,569 |
| 29. Debt Free Net Cash Flow | $829,689 | $796,449 | $762,718 | $824,809 | $788,815 | $752,275 |
| 30. PV Time Period (mid-year) | 8.5 | 9.5 | 10.5 | 11.5 | 12.5 | 13.5 |
| 31. Present Value Factor: 6.36% (8) | 0.5921 | 0.5567 | 0.5234 | 0.4921 | 0.4627 | 0.4350 |
| 32. Present Value Debt Free Net Cash Flow | $491,259 | $443,383 | $399,206 | $405,889 | $364,985 | $327,240 |
| | 9 | 10 | 11 | 12 | 13 | 14 |
| 33. Present Value Factor: 7.59% (9) | 0.5370 | 0.4991 | 0.4639 | 0.4311 | 0.4007 | 0.3725 |
| 34. Present Value Debt Free Net Cash Flow | $445,543 | $397,508 | $353,825 | $355,575 | $316,078 | $280,222 |
| | 9 | 10 | 11 | 12 | 13 | 14 |
| 35. Present Value Factor: 6.16% (8) | 0.6016 | 0.5667 | 0.5338 | 0.5029 | 0.4737 | 0.4462 |
| 36. Present Value Debt Free Net Cash Flow | $499,141 | $451,348 | $407,139 | $414,797 | $373,661 | $335,665 |
| | 9 | 10 | 11 | 12 | 13 | 14 |
| 37. Present Value Factor: 7.39% (9) | 0.5455 | 0.5080 | 0.4730 | 0.4405 | 0.4102 | 0.3819 |
| 38. Present Value Debt Free Net Cash Flow | $452,595 | $404,596 | $360,765 | $363,328 | $323,572 | $287,294 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | Estimated | Estimated | Estimated | Estimated | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Year 15 | Year 16 | Year 17 | Year 18 | Year 19 | Year 20 |
| | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 4,091,320 | 4,252,302 | 4,270,161 | 4,288,096 | 4,456,820 | 4,475,538 |
| 3. Other operating revenue | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 143,196 | 0 | 0 | 150,083 | 0 | 134,266 |
| 6. **Total Operating Revenues** | 4,241,016 | 4,258,802 | 4,276,661 | 4,444,679 | 4,463,320 | 4,616,304 |
| 7. **Rate Increase** | **3%** | | | **3%** | | **3%** |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 2,851,748 | 2,923,042 | 2,996,118 | 3,071,021 | 3,147,797 | 3,226,491 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | (77,547) | (79,486) | (81,473) | (83,510) | (85,598) | (87,738) |
| 12. LESS: EOS - Professional Services | (93,560) | (95,899) | (98,297) | (100,754) | (103,273) | (105,855) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. ADD: PURTA & Reg Assessment | 42,187 | 43,086 | 43,174 | 43,261 | 44,203 | 44,295 |
| 16. **Operating Expenses Before Depreciation** | 2,722,828 | 2,790,743 | 2,859,522 | 2,930,018 | 3,003,129 | 3,077,194 |
| 17. Depreciation (2) | 371,097 | 375,888 | 380,741 | 385,658 | 390,636 | 395,680 |
| 18. **Total Operating Expenses** | 3,093,925 | 3,166,631 | 3,240,263 | 3,315,676 | 3,393,765 | 3,472,874 |
| 19. **Operating Income** | 1,147,091 | 1,092,171 | 1,036,398 | 1,129,003 | 1,069,555 | 1,143,430 |
| 20. Revenues (3) | 4,241,016 | 4,258,802 | 4,276,661 | 4,444,679 | 4,463,320 | 4,616,304 |
| 21. EBITDA (4) | 1,518,188 | 1,468,059 | 1,417,139 | 1,514,661 | 1,460,191 | 1,539,110 |
| 22. EBIT (5) | 1,147,091 | 1,092,171 | 1,036,398 | 1,129,003 | 1,069,555 | 1,143,430 |
| 23. EBIT | 1,147,091 | 1,092,171 | 1,036,398 | 1,129,003 | 1,069,555 | 1,143,430 |
| 24. (-) Income Taxes | 331,395 | 315,528 | 299,415 | 326,169 | 308,994 | 330,337 |
| 25. Debt Free Net Income | 815,696 | 776,643 | 736,983 | 802,834 | 760,561 | 813,093 |
| 26. (+) Depreciation & Amortization | 371,097 | 375,888 | 380,741 | 385,658 | 390,636 | 395,680 |
| 27. (-) Capital Expenditures (6) | 361,751 | 366,422 | 371,153 | 375,945 | 380,799 | 385,716 |
| 28. (-) Changes in Working Capital (7) | 8,906 | 8,943 | 8,981 | 9,334 | 9,373 | 9,694 |
| 29. Debt Free Net Cash Flow | $816,136 | $777,165 | $737,590 | $803,213 | $761,025 | $813,362 |
| 30. PV Time Period (mid-year) | 14.5 | 15.5 | 16.5 | 17.5 | 18.5 | 19.5 |
| 31. Present Value Factor: 6.36% (8) | 0.4090 | 0.3845 | 0.3615 | 0.3399 | 0.3196 | 0.3005 |
| 32. Present Value Debt Free Net Cash Flow | $333,800 | $298,820 | $266,639 | $273,012 | $243,224 | $244,415 |
| | 15 | 16 | 17 | 18 | 19 | 20 |
| 33. Present Value Factor: 7.59% (9) | 0.3462 | 0.3218 | 0.2991 | 0.2780 | 0.2584 | 0.2401 |
| 34. Present Value Debt Free Net Cash Flow | $282,546 | $250,092 | $220,613 | $223,293 | $196,649 | $195,288 |
| | 15 | 16 | 17 | 18 | 19 | 20 |
| 35. Present Value Factor: 6.16% (8) | 0.4203 | 0.3959 | 0.3729 | 0.3513 | 0.3309 | 0.3117 |
| 36. Present Value Debt Free Net Cash Flow | $343,022 | $307,680 | $275,047 | $282,169 | $251,823 | $253,525 |
| | 15 | 16 | 17 | 18 | 19 | 20 |
| 37. Present Value Factor: 7.39% (9) | 0.3557 | 0.3312 | 0.3084 | 0.2872 | 0.2674 | 0.2490 |
| 38. Present Value Debt Free Net Cash Flow | $290,300 | $257,397 | $227,473 | $230,683 | $203,498 | $202,527 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| DCF With Capitalization of Terminal Value Model @ 6.36% | Terminal Value |
|---|---|
| Projected Debt Free Net Cash Flow (10) | $813,362 |
| Divided by Capitalization Factor (8) | 6.36% |
| 20th Year Terminal Value | 12,788,718 |
| 20th Year Present Value Factor (11) | 0.3005 |
| Present Value of Terminal Value | 3,843,010 |
| Present Value Debt Free Net Cash Flow for 20 Years | 7,495,101 |
| Indicated Value | $11,338,111 |

| DCF With EBIT & EBITDA Terminal Value Model - Discount Rate of 6.36% | | Multiples (13) | Terminal Value |
|---|---|---|---|
| Projected EBIT | $1,143,430 | 21.7 | $24,812,426 |
| Projected EBITDA | 1,539,110 | 14.8 | 22,778,824 |
| Weighted (1/3 EBIT 2/3 EBITDA) Terminal Value | | | 23,449,913 |
| 20th Year Present Value Factor (11) | | | 0.3005 |
| Present Value of Terminal Value | | | 7,046,699 |
| Present Value Debt Free Net Cash Flow for 20 Years | | | 7,495,101 |
| Indicated Value | | | $14,541,800 |

| DCF With Capitalization of Terminal Value Model @ 7.59% | Terminal Value |
|---|---|
| Projected Debt Free Net Cash Flow (10) | $813,362 |
| Divided by Capitalization Factor (9) | 7.59% |
| 20th Year Terminal Value | 10,716,238 |
| 20th Year Present Value Factor (12) | 0.2401 |
| Present Value of Terminal Value | 2,572,969 |
| Present Value Debt Free Net Cash Flow for 20 Years | 6,732,791 |
| Indicated Value | $9,305,760 |

| DCF With EBIT & EBITDA Terminal Value Model - Discount Rate of 7.59% | | Multiples (13) | Terminal Value |
|---|---|---|---|
| Projected EBIT | $1,143,430 | 21.7 | $24,812,426 |
| Projected EBITDA | 1,539,110 | 14.8 | 22,778,824 |
| Weighted (1/3 EBIT 2/3 EBITDA) Terminal Value | | | 23,449,913 |
| 20th Year Present Value Factor (12) | | | 0.2401 |
| Present Value of Terminal Value | | | 5,630,324 |
| Present Value Debt Free Net Cash Flow for 20 Years | | | 6,732,791 |
| Indicated Value | | | $12,363,115 |

| DCF With Capitalization of Terminal Value Model @ 6.16% | Terminal Value |
|---|---|
| Projected Debt Free Net Cash Flow (10) | $813,362 |
| Divided by Capitalization Factor (8) | 6.16% |
| 20th Year Terminal Value | 13,203,936 |
| 20th Year Present Value Factor (11) | 0.3005 |
| Present Value of Terminal Value | 3,967,783 |
| Present Value Debt Free Net Cash Flow for 20 Years | 7,495,101 |
| Indicated Value | $11,462,884 |

| DCF With Capitalization of Terminal Value Model @ 7.39% | Terminal Value |
|---|---|
| Projected Debt Free Net Cash Flow (10) | $813,362 |
| Divided by Capitalization Factor (9) | 7.39% |
| 20th Year Terminal Value | 11,006,258 |
| 20th Year Present Value Factor (12) | 0.2401 |
| Present Value of Terminal Value | 2,642,603 |
| Present Value Debt Free Net Cash Flow for 20 Years | 6,732,791 |
| Indicated Value | $9,375,394 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

Notes: (1) Assumptions:

Charges for services - Pre-2022 are actual or budget. Post-2021 based on customer growth (EDU) and average revenue per customer. Rate increases (Other rate increase line item) are added year after they occur.

Other (Rate Increase) - Assumed purchase by IOU at end of 2021 with shown rate increases.

OPERATING EXPENSES - increase at 2.5% annually after 2021 unless noted elsewhere. Assumed economies of scale are shown on lines below.
Wages & Benefits - Post-2021 assumed 15% savings due to economies of scale. Increase at 2.5% afterwards.

Professional Services - Post-2021 assumed 50% savings due to economies of scale. Increase at 2.5% afterwards.

No Additional O&M.

PURTA & Reg Assessment - 2021 assumed due to IOU purchase at the end of 2020.

(2)

Depreciation - Pre-2022 based on actual depreciation rate plus same rate on half of CAPX. Post-2021 based on depreciation rate plus same rate on half of CAPX.

(3) Line 6.

(4) Line 19 + line 17.

(5) Line 19.

(6) Capital Expenditures - Pre-2022 based on financials/budget. Post-2021 years are estimates at 1.52% of prior year-end GROSS Property, plant and equipment.

(7) Changes in Working Capital - based on water industry 0.21% of revenues.

(8) Discount rate is the current lower end of the IOU discount rate. Capitalization rate ( K ) at 6/28/2021 adjusted for stated growth ( g ) where capitalization rate = K - g.

(9) Discount rate is the current upper end of the IOU discount rate. Capitalization rate ( K ) at 6/28/2021 adjusted for stated growth ( g ) where capitalization rate = K - g.

(10) Final year shown, line 29.

(11) Final year shown, line 31.

(12) Final year shown, line 33.

(13) Developed on Market Multiples EXHIBIT 17.

**Terms:**

CAPX - Capital Expenditures
CIP - Capital improvement plan
Dep - Depreciation expense
GROSS PPE - GROSS Property, plant and equipment
IOU - Investor owned utility
MUNI - Large regional municipally owned utility
NET PPE - NET Property, plant and equipment

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | | | Budget | Budget | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Actual | | | Year 0 | Year 1 | Year 2 |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,147,607 |
| 3. Other operating revenue | 0 | 0 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 0 | 0 | 0 | 0 | 0 | 0 |
| 6. **Total Operating Revenues** | 2,011,578 | 2,211,380 | 2,071,219 | 2,148,508 | 2,151,309 | 2,154,107 |
| 7. **Rate Increase** | | | | | | |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 1,423,308 | 1,876,648 | 2,022,629 | 1,969,034 | 2,018,260 | 2,068,716 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | 0 | 0 | 0 | (53,544) | (54,882) | (56,254) |
| 12. LESS: EOS - Professional Services | 0 | 0 | 0 | (64,600) | (66,215) | (67,870) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. **Operating Expenses Before Depreciation** | 1,423,308 | 1,876,648 | 2,022,629 | 1,850,890 | 1,897,163 | 1,944,592 |
| 16. Depreciation (2) | 505,633 | 477,169 | 477,169 | 714,359 | 720,605 | 730,029 |
| 17. **Total Operating Expenses** | 1,928,941 | 2,353,817 | 2,499,798 | 2,565,249 | 2,617,768 | 2,674,621 |
| 18. **Operating Income** | 82,637 | (142,437) | (428,579) | (416,741) | (466,459) | (520,514) |
| 19. Revenues (3) | 2,011,578 | 2,211,380 | 2,071,219 | 2,148,508 | 2,151,309 | 2,154,107 |
| 20. EBITDA (4) | 588,270 | 334,732 | 48,590 | 297,618 | 254,146 | 209,515 |
| 21. EBIT (5) | 82,637 | (142,437) | (428,579) | (416,741) | (466,459) | (520,514) |
| 22. EBIT | 82,637 | (142,437) | (428,579) | (416,741) | (466,459) | (520,514) |
| 23. (-) Income Taxes | 0 | 0 | 0 | 0 | 0 | 0 |
| 24. Debt Free Net Income | 82,637 | (142,437) | (428,579) | (416,741) | (466,459) | (520,514) |
| 25. (+) Depreciation & Amortization | 505,633 | 477,169 | 477,169 | 714,359 | 720,605 | 730,029 |
| 26. (-) Capital Expenditures (6) | 513,332 | 874,280 | 25,000 | 304,000 | 702,411 | 711,597 |
| 27. (-) Changes in Working Capital (7) | 4,224 | 4,644 | 4,350 | 4,512 | 4,518 | 4,524 |
| 28. Debt Free Net Cash Flow | $70,714 | ($544,192) | $19,240 | ($10,894) | ($452,782) | ($506,605) |
| 29. PV Time Period (mid-year) | | | | (0.5) | 0.5 | 1.5 |
| | | | | | 1 | 2 |
| 30. Present Value Factor: 3.00% (8) | | | | | 0.9853 | 0.9566 |
| 31. Present Value Debt Free Net Cash Flow | | | | | ($446,126) | ($484,619) |
| | | | | | 1 | 2 |
| 32. Present Value Factor: 2.80% (9) | | | | | 0.9863 | 0.9594 |
| 33. Present Value Debt Free Net Cash Flow | | | | | ($446,579) | ($486,037) |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | Estimated | Estimated | Estimated | Estimated | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 |
| | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 2,153,202 | 3,665,199 | 3,672,896 | 3,688,322 | 3,703,813 | 3,961,128 |
| 3. Other operating revenue | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 1,507,241 | 0 | 0 | 0 | 240,748 | 0 |
| 6. **Total Operating Revenues** | 3,666,943 | 3,671,699 | 3,679,396 | 3,694,822 | 3,951,061 | 3,967,628 |
| 7. **Rate Increase** | **70%** | | | | **7%** | |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 2,120,434 | 2,173,445 | 2,227,781 | 2,283,476 | 2,340,563 | 2,399,077 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | (57,661) | (59,102) | (60,580) | (62,094) | (63,647) | (65,238) |
| 12. LESS: EOS - Professional Services | (69,567) | (71,306) | (73,089) | (74,916) | (76,789) | (78,709) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. **Operating Expenses Before Depreciation** | 1,993,206 | 2,043,037 | 2,094,112 | 2,146,465 | 2,200,127 | 2,255,130 |
| 16. Depreciation (2) | 739,577 | 749,249 | 759,048 | 768,975 | 779,031 | 789,220 |
| 17. **Total Operating Expenses** | 2,732,783 | 2,792,286 | 2,853,160 | 2,915,440 | 2,979,158 | 3,044,350 |
| 18. **Operating Income** | 934,160 | 879,413 | 826,236 | 779,382 | 971,903 | 923,278 |
| 19. Revenues (3) | 3,666,943 | 3,671,699 | 3,679,396 | 3,694,822 | 3,951,061 | 3,967,628 |
| 20. EBITDA (4) | 1,673,737 | 1,628,662 | 1,585,284 | 1,548,357 | 1,750,934 | 1,712,498 |
| 21. EBIT (5) | 934,160 | 879,413 | 826,236 | 779,382 | 971,903 | 923,278 |
| 22. EBIT | 934,160 | 879,413 | 826,236 | 779,382 | 971,903 | 923,278 |
| 23. (-) Income Taxes | 0 | 0 | 0 | 0 | 0 | 0 |
| 24. Debt Free Net Income | 934,160 | 879,413 | 826,236 | 779,382 | 971,903 | 923,278 |
| 25. (+) Depreciation & Amortization | 739,577 | 749,249 | 759,048 | 768,975 | 779,031 | 789,220 |
| 26. (-) Capital Expenditures (6) | 720,903 | 730,331 | 739,883 | 749,559 | 759,362 | 769,293 |
| 27. (-) Changes in Working Capital (7) | 7,701 | 7,711 | 7,727 | 7,759 | 8,297 | 8,332 |
| 28. Debt Free Net Cash Flow | $945,133 | $890,621 | $837,674 | $791,039 | $983,275 | $934,873 |
| 29. PV Time Period (mid-year) | 2.5 | 3.5 | 4.5 | 5.5 | 6.5 | 7.5 |
| | 3 | 4 | 5 | 6 | 7 | 8 |
| 30. Present Value Factor: 3.00% (8) | 0.9288 | 0.9017 | 0.8755 | 0.8500 | 0.8252 | 0.8012 |
| 31. Present Value Debt Free Net Cash Flow | $877,840 | $803,073 | $733,383 | $672,383 | $811,398 | $749,020 |
| | 3 | 4 | 5 | 6 | 7 | 8 |
| 32. Present Value Factor: 2.80% (9) | 0.9333 | 0.9079 | 0.8831 | 0.8591 | 0.8357 | 0.8129 |
| 33. Present Value Debt Free Net Cash Flow | $882,093 | $808,595 | $739,750 | $679,581 | $821,723 | $759,958 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | Estimated | Estimated | Estimated | Estimated | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Year 9 | Year 10 | Year 11 | Year 12 | Year 13 | Year 14 |
| | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 3,977,765 | 3,994,471 | 4,011,248 | 4,269,781 | 4,287,714 | 4,305,722 |
| 3. Other operating revenue | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 0 | 0 | 240,675 | 0 | 0 | 107,643 |
| 6. **Total Operating Revenues** | 3,984,265 | 4,000,971 | 4,258,423 | 4,276,281 | 4,294,214 | 4,419,865 |
| 7. **Rate Increase** | | | **6%** | | | **2%** |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 2,459,054 | 2,520,530 | 2,583,543 | 2,648,132 | 2,714,335 | 2,782,193 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | (66,869) | (68,540) | (70,254) | (72,010) | (73,811) | (75,656) |
| 12. LESS: EOS - Professional Services | (80,677) | (82,693) | (84,761) | (86,880) | (89,052) | (91,278) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. **Operating Expenses Before Depreciation** | 2,311,508 | 2,369,296 | 2,428,528 | 2,489,242 | 2,551,473 | 2,615,260 |
| 16. Depreciation (2) | 799,541 | 809,998 | 820,591 | 831,323 | 842,195 | 853,210 |
| 17. **Total Operating Expenses** | 3,111,050 | 3,179,294 | 3,249,119 | 3,320,564 | 3,393,667 | 3,468,469 |
| 18. **Operating Income** | 873,215 | 821,677 | 1,009,304 | 955,717 | 900,547 | 951,396 |
| 19. Revenues (3) | 3,984,265 | 4,000,971 | 4,258,423 | 4,276,281 | 4,294,214 | 4,419,865 |
| 20. EBITDA (4) | 1,672,757 | 1,631,675 | 1,829,895 | 1,787,039 | 1,742,741 | 1,804,605 |
| 21. EBIT (5) | 873,215 | 821,677 | 1,009,304 | 955,717 | 900,547 | 951,396 |
| 22. EBIT | 873,215 | 821,677 | 1,009,304 | 955,717 | 900,547 | 951,396 |
| 23. (-) Income Taxes | 0 | 0 | 0 | 0 | 0 | 0 |
| 24. Debt Free Net Income | 873,215 | 821,677 | 1,009,304 | 955,717 | 900,547 | 951,396 |
| 25. (+) Depreciation & Amortization | 799,541 | 809,998 | 820,591 | 831,323 | 842,195 | 853,210 |
| 26. (-) Capital Expenditures (6) | 779,353 | 789,546 | 799,872 | 810,333 | 820,930 | 831,666 |
| 27. (-) Changes in Working Capital (7) | 8,367 | 8,402 | 8,943 | 8,980 | 9,018 | 9,282 |
| 28. Debt Free Net Cash Flow | $885,037 | $833,727 | $1,021,080 | $967,726 | $912,793 | $963,658 |
| 29. PV Time Period (mid-year) | 8.5 | 9.5 | 10.5 | 11.5 | 12.5 | 13.5 |
| | 9 | 10 | 11 | 12 | 13 | 14 |
| 30. Present Value Factor: 3.00% (8) | 0.7778 | 0.7552 | 0.7332 | 0.7118 | 0.6911 | 0.6710 |
| 31. Present Value Debt Free Net Cash Flow | $688,382 | $629,631 | $748,656 | $688,827 | $630,832 | $646,614 |
| | 9 | 10 | 11 | 12 | 13 | 14 |
| 32. Present Value Factor: 2.80% (9) | 0.7908 | 0.7692 | 0.7483 | 0.7279 | 0.7081 | 0.6888 |
| 33. Present Value Debt Free Net Cash Flow | $699,887 | $641,303 | $764,074 | $704,408 | $646,349 | $663,767 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | Estimated | Estimated | Estimated | Estimated | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Year 15 | Year 16 | Year 17 | Year 18 | Year 19 | Year 20 |
| | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 4,431,902 | 4,450,516 | 4,469,208 | 4,604,666 | 4,624,005 | 4,643,426 |
| 3. Other operating revenue | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 0 | 0 | 116,199 | 0 | 0 | 130,016 |
| 6. **Total Operating Revenues** | 4,438,402 | 4,457,016 | 4,591,907 | 4,611,166 | 4,630,505 | 4,779,942 |
| 7. **Rate Increase** | | | **3%** | | | **3%** |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 2,851,748 | 2,923,042 | 2,996,118 | 3,071,021 | 3,147,797 | 3,226,491 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | (77,547) | (79,486) | (81,473) | (83,510) | (85,598) | (87,738) |
| 12. LESS: EOS - Professional Services | (93,560) | (95,899) | (98,297) | (100,754) | (103,273) | (105,855) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. **Operating Expenses Before Depreciation** | 2,680,641 | 2,747,657 | 2,816,348 | 2,886,757 | 2,958,926 | 3,032,899 |
| 16. Depreciation (2) | 864,368 | 875,671 | 887,124 | 898,726 | 910,480 | 922,387 |
| 17. **Total Operating Expenses** | 3,545,009 | 3,623,328 | 3,703,472 | 3,785,483 | 3,869,406 | 3,955,286 |
| 18. **Operating Income** | 893,393 | 833,688 | 888,435 | 825,683 | 761,099 | 824,656 |
| 19. Revenues (3) | 4,438,402 | 4,457,016 | 4,591,907 | 4,611,166 | 4,630,505 | 4,779,942 |
| 20. EBITDA (4) | 1,757,761 | 1,709,359 | 1,775,559 | 1,724,409 | 1,671,579 | 1,747,043 |
| 21. EBIT (5) | 893,393 | 833,688 | 888,435 | 825,683 | 761,099 | 824,656 |
| 22. EBIT | 893,393 | 833,688 | 888,435 | 825,683 | 761,099 | 824,656 |
| 23. (-) Income Taxes | 0 | 0 | 0 | 0 | 0 | 0 |
| 24. Debt Free Net Income | 893,393 | 833,688 | 888,435 | 825,683 | 761,099 | 824,656 |
| 25. (+) Depreciation & Amortization | 864,368 | 875,671 | 887,124 | 898,726 | 910,480 | 922,387 |
| 26. (-) Capital Expenditures (6) | 842,543 | 853,562 | 864,725 | 876,034 | 887,491 | 899,097 |
| 27. (-) Changes in Working Capital (7) | 9,321 | 9,360 | 9,643 | 9,683 | 9,724 | 10,038 |
| 28. Debt Free Net Cash Flow | $905,897 | $846,437 | $901,191 | $838,691 | $774,364 | $837,908 |
| 29. PV Time Period (mid-year) | 14.5 | 15.5 | 16.5 | 17.5 | 18.5 | 19.5 |
| | 15 | 16 | 17 | 18 | 19 | 20 |
| 30. Present Value Factor: 3.00% (8) | 0.6514 | 0.6324 | 0.6140 | 0.5961 | 0.5788 | 0.5619 |
| 31. Present Value Debt Free Net Cash Flow | $590,102 | $535,287 | $553,331 | $499,944 | $448,202 | $470,820 |
| | 15 | 16 | 17 | 18 | 19 | 20 |
| 32. Present Value Factor: 2.80% (9) | 0.6700 | 0.6518 | 0.6340 | 0.6168 | 0.6000 | 0.5836 |
| 33. Present Value Debt Free Net Cash Flow | $606,951 | $551,708 | $571,355 | $517,305 | $464,618 | $489,003 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach

Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| DCF With Capitalization of Terminal Value Model @ 3.00% | Terminal Value |
|---|---|
| Projected Debt Free Net Cash Flow (10) | $837,908 |
| Divided by Capitalization Factor (8) | 3.00% |
| 20th Year Terminal Value | 27,930,262 |
| 20th Year Present Value Factor (11) | 0.5619 |
| Present Value of Terminal Value | 15,694,014 |
| Present Value Debt Free Net Cash Flow for 20 Years | 10,846,979 |
| Indicated Value | $26,540,993 |

| DCF With EBIT & EBITDA Terminal Value Model - Discount Rate of 3.00% | | Multiples (13) | Terminal Value |
|---|---|---|---|
| Projected EBIT | $824,656 | 21.7 | $17,895,033 |
| Projected EBITDA | 1,747,043 | 14.8 | 25,856,232 |
| Weighted (1/3 EBIT 2/3 EBITDA) Terminal Value | | | 23,229,037 |
| 20th Year Present Value Factor (11) | | | 0.5619 |
| Present Value of Terminal Value | | | 13,052,396 |
| Present Value Debt Free Net Cash Flow for 20 Years | | | 10,846,979 |
| Indicated Value | | | $23,899,375 |

| DCF With Capitalization of Terminal Value Model @ 2.80% | Terminal Value |
|---|---|
| Projected Debt Free Net Cash Flow (10) | $837,908 |
| Divided by Capitalization Factor (9) | 2.80% |
| 20th Year Terminal Value | 29,925,280 |
| 20th Year Present Value Factor (12) | 0.5619 |
| Present Value of Terminal Value | 16,815,015 |
| Present Value Debt Free Net Cash Flow for 20 Years | 10,846,979 |
| Indicated Value | $27,661,994 |

| DCF With EBIT & EBITDA Terminal Value Model - Discount Rate of 2.80% | | Multiples (13) | Terminal Value |
|---|---|---|---|
| Projected EBIT | $824,656 | 21.7 | $17,895,033 |
| Projected EBITDA | 1,747,043 | 14.8 | 25,856,232 |
| Weighted (1/3 EBIT 2/3 EBITDA) Terminal Value | | | 23,229,037 |
| 20th Year Present Value Factor (12) | | | 0.5619 |
| Present Value of Terminal Value | | | 13,052,396 |
| Present Value Debt Free Net Cash Flow for 20 Years | | | 10,846,979 |
| Indicated Value | | | $23,899,375 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

Notes: (1) Assumptions:

Charges for services - Pre-2022 are actual or budget. Post-2021 based on customer growth (EDU) and average revenue per customer. Rate increases (Other rate increase line item) are added year after they occur.

Other (Rate Increase) - Assumed purchase by MUNI at end of 2021 with shown rate increases.

OPERATING EXPENSES - increase at 2.5% annually after 2021 unless noted elsewhere. Assumed economies of scale are shown on lines below.
Wages & Benefits - Post-2021 assumed 15% savings due to economies of scale. Increase at 2.5% afterwards.

Professional Services - Post-2021 assumed 50% savings due to economies of scale. Increase at 2.5% afterwards.

No Additional O&M.

(2)

Depreciation - Pre-2022 based on actual depreciation rate plus same rate on half of CAPX. Post-2021 based on depreciation rate plus same rate on half of CAPX.

(3) Line 6.

(4) Line 18 + line 16.

(5) Line 18.

(6) Capital Expenditures - Pre-2022 based on financials/budget. Post-2021 years are estimates at 1.54% of prior year-end GROSS Property, plant and equipment.

(7) Changes in Working Capital - based on water industry 0.21% of revenues.

(8) Discount rate is the the current MUNI discount rate. Capitalization rate ( K ) at 6/28/2021 equal to discount rate, where capitalization rate = K - g.

(9) Discount rate is the current MUNI discount rate. Capitalization rate ( K ) at 6/28/2021 adjusted for stated growth ( g ) where capitalization rate = K - g.

(10) Final year shown, line 28.

(11) Final year shown, line 30.

(12) Final year shown, line 30.

(13) Developed on Market Multiples EXHIBIT 17.

**Terms:**

CAPX - Capital Expenditures
CIP - Capital improvement plan
Dep - Depreciation expense
GROSS PPE - GROSS Property, plant and equipment
IOU - Investor owned utility
MUNI - Large regional municipally owned utility
NET PPE - NET Property, plant and equipment

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | | | Budget | Budget | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Actual | | | Year 0 | Year 1 | Year 2 |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,147,607 |
| 3. Other operating revenue | 0 | 0 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 0 | 0 | 0 | 0 | 0 | 0 |
| 6. **Total Operating Revenues** | 2,011,578 | 2,211,380 | 2,071,219 | 2,148,508 | 2,151,309 | 2,154,107 |
| 7. **Rate Increase** | | | | | | |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 1,423,308 | 1,876,648 | 2,022,629 | 1,969,034 | 2,018,260 | 2,068,716 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | 0 | 0 | 0 | (53,544) | (54,882) | (56,254) |
| 12. LESS: EOS - Professional Services | 0 | 0 | 0 | (64,600) | (66,215) | (67,870) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. ADD: PURTA & Reg Assessment | 0 | 0 | 0 | 0 | 49,156 | 49,146 |
| 16. **Operating Expenses Before Depreciation** | 1,423,308 | 1,876,648 | 2,022,629 | 1,850,890 | 1,946,319 | 1,993,738 |
| 17. Depreciation (2) | 505,633 | 477,169 | 477,169 | 714,359 | 720,605 | 730,029 |
| 18. **Total Operating Expenses** | 1,928,941 | 2,353,817 | 2,499,798 | 2,565,249 | 2,666,924 | 2,723,767 |
| 19. **Operating Income** | 82,637 | (142,437) | (428,579) | (416,741) | (515,615) | (569,660) |
| 20. Revenues (3) | 2,011,578 | 2,211,380 | 2,071,219 | 2,148,508 | 2,151,309 | 2,154,107 |
| 21. EBITDA (4) | 588,270 | 334,732 | 48,590 | 297,618 | 204,990 | 160,369 |
| 22. EBIT (5) | 82,637 | (142,437) | (428,579) | (416,741) | (515,615) | (569,660) |
| 23. EBIT | 82,637 | (142,437) | (428,579) | (416,741) | (515,615) | (569,660) |
| 24. (-) Income Taxes | 0 | 0 | 0 | (120,397) | (148,961) | (164,575) |
| 25. Debt Free Net Income | 82,637 | (142,437) | (428,579) | (296,344) | (366,654) | (405,085) |
| 26. (+) Depreciation & Amortization | 505,633 | 477,169 | 477,169 | 714,359 | 720,605 | 730,029 |
| 27. (-) Capital Expenditures (6) | 513,332 | 874,280 | 25,000 | 304,000 | 702,411 | 711,597 |
| 28. (-) Changes in Working Capital (7) | 4,224 | 4,644 | 4,350 | 4,512 | 4,518 | 4,524 |
| 29. Debt Free Net Cash Flow | $70,714 | ($544,192) | $19,240 | $109,503 | ($352,977) | ($391,176) |
| 30. PV Time Period (mid-year) | | | | (0.5) | 0.5 | 1.5 |
| 31. Present Value Factor: 6.36% (8) | | | | | 0.9696 | 0.9117 |
| 32. Present Value Debt Free Net Cash Flow | | | | | ($342,247) | ($356,635) |
| | | | | | 1 | 2 |
| 33. Present Value Factor: 7.59% (9) | | | | | 0.9641 | 0.8961 |
| 34. Present Value Debt Free Net Cash Flow | | | | | ($340,305) | ($350,533) |
| | | | | | 1 | 2 |
| 35. Present Value Factor: 6.16% (8) | | | | | 0.9706 | 0.9142 |
| 36. Present Value Debt Free Net Cash Flow | | | | | ($342,600) | ($357,613) |
| | | | | | 1 | 2 |
| 37. Present Value Factor: 7.39% (9) | | | | | 0.9650 | 0.8986 |
| 38. Present Value Debt Free Net Cash Flow | | | | | ($340,623) | ($351,511) |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | Estimated | Estimated | Estimated | Estimated | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 |
| | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 2,153,202 | 5,066,598 | 5,077,238 | 5,098,563 | 5,119,977 | 5,347,140 |
| 3. Other operating revenue | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 2,906,822 | 0 | 0 | 0 | 204,799 | 0 |
| 6. **Total Operating Revenues** | 5,066,524 | 5,073,098 | 5,083,738 | 5,105,063 | 5,331,276 | 5,353,640 |
| 7. **Rate Increase** | **135%** | | | | **4%** | |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 2,120,434 | 2,173,445 | 2,227,781 | 2,283,476 | 2,340,563 | 2,399,077 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | (57,661) | (59,102) | (60,580) | (62,094) | (63,647) | (65,238) |
| 12. LESS: EOS - Professional Services | (69,567) | (71,306) | (73,089) | (74,916) | (76,789) | (78,709) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. ADD: PURTA & Reg Assessment | 49,135 | 65,681 | 65,690 | 65,723 | 65,817 | 67,076 |
| 16. **Operating Expenses Before Depreciation** | 2,042,341 | 2,108,718 | 2,159,802 | 2,212,188 | 2,265,944 | 2,322,206 |
| 17. Depreciation (2) | 739,577 | 749,249 | 759,048 | 768,975 | 779,031 | 789,220 |
| 18. **Total Operating Expenses** | 2,781,918 | 2,857,967 | 2,918,850 | 2,981,163 | 3,044,975 | 3,111,426 |
| 19. **Operating Income** | 2,284,606 | 2,215,131 | 2,164,888 | 2,123,900 | 2,286,301 | 2,242,214 |
| 20. Revenues (3) | 5,066,524 | 5,073,098 | 5,083,738 | 5,105,063 | 5,331,276 | 5,353,640 |
| 21. EBITDA (4) | 3,024,183 | 2,964,380 | 2,923,936 | 2,892,875 | 3,065,332 | 3,031,434 |
| 22. EBIT (5) | 2,284,606 | 2,215,131 | 2,164,888 | 2,123,900 | 2,286,301 | 2,242,214 |
| 23. EBIT | 2,284,606 | 2,215,131 | 2,164,888 | 2,123,900 | 2,286,301 | 2,242,214 |
| 24. (-) Income Taxes | 660,023 | 639,951 | 625,436 | 613,595 | 660,512 | 647,776 |
| 25. Debt Free Net Income | 1,624,583 | 1,575,180 | 1,539,452 | 1,510,305 | 1,625,789 | 1,594,438 |
| 26. (+) Depreciation & Amortization | 739,577 | 749,249 | 759,048 | 768,975 | 779,031 | 789,220 |
| 27. (-) Capital Expenditures (6) | 720,903 | 730,331 | 739,883 | 749,559 | 759,362 | 769,293 |
| 28. (-) Changes in Working Capital (7) | 10,640 | 10,654 | 10,676 | 10,721 | 11,196 | 11,243 |
| 29. Debt Free Net Cash Flow | $1,632,617 | $1,583,445 | $1,547,941 | $1,519,000 | $1,634,262 | $1,603,122 |
| 30. PV Time Period (mid-year) | 2.5 | 3.5 | 4.5 | 5.5 | 6.5 | 7.5 |
| 31. Present Value Factor: 6.36% (8) | 0.8571 | 0.8059 | 0.7577 | 0.7124 | 0.6698 | 0.6297 |
| 32. Present Value Debt Free Net Cash Flow | $1,399,316 | $1,276,098 | $1,172,875 | $1,082,136 | $1,094,629 | $1,009,486 |
| | 3 | 4 | 5 | 6 | 7 | 8 |
| 33. Present Value Factor: 7.59% (9) | 0.8329 | 0.7741 | 0.7195 | 0.6687 | 0.6216 | 0.5777 |
| 34. Present Value Debt Free Net Cash Flow | $1,359,807 | $1,225,745 | $1,113,743 | $1,015,755 | $1,015,858 | $926,124 |
| | 3 | 4 | 5 | 6 | 7 | 8 |
| 35. Present Value Factor: 6.16% (8) | 0.8612 | 0.8112 | 0.7641 | 0.7198 | 0.6780 | 0.6387 |
| 36. Present Value Debt Free Net Cash Flow | $1,406,010 | $1,284,491 | $1,182,781 | $1,093,376 | $1,108,030 | $1,023,914 |
| | 3 | 4 | 5 | 6 | 7 | 8 |
| 37. Present Value Factor: 7.39% (9) | 0.8367 | 0.7792 | 0.7255 | 0.6756 | 0.6291 | 0.5858 |
| 38. Present Value Debt Free Net Cash Flow | $1,366,011 | $1,233,820 | $1,123,031 | $1,026,236 | $1,028,114 | $939,109 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | Estimated | Estimated | Estimated | Estimated | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Year 9 | Year 10 | Year 11 | Year 12 | Year 13 | Year 14 |
| | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 5,369,598 | 5,392,150 | 5,414,797 | 5,600,665 | 5,624,188 | 5,647,810 |
| 3. Other operating revenue | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 0 | 0 | 162,444 | 0 | 0 | 141,195 |
| 6. **Total Operating Revenues** | 5,376,098 | 5,398,650 | 5,583,741 | 5,607,165 | 5,630,688 | 5,795,505 |
| 7. **Rate Increase** | | | **3%** | | | **2%** |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 2,459,054 | 2,520,530 | 2,583,543 | 2,648,132 | 2,714,335 | 2,782,193 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | (66,869) | (68,540) | (70,254) | (72,010) | (73,811) | (75,656) |
| 12. LESS: EOS - Professional Services | (80,677) | (82,693) | (84,761) | (86,880) | (89,052) | (91,278) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. ADD: PURTA & Reg Assessment | 67,175 | 67,274 | 67,372 | 68,396 | 68,500 | 68,603 |
| 16. **Operating Expenses Before Depreciation** | 2,378,683 | 2,436,570 | 2,495,900 | 2,557,638 | 2,619,973 | 2,683,863 |
| 17. Depreciation (2) | 799,541 | 809,998 | 820,591 | 831,323 | 842,195 | 853,210 |
| 18. **Total Operating Expenses** | 3,178,225 | 3,246,568 | 3,316,491 | 3,388,960 | 3,462,167 | 3,537,072 |
| 19. **Operating Income** | 2,197,873 | 2,152,082 | 2,267,250 | 2,218,205 | 2,168,521 | 2,258,433 |
| 20. Revenues (3) | 5,376,098 | 5,398,650 | 5,583,741 | 5,607,165 | 5,630,688 | 5,795,505 |
| 21. EBITDA (4) | 2,997,415 | 2,962,080 | 3,087,841 | 3,049,527 | 3,010,715 | 3,111,642 |
| 22. EBIT (5) | 2,197,873 | 2,152,082 | 2,267,250 | 2,218,205 | 2,168,521 | 2,258,433 |
| 23. EBIT | 2,197,873 | 2,152,082 | 2,267,250 | 2,218,205 | 2,168,521 | 2,258,433 |
| 24. (-) Income Taxes | 634,966 | 621,737 | 655,008 | 640,839 | 626,486 | 652,461 |
| 25. Debt Free Net Income | 1,562,907 | 1,530,345 | 1,612,242 | 1,577,366 | 1,542,035 | 1,605,972 |
| 26. (+) Depreciation & Amortization | 799,541 | 809,998 | 820,591 | 831,323 | 842,195 | 853,210 |
| 27. (-) Capital Expenditures (6) | 779,353 | 789,546 | 799,872 | 810,333 | 820,930 | 831,666 |
| 28. (-) Changes in Working Capital (7) | 11,290 | 11,337 | 11,726 | 11,775 | 11,824 | 12,171 |
| 29. Debt Free Net Cash Flow | $1,571,806 | $1,539,460 | $1,621,235 | $1,586,580 | $1,551,475 | $1,615,345 |
| 30. PV Time Period (mid-year) | 8.5 | 9.5 | 10.5 | 11.5 | 12.5 | 13.5 |
| 31. Present Value Factor: 6.36% (8) | 0.5921 | 0.5567 | 0.5234 | 0.4921 | 0.4627 | 0.4350 |
| 32. Present Value Debt Free Net Cash Flow | $930,666 | $857,017 | $848,554 | $780,756 | $717,867 | $702,675 |
| | 9 | 10 | 11 | 12 | 13 | 14 |
| 33. Present Value Factor: 7.59% (9) | 0.5370 | 0.4991 | 0.4639 | 0.4311 | 0.4007 | 0.3725 |
| 34. Present Value Debt Free Net Cash Flow | $844,060 | $768,344 | $752,091 | $683,975 | $621,676 | $601,716 |
| | 9 | 10 | 11 | 12 | 13 | 14 |
| 35. Present Value Factor: 6.16% (8) | 0.6016 | 0.5667 | 0.5338 | 0.5029 | 0.4737 | 0.4462 |
| 36. Present Value Debt Free Net Cash Flow | $945,598 | $872,412 | $865,415 | $797,891 | $734,934 | $720,767 |
| | 9 | 10 | 11 | 12 | 13 | 14 |
| 37. Present Value Factor: 7.39% (9) | 0.5455 | 0.5080 | 0.4730 | 0.4405 | 0.4102 | 0.3819 |
| 38. Present Value Debt Free Net Cash Flow | $857,420 | $782,046 | $766,844 | $698,889 | $636,415 | $616,900 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| | Estimated | Estimated | Estimated | Estimated | Estimated | Estimated |
|---|---|---|---|---|---|---|
| | Year 15 | Year 16 | Year 17 | Year 18 | Year 19 | Year 20 |
| | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
| 1. **OPERATING REVENUES (1)** | | | | | | |
| 2. Charges for services | 5,813,319 | 5,837,735 | 5,862,253 | 6,004,612 | 6,029,832 | 6,055,157 |
| 3. Other operating revenue | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
| 4. Tap Fees | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Other (Rate Increase) | 0 | 0 | 117,245 | 0 | 0 | 121,103 |
| 6. **Total Operating Revenues** | 5,819,819 | 5,844,235 | 5,985,998 | 6,011,112 | 6,036,332 | 6,182,760 |
| 7. **Rate Increase** | | | **2%** | | | **2%** |
| 8. **OPERATING EXPENSES (1)** | | | | | | |
| 9. Operating & Maintenance Expenses | 2,851,748 | 2,923,042 | 2,996,118 | 3,071,021 | 3,147,797 | 3,226,491 |
| 10. Remove Economies of Scale | | | | | | |
| 11. LESS: EOS - Wages & Benefits | (77,547) | (79,486) | (81,473) | (83,510) | (85,598) | (87,738) |
| 12. LESS: EOS - Professional Services | (93,560) | (95,899) | (98,297) | (100,754) | (103,273) | (105,855) |
| 13. LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. ADD: Additional O&M | 0 | 0 | 0 | 0 | 0 | 0 |
| 15. ADD: PURTA & Reg Assessment | 69,509 | 69,617 | 69,724 | 70,498 | 70,609 | 70,720 |
| 16. **Operating Expenses Before Depreciation** | 2,750,150 | 2,817,274 | 2,886,072 | 2,957,255 | 3,029,535 | 3,103,619 |
| 17. Depreciation (2) | 864,368 | 875,671 | 887,124 | 898,726 | 910,480 | 922,387 |
| 18. **Total Operating Expenses** | 3,614,518 | 3,692,945 | 3,773,196 | 3,855,981 | 3,940,015 | 4,026,006 |
| 19. **Operating Income** | 2,205,301 | 2,151,290 | 2,212,802 | 2,155,131 | 2,096,317 | 2,156,754 |
| 20. Revenues (3) | 5,819,819 | 5,844,235 | 5,985,998 | 6,011,112 | 6,036,332 | 6,182,760 |
| 21. EBITDA (4) | 3,069,669 | 3,026,961 | 3,099,926 | 3,053,857 | 3,006,797 | 3,079,141 |
| 22. EBIT (5) | 2,205,301 | 2,151,290 | 2,212,802 | 2,155,131 | 2,096,317 | 2,156,754 |
| 23. EBIT | 2,205,301 | 2,151,290 | 2,212,802 | 2,155,131 | 2,096,317 | 2,156,754 |
| 24. (-) Income Taxes | 637,112 | 621,508 | 639,278 | 622,617 | 605,626 | 623,086 |
| 25. Debt Free Net Income | 1,568,189 | 1,529,782 | 1,573,524 | 1,532,514 | 1,490,691 | 1,533,668 |
| 26. (+) Depreciation & Amortization | 864,368 | 875,671 | 887,124 | 898,726 | 910,480 | 922,387 |
| 27. (-) Capital Expenditures (6) | 842,543 | 853,562 | 864,725 | 876,034 | 887,491 | 899,097 |
| 28. (-) Changes in Working Capital (7) | 12,222 | 12,273 | 12,571 | 12,623 | 12,676 | 12,984 |
| 29. Debt Free Net Cash Flow | $1,577,792 | $1,539,618 | $1,583,352 | $1,542,582 | $1,501,004 | $1,543,974 |
| 30. PV Time Period (mid-year) | 14.5 | 15.5 | 16.5 | 17.5 | 18.5 | 19.5 |
| 31. Present Value Factor: 6.36% (8) | 0.4090 | 0.3845 | 0.3615 | 0.3399 | 0.3196 | 0.3005 |
| 32. Present Value Debt Free Net Cash Flow | $645,317 | $591,983 | $572,382 | $524,324 | $479,721 | $463,964 |
| | 15 | 16 | 17 | 18 | 19 | 20 |
| 33. Present Value Factor: 7.59% (9) | 0.3462 | 0.3218 | 0.2991 | 0.2780 | 0.2584 | 0.2401 |
| 34. Present Value Debt Free Net Cash Flow | $546,232 | $495,449 | $473,581 | $428,838 | $387,859 | $370,708 |
| | 15 | 16 | 17 | 18 | 19 | 20 |
| 35. Present Value Factor: 6.16% (8) | 0.4203 | 0.3959 | 0.3729 | 0.3513 | 0.3309 | 0.3117 |
| 36. Present Value Debt Free Net Cash Flow | $663,146 | $609,535 | $590,432 | $541,909 | $496,682 | $481,257 |
| | 15 | 16 | 17 | 18 | 19 | 20 |
| 37. Present Value Factor: 7.39% (9) | 0.3557 | 0.3312 | 0.3084 | 0.2872 | 0.2674 | 0.2490 |
| 38. Present Value Debt Free Net Cash Flow | $561,221 | $509,921 | $488,306 | $443,030 | $401,368 | $384,450 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

| DCF With Capitalization of Terminal Value Model @ 6.36% | Terminal Value |
|---|---|
| Projected Debt Free Net Cash Flow (10) | $1,543,974 |
| Divided by Capitalization Factor (8) | 6.36% |
| 20th Year Terminal Value | 24,276,320 |
| 20th Year Present Value Factor (11) | 0.3005 |
| Present Value of Terminal Value | 7,295,034 |
| Present Value Debt Free Net Cash Flow for 20 Years | 14,450,884 |
| Indicated Value | $21,745,918 |

| DCF With EBIT & EBITDA Terminal Value Model - Discount Rate of 6.36% | | Multiples (13) | Terminal Value |
|---|---|---|---|
| Projected EBIT | $2,156,754 | 21.7 | $46,801,560 |
| Projected EBITDA | 3,079,141 | 14.8 | 45,571,283 |
| Weighted (1/3 EBIT 2/3 EBITDA) Terminal Value | | | 45,977,274 |
| 20th Year Present Value Factor (11) | | | 0.3005 |
| Present Value of Terminal Value | | | 13,816,171 |
| Present Value Debt Free Net Cash Flow for 20 Years | | | 14,450,884 |
| Indicated Value | | | $28,267,055 |

| DCF With Capitalization of Terminal Value Model @ 7.59% | Terminal Value |
|---|---|
| Projected Debt Free Net Cash Flow (10) | $1,543,974 |
| Divided by Capitalization Factor (9) | 7.59% |
| 20th Year Terminal Value | 20,342,213 |
| 20th Year Present Value Factor (12) | 0.2401 |
| Present Value of Terminal Value | 4,884,165 |
| Present Value Debt Free Net Cash Flow for 20 Years | 12,940,721 |
| Indicated Value | $17,824,886 |

| DCF With EBIT & EBITDA Terminal Value Model - Discount Rate of 7.59% | | Multiples (13) | Terminal Value |
|---|---|---|---|
| Projected EBIT | $2,156,754 | 21.7 | $46,801,560 |
| Projected EBITDA | 3,079,141 | 14.8 | 45,571,283 |
| Weighted (1/3 EBIT 2/3 EBITDA) Terminal Value | | | 45,977,274 |
| 20th Year Present Value Factor (12) | | | 0.2401 |
| Present Value of Terminal Value | | | 11,039,143 |
| Present Value Debt Free Net Cash Flow for 20 Years | | | 12,940,721 |
| Indicated Value | | | $23,979,865 |

| DCF With Capitalization of Terminal Value Model @ 6.16% | Terminal Value |
|---|---|
| Projected Debt Free Net Cash Flow (10) | $1,543,974 |
| Divided by Capitalization Factor (8) | 6.16% |
| 20th Year Terminal Value | 25,064,512 |
| 20th Year Present Value Factor (11) | 0.3005 |
| Present Value of Terminal Value | 7,531,886 |
| Present Value Debt Free Net Cash Flow for 20 Years | 14,450,884 |
| Indicated Value | $21,982,770 |

| DCF With Capitalization of Terminal Value Model @ 7.39% | Terminal Value |
|---|---|
| Projected Debt Free Net Cash Flow (10) | $1,543,974 |
| Divided by Capitalization Factor (9) | 7.39% |
| 20th Year Terminal Value | 20,892,746 |
| 20th Year Present Value Factor (12) | 0.2401 |
| Present Value of Terminal Value | 5,016,348 |
| Present Value Debt Free Net Cash Flow for 20 Years | 12,940,721 |
| Indicated Value | $17,957,069 |

**See last page of this EXHIBIT for notes and assumptions.**

Income Approach
Willistown Township Wastewater Systems Assets
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

Notes: (1) Assumptions:

Charges for services - Pre-2022 are actual or budget. Post-2021 based on customer growth (EDU) and average revenue per customer. Rate increases (Other rate increase line item) are added year after they occur.

Other (Rate Increase) - Assumed purchase by IOU at end of 2021 with shown rate increases.

OPERATING EXPENSES - increase at 2.5% annually after 2021 unless noted elsewhere. Assumed economies of scale are shown on lines below.
Wages & Benefits - Post-2021 assumed 15% savings due to economies of scale. Increase at 2.5% afterwards.

Professional Services - Post-2021 assumed 50% savings due to economies of scale. Increase at 2.5% afterwards.

No Additional O&M.

PURTA & Reg Assessment - 2021 assumed due to IOU purchase at the end of 2020.

(2)

Depreciation - Pre-2022 based on actual depreciation rate plus same rate on half of CAPX. Post-2021 based on depreciation rate plus same rate on half of CAPX.

(3) Line 6.

(4) Line 19 + line 17.

(5) Line 19.

(6) Capital Expenditures - Pre-2022 based on financials/budget. Post-2021 years are estimates at 1.54% of prior year-end GROSS Property, plant and equipment.

(7) Changes in Working Capital - based on water industry 0.21% of revenues.

(8) Discount rate is the current lower end of the IOU discount rate. Capitalization rate ( K ) at 6/28/2021 adjusted for stated growth ( g ) where capitalization rate = K - g.

(9) Discount rate is the current upper end of the IOU discount rate. Capitalization rate ( K ) at 6/28/2021 adjusted for stated growth ( g ) where capitalization rate = K - g.

(10) Final year shown, line 29.

(11) Final year shown, line 31.

(12) Final year shown, line 33.

(13) Developed on Market Multiples EXHIBIT 17.

**Terms:**

CAPX - Capital Expenditures
CIP - Capital improvement plan
Dep - Depreciation expense
GROSS PPE - GROSS Property, plant and equipment
IOU - Investor owned utility
MUNI - Large regional municipally owned utility
NET PPE - NET Property, plant and equipment

Market Multiples Method
Willistown Township Wastewater Systems Assets
2021 Operations
Market Multiple Method

| | A | B | C | D | E |
|---|---|---|---|---|---|
| | | | | (Col B × Col C) | (Col A × Col D) |
| | Subject Company Statistic (1) | Comparison Group's Valuation Multiples 6/28/2021 | Willistown Wastewater's Growth & Risk Adjustment | Willistown Wastewater's Risk Adjusted Valuation Multiples 6/28/2021 | Willistown Wastewater's Market Multiples Valuation |
| **Risk Adjusted Multiple** | | | | | |
| 1. Willistown Township Wastewater Systems Assets | | | | | |
| 2. Investor Provided Capital | $9,866,721 | 2.06 | 75.00% | 1.55 | $15,293,418 |
| 3. Gross PP&E | $19,641,520 | 1.48 | 82.00% | 1.21 | 23,766,239 |
| 4. Net PP&E | $13,367,274 | 1.88 | 82.00% | 1.54 | 20,585,602 |
| 5. Revenues | $2,148,508 | 8.41 | 75.00% | 6.31 | 13,557,085 |
| 6. EBITDA | $297,618 | 19.75 | 75.00% | 14.81 | 4,407,718 |
| 7. EBIT | ($8,933) | 28.93 | 75.00% | 21.70 | (193,835) |
| 8. Customers | 2,294 | $9,841 | 83.00% | $8,168 | 18,737,392 |
| 9. Population | 11,214 | $3,037 | 83.00% | $2,521 | 28,270,494 |
| 10. | | | | | |
| 11. Average | | | | | $15,553,014 |

**Conclusion of Market Multiple Method Valuation**

| | | Low | High | | Conclusion |
|---|---|---|---|---|---|
| 12. | Capital Items | $15,293,418 | $23,766,239 | | $19,529,828 |
| 13. | (Items 2-4) | | | | |
| 14. | Income Statement Items | (193,835) | 13,557,085 | | - |
| 15. | (Items 5 -7) | | | | |
| 16. | Demographics Items | 18,737,392 | 28,270,494 | | 23,503,943 |
| 17. | (Items 8-9) | | | | |
| | | | | Conclusion | $21,516,886 |

Market Multiples Method
Willistown Township Wastewater Systems Assets
Development of Market Multiples Method for the Market Multiples Method

| | Latest Quarter End | | | Latest 12 Months | | | 2020 | | 6/28/2021 |
|---|---|---|---|---|---|---|---|---|---|
| | Gross PP&E | Net PP&E | Invest. Total Capital | 12 Mos. Rev. | 12 Mos. EBITDA | 12 Mos. EBIT | Customers | Population | Enterprise Value |
| | ($ Mill) | ($ Mill) | ($ Mill) | ($ Mill) | ($ Mill) | ($ Mill) | | | ($ Mill) |
| American States Water Co | $2,137.130 | $1,562.452 | $1,230.252 | $496.226 | $176.438 | $138.470 | 286,341 | 1,000,000 | $3,564.232 |
| American Water Works Company Inc | $26,032.000 | $20,003.000 | $17,432.000 | $3,821.000 | $1,910.000 | $1,294.000 | 3,496,000 | 15,000,000 | $39,314.549 |
| Artesian Resources Corp | $723.349 | $571.627 | $338.623 | $88.976 | $39.354 | $27.951 | 95,640 | 300,000 | $516.521 |
| California Water Service Group | $3,952.681 | $2,684.936 | $2,150.889 | $816.481 | $264.663 | $161.152 | 543,000 | 2,000,000 | $3,994.644 |
| Essential Utilities, Inc. | $11,829.738 | $9,627.848 | $10,567.063 | $1,790.678 | $894.253 | $610.495 | 1,798,803 | 5,000,000 | $17,263.635 |
| Middlesex Water Co | $1,022.332 | $831.467 | $649.327 | $142.364 | $59.262 | $37.236 | 122,200 | 500,000 | $1,760.079 |
| SJW Corp. | $3,482.200 | $2,398.276 | $2,479.118 | $563.557 | $208.036 | $114.965 | 389,293 | 1,614,866 | $3,399.841 |
| York Water Company (The) | $444.757 | $351.283 | $269.306 | $54.056 | $31.171 | $22.844 | 72,681 | 202,000 | $732.923 |
| Average | $6,203.023 | $4,753.861 | $4,389.572 | $971.667 | $447.897 | $300.889 | 850,495 | 3,202,108 | $8,818.303 |
| Max | $26,032.000 | $20,003.000 | $17,432.000 | $3,821.000 | $1,910.000 | $1,294.000 | 3,496,000 | 15,000,000 | $39,314.549 |
| Min | $444.757 | $351.283 | $269.306 | $54.056 | $31.171 | $22.844 | 72,681 | 202,000 | $516.521 |
| Median | $2,809.665 | $1,980.364 | $1,690.571 | $529.892 | $192.237 | $126.718 | 337,817 | 1,307,433 | $3,482.036 |

| | Enterprise Value as a Multiple of | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Invest. Capital | Gross PP&E | Net PP&E | Rev. | EBITDA | EBIT | Customers | Population | Population Per Customer |
| | (x) | (x) | (x) | (x) | (x) | (x) | ($) | ($) | |
| American States Water Co | 2.90 | 1.67 | 2.28 | 7.18 | 20.20 | 25.74 | $12,448 | $3,564 | 3.49 |
| American Water Works Company Inc | 2.26 | 1.51 | 1.97 | 10.29 | 20.58 | 30.38 | $11,246 | $2,621 | 4.29 |
| Artesian Resources Corp | 1.53 | 0.71 | 0.90 | 5.81 | 13.12 | 18.48 | $5,401 | $1,722 | 3.14 |
| California Water Service Group | 1.86 | 1.01 | 1.49 | 4.89 | 15.09 | 24.79 | $7,357 | $1,997 | 3.68 |
| Essential Utilities, Inc. | 1.63 | 1.46 | 1.79 | 9.64 | 19.31 | 28.28 | $9,597 | $3,453 | 2.78 |
| Middlesex Water Co | 2.71 | 1.72 | 2.12 | 12.36 | 29.70 | 47.27 | $14,403 | $3,520 | 4.09 |
| SJW Corp. | 1.37 | 0.98 | 1.42 | 6.03 | 16.34 | 29.57 | $8,733 | $2,105 | 4.15 |
| York Water Company (The) | 2.72 | 1.65 | 2.09 | 13.56 | 23.51 | 32.08 | $10,084 | $3,628 | 2.78 |
| Average | 2.12 | 1.34 | 1.76 | 8.72 | 19.73 | 29.57 | $9,909 | $2,826 | 3.55 |
| Max | 2.90 | 1.72 | 2.28 | 13.56 | 29.70 | 47.27 | $14,403 | $3,628 | 4.29 |
| Min | 1.37 | 0.71 | 0.90 | 4.89 | 13.12 | 18.48 | $5,401 | $1,722 | 2.78 |
| Median | 2.06 | 1.48 | 1.88 | 8.41 | 19.75 | 28.93 | $9,841 | $3,037 | 3.59 |

Market Multiples Method
Willistown Township Wastewater Systems Assets
Quantification of the Effective Risk/Growth Adjustments

| | | Net PP&E | Gross PP&E | Invest. Capital |
|---|---|---|---|---|
| Comparable Group Multiple | | 1.88 | 1.48 | 2.06 |
| Ratio to Net PPE | | | 78.72% | |
| Not Contributed Multiple (NPPE = ICAP mult.) | | 2.06 | 1.62 | |
| Base Risk Factor | x | 75% | 75% | |
| Subject Company Adjusted Multiple | | 1.55 | 1.22 | |
| | | | | |
| Subject Company Adjusted Multiple | | 1.55 | 1.22 | |
| Comparable Group Multiple | ÷ | 1.88 | 1.48 | |
| Effective Risk/Growth Adjustment | | 82% | 82% | |

| | | Net PP&E | Gross PP&E |
|---|---|---|---|
| Plant Assets | | 100% | 100% |
| Ratio of Known "Cost Free" Capital | | 25% | 25% |
| Plant Assets Less Known "Cost Free" Capital | | 75% | 75% |
| | | | |
| Comparable Group Multiple | | 1.88 | 1.48 |
| Plant Assets Less Known "Cost Free" Capital | ÷ | 75% | 75% |
| Mulitple Without "Cost Free" Capital | | 2.51 | 1.97 |
| Base Risk Factor | x | 75% | 75% |
| Subject Company Adjusted Multiple | | 1.88 | 1.48 |
| | | | |
| Subject Company Adjusted Multiple | | 1.88 | 1.48 |
| Comparable Group Multiple | ÷ | 1.88 | 1.48 |
| Effective Risk/Growth Adjustment | | 100% | 100% |

| | | Net PP&E | Customers |
|---|---|---|---|
| Comparable Group Multiple | | 1.88 | 9,841.00 |
| Implied Capitalization Rate (1÷Multiple) | | 53.19% | 0.0102% |
| Ratio of Net PP&E Mult. to Invest. Capital Mult. | | 109.57% | |
| Less 1 | - | 1.00 | |
| Difference in Capital Source due to Contributions | | 9.57% | |
| Assumed Investor Financed (1-Difference in Capital Source) | | 90.43% | 90.43% |
| Implied Capitalization Rate (1÷Multiple) | x | | 0.0102% |
| Not Contributed Cap. Rate | | | 0.0092% |
| Not Contributed Multiple (1÷Cap. Rate) | | | 10,882.45 |
| Base Risk Factor | x | | 75% |
| Subject Company Adjusted Multiple | | | 8,161.84 |
| | | | |
| Subject Company Adjusted Multiple | | | 8,161.84 |
| Comparable Group Multiple | ÷ | | 9,841.00 |
| Effective Risk/Growth Adjustment | | | 83% |

Selected Transactions Method
For Willistown Township Wastewater Systems Assets
Summary

| | | Median | Mid-Point | Value |
|---|---|---|---|---|
| | All Selected Transactions Companies | | | |
| 1. | Asset Items | | | $26,094,639 |
| 2. | Ex-Ante (page 2) | $25,311,499 | $27,071,644 | |
| 3. | Ex-Post (page 3) | $21,174,687 | $30,820,725 | |
| 4. | Demographics Items | | | $23,049,552 |
| 5. | Ex-Ante (page 2) | $20,878,690 | $25,220,414 | |
| 6. | Ex-Post (page 3) | $20,878,690 | $25,220,414 | |
| 7. | | | Indicated Value | $24,572,095 |
| | Fully Integrated Selected Transactions Companies | | | |
| 8. | Asset Items | | | $25,595,255 |
| 9. | Ex-Ante (page 2) | $27,089,253 | $27,623,657 | |
| 10. | Ex-Post (page 3) | $22,812,303 | $24,855,806 | |
| 11. | Demographics Items | | | $30,895,285 |
| 12. | Ex-Ante (page 2) | $30,047,279 | $31,743,290 | |
| 13. | Ex-Post (page 3) | $30,047,279 | $31,743,290 | |
| 14. | | | Indicated Value | $28,245,270 |
| | Mostly Collection/Distribution Selected Transactions Companies | | | |
| 15. | Asset Items | | | $21,081,380 |
| 16. | Ex-Ante (page 2) | $16,786,002 | $16,786,002 | |
| 17. | Ex-Post (page 3) | $19,932,792 | $30,820,725 | |
| 18. | Demographics Items | | | $14,347,725 |
| 19. | Ex-Ante (page 2) | $11,934,139 | $16,761,311 | |
| 20. | Ex-Post (page 3) | $11,934,139 | $16,761,311 | |
| 21. | | | Indicated Value | $17,714,553 |

Selected Transactions Method - Ex-Ante
For Willistown Township Wastewater Systems Assets
Based on 2016 - 2021 Acquisitions of Assets of Water or Sewer System, Without Discount for Customer Contributions

| | | | Selected Transactions' Metrics | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Service | System | Announced Purchase Price was: | Investor Provided Capital | Gross PP&E | Net PP&E | Revenues | EBITDA | EBIT | Customers | Population |
| Municipal Authority of the City of Mckeesport | WW | INT | $156,000,000 | $83,903,219 | $91,435,797 | $73,813,794 | $13,047,844 | $6,180,616 | $3,811,679 | 12,780 | 50,570 |
| New Garden Township/Authority's WW System's Assets | WW | INT | $29,500,000 | $23,001,140 | $25,988,330 | $17,967,319 | $2,261,294 | $907,386 | $499,638 | 1,796 | 12,085 |
| Limerick Township Wastewater System's Assets | WW | INT | $75,100,000 | $43,501,755 | $60,847,250 | $36,113,701 | $4,418,775 | $2,487,775 | $893,600 | 5,416 | 18,798 |
| Steelton Borough (Water) Authority | W | INT | $22,500,000 | NA | NA | NA | NA | NA | NA | 2,472 | 5,932 |
| Exeter Township Wastewater System Assets | WW | INT | $96,000,000 | NA | NA | NA | $7,735,788 | $4,660,967 | $4,660,967 | 8,984 | 27,609 |
| Kane Borough Authority Wastewater System | WW | INT | $17,560,000 | $10,809,115 | $20,265,926 | $8,897,773 | $1,433,978 | $684,830 | $181,672 | 2,019 | 4,645 |
| Borough of Royersford Wastewater System Assets | WW | INT | $13,000,000 | $4,702,972 | $6,883,116 | $4,545,699 | $863,000 | $280,365 | $280,365 | 1,596 | 5,154 |
| Sadsbury Township Wastewater Utility | WW | C/D | $9,250,000 | NA | NA | NA | NA | NA | NA | 998 | 3,850 |
| East Bradford Township Wastewater System Assets | WW | C/D | $5,000,000 | $1,298,627 | NA | NA | $1,130,372 | $49,804 | $49,804 | 1,248 | 9,942 |
| Township of Mahoning Water System Assets | W | C/D | $4,734,800 | NA | NA | NA | $753,857 | $151,916 | $91,468 | 1,186 | 4,218 |
| Township of Mahoning Sewer System Assets | WW | C/D | $4,765,200 | NA | NA | NA | $1,193,055 | ($173,564) | ($244,337) | 1,451 | 4,218 |
| Cheltenham Township Wastewater System Assets | WW | C/D | $50,250,000 | NA | NA | NA | $9,290,500 | $4,506,168 | $4,506,168 | 10,219 | 37,841 |
| East Norriton Township Wastewater System Assets | WW | C/D | $21,000,000 | $4,055,138 | NA | NA | $3,320,000 | $612,827 | $612,827 | 4,966 | 14,296 |
| Valley Township Water System Assets | W | C/D | $7,325,000 | NA | NA | NA | $698,550 | $78,704 | $78,704 | 1,669 | 7,493 |
| Valley Township Wastewater System Assets | WW | C/D | $13,950,000 | NA | NA | NA | $2,743,957 | ($408,562) | ($408,562) | 3,125 | 7,493 |
| Upper Pottsgrove Township Wastewater System Assets | WW | C/D | $13,750,000 | NA | $15,295,347 | $11,548,897 | $1,380,242 | $858,878 | $858,878 | 1,428 | 5,530 |

| | | | | Subject Company's Metrics | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Willistown Township Wastewater Systems Assets | | | | $9,866,721 | $19,641,520 | $13,367,274 | $2,148,508 | $297,618 | ($8,933) | 2,294 | 11,214 |

| | | | Subject Company's Selected Transactions Multiples Valuations | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Municipal Authority of the City of Mckeesport | WW | INT | $21,941,949 | $18,345,047 | $33,510,695 | $28,250,746 | $25,687,558 | $7,511,931 | ($365,579) | $28,001,878 | $34,593,316 |
| New Garden Township/Authority's WW System's Assets | WW | INT | $19,891,024 | $12,654,515 | $22,295,578 | $21,947,325 | $28,028,636 | $9,675,840 | ($527,399) | $37,679,844 | $27,373,852 |
| Limerick Township Wastewater System's Assets | WW | INT | $23,804,145 | $17,033,583 | $24,242,314 | $27,797,823 | $36,515,313 | $8,984,369 | ($750,706) | $31,809,343 | $44,801,117 |
| Steelton Borough (Water) Authority | W | INT | $31,707,206 | NA | NA | NA | NA | NA | NA | $20,879,854 | $42,534,558 |
| Exeter Township Wastewater System Assets | WW | INT | $19,222,803 | NA | NA | NA | $26,662,671 | $6,129,908 | ($183,979) | $24,512,912 | $38,992,502 |
| Kane Borough Authority Wastewater System | WW | INT | $19,356,474 | $16,029,029 | $17,018,965 | $26,380,683 | $26,309,888 | $7,631,335 | ($863,395) | $19,951,778 | $42,393,507 |
| Borough of Royersford Wastewater System Assets | WW | INT | $24,414,948 | $27,273,684 | $37,096,536 | $38,228,348 | $32,364,547 | $13,799,975 | ($414,183) | $18,685,464 | $28,285,215 |
| Sadsbury Township Wastewater Utility | WW | C/D | $24,102,376 | NA | NA | NA | NA | NA | NA | $21,262,024 | $26,942,727 |
| East Bradford Township Wastewater System Assets | WW | C/D | $15,217,523 | $37,989,049 | NA | NA | $9,503,544 | $29,878,895 | ($896,765) | $9,190,705 | $5,639,710 |
| Township of Mahoning Water System Assets | W | C/D | $8,810,794 | NA | NA | NA | $13,494,278 | $9,275,904 | ($462,386) | $9,158,205 | $12,587,968 |
| Township of Mahoning Sewer System Assets | WW | C/D | $4,157,390 | NA | NA | NA | $8,581,391 | ($8,171,116) | $174,207 | $7,533,679 | $12,668,789 |
| Cheltenham Township Wastewater System Assets | WW | C/D | $8,202,329 | NA | NA | NA | $11,620,745 | $3,318,849 | ($99,610) | $11,280,311 | $14,891,348 |
| East Norriton Township Wastewater System Assets | WW | C/D | $16,791,983 | $51,095,953 | NA | NA | $13,589,960 | $10,198,591 | ($306,094) | $9,700,765 | $16,472,720 |
| Valley Township Water System Assets | W | C/D | $14,085,575 | NA | NA | NA | $22,529,269 | $27,699,350 | ($831,350) | $10,068,035 | $10,962,572 |
| Valley Township Wastewater System Assets | WW | C/D | $6,436,766 | NA | NA | NA | $10,922,797 | ($10,161,902) | $304,993 | $10,240,416 | $20,877,526 |
| Upper Pottsgrove Township Wastewater System Assets | WW | C/D | $15,652,660 | NA | $17,657,063 | $15,914,941 | $21,403,482 | $4,764,639 | ($143,003) | $22,088,585 | $27,882,911 |

Definitions: Where "INT" is "Fully Integrated Assets" and "C/D" is "Mostly Collection/Distribution Assets".
Where "WW" is wastewater and "W" is water.

Selected Transactions Method - Ex-Post
For Willistown Township Wastewater Systems Assets
Based on 2016 - 2021 Acquisitions of Assets of Water or Sewer System, Without Discount for Customer Contributions

| | | | Ex-Post Selected Transactions' Metrics | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Service | System | Announced Purchase Price was: | Investor Provided Capital | Ex-POST - OCN - Gross PP&E | Ex-Post - OCNLD - Net PP&E | Revenues | EBITDA | EBIT | Customers | Population |
| Municipal Authority of the City of Mckeesport | WW | INT | $156,000,000 | $83,903,219 | $108,231,570 | $80,085,602 | $13,047,844 | $6,180,616 | $3,811,679 | 12,780 | 50,570 |
| New Garden Township/Authority's WW System's Assets | WW | INT | $29,500,000 | $23,001,140 | $27,146,852 | $18,567,728 | $2,261,294 | $907,386 | $499,638 | 1,796 | 12,085 |
| Limerick Township Wastewater System's Assets | WW | INT | $75,100,000 | $43,501,755 | $63,480,402 | $46,153,867 | $4,418,775 | $2,487,775 | $893,600 | 5,416 | 18,798 |
| Steelton Borough (Water) Authority | W | INT | $22,500,000 | NA | $19,739,906 | $14,433,435 | NA | NA | NA | 2,472 | 5,932 |
| Exeter Township Wastewater System Assets | WW | INT | $96,000,000 | NA | $68,404,345 | $42,678,351 | $7,735,788 | $4,660,967 | $4,660,967 | 8,984 | 27,609 |
| Kane Borough Authority Wastewater System | WW | INT | $17,560,000 | $10,809,115 | $21,023,527 | $13,503,901 | $1,433,978 | $684,830 | $181,672 | 2,019 | 4,645 |
| Borough of Royersford Wastewater System Assets | WW | INT | $13,000,000 | $4,702,972 | $7,666,493 | $5,453,064 | $863,000 | $280,365 | $280,365 | 1,596 | 5,154 |
| Sadsbury Township Wastewater Utility | WW | C/D | $9,250,000 | NA | $7,480,601 | $6,128,876 | NA | NA | NA | 998 | 3,850 |
| East Bradford Township Wastewater System Assets | WW | C/D | $5,000,000 | $1,298,627 | $8,294,931 | $5,473,948 | $1,130,372 | $49,804 | $49,804 | 1,248 | 9,942 |
| Township of Mahoning Water System Assets | W | C/D | $4,734,800 | NA | $5,294,272 | $3,507,138 | $753,857 | $151,916 | $91,468 | 1,186 | 4,218 |
| Township of Mahoning Sewer System Assets | WW | C/D | $4,765,200 | NA | $4,931,649 | $3,234,859 | $1,193,055 | ($173,564) | ($244,337) | 1,451 | 4,218 |
| Cheltenham Township Wastewater System Assets | WW | C/D | $50,250,000 | NA | $19,818,216 | $15,408,458 | $9,290,500 | $4,506,168 | $4,506,168 | 10,219 | 37,841 |
| East Norriton Township Wastewater System Assets | WW | C/D | $21,000,000 | $4,055,138 | $16,916,212 | $9,251,450 | $3,320,000 | $612,827 | $612,827 | 4,966 | 14,296 |
| Valley Township Water System Assets | W | C/D | $7,325,000 | NA | $6,843,616 | $4,983,659 | $698,550 | $78,704 | $78,704 | 1,669 | 7,493 |
| Valley Township Wastewater System Assets | WW | C/D | $13,950,000 | NA | $13,389,108 | $8,832,690 | $2,743,957 | ($408,562) | ($408,562) | 3,125 | 7,493 |
| Upper Pottsgrove Township Wastewater System Assets | WW | C/D | $13,750,000 | NA | $15,295,347 | $11,548,897 | $1,380,242 | $858,878 | $858,878 | 1,428 | 5,530 |

| | Subject Company's Metrics | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Willistown Township Wastewater Systems Assets | $9,866,721 | $19,641,520 | $13,367,274 | $2,148,508 | $297,618 | ($8,933) | 2,294 | 11,214 |

| | | | Ex-Post Subject Company's Selected Transactions Multiples Valuations | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Municipal Authority of the City of Mckeesport | WW | INT | $21,015,357 | $18,345,047 | $28,310,382 | $26,038,323 | $25,687,558 | $7,511,931 | ($365,579) | $28,001,878 | $34,593,316 |
| New Garden Township/Authority's WW System's Assets | WW | INT | $19,683,376 | $12,654,515 | $21,344,090 | $21,237,632 | $28,028,636 | $9,675,840 | ($527,399) | $37,679,844 | $27,373,852 |
| Limerick Township Wastewater System's Assets | WW | INT | $22,922,568 | $17,033,583 | $23,236,749 | $21,750,773 | $36,515,313 | $8,984,369 | ($750,706) | $31,809,343 | $44,801,117 |
| Steelton Borough (Water) Authority | W | INT | $26,660,063 | NA | $22,387,857 | $20,837,983 | NA | NA | NA | $20,879,854 | $42,534,558 |
| Exeter Township Wastewater System Assets | WW | INT | $21,963,920 | NA | $27,565,295 | $30,068,132 | $26,662,671 | $6,129,908 | ($183,979) | $24,512,912 | $38,992,502 |
| Kane Borough Authority Wastewater System | WW | INT | $18,155,019 | $16,029,029 | $16,405,672 | $17,382,335 | $26,309,888 | $7,631,335 | ($863,395) | $19,951,778 | $42,393,507 |
| Borough of Royersford Wastewater System Assets | WW | INT | $23,145,996 | $27,273,684 | $33,305,941 | $31,867,325 | $32,364,547 | $13,799,975 | ($414,183) | $18,685,464 | $28,285,215 |
| Sadsbury Township Wastewater Utility | WW | C/D | $23,166,664 | NA | $24,287,361 | $20,174,545 | NA | NA | NA | $21,262,024 | $26,942,727 |
| East Bradford Township Wastewater System Assets | WW | C/D | $14,419,314 | $37,989,049 | $11,839,471 | $12,209,902 | $9,503,544 | $29,878,895 | ($896,765) | $9,190,705 | $5,639,710 |
| Township of Mahoning Water System Assets | W | C/D | $11,380,902 | NA | $17,565,903 | $18,046,444 | $13,494,278 | $9,275,904 | ($462,386) | $9,158,205 | $12,587,968 |
| Township of Mahoning Sewer System Assets | WW | C/D | $8,493,798 | NA | $18,978,595 | $19,691,039 | $8,581,391 | ($8,171,116) | $174,207 | $7,533,679 | $12,668,789 |
| Cheltenham Township Wastewater System Assets | WW | C/D | $19,200,989 | NA | $49,801,979 | $43,593,299 | $11,620,745 | $3,318,849 | ($99,610) | $11,280,311 | $14,891,348 |
| East Norriton Township Wastewater System Assets | WW | C/D | $19,434,712 | $51,095,953 | $24,383,232 | $30,342,568 | $13,589,960 | $10,198,591 | ($306,094) | $9,700,765 | $16,472,720 |
| Valley Township Water System Assets | W | C/D | $15,871,180 | NA | $21,023,116 | $19,647,268 | $22,529,269 | $27,699,350 | ($831,350) | $10,068,035 | $10,962,572 |
| Valley Township Wastewater System Assets | WW | C/D | $10,537,130 | NA | $20,464,336 | $21,111,742 | $10,922,797 | ($10,161,902) | $304,993 | $10,240,416 | $20,877,526 |
| Upper Pottsgrove Township Wastewater System Assets | WW | C/D | $15,652,660 | NA | $17,657,063 | $15,914,941 | $21,403,482 | $4,764,639 | ($143,003) | $22,088,585 | $27,882,911 |

Definitions: Where "INT" is "Fully Integrated Assets" and "C/D" is "Mostly Collection/Distribution Assets".
Where "WW" is wastewater and "W" is water.

Selected Transactions Method

For Willistown Township Wastewater Systems Assets

Based on Recent SJW Group's Bid For Connecticut Water Service Inc., With and Without Discount for Cost Free Capital

| Connecticut Water Service Inc. | | | Willistown Township Wastewater Systems Assets | | | |
|---|---|---|---|---|---|---|
| Purchase Price was: $1,106,267 | | | Willistown Township Wastewater | Selected Transactions Multiples | | |
| | Subject Company Statistics | Transaction Multiple | | | | |
| Investor Provided Capital | $573,223 | 1.93 | $9,866,721 | $19,041,853 | | |
| Gross PP&E | $939,050 | 1.18 | $19,641,520 | $23,139,094 | | |
| Net PP&E | $697,723 | 1.59 | $13,367,274 | $21,194,335 | $21,090,474 | |
| Revenues | $107,054 | 10.33 | $2,148,508 | $22,202,100 | | |
| EBITDA | $48,920 | 22.61 | $297,618 | $6,730,267 | | |
| EBIT | $32,236 | 34.32 | ($8,933) | ($306,543) | | $22,114,520 |
| Customers | 135,645 | $8,156 | 2,294 | $18,708,958 | | |
| Population | 450,000 | $2,458 | 11,214 | $27,568,175 | $23,138,566 | |
| Average | | | | $17,284,780 | | |

| | Subject Company Statistics | Transaction Multiple | | | | |
|---|---|---|---|---|---|---|
| Investor Provided Capital | $573,223 | 1.93 | $9,866,721 | $19,041,853 | | |
| Gross PP&E (Less "Cost Free" Capital) | $646,723 | 1.71 | $19,641,520 | $33,598,278 | | |
| Net PP&E (Less "Cost Free" Capital) | $480,521 | 2.30 | $13,367,274 | $30,774,461 | $26,320,066 | |
| Revenues | $107,054 | 10.33 | $2,148,508 | $22,202,100 | | |
| EBITDA | $48,920 | 22.61 | $297,618 | $6,730,267 | | |
| EBIT | $32,236 | 34.32 | ($8,933) | ($306,543) | | $24,729,316 |
| Customers | 135,645 | $8,156 | 2,294 | $18,708,958 | | |
| Population | 450,000 | $2,458 | 11,214 | $27,568,175 | $23,138,566 | |
| Average | | | | $19,789,694 | | |

Willistown Township Wastewater Systems Assets
Summary of Approach Results and
Fair Market Value Conclusion at Appraisal Date

| Valuation Approach | Indicated Value | Conclusion | Consideration |
|---|---|---|---|
| Cost Approach | $31,128,594 | | 33.33% |
| Income Approach | 24,381,001 | | 33.33% |
| Market Approach | 21,330,105 | | 33.34% |
| | | **Conclusion $25,613,000** | |

WORKPAPERS

# Daily Bond Yields and Key Indicators

Updated by 11 am ET with data from the previous business day. Data as of 1-Jul-21

**Moody's Daily Long-term Corporate Bond Yield Averages**

| | Utilities | Industrial | Corporate |
|---|---|---|---|
| Aaa | NA | 2.64 | 2.64 |
| Aa | 2.93 | 2.73 | 2.83 |
| A | 3.07 | 2.93 | 3 |
| Baa | 3.31 | 3.37 | 3.34 |
| Avg | 3.1 | 2.92 | 3.01 |

**Moody's Daily Treasury Yield Averages**

| | |
|---|---|
| Short-Term (3-5 yrs) | 0.64 |
| Medium-Term (5-10 yrs) | 1.14 |
| Long-Term (10+ yrs) | 1.99 |

**Moody's Daily Public Utility Common Stock Yield Averages**

| | |
|---|---|
| Price | 497.25 |
| Yield | 3.86 |
| New Dividend | 19.18 |

**Moody's Commodity and Scrap Price Indexes**

| | |
|---|---|
| Spot Commodity Index | 8,863.36 |
| Industrial Metals Index | 2,687.77 |

Index Name: S&P Municipal Bond Revenue Index

As of: 15-Jul-21

| Effective date | Yield To Maturity |
|---|---|
| 6/22/2021 | 2.65% |
| 6/23/2021 | 2.66% |
| 6/24/2021 | 2.67% |
| 6/25/2021 | 2.67% |
| 6/28/2021 | 2.66% |
| 6/29/2021 | 2.66% |
| 6/30/2021 | 2.66% |
| 7/1/2021 | 2.65% |
| 7/2/2021 | 2.65% |

**FED H.15**

| DATE | DAAA | DBAA | DGS10 | DGS20 | DGS30 |
|---|---|---|---|---|---|
| 2021-06-22 | 2.72 | 3.38 | 1.48 | 2.03 | 2.10 |
| 2021-06-23 | 2.72 | 3.39 | 1.50 | 2.04 | 2.11 |
| 2021-06-24 | 2.71 | 3.37 | 1.49 | 2.03 | 2.10 |
| 2021-06-25 | 2.77 | 3.44 | 1.54 | 2.09 | 2.16 |
| 2021-06-28 | 2.67 | 3.37 | 1.49 | 2.04 | 2.10 |
| 2021-06-29 | 2.67 | 3.36 | 1.49 | 2.03 | 2.10 |
| 2021-06-30 | 2.63 | 3.32 | 1.45 | 2.00 | 2.06 |
| 2021-07-01 | 2.64 | 3.34 | 1.48 | 2.01 | 2.07 |
| 2021-07-02 | 2.62 | 3.31 | 1.44 | 1.98 | 2.05 |

**FED H.15**

| | | 10-yr T-bond | 20-yr T-bond | 30-yr T-bond |
|---|---|---|---|---|
| Spot | 6/28/21 | 1.49 | 2.04 | 2.10 |

| **FED H.15** | | **AAA Corp** | **BAA CORP** | | A Rated Utility | | |
|---|---|---|---|---|---|---|---|
| | 6/28/21 | 2.67 | 3.37 | Spread | 0.03 | 0.03 | |
| Moody's Spot ===> | | 2.64 | 3.34 | Moody's Spot ===> | 3.07 | 3.07 | |
| | | 0.03 | 0.03 | Implied | 3.10 | 3.10 | 3.10 |

**Moody's Daily Long-term Corporate Bond Yield Averages**

| | 7/1/2021 | Utilities | Industrial | Corporate |
|---|---|---|---|---|
| Spot | Aaa | NA | 2.64 | 2.64 |
| | Aa | 2.93 | 2.73 | 2.83 |
| | A | 3.07 | 2.93 | 3 |
| | Baa | 3.31 | 3.37 | 3.34 |
| | Avg | 3.1 | 2.92 | 3.01 |

**S&P Municipal Bond Revenue Index**

6/28/21 2.66%

| | |
|---|---|
| Utilities | |
| Aa | |
| A | **3.10** |
| Baa | |

| | | **Decade Spread** | **Annual Spread** |
|---|---|---|---|
| 10-Year | 1.49 | | |
| 20-Year | 2.04 | 0.550 | 0.055 |
| 30-Year | 2.10 | 0.060 | |

| | |
|---|---|
| REVENUE BOND INDEX | 2.66 |
| 10-20 Yr | 0.28 |
| 20-30 Yr | 0.06 |
| | **3.00** |

| | |
|---|---|
| 30-Yr Rev Bond Est. | **3.00** |

| | | |
|---|---|---|
| 2019 Lt Debt | 3.17 | 3.1 |
| Prf Stk | 5.84 | 184% |
| Pref Stock Est. | 184% | **5.71** |

| | 6/28/21 |
|---|---|
| **A-Rated Rev Bonds** | **3.00** |
| **A-Rated PU Bonds** | **3.10** |
| **A-Rated PU Pref Stk** | **5.71** |
| **30-yr T-bond** | **2.10** |

| | SBBI | SBBI |
|---|---|---|
| Equity Risk Premium | 6.91 | 6.91 |
| Beta (Value Line Med.) | 0.80 | 0.80 |
| Risk Adjusted Equity Premium | 5.53 | 5.53 |
| Yield (RF) | 2.10 | 2.10 |
| Size Premium | 1.60 | 0.00 |
| | 9.23 | 7.63 |

| | |
|---|---|
| High | 9.23 |
| Low | 7.63 |

**0.80**

| | | |
|---|---|---|
| 11.88 | Total Return | SBBI 1926-2018 |
| 4.97 | Income Return | SBBI 1926-2018 |
| **2.10** | 30-yr T-bond | |

| | Recent Market Value (Mill $) | Market Quartile Name | Market Quartile | Quartile Size Premium | Value Line Beta |
|---|---|---|---|---|---|
| American States Water Co | 2,990.32 | Low-Cap | 3 | 1.6 | 0.65 |
| American Water Works Co Inc | 28,550.55 | Large-Cap | 1 | 0 | 0.85 |
| Artesian Resources Corp | 350.02 | Mico-Cap | 4 | 3.4 | - |
| California Water Service Gp | 2,857.94 | Low-Cap | 3 | 1.6 | 0.65 |
| Essential Utilities, Inc. | 11,524.96 | Mid-Cap | 2 | 0.89 | 0.95 |
| Middlesex Water Co | 1,463.65 | Low-Cap | 3 | 1.6 | 0.7 |
| SJW Corp | 1,910.43 | Low-Cap | 3 | 1.6 | 0.85 |
| York Water Co | 608.68 | Mico-Cap | 4 | 3.4 | 0.8 |
| Average | 6,282.070 | Mid-Cap | 2 | 0.89 | 0.78 |
| Median | 2,384.185 | Low-Cap | 3 | 1.60 | 0.80 |

**7/15/2021**

| Company Name | Ticker Symbol | 3/31/21 LT Debt-Total Qtly | Preferred S | Minority In | Common Equity-Total-Qtly | Invested Capital-Total Qtly | 6/28/21 Market Value-Mnthly |
|---|---|---|---|---|---|---|---|
| AMERICAN ST. | **AWR** | 580.859 | 0.000 | 0.000 | 649.393 | 1,230.252 | 2,990.324 |
| AMERICAN W/ | **AWK** | 9,734.000 | 0.000 | 0.000 | 6,583.000 | 16,317.000 | 28,550.549 |
| ARTESIAN RES | **ARTN.A** | 144.010 | 0.000 | 0.000 | 171.870 | 315.880 | 350.017 |
| CALIFORNIA W | **CWT** | 786.087 | 0.000 | 0.000 | 929.802 | 1,715.889 | 2,857.944 |
| ESSENTIAL UT | **WTRG** | 5,681.829 | 0.000 | 0.000 | 4,810.341 | 10,492.170 | 11,524.959 |
| MIDDLESEX W | **MSEX** | 285.395 | 2.084 | 0.000 | 348.848 | 636.327 | 1,463.646 |
| SJW GROUP | **SJW** | 1,379.313 | 0.000 | 0.000 | 978.296 | 2,357.609 | 1,910.425 |
| THE YORK WA | **YORW** | 124.296 | 0.000 | 0.000 | 145.010 | 269.306 | 608.682 |

| | Book Ratios LTD | Pref | Equity | | Market Ratios LTD | Pref | Equity | |
|---|---|---|---|---|---|---|---|---|
| AMERICA | 0.472 | 0.000 | 0.528 | 1.000 | 0.163 | 0.000 | 0.837 | 1.000 |
| AMERICA | 0.597 | 0.000 | 0.403 | 1.000 | 0.254 | 0.000 | 0.746 | 1.000 |
| ARTESIA | 0.456 | 0.000 | 0.544 | 1.000 | 0.292 | 0.000 | 0.708 | 1.000 |
| CALIFOR | 0.458 | 0.000 | 0.542 | 1.000 | 0.216 | 0.000 | 0.784 | 1.000 |
| ESSENTIA | 0.542 | 0.000 | 0.458 | 1.000 | 0.330 | 0.000 | 0.670 | 1.000 |
| MIDDLES | 0.449 | 0.003 | 0.548 | 1.000 | 0.163 | 0.001 | 0.836 | 1.000 |
| SJW GRO | 0.585 | 0.000 | 0.415 | 1.000 | 0.419 | 0.000 | 0.581 | 1.000 |
| THE YOR | 0.462 | 0.000 | 0.538 | 1.000 | 0.170 | 0.000 | 0.830 | 1.000 |
| | 0.503 | 0.000 | 0.497 | Avg | 0.251 | 0.000 | 0.749 | |
| | 0.467 | 0.000 | 0.533 | Med | 0.235 | 0.000 | 0.765 | |

| Assumptions: | 6/28/2021 |
|---|---|
| Debt Cost | 3.1 |
| Pref. Stock Cost | 5.71 |
| Equity Cost | 9.23 |
| Equity Cost | 7.63 |

| Ratio | Cost | Wt | Shield | Overall | |
|---|---|---|---|---|---|
| 23.50% | 3.100 | 0.73 | 0.72 | 0.52452 | |
| 0.00% | 5.710 | 0.00 | 1 | 0 | |
| 76.50% | 9.230 | 7.06 | 1 | 7.06095 | |
| | | 7.79 | | **7.59** | **<<<<ANSWER** |
| 23.50% | 3.100 | 0.73 | 0.72 | 0.52452 | |
| 0.00% | 5.710 | 0.00 | 1 | 0 | |
| 76.50% | 7.628 | 5.84 | 1 | 5.83542 | |
| | | 6.56 | | **6.36** | **<<<<ANSWER** |

| | ROE |
|---|---|
| **Public Meeting held July 15, 2021** | 9.85 |

**DSIC Weighted Cost of Capital**

| Assumptions: | 6/28/2021 |
|---|---|
| Debt Cost | 3.1 |
| Pref. Stock Cost | 5.71 |
| DSIC Equity Cost | 9.85 |

| | Ratio | Cost | Wt | Shield | Overall | |
|---|---|---|---|---|---|---|
| Debt | 46.70% | 3.100 | 1.45 | 0.72 | 1.042344 | |
| Pref | 0.00% | 5.710 | 0.00 | 1 | 0 | |
| Equity | 53.30% | 9.850 | 5.25 | 1 | 5.25005 | |
| | | | 6.70 | | **6.29** | **<<<<ANSWER** |

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# Aqua America's Pennsylvania Subsidiary Enters Agreement to Purchase Cheltenham Township Wastewater System

July 02, 2018 07:00 AM Eastern Daylight Time

BRYN MAWR, Pa.--(BUSINESS WIRE)--Aqua America announced today that its Pennsylvania subsidiary has signed an asset purchase agreement with Cheltenham Township to purchase its wastewater system, which serves approximately 10,500 connections in Montgomery County, for $50.25 million. The agreement must be approved by the Pennsylvania Public Utility Commission.

The transaction will be Aqua Pennsylvania's fourth acquisition application referred to the Pennsylvania PUC since Act 12, commonly referred to as fair market value legislation, was enacted last year. Aqua Pennsylvania has asset purchase agreements with the 2,100-customer New Garden Township wastewater system in Chester County and the 5,400-customer Limerick Township wastewater system in Montgomery County. The company also has an agreement, signed in December 2017, with East Bradford Township in Chester County to purchase its 1,200-customer wastewater collection system. Aqua already provides water service to East Bradford, as it does with Cheltenham.

These four systems, including Cheltenham, total more than 19,000 wastewater connections and would nearly double Aqua Pennsylvania's current 22,000-customer wastewater operation.

The new law encourages a consolidation of the fragmented industry for the benefit of customers, the environment, and local governments. This transaction will benefit customers by leveraging compliance expertise, purchasing power gained through economies of scale and operational efficiencies to ultimately benefit service to our customers at affordable rates.

"We are pleased with the momentum we are gaining to reach agreements with municipal systems," said Aqua America Chairman and CEO Christopher Franklin. "Act 12 is having its intended impact, allowing municipalities to be compensated for the fair value of their water and wastewater assets and enabling utility professionals to bring expertise to systems in need."

Aqua Pennsylvania President Marc Lucca says his team is ready to work with the Cheltenham community on making needed system improvements.

"As with our pending agreements with New Garden, East Bradford and Limerick, the Aqua Pennsylvania team is looking forward to assuming Cheltenham's sewer utility responsibilities so the township can direct its attention and capital to other priorities," said Lucca. "We are anxious to begin the work necessary to help the township meet the requirements of an outstanding Pennsylvania Department of Environmental Protection consent order, specifically related to inflow and infiltration issues there."

In total, Aqua has plans to spend nearly $50 million over the next 10 years to improve Cheltenham's wastewater system.

Aqua America is one of the largest U.S.-based, publicly traded water utilities and serves nearly 3 million people in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana and Virginia. Aqua America is listed on the New York Stock Exchange under the ticker symbol WTR. Visit AquaAmerica.com for more information.

**Forward-Looking Statements**

This release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 including, among others: the company's ability to successfully close the acquisition of the wastewater systems noted in this release. There are important factors that could cause actual results to differ materially from those expressed or implied by such forward-looking statements including: general economic business conditions, the successful integration of the customers and the facilities, the success of the company's growth efforts including its ability to utilize Act 12, and other factors discussed in our Annual Report on Form 10-K, which is on file with the Securities and Exchange Commission.

**Cheltenham Township**
**1329 Proceeding**
**Cheltenham Twp. - Water Accounts reported for Sewer Billing**

| Type of Service | Gallons | Customers[1] |
|---|---|---|
| Commercial | 280,938,300 | 534 |
| Industrial | 364,400 | 14 |
| Public | 9,962,700 | 23 |
| Residential | 484,692,800 | 9,648 |
| **Total** | **775,958,200** | **10,219** |

1. Customers include all Active and Inactive Accounts

The following table breaks down the above total figures by customer class as of December 31, 2017, 2016, and 2015 :

| | 2017 | 2016 | 2015 |
|---|---|---|---|
| **Customers:** | | | |
| Residential | 118,493 | 111,494 | 110,254 |
| Commercial | 9,386 | 8,626 | 8,569 |
| Industrial | 536 | 479 | 478 |
| Public Authority | 1,072 | 948 | 964 |
| Fire Protection | 3,178 | 2,876 | 2,815 |
| Other (including non-metered accounts) | 2,980 | 545 | 553 |
| Total | 135,645 | 124,968 | 123,633 |
| **Water Revenues** *(in thousands):* | | | |
| Residential | $ 62,831 | $ 59,884 | $ 58,439 |
| Commercial | 13,676 | 12,250 | 11,816 |
| Industrial | 3,196 | 3,176 | 3,229 |
| Public Authority | 3,845 | 3,510 | 3,193 |
| Fire Protection | 20,235 | 18,486 | 18,016 |
| Other (including non-metered accounts) | 3,271 | 1,361 | 1,348 |
| Total | $ 107,054 | $ 98,667 | $ 96,041 |
| **Customer Water Consumption** *(millions of gallons):* | | | |
| Residential | 6,408 | 6,583 | 6,551 |
| Commercial | 2,026 | 1,954 | 1,941 |
| Industrial | 711 | 724 | 777 |
| Public Authority | 575 | 539 | 503 |
| Total | 9,720 | 9,800 | 9,772 |

The Regulated Companies own various small, discrete parcels of land that are no longer required for water supply purposes. At December 31, 2017 , this land totaled over 600 acres. Over the past several years, we have been disposing of these land parcels through sales and/or donations, primarily to towns and municipalities. For more information, please refer to *Segments of Our Business* below.

Additional information on land dispositions can be found in Item 7 – "Management's Discussion and Analysis of Financial Conditions and Results of Operations – Commitments and Contingencies".

*Competition*

Our Regulated Companies face competition from a few small privately-owned water systems operating within, or adjacent to, our franchise areas and from municipal and public authority systems whose service areas in some cases overlap portions of our franchise areas.

*Employees*

As of December 31, 2017 , we employed a total of 294 people. Our employees are not covered by collective bargaining agreements.

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DEALS AUGUST 6, 2018 / 5:11 PM / 6 MONTHS AGO

# SJW Group makes $1.1 billion all-cash offer for Connecticut Water

3 MIN READ

NEW YORK (Reuters) - SJW Group (SJW.N) and Connecticut Water Service Inc (CTWS.O) said on Monday they were changing from a merger to an acquisition agreement, with SJW offering to buy the New England utility for $1.1 billion in cash instead of combining stock.

The switch to an all-cash offer is worth $70 per Connecticut Water share, a 33 percent premium to Connecticut Water's share price prior to the original deal announced in March, according to a joint statement.

It was also higher than the implied $61.86 per share value of the Clinton, Connecticut-based firm under the merger-of-equals transaction, which would have created a combined company in which existing SJW shareholders would hold 60 percent of the stock.

SJW closed 2.3 percent lower, while Connecticut Water was 9 percent higher at $68.50.

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To pay for the acquisition, SJW will initially utilize a $975 million bridge loan from financial adviser JP Morgan Chase (JPM.N). Ultimately, the purchase would be covered by debt and between $450 million and $500 million of equity finance.

The new deal aims to conclude in the first quarter of 2019, subject to approvals from Connecticut Water's shareholders, as well as regulators in Connecticut and Maine.

The duo's original all-stock merger announcement in March triggered competing offers from Eversource Energy (ES.N) and California Water Service Group (CWT.N).

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"We have converted from a stock-for-stock deal to a cash offer, which will resolve any further market distractions from the inferior proposals," SJW Chief Executive Eric Thornburg told Reuters, in reference to the actions by Eversource and CalWater.

Switching to an acquisition, versus a merger structure, means that SJW shareholders will no longer be required to vote on approving the deal, the statement said.

CalWater has an open tender offer to acquire SJW that runs until Sept. 28.

However, asked if the change was aimed at heading off any shareholder challenge to the deal, Thornburg told Reuters it "wasn't a consideration" and it had received nothing but support from its shareholders.

RBS sounds alarm over Brexit

CalWater declined to comment. A spokesman for Eversource said the company was evaluating developments but, as it has made clear, it will be disciplined in pursuing this or any other transaction.

Reporting by David French in New York; Additional Reporting by Liana B. Baker; Editing by Lisa Shumaker

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MORE FROM REUTERS

Wastewater treatment is provided by the Borough of West Chester pursuant to a Sewer Capacity Agreement dated November 14, 2017, by and between the Borough and East Bradford Township. Copies of West Chester's 2017 Chapter 94 Reports to DEP for the Goose Creek WWTP and for the Taylor Run WWTP are attached hereto as **Exhibit E3** and **Exhibit E4**.

15. The Goose Creek WWTP has a permitted treatment capacity of 1.672 MGD. The Taylor Run WWTP has a permitted treatment capacity of 1.50 MGD. The elevation of the Goose Creek WWTP is generally about EL 370. The elevation of the Taylor Run WWTP is generally about EL 260. The elevation of the Requested Territory ranges from approximately EL 365 to EL 280.

16. Water service in the Requested Territory is provided by both Aqua Pennsylvania, Inc. and private wells.

17. The original cost, by year and major plant category, of the East Bradford Township used and useful plant in service is $8,294,931 with a related calculation depreciation reserve of $2,820,983. The original cost value includes a series of capped sewers along the North Benjamin Drive area of the Township. The capped sewers include approximately 3,300 linear feet of 8" Gravity PVC pipe and 20 manholes, with an estimated original cost value of approximately $100,000 as estimated by Aqua. The pipe and manholes are included in the totals on page 2-11 and 2-12 of Exhibit W. Aqua will categorize the capped sewer pipe and manholes as plant held for future use in its asset allocation upon closing. The area of capped sewers along North Benjamin Drive is not included in the Requested Territory.

18. Tentative journal entries to record the transaction are presented in Section IV.

## IV. ASSET PURCHASE AGREEMENT

19. The *Assets Purchase Agreement* is dated December 20, 2017. The *First Amendment to Assets Purchase Agreement* is dated April 18, 2018. The purchase price is Five Million Dollars

($5,000,000.00). In addition to the purchase price, Section 1.5 of the Agreement provides that Aqua will assume certain defined liabilities and pay certain out-of-pocket costs incurred by East Bradford Township.

20. The purchase price and Agreement are based on arm's length negotiations. Aqua and East Bradford Township are not affiliated with each other. Aqua will use short term debt initially for the purchase of the assets with the expectation that the short term debt will be converted to long term debt and equity capital at a later date.

21. The wastewater system assets to be acquired are the "Assets" and have the meaning specified in Section 1.1 of the Agreement. The Assets include the assets, properties and rights of East Bradford Township that comprise the wastewater system or that are owned by East Bradford Township and used by it solely in connection with operation of the system.

22. "Excluded Assets," which are those assets not being transferred to Aqua, have the meaning specified in Section 1.4 of the Agreement. Excluded Assets include customer service laterals that run from the curb area to individual customer residences or structures; piping and fixtures internal to each customer residence or structure; cash and cash equivalents; and the items set forth in Schedule 1.4 of the Agreement.

23. "Assumed Liabilities" has the meaning specified in Section 1.6 of the Agreement and include the liabilities and obligations under the Assumed Contracts that arise after Closing, liabilities incurred or arising from and after Closing under or from failure to comply with permits, approvals or licenses related to the system that are transferred to Aqua and the obligation to provide wastewater service after Closing. The Assumed Contracts, which are listed in Schedule 1.6 of the APA and attached hereto as **Exhibit F1** and **Exhibit F2**, are the Sewer Capacity Agreement dated November 14, 2017, by and between the Borough of West Chester and East Bradford Township and the Intergovernmental Cooperation Agreement dated March 15, 1999, between East Bradford and Birmingham Township.

## East Bradford Township

| | # of Customers | Annual Gallons Treated (2017) |
|---|---|---|
| Residential- Single Family | 399 | 23,783,560 |
| Residential- Townhomes | 814 | 36,390,635 |
| | | |
| **Commercial** | | |
| Bradford Retail - The Bistro | | 112,800 |
| Bradford Retail - Strip Stores | | 688,000 |
| Brookworth Plaza - Dunkin Donuts | | 147,200 |
| Brookworth Plaza - CVS | | 35,300 |
| Brookworth Plaza - empty building | | - |
| Brookworth Plaza - Strip Stores | | 142,000 |
| Brookworth Plaza - PNC Bank | | 17,000 |
| Countryside Food Mart | | 52,700 |
| Antique Ice Museum | | 3,600 |
| Mrs. Mike's Restaurant | | 103,110 |
| Brandywine Hall Nursing Home | | 8,281,000 |
| Daily Local News - now empty building | | 24,400 |
| Bradford Plaza - Strip Stores | | 1,991,430 |
| Bradford Plaza - Giant Food Store | | 2,527,700 |
| Bradford Plaza - Walgreens | | 47,000 |
| Bradford Plaza - Giant Gas Station | | 6,200 |
| Chester County Art Association | | 120,100 |
| | | |
| **Industrial** | | |
| Diesel Systems | | 66,300 |
| Chem Service | | 173,400 |
| | | |
| | | |
| **Other Class(?)*** | | |
| Goddard School | | 252,800 |
| Hillsdale Elementary School | | 649,700 |
| WCU S Campus Apts - 144 | | 24,200 |
| WCU S Campus Apts - 167 | | 583,900 |
| WCU S Campus Apts - 168 | | 500,900 |
| WCU S Campus Apts - 169 | | 441,900 |
| WCU S Campus Apts - 170 | | 570,900 |
| WCU S Campus Apts - 171 | | 318,900 |
| WCU S Campus Apts - 172 | | 422,000 |
| WCU S Campus Apts - 173 | | 306,400 |
| WCU S Campus Apts - 174 | | 424,500 |
| WCU S Campus Apts - 175 | | 323,400 |
| WCU S Campus Apts - 176 | | 340,000 |
| WCU S Campus Apts - 177 | | 356,000 |
| University Student Housing 1 | | 4,463,500 |
| University Student Housing 2 | | 5,429,000 |
| | | |
| Total | | 90,121,435 |

*May include church, school, public, etc… (please insert a line for each)

420,000
153,300,000

35
399
814
1,248

1 **Q. How many customers will the acquisition add?**

2 A. The acquisition of East Norriton will add 4,966 customers to Aqua's existing 28,000
3 wastewater customers. This is an increase in customers of 17.7% (or about 20%).[23]

4 **Q. Will the acquisition increase rates for the customers to be acquired?**

5 A. Yes. Aqua witness Packer states that he reasonably expects that rates for East Norriton
6 customers will increase under Aqua ownership.[24] As discussed above, Aqua calculates
7 that if the entire revenue deficiency resulting from the acquisition is applied to East
8 Norriton Township customers, the adjusted average bill for customers using four thousand
9 gallons per month would increase from approximately $39 per month to $52 per month,
10 which would be a 35% rate increase.[25]

11 **Q. Will the acquisition increase rates for existing Aqua customers?**

12 A. Yes. Mr. Packer's testimony shows that, as a result of the acquisition, rates for existing
13 Aqua water customers and existing Aqua wastewater customers will increase if the revenue
14 deficiency is not fully borne by the East Norriton Township customers. Mr. Packer's
15 schedules show estimated increases to existing total Aqua water and wastewater customers
16 ranging from $0.17 per month to $1.66 per month ($2.04 per year to $19.92 per year).[26] If
17 the costs were spread to only existing wastewater customers, and not water customers, the

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[23] Exhibit U, Direct Testimony of William C. Packer, p. 9, lines 2-3 and 11-12, p. 16, lines 11-12.

[24] Exhibit U, Direct Testimony of William C. Packer, p. 18, lines 17-20 and Appendix A, p.1; Response to OCA-II-4, Attachment 1, p. 22 (attached as OCA Exhibit DJG-12).

[25] Exhibit U, Direct Testimony of William C. Packer, Appendix A, pp. 1-2 ($38.52 + $13.42 = $51.94). ($13.42 ÷ $38.52) x 100 = 34.84%.

[26] Exhibit U, Direct Testimony of William C. Packer, Appendix A, p. 1.

1 **Q. Describe the scope and organization of your testimony.**

2 A. My testimony addresses the application filed by Aqua Pennsylvania Wastewater, Inc.
3 ("Aqua" or the "Company") for the acquisition of the East Norriton Township (the
4 "Township") wastewater collection system assets. My testimony responds to the fair
5 market value ("FMV") approaches addressed in the testimonies of Harold Walker, III of
6 Gannett Fleming, who sponsors the FMV appraisals commissioned by the Company, and
7 Jerome C. Weinert, who sponsors the appraisal commissioned by the Township. I also
8 discuss the sufficiency of the notices sent to the customers of Aqua and the Township
9 regarding the impact on rates of the proposed acquisition.

## II. EXECUTIVE SUMMARY

### A. Overview

10 **Q. Please summarizes Aqua's application in this proceeding.**

11 A. Aqua's application proposes to acquire the Township's wastewater assets under Sections
12 1102 and 1329 of the Public Utility Code (the "Code"). According to Section 1329(c)(2)
13 of the Code, the ratemaking rate base is the lesser of the negotiated purchase price and the
14 average of two FMV appraisals. The FMV estimated by Gannett Fleming and AUS
15 Consultants is $24.2 million and $25.1 million, respectively. The purchase price negotiated
16 by Aqua and the Township is $21 million. Thus, the proposed rate base in the application
17 is $21 million.

Report by Class

| Account | Name<br>Service Address | Tax ID | Book | Status | Alert Code |
|---|---|---|---|---|---|
| 97990.00 | F M BROWN SONS INC<br>790 DANIEL BOONE ROAD | 43-5345-07-68-8539<br>BIRDSBORO | <br>PA | A<br>19508-8737 | |
| 99991.00 | DIEROLF, CANDACE<br>21 PINE AVENUE | <br>BIRDSBORO | <br>PA | A<br>19508 | |
| 99992.00 | TELFORD, MARK<br>19-6 CRANBERRY RIDGE | <br>READING | <br>PA | A<br>19606-3934 | |

**Total Class: R: 8,708**

**Class: TRAILER PARK**

| | | | | | |
|---|---|---|---|---|---|
| 20000.00<br>(610)670-0191 | KLIEWER, KIM B<br>4851 PERKIOMEN AVENUE | 43-5325-08-79-<br>READING | 100<br>PA | A<br>19606 | |
| 20010.00 | KL MHC LLC<br>44 KEYSTONE ROAD | 43-5335-14-34-<br>READING | 201<br>PA | A<br>19606-3655 | |
| 20020.00 | BORDIC MOBILE HOME PARK<br>214 BORDIC ROAD | 43-5335-09-16-<br>READING | 200<br>PA | A<br>19606-3605 | |
| 20030.00 | KL MHC LLC<br>44 KEYSTONE ROAD | 43-5335-10-35-<br>READING | 201<br>PA | A<br>19606-3655 | |
| 20060.00 | ALSACE TOWNSHIP<br>240 SPIES CHURCH ROAD | <br>READING | 101<br>PA | A<br>19606 | |
| 20070.00 | KL MHC LLC<br>44 KEYSTONE ROAD | 43-5335-14-34-2494<br>READING | <br>PA | A<br>19606-3655 | |
| 91230.00<br>(610)779-4202 | PENN VIEW MOBILE PARK<br>BROADWAY AVENUE | 43-5327-14-42-<br>READING | 200<br>PA | A<br>19606 | |

**Total Class: T: 7**

**Total: 8,984**

# Exeter Township supervisors agree to sell municipal wastewater system for $96 million

readingeagle.com/news/article/exeter-township-supervisors-agree-to-sell-municipal-wastewater-system-for-96-million

**Share**

**Adjust font size:** A A A

The sale to Pennsylvania American Water Co. will keep taxes steady for 10 years and do other things for Exeter, the township manager said.

Written by Mike Urban

Exeter Township, PA —

The Exeter Township supervisors have agreed to sell the township's wastewater treatment plant and system to a private company for $96 million, a move they expect will save taxpayers money and put the township on much better financial footing.

The supervisors voted 4-1 on April 23 to approve the sale to Pennsylvania American Water Co., which supplies water to the township and operates 15 wastewater treatment systems statewide.

The two sides must finalize the asset purchase agreement, and the sale will require Pennsylvania Utility Commission approval, meaning the earliest the company is likely to take ownership would be early next year.

Township Manager John A. Granger said that if the sale goes through as planned, it will allow the township to hold real estate taxes steady for 10 years or more; pay for future capital projects including equipment replacement, township building relocation and storm sewer improvements; and still leave $48 million in the bank.

The current property tax rate is 2.14 mills, but that would have increased 32.6 percent to 2.8 mills in 2019 if the township retained ownership of the plant, he said.

The township is expected to raise sewer rates 29 percent before the sale is completed, but that rate hike would likely have been higher if the township held onto the system and made necessary upgrades, said Supervisor John Cusatis.

And the supervisors plan to enact a homestead tax exemption that would more than cover the rate increase for most homeowners, he said.

There are about 9,000 properties in Exeter connected to the wastewater system, and Pennsylvania American spokesman Terry M. Maenza said that they shouldn't notice any changes in sewer service once the company takes control of the system.

"It should be seamless," he said.

The company plans to retain the township's six wastewater employees, he said.

Cusatis and fellow Supervisors Lisa VanderLaan, William F. White and David G. Speece Jr. voted for the sale, saying it was a tough decision but the economic benefits were too good to turn down.

"The sale will pay off the library and sewer debt, stabilize the tax base and improve the township's credit rating," Cusatis said.

Supervisor Gary E. Lloyd Jr. voted against the sale, saying he didn't want to lose the valuable asset.

Cusatis said that most Exeter residents he spoke with support the move, but at the April 23 meeting several expressed concern about selling public property to private industry and giving up control of the wastewater system.

A written handout from resident Sherrie Greene noted that: "I have done some research and read that many municipalities have taken this route, then regretted it later. Once our sewer system is sold, it is gone forever and we cannot get it back."

Pennsylvania American, headquartered in Hershey, is a subsidiary of American Water Works Co., based in Vorhees, N.J.

This would be Pennsylvania American's first wastewater treatment system in Berks.

(Correspondent Valdis I. Lacis contributed to this story.)

Contact Mike Urban: 610-371-5023 or murban@readingeagle.com.

1. The collection of a DSIC prior to inclusion of the acquired assets in a base rate case;
2. The accrual of Allowance for Funds Used During Construction (AFUDC) on non-DSIC eligible post-acquisition improvements; and
3. The deferral of depreciation for book and ratemaking purposes on non-DSIC eligible post-acquisition improvements.

**Q. Please briefly summarize the Acquisition Transaction that the Joint Applicants are proposing.**

A. Under the terms of the Proposed Transaction, PAWC would acquire the wastewater utility assets of Kane for $17.56 million.

**Q. Please describe the Kane wastewater utility.**

A. Kane owns and operates a sanitary wastewater collection system that provides sanitary wastewater service to approximately 2,019 customers in Kane Borough and a portion of Westmore Township in McKean County. The breakout of Kane's customer count is: 1,847 residential, 162 commercial, 3 industrial, and 7 municipal. The $17.56 million purchase price for a wastewater utility assets serving 2,019 customers equates to a cost of approximately $8,700 per customer.

**Q. Does the Application provide the terms of the Proposed Transaction?**

A. Yes, the Asset Purchase Agreement ("APA") dated November 4, 2019 was included with the Application. The APA states that the purchase price is Seventeen Million, Five Hundred Sixty Thousand Dollars ($17,560,000). The Application indicates that the purchase price is based on arm's length negotiations. PAWC and Kane Borough are not affiliated with each other.

| | Service Address | Customer Number | Edu Purchased | Group Code | Drainage Basin | SPA Amt | SPA Qty | SWR Amt | SWR Qty | Swr Base Amt | PEN Amt | INT Amt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3793 | 900 FOXMEADOW DR | 12133 | 16 | King Road | SOUTHEAST (6) | - | 116,300.00 | F | - | $ 1,348.80 | - | - |
| 3794 | 1000 FOXMEADOW DR | 12134 | 16 | King Road | SOUTHEAST (6) | - | 94,400.00 | F | - | $ 1,348.80 | - | - |
| 3795 | 1100 FOXMEADOW DR | 12135 | 16 | King Road | SOUTHEAST (6) | $ 216.44 | 153,200.00 | F | - | $ 1,348.80 | - | - |
| 3796 | 1200 FOXMEADOW DR | 12136 | 16 | King Road | SOUTHEAST (6) | $ 69.15 | 130,400.00 | F | - | $ 1,348.80 | - | - |
| 3799 | 1500 FOXMEADOW CIR | 12139 | 16 | King Road | SOUTHEAST (6) | $ 43.95 | 126,500.00 | F | - | $ 1,348.80 | - | - |
| 3800 | 1600 FOXMEADOW CIR | 12140 | 16 | King Road | SOUTHEAST (6) | - | 82,300.00 | F | - | $ 1,348.80 | - | - |
| 3801 | 1700 FOXMEADOW CIR | 12141 | 16 | King Road | SOUTHEAST (6) | - | 84,300.00 | F | - | $ 1,348.80 | - | - |
| 3802 | 1800 FOXMEADOW CIR | 12142 | 16 | King Road | SOUTHEAST (6) | - | 92,500.00 | F | - | $ 1,348.80 | - | - |
| 3803 | 1900 FOXMEADOW DR | 12143 | 16 | King Road | SOUTHEAST (6) | - | 111,200.00 | F | - | $ 1,348.80 | - | - |
| 3804 | 2000 FOXMEADOW CIR | 12144 | 16 | King Road | SOUTHEAST (6) | $ 8.42 | 121,000.00 | F | - | $ 1,348.80 | - | - |
| 3805 | 2100 FOXMEADOW CIR | 12145 | 16 | King Road | SOUTHEAST (6) | $ 160.88 | 144,600.00 | F | - | $ 1,348.80 | - | - |
| 3806 | 2200 FOXMEADOW DR | 12146 | 16 | King Road | SOUTHEAST (6) | - | 101,000.00 | F | - | $ 1,348.80 | - | - |
| 3807 | 2300 FOXMEADOW DR | 12147 | 16 | King Road | SOUTHEAST (6) | $ 176.38 | 147,000.00 | F | - | $ 1,348.80 | - | - |
| 3808 | 2400 FOXMEADOW CIR | 12148 | 16 | King Road | SOUTHEAST (6) | $ 94.99 | 134,400.00 | F | - | $ 1,348.80 | - | - |
| 3809 | 2500 FOXMEADOW CIR | 12149 | 16 | King Road | SOUTHEAST (6) | $ 107.26 | 136,300.00 | F | - | $ 1,348.80 | - | - |
| 161 | 640 N LEWIS RD | 275 | 17 | King Road | SOUTHEAST (6) | $ 1,932.95 | 306,700.00 | F | - | $ 84.30 | - | - |
| 3674 | 7-27 W RIDGE PIKE/STRP ML | 12005 | 18 | King Road | SOUTHEAST (6) | $ 63.37 | 92,100.00 | F | - | $ 927.30 | - | - |
| 3727 | 125 SUNSET RD | 12065 | 18 | King Road | 282 GRATERFORD RD (20) | $ 1,198.45 | 193,000.00 | F | - | $ 84.30 | - | - |
| 3772 | 15 KEYSTONE DR | 12112 | 18 | King Road | TRINLEY (5) | $ 2,452.98 | 387,200.00 | F | - | $ 84.30 | - | - |
| 5199 | 256 SWAMP PIKE/SCHOOL | 60965 | 18 | Possum Hollow | RAVENS CLAW (18) | $ 2,015.24 | 334,400.00 | F | - | $ 252.90 | - | - |
| 162 | 339 N LEWIS RD | 276 | 19 | King Road | SOUTHEAST (6) | $ 1,256.59 | 202,000.00 | F | - | $ 84.30 | - | - |
| 3706 | W RIDGE PIKE/STRIP/BANK | 12039 | 19 | King Road | SOUTH LIMERICK (3) | $ 1,373.73 | 272,500.00 | F | - | $ 674.40 | - | - |
| 3745 | 542 N LEWIS RD | 12084 | 19 | King Road | TRINLEY (5) | $ 112.65 | 32,400.00 | F | - | $ 168.60 | - | - |
| 3411 | 70 BUCKWALTER RD/1350/APPLEB | 11737 | 20 | King Road | SOUTHEAST (6) | $ 3,375.47 | 530,000.00 | F | - | $ 84.30 | - | - |
| 5389 | 206 JONES BLVD/MICROCOAX | 70011 | 20 | Possum Hollow | BROOKE EVANS (16) | $ 14,938.23 | 2,319,900.00 | F | - | $ 84.30 | - | - |
| 3445 | 70 BUCKWALTER RD/1250/TEXAS | 11771 | 21 | King Road | SOUTHEAST (6) | $ 2,419.39 | 382,000.00 | F | - | $ 84.30 | - | - |
| 3707 | 22 ANCHOR PARKWAY | 12040 | 23 | King Road | SOUTHEAST (6) | $ 1,958.79 | 310,700.00 | F | - | $ 84.30 | - | - |
| 3773 | 77 GRATERFORD RD | 12113 | 23 | King Road | 282 GRATERFORD RD (20) | $ 1,208.14 | 194,500.00 | F | - | $ 84.30 | - | - |
| 64 | 677 ELM ST | 170 | 24 | Royersford | ORCHARD TERRACE (OT) | - | 12,000.00 | F | - | $ 2,023.20 | - | - |
| 3863 | 430 W LINFIELD TRAPPE RD | 12208 | 24 | King Road | TRINLEY (5) | $ 4,782.46 | 747,800.00 | F | - | $ 84.30 | - | - |
| 794 | 1101 ENTERPRISE DR | 2573 | 28 | King Road | TRINLEY (5) | $ 1,182.95 | 190,600.00 | F | - | $ 84.30 | - | - |
| 2502 | 196 W RIDGE PK/FLEA MRKT | 10679 | 29 | King Road | RIDGE PIKE (10) | $ 629.07 | 247,000.00 | F | - | $ 1,686.00 | $ 1.80 | - |
| 3869 | 420 LINFIELD TRAPPE RD | 12214 | 30 | King Road | TRINLEY (5) | $ 852.20 | 139,400.00 | F | - | $ 84.30 | - | - |
| 5410 | 14 W LIGHTCAP RD | 70032 | 34 | Possum Hollow | POSSUM HOLLOW (17) | $ 7,741.14 | 1,205,800.00 | F | - | $ 84.30 | - | - |
| 3401 | 19 W LINFIELD TRAPPE RD | 11727 | 36 | King Road | SOUTHEAST (6) | $ 5,421.59 | 846,736.00 | F | - | $ 84.30 | - | - |
| 107 | 475 N LEWIS RD | 216 | 52 | King Road | SOUTHEAST (6) | $ 3,921.34 | 614,500.00 | F | - | $ 84.30 | - | - |
| 3761 | 88 ANCHOR PARKWAY | 12101 | 52 | King Road | SOUTHEAST (6) | $ 3,746.92 | 587,500.00 | F | - | $ 84.30 | - | - |
| 2292 | 420 W LINFIELD TRAPPE RD | 10357 | 59 | King Road | TRINLEY (5) | $ 5,568.64 | 869,500.00 | F | - | $ 84.30 | - | - |
| 167 | 350 S LEWIS RD | 282 | 60 | King Road | SOUTHEAST (6) | $ 3,791.50 | 594,400.00 | F | - | $ 84.30 | - | - |
| 2465 | 827 N LEWIS RD | 10630 | 80 | King Road | SOUTH LIMERICK (3) | - | 150,200.00 | F | - | $ 6,744.00 | - | - |
| 3091 | FOX RIDGE APTS | 11378 | 97 | King Road | SOUTH LIMERICK (3) | $ 2,050.04 | 1,043,000.00 | F | - | $ 8,177.10 | - | - |
| 2685 | 165 W RIDGE PIKE/TRLR PK | 10913 | 115 | King Road | SOUTHEAST (6) | $ 6,018.69 | 1,792,000.00 | F | - | $ 9,694.50 | - | - |
| 5397 | EXELON LIM GEN STA | 70019 | 137 | Possum Hollow | POSSUM HOLLOW (17) | N | - | $ 8,659.75 | 1,348,000.00 | $ 84.30 | $ 1,041.07 | - |
| 5400 | 18 LIGHTCAP RD | 70022 | 200 | Possum Hollow | POSSUM HOLLOW (17) | $ 4,006.31 | 1,278,500.00 | F | - | $ 7,418.40 | - | - |
| | | **5416** | **8402** | | | **$ 299,707.92** | **89,160,697** | **$ 25,039.14** | **7,288,556** | **$ 600,843.05** | **$ 14,296.74** | **$ 1,169.98** |

**ASSET PURCHASE AGREEMENT**

7. Aqua and Limerick are parties to an Asset Purchase Agreement dated November 16, 2016. Aqua Exhibit 1, Application ¶ 5 and ¶ 18; *see also* Aqua Exhibit No. 1, Exhibit C.

8. The negotiated purchase price, which is based on arms' length negotiation, is Seventy-Five Million One Hundred Thousand Dollars ($75,100,000.00). Aqua and Limerick are not affiliated with each other. Aqua Exhibit No. 1, Application ¶ 18 and Aqua St. No. 1 at 6, lines 6 through 10.

9. Aqua will use short term credit lines to fund the transaction. The short term credit funding will be converted to a mix of long-term debt and equity capital shortly after closing. Aqua St. No. 1 at 7, lines 18 through 20; *see also* Aqua Exhibit No. 1, Application ¶ 18.

**ASSETS BEING TRANSFERRED**

10. The wastewater system assets to be transferred are the "Acquired Assets" and have the meaning specified in Section 2.01 of the Agreement. The Acquired Assets include all real property Limerick owns and uses in the operation of the wastewater system and all sanitary wastewater related treatment and conveyance facilities, including the Possum Hollow Waste Water Treatment Plant ("PHWWTP"), the King Road Waste Water Treatment Plant ("KRWWTP") and all pipes, pumping stations, manholes and pipelines and billing and collections related assets necessary to run the system. Aqua Exhibit No. 1, Application ¶ 19.

11. Acquired Assets also include the contracts identified on Schedule 4.15 of the Agreement to which Limerick is a party (the "Assigned Contracts"). Since contract parties, other than Limerick, are identified by name, Schedule 4.15 and the Assigned Contracts are considered CONFIDENTIAL. Copies of CONFIDENTIAL Schedule 4.15 and the CONFIDENTIAL Assigned Contracts were included with the Application as Confidential Exhibit F and admitted into evidence as CONFIDENTIAL Aqua Exhibit No. 4. Aqua Exhibit No. 1, Application ¶ 20 and Tr. 13 and 20.

$5,572,770. Exh. A-14-a, SWPA St. 1 at 11-12. The allocated purchase price for the water system is $4,734,800 and the wastewater system is $4,765,200. Appendix A-14, SWPA St. 2 at 4-5.

The valuation experts were paid $59,145 for the Fair Market Value Appraisal Reports for both the water and wastewater systems. Exh. A-8-a. SWPA also indicates that it will incur transaction and closing costs of approximately $1,000,000 between the Water System and the Wastewater System, which will be included in rate base. Appendix A-14, SWPA St.1 at 5-6; Appendix A-12.

OCA will examine the ratemaking rate base claims to determine if the claims are reasonable and appropriate for ratemaking purposes.

2. Proposed Rates: SWPA proposes to charge customers of the Mahoning Township system the Mahoning Township water and wastewater rates in effect at closing. Application at 6, 11; Appendix A-13. Those rates will remain in effect until SWPA's next base rate case but SWPA may impose any fee or surcharge permitted by its Commission-approved tariff. Id.

The proposed rates do not appear to match the existing Mahoning Township rates. The OCA will investigate this apparent discrepancy. The OCA will investigate the impacts on the current customers as well as on Mahoning Township customers of the various assumptions and proposals.

3. The OCA submits that additional information is necessary to determine how the transaction will substantially and affirmatively benefit Suez's existing customers.

4. Conditions: Whether any conditions should be imposed upon the proposed transfer to ensure that Suez's customers are treated in a fair and just manner in accord with Pennsylvania law and Commission rules and regulations.

**MAHONING TOWNSHIP CUSTOMER LIST**

| Customer No | Name | Service Address | Service | SWR EDUs | EDU | Count |
|---|---|---|---|---|---|---|
| 11470.01 | T & S REALTY | 304 HOLLOW DR | Sewer | 1 | 1 | 1431 |
| 11471.01 | T & S REALTY | 306 HOLLOW DR | Sewer | 1 | 1 | 1432 |
| 11472.01 | T & S REALTY | 308 HOLLOW DR | Sewer | 1 | 1 | 1433 |
| 11473.01 | T & S REALTY | 310 HOLLOW DR | Sewer | 1 | 1 | 1434 |
| 11474.01 | T & S REALTY | 312 HOLLOW DR | Sewer | 1 | 1 | 1435 |
| 11475.01 | DAVID & JOANNE BROOKO\ | 32 TERRE LANE | Sewer | 1 | 1 | 1436 |
| 11476.02 | JAYA SUGUNARAJ & JESSITA | 214 ABBEY RD | Sewer | 1 | 1 | 1437 |
| 11478.01 | DAVID BULBIN & BARBARA | 74 WOODLAND DR | Sewer | 1 | 1 | 1438 |
| 11479.01 | JEFFREY MOLINARO | 1318 BLOOM RD | Sewer | 1 | 1 | 1439 |
| 11480.01 | CRYSTAL DOMETITA | 91 WOODLAND DR | Sewer | 1 | 1 | 1440 |
| 11482.01 | AYUSA SINHA | 672 LOWER ST | Sewer | 1 | 1 | 1441 |
| 11483.01 | MADIAN YAHYA | 676 LOWER ST | Sewer | 1 | 1 | 1442 |
| 11484.01 | JEFF WATSON | 168 KASEVILLE RD | Sewer | 1 | 1 | 1443 |
| 11485.01 | ANWER & SARAH QURESHI | 656 LOWER ST | Sewer | 1 | 1 | 1444 |
| 11486.01 | ROSS & ASHLEY PETERS | 83 TERRE LN | Sewer | 1 | 1 | 1445 |
| 11488.01 | QUESHI ANWER | 664 LOWER STREET | Sewer | 1 | 1 | 1446 |
| 11489.01 | MATHUR HERSH | 660 LOWER STREET | Sewer | 1 | 1 | 1447 |
| 11490.01 | PRASANNA SANKEPALLI & S | 668 LOWER ST | Sewer | 1 | 1 | 1448 |
| 11491.01 | MARK GATSKI & CATHERINE | 82 DELWOOD DR | Sewer | 1 | 1 | 1449 |
| 11492.01 | JONATHAN & LAURA SPAHF | 78 TERRE LN | Sewer | 1 | 1 | 1450 |
| 11166.02 | DANKO HOLDINGS LP | 1301 BLOOM RD | Sewer | 0 | 1 | 1451 |
| | TOTALS | | | | 2195 | 1451 |

eport Criteria:
Customer.Final bill date = {IS NULL}

5/30/18

| ustomer # | Name | Service Address | Meter ID | Customer Type | Size |
|---|---|---|---|---|---|
| 11104.01 | ANIMAL CARE | 32 ENTERPRISE DR | 0049503582 | Commercial | 1 |
| 11107.01 | EMMANUEL HOME | MONTOUR BLVD. 11107 | 8280982952 | Commercial | 1 |
| 11120.02 | REDEEMER ORTHODOX PRESBYTER | 1820 MONTOUR BLVD. | 1540802894 | Commercial | 1 |
| 11121.01 | FAB-TEX | 29 WOODBINE LANE | 0004695133 | Commercial | 1 |
| 11137.01 | GEISINGER HEALTH SYSTEMS - MCB | MCBRIDE | 1541355520 | Commercial | 1 |
| 11151.01 | ROAT-KRINER ROAT | 1133 BLOOM RD. | 1541286282 | Commercial | 1 |
| 11157.01 | TRINITY METHODIST CHURCH | 84 LOMBARD AVE | 1018010545 | Commercial | 1 |
| 11159.01 | VINTAGE KNOLLS ASSISTED LIVING | 9 JUSTIN DR 101 | 1541313242 | Commercial | 1 |
| 11160.01 | GEISINGER COMMUNITY HEALTH - VI | 44 WOODBINE LANE | 0048920994 | Commercial | 1 |
| 11165.01 | RINEHART DENTAL | 20 WESNER LANE | 1481726108 | Commercial | 1 |
| Total 1: 10 | | | | 10 | 10 |
| 11110.01 | BUSY BEAVER | 23 WESNER LN | 0053635505 | Commercial | 1.5 |
| 11139.01 | MEADOWS COMM. | 77 TOWER VIEW CIRCLE | 0051583844 | Commercial | 1.5 |
| 11148.01 | SHANER HOTEL GRP | 43 PINE BARN PLACE | 1832339361 | Commercial | 1.5 |
| 11170.01 | HAWKINS CHEVROLET | 1856 MONTOUR BLVD. | 1852732193 | Commercial | 1.5 |
| 11439.01 | GEORGE HEIM CAR WASH | 1802 MONTOUR BLVD | 1541551330 | Commercial | 1.5 |
| Total 1.5: 5 | | | | 5 | 5 |
| 11102.01 | ATLANTIC EQUIP | 15 ENTERPRISE DR | 0048304212 | Commercial | 2 |
| 11108.01 | EMMANUEL NAZARETH | 1707 MONTOUR BLVD. 11108 | 1007034764 | Commercial | 2 |
| 11117.01 | T & S REALTY | 1083 BLOOM RD | 0046645520 | Commercial | 2 |
| 11126.01 | GUM REALTY GROUP LLC | 74 SCHOOL HOUSE RD STE 101 | 0022379100 | Commercial | 2 |
| 11134.01 | MARIA JOSEPH AL CENTER | MONTOUR BLVD. 11134 | 1832120637 | Commercial | 2 |
| 11136.01 | GEISINGER HEALTH SYSTEMS - HUG | HUGHES CENTER SOUTH | 0052693508 | Commercial | 2 |
| 11146.01 | SHANER HOTEL GRP | 43 PINE BARN PLACE A | 0043702654 | Commercial | 2 |
| 11166.02 | DANKO HOLDINGS LP | 1301 BLOOM RD | 1548931502 | Commercial | 2 |
| Total 2: 8 | | | | 8 | 8 |
| 11101.01 | NAILS TO TAILS GROOMING SALON | 938 BLOOM RD. | 1810172132 | Commercial | 3/4 |
| 11109.01 | BROKENSHIRE JOHN | 769 BLOOM RD. | 1541276964 | Commercial | 3/4 |
| 11111.01 | CERO JAMES PATRICK | 795 BLOOM RD | 1541282452 | Commercial | 3/4 |
| 11113.01 | COLE'S HARDWARE | 25 ENTERPRISE ROAD | 1541310306 | Commercial | 3/4 |
| 11115.01 | HAWKINS JAMES | 1581 MONTOUR BLVD. | 1852924202 | Commercial | 3/4 |
| 11116.01 | HAWKINS COLLISION CENTER | MONTOUR BLVD. 11116 | 1541425432 | Commercial | 3/4 |

Commercial Water Meters
70

Residential Water Meters
1116

+ 1 2" = 15 Wesner Lane added 5/24/18

Total Meters
=
1186

21. Second, Ms. Vicari used inconsistent purchase price values to calculate the average costs per customer. Id. at 21-22.

(a) Incorrect Use of Projected Customers

Ms. Vicari used an incorrect number of customers for MACM. In Appendix A-17-a, it states that MACM has 12,780 customers, yet Ms. Vicari used 21,953 customers. OCA St. 1 at 20-21. She explained that she used that number because she counted the individual connections for each bulk customer. Id. She never supplied her calculation of the individual connections for the four bulk customers. Id.

Ms. Vicari does not necessarily apply that logic to the other acquisitions in her sample group by reflecting individual connections for any bulk customers. OCA St. 1S at 16-17. By using the actual number of customers for the other systems, she achieved a higher average cost per customer. She then multiplied this overstated cost per customer times the unsupported number of bulk customers' individual connection, compounding the error. Ms. Everette was not able to confirm whether all of the customer numbers in Ms. Vicari's sample group were consistently counted. She therefore used the 21,953 customer number used by Ms. Vicari to minimize the issues in the proceeding.

(b) Inconsistent Purchase Price Values

Similar to the problem with the customer count, MACM witness Vicari did not use consistent purchase price values. OCA St. 1 at 21-22. For the comparative acquisitions, she used the purchase price plus the value of capital improvements required by the agreement of sale. For MACM, however, she uses only the purchase price and does not consider the $62.7 million of capital investments that PAWC anticipates making over the next 10 years. Including the cost

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# McKeesport sewer system to be sold for $156 million

September 16, 2016 12:00 AM

By Deana Carpenter

The Municipal Authority of the City of McKeesport has agreed to sell its sewer system to Pennsylvania American Water for approximately $156 million.

The sale is needed to bring the city to more stable financial ground and avoid Act 47, the program for financially distressed municipalities, or municipal bankruptcy, McKeesport Mayor Michael Cherepko said at the Sept. 7 council meeting.

“It became very clear to this administration that the only way to save our community from municipal bankruptcy, while continuing to offer the same level of services our residents deserve, would be to transfer our local sewage system to a regional or national utility company,” Mr. Cherepko said in a news release.

A purchase agreement was signed by both parties last Friday following votes by city council and the municipal authority to sell the sewer system. The sale is expected to be finalized in the second half of next year pending regulatory approvals and other closing conditions.

The system serves 22,000 customers in McKeesport and the communities of Dravosburg, Duquesne, East McKeesport, Elizabeth Township, Glassport, Liberty, Lincoln, North Versailles, Port Vue, Versailles and White Oak.

“We look forward to closing the proposed acquisition and to providing wastewater services that reflect our commitment to environmental stewardship and quality customer service,” said

Kathy L. Pape, president of Pennsylvania American Water, said that after the deal is closed, the company looks forward “to welcoming the Municipal Authority of the City of McKeesport’s employees and customers to the Pennsylvania American Water family.”

She said the company also looks forward to “providing wastewater services that reflect our commitment to environmental stewardship and quality customer service.”

The next step is approval of the acquisition by the Pennsylvania Public Utility Commission along with other approvals, such as from the state Department of Environmental Protection.

In June, state Auditor General Eugene DePasquale said McKeeesport erred when it accidentally spent $729,275 in state funds earmarked for pension costs and subsequently couldn't pay its $2.3 million annual pension obligation last year.

McKeesport officials said then they would remedy the shortfall through "the sale of an asset in the near future."

“The total proceeds of the pending sale of the Municipal Authority of the City of McKeesport will solidify the City of McKeesport’s financial position for years to come,” Mr. Cherepko said this week. “The down payment associated with this

sale will generate enough revenue to cover all of the city's outstanding financial obligations, including the minimum municipal obligations associated with the city's pension funds."

*Deana Carpenter, freelance writer: suburbanliving@post-gazette.com.*

## EAST END SEWER ACCOUNTS

| Type | 2015-4 | 2015-3 | 2015-2 | 2015-1 | 2014-4 | 2014-3 | 2014-2 | 2014-1 |
|---|---|---|---|---|---|---|---|---|
| CO1 | 2,070,000 | 2,060,000 | 1,831,000 | 2,284,000 | 2,971,000 | 2,665,000 | 1,498,000 | 1,278,000 |
| CO2 | 739,000 | 1,050,000 | 885,000 | 793,000 | 1,028,000 | 1,061,000 | 873,000 | 873,000 |
| IND | | | | | | | | |
| MIX | 15,000 | 9,000 | 10,000 | 4,000 | 17,000 | 14,000 | 12,000 | 18,000 |
| RES | 13,780,000 | 13,367,000 | 12,924,000 | 13,280,000 | 12,700,000 | 14,137,000 | 14,241,000 | 12,874,000 |
| **Grand Total** | **16,604,000** | **16,486,000** | **15,650,000** | **16,361,000** | **16,716,000** | **17,877,000** | **16,624,000** | **15,043,000** |
| # DAYS | 94 | 90 | 89 | 91 | 87 | 94 | 93 | 91 |

| Type | 2015-4 GPD | 2015-3 GPD | 2015-2 GPD | 2015-1 GPD | 2014-4 GPD | 2014-3 GPD | 2014-2 GPD | 2014-1 GPD |
|---|---|---|---|---|---|---|---|---|
| CO1 | 22,021 | 22,889 | 20,573 | 25,099 | 34,149 | 28,351 | 16,108 | 14,044 |
| CO2 | 7,862 | 11,667 | 9,944 | 8,714 | 11,816 | 11,287 | 9,387 | 9,593 |
| IND | | | | | | | | |
| MIX | 160 | 100 | 112 | 44 | 195 | 149 | 129 | 198 |
| RES | 146,596 | 148,522 | 145,213 | 145,934 | 145,977 | 150,394 | 153,129 | 141,473 |
| **Grand Total** | **176,638** | **183,178** | **175,843** | **179,791** | **192,138** | **190,181** | **178,753** | **165,308** |

| Type | Total Units | Total Active Units | Total Accounts |
|---|---|---|---|
| CO1 | 145 | 109 | 65 |
| CO2 | 40 | 16 | 13 |
| IND | | | |
| MIX | 8 | 7 | 3 |
| RES | 1,043 | 1012 | 823 |
| **Grand Total** | **1,236** | **1,144** | **904** |

| Type | 2015 Total | 2014 Total |
|---|---|---|
| CO1 | 8,245,000 | 8,412,000 |
| CO2 | 3,467,000 | 3,835,000 |
| IND | | |
| MIX | 38,000 | 61,000 |
| RES | 53,351,000 | 53,952,000 |
| **Grand Total** | **65,101,000** | **66,260,000** |

| Service Area | Total Units | Total Active Units | Total Accounts |
|---|---|---|---|
| BP | 290 | 282 | 107 |
| BR | 52 | 51 | 52 |
| BW | 99 | 90 | 56 |
| CR | 5 | 4 | 5 |
| CW | 110 | 109 | 110 |
| EE | 1 | | 1 |
| GL | 132 | 110 | 70 |
| HD | 127 | 110 | 112 |
| PD | 31 | 31 | 31 |
| PM | 48 | 47 | 48 |
| PS | 66 | 66 | 66 |
| SC | 65 | 37 | 40 |
| SH | 132 | 132 | 132 |
| SRO | 2 | 2 | 2 |
| WB | 76 | 73 | 72 |
| **Grand Total** | **1,236** | **1,144** | **904** |

## SOUTH END SEWER ACCOUNTS

| Type | 2015-4 | 2015-3 | 2015-2 | 2015-1 | 2014-4 | 2014-3 | 2014-2 | 2014-1 |
|---|---|---|---|---|---|---|---|---|
| CO1 | 163,000 | 68,000 | 33,000 | 27,000 | 277,000 | 265,000 | 28,000 | 25,000 |
| RES | 7,444,000 | 7,494,000 | 7,172,000 | 7,565,000 | 7,109,000 | 7,576,000 | 7,233,000 | 7,750,000 |
| **Grand Total** | **7,607,000** | **7,562,000** | **7,205,000** | **7,592,000** | **7,386,000** | **7,841,000** | **7,261,000** | **7,775,000** |
| # DAYS | 94 | 90 | 89 | 91 | 87 | 94 | 93 | 91 |

| Type | 2015-4 GPD | 2015-3 GPD | 015-2 GPD | 2015-1 GPD | 2014-4 GPD | 2014-3 GPD | 2014-2 GPD | 2014-1 GPD |
|---|---|---|---|---|---|---|---|---|
| CO1 | 1,734 | 756 | 371 | 297 | 3,184 | 2,819 | 301 | 275 |
| RES | 79,191 | 83,267 | 80,584 | 83,132 | 81,713 | 80,596 | 77,774 | 85,165 |
| **Grand Total** | **80,926** | **84,022** | **80,955** | **83,429** | **84,897** | **83,415** | **78,075** | **85,440** |

| Type | Total Units | Total Active Units | Total Accounts |
|---|---|---|---|
| CO1 | 6 | 2 | 2 |
| RES | 611 | 605 | 607 |
| **Grand Total** | **617** | **607** | **609** |

| Type | 2015 Total | 2014 Total |
|---|---|---|
| CO1 | 291,000 | 595,000 |
| RES | 29,675,000 | 29,668,000 |
| **Grand Total** | **29,966,000** | **30,263,000** |

| Service Area | Total Units | Total Active Units | Total Accounts |
|---|---|---|---|
| ES | 178 | 174 | 174 |
| HGN | 129 | 125 | 125 |
| HGS | 30 | 29 | 30 |
| MG | 21 | 21 | 21 |
| WS | 259 | 258 | 259 |
| **Grand Total** | **617** | **607** | **609** |

## AVONDALE SEWER ACCOUNTS SEWER ACCOUNTS

| Type | 2015-4 | 2015-3 | 2015-2 | 2015-1 | 2014-4 | 2014-3 | 2014-2 | 20144 |
|---|---|---|---|---|---|---|---|---|
| CO1 | 2,833,000 | 3,044,000 | 2,895,000 | 3,014,000 | 2,844,000 | 2,681,000 | 2,598,000 | 2,992,000 |
| CO2 | 191,000 | 208,000 | 235,000 | 228,000 | 224,000 | 195,000 | 192,000 | 179,000 |
| MIX | 301,000 | 312,000 | 255,000 | 273,000 | 227,000 | 258,000 | 276,000 | 332,000 |
| RES | 4,090,000 | 3,750,000 | 3,588,000 | 4,089,000 | 3,506,000 | 4,183,000 | 4,716,000 | 3,705,000 |
| TWP | 31,000 | 24,000 | 20,000 | 19,000 | 21,000 | 22,000 | 19,000 | 74,000 |
| **Grand Total** | **7,446,000** | **7,338,000** | **6,993,000** | **7,623,000** | **6,822,000** | **7,339,000** | **7,801,000** | **7,282,000** |
| # DAYS | 94 | 90 | 89 | 91 | 87 | 94 | 93 | 91 |

| Type | 2015-4 GPD | 2015-3 GPD | )15-2 GPD | 2015-1 GPD | 2014-4 GPD | 2014-3 GPD | 2014-2 GPD | 2014-1 GPD |
|---|---|---|---|---|---|---|---|---|
| CO1 | 30,138 | 33,822 | 32,528 | 33,121 | 32,690 | 28,521 | 27,935 | 32,879 |
| CO2 | 2,032 | 2,311 | 2,640 | 2,505 | 2,575 | 2,074 | 2,065 | 1,967 |
| MIX | 3,202 | 3,467 | 2,865 | 3,000 | 2,609 | 2,745 | 2,968 | 3,648 |
| RES | 43,511 | 41,667 | 40,315 | 44,934 | 40,299 | 44,500 | 50,710 | 40,714 |
| TWP | 330 | 267 | 225 | 209 | 241 | 234 | 204 | 813 |
| **Grand Total** | **79,213** | **81,533** | **78,573** | **83,769** | **78,414** | **78,074** | **83,882** | **80,022** |

| Type | Total Units | Total Active Units | Total Accounts |
|---|---|---|---|
| CO1 | 397 | 48 | 38 |
| CO2 | 4 | 4 | 4 |
| MIX | 8 | 22 | 8 |
| RES | 306 | 282 | 230 |
| TWP | 3 | 3 | 3 |
| **Grand Total** | **718** | **359** | **283** |

| Type | 2015 Total | 2014 Total |
|---|---|---|
| CO1 | 11,786,000 | 11,115,000 |
| CO2 | 862,000 | 790,000 |
| MIX | 1,141,000 | 1,093,000 |
| RES | 15,517,000 | 16,110,000 |
| TWP | 94,000 | 136,000 |
| **Grand Total** | **29,400,000** | **29,244,000** |

| Service Area | Total Units | Total Active Units | Total Accounts |
|---|---|---|---|
| 41 | 308 | 76 | 46 |
| BH | 123 | 120 | 121 |
| BH2 | 6 | 6 | 6 |
| RR | 130 | 119 | 79 |
| TK | 151 | 38 | 31 |
| **Grand Total** | **718** | **359** | **283** |

# The PA PUC Approves First Wastewater Sale Under New Act 12

**06/14/2017**

June 14, 2017 (Philadelphia, PA) - On June 14, 2017, the Pennsylvania Public Utility Commission approved, in a four-to-one vote, Aqua Pennsylvania Wastewater, Inc.'s application to acquire the wastewater system of New Garden Township and its Sewer Authority, and to begin providing wastewater service to the residents of New Garden and Kennett Townships in Chester County. The transaction is the first to be approved using the fair market valuation approach established by the Pennsylvania State Legislature and Governor Tom Wolf with Act 12 of 2016 (Act of Apr. 14, 2016, P.L. 76, No. 12, 66 Pa. C.S. § 1329).

Act 12 is changing the landscape for municipal sales of water and wastewater systems to PUC-regulated public utility companies. The new law allows the parties to the transaction to opt in to a new method of valuation, which takes the value of the system for ratemaking purposes as either the lower of the average of two independent fair market value appraisals—one obtained by the utility buyer and one by the municipal seller—or by the negotiated purchase price. Prior to Act 12, system value for ratemaking was based on depreciated original cost, which would likely always result in a lower sale price than fair market value. In addition, the new law requires the PUC to act within six months of the acceptance of the application.

Act 12 became effective mid-June 2016, and the PUC issued its final implementation order in October 2016. The New Garden transaction was the first Act 12 application, submitted for approval in December 2016. Aqua, New Garden, and the Authority agreed to a negotiated purchase price of $29,500,000, which turned out to be less than the average of the two appraisals commissioned by Aqua and New Garden. The valuation for ratemaking purposes was therefore set at $29,500,000.

A protest to Aqua's application for PUC approval pursuant to Act 12 in the New Garden transaction was filed by the Bureau of Investigation and Enforcement, which sought a review of both of the fair market appraisals used, additional information about the proposed rate freeze agreed to by the parties, and a determination of whether the transaction was in the public interest under Section 1102 of the Public Utility Code.

An additional protest was filed by the Office of Consumer Advocates requesting further information to determine whether supplementary conditions should be imposed on the transaction to ensure that Aqua's existing customers are treated in a fair and just manner; how the transaction will substantially and affirmatively benefit Aqua's existing customers; and whether the agreement sufficiently provides for safe, adequate, and reasonable service at just and reasonable rates.

An evidentiary hearing was held before an administrative law judge on February 16, 2017. After the hearing, the judge recommended the denial of Aqua's application, concluding that Aqua had failed to demonstrate by a preponderance of the evidence that the acquisition was in the public interest because it failed to demonstrate that the transaction will result in affirmative public benefits to its existing customers. The judge also concluded that Aqua had failed to support its rate stabilization plan with evidence to show its basis and impact. The judge did

**Related Lawyers**

Skye C.A. Nickalls

Marc A. Feller

**Related Practices**

Corporate and Business

**Related Offices**

Philadelphia, PA

1 invest in necessary capital improvements and resources, and experienced managerial and
2 operating personnel necessary to provide safe and reliable sewer services to the residents of
3 the TOS and surrounding areas. PAWC is currently the water provider within TOS and is
4 the operator of TOS's System pump station.
5
6 **Q. PLEASE DESCRIBE PAWC'S HISTORICAL RELATIONSHIP WITH TOS.**
7 A. Since PAWC's acquisition of the water and wastewater assets of the City of Coatesville
8 Authority ("CCA") in March 2001, PAWC has been the regional wastewater (and water)
9 provider in the City of Coatesville and surrounding communities. . PAWC's treats the
10 wastewater from the communities of Sadsbury Township, City of Coatesville, East
11 Fallowfield Township, Caln Township, West Caln Township, Valley Township, West
12 Sadsbury Township, Highland Township, West Brandywine Township and Parksburg
13 Borough. TOS has been a bulk wastewater customer of PAWC since PAWC's acquisition
14 of CCA's water and wastewater system assets. We maintain a relationship with TOS and
15 other local municipalities by participating in local events, providing environmental and
16 firefighting grants, offering the "H2O Assistance Program," and supporting economic
17 growth through infrastructure improvements in the communities we serve.
18
19 **Q. HOW MANY CUSTOMERS DOES THE TOS SYSTEM CURRENTLY SERVE**
20 **AND HOW MANY CUSTOMERS DOES PAWC CURRENTLY SERVE?**
21 **A.** As of December 31, 2016, TOS furnished wastewater services to 998 customers. This
22 number includes 950 residential and 48 commercial customer connections. Of these

interest in discussing the potential acquisition of the System and the use of Section 1329, the fair market value approach. TOS's representatives executed the Letter of Interest on December 6 and 7, 2016 and returned it to PAWC. This "Letter of Interest" was extended through amendments on March 9, 2017, May 2, 2017, June 6, 2017, and July 5, 2017 to allow the parties to enter into a definitive agreement. Through these extensions, PAWC and TOS jointly retained the services of Herbert E. MacCombie, Jr., P.E., of Media Pennsylvania to complete the Engineer's Assessment of Tangible Assets pursuant to Section 1329. The Engineer's Assessment of Tangible Assets is included as **Schedule 1.1** of the APA and included with the UVE fair market valuation reports at **Appendix A-5**. PAWC, pursuant to Section 1329, retained the services of AUS Consultants of Greenfield Wisconsin to complete an appraisal of the System. TOS retained the services of Herbert, Rowland & Grubic, Inc. of Harrisburg, Pennsylvania to also complete an appraisal of the System. These appraisals accompany the Application at **Appendix A-5** (together with electronic working documents at **Appendix A-4**) and are included as **Schedule 2.2** of the APA. After receipt of the two appraisals and subsequent arms-length negotiations, on May 1, 2018 TOS's Board of Supervisors approved the APA, which was subsequently executed by PAWC and TOS that day too. This APA includes a negotiated purchase price of $9,250,000.

**Q. CAN YOU PLEASE PROVIDE AN OVERVIEW OF THE APA?**

**A.** Yes. The APA is attached as **Appendix A-24-a** to the Application **(PAWC Exhibit KEG-1)**. The APA sets forth the terms and conditions pursuant to which the TOS will sell, and PAWC will purchase, the System, as well as substantially all assets, properties and rights

Elizabeth Rose Triscari, Esquire
Pennsylvania-American Water Company
800 West Hersheypark Drive
Hershey, PA 17033
(717) 520-4606
elizabeth.triscari@amwater.com

The Applicant's attorneys are authorized to receive all notices and communications regarding this Application.

6. PAWC is a regulated public utility corporation duly organized and existing under the laws of the Commonwealth of Pennsylvania, and is engaged in the business of collecting, treating, storing, supplying, distributing and selling water to the public, and collecting, treating, transporting and disposing of wastewater for the public. Water and wastewater services are furnished by PAWC to the public in a service territory encompassing more than 400 communities across the Commonwealth with a combined population of over 2,400,000. A description of PAWC's existing certificated water and wastewater service territory is found in **Appendix B**, along with a detailed corporate history, outlining all of the mergers, acquisitions and consolidations, which have created PAWC as it exists on the date of this Application.

7. Steelton is a municipal water authority, organized by the Borough of Steelton in accordance with the Municipality Authorities Act, 53 Pa. C.S. §5601, et seq., with its offices located at 123 North Front Street, Steelton, Pennsylvania. Steelton owns and operates the Steelton System, providing water service to the public in the Borough of Steelton and a portion of Swatara Township (the "Service Area"), in Dauphin County, Pennsylvania.

8. As of November 30, 2018, Steelton furnishes water service to 2,472 customers including 2,289 residential, 124 commercial, 13 industrial, 34 institutional, 11 municipal, and one bulk sales customer connection.

PENNSYLVANIA REAL-TIME NEWS

# Steelton water sale closer to completion as Pa. American Water signs $22.5 million agreement

Updated Nov 15, 2018;
Posted Nov 15, 2018

Pennsylvania American Water announced today it signed an agreement to acquire the water assets of the Steelton Borough Authority. Pending regulatory approvals, the sale should be complete by the third quarter of 2019.

1

8
shares

**By Steve Marroni | smarroni@pennlive.com**

The sale of Steelton's water system is one step closer to completion.

Pennsylvania American Water announced today it has signed an agreement to acquire the water assets of the Steelton Borough Authority for $22.5 million.

The two will next seek approval of the acquisition from the Pennsylvania Public Utility Commission and other necessary approvals from the Pennsylvania Department of Environmental Protection, according to the company.

Subscribe

| Cust No | Name | Customer Type | Group Code | Service No | Description | Unit/Share |
|---|---|---|---|---|---|---|
| )33438358 | Morath, Christina | Commercial | None | 1 | SEWER | 1 |
| )33453937 | Baeder, William | Commercial | None | 1 | SEWER | 1 |
| )33521786 | Sanders, Debra | Commercial | None | 1 | SEWER | 1 |
| )33757653 | Advanced Auto Parts | Commercial | None | 1 | SEWER | 1 |
| )34016546 | Nelson's Ice Cream | Commercial | None | 1 | SEWER | 1 |
| )34030702 | Pitcher, Paul | Commercial | None | 1 | SEWER | 1 |
| )34083232 | Beck, Katharine G | Commercial | None | 1 | SEWER | 1 |
| )34862572 | LK Miller Properties LLC | Commercial | None | 1 | SEWER | 1 |
| )02939458 | Fuhrman, Steve | Commercial | None | 1 | SEWER | 1 |
| )03198199 | Sarangpur Realty LLC | Commercial | None | 1 | SEWER | 1 |
| )03373167 | Wilhelm, Rosemarie | Commercial | None | 1 | SEWER | 1 |
| )04397982 | Pragi Enterprises LLC | Commercial | None | 1 | SEWER | 1 |
| )06085025 | Plank Jr, Robert E | Commercial | None | 1 | SEWER | 1 |
| )06197065 | LD Hedge Associates LLC | Commercial | None | 1 | SEWER | 1 |
| )06197096 | LD Hedge Associates LLC | Commercial | None | 1 | SEWER | 1 |
| )07394708 | Fissinger, Matthew | Commercial | None | 1 | SEWER | 1 |
| )07425268 | Snyder, Joseph | Commercial | None | 1 | SEWER | 1 |
| )07461417 | Varlotta, Michael | Commercial | None | 1 | SEWER | 1 |
| )07487679 | CG Complex LLC | Commercial | None | 1 | SEWER | 1 |
| )07519040 | Bristol Road Partners Inc. | Commercial | None | 1 | SEWER | 1 |
| )08908308 | Superior Credit Union | Commercial | None | 1 | SEWER | 1 |
| )09217890 | Hoff Properties LLC | Commercial | None | 1 | SEWER | 1 |
| )10722804 | AMA Realty Properties LLC | Commercial | None | 1 | SEWER | 1 |
| )11184863 | Attilio, Thomas | Commercial | None | 1 | SEWER | 1 |
| )12032330 | 310 Chestnut Street LLC | Commercial | None | 1 | SEWER | 1 |
| )13068080 | Branch Banking & Trust Company | Commercial | None | 1 | SEWER | 1 |
| )13286185 | White, Elaine & Bruce | Commercial | None | 1 | SEWER | 1 |
| )15089717 | C&R Property Management LLC | Commercial | None | 1 | SEWER | 1 |
| )15089748 | C&R Property Management LLC | Commercial | None | 1 | SEWER | 1 |
| )15292810 | Preston, Aaron | Commercial | None | 1 | SEWER | 1 |
| )16240812 | Shalom, Jan | Commercial | None | 1 | SEWER | 1 |
| )16276750 | Copenhafer, Fay | Commercial | None | 1 | SEWER | 1 |
| )16612479 | Donohue, Patrick R | Commercial | None | 1 | SEWER | 1 |
| )17470098 | Lewis Group Ltd Partnership | Commercial | None | 1 | SEWER | 1 |
| )17961983 | Qawasmy, John | Commercial | None | 1 | SEWER | 1 |
| )18085592 | Christman, Lewis | Commercial | None | 1 | SEWER | 1 |
| )18305104 | Tarquini Herrera, Rachel | Commercial | None | 1 | SEWER | 1 |
| )18888302 | Florence Attilio Rental Acct. | Commercial | None | 1 | SEWER | 1 |
| )18888319 | Attilio, Thomas | Commercial | None | 1 | SEWER | 1 |
| )19364687 | Conigliaro, Vito | Commercial | None | 1 | SEWER | 1 |
| )21630875 | Chesterview Apartments | Commercial | None | 1 | SEWER | 1 |
| )22621041 | Main Street Royersford LLC | Commercial | None | 1 | SEWER | 1 |
| )22621096 | Spring Mountain Brewing Co | Commercial | None | 1 | SEWER | 1 |
| )23796115 | Kassam, Tashir | Commercial | None | 1 | SEWER | 1 |
| )26295581 | JD Arnold LLC | Commercial | None | 1 | SEWER | 1 |
| )26393133 | Ostebo, Kurt | Commercial | None | 1 | SEWER | 1 |
| | | 158 | | | | |

Report Criteria:
Billing.Service No = 1
Customer.Customer Type = Commercial, Industrial, Residential

Report Criteria:
Billing.Service No = 1
Customer.Customer Type = Industrial, Residential

| Cust No | Name | Customer Type | Group Code | Service No | Description | Unit/Share |
|---|---|---|---|---|---|---|
| )28611137 | Lewis Group Ltd. Partnership | Industrial | None | 1 | SEWER | 1 |
| )28619292 | Giftwares Co Inc | Industrial | None | 1 | SEWER | 1 |
| )28619407 | Specialty Chemical Systems Inc | Industrial | None | 1 | SEWER | 1 |
| )28619759 | Accumetrics Limited | Industrial | None | 1 | SEWER | 1 |
| )28619773 | Accumetrics Limited | Industrial | None | 1 | SEWER | 1 |
| )28620339 | Nelson's Ice Cream Inc. | Industrial | None | 1 | SEWER | 1 |
| )28620858 | American Machine & Tool Co. | Industrial | None | 1 | SEWER | 1 |
| )29486532 | A.C. Miller Concrete Company | Industrial | None | 1 | SEWER | 1 |
| )29651213 | Borough of Royersford | Industrial | None | 1 | SEWER | 1 |
| )29709754 | Royersford Spring Company | Industrial | None | 1 | SEWER | 1 |
| )29784885 | Advanced Fluid Systems Inc | Industrial | None | 1 | SEWER | 1 |
| | | 11 | | | | |

| Cust No | Name | Customer Type | Group Code | Service No | Description | Unit/Share |
|---|---|---|---|---|---|---|
| )25581487 | Sakal, Brian J | Residential | None | 1 | SEWER | 1 |
| )25581852 | Barbara Berman Ricci | Residential | None | 1 | SEWER | 1 |
| )25590276 | Tallman, William | Residential | None | 1 | SEWER | 1 |
| )25596441 | Tarantino, Joseph | Residential | None | 1 | SEWER | 1 |
| )25635087 | Benson, Merrill G | Residential | None | 1 | SEWER | 1 |
| )25760044 | Blamey, Chad & Katrin | Residential | None | 1 | SEWER | 1 |
| )25762972 | Whitmore, Andrew | Residential | None | 1 | SEWER | 1 |
| )25807684 | Mecca, Jessica | Residential | None | 1 | SEWER | 1 |
| )25824139 | Gerber, Jenna | Residential | None | 1 | SEWER | 1 |
| )25859012 | Creciun, Peter | Residential | None | 1 | SEWER | 1 |
| )25869156 | Seiders, Lester & Monica | Residential | None | 1 | SEWER | 1 |
| )25879108 | Chesterview Apartments | Residential | None | 1 | SEWER | 1 |
| )25930898 | US Bank NA | Residential | None | 1 | SEWER | 1 |
| )25948684 | Findley, Nicole M | Residential | None | 1 | SEWER | 1 |
| )25987108 | Craft, Elena | Residential | None | 1 | SEWER | 1 |
| )26021179 | John McDonald & Karlyn Eyre | Residential | None | 1 | SEWER | 1 |
| )26043841 | Blanche, Camile | Residential | None | 1 | SEWER | 1 |
| )26160869 | Hirst, Sharon A | Residential | None | 1 | SEWER | 1 |
| )26161459 | John Marlatt & Rebecca Gardner | Residential | None | 1 | SEWER | 1 |
| )26204967 | Niemczuk, Joseph W | Residential | None | 1 | SEWER | 1 |
| )26223333 | Weiss, Joseph | Residential | None | 1 | SEWER | 1 |
| )26239376 | C&R Property Management LLC | Residential | None | 1 | SEWER | 1 |
| )26300278 | Millard, Barry & Sheryl | Residential | None | 1 | SEWER | 1 |
| )26310954 | Nevin, Sean | Residential | None | 1 | SEWER | 1 |
| )26326843 | Davis, Jeff | Residential | None | 1 | SEWER | 1 |
| )26340238 | Jacobs, Jamie | Residential | None | 1 | SEWER | 1 |
| )26352002 | Slifer, Richard | Residential | None | 1 | SEWER | 1 |
| )26353432 | Lynch, Heather | Residential | None | 1 | SEWER | 1 |
| )26380250 | Tallman, William | Residential | None | 1 | SEWER | 1 |
| )26381130 | Stem, Matt & Heather | Residential | None | 1 | SEWER | 1 |
| )26403078 | Petaccio, Andrea | Residential | None | 1 | SEWER | 1 |
| )26630702 | O'Donnell, Kaitlyn | Residential | None | 1 | SEWER | 1 |
| )26660253 | Ilyas, Asif | Residential | None | 1 | SEWER | 1 |
| )26713911 | Hernandez, S & Murphy, M | Residential | None | 1 | SEWER | 1 |
| )26746591 | Gieske and Niemann LLC | Residential | None | 1 | SEWER | 1 |
| )26875659 | Speck, Erin | Residential | None | 1 | SEWER | 1 |
| )26880804 | Raser, Randy | Residential | None | 1 | SEWER | 1 |
| )26909682 | Perez, Waldemar & Aracelis | Residential | None | 1 | SEWER | 1 |
| )26969219 | Macelwee-Todd, Lisa | Residential | None | 1 | SEWER | 1 |
| | | 1427 | | | | |

Report Criteria:
Billing.Service No = 1
Customer.Customer Type = Residential

permitted under Law and the terms of any applicable contract that is a Nonassignable Asset, as agent or subcontractor for Seller, pay, perform and discharge the liabilities and obligations of Seller thereunder from and after the Closing Date, but only to the extent that such liabilities and obligations would be Assumed Liabilities if the applicable consent or approval had been obtained on or before the Closing Date and such Nonassignable Asset had been assigned to Buyer at Closing. To the extent permitted under Law, Seller shall hold in trust for and pay to Buyer promptly upon receipt thereof, such Nonassignable Asset and all income, proceeds and other monies received by Seller with respect to such Nonassignable Asset in connection with the arrangements under this Article II.

(c) If, following the Effective Date and before the Closing, Buyer identifies any contract to which Seller is a party which is not set forth on Schedule 4.15, and Buyer reasonably determines such contract is necessary or useful to the operation of the System, Buyer shall notify Seller of such determination and Seller shall, promptly following receipt of such notice, deliver to Buyer an updated Schedule 4.15 reflecting the addition of such contract, and such contract will be an "Assigned Contract" for all purposes hereunder.

(d) If during the twelve (12) month period following the Closing, Buyer identifies any contract to which Seller was a party as of the Closing and which (i) was not set forth on Schedule 4.15 (as may be updated pursuant to (c)) and (ii) Buyer reasonably believes is necessary or useful to the operation of the System, Seller shall, promptly following Buyer's written request therefor, execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, such other instruments of conveyance and transfer and other documents, and perform or cause to be performed such further acts, as may be reasonably required to evidence or effectuate, or more fully evidence or effectuate the assignment of such contract to Buyer for no additional consideration, and upon such assignment, such contract is deemed an Assigned Contract for all purposes hereunder.

## ARTICLE III.

## PURCHASE PRICE

**Section 3.01. Purchase Price.** The purchase price for the Acquired Assets is Thirteen Million Dollars ($13,000,000) (the "Purchase Price") which Buyer shall pay as follows at Closing:

(a) Buyer shall provide for payment in full of the total amount of Outstanding Indebtedness directly to Seller's obligees on account of the Purchase Price;

(b) Buyer shall pay, subject to any adjustment pursuant to Section 3.01(c), to Seller by wire transfer of immediately available funds the balance of the Purchase Price (remaining after the debt repayment pursuant to Section 3.01(a)) to one or more accounts that Seller designates and provides to Buyer at least three (3) Business Days before the Closing Date; and

(c) Final Billing: The Buyer is entitled to all customer billings with respect to sanitary wastewater customers services for the period on or after the Closing Effective Time, and Seller is entitled to all such billings for the period before the Closing Effective Time. The Parties

Report Criteria:
Service.Service number = 10,16
Group Code.Group code = "A","B","C"
Customer.Final bill date = {IS NULL}
Billing.Temporary disconnect date = {IS NULL}
Billing.Final disconnect date = {IS NULL}

| Customer Number | Customer Name | Service Address | Customer Type | Units |
|---|---|---|---|---|
| **10** | | | | |
| **UP Commercial** | | | | |
| 18011257.01 | POTTSTOWN 1257 INC | 1257 N CHARLOTTE ST | UP Commercial | 2 |
| 18011277.01 | CONIGLIARO, VITO | 1277 N CHARLOTTE ST | UP Commercial | 1 |
| 18011293.01 | BURGER KING #4651 | 1293 N CHARLOTTE ST | UP Commercial | 8 |
| 24010861.02 | DCM PROPERTY INVESTMENTS LLC | 861 WILLOW ST | UP Commercial | 1 |
| 24010929.01 | CREATIVE HEALTH SERVICES | 929 WILLOW ST | UP Commercial | 4 |
| 25100799.01 | FULTON FINANCIAL CORP | 799 STATE ST - FULTON BANK | UP Commercial | 1 |
| 41020175.02 | POTTSTOWN PLAZA ASSOC C/O COTSWOLD GRO | RENT-A-CENTER #50 | UP Commercial | 2 |
| 41020177.02 | POTTSTOWN PLAZA ASSOC C/O COTSWOLD GRO | DOLLAR ADVANTAGE | UP Commercial | 2 |
| 41020178.02 | POTTSTOWN PLAZA ASSOC C/O COTSWOLD GRO | RADIO SHACK #60 | UP Commercial | 2 |
| 41021066.01 | GEORGE EVANS | 1066 FARMINGTON AVE | UP Commercial | 1 |
| 41021173.01 | SHUKOWITSH, STEVEN & JESSICA | 1173 FARMINGTON AVE | UP Commercial | 1 |
| 41021189.01 | ARTIM, ROBERT | 1189 FARMINGTON AVE | UP Commercial | 1 |
| 41021320.01 | STROGUS, BARRY | 1320 FARMINGTON AVE | UP Commercial | 1 |
| 41021346.01 | AMERICAN METAL FINISHERS | 1346 FARMINGTON AVE | UP Commercial | 1 |
| 41021359.02 | BOWERS, TODD | 1359 FARMINGTON AVE | UP Commercial | 1 |
| 41021391.01 | MCGINNIS, DENNIS | 1361 FARMINGTON AVE | UP Commercial | 1 |
| 41021393.01 | SDM INVESTMENTS LLC | 1393 FARMINGTON AVE | UP Commercial | 1 |
| 41021403.01 | ARTIMS AUTOMOTIVE INC | 1403 FARMINGTON AVE | UP Commercial | 2 |
| 41021446.02 | 1446 FARMINGTON AVE LLC | 1446 FARMINGTON AVE | UP Commercial | 4 |
| 41021507.01 | RICHARDSON, GLORIA MAUGER & THOMAS | 1507 FARMINGTON AVE | UP Commercial | 1 |
| 41021525.01 | YOUNG, SHANE & KATHY | 1525 FARMINGTON AVE | UP Commercial | 1 |
| 41021587.01 | BURGYONE, BARRY | 1587 FARMINGTON AVE | UP Commercial | 1 |
| Total UP Commercial: | | | | |
| 22 | | | | 40 |
| **UP Mixed Use** | | | | |
| 20010875.01 | SJW PROPERTIES LLC | 875 N HANOVER ST -salon & apts | UP Mixed Use | 2 |
| 20010933.02 | MCGONIGLE, MICHAEL | 933 N HANOVER ST | UP Mixed Use | 2 |
| 20010943.01 | STRAUSS, PAUL | 943 N HANOVER ST | UP Mixed Use | 3 |
| 20010955.01 | BRODI, GERALD & ELAINE | 955 N HANOVER ST | UP Mixed Use | 11 |
| 21070842.01 | DAVIDHEISER, ALLEN & BEVERLY | 842 FARMINGTON AVE | UP Mixed Use | 1 |
| 24010940.01 | TOLENTINO, ROBERT & ASUNCION | 940 WILLOW ST | UP Mixed Use | 3 |
| 41050013.01 | OLOCK, ANDREW | 941 N HANOVER ST | UP Mixed Use | 4 |
| Total UP Mixed Use: | | | | |
| 7 | | | | 26 |
| **UP Public** | | | | |
| 16030233.01 | HOLY TRINITY ORTHODOX CHURCH | 1256 JUNIPER ST | UP Public | 1 |
| 20011351.01 | POTTSGROVE SCHOOL DISTRICT - ADMIN BLDG | 1351 N HANOVER ST - MULTI | UP Public | 30 |
| 41230093.01 | CHURCH OF LATTER - DAY SAINTS | 93 MAUGERS MILL RD | UP Public | 1 |
| Total UP Public: | | | | |
| 3 | | | | 32 |
| **UP Residential** | | | | |
| 10140863.02 | MILLS, LUCAS | 863 FARMINGTON AVE | UP Residential | 1 |
| 10140871.01 | POLLOCK, ANTHONY FILLMAN & BRENDA | 871 FARMINGTON AVE | UP Residential | 1 |

| Customer Number | Customer Name | Service Address | Customer Type | Units |
|---|---|---|---|---|
| 42061525.02 | HUTELMYER, JULIA & GREG | 1525 CLOVERHILL RD | UP Residential | 1 |
| 42071000.01 | HEATH, TERENCE M & CATHERINE | 1000 FALLBROOK LN | UP Residential | 1 |
| 42071002.02 | DAVIS, STEPHEN & KATHRYN | 1002 FALLBROOK LN | UP Residential | 1 |
| 42071004.02 | GALLINA, GAETANO | 1004 FALLBROOK LN | UP Residential | 1 |
| 42071006.02 | LIANG, JIE LIN & XIUYAN | 1006 FALLBROOK LN | UP Residential | 1 |
| 42071007.01 | STEELE, CORTNEY & DANIEL | 1007 FALLBROOK LN | UP Residential | 1 |
| 42071008.02 | FENOGLIO, CASEY & RICHARD | 1008 FALLBROOK LN | UP Residential | 1 |
| 42071009.02 | SHAW, SCOTT & THERESA | 1009 FALLBROOK LN | UP Residential | 1 |
| 42071010.02 | JOHNSON, FRANKLIN & KIMBERLY | 1010 FALLBROOK LN | UP Residential | 1 |
| 42071011.01 | HUBBARD, ANNA | 1011 FALLBROOK LN | UP Residential | 1 |
| 42071012.02 | DIXON, JULIAN & ERICA | 1012 FALLBROOK LN | UP Residential | 1 |
| 42071013.01 | HARISH, BIDADI & LAKSHMI | 1013 FALLBROOK LN | UP Residential | 1 |
| 42071014.02 | RICHARDSON, KATRINA | 1014 FALLBROOK LN | UP Residential | 1 |
| 42071015.02 | DZIUNYCZ, MATTHEW & EMILY | 1015 FALLBROOK LN | UP Residential | 1 |
| 42071016.02 | ISHLER, KARI KLAUS & MICHAEL | 1016 FALLBROOK LN | UP Residential | 1 |
| 42071017.03 | CONNER IV, SAMUEL | 1017 FALLBROOK LN | UP Residential | 1 |
| 42071018.01 | SHORT, CHRISTOPHER & RONNA | 1018 FALLBROOK LN | UP Residential | 1 |
| 42071019.01 | MCPHILLIMEY, MARK & ANN KOREEN | 1019 FALLBROOK LN | UP Residential | 1 |
| 42071020.01 | MCWILLIAMS, DAVID & LAURI | 1020 FALLBROOK LN | UP Residential | 1 |
| 42071021.01 | RIZZETTO, NINA | 1021 FALLBROOK LN | UP Residential | 1 |
| 42071022.02 | PASQUAL, MICHAEL & MARIA | 1022 FALLBROOK LN | UP Residential | 1 |
| 42071024.01 | COLLINGS, MARK | 1024 FALLBROOK LN | UP Residential | 1 |
| 42071026.01 | GAINES, NICOLE | 1026 FALLBROOK LN | UP Residential | 1 |
| 42071028.02 | SPRING HILL REALTY | 1028 FALLBROOK LN | UP Residential | 1 |
| 42071030.03 | HOUSEAL JR, JOSEPH & CARA | 1030 FALLBROOK LN | UP Residential | 1 |
| 42071032.03 | DAILY, ALBERT & REGINA | 1032 FALLBROOK LN | UP Residential | 1 |
| 42071034.01 | FELTENBERGER, CHAD & HEATHER | 1034 FALLBROOK LN | UP Residential | 1 |
| 42071036.02 | SOLIVAN, GINA & ADRIAN | 1036 FALLBROOK LN | UP Residential | 1 |
| 42071038.03 | THAO, DAVID | 1038 FALLBROOK LN | UP Residential | 1 |
| 42071040.01 | JORGENSON, TRISHA & ERICK | 1040 FALLBROOK LN | UP Residential | 1 |
| 42071042.01 | KROENING, TERRY | 1042 FALLBROOK LN | UP Residential | 1 |
| 42071044.01 | SCHURR, JEFFREY KENT | 1044 FALLBROOK LN | UP Residential | 1 |
| 42071045.01 | PURKAYASTHA, DEBASHISH & SUDDATTA | 1045 FALLBROOK LN | UP Residential | 1 |
| 42071046.03 | WILLIS, FRANK & FAITH | 1046 FALLBROOK LN | UP Residential | 1 |
| 42071047.02 | CONG, MY | 1047 FALLBROOK LN | UP Residential | 1 |
| 42071048.01 | HAINES, LARRY & DONNA | 1048 FALLBROOK LN | UP Residential | 1 |
| 42071050.02 | MIDDLETON, JAMES | 1050 FALLBROOK LN | UP Residential | 1 |
| 42071052.01 | SEMETER, DANIEL | 1052 FALLBROOK LN | UP Residential | 1 |
| 42071513.04 | ROMANO, DANIEL & SARA | 1513 CLOVER HILL RD | UP Residential | 1 |
| 42081600.02 | GOMEZ, ODETTE | 1600 APPLEGATE LN | UP Residential | 1 |
| 42081601.01 | RODRIGUEZ, RUTH & JUAN | 1601 APPLEGATE LN | UP Residential | 1 |
| 42081602.02 | EGARIAN, CHRISTOPHER | 1602 APPLEGATE LN | UP Residential | 1 |
| 42081604.01 | LAWLOR, CARL & LORETTA | 1604 APPLEGATE LN | UP Residential | 1 |
| 42081606.01 | COHEN, SIDNEY & RUTH | 1606 APPLEGATE LN | UP Residential | 1 |
| 42081608.01 | ROCHA, WILL & CARMEN | 1608 APPLEGATE LN | UP Residential | 1 |
| 42081609.01 | EVANS, GARETH | 1609 APPLEGATE LN | UP Residential | 1 |
| 42081610.01 | DUNKEL, CAROL | 1610 APPLEGATE LN | UP Residential | 1 |
| 42081611.02 | SORG, GREGORY & TRICIA | 1611 APPLEGATE LN | UP Residential | 1 |
| 42081612.01 | MANCINI, MICHAEL & AMIE | 1612 APPLEGATE LN | UP Residential | 1 |
| 42091501.02 | HULL, KEVIN & AMY | 1501 MAYWOOD LN | UP Residential | 1 |
| 42091503.02 | EPSTEIN, CARL & LINDA | 1503 MAYWOOD LN | UP Residential | 1 |
| 410512005.01 | CUTLER, ROBERT & ELIZABETH | 2005 PROUT FARM RD | UP Residential | |
| 4102152012.01 | SCHAEFFER, JACK & AUDREY | 1520 FARMINGTON AVE | UP Residential | 1 |
| 4152006901.01 | BUCK, WILLIAM | 69 MICKLITZ DR | UP Residential | 1 |
| Total UP Residential: 1,390 | | | | 1429 |

| Customer Number | Customer Name | Service Address | Customer Type | Units |
|---|---|---|---|---|
| Total 10: | | | | |
| 1,422 | | | | 1527 |
| **16** | | | | |
| **UP Commercial** | | | | |
| 10140882.01 | DICKENSON, CHARLES | 882 FARMINGTON AVE | UP Commercial | 2 |
| 10140902.01 | CMD SERVICES INC | 902 FARMINGTON AVE | UP Commercial | 3 |
| 18011263.02 | H & E PALERMO REAL ESTATE | 1263 N CHARLOTTE ST | UP Commercial | 2 |
| 20010863.01 | SJW PROPERTIES LLC | 871 N HANOVER ST -comm.bldg | UP Commercial | 6 |
| 41020179.01 | APPLEBEES RESTAURANT - ROSE CAS DIN LP | 815 STATE ST | UP Commercial | 30 |
| 41021495.01 | KIM, JONG Y & YUN K | 1495 FARMINGTON AVE | UP Commercial | 3 |
| Total UP Commercial: | | | | |
| 6 | | | | 46 |
| Total 16: | | | | |
| 6 | | | | 46 |
| Grand Totals: | | | | |
| 1,428 | | | | 1573 |

Report Criteria:
Service.Service number = 10,16
Group Code.Group code = "A","B","C"
Customer.Final bill date = {IS NULL}
Billing.Temporary disconnect date = {IS NULL}
Billing.Final disconnect date = {IS NULL}

https://www.pottsmerc.com/news/upper-pottsgrove-votes-4-1-to-sell-sewer-system-for-13-7m/article_f8f493d8-8408-11ea-8425-07388a90f968.html

FEATURED

# Upper Pottsgrove votes 4-1 to sell sewer system for $13.7M

Evan Brandt ebrandt@21st-centurymedia.com @PottstownNews on Twitter
Apr 22, 2020

Upper Pottsgrove Township Commissioner Martin Schreiber, framed in yellow, outlines his objections to the sale of the township's sewer collection system during Monday's online meeting.

Photo from Screenshot

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UPPER POTTSGROVE — Township Commissioners voted 4-1 Monday night to sell the township's sewer collection system for $13.75 million to Pennsylvania American Water.

Commissioners Martin Schreiber cast the lone vote against the sale.

As The Mercury reported on April 8, the presentation provided at four online informational sessions earlier in the month forecast that sewer rates would drop by about 9.6 percent under Pennsylvania American Water ownership.

However, the decrease — from the current $71.87 per month to $65 per month — would be short-lived, according to Bernie Grundusky, senior director for business development for the water company.

A chart he shared as part of the online meetings showed rates would return to the current rate in three or four years after the sale, and then increase annually by an average of 4.5 to 5.2 percent.

By comparison, the township's sewer rates, which have increased in a more haphazard fashion, average out to between 4.6 to 6 percent a year, according to the presentation.

Now that the sale has been approved, the average homeowner will save $1,260 between the time rates were dropped to when they return to their current level, according to the presentation.

The deal must still be approved by the Pennsylvania Public Utility Commission, a process that could take longer than a year to be finalized.

As a result of the vote, PFM Financial Advisors LLC will be paid more than $250,000.

As noted by Commissioners' Chairman Trace Slinkerd, who, prior to the vote, praised the consultants for taking a risk, if the commissioners had voted against the sale, PFM would have been paid only its $7,500 fee for preliminary work.

Scott Shearer, managing director of PFM, insisted during Monday's meeting that the firm "did not make a recommendation. We're not trying to sell this system."

During the four public information sessions the township staged online, not one negative aspect of the sale was identified. Township Manager Michelle Reddick said the presentations were put together by PFM and the staff.

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During those meetings, Slinkerd restricted all interaction to questions from residents, which were mostly answered by the consultants or township staff. He said public comments would be accepted at the April 20 meeting.

When that happened Monday night, the online meeting was attended by more than 50 people.

Eight residents spoke. All but one asked the commissioners to vote against the sale or, even more frequently, delay the vote until next month or later.

Many cited the fact that the Pennsylvania American Water's bid does not expire until June 30, and there is still time to answer residents' questions.

Don Read, a former member of the Pottstown Borough Authority and a current member of the township's sewer committee, was the only person to speak fully in favor of the sale.

As he did at the April 16 meeting, Read said the best reason to sell the system is the risk inherent in running it.

He said the potential capital costs of problems with sewer lines and pump stations, as well as capital costs imposed by the Pottstown Borough Authority, which runs the plant that receives and treats Upper Pottsgrove's sewage, are too big a financial risk for a four-person staff.

"The price is on the high side of what we projected," he said of the winning bid. The other bidder was Aqua America.

"What's another month going to do? It's frustrating to watch people come in at the last hour and ask for a delay," said Read.

He was referring, presumably, to other speakers who said they were unaware of the potential sale of the system until they received a township letter in the mail, a letter which arrived after the first two public information sessions had already occurred.

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"I am imploring you all to take an opportunity to table the vote until the May 20 meeting," said Turnberry Farms resident Stephanie Rowe.

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"This is beneficial in several ways, the first being it allows all residents to be able to digest and question this decision that seems to be on a fast track for a reason that has not been satisfied by any of the presentations that you allowed to happen with little or no response from the board — almost every question was deferred to either PFM or PA American Water," Rowe said.

Darryle Tillman, who appeared in scrubs while caring "for 104 patients, one third to one half of which have COVID-19," also urged a delay.

"This plan has its good points and its bad points, but it is ridiculous to do this in a Zoom meeting in the middle of a pandemic," he said in reference to the on-line platform used for the meeting.

Al Leach, who is also the vice president of the Pottsgrove School Board, also urged a pause.

"I'm sure you've all done your due diligence, but a lot of residents are just finding out about this and would like to see if they can get more involved," Leach said.

"There are a lot of questions that need to get answered, like how the board intends to spend the proceeds, and the open space question," he said.

Although the presentation has identified the proceeds as paying down the sewer system debt; making the pension system whole and paying off general fund and road fund debt, two other proposed uses have raised questions.

One is paying off debt undertaken by the open space fund, which is paid off with a voter-approved earned income tax; and infrastructure improvements to the police station and township offices in the firehouse.

No specific plan for those improvements has been presented as part of the sewer system sale proposal, said resident Doug Kern.

"We have no access to the paperwork, no ability to examine this ourselves," said Kern, who said he did not find out about the proposal until two of the public information sessions had already passed.

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"All I have is a bunch of slides, which changed after almost every meeting, and a lot of 'take-my-word-for-it-answers. It sounds like you have a 90-day window to make a decision," said Kern, urging a delay or a no vote.

Dustin Schreiber said his research indicates American Water, the parent company of the high bidder, "is owned by a German conglomerate called RFWAG. I'd prefer we support an American company if we sell, and I'm not convinced we should sell."

Hanover Drive resident Keith Plumadore said he sees the sale as a short-term fix for the township's finances. "It's a temporary reprieve from amateur fiscal management. The township did a good job with the (request for proposals) but I see no evidence the township will execute and bring better fiscal governance with the proceeds."

"When I moved here in 2000, the commissioners and the people all worked together," said Leach. "I implore you to at least consider the idea of tabling this motion, It would be so easy to delay this vote so we can get all our ducks in a row and demonstrate transparency we always used to have in this community."

Slinkerd closed public comment and then called on Schreiber to outline the objections he has been posting on his Facebook page and the Turnberry Farms Facebook page.

However, as Schreiber spoke, Slinkerd repeatedly interrupted him, talked over him and told him his points were not relevant to the subject at hand.

"The sewer customers paid for the sewer, if they were stockholders, they should be getting a bonus check, they're getting the short end of the stick," said Schreiber.

"What about people who pay school taxes but don't have any children in the system," Slinkerd interjected. "Should they not be taxed?"

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The areas in green on this map of Upper Pottsgrove show the areas served by the township sewer system.

Official township sewer map

"Everyone has a chance to send to send students to school," Schreiber replied. "What about open space, Martin?" Slinkerd interrupted again. "That's paid with earned income tax, but seniors don't pay that. Should we put signs up telling them they can't use the open space?" Slinkerd asked.

"We taxed ourselves for that," Schreiber started to reply and Slinkerd pressed on. "We don't separate our residents into septic or sewer residents. Are you saying that's the way we should go?"

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As Schreiber tried to raise further points, Slinkerd continued to interrupt him. "That's what you've been doing, going down this rabbit hole trying to dislodge what we're talking about," Slinkerd said.

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"You keep trying to throw things at the wall at the 11th hour to see what sticks to make it seem like you did research," he continued. "You've had a year to think about this stuff."

"Are you going to let me finish?" Schreiber finally asked. "I never stopped you," Slinkerd replied, finally allowing Schreiber to speak uninterrupted.

The other commissioners, Dave Waldt, Cathy Paretti and Renee Spaide all were permitted to speak uninterrupted, except when Schrieber spoke, thinking Paretti was finished with her point.

He apologized for interrupting her and urged her to go on.

The other commissioners joined in disputing Schreiber's points.

Spaide, who has served on the board for many years with Schreiber, read from a prepared statement that noted, in part, "all the commissioners have been involved."

She said she agrees with Read that running the sewer system is a risk. "We have a road crew, not a sewer crew and Pennsylvania American Water does this for a living," said Spaide.

Waldt said he and Paretti "ran on concern about the township's finances. People were very unhappy." He disputed Schreiber's characterization that he was left out of discussions. "We've spent hours on the budget and I never see you. You never participate," said Waldt.

"Dave and I started to get to get acquainted with this while we were running," said Paretti. "We don't have any business running a sewer business. If we keep it, our taxes would rise and the rates would be higher than if we didn't own it."

She added, "I don't wait to be invited into things, I ask for the information I need."

When Schreiber tried to point out he had asked Reddick for information and it took two days to get an answer, the other commissioners leaped to her defense. "Michelle has a lot on her plate," said Paretti.

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"Michelle has done an outstanding job," said Slinkerd.

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Paretti pointed out that while people last night were complaining about having the meeting over Zoom, it had more participants than most in-person township meetings.

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"It's great to see so many people participate. This is not as many as we get at regular meetings. I've had people tell me they like this better," said Paretti. "You're never going to make everyone happy."

But even in a pandemic, "the one thing that can't stop is your government," Paretti said.

After the vote, Slinkerd said the next steps would be discussed at a future meeting.

*This article first appeared as a post in The Digital Notebook blog.*

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>
> — Doug Kern, Upper Pottsgrove resident

> "This plan has its good points and its bad points, but it is ridiculous to do this in a Zoom meeting in the middle of a pandemic."
>
> — Darryle Tillman, Upper Pottsgrove resident

> "What's another month going to do? It's frustrating to watch people come in at the last hour and ask for a delay."
>
> — Don Read, Upper Pottsgrove Sewer Committee

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> "I am imploring you all to take an opportunity to table the vote until the May 20 meeting."
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> — Stephanie Rowe, Upper Pottsgrove resident

> "You keep trying to throw things at the wall at the 11th hour to see what sticks to make it seem like you did research."
>
> — Trace Slinkerd, Upper Pottsgrove Commissioners chairman

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Evan Brandt
@PottstownNews on Twitter

Evan Brandt has been a staff reporter for The Mercury for more than 20 years. He covers municipal, school district, political, state government, federal government and environmental news.

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Va Township

Bill ID: 20-3-30 Bill Date: 03/30/2020 Due Date: 04/30/2020

| Service | Charge | Rate | Current Charge | Prior Due | Total Billed | w\Penalty |
|---|---|---|---|---|---|---|

Billing Summary By Class

| Class | # of Units | # of Accounts | Consumption charges | Fixed charges | Special charges | Unit charges | Taxes | Prior Due | Total | Consumption |
|---|---|---|---|---|---|---|---|---|---|---|
| CH | 0.00 | 6 | $1,903.57 | $0.00 | $0.00 | $0.00 | $0.00 | $588.17 | $2,491.74 | 0.00 |
| COM | 0.00 | 119 | $57,834.48 | $0.00 | $0.00 | $0.00 | $0.00 | $4,543.43 | $62,377.91 | 1,636.00 |
| DAY | 0.00 | 2 | $2,006.87 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $2,006.87 | 0.00 |
| IND | 0.00 | 13 | $11,785.09 | $0.00 | $0.00 | $0.00 | $0.00 | -$967.10 | $10,817.99 | 27.00 |
| MH | 0.00 | 4 | $1,087.76 | $0.00 | $0.00 | $0.00 | $0.00 | $1,003.61 | $2,091.37 | 0.00 |
| RES | 1.00 | 3,022 | $943,941.94 | $0.00 | $0.00 | $0.00 | $0.00 | $224,214.75 | $1,168,156.69 | 31,458.00 |
| SCH | 0.00 | 3 | $4,074.10 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $4,074.10 | 338.00 |
| Grand Totals | 1.00 | | $1,022,633.81 | $0.00 | $0.00 | $0.00 | $0.00 | $229,382.86 | $1,252,016.67 | 33,459.00 |

| | Metered Sewer | Sewer | Trash | Water | Total |
|---|---|---|---|---|---|
| CH | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>6<br>$1463.00<br>0.00 | 0.00<br>6<br>$440.57<br>0.00 | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>6<br>$1903.57<br>0.00 |
| COM | 0.00<br>26<br>$9447.60<br>555.00 | 0.00<br>90<br>$41339.82<br>526.00 | 0.00<br>17<br>$1258.76<br>0.00 | 0.00<br>27<br>$5788.30<br>555.00 | 0.00<br>119<br>$57834.48<br>1,636.00 |
| DAY | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>2<br>$1881.00<br>0.00 | 0.00<br>1<br>$125.87<br>0.00 | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>2<br>$2006.87<br>0.00 |
| IND | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>12<br>$11495.00<br>0.00 | 0.00<br>1<br>$62.94<br>0.00 | 0.00<br>1<br>$227.15<br>27.00 | 0.00<br>13<br>$11785.09<br>27.00 |
| MH | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>4<br>$836.00<br>0.00 | 0.00<br>4<br>$251.76<br>0.00 | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>4<br>$1087.76<br>0.00 |

Valley Township

Bill ID: 20-3-30 Bill Date: 03/30/2020 Due Date: 04/30/2020

| Service | Charge | | | Rate | Current Charge | Prior Due | Total Billed | w\Penalty |
|---|---|---|---|---|---|---|---|---|

| | Metered Sewer | Sewer | Trash | Water | Total |
|---|---|---|---|---|---|
| RES | 0.00<br>1,638<br>$326585.47<br>15,718.00 | 0.00<br>1,344<br>$274835.00<br>0.00 | 1.00<br>2,741<br>$178743.69<br>0.00 | 0.00<br>1,641<br>$163777.78<br>15,740.00 | 1.00<br>3,022<br>$943941.94<br>31,458.00 |
| SCH | 0.00<br>2<br>$2026.80<br>169.00 | 0.00<br>1<br>$627.00<br>0.00 | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>2<br>$1420.30<br>169.00 | 0.00<br>3<br>$4074.10<br>338.00 |
| Total | 0.00<br>1,666<br>$338059.87<br>16,442.00 | 0.00<br>1,459<br>$332476.82<br>526.00 | 1.00<br>2,770<br>$180883.59<br>0.00 | 0.00<br>1,671<br>$171213.53<br>16,491.00 | 1.00<br>3,169<br>$1022633.81<br>33,459.00 |

Billing Summary By District

| District | Accounts | Consumption charges | Fixed charges | Special charges | Unit charges | Total Taxes | Prior Due | Total | Consumption |
|---|---|---|---|---|---|---|---|---|---|
| | 98 | $31,793.07 | $0.00 | $0.00 | $0.00 | $0.00 | $7,493.77 | $39,286.84 | 1,308.00 |
| 01 | 227 | $89,098.00 | $0.00 | $0.00 | $0.00 | $0.00 | $11,780.00 | $100,878.00 | 5,375.00 |
| 02 | 180 | $66,337.00 | $0.00 | $0.00 | $0.00 | $0.00 | $7,045.26 | $73,382.26 | 3,734.00 |
| 03 | 373 | $140,804.30 | $0.00 | $0.00 | $0.00 | $0.00 | $12,388.59 | $153,192.89 | 8,152.00 |
| 04 | 128 | $45,371.52 | $0.00 | $0.00 | $0.00 | $0.00 | $3,462.92 | $48,834.44 | 2,402.00 |
| 05 | 79 | $29,618.51 | $0.00 | $0.00 | $0.00 | $0.00 | $1,527.02 | $31,145.53 | 1,676.00 |
| 06 | 507 | $168,878.38 | $0.00 | $0.00 | $0.00 | $0.00 | -$1,009.62 | $167,868.76 | 7,332.00 |
| A | 522 | $156,120.45 | $0.00 | $0.00 | $0.00 | $0.00 | $53,216.98 | $209,337.43 | 1,346.00 |
| B | 662 | $191,212.44 | $0.00 | $0.00 | $0.00 | $0.00 | $96,144.83 | $287,357.27 | 1,172.00 |
| C | 364 | $92,570.36 | $0.00 | $0.00 | $0.00 | $0.00 | $36,930.04 | $129,500.40 | 436.00 |
| EF | 9 | $3,446.52 | $0.00 | $0.00 | $0.00 | $0.00 | $91.36 | $3,537.88 | 218.00 |
| WC | 20 | $7,383.26 | $0.00 | $0.00 | $0.00 | $0.00 | $311.71 | $7,694.97 | 308.00 |
| Grand Totals | | $1,022,633.81 | $0.00 | $0.00 | $0.00 | $0.00 | $229,382.86 | $1,252,016.67 | 33,459.00 |

(b) Until such time as a Nonassignable Asset is transferred to Buyer pursuant to this Article II, Buyer and Seller shall cooperate in any commercially reasonable and economically feasible arrangements (such as subleasing, sublicensing or subcontracting) to provide to the Parties the economic and, to the extent permitted under Law, operational equivalent of the transfer of such Nonassignable Asset to Buyer at the Closing and the performance by Buyer of its obligations with respect thereto, and so long as Seller transfers and turns over all economic and beneficial rights with respect to each such Nonassignable Asset, Buyer shall, to the extent permitted under Law and the terms of any applicable contract that is a Nonassignable Asset, as agent or subcontractor for Seller, pay, perform and discharge the liabilities and obligations of Seller thereunder from and after the Closing Date, but only to the extent that such liabilities and obligations would be Assumed Liabilities if the applicable consent or approval had been obtained on or before the Closing Date and such Nonassignable Asset had been assigned to Buyer at Closing. To the extent permitted under Law, Seller shall hold in trust for and pay to Buyer promptly upon receipt thereof, such Nonassignable Asset and all income, proceeds and other monies received by Seller with respect to such Nonassignable Asset in connection with the arrangements under this Article II.

(c) If, following the Effective Date and before the Closing, Buyer identifies any contract to which Seller is a party which is not set forth on Schedule 4.13, and Buyer reasonably determines such contract is necessary or useful to the operation of the System, Buyer shall notify Seller of such determination and Seller shall, promptly following receipt of such notice, deliver to Buyer an updated Schedule 4.13 reflecting the addition of such contract, and such contract will be an "Assigned Contract" for all purposes hereunder.

(d) If during the twelve (12) month period following the Closing, Buyer identifies any contract to which Seller was a party as of the Closing and which (i) was not set forth on Schedule 4.13 (as may be updated pursuant to (c)) and (ii) Buyer reasonably believes is necessary or useful to the operation of the System, Seller shall, promptly following Buyer's written request therefor, execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, such other instruments of conveyance and transfer and other documents, and perform or cause to be performed such further acts, as may be reasonably required to evidence or effectuate, or more fully evidence or effectuate the assignment of such contract to Buyer for no additional consideration, and upon such assignment, such contract is deemed an Assigned Contract for all purposes hereunder.

## ARTICLE III.

## PURCHASE PRICE AND ADDITIONAL PURCHASE PRICE

**Section 3.01. Purchase Price.**
The purchase price for the Acquired Assets is Thirteen Million Nine Hundred Fifty Thousand Dollars ($13,950,000) (the "Purchase Price") which Buyer shall pay as follows at Closing:

(a) Buyer shall pay, subject to any adjustment pursuant to Section 3.01(b), to Seller by wire transfer of immediately available funds the Purchase Price (remaining after the payments required in Section 3.01(a)) to one or more accounts that Seller designates and provides to Buyer at least three (3) Business Days before the Closing Date; and

Va Township

Bill ID: 20-3-30 Bill Date: 03/30/2020 Due Date: 04/30/2020

| Service | Charge | Rate | Current Charge | Prior Due | Total Billed | w\Penalty |
|---|---|---|---|---|---|---|

Billing Summary By Class

| Class | # of Units | # of Accounts | Consumption charges | Fixed charges | Special charges | Unit charges | Taxes | Prior Due | Total | Consumption |
|---|---|---|---|---|---|---|---|---|---|---|
| CH | 0.00 | 6 | $1,903.57 | $0.00 | $0.00 | $0.00 | $0.00 | $588.17 | $2,491.74 | 0.00 |
| COM | 0.00 | 119 | $57,834.48 | $0.00 | $0.00 | $0.00 | $0.00 | $4,543.43 | $62,377.91 | 1,636.00 |
| DAY | 0.00 | 2 | $2,006.87 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $2,006.87 | 0.00 |
| IND | 0.00 | 13 | $11,785.09 | $0.00 | $0.00 | $0.00 | $0.00 | -$967.10 | $10,817.99 | 27.00 |
| MH | 0.00 | 4 | $1,087.76 | $0.00 | $0.00 | $0.00 | $0.00 | $1,003.61 | $2,091.37 | 0.00 |
| RES | 1.00 | 3,022 | $943,941.94 | $0.00 | $0.00 | $0.00 | $0.00 | $224,214.75 | $1,168,156.69 | 31,458.00 |
| SCH | 0.00 | 3 | $4,074.10 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $4,074.10 | 338.00 |
| Grand Totals | 1.00 | | $1,022,633.81 | $0.00 | $0.00 | $0.00 | $0.00 | $229,382.86 | $1,252,016.67 | 33,459.00 |

| | Metered Sewer | Sewer | Trash | Water | Total |
|---|---|---|---|---|---|
| CH | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>6<br>$1463.00<br>0.00 | 0.00<br>6<br>$440.57<br>0.00 | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>6<br>$1903.57<br>0.00 |
| COM | 0.00<br>26<br>$9447.60<br>555.00 | 0.00<br>90<br>$41339.82<br>526.00 | 0.00<br>17<br>$1258.76<br>0.00 | 0.00<br>27<br>$5788.30<br>555.00 | 0.00<br>119<br>$57834.48<br>1,636.00 |
| DAY | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>2<br>$1881.00<br>0.00 | 0.00<br>1<br>$125.87<br>0.00 | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>2<br>$2006.87<br>0.00 |
| IND | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>12<br>$11495.00<br>0.00 | 0.00<br>1<br>$62.94<br>0.00 | 0.00<br>1<br>$227.15<br>27.00 | 0.00<br>13<br>$11785.09<br>27.00 |
| MH | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>4<br>$836.00<br>0.00 | 0.00<br>4<br>$251.76<br>0.00 | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>4<br>$1087.76<br>0.00 |

Billing Report - 1

Valley Township

Bill ID: 20-3-30 Bill Date: 03/30/2020 Due Date: 04/30/2020

| Service | Charge | | | Rate | Current Charge | Prior Due | Total Billed | w\Penalty |
|---|---|---|---|---|---|---|---|---|

| | Metered Sewer | Sewer | Trash | Water | Total |
|---|---|---|---|---|---|
| RES | 0.00<br>1,638<br>$326585.47<br>15,718.00 | 0.00<br>1,344<br>$274835.00<br>0.00 | 1.00<br>2,741<br>$178743.69<br>0.00 | 0.00<br>1,641<br>$163777.78<br>15,740.00 | 1.00<br>3,022<br>$943941.94<br>31,458.00 |
| SCH | 0.00<br>2<br>$2026.80<br>169.00 | 0.00<br>1<br>$627.00<br>0.00 | 0.00<br>0<br>$0.00<br>0.00 | 0.00<br>2<br>$1420.30<br>169.00 | 0.00<br>3<br>$4074.10<br>338.00 |
| Total | 0.00<br>1,666<br>$338059.87<br>16,442.00 | 0.00<br>1,459<br>$332476.82<br>526.00 | 1.00<br>2,770<br>$180883.59<br>0.00 | 0.00<br>1,671<br>$171213.53<br>16,491.00 | 1.00<br>3,169<br>$1022633.81<br>33,459.00 |

Billing Summary By District

| District | Accounts | Consumption charges | Fixed charges | Special charges | Unit charges | Total Taxes | Prior Due | Total | Consumption |
|---|---|---|---|---|---|---|---|---|---|
| | 98 | $31,793.07 | $0.00 | $0.00 | $0.00 | $0.00 | $7,493.77 | $39,286.84 | 1,308.00 |
| 01 | 227 | $89,098.00 | $0.00 | $0.00 | $0.00 | $0.00 | $11,780.00 | $100,878.00 | 5,375.00 |
| 02 | 180 | $66,337.00 | $0.00 | $0.00 | $0.00 | $0.00 | $7,045.26 | $73,382.26 | 3,734.00 |
| 03 | 373 | $140,804.30 | $0.00 | $0.00 | $0.00 | $0.00 | $12,388.59 | $153,192.89 | 8,152.00 |
| 04 | 128 | $45,371.52 | $0.00 | $0.00 | $0.00 | $0.00 | $3,462.92 | $48,834.44 | 2,402.00 |
| 05 | 79 | $29,618.51 | $0.00 | $0.00 | $0.00 | $0.00 | $1,527.02 | $31,145.53 | 1,676.00 |
| 06 | 507 | $168,878.38 | $0.00 | $0.00 | $0.00 | $0.00 | -$1,009.62 | $167,868.76 | 7,332.00 |
| A | 522 | $156,120.45 | $0.00 | $0.00 | $0.00 | $0.00 | $53,216.98 | $209,337.43 | 1,346.00 |
| B | 662 | $191,212.44 | $0.00 | $0.00 | $0.00 | $0.00 | $96,144.83 | $287,357.27 | 1,172.00 |
| C | 364 | $92,570.36 | $0.00 | $0.00 | $0.00 | $0.00 | $36,930.04 | $129,500.40 | 436.00 |
| EF | 9 | $3,446.52 | $0.00 | $0.00 | $0.00 | $0.00 | $91.36 | $3,537.88 | 218.00 |
| WC | 20 | $7,383.26 | $0.00 | $0.00 | $0.00 | $0.00 | $311.71 | $7,694.97 | 308.00 |
| Grand Totals | | $1,022,633.81 | $0.00 | $0.00 | $0.00 | $0.00 | $229,382.86 | $1,252,016.67 | 33,459.00 |

and beneficial rights with respect to each such Nonassignable Asset, Buyer shall, to the extent permitted under Law and the terms of any applicable contract that is a Nonassignable Asset, as agent or subcontractor for Seller, pay, perform and discharge the liabilities and obligations of Seller thereunder from and after the Closing Date, but only to the extent that such liabilities and obligations would be Assumed Liabilities if the applicable consent or approval had been obtained on or before the Closing Date and such Nonassignable Asset had been assigned to Buyer at Closing. To the extent permitted under Law, Seller shall hold in trust for and pay to Buyer promptly upon receipt thereof, such Nonassignable Asset and all income, proceeds and other monies received by Seller with respect to such Nonassignable Asset in connection with the arrangements under this Article II.

(c) If, following the Effective Date and before the Closing, Buyer identifies any contract to which Seller is a party which is not set forth on Schedule 4.13, and Buyer reasonably determines such contract is necessary or useful to the operation of the System, Buyer shall notify Seller of such determination and Seller shall, promptly following receipt of such notice, deliver to Buyer an updated Schedule 4.13 reflecting the addition of such contract, and such contract will be an "Assigned Contract" for all purposes hereunder.

(d) If during the twelve (12) month period following the Closing, Buyer identifies any contract to which Seller was a party as of the Closing and which (i) was not set forth on Schedule 4.13 (as may be updated pursuant to (c)) and (ii) Buyer reasonably believes is necessary or useful to the operation of the System, Seller shall, promptly following Buyer's written request therefor, execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, such other instruments of conveyance and transfer and other documents, and perform or cause to be performed such further acts, as may be reasonably required to evidence or effectuate, or more fully evidence or effectuate the assignment of such contract to Buyer for no additional consideration, and upon such assignment, such contract is deemed an Assigned Contract for all purposes hereunder.

## ARTICLE III.

## PURCHASE PRICE AND ADDITIONAL PURCHASE PRICE

### Section 3.01. Purchase Price.

The purchase price for the Acquired Assets is Seven Million Three Hundred Twenty-Five Thousand Dollars ($7,325,000) (the "Purchase Price") which Buyer shall pay as follows at Closing:

(a) Buyer shall pay, subject to any adjustment pursuant to Section 3.01(b) and to release Liens, to Seller by wire transfer of immediately available funds the Purchase Price to one or more accounts that Seller designates and provides to Buyer at least three (3) Business Days before the Closing Date; and

(b) Final Billing: The Buyer is entitled to all customer billings with respect to drinking water customers services for the period on or after the Closing Effective Time, and Seller is entitled to all such billings for the period before the Closing Effective Time. The Parties

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DEALS AUGUST 6, 2018 / 5:11 PM / 6 MONTHS AGO

# SJW Group makes $1.1 billion all-cash offer for Connecticut Water

3 MIN READ

NEW YORK (Reuters) - SJW Group (SJW.N) and Connecticut Water Service Inc (CTWS.O) said on Monday they were changing from a merger to an acquisition agreement, with SJW offering to buy the New England utility for $1.1 billion in cash instead of combining stock.

The switch to an all-cash offer is worth $70 per Connecticut Water share, a 33 percent premium to Connecticut Water's share price prior to the original deal announced in March, according to a joint statement.

It was also higher than the implied $61.86 per share value of the Clinton, Connecticut-based firm under the merger-of-equals transaction, which would have created a combined company in which existing SJW shareholders would hold 60 percent of the stock.

SJW closed 2.3 percent lower, while Connecticut Water was 9 percent higher at $68.50.

ADVERTISEMENT

To pay for the acquisition, SJW will initially utilize a $975 million bridge loan from financial adviser JP Morgan Chase (JPM.N). Ultimately, the purchase would be covered by debt and between $450 million and $500 million of equity finance.

The new deal aims to conclude in the first quarter of 2019, subject to approvals from Connecticut Water's shareholders, as well as regulators in Connecticut and Maine.

The duo's original all-stock merger announcement in March triggered competing offers from Eversource Energy (ES.N) and California Water Service Group (CWT.N).

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"We have converted from a stock-for-stock deal to a cash offer, which will resolve any further market distractions from the inferior proposals," SJW Chief Executive Eric Thornburg told Reuters, in reference to the actions by Eversource and CalWater.

Switching to an acquisition, versus a merger structure, means that SJW shareholders will no longer be required to vote on approving the deal, the statement said.

CalWater has an open tender offer to acquire SJW that runs until Sept. 28.

However, asked if the change was aimed at heading off any shareholder challenge to the deal, Thornburg told Reuters it "wasn't a consideration" and it had received nothing but support from its shareholders.

RBS sounds alarm over Brexit

CalWater declined to comment. A spokesman for Eversource said the company was evaluating developments but, as it has made clear, it will be disciplined in pursuing this or any other transaction.

Reporting by David French in New York; Additional Reporting by Liana B. Baker; Editing by Lisa Shumaker

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**CONNECTICUT WATER SERVICE INC / CT**
**BALANCE_SHEET2**
**Form Type: 10-K**
**Period End: Dec 31, 2017**
**Date Filed: Mar 15, 2018**
Table Of Contents

CONNECTICUT WATER SERVICE, INC.

CONSOLIDATED BALANCE SHEETS

| December 31, (in thousands, except share amounts) | 2017 | 2016 |
|---|---|---|
| ASSETS | | |
| Utility Plant | $ 927,289 | $ 777,860 |
| Construction Work in Progress | 11,761 | 33,748 |
| | 939,050 | 811,608 |
| Accumulated Provision for Depreciation | (241,327) | (210,212) |
| Net Utility Plant | 697,723 | 601,396 |
| Other Property and Investments | 10,662 | 9,071 |
| Cash and Cash Equivalents | 3,618 | 1,564 |
| Accounts Receivable (Less Allowance, 2017 - $1,265; 2016 - $1,100) | 14,965 | 13,024 |
| Accrued Unbilled Revenues | 8,481 | 8,171 |
| Materials and Supplies, at Average Cost | 1,593 | 1,536 |
| Prepayments and Other Current Assets | 7,021 | 5,069 |
| Total Current Assets | 35,678 | 29,364 |
| Unrecovered Income Taxes - Regulatory Asset | 66,631 | 93,264 |
| Pension Benefits - Regulatory Asset | 11,339 | 12,266 |
| Post-Retirement Benefits Other Than Pension - Regulatory Asset | 116 | 265 |
| Goodwill | 67,016 | 30,427 |
| Deferred Charges and Other Costs | 9,618 | 8,449 |
| Total Regulatory and Other Long-Term Assets | 154,720 | 144,671 |
| Total Assets | $ 898,783 | $ 784,502 |
| CAPITALIZATION AND LIABILITIES | | |
| Common Stockholders' Equity: | | |
| Common Stock Without Par Value: Authorized - 25,000,000 Shares | | |
| Issued and Outstanding: | | |
| 2017 - 12,065,016; 2016 - 11,248,458 | $ 191,641 | $ 145,739 |
| Retained Earnings | 102,417 | 91,213 |
| Accumulated Other Comprehensive Loss | (428) | (924) |
| Common Stockholders' Equity | 293,630 | 236,028 |
| Preferred Stock | 772 | 772 |
| Long-Term Debt | 253,367 | 197,047 |
| Total Capitalization | 547,769 | 433,847 |
| Current Portion of Long-Term Debt | 6,173 | 4,859 |
| Interim Bank Loans Payable | 19,281 | 32,953 |
| Accounts Payable and Accrued Expenses | 11,319 | 13,116 |
| Accrued Interest | 1,439 | 1,012 |
| Current Portion of Refund to Customers - Regulatory Liability | 64 | 855 |
| Other Current Liabilities | 3,262 | 2,330 |
| Total Current Liabilities | 41,538 | 55,125 |
| Advances for Construction | 20,024 | 19,127 |
| Deferred Federal and State Income Taxes | 33,579 | 50,558 |
| Unfunded Future Income Taxes | 58,384 | 90,977 |
| Long-Term Compensation Arrangements | 32,649 | 33,540 |
| Unamortized Investment Tax Credits - Regulatory Liability | 1,133 | 1,189 |
| Excess Accumulated Deferred Income Tax - Regulatory Liability | 30,937 | 4,373 |
| Refund to Customers - Regulatory Liability | - | 108 |
| Other Long-Term Liabilities | 1,241 | 701 |
| Total Long-Term Liabilities | 177,947 | 200,573 |
| Contributions in Aid of Construction | 131,529 | 94,957 |
| Commitments and Contingencies | - | - |
| Total Capitalization and Liabilities | $ 898,783 | $ 784,502 |

**Created by EDGAR Online, Inc.**

**CONNECTICUT WATER SERVICE INC / CT**
**INCOME_STATEMENT2**
**Form Type: 10-K**
**Period End: Dec 31, 2017**
**Date Filed: Mar 15, 2018**
Table Of Contents

CONNECTICUT WATER SERVICE, INC.

CONSOLIDATED STATEMENTS OF INCOME

| For the Years Ended December 31, (in thousands, except per share data) | 2017 | 2016 | 2015 |
|---|---|---|---|
| Operating Revenues | $ 107,054 | $ 98,667 | $ 96,041 |
| Operating Expenses | | | |
| Operation and Maintenance | 48,017 | 44,191 | 48,052 |
| Depreciation | 16,684 | 13,905 | 12,871 |
| Income Taxes | (1,993) | 2,570 | (818) |
| Taxes Other Than Income Taxes | 10,941 | 9,796 | 9,294 |
| Total Operating Expenses | 73,649 | 70,462 | 69,399 |
| Net Operating Revenues | 33,405 | 28,205 | 26,642 |
| Other Utility Income, Net of Taxes | 824 | 744 | 797 |
| Total Utility Operating Income | 34,229 | 28,949 | 27,439 |
| Other Income (Deductions), Net of Taxes | | | |
| (Loss) Gain on Real Estate Transactions | 33 | (54) | 349 |
| Non-Water Sales Earnings | 1,167 | 1,219 | 1,394 |
| Allowance for Funds Used During Construction | 774 | 1,198 | 530 |
| Other | (2,308) | (1,009) | (214) |
| Total Other Income (Loss), Net of Taxes | (334) | 1,354 | 2,059 |
| Interest and Debt Expenses | | | |
| Interest on Long-Term Debt | 9,054 | 7,714 | 7,087 |
| Other Interest Income, Net | (359) | (922) | (458) |
| Amortization of Debt Expense and Premium, Net | 146 | 124 | 108 |
| Total Interest and Debt Expenses | 8,841 | 6,916 | 6,737 |
| Net Income | 25,054 | 23,387 | 22,761 |
| Preferred Stock Dividend Requirement | 38 | 38 | 38 |
| Total Net Income Applicable to Common Stock | $ 25,016 | $ 23,349 | $ 22,723 |
| Weighted Average Common Shares Outstanding: | | | |
| Basic | 11,540 | 11,009 | 10,958 |
| Diluted | 11,762 | 11,228 | 11,164 |
| Earnings Per Common Share: | | | |
| Basic | $ 2.17 | $ 2.12 | $ 2.07 |
| Diluted | $ 2.13 | $ 2.08 | $ 2.04 |

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

| For the Years Ended December 31, (in thousands) | 2017 | 2016 | 2015 |
|---|---|---|---|
| Net Income | $ 25,054 | $ 23,387 | $ 22,761 |
| Other Comprehensive Income (Loss), net of tax | | | |
| Adjustment to post-retirement benefit plans, net of tax benefit (expense) of $(419), $15, and $(505) in 2017, 2016, and 2015, respectively | 289 | (24) | 765 |
| Unrealized Investment gain (loss), net of tax (expense) benefit of $(13), $(22) and $62, in 2017, 2016, and 2015, respectively | 207 | 35 | (97) |
| Other Comprehensive Income, net of tax | $ 496 | $ 11 | $ 668 |
| Comprehensive Income | $ 25,550 | $ 23,398 | $ 23,429 |

**WILLISTOWN TOWNSHIP**
**CHESTER COUNTY, PENNSYLVANIA**

**RESOLUTION 16 OF 2019**

**A RESOLUTION ESTABLISHING SEWER RENTAL FEES CHARGED FOR THE CONVEYANCE AND TREATMENT OF SEWAGE IN THE TOWNSHIP.**

**BE IT AND IT IS HEREBY RESOLVED,** as follows:

**SECTION I.** The Board of Supervisors does hereby adopt the following sewer rental fees charged to owners and users effective January 1, 2020, whether direct or indirect, of the sewer system within the Township of Willistown, Chester County, PA:

A. **Gravity Sewer Customers, Valley Forge System**

| | |
|---|---|
| Quarterly Base Rate: | $124.66 |
| Quarterly Consumption Based on Water Usage: | $0.00552 per gallon |

B. **Low Pressure Sewer Customers, Valley Forge System - Including But Not Limited To The Sugartown Road – School Lane Sewer District, The East Central Sewer District, And The Acres Sewer District**

| | |
|---|---|
| Quarterly Base Rate: | $124.66 |
| Quarterly Pump Maintenance Fee: | $50.00 |
| Quarterly Consumption Based on Water Usage: | $0.00552 per gallon |

C. **Penns Preserve Sewer**

| | |
|---|---|
| Quarterly Base Rate: | $187.96 |

D. **East Goshen Sewer**

| | |
|---|---|
| Quarterly Base Rate: | $153.87 |

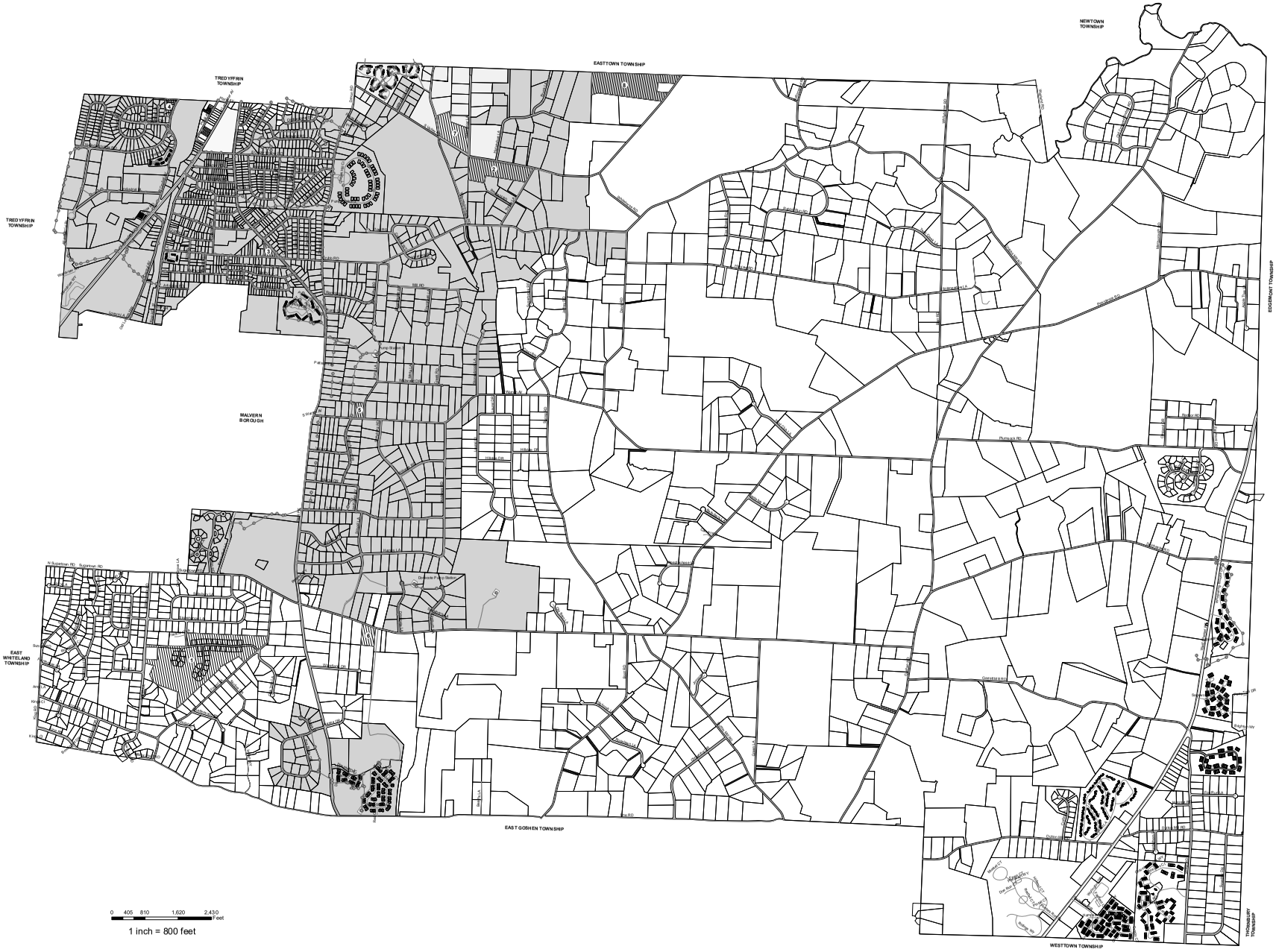
East Goshen Customers will be billed and responsible for payment of the prorated portion of the quarterly sewer payment due to East Goshen Township and/or East Goshen Municipal Authority.

## Legend

**Drainage Areas**

- Tredyffrin Township 1
- Tredyffrin Township 2
- TredyffrinTownship 3
- Easttown Township 1
- Easttown Township 2
- Pressure Sewer
- Gravity
- Force Main
- Manholes
- Pump Stations

| Map Identifier | Project Name | Status | Projected EDUs |
|---|---|---|---|
| 1 | Broadbeck Farms | Preliminary | 38 |
| 3 | 59 Grubb Road | Preliminary | 1 |
| 4 | 107 Central Avenue | Preliminary | 1 |
| 7 | 2 Greenbrier Lane | Preliminary | 4 |
| 8 | 2291 South Valley Road | Preliminary | 4 |




**WASTEWATER FACILITIES PLAN**

**CHAPTER 94 REPORT**
**VALLEY FORGE SEWER AUTHORITY**
**DRAINAGE AREA**

SITUATED IN

**WILLISTOWN TOWNSHIP**
**CHESTER COUNTY, PENNSYLVANIA**

PREPARED FOR:

WILLISTOWN TOWNSHIP
688 SUGARTOWN ROAD
MALVERN, PENNSYLVANIA 19355

*Carroll Engineering Corporation*

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Warrington, PA 18976
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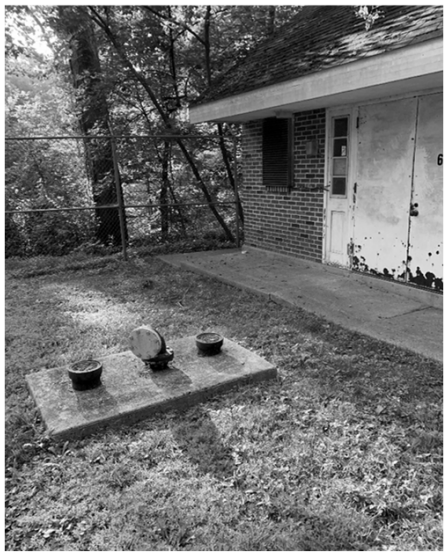
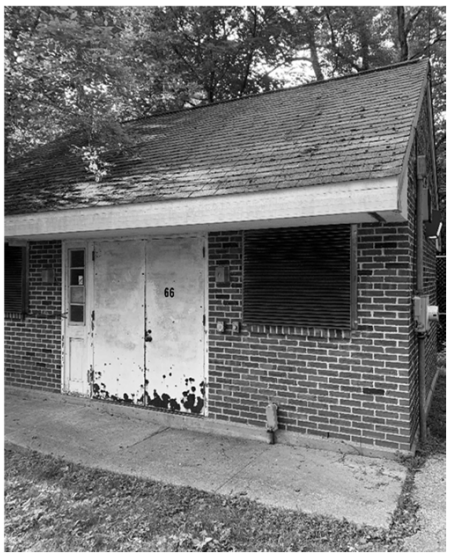
DATE: 8/30/2011 JOB NO.: 13-0010-08 SCALE: 1" = 800 ft.

Document Path: W:\2008\Projects\WastewaterAnalysis\Overall_Presentation_20100210.mxd

15002_05_20D_VFSA Map





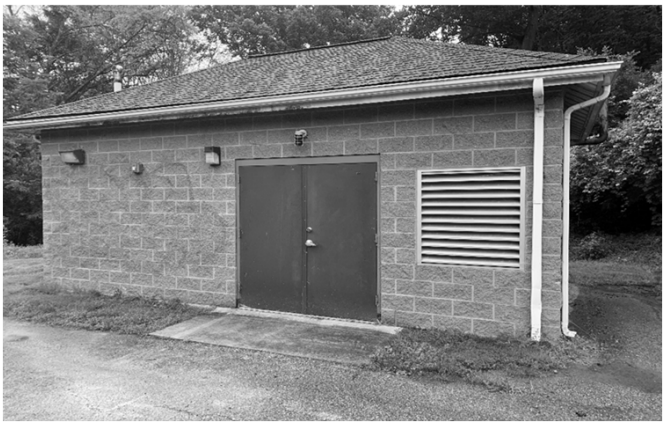

P.S. 1 - Pump Station #1 - 66 Devon Rd

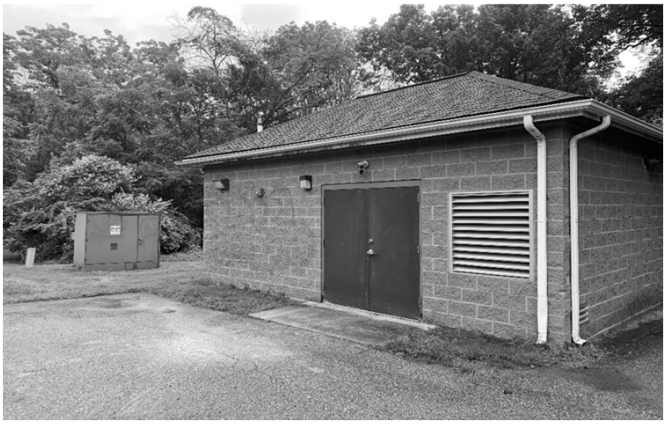
P.S. 2 - Pump Station #2 - 42 Devon Rd

P.S. 3 - Pump Station #3 - 7 Pond Ln

P.S. 3 - Pump Station #3 - 7 Pond Ln (Back of pump station)

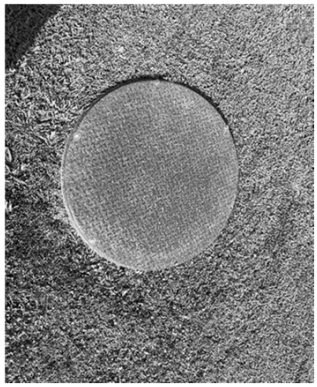
P.S. 4 - Pump Station #4 - 135 Line Rd





P.S. 5 - Penns Preserve - 5315 West Chester Pk,

B.S. 1 - Jaffrey - 107 Jaffrey Rd



B.S. 2 - Appleton - 158 Grubb Rd

# *Township Of Willistown Data & Demographics (As of July 1, 2020)*

## POPULATION

| | |
|---|---|
| Total Population | 11,214 |
| Population in Households | 10,995 |
| Population in Familes | 9,194 |
| Population in Group Qrtrs | 219 |
| Population Density | 619 |
| Diversity Index[1] | 20 |

## INCOME

| | |
|---|---|
| Median Household Income | $114,856 |
| Average Household Income | $172,208 |
| % of Income for Mortgage | 16% |
| Per Capita Income | $70,035 |
| Wealth Index[4] | 284 |

## HOUSING

| | |
|---|---|
| Total HU (Housing Units) | 4,835 (100%) |
| Owner Occupied HU | 3,948 (81.7%) |
| Renter Occupied HU | 611 (12.6%) |
| Vacant Housing Units | 276 ( 5.7%) |
| Median Home Value | $436,497 |
| Average Home Value | $592,127 |
| Housing Affordability Index[2] | 144 |

## HOUSEHOLDS

| | |
|---|---|
| Total Households | 4,559 |
| Average Household Size | 2.41 |
| Family Households | 3,173 |
| Average Family Size | 3 |

Willistown Township
2020 Customers and Consumption

| Customer Group | Customer Count |
|---|---|
| Gravity Sewer Customers, Valley Forge System | 1,694 |
| Lower Pressure Sewer Customers, Valley Forge System | 385 |
| Penns Preserve Sewer | 195 |
| East Goshen Sewer | 20 |
| **TOTAL** | **2,294** |

# WILLISTOWN TOWNSHIP

STATEMENT OF NET POSITION
PROPRIETARY FUNDS
DECEMBER 31, 2016

| | Sewer Fund |
|---|---|
| ASSETS | |
| CURRENT ASSETS | |
| Cash and cash equivalents | $ 2,192,680 |
| Due from other funds | 344,862 |
| Accounts receivable | 835,253 |
| Prepaid expenses | 149,681 |
| TOTAL CURRENT ASSETS | 3,522,476 |
| NONCURRENT ASSETS | |
| Sewer collection system | 7,652,651 |
| Less: accumulated depreciation | (2,823,990) |
| TOTAL NONCURRENT ASSETS | 4,828,661 |
| TOTAL ASSETS | $ 8,351,137 |
| LIABILITIES AND NET POSITION | |
| LIABILITIES | |
| CURRENT LIABILITIES | |
| Accounts payable | $ 190,789 |
| Bonds payable | 250,100 |
| Due to fiduciary funds | 20,433 |
| Due to other funds | 926,964 |
| Unearned revenue | 11,665 |
| Accrued Interest | 6,170 |
| TOTAL CURRENT LIABILITIES | 1,406,121 |
| NONCURRENT LIABILITIES | |
| Bonds payable | 4,952,947 |
| TOTAL LIABILITIES | 6,359,068 |
| NET POSITION | |
| Net investment in capital assets | 207,230 |
| Unrestricted | 1,784,839 |
| TOTAL NET POSITION | 1,992,069 |
| TOTAL LIABILITIES AND NET POSITION | $ 8,351,137 |

*See accompanying notes to the basic financial statements.*

# WILLISTOWN TOWNSHIP

STATEMENT OF REVENUES, EXPENSES AND
CHANGES IN NET POSITION
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2016

| | Sewer Fund |
|---|---|
| OPERATING REVENUES | |
| Sewer charges | $ 1,901,840 |
| OPERATING EXPENSES | |
| Sewage treatment | 701,513 |
| Operations and maintenance | 2,987,201 |
| General and administrative | 130,043 |
| Depreciation and amortization | 481,692 |
| TOTAL OPERATING EXPENSES | 4,300,449 |
| OPERATING LOSS | (2,398,609) |
| NONOPERATING REVENUES (EXPENSES) | |
| Investment income | 11,416 |
| Interest expense | (143,929) |
| Other | 152,687 |
| TOTAL NONOPERATING EXPENSES | 20,174 |
| LOSS BEFORE CAPITAL CONTRIBUTIONS | (2,378,435) |
| CAPITAL CONTRIBUTIONS | 153,209 |
| CHANGE IN NET POSITION | (2,225,226) |
| NET POSITION AT BEGINNING OF YEAR | 4,217,295 |
| NET POSITION AT END OF YEAR | $ 1,992,069 |

*See accompanying notes to the basic financial statements.*

# WILLISTOWN TOWNSHIP

STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2016

| | Sewer Fund |
|---|---|
| CASH FLOWS FROM OPERATING ACTIVITIES | |
| Cash received from customers | $ 1,887,324 |
| Cash payments to employees for services | (214,214) |
| Cash payments to vendors for goods and services | (3,004,190) |
| NET CASH USED BY OPERATING ACTIVITIES | (1,331,080) |
| CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES | |
| Bond principal payments | (255,324) |
| Interest paid | (144,332) |
| State reimbursements | 152,687 |
| Tapping fees | 153,209 |
| NET CASH USED BY CAPITAL AND RELATED FINANCING ACTIVITIES | (93,760) |
| CASH FLOWS FROM INVESTING ACTIVITIES | |
| Investment earnings | 11,416 |
| NET DECREASE IN CASH AND CASH EQUIVALENTS | (1,413,424) |
| CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR | 3,606,104 |
| CASH AND CASH EQUIVALENTS AT END OF YEAR | $ 2,192,680 |
| RECONCILIATION OF OPERATING LOSS TO NET CASH USED BY OPERATING ACTIVITIES | |
| Operating loss | $ (2,398,609) |
| Adjustment for noncash charges to operations | |
| Depreciation and amortization | 481,692 |
| Changes in assets and liabilities | |
| Increase in accounts receivable | (14,516) |
| Increase in prepaid expense | (19,985) |
| Increase in accounts payable | 142,880 |
| Increase in due to/from other funds, net | 477,458 |
| NET CASH USED BY OPERATING ACTIVITIES | $ (1,331,080) |

*See accompanying notes to the basic financial statements.*

# WILLISTOWN TOWNSHIP

STATEMENT OF NET POSITION
PROPRIETARY FUNDS
DECEMBER 31, 2017

| | Sewer Fund |
|---|---|
| ASSETS | |
| CURRENT ASSETS | |
| Cash and cash equivalents | $ 2,478,889 |
| Due from other funds | 36,016 |
| Accounts receivable | 814,408 |
| Prepaid expenses | 33,055 |
| TOTAL CURRENT ASSETS | 3,362,368 |
| NONCURRENT ASSETS | |
| Sewer collection system | 7,976,084 |
| Less: accumulated depreciation | (3,317,549) |
| TOTAL NONCURRENT ASSETS | 4,658,535 |
| TOTAL ASSETS | $ 8,020,903 |
| LIABILITIES AND NET POSITION | |
| LIABILITIES | |
| CURRENT LIABILITIES | |
| Accounts payable | $ 756,828 |
| Bonds payable | 258,300 |
| Due to fiduciary funds | 5,129 |
| Due to other funds | 971,939 |
| Unearned revenue | 1,900 |
| Accrued Interest | 5,857 |
| TOTAL CURRENT LIABILITIES | 1,999,953 |
| NONCURRENT LIABILITIES | |
| Bonds payable | 4,681,223 |
| TOTAL LIABILITIES | 6,681,176 |
| NET POSITION | |
| Net investment in capital assets | (51,993) |
| Unrestricted | 1,391,720 |
| TOTAL NET POSITION | 1,339,727 |
| TOTAL LIABILITIES AND NET POSITION | $ 8,020,903 |

*See accompanying notes to the basic financial statements.*

# WILLISTOWN TOWNSHIP

STATEMENT OF REVENUES, EXPENSES AND
CHANGES IN NET POSITION
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2017

| | Sewer Fund |
|---|---|
| OPERATING REVENUES | |
| Sewer charges | $ 2,016,468 |
| OPERATING EXPENSES | |
| Sewage treatment | 911,624 |
| Operations and maintenance | 590,665 |
| General and administrative | 653,639 |
| Depreciation and amortization | 493,559 |
| TOTAL OPERATING EXPENSES | 2,649,487 |
| OPERATING LOSS | (633,019) |
| NONOPERATING REVENUES (EXPENSES) | |
| Investment income | 9,983 |
| Interest expense | (134,343) |
| Other | 70,175 |
| TOTAL NONOPERATING EXPENSES | (54,185) |
| LOSS BEFORE CAPITAL CONTRIBUTIONS AND TRANSFERS | (687,204) |
| CAPITAL CONTRIBUTIONS | 37,301 |
| TRANSFERS OUT | (2,439) |
| CHANGE IN NET POSITION | (652,342) |
| NET POSITION AT BEGINNING OF YEAR | 1,992,069 |
| NET POSITION AT END OF YEAR | $ 1,339,727 |

*See accompanying notes to the basic financial statements.*

# WILLISTOWN TOWNSHIP

STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2017

| | | Sewer Fund |
|---|---|---|
| CASH FLOWS FROM OPERATING ACTIVITIES | | |
| Cash received from customers | $ | 2,027,548 |
| Cash payments to employees for services | | (262,127) |
| Cash payments to vendors for goods and services | | (872,619) |
| NET CASH PROVIDED BY OPERATING ACTIVITIES | | 892,802 |
| CASH FLOWS FROM NONCAPITAL AND RELATED FINANCING ACTIVITIES | | |
| Interfund transfers | | (2,439) |
| CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES | | |
| Purchases of capital assets | | (323,433) |
| Bond principal payments | | (263,524) |
| Interest paid | | (134,656) |
| State reimbursements | | 70,175 |
| Tapping fees | | 37,301 |
| NET CASH USED BY CAPITAL AND RELATED FINANCING ACTIVITIES | | (614,137) |
| CASH FLOWS FROM INVESTING ACTIVITIES | | |
| Investment earnings | | 9,983 |
| NET INCREASE IN CASH AND CASH EQUIVALENTS | | 286,209 |
| CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR | | 2,192,680 |
| CASH AND CASH EQUIVALENTS AT END OF YEAR | $ | 2,478,889 |
| RECONCILIATION OF OPERATING LOSS TO NET CASH PROVIDED BY OPERATING ACTIVITIES | | |
| Operating loss | $ | (633,019) |
| Adjustment for noncash charges to operations | | |
| Depreciation and amortization | | 493,559 |
| Changes in assets and liabilities | | |
| Decrease in accounts receivable | | 20,845 |
| Decrease in prepaid expense | | 116,626 |
| Increase in accounts payable | | 566,039 |
| Decrease in escrows payable | | (9,765) |
| Decrease in due to/from other funds, net | | 338,517 |
| NET CASH PROVIDED BY OPERATING ACTIVITIES | $ | 892,802 |

*See accompanying notes to the basic financial statements.*

# WILLISTOWN TOWNSHIP
## STATEMENT OF NET POSITION
## PROPRIETARY FUNDS
## DECEMBER 31, 2018

| | Sewer Fund |
|---|---|
| ASSETS | |
| CURRENT ASSETS | |
| Cash and cash equivalents | $ 4,914,148 |
| Due from other funds | 36,016 |
| Accounts receivable | 862,127 |
| Prepaid expenses | 33,055 |
| TOTAL CURRENT ASSETS | 5,845,346 |
| NONCURRENT ASSETS | |
| Sewer collection system | 7,799,427 |
| Less accumulated depreciation | (3,309,006) |
| TOTAL NONCURRENT ASSETS | 4,490,421 |
| TOTAL ASSETS | $ 10,335,767 |
| LIABILITIES AND NET POSITION | |
| LIABILITIES | |
| CURRENT LIABILITIES | |
| Accounts payable | $ 133,964 |
| Bonds payable | 262,400 |
| Due to fiduciary funds | 5,129 |
| Due to other funds | 420,504 |
| Unearned revenue | 1,900 |
| Accrued Interest | 5,534 |
| TOTAL CURRENT LIABILITIES | 829,431 |
| NONCURRENT LIABILITIES | |
| Bonds payable | 4,405,399 |
| TOTAL LIABILITIES | 5,234,830 |
| NET POSITION | |
| Net investment in capital assets | 54,423 |
| Unrestricted | 5,046,514 |
| TOTAL NET POSITION | 5,100,937 |
| TOTAL LIABILITIES AND NET POSITION | $ 10,335,767 |

*See accompanying notes to the basic financial statements.*

# WILLISTOWN TOWNSHIP

STATEMENT OF REVENUES, EXPENSES AND
CHANGES IN NET POSITION
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2018

| | Sewer Fund |
|---|---|
| OPERATING REVENUES | |
| Sewer charges | $ 2,011,578 |
| OPERATING EXPENSES | |
| Sewage treatment | 622,865 |
| Operations and maintenance | 693,045 |
| General and administrative | 107,398 |
| Depreciation and amortization | 505,633 |
| TOTAL OPERATING EXPENSES | 1,928,941 |
| OPERATING INCOME | 82,637 |
| NONOPERATING REVENUES (EXPENSES) | |
| Investment income | 21,167 |
| Loss on disposal of property | (175,813) |
| Interest expense | (126,830) |
| Other | 3,959,905 |
| TOTAL NONOPERATING EXPENSES | 3,678,429 |
| INCOME BEFORE TRANSFERS | 3,761,066 |
| TRANSFERS IN | 144 |
| CHANGE IN NET POSITION | 3,761,210 |
| NET POSITION AT BEGINNING OF YEAR | 1,339,727 |
| NET POSITION AT END OF YEAR | $ 5,100,937 |

*See accompanying notes to the basic financial statements.*

# WILLISTOWN TOWNSHIP

STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2018

| | Sewer Fund |
|---|---|
| CASH FLOWS FROM OPERATING ACTIVITIES | |
| Cash received from customers | $ 1,963,859 |
| Cash payments to employees for services | (306,022) |
| Cash payments to vendors for goods and services | (2,291,585) |
| NET CASH USED BY OPERATING ACTIVITIES | (633,748) |
| CASH FLOWS FROM NONCAPITAL AND RELATED FINANCING ACTIVITIES | |
| Interfund transfers | 144 |
| CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES | |
| Purchases of capital assets | (513,332) |
| Bond principal payments | (271,724) |
| Interest paid | (127,153) |
| State reimbursements and other | 3,959,905 |
| NET CASH PROVIDED BY CAPITAL AND RELATED FINANCING ACTIVITIES | 3,047,696 |
| CASH FLOWS FROM INVESTING ACTIVITIES | |
| Investment earnings | 21,167 |
| NET INCREASE IN CASH AND CASH EQUIVALENTS | 2,435,259 |
| CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR | 2,478,889 |
| CASH AND CASH EQUIVALENTS AT END OF YEAR | $ 4,914,148 |
| RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES | |
| Operating income | $ 82,637 |
| Adjustment for noncash charges to operations | |
| Depreciation and amortization | 505,633 |
| Changes in assets and liabilities | |
| Decrease in accounts receivable | (47,719) |
| Increase in accounts payable | (622,864) |
| Decrease in due to/from other funds, net | (551,435) |
| NET CASH USED BY OPERATING ACTIVITIES | $ (633,748) |

*See accompanying notes to the basic financial statements.*

# WILLISTOWN TOWNSHIP

STATEMENT OF NET POSITION
PROPRIETARY FUNDS
DECEMBER 31, 2019

| | Sewer Fund |
|---|---|
| ASSETS | |
| CURRENT ASSETS | |
| Cash and cash equivalents | $ 4,669,115 |
| Due from other funds | 36,016 |
| Accounts receivable | 888,077 |
| Prepaid expenses | 33,055 |
| TOTAL CURRENT ASSETS | 5,626,263 |
| NONCURRENT ASSETS | |
| Sewer collection system | 8,673,707 |
| Less accumulated depreciation | (3,786,175) |
| TOTAL NONCURRENT ASSETS | 4,887,532 |
| TOTAL ASSETS | $ 10,513,795 |
| LIABILITIES AND NET POSITION | |
| LIABILITIES | |
| CURRENT LIABILITIES | |
| Accounts payable | $ 214,225 |
| Bonds payable | 266,500 |
| Due to fiduciary funds | 5,129 |
| Due to other funds | 420,504 |
| Unearned revenue | 1,900 |
| Accrued Interest | 5,316 |
| TOTAL CURRENT LIABILITIES | 913,574 |
| NONCURRENT LIABILITIES | |
| Bonds payable | 4,125,475 |
| TOTAL LIABILITIES | 5,039,049 |
| NET POSITION | |
| Net investment in capital assets | 832,961 |
| Unrestricted | 4,641,785 |
| TOTAL NET POSITION | 5,474,746 |
| TOTAL LIABILITIES AND NET POSITION | $ 10,513,795 |

*See accompanying notes to the basic financial statements.*

# WILLISTOWN TOWNSHIP

STATEMENT OF REVENUES, EXPENSES AND
CHANGES IN NET POSITION
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2019

| | Sewer Fund |
|---|---|
| OPERATING REVENUES | |
| Sewer charges | $ 2,211,380 |
| OPERATING EXPENSES | |
| Sewage treatment | 1,008,250 |
| Operations and maintenance | 639,049 |
| General and administrative | 229,349 |
| Depreciation and amortization | 477,169 |
| TOTAL OPERATING EXPENSES | 2,353,817 |
| OPERATING LOSS | (142,437) |
| NONOPERATING REVENUES (EXPENSES) | |
| Investment income | 49,269 |
| Interest expense | (119,186) |
| Other | 586,163 |
| TOTAL NONOPERATING REVENUES (EXPENSES) | 516,246 |
| CHANGE IN NET POSITION | 373,809 |
| NET POSITION AT BEGINNING OF YEAR | 5,100,937 |
| NET POSITION AT END OF YEAR | $ 5,474,746 |

*See accompanying notes to the basic financial statements.*

**WILLISTOWN TOWNSHIP**
STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
YEAR ENDED DECEMBER 31, 2019

| | Sewer Fund |
|---|---|
| CASH FLOWS FROM OPERATING ACTIVITIES | |
| Cash received from customers | $ 2,185,430 |
| Cash payments to employees for services | (382,587) |
| Cash payments to vendors for goods and services | (1,413,800) |
| NET CASH PROVIDED BY OPERATING ACTIVITIES | 389,043 |
| CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES | |
| Purchases of capital assets | (874,280) |
| Bond principal payments | (275,824) |
| Interest paid | (119,404) |
| State reimbursements and other | 586,163 |
| NET CASH USED BY CAPITAL AND RELATED FINANCING ACTIVITIES | (683,345) |
| CASH FLOWS FROM INVESTING ACTIVITIES | |
| Investment earnings | 49,269 |
| NET DECREASE IN CASH AND CASH EQUIVALENTS | (245,033) |
| CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR | 4,914,148 |
| CASH AND CASH EQUIVALENTS AT END OF YEAR | $ 4,669,115 |
| RECONCILIATION OF OPERATING LOSS TO NET CASH PROVIDED BY OPERATING ACTIVITIES | |
| Operating loss | $ (142,437) |
| Adjustment for noncash charges to operations | |
| Depreciation and amortization | 477,169 |
| Changes in assets and liabilities | |
| Increase in accounts receivable | (25,950) |
| Increase in accounts payable | 80,261 |
| NET CASH PROVIDED BY OPERATING ACTIVITIES | $ 389,043 |

*See accompanying notes to the basic financial statements.*

| FUND | GENERAL LEDGER ACCOUNT | 2020 Total Next Year Budget |
|---|---|---|
| OPEN SPACE FUND | 04-310-201. OPEN SPACE TAX 1/8 OF 1% | (725,000) |
| | 04-341-000. INTEREST | (35,000) |
| | TOTAL REVENUE | (760,000) |
| | 04-400-532. BOND ADMIN EXPENSE 3 | 1,000 |
| | TOTAL GENERAL GOVERNMENT | 1,000 |
| | 04-470-103. BOND DEBT REDUCTION 3 | 350,000 |
| | 04-472-103. BOND DEBT INTEREST 3 | 202,760 |
| | TOTAL CULTURE AND RECREATION | 552,760 |
| | TOTAL EXPENDITURES | 553,760 |
| | NET ACTIVITY FOR THE YEAR | (206,240) |
| LOW PRESSURE FUND | 07-341-000. INTEREST | (2,000) |
| | 07-364-120. SEWER USE CHARGE | (146,608) |
| | TOTAL REVENUE | (148,608) |
| | 07-400-220. OPERATING SUPPLIES | 2,000 |
| | 07-400-240. GENERAL EXPENSES | 2,000 |
| | TOTAL GENERAL GOVERNMENT | 4,000 |
| | 07-429-220. OPERATING SUPPLIES | 4,000 |
| | 07-429-240. GENERAL EXPENSES | 850 |
| | 07-429-260. SMALL TOOLS & MINOR EQUIP. | 500 |
| | 07-429-321. TELEPHONE CHARGES/ALARM | 2,500 |
| | 07-429-361. ELECTRICITY | 22,000 |
| | 07-429-366. WATER | 2,500 |
| | 07-429-370. REPAIRS & MAINTENANCE | 37,500 |
| | 07-429-454. GROUNDS MAINTENANCE | 10,000 |
| | 07-429-456. PLANT OPERATOR | 60,000 |
| | 07-429-457. LAORATORY/WELLS | 7,500 |
| | 07-429-840. CAP. PUR.- REPLACEMENT | 25,000 |
| | TOTAL SANITARY SEWER OPERATIONS | 172,350 |
| | TOTAL EXPENDITURES | 176,350 |
| | NET ACTIVITY FOR THE YEAR | 27,742 |

DRAFT

| FUND | GENERAL LEDGER ACCOUNT | 2020 Total Next Year Budget |
|---|---|---|
| VALLEY FORGE SEWER FUND | 08-341-000. INTEREST EARNINGS | (30,000) |
| | 08-364-120. SEWER USE CHARGE | (1,852,311) |
| | 08-364-900. FEE - SEWER CERTIFICATION | (6,500) |
| | TOTAL REVENUE | (1,888,811) |
| | 08-400-003. DEFERRED COMPENSATION | 5,648 |
| | 08-400-140. WAGES-SEWER/CLERICAL | 141,191 |
| | 08-400-156. HOSPITALIZATION | 31,391 |
| | 08-400-158. LIFE INSURANCE | 1,000 |
| | 08-400-160. MEDICARE | 2,047 |
| | 08-400-161. FICA (SOCIAL SECURITY) | 8,754 |
| | 08-400-162. U/E COMPENSATION ADMIN | 108 |
| | 08-400-197. MUNI PENSION | 8,470 |
| | 08-400-210. OFFICE SUPPLIES | 7,000 |
| | 08-400-212. POSTAGE | 500 |
| | 08-400-240. GENERAL EXPENSES | 23,000 |
| | 08-400-311. ACCOUNTING/AUDITING | 5,000 |
| | 08-400-314. LEGAL SERVICES | 27,500 |
| | 08-400-352. INSURANCES | 17,000 |
| | TOTAL GENERAL GOVERNMENT | 278,609 |
| | 08-400-386. VALLEYFORGE SEWER AUTH. | 675,836 |
| | 08-400-387. TREDYFFRIN TRUNK LINE | 427,480 |
| | 08-400-388. E. GOSHEN MUNICIPAL AUTH. | 12,000 |
| | 08-400-532. BOND ADMIN,EXP.-USBANK | 539 |
| | 08-429-003. 457 MATCH | 6,757 |
| | 08-429-140. WAGES-MAINTENANCE CREW | 149,906 |
| | 08-429-156. HOSPITALIZATION | 56,215 |
| | 08-429-158. LIFE INSURANCE | 2,000 |
| | 08-429-160. MEDICARE | 2,449 |
| | 08-429-161. SOCIAL SECURITY | 10,473 |
| | 08-429-162. U/E COMPENSATION | 198 |
| | 08-429-180. OVERTIME | 19,020 |
| | 08-429-197. MUNI PENSION 6% | 10,136 |
| | 08-429-220. OPERATING SUPPLIES | 11,000 |
| | 08-429-230. FUEL - EMERG. GENERATORS | 1,000 |
| | 08-429-240. GENERAL EXPENSES | 7,500 |
| | 08-429-260. SMALL TOOLS / MINOR EQUIP. | 2,000 |
| | 08-429-300. PENNSYLVANIA ONE CALL | 1,200 |

DRAFT

| FUND | GENERAL LEDGER ACCOUNT | 2020 Total Next Year Budget |
|---|---|---|
| | 08-429-313. ENGINEERING SERVICES | 30,000 |
| | 08-429-321. TELEPHONE CHARGES/ALARM | 4,000 |
| | 08-429-361. ELECTRICITY | 50,000 |
| | 08-429-366. WATER | 1,500 |
| | 08-429-370. REPAIRS & MAINTENANCE | 50,000 |
| | 08-429-454. GROUNDS MAINTENANCE | 3,000 |
| | 08-429-461. TRAINING | 1,000 |
| | 08-472-103. BOND INTERST - USBANK | 394,080 |
| | TOTAL SANITARY SEWER OPERATIONS | 1,929,289 |
| | TOTAL EXPENDITURES | 2,207,898 |
| | NET ACTIVITY FOR THE YEAR | 319,087 |
| W. CHESTER PIKE SEWER FUND | 10-341-000. INTEREST EARNINGS | (1,000) |
| | TOTAL REVENUE | (1,000) |
| | NET ACTIVITY FOR THE YEAR | (1,000) |
| LOW PRESSURE FUND | 11-341-000. INTEREST EARNINGS | (1,000) |
| | 11-364-121. LOW PRESSURE MAINTENANC | (65,800) |
| | TOTAL REVENUE | (66,800) |
| | 11-429-450. REPAIRS/MAINT. - CONTRACTS | 63,000 |
| | TOTAL SANITARY SEWER OPERATIONS | 63,000 |
| | TOTAL EXPENDITURES | 63,000 |
| | NET ACTIVITY FOR THE YEAR | (3,800) |
| BARTRAM BRIDGE FUND | 17-341-000. INTEREST EARNINGS | (150) |
| | 17-380-030. DONATIONS -NEWTOWN TWP. | (1,500) |
| | 17-392-001. TRANSFER FROM GENERAL FU | (1,500) |
| | TOTAL REVENUE | (3,150) |
| | 17-400-316. MISCELLANEOUS SERVICES | 3,000 |
| | 17-454-361. ELECTRIC | 340 |
| | TOTAL GENERAL GOVERNMENT | 3,340 |
| | TOTAL EXPENDITURES | 3,340 |
| | NET ACTIVITY FOR THE YEAR | 190 |

DRAFT

| Fund | General Ledger Account | 2021 Budget |
|---|---|---|
| | | |
| | | |
| OPEN SPACE | 04-310-201. OPEN SPACE TAX 1/8 OF 1% | (725,000) |
| | 04-341-000. INTEREST | (11,000) |
| | TOTAL REVENUE | (736,000) |
| | | |
| | 04-400-532. BOND ADMIN EXPENSE 3 | 1,000 |
| | TOTAL GENERAL GOVERNMENT | 1,000 |
| | 04-470-103. BOND DEBT REDUCTION 3 | 360,000 |
| | 04-472-103. BOND DEBT INTEREST 3 | 195,760 |
| | TOTAL CULTURE & RECREATION | 555,760 |
| | TOTAL EXPENSES | 556,760 |
| | TOTAL OPEN SPACE FUND | (179,240) |
| | | |
| | | |
| PENNS PRESERVE | 07-341-000. INTEREST | (400) |
| | 07-364-120. SEWER USE CHARGE | (146,608) |
| | TOTAL REVENUE | (147,008) |
| | | |
| | 07-400-220. OPERATING SUPPLIES | 2,000 |
| | 07-400-240. GENERAL EXPENSES | 2,000 |
| | TOTAL GENERAL GOVERNMENT | 4,000 |
| | 07-429-220. OPERATING SUPPLIES | 4,000 |
| | 07-429-240. GENERAL EXPENSES | 850 |
| | 07-429-260. SMALL TOOLS & MINOR EQUIP. | 1,000 |
| | 07-429-313. ENGINEERING SERVICES | 19,200 |
| | 07-429-321. TELEPHONE CHARGES/ALARM | 1,750 |
| | 07-429-361. ELECTRICITY | 17,000 |
| | 07-429-366. WATER | 1,000 |
| | 07-429-370. REPAIRS & MAINTENANCE | 15,000 |
| | 07-429-454. GROUNDS MAINTENANCE | 10,000 |
| | 07-429-456. PLANT OPERATOR | 60,000 |
| | 07-429-457. LABORATORY/WELLS | 7,500 |
| | TOTAL SANITARY SEWER OPERATIONS | 137,300 |
| | TOTAL EXPENSES | 141,300 |
| | TOTAL PENNS PRESERVE | (5,708) |
| | | |

| Fund | General Ledger Account | 2021 Budget |
|---|---|---|
| | | |
| VALLEY FORGE SEWER FUN | 08-341-000. INTEREST EARNINGS | (7,800) |
| | 08-364-120. SEWER USE CHARGE | (1,933,000) |
| | 08-364-900. FEE - SEWER CERTIFICATION | (6,500) |
| | TOTAL REVENUE | (1,947,300) |
| | | |
| | 08-400-003. DEFERRED COMPENSATION | 1,247 |
| | 08-400-140. WAGES-SEWER/CLERICAL | 61,976 |
| | 08-400-156. HOSPITALIZATION | 4,569 |
| | 08-400-158. LIFE INSURANCE | 1,100 |
| | 08-400-160. MEDICARE | 898 |
| | 08-400-161. FICA (SOCIAL SECURITY) | 3,842 |
| | 08-400-162. U/E COMPENSATION ADMIN | 96 |
| | 08-400-197. MUNI PENSION | 1,871 |
| | 08-400-210. OFFICE SUPPLIES | 4,000 |
| | 08-400-240. GENERAL EXPENSES | 25,000 |
| | 08-400-314. LEGAL SERVICES | 75,000 |
| | 08-400-352. INSURANCES | 18,500 |
| | TOTAL GENERAL GOVERNMENT | 198,099 |
| | 08-400-386. VALLEY FORGE SEWER AUTH. | 675,836 |
| | 08-400-387. TREDYFFRIN TRUNK LINE | 427,480 |
| | 08-400-388. E. GOSHEN MUNICIPAL AUTH. | 12,000 |
| | 08-400-532. BOND ADMIN,EXP.-USBANK | 539 |
| | 08-429-003. 457 MATCH | 7,320 |
| | 08-429-140. WAGES-MAINTENANCE CREW | 163,035 |
| | 08-429-156. HOSPITALIZATION | 63,653 |
| | 08-429-158. LIFE INSURANCE | 2,200 |
| | 08-429-160. MEDICARE | 2,652 |
| | 08-429-161. SOCIAL SECURITY | 11,348 |
| | 08-429-162. U/E COMPENSATION | 198 |
| | 08-429-180. OVERTIME | 19,972 |
| | 08-429-197. MUNI PENSION 6% | 10,981 |
| | 08-429-220. OPERATING SUPPLIES | 11,000 |
| | 08-429-230. FUEL - EMERG. GENERATORS | 1,500 |
| | 08-429-240. GENERAL EXPENSES | 7,500 |
| | 08-429-250. REPAIRS & MAINT -- TRUCK 12 | 1,000 |
| | 08-429-260. SMALL TOOLS / MINOR EQUIP. | 2,500 |
| | 08-429-300. PENNSYLVANIA ONE CALL | 1,250 |
| | 08-429-313. ENGINEERING SERVICES | 35,000 |
| | 08-429-321. TELEPHONE CHARGES/ALARM | 4,500 |
| | 08-429-361. ELECTRICITY | 50,000 |
| | 08-429-366. WATER | 1,750 |
| | 08-429-370. REPAIRS & MAINTENANCE | 50,000 |

| Fund | General Ledger Account | 2021 Budget | |
|---|---|---|---|
| | 08-429-454. GROUNDS MAINTENANCE | 3,200 | |
| | 08-429-461. TRAINING | 1,000 | |
| | 08-472-103. BOND INTERST - USBANK | 393,449 | |
| | TOTAL SANITARY SEWER OPERATIONS | 1,960,863 | |
| | TOTAL EXPENSES | 2,158,962 | |
| | TOTAL VALLEY FORGE SEWER FUND | 211,662 | |

| Fund | General Ledger Account | 2021 Budget |
|---|---|---|
| | | |
| | | |
| LOW PRESSURE FUND | 11-341-000. INTEREST EARNINGS | (360) |
| | 11-364-121. LOW PRESSURE MAINTENANCE FE | (62,400) |
| | TOTAL REVENUE | (62,760) |
| | | |
| | 11-429-321. TELEPHONE CHARGES/ALARM | 600 |
| | 11-429-450. REPAIRS/MAINT. - CONTRACTS | 62,160 |
| | TOTAL SANITARY SEWER OPERATIONS | 62,760 |
| | TOTAL EXPENSES | 62,760 |
| | TOTAL LOW PRESSURE FUND | - |
| | | |
| | | |
| BARTRAM BRIDGE FUND | 17-341-000. INTEREST EARNINGS | (40) |
| | 17-380-030. DONATIONS -NEWTOWN TWP. | (1,500) |
| | 17-392-001. TRANSFER FROM GENERAL FUND | (1,500) |
| | TOTAL REVENUE | (3,040) |
| | | |
| | 17-400-316. MISCELLANEOUS SERVICES | 1,500 |
| | 17-454-361. ELECTRIC | 340 |
| | TOTAL GENERAL GOVERNMENT | 1,840 |
| | TOTAL EXPENSES | 1,840 |
| | TOTAL BARTRAM BRIDGE FUND | (1,200) |
| | | |
| | | |
| CAPITAL RESERVE | 30-341-000. INTEREST EARNINGS | (2,400) |
| | TOTAL REVENUE | (2,400) |
| | | |
| | 30-401-212. ADMIN. BLDG | 79,000 |
| | 30-401-610. GENERAL CONSTRUCTION | 46,000 |
| | TOTAL GENERAL GOVERNMENT | 125,000 |
| | 30-410-341. PD CAPITAL - VEHICLES | 97,100 |
| | 30-410-605. PD CAPITAL - GENERAL | 85,000 |
| | 30-410-606. CAPITAL - IT | 20,000 |
| | TOTAL PUBLIC SAFETY - POLICE | 202,100 |
| | 30-430-840. PW BUILDING | 640,000 |
| | TOTAL PUBLIC WORKS | 640,000 |
| | 30-454-840. PARKS | 40,000 |
| | TOTAL CULTURE & RECREATION | 40,000 |
| | TOTAL EXPENSES | 1,007,100 |
| | TOTAL CAPITAL RESERVE | 1,004,700 |
| | | |

| Fund | General Ledger Account | 2021 Budget |
|---|---|---|
| | | |
| STATE LIQUID FUELS | 35-341-000. INTEREST EARNINGS | (1,200) |
| | 35-355-050. STATE MOTOR LICENSE GRANT | (336,401) |
| | 35-355-150. STATE TURNBACK FUNDS | (20,360) |
| | TOTAL REVENUE | (357,961) |
| | | |
| | 35-432-220. SALT | 80,000 |
| | 35-433-361. PUBLIC UTILITY TRAFFIC LIGHTS | 8,000 |
| | 35-434-361. PUBLIC UTILITY STREET LIGHTS | 23,000 |
| | 35-438-450. REPAIRS/MAINT - CONTRACT | 250,000 |
| | 35-438-740. CAPITAL PURCHASE NEW | 109,000 |
| | TOTAL PUBLIC WORKS | 470,000 |
| | TOTAL EXPENSES | 470,000 |
| | TOTAL STATE LIQUID FUELS | 112,039 |

**Pennsylvania Municipalities, Total Decennial Population, 2010 & 2000**

*Prepared by The Pennsylvania State Data Center*

*Source: U.S. Census Bureau,Census 2000 & 2010 Redistricting Data (Public Law 94-171) Summary File.*

*March 9, 2011*

| | | Census: April 1, 2010 | | | Census: April 1, 2000 | | | Change: 2000 to 2010 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2010 State, County & Munic. FIPS Code | Geographic Area | Number | Percent Share of State Total | Munic. Pop. Rank | Number | Percent Share of State Total | Munic. Pop. Rank | Number | Munic. Rank | Percent | Munic. Rank |
| **4200000000** | **Pennsylvania** | **12,702,379** | **100.0%** | **-** | **12,281,054** | **100.0%** | **-** | **421,325** | **-** | **3.4%** | **-** |
| **4202900000** | **Chester County** | **498,886** | **3.9%** | **-** | **433,501** | **3.5%** | **-** | **65,385** | **-** | **15.1%** | **-** |
| 4202985352 | Willistown township | 10,497 | 0.1% | 239 | 10,011 | 0.1% | 234 | 486 | 324 | 4.9% | 817 |

## PART I

### Item 1. Business

This annual report on Form 10-K is a combined report being filed by two separate Registrants, American States Water Company (“AWR”) and Golden State Water Company (“GSWC”). References in this report to “Registrant” are to AWR and GSWC, collectively, unless otherwise specified. GSWC makes no representations as to the information contained in this report relating to AWR and its subsidiaries, other than GSWC.

AWR makes its periodic reports, Form 10-Q and Form 10-K, and current reports, Form 8-K, available free of charge through its website, www.aswater.com, as soon as material is electronically filed with or furnished to the Securities and Exchange Commission (“SEC”). Such reports are also available on the SEC’s website at www.sec.gov. AWR also makes available free of charge its code of business conduct and ethics, its corporate governance guidelines and the charters of its Nominating and Governance Committee, Compensation Committee and Audit and Finance Committee through its website or by calling (877) 463-6297. AWR and GSWC have filed the certification of officers required by Section 302 of the Sarbanes-Oxley Act as Exhibits 31.1 and 31.2 to its Form 10-K for the year ended December 31, 2020.

### Overview

AWR is the parent company of GSWC, Bear Valley Electric Service, Inc. ("BVESI") and American States Utility Services, Inc. (“ASUS”) (and its wholly owned subsidiaries: Fort Bliss Water Services Company (“FBWS”), Terrapin Utility Services, Inc. (“TUS”), Old Dominion Utility Services, Inc. (“ODUS”), Palmetto State Utility Services, Inc. (“PSUS”), Old North Utility Services, Inc. (“ONUS”), Emerald Coast Utility Services, Inc. (“ECUS”) and Fort Riley Utility Services, Inc. (“FRUS”)). On July 1, 2020, GSWC completed the transfer of the electric utility assets and liabilities from its electric division to BVESI, in exchange for common shares of BVESI. GSWC then immediately distributed all of BVESI's common shares to AWR, whereupon BVESI became wholly owned directly by AWR. This reorganization did not result in any substantive changes to AWR's operations and business segments.

AWR has three reportable segments: water, electric and contracted services. Within the segments, AWR has three principal business units, water and electric service utility operations conducted through its regulated utilities GSWC and BVESI, respectively, and contracted services conducted through ASUS and its subsidiaries. FBWS, TUS, ODUS, PSUS, ONUS, ECUS and FRUS may be referred to herein collectively as the “Military Utility Privatization Subsidiaries.”

GSWC is a public water utility engaged in the purchase, production, distribution and sale of water in 10 counties in the State of California. GSWC is regulated by the California Public Utilities Commission (“CPUC”). BVESI is a public electric utility that distributes electricity in several San Bernardino County mountain communities in California, and is also regulated by the CPUC. Additional information regarding public utility regulation is discussed in Item 7. "*Management's Discussion and Analysis of Financial Condition" and Results of Operation*" under the section titled "*Regulatory Matters*."

AWR's regulated utilities served 261,796 water customers and 24,545 electric customers at December 31, 2020, or a total of 286,341 customers, compared with 260,708 water customers and 24,420 electric customers at December 31, 2019, or a total of 285,128 customers. Both GSWC’s and BVESI's operations exhibit seasonal trends. Although both have diversified customer bases, residential and commercial customers account for the majority of water and electric sales and revenues. Revenues derived from commercial and residential customers accounted for approximately 90% of total water and electric revenues for the years ended December 31, 2020, 2019 and 2018.

ASUS, itself or through the Military Utility Privatization Subsidiaries, has contracted with the U.S. government to provide water and/or wastewater services at various military installations. ASUS operates, maintains and performs construction activities (including renewal and replacement capital work) on water and/or wastewater systems at various U.S. military bases pursuant to 50-year firm, fixed-price contracts. Each of the contracts with the U.S. government is subject to termination, in whole or in part, prior to the end of its 50-year term for convenience of the U.S. government or as a result of default or nonperformance by the ASUS subsidiary performing the contract. The price for each of these contracts is subject to annual economic price adjustments. Contracts are also subject to modifications for changes in circumstances, changes in laws and regulations, and additions to the contract value for new construction of facilities at the military bases. AWR guarantees performance of ASUS’s military privatization contracts.

**AMERICAN STATES WATER COMPANY AND SUBSIDIARIES**
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1 — Summary of Significant Accounting Policies**

Nature of Operations: American States Water Company ("AWR") is the parent company of Golden State Water Company ("GSWC"), Bear Valley Electric Service Inc. ("BVESI"), and American States Utility Services, Inc. ("ASUS") (and its wholly owned subsidiaries, Fort Bliss Water Services Company ("FBWS"), Terrapin Utility Services, Inc. ("TUS"), Old Dominion Utility Services, Inc. ("ODUS"), Palmetto State Utility Services, Inc. ("PSUS"), Old North Utility Services, Inc. ("ONUS"), Emerald Coast Utility Services, Inc. ("ECUS"), and Fort Riley Utility Services, Inc. ("FRUS")). AWR and its subsidiaries may be collectively referred to as "Registrant" or "the Company." The subsidiaries of ASUS are collectively referred to as the "Military Utility Privatization Subsidiaries." On July 1, 2020, GSWC completed the transfer of the electric utility assets and liabilities from its electric division to BVESI, a separate legal entity and wholly owned subsidiary of AWR (Note 20). This reorganization did not result in any substantive changes to AWR's operations and business segments. AWR, through its wholly owned subsidiaries, serves over one million people in nine states.

GSWC and BVESI are both California public utilities, with GSWC engaged in the purchase, production, distribution and sale of water throughout California serving approximately 261,800 customers, while BVESI distributes electricity in several San Bernardino County mountain communities in California serving approximately 24,500 customers. The California Public Utilities Commission ("CPUC") regulates GSWC's and BVESI's businesses in matters including properties, rates, services, facilities, and transactions between GSWC, BVESI, and their affiliates.

ASUS, through its Military Utility Privatization Subsidiaries, operates, maintains and performs construction activities (including renewal and replacement capital work) on water and/or wastewater systems at various U.S. military bases pursuant to 50-year firm fixed-price contracts. These contracts are subject to annual economic price adjustments and modifications for changes in circumstances, changes in laws and regulations and additions to the contract value for new construction of facilities at the military bases.

There is no direct regulatory oversight by the CPUC over AWR or the operations, rates or services provided by ASUS or the Military Utility Privatization Subsidiaries.

Basis of Presentation: The consolidated financial statements and notes thereto are presented in a combined report filed by two separate Registrants: AWR and GSWC. References in this report to "Registrant" are to AWR and GSWC, collectively, unless otherwise specified.

AWR owns all of the outstanding Common Shares of GSWC, BVESI and ASUS. ASUS owns all of the outstanding common shares of the Military Utility Privatization Subsidiaries. The consolidated financial statements of AWR include the accounts of AWR and its subsidiaries. These financial statements are prepared in conformity with accounting principles generally accepted in the United States of America. Intercompany transactions and balances have been eliminated in the AWR consolidated financial statements.

Related-Party Transactions: GSWC, BVESI and ASUS provide and/or receive various support services to and from their parent, AWR, and among themselves. GSWC also allocates certain corporate office administrative and general costs to its affiliates using allocation factors approved by the CPUC. During the years ended December 31, 2020, 2019 and 2018, GSWC allocated to ASUS approximately $4.9 million, $4.7 million and $4.2 million, respectively, of corporate office administrative and general costs. During the year ended December 31, 2020, GSWC allocated corporate office administrative and general costs to BVESI of approximately $1.3 million.

Furthermore, AWR borrows under a credit facility, which expires in May 2023, and provides funds to GSWC and ASUS in support of their operations. The interest rate charged to GSWC and ASUS is sufficient to cover AWR's interest expense under the credit facility. The CPUC requires GSWC to pay down all intercompany borrowings from AWR within a 24-month period, which was required by November 2020. In October 2020, the Board of Directors authorized AWR to invest equity in GSWC to enable the subsidiary to pay down all its intercompany borrowings. During the fourth quarter of 2020, AWR invested $60 million of equity in GSWC and received five shares of GSWC common stock. The majority of the proceeds from this stock issuance were used by GSWC to pay down its intercompany borrowings from AWR, satisfying the CPUC's requirement. As a result, GSWC had no intercompany borrowings from AWR as of December 31, 2020.

In October 2020, AWR issued an interest bearing promissory note to GSWC, which expires in May 2023. Under the terms of the note, AWR may borrow from GSWC amounts up to $30 million for working capital purposes. AWR agrees to pay any unpaid principal amounts outstanding under this note, plus accrued interest. In November 2020, AWR borrowed $6 million from GSWC under the terms of the note, which was subsequently repaid in December. As of December 31, 2020, there were no amounts outstanding under this note.

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**PART I**

**Item 1. Business**

This annual report on Form 10-K is a combined report being filed by two separate Registrants, American States Water Company ("AWR") and Golden State Water Company ("GSWC"). References in this report to "Registrant" are to AWR and GSWC, collectively, unless otherwise specified. GSWC makes no representations as to the information contained in this report relating to AWR and its subsidiaries, other than GSWC.

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**Overview**

AWR is the parent company of GSWC, Bear Valley Electric Service, Inc. ("BVESI") and American States Utility Services, Inc. ("ASUS") (and its wholly owned subsidiaries: Fort Bliss Water Services Company ("FBWS"), Terrapin Utility Services, Inc. ("TUS"), Old Dominion Utility Services, Inc. ("ODUS"), Palmetto State Utility Services, Inc. ("PSUS"), Old North Utility Services, Inc. ("ONUS"), Emerald Coast Utility Services, Inc. ("ECUS") and Fort Riley Utility Services, Inc. ("FRUS")). On July 1, 2020, GSWC completed the transfer of the electric utility assets and liabilities from its electric division to BVESI, in exchange for common shares of BVESI. GSWC then immediately distributed all of BVESI's common shares to AWR, whereupon BVESI became wholly owned directly by AWR. This reorganization did not result in any substantive changes to AWR's operations and business segments.

AWR has three reportable segments: water, electric and contracted services. Within the segments, AWR has three principal business units, water and electric service utility operations conducted through its regulated utilities GSWC and BVESI, respectively, and contracted services conducted through ASUS and its subsidiaries. FBWS, TUS, ODUS, PSUS, ONUS, ECUS and FRUS may be referred to herein collectively as the "Military Utility Privatization Subsidiaries."

GSWC is a public water utility engaged in the purchase, production, distribution and sale of water in 10 counties in the State of California. GSWC is regulated by the California Public Utilities Commission ("CPUC"). BVESI is a public electric utility that distributes electricity in several San Bernardino County mountain communities in California, and is also regulated by the CPUC. Additional information regarding public utility regulation is discussed in Item 7. "*Management's Discussion and Analysis of Financial Condition" and Results of Operation*" under the section titled "*Regulatory Matters*."

AWR's regulated utilities served 261,796 water customers and 24,545 electric customers at December 31, 2020, or a total of 286,341 customers, compared with 260,708 water customers and 24,420 electric customers at December 31, 2019, or a total of 285,128 customers. Both GSWC's and BVESI's operations exhibit seasonal trends. Although both have diversified customer bases, residential and commercial customers account for the majority of water and electric sales and revenues. Revenues derived from commercial and residential customers accounted for approximately 90% of total water and electric revenues for the years ended December 31, 2020, 2019 and 2018.

ASUS, itself or through the Military Utility Privatization Subsidiaries, has contracted with the U.S. government to provide water and/or wastewater services at various military installations. ASUS operates, maintains and performs construction activities (including renewal and replacement capital work) on water and/or wastewater systems at various U.S. military bases pursuant to 50-year firm, fixed-price contracts. Each of the contracts with the U.S. government is subject to termination, in whole or in part, prior to the end of its 50-year term for convenience of the U.S. government or as a result of default or nonperformance by the ASUS subsidiary performing the contract. The price for each of these contracts is subject to annual economic price adjustments. Contracts are also subject to modifications for changes in circumstances, changes in laws and regulations, and additions to the contract value for new construction of facilities at the military bases. AWR guarantees performance of ASUS's military privatization contracts.

## PART I

### ITEM 1. BUSINESS

**The Company**

With a history dating back to 1886, American Water is the largest and most geographically diverse, publicly-traded water and wastewater utility company in the United States, as measured by both operating revenues and population served. A holding company originally incorporated in Delaware in 1936, the Company employs approximately 7,000 professionals who provide drinking water, wastewater and other related services to over 15 million people in 46 states. The Company conducts the majority of its business through regulated utilities that provide water and wastewater services, collectively presented as the "Regulated Businesses." The Company also operates market-based businesses that provide complementary services. Individually, these businesses do not meet the criteria of a reportable segment in accordance with generally accepted accounting principles in the United States ("GAAP"), and are collectively presented as the "Market-Based Businesses," which is consistent with how management assesses the results of these businesses.

Throughout this Form 10-K, unless the context otherwise requires, references to "we," "us," "our," the "Company," and "American Water" mean American Water Works Company, Inc. and its subsidiaries, taken together as a whole. References to "parent company" mean American Water Works Company, Inc., without its subsidiaries.

**Regulated Businesses**

The Company's primary business involves the ownership of utilities that provide water and wastewater services to residential, commercial, industrial, public authority, fire service and sale for resale customers. The Company's utilities operate in over 1,700 communities in 16 states in the United States, with 3.5 million active customers in its water and wastewater networks. Services provided by the Company's utilities are subject to regulation by multiple state utility commissions or other entities engaged in utility regulation, collectively referred to as public utility commissions ("PUCs"). Federal, state and local governments also regulate environmental, health and safety, and water quality and water accountability matters. The Company reports the results of the services provided by its utilities in the Regulated Businesses segment. Operating revenues for the Regulated Businesses were $3,255 million for 2020, $3,094 million for 2019 and $2,984 million for 2018, accounting for 86%, 86% and 87%, respectively, of the Company's total operating revenues for the same periods.

Presented in the table below is a geographic summary of the Regulated Businesses' operating revenues and the number of customers the Company serves, by type of service, for and as of the year ended December 31, 2020:

| | Operating Revenues (in millions) | | | | Number of Customers (in thousands) | | | |
|---|---|---|---|---|---|---|---|---|
| | Water (a) | Wastewater | Total | % of Total | Water | Wastewater | Total | % of Total |
| New Jersey | $ 753 | $ 43 | $ 796 | 24.5 % | 657 | 55 | 712 | 20.4 % |
| Pennsylvania | 663 | 70 | 733 | 22.5 % | 673 | 77 | 750 | 21.6 % |
| Missouri | 335 | 11 | 346 | 10.6 % | 472 | 15 | 487 | 13.9 % |
| Illinois | 293 | 32 | 325 | 10.0 % | 292 | 68 | 360 | 10.3 % |
| California | 247 | 3 | 250 | 7.7 % | 183 | 3 | 186 | 5.3 % |
| Indiana | 234 | 2 | 236 | 7.3 % | 318 | 2 | 320 | 9.2 % |
| West Virginia | 164 | 1 | 165 | 5.1 % | 168 | 1 | 169 | 4.8 % |
| Total—Top Seven States (b) | 2,689 | 162 | 2,851 | 87.7 % | 2,763 | 221 | 2,984 | 85.5 % |
| Other (c) | 381 | 23 | 404 | 12.3 % | 481 | 31 | 512 | 14.5 % |
| Total Regulated Businesses | $ 3,070 | $ 185 | $ 3,255 | 100.0 % | 3,244 | 252 | 3,496 | 100.0 % |

(a) Includes other operating revenues consisting primarily of miscellaneous utility charges, fees and rents.

(b) The Company's "Top Seven States" are determined based upon operating revenues.

(c) Includes the Company's utility operations in the following states: Georgia, Hawaii, Iowa, Kentucky, Maryland, Michigan, New York, Tennessee and Virginia and other revenue attributable collectively to the Regulated Businesses.

## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*The following discussion should be read together with the Consolidated Financial Statements and the Notes thereto included elsewhere in this Form 10-K. This discussion contains forward-looking statements that are based on management's current expectations, estimates and projections about the Company's business, operations and financial performance. The cautionary statements made in this Form 10-K should be read as applying to all related forward-looking statements whenever they appear in this Form 10-K. The Company's actual results may differ materially from those currently anticipated and expressed in such forward-looking statements as a result of a number of factors, including those that are discussed under "Forward-Looking Statements," Item 1A—Risk Factors and elsewhere in this Form 10-K. The Company has a disclosure committee consisting of members of senior management and other key employees involved in the preparation of the Company's SEC reports. The committee is actively involved in the review and discussion of the Company's SEC filings. For a discussion and analysis of the Company's financial statements for fiscal 2019 compared to fiscal 2018, please refer to Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations in the Company's Annual Report on Form 10-K for the year ended December 31, 2019, filed with the SEC on February 18, 2020.*

### Overview

American Water is the largest and most geographically diverse, publicly-traded water and wastewater utility company in the United States, as measured by both operating revenues and population served. The Company employs approximately 7,000 professionals who provide drinking water, wastewater and other related services to over 15 million people in 46 states. The Company's primary business involves the ownership of utilities that provide water and wastewater services to residential, commercial, industrial, public authority, fire service and sale for resale customers, collectively presented as the "Regulated Businesses." The Company's utilities operate in over 1,700 communities in 16 states in the United States, with 3.5 million active customers with services provided by its water and wastewater networks. Services provided by the Company's utilities are subject to regulation by PUCs. The Company also operates market-based businesses that provide water, wastewater and other services to residential and smaller commercial customers, the U.S. government on military installations, as well as municipalities and utility customers, collectively presented as the "Market-Based Businesses." These Market-Based Businesses are not subject to economic regulation by state PUCs. See Item 1—Business for additional information.

### Novel Coronavirus (COVID-19) Pandemic Update

American Water has been monitoring the global impact of COVID-19 pandemic and has taken steps to mitigate adverse impacts to the Company. The Company has three main areas of focus as part of its response to COVID-19: the care and safety of its employees; the safety of its customers and the communities it serves; and the execution of its business continuity plan. American Water continues to work with its vendors to prevent disruptions in its supply chain, and, at this time, has not experienced, and does not anticipate, any material negative impacts. The Company has also been monitoring the impacts of the pandemic on its access to the capital markets, and to the extent such access is adversely affected, American Water may need to consider alternative sources of funding for its operations and for working capital, any of which could increase its cost of capital.

This pandemic continues to evolve, and American Water continues to monitor developments affecting its employees, customers, contractors and vendors and will take additional actions as warranted. To date, the Company has experienced COVID-19 financial impacts, including an increase in uncollectible accounts expense, additional debt costs, and certain incremental operation and maintenance ("O&M") expenses. The Company has also experienced decreased revenues as a result of the suspension of late fees and foregone reconnect fees. These impacts are collectively referred to as "financial impacts." See Note 3—Impact of Novel Coronavirus (COVID-19) Pandemic in the Notes to Consolidated Financial Statements for additional information. The extent to which COVID-19 may further impact American Water, including without limitation, its liquidity, financial condition, and results of operations, will depend on future developments, which presently cannot be predicted.

agreement, the expenditure in 2020 was $0.1 million. Tank painting expense for 2020, 2019 and 2018 was $155,000, $447,000, and $658,000, respectively.



Budgeted mandatory utility plant expenditures, due to planned governmental highway projects, which require the relocation of Artesian Water's water service mains, expected to be incurred in 2021 through 2023 are as follows:

| *In thousands* | |
|---|---|
| 2021 | $ 3,020 |
| 2022 | 3,020 |
| 2023 | 3,020 |
| | $ 9,060 |

The exact timing and extent of these relocation projects is controlled primarily by the Delaware Department of Transportation.

***NOTE 12***

***GEOGRAPHIC CONCENTRATION OF CUSTOMERS***

Artesian Water, Artesian Water Maryland and Artesian Water Pennsylvania provide water utility service to customers within their established service territory in all three counties of Delaware and in portions of Maryland and Pennsylvania, pursuant to rates filed with and approved by the DEPSC, the MDPSC and the PAPUC. As of December 31, 2020, Artesian Water was serving approximately 90,300 customers, Artesian Water Maryland was serving approximately 2,500 customers and Artesian Water Pennsylvania was serving approximately 40 customers.

Artesian Wastewater provides wastewater utility service to customers within its established service territory in Sussex County, Delaware pursuant to rates filed with and approved by the DEPSC. As of December 31, 2020, Artesian Wastewater was serving approximately 2,800 customers, including one large industrial customer that comprises approximately 24% of the outstanding accounts receivable balance at year end. All wastewater customers are located in Sussex County, Delaware.

***NOTE 13***

***REGULATORY PROCEEDINGS***

Overview

Our water and wastewater utilities generate operating revenue from customers based on rates that are established by state Public Service Commissions through a rate setting process that may include public hearings, evidentiary hearings and the submission of evidence and testimony in support of the requested level of rates by the Company.

We are subject to regulation by the following state regulatory commissions:

- The DEPSC, regulates both Artesian Water and Artesian Wastewater.
- The MDPSC, regulates both Artesian Water Maryland and Artesian Wastewater Maryland.
- The PAPUC, regulates Artesian Water Pennsylvania.

Our water and wastewater utility operations are also subject to regulation under the federal Safe Drinking Water Act of 1974, or Safe Drinking Water Act, the Clean Water Act of 1972, or the Clean Water Act, and related state laws, and under federal and state regulations issued under these laws. These laws and regulations establish criteria and standards for drinking water and for wastewater discharges. Capital expenditures and operating costs required as a result of water quality standards and environmental requirements have been traditionally recognized by state regulatory commissions as appropriate for inclusion in establishing rates.

Water and Wastewater Rates

Our regulated utilities periodically seek rate increases to cover the cost of increased operating expenses, increased financing expenses due to additional investments in utility plant and other costs of doing business. In Delaware, utilities are permitted by law to place rates into effect, under bond, on a temporary basis pending completion of a rate increase proceeding. The first temporary increase may be up to the lesser of $2.5 million on an annual basis or 15% of gross water sales. Should the rate case not be completed within seven months, by law, the utility may put the entire requested rate relief, up to 15% of gross water sales, in effect under bond until a final resolution is ordered and placed into effect. If any such rates are found to be in excess of rates the DEPSC finds to be appropriate, the utility must refund customers the portion found to be in excess with interest. The timing of our rate increase requests is therefore dependent upon the estimated cost of the administrative process in relation to the investments and expenses that we hope to recover through the rate increase. We can provide no assurances that rate increase requests will be approved by applicable regulatory agencies and, if approved, we cannot guarantee that these rate increases will be granted in a timely or sufficient manner to cover the investments and expenses for which we initially sought the rate increase.

# Artesian Resources Corporation 2020 Annual Report Available Electronically to Shareholders

April 08, 2021 17:28 ET | Source: Artesian Resources Corporation

NEWARK, Del., April 08, 2021 (GLOBE NEWSWIRE) -- Artesian Resources Corporation (NASDAQ: ARTNA), a leading provider of water, wastewater services and related services on the Delmarva Peninsula today announced that its 2020 Annual Report is available electronically to shareholders through its website at https://www.artesianwater.com/investor-relations/annual-report/. If any shareholder would like to receive a print copy of the 2020 Annual Report, they can request one free of charge by writing or calling Artesian Resources Corporation, 664 Churchmans Road, Newark, Delaware 19702, Attention Laura Slayman (Phone Number: 302-453-6900).

**About Artesian Resources**

Artesian Resources Corporation operates as a holding company of wholly-owned subsidiaries offering water and wastewater services, and related services, on the Delmarva Peninsula. Artesian Water Company, the principal subsidiary, is the oldest and largest regulated water utility on the Delmarva Peninsula and has been providing water service since 1905. Artesian supplies 8.3 billion gallons of water per year through 1,311 miles of main to over 300,000 people.

Contact:

Nicholle Taylor

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ACCEPT

Effective June 30, 2011, the CPUC adopted new rules related to the provision of non-regulated services using utility assets and employees. As a result, nearly all California non-regulated activities are now considered NTPS. The prescribed accounting for these NTPS is incremental cost allocation plus revenue sharing with regulated customers. Non-regulated services determined to be "active activities" require a 10% revenue sharing, and "passive activities" require a 30% revenue sharing. The amount of non-regulated revenues subject to revenue sharing is the total billed revenues less any authorized pass-through costs. Some examples of CPUC authorized pass-through costs are purchased water, purchased power, and pump taxes. All of our non-regulated services, except for leasing communication antenna sites on our properties, are "active activities" subject to a 10% revenue sharing. Leasing communication antenna sites on our properties are "passive activities" subject to a 30% revenue sharing. Cal Water's annual revenue sharing with regulated customers was $2.5 million, $2.7 million, and $2.6 million in 2020, 2019, and 2018, respectively.

**Operating Segment**

We operate in one reportable segment, the supply and distribution of water and providing water-related utility services. For information about revenue from external customers, net income and total assets, see "Item 8. Financial Statements and Supplementary Data."

**Growth**

We intend to continue exploring opportunities to expand our regulated and non-regulated water and wastewater activities, particularly in the western United States. The opportunities could include system acquisitions, lease arrangements similar to the City of Hawthorne and City of Commerce contracts, full service system operation and maintenance agreements, meter reading, billing contracts and other utility-related services.

**Geographical Service Areas and Number of Customer Connections at Year-end**

Our principal markets are users of water within our service areas. The approximate number of customer connections served in each regulated district, the City of Hawthorne and the City of Commerce, at December 31 is as follows:

| (rounded to the nearest hundred) | 2020 | 2019 |
|---|---|---|
| SAN FRANCISCO BAY AREA/NORTH COAST | | |
| Bay Area Region (serving South San Francisco, Colma, Broadmoor, San Mateo, San Carlos, Lucerne, Duncans Mills, Guerneville, Dillon Beach, Noel Heights and portions of Santa Rosa) | 56,000 | 55,900 |
| Bear Gulch (serving portions of Menlo Park, Atherton, Woodside and Portola Valley) | 19,000 | 18,900 |
| Los Altos (including portions of Cupertino, Los Altos Hills, Mountain View and Sunnyvale) | 19,000 | 19,000 |
| Livermore | 18,900 | 18,900 |
| | 112,900 | 112,700 |
| SACRAMENTO VALLEY | | |
| Chico (including Hamilton City) | 30,800 | 30,500 |
| Oroville | 3,700 | 3,600 |
| Marysville | 3,800 | 3,800 |
| Dixon | 3,100 | 3,000 |
| Willows | 2,400 | 2,400 |
| | 43,800 | 43,300 |
| SALINAS VALLEY | | |
| Salinas Valley Region (including Salinas and King City) | 31,600 | 31,500 |
| | 31,600 | 31,500 |
| SAN JOAQUIN VALLEY | | |
| Bakersfield | 73,500 | 72,700 |
| Stockton | 44,800 | 44,400 |
| Visalia | 46,700 | 46,000 |

| | | |
|---|---|---|
| Selma | 6,500 | 6,500 |
| Kern River Valley | 4,000 | 4,000 |





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| (rounded to the nearest hundred) | 2020 | 2019 |
|---|---|---|
| | 175,500 | 173,600 |
| LOS ANGELES AREA | | |
| East Los Angeles | 26,900 | 26,800 |
| Hermosa Redondo (serving Hermosa Beach, Redondo Beach and a portion of Torrance) | 27,100 | 27,100 |
| Dominguez (Carson and portions of Compton, Harbor City, Long Beach, Los Angeles and Torrance) | 34,300 | 34,200 |
| Los Angeles County Region (including Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills Estates, Rolling Hills, Fremont Valley, Lake Hughes, Lancaster and Leona Valley) | 25,700 | 25,700 |
| Westlake (a portion of Thousand Oaks) | 7,100 | 7,100 |
| Hawthorne and Commerce (leased municipal systems) | 7,700 | 7,600 |
| | 128,800 | 128,500 |
| CALIFORNIA TOTAL | 492,600 | 489,600 |
| HAWAII | 5,300 | 5,000 |
| NEW MEXICO | 8,500 | 8,300 |
| WASHINGTON | 36,600 | 17,700 |
| COMPANY TOTAL | 543,000 | 520,600 |

**Rates and Regulation**

The Commissions have plenary powers setting both rates and operating standards. As such, the Commissions' decisions significantly impact the Company's revenues, earnings, and cash flows. The amounts discussed herein are generally annual amounts, unless otherwise stated, and the financial impact to recorded revenue is expected to occur over a 12-month period from the effective date of the decision. In California, water utilities are required to make several different types of filings. Certain filings, such as General Rate Case (GRC) filings, escalation rate increase filings, and offset filings, may result in rate changes that generally remain in place until the next GRC. As explained below, surcharges and surcredits to recover balancing and memorandum accounts as well as GRC interim rate relief are temporary rate changes which have specific time frames for recovery.

The CPUC follows a rate case plan which requires Cal Water to file a GRC for each of its regulated operating districts every three years. In a GRC proceeding the CPUC not only considers the utility's rate setting requests, but may also consider other issues that affect the utility's rates and operations. The CPUC is generally required to issue its GRC decision prior to the first day of the test year or authorize interim rates. In accordance with the rate case plan, Cal Water will file its next GRC application in July of 2021.

Between GRC filings, Cal Water may file escalation rate increases, which allow Cal Water to recover cost increases, primarily from inflation and incremental investments, during the second and third years of the rate case cycle. However, escalation rate increases are district specific and subject to an earnings test. The CPUC may reduce a district’s escalation rate increase if, in the most recent 13-month period, the earnings test reflects earnings in excess of what was authorized for that district.

In addition, California water utilities are entitled to make offset requests via advice letter. Offsets may be requested to adjust revenues for construction projects authorized in GRCs when those capital projects go into service (these filings are referred to as "rate base offsets"), or for rate changes charged to Cal Water for purchased water, purchased power, and pump taxes (which are referred to as "expense offsets"). Rate changes approved in offset requests remain in effect until the next GRC is approved.

- restrictive covenants in or changes to the credit ratings on our current or future debt that could increase our financing costs or affect our ability to borrow, make payments on debt or pay dividends; and
- the risks set forth in "Risk Factors" included elsewhere in this annual report.

In light of these risks, uncertainties and assumptions, investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date of this annual report or as of the date of any document incorporated by reference in this annual report, as applicable. When considering forward-looking statements, investors should keep in mind the cautionary statements in this annual report and the documents incorporated by reference. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise.

**Overview**

California Water Service Group is a holding company with six operating subsidiaries: California Water Service Company (Cal Water), New Mexico Water Service Company (New Mexico Water), Washington Water Service Company (Washington Water), Hawaii Water Service Company, Inc. (Hawaii Water), and CWS Utility Services and HWS Utility Services LLC (CWS Utility Services and HWS Utility Services LLC being referred to collectively in this annual report as Utility Services). Cal Water, New Mexico Water, Washington Water, and Hawaii Water are regulated public utilities. The regulated utility entities also provide some non-regulated services. Utility Services holds non-utility property and provides non-regulated services to private companies and municipalities outside of California. Cal Water was the original operating company and began operations in 1926.

Our business is conducted through our operating subsidiaries and we provide utility services to approximately two million people. The bulk of the business consists of the production, purchase, storage, treatment, testing, distribution and sale of water for domestic, industrial, public and irrigation uses, and for fire protection. In some areas, we provide wastewater collection and treatment services, including treatment which allows water recycling. We also provide non-regulated water-related services under agreements with municipalities and other private companies. The non-regulated services include full water system operation, billing and meter reading services. Non-regulated operations also include the lease of communication antenna sites, lab services and promotion of other non-regulated services.

During the year ended December 31, 2020, there were no significant changes in the kind of products produced or services rendered by our operating subsidiaries, or in the markets or methods of distribution.

Our mailing address and contact information is:

California Water Service Group
1720 North First Street
San Jose, California 95112-4598
Telephone number: 408-367-8200
www.calwatergroup.com

Annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports are available free of charge through our website at www.calwatergroup.com. The reports are available on our website as soon as reasonably practicable after such reports are filed with the SEC.

The content on any website referred to in this annual report is not incorporated by reference in this annual report unless expressly noted.

**Regulated Business**

California water operations are conducted by Cal Water, which provides service to approximately 492,600 customer connections in approximately 100 California communities through 21 separate districts, which are subject to regulation by the California Public Utilities Commission (CPUC). California water operations accounted for approximately 90.7% of our total customer connections and 93.8% of our total consolidated operating revenue.

We operate the City of Hawthorne and the City of Commerce water systems under lease agreements. In accordance with the lease agreements, we receive all revenues from operating the systems and are responsible for paying the operating costs. The City of Hawthorne and the City of Commerce lease revenues are governed through their respective city councils and are considered non-regulated because they are

patterns by our customers, resulting from such causes as increased water conservation and the installation of water saving devices and appliances that can result in decreased water usage. It is estimated that in the event we experience a 0.50% decrease in residential water consumption it would result in a decrease in annual residential water revenue of approximately $2,800,000 and would likely be partially offset by a reduction in incremental water production expenses such as chemicals and power.

Our natural gas utility customer base is diversified among residential gas, commercial gas, industrial gas, gas transportation, and other utility (consisting of miscellaneous service revenue from gas distribution operations; gas processing and handling revenue; sales of natural gas at market-based rates and contracted fixed prices; sales of gas purchased from third parties; and other gas marketing activities). The Regulated Natural Gas segment operating revenues are reported for the period since closing on the Peoples Gas Acquisition on March 16, 2020. Substantially all of our natural gas utility customers are metered, which allows to measure and bill for our customers' natural gas usage. Natural gas usage per customer is affected by local weather conditions during the year, especially during the fall, winter, and early spring. These patterns reflect the higher demand for natural gas for heating purposes during the colder months.

Our growth in revenues over the past five years is primarily a result of the 2020 Peoples Gas Acquisition, increases in water and wastewater rates and customer growth. See *Economic Regulation* for a discussion of water, wastewater and natural gas rates. The increase in our utility customer base has been due to customers added through acquisitions, partnerships with developers, and organic growth (excluding dispositions) as shown below:

| Year | Utility Customer Growth Rate |
|---|---|
| 2020 | 42.9% |
| 2019 | 2.1% |
| 2018 | 2.3% |
| 2017 | 1.1% |
| 2016 | 1.6% |

In 2020, 2019, and 2018, our customer count increased by 772,099, 21,108, and 22,741 customers, respectively, primarily due to the addition of approximately 750,000 natural gas utility customers from the Peoples Gas Acquisition, water and wastewater utility systems that we acquired, and organic growth. Overall, for the five year period of 2016 through 2020, our utility customer base, adjusted to exclude customers associated with utility system dispositions, increased at an annual compound rate of 13.4%. During the five year period ended December 31, 2020, our utility customer base including customers associated with utility system acquisitions and dispositions increased from 957,866 at January 1, 2016 to 1,798,803 at December 31, 2020.

*Acquisitions and Other Growth Ventures*

We believe that acquisitions will continue to be an important source of customer growth for us. We intend to continue to pursue acquisitions of government-owned and regulated water and wastewater systems that provide services in areas near our existing service territories or in new service areas. We engage in continuing activities with respect to potential acquisitions, including calling on prospective sellers, performing analyses of and due diligence on acquisition candidates, making preliminary acquisition proposals, and negotiating the terms of potential acquisitions. Further, we are also seeking other potential business opportunities, including but not limited to, partnering with public and regulated utilities to invest in infrastructure projects, growing our market-based activities by acquiring businesses that provide water and wastewater or other utility-related services, and investing in infrastructure projects.

Based on the 2019 U.S. Census American Housing Survey, approximately 89% of the U.S. population obtains its water from public or private water utility systems, and 11% of the U.S. population obtains its water from individual wells. With approximately 50,000 public or private water systems in the U.S. (81% of which serve less than 3,300 customers), the water industry is the most fragmented of the major utility industries (telephone, natural gas, electric, water and wastewater). The majority of these community water systems are government-owned. The nation's water systems range in size from large government-owned systems, such as the New York City water system, which serves approximately 8.3 million people, to small systems, where a few customers share a common well. In the states where we operate regulated water utilities, we believe there are approximately 14,000 public or private water utility systems of widely-varying size, with the majority of the population being served by government-owned water systems.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this Annual Report on Form 10-K, or this Annual Report are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 that are made based upon, among other things, our current assumptions, expectations, plans, and beliefs concerning future events and their potential effect on us. These forward-looking statements involve risks, uncertainties and other factors, many of which are outside our control that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. In some cases you can identify forward-looking statements where statements are preceded by, followed by or include the words "believes," "expects," "estimates", "anticipates," "plans," "future," "potential," "probably," "predictions," "intends," "will," "continue," "in the event" or the negative of such terms or similar expressions. Please refer to the Summary in Item 1A – Risk Factors in this Annual Report for a description of the types of Forward-looking statements in this Annual Report.

Given these risks and uncertainties, you should not place undue reliance on any forward-looking statements. You should read this Annual Report completely and with the understanding that our actual future results, performance and achievements may be materially different from what we expect. These forward-looking statements represent assumptions, expectations, plans, and beliefs only as of the date of this Annual Report. Except for our ongoing obligations to disclose certain information under the federal securities laws, we are not obligated, and assume no obligation, to update these forward-looking statements, even though our situation may change in the future. For further information or other factors which could affect our financial results and such forward-looking statements, see *Item 1A – Risk Factors*. We qualify all of our forward-looking statements by these cautionary statements.

## PART I

### Item 1. *Business*

*The Company*

Essential Utilities, Inc. (referred to as "Essential Utilities", the "Company", "we", "us", or "our"), a Pennsylvania corporation, is the holding company for regulated utilities providing water, wastewater, or natural gas services to an estimated five million people in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, Virginia, West Virginia, and Kentucky under the Aqua and Peoples brands. One of our largest operating subsidiaries, is Aqua Pennsylvania, Inc., ("Aqua Pennsylvania") accounted for approximately 55% of operating revenues and approximately 67% of income for our Regulated Water segment in 2020. As of December 31, 2020, Aqua Pennsylvania provided water or wastewater services to approximately one-half of the total number of water and wastewater customers we serve. Aqua Pennsylvania's service territory is located in the suburban areas in counties north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. Our other regulated water utility subsidiaries provide similar services in seven additional states. Additionally, pursuant to the Company' growth strategy, commencing on March 16, 2020 with the completion of the Peoples Gas Acquisition, the Company began to provide natural gas distribution services to customers in western Pennsylvania, Kentucky, and West Virginia. Approximately 93% of the total number of natural gas utility customers we serve are in western Pennsylvania. Lastly, the Company's market-based activities are conducted through Aqua Infrastructure, LLC and Aqua Resources Inc., and certain other non-regulated subsidiaries of Peoples. Prior to our October 30, 2020 sale of our investment in a joint venture, Aqua Infrastructure provided non-utility raw water supply services for firms in the natural gas drilling industry. Following the October 30, 2020 closing, Aqua Infrastructure does not provide any services to the natural gas drilling industry. Aqua Resources offers, through a third-party, water and sewer line protection solutions and repair services to households.

Essential Utilities, which prior to its name change on February 3, 2020 was known as Aqua America, Inc., was formed in 1968 as a holding company for its primary subsidiary, Aqua Pennsylvania, formerly known as Philadelphia Suburban Water Company. In the early 1990s, we embarked on a growth through acquisition strategy. Our most significant transactions to date have been the merger with Consumers Water Company in 1999, the acquisition of the regulated water and wastewater operations of AquaSource, Inc. in 2003, the acquisition of Heater Utilities, Inc. in 2004, the acquisition of American Water Works Company, Inc.'s regulated water and wastewater operations in Ohio in 2012, and the Peoples Gas

# PART I

## Item 1. Business.

### Overview

Middlesex Water Company (Middlesex) was incorporated as a water utility company in 1897 and owns and operates regulated water utility and wastewater systems primarily in New Jersey and Delaware. Middlesex also operates water and wastewater systems under contract on behalf of municipal and private clients primarily in New Jersey and Delaware.

The terms "the Company," "we," "our," and "us" refer to Middlesex Water Company and its subsidiaries, including Tidewater Utilities, Inc. (Tidewater) and Tidewater's wholly-owned subsidiaries, Southern Shores Water Company, LLC (Southern Shores) and White Marsh Environmental Systems, Inc. (White Marsh). The Company's other subsidiaries are Pinelands Water Company (Pinelands Water) and Pinelands Wastewater Company (Pinelands Wastewater) (collectively, Pinelands), Utility Service Affiliates, Inc. (USA), Utility Service Affiliates (Perth Amboy) Inc., (USA-PA), Tidewater Environmental Services, Inc. (TESI) and Twin Lakes Utilities, Inc. (Twin Lakes).

The Company's principal executive offices are located at 485C Route 1 South, Suite 400, Iselin, New Jersey 08830. Our telephone number is (732) 634-1500. Our website address is http://www.middlesexwater.com. Information contained on our website is not part of this Annual Report on Form 10-K. We make available, free of charge through our website, reports and amendments filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, after such material is electronically filed with or furnished to the United States Securities and Exchange Commission (the SEC).

### *Middlesex System*

The Middlesex System in New Jersey provides water services to approximately 61,000 retail customers, primarily in eastern Middlesex County, New Jersey and provides water under wholesale contracts to the City of Rahway, Townships of Edison and Marlboro, the Borough of Highland Park and the Old Bridge Municipal Utilities Authority. The Middlesex System treats, stores and distributes water for residential, commercial, industrial and fire protection purposes. The Middlesex System also provides water treatment and pumping services to the Township of East Brunswick under contract. The amount of water supply allocated to the Township of East Brunswick is granted directly to the Township by the New Jersey Water Supply Authority. The Middlesex System produced approximately 59% of our 2020 consolidated operating revenues.

The Middlesex System's retail customers are located in an area of approximately 55 square miles in Woodbridge Township, the City of South Amboy, the Boroughs of Metuchen and Carteret, portions of the Township of Edison and the Borough of South Plainfield, all in Middlesex County, and a portion of the Township of Clark in Union County. Retail customers include a mix of residential customers, large industrial concerns and commercial and light industrial facilities. These customers are located in generally well-developed areas of central New Jersey.

The contract customers of the Middlesex System comprise an area of approximately 110 square miles with a population of over 200,000. Contract sales to the Townships of Edison and Marlboro, the City of Rahway and the Old Bridge Municipal Utilities Authority are supplemental to the water systems owned and operated by these customers. Middlesex is the sole source of water for the Borough of Highland Park and the Township of East Brunswick.

Middlesex provides water service to approximately 300 customers in Cumberland County, New Jersey. This system is referred to as Bayview, and is not physically interconnected with the Middlesex System. Bayview produced less than 1% of our 2020 consolidated operating revenues.



### *Tidewater System*

Tidewater, together with its wholly-owned subsidiary, Southern Shores, provides water services to approximately 52,000 retail customers for residential, commercial and fire protection purposes in over 430 separate communities in New Castle, Kent and Sussex Counties, Delaware. The Tidewater System produced approximately 28% of our 2020 consolidated operating revenues.

### *USA-PA*

USA-PA operates the City of Perth Amboy, New Jersey's (Perth Amboy) water and wastewater systems under a 10-year agreement, which expires in December 2028. There are approximately 12,000 customers comprised of residential, commercial and industrial connections, most of which are served by both the water and wastewater systems. In addition to performing day-to day operations, USA-PA is also responsible for emergency responses and management of capital projects funded by Perth Amboy. USA-PA produced approximately 5% of our 2020 consolidated operating revenues.

### *Pinelands Systems*

Pinelands Water provides water services to approximately 2,500 residential customers in Burlington County, New Jersey. Pinelands Water is not physically interconnected with the Middlesex System. Pinelands Water produced approximately 1% of our 2020 consolidated operating revenues.

Pinelands Wastewater provides wastewater collection and treatment services to approximately 2,500 residential customers. Under contract, it also services one municipal wastewater system in Burlington County, New Jersey with approximately 200 residential customers. Pinelands Wastewater produced approximately 1% of our 2020 consolidated operating revenues.

### *USA*

***Tidewater System***

Tidewater, together with its wholly-owned subsidiary, Southern Shores, provides water services to approximately 52,000 retail customers for residential, commercial and fire protection purposes in over 430 separate communities in New Castle, Kent and Sussex Counties, Delaware. The Tidewater System produced approximately 28% of our 2020 consolidated operating revenues.

***USA-PA***

USA-PA operates the City of Perth Amboy, New Jersey's (Perth Amboy) water and wastewater systems under a 10-year agreement, which expires in December 2028. There are approximately 12,000 customers comprised of residential, commercial and industrial connections, most of which are served by both the water and wastewater systems. In addition to performing day-to day operations, USA-PA is also responsible for emergency responses and management of capital projects funded by Perth Amboy. USA-PA produced approximately 5% of our 2020 consolidated operating revenues.

***Pinelands Systems***

Pinelands Water provides water services to approximately 2,500 residential customers in Burlington County, New Jersey. Pinelands Water is not physically interconnected with the Middlesex System. Pinelands Water produced approximately 1% of our 2020 consolidated operating revenues.

Pinelands Wastewater provides wastewater collection and treatment services to approximately 2,500 residential customers. Under contract, it also services one municipal wastewater system in Burlington County, New Jersey with approximately 200 residential customers. Pinelands Wastewater produced approximately 1% of our 2020 consolidated operating revenues.

***USA***

USA operates the Borough of Avalon, New Jersey's (Avalon) water utility, sewer utility and storm water system under a ten-year operations and maintenance contract expiring in 2022. USA serves approximately 6,400 retail customers in Avalon, most of which are served by both the water system and wastewater collection system. In addition to performing day-to-day operations, USA is responsible for billing, collections, customer service, emergency responses and management of capital projects funded by Avalon.

USA operates the Borough of Highland Park, New Jersey's (Highland Park) water utility and sewer utility under a ten-year operations and maintenance contract expiring in 2030. USA serves approximately 3,300 mostly retail customers in Highland Park. The contract commenced July 1, 2020.

USA also provides unregulated water and wastewater services under contract with several other smaller New Jersey municipalities.

Under a marketing agreement with HomeServe, USA offers residential customers in New Jersey and Delaware various water and wastewater related home maintenance programs. HomeServe is a leading national provider of such home maintenance service programs. USA receives a service fee for the billing, cash collection and other administrative matters associated with HomeServe's service contracts. The agreement expires in July 2021 and renewal discussions are underway.

USA produced approximately 2% of our 2020 consolidated operating revenues.

***TESI System***

TESI provides wastewater collection and treatment services to approximately 3,900 retail customers in Sussex County, Delaware. TESI produced approximately 2% of our 2020 consolidated operating revenues.



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***White Marsh***

White Marsh operates or maintains water and/or wastewater systems that serve approximately 1,900 retail customers under more than 36 separate contracts. White Marsh also owns two commercial properties that are leased to Tidewater for its administrative office campus and its field operations center. White Marsh produced approximately 1% of our 2020 consolidated operating revenues.

**Financial Information**

Consolidated operating revenues, operating income and net income are as follows:

| | (Thousands of Dollars) Years Ended December 31, | | |
|---|---|---|---|
| | **2020** | **2019** | **2018** |
| Operating Revenues | $ 141,592 | $ 134,598 | $ 138,077 |
| Operating Income | $ 37,420 | $ 35,520 | $ 37,142 |
| Net Income | $ 38,425 | $ 33,888 | $ 32,452 |

Operating revenues were earned from the following sources:

**EXHIBIT 99.1**

**FOR IMMEDIATE RELEASE**

# Middlesex Water Company Declares Quarterly Cash Dividend

ISELIN, N.J., Jan. 28, 2021 -- Middlesex Water Company (NASDAQ:MSEX) announced today that its Board of Directors has declared a cash dividend of $0.2725 per share on its common stock payable on March 1, 2021 to holders of record as of February 12, 2021. Middlesex Water has paid cash dividends in varying amounts continually since 1912 and has increased its annual dividend rate for 48 consecutive years.

Organized in 1897, Middlesex Water provides regulated and unregulated water and wastewater utility services primarily in New Jersey and Delaware through various subsidiary companies. To learn more about Middlesex Water, including information about its Investment Plan, visit the Investor Relations section at www.middlesexwater.com.

**ABOUT MIDDLESEX WATER COMPANY**

Middlesex Water Company serves as a trusted provider offering life-sustaining high quality water service for residential, commercial, industrial and fire protection purposes. The Company offers a full range of water, wastewater utility and related services. An investor-owned public utility, Middlesex Water is a professional services provider specializing in municipal and industrial contract operations and water and wastewater system technical operations and maintenance. The company and its subsidiaries form the Middlesex Water family of companies, which collectively serve a population of nearly half a million people in New Jersey and Delaware. Named a 2020 Top Workplace in New Jersey, Middlesex is focused on meeting the needs of our employees, customers, and shareholders. We invest in our people, our infrastructure and the communities we serve to support reliable and resilient utility services, economic growth and quality of life. To learn more about Middlesex Water, visit https://www.middlesexwater.com Please follow us on Facebook, Twitter and LinkedIn.

*This release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including, among others, our long-term strategy and expectations, the status of our acquisition program, the impact of our acquisitions, the impact of current and projected rate requests and the impact of our capital program on our environmental compliance. There are important factors that could cause actual results to differ materially from those expressed or implied by such forward-looking statements including: general economic business conditions, unfavorable weather conditions, the success of certain cost containment initiatives, changes in regulations or regulatory treatment, availability and the cost of capital, the success of growth initiatives and other factors discussed in our filings with the Securities and Exchange Commission.*

**Contact:**
Bernadette Sohler, Vice President – Corporate Affairs
Middlesex Water Company
(732) 638-7549
www.middlesexwater.com

**Item 6.** ***Selected Financial Data***

**FIVE YEAR FINANCIAL AND STATISTICAL REVIEW**
**SJW Group and Subsidiaries**

| | 2020 | 2019 | 2018 | 2017 | 2016 |
|---|---|---|---|---|---|
| **CONSOLIDATED RESULTS OF OPERATIONS** (in thousands) | | | | | |
| Operating revenue | $ 564,526 | 420,482 | 397,699 | 389,225 | 339,706 |
| Operating expense: | | | | | |
| Purchased water | 100,723 | 99,118 | 97,378 | 86,456 | 72,971 |
| Power | 13,330 | 7,443 | 6,180 | 7,295 | 6,102 |
| Groundwater extraction charges | 71,359 | 43,917 | 46,770 | 47,817 | 32,088 |
| Other production expenses | 40,380 | 25,291 | 18,398 | 16,571 | 14,470 |
| Administrative and general | 79,741 | 66,301 | 48,933 | 48,940 | 41,529 |
| Maintenance | 22,158 | 20,505 | 18,414 | 18,361 | 18,361 |
| Property taxes and other non-income taxes | 29,886 | 19,068 | 14,975 | 13,642 | 12,123 |
| Depreciation and amortization | 89,279 | 65,592 | 54,601 | 48,292 | 44,625 |
| Merger related expenses | — | 15,768 | 18,610 | — | — |
| Total operating expense | 446,856 | 363,003 | 324,259 | 287,374 | 242,269 |
| Operating income | 117,670 | 57,479 | 73,440 | 101,851 | 97,437 |
| Interest expense, other income and expense | (47,775) | (25,398) | (24,608) | (5,358) | (11,056) |
| Income before income taxes | 69,895 | 32,081 | 48,832 | 96,493 | 86,381 |
| Provision for income taxes | 8,380 | 8,454 | 10,065 | 35,393 | 33,542 |
| Net income before noncontrolling interest | 61,515 | 23,627 | 38,767 | 61,100 | 52,839 |
| Less net income attributable to the noncontrolling interest | — | 224 | — | 1,896 | — |
| SJW Group net income | $ 61,515 | 23,403 | 38,767 | 59,204 | 52,839 |
| Dividends paid | $ 36,509 | 34,134 | 23,074 | 21,332 | 16,559 |
| **CONSOLIDATED PER SHARE DATA** | | | | | |
| Earnings per share - diluted | 2.14 | 0.82 | 1.82 | 2.86 | 2.57 |
| Dividends paid | 1.28 | 1.20 | 1.12 | 1.04 | 0.81 |
| Book value per common share | 32.12 | 31.28 | 31.31 | 22.57 | 20.61 |
| **CONSOLIDATED BALANCE SHEET** (in thousands) | | | | | |
| Utility plant and intangible assets | $ 3,380,048 | 3,168,505 | 1,935,911 | 1,792,323 | 1,666,381 |
| Less accumulated depreciation and amortization | 1,045,136 | 962,019 | 607,090 | 553,059 | 520,018 |
| Net utility plant | 2,334,912 | 2,206,486 | 1,328,821 | 1,239,264 | 1,146,363 |
| Total assets | 3,311,465 | 3,132,470 | 1,956,389 | 1,458,001 | 1,443,376 |
| Capitalization: | | | | | |
| Stockholders' equity | 917,160 | 889,984 | 889,312 | 463,209 | 421,646 |
| Long-term debt, less current portion | 1,287,580 | 1,283,597 | 431,424 | 431,092 | 433,335 |
| Total capitalization | $ 2,204,740 | 2,173,581 | 1,320,736 | 894,301 | 854,981 |
| **OTHER STATISTICS—WATER UTILITY SERVICES** | | | | | |
| Average revenue per connection (in thousands) | $ 1,450 | 1,087 | 1,609 | 1,594 | 1,402 |

| | | | | | |
|---|---|---|---|---|---|
| Investment in gross utility plant per connection (in thousands) | $ 8,683 | 8,195 | 7,832 | 7,340 | 6,874 |
| Connections at year-end | 389,293 | 386,607 | 247,267 | 244,133 | 242,421 |
| Miles of main at year-end | 5,462 | 5,465 | 3,091 | 3,082 | 3,069 |
| Water production (million gallons) | 53,604 | 42,216 | 40,053 | 38,584 | 35,847 |
| Maximum daily production (million gallons) | 218 | 206 | 149 | 148 | 136 |
| Population served (estimate) | 1,614,866 | 1,604,442 | 1,114,200 | 1,100,200 | 1,092,600 |

**Note:** Information in this table, including Other Statistics, include SJWNE, LLC from the date of October 9, 2019.

**Item 6.** ***Selected Financial Data***

**FIVE YEAR FINANCIAL AND STATISTICAL REVIEW**
**SJW Group and Subsidiaries**

| | 2020 | 2019 | 2018 | 2017 | 2016 |
|---|---|---|---|---|---|
| **CONSOLIDATED RESULTS OF OPERATIONS** (in thousands) | | | | | |
| Operating revenue | $ 564,526 | 420,482 | 397,699 | 389,225 | 339,706 |
| Operating expense: | | | | | |
| Purchased water | 100,723 | 99,118 | 97,378 | 86,456 | 72,971 |
| Power | 13,330 | 7,443 | 6,180 | 7,295 | 6,102 |
| Groundwater extraction charges | 71,359 | 43,917 | 46,770 | 47,817 | 32,088 |
| Other production expenses | 40,380 | 25,291 | 18,398 | 16,571 | 14,470 |
| Administrative and general | 79,741 | 66,301 | 48,933 | 48,940 | 41,529 |
| Maintenance | 22,158 | 20,505 | 18,414 | 18,361 | 18,361 |
| Property taxes and other non-income taxes | 29,886 | 19,068 | 14,975 | 13,642 | 12,123 |
| Depreciation and amortization | 89,279 | 65,592 | 54,601 | 48,292 | 44,625 |
| Merger related expenses | — | 15,768 | 18,610 | — | — |
| Total operating expense | 446,856 | 363,003 | 324,259 | 287,374 | 242,269 |
| Operating income | 117,670 | 57,479 | 73,440 | 101,851 | 97,437 |
| Interest expense, other income and expense | (47,775) | (25,398) | (24,608) | (5,358) | (11,056) |
| Income before income taxes | 69,895 | 32,081 | 48,832 | 96,493 | 86,381 |
| Provision for income taxes | 8,380 | 8,454 | 10,065 | 35,393 | 33,542 |
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| Less net income attributable to the noncontrolling interest | — | 224 | — | 1,896 | — |
| SJW Group net income | $ 61,515 | 23,403 | 38,767 | 59,204 | 52,839 |
| Dividends paid | $ 36,509 | 34,134 | 23,074 | 21,332 | 16,559 |
| **CONSOLIDATED PER SHARE DATA** | | | | | |
| Earnings per share - diluted | 2.14 | 0.82 | 1.82 | 2.86 | 2.57 |
| Dividends paid | 1.28 | 1.20 | 1.12 | 1.04 | 0.81 |
| Book value per common share | 32.12 | 31.28 | 31.31 | 22.57 | 20.61 |
| **CONSOLIDATED BALANCE SHEET** (in thousands) | | | | | |
| Utility plant and intangible assets | $ 3,380,048 | 3,168,505 | 1,935,911 | 1,792,323 | 1,666,381 |
| Less accumulated depreciation and amortization | 1,045,136 | 962,019 | 607,090 | 553,059 | 520,018 |
| Net utility plant | 2,334,912 | 2,206,486 | 1,328,821 | 1,239,264 | 1,146,363 |
| Total assets | 3,311,465 | 3,132,470 | 1,956,389 | 1,458,001 | 1,443,376 |
| Capitalization: | | | | | |
| Stockholders' equity | 917,160 | 889,984 | 889,312 | 463,209 | 421,646 |
| Long-term debt, less current portion | 1,287,580 | 1,283,597 | 431,424 | 431,092 | 433,335 |
| Total capitalization | $ 2,204,740 | 2,173,581 | 1,320,736 | 894,301 | 854,981 |
| **OTHER STATISTICS—WATER UTILITY SERVICES** | | | | | |
| Average revenue per connection (in thousands) | $ 1,450 | 1,087 | 1,609 | 1,594 | 1,402 |

| | | | | | |
|---|---|---|---|---|---|
| Investment in gross utility plant per connection (in thousands) | $ 8,683 | 8,195 | 7,832 | 7,340 | 6,874 |
| Connections at year-end | 389,293 | 386,607 | 247,267 | 244,133 | 242,421 |
| Miles of main at year-end | 5,462 | 5,465 | 3,091 | 3,082 | 3,069 |
| Water production (million gallons) | 53,604 | 42,216 | 40,053 | 38,584 | 35,847 |
| Maximum daily production (million gallons) | 218 | 206 | 149 | 148 | 136 |
| Population served (estimate) | 1,614,866 | 1,604,442 | 1,114,200 | 1,100,200 | 1,092,600 |

**Note:** Information in this table, including Other Statistics, include SJWNE, LLC from the date of October 9, 2019.

Lead and copper may enter drinking water primarily through plumbing materials. The Company is required to comply with the Lead and Copper Rule established by the EPA and administered by the DEP. The Company must monitor drinking water at customer taps for compliance with this rule. If lead concentrations exceed an action level, the Company must undertake a number of additional actions to control corrosion, inform the public about steps they should take to protect their health and may be required to replace lead service lines under its control. See "Management's Discussion and Analysis – Environmental Matters" for a discussion of the Company's compliance with the Lead and Copper rule.

The DEP and the Susquehanna River Basin Commission, or SRBC, regulate the amount of water withdrawn from streams in the watershed to assure that sufficient quantities are available to meet the needs of the Company and other regulated users. Through its Division of Dam Safety, the DEP regulates the operation and maintenance of the Company's impounding dams. The Company routinely inspects its dams and prepares annual reports of their condition as required by DEP regulations. The DEP reviews these reports and inspects the Company's dams. The DEP most recently inspected the Company's dams in 2019.

Since 1980, the DEP has required any new dam to have a spillway that is capable of passing the design flood without overtopping the dam. The design flood is either the Probable Maximum Flood, or PMF, or some fraction of it, depending on the size and location of the dam. PMF is very conservative and is calculated using the most severe combination of meteorological and hydrologic conditions reasonably possible in the watershed area of a dam.

The Company engaged a professional engineer to analyze the spillway capacities at the Lake Williams and Lake Redman dams and validate the DEP's recommended flood design for the dams. Management presented the results of the study to the DEP in December 2004, and DEP then requested that the Company submit a proposed schedule for the actions to address the spillway capacities. Thereafter, the Company retained an engineering firm to prepare preliminary designs for increasing the spillway capacities to pass the PMF through armoring the dams with roller compacted concrete. Management has met with the DEP on a regular basis to review the preliminary design and discuss scheduling, permitting, and construction requirements. Recently, DEP expressed concern regarding the stability of the Lake Williams spillway in light of current design standards. The Company is currently completing the final design and the permitting process to armor and replace the spillway of the Lake Williams dam. The Company expects to finalize its plans in 2021 and begin construction in 2022 at a total cost of approximately $27 million. The Lake Redman dam will be reviewed following the completion of the work on the Lake Williams dam.

Capital expenditures and operating costs required as a result of water quality standards and environmental requirements have been traditionally recognized by state public utility commissions as appropriate for inclusion in establishing rates. The capital expenditures currently required as a result of water quality standards and environmental requirements have been budgeted in the Company's capital program and represent less than 15% of its expected total capital expenditures over the next five years. The Company is currently in compliance with wastewater environmental standards and does not anticipate any major capital expenditures for its current wastewater business.

**Growth**

(All dollar amounts are stated in thousands of dollars)

The Company continues to grow its number of customers and distribution facilities.

The growth in the number of customers of the Company is due primarily to the acquisition of water and wastewater systems and organic growth. During the year ended December 31, 2020, the Company increased its number of customers from 71,411 to 72,681. See "Management's Discussion and Analysis – Acquisitions and Growth" for a discussion of the Company's recent acquisitions.

The Company continues to grow its water distribution and wastewater collection systems to provide reliable service to its expanding franchised service territory and the increasing population within that territory. During the year ended December 31, 2020, the Company installed an additional 14,950 feet of water distribution mains and acquired an additional 32,593 feet of wastewater collection mains resulting in 987 miles of water mains and 36 miles of wastewater mains as of December 31, 2020.



The Company's growth in revenues is primarily a result of customer growth and increases in water and wastewater rates. During the year ended December 31, 2020, the Company recognized revenue of $53,852, an increase of $2,274, or 4.4%, as compared to $51,578 during the year ended December 31, 2019. In 2020, operating revenue was derived from the following sources and in the following percentages: residential, 66%; commercial and industrial, 26%; and other, 8%, which is primarily from the provision for fire service but includes other water and wastewater service-related income. See "Management's Discussion and Analysis – Rate Matters" for a discussion of the Company's rate case management.

**THE YORK WATER COMPANY**

**PART I**

**Item 1. Business.**

The York Water Company (the "Company") is the oldest investor-owned water utility in the United States and is duly organized under the laws of the Commonwealth of Pennsylvania. The Company has operated continuously since 1816. The primary business of the Company is to impound, purify to meet or exceed safe drinking water standards and distribute water. The Company also owns and operates two wastewater collection systems and five wastewater collection and treatment systems. The Company operates within its franchised water and wastewater territory, which covers portions of 51 municipalities within three counties in south-central Pennsylvania. The Company is regulated by the Pennsylvania Public Utility Commission, or PPUC, for both water and wastewater in the areas of billing, payment procedures, dispute processing, terminations, service territory, debt and equity financing and rate setting. The Company must obtain PPUC approval before changing any practices associated with the aforementioned areas.

Water service is supplied through the Company's own distribution system. The Company obtains the bulk of its water supply from both the South Branch and East Branch of the Codorus Creek, which together have an average daily flow of 73.0 million gallons. This combined watershed area is approximately 117 square miles. The Company has two reservoirs, Lake Williams and Lake Redman, which together hold up to approximately 2.2 billion gallons of water. The Company supplements its reservoirs with a 15-mile pipeline from the Susquehanna River to Lake Redman which provides access to an additional supply of 12.0 million gallons of untreated water per day. The Company also owns nine wells which are capable of providing a safe yield of approximately 597,000 gallons per day to supply water to the customers of its satellite systems in Adams County. As of December 31, 2020, the Company's average daily availability was 35.6 million gallons, and average daily consumption was approximately 19.9 million gallons. The Company's service territory had an estimated population of 202,000 as of December 31, 2020. Industry within the Company's service territory is diversified, manufacturing such items as fixtures and furniture, electrical machinery, food products, paper, ordnance units, textile products, air conditioning systems, laundry detergent, barbells, and motorcycles.

The Company's water business is somewhat dependent on weather conditions, particularly the amount and timing of rainfall. Revenues are particularly vulnerable to weather conditions in the summer months. Prolonged periods of hot and dry weather generally cause increased water usage for watering lawns, washing cars, and keeping golf courses and sports fields irrigated. Conversely, prolonged periods of dry weather could lead to drought restrictions from governmental authorities. Despite the Company's adequate water supply, customers may be required to cut back water usage under such drought restrictions which would negatively impact revenues. The Company has addressed some of this vulnerability by instituting minimum customer charges which are intended to cover fixed costs of operations under all likely weather conditions.

The Company's business does not require large amounts of working capital and is not dependent on any single customer or a very few customers for a material portion of its business. Increases in revenues are generally dependent on the Company's ability to obtain rate increases from the PPUC in a timely manner and in adequate amounts and to increase volumes of water sold through increased consumption and increases in the number of customers served. The Company continuously looks for water and wastewater acquisition and expansion opportunities both within and outside its current service territory as well as additional opportunities to enter into bulk water contracts with municipalities and other entities to supply water.

The Company has agreements with several municipalities to provide sewer billing and collection services. The Company also has a service line protection program on a targeted basis in order to further diversify its business. Under this optional program, customers pay a fixed monthly fee, and the Company will repair or replace damaged customer service lines, as needed, subject to an annual maximum dollar amount. The Company continues to review and consider opportunities to expand both initiatives.

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**Competition**

As a regulated utility, the Company operates within an exclusive franchised territory that is substantially free from direct competition with other public utilities, municipalities, and other entities. Although the Company has been granted an exclusive franchise for each of its existing community water and wastewater systems, the ability of the Company to expand or acquire new service territories may be affected by currently unknown competitors obtaining franchises to surrounding systems by application or acquisition. These competitors may include other investor-owned utilities, nearby municipally-owned utilities and sometimes competition from strategic or financial purchasers seeking to enter or expand in the water and wastewater industry. The addition of new service territory and the acquisition of other utilities are generally subject to review and approval by the PPUC.

**Water and Wastewater Quality and Environmental Regulations**

## Consensus Forecast of U.S. Interest Rates and Key Assumptions

| | History | | | | | | | | Consensus Forecasts-Quarterly Avg. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Average For Week Ending | | | | Average For Month | | | Latest Qtr | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q |
| | May 21 | May 14 | May 7 | Apr 30 | Apr | Mar | Feb | 1Q 2021 | **2021** | **2021** | **2021** | **2022** | **2022** | **2022** |
| Federal Funds Rate | 0.06 | 0.06 | 0.06 | 0.07 | 0.07 | 0.07 | 0.08 | 0.08 | **0.1** | **0.1** | **0.1** | **0.1** | **0.1** | **0.1** |
| Prime Rate | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | **3.3** | **3.3** | **3.3** | **3.3** | **3.3** | **3.3** |
| LIBOR, 3-mo. | 0.15 | 0.16 | 0.17 | 0.18 | 0.18 | 0.19 | 0.19 | 0.20 | **0.2** | **0.2** | **0.2** | **0.3** | **0.3** | **0.3** |
| Commercial Paper, 1-mo. | 0.04 | 0.04 | 0.29 | 0.04 | 0.04 | 0.07 | 0.06 | 0.07 | **0.1** | **0.1** | **0.1** | **0.1** | **0.2** | **0.2** |
| Treasury bill, 3-mo. | 0.01 | 0.02 | 0.02 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | **0.0** | **0.1** | **0.1** | **0.1** | **0.1** | **0.2** |
| Treasury bill, 6-mo. | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.06 | 0.07 | **0.1** | **0.1** | **0.1** | **0.1** | **0.2** | **0.2** |
| Treasury bill, 1 yr. | 0.05 | 0.05 | 0.06 | 0.05 | 0.06 | 0.08 | 0.07 | 0.08 | **0.1** | **0.1** | **0.2** | **0.2** | **0.3** | **0.3** |
| Treasury note, 2 yr. | 0.16 | 0.16 | 0.16 | 0.17 | 0.16 | 0.15 | 0.12 | 0.13 | **0.2** | **0.3** | **0.3** | **0.4** | **0.5** | **0.5** |
| Treasury note, 5 yr. | 0.84 | 0.83 | 0.81 | 0.86 | 0.86 | 0.82 | 0.54 | 0.60 | **0.9** | **1.0** | **1.1** | **1.2** | **1.2** | **1.3** |
| Treasury note, 10 yr. | 1.64 | 1.65 | 1.60 | 1.63 | 1.64 | 1.61 | 1.26 | 1.32 | **1.7** | **1.8** | **1.9** | **2.0** | **2.0** | **2.1** |
| Treasury bond, 30 yr. | 2.36 | 2.36 | 2.27 | 2.29 | 2.30 | 2.34 | 2.04 | 2.07 | **2.4** | **2.5** | **2.6** | **2.6** | **2.7** | **2.8** |
| Corporate Aaa bond | 3.09 | 3.11 | 3.01 | 3.04 | 3.04 | 3.15 | 2.84 | 2.88 | **3.0** | **3.1** | **3.3** | **3.3** | **3.3** | **3.4** |
| Corporate Baa bond | 3.56 | 3.57 | 3.48 | 3.51 | 3.51 | 3.62 | 3.30 | 3.35 | **3.8** | **4.0** | **4.1** | **4.2** | **4.2** | **4.3** |
| State & Local bonds | 2.64 | 2.65 | 2.65 | 2.63 | 2.66 | 2.74 | 2.63 | 2.68 | **2.6** | **2.7** | **2.8** | **2.9** | **2.9** | **2.9** |
| Home mortgage rate | 3.00 | 2.94 | 2.96 | 2.98 | 3.06 | 3.08 | 2.81 | 2.88 | **3.1** | **3.3** | **3.4** | **3.5** | **3.5** | **3.6** |
| | History | | | | | | | | Consensus Forecasts-Quarterly | | | | | |
| | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q |
| **Key Assumptions** | 2019 | 2019 | 2019 | 2020 | 2020 | 2020 | 2020 | 2021 | **2021** | **2021** | **2021** | **2022** | **2022** | **2022** |
| Fed's AFE Index | 110.4 | 110.6 | 110.5 | 111.4 | 112.4 | 107.3 | 105.2 | 103.4 | **102.7** | **102.7** | **102.9** | **102.9** | **103.1** | **103.2** |
| Real GDP | 1.5 | 2.6 | 2.4 | -5.0 | -31.4 | 33.4 | 4.3 | 6.4 | **9.3** | **6.9** | **5.0** | **3.9** | **3.1** | **2.6** |
| GDP Price Index | 2.5 | 1.5 | 1.4 | 1.4 | -1.8 | 3.5 | 2.0 | 4.3 | **3.3** | **2.5** | **2.1** | **2.2** | **2.2** | **2.3** |
| Consumer Price Index | 3.5 | 1.3 | 2.6 | 1.0 | -3.1 | 4.7 | 2.4 | 3.7 | **4.8** | **2.6** | **2.1** | **2.2** | **2.3** | **2.2** |
| PCE Price Index | 2.5 | 1.4 | 1.5 | 1.3 | -1.6 | 3.7 | 1.5 | 3.7 | **4.0** | **2.4** | **2.0** | **2.1** | **2.2** | **2.2** |

**Blue Chip Financial Forecasts, June 1, 2021. Copyright © 2021 CCH Incorporated. All Rights Reserved.**

**6/28/2021**

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| Company Name | Enterprise value to Net PPE | Month End 6/28/2021 (0) | Month End 5/31/2021 (-1) | Month End 4/30/2021 (-2) | Month End 3/31/2021 (-3) | Month End 2/28/2021 (-4) | Month End 1/31/2021 (-5) | Month End 12/31/2020 (-6) | Month End 11/30/2020 (-7) | Month End 10/31/2020 (-8) | Month End 9/30/2020 (-9) | Month End 8/31/2020 (-10) | Month End 7/31/2020 (-11) | Month End 6/30/2020 (-12) | Month End 5/31/2020 (-13) | Month End 4/30/2020 (-14) | Month End 3/31/2020 (-15) | Month End 2/29/2020 (-16) | Month End 1/31/2020 (-17) | Month End 12/31/2019 (-18) | Month End 11/30/2019 (-19) | Month End 10/31/2019 (-20) | Month End 9/30/2019 (-21) | Month End 8/31/2019 (-22) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE |
| AMERICAN STATES WATER COMP | 2.281 | 2.287 | 2.267 | 2.180 | 2.165 | 2.259 | 2.314 | 2.207 | 2.228 | 2.235 | 2.299 | 2.313 | 2.357 | 2.434 | 2.349 | 2.407 | 2.372 | 2.672 | 2.622 | 2.632 | 2.894 | 2.753 | 2.898 |
| AMERICAN WATER WORKS COMP | 1.965 | 1.964 | 1.958 | 1.903 | 1.871 | 2.016 | 1.964 | 1.996 | 1.962 | 1.909 | 1.910 | 1.954 | 1.773 | 1.791 | 1.719 | 1.698 | 1.744 | 1.849 | 1.717 | 1.732 | 1.755 | 1.762 | 1.810 |
| ESSENTIAL UTILITIES, INC. | 1.793 | 1.826 | 1.812 | 1.751 | 1.715 | 1.806 | 1.832 | 1.820 | 1.725 | 1.699 | 1.793 | 1.828 | 1.743 | 2.513 | 1.804 | 1.762 | 1.741 | 1.978 | 1.804 | 1.735 | 1.766 | 1.748 | 1.756 |
| ARTESIAN RESOURCES CORPORA | 0.904 | 0.981 | 0.972 | 0.960 | 0.925 | 0.982 | 0.923 | 0.936 | 0.890 | 0.878 | 0.902 | 0.888 | 0.905 | 0.897 | 0.889 | 0.932 | 0.893 | 0.954 | 0.943 | 0.953 | 0.941 | 0.941 | 0.944 |
| CALIFORNIA WATER SERVICE GR | 1.488 | 1.517 | 1.554 | 1.494 | 1.500 | 1.461 | 1.449 | 1.393 | 1.288 | 1.267 | 1.352 | 1.369 | 1.360 | 1.366 | 1.324 | 1.410 | 1.393 | 1.468 | 1.448 | 1.470 | 1.565 | 1.505 | 1.607 |
| MIDDLESEX WATER COMPANY | 2.117 | 2.213 | 2.115 | 2.050 | 1.899 | 2.137 | 1.978 | 1.938 | 1.838 | 1.788 | 1.882 | 1.878 | 1.939 | 2.011 | 1.822 | 1.818 | 1.874 | 2.070 | 2.028 | 2.078 | 2.013 | 1.957 | 1.934 |
| SJW GROUP | 1.418 | 1.446 | 1.460 | 1.443 | 1.429 | 1.451 | 1.491 | 1.471 | 1.399 | 1.401 | 1.431 | 1.420 | 1.416 | 1.450 | 1.393 | 1.370 | 2.195 | 1.557 | 1.512 | 1.531 | 1.561 | 1.476 | 1.506 |
| THE YORK WATER COMPANY | 2.086 | 2.271 | 2.326 | 2.224 | 1.968 | 2.040 | 2.165 | 2.160 | 2.036 | 2.037 | 2.205 | 2.227 | 2.294 | 2.174 | 2.000 | 2.131 | 2.091 | 2.302 | 2.250 | 2.221 | 2.191 | 2.175 | 1.931 |

| Company Name | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER COMP | 2.897 | 2.853 | 2.828 | 2.719 | 2.754 | 2.874 | 2.944 | 2.805 | 2.832 | 2.841 | 2.955 | 2.972 | 3.030 | 3.224 | 3.110 | 3.188 | 3.061 | 3.448 | 3.382 | 3.426 | 3.766 | 3.582 | 3.881 |
| AMERICAN WATER WORKS COMP | 2.255 | 2.224 | 2.217 | 2.154 | 2.094 | 2.256 | 2.198 | 2.234 | 2.196 | 2.136 | 2.143 | 2.191 | 1.989 | 2.096 | 2.012 | 1.987 | 2.062 | 2.187 | 2.030 | 2.041 | 2.067 | 2.075 | 2.153 |
| ESSENTIAL UTILITIES, INC. | 1.634 | 1.671 | 1.658 | 1.602 | 1.578 | 1.663 | 1.687 | 1.660 | 1.574 | 1.550 | 1.622 | 1.653 | 1.576 | 2.289 | 1.643 | 1.605 | 1.552 | 1.763 | 1.608 | 1.555 | 1.582 | 1.567 | 2.227 |
| ARTESIAN RESOURCES CORPORA | 1.525 | 1.623 | 1.608 | 1.588 | 1.542 | 1.636 | 1.539 | 1.589 | 1.511 | 1.490 | 1.542 | 1.517 | 1.547 | 1.528 | 1.514 | 1.587 | 1.529 | 1.633 | 1.615 | 1.651 | 1.629 | 1.630 | 1.648 |
| CALIFORNIA WATER SERVICE GR | 1.857 | 1.923 | 1.970 | 1.894 | 1.879 | 1.830 | 1.815 | 1.800 | 1.665 | 1.636 | 1.742 | 1.765 | 1.752 | 1.852 | 1.795 | 1.911 | 1.887 | 1.989 | 1.962 | 1.985 | 2.113 | 2.032 | 2.190 |
| MIDDLESEX WATER COMPANY | 2.711 | 2.826 | 2.701 | 2.618 | 2.364 | 2.660 | 2.462 | 2.366 | 2.244 | 2.183 | 2.287 | 2.282 | 2.356 | 2.463 | 2.232 | 2.226 | 2.249 | 2.484 | 2.433 | 2.773 | 2.686 | 2.611 | 2.607 |
| SJW GROUP | 1.371 | 1.388 | 1.401 | 1.384 | 1.374 | 1.395 | 1.433 | 1.411 | 1.342 | 1.344 | 1.379 | 1.369 | 1.365 | 1.398 | 1.343 | 1.321 | 2.144 | 1.521 | 1.477 | 1.482 | 1.511 | 1.429 | 1.459 |
| THE YORK WATER COMPANY | 2.722 | 2.902 | 2.971 | 2.842 | 2.496 | 2.587 | 2.745 | 2.847 | 2.685 | 2.686 | 2.912 | 2.941 | 3.030 | 2.875 | 2.645 | 2.817 | 2.777 | 3.057 | 2.988 | 2.986 | 2.945 | 2.923 | 2.610 |

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**INDEX**

| Company Name | Enterprise value to Net PPE | Month End 6/28/2021 (0) | Month End 5/31/2021 (-1) | Month End 4/30/2021 (-2) | Month End 3/31/2021 (-3) | Month End 2/28/2021 (-4) | Month End 1/31/2021 (-5) | Month End 12/31/2020 (-6) | Month End 11/30/2020 (-7) | Month End 10/31/2020 (-8) | Month End 9/30/2020 (-9) | Month End 8/31/2020 (-10) | Month End 7/31/2020 (-11) | Month End 6/30/2020 (-12) | Month End 5/31/2020 (-13) | Month End 4/30/2020 (-14) | Month End 3/31/2020 (-15) | Month End 2/29/2020 (-16) | Month End 1/31/2020 (-17) | Month End 12/31/2019 (-18) | Month End 11/30/2019 (-19) | Month End 10/31/2019 (-20) | Month End 9/30/2019 (-21) | Month End 8/31/2019 (-22) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE | Enterprise value to Net PPE |
| AMERICAN STATES WATER COMP | 1.000 | 1.003 | 0.994 | 0.956 | 0.949 | 0.990 | 1.015 | 0.967 | 0.977 | 0.980 | 1.008 | 1.014 | 1.033 | 1.067 | 1.030 | 1.055 | 1.040 | 1.171 | 1.149 | 1.154 | 1.269 | 1.207 | 1.270 |
| AMERICAN WATER WORKS COMP | 1.000 | 0.999 | 0.996 | 0.968 | 0.952 | 1.026 | 0.999 | 1.016 | 0.998 | 0.971 | 0.972 | 0.994 | 0.902 | 0.911 | 0.875 | 0.864 | 0.887 | 0.941 | 0.874 | 0.881 | 0.893 | 0.896 | 0.921 |
| ESSENTIAL UTILITIES, INC. | 1.000 | 1.018 | 1.011 | 0.977 | 0.956 | 1.007 | 1.022 | 1.015 | 0.962 | 0.948 | 1.000 | 1.019 | 0.972 | 1.401 | 1.006 | 0.982 | 0.971 | 1.103 | 1.006 | 0.967 | 0.985 | 0.975 | 0.979 |
| ARTESIAN RESOURCES CORPORA | 1.000 | 1.086 | 1.076 | 1.063 | 1.024 | 1.086 | 1.022 | 1.036 | 0.985 | 0.971 | 0.999 | 0.982 | 1.002 | 0.993 | 0.984 | 1.031 | 0.988 | 1.055 | 1.044 | 1.055 | 1.041 | 1.042 | 1.045 |
| CALIFORNIA WATER SERVICE GR | 1.000 | 1.020 | 1.044 | 1.004 | 1.008 | 0.982 | 0.974 | 0.936 | 0.866 | 0.851 | 0.909 | 0.920 | 0.914 | 0.918 | 0.890 | 0.948 | 0.936 | 0.987 | 0.973 | 0.988 | 1.052 | 1.011 | 1.080 |
| MIDDLESEX WATER COMPANY | 1.000 | 1.045 | 0.999 | 0.968 | 0.897 | 1.009 | 0.934 | 0.916 | 0.868 | 0.845 | 0.889 | 0.887 | 0.916 | 0.950 | 0.861 | 0.859 | 0.885 | 0.978 | 0.958 | 0.982 | 0.951 | 0.924 | 0.913 |
| SJW GROUP | 1.000 | 1.020 | 1.030 | 1.018 | 1.008 | 1.024 | 1.051 | 1.038 | 0.987 | 0.988 | 1.009 | 1.002 | 0.999 | 1.023 | 0.982 | 0.967 | 1.548 | 1.098 | 1.066 | 1.080 | 1.101 | 1.041 | 1.062 |
| THE YORK WATER COMPANY | 1.000 | 1.089 | 1.115 | 1.066 | 0.943 | 0.978 | 1.037 | 1.035 | 0.976 | 0.976 | 1.057 | 1.067 | 1.100 | 1.042 | 0.959 | 1.021 | 1.002 | 1.103 | 1.078 | 1.064 | 1.050 | 1.042 | 0.925 |

| Company Name | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER COMP | 1.000 | 0.985 | 0.976 | 0.939 | 0.950 | 0.992 | 1.016 | 0.968 | 0.978 | 0.980 | 1.020 | 1.026 | 1.046 | 1.113 | 1.074 | 1.100 | 1.057 | 1.190 | 1.168 | 1.182 | 1.300 | 1.236 | 1.340 |
| AMERICAN WATER WORKS COMP | 1.000 | 0.986 | 0.983 | 0.955 | 0.928 | 1.000 | 0.975 | 0.991 | 0.974 | 0.947 | 0.950 | 0.972 | 0.882 | 0.929 | 0.892 | 0.881 | 0.914 | 0.970 | 0.900 | 0.905 | 0.917 | 0.920 | 0.954 |
| ESSENTIAL UTILITIES, INC. | 1.000 | 1.023 | 1.015 | 0.981 | 0.966 | 1.018 | 1.032 | 1.016 | 0.963 | 0.949 | 0.993 | 1.012 | 0.965 | 1.401 | 1.006 | 0.982 | 0.950 | 1.079 | 0.984 | 0.952 | 0.969 | 0.959 | 1.363 |
| ARTESIAN RESOURCES CORPORA | 1.000 | 1.064 | 1.054 | 1.041 | 1.011 | 1.073 | 1.009 | 1.042 | 0.991 | 0.977 | 1.011 | 0.995 | 1.014 | 1.002 | 0.993 | 1.041 | 1.002 | 1.071 | 1.059 | 1.082 | 1.068 | 1.069 | 1.081 |
| CALIFORNIA WATER SERVICE GR | 1.000 | 1.036 | 1.061 | 1.020 | 1.012 | 0.985 | 0.977 | 0.969 | 0.896 | 0.881 | 0.938 | 0.950 | 0.943 | 0.997 | 0.966 | 1.029 | 1.016 | 1.071 | 1.056 | 1.069 | 1.138 | 1.094 | 1.179 |
| MIDDLESEX WATER COMPANY | 1.000 | 1.043 | 0.997 | 0.966 | 0.872 | 0.981 | 0.908 | 0.873 | 0.828 | 0.805 | 0.844 | 0.842 | 0.869 | 0.908 | 0.823 | 0.821 | 0.830 | 0.917 | 0.898 | 1.023 | 0.991 | 0.963 | 0.962 |
| SJW GROUP | 1.000 | 1.012 | 1.022 | 1.009 | 1.002 | 1.018 | 1.045 | 1.029 | 0.978 | 0.980 | 1.005 | 0.998 | 0.995 | 1.019 | 0.979 | 0.963 | 1.563 | 1.109 | 1.077 | 1.081 | 1.102 | 1.042 | 1.064 |
| THE YORK WATER COMPANY | 1.000 | 1.066 | 1.092 | 1.044 | 0.917 | 0.951 | 1.009 | 1.046 | 0.986 | 0.987 | 1.070 | 1.081 | 1.113 | 1.056 | 0.972 | 1.035 | 1.020 | 1.123 | 1.098 | 1.097 | 1.082 | 1.074 | 0.959 |

| **6/28/2021** | Month End 6/28/2021 | Month End 5/31/2021 | Month End 4/30/2021 | Month End 3/31/2021 | Month End 2/28/2021 | Month End 1/31/2021 | Month End 12/31/2020 | Month End 11/30/2020 | Month End 10/31/2020 | Month End 9/30/2020 | Month End 8/31/2020 | Month End 7/31/2020 | Month End 6/30/2020 | Month End 5/31/2020 | Month End 4/30/2020 | Month End 3/31/2020 | Month End 2/29/2020 | Month End 1/31/2020 | Month End 12/31/2019 | Month End 11/30/2019 | Month End 10/31/2019 | Month End 9/30/2019 | Month End 8/31/2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Enterprise value to Net PPE | 100% | 102% | 102% | 99% | 95% | 101% | 102% | 102% | 98% | 97% | 100% | 100% | 99% | 101% | 97% | 97% | 98% | 108% | 103% | 102% | 105% | 103% | 101% |
| Enterprise value to Inv Cap | 100% | 103% | 102% | 100% | 96% | 100% | 101% | 100% | 98% | 96% | 100% | 100% | 98% | 101% | 98% | 101% | 101% | 108% | 106% | 107% | 108% | 106% | 107% |

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| Company Name | Month End 7/31/2019 -23 Enterprise value to Net PPE | Month End 6/30/2019 -24 Enterprise value to Net PPE | Month End 5/31/2019 -25 Enterprise value to Net PPE | Month End 4/30/2019 -26 Enterprise value to Net PPE | Month End 3/31/2019 -27 Enterprise value to Net PPE | Month End 2/28/2019 -28 Enterprise value to Net PPE | Month End 1/31/2019 -29 Enterprise value to Net PPE | Month End 12/31/2018 -30 Enterprise value to Net PPE | Month End 11/30/2018 -31 Enterprise value to Net PPE | Month End 10/31/2018 -32 Enterprise value to Net PPE | Month End 9/30/2018 -33 Enterprise value to Net PPE | Month End 8/31/2018 -34 Enterprise value to Net PPE | Month End 7/31/2018 -35 Enterprise value to Net PPE | Month End 6/30/2018 -36 Enterprise value to Net PPE | Month End 5/31/2018 -37 Enterprise value to Net PPE | Month End 4/30/2018 -38 Enterprise value to Net PPE | Month End 3/31/2018 -39 Enterprise value to Net PPE | Month End 2/28/2018 -40 Enterprise value to Net PPE | Month End 1/31/2018 -41 Enterprise value to Net PPE | Month End 12/31/2017 -42 Enterprise value to Net PPE | Month End 11/30/2017 -43 Enterprise value to Net PPE | Month End 10/31/2017 -44 Enterprise value to Net PPE | Month End 9/30/2017 -45 Enterprise value to Net PPE | Month End 8/31/2017 -46 Enterprise value to Net PPE | Month End 7/31/2017 -47 Enterprise value to Net PPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER COMF | 2.453 | 2.391 | 2.392 | 2.321 | 2.324 | 2.379 | 2.263 | 2.244 | 2.288 | 2.117 | 2.115 | 2.128 | 2.112 | 2.024 | 2.021 | 2.000 | 1.919 | 1.958 | 2.005 | 2.088 | 2.128 | 2.004 | 1.863 | 1.894 | 1.944 |
| AMERICAN WATER WORKS COMP | 1.682 | 1.683 | 1.684 | 1.610 | 1.569 | 1.574 | 1.500 | 1.448 | 1.522 | 1.448 | 1.441 | 1.462 | 1.436 | 1.405 | 1.400 | 1.433 | 1.372 | 1.393 | 1.416 | 1.511 | 1.540 | 1.497 | 1.418 | 1.442 | 1.433 |
| ESSENTIAL UTILITIES, INC. | 1.958 | 1.937 | 1.904 | 1.863 | 1.538 | 1.572 | 1.505 | 1.479 | 1.535 | 1.453 | 1.593 | 1.626 | 1.606 | 1.549 | 1.550 | 1.555 | 1.519 | 1.558 | 1.609 | 1.710 | 1.707 | 1.621 | 1.536 | 1.574 | 1.556 |
| ARTESIAN RESOURCES CORPORA | 0.921 | 0.939 | 0.928 | 0.931 | 0.954 | 0.999 | 0.927 | 0.919 | 0.963 | 0.961 | 0.966 | 0.972 | 0.980 | 1.014 | 1.035 | 1.009 | 0.973 | 0.926 | 1.009 | 1.036 | 1.138 | 1.102 | 1.040 | 1.044 | 1.072 |
| CALIFORNIA WATER SERVICE GR | 1.524 | 1.465 | 1.470 | 1.495 | 1.550 | 1.525 | 1.468 | 1.427 | 1.420 | 1.328 | 1.349 | 1.339 | 1.338 | 1.265 | 1.324 | 1.289 | 1.228 | 1.284 | 1.351 | 1.463 | 1.510 | 1.420 | 1.322 | 1.332 | 1.369 |
| MIDDLESEX WATER COMPANY | 1.975 | 1.852 | 1.900 | 1.848 | 1.794 | 1.907 | 1.835 | 1.759 | 1.772 | 1.569 | 1.664 | 1.636 | 1.567 | 1.507 | 1.592 | 1.505 | 1.361 | 1.345 | 1.410 | 1.476 | 1.697 | 1.601 | 1.474 | 1.459 | 1.486 |
| SJW GROUP | 1.435 | 1.335 | 1.373 | 1.382 | 1.366 | 1.373 | 1.630 | 1.539 | 1.534 | 1.321 | 1.318 | 1.290 | 1.396 | 1.406 | 1.380 | 1.336 | 1.200 | 1.208 | 1.309 | 1.373 | 1.480 | 1.334 | 1.276 | 1.288 | 1.243 |
| THE YORK WATER COMPANY | 1.862 | 1.852 | 1.810 | 1.790 | 1.802 | 1.900 | 1.745 | 1.709 | 1.773 | 1.687 | 1.655 | 1.657 | 1.688 | 1.724 | 1.776 | 1.755 | 1.702 | 1.573 | 1.731 | 1.832 | 2.006 | 1.910 | 1.852 | 1.859 | 1.932 |

| Company Name | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER COMF | 3.285 | 3.203 | 3.201 | 3.106 | 3.109 | 3.200 | 3.044 | 3.017 | 3.044 | 2.818 | 2.814 | 2.834 | 2.812 | 2.695 | 2.693 | 2.666 | 2.558 | 2.609 | 2.672 | 2.782 | 2.820 | 2.656 | 2.468 | 2.371 | 2.434 |
| AMERICAN WATER WORKS COMP | 2.000 | 2.002 | 2.024 | 1.934 | 1.885 | 1.883 | 1.794 | 1.732 | 1.811 | 1.722 | 1.714 | 1.790 | 1.758 | 1.720 | 1.735 | 1.776 | 1.700 | 1.681 | 1.710 | 1.824 | 1.846 | 1.794 | 1.699 | 1.732 | 1.721 |
| ESSENTIAL UTILITIES, INC. | 2.483 | 2.456 | 2.435 | 2.383 | 1.968 | 2.026 | 1.940 | 1.905 | 1.969 | 1.864 | 2.043 | 2.128 | 2.102 | 2.027 | 2.039 | 2.045 | 1.998 | 2.057 | 2.124 | 2.258 | 2.240 | 2.127 | 2.016 | 2.088 | 2.064 |
| ARTESIAN RESOURCES CORPORA | 1.608 | 1.639 | 1.626 | 1.631 | 1.671 | 1.757 | 1.630 | 1.615 | 1.691 | 1.688 | 1.696 | 1.696 | 1.711 | 1.770 | 1.824 | 1.778 | 1.714 | 1.613 | 1.757 | 1.805 | 1.961 | 1.899 | 1.792 | 1.794 | 1.842 |
| CALIFORNIA WATER SERVICE GR | 2.076 | 1.996 | 2.027 | 2.062 | 2.138 | 2.075 | 1.997 | 1.942 | 1.977 | 1.849 | 1.877 | 1.887 | 1.885 | 1.782 | 1.791 | 1.743 | 1.660 | 1.769 | 1.861 | 2.016 | 2.068 | 1.946 | 1.810 | 1.878 | 1.930 |
| MIDDLESEX WATER COMPANY | 2.662 | 2.497 | 2.596 | 2.525 | 2.451 | 2.612 | 2.514 | 2.409 | 2.450 | 2.169 | 2.300 | 2.305 | 2.208 | 2.123 | 2.224 | 2.103 | 1.903 | 1.882 | 1.974 | 2.066 | 2.395 | 2.260 | 2.081 | 2.054 | 2.093 |
| SJW GROUP | 1.390 | 1.293 | 1.320 | 1.329 | 1.313 | 1.883 | 2.236 | 2.111 | 2.123 | 1.828 | 1.824 | 1.806 | 1.956 | 1.969 | 1.918 | 1.857 | 1.668 | 1.714 | 1.857 | 1.948 | 2.116 | 1.907 | 1.825 | 1.825 | 1.761 |
| THE YORK WATER COMPANY | 2.518 | 2.503 | 2.441 | 2.414 | 2.431 | 2.598 | 2.387 | 2.337 | 2.413 | 2.296 | 2.252 | 2.272 | 2.315 | 2.364 | 2.417 | 2.388 | 2.316 | 2.162 | 2.380 | 2.518 | 2.771 | 2.638 | 2.557 | 2.551 | 2.652 |

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| Company Name | Month End 7/31/2019 -23 Enterprise value to Net PPE | Month End 6/30/2019 -24 Enterprise value to Net PPE | Month End 5/31/2019 -25 Enterprise value to Net PPE | Month End 4/30/2019 -26 Enterprise value to Net PPE | Month End 3/31/2019 -27 Enterprise value to Net PPE | Month End 2/28/2019 -28 Enterprise value to Net PPE | Month End 1/31/2019 -29 Enterprise value to Net PPE | Month End 12/31/2018 -30 Enterprise value to Net PPE | Month End 11/30/2018 -31 Enterprise value to Net PPE | Month End 10/31/2018 -32 Enterprise value to Net PPE | Month End 9/30/2018 -33 Enterprise value to Net PPE | Month End 8/31/2018 -34 Enterprise value to Net PPE | Month End 7/31/2018 -35 Enterprise value to Net PPE | Month End 6/30/2018 -36 Enterprise value to Net PPE | Month End 5/31/2018 -37 Enterprise value to Net PPE | Month End 4/30/2018 -38 Enterprise value to Net PPE | Month End 3/31/2018 -39 Enterprise value to Net PPE | Month End 2/28/2018 -40 Enterprise value to Net PPE | Month End 1/31/2018 -41 Enterprise value to Net PPE | Month End 12/31/2017 -42 Enterprise value to Net PPE | Month End 11/30/2017 -43 Enterprise value to Net PPE | Month End 10/31/2017 -44 Enterprise value to Net PPE | Month End 9/30/2017 -45 Enterprise value to Net PPE | Month End 8/31/2017 -46 Enterprise value to Net PPE | Month End 7/31/2017 -47 Enterprise value to Net PPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER COMF | 1.075 | 1.048 | 1.049 | 1.018 | 1.019 | 1.043 | 0.992 | 0.984 | 1.003 | 0.928 | 0.927 | 0.933 | 0.926 | 0.887 | 0.886 | 0.877 | 0.841 | 0.858 | 0.879 | 0.915 | 0.933 | 0.879 | 0.817 | 0.830 | 0.852 |
| AMERICAN WATER WORKS COMP | 0.856 | 0.856 | 0.857 | 0.819 | 0.798 | 0.801 | 0.763 | 0.737 | 0.775 | 0.737 | 0.733 | 0.744 | 0.731 | 0.715 | 0.712 | 0.729 | 0.698 | 0.709 | 0.721 | 0.769 | 0.784 | 0.762 | 0.721 | 0.734 | 0.729 |
| ESSENTIAL UTILITIES, INC. | 1.092 | 1.080 | 1.062 | 1.039 | 0.858 | 0.877 | 0.840 | 0.825 | 0.856 | 0.810 | 0.888 | 0.907 | 0.896 | 0.864 | 0.864 | 0.867 | 0.847 | 0.869 | 0.897 | 0.954 | 0.952 | 0.904 | 0.856 | 0.878 | 0.868 |
| ARTESIAN RESOURCES CORPORA | 1.020 | 1.039 | 1.027 | 1.031 | 1.056 | 1.106 | 1.026 | 1.017 | 1.066 | 1.064 | 1.069 | 1.076 | 1.085 | 1.123 | 1.145 | 1.116 | 1.077 | 1.025 | 1.117 | 1.147 | 1.259 | 1.219 | 1.151 | 1.156 | 1.186 |
| CALIFORNIA WATER SERVICE GR | 1.024 | 0.985 | 0.988 | 1.005 | 1.042 | 1.025 | 0.987 | 0.959 | 0.955 | 0.893 | 0.907 | 0.900 | 0.899 | 0.850 | 0.890 | 0.866 | 0.825 | 0.863 | 0.908 | 0.983 | 1.015 | 0.955 | 0.888 | 0.895 | 0.920 |
| MIDDLESEX WATER COMPANY | 0.933 | 0.875 | 0.897 | 0.873 | 0.847 | 0.901 | 0.867 | 0.831 | 0.837 | 0.741 | 0.786 | 0.773 | 0.740 | 0.712 | 0.752 | 0.711 | 0.643 | 0.635 | 0.666 | 0.697 | 0.801 | 0.756 | 0.697 | 0.689 | 0.702 |
| SJW GROUP | 1.012 | 0.942 | 0.969 | 0.975 | 0.964 | 0.968 | 1.150 | 1.085 | 1.082 | 0.932 | 0.930 | 0.910 | 0.985 | 0.992 | 0.973 | 0.943 | 0.846 | 0.852 | 0.923 | 0.968 | 1.044 | 0.941 | 0.900 | 0.908 | 0.877 |
| THE YORK WATER COMPANY | 0.893 | 0.888 | 0.868 | 0.858 | 0.864 | 0.911 | 0.836 | 0.819 | 0.850 | 0.809 | 0.793 | 0.794 | 0.809 | 0.826 | 0.851 | 0.841 | 0.816 | 0.754 | 0.830 | 0.878 | 0.962 | 0.916 | 0.887 | 0.891 | 0.926 |

| Company Name | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER COMF | 1.134 | 1.106 | 1.105 | 1.072 | 1.073 | 1.105 | 1.051 | 1.041 | 1.051 | 0.973 | 0.971 | 0.978 | 0.971 | 0.930 | 0.930 | 0.920 | 0.883 | 0.901 | 0.922 | 0.960 | 0.973 | 0.917 | 0.852 | 0.818 | 0.840 |
| AMERICAN WATER WORKS COMP | 0.887 | 0.887 | 0.897 | 0.858 | 0.836 | 0.835 | 0.795 | 0.768 | 0.803 | 0.764 | 0.760 | 0.794 | 0.780 | 0.763 | 0.769 | 0.787 | 0.754 | 0.745 | 0.758 | 0.809 | 0.818 | 0.795 | 0.753 | 0.768 | 0.763 |
| ESSENTIAL UTILITIES, INC. | 1.520 | 1.504 | 1.491 | 1.459 | 1.204 | 1.240 | 1.187 | 1.166 | 1.205 | 1.141 | 1.251 | 1.302 | 1.286 | 1.240 | 1.248 | 1.252 | 1.223 | 1.259 | 1.300 | 1.382 | 1.371 | 1.302 | 1.234 | 1.278 | 1.264 |
| ARTESIAN RESOURCES CORPORA | 1.054 | 1.074 | 1.066 | 1.069 | 1.095 | 1.152 | 1.068 | 1.059 | 1.109 | 1.106 | 1.112 | 1.112 | 1.122 | 1.161 | 1.196 | 1.165 | 1.124 | 1.058 | 1.152 | 1.183 | 1.286 | 1.245 | 1.175 | 1.176 | 1.207 |
| CALIFORNIA WATER SERVICE GR | 1.118 | 1.075 | 1.091 | 1.110 | 1.151 | 1.117 | 1.075 | 1.045 | 1.064 | 0.996 | 1.011 | 1.016 | 1.015 | 0.960 | 0.964 | 0.938 | 0.894 | 0.952 | 1.002 | 1.085 | 1.114 | 1.048 | 0.975 | 1.011 | 1.039 |
| MIDDLESEX WATER COMPANY | 0.982 | 0.921 | 0.958 | 0.932 | 0.904 | 0.964 | 0.927 | 0.889 | 0.904 | 0.800 | 0.849 | 0.850 | 0.815 | 0.783 | 0.821 | 0.776 | 0.702 | 0.694 | 0.728 | 0.762 | 0.884 | 0.834 | 0.768 | 0.758 | 0.772 |
| SJW GROUP | 1.014 | 0.943 | 0.963 | 0.969 | 0.958 | 1.373 | 1.630 | 1.539 | 1.548 | 1.333 | 1.330 | 1.317 | 1.426 | 1.436 | 1.399 | 1.354 | 1.216 | 1.250 | 1.354 | 1.420 | 1.543 | 1.391 | 1.331 | 1.330 | 1.284 |
| THE YORK WATER COMPANY | 0.925 | 0.920 | 0.897 | 0.887 | 0.893 | 0.955 | 0.877 | 0.859 | 0.887 | 0.844 | 0.827 | 0.835 | 0.851 | 0.869 | 0.888 | 0.878 | 0.851 | 0.794 | 0.874 | 0.925 | 1.018 | 0.969 | 0.940 | 0.937 | 0.974 |

| 6/28/2021 | Month End 7/31/2019 | Month End 6/30/2019 | Month End 5/31/2019 | Month End 4/30/2019 | Month End 3/31/2019 | Month End 2/28/2019 | Month End 1/31/2019 | Month End 12/31/2018 | Month End 11/30/2018 | Month End 10/31/2018 | Month End 9/30/2018 | Month End 8/31/2018 | Month End 7/31/2018 | Month End 6/30/2018 | Month End 5/31/2018 | Month End 4/30/2018 | Month End 3/31/2018 | Month End 2/28/2018 | Month End 1/31/2018 | Month End 12/31/2017 | Month End 11/30/2017 | Month End 10/31/2017 | Month End 9/30/2017 | Month End 8/31/2017 | Month End 7/31/2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Enterprise value to Net PPE | 102% | 96% | 98% | 99% | 91% | 94% | 93% | 89% | 91% | 85% | 90% | 90% | 90% | 86% | 88% | 87% | 83% | 86% | 89% | 93% | 96% | 91% | 87% | 88% | 87% |
| Enterprise value to Inv Cap | 103% | 101% | 101% | 102% | 102% | 111% | 106% | 104% | 106% | 98% | 99% | 100% | 99% | 94% | 95% | 93% | 89% | 93% | 96% | 102% | 107% | 101% | 96% | 97% | 101% |

**6/28/2021**

| Company Name | Month End 6/30/2017 -48 Enterprise value to Net PPE | Month End 5/31/2017 -49 Enterprise value to Net PPE | Month End 4/30/2017 -50 Enterprise value to Net PPE | Month End 3/31/2017 -51 Enterprise value to Net PPE | Month End 2/28/2017 -52 Enterprise value to Net PPE | Month End 1/31/2017 -53 Enterprise value to Net PPE | Month End 12/31/2016 -54 Enterprise value to Net PPE | Month End 11/30/2016 -55 Enterprise value to Net PPE | Month End 10/31/2016 -56 Enterprise value to Net PPE | Month End 9/30/2016 -57 Enterprise value to Net PPE | Month End 8/31/2016 -58 Enterprise value to Net PPE | Month End 7/31/2016 -59 Enterprise value to Net PPE | Month End 6/30/2016 -60 Enterprise value to Net PPE | Month End 5/31/2016 -61 Enterprise value to Net PPE | Month End 4/30/2016 -62 Enterprise value to Net PPE | Month End 3/31/2016 -63 Enterprise value to Net PPE | Month End 2/29/2016 -64 Enterprise value to Net PPE | Month End 1/31/2016 -65 Enterprise value to Net PPE | Month End 12/31/2015 -66 Enterprise value to Net PPE | Month End 11/30/2015 -67 Enterprise value to Net PPE | Month End 10/31/2015 -68 Enterprise value to Net PPE | Month End 9/30/2015 -69 Enterprise value to Net PPE | Month End 8/31/2015 -70 Enterprise value to Net PPE | Month End 7/31/2015 -71 Enterprise value to Net PPE | Month End 6/30/2015 -72 Enterprise value to Net PPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER COMF | 1.879 | 1.805 | 1.760 | 1.752 | 1.800 | 1.756 | 1.813 | 1.744 | 1.651 | 1.653 | 1.659 | 1.778 | 1.799 | 1.667 | 1.751 | 1.671 | 1.824 | 1.904 | 1.782 | 1.806 | 1.757 | 1.781 | 1.661 | 1.681 | 1.637 |
| AMERICAN WATER WORKS COMP | 1.396 | 1.411 | 1.419 | 1.396 | 1.443 | 1.367 | 1.354 | 1.378 | 1.397 | 1.407 | 1.418 | 1.516 | 1.540 | 1.425 | 1.397 | 1.348 | 1.327 | 1.318 | 1.250 | 1.246 | 1.237 | 1.206 | 1.187 | 1.173 | 1.128 |
| ESSENTIAL UTILITIES, INC. | 1.553 | 1.549 | 1.553 | 1.519 | 1.535 | 1.479 | 1.465 | 1.478 | 1.509 | 1.501 | 1.521 | 1.670 | 1.708 | 1.605 | 1.579 | 1.585 | 1.564 | 1.588 | 1.522 | 1.533 | 1.501 | 1.418 | 1.402 | 1.392 | 1.354 |
| ARTESIAN RESOURCES CORPORA | 1.053 | 1.009 | 1.070 | 0.943 | 0.957 | 0.919 | 0.941 | 0.942 | 0.879 | 0.885 | 0.877 | 1.017 | 1.016 | 0.898 | 0.882 | 0.901 | 0.916 | 0.957 | 0.894 | 0.876 | 0.839 | 0.834 | 0.798 | 0.784 | 0.774 |
| CALIFORNIA WATER SERVICE GR | 1.294 | 1.267 | 1.294 | 1.271 | 1.316 | 1.239 | 1.223 | 1.263 | 1.168 | 1.202 | 1.189 | 1.279 | 1.289 | 1.164 | 1.129 | 1.079 | 1.038 | 1.028 | 0.976 | 0.970 | 0.965 | 0.968 | 0.942 | 0.969 | 0.993 |
| MIDDLESEX WATER COMPANY | 1.497 | 1.384 | 1.467 | 1.430 | 1.481 | 1.486 | 1.648 | 1.610 | 1.454 | 1.426 | 1.396 | 1.632 | 1.700 | 1.503 | 1.503 | 1.313 | 1.254 | 1.287 | 1.205 | 1.185 | 1.187 | 1.122 | 1.098 | 1.096 | 1.090 |
| SJW GROUP | 1.184 | 1.195 | 1.209 | 1.211 | 1.221 | 1.230 | 1.332 | 1.329 | 1.276 | 1.147 | 1.146 | 1.139 | 1.078 | 1.031 | 1.029 | 1.068 | 1.073 | 0.989 | 0.933 | 0.966 | 0.991 | 0.973 | 0.948 | 0.969 | 0.977 |
| THE YORK WATER COMPANY | 1.934 | 1.883 | 2.079 | 1.963 | 2.043 | 2.034 | 2.149 | 2.076 | 1.850 | 1.757 | 1.702 | 1.859 | 1.888 | 1.645 | 1.782 | 1.825 | 1.703 | 1.649 | 1.564 | 1.527 | 1.490 | 1.382 | 1.408 | 1.417 | 1.392 |

| Company Name | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER COMF | 2.352 | 2.312 | 2.254 | 2.243 | 2.303 | 2.246 | 2.319 | 2.259 | 2.138 | 2.141 | 2.171 | 2.327 | 2.354 | 2.188 | 2.298 | 2.192 | 2.341 | 2.443 | 2.287 | 2.302 | 2.240 | 2.270 | 2.050 | 2.074 | 2.021 |
| AMERICAN WATER WORKS COMP | 1.677 | 1.706 | 1.716 | 1.688 | 1.733 | 1.642 | 1.626 | 1.639 | 1.662 | 1.674 | 1.689 | 1.805 | 1.834 | 1.711 | 1.677 | 1.618 | 1.566 | 1.556 | 1.476 | 1.462 | 1.452 | 1.416 | 1.408 | 1.392 | 1.338 |
| ESSENTIAL UTILITIES, INC. | 2.061 | 2.061 | 2.067 | 2.023 | 2.039 | 1.964 | 1.946 | 1.963 | 2.005 | 1.994 | 2.029 | 2.229 | 2.279 | 2.151 | 2.116 | 2.124 | 2.067 | 2.099 | 2.011 | 2.016 | 1.974 | 1.865 | 1.854 | 1.841 | 1.791 |
| ARTESIAN RESOURCES CORPORA | 1.809 | 1.734 | 1.838 | 1.620 | 1.657 | 1.592 | 1.630 | 1.603 | 1.496 | 1.507 | 1.468 | 1.703 | 1.700 | 1.482 | 1.455 | 1.487 | 1.506 | 1.574 | 1.470 | 1.424 | 1.364 | 1.355 | 1.301 | 1.278 | 1.262 |
| CALIFORNIA WATER SERVICE GR | 1.824 | 1.780 | 1.818 | 1.787 | 1.882 | 1.772 | 1.750 | 1.770 | 1.636 | 1.684 | 1.680 | 1.806 | 1.822 | 1.652 | 1.603 | 1.532 | 1.439 | 1.424 | 1.352 | 1.353 | 1.346 | 1.351 | 1.310 | 1.347 | 1.381 |
| MIDDLESEX WATER COMPANY | 2.108 | 1.953 | 2.069 | 2.017 | 2.060 | 2.067 | 2.292 | 2.252 | 2.034 | 1.996 | 1.975 | 2.309 | 2.405 | 2.104 | 2.104 | 1.838 | 1.668 | 1.711 | 1.603 | 1.576 | 1.578 | 1.493 | 1.458 | 1.455 | 1.447 |
| SJW GROUP | 1.678 | 1.623 | 1.642 | 1.645 | 1.686 | 1.700 | 1.841 | 1.836 | 1.764 | 1.585 | 1.606 | 1.597 | 1.512 | 1.397 | 1.394 | 1.447 | 1.486 | 1.370 | 1.292 | 1.323 | 1.359 | 1.333 | 1.299 | 1.328 | 1.340 |
| THE YORK WATER COMPANY | 2.655 | 2.545 | 2.810 | 2.654 | 2.701 | 2.688 | 2.841 | 2.748 | 2.449 | 2.325 | 2.260 | 2.468 | 2.507 | 2.198 | 2.382 | 2.439 | 2.254 | 2.182 | 2.070 | 2.026 | 1.976 | 1.833 | 1.857 | 1.869 | 1.837 |

**6/28/2021**

| Company Name | Month End 6/30/2017 -48 Enterprise value to Net PPE | Month End 5/31/2017 -49 Enterprise value to Net PPE | Month End 4/30/2017 -50 Enterprise value to Net PPE | Month End 3/31/2017 -51 Enterprise value to Net PPE | Month End 2/28/2017 -52 Enterprise value to Net PPE | Month End 1/31/2017 -53 Enterprise value to Net PPE | Month End 12/31/2016 -54 Enterprise value to Net PPE | Month End 11/30/2016 -55 Enterprise value to Net PPE | Month End 10/31/2016 -56 Enterprise value to Net PPE | Month End 9/30/2016 -57 Enterprise value to Net PPE | Month End 8/31/2016 -58 Enterprise value to Net PPE | Month End 7/31/2016 -59 Enterprise value to Net PPE | Month End 6/30/2016 -60 Enterprise value to Net PPE | Month End 5/31/2016 -61 Enterprise value to Net PPE | Month End 4/30/2016 -62 Enterprise value to Net PPE | Month End 3/31/2016 -63 Enterprise value to Net PPE | Month End 2/29/2016 -64 Enterprise value to Net PPE | Month End 1/31/2016 -65 Enterprise value to Net PPE | Month End 12/31/2015 -66 Enterprise value to Net PPE | Month End 11/30/2015 -67 Enterprise value to Net PPE | Month End 10/31/2015 -68 Enterprise value to Net PPE | Month End 9/30/2015 -69 Enterprise value to Net PPE | Month End 8/31/2015 -70 Enterprise value to Net PPE | Month End 7/31/2015 -71 Enterprise value to Net PPE | Month End 6/30/2015 -72 Enterprise value to Net PPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER COMF | 0.824 | 0.791 | 0.771 | 0.768 | 0.789 | 0.770 | 0.795 | 0.765 | 0.724 | 0.725 | 0.727 | 0.780 | 0.789 | 0.731 | 0.768 | 0.732 | 0.800 | 0.834 | 0.781 | 0.792 | 0.770 | 0.781 | 0.728 | 0.737 | 0.718 |
| AMERICAN WATER WORKS COMP | 0.710 | 0.718 | 0.722 | 0.710 | 0.734 | 0.696 | 0.689 | 0.701 | 0.711 | 0.716 | 0.722 | 0.771 | 0.783 | 0.725 | 0.711 | 0.686 | 0.675 | 0.671 | 0.636 | 0.634 | 0.629 | 0.614 | 0.604 | 0.597 | 0.574 |
| ESSENTIAL UTILITIES, INC. | 0.866 | 0.864 | 0.866 | 0.847 | 0.856 | 0.825 | 0.817 | 0.824 | 0.842 | 0.837 | 0.848 | 0.931 | 0.953 | 0.895 | 0.881 | 0.884 | 0.872 | 0.886 | 0.849 | 0.855 | 0.837 | 0.791 | 0.782 | 0.776 | 0.755 |
| ARTESIAN RESOURCES CORPORA | 1.165 | 1.117 | 1.184 | 1.043 | 1.059 | 1.017 | 1.042 | 1.042 | 0.973 | 0.980 | 0.970 | 1.125 | 1.124 | 0.994 | 0.976 | 0.997 | 1.014 | 1.059 | 0.989 | 0.970 | 0.928 | 0.923 | 0.883 | 0.867 | 0.857 |
| CALIFORNIA WATER SERVICE GR | 0.870 | 0.851 | 0.870 | 0.855 | 0.885 | 0.833 | 0.822 | 0.849 | 0.785 | 0.808 | 0.799 | 0.859 | 0.867 | 0.782 | 0.759 | 0.725 | 0.698 | 0.691 | 0.656 | 0.652 | 0.649 | 0.651 | 0.633 | 0.651 | 0.667 |
| MIDDLESEX WATER COMPANY | 0.707 | 0.654 | 0.693 | 0.676 | 0.700 | 0.702 | 0.779 | 0.760 | 0.687 | 0.674 | 0.659 | 0.771 | 0.803 | 0.710 | 0.710 | 0.620 | 0.593 | 0.608 | 0.569 | 0.560 | 0.561 | 0.530 | 0.519 | 0.518 | 0.515 |
| SJW GROUP | 0.835 | 0.843 | 0.853 | 0.854 | 0.861 | 0.868 | 0.940 | 0.938 | 0.900 | 0.809 | 0.808 | 0.803 | 0.760 | 0.727 | 0.726 | 0.753 | 0.757 | 0.698 | 0.658 | 0.681 | 0.699 | 0.686 | 0.668 | 0.683 | 0.689 |
| THE YORK WATER COMPANY | 0.927 | 0.903 | 0.997 | 0.941 | 0.979 | 0.975 | 1.030 | 0.995 | 0.887 | 0.842 | 0.816 | 0.891 | 0.905 | 0.788 | 0.854 | 0.875 | 0.816 | 0.790 | 0.749 | 0.732 | 0.714 | 0.662 | 0.675 | 0.679 | 0.667 |

| Company Name | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap | Enterprise value to Inv Cap |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER COMF | 0.812 | 0.798 | 0.778 | 0.774 | 0.795 | 0.775 | 0.800 | 0.780 | 0.738 | 0.739 | 0.749 | 0.803 | 0.812 | 0.755 | 0.793 | 0.757 | 0.808 | 0.843 | 0.789 | 0.795 | 0.773 | 0.783 | 0.708 | 0.716 | 0.698 |
| AMERICAN WATER WORKS COMP | 0.743 | 0.756 | 0.761 | 0.748 | 0.768 | 0.728 | 0.721 | 0.727 | 0.737 | 0.742 | 0.749 | 0.800 | 0.813 | 0.759 | 0.743 | 0.718 | 0.695 | 0.690 | 0.654 | 0.648 | 0.644 | 0.628 | 0.624 | 0.617 | 0.593 |
| ESSENTIAL UTILITIES, INC. | 1.261 | 1.262 | 1.265 | 1.238 | 1.248 | 1.202 | 1.191 | 1.201 | 1.227 | 1.220 | 1.242 | 1.364 | 1.395 | 1.316 | 1.295 | 1.300 | 1.265 | 1.285 | 1.231 | 1.234 | 1.208 | 1.141 | 1.135 | 1.127 | 1.096 |
| ARTESIAN RESOURCES CORPORA | 1.186 | 1.137 | 1.205 | 1.062 | 1.086 | 1.044 | 1.069 | 1.051 | 0.981 | 0.988 | 0.962 | 1.116 | 1.115 | 0.972 | 0.954 | 0.975 | 0.987 | 1.032 | 0.964 | 0.934 | 0.894 | 0.888 | 0.853 | 0.838 | 0.827 |
| CALIFORNIA WATER SERVICE GR | 0.982 | 0.958 | 0.979 | 0.962 | 1.014 | 0.954 | 0.942 | 0.953 | 0.881 | 0.907 | 0.905 | 0.973 | 0.981 | 0.890 | 0.863 | 0.825 | 0.775 | 0.767 | 0.728 | 0.729 | 0.725 | 0.727 | 0.705 | 0.725 | 0.744 |
| MIDDLESEX WATER COMPANY | 0.778 | 0.720 | 0.763 | 0.744 | 0.760 | 0.763 | 0.846 | 0.831 | 0.750 | 0.736 | 0.728 | 0.852 | 0.887 | 0.776 | 0.776 | 0.678 | 0.615 | 0.631 | 0.591 | 0.582 | 0.582 | 0.551 | 0.538 | 0.537 | 0.534 |
| SJW GROUP | 1.224 | 1.184 | 1.197 | 1.199 | 1.230 | 1.239 | 1.342 | 1.339 | 1.286 | 1.156 | 1.171 | 1.164 | 1.102 | 1.018 | 1.017 | 1.055 | 1.083 | 0.999 | 0.942 | 0.965 | 0.991 | 0.972 | 0.947 | 0.969 | 0.977 |
| THE YORK WATER COMPANY | 0.975 | 0.935 | 1.033 | 0.975 | 0.992 | 0.988 | 1.044 | 1.010 | 0.900 | 0.854 | 0.830 | 0.907 | 0.921 | 0.808 | 0.875 | 0.896 | 0.828 | 0.802 | 0.761 | 0.744 | 0.726 | 0.674 | 0.682 | 0.687 | 0.675 |

| 6/28/2021 | Month End 6/30/2017 | Month End 5/31/2017 | Month End 4/30/2017 | Month End 3/31/2017 | Month End 2/28/2017 | Month End 1/31/2017 | Month End 12/31/2016 | Month End 11/30/2016 | Month End 10/31/2016 | Month End 9/30/2016 | Month End 8/31/2016 | Month End 7/31/2016 | Month End 6/30/2016 | Month End 5/31/2016 | Month End 4/30/2016 | Month End 3/31/2016 | Month End 2/29/2016 | Month End 1/31/2016 | Month End 12/31/2015 | Month End 11/30/2015 | Month End 10/31/2015 | Month End 9/30/2015 | Month End 8/31/2015 | Month End 7/31/2015 | Month End 6/30/2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Enterprise value to Net PPE | 85% | 85% | 86% | 85% | 86% | 83% | 82% | 84% | 81% | 81% | 80% | 83% | 83% | 76% | 76% | 74% | 78% | 74% | 70% | 71% | 71% | 67% | 67% | 68% | 68% |
| Enterprise value to Inv Cap | 98% | 95% | 101% | 97% | 100% | 97% | 99% | 98% | 89% | 88% | 87% | 94% | 95% | 85% | 87% | 86% | 82% | 82% | 77% | 77% | 75% | 76% | 71% | 72% | 72% |

NetPlant Advances CIAC DefTax ITC

| | | **2020** Net Property, Plant & Equipment | Advances for construction | Contributions in aid of construction | Deferred income taxes, net | Deferred investment tax credits | 2020 Known "Cost Free" Capital | 2020 Percentage of Known "Cost Free" Capital |
|---|---|---|---|---|---|---|---|---|
| | | (Millions of $) | | | | | | |
| | Comparable Group | | | | | | | |
| 1 | American States Water Co | $1,512.043 | $63.354 | $138.691 | $124.581 | $1.224 | $327.850 | 22% |
| 2 | American Water Works Co Inc | $19,710.000 | $270.000 | $1,393.000 | $2,113.000 | $0.000 | $3,776.000 | 19% |
| 3 | Artesian Resources -CL A | $559.561 | $4.578 | $160.258 | $50.313 | $0.473 | $215.622 | 39% |
| 4 | California Water Service Gp | $2,650.558 | $195.625 | $268.050 | $276.032 | $0.000 | $739.707 | 28% |
| 5 | Essential Utilities, Inc. | $9,512.877 | $99.014 | $573.774 | $1,258.098 | $0.000 | $1,930.886 | 20% |
| 6 | Middlesex Water Co | $796.598 | $23.404 | $111.990 | $61.297 | $0.000 | $196.691 | 25% |
| 7 | SJW Corp | $2,334.912 | $125.027 | $296.105 | $191.415 | $0.000 | $612.547 | 26% |
| 8 | York Water Co | $344.365 | $10.326 | $41.307 | $43.538 | $0.000 | $95.171 | 28% |
| | Median | | | | | | | 25% |

| CONSOLIDATED BALANCE SHEETS - USD ($) | Dec. 31, 2020 | Dec. 31, 2019 |
|---|---|---|
| $ in Thousands | | |
| Regulated utility plant, at cost | | |
| Water | $1,784,402 | $1,700,442 |
| Electric | 112,507 | 108,425 |
| Total | 1,896,909 | 1,808,867 |
| Non-regulated utility property, at cost | 33,315 | 30,554 |
| Total utility plant, at cost | 1,930,224 | 1,839,421 |
| Less — accumulated depreciation | -568,326 | -543,263 |
| Utility plant before construction work in progress | 1,361,898 | 1,296,158 |
| Construction work in progress | 150,145 | 119,547 |
| Net utility plant | 1,512,043 | 1,415,705 |
| Other Property and Investments | | |
| Goodwill | 1,116 | 1,116 |
| Other property and investments | 35,318 | 30,293 |
| Total other property and investments | 36,434 | 31,409 |
| Current Assets | | |
| Cash and cash equivalents | 36,737 | 1,334 |
| Accounts receivable — customers, less allowance for doubtful accounts | 29,162 | 20,907 |
| Unbilled revenue — receivable (Note 2) | 25,836 | 20,482 |
| Receivable from U.S. government, less allowance for doubtful accounts (Note 2) | 25,182 | 22,613 |
| Other accounts receivable, less allowance for doubtful accounts | 3,960 | 3,096 |
| Income taxes receivable | 103 | 5,685 |
| Materials and supplies | 8,619 | 6,429 |
| Regulatory assets — current | 13,088 | 20,930 |
| Prepayments and other current assets | 5,555 | 5,413 |
| Contract assets (Note 2) | 8,873 | 15,567 |
| Total current assets | 157,115 | 122,456 |
| Regulatory and Other Assets | | |
| Unbilled revenue, receivable from U.S government | 9,945 | 8,621 |
| Receivable from U.S. government (Note 2) | 49,488 | 42,206 |
| Contract assets (Note 2) | 1,384 | 64 |
| Operating lease right-of-use assets | 11,146 | 13,168 |
| Regulatory Assets, Noncurrent | 3,451 | 0 |
| Other | 10,597 | 7,702 |
| Total other assets | 86,011 | 71,761 |
| Total Assets | 1,791,603 | 1,641,331 |
| Capitalization | | |
| Common shareholders' equity | 641,673 | 601,530 |
| Long-term debt | 440,348 | 280,996 |
| Total capitalization | 1,082,021 | 882,526 |
| Current Liabilities | | |
| Notes payable to banks | 0 | 5,000 |
| Long-term debt -current | 358 | 344 |
| Accounts payable | 63,788 | 55,616 |
| Income taxes payable | 6,783 | 95 |
| Accrued other taxes | 11,902 | 11,110 |
| Accrued employee expenses | 15,122 | 14,255 |
| Accrued interest | 4,832 | 3,050 |
| Unrealized loss on purchased power contracts | 1,537 | 3,171 |
| Contract liabilities (Note 2) | 1,800 | 11,167 |
| Operating lease liabilities | 2,013 | 1,849 |
| Other | 10,437 | 10,341 |
| Total current liabilities | 118,572 | 115,998 |
| Other Credits | | |
| Notes payable to banks | 134,200 | 200,000 |
| Advances for Construction | 63,374 | 63,989 |
| Contributions in aid of construction — net | 140,332 | 134,706 |
| Deferred income taxes | 131,172 | 125,304 |
| Regulatory liabilities | 0 | 23,380 |
| Unamortized investment tax credits | 1,224 | 1,295 |
| Accrued pension and other post-retirement benefits | 95,639 | 68,469 |
| Operating lease liabilities | 9,636 | 11,739 |
| Other | 15,433 | 13,925 |
| Total other credits | 591,010 | 642,807 |
| Commitments and Contingencies | | |
| Liabilities and Equity, Total | 1,791,603 | 1,641,331 |
| GSWC | | |
| Regulated utility plant, at cost | | |
| Water | 1,784,402 | 1,700,442 |
| Electric | 0 | 108,425 |
| Total utility plant, at cost | 1,784,402 | 1,808,867 |
| Less — accumulated depreciation | -502,283 | -531,801 |
| Utility plant before construction work in progress | 1,282,119 | 1,277,066 |
| Construction work in progress | 118,370 | 117,676 |
| Net utility plant | 1,400,489 | 1,394,742 |
| Other Property and Investments | | |
| Other property and investments | 33,240 | 28,212 |
| Total other property and investments | 33,240 | 28,212 |
| Current Assets | | |
| Cash and cash equivalents | 35,578 | 401 |
| Accounts receivable — customers, less allowance for doubtful accounts | 26,920 | 20,907 |
| Unbilled revenue — receivable (Note 2) | 19,330 | 18,636 |
| Other accounts receivable, less allowance for doubtful accounts | 3,255 | 1,857 |
| Intercompany receivable | 1,107 | 0 |
| Income taxes receivable | 0 | 7,727 |
| Materials and supplies | 3,659 | 4,920 |
| Regulatory assets — current | 11,325 | 20,930 |
| Prepayments and other current assets | 4,114 | 4,497 |
| Total current assets | 105,288 | 79,875 |
| Regulatory and Other Assets | | |
| Operating lease right-of-use assets | 11,103 | 12,745 |
| Regulatory Assets, Noncurrent | 1,048 | 0 |
| Other | 9,614 | 6,880 |
| Total other assets | 21,765 | 19,625 |
| Total Assets | 1,560,782 | 1,522,454 |
| Capitalization | | |
| Common shareholders' equity | 583,298 | 551,188 |
| Long-term debt | 440,348 | 280,996 |
| Total capitalization | 1,023,646 | 832,184 |
| Current Liabilities | | |
| Long-term debt -current | 358 | 344 |
| Intercompany payable to Parent | 0 | 158,845 |
| Accounts payable | 45,613 | 45,756 |
| Income taxes payable | 4,612 | 0 |
| Accrued other taxes | 10,382 | 10,640 |
| Accrued employee expenses | 12,351 | 12,386 |
| Accrued interest | 4,545 | 2,736 |
| Unrealized loss on purchased power contracts | 0 | 3,171 |
| Operating lease liabilities | 1,956 | 1,612 |
| Other | 9,403 | 9,745 |
| Total current liabilities | 89,220 | 245,235 |
| Other Credits | | |
| Advances for Construction | 63,354 | 63,989 |
| Contributions in aid of construction — net | 138,691 | 134,706 |
| Deferred income taxes | 124,581 | 127,806 |
| Regulatory liabilities | 0 | 23,380 |
| Unamortized investment tax credits | 1,224 | 1,295 |
| Accrued pension and other post-retirement benefits | 95,570 | 68,469 |
| Operating lease liabilities | 9,636 | 11,588 |
| Other | 14,860 | 13,802 |
| Total other credits | 447,916 | 445,035 |
| Liabilities and Equity, Total | | |

| | | |
|---|---|---|
| **NetPlant** | 1,512,043 | 1,415,705 |
| **Advances** | 63,354 | 63,989 |
| **CIAC** | 138,691 | 134,706 |
| **DefTax** | 124,581 | 127,806 |
| **ITC** | 1,224 | 1,295 |

| olidated Balance Sheets - USD ($) | Dec. 31, 2020 | Dec. 31, 201 |
|---|---|---|
| Millions | | |
| ETS | | |
| perty, plant and equipment | $25,614 | $23,9 |
| umulated depreciation | -5,904 | -5, |
| perty, plant and equipment, net | 19,710 | 18, |
| rent assets: | | |
| n and cash equivalents | 547 | |
| tricted funds | 29 | |
| ounts receivable, net of allowance for uncollectible accounts of $60 and $41, respectively | 321 | |
| illed revenues | 206 | |
| terials and supplies | 47 | |
| ets held for sale | 629 | |
| er | 127 | |
| al current assets | 1,906 | 1, |
| ulatory and other long-term assets: | | |
| ulatory assets | 1,127 | 1, |
| rating lease right-of-use assets | 95 | |
| dwill | 1,504 | 1, |
| tretirement benefit assets | 173 | |
| ngible assets | 55 | |
| er | 196 | |
| al regulatory and other long-term assets | 3,150 | 3, |
| al assets | 24,766 | 22, |
| italization: | | |
| mon stock ($0.01 par value; 500,000,000 shares authorized; 186,466,707 and 185,903,727 shares issued, respectively) | 2 | |
| l-in-capital | 6,747 | 6, |
| ained earnings (accumulated deficit) | 102 | - |
| umulated other comprehensive loss | -49 | |
| asury stock, at cost (5,168,215 and 5,090,855 shares, respectively) | -348 | - |
| al common shareholders' equity | 6,454 | 6, |
| g-term debt | 9,329 | 8, |
| eemable preferred stock at redemption value | 4 | |
| al long-term debt | 9,333 | 8, |
| al capitalization | 15,787 | 14, |
| rent liabilities: | | |
| rt-term debt | 1,282 | |
| rent portion of long-term debt | 329 | |
| ounts payable | 189 | |
| rued liabilities | 591 | |
| rued taxes | 50 | |
| rued interest | 88 | |
| ilities related to assets held for sale | 137 | |
| er | 215 | |
| al current liabilities | 2,881 | 2, |
| ulatory and other long-term liabilities: | | |
| ances for construction | 270 | |
| erred income taxes and investment tax credits | 2,113 | 1, |
| ulatory liabilities | 1,770 | 1, |
| rating lease liabilities | 81 | |
| rued pension expense | 388 | |
| er | 83 | |
| al regulatory and other long-term liabilities | 4,705 | 4, |
| tributions in aid of construction | 1,393 | 1, |
| mitments and contingencies | | |
| al capitalization and liabilities | $24,766 | $22,6 |

| | | |
|---|---|---|
| **NetPlant** | 19,710 | 18, |
| **Advances** | 270 | |
| **CIAC** | 1,393 | 1, |
| **DefTax** | 2,113 | 1, |
| **ITC** | 0 | |

| CONSOLIDATED BALANCE SHEETS - USD ($) | Dec. 31, 2020 | Dec. 31, 2019 |
|---|---|---|
| $ in Thousands | | |
| ASSETS | | |
| Utility plant, at original cost (less accumulated depreciation - 2020 - $147,469,; 2019 - $136,588) | $559,561 | $530,721 |
| Current assets | | |
| Cash and cash equivalents | 28 | 596 |
| Accounts receivable (less allowance for doubtful accounts 2020 - $862; 2019-$264) | 10,162 | 6,913 |
| Income tax receivable | 629 | 19 |
| Unbilled operating revenues | 1,166 | 1,211 |
| Materials and supplies | 1,535 | 1,264 |
| Prepaid property taxes | 1,891 | 1,954 |
| Prepaid expenses and other | 2,208 | 2,250 |
| Total current assets | 17,619 | 14,207 |
| Other assets | | |
| Non-utility property (less accumulated depreciation - 2020- $865; 2019 - $790) | 3,796 | 3,812 |
| Other deferred assets | 5,309 | 4,257 |
| Operating lease right of use assets | 460 | 480 |
| Total other assets | 9,565 | 8,549 |
| Regulatory assets, net | 6,473 | 6,891 |
| Total assets | 593,218 | 560,368 |
| Stockholders' equity | | |
| Common stock | 9,357 | 9,292 |
| Preferred stock | 0 | 0 |
| Additional paid-in capital | 103,463 | 101,811 |
| Retained earnings | 56,606 | 49,165 |
| Total stockholders' equity | 169,426 | 160,268 |
| Long-term debt, net of current portion | 142,333 | 144,156 |
| Total stockholders' equity and long-term debt | 311,759 | 304,424 |
| Current liabilities | | |
| Lines of credit | 26,813 | 7,500 |
| Current portion of long-term debt | 1,757 | 1,706 |
| Accounts payable | 6,341 | 8,176 |
| Accrued expenses | 3,414 | 3,113 |
| Overdraft payable | 105 | 15 |
| Accrued interest | 930 | 830 |
| Income taxes payable | 237 | 343 |
| Customer and other deposits | 2,060 | 1,970 |
| OtherLiabilitiesCurrent | 2,067 | 1,946 |
| Total current liabilities | 43,724 | 25,599 |
| Commitments and contingencies (Note 11) | | |
| Deferred credits and other liabilities | | |
| Net advances for construction | 4,578 | 5,421 |
| OperatingLeaseLiabilityNoncurrent | 432 | 450 |
| Regulatory liabilities | 21,681 | 22,246 |
| Deferred investment tax credits | 473 | 490 |
| Deferred income taxes | 50,313 | 52,259 |
| Total deferred credits and other liabilities | 77,477 | 80,866 |
| Net contributions in aid of construction | 160,258 | 149,479 |
| Total Liabilities and Stockholders' Equity | | |

| | | |
|---|---|---|
| **NetPlant** | $559,561 | $530,721 |
| **Advances** | 4,578 | 5,421 |
| **CIAC** | 160,258 | 149,479 |
| **DefTax** | 50,313 | 52,259 |
| **ITC** | 473 | 490 |

| solidated Balance Sheets - USD ($) | Dec. 31, 2020 | Dec. 31, 2 |
|---|---|---|
| Thousands | | |
| ty plant: | | |
| l | $45,672 | $45,( |
| reciable plant and equipment | 3,645,770 | 3,235, |
| struction work in progress | 171,414 | 245, |
| ngible assets | 27,567 | 24, |
| l utility plant | 3,890,423 | 3,550, |
| accumulated depreciation and amortization | -1,239,865 | -1,144, |
| utility plant | 2,650,558 | 2,406, |
| ent assets: | | |
| and cash equivalents | 44,555 | 42, |
| ivables: | | |
| omers, net | 44,025 | 32, |
| ulatory balancing accounts | 96,241 | 38, |
| er, net | 20,331 | 14, |
| illed revenue, net | 34,069 | 34, |
| erials and supplies at weighted average cost | 8,831 | 7, |
| s, prepaid expenses, and other assets | 17,964 | 14, |
| l current assets | 266,016 | 184, |
| er assets: | | |
| ulatory assets | 325,376 | 433, |
| dwill | 31,842 | 2, |
| er | 120,456 | 84, |
| l other assets | 477,674 | 520, |
| AL ASSETS | 3,394,248 | 3,111, |
| talization: | | |
| mon stock, $0.01 par value; 68,000 shares authorized, 50,334 and 48,532 outstanding in 2020 and 2019, respectively | 503 | |
| tional paid-in capital | 448,632 | 362, |
| ined earnings | 472,209 | 417, |
| l common stockholders' equity | 921,344 | 779, |
| g-term debt, net | 781,100 | 786, |
| l capitalization | 1,702,444 | 1,566, |
| ent liabilities: | | |
| ent maturities of long-term debt, net | 5,127 | 21, |
| t-term borrowings | 370,000 | 175, |
| unts payable | 131,725 | 108, |
| ulatory balancing accounts | 34,636 | 4, |
| ued other taxes | 4,477 | 4, |
| ued interest | 6,178 | 5, |
| er accrued liabilities | 36,563 | 38, |
| l current liabilities | 588,706 | 358, |
| rred income taxes | 276,032 | 222, |
| ulatory liabilities | 180,718 | 211, |
| sion and postretirement benefits other than pensions | 115,581 | 258, |
| ances for construction | 195,625 | 191, |
| tributions in aid of construction | 268,050 | 241, |
| er long-term liabilities | 67,092 | 60, |
| mitments and contingencies | | |
| AL CAPITALIZATION AND LIABILITIES | $3,394,248 | $3,111, |

| | | |
|---|---|---|
| **NetPlant** | 2,650,558 | 2,406, |
| **Advances** | 195,625 | 191, |
| **CIAC** | 268,050 | 241, |
| **DefTax** | 276,032 | 222, |
| **ITC** | 0 | |

| :ed Balance Sheets - USD ($) | Dec. 31, 2 |
|---|---|
| ısands | |
| | |
| , plant and equipment, at cost | $11,6 |
| umulated depreciation | 2, |
| erty, plant and equipment | 9, |
| ıssets: | |
| cash equivalents | |
| receivable, net | |
| revenues | |
| / - materials and supplies | |
| / - gas stored | |
| ents and other current assets | |
| ry assets | |
| ld for sale | |
| rent assets | |
| ry assets | 1, |
| charges and other assets, net | |
| nt in joint venture | |
| stricted for construction activity | |
| | 2, |
| g lease right-of-use assets | |
| e assets | |
| ets | 13, |
| Utilities stockholders' equity: | |
| stock at $0.50 par value, authorized 600,000,000 shares, issued 248,571,355 and 223,871,284 as of December 31, 2020 and December 31, 2019 | |
| ı excess of par value | 3, |
| earnings | 1, |
| stock, at cost, 3,180,887 and 3,112,565 shares as of December 31, 2020 and December 31, 2019 | |
| ckholders' equity | 4, |
| n debt, excluding current portion | 5, |
| t issuance costs | |
| n debt, excluding current portion, net of debt issuance costs | 5, |
| nents and contingencies (See Note 9) | |
| iabilities: | |
| portion of long-term debt | |
| yable | |
| payable | |
| rdraft | |
| interest | |
| taxes | |
| ry liabilities | |
| crued liabilities | |
| rent liabilities | |
| credits and other liabilities: | |
| income taxes and investment tax credits | 1, |
| rs' advances for construction | |
| ry liabilities | |
| irement obligations | |
| g lease liabilities | |
| and other postretirement benefit liabilities | |
| | |
| erred credits and other liabilities | 2, |
| tions in aid of construction | |
| ilities and equity | $13,7 |

| | |
|---|---|
| **NetPlant** | 9, |
| **Advances** | |
| **CIAC** | |
| **DefTax** | 1, |
| **ITC** | |

| CONSOLIDATED BALANCE SHEETS - USD ($) | Dec. 31, 2020 | Dec. 31, 2019 |
|---|---|---|
| $ in Thousands | | |
| UTILITY PLANT: | | |
| Water Production | $168,080 | $160,870 |
| Transmission and Distribution | 648,763 | 556,517 |
| General | 85,056 | 83,043 |
| Construction Work in Progress | 80,055 | 75,520 |
| TOTAL | 981,954 | 875,950 |
| Less Accumulated Depreciation | 185,356 | 170,220 |
| UTILITY PLANT - NET | 796,598 | 705,730 |
| CURRENT ASSETS: | | |
| Cash and Cash Equivalents | 4,491 | 2,230 |
| Accounts Receivable, net | 14,569 | 11,908 |
| Unbilled Revenues | 7,065 | 7,183 |
| Materials and Supplies (at average cost) | 5,112 | 5,445 |
| Prepayments | 2,886 | 2,367 |
| TOTAL CURRENT ASSETS | 34,123 | 29,133 |
| Operating Lease Right of Use Asset | 5,209 | 5,944 |
| Preliminary Survey and Investigation Charges | 5,192 | 2,054 |
| Regulatory Assets | 118,144 | 110,479 |
| Restricted Cash | 5,913 | 44,269 |
| Non-utility Assets - Net | 11,207 | 10,370 |
| Other | 84 | 1,899 |
| TOTAL OTHER ASSETS | 145,749 | 175,015 |
| TOTAL ASSETS | 976,470 | 909,878 |
| CAPITALIZATION: | | |
| Common Stock, No Par Value | 217,451 | 215,125 |
| Retained Earnings | 128,757 | 108,667 |
| TOTAL COMMON EQUITY | 346,208 | 323,792 |
| Preferred Stock | 2,084 | 2,084 |
| Long-term Debt | 273,244 | 230,777 |
| TOTAL CAPITALIZATION | 621,536 | 556,653 |
| CURRENT LIABILITIES: | | |
| Current Portion of Long-term Debt | 7,255 | 7,178 |
| Notes Payable | 2,000 | 20,000 |
| Accounts Payable | 30,443 | 23,306 |
| Accrued Taxes | 10,138 | 7,635 |
| Accrued Interest | 2,137 | 2,031 |
| Unearned Revenues and Advanced Service Fees | 1,255 | 1,211 |
| Other | 3,620 | 3,620 |
| TOTAL CURRENT LIABILITIES | 56,848 | 64,981 |
| COMMITMENTS AND CONTINGENT LIABILITIES (Note 4) | | |
| OTHER LIABILITIES: | | |
| Customer Advances for Construction | 23,404 | 23,905 |
| Lease Obligations | 5,042 | 5,732 |
| Accumulated Deferred Income Taxes | 61,297 | 54,408 |
| Employee Benefit Plans | 34,426 | 34,671 |
| Regulatory Liabilities | 60,792 | 69,152 |
| Other | 1,135 | 2,546 |
| TOTAL OTHER LIABILITIES | 186,096 | 190,414 |
| CONTRIBUTIONS IN AID OF CONSTRUCTION | 111,990 | 97,830 |
| TOTAL CAPITALIZATION AND LIABILITIES | $976,470 | $909,878 |

| | | |
|---|---|---|
| **NetPlant** | 796,598 | 705,730 |
| **Advances** | 23,404 | 23,905 |
| **CIAC** | 111,990 | 97,830 |
| **DefTax** | 61,297 | 54,408 |
| **ITC** | 0 | 0 |

| | |
|---|---|
| ated Balance Sheets - USD ($) | Dec. 31, 2 |
| isands | |
| ant: | |
| | $ |
| ble plant and equipment | 3,1 |
| tion in progress | 1 |
| e assets | |
| , plant and equipment, gross | 3,3 |
| mulated depreciation and amortization | 1,0 |
| ilities, property, plant and equipment, net | 2,3 |
| te investments | |
| mulated depreciation and amortization | |
| te investments, net | |
| ssets: | |
| | |
| d cash | |
| receivable: | |
| rs, net of allowances for uncollectible accounts of $3,891 and $1,512 in 2020 and 2019, respectively | |
| ax | |
| | |
| unbilled utility revenue | |
| egulatory assets, net | |
| xpenses | |
| rrent assets | |
| rent assets | 1 |
| sets: | |
| latory assets, less current portion | 1 |
| nts | |
| | 6 |
| | |
| er assets | 8 |
| ets | 3,3 |
| ders' equity: | |
| stock, $0.001 par value; authorized 70,000,000 shares in 2020 and 2019; issued and outstanding 28,556,605 shares in 2020 and 28,456,508 shares in 201 | |
| al paid-in capital | 5 |
| earnings | 4 |
| ated other comprehensive (loss) income | |
| ckholders' equity | 9 |
| n debt, less current portion | 1,2 |
| ation, long-term debt and equity | 2,2 |
| iabilities: | |
| credit | 1 |
| portion of long-term debt | |
| groundwater extraction charges, purchased water and power | |
| payable | |
| interest | |
| payroll | |
| rrent liabilities | |
| rent liabilities | 3 |
| income taxes | 1 |
| s for construction | 1 |
| tions in aid of construction | 2 |
| ement benefit plans | 1 |
| ncurrent liabilities | |
| nents and contingencies | |
| uity and liabilities | $3,3 |

| | |
|---|---|
| **NetPlant** | 2,3 |
| **Advances** | 1 |
| **CIAC** | 2 |
| **DefTax** | 1 |
| **ITC** | |

| Sheets - USD ($)<br>usands | Dec. 31, 2 |
|---|---|
| PLANT, at original cost | $43 |
| quisition adjustments | |
| ated depreciation | - |
| y plant | 3 |
| HYSICAL PROPERTY, net of accumulated depreciation of $458 in 2020 and $435 in 2019 | |
| T ASSETS: | |
| l cash equivalents | |
| d cash | |
| s receivable, net of reserves of $655 in 2020 and $305 in 2019 | |
| revenues | |
| able income taxes | |
| s and supplies inventories, at cost | |
| expenses | |
| rent assets | |
| ONG-TERM ASSETS: | |
| pension cost | |
| eivable | |
| l regulatory assets | |
| sets | |
| er long-term assets | |
| ets | 4 |
| N STOCKHOLDERS' EQUITY: | |
| n stock, no par value, authorized 46,500,000 shares, issued and outstanding 13,060,817 shares in 2020 and 13,014,898 shares in 2019 | |
| l earnings | |
| nmon stockholders' equity | 1 |
| ED STOCK, authorized 500,000 shares, no shares issued | |
| RM DEBT, excluding current portion | 1 |
| MENTS | |
| T LIABILITIES: | |
| portion of long-term debt | |
| s payable | |
| s payable | |
| compensation and benefits | |
| interest | |
| l regulatory liabilities | |
| crued expenses | |
| rent liabilities | |
| D CREDITS: | |
| rs' advances for construction | |
| l income taxes | |
| l employee benefits | |
| l regulatory liabilities | |
| ferred credits | |
| erred credits | |
| tions in aid of construction | |
| ckholders' Equity and Liabilities | |

| | |
|---|---|
| **NetPlant** | 3 |
| **Advances** | |
| **CIAC** | |
| **DefTax** | |
| **ITC** | |

**Series Id:** CUUR0000SA0,CUUS0000SA0
Not Seasonally Adjusted
**Series Title:** All items in U.S. city average, all urban consumers, not seasonally adjusted
**Area:** U.S. city average
**Item:** All items
**Base Period:** 1982-84=100

**Download:**

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | HALF1 | HALF2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1990** | 127.4 | 128 | 128.7 | 128.9 | 129.2 | 129.9 | 130.4 | 131.6 | 132.7 | 133.5 | 133.8 | 133.8 | 128.7 | 132.6 |
| **1991** | 134.6 | 134.8 | 135 | 135.2 | 135.6 | 136 | 136.2 | 136.6 | 137.2 | 137.4 | 137.8 | 137.9 | 135.2 | 137.2 |
| **1992** | 138.1 | 138.6 | 139.3 | 139.5 | 139.7 | 140.2 | 140.5 | 140.9 | 141.3 | 141.8 | 142 | 141.9 | 139.2 | 141.4 |
| **1993** | 142.6 | 143.1 | 143.6 | 144 | 144.2 | 144.4 | 144.4 | 144.8 | 145.1 | 145.7 | 145.8 | 145.8 | 143.7 | 145.3 |
| **1994** | 146.2 | 146.7 | 147.2 | 147.4 | 147.5 | 148 | 148.4 | 149 | 149.4 | 149.5 | 149.7 | 149.7 | 147.2 | 149.3 |
| **1995** | 150.3 | 150.9 | 151.4 | 151.9 | 152.2 | 152.5 | 152.5 | 152.9 | 153.2 | 153.7 | 153.6 | 153.5 | 151.5 | 153.2 |
| **1996** | 154.4 | 154.9 | 155.7 | 156.3 | 156.6 | 156.7 | 157 | 157.3 | 157.8 | 158.3 | 158.6 | 158.6 | 155.8 | 157.9 |
| **1997** | 159.1 | 159.6 | 160 | 160.2 | 160.1 | 160.3 | 160.5 | 160.8 | 161.2 | 161.6 | 161.5 | 161.3 | 159.9 | 161.2 |
| **1998** | 161.6 | 161.9 | 162.2 | 162.5 | 162.8 | 163 | 163.2 | 163.4 | 163.6 | 164 | 164 | 163.9 | 162.3 | 163.7 |
| **1999** | 164.3 | 164.5 | 165 | 166.2 | 166.2 | 166.2 | 166.7 | 167.1 | 167.9 | 168.2 | 168.3 | 168.3 | 165.4 | 167.8 |
| **2000** | 168.8 | 169.8 | 171.2 | 171.3 | 171.5 | 172.4 | 172.8 | 172.8 | 173.7 | 174 | 174.1 | 174 | 170.8 | 173.6 |
| **2001** | 175.1 | 175.8 | 176.2 | 176.9 | 177.7 | 178 | 177.5 | 177.5 | 178.3 | 177.7 | 177.4 | 176.7 | 176.6 | 177.5 |
| **2002** | 177.1 | 177.8 | 178.8 | 179.8 | 179.8 | 179.9 | 180.1 | 180.7 | 181 | 181.3 | 181.3 | 180.9 | 178.9 | 180.9 |
| **2003** | 181.7 | 183.1 | 184.2 | 183.8 | 183.5 | 183.7 | 183.9 | 184.6 | 185.2 | 185 | 184.5 | 184.3 | 183.3 | 184.6 |
| **2004** | 185.2 | 186.2 | 187.4 | 188 | 189.1 | 189.7 | 189.4 | 189.5 | 189.9 | 190.9 | 191 | 190.3 | 187.6 | 190.2 |
| **2005** | 190.7 | 191.8 | 193.3 | 194.6 | 194.4 | 194.5 | 195.4 | 196.4 | 198.8 | 199.2 | 197.6 | 196.8 | 193.2 | 197.4 |
| **2006** | 198.3 | 198.7 | 199.8 | 201.5 | 202.5 | 202.9 | 203.5 | 203.9 | 202.9 | 201.8 | 201.5 | 201.8 | 200.6 | 202.6 |
| **2007** | 202.416 | 203.499 | 205.352 | 206.686 | 207.949 | 208.352 | 208.299 | 207.917 | 208.49 | 208.936 | 210.177 | 210.036 | 205.709 | 208.976 |
| **2008** | 211.08 | 211.693 | 213.528 | 214.823 | 216.632 | 218.815 | 219.964 | 219.086 | 218.783 | 216.573 | 212.425 | 210.228 | 214.429 | 216.177 |
| **2009** | 211.143 | 212.193 | 212.709 | 213.24 | 213.856 | 215.693 | 215.351 | 215.834 | 215.969 | 216.177 | 216.33 | 215.949 | 213.139 | 215.935 |
| **2010** | 216.687 | 216.741 | 217.631 | 218.009 | 218.178 | 217.965 | 218.011 | 218.312 | 218.439 | 218.711 | 218.803 | 219.179 | 217.535 | 218.576 |
| **2011** | 220.223 | 221.309 | 223.467 | 224.906 | 225.964 | 225.722 | 225.922 | 226.545 | 226.889 | 226.421 | 226.23 | 225.672 | 223.598 | 226.28 |
| **2012** | 226.665 | 227.663 | 229.392 | 230.085 | 229.815 | 229.478 | 229.104 | 230.379 | 231.407 | 231.317 | 230.221 | 229.601 | 228.85 | 230.338 |
| **2013** | 230.28 | 232.166 | 232.773 | 232.531 | 232.945 | 233.504 | 233.596 | 233.877 | 234.149 | 233.546 | 233.069 | 233.049 | 232.366 | 233.548 |
| **2014** | 233.916 | 234.781 | 236.293 | 237.072 | 237.9 | 238.343 | 238.25 | 237.852 | 238.031 | 237.433 | 236.151 | 234.812 | 236.384 | 237.088 |
| **2015** | 233.707 | 234.722 | 236.119 | 236.599 | 237.805 | 238.638 | 238.654 | 238.316 | 237.945 | 237.838 | 237.336 | 236.525 | 236.265 | 237.769 |
| **2016** | 236.916 | 237.111 | 238.132 | 239.261 | 240.229 | 241.018 | 240.628 | 240.849 | 241.428 | 241.729 | 241.353 | 241.432 | 238.778 | 241.237 |
| **2017** | 242.839 | 243.603 | 243.801 | 244.524 | 244.733 | 244.955 | 244.786 | 245.519 | 246.819 | 246.663 | 246.669 | 246.524 | 244.076 | 246.163 |
| **2018** | 247.867 | 248.991 | 249.554 | 250.546 | 251.588 | 251.989 | 252.006 | 252.146 | 252.439 | 252.885 | 252.038 | 251.233 | 250.089 | 252.125 |
| **2019** | 251.712 | 252.776 | 254.202 | 255.548 | 256.092 | 256.143 | 256.571 | 256.558 | 256.759 | 257.346 | 257.208 | 256.974 | 254.412 | 256.903 |
| **2020** | 257.971 | 258.678 | 258.115 | 256.389 | 256.394 | 257.797 | 259.101 | 259.918 | 260.28 | 260.388 | 260.229 | 260.474 | 257.557 | 260.065 |
| **2021** | 261.582 | 263.014 | 264.877 | 267.054 | | | | | | | | | | |

| | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman |
|---|---|---|---|---|---|---|---|---|---|---|
| | Line # | Line # | Line # | Line # | Line # | Line # | Line # | Line # | Line # | Line # |
| | **2** | **8** | **9** | **16** | **23** | **24** | **34** | **38** | **39** | **40** |
| 1912 | **0** | **0** | **0** | **0** | **0** | **0** | **9** | **0** | **6** | **0** |
| 1913 | **0** | **0** | **0** | **0** | **0** | **0** | **10** | **0** | **6** | **0** |
| 1914 | **0** | **0** | **0** | **0** | **0** | **0** | **8** | **0** | **5** | **0** |
| 1915 | **0** | **0** | **0** | **0** | **0** | **0** | **9** | **0** | **6** | **0** |
| 1916 | **0** | **0** | **0** | **0** | **0** | **0** | **11** | **0** | **6** | **0** |
| 1917 | **0** | **0** | **0** | **0** | **0** | **0** | **16** | **0** | **9** | **0** |
| 1918 | **0** | **0** | **0** | **0** | **0** | **0** | **19** | **0** | **10** | **0** |
| 1919 | **0** | **0** | **0** | **0** | **0** | **0** | **20** | **0** | **11** | **0** |
| 1920 | **0** | **0** | **0** | **0** | **0** | **0** | **22** | **0** | **12** | **0** |
| 1921 | **0** | **0** | **0** | **0** | **0** | **0** | **22** | **0** | **13** | **0** |
| 1922 | **0** | **0** | **0** | **0** | **0** | **0** | **20** | **0** | **12** | **0** |
| 1923 | **0** | **0** | **0** | **0** | **0** | **0** | **21** | **0** | **12** | **0** |
| 1924 | **0** | **0** | **0** | **0** | **0** | **0** | **22** | **0** | **13** | **0** |
| **1925** | **0** | **18** | **0** | **20** | **0** | **0** | **21** | **0** | **13** | **0** |
| 1926 | **0** | **19** | **0** | **0** | **0** | **0** | **21** | **0** | **13** | **0** |
| 1927 | **0** | **18** | **0** | **0** | **0** | **0** | **21** | **0** | **13** | **0** |
| **1928** | **0** | **18** | **0** | **0** | **0** | **0** | **20** | **0** | **13** | **0** |
| 1929 | **0** | **18** | **0** | **0** | **0** | **0** | **20** | **0** | **14** | **0** |
| 1930 | **0** | **17** | **0** | **0** | **0** | **0** | **20** | **0** | **14** | **0** |
| 1931 | **0** | **16** | **0** | **0** | **0** | **0** | **20** | **0** | **14** | **0** |
| **1932** | **0** | **15** | **0** | **0** | **0** | **0** | **18** | **0** | **13** | **0** |
| 1933 | **0** | **15** | **0** | **0** | **0** | **0** | **18** | **0** | **11** | **0** |
| 1934 | **0** | **16** | **0** | **0** | **0** | **0** | **19** | **0** | **12** | **0** |
| 1935 | **0** | **16** | **0** | **0** | **0** | **0** | **19** | **0** | **13** | **0** |
| 1936 | **0** | **16** | **0** | **0** | **0** | **0** | **20** | **0** | **13** | **0** |
| 1937 | **0** | **18** | **0** | **0** | **0** | **0** | **21** | **0** | **14** | **0** |

| | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman |
|---|---|---|---|---|---|---|---|---|---|---|
| | Line # | Line # | Line # | Line # | Line # | Line # | Line # | Line # | Line # | Line # |
| | **2** | **8** | **9** | **16** | **23** | **24** | **34** | **38** | **39** | **40** |
| 1938 | **0** | **18** | **0** | **0** | **0** | **0** | **22** | **0** | **14** | **0** |
| **1939** | **0** | **18** | **0** | **20** | **0** | **0** | **22** | **0** | **14** | **0** |
| 1940 | **0** | **20** | **0** | **0** | **0** | **0** | **24** | **0** | **14** | **0** |
| 1941 | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **15** | **0** |
| **1942** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **16** | **0** |
| 1943 | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **16** | **0** |
| **1944** | **0** | **21** | **0** | **0** | **0** | **0** | **25** | **0** | **17** | **0** |
| 1945 | **0** | **22** | **0** | **0** | **0** | **0** | **26** | **0** | **17** | **0** |
| 1946 | **0** | **24** | **0** | **0** | **0** | **0** | **29** | **0** | **19** | **0** |
| **1947** | **0** | **28** | **0** | **32** | **0** | **0** | **35** | **0** | **22** | **0** |
| **1948** | **0** | **32** | **0** | **35** | **29** | **0** | **41** | **0** | **25** | **0** |
| 1949 | **0** | **35** | **0** | **36** | **0** | **0** | **42** | **0** | **27** | **52** |
| **1950** | **0** | **36** | **0** | **38** | **0** | **0** | **43** | **0** | **28** | **59** |
| 1951 | **0** | **38** | **0** | **40** | **0** | **0** | **45** | **0** | **29** | **61** |
| **1952** | **0** | **38** | **0** | **41** | **0** | **0** | **47** | **0** | **31** | **61** |
| **1953** | **0** | **39** | **0** | **42** | **0** | **0** | **48** | **0** | **33** | **65** |
| **1954** | **0** | **41** | **0** | **0** | **0** | **0** | **48** | **0** | **0** | **67** |
| **1955** | **0** | **43** | **0** | **0** | **0** | **0** | **53** | **0** | **36** | **70** |
| **1956** | **0** | **46** | **0** | **0** | **0** | **0** | **57** | **0** | **0** | **77** |
| **1957** | **0** | **49** | **0** | **0** | **0** | **0** | **60** | **0** | **41** | **78** |
| **1958** | **0** | **50** | **0** | **0** | **0** | **0** | **63** | **0** | **44** | **78** |
| **1959** | **0** | **52** | **74** | **54** | **36** | **0** | **65** | **na** | **46** | **78** |
| **1960** | **0** | **53** | **74** | **55** | **35** | **0** | **68** | **na** | **48** | **78** |
| **1961** | **0** | **53** | **71** | **56** | **35** | **0** | **69** | **na** | **50** | **78** |
| **1962** | **0** | **54** | **71** | **58** | **35** | **0** | **71** | **na** | **51** | **84** |
| **1963** | **0** | **55** | **71** | **59** | **41** | **0** | **72** | **na** | **53** | **87** |
| **1964** | **0** | **56** | **73** | **60** | **44** | **0** | **73** | **na** | **55** | **87** |
| **1965** | **0** | **57** | **74** | **62** | **45** | **38** | **74** | **na** | **58** | **93** |
| **1966** | **0** | **56** | **78** | **64** | **46** | **41** | **75** | **na** | **60** | **101** |
| **1967** | **64** | **61** | **81** | **67** | **47** | **44** | **76** | **na** | **63** | **101** |

| | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman |
|---|---|---|---|---|---|---|---|---|---|---|
| | Line # | Line # | Line # | Line # | Line # | Line # | Line # | Line # | Line # | Line # |
| | **2** | **8** | **9** | **16** | **23** | **24** | **34** | **38** | **39** | **40** |
| **1968** | **0** | **64** | **81** | **69** | **49** | **0** | **77** | **na** | **66** | **101** |
| **1969** | **0** | **69** | **84** | **73** | **53** | **0** | **80** | **na** | **72** | **106** |
| **1970** | **0** | **75** | **89** | **79** | **75** | **0** | **84** | **na** | **79** | **108** |
| **1971** | **0** | **84** | **93** | **89** | **82** | **0** | **94** | **na** | **89** | **108** |
| **1972** | **0** | **92** | **96** | **96** | **85** | **0** | **98** | **na** | **96** | **106** |
| **1973** | **0** | **100** | **100** | **100** | **100** | **0** | **100** | **na** | **100** | **100** |
| **1974** | **0** | **117** | **122** | **118** | **140** | **0** | **110** | **25** | **115** | **93** |
| **1975** | **0** | **127** | **155** | **134** | **159** | **0** | **146** | **100** | **123** | **93** |
| **1976** | **0** | **130** | **174** | **144** | **171** | **0** | **154** | **104** | **130** | **98** |
| **1977** | **0** | **137** | **184** | **152** | **172** | **0** | **162** | **108** | **139** | **101** |
| **1978** | **0** | **148** | **192** | **162** | **173** | **0** | **173** | **113** | **145** | **105** |
| **1979** | **0** | **163** | **205** | **175** | **178** | **0** | **185** | **122** | **160** | **108** |
| **1980** | **0** | **181** | **222** | **191** | **191** | **0** | **202** | **132** | **175** | **122** |
| **1981** | **196** | **191** | **245** | **208** | **208** | **0** | **219** | **138** | **184** | **127** |
| **1982** | **197** | **198** | **260** | **227** | **210** | **244** | **231** | **137** | **198** | **128** |
| **1983** | **206** | **206** | **271** | **242** | **182** | **197** | **239** | **151** | **207** | **141** |
| **1984** | **217** | **218** | **277** | **251** | **184** | **200** | **244** | **149** | **215** | **148** |
| **1985** | **227** | **225** | **282** | **262** | **181** | **198** | **254** | **151** | **221** | **135** |
| **1986** | **234** | **233** | **284** | **269** | **184** | **207** | **255** | **150** | **226** | **135** |
| **1987** | **238** | **239** | **299** | **276** | **196** | **0** | **263** | **160** | **230** | **137** |
| **1988** | **248** | **251** | **311** | **286** | **220** | **0** | **280** | **197** | **245** | **140** |
| **1989** | **255** | **265** | **330** | **301** | **216** | **0** | **295** | **217** | **258** | **150** |
| **1990** | **258** | **271** | **349** | **313** | **229** | **0** | **301** | **211** | **262** | **159** |
| **1991** | **262** | **274** | **355** | **322** | **253** | **0** | **307** | **200** | **272** | **162** |
| **1992** | **270** | **281** | **368** | **332** | **261** | **0** | **311** | **183** | **283** | **196** |
| **1993** | **282** | **294** | **386** | **342** | **248** | **0** | **321** | **193** | **292** | **195** |

| | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman | Handy-Whitman |
|---|---|---|---|---|---|---|---|---|---|---|
| | Line # | Line # | Line # | Line # | Line # | Line # | Line # | Line # | Line # | Line # |
| | **2** | **8** | **9** | **16** | **23** | **24** | **34** | **38** | **39** | **40** |
| **1994** | **295** | **308** | **428** | **348** | **246** | **0** | **327** | **191** | **300** | **175** |
| **1995** | **302** | **316** | **442** | **357** | **250** | **0** | **332** | **204** | **307** | **200** |
| **1996** | **309** | **321** | **450** | **367** | **251** | **268** | **339** | **211** | **321** | **207** |
| **1997** | **317** | **331** | **473** | **380** | **255** | **273** | **347** | **216** | **323** | **197** |
| **1998** | **318** | **337** | **489** | **391** | **268** | **283** | **355** | **216** | **330** | **197** |
| **1999** | **318** | **343** | **505** | **401** | **268** | **288** | **361** | **219** | **334** | **198** |
| **2000** | **326** | **362** | **530** | **413** | **270** | **0** | **377** | **231** | **348** | **205** |
| **2001** | **336** | **378** | **527** | **428** | **0** | **0** | **391** | **0** | **354** | **206** |
| **2002** | **344** | **389** | **529** | **443** | **0** | **0** | **404** | **0** | **360** | **207** |
| **2003** | **350** | **394** | **543** | **452** | **0** | **0** | **407** | **0** | **368** | **207** |
| **2004** | **276** | **421** | **572** | **466** | **308** | **0** | **432** | **0** | **388** | **207** |
| **2005** | **0** | **448** | **612** | **486** | **0** | **0** | **469** | **0** | **410** | **214** |
| **2006** | **0** | **466** | **624** | **504** | **0** | **0** | **499** | **0** | **454** | **248** |
| **2007** | **0** | **496** | **634** | **537** | **0** | **0** | **530** | **0** | **485** | **289** |
| **2008** | **465** | **538** | **663** | **586** | **676** | **0** | **588** | **0** | **514** | **373** |
| **2009** | **469** | **544** | **691** | **619** | **722** | **0** | **614** | **0** | **537** | **373** |
| **2010** | **0** | **560** | **704** | **637** | **759** | **0** | **624** | **0** | **555** | **376** |
| **2011** | **0** | **584** | **752** | **654** | **777** | **0** | **648** | **0** | **576** | **379** |
| **2012** | **503** | **604** | **788** | **680** | **798** | **1078** | **687** | **0** | **598** | **379** |
| **2013** | **0** | **614** | **836** | **699** | **763** | **0** | **701** | **0** | **602** | **381** |
| **2014** | **0** | **631** | **896** | **725** | **735** | **1131** | **731** | **0** | **608** | **386** |
| **2015** | **0** | **647** | **945** | **741** | **742** | **0** | **740** | **0** | **618** | **402** |
| **2016** | **0** | **661** | **1017** | **761** | **769** | **0** | **755** | **0** | **624** | **403** |
| **2017** | **0** | **675** | **1117** | **785** | **788** | **0** | **777** | **0** | **650** | **419** |
| **2018** | **0** | **704** | **1210** | **813** | **818** | **0** | **803** | **0** | **668** | **436** |
| **2019** | **578** | **716** | **1332** | **847** | **833** | **0** | **830** | **405** | **688** | **447** |
| **2020** | **589** | **735** | **1430** | **893** | **836** | **0** | **858** | **431** | **705** | **466** |
| **2021** | **605** | **762** | **1436** | **922** | **836** | **1244** | **883** | **471** | **712** | **485** |
| **2021** | **605** | **762** | **1436** | **922** | **836** | **1244** | **883** | **471** | **712** | **485** |

| Handy-Whitman | Series Id: PCU3341--3341-- | Series Id: PCU336110336110 |
|---|---|---|
| | Series Title: PPI industry group data for Computer & peripheral equipment mfg, not seasonally adjusted | Series Title: PPI industry data for Automobile, light truck and utility vehicle mfg, not seasonally adjusted |
| Line # | Industry: Computer & peripheral equipment mfg | Industry: Automobile, light truck and utility vehicle mfg |
| **42** | Product: Computer & peripheral equipment mfg | Product: Automobile, light truck and utility vehicle mfg |
| | Base Date: 200612 | Base Date: 198206 |
| 1912 | **0** | |
| 1913 | **0** | |
| 1914 | **0** | |
| 1915 | **0** | |
| 1916 | **0** | |
| 1917 | **0** | |
| 1918 | **0** | |
| 1919 | **0** | |
| 1920 | **0** | |
| 1921 | **0** | |
| 1922 | **0** | |
| 1923 | **0** | |
| 1924 | **0** | |
| **1925** | **0** | |
| 1926 | **0** | |
| 1927 | **0** | |
| **1928** | **0** | |
| 1929 | **0** | |
| 1930 | **0** | |
| 1931 | **0** | |
| **1932** | **0** | |
| 1933 | **0** | |
| 1934 | **0** | |
| 1935 | **0** | |
| 1936 | **0** | |
| 1937 | **0** | |

| Handy-Whitman | Series Id: PCU3341--3341-- | Series Id: PCU336110336110 |
|---|---|---|
| | Series Title: PPI industry group data for Computer & peripheral equipment mfg, not seasonally adjusted | Series Title: PPI industry data for Automobile, light truck and utility vehicle mfg, not seasonally adjusted |
| Line # | Industry: Computer & peripheral equipment mfg | Industry: Automobile, light truck and utility vehicle mfg |
| **42** | Product: Computer & peripheral equipment mfg | Product: Automobile, light truck and utility vehicle mfg |
| | Base Date: 200612 | Base Date: 198206 |
| 1938 | **0** | |
| **1939** | **0** | |
| 1940 | **0** | |
| 1941 | **0** | |
| **1942** | **0** | |
| 1943 | **0** | |
| **1944** | **0** | |
| 1945 | **0** | |
| 1946 | **0** | |
| **1947** | **0** | |
| **1948** | **0** | |
| 1949 | **35** | |
| **1950** | **37** | |
| 1951 | **41** | |
| **1952** | **41** | |
| **1953** | **43** | |
| **1954** | **44** | |
| **1955** | **44** | |
| **1956** | **48** | |
| **1957** | **50** | |
| **1958** | **51** | |
| **1959** | **53** | |
| **1960** | **54** | |
| **1961** | **55** | |
| **1962** | **56** | |
| **1963** | **57** | |
| **1964** | **58** | |
| **1965** | **58** | |
| **1966** | **61** | |
| **1967** | **64** | |

| Handy-Whitman | Series Id: PCU3341--3341-- | | Series Id: PCU336110336110 | |
|---|---|---|---|---|
| | Series Title: PPI industry group data for Computer & peripheral equipment mfg, not seasonally adjusted | | Series Title: PPI industry data for Automobile, light truck and utility vehicle mfg, not seasonally adjusted | |
| Line # | Industry: Computer & peripheral equipment mfg | | Industry: Automobile, light truck and utility vehicle mfg | |
| **42** | Product: Computer & peripheral equipment mfg | | Product: Automobile, light truck and utility vehicle mfg | |
| | Base Date: 200612 | | Base Date: 198206 | |
| **1968** | **68** | | | |
| **1969** | **72** | | | |
| **1970** | **80** | | | |
| **1971** | **90** | | | |
| **1972** | **96** | | | |
| **1973** | **100** | | | |
| **1974** | **123** | | | |
| **1975** | **143** | | **1975** | 62.900 |
| **1976** | **157** | | **1976** | 64.025 |
| **1977** | **167** | | **1977** | 68.192 |
| **1978** | **182** | | **1978** | 72.892 |
| **1979** | **194** | | **1979** | 78.667 |
| **1980** | **207** | | **1980** | 85.983 |
| **1981** | **222** | | **1981** | 94.533 |
| **1982** | **245** | | **1982** | 99.567 |
| **1983** | **264** | *276.983* | **1983** | 102.108 |
| **1984** | **270** | *276.983* | **1984** | 104.625 |
| **1985** | **285** | *276.983* | **1985** | 107.208 |
| **1986** | **296** | *276.983* | **1986** | 111.008 |
| **1987** | **307** | *276.983* | **1987** | 112.967 |
| **1988** | **320** | *276.983* | **1988** | 114.117 |
| **1989** | **343** | *276.983* | **1989** | 117.358 |
| **1990** | **363** | *276.983* | **1990** | 119.850 |
| **1991** | **372** | *276.983* | **1991** | 125.292 |
| **1992** | **348** | *276.983* | **1992** | 129.108 |
| **1993** | **385** | *276.983* | **1993** | 133.167 |

| Handy-Whitman | | Series Id: PCU3341--3341-- | | Series Id: PCU336110336110 | |
|---|---|---|---|---|---|
| | | Series Title: PPI industry group data for Computer & peripheral equipment mfg, not seasonally adjusted | | Series Title: PPI industry data for Automobile, light truck and utility vehicle mfg, not seasonally adjusted | |
| Line # | | Industry: Computer & peripheral equipment mfg | | Industry: Automobile, light truck and utility vehicle mfg | |
| **42** | | Product: Computer & peripheral equipment mfg | | Product: Automobile, light truck and utility vehicle mfg | |
| | | Base Date: 200612 | | Base Date: 198206 | |
| **1994** | **391** | | *276.983* | **1994** | 137.950 |
| **1995** | **398** | **1995** | 276.983 | **1995** | 139.100 |
| **1996** | **418** | **1996** | 249.050 | **1996** | 140.433 |
| **1997** | **475** | **1997** | 219.583 | **1997** | 138.700 |
| **1998** | **493** | **1998** | 191.717 | **1998** | 136.842 |
| **1999** | **508** | **1999** | 172.783 | **1999** | 137.642 |
| **2000** | **526** | **2000** | 162.158 | **2000** | 138.767 |
| **2001** | **551** | **2001** | 153.075 | **2001** | 137.542 |
| **2002** | **565** | **2002** | 139.533 | **2002** | 134.892 |
| **2003** | **570** | **2003** | 123.950 | **2003** | 135.083 |
| **2004** | **585** | **2004** | 115.350 | **2004** | 136.475 |
| **2005** | **601** | **2005** | 107.775 | **2005** | 135.067 |
| **2006** | **643** | **2006** | 102.067 | **2006** | 130.817 |
| **2007** | **674** | **2007** | 94.450 | **2007** | 131.117 |
| **2008** | **706** | **2008** | 86.425 | **2008** | 132.892 |
| **2009** | **734** | **2009** | 81.092 | **2009** | 136.742 |
| **2010** | **728** | **2010** | 76.475 | **2010** | 136.783 |
| **2011** | **737** | **2011** | 73.408 | **2011** | 137.683 |
| **2012** | **762** | **2012** | 70.658 | **2012** | 141.250 |
| **2013** | **787** | **2013** | 67.642 | **2013** | 142.733 |
| **2014** | **846** | **2014** | 66.392 | **2014** | 145.333 |
| **2015** | **927** | **2015** | 63.208 | **2015** | 148.883 |
| **2016** | **974** | **2016** | 59.858 | **2016** | 150.108 |
| **2017** | **989** | **2017** | 58.775 | **2017** | 152.067 |
| **2018** | **1027** | **2018** | 58.483 | **2018** | 153.250 |
| **2019** | **1069** | **2019** | 56.308 | **2019** | 153.592 |
| **2020** | **1123** | **2020** | 54.950 | **2020** | 153.108 |
| **2021** | **1184** | **2021** | 54.900 | **2021** | 155.500 |
| **2021** | **1184** | | 54.900 | | 155.500 |

**PPI Industry Data**

**Series Id:** PCU33411-33411-
**Series Tit** PPI industry data for Computer & peripheral equipment mfg, not seasonally adjusted
**Industry:** Computer & peripheral equipment mfg
**Product:** Computer & peripheral equipment mfg
**Base Dat** 200612

**Download:**

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1995** | 286.5 | 284.5 | 282.9 | 282.2 | 279.9 | 277.8 | 277 | 273.4 | 271.7 | 270.5 | 269.1 | 268.3 |
| **1996** | 265.5 | 260.9 | 258.4 | 253.3 | 252 | 249.8 | 245.8 | 244.9 | 243.7 | 240.5 | 238.2 | 235.6 |
| **1997** | 234.4 | 232 | 230.5 | 228.8 | 221.2 | 218.1 | 216.1 | 213.8 | 212.3 | 210.5 | 209.1 | 208.2 |
| **1998** | 204.4 | 201.3 | 199.1 | 195.2 | 193.5 | 192.5 | 190.9 | 187.5 | 186.8 | 184.7 | 183.6 | 181.1 |
| **1999** | 178.6 | 177.9 | 177.2 | 175.3 | 175.1 | 174.8 | 171.2 | 169.8 | 169.5 | 168.6 | 168.2 | 167.2 |
| **2000** | 165.4 | 165 | 164.3 | 163 | 162.1 | 161.6 | 161.8 | 161 | 160.9 | 160.9 | 160.5 | 159.4 |
| **2001** | 158.4 | 157 | 155.7 | 155.6 | 154.9 | 153.9 | 153.3 | 150.5 | 150.4 | 149.8 | 149 | 148.4 |
| **2002** | 146.4 | 144.7 | 143.8 | 143.2 | 142.8 | 141.6 | 139.2 | 136.9 | 136.1 | 134.7 | 132.9 | 132.1 |
| **2003** | 130.3 | 127.8 | 126.3 | 126.1 | 125 | 124.5 | 123.5 | 122.5 | 122.4 | 120.7 | 119.7 | 118.6 |
| **2004** | 118.2 | 117.8 | 117.4 | 117.2 | 116.8 | 115.7 | 115.5 | 114.7 | 113.9 | 113.6 | 111.7 | 111.7 |
| **2005** | 110.5 | 110.2 | 109.5 | 109.2 | 108.3 | 108 | 107.5 | 107.3 | 106.4 | 105.9 | 105.6 | 104.9 |
| **2006** | 104.7 | 104.2 | 104 | 103.2 | 102.8 | 102.1 | 101.7 | 101.1 | 100.6 | 100.3 | 100.1 | 100 |
| **2007** | 99.2 | 98.7 | 97.9 | 97.5 | 96.2 | 95.1 | 93.9 | 92.3 | 91.7 | 91 | 90.2 | 89.7 |
| **2008** | 88.8 | 88.4 | 87.3 | 86.9 | 86.9 | 86.8 | 86.5 | 86 | 85.5 | 84.9 | 84.6 | 84.5 |
| **2009** | 84.4 | 83.2 | 83 | 82.4 | 82.3 | 81.5 | 81.1 | 81.3 | 79.1 | 79.1 | 78 | 77.7 |
| **2010** | 77.8 | 77.6 | 77.8 | 77.2 | 77 | 76.6 | 76.2 | 76 | 75.6 | 75.4 | 75.4 | 75.1 |
| **2011** | 75 | 74.7 | 74.3 | 74.6 | 74.3 | 74.1 | 72.7 | 72.1 | 72 | 72.1 | 72.4 | 72.6 |
| **2012** | 72.7 | 72.5 | 71.5 | 71.4 | 71.4 | 70.7 | 70.6 | 70.3 | 69.4 | 69.7 | 69 | 68.7 |
| **2013** | 68.6 | 68.6 | 68.5 | 68.3 | 67.8 | 67.3 | 67.4 | 67.1 | 67.3 | 66.9 | 67 | 66.9 |
| **2014** | 66.8 | 66.7 | 66.5 | 66.7 | 66.6 | 66.7 | 66.4 | 66.3 | 66.2 | 66.2 | 65.8 | 65.8 |
| **2015** | 66 | 64.2 | 63.5 | 63.3 | 63.1 | 62.6 | 62.9 | 63 | 62.9 | 62.5 | 62.2 | 62.3 |
| **2016** | 62.4 | 62 | 59.5 | 59.8 | 60 | 60 | 59.5 | 59.2 | 59.2 | 58.8 | 58.9 | 59 |
| **2017** | 58.4 | 58.5 | 58.5 | 59.2 | 59.1 | 59 | 58.9 | 58.7 | 58.9 | 58.8 | 58.7 | 58.6 |
| **2018** | 58.5 | 58.2 | 58.4 | 58.3 | 58.7 | 58.7 | 58.6 | 58.8 | 58.6 | 58.8 | 58.5 | 57.7 |
| **2019** | 57.7 | 57.9 | 57.3 | 57.2 | 56.2 | 55.8 | 55.7 | 55.9 | 54.4 | 55.8 | 55.8 | 56 |
| **2020** | 55.1 | 55.1 | 55 | 55.1 | 55.2 | 54.7 | 55.1 | 55.1 | 54.8 | 54.9 | 54.9 | 54.4 |
| **2021** | 54.8(P) | 54.9(P) | 54.5(P) | 54.9 | | | | | | | | |

P : Preliminary. All indexes are subject to revision four months after original publication.

54.9(P)

**PPI Industry Data**

**Series Id:** PCU336110336110
**Series Tit** PPI industry data for Automobile, light truck and utility vehicle mfg, not seasonally adjusted
**Industry:** Automobile, light truck and utility vehicle mfg
**Product:** Automobile, light truck and utility vehicle mfg
**Base Dat** 198206

**Download:**

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1975** | | | | | | | | | | | | 62.9 |
| **1976** | 63 | 62.9 | 63 | 63.1 | 62.9 | 63 | 63 | 63.3 | 63.4 | 66.9 | 66.9 | 66.9 |
| **1977** | 66.8 | 66.8 | 66.9 | 67.1 | 67.2 | 67.3 | 67.3 | 67.4 | 67.4 | 71.4 | 71.3 | 71.4 |
| **1978** | 71.4 | 71.4 | 71.4 | 71.4 | 72.5 | 72.7 | 72.5 | 72.5 | 72.5 | 75.4 | 75.4 | 75.6 |
| **1979** | 76.7 | 76.9 | 77 | 78.3 | 78.4 | 78.5 | 78.7 | 76.8 | 77 | 81.9 | 81.8 | 82 |
| **1980** | 83.5 | 82.8 | 82.9 | 85.2 | 84.6 | 84.6 | 86.3 | 86.7 | 82.7 | 90.9 | 91 | 90.6 |
| **1981** | 91.4 | 91.6 | 90.7 | 93.3 | 94.1 | 94.5 | 94.6 | 94.4 | 90.2 | 99.7 | 99.8 | 100.1 |
| **1982** | 100.5 | 97.5 | 97.5 | 97.4 | 98.8 | 100 | 100.1 | 100.4 | 94.9 | 102.5 | 102.5 | 102.7 |
| **1983** | 102.2 | 101.8 | 101.4 | 101.6 | 101.7 | 101.8 | 102 | 102.3 | 97.8 | 104.2 | 104.2 | 104.3 |
| **1984** | 104.5 | 104.5 | 104.6 | 104.9 | 104.6 | 104.4 | 104.7 | 104.4 | 101 | 106.1 | 106.3 | 105.5 |
| **1985** | 106.7 | 106.8 | 106.5 | 106.5 | 107 | 107.3 | 107.3 | 107.2 | 100.2 | 110.4 | 110.4 | 110.2 |
| **1986** | 109 | 109.3 | 108.7 | 110.3 | 110 | 110.2 | 110.3 | 109.7 | 105.6 | 116.9 | 116.7 | 115.4 |
| **1987** | 115.3 | 112.6 | 111.9 | 113.7 | 112.9 | 112.5 | 112.4 | 111.4 | 108.4 | 116.5 | 115.2 | 112.8 |
| **1988** | 113 | 113 | 112.5 | 112.6 | 113 | 113.1 | 113.2 | 113.3 | 110.2 | 119.5 | 118.1 | 117.9 |
| **1989** | 117.8 | 118.1 | 116.4 | 115.4 | 116.6 | 116.9 | 114.7 | 114.6 | 113.3 | 122.5 | 121.2 | 120.8 |
| **1990** | 118.4 | 118.5 | 118 | 117.8 | 117.3 | 119 | 119.2 | 118.2 | 117.2 | 125 | 124.8 | 124.8 |
| **1991** | 125.1 | 125.9 | 125.5 | 124.4 | 123.2 | 122.9 | 122.8 | 122.6 | 120.3 | 131 | 130.3 | 129.5 |
| **1992** | 129.2 | 129 | 129.3 | 129.2 | 128.9 | 128.3 | 128.4 | 127.5 | 123.5 | 132.1 | 132.1 | 131.8 |
| **1993** | 132.1 | 132.9 | 133 | 132.9 | 132.6 | 132.8 | 132.9 | 132.6 | 128 | 135.7 | 136.2 | 136.3 |
| **1994** | 137.3 | 137.5 | 137.4 | 137.4 | 138.3 | 138.1 | 138.2 | 138.2 | 133.9 | 140 | 139.3 | 139.8 |
| **1995** | 140.1 | 139.9 | 139.3 | 139.1 | 138.7 | 137.8 | 137.7 | 137.2 | 132.9 | 141.7 | 142.4 | 142.4 |
| **1996** | 141.2 | 141.1 | 141.1 | 140.5 | 140.6 | 140.7 | 139.5 | 139.2 | 135.6 | 142.2 | 141.9 | 141.6 |
| **1997** | 141.7 | 141.5 | 141.2 | 140.3 | 138.4 | 138 | 135.9 | 135.9 | 133.7 | 140.6 | 139.4 | 137.8 |
| **1998** | 137.8 | 138 | 137.8 | 137.2 | 135.4 | 134.3 | 134.8 | 133.9 | 132.7 | 140.6 | 140.4 | 139.2 |
| **1999** | 138.2 | 138.7 | 137.7 | 138 | 137.2 | 136 | 134.7 | 134.4 | 133.4 | 142.1 | 140.8 | 140.5 |
| **2000** | 139.9 | 139.4 | 139 | 138.9 | 138.9 | 137.4 | 136.8 | 135.8 | 135.5 | 141.2 | 141.3 | 141.1 |
| **2001** | 140.3 | 137.7 | 138.1 | 138.9 | 136.9 | 135.9 | 136.5 | 136 | 135.8 | 138.3 | 137.8 | 138.3 |
| **2002** | 136.8 | 137.7 | 136.4 | 136 | 134.9 | 134.4 | 131.3 | 130.3 | 130.4 | 139 | 136.5 | 135 |
| **2003** | 135.7 | 135.8 | 138.5 | 134 | 133.6 | 132 | 131.6 | 132 | 130.5 | 140.7 | 139 | 137.6 |
| **2004** | 137.4 | 136.8 | 137.1 | 135.9 | 136.2 | 136.2 | 132.8 | 132.4 | 131.5 | 142 | 139.9 | 139.5 |
| **2005** | 139.8 | 137.4 | 136.8 | 136.5 | 135.8 | 132.6 | 132.8 | 131.7 | 131.9 | 137.8 | 134.8 | 132.9 |
| **2006** | 133.7 | 133.7 | 133.4 | 132.3 | 132 | 130.6 | 123.7 | 125.7 | 126.5 | 129.4 | 135 | 133.8 |
| **2007** | 132.8 | 132.5 | 131.9 | 130.5 | 130.1 | 129.8 | 129.2 | 128.2 | 126.6 | 134.1 | 134.8 | 132.9 |
| **2008** | 133.6 | 133.5 | 132.1 | 133.1 | 132.2 | 129.5 | 128.2 | 129.1 | 128.7 | 139.4 | 137.7 | 137.6 |
| **2009** | 137 | 136.8 | 136 | 136.7 | 136.1 | 137.9 | 134.6 | 136.1 | 133.8 | 138.3 | 139.5 | 138.1 |
| **2010** | 139.3 | 139 | 137.8 | 137.2 | 137.3 | 135.4 | 134.8 | 135 | 134.5 | 137.7 | 137 | 136.4 |
| **2011** | 137 | 137 | 136.7 | 137.4 | 136.7 | 136.9 | 136.7 | 136.5 | 135.7 | 140.6 | 140.7 | 140.3 |
| **2012** | 141 | 140.4 | 140.3 | 140.6 | 139.7 | 140.1 | 140.9 | 140.8 | 139.6 | 143.9 | 144.1 | 143.6 |
| **2013** | 143.4 | 143.3 | 142.6 | 142.4 | 141.7 | 141.3 | 140.7 | 140.4 | 140.2 | 144.8 | 145.6 | 146.4 |
| **2014** | 146.8 | 146.6 | 145.5 | 145.2 | 144.4 | 143.8 | 143.6 | 143.4 | 142.6 | 148 | 147.8 | 146.3 |
| **2015** | 147.8 | 149.4 | 149.2 | 148.7 | 148.5 | 148.1 | 148.5 | 147.4 | 147.2 | 150.7 | 150.6 | 150.5 |
| **2016** | 149.9 | 150.2 | 149.8 | 149.6 | 149.7 | 149.8 | 148.5 | 147.7 | 147.6 | 152.7 | 152.4 | 153.4 |
| **2017** | 152.6 | 152.3 | 152.9 | 152.8 | 151.2 | 151.2 | 150.1 | 149.8 | 149.8 | 153.5 | 154.3 | 154.3 |
| **2018** | 153.3 | 152.9 | 152.9 | 152.5 | 152.5 | 152.7 | 152.2 | 152.1 | 152.4 | 155.3 | 155.2 | 155 |
| **2019** | 154.8 | 154.5 | 153.7 | 153.4 | 153.2 | 153 | 152.6 | 152 | 151.7 | 154.6 | 155.1 | 154.5 |
| **2020** | 152.9 | 153.6 | 152 | 153 | 152.4 | 152 | 152.1 | 152.3 | 152.3 | 154.3 | 154.9 | 155.5 |
| **2021** | 156.4(P) | 156.1(P) | 155.7(P) | 155.5 | | | | | | | | |

P : Preliminary. All indexes are subject to revision four months after original publication.

155.5(P)

# U.S. States a

| State | 1790 | 1800 | 1810 | 1820 | 1830 | 1840 | 1850 |
|---|---|---|---|---|---|---|---|
| Alabama | - | 1,250 | 9,046 | 127,901 | 309,527 | 590,756 | 771,623 |
| Alaska | - | - | - | - | - | - | - |
| Arizona | - | - | - | - | - | - | - |
| Arkansas | - | - | 1,062 | 14,273 | 30,388 | 97,574 | 209,897 |
| California | - | - | - | - | - | - | 92,597 |
| Colorado | - | - | - | - | - | - | - |
| Connecticut | 237,946 | 251,002 | 261,942 | 275,248 | 297,675 | 309,978 | 370,792 |
| Delaware | 59,096 | 64,273 | 72,674 | 72,749 | 76,748 | 78,085 | 91,532 |
| District of Columbia | - | 8,144 | 15,471 | 23,336 | 30,261 | 33,745 | 51,687 |
| Florida | - | - | - | - | 34,730 | 54,477 | 87,445 |
| Georgia | 82,548 | 162,686 | 252,433 | 340,989 | 516,823 | 691,392 | 906,185 |
| Hawaii | - | - | - | - | - | - | - |
| Idaho | - | - | - | - | - | - | - |
| Illinois | - | - | 12,282 | 55,211 | 157,445 | 476,183 | 851,470 |
| Indiana | - | 5,641 | 24,520 | 147,718 | 343,031 | 685,866 | 988,416 |
| Iowa | - | - | - | - | - | 43,112 | 192,914 |
| Kansas | - | - | - | - | - | - | - |
| Kentucky | 73,677 | 220,955 | 406,511 | 564,317 | 687,917 | 779,828 | 982,405 |
| Louisiana | - | - | 76,556 | 153,407 | 215,739 | 352,411 | 517,762 |
| Maine | 96,540 | 151,719 | 228,705 | 298,335 | 399,455 | 501,793 | 583,169 |
| Maryland | 319,728 | 341,548 | 380,546 | 407,350 | 447,040 | 470,019 | 583,034 |
| Massachusetts | 378,787 | 422,845 | 472,040 | 523,287 | 610,408 | 737,699 | 994,514 |
| Michigan | - | - | 4,762 | 8,896 | 31,639 | 212,267 | 397,654 |
| Minnesota | - | - | - | - | - | - | 6,077 |
| Mississippi | - | 7,600 | 31,306 | 75,448 | 136,621 | 375,651 | 606,526 |
| Missouri | - | - | 19,783 | 66,586 | 140,455 | 383,702 | 682,044 |
| Montana | - | - | - | - | - | - | - |
| Nebraska | - | - | - | - | - | - | - |
| Nevada | - | - | - | - | - | - | - |
| New Hampshire | 141,885 | 183,858 | 214,460 | 244,161 | 269,328 | 284,574 | 317,976 |
| New Jersey | 184,139 | 211,149 | 245,562 | 277,575 | 320,823 | 373,306 | 489,555 |
| New Mexico | - | - | - | - | - | - | 61,547 |
| New York | 340,120 | 589,051 | 959,049 | 1,372,812 | 1,918,608 | 2,428,921 | 3,097,394 |
| North Carolina | 393,751 | 478,103 | 555,500 | 638,829 | 737,987 | 753,419 | 869,039 |
| North Dakota | - | - | - | - | - | - | - |
| Ohio | - | 45,365 | 230,760 | 581,434 | 937,903 | 1,519,467 | 1,980,329 |
| Oklahoma | - | - | - | - | - | - | - |
| Oregon | - | - | - | - | - | - | 12,093 |
| Pennsylvania | 434,373 | 602,365 | 810,091 | 1,049,458 | 1,348,233 | 1,724,033 | 2,311,786 |
| Rhode Island | 68,825 | 69,122 | 76,931 | 83,059 | 97,199 | 108,830 | 147,545 |
| South Carolina | 249,073 | 345,591 | 415,115 | 502,741 | 581,185 | 594,398 | 668,507 |
| South Dakota | - | - | - | - | - | - | - |
| Tennessee | 35,691 | 105,602 | 261,727 | 422,823 | 681,904 | 829,210 | 1,002,717 |
| Texas | - | - | - | - | - | - | 212,592 |
| Utah | - | - | - | - | - | - | 11,380 |
| Vermont | 85,425 | 154,465 | 217,895 | 235,981 | 280,652 | 291,948 | 314,120 |
| Virginia | 691,737 | 807,557 | 877,683 | 938,261 | 1,044,054 | 1,025,227 | 1,119,348 |
| Washington | - | - | - | - | - | - | 1,201 |
| West Virginia | 55,873 | 78,592 | 105,469 | 136,808 | 176,924 | 224,537 | 302,313 |
| Wisconsin | - | - | - | - | - | 30,945 | 305,391 |
| Wyoming | - | - | - | - | - | - | - |
| Total - States & D.C. | 3,929,214 | 5,308,483 | 7,239,881 | 9,638,993 | 12,860,702 | 17,063,353 | 23,192,576 |

# and District of Columbia Population Censu

| State | 1860 | 1870 | 1880 | 1890 | 1900 | 1910 |
|---|---|---|---|---|---|---|
| Alabama | 964,201 | 996,992 | 1,262,505 | 1,513,401 | 1,828,697 | 2,138,093 |
| Alaska | - | - | 33,426 | 32,052 | 63,592 | 64,356 |
| Arizona | - | 9,658 | 40,440 | 88,243 | 122,931 | 204,354 |
| Arkansas | 435,450 | 484,471 | 802,525 | 1,128,211 | 1,311,564 | 1,574,449 |
| California | 379,994 | 560,247 | 864,694 | 1,213,398 | 1,485,053 | 2,377,549 |
| Colorado | 34,277 | 39,864 | 194,327 | 413,249 | 539,700 | 799,024 |
| Connecticut | 460,147 | 537,454 | 622,700 | 746,258 | 908,420 | 1,114,756 |
| Delaware | 112,216 | 125,015 | 146,608 | 168,493 | 184,735 | 202,322 |
| District of Columbia | 75,080 | 131,700 | 177,624 | 230,392 | 278,718 | 331,069 |
| Florida | 140,424 | 187,748 | 269,493 | 391,422 | 528,542 | 752,619 |
| Georgia | 1,057,286 | 1,184,109 | 1,542,180 | 1,837,353 | 2,216,331 | 2,609,121 |
| Hawaii | - | - | - | - | 154,001 | 191,874 |
| Idaho | - | 14,999 | 32,610 | 88,548 | 161,772 | 325,594 |
| Illinois | 1,711,951 | 2,539,891 | 3,077,871 | 3,826,352 | 4,821,550 | 5,638,591 |
| Indiana | 1,350,428 | 1,680,637 | 1,978,301 | 2,192,404 | 2,516,462 | 2,700,876 |
| Iowa | 674,913 | 1,194,020 | 1,624,615 | 1,912,297 | 2,231,853 | 2,224,771 |
| Kansas | 107,206 | 364,399 | 996,096 | 1,428,108 | 1,470,495 | 1,690,949 |
| Kentucky | 1,155,684 | 1,321,011 | 1,648,690 | 1,858,635 | 2,147,174 | 2,289,905 |
| Louisiana | 708,002 | 726,915 | 939,946 | 1,118,588 | 1,381,625 | 1,656,388 |
| Maine | 628,279 | 626,915 | 648,936 | 661,086 | 694,466 | 742,371 |
| Maryland | 687,049 | 780,894 | 934,943 | 1,042,390 | 1,188,044 | 1,295,346 |
| Massachusetts | 1,231,066 | 1,457,351 | 1,783,085 | 2,238,947 | 2,805,346 | 3,366,416 |
| Michigan | 749,113 | 1,184,059 | 1,636,937 | 2,093,890 | 2,420,982 | 2,810,173 |
| Minnesota | 172,023 | 439,706 | 780,773 | 1,310,283 | 1,751,394 | 2,075,708 |
| Mississippi | 791,305 | 827,922 | 1,131,597 | 1,289,600 | 1,551,270 | 1,797,114 |
| Missouri | 1,182,012 | 1,721,295 | 2,168,380 | 2,679,185 | 3,106,665 | 3,293,335 |
| Montana | - | 20,595 | 39,159 | 142,924 | 243,329 | 376,053 |
| Nebraska | 28,841 | 122,993 | 452,402 | 1,062,656 | 1,066,300 | 1,192,214 |
| Nevada | 6,857 | 42,491 | 62,266 | 47,355 | 42,335 | 81,875 |
| New Hampshire | 326,073 | 318,300 | 346,991 | 376,530 | 411,588 | 430,572 |
| New Jersey | 672,035 | 906,096 | 1,131,116 | 1,444,933 | 1,883,669 | 2,537,167 |
| New Mexico | 93,516 | 91,874 | 119,565 | 160,282 | 195,310 | 327,301 |
| New York | 3,880,735 | 4,382,759 | 5,082,871 | 6,003,174 | 7,268,894 | 9,113,614 |
| North Carolina | 992,622 | 1,071,361 | 1,399,750 | 1,617,949 | 1,893,810 | 2,206,287 |
| North Dakota | - | 2,405 | 36,909 | 190,983 | 319,146 | 577,056 |
| Ohio | 2,339,511 | 2,665,260 | 3,198,062 | 3,672,329 | 4,157,545 | 4,767,121 |
| Oklahoma | - | - | - | 258,657 | 790,391 | 1,657,155 |
| Oregon | 52,465 | 90,923 | 174,768 | 317,704 | 413,536 | 672,765 |
| Pennsylvania | 2,906,215 | 3,521,951 | 4,282,891 | 5,258,113 | 6,302,115 | 7,665,111 |
| Rhode Island | 174,620 | 217,353 | 276,531 | 345,506 | 428,556 | 542,610 |
| South Carolina | 703,708 | 705,606 | 995,577 | 1,151,149 | 1,340,316 | 1,515,400 |
| South Dakota | 4,837 | 11,776 | 98,268 | 348,600 | 401,570 | 583,888 |
| Tennessee | 1,109,801 | 1,258,520 | 1,542,359 | 1,767,518 | 2,020,616 | 2,184,789 |
| Texas | 604,215 | 818,579 | 1,591,749 | 2,235,527 | 3,048,710 | 3,896,542 |
| Utah | 40,273 | 86,786 | 143,963 | 210,779 | 276,749 | 373,351 |
| Vermont | 315,098 | 330,551 | 332,286 | 332,422 | 343,641 | 355,956 |
| Virginia | 1,219,630 | 1,225,163 | 1,512,565 | 1,655,980 | 1,854,184 | 2,061,612 |
| Washington | 11,594 | 23,955 | 75,116 | 357,232 | 518,103 | 1,141,990 |
| West Virginia | 376,688 | 442,014 | 618,457 | 762,794 | 958,800 | 1,221,119 |
| Wisconsin | 775,881 | 1,054,670 | 1,315,497 | 1,693,330 | 2,069,042 | 2,333,860 |
| Wyoming | - | 9,118 | 20,789 | 62,555 | 92,531 | 145,965 |
| Total - States & D.C. | 31,443,321 | 38,558,371 | 50,189,209 | 62,979,766 | 76,212,168 | 92,228,496 |

# ıs Counts: 1790 to 2010

| State | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 |
|---|---|---|---|---|---|---|
| Alabama | 2,348,174 | 2,646,248 | 2,832,961 | 3,061,743 | 3,266,740 | 3,444,165 |
| Alaska | 55,036 | 59,278 | 72,524 | 128,643 | 226,167 | 300,382 |
| Arizona | 334,162 | 435,573 | 499,261 | 749,587 | 1,302,161 | 1,770,900 |
| Arkansas | 1,752,204 | 1,854,482 | 1,949,387 | 1,909,511 | 1,786,272 | 1,923,295 |
| California | 3,426,861 | 5,677,251 | 6,907,387 | 10,586,223 | 15,717,204 | 19,953,134 |
| Colorado | 939,629 | 1,035,791 | 1,123,296 | 1,325,089 | 1,753,947 | 2,207,259 |
| Connecticut | 1,380,631 | 1,606,903 | 1,709,242 | 2,007,280 | 2,535,234 | 3,031,709 |
| Delaware | 223,003 | 238,380 | 266,505 | 318,085 | 446,292 | 548,104 |
| District of Columbia | 437,571 | 486,869 | 663,091 | 802,178 | 763,956 | 756,510 |
| Florida | 968,470 | 1,468,211 | 1,897,414 | 2,771,305 | 4,951,560 | 6,789,443 |
| Georgia | 2,895,832 | 2,908,506 | 3,123,723 | 3,444,578 | 3,943,116 | 4,589,575 |
| Hawaii | 255,881 | 368,300 | 422,770 | 499,794 | 632,772 | 768,561 |
| Idaho | 431,866 | 445,032 | 524,873 | 588,637 | 667,191 | 712,567 |
| Illinois | 6,485,280 | 7,630,654 | 7,897,241 | 8,712,176 | 10,081,158 | 11,113,976 |
| Indiana | 2,930,390 | 3,238,503 | 3,427,796 | 3,934,224 | 4,662,498 | 5,193,669 |
| Iowa | 2,404,021 | 2,470,939 | 2,538,268 | 2,621,073 | 2,757,537 | 2,824,376 |
| Kansas | 1,769,257 | 1,880,999 | 1,801,028 | 1,905,299 | 2,178,611 | 2,246,578 |
| Kentucky | 2,416,630 | 2,614,589 | 2,845,627 | 2,944,806 | 3,038,156 | 3,218,706 |
| Louisiana | 1,798,509 | 2,101,593 | 2,363,880 | 2,683,516 | 3,257,022 | 3,641,306 |
| Maine | 768,014 | 797,423 | 847,226 | 913,774 | 969,265 | 992,048 |
| Maryland | 1,449,661 | 1,631,526 | 1,821,244 | 2,343,001 | 3,100,689 | 3,922,399 |
| Massachusetts | 3,852,356 | 4,249,614 | 4,316,721 | 4,690,514 | 5,148,578 | 5,689,170 |
| Michigan | 3,668,412 | 4,842,325 | 5,256,106 | 6,371,766 | 7,823,194 | 8,875,083 |
| Minnesota | 2,387,125 | 2,563,953 | 2,792,300 | 2,982,483 | 3,413,864 | 3,804,971 |
| Mississippi | 1,790,618 | 2,009,821 | 2,183,796 | 2,178,914 | 2,178,141 | 2,216,912 |
| Missouri | 3,404,055 | 3,629,367 | 3,784,664 | 3,954,653 | 4,319,813 | 4,676,501 |
| Montana | 548,889 | 537,606 | 559,456 | 591,024 | 674,767 | 694,409 |
| Nebraska | 1,296,372 | 1,377,963 | 1,315,834 | 1,325,510 | 1,411,330 | 1,483,493 |
| Nevada | 77,407 | 91,058 | 110,247 | 160,083 | 285,278 | 488,738 |
| New Hampshire | 443,083 | 465,293 | 491,524 | 533,242 | 606,921 | 737,681 |
| New Jersey | 3,155,900 | 4,041,334 | 4,160,165 | 4,835,329 | 6,066,782 | 7,168,164 |
| New Mexico | 360,350 | 423,317 | 531,818 | 681,187 | 951,023 | 1,016,000 |
| New York | 10,385,227 | 12,588,066 | 13,479,142 | 14,830,192 | 16,782,304 | 18,236,967 |
| North Carolina | 2,559,123 | 3,170,276 | 3,571,623 | 4,061,929 | 4,556,155 | 5,082,059 |
| North Dakota | 646,872 | 680,845 | 641,935 | 619,636 | 632,446 | 617,761 |
| Ohio | 5,759,394 | 6,646,697 | 6,907,612 | 7,946,627 | 9,706,397 | 10,652,017 |
| Oklahoma | 2,028,283 | 2,396,040 | 2,336,434 | 2,233,351 | 2,328,284 | 2,559,229 |
| Oregon | 783,389 | 953,786 | 1,089,684 | 1,521,341 | 1,768,687 | 2,091,385 |
| Pennsylvania | 8,720,017 | 9,631,350 | 9,900,180 | 10,498,012 | 11,319,366 | 11,793,909 |
| Rhode Island | 604,397 | 687,497 | 713,346 | 791,896 | 859,488 | 946,725 |
| South Carolina | 1,683,724 | 1,738,765 | 1,899,804 | 2,117,027 | 2,382,594 | 2,590,516 |
| South Dakota | 636,547 | 692,849 | 642,961 | 652,740 | 680,514 | 665,507 |
| Tennessee | 2,337,885 | 2,616,556 | 2,915,841 | 3,291,718 | 3,567,089 | 3,923,687 |
| Texas | 4,663,228 | 5,824,715 | 6,414,824 | 7,711,194 | 9,579,677 | 11,196,730 |
| Utah | 449,396 | 507,847 | 550,310 | 688,862 | 890,627 | 1,059,273 |
| Vermont | 352,428 | 359,611 | 359,231 | 377,747 | 389,881 | 444,330 |
| Virginia | 2,309,187 | 2,421,851 | 2,677,773 | 3,318,680 | 3,966,949 | 4,648,494 |
| Washington | 1,356,621 | 1,563,396 | 1,736,191 | 2,378,963 | 2,853,214 | 3,409,169 |
| West Virginia | 1,463,701 | 1,729,205 | 1,901,974 | 2,005,552 | 1,860,421 | 1,744,237 |
| Wisconsin | 2,632,067 | 2,939,006 | 3,137,587 | 3,434,575 | 3,951,777 | 4,417,731 |
| Wyoming | 194,402 | 225,565 | 250,742 | 290,529 | 330,066 | 332,416 |
| Total - States & D.C. | 106,021,537 | 123,202,624 | 132,164,569 | 151,325,798 | 179,323,175 | 203,211,926 |

| State | 1980 | 1990 | 2000 | 2010 |
|---|---|---|---|---|
| Alabama | 3,893,888 | 4,040,587 | 4,447,351 | 4,779,736 |
| Alaska | 401,851 | 550,043 | 626,931 | 710,231 |
| Arizona | 2,718,215 | 3,665,228 | 5,130,632 | 6,392,017 |
| Arkansas | 2,286,435 | 2,350,725 | 2,673,400 | 2,915,918 |
| California | 23,667,902 | 29,760,021 | 33,871,653 | 37,253,956 |
| Colorado | 2,889,964 | 3,294,394 | 4,302,015 | 5,029,196 |
| Connecticut | 3,107,576 | 3,287,116 | 3,405,602 | 3,574,097 |
| Delaware | 594,338 | 666,168 | 783,600 | 897,934 |
| District of Columbia | 638,333 | 606,900 | 572,059 | 601,723 |
| Florida | 9,746,324 | 12,937,926 | 15,982,824 | 18,801,310 |
| Georgia | 5,463,105 | 6,478,216 | 8,186,816 | 9,687,653 |
| Hawaii | 964,691 | 1,108,229 | 1,211,537 | 1,360,301 |
| Idaho | 943,935 | 1,006,749 | 1,293,956 | 1,567,582 |
| Illinois | 11,426,518 | 11,430,602 | 12,419,647 | 12,830,632 |
| Indiana | 5,490,224 | 5,544,159 | 6,080,517 | 6,483,802 |
| Iowa | 2,913,808 | 2,776,755 | 2,926,382 | 3,046,355 |
| Kansas | 2,363,679 | 2,477,574 | 2,688,824 | 2,853,118 |
| Kentucky | 3,660,777 | 3,685,296 | 4,042,285 | 4,339,367 |
| Louisiana | 4,205,900 | 4,219,973 | 4,468,958 | 4,533,372 |
| Maine | 1,124,660 | 1,227,928 | 1,274,923 | 1,328,361 |
| Maryland | 4,216,975 | 4,781,468 | 5,296,507 | 5,773,552 |
| Massachusetts | 5,737,037 | 6,016,425 | 6,349,105 | 6,547,629 |
| Michigan | 9,262,078 | 9,295,297 | 9,938,480 | 9,883,640 |
| Minnesota | 4,075,970 | 4,375,099 | 4,919,492 | 5,303,925 |
| Mississippi | 2,520,638 | 2,573,216 | 2,844,656 | 2,967,297 |
| Missouri | 4,916,686 | 5,117,073 | 5,596,683 | 5,988,927 |
| Montana | 786,690 | 799,065 | 902,195 | 989,415 |
| Nebraska | 1,569,825 | 1,578,385 | 1,711,265 | 1,826,341 |
| Nevada | 800,493 | 1,201,833 | 1,998,257 | 2,700,551 |
| New Hampshire | 920,610 | 1,109,252 | 1,235,786 | 1,316,470 |
| New Jersey | 7,364,823 | 7,730,188 | 8,414,347 | 8,791,894 |
| New Mexico | 1,302,894 | 1,515,069 | 1,819,046 | 2,059,179 |
| New York | 17,558,072 | 17,990,455 | 18,976,821 | 19,378,102 |
| North Carolina | 5,881,766 | 6,628,637 | 8,046,485 | 9,535,483 |
| North Dakota | 652,717 | 638,800 | 642,200 | 672,591 |
| Ohio | 10,797,630 | 10,847,115 | 11,353,145 | 11,536,504 |
| Oklahoma | 3,025,290 | 3,145,585 | 3,450,652 | 3,751,351 |
| Oregon | 2,633,105 | 2,842,321 | 3,421,436 | 3,831,074 |
| Pennsylvania | 11,863,895 | 11,881,643 | 12,281,054 | 12,702,379 |
| Rhode Island | 947,154 | 1,003,464 | 1,048,319 | 1,052,567 |
| South Carolina | 3,121,820 | 3,486,703 | 4,011,816 | 4,625,364 |
| South Dakota | 690,768 | 696,004 | 754,844 | 814,180 |
| Tennessee | 4,591,120 | 4,877,185 | 5,689,267 | 6,346,105 |
| Texas | 14,229,191 | 16,986,510 | 20,851,790 | 25,145,561 |
| Utah | 1,461,037 | 1,722,850 | 2,233,198 | 2,763,885 |
| Vermont | 511,456 | 562,758 | 608,827 | 625,741 |
| Virginia | 5,346,818 | 6,187,358 | 7,079,030 | 8,001,024 |
| Washington | 4,132,156 | 4,866,692 | 5,894,141 | 6,724,540 |
| West Virginia | 1,949,644 | 1,793,477 | 1,808,350 | 1,852,994 |
| Wisconsin | 4,705,767 | 4,891,769 | 5,363,715 | 5,686,986 |
| Wyoming | 469,557 | 453,588 | 493,782 | 563,626 |
| Total - States & D.C. | 226,545,805 | 248,709,873 | 281,424,603 | 308,745,538 |

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

ADR 022 I July 2016

# Analytical Data Report

## County- and Municipal-Level Population Forecasts, 2015–2045

DELAWARE VALLEY li..data

*The Delaware Valley Regional Planning Commission is dedicated to uniting the region's elected officials, planning professionals, and the public with a common vision of making a great region even greater. Shaping the way we live, work, and play, DVRPC builds consensus on improving transportation, promoting smart growth, protecting the environment, and enhancing the economy. We serve a diverse region of nine counties: Bucks, Chester, Delaware, Montgomery, and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer in New Jersey. DVRPC is the federally designated Metropolitan Planning Organization for the Greater Philadelphia Region — leading the way to a better future.*

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The symbol in our logo is adapted from the official DVRPC seal and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole while the diagonal bar signifies the Delaware River. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey.

DVRPC is funded by a variety of funding sources, including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA); the Pennsylvania and New Jersey departments of transportation; and DVRPC's state and local member governments. The authors, however, are solely responsible for the findings and conclusions herein, which may not represent the official views or policies of the funding agencies.

The Delaware Valley Regional Planning Commission (DVRPC) fully complies with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related nondiscrimination statutes and regulations in all programs and activities. DVRPC's website, www.dvrpc.org, may be translated into multiple languages. Publications and other public documents can be made available in alternative languages and formats, if requested.

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As the region's metropolitan planning organization, DVRPC provides technical assistance and services to its member state and local governments. *Delaware Valley Data* is our periodic series of free data bulletins, analytical data reports, data reference guides, and data snapshots.

## Background

Population and employment forecasts are a critical component of long-range land use and transportation planning. As a part of the Delaware Valley Regional Planning Commission's (DVRPC's) long-range planning activities, the Commission is required to maintain forecasts with at least a 20-year horizon, or to the horizon year of the long-range plan. DVRPC last adopted forecasts through the year 2040 in January 2012. Since that time, the Census Bureau has released 2015 population estimates, and both the nation and the region have continued to recover from the significant economic recession that officially began in December 2007 and ended in June 2009.

In order to incorporate the 2015 Census estimates and maintain a 30-year planning horizon, DVRPC has prepared 2045 population forecasts for its member counties and municipalities. These forecasts were formally adopted by the DVRPC Board on July 28, 2016, and serve as the basis for DVRPC planning and modeling activities. Employment forecasts in five-year increments through 2045 are scheduled to be adopted in October 2016.

Three alternative sets of county- and municipal-level 2045 population forecasts were developed based on the method described below, and sent to the county planning staffs for review and comment. Agreement was first reached on the county- and municipal-level 2045 population forecasts; forecasts for 2020, 2025, 2030, 2035, and 2040 were then calculated by DVRPC, based on the population growth rate predicted over each five-year increment by the Commission's age-cohort survival model. These mid-cycle forecasts were again sent to the counties for review, and their suggested revisions were incorporated to produce the final set of 2045 forecasts.

## Method for Calculating County-Level 2045 Population Forecasts

Three alternative 2045 population forecasts were calculated for each county based on three separate methods, the results of which define a reasonable range of values within which each county's 2045 population total is expected to fall. This process replicates the process employed in 2007 and again in 2011, to develop the Commission's adopted 2035 and 2040 population forecasts. The three alternative methods are as follows:

- An initial set of draft county-level 2045 forecasts was obtained by running the traditional age-cohort survival model used in the previously forecasted round, but updating the model to incorporate 2000, 2005, 2010, and 2015 population data in five-year age/sex cohorts. When the analysis for this report was conducted, the Census Bureau had released 2015 estimates of the total population in each county, but had not yet released 2015 estimates by age/sex cohorts. The percentage of the population in each age/sex cohort in 2014 was therefore applied to the 2015 county estimates, to approximate 2015 age/sex breakdowns. The model incorporates birth, death, survival, and migration rates as follows:

- **Birth rate**: The model uses the number of live births per 1,000 women by five-year age cohort in New Jersey in 2013, assuming that New Jersey state-wide data is a better proxy for the Greater Philadelphia region's fertility rate than state-wide data from Pennsylvania (which has many non-metropolitan counties).

- **Survival rate**: Survival rate data (and, conversely, mortality rate data) was obtained from the National Vital Statistics System of the Center for Disease Control and Prevention (CDC). Future survival rates were adjusted to account for expected improvements in mortality related to medical advances and lifestyle changes, based on average increases in life expectancy over the past 20 years.

- **Migration**: The model assumes that migration (the change in the population that cannot be accounted for through births and deaths) in future years will be the same as the average migration rate experienced by each five-year age/sex cohort in each county between 2000 and 2015. Using the average migration rates between 2000 and 2015 accounts for changes in migration experienced prior to the economic recession, during the recession, and post-recession.

This age-cohort model replicates the model used in 2007 and again in 2011, but incorporates recent data to more accurately portray recent demographic trends. These trends include higher in-migration of seniors to certain areas of the region, declining overall fertility rates but higher fertility rates among women over age 35, and in-migration to Philadelphia and some of the region's older suburbs.

- A second set of county-level forecasts was developed utilizing the region-wide 2045 population forecast from the age-cohort model described above, but redistributing the total 2045 regional population to each of the nine counties based on the county percentages from the adopted 2040 forecasts. This alternative acknowledges that the longer-term development trends agreed upon during the process of developing the 2040 forecasts may be more important in some counties than the age-cohort births/deaths and shorter-term migration trends reflected in the county-level age-cohort method described above. It therefore continues those longer-term growth trends by reassigning the 2045 regional population among the nine counties, essentially adjusting migration rates to compensate for birth-death effects.

- A third alternative set of county-level forecasts was developed by applying the growth rates between each five-year time period from DVRPC's adopted 2040 forecasts to the previous five-year total, but using 2015 American Community Survey data as the base. The expected growth rate between 2040 and 2045 was based on the average change in the forecasted growth rate for each five-year increment between 2015 and 2040.

  This alternative ignores the results of the most recent age-cohort model and simply extends to 2045 the growth rates agreed upon during the process of developing the 2040 forecasts, as applied to the new 2015 base. This method assumes future population growth will follow previously adopted trends but adjusts for the differences in growth that actually occurred between 2010 and 2015.

The two alternatives to the age-cohort model incorporate the value of local planning knowledge and recognize that the adopted 2040 forecasts did not simply reflect the age-cohort results, but included significant input from the county planning staffs. Based on the above steps, three alternative sets of 2045 forecasts were developed for each of the nine counties, creating expected minimum and maximum 2045 county-level forecasts.

## Method for Calculating Municipal-Level 2045 Population Forecasts

Each set of alternative county-level 2045 forecasts was disaggregated to the municipal level using the following method:

- The difference between the municipal-level 2015 Census population estimate and DVRPC's 2015 population forecast was calculated for each municipality.
- These differences were added or subtracted as appropriate from the adopted municipal-level 2040 forecasts. These adjusted 2040 forecasts were then used as a base for the calculation of the 2045 municipal forecasts.
- The adjusted 2040 population forecasts were summed and, for each set of alternatives, the percentage of the population forecasted to live in each municipality in 2040 (based on the adjusted 2040 forecasts) was applied to each of the 2045 county-level alternatives to create preliminary 2045 municipal forecasts, with the sum of all municipalities within each county matching the county-level 2045 forecast for each of the three alternatives.

This method assumes that the proportion of the county's population living in each municipality in 2040 will remain the same in 2045 and, when applied to the three alternative county-level forecasts, produced three alternative sets of municipal-level 2045 forecasts. These alternatives were sent to DVRPC's member counties' planning staff for review and comment, and consensus was reached on a full set of 2045 county and municipal forecasts.

## Method for Developing Mid-Year Population Forecasts

Once agreement was reached on the county- and municipal-level 2045 population forecasts, forecasts for 2020, 2025, 2030, 2035, and 2040 were developed by DVRPC, based on the population growth predicted for each mid-year increment by the regional age-cohort survival model. The age-cohort model predicted a slight curve (rather than a straight line), with slightly more growth in the early years and a slight slowing near the end.

Obviously, the population of every municipality is not going to increase at exactly the same rate during each five-year interval. These mid-year numbers were simply intended to provide a logical starting point for discussion, and were sent to the county planning staffs for final review, based on their local knowledge of pending and approved development proposals and population growth trends. Their suggested revisions were incorporated to produce the final set of 2045 forecasts. Table 1 summarizes DVRPC's adopted regional and county forecasts in five-year increments through 2045, and municipal-level forecasts are provided in Appendix A.

**Table 1: Forecasted Population by County, 2015-2045**

| County | 2010 Census | 2015 Census Estimate | 2020 Forecast | 2025 Forecast | 2030 Forecast | 2035 Forecast | 2040 Forecast | 2045 Forecast | 2015-2045 Absolute Change | 2015-2045 Percentage Change |
|---|---|---|---|---|---|---|---|---|---|---|
| Bucks County | 625,249 | 627,367 | 640,495 | 654,792 | 669,299 | 681,273 | 691,111 | 699,498 | 72,131 | 11.5% |
| Chester County | 498,886 | 515,939 | 543,702 | 571,641 | 599,932 | 624,832 | 645,562 | 662,283 | 146,344 | 28.4% |
| Delaware County | 558,979 | 563,894 | 568,337 | 572,758 | 577,248 | 581,136 | 584,329 | 587,037 | 23,143 | 4.1% |
| Montgomery County | 799,874 | 819,264 | 840,934 | 863,327 | 884,387 | 903,114 | 918,918 | 932,820 | 113,556 | 13.9% |
| Philadelphia County | 1,526,006 | 1,567,443 | 1,594,787 | 1,616,816 | 1,643,971 | 1,667,290 | 1,683,402 | 1,696,133 | 128,690 | 8.2% |
| **Five Pennsylvania Counties** | **4,008,994** | **4,093,907** | **4,188,255** | **4,279,333** | **4,374,837** | **4,457,645** | **4,523,322** | **4,577,771** | **483,864** | **11.8%** |
| Burlington County | 448,734 | 450,226 | 459,344 | 468,428 | 475,978 | 482,560 | 488,026 | 492,709 | 42,483 | 9.4% |
| Camden County | 513,657 | 510,923 | 514,006 | 517,073 | 520,189 | 522,886 | 525,101 | 526,997 | 16,074 | 3.1% |
| Gloucester County | 288,288 | 291,479 | 307,766 | 323,969 | 340,425 | 354,677 | 366,383 | 376,308 | 84,829 | 29.1% |
| Mercer County | 367,511 | 371,398 | 377,328 | 383,227 | 389,219 | 394,407 | 398,669 | 402,283 | 30,885 | 8.3% |
| **Four New Jersey Counties** | **1,618,190** | **1,624,026** | **1,658,444** | **1,692,697** | **1,725,811** | **1,754,530** | **1,778,179** | **1,798,296** | **174,270** | **10.7%** |
| **Nine-County DVRPC Region** | **5,627,184** | **5,717,933** | **5,846,699** | **5,972,030** | **6,100,648** | **6,212,175** | **6,301,501** | **6,376,067** | **658,134** | **11.5%** |

*Source: Delaware Valley Regional Planning Commission, July 2016.*

Table 2 identifies the 20 municipalities expected to gain the most residents between 2015 and 2045, and Table 3 identifies municipalities with the highest forecasted percentage change in population. Figure 1 illustrates the 2040 population forecasts by municipality, with concentrations of population seen in Philadelphia and the region's mature suburbs and along major highway corridors, including Route 422, Route 30, Mercer County's Route 1 corridor, and the Route 55 in Gloucester County and southern Camden County. Figures 2 and 3 illustrate absolute and percent change in population by municipality between 2015 and 2045, respectively.

Figure 4 illustrates the absolute increase in population per square mile in each of the region's 352 municipalities. This map illustrates not just where the population is increasing, but also the impact of relatively small population increases on the population density in specific municipalities. Significant increases in density are forecast not just in the City of Philadelphia, but also in many of the region's smaller boroughs, including Phoenixville, Atglen, Parkesburg, Oxford, Avondale, West Grove, and Kennett Square in Chester County; Bridgeport and Conshohocken in Montgomery County; and Riverside and Beverly in Burlington County.

## Highlights

- The DVRPC region is forecast to gain over 658,000 residents between 2015 and 2045 (an 11.5 percent increase).
- As it has since the mid-2000s, the population of the City of Philadelphia increased between 2010 and 2015, with the city adding more than 41,000 residents. This trend is forecast to continue, with the city's population expected to increase by over 8 percent by 2045, adding over 128,000 residents. The share of the region's population living in the city is expected to increase slightly by 2045, from 26 percent, in 2015, to 27 percent.
- The population of the region's five southeastern Pennsylvania counties is forecast to increase by 11.8 percent between 2015 and 2045, while the population of the four New Jersey counties is expected to increase by 10.7 percent.
- The largest percentage increases in population are expected in municipalities in Gloucester County, New Jersey (where the county's population is forecast to increase by over 29 percent) and Chester County, Pennsylvania (where the population is forecast to increase by more than 28 percent).

- The largest absolute increase in population is forecast for Chester County, which is expected to gain over 146,000 residents and surpass Delaware County to become the region's fourth most populous county by 2045. Other counties forecast to see a significant number of additional residents include Philadelphia (as mentioned above), Montgomery County (with a forecasted increase of over 113,000 people), and Gloucester County, New Jersey (forecast to add almost 85,000 residents).

### Table 2: Municipalities with the Greatest Forecasted Absolute Change in Population, 2015–2045

| Rank | Municipality or City Planning Area | County | Absolute Change | Rank | Municipality or City Planning Area | County | Absolute Change |
|---|---|---|---|---|---|---|---|
| 1 | Central | Philadelphia | 30,406 | 11 | Harrison Township | Gloucester | 7,666 |
| 2 | Lower North | Philadelphia | 16,360 | 12 | Washington Township | Gloucester | 7,504 |
| 3 | University/Southwest | Philadelphia | 14,586 | 13 | Bristol Township | Bucks | 6,766 |
| 4 | Monroe Township | Gloucester | 13,519 | 14 | Mantua Township | Gloucester | 6,667 |
| 5 | Woolwich Township | Gloucester | 12,362 | 15 | River Wards | Philadelphia | 6,566 |
| 6 | Phoenixville Borough | Chester | 9,052 | 16 | East Whiteland Township | Chester | 6,250 |
| 7 | North | Philadelphia | 8,607 | 17 | Glassboro Borough | Gloucester | 6,063 |
| 8 | West | Philadelphia | 8,278 | 18 | Lower Merion Township | Montgomery | 6,054 |
| 9 | Bensalem Township | Bucks | 7,838 | 19 | Upper Providence Township | Montgomery | 6,050 |
| 10 | South | Philadelphia | 7,767 | 20 | Horsham Township | Montgomery | 5,954 |

*Source: Delaware Valley Regional Planning Commission, July 2016.*

### Table 3: Municipalities with the Greatest Forecasted Percentage Change in Population, 2015–2045

| Rank | Municipality or City Planning Area | County | Absolute Change | Rank | Municipality or City Planning Area | County | Absolute Change |
|---|---|---|---|---|---|---|---|
| 1 | Woolwich Township | Gloucester | 100.5% | 11 | London Grove Township | Chester | 52.4% |
| 2 | Elk Township | Gloucester | 70.3% | 12 | South Coatesville Borough | Chester | 50.5% |
| 3 | Atglen Borough | Chester | 63.9% | 13 | West Brandywine Township | Chester | 48.2% |
| 4 | Elverson Borough | Chester | 62.6% | 14 | East Vincent Township | Chester | 47.6% |
| 5 | Modena Borough | Chester | 62.5% | 15 | East Brandywine Township | Chester | 47.0% |
| 6 | Sadsbury Township | Chester | 62.3% | 16 | Penn Township | Chester | 46.5% |
| 7 | Harrison Township | Gloucester | 59.0% | 17 | Charlestown Township | Chester | 46.5% |
| 8 | East Whiteland Township | Chester | 58.4% | 18 | New Hanover Township | Montgomery | 46.3% |
| 9 | West Sadsbury Township | Chester | 54.5% | 19 | Hainesport Township | Burlington | 45.5% |
| 10 | Phoenixville Borough | Chester | 54.3% | 20 | Mantua Township | Gloucester | 44.3% |

*Source: Delaware Valley Regional Planning Commission, July 2016.*

Figure 1:

# 2045 Municipal Population Forecast

dvrpc

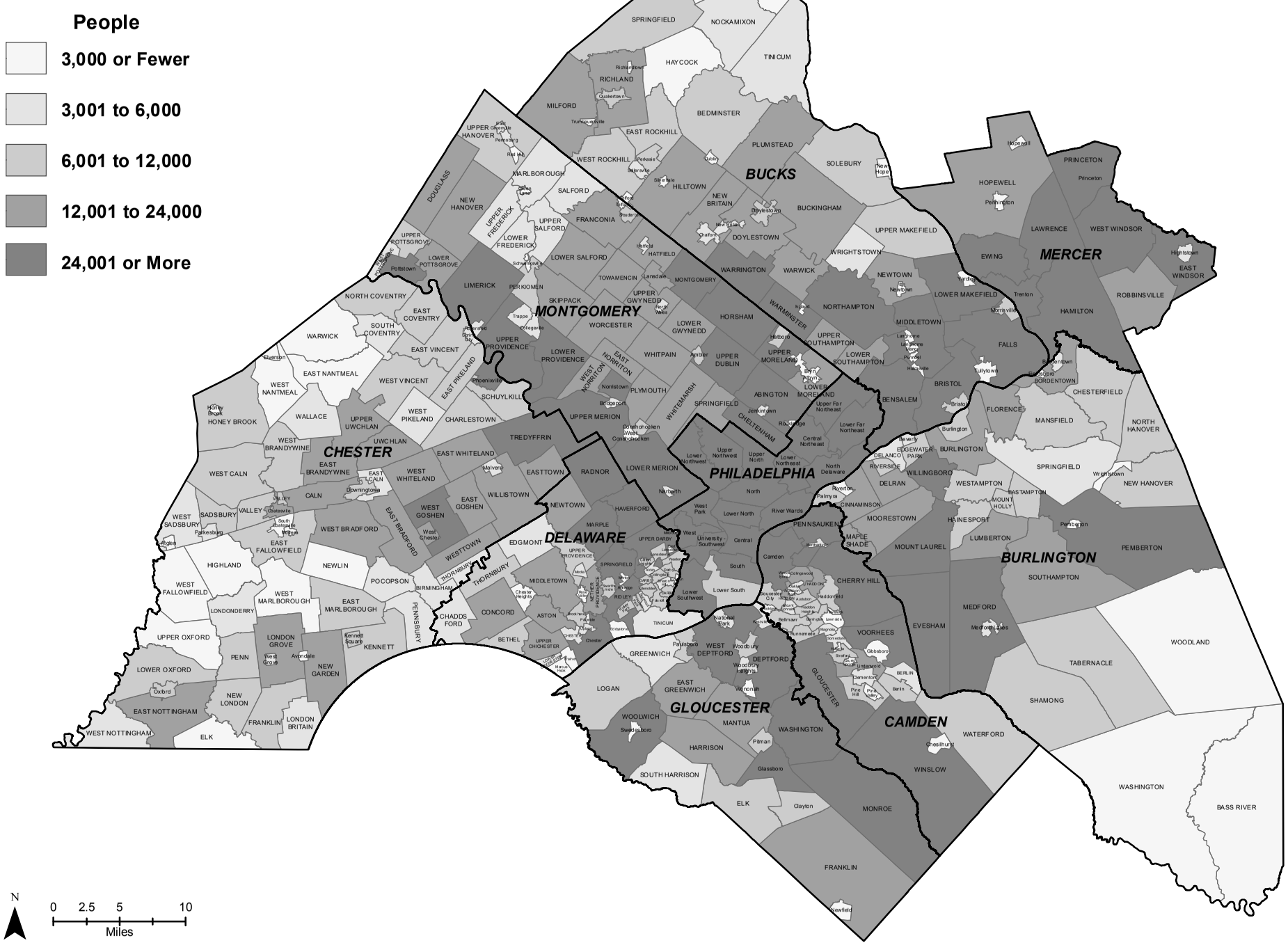

Figure 2:

# 2045 Municipal Population Forecast

## Absolute Change: 2015—2045

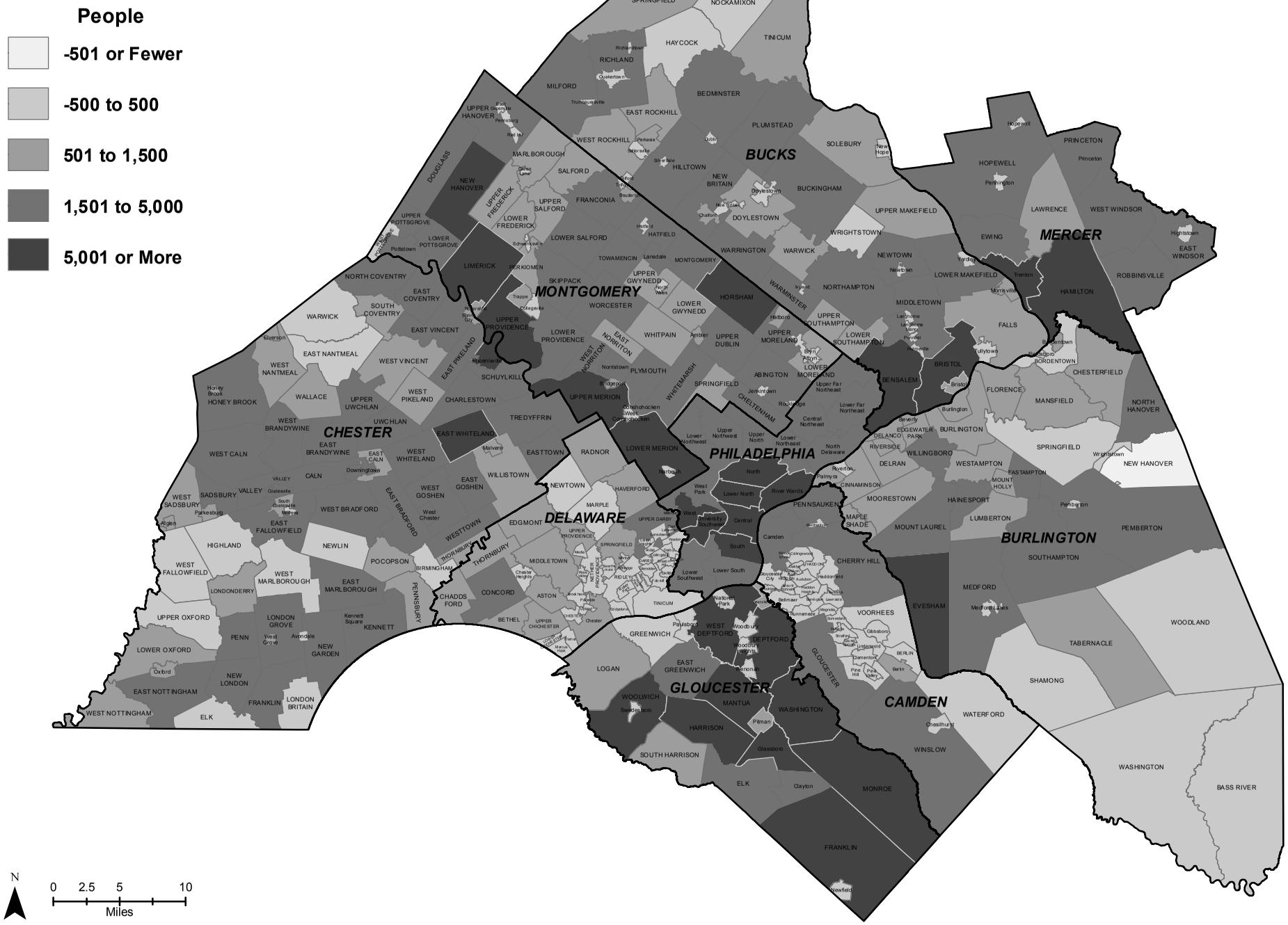




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EXHIBIT 20

Figure 3:

# 2045 Municipal Population Forecast

## Percentage Change: 2015—2045

dvrpc

- Decline (Below -5%)
- Stable (-5% to +5%)
- Moderate Growth (+6% to +25%)
- Significant Growth (+26% to +50%)
- Exceptional Growth (Above +50%)

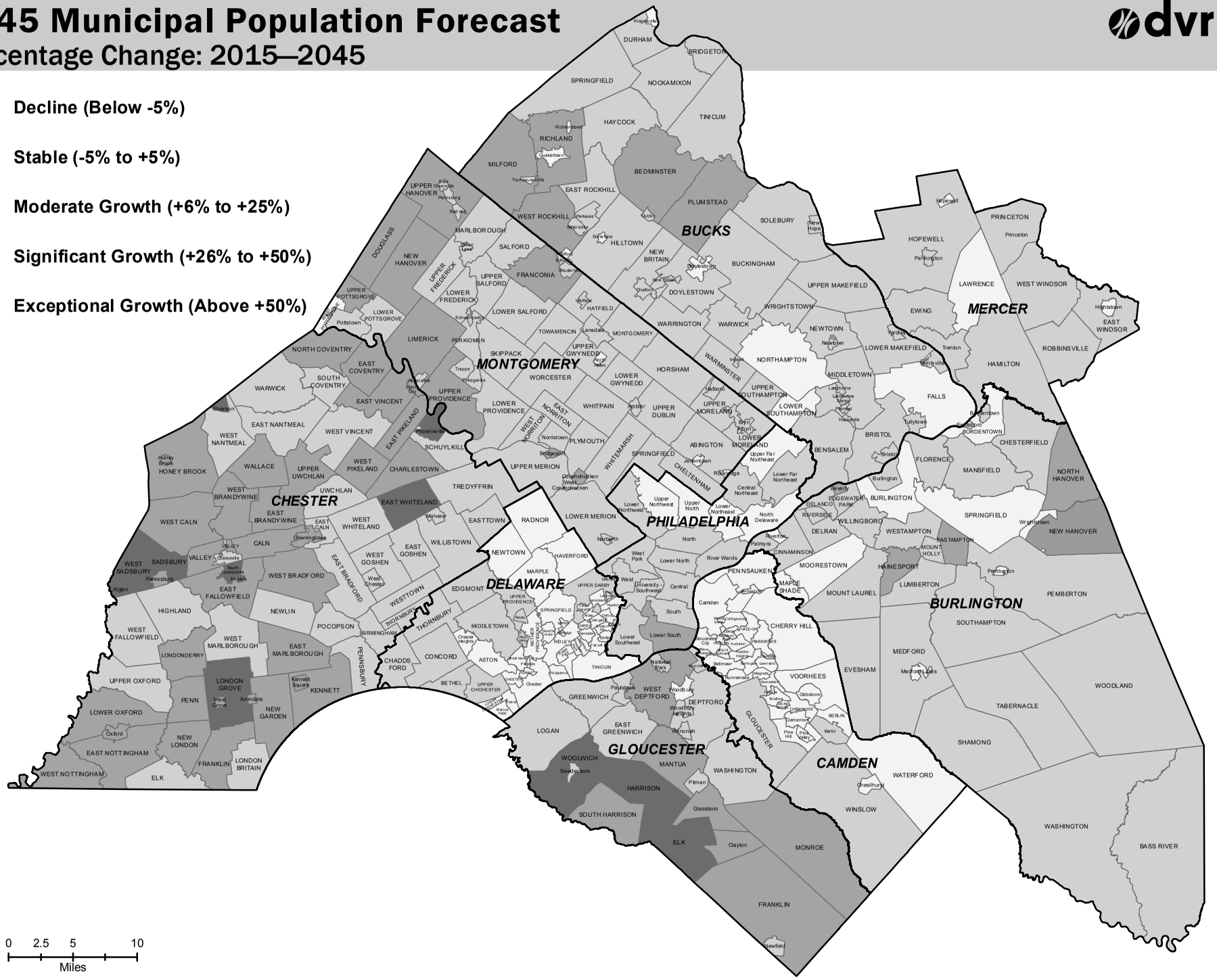

Figure 4:

# 2045 Municipal Population Forecast

## Absolute Change per Square Mile by Municipality: 2015—2045

dvrpc

## Summary

This report summarizes the method used to develop 2045 and interim-year population forecasts, which were adopted by the DVRPC Board on July 28, 2016. The population of the nine-county DVRPC region is forecast to increase by 11.5 percent between 2015 and 2045, with much of this growth concentrated in the suburbs, particularly in Chester County, Pennsylvania, and Gloucester County, New Jersey. The population of the City of Philadelphia is expected to increase by over 8 percent by 2045, and the share of the region's population living in the city is expected to increase slightly, from 26 percent in 2015 to 27 percent in 2045.

Population and employment forecasts are a critical component of long-range land use and transportation planning. The adopted population forecasts provided in this report will serve as the basis for DVRPC's planning and modeling activities. Employment forecasts in five-year increments through 2045 will be prepared and adopted in October 2016. The population and employment forecasts will be included in and support *Connections 2045*, the region's long-range plan update, scheduled for adoption in July 2017.

## Appendix A: Forecasted Population by County and Municipality, 2015-2045

| County / Municipality | 2000 Census | 2010 Census | 2015 Census Estimate | 2020 Forecast | 2025 Forecast | 2030 Forecast | 2035 Forecast | 2040 Forecast | 2045 Forecast | 2015-2045 Absolute Change | 2015-2045 Percentage Change |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bucks County** | **597,636** | **625,249** | **627,367** | **640,495** | **654,792** | **669,299** | **681,273** | **691,111** | **699,498** | **72,131** | **11.5%** |
| Bedminster Township | 4,800 | 6,574 | 7,037 | 7,407 | 7,775 | 8,149 | 8,473 | 8,739 | 8,965 | 1,928 | 27.4% |
| Bensalem Township | 58,435 | 60,427 | 60,374 | 61,878 | 63,377 | 64,898 | 66,212 | 67,296 | 68,212 | 7,838 | 13.0% |
| Bridgeton Township | 1,410 | 1,277 | 1,283 | 1,309 | 1,335 | 1,361 | 1,384 | 1,402 | 1,418 | 135 | 10.5% |
| Bristol Borough | 9,923 | 9,726 | 9,569 | 9,674 | 9,778 | 9,884 | 9,976 | 10,051 | 10,115 | 546 | 5.7% |
| Bristol Township | 55,521 | 54,582 | 54,086 | 54,360 | 56,166 | 57,990 | 59,127 | 60,060 | 60,852 | 6,766 | 12.5% |
| Buckingham Township | 16,440 | 20,075 | 20,385 | 21,079 | 21,770 | 22,471 | 23,078 | 23,577 | 24,000 | 3,615 | 17.7% |
| Chalfont Borough | 3,900 | 4,009 | 4,069 | 4,496 | 4,559 | 4,625 | 4,672 | 4,699 | 4,726 | 657 | 16.1% |
| Doylestown Borough | 8,230 | 8,380 | 8,301 | 8,368 | 8,435 | 8,502 | 8,561 | 8,609 | 8,650 | 349 | 4.2% |
| Doylestown Township | 18,387 | 17,565 | 17,563 | 17,806 | 18,048 | 18,293 | 18,506 | 18,681 | 18,829 | 1,266 | 7.2% |
| Dublin Borough | 2,085 | 2,158 | 2,169 | 2,221 | 2,273 | 2,325 | 2,371 | 2,408 | 2,440 | 271 | 12.5% |
| Durham Township | 1,313 | 1,144 | 1,144 | 1,175 | 1,206 | 1,238 | 1,265 | 1,288 | 1,307 | 163 | 14.2% |
| East Rockhill Township | 5,200 | 5,706 | 5,742 | 5,924 | 6,106 | 6,290 | 6,450 | 6,581 | 6,692 | 950 | 16.5% |
| Falls Township | 34,865 | 34,300 | 33,901 | 34,074 | 34,245 | 34,420 | 34,571 | 34,695 | 34,800 | 899 | 2.7% |
| Haycock Township | 2,190 | 2,225 | 2,218 | 2,266 | 2,315 | 2,363 | 2,406 | 2,441 | 2,470 | 252 | 11.4% |
| Hilltown Township | 12,100 | 15,029 | 15,262 | 15,807 | 16,349 | 16,900 | 17,376 | 17,768 | 18,100 | 2,838 | 18.6% |
| Hulmeville Borough | 895 | 1,003 | 996 | 1,007 | 1,017 | 1,028 | 1,037 | 1,045 | 1,051 | 55 | 5.5% |
| Ivyland Borough | 492 | 1,041 | 1,053 | 1,071 | 1,089 | 1,108 | 1,124 | 1,137 | 1,148 | 95 | 9.0% |
| Langhorne Borough | 1,980 | 1,622 | 1,599 | 1,618 | 1,638 | 1,657 | 1,674 | 1,688 | 1,700 | 101 | 6.3% |
| Langhorne Manor Borough | 925 | 1,442 | 1,431 | 1,449 | 1,467 | 1,485 | 1,501 | 1,514 | 1,525 | 94 | 6.6% |
| Lower Makefield Township | 32,691 | 32,559 | 32,755 | 33,683 | 34,074 | 34,474 | 34,855 | 35,181 | 35,500 | 2,745 | 8.4% |
| Lower Southampton Township | 19,275 | 18,909 | 19,142 | 19,266 | 19,389 | 19,515 | 19,623 | 19,712 | 19,788 | 646 | 3.4% |
| Middletown Township | 44,140 | 45,436 | 45,407 | 46,097 | 46,784 | 47,480 | 48,084 | 48,580 | 49,000 | 3,593 | 7.9% |
| Milford Township | 8,810 | 9,902 | 10,053 | 10,555 | 11,055 | 11,562 | 12,002 | 12,363 | 12,669 | 2,616 | 26.0% |
| Morrisville Borough | 10,020 | 8,728 | 8,605 | 8,623 | 8,796 | 8,968 | 9,074 | 9,160 | 9,234 | 629 | 7.3% |
| New Britain Borough | 2,358 | 3,152 | 3,017 | 3,080 | 3,143 | 3,207 | 3,263 | 3,308 | 3,347 | 330 | 10.9% |
| New Britain Township | 10,695 | 11,070 | 11,236 | 11,653 | 12,068 | 12,489 | 12,854 | 13,154 | 13,408 | 2,172 | 19.3% |
| New Hope Borough | 2,250 | 2,528 | 2,510 | 2,550 | 2,590 | 2,631 | 2,666 | 2,695 | 2,719 | 209 | 8.3% |
| Newtown Borough | 2,310 | 2,248 | 2,222 | 2,284 | 2,345 | 2,407 | 2,461 | 2,505 | 2,543 | 321 | 14.4% |
| Newtown Township | 18,206 | 19,299 | 19,704 | 20,059 | 20,412 | 20,770 | 21,081 | 21,336 | 21,552 | 1,848 | 9.4% |
| Nockamixon Township | 3,520 | 3,441 | 3,413 | 3,491 | 3,568 | 3,647 | 3,715 | 3,771 | 3,818 | 405 | 11.9% |
| Northampton Township | 39,384 | 39,726 | 39,587 | 39,841 | 40,262 | 40,691 | 41,012 | 41,276 | 41,500 | 1,913 | 4.8% |
| Penndel Borough | 2,420 | 2,328 | 2,221 | 2,283 | 2,345 | 2,408 | 2,462 | 2,507 | 2,545 | 324 | 14.6% |
| Perkasie Borough | 8,830 | 8,511 | 8,471 | 8,671 | 8,869 | 9,071 | 9,246 | 9,389 | 9,511 | 1,040 | 12.3% |
| Plumstead Township | 11,410 | 12,442 | 13,511 | 14,417 | 15,318 | 16,233 | 17,025 | 17,676 | 18,228 | 4,717 | 34.9% |
| Quakertown Borough | 8,935 | 8,979 | 8,855 | 8,912 | 8,968 | 9,025 | 9,075 | 9,115 | 9,150 | 295 | 3.3% |
| Richland Township | 9,920 | 13,052 | 13,155 | 13,855 | 14,551 | 15,258 | 15,871 | 16,374 | 16,800 | 3,645 | 27.7% |

| County / Municipality | 2000 Census | 2010 Census | 2015 Census Estimate | 2020 Forecast | 2025 Forecast | 2030 Forecast | 2035 Forecast | 2040 Forecast | 2045 Forecast | 2015-2045 Absolute Change | 2015-2045 Percentage Change |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Richlandtown Borough | 1,285 | 1,327 | 1,312 | 1,319 | 1,327 | 1,334 | 1,340 | 1,346 | 1,350 | 38 | 2.9% |
| Riegelsville Borough | 863 | 868 | 858 | 865 | 873 | 880 | 886 | 892 | 896 | 38 | 4.4% |
| Sellersville Borough | 4,564 | 4,249 | 4,212 | 4,297 | 4,382 | 4,469 | 4,544 | 4,605 | 4,657 | 445 | 10.6% |
| Silverdale Borough | 1,000 | 871 | 856 | 863 | 869 | 876 | 881 | 886 | 890 | 34 | 4.0% |
| Solebury Township | 7,740 | 8,692 | 8,639 | 8,766 | 8,892 | 9,020 | 9,131 | 9,223 | 9,300 | 661 | 7.7% |
| Springfield Township | 4,965 | 5,035 | 5,036 | 5,239 | 5,440 | 5,645 | 5,823 | 5,968 | 6,092 | 1,056 | 21.0% |
| Telford Borough (part) | 2,201 | 2,207 | 2,193 | 2,214 | 2,234 | 2,255 | 2,273 | 2,287 | 2,300 | 107 | 4.9% |
| Tinicum Township | 4,205 | 3,995 | 3,963 | 4,136 | 4,307 | 4,482 | 4,633 | 4,757 | 4,862 | 899 | 22.7% |
| Trumbauersville Borough | 1,060 | 974 | 959 | 967 | 975 | 983 | 990 | 995 | 1,000 | 41 | 4.3% |
| Tullytown Borough | 2,035 | 1,872 | 1,859 | 1,906 | 1,953 | 2,000 | 2,042 | 2,075 | 2,104 | 245 | 13.2% |
| Upper Makefield Township | 7,180 | 8,190 | 8,255 | 8,477 | 8,697 | 8,921 | 9,115 | 9,275 | 9,410 | 1,155 | 14.0% |
| Upper Southampton Township | 15,765 | 15,152 | 15,121 | 15,271 | 15,419 | 15,570 | 15,701 | 15,809 | 15,900 | 779 | 5.2% |
| Warminster Township | 31,383 | 32,682 | 32,594 | 33,035 | 33,473 | 33,918 | 34,304 | 34,620 | 34,889 | 2,295 | 7.0% |
| Warrington Township | 17,580 | 23,418 | 23,942 | 24,796 | 25,646 | 26,510 | 27,257 | 27,871 | 28,392 | 4,450 | 18.6% |
| Warwick Township | 11,975 | 14,437 | 14,694 | 14,972 | 15,249 | 15,531 | 15,774 | 15,974 | 16,144 | 1,450 | 9.9% |
| West Rockhill Township | 4,230 | 5,256 | 5,277 | 5,369 | 5,733 | 6,098 | 6,337 | 6,534 | 6,700 | 1,423 | 27.0% |
| Wrightstown Township | 2,840 | 2,995 | 3,110 | 3,197 | 3,284 | 3,373 | 3,449 | 3,512 | 3,565 | 455 | 14.6% |
| Yardley Borough | 2,500 | 2,434 | 2,441 | 2,497 | 2,554 | 2,611 | 2,660 | 2,701 | 2,735 | 294 | 12.0% |
| **Chester County** | **433,512** | **498,886** | **515,939** | **543,702** | **571,641** | **599,932** | **624,832** | **645,562** | **662,283** | **146,344** | **28.4%** |
| Atglen Borough | 1,215 | 1,406 | 1,408 | 1,532 | 1,683 | 1,858 | 2,030 | 2,203 | 2,308 | 900 | 63.9% |
| Avondale Borough | 1,110 | 1,265 | 1,399 | 1,490 | 1,581 | 1,672 | 1,752 | 1,818 | 1,873 | 474 | 33.9% |
| Birmingham Township | 4,220 | 4,208 | 4,262 | 4,320 | 4,377 | 4,435 | 4,486 | 4,527 | 4,562 | 300 | 7.0% |
| Caln Township | 11,916 | 13,817 | 14,115 | 15,025 | 15,929 | 16,848 | 17,644 | 18,299 | 18,852 | 4,737 | 33.6% |
| Charlestown Township | 4,050 | 5,671 | 5,690 | 6,198 | 6,703 | 7,217 | 7,661 | 8,026 | 8,336 | 2,646 | 46.5% |
| Coatesville City | 10,838 | 13,100 | 13,148 | 13,666 | 14,182 | 14,706 | 15,160 | 15,532 | 15,848 | 2,700 | 20.5% |
| Downingtown Borough | 7,590 | 7,891 | 7,946 | 8,508 | 9,068 | 9,636 | 10,128 | 10,532 | 10,875 | 2,929 | 36.9% |
| East Bradford Township | 9,405 | 9,942 | 10,038 | 10,470 | 10,900 | 11,336 | 11,714 | 12,025 | 12,288 | 2,250 | 22.4% |
| East Brandywine Township | 5,825 | 6,742 | 8,295 | 9,044 | 9,789 | 10,545 | 11,201 | 11,739 | 12,195 | 3,900 | 47.0% |
| East Caln Township | 2,855 | 4,838 | 4,873 | 5,073 | 5,273 | 5,475 | 5,651 | 5,795 | 5,917 | 1,044 | 21.4% |
| East Coventry Township | 4,565 | 6,636 | 6,753 | 7,173 | 7,592 | 8,017 | 8,385 | 8,687 | 8,943 | 2,190 | 32.4% |
| East Fallowfield Township | 5,160 | 7,449 | 7,570 | 7,992 | 8,412 | 8,839 | 9,208 | 9,512 | 9,769 | 2,199 | 29.0% |
| East Goshen Township | 16,825 | 18,026 | 18,339 | 18,685 | 19,028 | 19,378 | 19,680 | 19,928 | 20,139 | 1,800 | 9.8% |
| East Marlborough Township | 6,315 | 7,026 | 7,283 | 7,850 | 8,414 | 8,986 | 9,482 | 9,890 | 10,235 | 2,952 | 40.5% |
| East Nantmeal Township | 1,785 | 1,803 | 1,842 | 1,871 | 1,899 | 1,929 | 1,954 | 1,974 | 1,992 | 150 | 8.1% |
| East Nottingham Township | 5,515 | 8,650 | 8,930 | 9,571 | 10,208 | 10,855 | 11,415 | 11,876 | 12,266 | 3,336 | 37.4% |
| East Pikeland Township | 6,550 | 7,079 | 7,359 | 7,932 | 8,502 | 9,081 | 9,583 | 9,995 | 10,344 | 2,985 | 40.6% |
| East Vincent Township | 5,493 | 6,821 | 6,920 | 7,552 | 8,182 | 8,821 | 9,374 | 9,829 | 10,214 | 3,294 | 47.6% |
| East Whiteland Township | 9,335 | 10,650 | 10,702 | 12,002 | 13,196 | 14,309 | 15,358 | 16,221 | 16,952 | 6,250 | 58.4% |

| County / Municipality | 2000 Census | 2010 Census | 2015 Census Estimate | 2020 Forecast | 2025 Forecast | 2030 Forecast | 2035 Forecast | 2040 Forecast | 2045 Forecast | 2015-2045 Absolute Change | 2015-2045 Percentage Change |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Easttown Township | 10,265 | 10,477 | 10,620 | 10,966 | 11,309 | 11,659 | 11,961 | 12,209 | 12,420 | 1,800 | 16.9% |
| Elk Township | 1,490 | 1,681 | 1,695 | 1,753 | 1,810 | 1,868 | 1,919 | 1,960 | 1,995 | 300 | 17.7% |
| Elverson Borough | 960 | 1,225 | 1,314 | 1,472 | 1,629 | 1,788 | 1,926 | 2,040 | 2,136 | 822 | 62.6% |
| Franklin Township | 3,850 | 4,352 | 4,518 | 4,861 | 5,202 | 5,548 | 5,848 | 6,094 | 6,303 | 1,785 | 39.5% |
| Highland Township | 1,125 | 1,272 | 1,289 | 1,332 | 1,375 | 1,419 | 1,457 | 1,488 | 1,514 | 225 | 17.5% |
| Honey Brook Borough | 1,285 | 1,713 | 1,758 | 1,873 | 1,988 | 2,104 | 2,205 | 2,288 | 2,358 | 600 | 34.1% |
| Honey Brook Township | 6,280 | 7,647 | 8,124 | 8,510 | 8,980 | 9,523 | 10,058 | 10,596 | 10,924 | 2,800 | 34.5% |
| Kennett Square Borough | 5,275 | 6,072 | 6,167 | 6,666 | 7,163 | 7,667 | 8,104 | 8,463 | 8,767 | 2,600 | 42.2% |
| Kennett Township | 6,450 | 7,565 | 8,172 | 8,690 | 9,206 | 9,730 | 10,184 | 10,556 | 10,872 | 2,700 | 33.0% |
| London Britain Township | 2,795 | 3,139 | 3,268 | 3,314 | 3,360 | 3,406 | 3,447 | 3,480 | 3,508 | 240 | 7.3% |
| London Grove Township | 5,265 | 7,475 | 8,592 | 9,213 | 9,969 | 10,842 | 11,702 | 12,566 | 13,092 | 4,500 | 52.4% |
| Londonderry Township | 1,630 | 2,149 | 2,400 | 2,553 | 2,706 | 2,860 | 2,995 | 3,105 | 3,198 | 798 | 33.3% |
| Lower Oxford Township | 4,320 | 5,200 | 5,001 | 5,289 | 5,576 | 5,867 | 6,119 | 6,326 | 6,501 | 1,500 | 30.0% |
| Malvern Borough | 3,060 | 2,998 | 3,430 | 3,557 | 3,684 | 3,813 | 3,924 | 4,015 | 4,093 | 663 | 19.3% |
| Modena Borough | 610 | 535 | 528 | 591 | 654 | 718 | 774 | 819 | 858 | 330 | 62.5% |
| New Garden Township | 9,080 | 11,984 | 12,096 | 12,730 | 13,360 | 14,000 | 14,555 | 15,010 | 15,396 | 3,300 | 27.3% |
| New London Township | 4,585 | 5,631 | 5,944 | 6,438 | 6,930 | 7,429 | 7,862 | 8,217 | 8,518 | 2,574 | 43.3% |
| Newlin Township | 1,150 | 1,285 | 1,356 | 1,415 | 1,474 | 1,534 | 1,586 | 1,629 | 1,665 | 309 | 22.8% |
| North Coventry Township | 7,380 | 7,866 | 8,024 | 8,397 | 8,851 | 9,375 | 9,891 | 10,409 | 10,724 | 2,700 | 33.6% |
| Oxford Borough | 4,315 | 5,077 | 5,385 | 5,571 | 5,798 | 6,060 | 6,318 | 6,577 | 6,735 | 1,350 | 25.1% |
| Parkesburg Borough | 3,375 | 3,593 | 3,687 | 3,974 | 4,260 | 4,551 | 4,802 | 5,009 | 5,184 | 1,497 | 40.6% |
| Penn Township | 2,810 | 5,364 | 5,475 | 5,964 | 6,451 | 6,945 | 7,373 | 7,724 | 8,022 | 2,547 | 46.5% |
| Pennsbury Township | 3,505 | 3,604 | 3,659 | 3,763 | 3,867 | 3,972 | 4,064 | 4,138 | 4,202 | 543 | 14.8% |
| Phoenixville Borough | 14,795 | 16,440 | 16,658 | 18,696 | 20,725 | 22,481 | 24,002 | 25,051 | 25,710 | 9,052 | 54.3% |
| Pocopson Township | 3,350 | 4,582 | 4,856 | 5,060 | 5,264 | 5,471 | 5,649 | 5,796 | 5,921 | 1,065 | 21.9% |
| Sadsbury Township | 2,580 | 3,570 | 3,850 | 4,311 | 4,769 | 5,235 | 5,638 | 5,969 | 6,250 | 2,400 | 62.3% |
| Schuylkill Township | 6,965 | 8,516 | 8,576 | 8,922 | 9,265 | 9,615 | 9,917 | 10,165 | 10,376 | 1,800 | 21.0% |
| South Coatesville Borough | 995 | 1,303 | 1,435 | 1,574 | 1,713 | 1,853 | 1,975 | 2,075 | 2,160 | 725 | 50.5% |
| South Coventry Township | 1,895 | 2,604 | 2,616 | 2,721 | 2,825 | 2,931 | 3,023 | 3,098 | 3,162 | 546 | 20.9% |
| Spring City Borough | 3,305 | 3,323 | 3,322 | 3,514 | 3,705 | 3,898 | 4,066 | 4,204 | 4,321 | 999 | 30.1% |
| Thornbury Township | 2,678 | 3,017 | 3,343 | 3,503 | 3,662 | 3,824 | 3,964 | 4,079 | 4,177 | 834 | 24.9% |
| Tredyffrin Township | 29,065 | 29,332 | 29,559 | 30,232 | 30,900 | 31,578 | 32,165 | 32,648 | 33,059 | 3,500 | 11.8% |
| Upper Oxford Township | 2,095 | 2,484 | 2,504 | 2,594 | 2,684 | 2,776 | 2,855 | 2,920 | 2,975 | 471 | 18.8% |
| Upper Uwchlan Township | 6,850 | 11,227 | 11,545 | 12,179 | 12,809 | 13,449 | 14,004 | 14,459 | 14,845 | 3,300 | 28.6% |
| Uwchlan Township | 16,575 | 18,088 | 19,072 | 19,763 | 20,451 | 21,149 | 21,754 | 22,251 | 22,672 | 3,600 | 18.9% |
| Valley Township | 5,115 | 6,794 | 7,632 | 8,187 | 8,740 | 9,301 | 9,787 | 10,186 | 10,524 | 2,892 | 37.9% |
| Wallace Township | 3,240 | 3,458 | 3,698 | 3,985 | 4,270 | 4,560 | 4,811 | 5,017 | 5,192 | 1,494 | 40.4% |
| Warwick Township | 2,555 | 2,507 | 2,550 | 2,610 | 2,671 | 2,732 | 2,785 | 2,828 | 2,865 | 315 | 12.4% |
| West Bradford Township | 10,775 | 12,223 | 12,779 | 13,519 | 14,255 | 15,003 | 15,651 | 16,183 | 16,634 | 3,855 | 30.2% |

| County / Municipality | 2000 Census | 2010 Census | 2015 Census Estimate | 2020 Forecast | 2025 Forecast | 2030 Forecast | 2035 Forecast | 2040 Forecast | 2045 Forecast | 2015-2045 Absolute Change | 2015-2045 Percentage Change |
|---|---|---|---|---|---|---|---|---|---|---|---|
| West Brandywine Township | 7,160 | 7,394 | 7,468 | 8,159 | 8,847 | 9,545 | 10,150 | 10,647 | 11,068 | 3,600 | 48.2% |
| West Caln Township | 7,055 | 9,014 | 9,085 | 9,539 | 9,990 | 10,449 | 10,846 | 11,172 | 11,449 | 2,364 | 26.0% |
| West Chester Borough | 17,861 | 18,461 | 19,842 | 20,361 | 20,876 | 21,400 | 21,853 | 22,225 | 22,542 | 2,700 | 13.6% |
| West Fallowfield Township | 2,485 | 2,566 | 2,596 | 2,625 | 2,653 | 2,683 | 2,708 | 2,728 | 2,746 | 150 | 5.8% |
| West Goshen Township | 20,495 | 21,866 | 23,137 | 23,713 | 24,284 | 24,868 | 25,369 | 25,786 | 26,137 | 3,000 | 13.0% |
| West Grove Borough | 2,650 | 2,854 | 2,859 | 3,002 | 3,144 | 3,288 | 3,413 | 3,516 | 3,603 | 744 | 26.0% |
| West Marlborough Township | 855 | 814 | 821 | 830 | 838 | 847 | 855 | 861 | 866 | 45 | 5.5% |
| West Nantmeal Township | 2,030 | 2,170 | 2,190 | 2,294 | 2,397 | 2,502 | 2,592 | 2,667 | 2,730 | 540 | 24.7% |
| West Nottingham Township | 2,634 | 2,722 | 2,706 | 2,879 | 3,051 | 3,225 | 3,377 | 3,501 | 3,606 | 900 | 33.3% |
| West Pikeland Township | 3,550 | 4,024 | 4,085 | 4,324 | 4,562 | 4,803 | 5,013 | 5,184 | 5,330 | 1,245 | 30.5% |
| West Sadsbury Township | 2,440 | 2,444 | 2,475 | 2,661 | 2,888 | 3,150 | 3,408 | 3,667 | 3,825 | 1,350 | 54.5% |
| West Vincent Township | 3,170 | 4,567 | 5,038 | 5,230 | 5,422 | 5,616 | 5,784 | 5,923 | 6,040 | 1,002 | 19.9% |
| West Whiteland Township | 16,500 | 18,274 | 18,450 | 19,266 | 20,077 | 20,901 | 21,614 | 22,201 | 22,698 | 4,248 | 23.0% |
| Westtown Township | 10,352 | 10,827 | 10,913 | 11,426 | 11,936 | 12,454 | 12,902 | 13,271 | 13,583 | 2,670 | 24.5% |
| Willistown Township | 10,015 | 10,497 | 10,905 | 11,177 | 11,448 | 11,724 | 11,962 | 12,158 | 12,324 | 1,419 | 13.0% |
| **Delaware County** | **551,989** | **558,979** | **563,894** | **568,337** | **572,758** | **577,248** | **581,136** | **584,329** | **587,037** | **23,143** | **4.1%** |
| Aldan Borough | 4,315 | 4,152 | 4,165 | 4,186 | 4,208 | 4,230 | 4,248 | 4,264 | 4,277 | 112 | 2.7% |
| Aston Township | 16,205 | 16,592 | 16,799 | 16,942 | 17,083 | 17,227 | 17,352 | 17,455 | 17,541 | 742 | 4.4% |
| Bethel Township | 6,420 | 8,791 | 9,166 | 9,359 | 9,550 | 9,745 | 9,914 | 10,052 | 10,170 | 1,004 | 11.0% |
| Brookhaven Borough | 7,985 | 8,006 | 8,078 | 8,138 | 8,198 | 8,259 | 8,311 | 8,355 | 8,391 | 313 | 3.9% |
| Chadds Ford Township | 3,170 | 3,640 | 3,740 | 3,848 | 3,955 | 4,064 | 4,159 | 4,237 | 4,302 | 562 | 15.0% |
| Chester City | 36,855 | 33,972 | 34,092 | 34,281 | 34,468 | 34,659 | 34,824 | 34,960 | 35,075 | 983 | 2.9% |
| Chester Heights Borough | 2,481 | 2,531 | 2,626 | 2,647 | 2,667 | 2,688 | 2,706 | 2,721 | 2,733 | 107 | 4.1% |
| Chester Township | 4,605 | 3,940 | 4,103 | 4,140 | 4,178 | 4,216 | 4,248 | 4,275 | 4,298 | 195 | 4.8% |
| Clifton Heights Borough | 6,780 | 6,652 | 6,684 | 6,709 | 6,733 | 6,758 | 6,780 | 6,798 | 6,813 | 129 | 1.9% |
| Collingdale Borough | 8,665 | 8,786 | 8,792 | 8,866 | 8,939 | 9,014 | 9,079 | 9,132 | 9,177 | 385 | 4.4% |
| Colwyn Borough | 2,455 | 2,546 | 2,553 | 2,584 | 2,615 | 2,646 | 2,673 | 2,695 | 2,714 | 161 | 6.3% |
| Concord Township | 11,235 | 17,231 | 17,663 | 18,150 | 18,635 | 19,127 | 19,554 | 19,904 | 20,201 | 2,538 | 14.4% |
| Darby Borough | 10,300 | 10,687 | 10,687 | 10,756 | 10,825 | 10,896 | 10,956 | 11,006 | 11,049 | 362 | 3.4% |
| Darby Township | 9,625 | 9,264 | 9,318 | 9,322 | 9,326 | 9,330 | 9,333 | 9,336 | 9,338 | 20 | 0.2% |
| East Lansdowne Borough | 2,585 | 2,668 | 2,665 | 2,673 | 2,682 | 2,690 | 2,697 | 2,703 | 2,709 | 44 | 1.7% |
| Eddystone Borough | 2,440 | 2,410 | 2,407 | 2,414 | 2,420 | 2,427 | 2,433 | 2,438 | 2,442 | 35 | 1.5% |
| Edgmont Township | 3,915 | 3,987 | 4,069 | 4,214 | 4,358 | 4,504 | 4,631 | 4,735 | 4,823 | 754 | 18.5% |
| Folcroft Borough | 6,980 | 6,606 | 6,637 | 6,631 | 6,625 | 6,619 | 6,614 | 6,610 | 6,606 | -31 | -0.5% |
| Glenolden Borough | 7,475 | 7,153 | 7,173 | 7,194 | 7,215 | 7,236 | 7,255 | 7,270 | 7,283 | 110 | 1.5% |
| Haverford Township | 49,608 | 48,491 | 49,057 | 49,279 | 49,500 | 49,724 | 49,918 | 50,078 | 50,213 | 1,156 | 2.4% |
| Lansdowne Borough | 11,044 | 10,620 | 10,639 | 10,655 | 10,671 | 10,688 | 10,702 | 10,714 | 10,724 | 85 | 0.8% |
| Lower Chichester Township | 3,590 | 3,469 | 3,477 | 3,488 | 3,499 | 3,510 | 3,519 | 3,527 | 3,534 | 57 | 1.6% |

| County / Municipality | 2000 Census | 2010 Census | 2015 Census Estimate | 2020 Forecast | 2025 Forecast | 2030 Forecast | 2035 Forecast | 2040 Forecast | 2045 Forecast | 2015-2045 Absolute Change | 2015-2045 Percentage Change |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Marcus Hook Borough | 2,315 | 2,397 | 2,397 | 2,415 | 2,433 | 2,451 | 2,466 | 2,479 | 2,490 | 93 | 3.9% |
| Marple Township | 23,735 | 23,428 | 23,743 | 23,794 | 23,846 | 23,898 | 23,942 | 23,979 | 24,011 | 268 | 1.1% |
| Media Borough | 5,530 | 5,327 | 5,363 | 5,445 | 5,526 | 5,608 | 5,679 | 5,738 | 5,788 | 425 | 7.9% |
| Middletown Township | 16,065 | 15,807 | 15,998 | 16,185 | 16,371 | 16,560 | 16,724 | 16,858 | 16,972 | 974 | 6.1% |
| Millbourne Borough | 945 | 1,159 | 1,162 | 1,178 | 1,194 | 1,210 | 1,223 | 1,235 | 1,244 | 82 | 7.1% |
| Morton Borough | 2,715 | 2,669 | 2,695 | 2,707 | 2,720 | 2,732 | 2,743 | 2,752 | 2,760 | 65 | 2.4% |
| Nether Providence Township | 13,456 | 13,706 | 13,808 | 13,893 | 13,977 | 14,063 | 14,138 | 14,199 | 14,251 | 443 | 3.2% |
| Newtown Township | 11,705 | 12,216 | 12,754 | 12,849 | 12,943 | 13,038 | 13,121 | 13,189 | 13,246 | 492 | 3.9% |
| Norwood Borough | 5,985 | 5,890 | 5,898 | 5,917 | 5,935 | 5,954 | 5,970 | 5,984 | 5,995 | 97 | 1.6% |
| Parkside Borough | 2,265 | 2,328 | 2,334 | 2,349 | 2,365 | 2,380 | 2,394 | 2,405 | 2,414 | 80 | 3.4% |
| Prospect Park Borough | 6,595 | 6,454 | 6,481 | 6,515 | 6,548 | 6,582 | 6,612 | 6,636 | 6,656 | 175 | 2.7% |
| Radnor Township | 30,880 | 31,531 | 31,612 | 31,808 | 32,003 | 32,201 | 32,373 | 32,513 | 32,633 | 1,021 | 3.2% |
| Ridley Park Borough | 7,195 | 7,002 | 7,035 | 7,071 | 7,106 | 7,143 | 7,174 | 7,200 | 7,221 | 186 | 2.6% |
| Ridley Township | 30,790 | 30,768 | 31,053 | 31,129 | 31,205 | 31,281 | 31,348 | 31,402 | 31,449 | 396 | 1.3% |
| Rose Valley Borough | 945 | 913 | 949 | 970 | 991 | 1,012 | 1,031 | 1,046 | 1,058 | 109 | 11.5% |
| Rutledge Borough | 860 | 784 | 795 | 798 | 801 | 804 | 807 | 809 | 811 | 16 | 2.0% |
| Sharon Hill Borough | 5,465 | 5,697 | 5,702 | 5,733 | 5,764 | 5,795 | 5,822 | 5,845 | 5,863 | 161 | 2.8% |
| Springfield Township | 23,675 | 24,211 | 24,401 | 24,612 | 24,822 | 25,035 | 25,220 | 25,372 | 25,500 | 1,099 | 4.5% |
| Swarthmore Borough | 6,170 | 6,194 | 6,211 | 6,249 | 6,287 | 6,325 | 6,359 | 6,386 | 6,409 | 198 | 3.2% |
| Thornbury Township | 5,787 | 8,028 | 7,857 | 8,039 | 8,219 | 8,403 | 8,562 | 8,692 | 8,803 | 946 | 12.0% |
| Tinicum Township | 4,355 | 4,091 | 4,109 | 4,113 | 4,117 | 4,120 | 4,124 | 4,126 | 4,129 | 20 | 0.5% |
| Trainer Borough | 1,905 | 1,828 | 1,844 | 1,833 | 1,822 | 1,810 | 1,801 | 1,793 | 1,786 | -58 | -3.1% |
| Upland Borough | 2,980 | 3,239 | 3,251 | 3,263 | 3,274 | 3,286 | 3,296 | 3,304 | 3,311 | 60 | 1.8% |
| Upper Chichester Township | 16,845 | 16,738 | 17,003 | 17,177 | 17,350 | 17,526 | 17,678 | 17,803 | 17,909 | 906 | 5.3% |
| Upper Darby Township | 81,821 | 82,795 | 82,878 | 83,699 | 84,521 | 85,354 | 86,073 | 86,662 | 87,167 | 4,289 | 5.2% |
| Upper Providence Township | 10,510 | 10,142 | 10,448 | 10,592 | 10,735 | 10,881 | 11,007 | 11,110 | 11,198 | 750 | 7.2% |
| Yeadon Borough | 11,762 | 11,443 | 11,523 | 11,528 | 11,533 | 11,539 | 11,543 | 11,547 | 11,550 | 27 | 0.2% |
| **Montgomery County** | **748,978** | **799,874** | **819,264** | **840,934** | **863,327** | **884,387** | **903,114** | **918,918** | **932,820** | **113,556** | **13.9%** |
| Abington Township | 56,105 | 55,310 | 55,590 | 56,172 | 56,754 | 57,336 | 57,918 | 58,500 | 59,083 | 3,493 | 6.3% |
| Ambler Borough | 6,425 | 6,417 | 6,505 | 6,657 | 6,810 | 6,963 | 7,116 | 7,269 | 7,422 | 917 | 14.1% |
| Bridgeport Borough | 4,370 | 4,554 | 4,564 | 4,964 | 5,464 | 5,533 | 5,602 | 5,671 | 5,740 | 1,176 | 25.8% |
| Bryn Athyn Borough | 1,350 | 1,375 | 1,392 | 1,408 | 1,423 | 1,439 | 1,453 | 1,464 | 1,474 | 82 | 5.9% |
| Cheltenham Township | 36,880 | 36,793 | 37,014 | 37,364 | 37,714 | 38,146 | 38,578 | 39,092 | 39,607 | 2,593 | 7.0% |
| Collegeville Borough | 4,930 | 5,089 | 5,287 | 5,360 | 5,432 | 5,506 | 5,569 | 5,622 | 5,666 | 379 | 7.2% |
| Conshohocken Borough | 7,590 | 7,833 | 7,956 | 8,706 | 9,456 | 9,877 | 10,297 | 10,567 | 10,837 | 2,881 | 36.2% |
| Douglass Township | 9,104 | 10,195 | 10,432 | 10,950 | 11,464 | 11,987 | 12,440 | 12,812 | 13,128 | 2,696 | 25.8% |
| East Greenville Borough | 3,105 | 2,951 | 2,985 | 3,047 | 3,109 | 3,171 | 3,233 | 3,295 | 3,358 | 373 | 12.5% |
| East Norriton Township | 13,211 | 13,590 | 14,082 | 14,256 | 14,430 | 14,606 | 14,759 | 14,884 | 14,990 | 908 | 6.4% |

| County / Municipality | 2000 Census | 2010 Census | 2015 Census Estimate | 2020 Forecast | 2025 Forecast | 2030 Forecast | 2035 Forecast | 2040 Forecast | 2045 Forecast | 2015-2045 Absolute Change | 2015-2045 Percentage Change |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Franconia Township | 11,525 | 13,064 | 13,241 | 13,798 | 14,355 | 14,912 | 15,469 | 16,026 | 16,584 | 3,343 | 25.2% |
| Green Lane Borough | 580 | 508 | 500 | 508 | 515 | 523 | 530 | 535 | 540 | 40 | 8.0% |
| Hatboro Borough | 7,390 | 7,360 | 7,411 | 7,591 | 7,770 | 7,952 | 8,110 | 8,240 | 8,349 | 938 | 12.7% |
| Hatfield Borough | 2,605 | 3,290 | 3,306 | 3,342 | 3,378 | 3,415 | 3,447 | 3,473 | 3,495 | 189 | 5.7% |
| Hatfield Township | 16,712 | 17,249 | 17,558 | 18,057 | 18,553 | 19,057 | 19,493 | 19,851 | 20,155 | 2,597 | 14.8% |
| Horsham Township | 24,234 | 26,147 | 26,587 | 26,987 | 28,319 | 29,668 | 31,023 | 31,845 | 32,541 | 5,954 | 22.4% |
| Jenkintown Borough | 4,475 | 4,422 | 4,431 | 4,467 | 4,504 | 4,541 | 4,572 | 4,599 | 4,621 | 190 | 4.3% |
| Lansdale Borough | 16,070 | 16,269 | 16,512 | 17,019 | 17,523 | 18,035 | 18,479 | 18,843 | 19,152 | 2,640 | 16.0% |
| Limerick Township | 13,535 | 18,074 | 18,798 | 19,854 | 20,904 | 21,970 | 22,894 | 23,653 | 24,296 | 5,498 | 29.2% |
| Lower Frederick Township | 4,795 | 4,840 | 4,892 | 4,985 | 5,078 | 5,171 | 5,263 | 5,355 | 5,447 | 555 | 11.3% |
| Lower Gwynedd Township | 10,420 | 11,405 | 11,548 | 11,732 | 11,916 | 12,100 | 12,284 | 12,468 | 12,651 | 1,103 | 9.6% |
| Lower Merion Township | 58,740 | 57,825 | 58,177 | 59,676 | 61,027 | 62,135 | 62,983 | 63,732 | 64,231 | 6,054 | 10.4% |
| Lower Moreland Township | 11,280 | 12,982 | 13,220 | 13,426 | 13,631 | 13,839 | 14,020 | 14,168 | 14,294 | 1,074 | 8.1% |
| Lower Pottsgrove Township | 11,213 | 12,059 | 12,174 | 12,565 | 12,954 | 13,350 | 13,692 | 13,973 | 14,212 | 2,038 | 16.7% |
| Lower Providence Township | 22,390 | 25,436 | 26,187 | 26,679 | 27,168 | 27,664 | 28,094 | 28,448 | 28,747 | 2,560 | 9.8% |
| Lower Salford Township | 12,895 | 14,959 | 15,344 | 15,922 | 16,497 | 17,081 | 17,587 | 18,002 | 18,355 | 3,011 | 19.6% |
| Marlborough Township | 3,110 | 3,178 | 3,308 | 3,405 | 3,501 | 3,599 | 3,683 | 3,753 | 3,812 | 504 | 15.2% |
| Montgomery Township | 22,025 | 24,790 | 26,025 | 26,545 | 27,063 | 27,588 | 28,044 | 28,418 | 28,735 | 2,710 | 10.4% |
| Narberth Borough | 4,235 | 4,282 | 4,309 | 4,378 | 4,447 | 4,517 | 4,578 | 4,627 | 4,669 | 360 | 8.4% |
| New Hanover Township | 7,365 | 10,939 | 12,495 | 13,605 | 14,708 | 15,829 | 16,800 | 17,598 | 18,274 | 5,779 | 46.3% |
| Norristown Borough | 31,280 | 34,324 | 34,412 | 34,777 | 35,212 | 35,737 | 36,344 | 36,942 | 37,543 | 3,131 | 9.1% |
| North Wales Borough | 3,340 | 3,229 | 3,250 | 3,277 | 3,304 | 3,332 | 3,356 | 3,375 | 3,392 | 142 | 4.4% |
| Pennsburg Borough | 2,730 | 3,843 | 3,873 | 3,942 | 4,010 | 4,080 | 4,140 | 4,190 | 4,232 | 359 | 9.3% |
| Perkiomen Township | 7,095 | 9,139 | 9,245 | 9,486 | 9,726 | 9,969 | 10,180 | 10,354 | 10,501 | 1,256 | 13.6% |
| Plymouth Township | 16,045 | 16,525 | 17,653 | 18,091 | 18,527 | 18,969 | 19,353 | 19,668 | 19,934 | 2,281 | 12.9% |
| Pottstown Borough | 21,859 | 22,377 | 22,664 | 22,959 | 23,253 | 23,551 | 23,809 | 24,021 | 24,201 | 1,537 | 6.8% |
| Red Hill Borough | 2,195 | 2,383 | 2,383 | 2,441 | 2,498 | 2,557 | 2,607 | 2,649 | 2,684 | 301 | 12.6% |
| Rockledge Borough | 2,575 | 2,543 | 2,541 | 2,553 | 2,565 | 2,577 | 2,588 | 2,596 | 2,604 | 63 | 2.5% |
| Royersford Borough | 4,245 | 4,752 | 4,771 | 4,893 | 5,014 | 5,136 | 5,243 | 5,330 | 5,404 | 633 | 13.3% |
| Salford Township | 2,365 | 2,504 | 2,954 | 3,088 | 3,222 | 3,358 | 3,475 | 3,572 | 3,654 | 700 | 23.7% |
| Schwenksville Borough | 1,395 | 1,385 | 1,398 | 1,422 | 1,445 | 1,469 | 1,489 | 1,506 | 1,521 | 123 | 8.8% |
| Skippack Township | 9,915 | 13,715 | 14,992 | 15,475 | 15,958 | 16,441 | 16,924 | 17,407 | 17,891 | 2,899 | 19.3% |
| Souderton Borough | 6,725 | 6,618 | 6,747 | 6,917 | 7,086 | 7,258 | 7,406 | 7,528 | 7,632 | 885 | 13.1% |
| Springfield Township | 19,530 | 19,418 | 19,574 | 19,766 | 19,957 | 20,151 | 20,319 | 20,457 | 20,574 | 1,000 | 5.1% |
| Telford Borough (pt.) | 2,474 | 2,665 | 2,668 | 2,720 | 2,771 | 2,823 | 2,868 | 2,905 | 2,937 | 269 | 10.1% |
| Towamencin Township | 17,600 | 17,578 | 18,272 | 18,755 | 19,235 | 19,723 | 20,146 | 20,493 | 20,787 | 2,515 | 13.8% |
| Trappe Borough | 3,210 | 3,509 | 3,553 | 3,656 | 3,758 | 3,862 | 3,952 | 4,026 | 4,089 | 536 | 15.1% |
| Upper Dublin Township | 25,875 | 25,569 | 26,211 | 26,890 | 27,715 | 28,501 | 28,995 | 29,383 | 29,745 | 3,534 | 13.5% |
| Upper Frederick Township | 3,140 | 3,523 | 3,564 | 3,662 | 3,760 | 3,860 | 3,946 | 4,016 | 4,076 | 512 | 14.4% |

| County / Municipality | 2000 Census | 2010 Census | 2015 Census Estimate | 2020 Forecast | 2025 Forecast | 2030 Forecast | 2035 Forecast | 2040 Forecast | 2045 Forecast | 2015-2045 Absolute Change | 2015-2045 Percentage Change |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Upper Gwynedd Township | 14,245 | 15,552 | 15,928 | 16,116 | 16,304 | 16,492 | 16,679 | 16,866 | 17,053 | 1,125 | 7.1% |
| Upper Hanover Township | 4,885 | 6,464 | 7,287 | 7,696 | 8,103 | 8,516 | 8,874 | 9,168 | 9,417 | 2,130 | 29.2% |
| Upper Merion Township | 26,863 | 28,395 | 28,620 | 30,147 | 31,668 | 32,607 | 33,393 | 34,003 | 34,491 | 5,871 | 20.5% |
| Upper Moreland Township | 24,990 | 24,015 | 24,231 | 24,522 | 24,812 | 25,107 | 25,362 | 25,572 | 25,749 | 1,518 | 6.3% |
| Upper Pottsgrove Township | 4,105 | 5,315 | 5,483 | 5,774 | 6,065 | 6,357 | 6,649 | 6,941 | 7,233 | 1,750 | 31.9% |
| Upper Providence Township | 15,395 | 21,219 | 23,460 | 24,622 | 25,777 | 26,951 | 27,967 | 28,802 | 29,510 | 6,050 | 25.8% |
| Upper Salford Township | 3,025 | 3,299 | 3,378 | 3,507 | 3,636 | 3,765 | 3,894 | 4,024 | 4,154 | 776 | 23.0% |
| West Conshohocken Borough | 1,445 | 1,320 | 1,381 | 1,411 | 1,442 | 1,472 | 1,499 | 1,521 | 1,539 | 158 | 11.4% |
| West Norriton Township | 14,900 | 15,663 | 15,779 | 16,145 | 16,509 | 16,878 | 17,198 | 17,461 | 17,684 | 1,905 | 12.1% |
| West Pottsgrove Township | 3,815 | 3,874 | 3,884 | 3,915 | 3,945 | 3,976 | 4,003 | 4,025 | 4,044 | 160 | 4.1% |
| Whitemarsh Township | 16,702 | 17,349 | 17,663 | 18,503 | 19,040 | 19,486 | 19,859 | 20,197 | 20,476 | 2,813 | 15.9% |
| Whitpain Township | 18,562 | 18,875 | 19,180 | 19,464 | 19,747 | 20,034 | 20,283 | 20,487 | 20,661 | 1,481 | 7.7% |
| Worcester Township | 7,789 | 9,750 | 10,435 | 10,917 | 11,396 | 11,882 | 12,304 | 12,650 | 12,943 | 2,508 | 24.0% |
| **Philadelphia County** | **1,517,550** | **1,526,006** | **1,567,443** | **1,594,787** | **1,616,816** | **1,643,971** | **1,667,290** | **1,683,402** | **1,696,133** | **128,690** | **8.2%** |
| Central | 100,188 | 117,132 | 126,629 | 132,848 | 137,233 | 143,015 | 148,841 | 153,321 | 157,035 | 30,406 | 24.0% |
| Central Northeast | 72,179 | 78,266 | 79,870 | 81,333 | 82,568 | 83,813 | 84,123 | 84,490 | 84,713 | 4,843 | 6.1% |
| Lower Far Northeast | 71,657 | 70,340 | 70,596 | 71,526 | 72,319 | 73,060 | 73,588 | 74,087 | 74,502 | 3,906 | 5.5% |
| Lower North | 95,139 | 95,176 | 101,692 | 105,069 | 108,227 | 111,507 | 114,601 | 116,878 | 118,052 | 16,360 | 16.1% |
| Lower Northeast | 93,471 | 100,232 | 102,654 | 103,621 | 104,301 | 104,837 | 105,110 | 105,080 | 105,424 | 2,770 | 2.7% |
| Lower Northwest | 51,869 | 50,799 | 52,319 | 53,241 | 54,072 | 54,730 | 55,162 | 55,406 | 55,811 | 3,492 | 6.7% |
| Lower South | 4,318 | 5,150 | 5,499 | 5,747 | 5,998 | 6,501 | 6,749 | 7,001 | 7,335 | 1,836 | 33.4% |
| Lower Southwest | 41,642 | 42,117 | 42,462 | 43,288 | 43,711 | 44,054 | 44,854 | 45,183 | 45,439 | 2,977 | 7.0% |
| North | 141,061 | 137,849 | 138,049 | 138,663 | 140,022 | 142,561 | 144,724 | 145,520 | 146,656 | 8,607 | 6.2% |
| North Delaware | 96,005 | 100,631 | 101,251 | 102,210 | 102,553 | 102,944 | 102,909 | 103,041 | 103,280 | 2,029 | 2.0% |
| River Wards | 66,321 | 68,489 | 70,385 | 72,380 | 73,004 | 74,203 | 75,613 | 76,270 | 76,951 | 6,566 | 9.3% |
| South | 131,616 | 132,904 | 137,110 | 138,842 | 140,432 | 141,898 | 143,712 | 144,223 | 144,877 | 7,767 | 5.7% |
| University/Southwest | 83,639 | 81,746 | 87,719 | 92,546 | 94,735 | 97,599 | 99,607 | 101,667 | 102,305 | 14,586 | 16.6% |
| Upper Far Northeast | 64,469 | 66,605 | 67,986 | 68,387 | 69,071 | 69,893 | 69,943 | 70,370 | 70,660 | 2,674 | 3.9% |
| Upper North | 154,560 | 144,381 | 145,913 | 146,533 | 147,898 | 149,046 | 149,501 | 150,207 | 150,422 | 4,509 | 3.1% |
| Upper Northwest | 89,851 | 85,093 | 85,633 | 86,048 | 87,079 | 88,209 | 89,309 | 89,432 | 89,915 | 4,282 | 5.0% |
| West | 111,973 | 105,642 | 106,922 | 107,403 | 108,060 | 109,844 | 112,163 | 114,009 | 115,200 | 8,278 | 7.7% |
| West Park | 47,592 | 43,454 | 44,754 | 45,102 | 45,533 | 46,257 | 46,781 | 47,217 | 47,556 | 2,802 | 6.3% |
| **Burlington County** | **423,397** | **448,734** | **450,226** | **459,344** | **468,428** | **475,978** | **482,560** | **488,026** | **492,709** | **42,483** | **9.4%** |
| Bass River Township | 1,510 | 1,443 | 1,449 | 1,483 | 1,516 | 1,550 | 1,580 | 1,604 | 1,624 | 175 | 12.1% |
| Beverly City | 2,660 | 2,577 | 2,559 | 2,710 | 2,859 | 3,011 | 3,143 | 3,251 | 3,343 | 784 | 30.6% |
| Bordentown City | 3,970 | 3,924 | 3,882 | 4,012 | 4,141 | 4,273 | 4,387 | 4,480 | 4,559 | 677 | 17.4% |
| Bordentown Township | 8,375 | 11,367 | 11,935 | 11,965 | 11,996 | 12,027 | 12,053 | 12,075 | 12,094 | 159 | 1.3% |





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| County / Municipality | 2000 Census | 2010 Census | 2015 Census Estimate | 2020 Forecast | 2025 Forecast | 2030 Forecast | 2035 Forecast | 2040 Forecast | 2045 Forecast | 2015-2045 Absolute Change | 2015-2045 Percentage Change |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Burlington City | 9,740 | 9,920 | 9,808 | 10,010 | 10,210 | 10,414 | 10,590 | 10,735 | 10,858 | 1,050 | 10.7% |
| Burlington Township | 20,190 | 22,594 | 22,826 | 22,936 | 23,045 | 23,156 | 23,252 | 23,331 | 23,398 | 572 | 2.5% |
| Chesterfield Township | 5,955 | 7,699 | 7,572 | 7,715 | 7,857 | 8,002 | 8,127 | 8,230 | 8,317 | 745 | 9.8% |
| Cinnaminson Township | 14,595 | 15,569 | 16,651 | 16,880 | 17,108 | 17,339 | 17,540 | 17,704 | 17,844 | 1,193 | 7.2% |
| Delanco Township | 3,335 | 4,283 | 4,541 | 4,644 | 4,746 | 4,849 | 4,939 | 5,013 | 5,075 | 534 | 11.8% |
| Delran Township | 15,535 | 16,896 | 16,767 | 16,959 | 17,150 | 17,343 | 17,511 | 17,649 | 17,766 | 999 | 6.0% |
| Eastampton Township | 6,205 | 6,069 | 6,011 | 6,450 | 6,887 | 7,331 | 7,715 | 8,031 | 8,298 | 2,287 | 38.0% |
| Edgewater Park Township | 7,865 | 8,881 | 8,788 | 8,995 | 9,200 | 9,409 | 9,590 | 9,738 | 9,864 | 1,076 | 12.2% |
| Evesham Township | 42,275 | 45,538 | 45,577 | 47,546 | 49,519 | 49,847 | 50,175 | 50,504 | 50,831 | 5,254 | 11.5% |
| Fieldsboro Borough | 522 | 540 | 532 | 539 | 547 | 554 | 560 | 565 | 570 | 38 | 7.1% |
| Florence Township | 10,745 | 12,109 | 12,688 | 12,864 | 13,038 | 13,216 | 13,369 | 13,495 | 13,602 | 914 | 7.2% |
| Hainesport Township | 4,125 | 6,110 | 6,053 | 6,582 | 7,108 | 7,643 | 8,105 | 8,486 | 8,808 | 2,755 | 45.5% |
| Lumberton Township | 10,455 | 12,559 | 12,428 | 12,712 | 12,995 | 13,281 | 13,530 | 13,734 | 13,907 | 1,479 | 11.9% |
| Mansfield Township | 5,090 | 8,544 | 8,574 | 8,735 | 8,896 | 9,058 | 9,200 | 9,315 | 9,414 | 840 | 9.8% |
| Maple Shade Township | 19,080 | 19,131 | 18,963 | 19,071 | 19,178 | 19,287 | 19,381 | 19,459 | 19,524 | 561 | 3.0% |
| Medford Lakes Borough | 4,175 | 4,146 | 4,085 | 4,097 | 4,109 | 4,122 | 4,132 | 4,141 | 4,149 | 64 | 1.6% |
| Medford Township | 22,250 | 23,033 | 23,414 | 23,916 | 24,415 | 24,922 | 25,361 | 25,721 | 26,027 | 2,613 | 11.2% |
| Moorestown Township | 19,020 | 20,726 | 20,564 | 20,745 | 20,925 | 21,107 | 21,265 | 21,395 | 21,505 | 941 | 4.6% |
| Mount Holly Township | 10,728 | 9,536 | 9,493 | 9,620 | 9,747 | 9,875 | 9,987 | 10,078 | 10,156 | 663 | 7.0% |
| Mount Laurel Township | 40,225 | 41,864 | 41,842 | 42,342 | 42,839 | 43,346 | 43,784 | 44,146 | 44,449 | 2,607 | 6.2% |
| New Hanover Township | 9,744 | 7,385 | 8,078 | 7,927 | 7,777 | 7,625 | 7,493 | 7,384 | 7,292 | -786 | -9.7% |
| North Hanover Township | 7,347 | 7,678 | 7,609 | 8,049 | 8,486 | 8,930 | 9,315 | 9,630 | 9,898 | 2,289 | 30.1% |
| Palmyra Borough | 7,090 | 7,398 | 7,314 | 7,420 | 7,525 | 7,632 | 7,725 | 7,801 | 7,865 | 551 | 7.5% |
| Pemberton Borough | 1,210 | 1,409 | 1,383 | 1,390 | 1,397 | 1,404 | 1,410 | 1,415 | 1,419 | 36 | 2.6% |
| Pemberton Township | 28,575 | 27,912 | 27,771 | 28,279 | 28,784 | 29,297 | 29,741 | 30,106 | 30,416 | 2,645 | 9.5% |
| Riverside Township | 7,910 | 8,079 | 7,997 | 8,254 | 8,511 | 8,771 | 8,996 | 9,181 | 9,338 | 1,341 | 16.8% |
| Riverton Borough | 2,760 | 2,779 | 2,748 | 2,753 | 2,758 | 2,763 | 2,768 | 2,771 | 2,774 | 26 | 0.9% |
| Shamong Township | 6,465 | 6,490 | 6,419 | 6,494 | 6,568 | 6,644 | 6,709 | 6,763 | 6,809 | 390 | 6.1% |
| Southampton Township | 10,388 | 10,464 | 10,337 | 10,735 | 11,131 | 11,533 | 11,881 | 12,167 | 12,409 | 2,072 | 20.0% |
| Springfield Township | 3,225 | 3,414 | 3,355 | 3,386 | 3,417 | 3,448 | 3,475 | 3,498 | 3,517 | 162 | 4.8% |
| Tabernacle Township | 7,170 | 6,949 | 6,954 | 7,051 | 7,147 | 7,244 | 7,329 | 7,398 | 7,457 | 503 | 7.2% |
| Washington Township | 621 | 687 | 674 | 681 | 689 | 697 | 703 | 708 | 713 | 39 | 5.8% |
| Westampton Township | 7,217 | 8,813 | 8,726 | 8,932 | 9,137 | 9,345 | 9,525 | 9,673 | 9,799 | 1,073 | 12.3% |
| Willingboro Township | 33,010 | 31,629 | 31,270 | 31,831 | 32,391 | 32,959 | 33,451 | 33,855 | 34,198 | 2,928 | 9.4% |
| Woodland Township | 1,290 | 1,788 | 1,793 | 1,833 | 1,873 | 1,913 | 1,948 | 1,977 | 2,001 | 208 | 11.6% |
| Wrightstown Borough | 750 | 802 | 796 | 801 | 806 | 811 | 815 | 819 | 822 | 26 | 3.3% |
| **Camden County** | **508,929** | **513,657** | **510,923** | **514,006** | **517,073** | **520,189** | **522,886** | **525,101** | **526,997** | **16,074** | **3.1%** |
| Audubon Borough | 9,180 | 8,819 | 8,730 | 8,699 | 8,668 | 8,637 | 8,609 | 8,587 | 8,568 | -162 | -1.9% |

| County / Municipality | 2000 Census | 2010 Census | 2015 Census Estimate | 2020 Forecast | 2025 Forecast | 2030 Forecast | 2035 Forecast | 2040 Forecast | 2045 Forecast | 2015-2045 Absolute Change | 2015-2045 Percentage Change |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Audubon Park Borough | 1,100 | 1,023 | 1,011 | 1,008 | 1,006 | 1,003 | 1,001 | 999 | 997 | -14 | -1.4% |
| Barrington Borough | 7,084 | 6,983 | 6,817 | 6,816 | 6,815 | 6,814 | 6,813 | 6,812 | 6,811 | -6 | -0.1% |
| Bellmawr Borough | 11,265 | 11,583 | 11,462 | 11,464 | 11,467 | 11,469 | 11,470 | 11,471 | 11,472 | 10 | 0.1% |
| Berlin Borough | 6,150 | 7,588 | 7,590 | 7,688 | 7,785 | 7,884 | 7,970 | 8,040 | 8,100 | 510 | 6.7% |
| Berlin Township | 5,290 | 5,357 | 5,434 | 5,439 | 5,444 | 5,448 | 5,453 | 5,456 | 5,459 | 25 | 0.5% |
| Brooklawn Borough | 2,355 | 1,955 | 1,933 | 1,939 | 1,945 | 1,951 | 1,956 | 1,960 | 1,964 | 31 | 1.6% |
| Camden City | 79,905 | 77,344 | 76,119 | 76,512 | 76,904 | 77,302 | 77,643 | 77,929 | 78,169 | 2,050 | 2.7% |
| Cherry Hill Township | 69,960 | 71,045 | 71,340 | 71,903 | 72,462 | 73,031 | 73,523 | 73,927 | 74,270 | 2,930 | 4.1% |
| Chesilhurst Borough | 1,520 | 1,634 | 1,634 | 1,632 | 1,631 | 1,629 | 1,628 | 1,627 | 1,626 | -8 | -0.5% |
| Clementon Borough | 4,985 | 5,000 | 4,947 | 4,981 | 5,014 | 5,048 | 5,077 | 5,102 | 5,122 | 175 | 3.5% |
| Collingswood Borough | 14,326 | 13,926 | 14,000 | 13,997 | 13,994 | 13,991 | 13,988 | 13,986 | 13,984 | -16 | -0.1% |
| Gibbsboro Borough | 2,435 | 2,274 | 2,244 | 2,242 | 2,239 | 2,236 | 2,234 | 2,233 | 2,231 | -13 | -0.6% |
| Gloucester City | 11,484 | 11,456 | 11,329 | 11,326 | 11,323 | 11,320 | 11,318 | 11,316 | 11,314 | -15 | -0.1% |
| Gloucester Township | 64,350 | 64,634 | 63,939 | 64,859 | 65,777 | 66,707 | 67,514 | 68,176 | 68,737 | 4,798 | 7.5% |
| Haddon Heights Borough | 7,545 | 7,473 | 7,514 | 7,474 | 7,434 | 7,393 | 7,358 | 7,329 | 7,305 | -209 | -2.8% |
| Haddon Township | 14,651 | 14,707 | 14,543 | 14,580 | 14,617 | 14,655 | 14,688 | 14,714 | 14,737 | 194 | 1.3% |
| Haddonfield Borough | 11,661 | 11,593 | 11,414 | 11,412 | 11,410 | 11,408 | 11,407 | 11,405 | 11,404 | -10 | -0.1% |
| Hi-Nella Borough | 1,035 | 870 | 860 | 860 | 859 | 859 | 859 | 858 | 858 | -2 | -0.2% |
| Laurel Springs Borough | 1,970 | 1,908 | 1,884 | 1,883 | 1,882 | 1,882 | 1,881 | 1,880 | 1,880 | -4 | -0.2% |
| Lawnside Borough | 2,692 | 2,945 | 2,919 | 2,917 | 2,915 | 2,913 | 2,911 | 2,909 | 2,908 | -11 | -0.4% |
| Lindenwold Borough | 17,410 | 17,613 | 17,458 | 17,449 | 17,441 | 17,432 | 17,424 | 17,418 | 17,413 | -45 | -0.3% |
| Magnolia Borough | 4,405 | 4,341 | 4,298 | 4,290 | 4,282 | 4,274 | 4,267 | 4,260 | 4,256 | -42 | -1.0% |
| Merchantville Borough | 3,800 | 3,821 | 3,778 | 3,778 | 3,777 | 3,777 | 3,777 | 3,776 | 3,776 | -2 | -0.1% |
| Mount Ephraim Borough | 4,495 | 4,676 | 4,639 | 4,637 | 4,636 | 4,634 | 4,633 | 4,632 | 4,631 | -8 | -0.2% |
| Oaklyn Borough | 4,188 | 4,038 | 3,992 | 4,001 | 4,010 | 4,019 | 4,026 | 4,033 | 4,038 | 46 | 1.2% |
| Pennsauken Township | 35,737 | 35,885 | 35,628 | 35,924 | 36,219 | 36,518 | 36,778 | 36,990 | 37,171 | 1,543 | 4.3% |
| Pine Hill Borough | 10,880 | 10,233 | 10,510 | 10,501 | 10,492 | 10,482 | 10,474 | 10,468 | 10,462 | -48 | -0.5% |
| Pine Valley Borough | 20 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 0 | 0.0% |
| Runnemede Borough | 8,535 | 8,468 | 8,381 | 8,380 | 8,378 | 8,377 | 8,376 | 8,375 | 8,374 | -7 | -0.1% |
| Somerdale Borough | 5,192 | 5,151 | 5,460 | 5,444 | 5,427 | 5,411 | 5,397 | 5,385 | 5,375 | -85 | -1.6% |
| Stratford Borough | 7,270 | 7,040 | 7,013 | 7,047 | 7,081 | 7,116 | 7,146 | 7,170 | 7,191 | 178 | 2.5% |
| Tavistock Borough | 24 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 | 0.0% |
| Voorhees Township | 28,130 | 29,131 | 29,370 | 29,305 | 29,240 | 29,174 | 29,117 | 29,071 | 29,031 | -339 | -1.2% |
| Waterford Township | 10,494 | 10,649 | 10,753 | 10,749 | 10,744 | 10,740 | 10,736 | 10,733 | 10,747 | -6 | -0.1% |
| Winslow Township | 34,611 | 39,499 | 39,019 | 39,910 | 40,797 | 41,698 | 42,478 | 43,119 | 43,662 | 4,643 | 11.9% |
| Woodlynne Borough | 2,795 | 2,978 | 2,944 | 2,943 | 2,941 | 2,940 | 2,939 | 2,938 | 2,937 | -7 | -0.2% |
| **Gloucester County** | **255,719** | **288,288** | **291,479** | **307,766** | **323,969** | **340,425** | **354,677** | **366,383** | **376,308** | **84,829** | **29.1%** |
| Clayton Borough | 7,135 | 8,179 | 8,493 | 9,013 | 9,531 | 10,057 | 10,512 | 10,886 | 11,203 | 2,710 | 31.9% |

| County / Municipality | 2000 Census | 2010 Census | 2015 Census Estimate | 2020 Forecast | 2025 Forecast | 2030 Forecast | 2035 Forecast | 2040 Forecast | 2045 Forecast | 2015-2045 Absolute Change | 2015-2045 Percentage Change |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Deptford Township | 26,770 | 30,561 | 30,569 | 31,601 | 32,628 | 33,671 | 34,574 | 35,316 | 35,945 | 5,376 | 17.6% |
| East Greenwich Township | 5,430 | 9,555 | 10,380 | 10,798 | 11,214 | 11,637 | 12,003 | 12,303 | 12,558 | 2,178 | 21.0% |
| Elk Township | 3,615 | 4,216 | 4,156 | 4,717 | 5,274 | 5,841 | 6,331 | 6,734 | 7,076 | 2,920 | 70.3% |
| Franklin Township | 15,470 | 16,820 | 16,669 | 17,714 | 18,753 | 19,808 | 20,722 | 21,473 | 22,110 | 5,441 | 32.6% |
| Glassboro Borough | 18,970 | 18,579 | 19,216 | 20,380 | 21,538 | 22,715 | 23,733 | 24,570 | 25,279 | 6,063 | 31.6% |
| Greenwich Township | 4,880 | 4,899 | 4,857 | 4,942 | 5,027 | 5,113 | 5,188 | 5,249 | 5,301 | 444 | 9.1% |
| Harrison Township | 8,785 | 12,417 | 12,984 | 14,456 | 15,920 | 17,407 | 18,695 | 19,753 | 20,650 | 7,666 | 59.0% |
| Logan Township | 6,035 | 6,042 | 5,983 | 6,217 | 6,450 | 6,687 | 6,892 | 7,061 | 7,203 | 1,220 | 20.4% |
| Mantua Township | 14,217 | 15,217 | 15,054 | 16,334 | 17,608 | 18,901 | 20,021 | 20,941 | 21,721 | 6,667 | 44.3% |
| Monroe Township | 28,967 | 36,129 | 36,862 | 39,459 | 42,040 | 44,662 | 46,934 | 48,799 | 50,381 | 13,519 | 36.7% |
| National Park Borough | 3,205 | 3,036 | 2,999 | 3,053 | 3,107 | 3,162 | 3,210 | 3,249 | 3,282 | 283 | 9.4% |
| Newfield Borough | 1,615 | 1,553 | 1,534 | 1,561 | 1,588 | 1,615 | 1,639 | 1,659 | 1,675 | 141 | 9.2% |
| Paulsboro Borough | 6,160 | 6,097 | 5,989 | 6,054 | 6,118 | 6,184 | 6,241 | 6,287 | 6,327 | 338 | 5.6% |
| Pitman Borough | 9,330 | 9,011 | 8,898 | 9,092 | 9,285 | 9,482 | 9,652 | 9,791 | 9,910 | 1,012 | 11.4% |
| South Harrison Township | 2,415 | 3,162 | 3,138 | 3,397 | 3,655 | 3,917 | 4,144 | 4,331 | 4,489 | 1,351 | 43.1% |
| Swedesboro Borough | 2,055 | 2,584 | 2,613 | 2,686 | 2,758 | 2,831 | 2,895 | 2,947 | 2,991 | 378 | 14.5% |
| Washington Township | 48,155 | 48,559 | 47,862 | 49,302 | 50,738 | 52,192 | 53,452 | 54,488 | 55,366 | 7,504 | 15.7% |
| Wenonah Borough | 2,315 | 2,278 | 2,254 | 2,318 | 2,382 | 2,447 | 2,503 | 2,549 | 2,588 | 334 | 14.8% |
| West Deptford Township | 19,370 | 21,677 | 21,420 | 22,506 | 23,586 | 24,683 | 25,634 | 26,414 | 27,076 | 5,656 | 26.4% |
| Westville Borough | 4,500 | 4,288 | 4,224 | 4,338 | 4,451 | 4,566 | 4,665 | 4,747 | 4,816 | 592 | 14.0% |
| Woodbury City | 10,305 | 10,174 | 10,020 | 10,105 | 10,190 | 10,276 | 10,351 | 10,412 | 10,464 | 444 | 4.4% |
| Woodbury Heights Borough | 2,990 | 3,055 | 3,010 | 3,054 | 3,098 | 3,143 | 3,181 | 3,213 | 3,240 | 230 | 7.6% |
| Woolwich Township | 3,030 | 10,200 | 12,295 | 14,669 | 17,030 | 19,428 | 21,505 | 23,211 | 24,657 | 12,362 | 100.5% |
| **Mercer County** | **320,527** | **367,511** | **371,398** | **377,328** | **383,227** | **389,219** | **394,407** | **398,669** | **402,283** | **30,885** | **8.3%** |
| East Windsor Township | 24,915 | 27,190 | 27,603 | 28,068 | 28,531 | 29,002 | 29,409 | 29,743 | 30,027 | 2,424 | 8.8% |
| Ewing Township | 35,710 | 35,790 | 36,486 | 37,076 | 37,660 | 38,254 | 38,769 | 39,192 | 39,550 | 3,064 | 8.4% |
| Hamilton Township | 87,109 | 88,464 | 89,030 | 90,099 | 91,163 | 92,243 | 93,178 | 93,947 | 94,598 | 5,568 | 6.3% |
| Hightstown Borough | 5,215 | 5,494 | 5,517 | 5,562 | 5,607 | 5,653 | 5,693 | 5,725 | 5,753 | 236 | 4.3% |
| Hopewell Borough | 2,035 | 1,922 | 1,929 | 1,932 | 1,936 | 1,939 | 1,942 | 1,944 | 1,946 | 17 | 0.9% |
| Hopewell Township | 16,105 | 18,302 | 18,606 | 19,460 | 20,310 | 21,174 | 21,921 | 22,535 | 23,056 | 4,450 | 23.9% |
| Lawrence Township | 29,160 | 33,472 | 33,242 | 33,511 | 33,779 | 34,052 | 34,287 | 34,481 | 34,645 | 1,403 | 4.2% |
| Pennington Borough | 2,695 | 2,585 | 2,598 | 2,654 | 2,710 | 2,766 | 2,816 | 2,856 | 2,890 | 292 | 11.2% |
| Princeton** | | 28,572 | 29,603 | 30,084 | 30,559 | 31,044 | 31,463 | 31,808 | 32,100 | 2,497 | 8.4% |
| Robbinsville | 10,275 | 13,642 | 14,176 | 14,784 | 15,390 | 16,006 | 16,538 | 16,978 | 17,347 | 3,171 | 22.4% |
| Trenton City | 85,403 | 84,913 | 84,225 | 85,213 | 86,197 | 87,194 | 88,059 | 88,767 | 89,372 | 5,147 | 6.1% |
| West Windsor Township | 21,905 | 27,165 | 28,383 | 28,885 | 29,385 | 29,892 | 30,332 | 30,693 | 30,999 | 2,616 | 9.2% |

*Source: Delaware Valley Regional Planning Commission, June 2016. ** In January 2013, Princeton Township and Princeton Borough, in Mercer County, merged to form one single municipality, known simply as Princeton.*

**Report Title:** **Analytical Data Report # 022: County- and Municipal-Level Population Forecasts, 2015-2045**

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**Publication No.:** ADR 022

**Date Published:** July 2016

**Geographic Area Covered:** DVRPC's 9-county region, including Burlington, Camden, Gloucester, and Mercer counties in New Jersey, and Bucks, Chester, Delaware, Montgomery, and Philadelphia counties in Pennsylvania.

**Key Words:** population, population forecasts, age-cohort survival model, birth rates, survival rates, migration, Connections 2045, long-range plan

**ABSTRACT:** This report presents the Delaware Valley Regional Planning Commission's (DVRPC's) adopted 2045 county- and municipal-level population forecasts and describes the method used to develop them. Population and employment forecasts are a critical component of long-range land use and transportation planning. As a part of DVRPC's long-range planning activities, the Commission is required to maintain forecasts with at least a 20-year horizon, or to the horizon year of the long-range plan. DVRPC last adopted forecasts through the year 2040 in January 2012. Since that time, the Census Bureau has released 2015 population estimates, and both the nation and the region have continued to recover from the significant economic recession that officially began in December 2007 and ended in June 2009.

In order to incorporate the 2015 Census estimates and maintain a 30-year planning horizon, DVRPC has prepared 2045 population forecasts for its member counties and municipalities. These forecasts were formally adopted by the DVRPC Board on July 28, 2016, and serve as the basis for DVRPC planning and modeling activities. Employment forecasts in five-year increments through 2045 are scheduled to be adopted in October 2016.

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DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

ADR 023 I October 2016

# Analytical Data Report

## Regional, County, and Municipal Employment Forecasts, 2015–2045

DELAWARE VALLEY li..data

*The Delaware Valley Regional Planning Commission is dedicated to uniting the region's elected officials, planning professionals, and the public with a common vision of making a great region even greater. Shaping the way we live, work, and play, DVRPC builds consensus on improving transportation, promoting smart growth, protecting the environment, and enhancing the economy. We serve a diverse region of nine counties: Bucks, Chester, Delaware, Montgomery, and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer in New Jersey. DVRPC is the federally designated Metropolitan Planning Organization for the Greater Philadelphia Region — leading the way to a better future.*

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The symbol in our logo is adapted from the official DVRPC seal and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole while the diagonal bar signifies the Delaware River. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey.

DVRPC is funded by a variety of funding sources, including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA); the Pennsylvania and New Jersey departments of transportation; and DVRPC's state and local member governments. The authors, however, are solely responsible for the findings and conclusions herein, which may not represent the official views or policies of the funding agencies.

The Delaware Valley Regional Planning Commission (DVRPC) fully complies with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related nondiscrimination statutes and regulations in all programs and activities. DVRPC's website, www.dvrpc.org, may be translated into multiple languages. Publications and other public documents can be made available in alternative languages and formats, if requested.

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As the region's metropolitan planning organization, DVRPC provides technical assistance and services to its member state and local governments. *Delaware Valley Data* is our periodic series of free data bulletins, analytical data reports, data reference guides, and data snapshots.

# Introduction

As a part of our long-range planning activities, DVRPC is required to maintain forecasts with at least a 20-year horizon, or to the horizon year of the long-range plan. Population forecasts in five-year increments between 2015 and 2045 were adopted by the DVRPC Board on July 28, 2016. This document presents employment forecasts in five-year increments between 2015 and 2045, developed by DVRPC in coordination with its member county planning staffs. These population and employment forecasts will support the region's 2045 long-range plan, scheduled for adoption in July 2017, and serve as the basis for DVRPC's planning and modeling activities.

# 2010 and 2013 Employment Base

DVRPC has traditionally based its long-range employment forecasts on employment data from the American Association of State Highway and Transportation Officials' (AASHTO) Census Transportation Planning Products (CTPP). However, 2010 CTPP data was not released until mid-2013, too late to be used for forecasting purposes prior to the 2013 adoption of the current Connections 2040 Long Range Plan. Additionally, changes in the method for calculating CTPP data has increased the margins of error and made it a less reliable source of employment data for small geographies. Subsequently, DVRPC staff researched and compared several sources of employment data, including government sources (such as ES-202 data, the BLS' Quarterly Census of Employment and Wages, and the Current Employment Statistics survey) and private proprietary sources (including Dun and Bradstreet). The National Establishment Time-Series (NETS), produced by Walls and Associates, was determined to be superior to other sources in terms of coverage, accuracy, and the provision of locational data.

The NETS database is essentially a "cleaned-up" version of the Dun and Bradstreet database. Using each company's unique DUNS number (or numbers, in cases where separate divisions within a company have unique DUNS numbers), Walls and Associates creates a time series for each business and then screens the data to eliminate duplicates and identify anomalies. If a file contains suspicious information, the data is cross-checked with previous annual records and adjusted or eliminated as appropriate, based on information collected from other sources (including government and non-profits). One advantage of the establishment-based NETS Database is that all employment, sales, and other activity is reported at the actual facility—not the headquarters.

Unlike government sources of employment data, the NETS database includes sole proprietors, part-time jobs, and farm operations, and has been found to be more accurate in reporting data for small privately-owned firms and public sector employers such as post offices and public schools. Employment from the NETS database is therefore generally higher than many of these other sources. As a base for the 2040 forecasts, DVRPC and county planning staffs reviewed 2000 and 2010 employment data from a NETS database that was acquired in 2013.

In March 2016, DVRPC acquired an updated NETS dataset that included both revised 2010 and 2013 employment data. All corrections made to the previous NETS database by DVRPC and county planning staffs, either during the previous forecasting round or as a result of ongoing DVRPC land

use and transportation studies, were incorporated in to the new database. DVRPC staff reviewed the revised 2010 data and the 2013 data to eliminate any remaining duplicates and correct obvious errors, using resources that included CoStar, company web sites, and on-line business directories. The data was then reviewed by the region's county planning staffs, and further corrections were made based on local knowledge (including errors in location and missing large employers).

The NETS database used by DVRPC includes the street address and the most current latitude-longitude for each establishment as well as the origin and destination latitude-longitudes for all significant moves, at the four-decimal-place-level. In order to assign each employer to a specific municipality, every employer in the NETS database was geocoded. Based on an internal review by DVRPC staff, several spatially inaccurate results were identified, and numerous adjustments were made to improve the accuracy of the dataset before the results were sent to the counties for review. While the counties were reviewing the employment data, DVRPC staff continued to refine the NETS GIS dataset, by comparing TomTom results with other geocoding services, and by manually checking the location of hundreds of significant employers.

## 2015 Employment Estimates

Estimates of the 2015 employment were then calculated, based on both the changes in NETS employment by sector in each county between 2010 and 2013, and the employment change in each county between 2010 and 2015 released by the BLS in September 2016. The estimated 2015 county employment was allocated to municipalities based on the proportion of the county's employment that was present in each municipality in 2013.

## 2045 Employment Forecasts

Employment forecasts in five-year increments through 2045 were developed using a similar method as was used in previous forecasting rounds. Various studies and past experience have shown that there is a direct relationship between the number of workers living in a region (which is a function of population) and the number of jobs. To forecast future employment, DVRPC determined an expected future ratio of employment to population for each county, based on the known ratio in 2015. These ratios were applied to the Commission's adopted 2045 population forecasts, to create employment forecasts for each county, in five-year increments through 2045.

County-level employment forecasts between 2020 and 2040 were disaggregated to the municipal level based on the proportion of each county's employment that was expected to be in each municipality by DVRPC's adopted 2040 forecasts, as adjusted by the differences between the Commission's adopted 2015 forecast and the 2015 NETS employment estimates. The proportion of each county's employment expected to be in each municipality in 2045 was forecast based on the linear trend in the proportion from 2015 to 2040. The draft employment forecasts in five-year increments were then reviewed by county planning staffs, and final revisions were made based on their recommendations.

Military employment, which DVRPC staff believes was not accurately reflected in the NETS database, was accounted for by adding the military employment in each municipality reported in the 2006–2010 five-

year CTPP estimates to the 2015 employment estimate and the future employment forecasts. Given the difficulty of forecasting future military employment, the number of military employees was kept stable in future years.

Table 1 summarizes regional and county employment forecasts in five-year increments through 2045, and municipal-level forecasts are provided in Appendix A. Table 2 identifies the 20 municipalities expected to gain the most employees between 2015 and 2045 in absolute numbers, while Table 3 identifies municipalities with the highest forecast percentage change in employment. Figure 1 illustrates the DVRPC region's 2045 municipal employment forecasts, and Figures 2 and 3 illustrate absolute and percent change in employment by municipality between 2015 and 2045.

Figure 4 illustrates the absolute increase in employment per square mile in each of the region's 352 municipalities and 18 City of Philadelphia planning districts. This map highlights not only where employment is increasing, but also the impact of relatively small increases on employment density in many of the region's centers. Employment density is forecast to increase not only in the City of Philadelphia, but also in many of the region's smaller boroughs, including Conshohocken and West Conshohocken boroughs in Montgomery County; Dublin, Penndel, and Ivyland boroughs in Bucks County; and Kennett Square, Phoenixville, and Downingtown boroughs in Chester County.

Highlights include the following:

- The DVRPC region is forecast to gain almost 373,000 jobs between 2015 and 2045 (an increase of almost 12 percent), with much of this growth concentrated in the suburbs.
- The region's five southeastern Pennsylvania counties are forecast to experience a 12.6 percent increase in employment, while employment in the four New Jersey counties is expected to increase by 9.8 percent.
- The largest percent increases are forecast in Gloucester County in New Jersey and Chester County in Pennsylvania, where employment is forecast to increase by 29 and 28 percent, respectively.
- The largest absolute increase in employment is forecast for Chester County, expected to gain 87,800 employees. Other counties forecast to see a significant number of additional employees include Montgomery County (expected to gain almost 82,000 employees) and Philadelphia (with a forecasted increase of almost 64,000 jobs).
- Both Philadelphia and Camden City, New Jersey, are forecast to gain employment, with forecasted percentage increases of 8.3 percent and 10.1 percent, respectively. The region's other two core cities are expected to see their employment stabilize and increase slightly, with a 2.8 percent increase in employment in Trenton, New Jersey, and a 2.6 percent increase in Chester City, Pennsylvania.

# Summary

Population and employment forecasts are a critical component of long-range land use and transportation planning. This report presents the method used to develop 2045 and interim year employment forecasts, adopted by the DVRPC Board on October 27, 2016.

Data from the National Establishments Time Series (NETS) database served as the base for the 2045 employment forecasts. In March 2016, DVRPC acquired an updated NETS database that included 2013 employment data and revised 2010 data. The 2010 and 2013 employment data was reviewed and revised by DVRPC staff, utilizing resources that included CoStar, on-line business directories, company websites and, when appropriate, direct telephone calls. The revised data was then sent to the county planning staffs for additional revision. Additionally, during the summer of 2016, DVRPC acquired improved geocoding resources that allowed staff to further correct the spatial locations of employers.

Based on changes in the NETS employment between 2010 and 2013, and changes in employment in each county between 2010 and 2015 as reported by the U.S. Bureau of Labor Statistics (BLS), 2015 employment was estimated by county and municipality. Given that studies have shown that there is a direct relationship between the number of workers living in an area and the number of jobs, employment forecasts were calculated in five-year increments through 2045, by estimating a future ratio of population to employment in each county and applying it to DVRPC's adopted population forecasts.

Employment in the nine-county region is forecast to increase by almost 12 percent between 2015 and 2045, with the greatest absolute increases in employment expected in Chester, Montgomery, and Philadelphia counties and the greatest percentage increases forecast in Gloucester County, New Jersey, and Chester County, Pennsylvania. Together with the 2045 population forecasts adopted by the DVRPC Board in July 2016, these employment forecasts will serve as the basis for DVRPC's planning and modeling activities, and support the region's 2045 long-range plan, scheduled for adoption in July 2017.

## Table 1: 2045 Employment Forecasts by County

| County | 2015 Employment | 2020 Employment Forecast | 2025 Employment Forecast | 2030 Employment Forecast | 2035 Employment Forecast | 2040 Employment Forecast | 2045 Employment Forecast | Forecasted Absolute Change, 2015-2045 | Forecasted Percent Change, 2015-2045 |
|---|---|---|---|---|---|---|---|---|---|
| Bucks County | 322,731 | 329,645 | 337,203 | 344,859 | 351,310 | 356,671 | 361,124 | 38,393 | 11.9% |
| Chester County | 309,605 | 326,320 | 343,050 | 359,774 | 374,967 | 387,391 | 397,405 | 87,800 | 28.4% |
| Delaware County | 268,054 | 270,167 | 272,269 | 274,401 | 276,248 | 277,763 | 279,050 | 10,996 | 4.1% |
| Montgomery County | 582,443 | 598,434 | 614,469 | 629,563 | 642,996 | 654,966 | 664,385 | 81,942 | 14.1% |
| Philadelphia County | 772,847 | 786,308 | 797,156 | 810,574 | 822,002 | 829,937 | 836,825 | 63,978 | 8.3% |
| **Five Pennsylvania Counties** | **2,255,680** | **2,310,874** | **2,364,147** | **2,419,171** | **2,467,523** | **2,506,728** | **2,538,789** | **283,109** | **12.6%** |
| Burlington County | 241,298 | 246,351 | 251,368 | 255,562 | 258,363 | 261,195 | 263,622 | 22,324 | 9.3% |
| Camden County | 263,582 | 265,169 | 266,753 | 268,359 | 269,750 | 270,892 | 271,869 | 8,287 | 3.1% |
| Gloucester County | 121,382 | 128,161 | 134,902 | 141,752 | 147,682 | 152,554 | 156,686 | 35,304 | 29.1% |
| Mercer County | 286,295 | 290,864 | 295,408 | 300,025 | 304,021 | 307,302 | 310,084 | 23,789 | 8.3% |
| **Four New Jersey Counties** | **912,557** | **930,545** | **948,431** | **965,698** | **979,816** | **991,943** | **1,002,261** | **89,704** | **9.8%** |
| **Nine DVRPC Counties** | **3,168,237** | **3,241,419** | **3,312,578** | **3,384,869** | **3,447,339** | **3,498,671** | **3,541,050** | **372,813** | **11.8%** |

***Source:*** *Delaware Valley Regional Planning Commission, October 2016.*



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## Table 2: Municipalities with the Greatest Forecasted Absolute Change in Employment, 2015–2045

| Rank | Municipality/County | Absolute Change | Rank | Municipality/County | Absolute Change |
|---|---|---|---|---|---|
| 1 | Upper Merion Township/ Montgomery | 9,470 | 11 | Plymouth Township/ Montgomery | 4,500 |
| 2 | Horsham Township/ Montgomery | 8,660 | 12 | Woolwich Township/ Gloucester | 4,338 |
| 3 | East Whiteland Township/ Chester | 7,224 | 13 | Camden City/ Camden | 4,206 |
| 4 | Uwchlan Township/ Chester | 6,737 | 14 | West Deptford Township/ Gloucester | 3,844 |
| 5 | Tredyffrin Township/ Chester | 6,625 | 15 | West Windsor Township/ Mercer | 3,713 |
| 6 | West Whiteland Township/ Chester | 6,259 | 16 | Hopewell Township/ Mercer | 3,712 |
| 7 | West Goshen Township/ Chester | 5,459 | 17 | Phoenixville Borough/ Chester | 3,621 |
| 8 | Conshohocken Borough/ Montgomery | 5,000 | 18 | Lower Merion Township/ Montgomery | 3,500 |
| 9 | Monroe Township/ Camden | 4,999 | 19 | Mt. Laurel Township/ Burlington | 3,444 |
| 10 | Upper Providence Township/ Montgomery | 4,520 | 20 | Upper Dublin Township/Bucks | 3,400 |

*Source: Delaware Valley Regional Planning Commission, October 2016. Does not include Philadelphia, which is both a county and a municipality.*

## Table 3: Municipalities with the Greatest Forecasted Percentage Change in Employment, 2015–2045

| Rank | Municipality/County | Absolute Change | Rank | Municipality/County | Absolute Change |
|---|---|---|---|---|---|
| 1 | Woolwich Township/ Gloucester | 164% | 11 | Parkesburg Borough/ Chester | 59% |
| 2 | Modena Borough/ Chester | 125% | 12 | West Sadsbury Township/ Chester | 58% |
| 3 | Elk Township/ Gloucester | 92% | 13 | Mantua Township/ Gloucester | 57% |
| 4 | Dublin Borough/ Bucks | 84% | 14 | Honey Brook Borough/ Chester | 55% |
| 5 | Lower Oxford Township/ Chester | 82% | 15 | Conshohocken Borough/ Montgomery | 53% |
| 6 | West Brandywine Township/ Chester | 77% | 16 | Wallace Township/ Chester | 53% |
| 7 | Elverson Borough/ Chester | 72% | 17 | Phoenixville Borough/ Chester | 53% |
| 8 | East Vincent Township/ Chester | 68% | 18 | West Nottingham Township/ Chester | 53% |
| 9 | Harrison Township/ Gloucester | 64% | 19 | Sellersville Borough/ Bucks | 52% |
| 10 | South Coventry Township/ Chester | 61% | 20 | Upper Oxford Township/ Chester | 52% |

*Source: Delaware Valley Regional Planning Commission, October, 2016. Does not include Philadelphia, which is both a county and a municipality.*

Figure 1:

# 2045 Municipal Employment Forecast

dvrpc

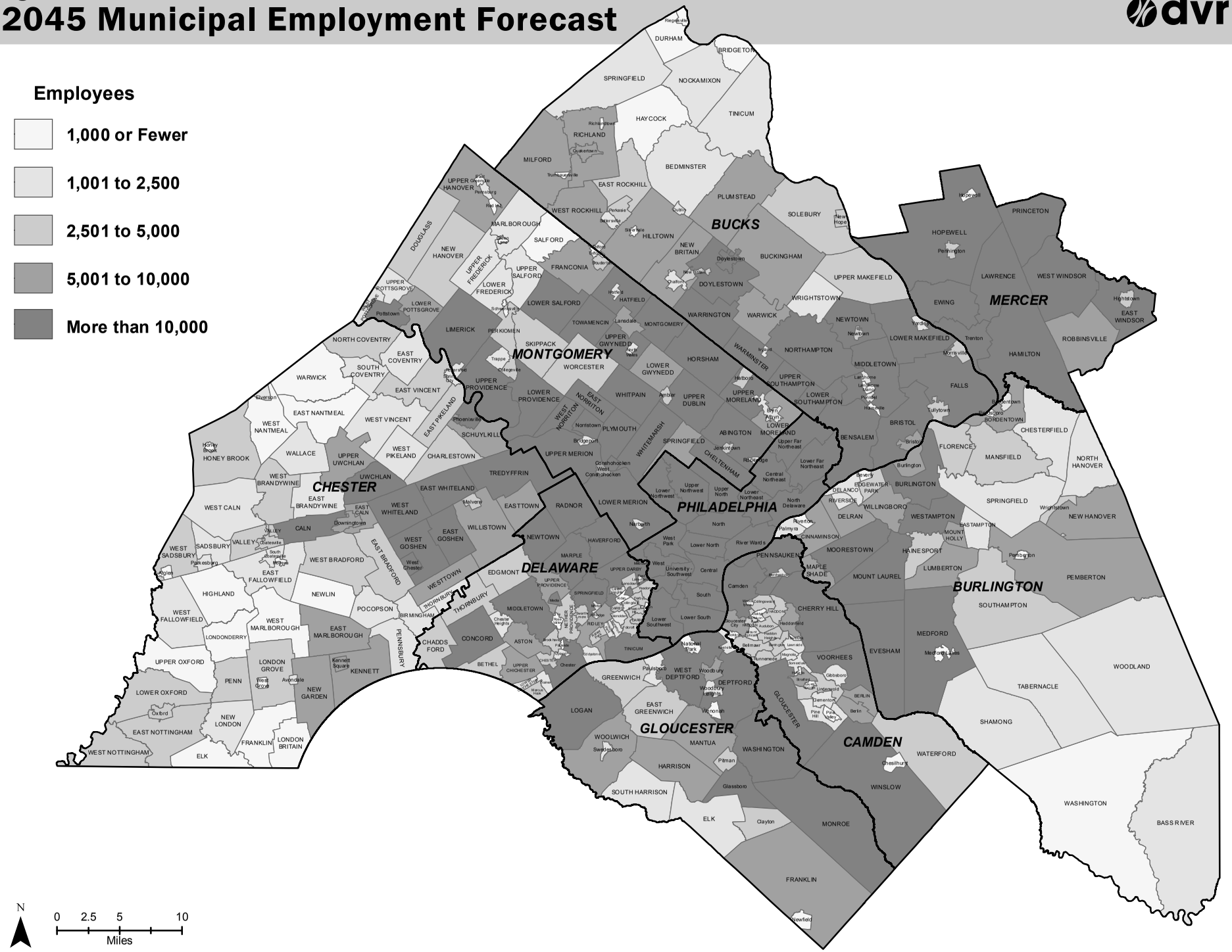

Figure 2:

# 2045 Municipal Employment Forecast

## Absolute Change: 2015—2045

dvrpc

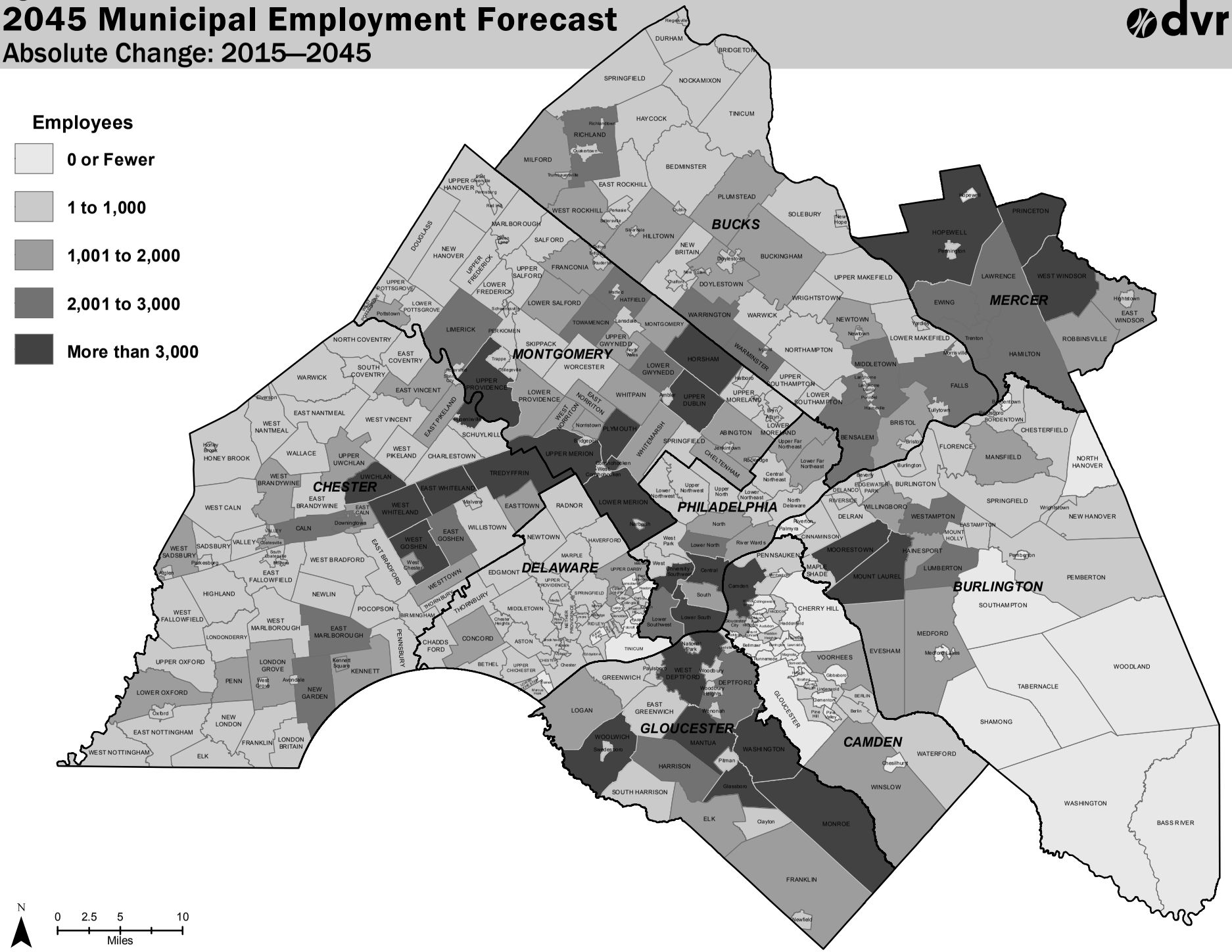




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Figure 3:

# 2045 Municipal Employment Forecast

## Percentage Change: 2015—2045

dvrpc

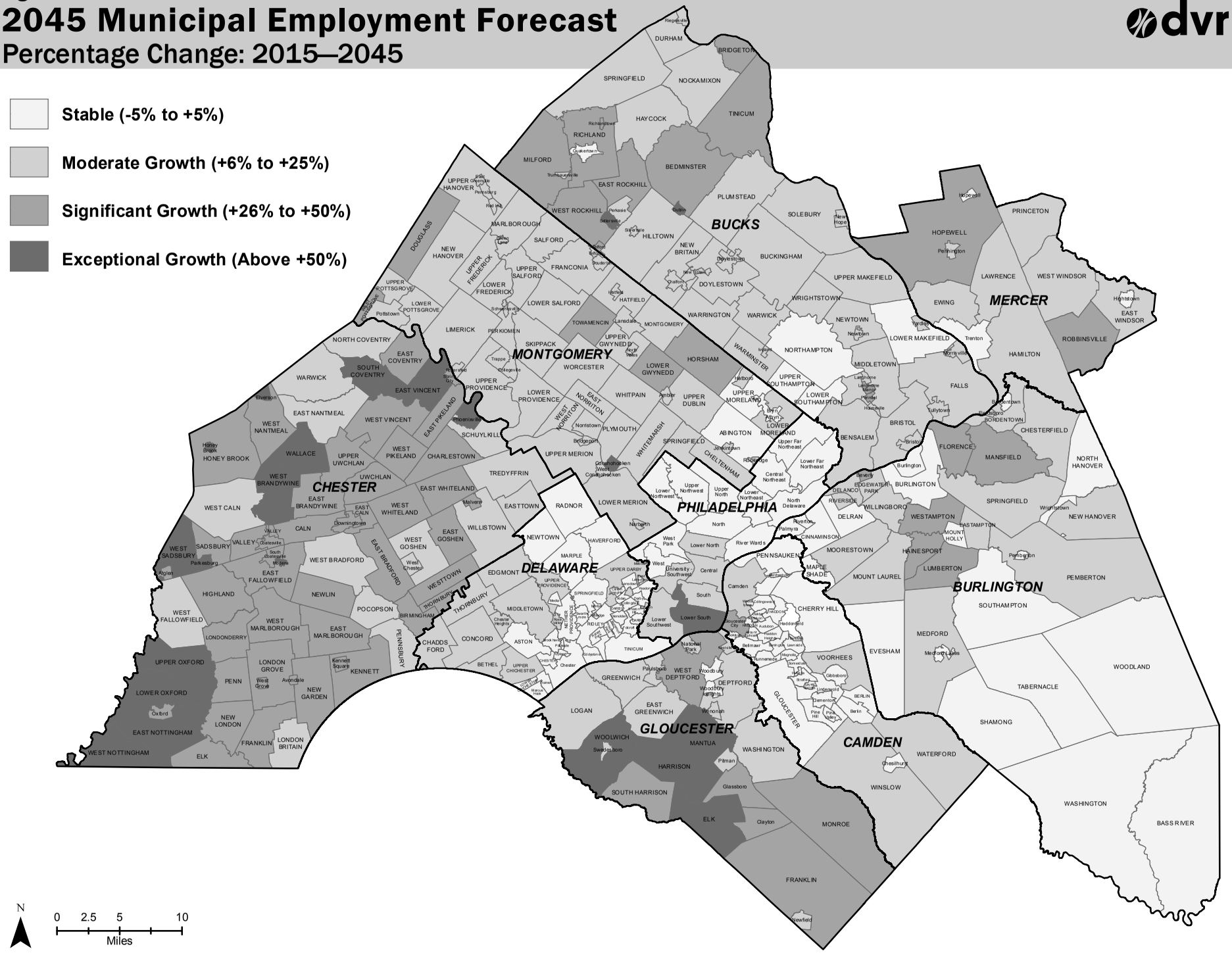




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Figure 4:

# 2045 Municipal Employment Forecast

## Absolute Change per Square Mile by Municipality: 2015—2045

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## Appendix A: Forecasted Employment by County and Municipality, 2015-2045

| County / Municipality | 2015 Employment Estimate | 2020 Employment Forecast | 2025 Employment Forecast | 2030 Employment Forecast | 2035 Employment Forecast | 2040 Employment Forecast | 2045 Employment Forecast | Absolute Change, 2015–2045 | Percentage Change 2015–2045 |
|---|---|---|---|---|---|---|---|---|---|
| **Bucks County** | **322,731** | **329,645** | **337,203** | **344,859** | **351,310** | **356,671** | **361,124** | **38,393** | **11.9%** |
| Bedminster Township | 1,864 | 2,018 | 2,116 | 2,215 | 2,260 | 2,311 | 2,424 | 560 | 30.0% |
| Bensalem Township | 43,829 | 44,472 | 44,697 | 44,952 | 45,567 | 46,304 | 46,023 | 2,194 | 5.0% |
| Bridgeton Township | 334 | 351 | 368 | 395 | 402 | 419 | 434 | 100 | 29.9% |
| Bristol Borough | 5,111 | 5,166 | 5,239 | 5,315 | 5,366 | 5,396 | 5,415 | 304 | 5.9% |
| Bristol Township | 23,168 | 23,575 | 23,799 | 24,037 | 24,370 | 24,768 | 24,740 | 1,572 | 6.8% |
| Buckingham Township | 7,609 | 7,755 | 8,012 | 8,271 | 8,409 | 8,476 | 8,667 | 1,058 | 13.9% |
| Chalfont Borough | 1,300 | 1,332 | 1,393 | 1,454 | 1,485 | 1,499 | 1,550 | 250 | 19.2% |
| Doylestown Borough | 10,480 | 10,628 | 10,861 | 11,097 | 11,236 | 11,309 | 11,438 | 958 | 9.1% |
| Doylestown Township | 11,453 | 11,838 | 12,071 | 12,308 | 12,652 | 13,030 | 13,163 | 1,710 | 14.9% |
| Dublin Borough | 820 | 879 | 926 | 962 | 1,225 | 1,530 | 1,520 | 700 | 85.4% |
| Durham Township | 254 | 256 | 257 | 259 | 267 | 276 | 273 | 19 | 7.5% |
| East Rockhill Township | 2,140 | 2,259 | 2,335 | 2,411 | 2,520 | 2,636 | 2,700 | 560 | 26.2% |
| Falls Township | 16,290 | 16,575 | 17,065 | 17,558 | 17,827 | 17,961 | 18,302 | 2,012 | 12.4% |
| Haycock Township | 486 | 507 | 519 | 532 | 556 | 582 | 590 | 104 | 21.4% |
| Hilltown Township | 6,113 | 6,252 | 6,509 | 6,766 | 6,897 | 6,959 | 7,167 | 1,054 | 17.2% |
| Hulmeville Borough | 254 | 262 | 268 | 274 | 282 | 290 | 294 | 40 | 15.7% |
| Ivyland Borough | 1,671 | 1,749 | 1,789 | 1,830 | 1,869 | 1,913 | 1,948 | 277 | 16.6% |
| Langhorne Borough | 1,150 | 1,176 | 1,225 | 1,274 | 1,299 | 1,311 | 1,351 | 201 | 17.5% |
| Langhorne Manor Borough | 313 | 329 | 364 | 398 | 413 | 420 | 454 | 141 | 45.0% |
| Lower Makefield Township | 11,612 | 11,717 | 11,768 | 11,827 | 12,007 | 12,219 | 12,111 | 499 | 4.3% |
| Lower Southampton Township | 13,210 | 13,289 | 13,334 | 13,387 | 13,457 | 13,512 | 13,401 | 191 | 1.4% |
| Middletown Township | 24,781 | 25,116 | 25,630 | 26,154 | 26,465 | 26,634 | 26,900 | 2,119 | 8.6% |
| Milford Township | 3,753 | 3,912 | 4,241 | 4,567 | 4,720 | 4,784 | 5,100 | 1,347 | 35.9% |
| Morrisville Borough | 2,903 | 2,951 | 3,033 | 3,115 | 3,161 | 3,184 | 3,238 | 335 | 11.5% |
| New Britain Borough | 3,004 | 3,046 | 3,088 | 3,132 | 3,176 | 3,214 | 3,204 | 200 | 6.7% |
| New Britain Township | 5,330 | 5,453 | 5,528 | 5,605 | 5,791 | 5,992 | 5,999 | 669 | 12.6% |
| New Hope Borough | 2,854 | 2,893 | 2,953 | 3,015 | 3,051 | 3,071 | 3,102 | 248 | 8.7% |
| Newtown Borough | 2,375 | 2,404 | 2,426 | 2,447 | 2,522 | 2,604 | 2,588 | 213 | 9.0% |
| Newtown Township | 13,519 | 13,712 | 14,016 | 14,325 | 14,505 | 14,601 | 14,771 | 1,252 | 9.3% |
| Nockamixon Township | 1,519 | 1,580 | 1,617 | 1,655 | 1,733 | 1,816 | 1,838 | 319 | 21.0% |

| County / Municipality | 2015 Employment Estimate | 2020 Employment Forecast | 2025 Employment Forecast | 2030 Employment Forecast | 2035 Employment Forecast | 2040 Employment Forecast | 2045 Employment Forecast | Absolute Change, 2015–2045 | Percentage Change 2015–2045 |
|---|---|---|---|---|---|---|---|---|---|
| Northampton Township | 14,669 | 14,801 | 14,953 | 15,113 | 15,233 | 15,310 | 15,299 | 630 | 4.3% |
| Penndel Borough | 1,403 | 1,453 | 1,555 | 1,656 | 1,704 | 1,725 | 1,819 | 416 | 29.7% |
| Perkasie Borough | 2,991 | 3,058 | 3,182 | 3,305 | 3,369 | 3,399 | 3,499 | 508 | 17.0% |
| Plumstead Township | 6,583 | 6,785 | 7,183 | 7,578 | 7,771 | 7,856 | 8,214 | 1,631 | 24.8% |
| Quakertown Borough | 5,546 | 5,598 | 5,660 | 5,724 | 5,772 | 5,801 | 5,802 | 256 | 4.6% |
| Richland Township | 6,678 | 7,236 | 7,597 | 7,956 | 8,221 | 8,510 | 8,904 | 2,226 | 33.3% |
| Richlandtown Borough | 288 | 300 | 326 | 351 | 363 | 368 | 393 | 105 | 36.5% |
| Riegelsville Borough | 142 | 145 | 148 | 149 | 154 | 159 | 159 | 17 | 12.0% |
| Sellersville Borough | 1,150 | 1,230 | 1,377 | 1,520 | 1,597 | 1,632 | 1,750 | 600 | 52.2% |
| Silverdale Borough | 299 | 301 | 303 | 305 | 315 | 327 | 323 | 24 | 8.0% |
| Solebury Township | 3,399 | 3,472 | 3,605 | 3,739 | 3,808 | 3,841 | 3,946 | 547 | 16.1% |
| Springfield Township | 1,474 | 1,524 | 1,555 | 1,586 | 1,638 | 1,693 | 1,710 | 236 | 16.0% |
| Telford Borough (part) | 778 | 815 | 894 | 971 | 1,007 | 1,022 | 1,099 | 321 | 41.3% |
| Tinicum Township | 1,532 | 1,584 | 1,690 | 1,794 | 1,844 | 1,866 | 1,963 | 431 | 28.1% |
| Trumbauersville Borough | 307 | 309 | 314 | 317 | 333 | 348 | 346 | 39 | 12.7% |
| Tullytown Borough | 3,097 | 3,158 | 3,267 | 3,377 | 3,435 | 3,463 | 3,546 | 449 | 14.5% |
| Upper Makefield Township | 2,741 | 2,790 | 2,876 | 2,962 | 3,008 | 3,031 | 3,092 | 351 | 12.8% |
| Upper Southampton Township | 9,981 | 10,006 | 10,026 | 10,053 | 10,322 | 10,618 | 10,459 | 478 | 4.8% |
| Warminster Township | 16,109 | 16,891 | 17,210 | 17,536 | 17,956 | 18,424 | 18,702 | 2,593 | 16.1% |
| Warrington Township | 9,581 | 9,863 | 10,414 | 10,963 | 11,232 | 11,352 | 11,842 | 2,261 | 23.6% |
| Warwick Township | 5,967 | 6,074 | 6,258 | 6,444 | 6,544 | 6,594 | 6,724 | 757 | 12.7% |
| West Rockhill Township | 5,227 | 5,442 | 5,885 | 6,323 | 6,530 | 6,617 | 7,040 | 1,813 | 34.7% |
| Wrightstown Township | 1,294 | 1,324 | 1,378 | 1,433 | 1,461 | 1,474 | 1,519 | 225 | 17.4% |
| Yardley Borough | 1,996 | 2,034 | 2,100 | 2,167 | 2,203 | 2,220 | 2,269 | 273 | 13.7% |
| **Chester County** | **309,605** | **326,320** | **343,050** | **359,774** | **374,967** | **387,391** | **397,405** | **87,800** | **28.4%** |
| Atglen Borough | 498 | 521 | 549 | 577 | 599 | 617 | 643 | 145 | 29.1% |
| Avondale Borough | 780 | 840 | 906 | 971 | 1,026 | 1,071 | 1,122 | 342 | 43.8% |
| Birmingham Township | 1,573 | 1,664 | 1,754 | 1,846 | 1,927 | 1,994 | 2,046 | 473 | 30.1% |
| Caln Township | 8,191 | 8,719 | 9,294 | 9,872 | 10,358 | 10,761 | 11,181 | 2,990 | 36.5% |
| Charlestown Township | 3,134 | 3,309 | 3,483 | 3,661 | 3,818 | 3,947 | 4,050 | 916 | 29.2% |
| Coatesville City | 2,579 | 2,759 | 2,958 | 3,160 | 3,327 | 3,465 | 3,619 | 1,040 | 40.3% |
| Downingtown Borough | 6,455 | 6,798 | 7,192 | 7,588 | 7,910 | 8,175 | 8,499 | 2,044 | 31.7% |

| County / Municipality | 2015 Employment Estimate | 2020 Employment Forecast | 2025 Employment Forecast | 2030 Employment Forecast | 2035 Employment Forecast | 2040 Employment Forecast | 2045 Employment Forecast | Absolute Change, 2015–2045 | Percentage Change 2015–2045 |
|---|---|---|---|---|---|---|---|---|---|
| East Bradford Township | 1,844 | 1,966 | 2,097 | 2,229 | 2,341 | 2,433 | 2,527 | 683 | 37.0% |
| East Brandywine Township | 1,649 | 1,777 | 1,921 | 2,068 | 2,187 | 2,285 | 2,404 | 755 | 45.8% |
| East Caln Township | 4,254 | 4,474 | 4,685 | 4,900 | 5,096 | 5,258 | 5,367 | 1,113 | 26.2% |
| East Coventry Township | 1,515 | 1,618 | 1,730 | 1,842 | 1,937 | 2,015 | 2,096 | 581 | 38.3% |
| East Fallowfield Township | 911 | 969 | 1,029 | 1,089 | 1,140 | 1,186 | 1,221 | 310 | 34.0% |
| East Goshen Township | 8,156 | 8,597 | 9,036 | 9,482 | 9,877 | 10,205 | 10,461 | 2,305 | 28.3% |
| East Marlborough Township | 5,264 | 5,608 | 6,002 | 6,399 | 6,721 | 6,987 | 7,308 | 2,044 | 38.8% |
| East Nantmeal Township | 821 | 862 | 896 | 931 | 966 | 996 | 999 | 178 | 21.7% |
| East Nottingham Township | 1,713 | 1,854 | 2,020 | 2,187 | 2,320 | 2,430 | 2,571 | 858 | 50.1% |
| East Pikeland Township | 2,836 | 3,040 | 3,268 | 3,499 | 3,687 | 3,845 | 4,025 | 1,189 | 41.9% |
| Easttown Township | 7,006 | 7,347 | 7,667 | 7,992 | 8,291 | 8,545 | 8,694 | 1,688 | 24.1% |
| East Vincent Township | 1,867 | 2,063 | 2,298 | 2,306 | 2,716 | 2,858 | 3,129 | 1,262 | 67.6% |
| East Whiteland Township | 23,399 | 24,735 | 26,117 | 27,514 | 28,722 | 29,730 | 30,623 | 7,224 | 30.9% |
| Elk Township | 266 | 287 | 305 | 324 | 342 | 357 | 363 | 97 | 36.5% |
| Elverson Borough | 596 | 663 | 746 | 829 | 894 | 947 | 1,026 | 430 | 72.1% |
| Franklin Township | 608 | 659 | 715 | 773 | 820 | 859 | 905 | 297 | 48.8% |
| Highland Township | 535 | 567 | 594 | 623 | 649 | 674 | 681 | 146 | 27.3% |
| Honey Brook Borough | 389 | 425 | 466 | 507 | 541 | 569 | 602 | 213 | 54.8% |
| Honey Brook Township | 2,990 | 3,164 | 3,342 | 3,522 | 3,678 | 3,809 | 3,920 | 930 | 31.1% |
| Kennett Township | 5,782 | 6,112 | 6,450 | 6,793 | 7,092 | 7,341 | 7,555 | 1,773 | 30.7% |
| Kennett Square Borough | 4,177 | 4,405 | 4,632 | 4,862 | 5,066 | 5,239 | 5,370 | 1,193 | 28.6% |
| London Britain Township | 630 | 665 | 691 | 719 | 747 | 772 | 773 | 143 | 22.7% |
| Londonderry Township | 488 | 530 | 575 | 621 | 660 | 694 | 729 | 241 | 49.4% |
| London Grove Township | 2,535 | 2,738 | 2,972 | 3,208 | 3,400 | 3,559 | 3,755 | 1,220 | 48.1% |
| Lower Oxford Township | 1,874 | 2,096 | 2,397 | 2,698 | 2,918 | 3,098 | 3,418 | 1,544 | 82.4% |
| Malvern Borough | 2,359 | 2,500 | 2,646 | 2,794 | 2,921 | 3,027 | 3,121 | 762 | 32.3% |
| Modena Borough | 124 | 147 | 178 | 207 | 230 | 248 | 279 | 155 | 125.0% |
| New Garden Township | 6,534 | 6,884 | 7,277 | 7,673 | 7,999 | 8,268 | 8,578 | 2,044 | 31.3% |
| Newlin Township | 271 | 293 | 315 | 336 | 357 | 375 | 387 | 116 | 42.8% |
| New London Township | 1,041 | 1,098 | 1,155 | 1,213 | 1,263 | 1,306 | 1,385 | 344 | 33.0% |
| North Coventry Township | 3,730 | 3,896 | 4,037 | 4,182 | 4,323 | 4,444 | 4,483 | 753 | 20.2% |
| Oxford Borough | 2,156 | 2,319 | 2,504 | 2,691 | 2,843 | 2,968 | 3,118 | 962 | 44.6% |
| Parkesburg Borough | 671 | 734 | 811 | 888 | 948 | 997 | 1,065 | 394 | 58.7% |

| County / Municipality | 2015 Employment Estimate | 2020 Employment Forecast | 2025 Employment Forecast | 2030 Employment Forecast | 2035 Employment Forecast | 2040 Employment Forecast | 2045 Employment Forecast | Absolute Change, 2015–2045 | Percentage Change 2015–2045 |
|---|---|---|---|---|---|---|---|---|---|
| Penn Township | 2,916 | 3,084 | 3,286 | 3,490 | 3,649 | 3,781 | 3,961 | 1,045 | 35.8% |
| Pennsbury Township | 1,395 | 1,460 | 1,514 | 1,568 | 1,624 | 1,671 | 1,680 | 285 | 20.4% |
| Phoenixville Borough | 6,835 | 7,419 | 8,119 | 8,823 | 9,378 | 9,835 | 10,456 | 3,621 | 53.0% |
| Pocopson Township | 1,030 | 1,081 | 1,123 | 1,165 | 1,208 | 1,244 | 1,252 | 222 | 21.6% |
| Sadsbury Township | 1,571 | 1,692 | 1,830 | 1,969 | 2,083 | 2,176 | 2,288 | 717 | 45.6% |
| Schuylkill Township | 4,530 | 4,706 | 4,840 | 4,977 | 5,124 | 5,197 | 5,247 | 717 | 15.8% |
| South Coatesville Borough | 1,390 | 1,502 | 1,629 | 1,759 | 1,862 | 1,949 | 2,055 | 665 | 47.8% |
| South Coventry Township | 1,146 | 1,257 | 1,392 | 1,528 | 1,633 | 1,721 | 1,844 | 698 | 60.9% |
| Spring City Borough | 959 | 1,027 | 1,100 | 1,173 | 1,235 | 1,287 | 1,339 | 380 | 39.6% |
| Thornbury Township | 1,302 | 1,384 | 1,470 | 1,557 | 1,631 | 1,693 | 1,749 | 447 | 34.3% |
| Tredyffrin Township | 55,495 | 57,323 | 58,540 | 59,802 | 61,270 | 62,518 | 62,120 | 6,625 | 11.9% |
| Upper Oxford Township | 361 | 393 | 428 | 465 | 494 | 519 | 547 | 186 | 51.5% |
| Upper Uwchlan Township | 4,216 | 4,447 | 4,677 | 4,910 | 5,116 | 5,288 | 5,421 | 1,205 | 28.6% |
| Uwchlan Township | 14,889 | 16,014 | 17,312 | 18,619 | 19,674 | 20,545 | 21,626 | 6,737 | 45.2% |
| Valley Township | 2,085 | 2,249 | 2,440 | 2,633 | 2,787 | 2,915 | 3,074 | 989 | 47.4% |
| Wallace Township | 903 | 981 | 1,074 | 1,168 | 1,242 | 1,304 | 1,383 | 480 | 53.2% |
| Warwick Township | 614 | 648 | 674 | 701 | 729 | 753 | 754 | 140 | 22.8% |
| West Bradford Township | 2,095 | 2,190 | 2,269 | 2,349 | 2,429 | 2,497 | 2,514 | 419 | 20.0% |
| West Brandywine Township | 2,088 | 2,331 | 2,643 | 2,955 | 3,192 | 3,386 | 3,694 | 1,606 | 76.9% |
| West Caln Township | 1,450 | 1,523 | 1,590 | 1,657 | 1,721 | 1,775 | 1,799 | 349 | 24.1% |
| West Chester Borough | 11,440 | 11,787 | 11,979 | 12,181 | 12,448 | 12,678 | 12,510 | 1,070 | 9.4% |
| West Fallowfield Township | 958 | 1,006 | 1,043 | 1,082 | 1,122 | 1,155 | 1,159 | 201 | 21.0% |
| West Goshen Township | 24,174 | 25,299 | 26,334 | 27,385 | 28,369 | 29,189 | 29,633 | 5,459 | 22.6% |
| West Grove Borough | 674 | 719 | 763 | 808 | 848 | 881 | 907 | 233 | 34.6% |
| West Marlborough Township | 330 | 353 | 371 | 388 | 409 | 424 | 426 | 96 | 29.1% |
| West Nantmeal Township | 647 | 690 | 732 | 775 | 814 | 845 | 870 | 223 | 34.5% |
| West Nottingham Township | 1,736 | 1,884 | 2,060 | 2,238 | 2,378 | 2,493 | 2,647 | 911 | 52.5% |
| West Pikeland Township | 964 | 1,029 | 1,097 | 1,165 | 1,225 | 1,274 | 1,320 | 356 | 36.9% |
| West Sadsbury Township | 2,106 | 2,300 | 2,537 | 2,774 | 2,959 | 3,112 | 3,327 | 1,221 | 58.0% |
| West Vincent Township | 1,476 | 1,552 | 1,623 | 1,695 | 1,759 | 1,816 | 1,846 | 370 | 25.1% |
| West Whiteland Township | 23,476 | 24,691 | 25,883 | 27,093 | 28,175 | 29,076 | 29,735 | 6,259 | 26.7% |
| Westtown Township | 4,257 | 4,479 | 4,693 | 4,910 | 5,107 | 5,271 | 5,383 | 1,126 | 26.5% |
| Willistown Township | 7,896 | 8,118 | 8,275 | 8,436 | 8,616 | 8,769 | 8,741 | 845 | 10.7% |

| County / Municipality | 2015 Employment Estimate | 2020 Employment Forecast | 2025 Employment Forecast | 2030 Employment Forecast | 2035 Employment Forecast | 2040 Employment Forecast | 2045 Employment Forecast | Absolute Change, 2015–2045 | Percentage Change 2015–2045 |
|---|---|---|---|---|---|---|---|---|---|
| **Delaware County** | **268,054** | **270,167** | **272,269** | **274,401** | **276,248** | **277,763** | **279,050** | **10,996** | **4.1%** |
| Aldan Borough | 957 | 963 | 966 | 969 | 973 | 978 | 978 | 21 | 2.2% |
| Aston Township | 6,558 | 6,615 | 6,678 | 6,742 | 6,793 | 6,832 | 6,876 | 318 | 4.8% |
| Bethel Township | 2,297 | 2,331 | 2,388 | 2,445 | 2,478 | 2,497 | 2,548 | 251 | 10.9% |
| Brookhaven Borough | 2,702 | 2,722 | 2,739 | 2,756 | 2,773 | 2,787 | 2,796 | 94 | 3.5% |
| Chadds Ford Twp. | 4,153 | 4,232 | 4,374 | 4,516 | 4,593 | 4,634 | 4,768 | 615 | 14.8% |
| Chester City | 11,939 | 12,014 | 12,062 | 12,112 | 12,174 | 12,234 | 12,244 | 305 | 2.6% |
| Chester Township | 942 | 956 | 980 | 1,004 | 1,017 | 1,025 | 1,047 | 105 | 11.1% |
| Chester Heights Borough | 2,926 | 2,945 | 2,958 | 2,971 | 2,987 | 3,002 | 3,005 | 79 | 2.7% |
| Clifton Heights Borough | 2,142 | 2,153 | 2,155 | 2,157 | 2,165 | 2,175 | 2,169 | 27 | 1.3% |
| Collingdale Borough | 2,108 | 2,125 | 2,143 | 2,161 | 2,176 | 2,188 | 2,199 | 91 | 4.3% |
| Colwyn Borough | 417 | 421 | 425 | 430 | 433 | 435 | 439 | 22 | 5.3% |
| Concord Township | 11,491 | 11,733 | 12,179 | 12,629 | 12,864 | 12,988 | 13,416 | 1,925 | 16.8% |
| Darby Borough | 3,955 | 3,982 | 4,003 | 4,025 | 4,047 | 4,068 | 4,077 | 122 | 3.1% |
| Darby Township | 2,593 | 2,602 | 2,595 | 2,588 | 2,594 | 2,604 | 2,588 | -5 | -0.2% |
| East Lansdowne Borough | 658 | 661 | 661 | 661 | 664 | 667 | 665 | 7 | 1.1% |
| Eddystone Borough | 2,429 | 2,439 | 2,436 | 2,433 | 2,440 | 2,450 | 2,439 | 10 | 0.4% |
| Edgmont Township | 2,247 | 2,307 | 2,424 | 2,542 | 2,601 | 2,630 | 2,745 | 498 | 22.2% |
| Folcroft Borough | 3,501 | 3,507 | 3,484 | 3,460 | 3,462 | 3,474 | 3,437 | -64 | -1.8% |
| Glenolden Borough | 2,366 | 2,376 | 2,376 | 2,375 | 2,383 | 2,394 | 2,385 | 19 | 0.8% |
| Haverford Township | 16,973 | 17,066 | 17,103 | 17,142 | 17,217 | 17,298 | 17,279 | 306 | 1.8% |
| Lansdowne Borough | 2,650 | 2,659 | 2,652 | 2,646 | 2,652 | 2,662 | 2,646 | -4 | -0.2% |
| Lower Chichester Township | 1,374 | 1,380 | 1,381 | 1,381 | 1,386 | 1,392 | 1,387 | 13 | 0.9% |
| Marcus Hook Borough | 3,014 | 3,037 | 3,058 | 3,079 | 3,099 | 3,115 | 3,127 | 113 | 3.7% |
| Marple Township | 14,026 | 14,082 | 14,063 | 14,045 | 14,085 | 14,143 | 14,075 | 49 | 0.3% |
| Media Borough | 11,882 | 11,974 | 12,064 | 12,156 | 12,236 | 12,303 | 12,357 | 475 | 4.0% |
| Middletown Township | 14,076 | 14,220 | 14,407 | 14,597 | 14,727 | 14,820 | 14,968 | 892 | 6.3% |
| Millbourne Borough | 370 | 375 | 382 | 389 | 393 | 396 | 402 | 32 | 8.6% |
| Morton Borough | 1,290 | 1,297 | 1,300 | 1,303 | 1,309 | 1,315 | 1,314 | 24 | 1.9% |
| Nether Providence Township | 4,626 | 4,656 | 4,677 | 4,698 | 4,723 | 4,747 | 4,753 | 127 | 2.7% |
| Newtown Township | 12,615 | 12,710 | 12,798 | 12,888 | 12,971 | 13,040 | 13,090 | 475 | 3.8% |

| County / Municipality | 2015 Employment Estimate | 2020 Employment Forecast | 2025 Employment Forecast | 2030 Employment Forecast | 2035 Employment Forecast | 2040 Employment Forecast | 2045 Employment Forecast | Absolute Change, 2015–2045 | Percentage Change 2015–2045 |
|---|---|---|---|---|---|---|---|---|---|
| Norwood Borough | 1,140 | 1,145 | 1,146 | 1,146 | 1,151 | 1,156 | 1,152 | 12 | 1.1% |
| Parkside Borough | 328 | 330 | 332 | 334 | 336 | 337 | 338 | 10 | 3.0% |
| Prospect Park Borough | 1,726 | 1,736 | 1,742 | 1,747 | 1,756 | 1,764 | 1,764 | 38 | 2.2% |
| Radnor Township | 25,694 | 25,861 | 25,978 | 26,099 | 26,239 | 26,371 | 26,407 | 713 | 2.8% |
| Ridley Township | 2,809 | 2,814 | 2,795 | 2,776 | 2,777 | 2,786 | 2,757 | -52 | -1.9% |
| Ridley Park Borough | 9,411 | 9,463 | 9,483 | 9,505 | 9,546 | 9,591 | 9,580 | 169 | 1.8% |
| Rose Valley Borough | 297 | 302 | 310 | 318 | 323 | 326 | 333 | 36 | 12.1% |
| Rutledge Borough | 131 | 132 | 132 | 132 | 133 | 133 | 133 | 2 | 1.5% |
| Sharon Hill Borough | 2,985 | 3,003 | 3,014 | 3,026 | 3,041 | 3,056 | 3,058 | 73 | 2.4% |
| Springfield Township | 14,177 | 14,292 | 14,411 | 14,532 | 14,633 | 14,715 | 14,791 | 614 | 4.3% |
| Swarthmore Borough | 2,660 | 2,677 | 2,688 | 2,700 | 2,714 | 2,727 | 2,730 | 70 | 2.6% |
| Thornbury Township | 2,366 | 2,418 | 2,514 | 2,610 | 2,661 | 2,687 | 2,780 | 414 | 17.5% |
| Tinicum Township | 12,489 | 12,531 | 12,495 | 12,461 | 12,488 | 12,537 | 12,457 | -32 | -0.3% |
| Trainer Borough | 1,799 | 1,799 | 1,779 | 1,760 | 1,757 | 1,762 | 1,735 | -64 | -3.6% |
| Upland Borough | 1,222 | 1,227 | 1,228 | 1,228 | 1,232 | 1,237 | 1,233 | 11 | 0.9% |
| Upper Chichester Township | 6,648 | 6,710 | 6,786 | 6,862 | 6,918 | 6,959 | 7,016 | 368 | 5.5% |
| Upper Darby Township | 25,058 | 25,282 | 25,543 | 25,806 | 26,007 | 26,159 | 26,346 | 1,288 | 5.1% |
| Upper Providence Township | 5,055 | 5,114 | 5,198 | 5,283 | 5,338 | 5,373 | 5,445 | 390 | 7.7% |
| Yeadon Borough | 2,782 | 2,791 | 2,784 | 2,776 | 2,783 | 2,794 | 2,776 | -6 | -0.2% |
| **Montgomery County** | **582,443** | **598,434** | **614,469** | **629,563** | **642,996** | **654,966** | **664,385** | **81,942** | **14.1%** |
| Abington Township | 30,656 | 31,098 | 31,327 | 31,512 | 31,899 | 32,371 | 32,156 | 1,500 | 4.9% |
| Ambler Borough | 3,185 | 3,248 | 3,322 | 3,392 | 3,450 | 3,501 | 3,537 | 352 | 11.1% |
| Bridgeport Borough | 2,180 | 2,248 | 2,298 | 2,345 | 2,399 | 2,455 | 2,480 | 300 | 13.8% |
| Bryn Athyn Borough | 1,427 | 1,440 | 1,452 | 1,463 | 1,474 | 1,484 | 1,477 | 50 | 3.5% |
| Cheltenham Township | 18,189 | 18,517 | 18,725 | 18,906 | 19,201 | 19,546 | 19,489 | 1,300 | 7.1% |
| Collegeville Borough | 2,626 | 2,668 | 2,705 | 2,738 | 2,775 | 2,814 | 2,815 | 189 | 7.2% |
| Conshohocken Borough | 9,368 | 10,531 | 11,292 | 12,036 | 12,854 | 13,522 | 14,368 | 5,000 | 53.4% |
| Douglass Township | 3,661 | 3,820 | 4,038 | 4,249 | 4,380 | 4,431 | 4,661 | 1,000 | 27.3% |
| East Greenville Borough | 651 | 663 | 675 | 687 | 697 | 707 | 711 | 60 | 9.2% |
| East Norriton Township | 10,682 | 10,999 | 11,317 | 11,617 | 11,813 | 11,880 | 12,182 | 1,500 | 14.0% |
| Franconia Township | 7,630 | 7,696 | 8,004 | 8,297 | 8,439 | 8,497 | 8,745 | 1,115 | 14.6% |
| Green Lane Borough | 183 | 186 | 187 | 189 | 191 | 193 | 193 | 10 | 5.5% |

| County / Municipality | 2015 Employment Estimate | 2020 Employment Forecast | 2025 Employment Forecast | 2030 Employment Forecast | 2035 Employment Forecast | 2040 Employment Forecast | 2045 Employment Forecast | Absolute Change, 2015–2045 | Percentage Change 2015–2045 |
|---|---|---|---|---|---|---|---|---|---|
| Hatboro Borough | 3,893 | 3,978 | 4,018 | 4,055 | 4,125 | 4,204 | 4,193 | 300 | 7.7% |
| Hatfield Borough | 1,150 | 1,172 | 1,190 | 1,208 | 1,227 | 1,248 | 1,250 | 100 | 8.7% |
| Hatfield Township | 17,580 | 18,120 | 18,629 | 19,110 | 19,533 | 19,857 | 20,218 | 2,638 | 15.0% |
| Horsham Township | 30,408 | 31,549 | 33,538 | 35,468 | 36,584 | 37,907 | 39,068 | 8,660 | 28.5% |
| Jenkintown Borough | 4,597 | 4,677 | 4,722 | 4,761 | 4,833 | 4,918 | 4,897 | 300 | 6.5% |
| Lansdale Borough | 7,772 | 7,952 | 8,045 | 8,126 | 8,254 | 8,372 | 8,384 | 612 | 7.9% |
| Limerick Township | 11,533 | 11,874 | 12,362 | 12,826 | 13,324 | 13,799 | 14,151 | 2,618 | 22.7% |
| Lower Frederick Township | 1,110 | 1,146 | 1,178 | 1,208 | 1,260 | 1,320 | 1,334 | 224 | 20.2% |
| Lower Gwynedd Township | 7,006 | 7,282 | 7,770 | 8,244 | 8,514 | 8,687 | 9,125 | 2,119 | 30.2% |
| Lower Merion Township | 55,354 | 56,522 | 57,038 | 57,471 | 58,209 | 58,915 | 58,854 | 3,500 | 6.3% |
| Lower Moreland Township | 8,085 | 8,225 | 8,331 | 8,424 | 8,551 | 8,692 | 8,685 | 600 | 7.4% |
| Lower Pottsgrove Township | 4,670 | 4,768 | 4,943 | 5,109 | 5,239 | 5,346 | 5,470 | 800 | 17.1% |
| Lower Providence Township | 12,994 | 13,230 | 13,581 | 13,910 | 14,129 | 14,290 | 14,494 | 1,500 | 11.5% |
| Lower Salford Township | 9,663 | 9,864 | 10,234 | 10,586 | 10,776 | 10,886 | 11,163 | 1,500 | 15.5% |
| Marlborough Township | 978 | 991 | 1,010 | 1,027 | 1,051 | 1,071 | 1,078 | 100 | 10.2% |
| Montgomery Township | 16,097 | 16,473 | 16,923 | 17,343 | 17,580 | 17,640 | 18,012 | 1,915 | 11.9% |
| Narberth Borough | 2,039 | 2,076 | 2,101 | 2,122 | 2,155 | 2,193 | 2,189 | 150 | 7.4% |
| New Hanover Township | 2,020 | 2,102 | 2,198 | 2,290 | 2,370 | 2,435 | 2,515 | 495 | 24.5% |
| Norristown Borough | 14,095 | 14,558 | 14,873 | 15,166 | 15,560 | 15,972 | 16,095 | 2,000 | 14.2% |
| North Wales Borough | 1,419 | 1,443 | 1,460 | 1,476 | 1,498 | 1,522 | 1,519 | 100 | 7.0% |
| Pennsburg Borough | 1,519 | 1,552 | 1,573 | 1,592 | 1,617 | 1,641 | 1,645 | 126 | 8.3% |
| Perkiomen Township | 2,416 | 2,469 | 2,537 | 2,602 | 2,651 | 2,693 | 2,733 | 317 | 13.1% |
| Plymouth Township | 23,839 | 24,550 | 25,500 | 26,410 | 27,090 | 27,652 | 28,339 | 4,500 | 18.9% |
| Pottstown Borough | 10,757 | 11,090 | 11,342 | 11,578 | 11,857 | 12,128 | 12,257 | 1,500 | 13.9% |
| Red Hill Borough | 631 | 642 | 654 | 666 | 676 | 685 | 689 | 58 | 9.2% |
| Rockledge Borough | 957 | 979 | 996 | 1,011 | 1,031 | 1,054 | 1,057 | 100 | 10.4% |
| Royersford Borough | 1,393 | 1,419 | 1,443 | 1,466 | 1,489 | 1,511 | 1,518 | 125 | 9.0% |
| Salford Township | 526 | 544 | 564 | 583 | 605 | 627 | 641 | 115 | 21.9% |
| Schwenksville Borough | 418 | 434 | 454 | 474 | 490 | 504 | 518 | 100 | 23.9% |
| Skippack Township | 4,197 | 4,300 | 4,402 | 4,496 | 4,565 | 4,631 | 4,697 | 500 | 11.9% |
| Souderton Borough | 2,788 | 2,876 | 2,972 | 3,064 | 3,147 | 3,227 | 3,288 | 500 | 17.9% |
| Springfield Township | 7,874 | 8,000 | 8,084 | 8,158 | 8,271 | 8,399 | 8,374 | 500 | 6.4% |
| Telford Borough (part) | 643 | 659 | 684 | 707 | 722 | 734 | 751 | 108 | 16.8% |

| County / Municipality | 2015 Employment Estimate | 2020 Employment Forecast | 2025 Employment Forecast | 2030 Employment Forecast | 2035 Employment Forecast | 2040 Employment Forecast | 2045 Employment Forecast | Absolute Change, 2015–2045 | Percentage Change 2015–2045 |
|---|---|---|---|---|---|---|---|---|---|
| Towamencin Township | 7,548 | 8,086 | 8,612 | 9,125 | 9,567 | 9,909 | 10,421 | 2,873 | 38.1% |
| Trappe Borough | 2,144 | 2,190 | 2,248 | 2,303 | 2,345 | 2,381 | 2,414 | 270 | 12.6% |
| Upper Dublin Township | 21,566 | 22,207 | 22,864 | 23,485 | 24,048 | 24,546 | 24,966 | 3,400 | 15.8% |
| Upper Frederick Township | 871 | 899 | 930 | 960 | 998 | 1,037 | 1,056 | 185 | 21.2% |
| Upper Gwynedd Township | 25,099 | 25,428 | 25,751 | 26,036 | 26,324 | 26,607 | 26,599 | 1,500 | 6.0% |
| Upper Hanover Township | 4,221 | 4,395 | 4,541 | 4,680 | 4,831 | 4,957 | 5,078 | 857 | 20.3% |
| Upper Merion Township | 57,038 | 59,232 | 60,940 | 62,559 | 64,072 | 65,430 | 66,508 | 9,470 | 16.6% |
| Upper Moreland Township | 18,160 | 18,395 | 18,536 | 18,650 | 18,853 | 19,092 | 18,977 | 817 | 4.5% |
| Upper Pottsgrove Township | 1,161 | 1,186 | 1,227 | 1,264 | 1,301 | 1,335 | 1,361 | 200 | 17.2% |
| Upper Providence Township | 22,276 | 23,028 | 24,014 | 24,960 | 25,575 | 25,947 | 26,796 | 4,520 | 20.3% |
| Upper Salford Township | 1,273 | 1,303 | 1,338 | 1,371 | 1,407 | 1,442 | 1,462 | 189 | 14.8% |
| West Conshohocken Borough | 5,836 | 5,978 | 6,180 | 6,371 | 6,506 | 6,612 | 6,748 | 912 | 15.6% |
| West Norriton Township | 9,363 | 9,557 | 9,802 | 10,031 | 10,212 | 10,367 | 10,499 | 1,136 | 12.1% |
| West Pottsgrove Township | 1,476 | 1,530 | 1,622 | 1,711 | 1,764 | 1,798 | 1,879 | 403 | 27.3% |
| Whitemarsh Township | 20,727 | 21,090 | 21,343 | 21,565 | 21,894 | 22,235 | 22,227 | 1,500 | 7.2% |
| Whitpain Township | 19,871 | 20,231 | 20,641 | 21,020 | 21,350 | 21,653 | 21,819 | 1,948 | 9.8% |
| Worcester Township | 2,954 | 3,069 | 3,189 | 3,304 | 3,394 | 3,457 | 3,560 | 606 | 20.5% |
| **Philadelphia County** | **772,847** | **786,308** | **797,156** | **810,574** | **822,002** | **829,937** | **836,825** | **63,978** | **8.3%** |
| Central | 277,884 | 280,877 | 283,540 | 287,458 | 289,839 | 291,941 | 294,586 | 16,702 | 6.0% |
| South | 32,348 | 32,823 | 33,052 | 33,584 | 33,897 | 34,118 | 34,233 | 1,885 | 5.8% |
| Lower South | 19,366 | 22,053 | 25,327 | 28,043 | 30,830 | 33,279 | 35,111 | 15,745 | 81.3% |
| Lower Southwest | 21,287 | 21,570 | 22,013 | 22,546 | 22,943 | 23,231 | 23,518 | 2,231 | 10.5% |
| University/Southwest | 81,863 | 84,881 | 86,678 | 89,222 | 91,692 | 92,487 | 94,866 | 13,003 | 15.9% |
| West | 14,073 | 14,203 | 14,299 | 14,439 | 14,598 | 14,699 | 14,774 | 701 | 5.0% |
| West Park | 17,141 | 17,404 | 17,509 | 17,692 | 17,785 | 17,928 | 17,987 | 846 | 4.9% |
| Lower North | 27,134 | 27,582 | 28,096 | 28,441 | 28,963 | 29,335 | 29,204 | 2,070 | 7.6% |
| River Wards | 23,154 | 23,578 | 23,698 | 23,934 | 24,224 | 24,485 | 24,249 | 1,095 | 4.7% |
| North | 41,243 | 41,508 | 41,777 | 42,342 | 42,647 | 42,878 | 42,941 | 1,698 | 4.1% |
| Lower Northwest | 18,212 | 18,475 | 18,586 | 18,710 | 18,889 | 19,048 | 19,008 | 796 | 4.4% |
| Upper Northwest | 25,673 | 25,928 | 26,010 | 26,217 | 26,435 | 26,540 | 26,478 | 805 | 3.1% |
| Upper North | 33,741 | 34,068 | 34,214 | 34,353 | 34,589 | 34,656 | 34,655 | 914 | 2.7% |
| Lower Northeast | 27,338 | 27,591 | 27,740 | 27,958 | 28,086 | 28,125 | 28,124 | 786 | 2.9% |

| County / Municipality | 2015 Employment Estimate | 2020 Employment Forecast | 2025 Employment Forecast | 2030 Employment Forecast | 2035 Employment Forecast | 2040 Employment Forecast | 2045 Employment Forecast | Absolute Change, 2015–2045 | Percentage Change 2015–2045 |
|---|---|---|---|---|---|---|---|---|---|
| Central Northeast | 22,546 | 22,843 | 23,015 | 23,244 | 23,395 | 23,498 | 23,473 | 927 | 4.1% |
| North Delaware | 23,938 | 24,269 | 24,330 | 24,557 | 24,692 | 24,819 | 24,807 | 869 | 3.6% |
| Lower Far Northeast | 31,433 | 31,835 | 32,080 | 32,378 | 32,667 | 32,893 | 32,853 | 1,420 | 4.5% |
| Upper Far Northeast | 34,473 | 34,820 | 35,192 | 35,456 | 35,831 | 35,977 | 35,958 | 1,485 | 4.3% |
| **Burlington County** | **241,298** | **246,351** | **251,368** | **255,562** | **258,363** | **261,195** | **263,622** | **22,324** | **9.3%** |
| Bass River Township | 1,556 | 1,572 | 1,566 | 1,556 | 1,558 | 1,571 | 1,544 | -12 | -0.8% |
| Beverly City | 400 | 417 | 446 | 472 | 485 | 493 | 519 | 119 | 29.8% |
| Bordentown City | 1,437 | 1,452 | 1,447 | 1,439 | 1,441 | 1,451 | 1,428 | -9 | -0.6% |
| Bordentown Township | 5,424 | 5,530 | 5,624 | 5,703 | 5,760 | 5,824 | 5,858 | 434 | 8.0% |
| Burlington City | 5,162 | 5,229 | 5,237 | 5,231 | 5,251 | 5,298 | 5,242 | 80 | 1.5% |
| Burlington Township | 17,266 | 17,584 | 17,772 | 17,879 | 17,949 | 18,054 | 18,013 | 747 | 4.3% |
| Chesterfield Township | 1,770 | 1,800 | 1,819 | 1,833 | 1,846 | 1,865 | 1,863 | 93 | 5.3% |
| Cinnaminson Township | 9,862 | 9,981 | 9,978 | 9,949 | 9,979 | 10,064 | 9,938 | 76 | 0.8% |
| Delanco Township | 1,193 | 1,234 | 1,296 | 1,353 | 1,383 | 1,403 | 1,455 | 262 | 22.0% |
| Delran Township | 7,181 | 7,263 | 7,249 | 7,217 | 7,234 | 7,295 | 7,190 | 9 | 0.1% |
| Eastampton Township | 949 | 980 | 1,027 | 1,070 | 1,092 | 1,109 | 1,147 | 198 | 20.9% |
| Edgewater Park Township | 2,738 | 2,795 | 2,849 | 2,896 | 2,928 | 2,961 | 2,985 | 247 | 9.0% |
| Evesham Township | 27,494 | 27,914 | 28,117 | 28,240 | 28,412 | 28,688 | 28,559 | 1,065 | 3.9% |
| Fieldsboro Borough | 87 | 88 | 89 | 91 | 91 | 92 | 92 | 5 | 5.7% |
| Florence Township | 3,424 | 3,650 | 3,889 | 4,017 | 4,112 | 4,190 | 4,297 | 873 | 25.5% |
| Hainesport Township | 3,128 | 3,287 | 3,567 | 3,834 | 3,962 | 4,037 | 4,299 | 1,171 | 37.4% |
| Lumberton Township | 6,605 | 6,926 | 7,488 | 8,022 | 8,279 | 8,433 | 8,954 | 2,349 | 35.6% |
| Mansfield Township | 2,794 | 2,935 | 3,186 | 3,422 | 3,537 | 3,604 | 3,838 | 1,044 | 37.4% |
| Maple Shade Township | 6,792 | 6,875 | 6,877 | 6,860 | 6,881 | 6,942 | 6,858 | 66 | 1.0% |
| Medford Lakes Borough | 800 | 808 | 805 | 800 | 800 | 807 | 793 | -7 | -0.9% |
| Medford Township | 11,762 | 11,938 | 12,189 | 12,416 | 12,559 | 12,653 | 12,855 | 1,093 | 9.3% |
| Moorestown Township | 30,721 | 31,403 | 32,129 | 32,756 | 33,157 | 33,552 | 33,945 | 3,224 | 10.5% |
| Mount Holly Township | 7,793 | 7,890 | 7,894 | 7,877 | 7,904 | 7,972 | 7,879 | 86 | 1.1% |
| Mount Laurel Township | 37,270 | 38,050 | 38,815 | 39,464 | 39,903 | 40,362 | 40,714 | 3,444 | 9.2% |
| New Hanover Township | 4,627 | 4,707 | 4,791 | 4,874 | 4,957 | 5,040 | 5,127 | 500 | 10.8% |
| North Hanover Township | 1,451 | 1,455 | 1,437 | 1,429 | 1,422 | 1,416 | 1,401 | -50 | -3.4% |
| Palmyra Borough | 2,008 | 2,021 | 1,994 | 1,963 | 1,957 | 1,971 | 1,916 | -92 | -4.6% |

| County / Municipality | 2015 Employment Estimate | 2020 Employment Forecast | 2025 Employment Forecast | 2030 Employment Forecast | 2035 Employment Forecast | 2040 Employment Forecast | 2045 Employment Forecast | Absolute Change, 2015–2045 | Percentage Change 2015–2045 |
|---|---|---|---|---|---|---|---|---|---|
| Pemberton Borough | 541 | 547 | 544 | 541 | 541 | 546 | 537 | -4 | -0.7% |
| Pemberton Township | 7,035 | 7,204 | 7,420 | 7,616 | 7,725 | 7,816 | 7,970 | 935 | 13.3% |
| Riverside Township | 1,726 | 1,759 | 1,787 | 1,811 | 1,827 | 1,847 | 1,856 | 130 | 7.5% |
| Riverton Borough | 836 | 844 | 839 | 832 | 832 | 840 | 823 | -13 | -1.6% |
| Shamong Township | 1,695 | 1,713 | 1,705 | 1,693 | 1,696 | 1,709 | 1,680 | -15 | -0.9% |
| Southampton Township | 3,705 | 3,744 | 3,729 | 3,704 | 3,709 | 3,739 | 3,677 | -28 | -0.8% |
| Springfield Township | 1,513 | 1,543 | 1,593 | 1,640 | 1,666 | 1,681 | 1,726 | 213 | 14.1% |
| Tabernacle Township | 2,042 | 2,063 | 2,054 | 2,041 | 2,044 | 2,061 | 2,026 | -16 | -0.8% |
| Washington Township | 245 | 247 | 247 | 245 | 246 | 247 | 243 | -2 | -0.8% |
| Westampton Township | 7,379 | 7,776 | 8,490 | 9,169 | 9,495 | 9,682 | 10,357 | 2,978 | 40.4% |
| Willingboro Township | 8,184 | 8,388 | 8,632 | 8,850 | 8,979 | 9,093 | 9,253 | 1,069 | 13.1% |
| Woodland Township | 1,893 | 1,911 | 1,899 | 1,882 | 1,883 | 1,897 | 1,860 | -33 | -1.7% |
| Wrightstown Borough | 2,810 | 2,828 | 2,852 | 2,875 | 2,881 | 2,890 | 2,905 | 95 | 3.4% |
| **Camden County** | **263,582** | **265,169** | **266,753** | **268,359** | **269,750** | **270,892** | **271,869** | **8,287** | **3.1%** |
| Audubon Borough | 2,882 | 2,878 | 2,858 | 2,840 | 2,834 | 2,839 | 2,809 | -73 | -2.5% |
| Audubon Park Borough | 122 | 122 | 121 | 120 | 120 | 120 | 119 | -3 | -2.5% |
| Barrington Borough | 2,919 | 2,916 | 2,900 | 2,885 | 2,881 | 2,886 | 2,860 | -59 | -2.0% |
| Bellmawr Borough | 4,855 | 4,861 | 4,856 | 4,853 | 4,855 | 4,867 | 4,848 | -7 | -0.1% |
| Berlin Borough | 4,889 | 4,908 | 4,936 | 4,965 | 4,981 | 4,998 | 5,012 | 123 | 2.5% |
| Berlin Township | 6,474 | 6,492 | 6,514 | 6,537 | 6,551 | 6,572 | 6,574 | 100 | 1.5% |
| Brooklawn Borough | 979 | 980 | 979 | 978 | 978 | 981 | 976 | -3 | -0.3% |
| Camden City | 41,786 | 42,644 | 43,370 | 44,057 | 44,850 | 45,205 | 45,992 | 4,206 | 10.1% |
| Cherry Hill Township | 66,799 | 66,845 | 66,734 | 66,641 | 66,648 | 66,808 | 66,479 | -320 | -0.5% |
| Chesilhurst Borough | 268 | 267 | 264 | 262 | 261 | 261 | 257 | -11 | -4.1% |
| Clementon Borough | 1,391 | 1,391 | 1,388 | 1,385 | 1,384 | 1,388 | 1,379 | -12 | -0.9% |
| Collingswood Borough | 4,307 | 4,308 | 4,296 | 4,285 | 4,283 | 4,292 | 4,266 | -41 | -1.0% |
| Gibbsboro Borough | 1,885 | 1,884 | 1,875 | 1,866 | 1,864 | 1,867 | 1,852 | -33 | -1.8% |
| Gloucester City | 4,709 | 4,888 | 5,290 | 5,692 | 5,866 | 5,942 | 6,345 | 1,636 | 34.7% |
| Gloucester Township | 19,959 | 19,964 | 19,911 | 19,863 | 19,857 | 19,901 | 19,782 | -177 | -0.9% |
| Haddon Township | 4,577 | 4,590 | 4,606 | 4,624 | 4,634 | 4,649 | 4,651 | 74 | 1.6% |
| Haddonfield Borough | 6,525 | 6,526 | 6,508 | 6,491 | 6,488 | 6,503 | 6,463 | -62 | -1.0% |
| Haddon Heights Borough | 3,220 | 3,227 | 3,234 | 3,242 | 3,248 | 3,257 | 3,254 | 34 | 1.1% |

| County / Municipality | 2015 Employment Estimate | 2020 Employment Forecast | 2025 Employment Forecast | 2030 Employment Forecast | 2035 Employment Forecast | 2040 Employment Forecast | 2045 Employment Forecast | Absolute Change, 2015–2045 | Percentage Change 2015–2045 |
|---|---|---|---|---|---|---|---|---|---|
| Hi-Nella Borough | 201 | 201 | 201 | 201 | 201 | 202 | 201 | 0 | 0.0% |
| Laurel Springs Borough | 468 | 468 | 465 | 463 | 463 | 464 | 460 | -8 | -1.7% |
| Lawnside Borough | 1,916 | 1,911 | 1,894 | 1,877 | 1,872 | 1,874 | 1,850 | -66 | -3.4% |
| Lindenwold Borough | 3,140 | 3,147 | 3,152 | 3,158 | 3,163 | 3,172 | 3,168 | 28 | 0.9% |
| Magnolia Borough | 1,064 | 1,063 | 1,058 | 1,052 | 1,051 | 1,053 | 1,043 | -21 | -2.0% |
| Merchantville Borough | 1,408 | 1,409 | 1,406 | 1,404 | 1,404 | 1,407 | 1,400 | -8 | -0.6% |
| Mount Ephraim Borough | 1,137 | 1,137 | 1,133 | 1,129 | 1,128 | 1,131 | 1,123 | -14 | -1.2% |
| Oaklyn Borough | 991 | 990 | 986 | 981 | 980 | 982 | 974 | -17 | -1.7% |
| Pennsauken Township | 25,712 | 25,798 | 25,799 | 25,816 | 25,889 | 26,018 | 25,945 | 233 | 0.9% |
| Pine Hill Borough | 1,618 | 1,625 | 1,627 | 1,629 | 1,634 | 1,643 | 1,640 | 22 | 1.4% |
| Pine Valley Borough | 185 | 185 | 185 | 184 | 184 | 184 | 183 | -2 | -1.1% |
| Runnemede Borough | 3,101 | 3,099 | 3,084 | 3,070 | 3,066 | 3,072 | 3,047 | -54 | -1.7% |
| Somerdale Borough | 2,376 | 2,377 | 2,375 | 2,372 | 2,373 | 2,378 | 2,367 | -9 | -0.4% |
| Stratford Borough | 6,353 | 6,354 | 6,335 | 6,318 | 6,315 | 6,329 | 6,289 | -64 | -1.0% |
| Tavistock Borough | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 0 | 0.0% |
| Voorhees Township | 20,328 | 20,474 | 20,749 | 21,028 | 21,161 | 21,258 | 21,479 | 1,151 | 5.7% |
| Waterford Township | 3,606 | 3,637 | 3,698 | 3,760 | 3,789 | 3,808 | 3,860 | 254 | 7.0% |
| Winslow Township | 10,976 | 11,147 | 11,510 | 11,875 | 12,038 | 12,124 | 12,466 | 1,490 | 13.6% |
| Woodlynne Borough | 406 | 406 | 406 | 406 | 406 | 407 | 406 | 0 | 0.0% |
| **Gloucester County** | **121,382** | **128,161** | **134,902** | **141,752** | **147,682** | **152,554** | **156,686** | **35,304** | **29.1%** |
| Clayton Borough | 2,236 | 2,380 | 2,549 | 2,718 | 2,847 | 2,947 | 3,076 | 840 | 37.6% |
| Deptford Township | 14,845 | 15,536 | 16,047 | 16,583 | 17,165 | 17,692 | 17,824 | 2,979 | 20.1% |
| East Greenwich Township | 2,593 | 2,718 | 2,817 | 2,920 | 3,027 | 3,121 | 3,155 | 562 | 21.7% |
| Elk Township | 1,106 | 1,240 | 1,465 | 1,684 | 1,813 | 1,894 | 2,126 | 1,020 | 92.2% |
| Franklin Township | 4,372 | 4,642 | 4,944 | 5,247 | 5,488 | 5,676 | 5,895 | 1,523 | 34.8% |
| Glassboro Borough | 7,359 | 7,860 | 8,475 | 9,089 | 9,543 | 9,883 | 10,380 | 3,021 | 41.1% |
| Greenwich Township | 2,436 | 2,516 | 2,524 | 2,539 | 2,600 | 2,670 | 2,601 | 165 | 6.8% |
| Harrison Township | 3,492 | 3,812 | 4,291 | 4,762 | 5,063 | 5,266 | 5,724 | 2,232 | 63.9% |
| Logan Township | 9,726 | 10,183 | 10,529 | 10,892 | 11,277 | 11,624 | 11,726 | 2,000 | 20.6% |
| Mantua Township | 5,333 | 5,786 | 6,436 | 7,078 | 7,501 | 7,792 | 8,396 | 3,063 | 57.4% |

| County / Municipality | 2015 Employment Estimate | 2020 Employment Forecast | 2025 Employment Forecast | 2030 Employment Forecast | 2035 Employment Forecast | 2040 Employment Forecast | 2045 Employment Forecast | Absolute Change, 2015–2045 | Percentage Change 2015–2045 |
|---|---|---|---|---|---|---|---|---|---|
| Monroe Township | 11,219 | 12,024 | 13,054 | 14,078 | 14,812 | 15,352 | 16,218 | 4,999 | 44.6% |
| National Park Borough | 430 | 445 | 448 | 453 | 464 | 477 | 467 | 37 | 8.6% |
| Newfield Borough | 441 | 456 | 457 | 460 | 471 | 484 | 472 | 31 | 7.0% |
| Paulsboro Borough | 1,707 | 1,760 | 1,760 | 1,765 | 1,804 | 1,852 | 1,796 | 89 | 5.2% |
| Pitman Borough | 2,481 | 2,590 | 2,659 | 2,733 | 2,823 | 2,908 | 2,911 | 430 | 17.3% |
| South Harrison Township | 1,000 | 1,066 | 1,143 | 1,221 | 1,280 | 1,324 | 1,385 | 385 | 38.5% |
| Swedesboro Borough | 1,618 | 1,681 | 1,708 | 1,740 | 1,790 | 1,841 | 1,822 | 204 | 12.6% |
| Washington Township | 19,175 | 19,988 | 20,465 | 20,982 | 21,650 | 22,291 | 22,242 | 3,067 | 16.0% |
| Wenonah Borough | 520 | 541 | 553 | 565 | 582 | 599 | 596 | 76 | 14.6% |
| West Deptford Township | 13,690 | 14,441 | 15,169 | 15,910 | 16,564 | 17,107 | 17,534 | 3,844 | 28.1% |
| Westville Borough | 1,784 | 1,860 | 1,904 | 1,953 | 2,015 | 2,075 | 2,070 | 286 | 16.0% |
| Woodbury City | 9,289 | 9,538 | 9,440 | 9,372 | 9,545 | 9,783 | 9,366 | 77 | 0.8% |
| Woodbury Heights Borough | 1,887 | 1,940 | 1,925 | 1,915 | 1,953 | 2,002 | 1,923 | 36 | 1.9% |
| Woolwich Township | 2,643 | 3,158 | 4,140 | 5,093 | 5,605 | 5,894 | 6,981 | 4,338 | 164.1% |
| **Mercer County** | **286,295** | **290,864** | **295,408** | **300,025** | **304,021** | **307,302** | **310,084** | **23,789** | **8.3%** |
| East Windsor Township | 17,414 | 17,737 | 18,170 | 18,607 | 18,858 | 19,015 | 19,359 | 1,945 | 11.2% |
| Ewing Township | 22,150 | 22,877 | 23,322 | 23,772 | 24,047 | 24,230 | 24,680 | 2,530 | 11.4% |
| Hamilton Township | 49,812 | 50,303 | 50,848 | 51,406 | 51,824 | 52,157 | 52,345 | 2,533 | 5.1% |
| Hightstown Borough | 2,775 | 2,796 | 2,812 | 2,828 | 2,846 | 2,862 | 2,857 | 82 | 3.0% |
| Hopewell Borough | 982 | 990 | 987 | 984 | 986 | 990 | 980 | -2 | -0.2% |
| Hopewell Township | 14,696 | 14,797 | 15,282 | 15,771 | 17,012 | 18,290 | 18,408 | 3,712 | 25.3% |
| Lawrence Township | 28,005 | 28,973 | 29,178 | 29,392 | 29,586 | 29,760 | 30,015 | 2,010 | 7.2% |
| Pennington Borough | 2,412 | 2,449 | 2,502 | 2,555 | 2,587 | 2,608 | 2,646 | 234 | 9.7% |
| Princeton | 26,211 | 27,014 | 27,617 | 28,227 | 28,585 | 28,815 | 29,399 | 3,188 | 12.2% |
| Robbinsville | 6,542 | 6,815 | 7,186 | 7,558 | 7,743 | 7,836 | 8,212 | 1,670 | 25.5% |
| Trenton City | 78,922 | 79,280 | 79,783 | 80,307 | 80,812 | 81,280 | 81,096 | 2,174 | 2.8% |
| West Windsor Township | 36,374 | 36,833 | 37,721 | 38,618 | 39,135 | 39,459 | 40,087 | 3,713 | 10.2% |

**Source:** Delaware Valley Regional Planning Commission, September 2016. Base employment data from the National Establishments Time Series (NETS) database, 2010 and 2013.



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**Report Title:** **Analytical Data Report # 023: County- and Municipal-Level Employment Forecasts, 2015–2045**

**Publication No.:** ADR023

**Date Published:** October 2016

**Geographic Area Covered:** DVRPC's nine-county region, including Burlington, Camden, Gloucester, and Mercer counties in New Jersey, and Bucks, Chester, Delaware, Montgomery, and Philadelphia counties in Pennsylvania.

**Key Words:** employment, employment forecasts, National Establishments Time Series database, NETS, Connections 2045, long-range plan

**ABSTRACT:** This report presents the Delaware Valley Regional Planning Commission's (DVRPC's) adopted 2045 county- and municipal-level employment forecasts and describes the method used to develop them. Population and employment forecasts are a critical component of long-range land use and transportation planning. As a part of DVRPC's long-range planning activities, the Commission is required to maintain forecasts with at least a 20-year horizon, or to the horizon year of the long-range plan.

DVRPC last adopted employment forecasts through the year 2040 in September 2012. In March 2016, DVRPC acquired a National Establishments Time Series (NETS) database that included 2013 employment data and revised 2010 data. The 2010 and 2013 employment data was reviewed and revised by DVRPC staff, utilizing resources that included CoStar, on-line business directories, company web sites, and, when appropriate, direct telephone calls. The revised data was then sent to the county planning staffs for additional revision. Additionally, during the summer of 2016, DVRPC acquired improved geocoding resources that allowed staff to further correct the spatial locations of employers.

Based on changes in the NETS employment between 2010 and 2013, and changes in employment in each county between 2010 and 2015, as reported by the U.S. Bureau of Labor Statistics, 2015 employment was estimated by county and municipality. Studies have shown that there is a direct relationship between the number of workers living in an area and the number of jobs. County-level employment was forecasted in five-year increments through 2045, by estimating a future ratio of population to employment in each county and applying it to DVRPC's adopted population forecasts. Together with the 2045 population forecasts adopted by the DVRPC Board in July 2016, these employment forecasts, adopted by the Board in October 2016, will serve as the basis for DVRPC's planning and modeling activities, and support the region's 2045 long-range plan, scheduled for adoption in July 2017.

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**Willistown Township Wastewater System Assets**

| | | | |
|---|---|---|---|
| Total Debt | 4391975 | 4667799 | 4939523 |
| Purchase of Capital Assets | 874280 | 513332 | 323433 |

| | 2019 | 2018 | 2017 |
|---|---|---|---|
| Income (Loss) Before Transfers | -261841 | -44516 | -767675 |
| Interest paid | 119404 | 127153 | 134656 |
| Depreciation | 477169 | 505633 | 493559 |
| Total Source | $334,732 | $588,270 | ($139,460) |
| Income tax | 0 | 0 | 0 |
| Principal | 275824 | 271724 | 263524 |
| Interest paid | 119404 | 127153 | 134656 |
| Total Use | $395,228 | $398,877 | $398,180 |

**W/Out Trans**

| | | | |
|---|---|---|---|
| Debt Service Coverage | 0.85 | 1.47 | -0.35 |
| Pre-Tax Interest Coverage - Including AFC(3)(x) | -1.19 | 0.65 | -4.70 |
| Post-Tax Interest Coverage - Including AFC(3)(x) | -1.19 | 0.65 | -4.70 |
| GCF / Interest Coverage(4)(x) | 2.80 | 4.63 | -1.04 |
| GCF / Tot. Debt(7)(%) | 4.90 | 9.88 | -5.55 |
| GCF / Construction(6)(%) | 24.63 | 89.83 | -84.75 |

**Comparable Group**

Debt Service Coverage - As Reported

| Comparable Group | 2019 | 2018 | 2017 |
|---|---|---|---|
| AMERICAN STATES WATER COMPANY | 2.2 | 5.4 | 2.4 |
| AMERICAN WATER WORKS COMPANY, INC. | 1.8 | 1.7 | 1.0 |
| ARTESIAN RESOURCES CORPORATION | 3.7 | 4.1 | 4.0 |
| CALIFORNIA WATER SERVICE GROUP | 0.4 | 3.4 | 3.0 |
| ESSENTIAL UTILITIES, INC. | 0.4 | 0.5 | 1.0 |
| MIDDLESEX WATER COMPANY | 4.0 | 4.0 | 3.7 |
| SJW GROUP | 3.7 | 4.9 | 5.2 |
| THE YORK WATER COMPANY | 0.3 | 0.8 | 1.1 |
| Median | 2.0 | 3.7 | 2.7 |

| Company Name | 2019 DEPRECIATION | 2018 DEPRECIATION | 2017 DEPRECIATION | 2019 TOTAL INTERST EXPENSE | 2018 TOTAL INTERST EXPENSE | 2017 TOTAL INTERST EXPENSE |
|---|---|---|---|---|---|---|
| AMERICAN STATES WATER COMPANY | 35.713 | 40.663 | 39.273 | 24.586 | 23.433 | 22.582 |
| AMERICAN WATER WORKS COMPANY, INC. | 582.000 | 545.000 | 492.000 | 386.000 | 361.000 | 356.000 |
| ARTESIAN RESOURCES CORPORATION | 10.803 | 10.288 | 9.555 | 7.024 | 6.252 | 6.177 |
| CALIFORNIA WATER SERVICE GROUP | 91.288 | 85.707 | 78.592 | 44.891 | 39.917 | 36.288 |
| ESSENTIAL UTILITIES, INC. | 156.476 | 146.673 | 136.724 | 149.125 | 158.833 | 88.543 |
| MIDDLESEX WATER COMPANY | 17.232 | 15.780 | 14.846 | 7.264 | 6.758 | 5.506 |
| SJW GROUP | 68.489 | 56.907 | 50.501 | 31.796 | 24.332 | 22.929 |
| THE YORK WATER COMPANY | 7.688 | 7.010 | 6.769 | 5.124 | 5.509 | 5.348 |

| | 2019 INCOME TO PREF+COMM | 2018 INCOME TO PREF+COMM | 2017 INCOME TO PREF+COMM | 2019 REPAY LT DEBT | 2018 REPAY LT DEBT | 2017 REPAY LT DEBT |
|---|---|---|---|---|---|---|
| AMERICAN STATES WATER COMPANY | 84.342 | 63.871 | 69.367 | 40.325 | 0.326 | 31.329 |
| AMERICAN WATER WORKS COMPANY, INC. | 621.000 | 567.000 | 426.000 | 495.000 | 526.000 | 896.000 |
| ARTESIAN RESOURCES CORPORATION | 14.925 | 14.278 | 13.983 | 1.725 | 1.344 | 1.218 |
| CALIFORNIA WATER SERVICE GROUP | 63.116 | 65.584 | 72.940 | 405.568 | 16.532 | 26.829 |
| ESSENTIAL UTILITIES, INC. | 224.543 | 191.988 | 239.738 | 1,073.708 | 914.125 | 359.068 |
| MIDDLESEX WATER COMPANY | 33.888 | 32.452 | 22.809 | 7.343 | 7.024 | 6.159 |
| SJW GROUP | 23.403 | 38.767 | 59.204 | 1.400 | 0.000 | 2.717 |
| THE YORK WATER COMPANY | 14.402 | 13.376 | 12.974 | 85.906 | 25.691 | 17.533 |

| Company Name | Pretax Operating Income | | | Interest expense | | | Net Income | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2018 | 2017 | 2019 | 2018 | 2017 | 2019 | 2018 | 2017 |
| AMERICAN STATES WATER CO | 133.598 | 105.321 | 130.923 | 24.586 | 23.433 | 22.582 | 84.342 | 63.871 | 69.367 |
| AMERICAN WATER WORKS CO INC | 1,219.000 | 1,150.000 | 1,268.000 | 386.000 | 361.000 | 356.000 | 621.000 | 567.000 | 426.000 |
| ARTESIAN RESOURCES -CL A | 27.130 | 25.521 | 27.455 | 7.024 | 6.252 | 6.177 | 14.925 | 14.278 | 13.983 |
| CALIFORNIA WATER SERVICE GP | 125.678 | 121.373 | 146.055 | 44.891 | 39.917 | 36.288 | 63.116 | 65.584 | 72.940 |
| ESSENTIAL UTILITIES, INC. | 360.651 | 337.152 | 345.195 | 149.125 | 158.833 | 88.543 | 224.543 | 191.988 | 239.738 |
| MIDDLESEX WATER CO | 38.012 | 40.134 | 39.415 | 7.264 | 6.758 | 5.506 | 33.888 | 32.452 | 22.809 |
| SJW GROUP | 63.653 | 73.164 | 117.526 | 31.796 | 24.332 | 22.929 | 23.403 | 38.767 | 59.204 |
| YORK WATER CO | 21.766 | 21.376 | 22.865 | 5.124 | 5.509 | 5.348 | 14.402 | 13.376 | 12.974 |

| Company Name | Gross Cash Flow | | | Total debt | | | CAPX | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2018 | 2017 | 2019 | 2018 | 2017 | 2019 | 2018 | 2017 |
| AMERICAN STATES WATER CO | 126.678 | 98.761 | 120.792 | 499.928 | 416.907 | 380.363 | 151.940 | 126.561 | 113.126 |
| AMERICAN WATER WORKS CO INC | 1,398.000 | 1,294.000 | 1,372.000 | 9,557.000 | 8,625.000 | 7,728.000 | 1,654.000 | 1,586.000 | 1,434.000 |
| ARTESIAN RESOURCES -CL A | 21.079 | 24.763 | 31.428 | 153.846 | 133.646 | 116.845 | 40.677 | 49.053 | 41.094 |
| CALIFORNIA WATER SERVICE GP | 168.402 | 165.097 | 185.996 | 998.102 | 880.038 | 806.813 | 273.770 | 271.707 | 259.194 |
| ESSENTIAL UTILITIES, INC. | 354.411 | 310.688 | 375.031 | 3,097.913 | 2,627.187 | 2,146.801 | 550.273 | 495.737 | 478.089 |
| MIDDLESEX WATER CO | 46.410 | 45.909 | 44.897 | 263.687 | 208.694 | 173.910 | 89.125 | 72.094 | 50.301 |
| SJW GROUP | 86.320 | 83.332 | 106.462 | 1,423.078 | 531.424 | 456.092 | 164.325 | 135.973 | 141.213 |
| YORK WATER CO | 22.365 | 20.215 | 21.363 | 103.282 | 96.173 | 93.338 | 20.537 | 16.882 | 25.074 |

| Company Name | Pretax Interest Coverage | | | Posttax Interest Coverage | | | GCF Interest Coverage | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2018 | 2017 | 2019 | 2018 | 2017 | 2019 | 2018 | 2017 |
| AMERICAN STATES WATER CO | 5.4 | 4.5 | 5.8 | 4.4 | 3.7 | 4.1 | 6.2 | 5.2 | 6.3 |
| AMERICAN WATER WORKS CO INC | 3.2 | 3.2 | 3.6 | 2.6 | 2.6 | 2.2 | 4.6 | 4.6 | 4.9 |
| ARTESIAN RESOURCES -CL A | 3.9 | 4.1 | 4.4 | 3.1 | 3.3 | 3.3 | 4.0 | 5.0 | 6.1 |
| CALIFORNIA WATER SERVICE GP | 2.8 | 3.0 | 4.0 | 2.4 | 2.6 | 3.0 | 4.8 | 5.1 | 6.1 |
| ESSENTIAL UTILITIES, INC. | 2.4 | 2.1 | 3.9 | 2.5 | 2.2 | 3.7 | 3.4 | 3.0 | 5.2 |
| MIDDLESEX WATER CO | 5.2 | 5.9 | 7.2 | 5.7 | 5.8 | 5.1 | 7.4 | 7.8 | 9.2 |
| SJW GROUP | 2.0 | 3.0 | 5.1 | 1.7 | 2.6 | 3.6 | 3.7 | 4.4 | 5.6 |
| YORK WATER CO | 4.2 | 3.9 | 4.3 | 3.8 | 3.4 | 3.4 | 5.4 | 4.7 | 5.0 |
| Median | 3.6 | 3.6 | 4.4 | 2.9 | 3.0 | 3.5 | 4.7 | 4.9 | 5.9 |

| Company Name | GCF To Debt | | | GCF To CAPX | | |
|---|---|---|---|---|---|---|
| | 2019 | 2018 | 2017 | 2019 | 2018 | 2017 |
| AMERICAN STATES WATER CO | 25.3 | 23.7 | 31.8 | 83.4 | 78.0 | 106.8 |
| AMERICAN WATER WORKS CO INC | 14.6 | 15.0 | 17.8 | 84.5 | 81.6 | 95.7 |
| ARTESIAN RESOURCES -CL A | 13.7 | 18.5 | 26.9 | 51.8 | 50.5 | 76.5 |
| CALIFORNIA WATER SERVICE GP | 16.9 | 18.8 | 23.1 | 61.5 | 60.8 | 71.8 |
| ESSENTIAL UTILITIES, INC. | 11.4 | 11.8 | 17.5 | 64.4 | 62.7 | 78.4 |
| MIDDLESEX WATER CO | 17.6 | 22.0 | 25.8 | 52.1 | 63.7 | 89.3 |
| SJW GROUP | 6.1 | 15.7 | 23.3 | 52.5 | 61.3 | 75.4 |
| YORK WATER CO | 21.7 | 21.0 | 22.9 | 108.9 | 119.7 | 85.2 |
| Median | 15.8 | 18.7 | 23.2 | 63.0 | 63.2 | 81.8 |

| | 2019 | 2018 | 2017 |
|---|---|---|---|
| Pre-Tax Interest Coverage - Including AFC(3)(x) | 3.6 | 3.6 | 4.4 |
| Post-Tax Interest Coverage - Including AFC(3)(x) | 2.9 | 3.0 | 3.5 |
| GCF / Interest Coverage(4)(x) | 4.7 | 4.9 | 5.9 |
| GCF / Tot. Debt(7)(%) | 15.8 | 18.7 | 23.2 |
| GCF / Construction(6)(%) | 63.0 | 63.2 | 81.8 |

*Bulletin No. 193*

*1912 to January 1, 2021*

# The Handy-Whitman Index® of Public Utility Construction Costs™

# *Trends of Construction Costs*

COMPILED & PUBLISHED BY
**Whitman, Requardt & Associates, LLP**
**Engineers, Architects and Planners**
**801 South Caroline Street**
**Baltimore, Maryland 21231**
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|---|---|---|
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| North Central Region | G-3 | G-3-1 |
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|---|---|---|
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# TRENDS OF PUBLIC UTILITY CONSTRUCTION COSTS

## GEOGRAPHIC REGIONS

# FOREWORD

## Tradition of Quality

The Handy-Whitman Index of Public Utility Construction Costs has been published continuously since 1924. Formerly the Handy Index, Bulletin Nos. 1 through 15 were developed by William W. Handy of Baltimore who had wide valuation experience in public utilities. *He believed that valuation studies should not be confined to rate cases but should be kept alive to the benefit of the utility industry.* He began publishing index numbers for electric and gas construction cost trends. Carrying on with the *tradition of quality*, after Mr. Handy's death, we continued publication for his estate beginning with Bulletin 16. Then, January 1, 1950, Whitman, Requardt and Associates, LLP purchased rights to the publication and have since been the sole publishers.

The name Handy-Whitman Index was adopted for Bulletin No. 53 and succeeding issues to combine the names of Mr. Handy and Ezra B. Whitman, a well-known valuation engineer. In 1957 an index of water utility construction costs was added. Mr. Whitman was a consultant on the publication of the Index until his death in 1963.

## Whitman, Requardt and Associates, LLP

Ezra B. Whitman, a well-known valuation engineer was one of the founders of our firm. Major Whitman, as he was known from his World War I service, had already made a name for himself. Prior to the founding of the firm in 1915, Major Whitman had been President and Chief Engineer of the Water Board of the City of Baltimore. He designed the first rapid sand filtration plant serving a major city while he was the Baltimore Water Engineer. He was also president of the American Society of Civil Engineers and of the American Institute of Consulting Engineers and a chairman of the Public Service Commission of Maryland.

The Handy-Whitman Index is prepared especially for electric, gas and water utilities and is the only known publication of its kind available to the public. The list of subscribers is international and includes operating utilities, regulatory bodies, valuation engineers, equipment industries, insurance companies and reference libraries.

## Tradition of Quality Continued

Since 1915, Whitman, Requardt and Associates, LLP, has been an independent consulting engineering firm organized to serve government, industry and private enterprise.

The firm has steadily expanded its engineering capabilities, providing complete services for civil, sanitary, structural, mechanical and electrical engineering and architectural projects from job inception through construction management. Construction cost data from utility projects of all types are available from design and valuation assignments. The staff is composed of specialists in these and related disciplines who bring a diverse professional and academic expertise to each assignment. A full-time staff is maintained specifically for preparing the Handy-Whitman Index.

## Methods of Preparation of Indexes

An index number is a percentage ratio between the cost of an item at any stated time and its cost at a base period, or:

$$\text{Index Number} = \frac{\text{cost at stated time}}{\text{cost at base period}} \times 100$$

Index numbers have been prepared for many items, including wage rates, cost-of-living, material and equipment costs, and financial transactions. In the Handy-Whitman Index, index numbers have been developed for Building Construction, Electric Utility Construction, Gas Utility Construction and Water Utility Construction. Prices of basic materials such as cement, sand, gravel, cast iron pipe, wire, etc., are obtained from publications such as Engineering News-Record and checked against prices actually being paid for such materials. Labor cost trends are computed from labor rates obtained from sources such as the Construction Labor Research Council. Prices and cost trends of equipment are obtained from nationally recognized manufacturers, and operating utilities.

Handy-Whitman Index numbers are developed from wage rates and prices prevailing on January 1 and July 1 each year. The index numbers are generally based on 1973 = 100, although those items of recent origin are based on a later year.

The proportions of basic materials, labor, equipment and other cost components used in the Handy-Whitman Index are based on analyses developed during valuation and design assignments and on data furnished by utilities and industrial sources willing to assist with the Index. These data are reviewed continuously, and weightings and components are revised as required. This review assures that the indexes published reflect current construction practice.

# FOREWORD

### Geographic Regions

To reflect differing cost trends throughout the 48 contiguous states, the index has been divided into six geographical regions of similar characteristics. They are shown on the accompanying map.

### Use of Index Numbers

Handy-Whitman Index numbers have been widely used to trend earlier valuations and original cost records to estimate reproduction cost at prices prevailing at a certain date. The use of indexes for an appropriate property item or group will provide a reliable guide to changes in cost. Cost trends are given for all the important items of property. The electric and gas groups are arranged by the Federal Energy Regulatory Commission Uniform System of Accounts. The water property accounts are arranged to follow the classification of the National Association of Regulatory Utility Commissioners and the American Water Works Association.

The Handy-Whitman Index will furnish a yardstick for the fluctuations in value of property which will be satisfactory for many purposes. In rate cases, when a more exact determination of value is desired, however, the Index must be used carefully. Average prices and cost trends are used to develop the Index, and any direct application of cost trends without checking with actual local experience may not be accepted without controversy. When local experience is compared with the index and the correlation between the two trends is determined, the result is satisfactory. Costs trended by such a method are used to assist in establishing a rate base.

Indexes in these bulletins are used to trend earlier valuations or original cost records for insurance purposes.

The Handy-Whitman Index has a general application in valuations of all types of property. The building construction cost trends may be used wherever similar items of property are to be compared. Many of the other trends may be used for related items in other industries because of their similarity.

State-of-the-art changes often affect costs independently of inflation. New regulatory and environmental requirements, changes in work rules and improved design standards, for instance, increase construction costs even though the price of wages, materials and equipment may be static. Trended construction costs will not reflect such changes. However, trended costs are a reasonably accurate measure of the cost of reproducing actual plant.

Although every effort is made to maintain accuracy, Whitman, Requardt and Associates, LLP disclaim any responsibility for the use of these indexes, because local conditions may vary.

No guarantee or warranty of any kind is made in the sale of the Handy-Whitman Index. Published numbers are occasionally subject to change based upon receipt of new or different information. These numbers will be bolded.

Further inquiries on electric, gas and water indexes should be addressed to Whitman, Requardt and Associates, LLP.

### Total Electric Plant and Function

Three indexes are provided for total plant. The first is for all steam generation and the other two for weighted combinations of steam and nuclear, and steam and hydro generation. Indexes are also provided for each function.

Indexes are not maintained for plant accounts 323,324,325,341,345 and 346. We believe that indexes for comparable accounts in other functions are sufficiently accurate for these accounts.

The indexes for total nuclear production and total other production incorporate comparable indexes from the steam production function for the accounts not listed.

### Value of Index Numbers

We believe that present-day reproduction cost of any property can be calculated more accurately using index numbers than by repricing a complete inventory.

Trending the controlling items of property in any utility by the index method saves time and effort in arriving at a valuation. Analyzing and determining cost trends for all of the great numbers of articles of plant that represent only a very small proportion of the value of the utility is not necessary. They may be assumed to follow in general the trend of the controlling items, and the fluctuations in value above or below the trends of the controlling items will tend to offset each other and have a very slight effect on the total value.

### Comments on Bulletin No. 193

During the twelve-month period ending January 1, 2021, the average index of all geographical regions for Total Gas Plant increased 0.9%, and the comparable index for Electric Plant-All Steam Generation increased 4.5%.

**May 2021**
**Whitman, Requardt and Associates, LLP**

| | BCWSA | | | ACSA | | | ALTOONA WATER AUTHORITY | | | CRWA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **2019** | **2018** | **2017** | **2019** | **2018** | **2017** | **2019** | **2018** | **2017** | **2019** | **2018** | **2017** |
| NET Property, plant and equipment | 453,174,193 | 444,814,214 | 447,915,121 | 629,097,945 | 622,343,318 | 608,600,195 | 100,528,196 | 106,598,286 | 112,668,376 | 203,420,262 | 178,131,377 | 156,382,360 |
| Operating Income | 19,821,564 | 15,116,318 | 19,747,701 | 75,382,370 | 68,023,690 | 73,355,348 | 12,227,127 | 14,022,174 | 8,988,742 | 21,336,089 | 20,313,529 | 15,628,727 |
| ROR/N PPE | 4.37% | 3.40% | 4.41% | 11.98% | 10.93% | 12.05% | 12.16% | 13.15% | 7.98% | 10.49% | 11.40% | 9.99% |
| 3-Year Average | 4.06% | | | 11.66% | | | 11.10% | | | 10.63% | | |

| | |
|---|---|
| Median of Each Year | 5.08% |
| Median of Each Entity | 5.90% |
| Conclusion | 5.49% |

| | CHESTER WATER AUTHORITY | | | ERIE CITY WATER AUTHORITY | | | LASA* | | | RAWA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **2019** | **2018** | **2017** | **2019** | **2018** | **2017** | **2019** | **2018** | **2017** | **2019** | **2018** | **2017** |
| NET Property, plant and equipment | 282,920,765 | 277,881,505 | 271,133,389 | 194,099,358 | 191,070,499 | 187,981,855 | 140,405,221 | 142,318,075 | 141,219,375 | 66,455,706 | 64,973,550 | 59,036,648 |
| Operating Income | 4,705,194 | 1,487,430 | 2,795,223 | 9,549,652 | 10,005,109 | 11,356,179 | 6,901,580 | 6,054,460 | 5,520,628 | 3,556,133 | 2,945,874 | 5,516,028 |
| ROR/N PPE | 1.66% | 0.54% | 1.03% | 4.92% | 5.24% | 6.04% | 4.92% | 4.25% | 3.91% | 5.35% | 4.53% | 9.34% |
| 3-Year Average | 1.08% | | | 5.40% | | | 4.36% | | | 6.41% | | |
| Median of Each Year | | | | | | | | | | | | |
| Median of Each Entity | | | | | | | | | | | | |
| Conclusion | | | | | | | | | | | | |

* Fiscal year 3/31

| | WCMA* | | | PITTSBURGH WATER & SEWER | | |
|---|---|---|---|---|---|---|
| | **2019** | **2018** | **2017** | **2019** | **2018** | **2017** |
| NET Property, plant and equipment | 590,631,677 | 554,245,152 | 510,067,669 | 830,578,000 | 757,480,000 | 689,807,000 |
| Operating Income | 23,281,341 | 27,079,696 | 21,532,860 | 65,808,000 | 61,660,000 | 29,604,000 |
| ROR/N PPE | 3.94% | 4.89% | 4.22% | 7.92% | 8.14% | 4.29% |
| 3-Year Average | 4.35% | | | 6.78% | | |

*Fiscal Year 3/31

Median of Each Year

Median of Each Entity

Conclusion

BUCKS COUNTY WATER AND SEWER AUTHORITY
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
DECEMBER 31, 2019 AND 2018

## NOTE 6: SEGMENT INFORMATION

As of and for the years ended December 31, 2019 and 2018 segment information is as follows:

| | 2019 | | | |
|---|---|---|---|---|
| Assets | Sewer System | Water System | Administrative Account | Totals |
| Current Assets | | | | |
| Cash and Investments | $ 14,429,267 | $ 11,367,223 | $ 3,126,116 | $ 28,922,606 |
| Accounts Receivable, Unbilled Revenue and Net Intercompany Transfers | 6,989,222 | 17,310,475 | (9,104,024) | 15,195,673 |
| Other | 608,655 | 83,531 | - | 692,186 |
| Non-Current Assets | | | | |
| Restricted Assets | 48,050,977 | 12,345,721 | 4,370,043 | 64,766,741 |
| Capital Assets | 304,158,678 | 142,902,978 | 6,112,537 | 453,174,193 |
| Total Assets | 374,236,799 | 184,009,928 | 4,504,672 | 562,751,399 |
| Deferred Outflows of Resources | | | | |
| Deferred Amount from Debt Refundings | 2,839,649 | 5,978,362 | - | 8,818,011 |
| Pension: Changes in Assumptions | 465,033 | 126,073 | - | 591,106 |
| Pension: Difference Between Expected and Actual Experience | 674,207 | 130,920 | - | 805,127 |
| Pension: Difference Between Projected and Actual Earnings on Investments | 1,437,679 | 253,707 | - | 1,691,386 |
| Pension: Contributions Made Subsequent to Measurement Date | 3,275,976 | 1,050,776 | - | 4,326,752 |
| OPEB: Difference Between Expected and Actual Experience | 29,645 | 5,232 | - | 34,877 |
| OPEB: Difference Between Projected and Actual Earnings on Plan Investments | 1,676 | 296 | - | 1,972 |
| Total Deferred Outflows of Resources | 8,723,865 | 7,545,366 | - | 16,269,231 |
| Liabilities and Net Position | | | | |
| Liabilities | | | | |
| Current Liabilities | 29,501,359 | 3,745,556 | 789,063 | 34,035,978 |
| Non-Current Liabilities | 150,796,046 | 88,247,692 | 3,715,609 | 242,759,347 |
| Total Liabilities | 180,297,405 | 91,993,248 | 4,504,672 | 276,795,325 |
| Deferred Inflows of Resources | | | | |
| Pension: Changes in Assumptions | 27,086 | 5,032 | - | 32,118 |
| Pension: Difference Between Projected and Actual Earnings on Investments | (165,256) | 165,256 | - | - |
| OPEB: Changes in Assumptions | 273,297 | 48,229 | - | 321,526 |
| Proceeds from Sale of Future Revenues | - | 3,967,975 | - | 3,967,975 |
| Total Deferred Inflows of Resources | 135,127 | 4,186,492 | - | 4,321,619 |
| Net Position | | | | |
| Net Investment in Capital Assets | 156,941,099 | 53,025,395 | 6,112,537 | 216,079,031 |
| Restricted for Capital Activity | 5,071,173 | 6,352,002 | 654,434 | 12,077,609 |
| Restricted for Debt Service | 25,520,284 | 5,993,716 | - | 31,514,000 |
| Unrestricted | 14,995,576 | 30,004,441 | (6,766,971) | 38,233,046 |
| Total Net Position | $ 202,528,132 | $ 95,375,554 | $ - | $ 297,903,686 |

BUCKS COUNTY WATER AND SEWER AUTHORITY
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
DECEMBER 31, 2019 AND 2018

## NOTE 6: SEGMENT INFORMATION (CONTINUED)

| | 2018 | | | |
|---|---|---|---|---|
| Assets | Sewer System | Water System | Administrative Account | Totals |
| Current Assets | | | | |
| Cash and Investments | $ 13,996,611 | $ 9,258,718 | $ 1,343,631 | $ 24,598,960 |
| Accounts Receivable, Unbilled Revenue and Net Intercompany Transfers | 6,114,899 | 18,137,594 | (6,574,182) | 17,678,311 |
| Other | 610,549 | 85,000 | - | 695,549 |
| Non-Current Assets | | | | |
| Restricted Assets | 47,524,162 | 12,202,731 | 3,988,462 | 63,715,355 |
| Capital Assets | 293,945,954 | 145,484,365 | 5,383,895 | 444,814,214 |
| Total Assets | 362,192,175 | 185,168,408 | 4,141,806 | 551,502,389 |
| Deferred Outflows of Resources | | | | |
| Deferred Amount from Debt Refundings | 3,503,369 | 6,462,562 | - | 9,965,931 |
| Pension: Changes in Assumptions | 632,513 | 155,628 | - | 788,141 |
| Pension: Difference Between Expected and Actual Experience | 162,431 | 40,607 | - | 203,038 |
| Pension: Contributions Made Subsequent to Measurement Date | 6,428,229 | 1,607,056 | - | 8,035,285 |
| Total Deferred Outflows of Resources | 10,726,542 | 8,265,853 | - | 18,992,395 |
| Liabilities and Net Position | | | | |
| Liabilities | | | | |
| Current Liabilities | 24,140,550 | 3,373,492 | 645,278 | 28,159,320 |
| Non-Current Liabilities | 156,519,961 | 91,561,281 | 3,496,528 | 251,577,770 |
| Total Liabilities | 180,660,511 | 94,934,773 | 4,141,806 | 279,737,090 |
| Deferred Inflows of Resources | | | | |
| Pension: Changes in Assumptions | 36,187 | 6,638 | - | 42,825 |
| Pension: Difference Between Projected and Actual Earnings on Investments | 2,478,081 | 619,520 | - | 3,097,601 |
| Proceeds from the Sale of Future Revenues | - | 4,140,496 | - | 4,140,496 |
| Total Deferred Inflows of Resources | 2,514,268 | 4,766,654 | - | 7,280,922 |
| Net Position | | | | |
| Net Investment in Capital Assets | 129,539,966 | 61,197,479 | 5,383,898 | 196,121,343 |
| Restricted for Capital Activity | 18,722,168 | - | 491,930 | 19,214,098 |
| Restricted for Debt Service | 28,801,994 | 6,333,246 | - | 35,135,240 |
| Unrestricted | 12,679,810 | 26,202,109 | (5,875,828) | 33,006,091 |
| Total Net Position | $ 189,743,938 | $ 93,732,834 | $ - | $ 283,476,772 |

# BUCKS COUNTY WATER AND SEWER AUTHORITY
## STATEMENTS OF NET POSITION
## DECEMBER 31, 2019 AND 2018

| ASSETS | 2019 | 2018 |
|---|---|---|
| Current Assets | | |
| Cash and Cash Equivalents | $ 5,870,876 | $ 3,803,232 |
| Investments | 23,051,730 | 20,795,728 |
| Accounts Receivable, Net of Allowance for Doubtful Accounts | 6,175,101 | 7,707,994 |
| Unbilled Revenue Receivable | 9,020,572 | 9,970,317 |
| Prepaid Expenses | 692,186 | 695,549 |
| Total Current Assets | 44,810,465 | 42,972,820 |
| Non-Current Assets | | |
| Restricted Assets | | |
| Cash and Cash Equivalents | 3,922,837 | 3,541,256 |
| Investments | 60,095,138 | 59,883,991 |
| Interest Receivable | 748,766 | 290,108 |
| Total Restricted Assets | 64,766,741 | 63,715,355 |
| Capital Assets | | |
| Land, Rights-of-Way and CIP | 77,851,553 | 79,376,857 |
| Other Capital Assets, Net of Accumulated Depreciation | 375,322,640 | 365,437,357 |
| Total Capital Assets, Net | 453,174,193 | 444,814,214 |
| Total Non-Current Assets | 517,940,934 | 508,529,569 |
| Total Assets | 562,751,399 | 551,502,389 |
| Deferred Outflows of Resources | | |
| Deferred Amount from Debt Refundings | 8,818,011 | 9,965,931 |
| Pension: Changes in Assumptions | 591,106 | 788,141 |
| Pension: Difference Between Expected and Actual Experience | 805,127 | 203,038 |
| Pension: Difference Between Projected and Actual Earnings on Investments | 1,691,386 | - |
| Pension: Contributions Made Subsequent to Measurement Date | 4,326,752 | 8,035,285 |
| OPEB: Difference Between Expected and Actual Experience | 34,877 | - |
| OPEB: Difference Between Projected and Actual Earnings on Plan Investments | 1,972 | - |
| Total Deferred Outflows of Resources | 16,269,231 | 18,992,395 |
| **LIABILITIES AND NET POSITION** | | |
| Current Liabilities | | |
| Accounts Payable and Accrued Expenses | 11,887,091 | 6,872,214 |
| Current Portion of Bonds Payable | 21,345,000 | 20,460,000 |
| Interest Payable | 803,887 | 827,106 |
| Total Current Liabilities | 34,035,978 | 28,159,320 |
| Non-Current Liabilities | | |
| Customer and Developer Deposits | 3,715,610 | 3,496,528 |
| Bonds Payable, Net of Unamortized Bond Discount and Premium | 233,209,683 | 239,927,805 |
| Net Pension Liability | 1,880,256 | 2,296,351 |
| Net OPEB Liability | 3,953,798 | 5,857,086 |
| Total Non-Current Liabilities | 242,759,347 | 251,577,770 |
| Total Liabilities | 276,795,325 | 279,737,090 |
| Deferred Inflows of Resources | | |
| Pension: Changes in Assumptions | 32,118 | 42,825 |
| Pension: Difference Between Projected and Actual Earnings on Investments | - | 3,097,601 |
| OPEB: Changes in Assumptions | 321,526 | - |
| Proceeds from Sale of Future Revenues | 3,967,975 | 4,140,496 |
| Total Deferred Inflows of Resources | 4,321,619 | 7,280,922 |
| Net Position | | |
| Net Investment in Capital Assets | 216,079,031 | 196,121,343 |
| Restricted for Capital Activity | 12,077,609 | 19,214,098 |
| Restricted for Debt Service | 31,514,000 | 35,135,240 |
| Unrestricted | 38,233,046 | 33,006,091 |
| Total Net Position | $ 297,903,686 | $ 283,476,772 |

See accompanying notes to the financial statements.

# BUCKS COUNTY WATER AND SEWER AUTHORITY
## STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION
## YEARS ENDED DECEMBER 31, 2019 AND 2018

| | 2019 | 2018 |
|---|---|---|
| Operating Revenues | | |
| Retail Sewer Service | $ 49,612,675 | $ 48,634,267 |
| Wholesale Sewer Service | 20,728,839 | 19,105,200 |
| Retail Water Service | 11,481,175 | 11,755,194 |
| Wholesale Water Service | 4,315,851 | 4,357,235 |
| Improvement and Tapping Fees | 580,375 | 279,425 |
| Other Revenues | 5,875,885 | 4,697,553 |
| Total Operating Revenues | 92,594,800 | 88,828,874 |
| Expenses | | |
| Operating Expenses | | |
| Sewage Treatment and Water Procurement | | |
| Sewage Treatment | 20,534,850 | 20,862,709 |
| Water Procurement | 5,352,970 | 5,611,587 |
| Total Sewage Treatment and Water Procurement | 25,887,820 | 26,474,296 |
| Plant Operations | | |
| Payroll and Related Costs | 1,927,213 | 1,592,995 |
| Repairs and Maintenance | 1,292,778 | 1,251,844 |
| Electricity | 405,213 | 461,808 |
| Water and Sewage Testing | 256,279 | 218,091 |
| Total Plant Operations | 3,881,483 | 3,524,738 |
| Collection, Transmission and Distribution Service | | |
| Payroll and Related Costs | 9,070,825 | 8,191,888 |
| Repairs and Maintenance | 2,347,631 | 1,992,003 |
| Electricity | 807,210 | 995,191 |
| Other Related Costs | 274,544 | 298,459 |
| Total Collection, Transmission and Distribution Service | 12,500,210 | 11,477,541 |
| Total Operating Expenses | 42,269,513 | 41,476,575 |
| General and Administrative Expenses | | |
| Payroll and Related Costs | 4,536,162 | 6,780,772 |
| Professional Fees | 2,732,816 | 1,981,255 |
| Insurance | 522,165 | 476,597 |
| Other | 3,199,536 | 4,933,790 |
| Total General and Administrative Expense | 10,990,679 | 14,172,414 |
| Total Expenses | 53,260,192 | 55,648,989 |
| Income From Operations Before Depreciation | 39,334,608 | 33,179,885 |
| Depreciation | (19,513,044) | (18,063,567) |
| Operating Income | 19,821,564 | 15,116,318 |
| Nonoperating Revenue (Expense) | | |
| Interest Expense, Net of Amounts Capitalized | (8,517,857) | (9,017,615) |
| Investment Income | 2,078,449 | 2,015,753 |
| Other | - | 4,824 |
| Improvement and Tapping Fees | 1,262,884 | 2,750,737 |
| Amortization | (218,126) | (51,377) |
| Total Nonoperating Expense | (5,394,650) | (4,297,678) |
| Increase In Net Position, Before Contributed Capital | 14,426,914 | 10,818,640 |
| Contributed Capital | - | 779,914 |
| Net Position - Beginning of Year, as Previously Reported | 283,476,772 | 275,130,457 |
| Adjustment for GASB No. 75 | - | (3,252,239) |
| Net Position - Beginning of Year, Restated | 283,476,772 | 271,878,218 |
| Net Position - End of Year | $ 297,903,686 | $ 283,476,772 |

See accompanying notes to the financial statements.

BUCKS COUNTY WATER AND SEWER AUTHORITY
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
DECEMBER 31, 2018 AND 2017

## NOTE 6: SEGMENT INFORMATION

As of and for the years ended December 31, 2018 and 2017 segment information is as follows:

| | 2018 | | | |
|---|---|---|---|---|
| Assets | Sewer System | Water System | Administrative Account | Totals |
| Current Assets | | | | |
| Cash and Investments | $ 13,996,611 | $ 9,258,718 | $ 1,343,631 | $ 24,598,960 |
| Accounts Receivable and Unbilled Revenue | 6,114,899 | 18,137,594 | (6,574,182) | 17,678,311 |
| Other | 610,549 | 85,000 | - | 695,549 |
| Non-Current Assets | | | | |
| Restricted Assets | 47,524,162 | 12,202,731 | 3,988,462 | 63,715,355 |
| Capital Assets | 293,945,954 | 145,484,365 | 5,383,895 | 444,814,214 |
| Total Assets | 362,192,175 | 185,168,408 | 4,141,806 | 551,502,389 |
| Deferred Outflows of Resources | | | | |
| Deferred Amount from Debt Refundings | 3,503,369 | 6,462,562 | - | 9,965,931 |
| Changes in Assumptions | 632,513 | 155,628 | - | 788,141 |
| Difference Between Expected and Actual Experience | 162,431 | 40,607 | - | 203,038 |
| Contributions Made Subsequent to Measurement Date | 6,428,229 | 1,607,056 | - | 8,035,285 |
| Total Deferred Outflows of Resources | 10,726,542 | 8,265,853 | - | 18,992,395 |
| Liabilities and Net Position | | | | |
| Liabilities | | | | |
| Current Liabilities | 24,140,550 | 3,373,492 | 645,278 | 28,159,320 |
| Non-Current Liabilities | 156,519,961 | 91,561,281 | 3,496,528 | 251,577,770 |
| Total Liabilities | 180,660,511 | 94,934,773 | 4,141,806 | 279,737,090 |
| Deferred Inflows of Resources | | | | |
| Changes in Assumptions | 36,187 | 6,638 | - | 42,825 |
| Difference Between Projected and Actual Earnings on Investments | 2,478,081 | 619,520 | - | 3,097,601 |
| Proceeds from the Sale of Future Revenues | - | 4,140,496 | - | 4,140,496 |
| Total Deferred Inflows of Resources | 2,514,268 | 4,766,654 | - | 7,280,922 |
| Net Position | | | | |
| Net Investment in Capital Assets | 129,539,966 | 61,197,479 | 5,383,898 | 196,121,343 |
| Restricted for Capital Activity | 18,722,168 | - | 491,930 | 19,214,098 |
| Restricted for Debt Service | 28,801,994 | 6,333,246 | - | 35,135,240 |
| Unrestricted | 12,679,810 | 26,202,109 | (5,875,828) | 33,006,091 |
| Total Net Position | $ 189,743,938 | $ 93,732,834 | $ - | $ 283,476,772 |

BUCKS COUNTY WATER AND SEWER AUTHORITY
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
DECEMBER 31, 2018 AND 2017

## NOTE 6: SEGMENT INFORMATION (CONTINUED)

| | 2017 | | | |
|---|---|---|---|---|
| Assets | Sewer System | Water System | Administrative Account | Totals |
| Current Assets | | | | |
| Cash and Investments | $ 8,904,986 | $ 11,194,811 | $ 1,393,738 | $ 21,493,535 |
| Accounts Receivable & Unbilled Revenue | 22,076,404 | 4,854,323 | (6,223,024) | 20,707,703 |
| Other | 576,394 | 79,590 | - | 655,984 |
| Non-Current Assets | | | | |
| Restricted Assets | 48,012,438 | 22,338,930 | 3,907,802 | 74,259,170 |
| Capital Assets | 294,731,969 | 147,991,214 | 5,191,938 | 447,915,121 |
| Total Assets | 374,302,191 | 186,458,868 | 4,270,454 | 565,031,513 |
| Deferred Outflows of Resources | | | | |
| Deferred Amount from Debt Refundings | 4,223,088 | 6,924,098 | - | 11,147,186 |
| Changes in Assumptions | 788,141 | 197,035 | - | 985,176 |
| Difference Between Expected and Actual Experience | 208,819 | 52,205 | - | 261,024 |
| Difference Between Projected and Actual Earnings on Investments | 680,277 | 170,069 | - | 850,346 |
| Contributions Made Subsequent to Measurement Date | 1,562,388 | 390,597 | - | 1,952,985 |
| Total Deferred Outflows of Resources | 7,462,713 | 7,734,004 | - | 15,196,717 |
| Liabilities and Net Position | | | | |
| Liabilities | | | | |
| Current Liabilities | 22,888,994 | 3,518,492 | 809,871 | 27,217,357 |
| Non-Current Liabilities | 175,965,552 | 94,087,732 | 3,460,583 | 273,513,867 |
| Total Liabilities | 198,854,546 | 97,606,224 | 4,270,454 | 300,731,224 |
| Deferred Inflows of Resources | | | | |
| Changes in Assumptions | 42,826 | 10,706 | - | 53,532 |
| Proceeds from the Sale of Future Revenues | - | 4,313,017 | - | 4,313,017 |
| Total Deferred Inflows of Resources | 42,826 | 4,323,723 | - | 4,366,549 |
| Net Position | | | | |
| Net Investment in Capital Assets | 128,626,008 | 55,498,881 | 5,191,931 | 189,316,820 |
| Restricted for Capital Activity | 6,277,232 | 16,463,309 | 447,206 | 23,187,747 |
| Restricted for Debt Service | 24,622,642 | 5,870,408 | - | 30,493,050 |
| Unrestricted | 23,341,650 | 14,430,327 | (5,639,137) | 32,132,840 |
| Total Net Position | $ 182,867,532 | $ 92,262,925 | $ - | $ 275,130,457 |

BUCKS COUNTY WATER AND SEWER AUTHORITY
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
DECEMBER 31, 2018 AND 2017

## NOTE 6: SEGMENT INFORMATION (CONTINUED)

| | 2018 | | |
|---|---|---|---|
| | Sewer System | Water System | Totals |
| Operating Revenues | | | |
| Retail Sewer Service | $ 48,634,267 | $ - | $ 48,634,267 |
| Wholesale Sewer Service | 19,105,200 | - | 19,105,200 |
| Retail Water Service | - | 11,755,194 | 11,755,194 |
| Wholesale Water Service | - | 4,357,235 | 4,357,235 |
| Improvement and Tapping Fees | - | 279,425 | 279,425 |
| Other Revenues | 3,130,165 | 1,567,388 | 4,697,553 |
| Total Operating Revenues | 70,869,632 | 17,959,242 | 88,828,874 |
| Expenses | | | |
| Operating Expenses | | | |
| Sewage Treatment and Water Procurement | | | |
| Sewage Treatment | 20,862,709 | - | 20,862,709 |
| Water Procurement | - | 5,611,587 | 5,611,587 |
| Total Sewage and Water Procurement | 20,862,709 | 5,611,587 | 26,474,296 |
| Plant Operations | | | |
| Payroll and Related Costs | 1,592,995 | - | 1,592,995 |
| Repairs and Maintenance | 1,251,844 | - | 1,251,844 |
| Electricity | 461,808 | - | 461,808 |
| Water and Sewage Testing | 218,091 | - | 218,091 |
| Total Plant Operations | 3,524,738 | - | 3,524,738 |
| Collection, Transmission and Distribution Service | | | |
| Payroll and related costs | 6,404,591 | 1,787,297 | 8,191,888 |
| Repairs and maintenance | 1,660,514 | 331,489 | 1,992,003 |
| Electricity | 822,812 | 172,379 | 995,191 |
| Other related costs | 209,224 | 89,235 | 298,459 |
| Total Collection, Transmission and Distribution Service Expense | 9,097,141 | 2,380,400 | 11,477,541 |
| Total Operating Expense | 33,484,588 | 7,991,987 | 41,476,575 |
| General and Administrative Expenses | | | |
| Payroll and related costs | 5,714,319 | 1,066,453 | 6,780,772 |
| Professional fees | 1,747,815 | 233,440 | 1,981,255 |
| Insurance | 395,522 | 81,075 | 476,597 |
| Other | 4,821,938 | 111,852 | 4,933,790 |
| Total General and Administrative Expenses | 12,679,594 | 1,492,820 | 14,172,414 |
| Income from Operations before depreciation | 24,705,450 | 8,474,435 | 33,179,885 |
| Depreciation | (14,696,296) | (3,367,271) | (18,063,567) |
| Operating Income | 10,009,154 | 5,107,164 | 15,116,318 |
| Nonoperating Revenue (Expense) | | | |
| Interest Expense, net of Amounts Capitalized | (5,405,915) | (3,611,700) | (9,017,615) |
| Investment Income | 1,623,182 | 392,571 | 2,015,753 |
| Other | 4,824 | - | 4,824 |
| Improvement and Tapping Fees | 2,750,737 | - | 2,750,737 |
| Amortization | (51,377) | - | (51,377) |
| Total Nonoperating Expense | (1,078,549) | (3,219,129) | (4,297,678) |
| Increase in Net Position, Before Contributed Capital | 8,930,605 | 1,888,035 | 10,818,640 |
| Contributed Capital | 710,204 | 69,710 | 779,914 |
| Net Position - Beginning of Year, as Previously Reported | 182,867,532 | 92,262,925 | 275,130,457 |
| Adjustment for GASB No. 75 | (2,764,403) | (487,836) | (3,252,239) |
| Net Position - Beginning of Year, Restated | 180,103,129 | 91,775,089 | 271,878,218 |
| Net Position, End of Year | $ 189,743,938 | $ 93,732,834 | $ 283,476,772 |

BUCKS COUNTY WATER AND SEWER AUTHORITY
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
DECEMBER 31, 2018 AND 2017

NOTE 6: SEGMENT INFORMATION (CONTINUED)

| | 2017 | | |
|---|---|---|---|
| | Sewer System | Water System | Totals |
| Operating Revenues | | | |
| Retail Sewer Service | $ 45,876,948 | $ - | $ 45,876,948 |
| Wholesale Sewer Service | 15,432,198 | - | 15,432,198 |
| Retail Water Service | - | 11,949,872 | 11,949,872 |
| Wholesale Water Service | - | 6,647,724 | 6,647,724 |
| Improvement & Tapping Fees | - | 232,767 | 232,767 |
| Other Revenues | 3,249,727 | 1,629,253 | 4,878,980 |
| Total Operating Revenues | 64,558,873 | 20,459,616 | 85,018,489 |
| Expenses | | | |
| Operating Expenses | | | |
| Sewage Treatment and Water Procurement | | | |
| Sewage Treatment | 17,676,455 | - | 17,676,455 |
| Water Procurement | - | 6,530,098 | 6,530,098 |
| Total Sewage and Water Procurement | 17,676,455 | 6,530,098 | 24,206,553 |
| Plant Operations | | | |
| Payroll and Related Costs | 1,566,670 | - | 1,566,670 |
| Repairs and Maintenance | 958,914 | - | 958,914 |
| Electricity | 407,469 | - | 407,469 |
| Water and Sewage Testing | 219,714 | - | 219,714 |
| Total Plant Operations | 3,152,767 | - | 3,152,767 |
| Collection, Transmission and Distribution Service | | | |
| Payroll and related costs | 6,419,918 | 1,969,201 | 8,389,119 |
| Repairs and maintenance | 1,314,607 | 262,103 | 1,576,710 |
| Electricity | 672,888 | 158,476 | 831,364 |
| Other related costs | 105,932 | 65,769 | 171,701 |
| Total Collection, Transmission and Distribution Service Expense | 8,513,345 | 2,455,549 | 10,968,894 |
| Total Operating Expense | 29,342,567 | 8,985,647 | 38,328,214 |
| General and Administrative Expenses | | | |
| Payroll and related costs | 3,206,904 | 623,007 | 3,829,911 |
| Professional fees | 1,322,262 | 265,487 | 1,587,749 |
| Insurance | 353,433 | 90,023 | 443,456 |
| Other | 3,503,737 | 393,590 | 3,897,327 |
| Total General and Administrative Expenses | 8,386,336 | 1,372,107 | 9,758,443 |
| Income from Operations before depreciation | 26,829,970 | 10,101,862 | 36,931,832 |
| Depreciation | (13,769,257) | (3,414,874) | (17,184,131) |
| Operating Income | 13,060,713 | 6,686,988 | 19,747,701 |
| Non-Operating Revenue (Expense) | | | |
| Interest Expense, net of Amounts Capitalized | (4,463,766) | (4,352,345) | (8,816,111) |
| Investment Income | 1,224,604 | 435,695 | 1,660,299 |
| Improvement and Tapping Fees | 1,497,598 | - | 1,497,598 |
| Amortization | (280,152) | (736,050) | (1,016,202) |
| Total Non-Operating Expense | (2,021,716) | (4,652,700) | (6,674,416) |
| Increase in Net Position | 11,038,997 | 2,034,288 | 13,073,285 |
| Net Position, Beginning of Year | 171,828,535 | 90,228,637 | 262,057,172 |
| Net Position, End of Year | $ 182,867,532 | $ 92,262,925 | $ 275,130,457 |

BUCKS COUNTY WATER AND SEWER AUTHORITY
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
DECEMBER 31, 2018 AND 2017

## NOTE 6: SEGMENT INFORMATION (CONTINUED)

| | 2018 | | | |
|---|---|---|---|---|
| | Sewer System | Water System | Administrative Account | Totals |
| Cash Flows from Operating Activities | | | | |
| Cash Received from Customers | $ 72,660,789 | $ 17,539,631 | $ - | $ 90,200,420 |
| Payments to Suppliers | (31,373,585) | (6,551,971) | - | (37,925,556) |
| Payroll and Related Payments | (13,711,973) | (3,095,494) | - | (16,807,467) |
| Other Operating (Payments) / Transactions | 12,644,098 | (13,022,354) | 222,511 | (155,745) |
| Net Cash Provided from Operations | 40,219,329 | (5,130,188) | 222,511 | 35,311,652 |
| Cash Flows from Capital and Related Financing Activities | | | | |
| Acquisition and Construction of Capital Assets | (12,799,197) | (860,416) | (191,958) | (13,851,571) |
| Improvement and Tapping Fees | 2,750,737 | - | - | 2,750,737 |
| Bond Principal Repayments | (17,784,999) | (2,475,000) | - | (20,259,999) |
| Interest Paid | (6,364,234) | (3,537,201) | - | (9,901,435) |
| Net Cash Used in Capital and Related Financing Activities | (34,197,693) | (6,872,617) | (191,958) | (41,262,268) |
| Cash Flows from Investing Activities | | | | |
| Sale of Investments, Net | (5,599,131) | 12,069,155 | - | 6,470,024 |
| Interest Received | 14,790 | 392,571 | - | 407,361 |
| Net Cash Used in Investing Activities | (5,584,341) | 12,461,726 | - | 6,877,385 |
| Net Increase (Decrease) in Cash and Cash Equivalents | 437,295 | 458,921 | 30,553 | 926,769 |
| Cash and Cash Equivalents - Beginning of Year | 1,529,900 | 33,485 | 4,854,334 | 6,417,719 |
| Cash and Cash Equivalents - End of Year | $ 1,967,195 | $ 492,406 | $ 4,884,887 | $ 7,344,488 |
| Displayed as: | | | | |
| Cash and Cash Equivalents | $ 1,967,195 | $ 492,406 | $ 1,343,631 | $ 3,803,232 |
| Restricted Cash and Cash Equivalents | - | - | 3,541,256 | 3,541,256 |
| | $ 1,967,195 | $ 492,406 | $ 4,884,887 | $ 7,344,488 |
| Reconciliation of Operating Income to Net Cash Provided from Operations: | | | | |
| Operating Income | $ 10,009,154 | $ 5,107,164 | $ - | $ 15,116,318 |
| Adjustments to Reconcile Operating Income to Net Cash Provided from Operating Activities | | | | |
| Depreciation | 14,696,296 | 3,367,271 | - | 18,063,567 |
| Changes in Assets and Liabilities: | | | | |
| Receivables and Unbilled Revenue, Net | 3,276,483 | (247,091) | - | 3,029,392 |
| Prepaid Expenses | (34,155) | (5,410) | - | (39,565) |
| Intercompany Receivables (Payables) | 12,685,022 | (13,036,180) | 351,158 | - |
| Accounts Payable and Accrued Expenses | 531,336 | (121,266) | (164,592) | 245,478 |
| Interest Payable | (37,555) | 16,262 | - | (21,293) |
| Customer and Developer Deposits | - | - | 35,945 | 35,945 |
| Net Pension and OPEB Liabilities and Related Pension Deferrals | (907,252) | (210,938) | - | (1,118,190) |
| Net Cash Provided from Operations | $ 40,219,329 | $ (5,130,188) | $ 222,511 | $ 35,311,652 |

BUCKS COUNTY WATER AND SEWER AUTHORITY
NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
DECEMBER 31, 2018 AND 2017

## NOTE 6: SEGMENT INFORMATION (CONTINUED)

| | 2017 | | | |
|---|---|---|---|---|
| | Sewer System | Water System | Administrative Account | Totals |
| Cash Flows from Operating Activities | | | | |
| Cash Received from Customers | $ 62,575,421 | $ 20,069,302 | $ - | $ 82,644,723 |
| Payments to Suppliers | (25,232,863) | (7,175,732) | 457,880 | (31,950,715) |
| Payroll and Related Payments | (11,445,049) | (2,595,164) | - | (14,040,213) |
| Other Operating (Payments) / Transactions | (253,988) | (1,470,351) | 1,625,942 | (98,397) |
| Net Cash Provided from Operations | 25,643,521 | 8,828,055 | 2,083,822 | 36,555,398 |
| Cash Flows from Capital and Related Financing Activities | | | | |
| Acquisition and Construction of Capital Assets | (15,016,258) | (3,846,355) | (1,629,962) | (20,492,575) |
| Improvement and Tapping Fees | 1,497,598 | - | - | 1,497,598 |
| Bond Principal Repayments | (17,375,000) | (2,390,000) | - | (19,765,000) |
| Bond Issuance Proceeds | 34,112,802 | 80,744,268 | - | 114,857,070 |
| Transfer to Escrow Agent for Bond Defeasance | (35,441,434) | (97,773,208) | - | (133,214,642) |
| Interest Paid | (7,346,730) | (4,899,811) | - | (12,246,541) |
| Net Cash Used in Capital and Related Financing Activities | (39,569,022) | (28,165,106) | (1,629,962) | (69,364,090) |
| Cash Flows from Investing Activities | | | | |
| Sale of Investments, Net | 12,001,747 | 17,241,059 | - | 29,242,806 |
| Interest Received | 1,241,452 | 435,696 | - | 1,677,148 |
| Net Cash Provided by Investing Activities | 13,243,199 | 17,676,755 | - | 30,919,954 |
| Net Increase (Decrease) in Cash and Cash Equivalents | (682,302) | (1,660,296) | 453,860 | (1,888,738) |
| Cash and Cash Equivalents - Beginning of Year | 2,212,202 | 1,693,781 | 4,400,474 | 8,306,457 |
| Cash and Cash Equivalents - End of Year | $ 1,529,900 | $ 33,485 | $ 4,854,334 | $ 6,417,719 |
| Displayed as: | | | | |
| Cash and Cash Equivalents | $ 1,529,900 | $ 33,485 | $ 1,393,738 | $ 2,957,123 |
| Restricted Cash and Cash Equivalents | - | - | 3,460,596 | 3,460,596 |
| | $ 1,529,900 | $ 33,485 | $ 4,854,334 | $ 6,417,719 |
| Reconciliation of Operating Income to Net Cash Provided from Operations: | | | | |
| Operating Income | $ 13,060,713 | $ 6,686,988 | $ - | $ 19,747,701 |
| Adjustments to Reconcile Operating Income to Net Cash Provided from Operating Activities | | | | |
| Depreciation | 13,769,257 | 3,414,874 | - | 17,184,131 |
| Changes in Assets and Liabilities: | | | | |
| Receivables and Unbilled Revenue, Net | (2,092,088) | 578,398 | - | (1,513,690) |
| Prepaid Expenses | (31,647) | 9,560 | 155,474 | 133,387 |
| Intercompany Receivables (Payables) | 77,451 | (1,420,368) | 1,342,917 | - |
| Accounts Payable and Accrued Expenses | 935,352 | (293,880) | 341,623 | 983,095 |
| Interest Payable | (63,616) | (144,543) | - | (208,159) |
| Customer and Developer Deposits | - | - | 243,808 | 243,808 |
| Net Pension Liability and Related Pension Deferrals | (11,901) | (2,974) | - | (14,875) |
| Net Cash Provided from Operations | $ 25,643,521 | $ 8,828,055 | $ 2,083,822 | $ 36,555,398 |

# BUCKS COUNTY WATER AND SEWER AUTHORITY
## STATEMENTS OF NET POSITION
## DECEMBER 31, 2016 AND 2015

| ASSETS | 2016 | 2015 |
|---|---|---|
| Current Assets | | |
| Cash and Cash Equivalents | $ 5,089,665 | $ 5,731,089 |
| Investments | 24,374,913 | 17,814,990 |
| Accounts Receivable, Net of Allowance for Doubtful Accounts | 10,620,665 | 10,570,311 |
| Unbilled Revenue | 8,573,348 | 7,935,326 |
| Prepaid Expenses | 789,370 | 260,954 |
| Total Current Assets | 49,447,961 | 42,312,670 |
| Non-Current Assets | | |
| Restricted Assets | | |
| Cash and Cash Equivalents | 3,216,792 | 3,161,760 |
| Investments | 94,684,066 | 135,009,814 |
| Interest Receivable | 59,621 | 64,688 |
| Total Restricted Assets | 97,960,479 | 138,236,262 |
| Capital Assets | | |
| Land, Rights-of-Way and CIP | 77,719,725 | 74,796,483 |
| Other Capital Assets, Net of Accumulated Depreciation | 365,717,807 | 335,450,721 |
| Total Capital Assets, Net | 443,437,532 | 410,247,204 |
| Total Non-Current Assets | 541,398,011 | 548,483,466 |
| Total Assets | 590,845,972 | 590,796,136 |
| Deferred Outflows of Resources | | |
| Deferred Amount from Debt Refundings | 3,184,947 | 3,396,951 |
| Pension: Difference between expected and Actual Experience | 144,527 | 173,432 |
| Pension: Difference between projected and actual earnings on investments | 1,676,529 | 181,362 |
| Pension: Contributions made subsequent to measurement date | 1,754,573 | 1,714,497 |
| Total Deferred Outflows of Resources | 6,760,576 | 5,466,242 |
| **LIABILITIES AND NET POSITION** | | |
| Current Liabilities | | |
| Accounts Payable and Accrued Expenses | 5,516,076 | 4,231,827 |
| Current Portion of Bonds Payable | 19,765,000 | 17,535,000 |
| Interest Payable | 1,031,332 | 1,073,303 |
| Total Current Liabilities | 26,312,408 | 22,840,130 |
| Non-Current Liabilities | | |
| Customer and Developer Deposits | 3,216,788 | 3,161,756 |
| Bonds Payable, Net of Unamortized Bond Discount and Premium | 293,958,458 | 315,287,483 |
| Net Pension Liability | 6,800,663 | 5,114,435 |
| Total Non-Current Liabilities | 303,975,909 | 323,563,674 |
| Total Liabilities | 330,288,317 | 346,403,804 |
| Deferred Inflows of Resources | | |
| Pension: Changes in Assumptions | 64,329 | - |
| Proceeds from sale of future revenues | 5,196,730 | 5,206,301 |
| Total Deferred Inflows of Resources | 5,261,059 | 5,206,301 |
| Net Position | | |
| Net Investment in Capital Assets | 163,868,064 | 171,371,418 |
| Restricted for Capital Activity | 24,324,428 | 20,752,536 |
| Restricted for Debt Service | 30,964,216 | 34,304,360 |
| Unrestricted | 42,900,464 | 18,223,959 |
| Total Net Position | $ 262,057,172 | $ 244,652,273 |

See accompanying notes to the financial statements.

# BUCKS COUNTY WATER AND SEWER AUTHORITY
## STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION
## YEARS ENDED DECEMBER 31, 2016 AND 2015

| | 2016 | 2015 |
|---|---|---|
| Operating Revenues | | |
| Retail Sewer Service | $ 43,421,110 | $ 40,074,901 |
| Wholesale Sewer Service | 14,897,563 | 15,357,443 |
| Retail Water Service | 11,916,548 | 8,704,536 |
| Wholesale Water Service | 12,191,561 | 11,633,096 |
| Improvement and Tapping Fees | 110,550 | 320,175 |
| Other Revenues | 4,481,483 | 4,144,208 |
| Total Operating Revenues | 87,018,815 | 80,234,359 |
| Expenses | | |
| Operating Expenses | | |
| Sewage Treatment and Water Procurement | | |
| Sewage Treatment | 16,253,379 | 13,646,982 |
| Water Procurement | 8,547,084 | 8,073,320 |
| Total Sewage Treatment and Water Procurement | 24,800,463 | 21,720,302 |
| Plant Operations | | |
| Payroll and Related Costs | 1,755,388 | 1,633,434 |
| Repairs and Maintenance | 968,414 | 984,929 |
| Electricity | 470,001 | 386,706 |
| Water and Sewage Testing | 165,530 | 118,633 |
| Total Plant Operations | 3,359,333 | 3,123,702 |
| Collection, Transmission and Distribution Service | | |
| Payroll and Related Costs | 8,220,765 | 8,072,542 |
| Repairs and Maintenance | 1,468,471 | 1,540,762 |
| Electricity | 874,124 | 995,081 |
| Other Related Costs | 178,188 | 257,882 |
| Total Collection, Transmission and Distribution Service | 10,741,548 | 10,866,267 |
| Total Operating Expenses | 38,901,344 | 35,710,271 |
| General and Administrative Expenses | | |
| Payroll and Related Costs | 3,343,236 | 3,444,298 |
| Professional Fees | 1,133,397 | 1,573,043 |
| Insurance | 471,189 | 518,425 |
| Bad Debt | - | - |
| Other | 3,844,235 | 2,781,201 |
| Total General and Administrative Expense | 8,792,057 | 8,316,967 |
| Total Expenses | 47,693,401 | 44,027,238 |
| Income From Operations Before Depreciation | 39,325,414 | 36,207,121 |
| Depreciation | (15,983,865) | (15,105,344) |
| Operating Income | 23,341,549 | 21,101,777 |
| Non-Operating Revenue (Expense) | | |
| Interest Expense, Net of Amounts Capitalized | (10,941,064) | (10,312,121) |
| Investment Income | 1,338,537 | 903,993 |
| Other | 3,012 | - |
| Improvement and Tapping Fees | 4,048,410 | 3,033,482 |
| Amortization | (385,545) | (1,174,018) |
| Total Non-Operating Expense | (5,936,650) | (7,548,664) |
| Increase In Net Position, Before Contributed Capital | 17,404,899 | 13,553,113 |
| Contributed Capital | - | 192,833 |
| Increase in Net Position | 17,404,899 | 13,745,946 |
| Net Position - Beginning of Year | 244,652,273 | 234,178,514 |
| Cumulative Change | - | (3,272,187) |
| Net Position - Beginning of Year, Restated | 244,652,273 | 230,906,327 |
| Net Position - End of Year | $ 262,057,172 | $ 244,652,273 |

See accompanying notes to the financial statements.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## STATEMENTS OF NET POSITION

DECEMBER 31, 2019 AND 2018

**Assets and Deferred Outflows of Resources**

| | 2019 | 2018 |
|---|---|---|
| Assets: | | |
| Current assets: | | |
| Cash and cash equivalents | $ 175,476,686 | $ 142,482,220 |
| Accounts receivable: | | |
| Billed sewer revenue | 16,702,983 | 16,544,587 |
| Unbilled sewer revenue | 43,666,409 | 41,408,016 |
| Other | 30,225 | 4,469 |
| Other current assets | 6,604,244 | 6,556,274 |
| Total current assets | 242,480,547 | 206,995,566 |
| Restricted/designated assets: | | |
| Cash and cash equivalents | 150,150,904 | 83,445,720 |
| Investments | 84,963,478 | 167,782,528 |
| Accrued interest receivable | 375,444 | 622,842 |
| Total restricted/designated assets | 235,489,826 | 251,851,090 |
| Prepaid bond costs | 6,591,319 | 7,187,959 |
| Nondepreciable capital assets: | | |
| Land | 5,344,896 | 5,344,896 |
| Construction in progress | 81,287,241 | 59,836,813 |
| Total nondepreciable capital assets | 86,632,137 | 65,181,709 |
| Depreciable capital assets - at cost, net of accumulated depreciation | 542,465,808 | 557,161,609 |
| Total | 629,097,945 | 622,343,318 |
| Net pension asset | - | 2,705,577 |
| Total Assets | 1,113,659,637 | 1,091,083,510 |
| Deferred Outflows of Resources: | | |
| Related to pensions | 35,676,281 | 17,633,917 |
| Other post-retirement benefits | 853,236 | 932,894 |
| Refunding adjustment | 6,278,101 | 7,077,328 |
| Total Deferred Outflows of Resources | 42,807,618 | 25,644,139 |
| **Total Assets and Deferred Outflows of Resources** | $ 1,156,467,255 | $ 1,116,727,649 |

**Liabilities, Deferred Inflows of Resources, and Net Position**

| | 2019 | 2018 |
|---|---|---|
| Liabilities: | | |
| Current liabilities: | | |
| Accounts payable | $ 7,349,003 | $ 7,180,579 |
| Accrued liabilities: | | |
| Compensated absences | 4,994,678 | 4,539,483 |
| Salaries and wages | 1,751,181 | 1,529,529 |
| Accrued interest on bonds | 2,638,762 | 2,745,875 |
| Reserve for litigation | 2,371,900 | 2,371,900 |
| Pretreatment advance payments | 1,850 | 24,375 |
| Current maturities of sewer revenue bonds | 27,635,000 | 26,630,000 |
| Total current liabilities | 46,742,374 | 45,021,741 |
| Long-term liabilities: | | |
| Other post-employment benefits | 12,087,137 | 13,297,158 |
| Net pension liability | 28,684,748 | 6,121,872 |
| Sewer revenue bonds - less current maturities | 650,300,000 | 677,935,000 |
| Unamortized bond premium | 50,763,732 | 55,857,500 |
| Net long-term debt | 701,063,732 | 733,792,500 |
| Total long-term liabilities | 741,835,617 | 753,211,530 |
| Total Liabilities | 788,577,991 | 798,233,271 |
| Deferred Inflows of Resources: | | |
| Related to pensions | 9,341,236 | 12,389,471 |
| Other post-retirement benefits | 1,904,424 | - |
| Total Deferred Inflows of Resources | 11,245,660 | 12,389,471 |
| Net Position: | | |
| Net investment in capital assets | 142,167,140 | 120,849,236 |
| Unrestricted | 214,476,464 | 185,255,671 |
| Total Net Position | 356,643,604 | 306,104,907 |
| **Total Liabilities, Deferred Inflows of Resources, and Net Position** | $ 1,156,467,255 | $ 1,116,727,649 |

The notes to financial statements are an integral part of this statement.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## STATEMENTS OF NET POSITION

DECEMBER 31, 2018 AND 2017

**Assets and Deferred Outflows of Resources**

| | 2018 | 2017 |
|---|---|---|
| Assets: | | |
| Current assets: | | |
| Cash and cash equivalents | $ 142,482,220 | $ 119,248,255 |
| Accounts receivable: | | |
| Billed sewer revenue | 16,544,587 | 17,185,654 |
| Unbilled sewer revenue | 41,408,016 | 40,232,780 |
| Other | 4,469 | 4,635 |
| Other current assets | 6,556,274 | 6,432,263 |
| Total current assets | 206,995,566 | 183,103,587 |
| Restricted/designated assets: | | |
| Cash and cash equivalents | 83,445,720 | 100,289,509 |
| Investments | 167,782,528 | - |
| Accrued interest receivable | 622,842 | - |
| Total restricted/designated assets | 251,851,090 | 100,289,509 |
| Prepaid bond costs | 7,187,959 | 6,472,479 |
| Nondepreciable capital assets: | | |
| Land | 5,344,896 | 5,344,896 |
| Construction in progress | 59,836,813 | 38,371,565 |
| Total nondepreciable capital assets | 65,181,709 | 43,716,461 |
| Depreciable capital assets - at cost, net of accumulated depreciation | 557,161,609 | 564,883,734 |
| Total | 622,343,318 | 608,600,195 |
| Net pension asset | 2,705,577 | - |
| Total Assets | 1,091,083,510 | 898,465,770 |
| Deferred Outflows of Resources: | | |
| Related to pensions | 17,633,917 | 21,247,515 |
| Other post-retirement benefits | 932,894 | - |
| Refunding adjustment | 7,077,328 | 8,074,203 |
| Total Deferred Outflows of Resources | 25,644,139 | 29,321,718 |
| **Total Assets and Deferred Outflows of Resources** | $ 1,116,727,649 | $ 927,787,488 |

**Liabilities, Deferred Inflows of Resources, and Net Position**

| | 2018 | 2017 |
|---|---|---|
| Liabilities: | | |
| Current liabilities: | | |
| Accounts payable | $ 7,180,579 | $ 7,167,120 |
| Accrued liabilities: | | |
| Compensated absences | 4,539,483 | 4,689,828 |
| Salaries and wages | 1,529,529 | 1,441,024 |
| Accrued interest on bonds | 2,745,875 | 2,260,535 |
| Reserve for litigation | 2,371,900 | 2,371,900 |
| Pretreatment advance payments | 24,375 | 71,600 |
| Current maturities of sewer revenue bonds | 26,630,000 | 25,395,000 |
| Total current liabilities | 45,021,741 | 43,397,007 |
| Long-term liabilities: | | |
| Other post-employment benefits | 13,297,158 | 6,199,726 |
| Net pension liability | 6,121,872 | 16,421,705 |
| Sewer revenue bonds - less current maturities | 677,935,000 | 547,335,000 |
| Unamortized bond premium | 55,857,500 | 48,952,220 |
| Net long-term debt | 733,792,500 | 596,287,220 |
| Total long-term liabilities | 753,211,530 | 618,908,651 |
| Total Liabilities | 798,233,271 | 662,305,658 |
| Deferred Inflows of Resources: | | |
| Related to pensions | 12,389,471 | 2,935,957 |
| Net Position: | | |
| Net investment in capital assets | 120,849,236 | 95,281,689 |
| Unrestricted | 185,255,671 | 167,264,184 |
| Total Net Position | 306,104,907 | 262,545,873 |
| **Total Liabilities, Deferred Inflows of Resources, and Net Position** | $ 1,116,727,649 | $ 927,787,488 |

The notes to financial statements are an integral part of this statement.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## STATEMENTS OF NET POSITION

DECEMBER 31, 2017 AND 2016

**Assets and Deferred Outflows of Resources**

| | 2017 | 2016 |
|---|---|---|
| Assets: | | |
| Current assets: | | |
| Cash and cash equivalents | $ 119,248,255 | $ 91,684,772 |
| Accounts receivable: | | |
| Billed sewer revenue | 17,185,654 | 14,582,462 |
| Unbilled sewer revenue | 40,232,780 | 35,405,033 |
| Other | 4,635 | 40,361 |
| Other current assets | 6,432,263 | 6,129,723 |
| Total current assets | 183,103,587 | 147,842,351 |
| Restricted/designated assets: | | |
| Cash and cash equivalents | 100,289,509 | 92,275,291 |
| Investments | - | 31,442,508 |
| Accrued interest receivable | - | 156,762 |
| Total restricted/designated assets | 100,289,509 | 123,874,561 |
| Prepaid bond costs | 6,472,479 | 7,165,980 |
| Nondepreciable capital assets: | | |
| Land | 5,344,896 | 5,344,896 |
| Construction in progress | 38,371,565 | 30,816,357 |
| Total nondepreciable capital assets | 43,716,461 | 36,161,253 |
| Depreciable capital assets - at cost, net of accumulated depreciation | 564,883,734 | 559,206,163 |
| Total | 608,600,195 | 595,367,416 |
| Capital fees receivable | - | 40,000 |
| Total Assets | 898,465,770 | 874,290,308 |
| Deferred Outflows of Resources: | | |
| Related to pensions | 21,247,515 | 19,454,240 |
| Refunding adjustment | 8,074,203 | 9,259,327 |
| Total Deferred Outflows of Resources | 29,321,718 | 28,713,567 |
| **Total Assets and Deferred Outflows of Resources** | $ 927,787,488 | $ 903,003,875 |

**Liabilities, Deferred Inflows of Resources, and Net Position**

| | 2017 | 2016 |
|---|---|---|
| Liabilities: | | |
| Current liabilities: | | |
| Accounts payable | $ 7,167,120 | $ 8,192,941 |
| Accrued liabilities: | | |
| Compensated absences | 4,689,828 | 4,543,017 |
| Salaries and wages | 1,441,024 | 1,315,045 |
| Accrued interest on bonds | 2,260,535 | 2,007,614 |
| Reserve for litigation | 2,371,900 | 2,371,900 |
| Pretreatment advance payments | 71,600 | 53,300 |
| Current maturities of sewer revenue bonds | 25,395,000 | 24,205,000 |
| Total current liabilities | 43,397,007 | 42,688,817 |
| Long-term liabilities: | | |
| Other post-employment benefits | 6,199,726 | 5,173,881 |
| Net pension liability | 16,421,705 | 10,265,284 |
| Sewer revenue bonds - less current maturities | 547,335,000 | 572,730,000 |
| Unamortized bond premium | 48,952,220 | 54,514,841 |
| Net long-term debt | 596,287,220 | 627,244,841 |
| Total long-term liabilities | 618,908,651 | 642,684,006 |
| Total Liabilities | 662,305,658 | 685,372,823 |
| Deferred Inflows of Resources: | | |
| Related to pensions | 2,935,957 | 4,102,436 |
| Net Position: | | |
| Net investment in capital assets | 95,281,689 | 77,051,463 |
| Unrestricted | 167,264,184 | 136,477,153 |
| Total Net Position | 262,545,873 | 213,528,616 |
| **Total Liabilities, Deferred Inflows of Resources, and Net Position** | $ 927,787,488 | $ 903,003,875 |

The notes to financial statements are an integral part of this statement.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

YEARS ENDED DECEMBER 31, 2019 AND 2018

| | 2019 | 2018 |
|---|---|---|
| **Operating Revenues** | $ 180,238,305 | $ 169,724,327 |
| **Operating Expenses:** | | |
| Treatment | 49,805,868 | 47,633,280 |
| Intercepting sewer systems | 8,753,813 | 8,490,808 |
| Upper Allegheny system | 298,412 | 563,244 |
| Administrative and engineering | 15,962,845 | 14,736,160 |
| Billing and collecting | 3,572,073 | 3,482,212 |
| Management information systems | 3,690,385 | 3,723,344 |
| Total operating expenses before depreciation | 82,083,396 | 78,629,048 |
| **Operating Income Before Depreciation** | 98,154,909 | 91,095,279 |
| Depreciation | 22,772,539 | 23,071,589 |
| **Operating Income** | 75,382,370 | 68,023,690 |
| **Non-operating Revenues (Expenses):** | | |
| Interest income, net of amounts capitalized | 8,966,272 | 3,127,451 |
| Interest expense on bonds | (28,261,390) | (20,735,872) |
| Amortization of prepaid bond costs | (596,640) | (629,995) |
| Change in value of pension related items | (4,177,854) | (61,702) |
| Change in value of OPEB related items | (774,061) | (789,172) |
| Total non-operating revenues (expenses) | (24,843,673) | (19,089,290) |
| **Change in Net Position** | 50,538,697 | 48,934,400 |
| **Net Position:** | | |
| Beginning of year | 306,104,907 | 257,170,507 |
| End of year | $ 356,643,604 | $ 306,104,907 |

The notes to financial statements are an integral part of this statement.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

YEARS ENDED DECEMBER 31, 2018 AND 2017

| | 2018 | 2017 |
|---|---|---|
| **Operating Revenues** | $ 169,724,327 | $ 170,182,173 |
| **Operating Expenses:** | | |
| Treatment | 47,633,280 | 44,821,531 |
| Intercepting sewer systems | 8,490,808 | 7,100,846 |
| Upper Allegheny system | 563,244 | 487,512 |
| Administrative and engineering | 14,736,160 | 13,772,696 |
| Billing and collecting | 3,482,212 | 4,439,250 |
| Management information systems | 3,723,344 | 3,778,272 |
| Total operating expenses before depreciation | 78,629,048 | 74,400,107 |
| **Operating Income Before Depreciation** | 91,095,279 | 95,782,066 |
| Depreciation | 23,071,589 | 22,426,718 |
| **Operating Income** | 68,023,690 | 73,355,348 |
| **Non-operating Revenues (Expenses):** | | |
| Interest income, net of amounts capitalized | 3,127,451 | 1,096,517 |
| Interest expense on bonds, net of amounts capitalized | (20,735,872) | (21,544,440) |
| Amortization of prepaid bond costs | (629,995) | (693,501) |
| Change in value of pension related items | (61,702) | (3,196,667) |
| Change in value of OPEB related items | (789,172) | - |
| Total non-operating revenues (expenses) | (19,089,290) | (24,338,091) |
| **Change in Net Position** | 48,934,400 | 49,017,257 |
| **Net Position:** | | |
| Beginning of year, as restated for 2018 | 257,170,507 | 213,528,616 |
| End of year | $ 306,104,907 | $ 262,545,873 |

The notes to financial statements are an integral part of this statement.

# ALLEGHENY COUNTY SANITARY AUTHORITY

## STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

YEARS ENDED DECEMBER 31, 2017 AND 2016

| | 2017 | 2016 |
|---|---|---|
| **Operating Revenues** | $ 170,182,173 | $ 151,390,618 |
| **Operating Expenses:** | | |
| Treatment | 44,821,531 | 44,955,562 |
| Intercepting sewer systems | 7,100,846 | 5,896,400 |
| Upper Allegheny system | 487,512 | 451,733 |
| Administrative and engineering | 13,772,696 | 12,366,247 |
| Billing and collecting | 4,439,250 | 3,348,876 |
| Management information systems | 3,778,272 | 3,571,943 |
| Total operating expenses before depreciation | 74,400,107 | 70,590,761 |
| **Operating Income Before Depreciation** | 95,782,066 | 80,799,857 |
| Depreciation | 22,426,718 | 21,271,326 |
| **Operating Income** | 73,355,348 | 59,528,531 |
| **Non-operating Revenues (Expenses):** | | |
| Interest income, net of amounts capitalized | 1,096,517 | 310,794 |
| Interest expense on bonds, net of amounts capitalized | (21,544,440) | (23,172,637) |
| Amortization of prepaid bond costs | (693,501) | (1,306,549) |
| Change in value of pension related items | (3,196,667) | (123,155) |
| Total non-operating revenues (expenses) | (24,338,091) | (24,291,547) |
| **Change in Net Position** | 49,017,257 | 35,236,984 |
| **Net Position:** | | |
| Beginning of year | 213,528,616 | 178,291,632 |
| End of year | $ 262,545,873 | $ 213,528,616 |

The notes to financial statements are an integral part of this statement.

# CAPITAL REGION WATER

## BALANCE SHEET

DECEMBER 31, 2016

| **Assets and Deferred Outflows of Resources** | |
|---|---|
| Assets: | |
| Current assets: | |
| Cash and cash equivalents | $ 31,370,479 |
| Accounts receivable, net of allowance for uncollectible accounts of $4,798,347 | 8,391,183 |
| Due from the City of Harrisburg | 2,995,798 |
| Prepaid expenses | 291,184 |
| Inventory | 489,164 |
| Total current assets | 43,537,808 |
| Restricted assets: | |
| Cash and cash equivalents - restricted under trust indentures and guarantee agreement | 4,723,331 |
| Investments - restricted under trust indentures | 37,547,376 |
| Total restricted assets | 42,270,707 |
| Noncurrent assets: | |
| Capital assets, not being depreciated | 12,360,288 |
| Capital assets, net of accumulated depreciation of $118,292,680 | 136,420,246 |
| Total noncurrent assets | 148,780,534 |
| Total Assets | 234,589,049 |
| Deferred Outflows of Resources: | |
| Deferred loss on refunding | 8,778,954 |
| Deferred outflows of resources for pensions | 757,778 |
| Total Deferred Outflows of Resources | 9,536,732 |
| **Total Assets and Deferred Outflows of Resources** | $244,125,781 |

# CAPITAL REGION WATER

## STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

YEAR ENDED DECEMBER 31, 2016

| | |
|---|---|
| **Operating Revenues:** | |
| User charges | $ 38,184,824 |
| Total operating revenues | 38,184,824 |
| **Operating Expenses:** | |
| Operating | 13,802,610 |
| Administrative | 5,051,155 |
| Depreciation | 4,298,812 |
| Total operating expenses | 23,152,577 |
| **Operating Income** | 15,032,247 |
| **Non-Operating Revenues (Expenses):** | |
| Investment income | 2,192,129 |
| Intergovernmental revenue | 16,177 |
| Gain on sale of easements | 4,671,738 |
| Miscellaneous expense | (240,506) |
| Interest expense | (7,713,386) |
| Total non-operating revenues (expenses) | (1,073,848) |
| **Change in Net Position Before Special Item** | 13,958,399 |
| Special item | 92,933 |
| **Change in Net Position** | 14,051,332 |
| **Net Position:** | |
| Beginning of year | 35,564,284 |
| End of year | $ 49,615,616 |

The accompanying notes are an integral part of these financial statements.

# CAPITAL REGION WATER

## BALANCE SHEET

DECEMBER 31, 2017

| Assets and Deferred Outflows of Resources | |
|---|---|
| **Assets:** | |
| Current assets: | |
| Cash and cash equivalents | $ 39,042,983 |
| Accounts receivable, net of allowance for uncollectible accounts of $5,381,652 | 10,642,831 |
| Due from the City of Harrisburg | 2,999,854 |
| Prepaid expenses | 330,564 |
| Inventory | 475,789 |
| Total current assets | 53,492,021 |
| Restricted assets: | |
| Cash and cash equivalents - restricted under trust indentures and guarantee agreement | 28,128,910 |
| Investments - restricted under trust indentures | 19,919,838 |
| Total restricted assets | 48,048,748 |
| Noncurrent assets: | |
| Capital assets, not being depreciated | 6,640,532 |
| Capital assets, net of accumulated depreciation of $123,593,986 | 149,741,828 |
| Total noncurrent assets | 156,382,360 |
| Total Assets | 257,923,129 |
| **Deferred Outflows of Resources:** | |
| Deferred loss on refunding | 7,666,840 |
| Deferred outflows of resources for pensions | 1,087,971 |
| Total Deferred Outflows of Resources | 8,754,811 |
| **Total Assets and Deferred Outflows of Resources** | $ 266,677,940 |

# CAPITAL REGION WATER

## BALANCE SHEET

DECEMBER 31, 2018

| Assets and Deferred Outflows of Resources | |
|---|---|
| **Assets:** | |
| Current assets: | |
| Cash and cash equivalents | $ 48,169,716 |
| Accounts receivable, net of allowance for uncollectible accounts of $5,914,774 | 10,001,747 |
| Grants receivable | 905,431 |
| Due from the City of Harrisburg | 3,686,285 |
| Prepaid expenses | 403,089 |
| Inventory | 347,960 |
| Total current assets | 63,514,228 |
| Restricted assets: | |
| Cash and cash equivalents - restricted under trust indentures and guarantee agreement | 19,430,292 |
| Investments - restricted under trust indentures | 19,433,058 |
| Total restricted assets | 38,863,350 |
| Noncurrent assets: | |
| Capital assets, not being depreciated | 16,946,141 |
| Capital assets, net of accumulated depreciation of $128,988,007 | 160,175,578 |
| Net pension asset | 1,009,658 |
| Total noncurrent assets | 178,131,377 |
| Total Assets | 280,508,955 |
| **Deferred Outflows of Resources:** | |
| Deferred loss on refunding | 7,877,263 |
| Deferred outflows of resources for other postemployment benefits | 77,533 |
| Deferred outflows of resources for pension | 651,522 |
| Total Deferred Outflows of Resources | 8,606,318 |
| **Total Assets and Deferred Outflows of Resources** | $ 289,115,273 |

# CAPITAL REGION WATER

## BALANCE SHEET

DECEMBER 31, 2019

(with comparative totals as of December 31, 2018)

| Assets and Deferred Outflows of Resources | 2019 | 2018 |
|---|---|---|
| Assets: | | |
| Current assets: | | |
| Cash and cash equivalents | $ 37,818,930 | $ 48,169,716 |
| Accounts receivable, net of allowance for uncollectible accounts of $6,179,939 and $5,914,774 | 11,392,879 | 10,001,747 |
| Grants receivable | 481,413 | 905,431 |
| Due from the City of Harrisburg | 3,030,340 | 3,686,285 |
| Prepaid expenses | 407,379 | 403,089 |
| Inventory | 219,675 | 347,960 |
| Total current assets | 53,350,616 | 63,514,228 |
| Restricted assets: | | |
| Cash and cash equivalents - restricted under trust indentures and guarantee agreement | 10,728,097 | 19,430,292 |
| Investments - restricted under trust indentures | 23,792,020 | 19,433,058 |
| Total restricted assets | 34,520,117 | 38,863,350 |
| Noncurrent assets: | | |
| Capital assets, not being depreciated | 25,938,916 | 16,946,141 |
| Capital assets, net of accumulated depreciation of $132,254,413 and $128,988,007 | 177,481,346 | 160,175,578 |
| Net pension asset | - | 1,009,658 |
| Total noncurrent assets | 203,420,262 | 178,131,377 |
| Total Assets | 291,290,995 | 280,508,955 |
| Deferred Outflows of Resources: | | |
| Deferred loss on refunding | 6,849,812 | 7,877,263 |
| Deferred outflows of resources for other postemployment benefits | 78,714 | 77,533 |
| Deferred outflows of resources for pension | 1,518,157 | 651,522 |
| Total Deferred Outflows of Resources | 8,446,683 | 8,606,318 |
| **Total Assets and Deferred Outflows of Resources** | $ 299,737,678 | $ 289,115,273 |

# CAPITAL REGION WATER

## STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

YEAR ENDED DECEMBER 31, 2017

| | |
|---|---|
| **Operating Revenues:** | |
| User charges | $ 40,503,481 |
| Total operating revenues | 40,503,481 |
| **Operating Expenses:** | |
| Operating | 14,206,161 |
| Administrative | 5,367,287 |
| Depreciation | 5,301,306 |
| Total operating expenses | 24,874,754 |
| **Operating Income** | 15,628,727 |
| **Non-Operating Revenues (Expenses):** | |
| Investment income | 682,914 |
| Intergovernmental revenue | 471,421 |
| Miscellaneous expense | (135,908) |
| Interest expense | (7,450,743) |
| Total non-operating revenues (expenses) | (6,432,316) |
| **Change in Net Position** | 9,196,411 |
| **Net Position:** | |
| Beginning of year - restated | 47,619,135 |
| End of year | $ 56,815,546 |

The accompanying notes are an integral part of these financial statements.

# CAPITAL REGION WATER

## STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

YEAR ENDED DECEMBER 31, 2018

| | |
|---|---|
| **Operating Revenues:** | |
| User charges | $ 44,895,271 |
| Total operating revenues | 44,895,271 |
| **Operating Expenses:** | |
| Operating | 13,894,496 |
| Administrative | 5,293,225 |
| Depreciation | 5,394,021 |
| Total operating expenses | 24,581,742 |
| **Operating Income** | 20,313,529 |
| **Non-Operating Revenues (Expenses):** | |
| Investment income | 568,004 |
| Grant revenue | 1,502,468 |
| Gain on sale of easements | 4,838,927 |
| Miscellaneous expense | (180,383) |
| Interest expense | (6,812,458) |
| Total non-operating revenues (expenses) | (83,442) |
| **Change in Net Position** | 20,230,087 |
| **Net Position:** | |
| Beginning of year - restated | 55,942,804 |
| End of year | $ 76,172,891 |

The accompanying notes are an integral part of these financial statements.

# CAPITAL REGION WATER

## STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

YEAR ENDED DECEMBER 31, 2019

(with comparative totals for the year ended December 31, 2018)

| | 2019 | 2018 |
|---|---|---|
| **Operating Revenues:** | | |
| User charges | $ 47,556,016 | $ 44,895,271 |
| Total operating revenues | 47,556,016 | 44,895,271 |
| **Operating Expenses:** | | |
| Operating | 14,776,480 | 13,894,496 |
| Administrative | 5,788,495 | 5,293,225 |
| Depreciation | 5,654,952 | 5,394,021 |
| Total operating expenses | 26,219,927 | 24,581,742 |
| **Operating Income** | 21,336,089 | 20,313,529 |
| **Non-Operating Revenues (Expenses):** | | |
| Investment income | 1,193,936 | 568,004 |
| Grant revenue | 1,184,617 | 1,502,468 |
| Gain on sale of easements | 40,000 | 4,838,927 |
| Miscellaneous income (expense) | 606,499 | (180,383) |
| Loss on disposal of capital assets | (74,363) | - |
| Interest expense | (5,836,796) | (6,812,458) |
| Total non-operating revenues (expenses) | (2,886,107) | (83,442) |
| **Change in Net Position** | 18,449,982 | 20,230,087 |
| **Net Position:** | | |
| Beginning of year | 76,172,891 | 55,942,804 |
| End of year | $ 94,622,873 | $ 76,172,891 |

The accompanying notes are an integral part of these financial statements.

# ALTOONA WATER AUTHORITY
## STATEMENTS OF NET POSITION

| | December 31, 2017 | December 31, 2016 |
|---|---|---|
| **ASSETS** | | |
| **Current Assets** | | |
| Cash | $ 1,187,229 | $ 2,426,395 |
| Investments | 3,009,242 | 3,590,996 |
| Accounts Receivable | 3,728,307 | 3,890,186 |
| Accrued Interest Receivable | 15,956 | -- |
| Prepaid Expenses | 476,123 | 301,183 |
| Total Current Assets | 8,416,857 | 10,208,760 |
| **Restricted Assets** | | |
| Capital Projects | 243,872 | 1,220,873 |
| Debt Service | 1,152,851 | 1,053,440 |
| Debt Service Reserve | 2,036,583 | 2,132,427 |
| Surplus Fund | 1,081,611 | 364,266 |
| Total Restricted Assets | 4,514,917 | 4,771,006 |
| **Right to Use Asset** | | |
| Right to Use Asset Net | 112,668,376 | - - |
| **Capital Assets** | | |
| Total Plant and Properties | -- | 348,811,369 |
| Less: Accumulated Depreciation | -- | (126,269,611) |
| Net Plant and Properties | -- | 222,541,758 |
| **TOTAL ASSETS** | **125,600,150** | **237,521,524** |
| **DEFERRED OUTFLOWS OF RESOURCES** | | |
| Outflow Related to Pension | 1,526,330 | 792,553 |
| **LIABILITIES** | | |
| **Current Liabilities** | | |
| Accounts Payable | 1,211,479 | 1,353,287 |
| Accrued Expenses | 353,388 | 382,098 |
| Accrued Payroll and Taxes | 236,925 | 234,996 |
| Deposits and Credits | 99,009 | 98,909 |
| Current Portion of City Lease Obligation | 29,982 | |
| Current Portion of Notes Payable | 2,682,406 | 1,862,721 |
| Current Portion of Bonds Payable | 6,010,000 | 5,725,000 |
| Total Current Liabilities | 10,623,189 | 9,657,011 |
| **Long Term Liabilities** | | |
| City Lease Obligation | 113,242,714 | - - |
| Loans Payable – PennVest | 38,640,937 | 41,937,165 |
| Bonds Payable | 31,728,617 | 37,372,825 |
| Net Pension Liability | 2,570,058 | 2,101,758 |
| Unearned Interest - Series of 1994 | 105,310 | 157,966 |
| Total Long Term Liabilities | 186,287,636 | 81,569,714 |
| **TOTAL LIABILITIES** | **196,910,825** | **91,226,725** |
| **DEFERRED INFLOWS OF RESOURCES** | | |
| Inflow Related to Pension | 829,998 | 192,683 |
| **NET POSITION** | | |
| Invested in Capital Assets Net of Related Debt | -- | 138,861,752 |
| Restricted for: | | |
| Construction | 222,881 | 499,882 |
| Debt Service | 1,045,329 | 1,053,419 |
| Unrestricted | ( 71,882,553) | 6,479,616 |
| **TOTAL NET POSITION** | **$( 70,614,343)** | **$ 146,894,669** |

See Accompanying Notes to Financial Statements

# ALTOONA WATER AUTHORITY
## STATEMENTS OF NET POSITION

| | December 31, 2018 | December 31, 2017 |
|---|---|---|
| **ASSETS** | | |
| **Current Assets** | | |
| Cash | $ 2,420,679 | $ 1,187,229 |
| Investments | 4,484,450 | 3,009,242 |
| Accounts Receivable | 4,460,455 | 3,728,307 |
| Accrued Interest Receivable | 29,077 | 15,956 |
| Prepaid Expenses | 307,825 | 476,123 |
| Total Current Assets | 11,702,486 | 8,416,857 |
| **Restricted Assets** | | |
| Capital Projects | 247,194 | 243,872 |
| Debt Service | 1,041,048 | 1,152,851 |
| Debt Service Reserve | 2,067,009 | 2,036,583 |
| Surplus Fund | 1,097,730 | 1,081,611 |
| Total Restricted Assets | 4,452,981 | 4,514,917 |
| **Right to Use Asset** | | |
| Right to Use Asset Net | 106,598,286 | 112,668,376 |
| **TOTAL ASSETS** | **122,753,753** | **125,600,150** |
| **DEFERRED OUTFLOWS OF RESOURCES** | | |
| Outflow Related to Pension | 2,359,034 | 1,526,330 |
| **LIABILITIES** | | |
| **Current Liabilities** | | |
| Accounts Payable | 1,079,614 | 1,211,479 |
| Accrued Expenses | 352,761 | 353,388 |
| Accrued Payroll and Taxes | 274,897 | 236,925 |
| Deposits and Credits | 92,183 | 99,009 |
| Demand Note | 1,464,081 | -- |
| Current Portion of City Lease Obligation | 1,114,720 | 29,982 |
| Current Portion of Notes Payable | 2,974,950 | 2,682,406 |
| Current Portion of Bonds Payable | 6,305,000 | 6,010,000 |
| Total Current Liabilities | 13,658,206 | 10,623,189 |
| **Long Term Liabilities** | | |
| City Lease Obligation | 112,127,994 | 113,242,714 |
| Loans Payable – PennVest | 35,892,461 | 38,640,937 |
| Bonds Payable | 25,798,561 | 31,728,617 |
| Net Pension Liability | 4,271,068 | 2,570,058 |
| Unearned Interest - Series of 1994 | 52,655 | 105,310 |
| Total Long Term Liabilities | 178,142,739 | 186,287,636 |
| **TOTAL LIABILITIES** | **191,800,945** | **196,910,825** |
| **DEFERRED INFLOWS OF RESOURCES** | | |
| Inflow Related to Pension | 642,998 | 829,998 |
| **NET POSITION** | | |
| Restricted for: | | |
| Construction | 226,203 | 222,881 |
| Debt Service | 1,040,814 | 1,045,329 |
| Unrestricted | ( 68,598,173) | ( 71,882,553) |
| **TOTAL NET POSITION** | **$( 67,331,156)** | **$( 70,614,343)** |

See Accompanying Notes to Financial Statements

# CITY OF ALTOONA
# BLAIR COUNTY, PENNSYLVANIA
# STATEMENT OF NET POSITION
# DECEMBER 31, 2019
# (AMOUNTS EXPRESSED IN WHOLE DOLLARS)

| | PRIMARY GOVERNMENT | COMPONENT UNITS | | |
|---|---|---|---|---|
| | Governmental Activities | Altoona Water Authority | Redevelopment Authority of Altoona | The Parking Authority of the City of Altoona |
| **ASSETS** | | | | |
| Cash and Cash Equivalents | $ 24,556,757 | $ 2,142,068 | $ 217,510 | $ 157,819 |
| Investments | 366,982 | 12,127,836 | 0 | 0 |
| Taxes Receivable | 4,174,803 | 0 | 0 | 0 |
| Accounts Receivable | 0 | 3,750,328 | 2,816 | 3,568 |
| Intergovernmental Receivables | 321,540 | 0 | 0 | 0 |
| Loans Receivable – Current | 795,935 | 0 | 8,972 | 0 |
| Other Receivables | 193,952 | 14,619 | 0 | 0 |
| Prepaid Expenses | 314,090 | 25,755 | 0 | 1,667 |
| Inventory | 512,219 | 0 | 0 | 0 |
| Loans Receivable – Long-Term | 5,374,360 | 0 | 103,723 | 0 |
| Right to Use Asset, Net | 0 | 100,528,196 | 0 | 0 |
| Capital Assets, Net of Accumulated Depreciation | 405,378,818 | 0 | 254,542 | 2,527,780 |
| **TOTAL ASSETS** | $441,989,456 | $118,588,802 | $ 587,563 | $2,690,834 |
| **Deferred Outflows of Resources** | | | | |
| Deferred Charges: | | | | |
| Bond Discounts | $ 780,363 | $ 0 | $ 0 | $ 0 |
| Defined Benefit Pensions | 10,878,514 | 1,651,319 | | |
| OPEB Plans | 1,130,677 | 0 | 0 | 0 |
| Total Deferred Outflows of Resources | $ 12,789,554 | $ 1,651,319 | $ 0 | $ 0 |
| **LIABILITIES** | | | | |
| Accounts Payable | $ 2,790,042 | $ 1,732,865 | $ 4,978 | $ 14,842 |
| Accrued Payroll | 362,296 | 0 | 0 | 0 |
| Payroll Taxes and Benefits Payable | 134,704 | 0 | 0 | 3,459 |
| Accrued Expenses | 0 | 0 | 0 | 2,958 |
| Accrued Payroll, Taxes, and Withholding | 0 | 427,226 | 0 | 0 |
| Accumulated Compensated Absences | 0 | 279,288 | 0 | 2,119 |
| Accrued Interest | 295,444 | 0 | 0 | 321 |
| Deposits Held | 112,334 | 83,805 | 0 | 0 |
| Unearned Revenues – Grants | 6,271,037 | 0 | 0 | 0 |
| Unearned Revenues - Rent Received in Advance | 0 | 0 | 200 | 39,412 |
| Noncurrent Liabilities: | | | | |
| Due Within One Year | 3,835,073 | 7,205,690 | 0 | 22,257 |
| Due in More Than One Year | 118,568,396 | 150,406,922 | 0 | 164,998 |
| **TOTAL LIABILITIES** | $132,369,326 | $160,135,796 | $ 5,178 | $ 250,366 |
| **Deferred Inflows of Resources** | | | | |
| Defined Benefit Pensions | $ 12,696,000 | $ 1,965,233 | $ 0 | $ 0 |
| **NET POSITION** | | | | |
| Net Investment in Capital Assets | $345,530,381 | $ 0 | $ 254,542 | $2,340,525 |
| Restricted for: | | | 0 | 0 |
| Highway Aid | 894,316 | 0 | 0 | 0 |
| Capital Expenditures | 8,184,878 | 0 | 0 | 0 |
| Recreation | 231,511 | 0 | 0 | 0 |
| Other Projects | 5,470,093 | 0 | 339,715 | 0 |
| Water Authority | 0 | 0 | 0 | 0 |
| Unrestricted (Deficit) | ( 50,597,495) | ( 41,860,908) | ( 11,872) | 99,943 |
| **TOTAL NET POSITION** | $309,713,684 | ($ 41,860,908) | $ 582,385 | $2,440,468 |

**See Accompanying Notes and Independent Auditor's Report**

## ALTOONA WATER AUTHORITY
## STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

| | Year Ended December 31, 2017 | Year Ended December 31, 2016 |
|---|---|---|
| **Operating Revenues, Securing Revenue Bonds** | | |
| Water/Sewer Rentals | $ 28,033,026 | $ 27,234,701 |
| Installations and Renewals Service Lines | 119,509 | 116,080 |
| Meter Sales, Shut-Offs, and Remotes | 224,910 | 224,676 |
| Timber Sales | 40,197 | 142,007 |
| Septic Hauler Fees | 75,649 | 81,269 |
| Fire Hydrant and Line Rentals | 343,767 | 331,999 |
| Service to Wastewater Division | 1,057,455 | 1,097,406 |
| Miscellaneous | 322,114 | 414,937 |
| Intermunicipal Service Reimbursements | 1,409,183 | 1,346,227 |
| **Total Operating Revenues** | 31,625,810 | 30,989,302 |
| **Operating Expenses - Functional and Departmental** | | |
| Administration | 2,117,738 | 5,106,472 |
| Billing and Collection | 709,035 | 750,662 |
| Purification and Distribution/Disposal | 5,001,575 | 5,078,445 |
| Meter Division | 482,163 | 476,819 |
| Maintenance | 3,823,793 | 3,918,953 |
| Fringe Benefits and Insurance | 3,706,216 | 3,838,891 |
| Depreciation and Amortization | 6,796,548 | 7,861,126 |
| **Total Operating Expenses- Functional and Departmental** | 22,637,068 | 27,031,368 |
| **Operating Income** | 8,988,742 | 3,957,934 |
| **Nonoperating Revenues and (Expenses)** | | |
| Capital Contribution to City of Altoona | (223,701,014) | -- |
| Investment Income | 80,223 | 50,052 |
| Interest Expense | ( 2,813,892) | ( 2,983,688) |
| Fees and Miscellaneous | ( 379) | ( 839) |
| Gain on Disposition of Fixed Assets | 45,961 | 34,612 |
| Contributed Capital | 16,825 | -- |
| Amortization Bond Issue Costs | ( 125,478) | ( 126,251) |
| **Total Nonoperating Revenues and (Expenses)** | (226,497,754) | ( 3,026,114) |
| **Net Income** | (217,509,012) | 931,820 |
| **Net Position - January 1** | 146,894,669 | 145,962,849 |
| **Net Position - December 31** | **$( 70,614,343)** | **$ 146,894,669** |

See Accompanying Notes to Financial Statements

## ALTOONA WATER AUTHORITY
## STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

| | Year Ended December 31, 2018 | Year Ended December 31, 2017 |
|---|---|---|
| **Operating Revenues, Securing Revenue Bonds** | | |
| Water/Sewer Rentals | $ 30,794,341 | $ 28,033,026 |
| Installations and Renewals Service Lines | 139,503 | 119,509 |
| Meter Sales, Shut-Offs, and Remotes | 250,565 | 224,910 |
| Timber Sales | 116,337 | 40,197 |
| Septic Hauler Fees | 2,269,905 | 75,649 |
| Fire Hydrant and Line Rentals | 341,023 | 343,767 |
| Service to Wastewater Division | 1,047,022 | 1,057,455 |
| Miscellaneous | 421,392 | 322,114 |
| Intermunicipal Service Reimbursements | 1,231,099 | 1,409,183 |
| **Total Operating Revenues** | 36,611,187 | 31,625,810 |
| **Operating Expenses - Functional and Departmental** | | |
| Administration | 2,180,781 | 2,117,738 |
| Billing and Collection | 681,880 | 709,035 |
| Purification and Distribution/Disposal | 5,060,425 | 5,001,575 |
| Meter Division | 505,784 | 482,163 |
| Maintenance | 3,956,167 | 3,823,793 |
| Fringe Benefits and Insurance | 4,133,886 | 3,706,216 |
| Depreciation and Amortization | 6,070,090 | 6,796,548 |
| **Total Operating Expenses- Functional and Departmental** | 22,589,013 | 22,637,068 |
| **Operating Income** | 14,022,174 | 8,988,742 |
| **Nonoperating Revenues and (Expenses)** | | |
| Capital Contribution to City of Altoona | ( 4,277,135) | (223,701,014) |
| Investment Income | 170,111 | 80,223 |
| Interest Expense | ( 6,783,092) | ( 2,813,892) |
| Fees and Miscellaneous | -- | ( 379) |
| Gain on Disposition of Fixed Assets | 105,075 | 45,961 |
| Contributed Capital | 201,042 | 16,825 |
| Amortization Bond Issue Costs | ( 154,988) | ( 125,478) |
| **Total Nonoperating Revenues and (Expenses)** | ( 10,738,987) | (226,497,754) |
| **Net Income/(Loss)** | 3,283,187 | (217,509,012) |
| **Net Position - January 1** | ( 70,614,343) | 146,894,669 |
| **Net Position - December 31** | **$( 67,331,156)** | **$( 70,614,343)** |

See Accompanying Notes to Financial Statements

**ALTOONA WATER AUTHORITY**
**WATER DIVISION**
**WATER REVENUE FUND**

| | 2019 BUDGET |
|---|---|
| **REVENUE** | |
| WATER SALES | 17,474,179 |
| SALES TO OTHER UTILITIES | 450,000 |
| BULK SALES | - |
| CAPITAL SURCHARGE | 500,000 |
| PENALTIES | 90,000 |
| INSTALL/RENEW-SERVICE LINES | 95,000 |
| METER INCOME | 30,000 |
| SHUT OFFS | 60,000 |
| FIRE LINES | 330,000 |
| FINAL READINGS | 45,000 |
| CAPACITY FEES | 30,000 |
| REIMBURSEMENTS-BELLWOOD BORO | 261,257 |
| REIMBURSEMENTS-HOLLIDAYSBURG BORO | 743,153 |
| INTEREST INCOME | 70,000 |
| SERVICE-WASTEWATER DIVISION | 1,112,400 |
| TIMBER SALES | 50,000 |
| OTHER RENTALS | 172,000 |
| MISCELLANEOUS INCOME | 96,000 |
| BAD DEBT RECOVERY | 4,000 |
| **TOTAL REVENUES** | **21,612,989** |
| **EXPENDITURES-ADMINSITRATIVE** | |
| WAGES | 770,879 |
| OFFICER'S COMPENSATION | 1,200 |
| CONSULTING ENGINEERS | 45,000 |
| AUDITING | 15,000 |
| LEGAL FEES | 25,000 |
| TRUSTEES EXPENSE | 4,200 |
| OTHER PROFESSIONAL FEES | 100,000 |
| ADVERTISING | 6,000 |
| PUBLIC RELATIONS AND MARKETING | 1,000 |
| TRAVEL/CONFERENCES/EDUCATION | 2,500 |
| DUES & SUPSCRIPTIONS | 6,500 |
| MAINTENANCE BUILDING | 15,000 |
| MAINTENANCE-EQUIPMENT | 12,000 |
| OFFICE SUPPLIES | 6,000 |
| POSTAGE | 2,000 |
| LEASE PAYMENT | 2,730,010 |
| HUMAN RESOURCE EXPENSE | 2,500 |
| SAFETY COMMITTEE EXPENSE | 12,000 |
| TELEPHONE EXPENSE | 15,000 |
| BAD DEBT EXPENSE | 20,000 |
| UTILITIES | 22,000 |
| SMALL TOOLS, EQUIPMENT, FURNITURE | 2,500 |
| **TOTAL ADMINISTRATIVE EXPENDITURES** | **3,816,289** |

**ALTOONA WATER AUTHORITY**
**WATER DIVISION**
**WATER REVENUE FUND**

| | 2019 BUDGET |
|---|---|
| **EXPENDITURES-BILLING & COLLECTION** | |
| WAGES | 467,320 |
| TRAVEL/CONFERENCES/EDUCATION | 500 |
| MAINTENANCE-EQUIPMENT | 10,000 |
| OFFICE SUPPLIES | 20,000 |
| UTILITY BILLING SOFTWARE HOSTING | 85,000 |
| POSTAGE | 145,000 |
| COLLECTION EXPENSE | 7,000 |
| TELEPHONE EXPENSE | 3,000 |
| SMALL TOOLS, EQUIPMENT, FURNITURE | 4,000 |
| **TOTAL BILLING & COLLECTION EXPENDITRURES** | **741,820** |
| **EXPENDITURES-PURIFICATION & DISTRIBUTION** | |
| WAGES | 1,247,592 |
| TRAVEL/CONFERENCES/EDUCATION | 7,000 |
| DAM INSPECTIONS | 27,000 |
| TELEPHONE EXPENSE | 2,700 |
| MAINTENANCE-WATER PUMP STATION | - |
| MAINTENANCE-TANKS | - |
| MAINTENANCE-WATERSHED | 15,000 |
| SOURCE WATER PROTECTION | 6,000 |
| UTILITIES | 105,000 |
| SMALL TOOLS, EQUIPMENT, FURNITURE | 8,000 |
| **TOTAL PURIFICATION & DISTRIBUTION EXPENDITURES** | **1,418,292** |
| **EXPENDITURES-HORSESHOE CURVE WTP** | |
| LAB COSTS/SUPPLIES | 32,500 |
| TELEPHONE EXPENSE | 4,200 |
| ELECTRICITY | 130,000 |
| CHEMICALS | 89,250 |
| MAINTENANCE | 86,250 |
| SLUDGE DISPOSAL | 10,000 |
| UTILITIES - PROPANE HEATING | 65,000 |
| **TOTAL HORSESHOE CURVE EXPENDITURES** | **417,200** |
| **EXPENDITURES-MILL RUN WTP** | |
| LAB COSTS/SUPPLIES | 17,300 |
| TELEPHONE EXPENSE | 1,300 |
| ELECTRICITY | 40,000 |
| CHEMICALS | 18,900 |
| MAINTENANCE | 25,000 |
| SLUDGE DISPOSAL | 3,000 |
| UTILITIES - PROPANE HEATING | 15,000 |
| **TOTAL MILL RUN EXPENDITURES** | **120,500** |

**ALTOONA WATER AUTHORITY**
**WATER DIVISION**
**WATER REVENUE FUND**

| | 2019 BUDGET |
|---|---|
| **EXPENDITURES-TIPTON WTP** | |
| LAB COSTS/SUPPLIES | 25,800 |
| TELEPHONE EXPENSE | 1,500 |
| ELECTRICITY | 54,000 |
| CHEMICALS | 31,500 |
| MAINTENANCE | 23,000 |
| SLUDGE DISPOSAL | 3,000 |
| UTILITIES - PROPANE HEATING | 10,000 |
| **TOTAL TIPTON EXPENDITURES** | **148,800** |
| **EXPENDITURES-KETTLE WTP** | |
| LAB COSTS/SUPPLIES | 3,000 |
| TELEPHONE EXPENSE | 1,000 |
| ELECTRICITY | 7,000 |
| CHEMICALS | 2,000 |
| MAINTENANCE | 5,000 |
| SLUDGE DISPOSAL | |
| UTILITIES - PROPANE HEATING | 4,500 |
| **TOTAL KETTLE EXPENDITURES** | **22,500** |
| **EXPENDITURES-HOMER GAP WTP** | |
| LAB COSTS/SUPPLIES | 2,000 |
| TELEPHONE EXPENSE | 400 |
| ELECTRICITY | 7,000 |
| CHEMICALS | 2,000 |
| MAINTENANCE | 4,000 |
| SLUDGE DISPOSAL | - |
| UTILITIES - PROPANE HEATING | 5,000 |
| **TOTAL HOMER GAP EXPENDITURES** | **20,400** |
| **EXPENDITURES-PLANE NINE WTP** | |
| LAB COSTS/SUPPLIES | 32,500 |
| TELEPHONE EXPENSE | 1,500 |
| ELECTRICITY | 75,000 |
| CHEMICALS | 31,500 |
| MAINTENANCE | 23,000 |
| SLUDGE DISPOSAL | 3,000 |
| UTILITIES - PROPANE HEATING | 15,000 |
| INSURANCE | 11,000 |
| **TOTAL PLANE NINE EXPENDITURES** | **192,500** |

**ALTOONA WATER AUTHORITY**
**WATER DIVISION**
**WATER REVENUE FUND**

| | 2019 BUDGET |
|---|---|
| **EXPENDITURES-BELLWOOD WTP** | |
| LAB COSTS/SUPPLIES | 32,500 |
| TELEPHONE EXPENSE | 1,400 |
| ELECTRICITY | 75,000 |
| CHEMICALS | 54,600 |
| MAINTENANCE | 28,750 |
| SLUDGE DISPOSAL | 4,000 |
| UTILITIES - PROPANE HEATING | 20,000 |
| INSURANCE | 10,000 |
| **TOTAL BELLWOOD EXPENDITURES** | **226,250** |
| **EXPENDITURES-METER DIVISION** | |
| WAGES | 450,182 |
| MAINTENANCE-EQUIPMENT | 30,000 |
| TELEPHONE EXPENSE | 5,000 |
| OFFICE SUPPLIES/UNIFORMS/MAINT. | 2,000 |
| MATERIALS & SUPPLIES | 20,000 |
| GASOLINE & OIL | 18,000 |
| SMALL TOOLS, EQUIPMENT, FURNITURE | 3,500 |
| | - |
| **TOTAL METER DIVISION EXPENDITURES** | **528,682** |
| **EXPENDITURES-MAINTENANCE** | |
| WAGES | 2,446,757 |
| TRAVEL/CONFERENCES/EDUCATION | 14,000 |
| MAINTENANCE-BUILDING | 10,000 |
| MAINTENANCE-EQUIPMENT | 8,000 |
| MAINTENANCE-COMMUNICATION EQUIPMENT | 500 |
| OFFICE SUPPLIES | 3,000 |
| GIS SYSTEM EXPENSE | 11,200 |
| TELEPHONE EXPENSE | 16,000 |
| SAFETY EQUIPMENT/CLOTHING | 10,000 |
| MAINTENANCE - WATER PUMP STATIONS | 12,000 |
| MAINTENANCE - TANKS | 30,000 |
| UTILITIES | 18,000 |
| MECHANICS UNIFORMS | 2,000 |
| MATERIALS & SUPPLIES | 400,000 |
| LEASE EXPENSE | 14,051 |
| MAINTENANCE-VEHICLE | 75,000 |
| GASOLINE & OIL | 55,000 |
| DIESEL FUEL | 65,000 |
| STREET CUTS | 325,000 |
| ONE CALL SYSTEM EXPENSE | 7,000 |
| SMALL TOOLS, EQUIPMENT, FURNITURE | 15,000 |
| **TOTAL MAINTENANCE EXPENDITURES** | **3,537,508** |

**ALTOONA WATER AUTHORITY**
**WATER DIVISION**
**WATER REVENUE FUND**

| | 2019 BUDGET |
|---|---|
| **EXPENDITURES-EMPLOYEE BENEFITS & INSURANCE** | |
| SOCIAL SECURITY | 411,779 |
| WORKMENS COMPENSATION | 140,000 |
| PA UNEMPLOYMENT COMPENSATION | 5,000 |
| PENSION | 486,300 |
| GROUP LIFE, AD&D, LTD , STD | 90,000 |
| HOSPITALIZATION & MAJOR MEDICAL | 1,480,000 |
| HEALTH & WELFARE(AFSCME) | 28,329 |
| MEDICAL EXAMINATIONS | 8,000 |
| INSURANCE-FLEET | 24,601 |
| INSURANCE-ALL RISK PROPERTY | 147,898 |
| INSURANCE-PUBLIC OFFICIAL LIABILITY | 3,685 |
| CONTINGENCIES | - |
| **TOTAL EMPLOYEE FRINGE BENEFITS & INSURANCE** | **2,825,592** |
| ***TOTAL OPERATING EXPENDITURES*** | **14,016,333** |
| **CAPITAL EXPENDITURES** | |
| CONSTRUCTION & RENEWAL | 612,912 |
| VEHICLES | - |
| OFFICE FURNITURE & EQUIPMENT | - |
| METERS | - |
| COMPUTER EQUIPMENT | - |
| FIRE HYDRANTS | - |
| PLANT EQUIPMENT/RENEWAL | - |
| OTHER EQUIPMENT | - |
| **TOTAL CAPITAL EXPENDITURES** | **612,912** |
| **DEBT SERVICE & INTEREST** | |
| DEBT SERVICE PAYMENT | 6,435,936 |
| **TOTAL DEBT SERVICE PAYMENT** | **6,435,936** |
| **TOTAL EXPENDITURES** | **21,065,181** |
| **NET REVENUE/(DEFICIT)** | **547,808** |

**ALTOONA WATER AUTHORITY**
**WASTEWATER DIVISION**
**SEWER REVENUE FUND**

| | 2019 BUDGET |
|---|---|
| **REVENUE** | **0%** |
| WASTEWATER RENTALS | 11,343,481 |
| CAPITAL SURCHARGE | 500,000 |
| PENALTIES | 65,000 |
| CAPACITY FEES | 10,000 |
| SEWER INSTALL/TAP FEES | 20,000 |
| SEWER-SURCHARGE/PRETREATMENT | 150,000 |
| SEPTIC HAULER FEES | 190,000 |
| INTERMUNICIPAL SERVICE REIMBURSEMENT | 592,855 |
| INTEREST INCOME | 25,000 |
| MISCELLANEOUS INCOME | 90,000 |
| RECOVERY - CHARGED OFF ACCOUNTS | 2,000 |
| **TOTAL REVENUES** | **12,988,336** |
| **EXPENDITURES-ADMINISTRATIVE** | |
| OFFICER'S COMPENSATION | 1,200 |
| CONSULTING ENGINEERS | 113,000 |
| AUDITING | 12,000 |
| LEGAL FEES | 40,000 |
| TRUSTEE EXPENSE | 5,200 |
| OTHER PROFESSIONAL FEES | 35,000 |
| ADVERTISING | 3,000 |
| PUBLIC RELATIONS EXPENSE | 1,000 |
| TRAVEL/CONFERENCES/EDUCATION | 5,000 |
| DUES & SUPSCRIPTIONS | 6,700 |
| MAINTENANCE-EQUIPMENT | 12,000 |
| OFFICE SUPPLIES | 5,000 |
| POSTAGE | 3,000 |
| PAYMENT FOR CITY SERVICES | 1,535,630 |
| PAYMENT FOR WATER DIVISION SERVICES | 1,112,400 |
| HUMAN RESOURCE EXPENSE | 2,500 |
| SAFETY COMMITTEE EXPENSE | 10,000 |
| BAD DEBT EXPENSE | 15,000 |
| TELEPHONE EXPENSE | 7,000 |
| SMALL TOOLS, EQUIPMENT, FURNITURE | 2,000 |
| **TOTAL ADMINISTRATIVE EXPENDITURES** | **2,926,630** |

**ALTOONA WATER AUTHORITY**
**WASTEWATER DIVISION**
**SEWER REVENUE FUND**

| | 2019 BUDGET |
|---|---|
| **EXPENDITURES-DISPOSAL PLANTS** | |
| WAGES | 1,338,792 |
| TRAVEL/CONFERENCE/EDUCATION | 16,000 |
| PRETREATMENT MONITORING | 60,000 |
| TELEPHONE EXPENSE | 4,500 |
| SAFETY EQUIPMENT/CLOTHING | 1,500 |
| MAINTENANCE - PUMP STATIONS | 4,000 |
| SMALL TOOLS, EQUIPMENT, FURNITURE | 10,000 |
| **TOTAL DISPOSAL PLANTS EXPENDITURES** | **1,434,792** |
| **EXPENDITURES - EASTERLY PLANT** | |
| LAB COSTS & SUPPLIES | 55,000 |
| TELEPHONE EXPENSE | 2,000 |
| ELECTRICITY-PLANTS | 350,000 |
| CHEMICALS | 70,000 |
| MAINTENANCE-PLANTS | 103,000 |
| MAINTENANCE-CSO'S | 15,000 |
| SLUDGE DISPOSAL | 20,000 |
| NATURAL GAS & OIL | 35,000 |
| **TOTAL EASTERLY PLANT EXPENDITURES** | **650,000** |
| **EXPENDITURES - WESTERLY PLANT** | |
| LAB COSTS & SUPPLIES | 55,000 |
| TELEPHONE EXPENSE | 10,000 |
| ELECTRICITY-PLANTS | 500,000 |
| CHEMICALS | 95,000 |
| MAINTENANCE-PLANTS | 204,000 |
| MAINTENANCE-CSO'S | 15,000 |
| SLUDGE DISPOSAL | 20,000 |
| NATURAL GAS & OIL | 55,000 |
| **TOTAL WESTERLY PLANT EXPENDITURES** | **954,000** |

**ALTOONA WATER AUTHORITY**
**WASTEWATER DIVISION**
**SEWER REVENUE FUND**

| | 2019 BUDGET |
|---|---|
| **EXPENDITURES-SANITARY SEWERS** | |
| WAGES | 682,400 |
| MAINTENANCE-BUILDING | 4,000 |
| GIS SYSTEM EXPENSE | 11,200 |
| TELEPHONE EXPENSE | 2,400 |
| SAFETY EQUIPMENT/CLOTHING | 4,000 |
| MATERIALS & SUPPLIES | 180,000 |
| MAINTENANCE-VEHICLE | 40,000 |
| GASOLINE & OIL | 20,000 |
| DIESEL FUEL | 30,000 |
| STREET CUTS | 150,000 |
| ONE CALL SYSTEM EXPENSE | 4,000 |
| SMALL TOOLS, EQUIPMENT, FURNITURE | 3,000 |
| **TOTAL SANITARY SEWERS EXPENDITURES** | **1,131,000** |
| **EXPENDITURES-EMPLOYEE BENEFITS & INSURANCE** | |
| SOCIAL SECURITY | 154,621 |
| WORKMENS COMPENSATION | 68,000 |
| PA UNEMPLOYMENT COMPENSATION | 2,500 |
| PENSION | 230,000 |
| GROUP LIFE, AD&D, LTD | 30,000 |
| HOSPITALIZATION & MAJR MEDICAL | 636,354 |
| HEALTH & WELFARE(AFSCME) | 11,600 |
| MEDICAL EXAMINATIONS | 5,000 |
| INSURANCE-FLEET | 16,436 |
| INSURANCE-ALL RISK PROPERTY | 103,458 |
| INSURANCE-BOILER MACHINERY | - |
| INSURANCE-PUBLIC OFFICIAL LIAB | 3,474 |
| CONTINGENCIES | - |
| **TOTAL EMPLOYEE FRINGE BENEFITS & INSURANCE** | **1,261,443** |
| ***TOTAL OPERATING EXPENDITURES*** | **8,357,865** |

**ALTOONA WATER AUTHORITY**
**WASTEWATER DIVISION**
**SEWER REVENUE FUND**

| | 2019 BUDGET |
|---|---|
| **CAPITAL EXPENTITURES** | |
| CONSTRUCTION & RENEWAL | - |
| VEHICLES | 431,000 |
| OFFICE FURNITURE & EQUIPMENT | 8,000 |
| COMPUTER EQUIPMENT | 15,500 |
| PLANT EQUIPMENT/RENEWAL | - |
| OTHER EQUIPMENT | 9,000 |
| **TOTAL CAPITAL EXPENDITURES** | **463,500** |
| **DEBT SERVICE & INTEREST** | |
| DEBT SERVICE PAYMENT | 4,154,608 |
| **TOTAL DEBT SERVICE PAYMENT** | **4,154,608** |
| **TOTAL EXPENDITURES** | **12,975,973** |
| **NET REVENUE/(DEFICIT)** | **12,363** |

**CITY OF READING**

**COMBINING STATEMENT OF NET POSITION - WATER FUNDS**

**December 31, 2019**

| | City Water Fund | Reading Area Water Authority | Eliminations | Total Water Fund |
|---|---|---|---|---|
| **ASSETS** | | | | |
| Current assets: | | | | |
| Cash | $ 1,858,893 | $ 13,894,351 | $ - | $ 15,753,244 |
| Investments | 119,120 | - | - | 119,120 |
| Accounts receivable, net | 1,687 | 5,230,760 | - | 5,232,447 |
| Interfund receivables | 293,208 | - | (224,755) | 68,453 |
| Inventory | - | 160,309 | - | 160,309 |
| Prepaid expenses | - | 54,600 | - | 54,600 |
| Total current assets | 2,272,908 | 19,340,020 | (224,755) | 21,388,173 |
| Restricted assets - cash and investments | - | 9,570,456 | - | 9,570,456 |
| Noncurrent assets: | | | | |
| Capital assets not being depreciated | 2,059,359 | 270,252 | - | 2,329,611 |
| Capital assets, net of accumulated depreciation | 9,380,774 | 66,185,454 | - | 75,566,228 |
| Total capital assets, net | 11,440,133 | 66,455,706 | - | 77,895,839 |
| Rights to leased land | - | 917,715 | - | 917,715 |
| Total noncurrent assets | 11,440,133 | 67,373,421 | - | 78,813,554 |
| **TOTAL ASSETS** | 13,713,041 | 96,283,897 | (224,755) | 109,772,183 |
| **DEFERRED OUTFLOWS** | | | | |
| Deferred charge on bond refunding | 123,536 | 917,612 | - | 1,041,148 |
| Deferred outflows of resources for pension | 599,238 | - | - | 599,238 |
| Deferred outflows of resources for other postemployment benefits | 20,939 | - | - | 20,939 |
| **TOTAL DEFERRED OUTFLOWS** | 743,713 | 917,612 | - | 1,661,325 |
| **LIABILITIES** | | | | |
| Current liabilities: | | | | |
| Accounts payable | 14,606 | 378,233 | - | 392,839 |
| Interfund payables | 4,214,064 | 224,755 | (224,755) | 4,214,064 |
| Accrued interest | - | 297,398 | - | 297,398 |
| Accrued payroll and compensated absences | - | 790,915 | - | 790,915 |
| Escrow deposits | - | 107,245 | - | 107,245 |
| Current portion notes and bonds payable | 99,498 | 3,379,254 | - | 3,478,752 |
| Total current liabilities | 4,328,168 | 5,177,800 | (224,755) | 9,281,213 |
| Noncurrent liabilities: | | | | |
| Notes and Bonds payable, net | 3,065,323 | 77,462,829 | - | 80,528,152 |
| Net pension liability | 1,178,813 | - | - | 1,178,813 |
| Other postemployment benefits | 144,972 | - | - | 144,972 |
| Total noncurrent liabilities | 4,389,108 | 77,462,829 | - | 81,851,937 |
| **TOTAL LIABILITIES** | 8,717,276 | 82,640,629 | (224,755) | 91,133,150 |
| **DEFERRED INFLOWS** | | | | |
| Deferred inflows of resources for pension | 576,698 | - | - | 576,698 |
| Deferred inflows of resources for other postemployment benefits | 1,900 | - | - | 1,900 |
| **TOTAL DEFERRED INFLOWS** | 578,598 | - | - | 578,598 |
| **NET POSITION** | | | | |
| Net investment in capital assets | 8,398,848 | (13,468,765) | - | (5,069,917) |
| Restricted for debt service | - | 7,592,650 | - | 7,592,650 |
| Restricted for capital assets | - | 1,879,990 | - | 1,879,990 |
| Unrestricted | (3,237,968) | 18,557,005 | - | 15,319,037 |
| **TOTAL NET POSITION** | $ 5,160,880 | $ 14,560,880 | $ - | $ 19,721,760 |

*See note to supplementary information.*

**CITY OF READING**

**COMBINING STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION - WATER FUNDS**

**Year Ended December 31, 2019**

| | City Water Fund | Reading Area Water Authority | Eliminations | Total Water Fund |
|---|---|---|---|---|
| **OPERATING REVENUES** | | | | |
| Charges for services | $ 12,151,531 | $ 32,093,301 | $ (12,151,531) | $ 32,093,301 |
| Other | 487,110 | 41,836 | - | 528,946 |
| **TOTAL OPERATING REVENUES** | 12,638,641 | 32,135,137 | (12,151,531) | 32,622,247 |
| **OPERATING EXPENSES** | | | | |
| Lease payments | - | 12,142,535 | (12,142,535) | - |
| Personnel | 441,051 | 6,372,046 | - | 6,813,097 |
| Depreciation and amortization | 596,856 | 4,311,994 | - | 4,908,850 |
| Risk management | 65,800 | - | - | 65,800 |
| Contracted Services | - | 907,019 | - | 907,019 |
| Chemicals and supplies | - | 1,173,058 | - | 1,173,058 |
| Utilities | - | 655,444 | - | 655,444 |
| Other | 1,869,230 | 3,016,908 | (8,996) | 4,877,142 |
| **TOTAL OPERATING EXPENSES** | 2,972,937 | 28,579,004 | (12,151,531) | 19,400,410 |
| **OPERATING INCOME** | 9,665,704 | 3,556,133 | - | 13,221,837 |
| **NONOPERATING REVENUES (EXPENSES)** | | | | |
| Intergovernmental revenue | - | 125,000 | - | 125,000 |
| Interest income | 2,445 | 597,173 | - | 599,618 |
| Interest expense | (154,896) | (3,768,727) | - | (3,923,623) |
| Gain (loss) on sale of solid waste accounts receivable | - | 68,728 | - | 68,728 |
| Other | - | 19,797 | - | 19,797 |
| **NET NONOPERATING REVENUES (EXPENSES)** | (152,451) | (2,958,029) | - | (3,110,480) |
| **INCOME BEFORE TRANSFERS** | 9,513,253 | 598,104 | - | 10,111,357 |
| Transfers out - lease payments | (9,774,710) | - | - | (9,774,710) |
| **CHANGE IN NET POSITION** | (261,457) | 598,104 | - | 336,647 |
| **NET POSITION - BEGINNING OF YEAR - RESTATED** | 5,422,337 | 13,962,776 | - | 19,385,113 |
| **NET POSITION - END OF YEAR** | $ 5,160,880 | $ 14,560,880 | $ - | $ 19,721,760 |

## Financial Information

**Net Position -** The following schedule presents a summary of net position comparison at December 31, 2018, 2017, and 2016:

| | 2018 | 2017 (As Restated) | 2016 (As Restated) |
|---|---|---|---|
| **Assets** | | | |
| Unrestricted current assets | **$ 25,886,197** | $ 24,371,571 | $ 20,614,911 |
| Restricted current assets | **3,389,010** | 11,067,725 | 19,177,064 |
| Capital assets, net | **64,973,550** | 59,036,648 | 55,262,527 |
| Other asset | **351,810** | 1,020,000 | 1,020,000 |
| **Deferred Outflow of Resources** | **1,054,979** | 1,197,798 | 1,346,286 |
| **Total Assets and Deferred Outflow of Resources** | **$ 102,255,546** | $ 96,693,742 | $ 97,420,788 |
| **Liabilities** | | | |
| Current liabilities | **$ 7,496,258** | $ 5,387,837 | $ 5,985,559 |
| Long-term debt | **80,796,512** | 84,017,089 | 87,200,895 |
| **Total Liabilities** | **$ 88,292,770** | $ 89,404,926 | $ 93,186,454 |
| **Net Position** | | | |
| Net investment in capital assets | **$ (18,130,096)** | $ (27,177,795) | $ (22,222,481) |
| Restricted for debt service | **7,513,275** | 7,426,839 | 7,409,503 |
| Unrestricted | **24,579,597** | 27,039,772 | 19,047,312 |
| **Total Net Position** | **$ 13,962,776** | $ 7,288,816 | $ 4,234,334 |

Current liabilities increased by 39.1% in 2018 compared to a decrease by 10.0% in 2017 and an increase by 20.7% in 2016. The 2018 increase is attributable to increases in capital accounts payable.

**Revenues -** The following schedule presents a summary of revenues for the years ended December 31, 2018, 2017, and 2016:

| | 2018 | 2017 | 2016 |
|---|---|---|---|
| **Operating Revenues** | | | |
| Water billings | **$ 29,663,185** | $ 29,736,140 | $ 29,622,297 |
| Interest and penalty charges | **541,209** | 472,340 | 586,502 |
| Tampered meter and other charges | **310,720** | 449,933 | 591,344 |
| Tapping and connection fees | **50,610** | 177,175 | 86,244 |
| Abandonment fees | **20,107** | 60,907 | 32,001 |
| **Total Operating Revenues** | **$ 30,585,831** | $ 30,896,495 | $ 30,918,388 |

The 2018 fiscal year's total operating revenue decreased by 1.0% compared to 2017, and decreased by 0.1% and increased by 11.7% in 2017 and 2016, respectively.

**Financial Information (continued)**

**Expenses -** The following schedule presents a summary of expenses for the years ended December 31, 2018, 2017, and 2016:

| | 2018 | 2017 (As Restated) | 2016 (As Restated) |
|---|---|---|---|
| **Operating Expenses** | | | |
| Lease payments, City of Reading | **$ 11,640,032** | $ 11,426,339 | $ 11,441,419 |
| Chemical supplies | **1,051,101** | 746,486 | 1,197,002 |
| Meter reading | **-** | - | 539,483 |
| Salaries, payroll taxes, and employee benefits | **6,213,345** | 5,877,245 | 5,529,809 |
| Contracted services | **967,302** | 849,520 | 1,089,676 |
| Other | **3,895,738** | 3,176,042 | 2,881,120 |
| **Total Operating Expenses** | **$ 23,767,518** | $ 22,075,632 | $ 22,678,509 |

The $1,691,886 increase in expenses is primarily the result of the increase in chemical supplies, salaries, payroll taxes and employee benefits, and bad debt expense.

**Changes in Net Position -** The following schedule presents a summary of changes in net position for the years ended December 31, 2018, 2017, and 2016:

| | 2018 | 2017 (As Restated) | 2016 (As Restated) |
|---|---|---|---|
| Operating revenues | **$ 30,585,831** | $ 30,896,495 | $ 30,918,388 |
| Operating expenses | **23,767,518** | 22,075,632 | 22,678,509 |
| **Operating Income before Depreciation** | **6,818,313** | 8,820,863 | 8,239,879 |
| Depreciation and amortization | **3,872,439** | 3,304,835 | 2,946,682 |
| **Operating Income** | **2,945,874** | 5,516,028 | 5,293,197 |
| Nonoperating revenues (expenses), net | **3,728,086** | (2,461,546) | (3,468,433) |
| **Increase in Net Position** | **$ 6,673,960** | $ 3,054,482 | $ 1,824,764 |

Table 2 below shows a Condensed Statement of Revenue, Expenses, and Changes in Net Position for the years ended March 31, 2017, 2016, and 2015 as restated. The change in net position increased from $ 3.7 million in fiscal year 2016 to $ 4.6 million in fiscal year 2017. Operating income increased $ 1.1 million over last year while non-operating revenue (expense) increased $ 1.1 million over fiscal year 2016.

| | 2017 | 2016 | 2015 |
|---|---|---|---|
| Operating revenue | $ 20,849,832 | $ 19,713,716 | $ 17,642,797 |
| Operating expenses | 15,710,138 | 14,557,000 | 12,620,147 |
| Operating income | 5,139,694 | 5,156,716 | 5,022,650 |
| Non-operating revenue (expenses) | (908,165) | (1,983,244) | (741,293) |
| Income before capital contribution | 4,231,529 | 3,173,472 | 4,281,357 |
| Capital contribution | 324,142 | 551,477 | 638,017 |
| Change in net position | 4,555,671 | 3,724,949 | 4,919,374 |
| Net position, beginning of year | 76,825,172 | 73,100,223 | 68,180,849 |
| Net position, end of year | $ 81,380,843 | $ 76,825,172 | $ 73,100,223 |

**Table 2 - Condensed Statement of Revenues, Expenses, and Changes in Net Position**

Table 3 and Table 4 below show a breakdown of fiscal year 2017 Operating Revenue and Operating Expenses, respectively.

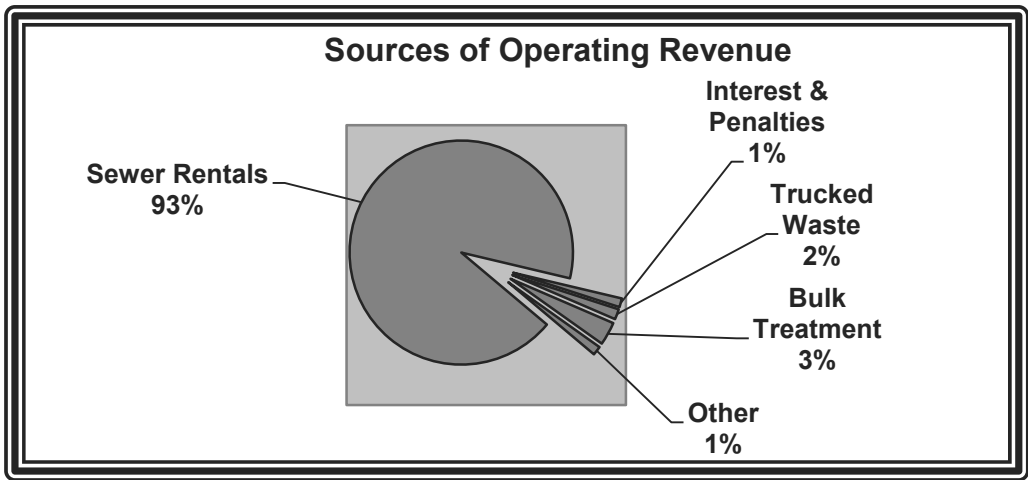



**Table 3 - Sources of Operating Revenue - Fiscal Year 2017**

Table 2 below shows a Condensed Statement of Revenue, Expenses, and Changes in Net Position for the years ended March 31, 2018, 2017, and 2016. The change in net position increased from $ 4.6 million in fiscal year 2017 to $ 9.0 million in fiscal year 2018. Operating income increased $ 381,000 over last year while non-operating revenue (expense) increased $ 3.2 million over fiscal year 2017.

| | 2018 | 2017 | 2016 |
|---|---|---|---|
| Operating revenue | $ 21,499,186 | $ 20,849,832 | $ 19,713,716 |
| Operating expenses | 15,978,558 | 15,710,138 | 14,557,000 |
| Operating income | 5,520,628 | 5,139,694 | 5,156,716 |
| Non-operating revenue (expenses) | 2,251,417 | (908,165) | (1,983,244) |
| Income before capital contribution | 7,772,045 | 4,231,529 | 3,173,472 |
| Capital contribution | 1,224,093 | 324,142 | 551,477 |
| Change in net position | 8,996,138 | 4,555,671 | 3,724,949 |
| Net position, beginning of year | 81,380,843 | 76,825,172 | 73,100,223 |
| Net position, end of year | $ 90,376,981 | $ 81,380,843 | $ 76,825,172 |

**Table 2 - Condensed Statement of Revenues, Expenses, and Changes in Net Position**

Table 3 and Table 4 below show a breakdown of fiscal year 2018 Operating Revenue and Operating Expenses, respectively.

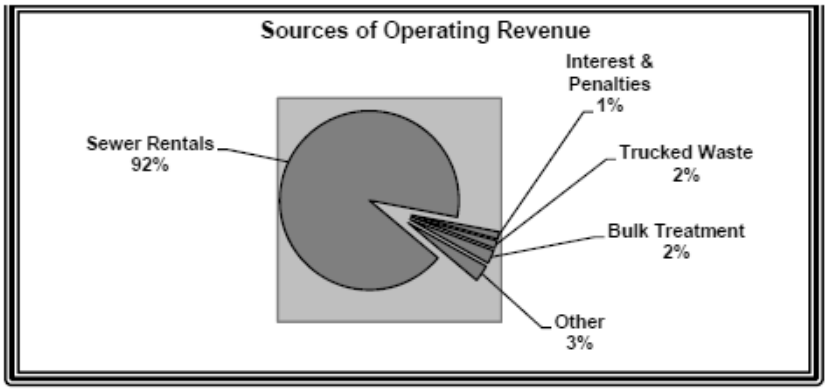



**Table 3 - Sources of Operating Revenue - Fiscal Year 2018**

*Financial Analysis (Continued)*

Table 2 below shows a Condensed Statement of Revenue, Expenses, and Changes in Net Position for the years ended March 31, 2019, 2018, and 2017. The change in net position decreased from $ 9.0 million in fiscal year 2018 to $ 6.1 million in fiscal year 2019. Operating income increased $ 564,000 over last year while non-operating revenue (expense) decreased $ 3.1 million over fiscal year 2018.

| | 2019 | 2018 | 2017 |
|---|---|---|---|
| Operating revenue | $ 22,974,614 | $ 21,499,186 | $ 20,849,832 |
| Operating expenses | 16,889,502 | 15,978,558 | 15,710,138 |
| Operating income | 6,085,112 | 5,520,628 | 5,139,694 |
| Non-operating revenue (expenses) | (825,158) | 2,251,417 | (908,165) |
| Income before capital contribution | 5,259,954 | 7,772,045 | 4,231,529 |
| Capital contribution | 840,017 | 1,224,093 | 324,142 |
| Change in net position | 6,099,971 | 8,996,138 | 4,555,671 |
| Net position, beginning of year | 90,376,981 | 81,380,843 | 76,825,172 |
| Net position, end of year | $ 96,476,952 | $ 90,376,981 | $ 81,380,843 |

**Table 2 - Condensed Statement of Revenues, Expenses, and Changes in Net Position**

Table 3 and Table 4 below show a breakdown of fiscal year 2019 Operating Revenue and Operating Expenses, respectively.

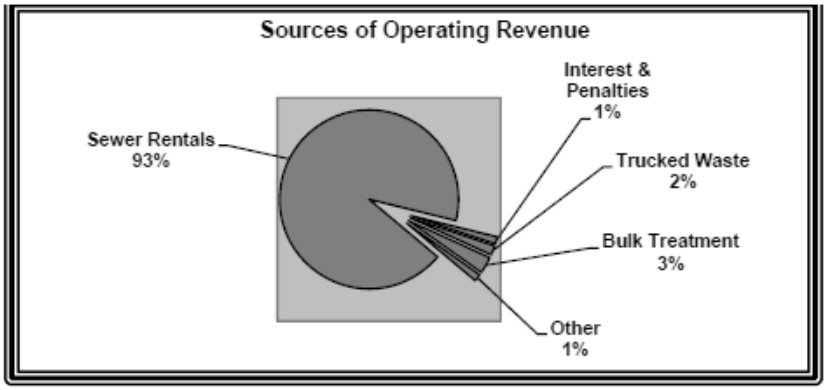



**Table 3 - Sources of Operating Revenue - Fiscal Year 2019**

Table 2 below shows a Condensed Statement of Revenue, Expenses, and Changes in Net Position for the years ended March 31, 2020, 2019, and 2018. The change in net position increased from $ 6.1 million in fiscal year 2019 to $ 7.6 million in fiscal year 2020. Operating income increased $ 847,000 over last year while non-operating expenses decreased $ 650,000 over fiscal year 2019.

| | 2020 | 2019 | 2018 |
|---|---|---|---|
| Operating revenue | $ 23,304,048 | $ 22,943,962 | $ 21,499,186 |
| Operating expenses | 16,402,468 | 16,889,502 | 15,978,558 |
| Operating income | 6,901,580 | 6,054,460 | 5,520,628 |
| Non-operating revenue (expenses) | (144,188) | (794,506) | 2,251,417 |
| Income before capital contribution | 6,757,392 | 5,259,954 | 7,772,045 |
| Capital contribution | 851,741 | 840,017 | 1,224,093 |
| Change in net position | 7,609,133 | 6,099,971 | 8,996,138 |
| Net position, beginning of year | 96,476,952 | 90,376,981 | 81,380,843 |
| Net position, end of year | $ 104,086,085 | $ 96,476,952 | $ 90,376,981 |

**Table 2 - Condensed Statement of Revenues, Expenses, and Changes in Net Position**

Table 3 and Table 4 below show a breakdown of fiscal year 2020 Operating Revenue and Operating Expenses, respectively.

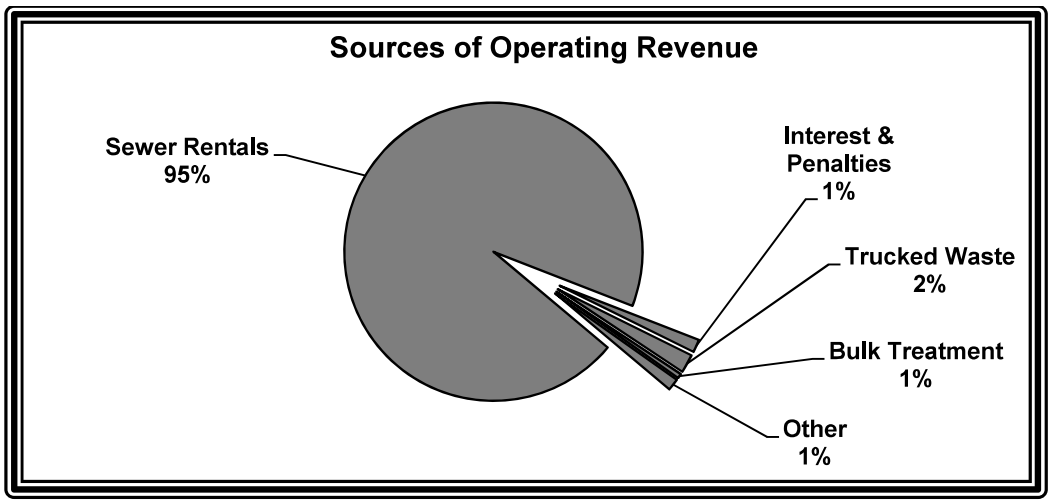



**Table 3 - Sources of Operating Revenue - Fiscal Year 2020**

## Revenue

In fiscal year 2017, revenue exceeded budgeted revenue by 1.0% resulting from additional investment income earned from higher than expected rates of return and below projection draws on construction funds.

## Expenses

Expenses, excluding depreciation, were 1.3% under budget. Interest expenses were below budget as 24% of paid interest expenses were capitalized as project costs. This was offset by above-budget expenditures in Administrative and Treatment Plant expenses. Higher than budgeted employee health care costs of $ 113,000 in the self-funded health insurance plan and amortization of pension liability of $ 52,000 generated above-budget Administrative expenses. Treatment plant expenses for nutrient credit purchases to remain in compliance with the Authority's discharge permit were over-budget by $ 131,000 and expenses for sludge disposal were over-budget by $ 63,000 to cover disposal costs during an extended repair of the centrifuge. Above-budget expense for depreciation account for 48.5% of the negative budget variance in operating expenses. Prior period adjustments to correct the posting of capitalized interest increased the asset value of constructed assets leading to above-budget depreciation costs.

## *CAPITAL ASSETS AND DEBT ADMINISTRATION*

### *Capital Assets*

The Authority's capital assets, net of accumulated depreciation, as of March 31, 2017 were $ 119.7 million. The Authority capitalizes all assets costing more than $ 20,000 whose expected life exceeds 12 months. A condensed statement of capital assets for fiscal years 2017, 2016, and 2015 is presented in Table 6 below. Additional information on the Authority's capital assets can be found in Note 5 of the financial statements.

| | 2017 | 2016 | 2015 |
|---|---|---|---|
| Construction in progress | $ 24,247,571 | $ 8,328,405 | $ 6,383,634 |
| Land | 95,181 | 95,181 | 36,257 |
| Sewer System | | | |
| Lines | 99,909,426 | 99,088,012 | 89,292,400 |
| Pump stations | 33,042,528 | 32,887,101 | 32,787,258 |
| Treatment plant | 38,039,056 | 37,266,392 | 37,189,692 |
| Buildings and improvements | 3,640,150 | 3,199,420 | 3,199,420 |
| Technology | 1,353,402 | 1,295,369 | 1,295,369 |
| Vehicles | 1,760,826 | 1,706,256 | 1,699,097 |
| Equipment | 830,745 | 830,745 | 830,745 |
| | 202,918,885 | 184,696,881 | 172,713,872 |
| Total accumulated depreciation | (83,211,180) | (78,843,305) | (74,748,106) |
| Total Capital Assets | $ 119,707,705 | $ 105,853,576 | $ 97,965,766 |

**Table 6 - Condensed Statement of Capital Assets - Fiscal Years 2017, 2016, and 2015**

### Revenue

In fiscal year 2018, revenue exceeded budgeted revenue by 7.2% resulting from capacity reservation and tapping fee income exceeding budget, which offset below-budget investment and other income.

### Expenses

Expenses, excluding depreciation, were 5.3% over budget. Interest expense was below budget as 52% of paid interest expense was capitalized as project costs. This was offset by above-budget expenditures in Administrative and Treatment Plant expenses. Higher than budgeted legal expenses of $ 31,000 and amortization of pension liability of $ 58,000 generated above-budget Administrative expenses. Treatment plant expenses for nutrient credit purchases to remain in compliance with the Authority's discharge permit were over-budget by $ 62,000 and expenses for sludge disposal were over-budget by $ 91,000. Above-budget expense for depreciation of $ 573,000 accounts for 71.2% of the negative budget variance in operating expenses.

## *CAPITAL ASSETS AND DEBT ADMINISTRATION*

### *Capital Assets*

The Authority's capital assets, net of accumulated depreciation, as of March 31, 2018 were $ 141.2 million. The Authority capitalizes all assets costing more than $ 20,000 whose expected life exceeds 12 months. A condensed statement of capital assets for fiscal years 2018, 2017, and 2016 is presented in Table 6 below. Additional information on the Authority's capital assets can be found in Note 5 of the financial statements.

| | 2018 | 2017 | 2016 |
|---|---|---|---|
| Construction in progress | $ 41,124,606 | $ 24,247,571 | $ 8,328,405 |
| Land | 95,181 | 95,181 | 95,181 |
| Sewer System | | | |
| Lines | 102,594,800 | 99,909,426 | 99,088,012 |
| Pump stations | 38,845,592 | 33,042,528 | 32,887,101 |
| Treatment plant | 38,193,779 | 38,039,056 | 37,266,392 |
| Buildings and improvements | 3,640,150 | 3,640,150 | 3,199,420 |
| Technology | 1,424,091 | 1,353,402 | 1,295,369 |
| Vehicles | 2,291,170 | 1,760,826 | 1,706,256 |
| Equipment | 830,745 | 830,745 | 830,745 |
| | 229,040,114 | 202,918,885 | 184,696,881 |
| Total accumulated depreciation | (87,820,739) | (83,211,180) | (78,843,305) |
| Total Capital Assets | $ 141,219,375 | $ 119,707,705 | $ 105,853,576 |

**Table 6 - Condensed Statement of Capital Assets - Fiscal Years 2018, 2017, and 2016**

*Budgetary Highlights (Continued)*

### Revenue

In fiscal year 2019, actual revenue exceeded budgeted revenue by $ 820,000 resulting from sewer rental, investment, and other income exceeding budget. These were partially offset by below-budget revenue in capacity reservation and tapping fee income.

### Expenses

Expenses, excluding depreciation, were $ 1.5 million over budget. Above average rainfall generated a 40% increase in flow through the collection system and treatment plant for the year. Consequently, electricity and chemical costs, sewer treatment costs from the City of Lancaster and the Borough of Columbia, and nutrient credit purchase costs were $ 1.4 million over budget. When combined with extensive rehabilitation of the centrifuge at the treatment plant, the operating expenses, excluding depreciation, exceeded budget by $ 1.5 million. Above-budget expense for depreciation of $ 308,000 accounts for the balance of the negative budget variance in operating expenses.

## *CAPITAL ASSETS AND DEBT ADMINISTRATION*

### *Capital Assets*

The Authority's capital assets, net of accumulated depreciation, as of March 31, 2019 were $ 142.3 million. The Authority capitalizes all assets costing more than $ 20,000 whose expected life exceeds 12 months. A condensed statement of capital assets for fiscal years 2019, 2018, and 2017 is presented in Table 6 below. Additional information on the Authority's capital assets can be found in Note 5 of the financial statements.

| | 2019 | 2018 | 2017 |
|---|---|---|---|
| Construction in progress | $ 37,011,554 | $ 41,124,606 | $ 24,247,571 |
| Land | 95,181 | 95,181 | 95,181 |
| Sewer System | | | |
| Lines | 110,392,727 | 102,594,800 | 99,909,426 |
| Pump stations | 40,897,235 | 38,845,592 | 33,042,528 |
| Treatment plant | 38,262,279 | 38,193,779 | 38,039,056 |
| Buildings and improvements | 3,640,150 | 3,640,150 | 3,640,150 |
| Technology | 1,424,091 | 1,424,091 | 1,353,402 |
| Vehicles | 2,295,745 | 2,291,170 | 1,760,826 |
| Equipment | 977,181 | 830,745 | 830,745 |
| | 234,996,143 | 229,040,114 | 202,918,885 |
| Total accumulated depreciation | (92,678,068) | (87,820,739) | (83,211,180) |
| Total Capital Assets | $ 142,318,075 | $ 141,219,375 | $ 119,707,705 |

**Table 6 - Condensed Statement of Capital Assets - Fiscal Years 2019, 2018, and 2017**

In fiscal year 2020, actual revenue was below budgeted revenue by $ 7,000 resulting from below-budget revenue in sewer rental and surcharges. These were offset by above-budget revenue in capacity reservation and tapping fee income and investment income.

### Expenses

Expenses were $ 127,000 under budget. Above-budget expenses for required equipment maintenance in our collection system were offset by below-budget depreciation costs as well as below-budget expenditures at the treatment plant and laboratory.

## *CAPITAL ASSETS AND DEBT ADMINISTRATION*

### *Capital Assets*

The Authority's total capital assets, net of accumulated depreciation, as of March 31, 2020 were $ 140.4 million. The Authority capitalizes all assets costing more than $ 20,000 whose expected life exceeds 12 months. A condensed statement of capital assets for fiscal years 2020, 2019, and 2018 is presented in Table 6 below. Additional information on the Authority's capital assets can be found in Note 5 of the financial statements.

| | 2020 | 2019 | 2018 |
|---|---|---|---|
| Construction in progress | $ 5,206,076 | $ 37,011,554 | $ 41,124,606 |
| Land | 95,181 | 95,181 | 95,181 |
| Sewer System | | | |
| Lines | 112,758,402 | 110,392,727 | 102,594,800 |
| Pump stations | 41,163,499 | 40,897,235 | 38,845,592 |
| Treatment plant | 70,517,190 | 38,262,279 | 38,193,779 |
| Buildings and improvements | 3,669,937 | 3,640,150 | 3,640,150 |
| Technology | 1,424,091 | 1,424,091 | 1,424,091 |
| Vehicles | 2,346,319 | 2,295,745 | 2,291,170 |
| Equipment | 996,387 | 977,181 | 830,745 |
| | 238,177,082 | 234,996,143 | 229,040,114 |
| Total accumulated depreciation | (97,771,861) | (92,678,068) | (87,820,739) |
| Total Capital Assets | $ 140,405,221 | $ 142,318,075 | $ 141,219,375 |

**Table 6 - Condensed Statement of Capital Assets - Fiscal Years 2020, 2019, and 2018**

### *Debt Administration*

As of March 31, 2020, the Authority had $ 66.4 million of bonds outstanding including $ 56.5 million in Sewer Revenue Bonds and $ 9.9 million of bonds through a subsidy agreement with the Borough of Columbia. Unamortized bond premiums of $ 2.8 million bring the total bonds payable liability to $ 69.3 million. Bond principal payments of $ 5.8 million and amortization of bond premiums of $ 0.3 million reduced the total bonds payable liability by $ 6.1 million from the March 31, 2019 balance of $ 75.4 million.

**MUNICIPAL AUTHORITY OF WESTMORELAND COUNTY**
**Statements of Net Position**
**March 31, 2020 and 2019**

| | 2020 | 2019 |
|---|---|---|
| Current Assets | | |
| Cash and cash equivalents, unrestricted (Note 3) | $ 29,663,969 | $ 27,812,712 |
| Accounts receivable, customers (net of allowance for doubtful accounts of $474,033 in 2020 and $473,827 in 2019) | 7,014,694 | 6,547,940 |
| Unbilled water and sewer service | 10,722,797 | 9,852,958 |
| Surcharges receivable, current portion | 350,000 | 350,000 |
| Other receivables | 216,612 | 498,933 |
| Material and supplies | 3,630,945 | 2,868,304 |
| Prepaid expenses | 1,121,573 | 352,547 |
| **Total Current Assets** | 52,720,590 | 48,283,394 |
| Property, Plant and Equipment | | |
| Property, plant and equipment (Note 2) | 816,019,835 | 767,648,700 |
| Less: accumulated depreciation | (225,388,158) | (213,403,548) |
| **Property, Plant and Equipment, Net** | 590,631,677 | 554,245,152 |
| Non-Current Assets | | |
| Surcharges receivable, net of current portion and allowance for doubtful accounts of $200,000 in 2020 and 2019 | 1,465,670 | 1,509,942 |
| Prepaid bond insurance | 867,810 | 913,328 |
| Restricted assets: | | |
| Special funds held by trustee (Note 4 & 5) | 176,264,906 | 207,837,151 |
| Restricted cash held by the Authority (Note 6) | 6,663,291 | 16,415,126 |
| **Total Non-Current Assets** | 185,261,677 | 226,675,547 |
| **Total Assets** | 828,613,944 | 829,204,093 |
| Deferred Outflows of Resources | | |
| Net difference between projected and actual earnings on pension plan investments | 7,199,443 | 30,552 |
| Changes in assumptions related to pensions | - | 57,541 |
| Difference between expected and actual experience related to pensions | 835,078 | 602,541 |
| Contribution to pension plan subsequent to measurement date | - | 150,548 |
| Difference between expected and actual experience related to OPEB | 20,431 | 24,517 |
| Changes in assumptions related to OPEB | 7,138,277 | 1,501,026 |
| Deferred losses on bond refundings, net of amortization (Note 8) | 3,413,275 | 4,283,283 |
| **Total Deferred Outflows of Resources** | 18,606,504 | 6,650,008 |

*(continued)*

*See accompanying notes to the financial statements.*

**MUNICIPAL AUTHORITY OF WESTMORELAND COUNTY**
**Statements of Net Position**
**March 31, 2019 and 2018**

| | 2019 | Restated 2018 |
|---|---|---|
| Current Assets | | |
| Cash and cash equivalents, unrestricted (Note 3) | $ 27,812,712 | $ 19,209,356 |
| Accounts receivable, customers (net of allowance for doubtful accounts of $473,827 in 2019 and $470,533 in 2018) | 6,547,940 | 6,298,373 |
| Unbilled water and sewer service | 9,852,958 | 9,851,714 |
| Surcharges receivable, current portion | 350,000 | 350,000 |
| Other receivables | 498,933 | 1,070,190 |
| Inventory - material and supplies | 2,868,304 | 2,515,551 |
| Prepaid expenses | 352,547 | 200,121 |
| **Total Current Assets** | 48,283,394 | 39,495,305 |
| Property, Plant and Equipment | | |
| Property, plant and equipment (Note 2) | 767,648,700 | 711,563,565 |
| Less: accumulated depreciation | (213,403,548) | (201,495,896) |
| **Property, Plant and Equipment, Net** | 554,245,152 | 510,067,669 |
| Non-Current Assets | | |
| Surcharges receivable, net of current portion and allowance for doubtful accounts of $200,000 in 2019 and 2018 | 1,509,942 | 1,653,673 |
| Prepaid bond insurance | 913,328 | 958,845 |
| Restricted assets: | | |
| Special funds held by trustee (Note 4 & 5) | 207,837,151 | 234,717,525 |
| Restricted cash held by the Authority (Note 6) | 16,415,126 | 19,597,310 |
| **Total Non-Current Assets** | 226,675,547 | 256,927,353 |
| **Total Assets** | 829,204,093 | 806,490,327 |
| Deferred Outflows of Resources | | |
| Net difference between projected and actual earnings on pension plan investments | 30,552 | - |
| Changes in assumptions related to pensions | 57,541 | 77,283 |
| Difference between expected and actual experience related to pensions | 602,541 | 825,024 |
| Contribution to pension plan subsequent to measurement date | 150,548 | 56,041 |
| Difference between expected and actual experience related to OPEB | 24,517 | - |
| Changes in assumptions related to OPEB | 1,501,026 | - |
| Deferred losses on bond refundings, net of amortization (Note 8) | 4,283,283 | 4,612,214 |
| **Total Deferred Outflows of Resources** | 6,650,008 | 5,570,562 |

*(continued)*

*See accompanying notes to the financial statements.*

**MUNICIPAL AUTHORITY OF WESTMORELAND COUNTY**
**Statements of Net Position**
**March 31, 2018 and 2017**

| | 2018 | 2017 |
|---|---|---|
| Current Assets | | |
| Cash and cash equivalents, unrestricted (Note 3) | $ 19,209,356 | $ 15,067,865 |
| Accounts receivable, customers (net of allowance for doubtful accounts of $470,533 in 2018 and $458,506 in 2017) | 6,298,373 | 5,597,012 |
| Unbilled water and sewer service | 9,851,714 | 9,777,602 |
| Surcharges receivable, current portion | 350,000 | 350,000 |
| Other receivables | 1,070,190 | 5,178,590 |
| Inventory - material and supplies | 2,515,551 | 2,289,998 |
| Prepaid expenses | 200,121 | 129,312 |
| **Total Current Assets** | 39,495,305 | 38,390,379 |
| Property, Plant and Equipment | | |
| Property, plant and equipment (Note 2) | 711,563,565 | 662,320,792 |
| Less: accumulated depreciation | (201,495,896) | (189,824,163) |
| **Property, Plant and Equipment, net** | 510,067,669 | 472,496,629 |
| Non-Current Assets | | |
| Surcharges receivable, net of current portion and allowance for doubtful accounts of $200,000 in 2018 and 2017 | 1,653,673 | 1,959,138 |
| Prepaid bond insurance | 958,845 | 596,655 |
| Restricted assets: | | |
| Special funds held by trustee (Note 4 & 5) | 234,717,525 | 254,963,842 |
| Restricted cash held by authority (Note 6) | 19,597,310 | 19,003,328 |
| **Total Non-Current Assets** | 256,927,353 | 276,522,963 |
| **Total Assets** | 806,490,327 | 787,409,971 |
| Deferred Outflows of Resources | | |
| Net difference between projected and actual earnings on pension plan investments | - | 170,728 |
| Changes in assumptions related to pensions | 77,283 | - |
| Difference between expected and actual experience related to pensions | 825,024 | 104,074 |
| Contribution to pension plan subsequent to measurement date | 56,041 | - |
| Deferred losses on bond refundings, net of amortization (Note 8) | 4,612,214 | 1,205,212 |
| **Total Deferred Outflows of Resources** | 5,570,562 | 1,480,014 |

*(continued)*

*See accompanying notes to the financial statements.*

**MUNICIPAL AUTHORITY OF WESTMORELAND COUNTY**
**Statements of Revenues, Expenses and Changes in Net Position**
**Fiscal Years Ended March 31, 2020 and 2019**

| | 2020 | 2019 |
|---|---|---|
| Operating Revenues | | |
| Water | $ 86,373,308 | $ 86,597,707 |
| Wastewater | 16,156,229 | 15,286,438 |
| Other operating revenues | 2,930,304 | 5,450,849 |
| **Total Operating Revenues** | 105,459,841 | 107,334,994 |
| Operating Expenses | | |
| Source of supply | 1,072,453 | 935,776 |
| Treatment system | 8,651,822 | 8,810,618 |
| Distribution | 20,592,367 | 18,735,370 |
| Engineering | 1,599,655 | 1,530,906 |
| Wastewater system | 8,871,707 | 8,444,588 |
| Landfill | 4,790 | 4,765 |
| Depreciation and amortization | 14,151,165 | 13,433,385 |
| Commercial and general | 25,934,541 | 27,059,890 |
| Management fee | 1,300,000 | 1,300,000 |
| **Total Operating Expenses** | 82,178,500 | 80,255,298 |
| **Operating Income Before Non-Operating Expenses** | 23,281,341 | 27,079,696 |
| Non-Operating Revenues (Expenses) | | |
| Investment income | 4,775,646 | 4,943,913 |
| Net increase in the fair value of investments | 43,786 | 20,450 |
| Interest expense | (21,188,625) | (20,975,541) |
| Loss on disposals of property, plant and equipment | (775,797) | (403,367) |
| **Total Non-Operating Expenses** | (17,144,990) | (16,414,545) |
| **Income Before Capital Contributions** | 6,136,351 | 10,665,151 |
| Capital Contributions | 5,193,678 | 6,523,749 |
| **Increase in Net Position** | 11,330,029 | 17,188,900 |
| **Total Net Position, Beginning of Fiscal Year** | 145,177,760 | 127,988,860 |
| **Total Net Position, End of Fiscal Year** | $ 156,507,789 | $ 145,177,760 |

*See accompanying notes to the financial statements.*

**MUNICIPAL AUTHORITY OF WESTMORELAND COUNTY**
**Statements of Revenues, Expenses and Changes in Net Position**
**Fiscal Years Ended March 31, 2019 and 2018**

| | 2019 | Restated 2018 |
|---|---|---|
| Operating Revenues | | |
| Water | $ 86,597,707 | $ 81,638,410 |
| Wastewater | 15,286,438 | 14,901,786 |
| Other operating revenues | 5,450,849 | 3,527,303 |
| **Total Operating Revenues** | 107,334,994 | 100,067,499 |
| Operating Expenses | | |
| Source of supply | 935,776 | 865,364 |
| Treatment system | 8,810,618 | 8,002,831 |
| Distribution | 18,735,370 | 17,775,014 |
| Engineering | 1,530,906 | 1,307,465 |
| Wastewater system | 8,444,588 | 8,509,813 |
| Landfill | 4,765 | 43,367 |
| Depreciation and amortization | 13,433,385 | 12,577,264 |
| Commercial and general | 27,059,890 | 28,228,521 |
| Management fee | 1,300,000 | 1,225,000 |
| **Total Operating Expenses** | 80,255,298 | 78,534,639 |
| **Operating Income Before Non-Operating Revenues** | 27,079,696 | 21,532,860 |
| Non-Operating Revenues (Expenses) | | |
| Investment income | 4,943,913 | 3,535,070 |
| Net increase (decrease) in the fair value of investments | 20,450 | (407,750) |
| Interest expense | (20,975,541) | (15,262,836) |
| Loss on disposals of property | (403,367) | (336,175) |
| **Total Non-Operating Expenses** | (16,414,545) | (12,471,691) |
| **Income Before Capital Contributions** | 10,665,151 | 9,061,169 |
| Capital Contributions | 6,523,749 | 13,400,327 |
| **Increase in Net Position** | 17,188,900 | 22,461,496 |
| **Total Net Position, Beginning of Fiscal Year** | 127,988,860 | 135,957,658 |
| **Prior Period Adjustment, see Note 19** | - | (30,430,294) |
| **Total Net Position, End of Fiscal Year** | $ 145,177,760 | $ 127,988,860 |

*See accompanying notes to the financial statements.*

**MUNICIPAL AUTHORITY OF WESTMORELAND COUNTY**
**Statements of Revenues, Expenses and Changes in Net Position**
**Fiscal Years Ended March 31, 2018 and 2017**

| | 2018 | 2017 |
|---|---|---|
| Operating Revenues | | |
| Water | $ 81,638,410 | $ 77,440,502 |
| Wastewater | 14,901,786 | 14,121,562 |
| Other operating revenues | 3,527,303 | 2,858,021 |
| **Total Operating Revenues** | 100,067,499 | 94,420,085 |
| Operating Expenses | | |
| Source of supply | 865,364 | 861,886 |
| Treatment system | 8,002,831 | 8,006,826 |
| Distribution | 17,775,014 | 17,459,687 |
| Engineering | 1,307,465 | 1,271,392 |
| Wastewater system | 8,509,813 | 7,632,386 |
| Landfill | 43,367 | 12,005 |
| Depreciation and amortization | 12,577,264 | 11,562,121 |
| Commercial and general | 28,228,521 | 25,817,145 |
| Management fee | 1,225,000 | 1,200,000 |
| **Total Operating Expenses** | 78,534,639 | 73,823,448 |
| **Operating Income Before Non-Operating Revenues** | 21,532,860 | 20,596,637 |
| Non-Operating Revenues (Expenses) | | |
| Investment income | 3,535,070 | 3,225,914 |
| Net increase (decrease) in the fair value of investments | (407,750) | 431,964 |
| Interest expense | (15,262,836) | (15,032,096) |
| Loss on disposals of property | (336,175) | (1,732,987) |
| **Total Non-Operating Expenses** | (12,471,691) | (13,107,205) |
| **Income Before Capital Contributions** | 9,061,169 | 7,489,432 |
| Capital Contributions | 13,400,327 | 13,432,729 |
| **Increase in Net Position** | 22,461,496 | 20,922,161 |
| **Total Net Position, Beginning of Year** | 135,957,658 | 115,035,497 |
| **Total Net Position, End of Year** | $ 158,419,154 | $ 135,957,658 |

*See accompanying notes to the financial statements.*

# Erie City Water Authority
## Statements of Financial Position

| | As of December 31, | | | |
|---|---|---|---|---|
| | 2019 | 2018 | Change | % Change |
| ASSETS | | | | |
| Current assets | $ 20,057,629 | $ 17,026,267 | $ 3,031,362 | 17.80% |
| Restricted investments | 28,746,310 | 32,386,195 | (3,639,885) | -11.24% |
| Capital assets, net of accumulated depreciation | 194,099,358 | 191,070,499 | 3,028,859 | 1.59% |
| Other non-current assets | 10,462,221 | 10,481,961 | (19,740) | -0.19% |
| Deferred outflows of resources | 32,762,058 | 34,530,203 | (1,768,145) | -5.12% |
| Total Assets and Deferred Outflows | $ 286,127,576 | $ 285,495,125 | $ 632,451 | 0.22% |
| LIABILITIES AND NET POSITION | | | | |
| Current liabilities | $ 7,175,123 | $ 8,766,073 | $ (1,590,950) | -18.15% |
| Long-term debt, net of unaccreted discounts | 306,968,863 | 310,547,787 | (3,578,924) | -1.15% |
| Other non-current liabilities | 25,881,649 | 21,044,412 | 4,837,237 | 22.99% |
| Deferred inflow of resources | 1,888,035 | - | 1,888,035 | 0.00% |
| Total liabilities and deferred inflow of resources | 341,913,670 | 340,358,272 | 1,555,398 | 0.46% |
| Net position - | | | | |
| Net investment in capital assets | 15,948,959 | 11,468,894 | 4,480,065 | 39.06% |
| Restricted for capital projects, debt service | 8,864,436 | 9,849,537 | (985,101) | -10.00% |
| Unrestricted | (80,599,489) | (76,181,578) | (4,417,911) | 5.80% |
| Total net position | (55,786,094) | (54,863,147) | (922,947) | 1.68% |
| Total liabilities and net position | $ 286,127,576 | $ 285,495,125 | $ 632,451 | 0.22% |

Changes in Net Position –

The Authority's net position decreased by $922,947 in 2019. The 2019 decrease in the net position resulted from several factors related to materials and supplies costs and personnel related costs that was offset by savings on interest expense.

Total operating revenues for the year ended December 31, 2019 of $40,086,711 increased $316,562 (0.80%) compared to December 31, 2018.

Total operating expenses of $22,143,829 increased $756,012 (3.53%).

Total 2019 expenses of $42,660,918 compared to $44,001,398 in 2018 decreased $1,340,480 (11.11%).

to $285.50 million. Total liabilities and inflows increased $36.14 million [11.88%] to $340.36 million. The primary reasons for the increase are discussed in the following *Changes in Net Position* section.

Restricted investments of $32.39 million increased $21.03 million [285.19%], primarily from $27 million of new capital project funds from the 2018 bond issue.

Capital assets (net of depreciation) increased $3.09 million. Gross capital assets (before depreciation) increased $11.47 million representing capital additions in accordance with the Authority's adopted capital project program.

**ERIE CITY WATER AUTHORITY**
**STATEMENTS OF FINANCIAL POSITION**

| | As of December 31, | | | |
|---|---|---|---|---|
| | 2018 | 2017 | $ Change | % Change |
| ASSETS | | | | |
| Current assets | $ 17,026,267 | $ 13,116,705 | $ 3,909,562 | 29.8% |
| Restricted investments | 32,386,195 | 11,356,255 | 21,029,940 | 185.2% |
| Capital assets, net of accumulated depreciation | 191,070,499 | 187,981,855 | 3,088,644 | 1.6% |
| Other non-current assets | 10,481,961 | 10,665,706 | (183,745) | (1.7%) |
| Deferred outflows of resources | 34,530,203 | 30,999,314 | 3,530,889 | 11.4% |
| Total Assets and Deferred Outflows | $ 285,495,125 | $ 254,119,835 | $ 31,375,290 | 12.3% |

| | As of December 31, | | | |
|---|---|---|---|---|
| | 2018 | 2017 | $ Change | % Change |
| LIABILITIES AND NET ASSETS | | | | |
| Current liabilities | $ 8,766,073 | $ 7,893,978 | $ 872,095 | 29.8% |
| Long-term debt, net of unaccreted discounts | 310,547,787 | 284,395,079 | 26,152,708 | 9.2% |
| Other non-current liabilities | 21,044,412 | 11,930,218 | (9,114,194) | (76.4%) |
| Deferred inflow of resources | - | 1,113,991 | (1,113,991) | - |
| Total liabilities and deferred outflow of resources | 340,358,272 | 305,333,266 | 35,025,006 | 11.5% |
| Net position – | | | | |
| Invested in capital assets, net of related debt | 11,468,894 | 7,320,870 | 4,148,024 | 56.7% |
| Restricted for capital projects, debt service | 9,849,537 | 7,691,083 | 2,158,454 | 28.1% |
| Unrestricted | (76,181,578) | (66,225,384) | (9,956,194) | (15.0%) |
| Total net position | (54,863,147) | (51,213,431) | (3,649,716) | (7.1%) |
| Total liabilities and net position | $ 285,495,125 | $ 254,119,835 | ($ 31,375,290) | (12.3%) |

*Changes in Net Position –*

The Authority's net position decreased by <$3.65> million in 2018, compared to a <$.84> million decrease in 2017. The 2018 decrease in the net position resulted from several factors – $1.84 million increase in pension costs, $1.1 million increase in interest expense and $1.03 million of bond issue costs.

Total operating revenues for the year ended December 31, 2018 of $39.8 million increased $1.3 million [3.3%] compared to December 31, 2017.

Total operating expenses of $21.4 million increased $2.48 million [13.1%]. The majority of the

**Erie City Water Authority**
**(aka Erie Water Works)**

***MANAGEMENT DISCUSSION AND ANALYSIS (Unaudited)***

**December 31, 2017 and 2016**

**ERIE CITY WATER AUTHORITY**
**STATEMENTS OF FINANCIAL POSITION**

| | As of December 31, | | | |
|---|---|---|---|---|
| | 2017 | 2016 | $ Change | % Change |
| ASSETS | | | | |
| Current assets | $ 13,116,705 | $ 13,797,317 | ( $ 680,612 ) | ( 4.9% ) |
| Restricted investments | 11,356,255 | 20,831,757 | ( 9,475,502 ) | ( 45.5% ) |
| Capital assets, net of accumulated depreciation | 187,981,855 | 182,608,316 | 5,373,539 | 2.9% |
| Other non-current assets | 10,665,706 | 11,274,848 | ( 609,142 ) | ( 5.4% ) |
| Deferred outflows of resources | 30,999,314 | 34,010,414 | ( 3,011,100 ) | ( 8.9% ) |
| Total Assets and Deferred Outflows | $ 254,119,835 | $ 262,522,652 | ( $ 8,402,817 ) | ( 3.2% ) |

| | As of December 31, | | | |
|---|---|---|---|---|
| | 2017 | 2016 | $ Change | % Change |
| LIABILITIES AND NET ASSETS | | | | |
| Current liabilities | $ 7,893,978 | $ 7,918,630 | ( $ 24,652 ) | ( 4.9% ) |
| Long-term debt, net of unaccreted discounts | 284,395,079 | 289,960,220 | ( 5,565,141 ) | ( 1.9% ) |
| Other non-current liabilities | 11,930,218 | 15,019,944 | ( 3,089,726 ) | 20.6% |
| Deferred inflow of resources | 1,113,991 | - | 1,113,991 | - |
| Total liabilities and deferred outflow of resources | 305,333,266 | 312,898,794 | ( 7,565,528 ) | 2.4% |
| Net position – | | | | |
| Invested in capital assets, net of related debt | 7,320,870 | 7,270,325 | 50,545 | 0.7% |
| Restricted for capital projects, debt service | 7,691,083 | 13,216,103 | 5,525,020 | 41.8% |
| Unrestricted | ( 66,225,384 ) | ( 70,862,570 ) | ( 4,637,186 ) | ( 6.5% ) |
| Total net position | ( 51,213,431 ) | ( 50,376,142 ) | ( 837,289 ) | ( 1.7% ) |
| Total liabilities and net position | $ 254,119,835 | $ 262,522,652 | ( $ 8,402,817 ) | ( 3.2% ) |

*Changes in Net Position –*

The Authority's net position decreased by $.84 million in 2017, compared to a $1.92 million in 2016. The 2017 increase in the net position deficit of $.85 million resulted from several factors – $2.6 million increase in net operating revenue - $19.6 million in 2017 versus $17.0 million in 2016 and a $.4 million increase in interest expense - $13.2 million in 2017 versus $12.7 million in 2016.

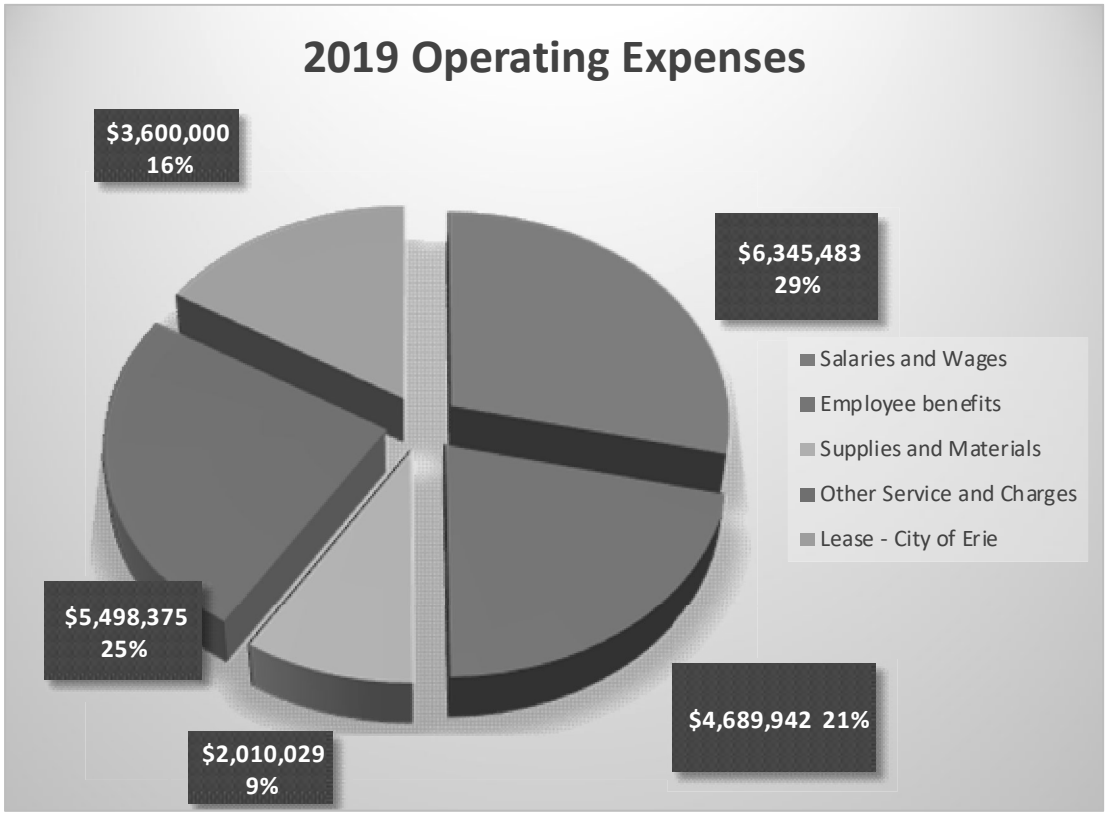
Total operating revenues for the year ended December 31, 2017 of $38.5 million increased $1.8 million (4.9%) compared to December 31, 2016.

Total operating expenses of $18.9 million decreased $.77 million (3.9%). The majority of the 2017 decrease in operating expenses was attributable to lower repair costs on water mains.

Total 2017 expenses of $40.3 million increased $.15 million (.04%) compared to 2016.

## ERIE CITY WATER AUTHORITY
## STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

| | For the year ended December 31, | | | |
|---|---|---|---|---|
| | 2019 | 2018 | Change | % Change |
| Operations | | | | |
| Operating revenues | $ 40,086,711 | $ 39,770,149 | $ 316,562 | 0.80% |
| Operating expenses | (22,143,829) | (21,387,817) | (756,012) | 3.53% |
| Depreciation | (8,393,230) | (8,377,223) | (16,007) | 0.19% |
| Operating income | $ 9,549,652 | $ 10,005,109 | $ (455,457) | -4.55% |
| Non-operating revenue (expense) | | | | |
| Interest expense | $ (12,123,859) | $ (14,236,358) | $ 2,112,499 | -14.84% |
| Other revenues | 2,302,321 | 1,948,092 | 354,229 | 18.18% |
| Other expenses | (651,061) | (1,446,534) | 795,473 | -54.99% |
| | (10,472,599) | (13,734,800) | 3,262,201 | -23.75% |
| Net loss before capital contributions | (922,947) | (3,729,691) | 2,806,744 | -75.25% |
| Capital assets contributions | - | 79,975 | (79,975) | -100.00% |
| Change in net position | $ (922,947) | $ (3,649,716) | $ 2,726,769 | -74.71% |



**Erie City Water Authority**
**(aka Erie Water Works)**

***MANAGEMENT DISCUSSION AND ANALYSIS (Unaudited)***

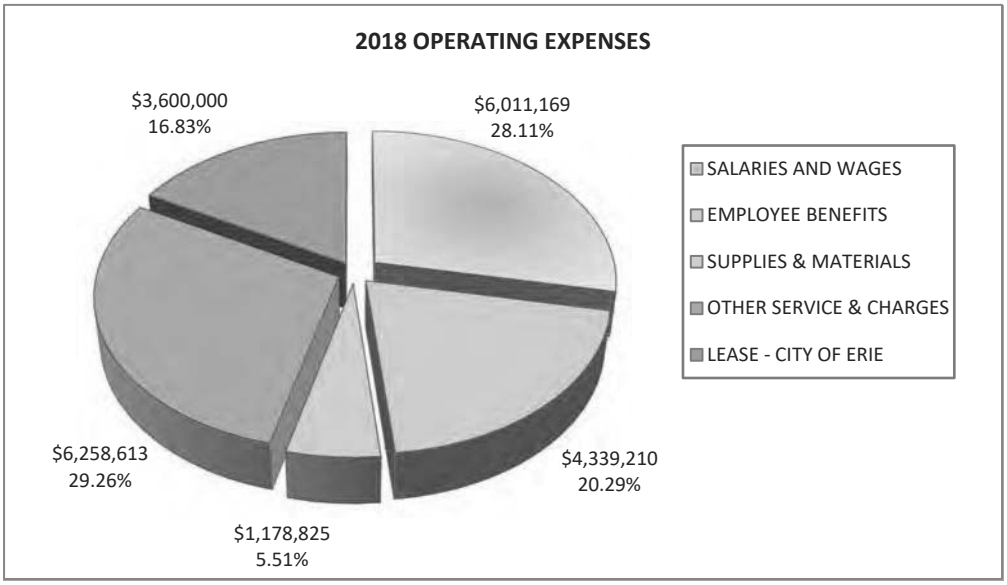
**December 31, 2018 and 2017**

2018 decrease in operating expenses was attributable to higher pension costs and contracted services.

Total 2018 expenses of $44.0 million $40.3 million increased $3.7 million [9.18%] compared to 2017.

**ERIE CITY WATER AUTHORITY**
**STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION**

| | For the year ended December 31, | | | |
|---|---|---|---|---|
| | 2018 | 2017 | $ Change | % Change |
| Operations - | | | | |
| Operating revenues | $ 39,770,149 | $ 38,483,311 | $ 1,286,838 | 3.3% |
| Operating expenses | ( 21,387,817 ) | ( 18,912,253 ) | 2,475,564 | 13.1% |
| Depreciation | ( 8,377,223 ) | ( 8,214,879 ) | 162,344 | ( 2.0% ) |
| Operating income | 10,005,109 | 11,356,179 | 1,351,070 | ( 11.9% ) |
| Non-operating revenue (expense) | | | | |
| Interest expense | ( 14,236,358 ) | ( 13,165,069 ) | 1,071,289 | 8.1% |
| Other revenues | 1,948,092 | 1,326,328 | 621,764 | 46.9% |
| Other expenses | ( 1,446,534 ) | ( 354,727 ) | 1,091,807 | 307.8% |
| | ( 13,734,800 ) | ( 12,193,468 ) | 1,541,332 | 12.6% |
| Net loss before capital contributions | ( 3,729,691 ) | ( 837,289 ) | ( 2,892,402 ) | ( 345.4% ) |
| Capital asset contributions | 79,975 | | 79,975 | - |
| Change in net position | ( $ 3,649,716 ) | ( $ 837,289 ) | ( $ 2,812,427 ) | ( 335.9% ) |



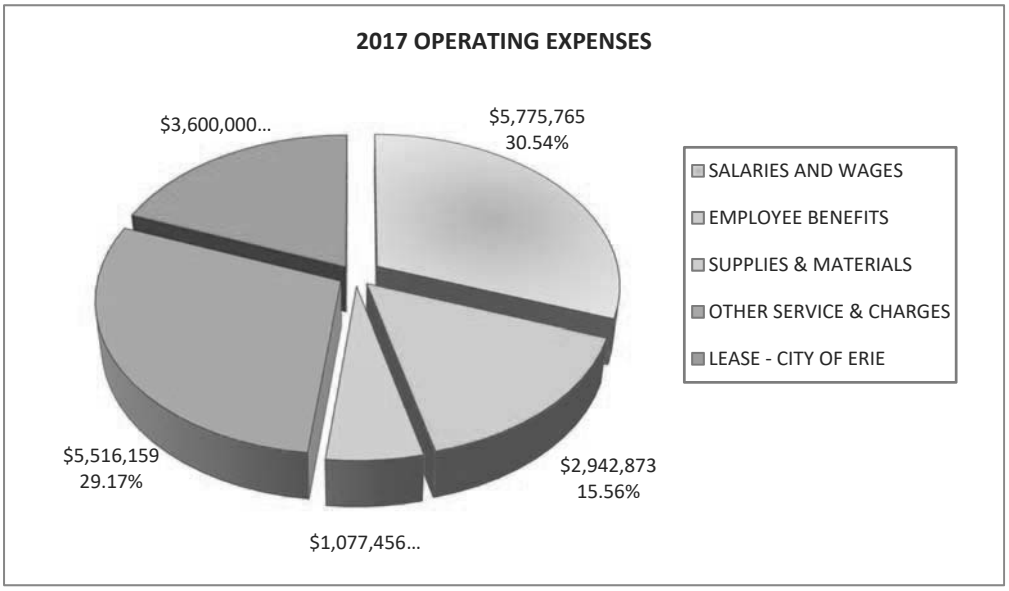
**Erie City Water Authority**
**(aka Erie Water Works)**

***MANAGEMENT DISCUSSION AND ANALYSIS (Unaudited)***

**December 31, 2017 and 2016**

**ERIE CITY WATER AUTHORITY**
**STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION**

| | For the year ended December 31, | | | |
|---|---|---|---|---|
| | 2017 | 2016 | $ Change | % Change |
| Operations - | | | | |
| Operating revenues | $ 38,483,311 | $ 36,687,234 | $ 1,796,077 | 4.9% |
| Operating expenses | ( 18,912,253 ) | ( 19,686,218 ) | 773,965 | 3.9% |
| Depreciation | ( 8,214,879 ) | ( 8,033,694 ) | ( 181,185 ) | ( 2.3% ) |
| Operating income | 11,356,179 | 8,967,322 | ( 2,388,857 ) | ( 26.6% ) |
| Non-operating revenue (expense) | | | | |
| Interest expense | ( 13,165,069 ) | ( 12,733,444 ) | 431,625 | 3.4% |
| Other revenues | 1,326,328 | 1,292,480 | 33,848 | 2.6% |
| Other expenses | ( 354,727 ) | ( 924,621 ) | 569,894 | 61.6% |
| | ( 12,193,468 ) | ( 12,365,585 ) | 172,117 | 1.4% |
| Net loss before capital contributions | ( 837,289 ) | ( 3,398,263 ) | ( 2,560,974 ) | ( 75.4% ) |
| Capital asset contributions | | 211,506 | 211,506 | 100.0% |
| Change in net position | ( $ 837,289 ) | ( $ 3,186,757 ) | ( $ 2,349,468 ) | ( 73.7% ) |




## CAPITAL ASSETS AND DEBT ADMINISTRATION

### Capital Assets

As of December 31, 2017, the Authority had $307.0 million of gross investment in capital assets, with $119.0 million in accumulated depreciation, for a net book value of $188.0 million. This amount represents a 3.0% increase over the prior year. Net capital assets make up 82.6% of the Authority's total

**Chester Water Authority**
**Statements of Net Position**
**December 31, 2017and 2016**

Assets and Deferred Outflows of Resources

| | December 31, 2017 | December 31, 2016 |
|---|---|---|
| Current Assets | | |
| Cash and cash equivalents | $ 12,277,333 | $ 15,403,124 |
| Investments | 1,185,056 | 2,006,735 |
| Accounts receivable, net of allowance for doubtful accounts of $300,000 in both 2017 and 2016 | 4,018,123 | 4,041,759 |
| Unbilled revenue | 4,100,936 | 4,657,916 |
| Materials and supplies | 2,438,785 | 1,992,837 |
| Other current assets | 72,551 | 87,336 |
| Total Current Assets | 24,092,784 | 28,189,707 |
| Non-Current Assets | | |
| Property, plant, and equipment—net of accumulated depreciation | 271,133,389 | 264,773,275 |
| Net pension asset | 1,501,182 | - |
| Total Non-Current Assets | 272,634,571 | 264,773,275 |
| Restricted Assets | | |
| Cash and cash equivalents | 7,549,260 | 11,607,560 |
| Total Restricted Assets | 7,549,260 | 11,607,560 |
| Total Assets | 304,276,615 | 304,570,542 |
| Deferred Outflows of Resources | | |
| Changes in pension investment returns and actuarial assumptions | 1,479,458 | 1,387,427 |
| Deferred debt issuance costs | - | 58,717 |
| Total Deferred Outflows of Resources | 1,479,458 | 1,446,144 |
| Total Assets and Deferred Outflows of Resources | $ 305,756,073 | $ 306,016,686 |

See accompanying notes to financial statements.

**Chester Water Authority**
**Statements of Net Position**
**December 31, 2018 and 2017**

Assets and Deferred Outflows of Resources

| | December 31, 2018 | December 31, 2017 |
|---|---|---|
| Current Assets | | |
| Cash and cash equivalents | $ 9,680,971 | $ 12,277,333 |
| Investments | 1,207,385 | 1,185,056 |
| Accounts receivable, net of allowance for doubtful accounts of $300,000 in both 2018 and 2017 | 4,215,519 | 4,018,123 |
| Unbilled revenue | 4,143,347 | 4,100,936 |
| Materials and supplies | 2,894,794 | 2,438,785 |
| Other current assets | 44,734 | 72,551 |
| Total Current Assets | 22,186,750 | 24,092,784 |
| Non-Current Assets | | |
| Property, plant, and equipment—net of accumulated depreciation | 277,881,505 | 271,133,389 |
| Net pension asset | - | 1,501,182 |
| Total Non-Current Assets | 277,881,505 | 272,634,571 |
| Restricted Assets | | |
| Cash and cash equivalents | 7,629,992 | 7,549,260 |
| Total Restricted Assets | 7,629,992 | 7,549,260 |
| Total Assets | 307,698,247 | 304,276,615 |
| Deferred Outflows of Resources | | |
| Changes in pension investment returns and actuarial assumptions | 4,646,383 | 1,479,458 |
| Changes in OPEB investment returns and actuarial assumptions | 420,158 | - |
| Total Deferred Outflows of Resources | 5,066,541 | 1,479,458 |
| Total Assets and Deferred Outflows of Resources | $ 312,764,788 | $ 305,756,073 |

See accompanying notes to financial statements.

**Chester Water Authority**
**Statements of Net Position**
**December 31, 2019 and 2018**

Assets and Deferred Outflows of Resources

| | December 31, 2019 | December 31, 2018 |
|---|---|---|
| Current Assets | | |
| Cash and cash equivalents | $ 12,498,028 | $ 9,680,971 |
| Investments | 1,224,596 | 1,207,385 |
| Accounts receivable, net of allowance for doubtful accounts of $300,000 in both 2019 and 2018 | 4,715,593 | 4,215,519 |
| Unbilled revenue | 4,184,067 | 4,143,347 |
| Materials and supplies | 2,392,807 | 2,894,794 |
| Other current assets | 225,137 | 44,735 |
| Total Current Assets | 25,240,228 | 22,186,751 |
| Non-Current Assets | | |
| Property, plant, and equipment—net of accumulated depreciation | 282,114,520 | 277,881,505 |
| Net pension asset | 806,245 | - |
| Total Non-Current Assets | 282,920,765 | 277,881,505 |
| Restricted Assets | | |
| Cash and cash equivalents | 28,304,535 | 7,629,992 |
| Total Restricted Assets | 28,304,535 | 7,629,992 |
| Total Assets | 336,465,528 | 307,698,248 |
| Deferred Outflows of Resources | | |
| Changes in pension investment returns and actuarial assumptions | 1,134,806 | 4,646,383 |
| Changes in OPEB investment returns and actuarial assumptions | 1,912,766 | 420,158 |
| Total Deferred Outflows of Resources | 3,047,572 | 5,066,541 |
| Total Assets and Deferred Outflows of Resources | $ 339,513,100 | $ 312,764,789 |

See accompanying notes to financial statements.

**Chester Water Authority**
**Statements of Revenues, Expenses, and Changes In Net Position**
**For The Years Ended December 31, 2017 and 2016**

| | December 31, 2017 | December 31, 2016 |
|---|---|---|
| Operating Revenues | | |
| Residential | $ 16,471,074 | $ 15,921,450 |
| Commercial | 5,885,341 | 7,832,237 |
| Industrial | 7,414,215 | 7,555,707 |
| Fire protection | 4,001,045 | 3,741,370 |
| Capacity charges, flat and late fee revenues | 1,360,899 | 933,218 |
| Sales to other water utilities | 7,158,892 | 6,674,498 |
| Total Operating Revenues | 42,291,466 | 42,658,480 |
| Operating Expenses | | |
| Purification and Pumping | 7,326,031 | 7,857,889 |
| Distribution | 7,159,659 | 6,740,726 |
| Administrative | 11,664,820 | 11,925,625 |
| Finance/customer service, billing and collections | 3,824,583 | 3,721,092 |
| Depreciation | 9,521,150 | 8,644,302 |
| Total Operating Expenses | 39,496,243 | 38,889,634 |
| Operating Income | 2,795,223 | 3,768,846 |
| Non-Operating Revenues (Expenses) | | |
| Net investment income | 146,144 | 113,603 |
| Interest expense | (2,681,713) | (2,384,151) |
| Other nonoperating revenues/expenses | 982,798 | 294,218 |
| Amortization of bond discounts and debt issue costs | 250,136 | 20,360 |
| Loss on disposal of property and equipment | (481,900) | (12,038) |
| Total Non-Operating Revenues/(Expenses) | (1,784,535) | (1,968,008) |
| Income Before Contributions | 1,010,688 | 1,800,838 |
| Capital Contributions | 2,699,498 | 1,623,074 |
| Change In Net Position | 3,710,186 | 3,423,912 |
| Net Position—Beginning of year | 229,828,321 | 226,404,409 |
| Net Position—End of year | $ 233,538,507 | $ 229,828,321 |

See accompanying notes to financial statements.

**Chester Water Authority**
**Statements of Revenues, Expenses, and Changes In Net Position**
**For The Years Ended December 31, 2018 and 2017**

| | December 31, 2018 | December 31, 2017 |
|---|---|---|
| Operating Revenues | | |
| Residential | $ 16,270,379 | $ 16,471,074 |
| Commercial | 7,006,726 | 5,885,341 |
| Industrial | 8,262,780 | 7,414,215 |
| Fire protection | 3,902,103 | 4,001,045 |
| Capacity charges, flat and late fee revenues | 1,134,612 | 1,360,899 |
| Sales to other water utilities | 6,749,553 | 7,158,892 |
| Total Operating Revenues | 43,326,153 | 42,291,466 |
| Operating Expenses | | |
| Purification and Pumping | 7,479,180 | 7,326,031 |
| Distribution | 7,989,652 | 7,159,659 |
| Administrative | 12,605,483 | 11,664,820 |
| Finance/customer service, billing and collections | 4,189,300 | 3,824,583 |
| Depreciation | 9,575,108 | 9,521,150 |
| Total Operating Expenses | 41,838,723 | 39,496,243 |
| Operating Income | 1,487,430 | 2,795,223 |
| Non-Operating Revenues (Expenses) | | |
| Net investment income | 131,632 | 146,144 |
| Interest expense | (2,776,729) | (2,681,713) |
| Other nonoperating revenues | 514,231 | 982,798 |
| Amortization of bond discounts and debt issuance costs | 401,140 | 250,136 |
| Gain (loss) on disposal of property and equipment | 17,882 | (481,900) |
| Total Non-Operating Revenues/(Expenses) | (1,711,844) | (1,784,535) |
| (Loss) Income Before Contributions | (224,414) | 1,010,688 |
| Capital Contributions | 5,652,845 | 2,699,498 |
| Change In Net Position | 5,428,431 | 3,710,186 |
| Net Position—Beginning of year, as previously reported | 233,538,507 | 229,828,321 |
| Cumulative effect of prior period adjustment for adoption of GASB 75 - Net OPEB Liability | (4,932,637) | - |
| Net Position - Beginning of year, restated | 228,605,870 | 229,828,321 |
| Net Position—End of year | $ 234,034,301 | $ 233,538,507 |

See accompanying notes to financial statements.

**Chester Water Authority**
**Statements of Revenues, Expenses, and Changes In Net Position**
**For The Years Ended December 31, 2019 and 2018**

| | December 31, 2019 | December 31, 2018 |
|---|---|---|
| Operating Revenues | | |
| Residential | $ 16,511,126 | $ 16,270,379 |
| Commercial | 7,179,069 | 7,006,726 |
| Industrial | 9,832,034 | 8,262,780 |
| Fire protection | 4,063,901 | 3,902,103 |
| Capacity charges, flat and late fee revenues | 1,374,484 | 1,134,612 |
| Sales to other water utilities | 6,802,562 | 6,749,553 |
| Total Operating Revenues | 45,763,176 | 43,326,153 |
| Operating Expenses | | |
| Purification and Pumping | 7,409,809 | 7,479,180 |
| Distribution | 6,687,166 | 7,989,652 |
| Administrative | 13,672,346 | 12,605,483 |
| Finance/customer service, billing and collections | 3,834,971 | 4,189,300 |
| Depreciation | 9,453,690 | 9,575,108 |
| Total Operating Expenses | 41,057,982 | 41,838,723 |
| Operating Income | 4,705,194 | 1,487,430 |
| Non-Operating Revenues/(Expenses) | | |
| Net investment income | 155,689 | 131,632 |
| Interest expense | (2,810,444) | (2,776,729) |
| Other nonoperating revenues | 311,563 | 514,232 |
| Amortization of bond discounts and debt issuance costs | 479,795 | 401,140 |
| Gain (loss) on disposal of property and equipment | 302,194 | 17,882 |
| Total Non-Operating Revenues/(Expenses) | (1,561,203) | (1,711,843) |
| Income (Loss) Before Contributions | 3,143,991 | (224,413) |
| Capital Contributions | 894,723 | 5,652,845 |
| Change In Net Position | 4,038,714 | 5,428,432 |
| Net Position - Beginning of year, as previously reported | 234,034,302 | 233,538,507 |
| Cumulative effect of prior period adjustment for adoption of GASB 75 - Net OPEB Liability | - | (4,932,637) |
| Net Position - Beginning of year, restated | 234,034,302 | 228,605,870 |
| Net Position - End of year | $ 238,073,016 | $ 234,034,302 |

See accompanying notes to financial statements.

# PITTSBURGH WATER AND SEWER AUTHORITY

STATEMENTS OF NET POSITION

*(Dollars expressed in thousands)*

DECEMBER 31, 2017 AND 2016

| | 2017 | 2016 |
|---|---|---|
| **Assets** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 11,076 | $ 21,620 |
| Accounts receivable, net: | | |
| Water: | | |
| Billed | 9,335 | 6,388 |
| Unbilled | 6,760 | 5,886 |
| Total water | 16,095 | 12,274 |
| Wastewater treatment: | | |
| Billed | 9,975 | 10,844 |
| Unbilled | 3,746 | 3,719 |
| Total wastewater treatment | 13,721 | 14,563 |
| Other receivables | 1,074 | 797 |
| Total accounts receivable, net | 30,890 | 27,634 |
| Prepaid expenses | 674 | 65 |
| Inventory | 3,777 | 2,218 |
| Total current assets | 46,417 | 51,537 |
| Noncurrent assets: | | |
| Restricted assets: | | |
| Cash and cash equivalents | 18,264 | 11,900 |
| Investments | 11,684 | 14,437 |
| Total restricted assets | 29,948 | 26,337 |
| Capital assets, not being depreciated | 100,240 | 88,861 |
| Capital assets, net of accumulated depreciation | 589,567 | 587,937 |
| Total noncurrent assets | 719,755 | 703,135 |
| **Total Assets** | 766,172 | 754,672 |
| **Deferred Outflows of Resources** | | |
| Deferred charge on refunding | 110,326 | 25,008 |
| Accumulated decrease in fair value of hedging derivatives | 3,279 | 70,897 |
| **Total Deferred Outflows of Resources** | 113,605 | 95,905 |

(Continued)

The notes to financial statements are an integral part of this statement.

# PITTSBURGH WATER AND SEWER AUTHORITY

STATEMENTS OF NET POSITION

*(Dollars expressed in thousands)*

DECEMBER 31, 2018 AND 2017

| | 2018 | 2017 |
|---|---|---|
| **Assets** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 46,920 | $ 11,076 |
| Accounts receivable, net: | | |
| Water: | | |
| Billed | 8,537 | 9,335 |
| Unbilled | 8,583 | 6,760 |
| Total water | 17,120 | 16,095 |
| Wastewater treatment: | | |
| Billed | 7,014 | 9,975 |
| Unbilled | 3,719 | 3,746 |
| Total wastewater treatment | 10,733 | 13,721 |
| Other receivables | 1,510 | 1,074 |
| Total accounts receivable, net | 29,363 | 30,890 |
| Prepaid expenses | 520 | 674 |
| Inventory | 1,984 | 3,777 |
| Total current assets | 78,787 | 46,417 |
| Noncurrent assets: | | |
| Restricted assets: | | |
| Cash and cash equivalents | 13,970 | 18,264 |
| Investments | 9,356 | 11,684 |
| Total restricted assets | 23,326 | 29,948 |
| Hedging derivative - interest rate swap | 4,750 | - |
| Capital assets, not being depreciated | 139,303 | 100,240 |
| Capital assets, net of accumulated depreciation | 618,177 | 589,567 |
| Total noncurrent assets | 785,556 | 719,755 |
| **Total Assets** | 864,343 | 766,172 |
| **Deferred Outflows of Resources** | | |
| Deferred charge on refunding | 102,534 | 110,326 |
| Accumulated decrease in fair value of hedging derivatives | 757 | 3,279 |
| **Total Deferred Outflows of Resources** | 103,291 | 113,605 |

(Continued)

The notes to financial statements are an integral part of this statement.

# PITTSBURGH WATER AND SEWER AUTHORITY

STATEMENTS OF NET POSITION

*(Dollars expressed in thousands)*

DECEMBER 31, 2019 AND 2018

| | 2019 | 2018 |
|---|---|---|
| **Assets** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 64,680 | $ 46,920 |
| Accounts receivable, net: | | |
| Water: | | |
| Billed | 7,138 | 8,537 |
| Unbilled | 8,965 | 8,583 |
| Total water | 16,103 | 17,120 |
| Wastewater treatment: | | |
| Billed | 2,130 | 7,014 |
| Unbilled | 3,725 | 3,719 |
| Total wastewater treatment | 5,855 | 10,733 |
| Other receivables | 2,450 | 1,510 |
| Total accounts receivable, net | 24,408 | 29,363 |
| Prepaid expenses | 707 | 520 |
| Inventory | 1,597 | 1,984 |
| Total current assets | 91,392 | 78,787 |
| Noncurrent assets: | | |
| Restricted assets: | | |
| Cash and cash equivalents | 16,360 | 13,970 |
| Investments | 9,604 | 9,356 |
| Total restricted assets | 25,964 | 23,326 |
| Hedging derivative - interest rate swap | - | 4,750 |
| Capital assets, not being depreciated | 135,287 | 139,303 |
| Capital assets, net of accumulated depreciation | 695,291 | 618,177 |
| Total noncurrent assets | 856,542 | 785,556 |
| **Total Assets** | 947,934 | 864,343 |
| **Deferred Outflows of Resources** | | |
| Deferred charge on refunding | 99,012 | 102,534 |
| Accumulated decrease in fair value of hedging derivatives | 13,351 | 757 |
| **Total Deferred Outflows of Resources** | 112,363 | 103,291 |

(Continued)

The notes to financial statements are an integral part of this statement.

# PITTSBURGH WATER AND SEWER AUTHORITY

## STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

*(Dollars expressed in thousands)*

YEARS ENDED DECEMBER 31, 2017 AND 2016

| | 2017 | 2016 |
|---|---|---|
| **Operating Revenues:** | | |
| Residential, commercial, and industrial water sales | $ 128,488 | $ 113,818 |
| Wastewater treatment | 68,935 | 62,125 |
| Other | 5,573 | 4,784 |
| Total operating revenues | 202,996 | 180,727 |
| **Operating Expenses:** | | |
| Direct operating expenses | 71,156 | 60,687 |
| Wastewater treatment | 75,107 | 62,125 |
| Cooperation agreement operating expenses: | | |
| Indirect cost allocation - sewer conveyance | 2,250 | 2,846 |
| Indirect cost allocation - water | 3,113 | 4,304 |
| Expense of water provided by other entities: | | |
| Subsidy of customers located in the City | 5,594 | 1,974 |
| Depreciation | 16,172 | 16,657 |
| Total operating expenses | 173,392 | 148,593 |
| **Operating Income** | 29,604 | 32,134 |
| **Non-operating Revenues (Expenses):** | | |
| Donated property | 1,595 | 981 |
| Interest revenue | 460 | 383 |
| Investment income (loss) - change in fair value of swap | 835 | 1,690 |
| Interest and amortization | (34,913) | (36,966) |
| Bond issuance costs | (3,894) | - |
| Total non-operating revenues (expenses) | (35,917) | (33,912) |
| **Net Income (Loss)** | (6,313) | (1,778) |
| **Net Position:** | | |
| Beginning of year | (37,523) | (35,745) |
| End of year | $ (43,836) | $ (37,523) |

The notes to financial statements are an integral part of this statement.

# PITTSBURGH WATER AND SEWER AUTHORITY

## STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

*(Dollars expressed in thousands)*

YEARS ENDED DECEMBER 31, 2018 AND 2017

| | 2018 | 2017 |
|---|---|---|
| **Operating Revenues:** | | |
| Residential, commercial, and industrial water sales | $ 159,506 | $ 128,488 |
| Wastewater treatment | 67,261 | 68,935 |
| Other | 4,967 | 5,573 |
| Total operating revenues | 231,734 | 202,996 |
| **Operating Expenses:** | | |
| Direct operating expenses | 72,633 | 71,156 |
| Wastewater treatment | 71,822 | 75,107 |
| Reimbursement for City of Pittsburgh services | 4,911 | 5,363 |
| Expense of water provided by other entities: | | |
| Subsidy of customers located in the City | 3,814 | 5,594 |
| Depreciation | 16,894 | 16,172 |
| Total operating expenses | 170,074 | 173,392 |
| **Operating Income** | 61,660 | 29,604 |
| **Non-operating Revenues (Expenses):** | | |
| Donated property | 13,649 | 1,595 |
| Interest revenue | 469 | 460 |
| Investment income (loss) - change in fair value of swap | 2,542 | 835 |
| Interest and amortization | (34,365) | (34,913) |
| Bond issuance costs | - | (3,894) |
| Total non-operating revenues (expenses) | (17,705) | (35,917) |
| **Special Item:** | | |
| Private lead line replacement | (4,478) | - |
| **Net Income (Loss)** | 39,477 | (6,313) |
| **Net Position:** | | |
| Beginning of year | (43,836) | (37,523) |
| End of year | $ (4,359) | $ (43,836) |

The notes to financial statements are an integral part of this statement.

# PITTSBURGH WATER AND SEWER AUTHORITY

## STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

*(Dollars expressed in thousands)*

YEARS ENDED DECEMBER 31, 2019 AND 2018

| | 2019 | 2018 |
|---|---|---|
| **Operating Revenues:** | | |
| Residential, commercial, and industrial water sales | $ 171,681 | $ 159,506 |
| Wastewater treatment | 70,970 | 67,261 |
| Other | 6,398 | 4,967 |
| Total operating revenues | 249,049 | 231,734 |
| **Operating Expenses:** | | |
| Direct operating expenses | 89,512 | 72,633 |
| Wastewater treatment | 72,389 | 71,822 |
| Reimbursement for City of Pittsburgh services | 1,991 | 4,911 |
| Expense of water provided by other entities: | | |
| Subsidy of customers located in the City | 1,338 | 3,814 |
| Depreciation | 18,011 | 16,894 |
| Total operating expenses | 183,241 | 170,074 |
| **Operating Income** | 65,808 | 61,660 |
| **Non-operating Revenues (Expenses):** | | |
| Federal and private grants | 6,922 | - |
| Donated property | 110 | 13,649 |
| Interest revenue | 719 | 469 |
| Investment income (loss) - change in fair value of swap | (4,180) | 2,542 |
| Interest and amortization | (38,740) | (34,365) |
| Bond issuance costs | (2,462) | - |
| Total non-operating revenues (expenses) | (37,631) | (17,705) |
| **Net Income before Special Item** | 28,177 | 43,955 |
| **Special Item:** | | |
| Private lead line replacement | (22,283) | (4,478) |
| **Net Income** | 5,894 | 39,477 |
| **Net Position:** | | |
| Beginning of year | (4,359) | (43,836) |
| End of year | $ 1,535 | $ (4,359) |

The notes to financial statements are an integral part of this statement.

| | | | WORKING NOTES | | | | | | | | WORKING NOTES | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| GROSS Property, plant and equipment | - | - | - | | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 |
| Accumulated Depreciation | - | - | - | | 6,274,246 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 |
| NET PPE | - | - | - | | 13,367,274 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 |
| Total Debt | - | - | - | 4,391,975 | *4,391,975* | *4,391,975* | | | | | | |
| Net Equity | - | - | - | 5,474,746 | *5,474,746* | *5,474,746* | | | | | | |
| Investor Provided Capital | - | - | - | 9,866,721 | 9,866,721 | 9,866,721 | - | | | | | |
| Depreciation / GROSS PPE | #DIV/0! | #DIV/0! | #DIV/0! | 0.00% | 0.00% | 1.55% | | | | | | |
| | | | | Dep on Retired property | - | - | - | - | - | - | - | - |
| | | | | Dep on Prior yr. GROSS | 477,169 | 304,901 | - | - | - | - | - | - |
| | | | | Total Dep | 477,169 | 304,901 | - | - | - | - | - | - |
| llistown Depreciation Expense | - | - | 505,633 | 477,169 *part of OCN* | 304,901 | | | | | | | |
| | | | | NET PPE | | PURTA | 0.001527765 | | | | | |
| | | | | Rev | | Reg Assessment Fee | 0.005652534 | | | | | |
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| | | | | | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| | Willistown | | | | | | | | | | | |
| | | FIX CIP | | CIP | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | | | | | *part of OCN* | = to DepX | | | | | | |
| | | | | | 25,000 | 304,000 | | | | | | |
| | | | | | | | | | 191 | 71 | 72 | 56 |
| | | | | | 2020 | 2021 | | | | | | |
| | | | | | | 4,750.00 | 61,750.00 | 61,750.00 | 61,750.00 | - | 99,750.00 | 99,750.00 |
| Sewer Rental Charges | 0 | 0 | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,291,030 | 2,297,010 | 2,300,000 | | |
| EDUs | 0 | 0 | 0 | 0 | 4,961 | 4,961 | 4974 | 4987 | 5000 | 5000 | 5021 | 5042 |
| | | | | | 0 | 1 | 13 | 13 | 13 | 0 | 21 | 21 |
| | | 0 | 0 | 0 | 2480.5 | 4961 | 4967.5 | 4980.5 | 4993.5 | 5000 | | |
| | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | 416.1900826 | | | | | | | |
| | | | | | | $ 460.00 | $ 460.00 | $ 460.00 | $ 460.00 | $ 460.00 | | |
| | | #DIV/0! | #DIV/0! | #DIV/0! | 832.3801653 | 431.7694013 | | | | | | |
| Willistown | | | | | C | 2,294 | 10 | | | | | |
| | | | | | E | 4,961 | 21 | | | | | |
| | | | | | | 0.46 | | | | | | |
| | | | | 1742000 | | | | | | | | |
| Customer Growth | | | | | | 0 | 6 | 6 | 6 | 0 | 0.42% | 0.42% |
| Delivered to Customer | | | - | 26.16 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 27 |
| Willistown Customers | | | 2,294 | 2,294 | 2,294 | 2,294 | 2,300 | 2,306 | 2,312 | 2,312 | 2,322 | 2,331 |
| Total Revenue (Less TAP) | | | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,147,607 | 2,153,202 | 2,953,719 | 2,959,922 | 2,972,354 |
| | | | | | | | | | | 137.18% | | |
| avg CUST rev | | | 876.89 | 963.98 | 900.05 | 933.74 | 932.53 | 931.31 | 931.32 | 1,277.56 | 1,274.89 | 1,274.89 |
| avg CUST flow | | | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| avg EDU rev | | | #DIV/0! | #DIV/0! | 416.19 | 431.77 | 431.20 | 430.64 | 430.64 | 590.74 | 589.51 | 589.52 |
| avg EDU flow | | | #DIV/0! | #DIV/0! | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rev Calculated | | | | | | 2,064,719 | 2,144,809 | 2,147,607 | 2,150,401 | 2,153,202 | 2,959,922 | 2,966,138 |

| WORKING NOTES | | | | | | | WORKING NOTES | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |

| | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|
| Change | | | | 37.0% | | | 5.0% |
| $ 900.05 | $ 933.74 | $ 932.53 | $ 932.53 | $ 1,277.56 | $ 1,277.56 | $ 1,277.56 | $ 1,341.44 |
| | | | $ - | $ 345.03 | $ - | $ - | $ 63.88 |
| | - | 2,801 | 2,798 | 2,949,886 | - | 6,203 | 6,216 |
| | 2,064,719 | 2,144,809 | 2,147,607 | 2,153,202 | 2,953,719 | 2,959,922 | 2,972,354 |
| | - | - | - | 796,685 | - | - | 148,618 |

| Prior yr | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NET PURTA | 0.1432% | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 |
| REV Reg Assessment | 0.5690% | 12,225 | 12,241 | 12,257 | 16,822 | 16,844 | 16,879 |
| | | 30,930 | 30,946 | 30,962 | 35,527 | 35,549 | 35,584 |

| Willistown Township Wastewater Systems Assets | |
|---|---|
| Investor Provide | 9,866,721 |
| Gross PP&E | 19,641,520 |
| Net PP&E | 13,367,274 |
| Revenues | 2,148,508 |
| EBITDA | 179,474 |
| EBIT | (125,427) |
| Customers | 2,294 |
| Population | 11,214 |

| | | | | | |
|---|---|---|---|---|---|
| G PPE | - | - | 19,641,520 | 19,641,520 | |
| NPPE | - | - | 13,367,274 | 13,062,373 | |
| Cust | 2,294 | 2,294 | 2,294 | 2,294 | |

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| llistown | | | | | | | | | | |
| LESS: EOS - Wages & Benefits | 0 | - | - | - | - | 356,958 | | 0.15 | LESS: EOS - Wage: Wages & Benefits | |
| LESS: EOS - Professional Services | 0 | 0 | 0 | 0 | - | 129,200 | | 0.5 | LESS: EOS - Profes Net Professional Serv | |
| LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | - | - | | | LESS: EOS - Eli Tranfers | |
| llistown | | | | | | | | | | |
| Wages | | | 0 | 0 | 0 | 356,958 | | | | |
| Professional Services | | | | | 0 | 129,200 | | | | |
| Eliminated Exp | | | 0 | 0 | 0 | 0 | | | | |

| llistown | | | | | included in OCN | = to DepX |
|---|---|---|---|---|---|---|
| Reported CAPX - from the financials | 0 | 323,433 | 513,332 | 874,280 | 25,000 | 304,000 |

| 2016 | 2017 | 2018 | 2019 | 2020 | Assets | Per Books | Difference |
|---|---|---|---|---|---|---|---|

| WORKING NOTES | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROSS Property, plant and equipment | - | - | - | - | 19,641,520 | | | 19,641,520 | - | | | |
| Accumulated Depreciation | - | - | - | - | 6,274,246 | | | 6,274,246 | - | | | |
| NET PPE | - | - | - | - | 13,367,274 | | | 13,367,274 | - | 13,367,274 | | |
| Total Debt | - | - | - | 4,391,975 | 4,391,975 | | | 304,901 | | | | |
| Net Equity | - | - | - | 5,474,746 | 5,474,746 | | | | | | | |
| Investor Provided Capital | - | - | - | 9,866,721 | 9,866,721 | | | | | | | |
| Depreciation Rate | 0.00% | 0.00% | 0.00% | #DIV/0! | 1.55% | | | | | | | |
| Depreciation Expense | - | - | 505,633 | 477,169 | 304,901.00 | | | | | | | |

| | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| CAPX | 0 | 0 | 0 | 0 | 0 |

| | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|---|
| | XYZ's LTCP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Willistown | State of Good Repair | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | XYZ's Base CAPX | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP & Expand WWTP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | xyz LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | xyz LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Expand WWTP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | PWD Base charge | | 0 | 0 | 0 | 0 | 0 | 0 |
| | CAPX | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Expand WWTP work area | | 0 | 0 | 0 | 0 | 0 | 0 |
| | State of Good Repair | | 0 | 0 | 0 | 0 | 0 | 0 |
| | XYZ's Base CAPX | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP & Expand WWTP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | OpEx | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|---|---|
| State of Good Repair | Capital Expenditures - Pre-2028 based on financials/budget. Post-2027 years are estimates at 0.00% of prior year-e |
| XYZ's Base CAPX | dummy |
| Base & LTCP | dummy |
| Base & LTCP & Expand WWTP | dummy |
| CAPX note | Capital Expenditures - Pre-2028 based on financials/budget. Post-2027 years are estimates at 0.00% of prior year-e |
| State of Good Repair | No Additional O&M. |
| XYZ's Base CAPX | dummy |
| Base & LTCP | dummy |
| Base & LTCP & Expand WWTP | dummy |
| Additional OpEx note | No Additional O&M. |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROSS Property, plant and equipment | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 |
| Accumulated Depreciation | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 |
| NET PPE | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 |
| Total Debt | | | | | | | | | | | | | | |
| Net Equity | | | | | | | | | | | | | | |
| Investor Provided Capital | | | | | | | | | | | | | | |
| Depreciation / GROSS PPE | | | | | | | | | | | | | | |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

llistown

Depreciation Expense

| | 7<br>2028 | 8<br>2029 | 9<br>2030 | 10<br>2031 | 11<br>2032 | 12<br>2033 | 13<br>2034 | 14<br>2035 | 15<br>2036 | 16<br>2037 | 17<br>2038 | 18<br>2039 | 19<br>2040 | 20<br>2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | 99,750.00 | 99,750.00 | 99,750.00 | 99,750.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 |
| Sewer Rental Charges | | | | | | | | | | | | | | |
| EDUs | 5063 | 5084 | 5105 | 5126 | 5148 | 5170 | 5192 | 5214 | 5236 | 5258 | 5280 | 5302 | 5324 | 5346 |
| | 21 | 21 | 21 | 21 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |

Willistown

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% |
| | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 28 | 28 | 28 | 28 | 28 | 28 |
| Willistown | 2,341 | 2,351 | 2,361 | 2,371 | 2,381 | 2,391 | 2,401 | 2,411 | 2,421 | 2,431 | 2,441 | 2,452 | 2,462 | 2,472 |
| | 3,134,079 | 3,147,242 | 3,160,461 | 3,316,553 | 3,330,482 | 3,344,470 | 3,492,858 | 3,507,528 | 3,522,259 | 3,664,387 | 3,679,777 | 3,695,232 | 3,822,075 | 3,838,128 |
| | 105.00% | | | | | | | | | | | | | |
| | 1,338.63 | 1,338.63 | 1,338.63 | 1,398.87 | 1,398.87 | 1,398.87 | 1,454.83 | 1,454.83 | 1,454.83 | 1,507.20 | 1,507.20 | 1,507.20 | 1,552.42 | 1,552.42 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 619.02 | 619.05 | 619.09 | 647.01 | 646.95 | 646.90 | 672.74 | 672.71 | 672.70 | 696.92 | 696.93 | 696.95 | 717.90 | 717.94 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2,978,596 | 3,140,661 | 3,153,851 | 3,167,098 | 3,323,518 | 3,337,476 | 3,351,493 | 3,500,193 | 3,514,894 | 3,529,656 | 3,672,082 | 3,687,505 | 3,702,992 | 3,830,101 |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 4.5% | | | 4.0% | | | 3.6% | | | 3.0% | | 3.1% |
| | $ 1,341.44 | $ 1,341.44 | $ 1,401.80 | $ 1,401.80 | $ 1,401.80 | $ 1,457.87 | $ 1,457.87 | $ 1,457.87 | $ 1,510.36 | $ 1,510.36 | $ 1,510.36 | $ 1,555.67 | $ 1,555.67 | $ 1,603.89 |
| | $ - | $ - | $ 60.36 | $ - | $ - | $ 56.07 | $ - | $ - | $ 52.48 | $ - | $ - | $ 45.31 | $ - | $ 48.23 |
| | 6,242 | 6,582 | 6,609 | 6,637 | 6,965 | 6,994 | 7,023 | 7,335 | 7,366 | 7,397 | 7,695 | 7,728 | 7,760 | 8,026 |
| | 3,134,079 | 3,147,242 | 3,160,461 | 3,316,553 | 3,330,482 | 3,344,470 | 3,492,858 | 3,507,528 | 3,522,259 | 3,664,387 | 3,679,777 | 3,695,232 | 3,822,075 | 3,838,128 |
| | - | - | 142,221 | - | - | 133,779 | - | - | 126,801 | - | - | 110,857 | - | 118,982 |
| | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 |
| | 17,795 | 17,870 | 17,945 | 18,829 | 18,908 | 18,987 | 19,828 | 19,911 | 19,995 | 20,800 | 20,887 | 20,975 | 21,694 | 21,785 |
| | 36,500 | 36,575 | 36,650 | 37,534 | 37,613 | 37,692 | 38,533 | 38,616 | 38,700 | 39,505 | 39,592 | 39,680 | 40,399 | 40,490 |

| | | | | |
|---|---|---|---|---|
| llistown | | | | |
| LESS: EOS - Wages & Benefits | | 15% savings | 15% | 0.15 |
| LESS: EOS - Professional Services | ices | 50% savings | 50% | 0.5 |
| LESS: EOS - Eliminated Expenses | | 100% savings | 100% | 1 |

llistown
Wages
Professional Services

Eliminated Exp

llistown
Reported CAPX - from the financials

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROSS Property, plant and equipment | | | | | | | | | | | | | | |
| Accumulated Depreciation | | | | | | | | | | | | | | |
| NET PPE | | | | | | | | | | | | | | |
| Total Debt | | | | | | | | | | | | | | |
| Net Equity | | | | | | | | | | | | | | |
| Investor Provided Capital | | | | | | | | | | | | | | |
| Depreciation Rate | | | | | | | | | | | | | | |
| Depreciation Expense | | | | | | | | | | | | | | |
| CAPX | | | | | | | | | | | | | | |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

:nd GROSS Property, plant and equipment.

:nd GROSS Property, plant and equipment.

| | WORKING NOTES | | | | | | | WORKING NOTES | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| GROSS Property, plant and equipment | - | - | - | | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 |
| Accumulated Depreciation | - | - | - | | 6,274,246 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 |
| NET PPE | - | - | - | | 13,367,274 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 |
| Total Debt | - | - | - | 4,391,975 | *4,391,975* | *4,391,975* | | | | | | |
| Net Equity | - | - | - | 5,474,746 | *5,474,746* | *5,474,746* | | | | | | |
| Investor Provided Capital | - | - | - | 9,866,721 | 9,866,721 | 9,866,721 | - | | | | | |
| Depreciation / GROSS PPE | #DIV/0! | #DIV/0! | #DIV/0! | 0.00% | 0.00% | 1.55% | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dep on Retired property | | | | | - | - | - | - | - | - | - | - |
| Dep on Prior yr. GROSS | | | | | 477,169 | 304,901 | - | - | - | - | - | - |
| Total Dep | | | | | 477,169 | 304,901 | - | - | - | - | - | - |
| llistown | | | | | | | | | | | | |
| Depreciation Expense | - | - | 505,633 | 477,169 | 304,901 | | | | | | | |
| | | | | *part of OCN* | | | | | | | | |

| | | | |
|---|---|---|---|
| NET PPE | | PURTA | 0.001527765 |
| Rev | | Reg Assessment Fee | 0.005652534 |

| | | | | | 2020 | 2021 | 1<br>2022 | 2<br>2023 | 3<br>2024 | 4<br>2025 | 5<br>2026 | 6<br>2027 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Willistown | | | | | | | | | | | | |
| | FIX CIP | | | CIP | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | | | | | *part of OCN* | = to DepX | | | | | | |
| | | | | | 25,000 | 304,000 | | | | | | |
| | | | | | | | | | 191 | 71 | 72 | 56 |
| | | | | | 2020 | 2021 | | | | | | |
| | | | | | | 4,750.00 | 61,750.00 | 61,750.00 | 61,750.00 | - | 99,750.00 | 99,750.00 |
| Sewer Rental Charges | 0 | 0 | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,291,030 | 2,297,010 | 2,300,000 | | |
| EDUs | 0 | 0 | 0 | 0 | 4,961 | 4,961 | 4974 | 4987 | 5000 | 5000 | 5021 | 5042 |
| | | | | | 0 | 1 | 13 | 13 | 13 | 0 | 21 | 21 |
| | | 0 | 0 | 0 | 2480.5 | 4961 | 4967.5 | 4980.5 | 4993.5 | 5000 | | |
| | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | 416.1900826 | | | | | | | |
| | | | | | | $ 460.00 | $ 460.00 | $ 460.00 | $ 460.00 | $ 460.00 | | |
| | | #DIV/0! | #DIV/0! | #DIV/0! | 832.3801653 | 431.7694013 | | | | | | |
| Willistown | | | | | C | 2,294 | 10 | | | | | |
| | | | | | E | 4,961 | 21 | | | | | |
| | | | | | | 0.46 | | | | | | |
| | | | | 1742000 | | | | | | | | |
| | Customer Growth | | | | | 0 | 6 | 6 | 6 | 0 | 0.42% | 0.42% |
| | Delivered to Customer | | - | 26.16 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 27 |
| Willistown | Customers | | 2,294 | 2,294 | 2,294 | 2,294 | 2,300 | 2,306 | 2,312 | 2,312 | 2,322 | 2,331 |
| | Total Revenue (Less TAP) | | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,147,607 | 2,153,202 | 2,953,719 | 2,959,922 | 2,972,354 |
| | | | | | | | | | | 137.18% | | |
| | avg CUST rev | | 876.89 | 963.98 | 900.05 | 933.74 | 932.53 | 931.31 | 931.32 | 1,277.56 | 1,274.89 | 1,274.89 |
| | avg CUST flow | | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | avg EDU rev | | #DIV/0! | #DIV/0! | 416.19 | 431.77 | 431.20 | 430.64 | 430.64 | 590.74 | 589.51 | 589.52 |
| | avg EDU flow | | #DIV/0! | #DIV/0! | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Rev Calculated | | | | | 2,064,719 | 2,144,809 | 2,147,607 | 2,150,401 | 2,153,202 | 2,959,922 | 2,966,138 |

| WORKING NOTES | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | WORKING NOTES 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| | | | | | | Change | | | 37.0% | | | 5.0% |
| | | | | | $ 900.05 | $ 933.74 | $ 932.53 | $ 932.53 | $ 1,277.56 | $ 1,277.56 | $ 1,277.56 | $ 1,341.44 |
| | | | | | | | | $ - | $ 345.03 | $ - | $ - | $ 63.88 |
| | | | | | | - | 2,801 | 2,798 | 2,949,886 | - | 6,203 | 6,216 |
| | | | | | | 2,064,719 | 2,144,809 | 2,147,607 | 2,153,202 | 2,953,719 | 2,959,922 | 2,972,354 |
| | | | | | | - | - | - | 796,685 | - | - | 148,618 |
| Prior yr | | | | | | | | | | | | |
| NET PURTA | | | 0.1432% | | | | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 |
| REV Reg Assessment | | | 0.5690% | | | | 12,225 | 12,241 | 12,257 | 16,822 | 16,844 | 16,879 |
| | | | | | | | 30,930 | 30,946 | 30,962 | 35,527 | 35,549 | 35,584 |

| Willistown Township Wastewater Systems Assets | |
|---|---|
| Investor Provide | 9,866,721 |
| Gross PP&E | 19,641,520 |
| Net PP&E | 13,367,274 |
| Revenues | 2,148,508 |
| EBITDA | 297,618 |
| EBIT | (7,283) |
| Customers | 2,294 |
| Population | 11,214 |

| | | | | | |
|---|---|---|---|---|---|
| G PPE | - | - | 19,641,520 | 19,641,520 | |
| NPPE | - | - | 13,367,274 | 13,062,373 | |
| Cust | 2,294 | 2,294 | 2,294 | 2,294 | |

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| llistown | | | | | | | | | | |
| LESS: EOS - Wages & Benefits | 0 | - | - | - | - | 356,958 | | 0.15 | LESS: EOS - Wage: Wages & Benefits | |
| LESS: EOS - Professional Services | 0 | 0 | 0 | 0 | - | 129,200 | | 0.5 | LESS: EOS - Profes Net Professional Serv | |
| LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | - | - | | | LESS: EOS - Eli Tranfers | |
| llistown | | | | | | | | | | |
| Wages | | | 0 | 0 | 0 | 356,958 | | | | |
| Professional Services | | | | | 0 | 129,200 | | | | |
| Eliminated Exp | | | 0 | 0 | 0 | 0 | | | | |

| llistown | | | | | included in OCN | = to DepX |
|---|---|---|---|---|---|---|
| Reported CAPX - from the financials | 0 | 323,433 | 513,332 | 874,280 | 25,000 | 304,000 |

| 2016 | 2017 | 2018 | 2019 | 2020 | Assets | Per Books | Difference |
|---|---|---|---|---|---|---|---|

| | WORKING NOTES | | | | | | | WORKING NOTES | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| GROSS Property, plant and equipment | - | - | - | - | 19,641,520 | | | 19,641,520 | - | | | |
| Accumulated Depreciation | - | - | - | - | 6,274,246 | | | 6,274,246 | - | | | |
| NET PPE | - | - | - | - | 13,367,274 | | | 13,367,274 | - | 13,367,274 | | |
| Total Debt | - | - | - | 4,391,975 | 4,391,975 | | | 304,901 | | | | |
| Net Equity | - | - | - | 5,474,746 | 5,474,746 | | | | | | | |
| Investor Provided Capital | - | - | - | 9,866,721 | 9,866,721 | | | | | | | |
| Depreciation Rate | 0.00% | 0.00% | 0.00% | #DIV/0! | 1.55% | | | | | | | |
| Depreciation Expense | - | - | 505,633 | 477,169 | 304,901.00 | | | | | | | |

| | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| CAPX | 0 | 0 | 0 | 0 | 0 |

| | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|---|
| | XYZ's LTCP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Willistown | State of Good Repair | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | XYZ's Base CAPX | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP & Expand WWTP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | xyz LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | xyz LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Expand WWTP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | PWD Base charge | | 0 | 0 | 0 | 0 | 0 | 0 |
| | CAPX | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Expand WWTP work area | | 0 | 0 | 0 | 0 | 0 | 0 |
| | State of Good Repair | | 0 | 0 | 0 | 0 | 0 | 0 |
| | XYZ's Base CAPX | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP & Expand WWTP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | OpEx | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|---|---|
| State of Good Repair | Capital Expenditures - Pre-2028 based on financials/budget. Post-2027 years are estimates at 0.00% of prior year-e |
| XYZ's Base CAPX | dummy |
| Base & LTCP | dummy |
| Base & LTCP & Expand WWTP | dummy |
| CAPX note | Capital Expenditures - Pre-2028 based on financials/budget. Post-2027 years are estimates at 0.00% of prior year-e |
| State of Good Repair | No Additional O&M. |
| XYZ's Base CAPX | dummy |
| Base & LTCP | dummy |
| Base & LTCP & Expand WWTP | dummy |
| Additional OpEx note | No Additional O&M. |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROSS Property, plant and equipment | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 |
| Accumulated Depreciation | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 |
| NET PPE | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 |
| Total Debt | | | | | | | | | | | | | | |
| Net Equity | | | | | | | | | | | | | | |
| Investor Provided Capital | | | | | | | | | | | | | | |
| Depreciation / GROSS PPE | | | | | | | | | | | | | | |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| llistown | | | | | | | | | | | | | | |
| Depreciation Expense | | | | | | | | | | | | | | |
| | 7<br>2028 | 8<br>2029 | 9<br>2030 | 10<br>2031 | 11<br>2032 | 12<br>2033 | 13<br>2034 | 14<br>2035 | 15<br>2036 | 16<br>2037 | 17<br>2038 | 18<br>2039 | 19<br>2040 | 20<br>2041 |
| | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | 99,750.00 | 99,750.00 | 99,750.00 | 99,750.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 |
| Sewer Rental Charges | | | | | | | | | | | | | | |
| EDUs | 5063 | 5084 | 5105 | 5126 | 5148 | 5170 | 5192 | 5214 | 5236 | 5258 | 5280 | 5302 | 5324 | 5346 |
| | 21 | 21 | 21 | 21 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| Willistown | | | | | | | | | | | | | | |
| | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% |
| | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 28 | 28 | 28 | 28 | 28 | 28 |
| Willistown | 2,341 | 2,351 | 2,361 | 2,371 | 2,381 | 2,391 | 2,401 | 2,411 | 2,421 | 2,431 | 2,441 | 2,452 | 2,462 | 2,472 |
| | 3,134,079 | 3,147,242 | 3,160,461 | 3,316,553 | 3,330,482 | 3,344,470 | 3,492,858 | 3,507,528 | 3,522,259 | 3,664,387 | 3,679,777 | 3,695,232 | 3,822,075 | 3,838,128 |
| | 105.00% | | | | | | | | | | | | | |
| | 1,338.63 | 1,338.63 | 1,338.63 | 1,398.87 | 1,398.87 | 1,398.87 | 1,454.83 | 1,454.83 | 1,454.83 | 1,507.20 | 1,507.20 | 1,507.20 | 1,552.42 | 1,552.42 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 619.02 | 619.05 | 619.09 | 647.01 | 646.95 | 646.90 | 672.74 | 672.71 | 672.70 | 696.92 | 696.93 | 696.95 | 717.90 | 717.94 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2,978,596 | 3,140,661 | 3,153,851 | 3,167,098 | 3,323,518 | 3,337,476 | 3,351,493 | 3,500,193 | 3,514,894 | 3,529,656 | 3,672,082 | 3,687,505 | 3,702,992 | 3,830,101 |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 4.5% | | | 4.0% | | | 3.6% | | | 3.0% | | 3.1% |
| | $ 1,341.44 | $ 1,341.44 | $ 1,401.80 | $ 1,401.80 | $ 1,401.80 | $ 1,457.87 | $ 1,457.87 | $ 1,457.87 | $ 1,510.36 | $ 1,510.36 | $ 1,510.36 | $ 1,555.67 | $ 1,555.67 | $ 1,603.89 |
| | $ - | $ - | $ 60.36 | $ - | $ - | $ 56.07 | $ - | $ - | $ 52.48 | $ - | $ - | $ 45.31 | $ - | $ 48.23 |
| | 6,242 | 6,582 | 6,609 | 6,637 | 6,965 | 6,994 | 7,023 | 7,335 | 7,366 | 7,397 | 7,695 | 7,728 | 7,760 | 8,026 |
| | 3,134,079 | 3,147,242 | 3,160,461 | 3,316,553 | 3,330,482 | 3,344,470 | 3,492,858 | 3,507,528 | 3,522,259 | 3,664,387 | 3,679,777 | 3,695,232 | 3,822,075 | 3,838,128 |
| | - | - | 142,221 | - | - | 133,779 | - | - | 126,801 | - | - | 110,857 | - | 118,982 |
| | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 |
| | 17,795 | 17,870 | 17,945 | 18,829 | 18,908 | 18,987 | 19,828 | 19,911 | 19,995 | 20,800 | 20,887 | 20,975 | 21,694 | 21,785 |
| | 36,500 | 36,575 | 36,650 | 37,534 | 37,613 | 37,692 | 38,533 | 38,616 | 38,700 | 39,505 | 39,592 | 39,680 | 40,399 | 40,490 |

| | | | | |
|---|---|---|---|---|
| llistown | | | | |
| LESS: EOS - Wages & Benefits | | 15% savings | 15% | 0.15 |
| LESS: EOS - Professional Services | ices | 50% savings | 50% | 0.5 |
| LESS: EOS - Eliminated Expenses | | 100% savings | 100% | 1 |

llistown
Wages
Professional Services

Eliminated Exp

llistown
Reported CAPX - from the financials

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROSS Property, plant and equipment | | | | | | | | | | | | | | |
| Accumulated Depreciation | | | | | | | | | | | | | | |
| NET PPE | | | | | | | | | | | | | | |
| Total Debt | | | | | | | | | | | | | | |
| Net Equity | | | | | | | | | | | | | | |
| Investor Provided Capital | | | | | | | | | | | | | | |
| Depreciation Rate | | | | | | | | | | | | | | |
| Depreciation Expense | | | | | | | | | | | | | | |
| CAPX | | | | | | | | | | | | | | |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

:nd GROSS Property, plant and equipment.

:nd GROSS Property, plant and equipment.

| | WORKING NOTES | | | | | | | WORKING NOTES | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| GROSS Property, plant and equipment | - | - | - | | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 |
| Accumulated Depreciation | - | - | - | | 6,274,246 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 |
| NET PPE | - | - | - | | 13,367,274 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 |
| Total Debt | - | - | - | 4,391,975 | *4,391,975* | *4,391,975* | | | | | | |
| Net Equity | - | - | - | 5,474,746 | *5,474,746* | *5,474,746* | | | | | | |
| Investor Provided Capital | - | - | - | 9,866,721 | 9,866,721 | 9,866,721 | - | | | | | |
| Depreciation / GROSS PPE | #DIV/0! | #DIV/0! | #DIV/0! | 0.00% | 0.00% | 1.55% | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Dep on Retired property | | - | - | - | - | - | - | - | - |
| | | | Dep on Prior yr. GROSS | | 477,169 | 304,901 | - | - | - | - | - | - |
| | | | Total Dep | | 477,169 | 304,901 | - | - | - | - | - | - |
| llistown | | | | | | | | | | | | |
| Depreciation Expense | - | - | 505,633 | 477,169 | 304,901 | | | | | | | |
| | | | | *part of OCN* | | | | | | | | |

| | | | |
|---|---|---|---|
| | NET PPE | PURTA | 0.001527765 |
| | Rev | Reg Assessment Fee | 0.005652534 |

| | | | | | 2020 | 2021 | 1<br>2022 | 2<br>2023 | 3<br>2024 | 4<br>2025 | 5<br>2026 | 6<br>2027 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Willistown | | | | | | | | | | | | |
| | | FIX CIP | | CIP | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | | | | | *part of OCN* | = to DepX | | | | | | |
| | | | | | 25,000 | 304,000 | | | | | | |
| | | | | | | | | | 191 | 71 | 72 | 56 |
| | | | | | 2020 | 2021 | | | | | | |
| | | | | | | 4,750.00 | 61,750.00 | 61,750.00 | 61,750.00 | - | 99,750.00 | 99,750.00 |
| Sewer Rental Charges | 0 | 0 | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,291,030 | 2,297,010 | 2,300,000 | | |
| EDUs | 0 | 0 | 0 | 0 | 4,961 | 4,961 | 4974 | 4987 | 5000 | 5000 | 5021 | 5042 |
| | | | | | 0 | 1 | 13 | 13 | 13 | 0 | 21 | 21 |
| | | 0 | 0 | 0 | 2480.5 | 4961 | 4967.5 | 4980.5 | 4993.5 | 5000 | | |
| | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | 416.1900826 | | | | | | | |
| | | | | | | $ 460.00 | $ 460.00 | $ 460.00 | $ 460.00 | $ 460.00 | | |
| | | #DIV/0! | #DIV/0! | #DIV/0! | 832.3801653 | 431.7694013 | | | | | | |
| Willistown | | | | | C | 2,294 | 10 | | | | | |
| | | | | | E | 4,961 | 21 | | | | | |
| | | | | | | 0.46 | | | | | | |
| | | | | 1742000 | | | | | | | | |
| | | Customer Growth | | | | 0 | 6 | 6 | 6 | 0 | 0.42% | 0.42% |
| | | Delivered to Customer | - | 26.16 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 27 |
| Willistown | | Customers | 2,294 | 2,294 | 2,294 | 2,294 | 2,300 | 2,306 | 2,312 | 2,312 | 2,322 | 2,331 |
| | | Total Revenue (Less TAP) | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,147,607 | 2,153,202 | 3,514,279 | 3,521,659 | 3,536,450 |
| | | | | | | | | | | 163.21% | | |
| | | avg CUST rev | 876.89 | 963.98 | 900.05 | 933.74 | 932.53 | 931.31 | 931.32 | 1,520.02 | 1,516.84 | 1,516.84 |
| | | avg CUST flow | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | avg EDU rev | #DIV/0! | #DIV/0! | 416.19 | 431.77 | 431.20 | 430.64 | 430.64 | 702.86 | 701.39 | 701.40 |
| | | avg EDU flow | #DIV/0! | #DIV/0! | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Rev Calculated | | | | 2,064,719 | 2,144,809 | 2,147,607 | 2,150,401 | 2,153,202 | 3,521,659 | 3,529,054 |

| WORKING NOTES | | | | | | | WORKING NOTES | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |

| | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|
| Change | | | | 63.0% | | | 4.0% |
| $ 900.05 | $ 933.74 | $ 932.53 | $ 932.53 | $ 1,520.02 | $ 1,520.02 | $ 1,520.02 | $ 1,580.82 |
| | | | $ - | $ 587.49 | $ - | $ - | $ 60.80 |
| | - | 2,801 | 2,798 | 3,509,719 | - | 7,380 | 7,395 |
| | 2,064,719 | 2,144,809 | 2,147,607 | 2,153,202 | 3,514,279 | 3,521,659 | 3,536,450 |
| | - | - | - | 1,356,517 | - | - | 141,458 |

| Prior yr | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NET PURTA | 0.1432% | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 |
| REV Reg Assessment | 0.5690% | 12,225 | 12,241 | 12,257 | 20,007 | 20,033 | 20,075 |
| | | 30,930 | 30,946 | 30,962 | 38,712 | 38,738 | 38,780 |

| Willistown Township Wastewater Systems Assets | |
|---|---|
| Investor Provide | 9,866,721 |
| Gross PP&E | 19,641,520 |
| Net PP&E | 13,367,274 |
| Revenues | 2,148,508 |
| EBITDA | 297,618 |
| EBIT | (7,283) |
| Customers | 2,294 |
| Population | 11,214 |

| | | | | | |
|---|---|---|---|---|---|
| G PPE | - | - | 19,641,520 | 19,641,520 | |
| NPPE | - | - | 13,367,274 | 13,062,373 | |
| Cust | 2,294 | 2,294 | 2,294 | 2,294 | |

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | |
|---|---|---|---|---|---|---|---|---|---|
| llistown | | | | | | | | | |
| LESS: EOS - Wages & Benefits | 0 | - | - | - | - | 356,958 | | 0.15 | LESS: EOS - Wage: Wages & Benefits |
| LESS: EOS - Professional Services | 0 | 0 | 0 | 0 | - | 129,200 | | 0.5 | LESS: EOS - Profes Net Professional Serv |
| LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | - | - | | | LESS: EOS - Eli Tranfers |
| llistown | | | | | | | | | |
| Wages | | | 0 | 0 | 0 | 356,958 | | | |
| Professional Services | | | | | 0 | 129,200 | | | |
| Eliminated Exp | | | 0 | 0 | 0 | 0 | | | |

| llistown | | | | | included in OCN | = to DepX |
|---|---|---|---|---|---|---|
| Reported CAPX - from the financials | 0 | 323,433 | 513,332 | 874,280 | 25,000 | 304,000 |

| 2016 | 2017 | 2018 | 2019 | 2020 | Assets | Per Books | Difference |
|---|---|---|---|---|---|---|---|

| | WORKING NOTES | | | | | | | WORKING NOTES | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| GROSS Property, plant and equipment | - | - | - | - | 19,641,520 | | | 19,641,520 | - | | | |
| Accumulated Depreciation | - | - | - | - | 6,274,246 | | | 6,274,246 | - | | | |
| NET PPE | - | - | - | - | 13,367,274 | | | 13,367,274 | - | 13,367,274 | | |
| Total Debt | - | - | - | 4,391,975 | 4,391,975 | | | 304,901 | | | | |
| Net Equity | - | - | - | 5,474,746 | 5,474,746 | | | | | | | |
| Investor Provided Capital | - | - | - | 9,866,721 | 9,866,721 | | | | | | | |
| Depreciation Rate | 0.00% | 0.00% | 0.00% | #DIV/0! | 1.55% | | | | | | | |
| Depreciation Expense | - | - | 505,633 | 477,169 | 304,901.00 | | | | | | | |

| | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| CAPX | 0 | 0 | 0 | 0 | 0 |

| | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|---|
| | XYZ's LTCP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Willistown | State of Good Repair | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | XYZ's Base CAPX | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP & Expand WWTP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | xyz LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | xyz LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Expand WWTP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | PWD Base charge | | 0 | 0 | 0 | 0 | 0 | 0 |
| | CAPX | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Expand WWTP work area | | 0 | 0 | 0 | 0 | 0 | 0 |
| | State of Good Repair | | 0 | 0 | 0 | 0 | 0 | 0 |
| | XYZ's Base CAPX | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP & Expand WWTP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | OpEx | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|---|---|
| State of Good Repair | Capital Expenditures - Pre-2028 based on financials/budget. Post-2027 years are estimates at 0.00% of prior year-e |
| XYZ's Base CAPX | dummy |
| Base & LTCP | dummy |
| Base & LTCP & Expand WWTP | dummy |
| CAPX note | Capital Expenditures - Pre-2028 based on financials/budget. Post-2027 years are estimates at 0.00% of prior year-e |
| State of Good Repair | No Additional O&M. |
| XYZ's Base CAPX | dummy |
| Base & LTCP | dummy |
| Base & LTCP & Expand WWTP | dummy |
| Additional OpEx note | No Additional O&M. |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROSS Property, plant and equipment | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 | 19,641,520 |
| Accumulated Depreciation | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 | 6,579,147 |
| NET PPE | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 | 13,062,373 |
| Total Debt | | | | | | | | | | | | | | |
| Net Equity | | | | | | | | | | | | | | |
| Investor Provided Capital | | | | | | | | | | | | | | |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Depreciation / GROSS PPE

llistown

Depreciation Expense

| | 7<br>2028 | 8<br>2029 | 9<br>2030 | 10<br>2031 | 11<br>2032 | 12<br>2033 | 13<br>2034 | 14<br>2035 | 15<br>2036 | 16<br>2037 | 17<br>2038 | 18<br>2039 | 19<br>2040 | 20<br>2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | 99,750.00 | 99,750.00 | 99,750.00 | 99,750.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 |
| Sewer Rental Charges | | | | | | | | | | | | | | |
| EDUs | 5063 | 5084 | 5105 | 5126 | 5148 | 5170 | 5192 | 5214 | 5236 | 5258 | 5280 | 5302 | 5324 | 5346 |
| | 21 | 21 | 21 | 21 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |

Willistown

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% |
| | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 28 | 28 | 28 | 28 | 28 | 28 |
| Willistown | 2,341 | 2,351 | 2,361 | 2,371 | 2,381 | 2,391 | 2,401 | 2,411 | 2,421 | 2,431 | 2,441 | 2,452 | 2,462 | 2,472 |
| | 3,693,355 | 3,708,867 | 3,724,444 | 3,870,990 | 3,887,248 | 3,903,575 | 4,057,169 | 4,074,209 | 4,091,320 | 4,252,302 | 4,270,161 | 4,288,096 | 4,456,820 | 4,475,538 |
| | 104.00% | | | | | | | | | | | | | |
| | 1,577.51 | 1,577.51 | 1,577.51 | 1,632.72 | 1,632.72 | 1,632.72 | 1,689.87 | 1,689.87 | 1,689.87 | 1,749.02 | 1,749.02 | 1,749.02 | 1,810.23 | 1,810.23 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 729.48 | 729.52 | 729.57 | 755.17 | 755.10 | 755.04 | 781.43 | 781.40 | 781.38 | 808.73 | 808.74 | 808.77 | 837.12 | 837.18 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3,543,877 | 3,701,111 | 3,716,656 | 3,732,265 | 3,879,119 | 3,895,411 | 3,911,773 | 4,065,689 | 4,082,765 | 4,099,912 | 4,261,232 | 4,279,128 | 4,297,101 | 4,466,179 |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 3.5% | | | 3.5% | | | 3.5% | | | 3.5% | | 3.0% |
| | $ 1,580.82 | $ 1,580.82 | $ 1,636.15 | $ 1,636.15 | $ 1,636.15 | $ 1,693.41 | $ 1,693.41 | $ 1,693.41 | $ 1,752.68 | $ 1,752.68 | $ 1,752.68 | $ 1,814.02 | $ 1,814.02 | $ 1,868.45 |
| | $ - | $ - | $ 55.33 | $ - | $ - | $ 57.27 | $ - | $ - | $ 59.27 | $ - | $ - | $ 61.34 | $ - | $ 54.42 |
| | 7,427 | 7,756 | 7,789 | 7,821 | 8,129 | 8,163 | 8,198 | 8,520 | 8,556 | 8,592 | 8,930 | 8,967 | 9,005 | 9,359 |
| | 3,693,355 | 3,708,867 | 3,724,444 | 3,870,990 | 3,887,248 | 3,903,575 | 4,057,169 | 4,074,209 | 4,091,320 | 4,252,302 | 4,270,161 | 4,288,096 | 4,456,820 | 4,475,538 |
| | - | - | 130,356 | - | - | 136,625 | - | - | 143,196 | - | - | 150,083 | - | 134,266 |
| | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 | 18,705 |
| | 20,964 | 21,052 | 21,140 | 21,971 | 22,063 | 22,155 | 23,026 | 23,122 | 23,219 | 24,131 | 24,233 | 24,334 | 25,290 | 25,396 |
| | 39,669 | 39,757 | 39,845 | 40,676 | 40,768 | 40,860 | 41,731 | 41,827 | 41,924 | 42,836 | 42,938 | 43,039 | 43,995 | 44,101 |

| | | | | |
|---|---|---|---|---|
| llistown | | | | |
| LESS: EOS - Wages & Benefits | | 15% savings | 15% | 0.15 |
| LESS: EOS - Professional Services | ices | 50% savings | 50% | 0.5 |
| LESS: EOS - Eliminated Expenses | | 100% savings | 100% | 1 |

llistown
Wages
Professional Services

Eliminated Exp

llistown
Reported CAPX - from the financials

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROSS Property, plant and equipment | | | | | | | | | | | | | | |
| Accumulated Depreciation | | | | | | | | | | | | | | |
| NET PPE | | | | | | | | | | | | | | |
| Total Debt | | | | | | | | | | | | | | |
| Net Equity | | | | | | | | | | | | | | |
| Investor Provided Capital | | | | | | | | | | | | | | |
| Depreciation Rate | | | | | | | | | | | | | | |
| Depreciation Expense | | | | | | | | | | | | | | |
| CAPX | | | | | | | | | | | | | | |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

:nd GROSS Property, plant and equipment.

:nd GROSS Property, plant and equipment.

| | WORKING NOTES | | | | | | | WORKING NOTES | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| GROSS Property, plant and equipment | - | - | - | | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 |
| Accumulated Depreciation | - | - | - | | 19,194,180 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 |
| NET PPE | - | - | - | | 26,200,000 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 |
| Total Debt | - | - | - | 4,391,975 | *4,391,975* | *4,391,975* | | | | | | |
| Net Equity | - | - | - | 5,474,746 | *5,474,746* | *5,474,746* | | | | | | |
| Investor Provided Capital | - | - | - | 9,866,721 | 9,866,721 | 9,866,721 | - | | | | | |
| Depreciation / GROSS PPE | #DIV/0! | #DIV/0! | #DIV/0! | 0.00% | 0.00% | 1.57% | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dep on Retired property | | | | | - | - | - | - | - | - | - | - |
| Dep on Prior yr. GROSS | | | | | 477,169 | 712,689 | - | - | - | - | - | - |
| Total Dep | | | | | 477,169 | 712,689 | - | - | - | - | - | - |
| llistown | | | | | | | | | | | | |
| Depreciation Expense | - | - | 505,633 | 477,169 | 712,689 | | | | | | | |
| | | | | *part of OCN* | | | | | | | | |

| | | | |
|---|---|---|---|
| NET PPE | | PURTA | 0.001527765 |
| Rev | | Reg Assessment Fee | 0.005652534 |

| | | | | | 2020 | 2021 | 1<br>2022 | 2<br>2023 | 3<br>2024 | 4<br>2025 | 5<br>2026 | 6<br>2027 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Willistown | | | | | | | | | | | | |
| | FIX CIP | | | CIP | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | | | | | *part of OCN* | = to DepX | | | | | | |
| | | | | | 25,000 | 304,000 | | | | | | |
| | | | | | | | | | 191 | 71 | 72 | 56 |
| | | | | | 2020 | 2021 | | | | | | |
| | | | | | | 4,750.00 | 61,750.00 | 61,750.00 | 61,750.00 | - | 99,750.00 | 99,750.00 |
| Sewer Rental Charges | 0 | 0 | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,291,030 | 2,297,010 | 2,300,000 | | |
| EDUs | 0 | 0 | 0 | 0 | 4,961 | 4,961 | 4974 | 4987 | 5000 | 5000 | 5021 | 5042 |
| | | | | | 0 | 1 | 13 | 13 | 13 | 0 | 21 | 21 |
| | | 0 | 0 | 0 | 2480.5 | 4961 | 4967.5 | 4980.5 | 4993.5 | 5000 | | |
| | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | 416.1900826 | | | | | | | |
| | | | | | | $ 460.00 | $ 460.00 | $ 460.00 | $ 460.00 | $ 460.00 | | |
| | | #DIV/0! | #DIV/0! | #DIV/0! | 832.3801653 | 431.7694013 | | | | | | |
| Willistown | | | | | C | 2,294 | 10 | | | | | |
| | | | | | E | 4,961 | 21 | | | | | |
| | | | | | | 0.46 | | | | | | |
| | | | | 1742000 | | | | | | | | |
| | Customer Growth | | | | | 0 | 6 | 6 | 6 | 0 | 0.42% | 0.42% |
| | Delivered to Customer | | - | 26.16 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 27 |
| Willistown | Customers | | 2,294 | 2,294 | 2,294 | 2,294 | 2,300 | 2,306 | 2,312 | 2,312 | 2,322 | 2,331 |
| | Total Revenue (Less TAP) | | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,147,607 | 2,153,202 | 3,665,199 | 3,672,896 | 3,688,322 |
| | | | | | | | | | | 170.22% | | |
| | avg CUST rev | | 876.89 | 963.98 | 900.05 | 933.74 | 932.53 | 931.31 | 931.32 | 1,585.29 | 1,581.98 | 1,581.98 |
| | avg CUST flow | | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | avg EDU rev | | #DIV/0! | #DIV/0! | 416.19 | 431.77 | 431.20 | 430.64 | 430.64 | 733.04 | 731.51 | 731.52 |
| | avg EDU flow | | #DIV/0! | #DIV/0! | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Rev Calculated | | | | | 2,064,719 | 2,144,809 | 2,147,607 | 2,150,401 | 2,153,202 | 3,672,896 | 3,680,609 |

| WORKING NOTES | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | WORKING NOTES 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| | | | | | | Change | | | 70.0% | | | |
| | | | | | $ 900.05 | $ 933.74 | $ 932.53 | $ 932.53 | $ 1,585.29 | $ 1,585.29 | $ 1,585.29 | $ 1,585.29 |
| | | | | | | | | $ - | $ 652.77 | $ - | $ - | $ - |
| | | | | | | - | 2,801 | 2,798 | 3,660,443 | - | 7,697 | 7,713 |
| | | | | | | 2,064,719 | 2,144,809 | 2,147,607 | 2,153,202 | 3,665,199 | 3,672,896 | 3,688,322 |
| | | | | | | - | - | - | 1,507,241 | - | - | - |
| Prior yr | | | | | | | | | | | | |
| NET PURTA | | | 0.1432% | | | | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 |
| REV Reg Assessment | | | 0.5690% | | | | 12,225 | 12,241 | 12,257 | 20,865 | 20,892 | 20,936 |
| | | | | | | | 48,723 | 48,739 | 48,755 | 57,363 | 57,390 | 57,434 |

| Willistown Township Wastewater Systems Assets | |
|---|---|
| Investor Provide | 9,866,721 |
| Gross PP&E | 45,394,180 |
| Net PP&E | 26,200,000 |
| Revenues | 2,148,508 |
| EBITDA | 297,618 |
| EBIT | (415,071) |
| Customers | 2,294 |
| Population | 11,214 |

| | | | | | |
|---|---|---|---|---|---|
| G PPE | - | - | 45,394,180 | 45,394,180 | |
| NPPE | - | - | 26,200,000 | 25,487,311 | |
| Cust | 2,294 | 2,294 | 2,294 | 2,294 | |

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | |
|---|---|---|---|---|---|---|---|---|---|
| llistown | | | | | | | | | |
| LESS: EOS - Wages & Benefits | 0 | - | - | - | - | 356,958 | | 0.15 | LESS: EOS - Wage: Wages & Benefits |
| LESS: EOS - Professional Services | 0 | 0 | 0 | 0 | - | 129,200 | | 0.5 | LESS: EOS - Profes Net Professional Serv |
| LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | - | - | | | LESS: EOS - Eli Tranfers |
| llistown | | | | | | | | | |
| Wages | | | 0 | 0 | 0 | 356,958 | | | |
| Professional Services | | | | | 0 | 129,200 | | | |
| Eliminated Exp | | | 0 | 0 | 0 | 0 | | | |

| llistown | | | | | included in OCN | = to DepX |
|---|---|---|---|---|---|---|
| Reported CAPX - from the financials | 0 | 323,433 | 513,332 | 874,280 | 25,000 | 304,000 |

| 2016 | 2017 | 2018 | 2019 | 2020 | Assets | Per Books | Difference |
|---|---|---|---|---|---|---|---|

| WORKING NOTES | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROSS Property, plant and equipment | - | - | - | - | 45,394,180 | | | 45,394,180 | - | | | |
| Accumulated Depreciation | - | - | - | - | 19,194,180 | | | 19,194,180 | - | | | |
| NET PPE | - | - | - | - | 26,200,000 | | | 26,200,000 | - | 26,200,000 | | |
| Total Debt | - | - | - | 4,391,975 | 4,391,975 | | | 712,689 | | | | |
| Net Equity | - | - | - | 5,474,746 | 5,474,746 | | | | | | | |
| Investor Provided Capital | - | - | - | 9,866,721 | 9,866,721 | | | | | | | |
| Depreciation Rate | 0.00% | 0.00% | 0.00% | #DIV/0! | 1.57% | | | | | | | |
| Depreciation Expense | - | - | 505,633 | 477,169 | 712,689.00 | | | | | | | |

| | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| CAPX | 0 | 0 | 0 | 0 | 0 |

| | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|
| XYZ's LTCP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Willistown State of Good Repair | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| XYZ's Base CAPX | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base & LTCP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Base & LTCP & Expand WWTP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| xyz LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| xyz LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| Expand WWTP | | 0 | 0 | 0 | 0 | 0 | 0 |
| PWD Base charge | | 0 | 0 | 0 | 0 | 0 | 0 |
| CAPX | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Expand WWTP work area | | 0 | 0 | 0 | 0 | 0 | 0 |
| State of Good Repair | | 0 | 0 | 0 | 0 | 0 | 0 |
| XYZ's Base CAPX | | 0 | 0 | 0 | 0 | 0 | 0 |
| Base & LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| Base & LTCP & Expand WWTP | | 0 | 0 | 0 | 0 | 0 | 0 |
| OpEx | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|---|---|
| State of Good Repair | Capital Expenditures - Pre-2028 based on financials/budget. Post-2027 years are estimates at 0.00% of prior year-e |
| XYZ's Base CAPX | dummy |
| Base & LTCP | dummy |
| Base & LTCP & Expand WWTP | dummy |
| CAPX note | Capital Expenditures - Pre-2028 based on financials/budget. Post-2027 years are estimates at 0.00% of prior year-e |
| State of Good Repair | No Additional O&M. |
| XYZ's Base CAPX | dummy |
| Base & LTCP | dummy |
| Base & LTCP & Expand WWTP | dummy |
| Additional OpEx note | No Additional O&M. |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROSS Property, plant and equipment | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 |
| Accumulated Depreciation | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 |
| NET PPE | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 |
| Total Debt | | | | | | | | | | | | | | |
| Net Equity | | | | | | | | | | | | | | |
| Investor Provided Capital | | | | | | | | | | | | | | |
| Depreciation / GROSS PPE | | | | | | | | | | | | | | |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| llistown | | | | | | | | | | | | | | |
| Depreciation Expense | | | | | | | | | | | | | | |
| | 7<br>2028 | 8<br>2029 | 9<br>2030 | 10<br>2031 | 11<br>2032 | 12<br>2033 | 13<br>2034 | 14<br>2035 | 15<br>2036 | 16<br>2037 | 17<br>2038 | 18<br>2039 | 19<br>2040 | 20<br>2041 |
| | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | 99,750.00 | 99,750.00 | 99,750.00 | 99,750.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 |
| Sewer Rental Charges | | | | | | | | | | | | | | |
| EDUs | 5063 | 5084 | 5105 | 5126 | 5148 | 5170 | 5192 | 5214 | 5236 | 5258 | 5280 | 5302 | 5324 | 5346 |
| | 21 | 21 | 21 | 21 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| Willistown | | | | | | | | | | | | | | |
| | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% |
| | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 28 | 28 | 28 | 28 | 28 | 28 |
| Willistown | 2,341 | 2,351 | 2,361 | 2,371 | 2,381 | 2,391 | 2,401 | 2,411 | 2,421 | 2,431 | 2,441 | 2,452 | 2,462 | 2,472 |
| | 3,703,813 | 3,961,128 | 3,977,765 | 3,994,471 | 4,011,248 | 4,269,781 | 4,287,714 | 4,305,722 | 4,431,902 | 4,450,516 | 4,469,208 | 4,604,666 | 4,624,005 | 4,643,426 |
| | 100.00% | | | | | | | | | | | | | |
| | 1,581.98 | 1,684.81 | 1,684.81 | 1,684.81 | 1,684.81 | 1,785.90 | 1,785.90 | 1,785.90 | 1,830.54 | 1,830.54 | 1,830.54 | 1,878.14 | 1,878.14 | 1,878.14 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 731.55 | 779.14 | 779.19 | 779.26 | 779.19 | 825.88 | 825.83 | 825.80 | 846.43 | 846.43 | 846.44 | 868.48 | 868.52 | 868.58 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3,696,067 | 3,711,591 | 3,969,446 | 3,986,118 | 4,002,859 | 4,019,672 | 4,278,748 | 4,296,718 | 4,314,764 | 4,441,209 | 4,459,862 | 4,478,593 | 4,614,336 | 4,633,715 |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
| | 6.5% | | | | 6.0% | | | 2.5% | | | 2.6% | | | 2.8% |
| | $ 1,688.34 | $ 1,688.34 | $ 1,688.34 | $ 1,688.34 | $ 1,789.64 | $ 1,789.64 | $ 1,789.64 | $ 1,834.38 | $ 1,834.38 | $ 1,834.38 | $ 1,882.07 | $ 1,882.07 | $ 1,882.07 | $ 1,934.77 |
| | $ 103.04 | $ - | $ - | $ - | $ 101.30 | $ - | $ - | $ 44.74 | $ - | $ - | $ 47.69 | $ - | $ - | $ 52.70 |
| | 7,745 | 7,778 | 8,318 | 8,353 | 8,388 | 8,424 | 8,967 | 9,004 | 9,042 | 9,307 | 9,346 | 9,385 | 9,670 | 9,710 |
| | 3,703,813 | 3,961,128 | 3,977,765 | 3,994,471 | 4,011,248 | 4,269,781 | 4,287,714 | 4,305,722 | 4,431,902 | 4,450,516 | 4,469,208 | 4,604,666 | 4,624,005 | 4,643,426 |
| | 240,748 | - | - | - | 240,675 | - | - | 107,643 | - | - | 116,199 | - | - | 130,016 |
| | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 |
| | 21,024 | 22,482 | 22,576 | 22,670 | 22,766 | 24,230 | 24,332 | 24,434 | 25,149 | 25,255 | 25,360 | 26,128 | 26,238 | 26,348 |
| | 57,522 | 58,980 | 59,074 | 59,168 | 59,264 | 60,728 | 60,830 | 60,932 | 61,647 | 61,753 | 61,858 | 62,626 | 62,736 | 62,846 |

llistown

| | | | | |
|---|---|---|---|---|
| LESS: EOS - Wages & Benefits | | 15% savings | 15% | 0.15 |
| LESS: EOS - Professional Services | ices | 50% savings | 50% | 0.5 |
| LESS: EOS - Eliminated Expenses | | 100% savings | 100% | 1 |

llistown

Wages

Professional Services

Eliminated Exp

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Reported CAPX - from the financials

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROSS Property, plant and equipment | | | | | | | | | | | | | | |
| Accumulated Depreciation | | | | | | | | | | | | | | |
| NET PPE | | | | | | | | | | | | | | |
| Total Debt | | | | | | | | | | | | | | |
| Net Equity | | | | | | | | | | | | | | |
| Investor Provided Capital | | | | | | | | | | | | | | |
| Depreciation Rate | | | | | | | | | | | | | | |
| Depreciation Expense | | | | | | | | | | | | | | |
| CAPX | | | | | | | | | | | | | | |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

:nd GROSS Property, plant and equipment.

:nd GROSS Property, plant and equipment.

| | WORKING NOTES | | | | | | | WORKING NOTES | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| GROSS Property, plant and equipment | - | - | - | | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 |
| Accumulated Depreciation | - | - | - | | 19,194,180 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 |
| NET PPE | - | - | - | | 26,200,000 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 |
| Total Debt | - | - | - | 4,391,975 | *4,391,975* | *4,391,975* | | | | | | |
| Net Equity | - | - | - | 5,474,746 | *5,474,746* | *5,474,746* | | | | | | |
| Investor Provided Capital | - | - | - | 9,866,721 | 9,866,721 | 9,866,721 | - | | | | | |
| Depreciation / GROSS PPE | #DIV/0! | #DIV/0! | #DIV/0! | 0.00% | 0.00% | 1.57% | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dep on Retired property | | | | | - | - | - | - | - | - | - | - |
| Dep on Prior yr. GROSS | | | | | 477,169 | 712,689 | - | - | - | - | - | - |
| Total Dep | | | | | 477,169 | 712,689 | - | - | - | - | - | - |
| llistown | | | | | | | | | | | | |
| Depreciation Expense | - | - | 505,633 | 477,169 | 712,689 | | | | | | | |
| | | | | *part of OCN* | | | | | | | | |

| | | | |
|---|---|---|---|
| NET PPE | PURTA | 0.001527765 |
| Rev | Reg Assessment Fee | 0.005652534 |

| | | | | | 2020 | 2021 | 1<br>2022 | 2<br>2023 | 3<br>2024 | 4<br>2025 | 5<br>2026 | 6<br>2027 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Willistown | | | | | | | | | | | | |
| | FIX CIP | | | CIP | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | | | | | *part of OCN* | = to DepX | | | | | | |
| | | | | | 25,000 | 304,000 | | | | | | |
| | | | | | | | | | 191 | 71 | 72 | 56 |
| | | | | | 2020 | 2021 | | | | | | |
| | | | | | | 4,750.00 | 61,750.00 | 61,750.00 | 61,750.00 | - | 99,750.00 | 99,750.00 |
| Sewer Rental Charges | 0 | 0 | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,291,030 | 2,297,010 | 2,300,000 | | |
| EDUs | 0 | 0 | 0 | 0 | 4,961 | 4,961 | 4974 | 4987 | 5000 | 5000 | 5021 | 5042 |
| | | | | | 0 | 1 | 13 | 13 | 13 | 0 | 21 | 21 |
| | | 0 | 0 | 0 | 2480.5 | 4961 | 4967.5 | 4980.5 | 4993.5 | 5000 | | |
| | #DIV/0! | #DIV/0! | #DIV/0! | #DIV/0! | 416.1900826 | | | | | | | |
| | | | | | | $ 460.00 | $ 460.00 | $ 460.00 | $ 460.00 | $ 460.00 | | |
| | | #DIV/0! | #DIV/0! | #DIV/0! | 832.3801653 | 431.7694013 | | | | | | |
| Willistown | | | | | C | 2,294 | 10 | | | | | |
| | | | | | E | 4,961 | 21 | | | | | |
| | | | | | | 0.46 | | | | | | |
| | | | | 1742000 | | | | | | | | |
| | Customer Growth | | | | | 0 | 6 | 6 | 6 | 0 | 0.42% | 0.42% |
| | Delivered to Customer | | - | 26.16 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 27 |
| Willistown | Customers | | 2,294 | 2,294 | 2,294 | 2,294 | 2,300 | 2,306 | 2,312 | 2,312 | 2,322 | 2,331 |
| | Total Revenue (Less TAP) | | 2,011,578 | 2,211,380 | 2,064,719 | 2,142,008 | 2,144,809 | 2,147,607 | 2,153,202 | 5,066,598 | 5,077,238 | 5,098,563 |
| | | | | | | | | | | 235.31% | | |
| | avg CUST rev | | 876.89 | 963.98 | 900.05 | 933.74 | 932.53 | 931.31 | 931.32 | 2,191.44 | 2,186.85 | 2,186.85 |
| | avg CUST flow | | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | avg EDU rev | | #DIV/0! | #DIV/0! | 416.19 | 431.77 | 431.20 | 430.64 | 430.64 | 1,013.32 | 1,011.20 | 1,011.22 |
| | avg EDU flow | | #DIV/0! | #DIV/0! | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Rev Calculated | | | | | 2,064,719 | 2,144,809 | 2,147,607 | 2,150,401 | 2,153,202 | 5,077,238 | 5,087,900 |

| WORKING NOTES | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | WORKING NOTES 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| | | | | | | Change | | | 135.0% | | | |
| | | | | | $ 900.05 | $ 933.74 | $ 932.53 | $ 932.53 | $ 2,191.44 | $ 2,191.44 | $ 2,191.44 | $ 2,191.44 |
| | | | | | | | | $ - | $ 1,258.91 | $ - | $ - | $ - |
| | | | | | | - | 2,801 | 2,798 | 5,060,024 | - | 10,640 | 10,662 |
| | | | | | | 2,064,719 | 2,144,809 | 2,147,607 | 2,153,202 | 5,066,598 | 5,077,238 | 5,098,563 |
| | | | | | | - | - | - | 2,906,822 | - | - | - |
| Prior yr | | | | | | | | | | | | |
| NET PURTA | | | 0.1432% | | | | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 |
| REV Reg Assessment | | | 0.5690% | | | | 12,225 | 12,241 | 12,257 | 28,829 | 28,866 | 28,926 |
| | | | | | | | 48,723 | 48,739 | 48,755 | 65,327 | 65,364 | 65,424 |

| Willistown Township Wastewater Systems Assets | |
|---|---|
| Investor Provide | 9,866,721 |
| Gross PP&E | 45,394,180 |
| Net PP&E | 26,200,000 |
| Revenues | 2,148,508 |
| EBITDA | 297,618 |
| EBIT | (415,071) |
| Customers | 2,294 |
| Population | 11,214 |

| | | | | | |
|---|---|---|---|---|---|
| G PPE | - | - | 45,394,180 | 45,394,180 | |
| NPPE | - | - | 26,200,000 | 25,487,311 | |
| Cust | 2,294 | 2,294 | 2,294 | 2,294 | |

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | |
|---|---|---|---|---|---|---|---|---|---|
| llistown | | | | | | | | | |
| LESS: EOS - Wages & Benefits | 0 | - | - | - | - | 356,958 | | 0.15 | LESS: EOS - Wage: Wages & Benefits |
| LESS: EOS - Professional Services | 0 | 0 | 0 | 0 | - | 129,200 | | 0.5 | LESS: EOS - Profes Net Professional Serv |
| LESS: EOS - Eliminated Expenses | 0 | 0 | 0 | 0 | - | - | | | LESS: EOS - Eli Tranfers |
| llistown | | | | | | | | | |
| Wages | | | 0 | 0 | 0 | 356,958 | | | |
| Professional Services | | | | | 0 | 129,200 | | | |
| Eliminated Exp | | | 0 | 0 | 0 | 0 | | | |

| llistown | | | | | included in OCN | = to DepX |
|---|---|---|---|---|---|---|
| Reported CAPX - from the financials | 0 | 323,433 | 513,332 | 874,280 | 25,000 | 304,000 |

| 2016 | 2017 | 2018 | 2019 | 2020 | Assets | Per Books | Difference |
|---|---|---|---|---|---|---|---|

| WORKING NOTES | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROSS Property, plant and equipment | - | - | - | - | 45,394,180 | | | 45,394,180 | - | | | |
| Accumulated Depreciation | - | - | - | - | 19,194,180 | | | 19,194,180 | - | | | |
| NET PPE | - | - | - | - | 26,200,000 | | | 26,200,000 | - | 26,200,000 | | |
| Total Debt | - | - | - | 4,391,975 | 4,391,975 | | | 712,689 | | | | |
| Net Equity | - | - | - | 5,474,746 | 5,474,746 | | | | | | | |
| Investor Provided Capital | - | - | - | 9,866,721 | 9,866,721 | | | | | | | |
| Depreciation Rate | 0.00% | 0.00% | 0.00% | #DIV/0! | 1.57% | | | | | | | |
| Depreciation Expense | - | - | 505,633 | 477,169 | 712,689.00 | | | | | | | |

| | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| CAPX | 0 | 0 | 0 | 0 | 0 |

| | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|---|
| | XYZ's LTCP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Willistown | State of Good Repair | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | XYZ's Base CAPX | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP & Expand WWTP | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | xyz LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | xyz LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Expand WWTP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | PWD Base charge | | 0 | 0 | 0 | 0 | 0 | 0 |
| | CAPX | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Expand WWTP work area | | 0 | 0 | 0 | 0 | 0 | 0 |
| | State of Good Repair | | 0 | 0 | 0 | 0 | 0 | 0 |
| | XYZ's Base CAPX | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | Base & LTCP & Expand WWTP | | 0 | 0 | 0 | 0 | 0 | 0 |
| | OpEx | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|---|---|
| State of Good Repair | Capital Expenditures - Pre-2028 based on financials/budget. Post-2027 years are estimates at 0.00% of prior year-e |
| XYZ's Base CAPX | dummy |
| Base & LTCP | dummy |
| Base & LTCP & Expand WWTP | dummy |
| CAPX note | Capital Expenditures - Pre-2028 based on financials/budget. Post-2027 years are estimates at 0.00% of prior year-e |
| State of Good Repair | No Additional O&M. |
| XYZ's Base CAPX | dummy |
| Base & LTCP | dummy |
| Base & LTCP & Expand WWTP | dummy |
| Additional OpEx note | No Additional O&M. |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROSS Property, plant and equipment | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 | 45,394,180 |
| Accumulated Depreciation | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 | 19,906,869 |
| NET PPE | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 | 25,487,311 |
| Total Debt | | | | | | | | | | | | | | |
| Net Equity | | | | | | | | | | | | | | |
| Investor Provided Capital | | | | | | | | | | | | | | |
| Depreciation / GROSS PPE | | | | | | | | | | | | | | |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| llistown | | | | | | | | | | | | | | |
| Depreciation Expense | | | | | | | | | | | | | | |
| | 7<br>2028 | 8<br>2029 | 9<br>2030 | 10<br>2031 | 11<br>2032 | 12<br>2033 | 13<br>2034 | 14<br>2035 | 15<br>2036 | 16<br>2037 | 17<br>2038 | 18<br>2039 | 19<br>2040 | 20<br>2041 |
| | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| | 99,750.00 | 99,750.00 | 99,750.00 | 99,750.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 | 104,500.00 |
| Sewer Rental Charges | | | | | | | | | | | | | | |
| EDUs | 5063 | 5084 | 5105 | 5126 | 5148 | 5170 | 5192 | 5214 | 5236 | 5258 | 5280 | 5302 | 5324 | 5346 |
| | 21 | 21 | 21 | 21 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| Willistown | | | | | | | | | | | | | | |
| | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% |
| | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 28 | 28 | 28 | 28 | 28 | 28 |
| Willistown | 2,341 | 2,351 | 2,361 | 2,371 | 2,381 | 2,391 | 2,401 | 2,411 | 2,421 | 2,431 | 2,441 | 2,452 | 2,462 | 2,472 |
| | 5,119,977 | 5,347,140 | 5,369,598 | 5,392,150 | 5,414,797 | 5,600,665 | 5,624,188 | 5,647,810 | 5,813,319 | 5,837,735 | 5,862,253 | 6,004,612 | 6,029,832 | 6,055,157 |
| | 100.00% | | | | | | | | | | | | | |
| | 2,186.85 | 2,274.33 | 2,274.33 | 2,274.33 | 2,274.33 | 2,342.56 | 2,342.56 | 2,342.56 | 2,401.12 | 2,401.12 | 2,401.12 | 2,449.14 | 2,449.14 | 2,449.14 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1,011.25 | 1,051.76 | 1,051.83 | 1,051.92 | 1,051.83 | 1,083.30 | 1,083.24 | 1,083.20 | 1,110.26 | 1,110.26 | 1,110.28 | 1,132.52 | 1,132.58 | 1,132.65 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5,109,270 | 5,130,729 | 5,358,369 | 5,380,874 | 5,403,474 | 5,426,168 | 5,612,426 | 5,635,999 | 5,659,670 | 5,825,527 | 5,849,994 | 5,874,564 | 6,017,222 | 6,042,495 |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4.0% | | | | 3.0% | | | 2.5% | | | 2.0% | | | 2.0% |
| | $ 2,279.09 | $ 2,279.09 | $ 2,279.09 | $ 2,279.09 | $ 2,347.47 | $ 2,347.47 | $ 2,347.47 | $ 2,406.15 | $ 2,406.15 | $ 2,406.15 | $ 2,454.28 | $ 2,454.28 | $ 2,454.28 | $ 2,503.36 |
| | $ 87.66 | $ - | $ - | $ - | $ 68.37 | $ - | $ - | $ 58.69 | $ - | $ - | $ 48.12 | $ - | $ - | $ 49.09 |
| | 10,707 | 10,752 | 11,229 | 11,276 | 11,324 | 11,371 | 11,761 | 11,811 | 11,860 | 12,208 | 12,259 | 12,311 | 12,610 | 12,663 |
| | 5,119,977 | 5,347,140 | 5,369,598 | 5,392,150 | 5,414,797 | 5,600,665 | 5,624,188 | 5,647,810 | 5,813,319 | 5,837,735 | 5,862,253 | 6,004,612 | 6,029,832 | 6,055,157 |
| | 204,799 | - | - | - | 162,444 | - | - | 141,195 | - | - | 117,245 | - | - | 121,103 |
| | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 | 36,498 |
| | 29,048 | 30,335 | 30,462 | 30,590 | 30,718 | 31,771 | 31,905 | 32,039 | 32,976 | 33,115 | 33,254 | 34,060 | 34,203 | 34,347 |
| | 65,546 | 66,833 | 66,960 | 67,088 | 67,216 | 68,269 | 68,403 | 68,537 | 69,474 | 69,613 | 69,752 | 70,558 | 70,701 | 70,845 |

llistown

| | | | | |
|---|---|---|---|---|
| LESS: EOS - Wages & Benefits | | 15% savings | 15% | 0.15 |
| LESS: EOS - Professional Services | ices | 50% savings | 50% | 0.5 |
| LESS: EOS - Eliminated Expenses | | 100% savings | 100% | 1 |

llistown

Wages
Professional Services

Eliminated Exp

llistown

Reported CAPX - from the financials

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROSS Property, plant and equipment | | | | | | | | | | | | | | |
| Accumulated Depreciation | | | | | | | | | | | | | | |
| NET PPE | | | | | | | | | | | | | | |
| Total Debt | | | | | | | | | | | | | | |
| Net Equity | | | | | | | | | | | | | | |
| Investor Provided Capital | | | | | | | | | | | | | | |
| Depreciation Rate | | | | | | | | | | | | | | |
| Depreciation Expense | | | | | | | | | | | | | | |
| CAPX | | | | | | | | | | | | | | |

| | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

:nd GROSS Property, plant and equipment.

:nd GROSS Property, plant and equipment.

DUFF & PHELPS

# 2019 SBBI® Yearbook

## Stocks, Bonds, Bills, and Inflation®

U.S. Capital Markets Performance by
Asset Class 1926–2018

**Exhibit 7.1:** Aggregate Market Capitalization and Company Counts of the CRSP (NYSE/NYSE MKT/NASDAQ) Deciles and Size Groupings
December 31, 2018

| Decile | Historic Average Percentage of Total Capitalization | Recent Number of Companies | Recent Decile Market Capitalization (in $thousands) | Recent Percentage of Total Capitalization |
|---|---|---|---|---|
| 1-Largest | 63.22% | 191 | 19,292,756,366 | 69.06% |
| 2 | 13.91% | 202 | 3,374,015,549 | 12.08% |
| 3 | 7.53% | 192 | 1,736,953,613 | 6.22% |
| 4 | 4.72% | 222 | 1,163,165,541 | 4.16% |
| 5 | 3.25% | 219 | 736,762,076 | 2.64% |
| 6 | 2.41% | 286 | 631,058,072 | 2.26% |
| 7 | 1.79% | 284 | 403,045,100 | 1.44% |
| 8 | 1.33% | 348 | 307,565,042 | 1.10% |
| 9 | 1.02% | 444 | 200,061,186 | 0.72% |
| 10-Smallest | 0.81% | 725 | 89,596,785 | 0.32% |
| Mid-Cap 3-5 | 15.50% | 633 | 3,636,881,230 | 13.02% |
| Low-Cap 6-8 | 5.52% | 918 | 1,341,668,214 | 4.80% |
| Micro-Cap 9-10 | 1.84% | 1,169 | 289,657,971 | 1.04% |

**Source of data:** CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. To learn more about CRSP, visit crsp.com.

In Exhibit 7.2, the largest company in each of the CRSP (NYSE/NYSE MKT/NASDAQ) deciles and size groupings (by market capitalization) are listed as of September 30, 2018.

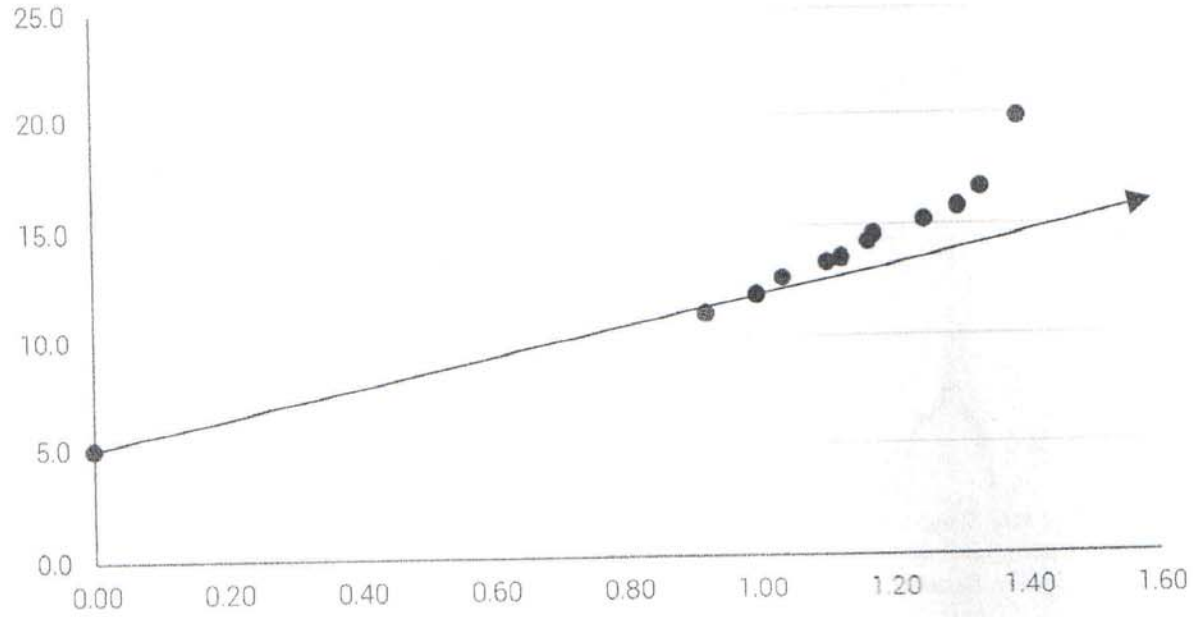
**Exhibit 7.6:** Summary Statistics of Annual Returns (CRSP NYSE/NYSE MKT/NASDAQ Deciles) (%) 1926–2018

| Decile | Geometric Mean (%) | Arithmetic Mean (%) | Standard Deviation (%) | Serial Correlation |
|---|---|---|---|---|
| 1 - Largest | 9.3 | 11.0 | 18.8 | 0.06 |
| 2 | 10.4 | 12.7 | 21.4 | 0.00 |
| 3 | 10.9 | 13.4 | 23.2 | -0.03 |
| 4 | 10.7 | 13.6 | 25.4 | -0.03 |
| 5 | 11.2 | 14.3 | 26.0 | -0.03 |
| 6 | 11.2 | 14.6 | 27.0 | 0.01 |
| 7 | 11.4 | 15.2 | 28.9 | 0.01 |
| 8 | 11.3 | 15.8 | 32.7 | 0.00 |
| 9 | 11.3 | 16.7 | 36.8 | 0.06 |
| 10 | 12.9 | 19.8 | 42.1 | 0.14 |
| Mid-Cap | 10.9 | 13.6 | 24.3 | -0.03 |
| Low-Cap | 11.3 | 15.0 | 28.5 | 0.01 |
| Micro-Cap | 11.9 | 17.7 | 38.5 | 0.08 |
| The "Market" (Deciles 1-10) | 9.8 | 11.7 | 19.9 | 0.01 |

**Source of underlying data:** CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. To learn more about CRSP, visit crsp.com. All calculations performed by Duff & Phelps.

Exhibit 7.7 is a graphical depiction of the year-end index levels presented in Exhibit 7.5 for mid-cap stocks (a portfolio comprised of CRSP deciles 3, 4, and 5), low-cap stocks (a portfolio comprised of CRSP deciles 6, 7, and 8), micro-cap stocks (a portfolio comprised of CRSP deciles 9 and 10), and the "market" (a portfolio comprised of CRSP deciles 1–10).

**Exhibit 7.9:** Security Market Line Versus a Scatter-Plot of Average Arithmetic Total Returns of the CRSP NYSE/NYSE MKT/NADAQ Deciles 1–10 and Their Respective Betas.




**Sources of underlying data:** Betas are estimated from monthly returns in excess of the 30-day U.S. Treasury bill total return, January 1926–December 2018. Historical riskless rate measured by the 93-year arithmetic mean income return component of SBBI® 20-year government bonds (4.97%). Calculated in the context of the CAPM by multiplying the equity risk premium by beta. The equity risk premium is estimated by the arithmetic mean total return of the S&P 500 (11.88%) minus the arithmetic mean income return component of SBBI® 20-year government bonds (4.97%) from 1926–2018. Sources of underlying data: (i) Morningstar, Inc. Used with permission. All rights reserved. (ii) CRSP U.S. Stock Database and CRSP U.S. Indices Database © 2019 Center for Research in Security Prices (CRSP®), University of Chicago Booth School of Business. To learn more about CRSP, visit crsp.com. All calculations performed by Duff & Phelps.

## Serial Correlation in Small-Cap Stock Returns

Serial correlation, or first-order autocorrelation, measures the degree to which the return of a given series is related from period to period. Serial correlation, like cross-correlation, ranges from 1.0 to negative 1.0. A positive serial correlation can be an indicator of a trend in a return series. A serial correlation of 1.0 indicates that returns from one period have a perfectly positive relationship to the returns of the next period; returns are therefore perfectly predictable from one period to the next. A negative serial correlation can be an indicator of a cycle in a return series. A serial correlation of negative 1.0 indicates that returns from one period have a perfectly negative relationship to the next period. A serial correlation near zero indicates that returns are random or unpredictable.

If stock returns have a positive or a negative serial correlation, one can gain some information about future performance based on prior period returns. The serial correlation of returns on large-cap stocks is near zero (see Exhibit 7.6). For the smallest deciles of stocks, the serial correlation tends to be higher. This observation bears further examination.

**The Water Utility Industry consists of eight companies that provide water services mostly to residential customers. The group continues to be highly ranked among the 97 industries that are followed by *Value Line*. Much of the appeal of owning these securities has to do with their well-defined earnings and dividend growth prospects. These equities also provide diversification for professional money managers who overseeing funds that must be put invested in regulated utilities.**

**Due to the small number of equities available here, they trade at high Price/Earnings ratios.**

**As a group, these stocks have underperformed the S&P 500 Index since the beginning of the year.**

## Earnings Remain Steady

COVID-19 has not caused any real problems for water utilities. This is due to two main reasons. First, the demand for water is relatively inelastic. Whether GDP is rising or falling substantially, the demand for water will not change much. (Regulators can occasionally impose price increases for emergencies, such as a drought, to reduce usage.) People just have to consume this essential resource. Secondly, because utilities must file petitions with state authorities to change rates, the price of water is typically known for the next year or two. For example, in California, the process is so lengthy that a utility will file well in advance to establish rates for the next three-year period. The end result of this is that companies' level of profitability is very predictable relative to that of other industries. Of course, there is a cost for this as investors must pay a premium for these stocks. Furthermore, because profits here are less volatile, so too is dividend growth. The average increase for water utilities is currently in the range of 5% to 10%.

## Industry Fundamentals

Change in this Industry historically doesn't occur overnight. Indeed, the storyline here has been consistent for some time. Following years and years of underinvestment, the nation found itself with an aging water infrastructure that is in poor condition. Many pipelines were installed 50 to 75 years ago. In badly need of replacement, water utilities have been spending heaving to replace old assets. This high level of expenditures will have to be maintained for decades.

## Regulation

As we have highlighted in the past, one of the most significant factors in determining the profitability of a utility is the regulatory climate where it operates. Fortunately for the Water Utility Industry, state authorities and water utilities both realize what needs to be done, and are working constructively to address the issues. Regulators agree that the outlays being made to upgrade the country's infrastructure are required, so they are allowing fair return on investment to be made. Having a positive relationship may seem reasonable, but this is not the case for gas and electric utilities. Conflicts are not unusual.

**INDUSTRY TIMELINESS: 7 (of 97)**

## Balance Sheets

Internally generated funds are not sufficient for these entities to cover their capital budgets. As a result, external financing is needed to make up the difference. The trend has been to sell debt rather than issuing new equity. We attribute this primarily to the low interest rates environment that has been prevalent for some time now. Still, on the whole, balance sheets here aren't overleveraged, as Financial Strength ratings average B+ to B++.

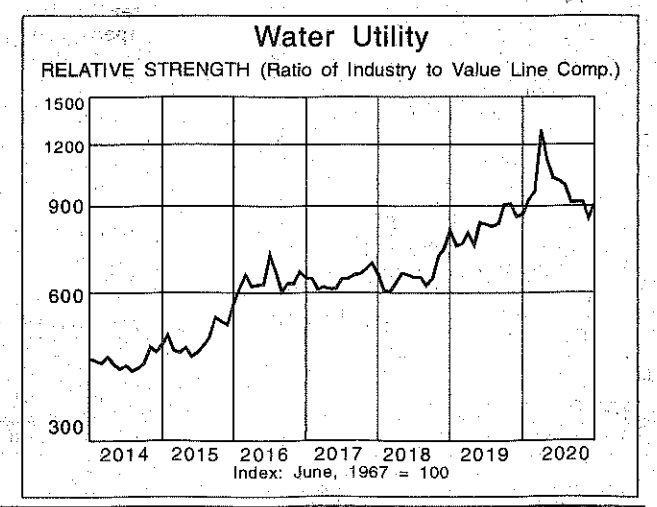
## Scarcity

The market capitalization of all the stocks combined in this group total about $47 billion. (For example, Consolidated Edison, a New York-based electric utility has a market cap itself of approximately $25 billion.) Hence, water stocks always seem to be pricey because the demand outstrips supply.

## Conclusion

Since the start of this year, the stock of *Middlesex Water* has been the only one out of the seven regulated water utilities to have outperformed the market averages. Still, though there are some timely stocks in the group, none can be considered inexpensive. Rather, the premium investors are willing to pay for these equities has been reduced. Certain Wall Street analysts have attributed the sluggish showing to rising yields on long-term Treasury bonds. Utilities are bought for the income they generate and this makes bonds look more attractive. In our opinion, the Water Utility Industry has not traded like electric and gas utilities for some time. Indeed, the average dividend yield of these equities is lower than the *Value Line* median. It should also be noted, that the typical member of this sector has below-average total return prospects out to 2024-2026. Nevertheless, very conservative accounts may find this a small price to pay for the low volatility and well-defined prospects. As always, we advise subscribers to read each individual report carefully before making any commitments to better understand the potential risk being assumed.

*James A. Flood*

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# AMER. STATES WATER NYSE-AWR

RECENT PRICE 75.91 | P/E RATIO 31.5 (Trailing: 32.6 Median: 24.0) | RELATIVE P/E RATIO 1.44 | DIV'D YLD 1.9% | VALUE LINE 1789

TIMELINESS 3 Raised 3/5/21
SAFETY 2 Raised 7/20/12
TECHNICAL 4 Lowered 4/9/21
BETA .65 (1.00 = Market)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 19.8 | 18.2 | 24.1 | 33.1 | 38.7 | 44.1 | 47.2 | 58.4 | 69.6 | 96.0 | 96.6 | 83.1 |
| Low: | 15.6 | 15.3 | 17.0 | 24.0 | 27.0 | 35.8 | 37.3 | 41.1 | 50.1 | 63.3 | 65.1 | 70.1 |

**18-Month Target Price Range**

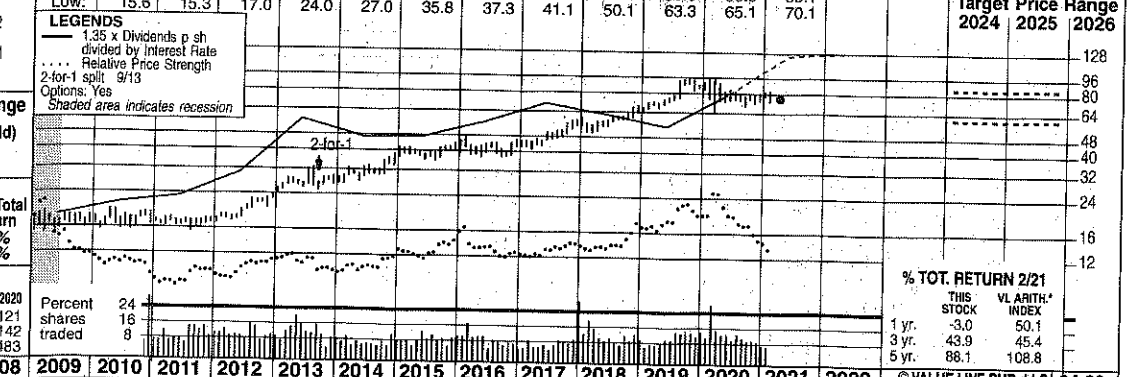
| Low-High | Midpoint (% to Mid) |
|---|---|
| $62-$108 | $85 (10%) |

**2024-26 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 85 | (+10%) | 5% |
| Low | 60 | (-20%) | -3% |

**Institutional Decisions**

| | 2Q2020 | 3Q2020 | 4Q2020 |
|---|---|---|---|
| to Buy | 135 | 121 | 121 |
| to Sell | 129 | 135 | 142 |
| Hld's(000) | 25635 | 25731 | 25483 |




**% TOT. RETURN 2/21**

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | -3.0 | 50.1 |
| 3 yr. | 43.9 | 45.4 |
| 5 yr. | 88.1 | 108.8 |

| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | © VALUE LINE PUB. LLC | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.03 | 7.88 | 8.75 | 9.21 | 9.74 | 10.71 | 11.12 | 12.12 | 12.19 | 12.17 | 12.56 | 11.92 | 12.01 | 11.88 | 12.86 | 13.24 | *13.55* | *13.75* | Revenues per sh | *17.20* |
| 1.32 | 1.45 | 1.65 | 1.69 | 1.70 | 2.11 | 2.13 | 2.48 | 2.65 | 2.67 | 2.81 | 2.70 | 2.96 | 2.84 | 3.26 | 3.34 | *3.50* | *3.65* | "Cash Flow" per sh | *4.80* |
| .66 | .67 | .81 | .78 | .81 | 1.11 | 1.12 | 1.41 | 1.61 | 1.57 | 1.61 | 1.62 | 1.88 | 1.72 | 2.28 | 2.33 | *2.40* | *2.55* | Earnings per sh A | *3.05* |
| .45 | .46 | .48 | .50 | .51 | .52 | .55 | .64 | .76 | .83 | .87 | .91 | .99 | 1.06 | 1.16 | 1.28 | *1.40* | *1.52* | Div'd Decl'd per sh B■ | *2.00* |
| 2.12 | 1.95 | 1.45 | 2.23 | 2.09 | 2.12 | 2.13 | 1.77 | 2.52 | 1.89 | 2.39 | 3.55 | 3.08 | 3.44 | 4.12 | 3.54 | *4.05* | *4.00* | Cap'l Spending per sh | *4.25* |
| 7.86 | 8.32 | 8.77 | 8.97 | 9.70 | 10.13 | 10.84 | 11.80 | 12.72 | 13.24 | 12.77 | 13.52 | 14.45 | 15.19 | 16.33 | 17.39 | *18.95* | *20.00* | Book Value per sh D | *23.20* |
| 33.60 | 34.10 | 34.46 | 34.60 | 37.06 | 37.26 | 37.70 | 38.53 | 38.72 | 38.29 | 36.50 | 36.57 | 36.68 | 36.76 | 36.85 | 36.89 | *37.25* | *37.50* | Common Shs Outst'g C | *37.50* |
| 21.9 | 27.7 | 24.0 | 22.6 | 21.2 | 15.7 | 15.4 | 14.3 | 17.2 | 20.1 | 24.6 | 25.6 | 25.7 | 34.0 | 34.4 | 34.3 | *Bold figures are* | | Avg Ann'l P/E Ratio | *24.0* |
| 1.17 | 1.50 | 1.27 | 1.36 | 1.41 | 1.00 | .97 | .91 | .97 | 1.06 | 1.24 | 1.34 | 1.29 | 1.84 | 1.83 | 1.78 | *Value Line* | | Relative P/E Ratio | *1.35* |
| 3.1% | 2.5% | 2.5% | 2.9% | 2.9% | 3.0% | 3.2% | 3.1% | 2.7% | 2.6% | 2.2% | 2.2% | 2.0% | 1.8% | 1.5% | 1.6% | *estimates* | | Avg Ann'l Div'd Yield | *2.8%* |

**CAPITAL STRUCTURE as of 12/31/20**
Total Debt $575.0 mill. Due in 5 Yrs $136.0 mill.
LT Debt $574.6 mill. LT Interest $22.5 mill.
(47% of Cap'l)

**Leases, Uncapitalized:** Annual rentals $2.6 mill.
**Pension Assets-12/19** $213.1 mill. **Oblig.** $272.8 mill.

**Pfd Stock** None

**Common Stock** 36,898,213 shs. as of 2/19/20

**MARKET CAP: $2.8 billion (Mid Cap)**

| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 419.3 | 466.9 | 472.1 | 465.8 | 458.6 | 436.1 | 440.6 | 436.8 | 473.9 | 488.2 | *505* | *515* | Revenues ($mill) | *645* |
| 42.0 | 54.1 | 62.7 | 61.1 | 60.5 | 59.7 | 69.4 | 63.9 | 84.3 | 86.4 | *90.0* | *95.0* | Net Profit ($mill) | *115* |
| 41.7% | 39.9% | 36.3% | 38.4% | 38.4% | 36.8% | 36.0% | 22.0% | 22.6% | 24.6% | *23.0%* | *24.0%* | Income Tax Rate | *23.0%* |
| 2.0% | 2.5% | -- | -- | -- | -- | -- | -- | 2.5% | -- | *1.0%* | *1.0%* | AFUDC % to Net Profit | *1.0%* |
| 45.4% | 42.2% | 39.8% | 39.1% | 41.1% | 39.4% | 38.0% | 40.5% | 44.4% | 47.2% | *45.0%* | *45.5%* | Long-Term Debt Ratio | *53.5%* |
| 54.6% | 57.8% | 60.2% | 60.9% | 58.9% | 60.6% | 62.0% | 59.5% | 55.6% | 52.8% | *55.0%* | *54.5%* | Common Equity Ratio | *46.5%* |
| 749.1 | 787.0 | 818.4 | 832.6 | 791.5 | 815.3 | 854.9 | 938.4 | 1082.5 | 1216.2 | *1280* | *1380* | Total Capital ($mill) | *1620* |
| 896.5 | 917.8 | 987.5 | 1003.5 | 1060.8 | 1150.9 | 1205.0 | 1296.3 | 1415.7 | 1512.0 | *1600* | *1700* | Net Plant ($mill) | *1925* |
| 7.1% | 8.3% | 8.9% | 8.6% | 9.0% | 8.6% | 9.3% | 7.9% | 8.9% | 8.0% | *8.0%* | *8.0%* | Return on Total Cap'l | *8.5%* |
| 10.3% | 11.9% | 12.7% | 12.0% | 13.0% | 12.1% | 13.1% | 11.4% | 14.0% | 13.5% | *13.0%* | *12.5%* | Return on Shr. Equity | *13.0%* |
| 10.3% | 11.9% | 12.7% | 12.0% | 13.0% | 12.1% | 13.1% | 11.4% | 14.0% | 13.5% | *13.0%* | *12.5%* | Return on Com Equity | *13.0%* |
| 5.3% | 6.6% | 6.8% | 5.7% | 6.0% | 5.3% | 6.2% | 4.5% | 6.9% | 6.1% | *6.0%* | *5.0%* | Retained to Com Eq | *4.5%* |
| 49% | 45% | 47% | 53% | 54% | 56% | 52% | 61% | 51% | 55% | *58%* | *60%* | All Div'ds to Net Prof | *66%* |

| CURRENT POSITION ($MILL.) | 2018 | 2019 | 12/31/20 |
|---|---|---|---|
| Cash Assets | 7.1 | 1.3 | 36.7 |
| Accts Receivable | 23.4 | 20.9 | 29.2 |
| Other | 101.0 | 100.3 | 91.2 |
| Current Assets | 131.5 | 122.5 | 157.1 |
| Accts Payable | 59.5 | 55.6 | 63.8 |
| Debt Due | 40.3 | 5.3 | .4 |
| Other | 46.8 | 55.1 | 54.4 |
| Current Liab. | 146.6 | 116.0 | 118.6 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '18-'20 to '24-'26 |
|---|---|---|---|
| Revenues | 2.5% | .5% | 5.0% |
| "Cash Flow" | 5.5% | 3.0% | 7.0% |
| Earnings | 9.0% | 5.5% | 6.5% |
| Dividends | 8.5% | 7.5% | 9.5% |
| Book Value | 5.5% | 5.0% | 5.5% |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun. 30 | Sep. 30 | Dec. 31 | Full Year |
|---|---|---|---|---|---|
| 2018 | 94.7 | 106.9 | 124.2 | 111.0 | 436.8 |
| 2019 | 101.7 | 124.7 | 134.5 | 113.0 | 473.9 |
| 2020 | 109.1 | 121.3 | 133.6 | 124.2 | 488.2 |
| 2021 | *115* | *125* | *145* | *120* | *505* |
| 2022 | *118* | *127* | *148* | *122* | *515* |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun. 30 | Sep. 30 | Dec. 31 | Full Year |
|---|---|---|---|---|---|
| 2018 | .29 | .44 | .62 | .37 | 1.72 |
| 2019 | .35 | .72 | .76 | .45 | 2.28 |
| 2020 | .38 | .69 | .72 | .54 | 2.33 |
| 2021 | *.45* | *.67* | *.75* | *.53* | *2.40* |
| 2022 | *.48* | *.72* | *.78* | *.57* | *2.55* |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2017 | .242 | .242 | .255 | .255 | .99 |
| 2018 | .255 | .255 | .275 | .275 | 1.06 |
| 2019 | .275 | .275 | .305 | .305 | 1.16 |
| 2020 | .305 | .305 | .335 | .335 | 1.28 |
| 2021 | .335 | | | | |

**BUSINESS:** American States Water Co. operates as a holding company. Through its principal subsidiary, Golden State Water Co., it supplies water to 261,976 customers in 10 California counties. Service areas include the metropolitan areas of Los Angeles and Orange Counties. The company also provides electricity to 24,545 customers in Big Bear Lake and San Bernardino Cnty. Provides water & wastewater services to U.S. military bases through its ASUS subsidiary. Sold Chaparral City Wtr. of AZ. (6/11). Employs 841. BlackRock, Inc. owns 15.9% of out. shares; Vanguard, 11.9%; off. & dir. 1.0%. (4/20 Proxy). Chairman: Lloyd Ross. Pres. & CEO: Robert Sprowls. Inc: CA. Address: 630 East Foothill Blvd., San Dimas, CA 91773. Tel: 909-394-3600. Internet: www.aswater.com.

**Shares of American States Water have not performed well lately.** Over the past three-month period, the price of the stock has declined about 2%. By comparison, the S&P 500 Index has increased 7%, a difference of nearly 900 basis points. **Meanwhile, a major rate case is pending.** California is a state where water utilities file a petition to raise prices once every three years. Last summer, the Golden States Water Company (GSWC) submitted the papers for rate hikes that would cover the years 2022 to 2024. The final decision on the case is not expected until late this year, at the earliest. Our earnings assumptions are based upon a reasonable ruling, as relations with the regulators has been mostly positive. An unexpectedly harsh decision would have a negative impact on the bottom line.

**Earnings should advance at a decent clip both this year and next.** The company's year-over-year share net will likely only increase 3% in 2021. (Utilities often see earnings growth slow in the year before new rates are determined.) In 2022, with the assistance of higher rates, we are estimating that earnings per share will climb 6%.

**Dividend growth prospects seem to be somewhat brighter.** At the company's August board meeting, we think the distribution per share will be raised $0.03, a 9% increase. This is near the very high end of the range for water utilities.

**The company's nonregulated operations offer some potential upside.** Through its ASUS business, the company operates water systems at U.S. Army installations. ASUS has been reasonably successful in winning its share of the many contracts the military has put out for bid. With more privatizations of these facilities planned, this segment could provide higher-margined revenues. That's because returns here are not capped, so there isn't a limit on profitability.

**These neutrally ranked shares do not have appeal, at this time.** Despite lagging the market, AWR is only ranked to perform in line with the major indexes in the year ahead. Moreover, over the pull to 2024-2026, total return potential is well-below the *Value Line* median, as the equity is already in its Target Price Range.

*James A. Flood* *April 9, 2021*

(A) Primary earnings. Excludes nonrecurring gains/(losses): '05, 13¢; '06, 3¢; '08, (14¢); '10, (23¢); '11, 10¢. Next earnings report due mid-May.
(B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available.
(C) In millions, adjusted for split.
(D) Includes intangibles. As of 12/31/20; $1.1 million/$0.03 a share.

| | |
|---|---|
| Company's Financial Strength | A |
| Stock's Price Stability | 100 |
| Price Growth Persistence | 95 |
| Earnings Predictability | 85 |

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# AMERICAN WATER NYSE-AWK

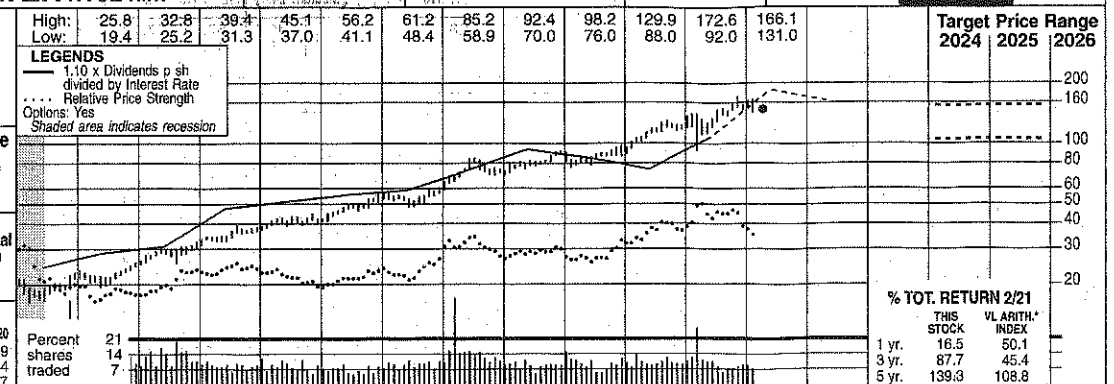
RECENT PRICE 147.91 | P/E RATIO 35.4 (Trailing: 37.8 Median: 24.0) | RELATIVE P/E RATIO 1.62 | DIV'D YLD 1.6% | VALUE LINE 1790

TIMELINESS 2 Lowered 11/13/20
SAFETY 3 New 7/25/08
TECHNICAL 3 Lowered 4/9/21
BETA .65 (1.00 = Market)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 25.8 | 32.8 | 39.4 | 45.1 | 56.2 | 61.2 | 85.2 | 92.4 | 98.2 | 129.9 | 172.6 | 166.1 |
| Low: | 19.4 | 25.2 | 31.3 | 37.0 | 41.1 | 48.4 | 58.9 | 70.0 | 76.0 | 88.0 | 92.0 | 131.0 |

Target Price Range 2024 | 2025 | 2026

LEGENDS
— 1.10 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



**18-Month Target Price Range**

| Low-High | Midpoint (% to Mid) |
|---|---|
| $114-$247 | $181 (20%) |

**2024-26 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 155 | (+5%) | 3% |
| Low | 105 | (-30%) | -6% |

**Institutional Decisions**

| | 2Q2020 | 3Q2020 | 4Q2020 |
|---|---|---|---|
| to Buy | 363 | 401 | 449 |
| to Sell | 371 | 337 | 344 |
| Hld's(000) | 151102 | 150689 | 148917 |

Percent shares traded 21 14 7

% TOT. RETURN 2/21

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 16.5 | 50.1 |
| 3 yr. | 87.7 | 45.4 |
| 5 yr. | 139.3 | 108.8 |

| 2005 | 2006E | 2007E | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | © VALUE LINE PUB. LLC | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -- | 13.08 | 13.84 | 14.61 | 13.98 | 15.49 | 15.18 | 16.25 | 16.28 | 16.78 | 17.72 | 18.54 | 18.81 | 19.04 | 19.97 | 20.83 | *22.10* | *23.30* | Revenues per sh | *25.80* |
| -- | .65 | d.47 | 2.87 | 2.89 | 3.56 | 3.73 | 4.27 | 4.36 | 4.75 | 5.13 | 5.26 | 5.14 | 6.15 | 6.65 | 7.24 | *7.70* | *8.25* | "Cash Flow" per sh | *9.70* |
| -- | d.97 | d2.14 | 1.10 | 1.25 | 1.53 | 1.72 | 2.11 | 2.06 | 2.39 | 2.64 | 2.62 | 2.38 | 3.15 | 3.43 | 3.91 | *4.25* | *4.60* | Earnings per sh A | *5.50* |
| -- | -- | -- | .40 | .82 | .86 | .90 | 1.21 | .84 | 1.21 | 1.33 | 1.47 | 1.62 | 1.78 | 1.96 | 2.15 | *2.35* | *2.55* | Div'd Decl'd per sh B■ | *3.10* |
| -- | 4.31 | 4.74 | 6.31 | 4.50 | 4.38 | 5.27 | 5.25 | 5.50 | 5.33 | 6.51 | 7.36 | 8.04 | 8.78 | 9.15 | 10.05 | *12.80* | *12.60* | Cap'l Spending per sh | *11.75* |
| -- | 23.86 | 28.39 | 25.64 | 22.91 | 23.59 | 24.11 | 25.11 | 26.52 | 27.39 | 28.25 | 29.24 | 30.13 | 32.42 | 33.83 | 35.58 | *37.45* | *39.40* | Book Value per sh D | *50.00* |
| -- | 160.00 | 160.00 | 160.00 | 174.63 | 175.00 | 175.66 | 176.99 | 178.25 | 179.46 | 178.28 | 178.10 | 178.44 | 180.68 | 180.81 | 181.30 | *181.50* | *182.00* | Common Shs Outst'g C | *190.00* |
| -- | -- | -- | 18.9 | 15.6 | 14.6 | 16.8 | 16.7 | 19.9 | 20.0 | 20.5 | 27.7 | 33.8 | 27.3 | 32.9 | 35.3 | *Bold figures are* | | Avg Ann'l P/E Ratio | *23.5* |
| -- | -- | -- | 1.14 | 1.04 | .93 | 1.05 | 1.06 | 1.12 | 1.05 | 1.03 | 1.45 | 1.70 | 1.47 | 1.75 | 1.83 | *Value Line* | | Relative P/E Ratio | *1.30* |
| -- | -- | -- | 1.9% | 4.2% | 3.8% | 3.1% | 3.4% | 2.0% | 2.5% | 2.5% | 2.0% | 2.0% | 2.1% | 1.7% | 1.6% | *estimates* | | Avg Ann'l Div'd Yield | *2.4%* |

**CAPITAL STRUCTURE as of 12/31/20**
Total Debt $10691 mil. Due in 5 Yrs $2500 mil.
LT Debt $9329 mil. LT Interest $354 mil.
(59% of Cap'l)

Leases, Uncapitalized: Annual rentals $14.0 mill.
Pension Assets12/19 $1747.0 mill. Oblig. $2161.0 mill.
Pfd Stock $4.0 mill. Pfd Div'd $.3 mill.

Common Stock 181,439,255 shares as of 2/19/21

MARKET CAP: $26.8 billion (Large Cap)

| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2666.2 | 2876.9 | 2901.9 | 3011.3 | 3159.0 | 3302.0 | 3357.0 | 3440.0 | 3610.0 | 3777.0 | *4010* | *4240* | Revenues ($mill) | *4900* |
| 304.9 | 374.3 | 369.3 | 429.8 | 476.0 | 468.0 | 426.0 | 567.0 | 621.0 | 709.0 | *770* | *835* | Net Profit ($mill) | *1045* |
| 39.5% | 40.7% | 39.1% | 39.4% | 39.1% | 39.2% | 53.3% | 28.2% | 25.5% | 23.3% | *23.5%* | *23.5%* | Income Tax Rate | *24.0%* |
| -- | 6.2% | 5.1% | -- | -- | -- | -- | -- | 5.1% | 4.0% | *5.0%* | *5.0%* | AFUDC % to Net Profit | *5.0%* |
| 55.7% | 53.9% | 52.4% | 52.4% | 53.7% | 52.4% | 54.7% | 56.3% | 58.5% | 59.1% | *59.5%* | *61.5%* | Long-Term Debt Ratio | *61.0%* |
| 44.2% | 46.1% | 47.6% | 47.4% | 46.2% | 47.5% | 45.3% | 43.6% | 41.4% | 40.9% | *40.5%* | *39.5%* | Common Equity Ratio | *39.0%* |
| 9580.3 | 9635.5 | 9940.7 | 10364 | 10911 | 10967 | 11875 | 13433 | 14760 | 15787 | *16800* | *19000* | Total Capital ($mill) | *20000* |
| 11021 | 11739 | 12391 | 12900 | 13933 | 14992 | 16246 | 17409 | 18232 | 19710 | *21150* | *22650* | Net Plant ($mill) | *24500* |
| 4.8% | 5.4% | 5.1% | 5.5% | 5.7% | 5.6% | 4.9% | 5.4% | 5.4% | 5.7% | *6.0%* | *5.5%* | Return on Total Cap'l | *6.0%* |
| 7.2% | 8.4% | 7.8% | 8.7% | 9.4% | 9.0% | 7.9% | 9.7% | 10.1% | 11.0% | *11.5%* | *11.5%* | Return on Shr. Equity | *11.0%* |
| 7.2% | 8.4% | 7.8% | 8.7% | 9.4% | 9.0% | 7.9% | 9.7% | 10.1% | 11.0% | *11.5%* | *11.5%* | Return on Com Equity | *11.0%* |
| 3.5% | 3.6% | 4.7% | 4.3% | 4.7% | 4.0% | 2.5% | 4.2% | 4.4% | 5.0% | *5.0%* | *5.0%* | Retained to Com Eq | *4.5%* |
| 52% | 57% | 40% | 50% | 50% | 56% | 68% | 56% | 57% | 55% | *55%* | *55%* | All Div'ds to Net Prof | *56%* |

| CURRENT POSITION ($MILL.) | 2018 | 2019 | 12/31/20 |
|---|---|---|---|
| Cash Assets | 158 | 91 | 576 |
| Accts Receivable | 301 | 294 | 321 |
| Other | 322 | 900 | 1009 |
| Current Assets | 781 | 1285 | 1906 |
| Accts Payable | 175 | 203 | 189 |
| Debt Due | 1035 | 814 | 1611 |
| Other | 884 | 1028 | 1081 |
| Current Liab. | 2094 | 2045 | 2881 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '18-'20 to '24-'26 |
|---|---|---|---|
| Revenues | 3.0% | 3.5% | *4.5%* |
| "Cash Flow" | 8.0% | 7.0% | *6.5%* |
| Earnings | 10.5% | 8.0% | *8.5%* |
| Dividends | 11.0% | 11.5% | *8.5%* |
| Book Value | 3.5% | 4.5% | *5.0%* |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun. 30 | Sep. 30 | Dec. 31 | Full Year |
|---|---|---|---|---|---|
| 2018 | 761 | 853 | 976 | 850 | 3440 |
| 2019 | 813 | 882 | 1013 | 902 | 3610 |
| 2020 | 844 | 931 | 1079 | 923 | 3777 |
| 2021 | *880* | *995* | *1140* | *995* | *4010* |
| 2022 | *935* | *1055* | *1200* | *1050* | *4240* |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun. 30 | Sep. 30 | Dec. 31 | Full Year |
|---|---|---|---|---|---|
| 2018 | .59 | .91 | 1.03 | .62 | 3.15 |
| 2019 | .62 | .94 | 1.33 | .54 | 3.43 |
| 2020 | .68 | .97 | 1.46 | .80 | 3.91 |
| 2021 | *.73* | *1.05* | *1.60* | *.87* | *4.25* |
| 2022 | *.80* | *1.15* | *1.70* | *.95* | *4.60* |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2017 | .375 | .415 | .415 | .415 | 1.62 |
| 2018 | .415 | .455 | .455 | .455 | 1.78 |
| 2019 | .455 | .50 | .50 | .50 | 1.96 |
| 2020 | .50 | .55 | .55 | .55 | 2.15 |
| 2021 | .55 | | | | |

**BUSINESS:** American Water Works Company, Inc. is the largest investor-owned water and wastewater utility in the U.S., providing services to approximately 15 million people in 46 states. Nonregulated business assists municipalities and military bases with the maintenance and upkeep as well. Regulated operations made up 86% of 2020 revenues. New Jersey is its largest market accounting for 24.5% of regulated revenues; Pennsylvania, 22.5%; Missouri, 10.6%. Has 6,800 employees. The Vanguard Grp, owns 11.7% of outstanding shares; BlackRock, Inc., 8.1%; officers & directors, less than 1.0%. (3/21 Proxy). President & CEO: Susan N. Story. Chairman: George MacKenzie. Address: 1 Water Street, Camden, NJ 08102. Tel.: 856-346-8200. Internet: www.amwater.com.

**American Water Works completed another very successful year in 2020.** Due in part to a strong fourth quarter, the water utility managed to post an impressive 14% share-earnings increase over 2019. One of the most attractive qualities about this industry is that the demand for water is relatively inelastic. Hence, the pandemic has had no real impact on the company.

**The earnings picture remains bright.** American Water has an aggressive acquisition policy (more below). This, plus solid cost controls, an expanding rate base, and the stable need for water, should ensure solid yearly earnings per share increases for the foreseeable future. We think the company's share net will rise 8% both this year and in 2022. Through 2024 to 2026, we estimate growth here should be in the 7%-10% range, a much higher rate than the typical utility.

**The company ought to continue to following what has been a successful strategy.** Management has been acquiring small, independent water districts for many years. Indeed, in 2020, 23 such purchases were made. Domestically, there are literally thousands of these undersized water entities that are run by local municipalities. Often they are inefficient and undercapitalized. American Water can merge these operations into its existing business and attain significant economies of scale. As a result, the utility's margins should continue to widen annually as long as this policy is in place.

**Capital expenditures are large, but manageable.** Like others in the group, the company is spending heavily to upgrade its pipelines and other assets. Also, most of the acquisitions require investment to ensure that they are in compliance with federal mandates. Over the past 10 years, capital outlays have totaled $28 billion. Out to mid-decade, annual outlays may average $2.2 billion to $2.5 billion. The balance sheet will likely handle this without deteriorating much.

**These shares are timely.** Since our January report, the equity has underperformed the market indexes by about 750 basis points. Thus, the premium investors usually have to pay for this industry standout has declined to some degree.

*James A. Flood* *April 9, 2021*

(A) Diluted earnings. Excludes nonrecur. losses: '06, $4.62; '09, $2.63; '11, $0.07. Disc. oper.: '06, ($0.04); '11, $0.03; '12, ($0.10); '13,($0.01). GAAP used as of 2014. Next earnings report due mid-May.
(B) Dividends paid in March, June, September, and December. ■ Div. reinvestment available.
(C) In millions. (D) Includes intangibles. On 12/31/20: $1.559 billion, $8.59/share.
(E) Pro forma numbers for '06 & '07.

| | |
|---|---|
| Company's Financial Strength | B++ |
| Stock's Price Stability | 85 |
| Price Growth Persistence | 80 |
| Earnings Predictability | 85 |

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# CALIFORNIA WATER NYSE-CWT

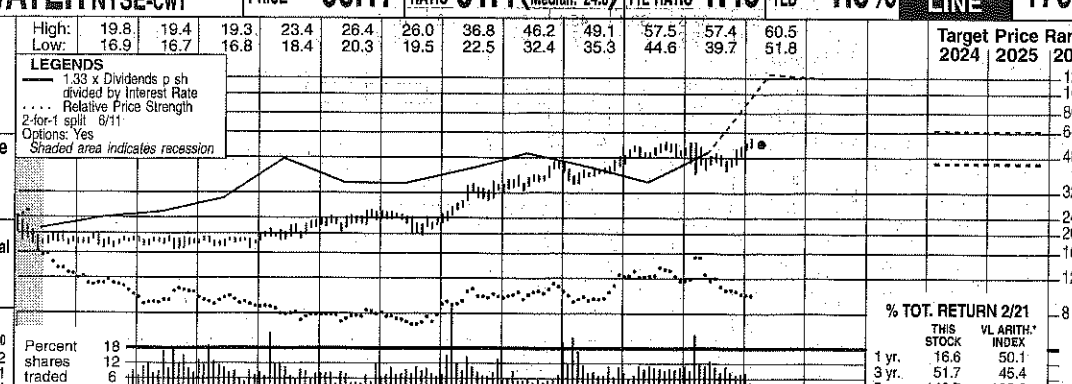
RECENT PRICE 56.17 | P/E RATIO 31.4 (Trailing: 29.0 Median: 24.0) | RELATIVE P/E RATIO 1.43 | DIV'D YLD 1.6% | VALUE LINE 1791

TIMELINESS 1 Raised 3/19/21
SAFETY 3 Lowered 7/27/07
TECHNICAL 2 Lowered 4/9/21
BETA .65 (1.00 = Market)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 19.8 | 19.4 | 19.3 | 23.4 | 26.4 | 26.0 | 36.8 | 46.2 | 49.1 | 57.5 | 57.4 | 60.5 |
| Low: | 16.9 | 16.7 | 16.8 | 18.4 | 20.3 | 19.5 | 22.5 | 32.4 | 35.3 | 44.6 | 39.7 | 51.8 |

Target Price Range 2024 | 2025 | 2026

LEGENDS
— 1.33 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
2-for-1 split 6/11
Options: Yes
Shaded area indicates recession



**18-Month Target Price Range**

| Low-High | Midpoint (% to Mid) |
|---|---|
| $43-$81 | $62 (10%) |

**2024-26 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 65 | (+15%) | 6% |
| Low | 45 | (-20%) | -3% |

**Institutional Decisions**

| | 2Q2020 | 3Q2020 | 4Q2020 |
|---|---|---|---|
| to Buy | 109 | 101 | 122 |
| to Sell | 107 | 106 | 91 |
| Hld's(000) | 35580 | 36492 | 37534 |

Percent shares traded 18 12 6

% TOT. RETURN 2/21

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 16.6 | 50.1 |
| 3 yr. | 51.7 | 45.4 |
| 5 yr. | 142.7 | 108.8 |

| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | © VALUE LINE PUB. LLC | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8.72 | 8.10 | 8.88 | 9.90 | 10.82 | 11.05 | 12.00 | 13.34 | 12.23 | 12.50 | 12.29 | 12.70 | 13.89 | 14.53 | 14.72 | 15.78 | *16.00* | *15.95* | Revenues per sh | *16.30* |
| 1.52 | 1.36 | 1.56 | 1.86 | 1.93 | 1.93 | 2.07 | 2.32 | 2.21 | 2.47 | 2.22 | 2.34 | 3.00 | 3.11 | 3.14 | 3.88 | *3.45* | *3.55* | "Cash Flow" per sh | *3.75* |
| .74 | .67 | .75 | .95 | .98 | .91 | .86 | 1.02 | 1.02 | 1.19 | .94 | 1.01 | 1.40 | 1.36 | 1.31 | 1.97 | *1.90* | *2.00* | Earnings per sh A | *2.25* |
| .57 | .58 | .58 | .59 | .59 | .60 | .62 | .63 | .64 | .65 | .67 | .69 | .72 | .75 | .79 | .85 | *.92* | *.98* | Div'd Decl'd per sh B■ | *1.15* |
| 2.01 | 2.14 | 1.84 | 2.41 | 2.66 | 2.97 | 2.83 | 3.04 | 2.58 | 2.76 | 3.69 | 4.77 | 5.40 | 5.65 | 5.64 | 5.93 | *5.25* | *5.50* | Cap'l Spending per sh | *5.85* |
| 7.90 | 9.07 | 9.25 | 9.72 | 10.13 | 10.45 | 10.76 | 11.28 | 12.54 | 13.11 | 13.41 | 13.75 | 14.44 | 15.19 | 16.07 | 18.30 | *18.35* | *18.25* | Book Value per sh C | *19.80* |
| 36.78 | 41.31 | 41.33 | 41.45 | 41.53 | 41.67 | 41.82 | 41.98 | 47.74 | 47.81 | 47.88 | 47.97 | 48.01 | 48.07 | 48.53 | 50.33 | *51.00* | *52.00* | Common Shs Outst'g D | *53.00* |
| 24.9 | 29.2 | 26.1 | 19.8 | 19.7 | 20.3 | 21.3 | 17.9 | 20.1 | 19.7 | 24.8 | 29.6 | 26.9 | 30.3 | 39.3 | 24.9 | *Bold figures are* | | Avg Ann'l P/E Ratio | *24.0* |
| 1.33 | 1.58 | 1.39 | 1.19 | 1.31 | 1.29 | 1.34 | 1.14 | 1.13 | 1.04 | 1.25 | 1.55 | 1.35 | 1.64 | 2.09 | 1.29 | *Value Line* | | Relative P/E Ratio | *1.30* |
| 3.1% | 2.9% | 3.0% | 3.1% | 3.1% | 3.2% | 3.4% | 3.5% | 3.1% | 2.8% | 2.9% | 2.3% | 1.9% | 1.8% | 1.5% | 1.7% | *estimates* | | Avg Ann'l Div'd Yield | *2.1%* |

**CAPITAL STRUCTURE as of 12/31/20**
Total Debt $1156.2 mill. Due in 5 Yrs $357.0 mill.
LT Debt $781.1 mill. LT Interest $40.0 mill.
(Total interest coverage: 5.2x) (46% of Cap'l)

Pension Assets-12/20 $716.8 mill. Oblig. $833.9 mill.

Pfd Stock None

Common Stock 50,330,000 shs.

MARKET CAP: $2.8 billion (Mid Cap)

| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 501.8 | 560.0 | 584.1 | 597.5 | 588.4 | 609.4 | 666.9 | 698.2 | 714.6 | 794.3 | *815* | *830* | Revenues ($mill) E | *865* |
| 36.1 | 42.6 | 47.3 | 56.7 | 45.0 | 48.7 | 67.2 | 65.6 | 63.1 | 96.8 | *97.0* | *105* | Net Profit ($mill) | *120* |
| 40.5% | 37.5% | 30.3% | 33.0% | 36.0% | 35.5% | 30.1% | 24.5% | 19.1% | 11.1% | *21.0%* | *21.0%* | Income Tax Rate | *21.0%* |
| 7.6% | 8.0% | 4.3% | 2.7% | 4.3% | 6.1% | 3.5% | 3.1% | 5.8% | 3.3% | *5.0%* | *5.0%* | AFUDC % to Net Profit | *5.0%* |
| 51.7% | 47.8% | 41.6% | 40.1% | 44.4% | 44.6% | 42.7% | 49.3% | 50.2% | 45.9% | *44.5%* | *43.5%* | Long-Term Debt Ratio | *38.0%* |
| 48.3% | 52.2% | 58.4% | 59.9% | 55.6% | 55.4% | 57.3% | 50.7% | 49.8% | 54.1% | *55.5%* | *56.5%* | Common Equity Ratio | *62.0%* |
| 931.5 | 908.2 | 1024.9 | 1045.9 | 1154.4 | 1191.2 | 1209.3 | 1440.2 | 1566.7 | 1702.4 | *1685* | *1675* | Total Capital ($mill) | *1700* |
| 1381.1 | 1457.1 | 1515.8 | 1590.4 | 1701.8 | 1859.3 | 2048.0 | 2232.7 | 2406.4 | 2650.6 | *2675* | *2700* | Net Plant ($mill) | *2850* |
| 5.5% | 6.3% | 6.0% | 6.3% | 5.2% | 5.5% | 7.1% | 5.9% | 5.5% | 7.0% | *6.5%* | *7.0%* | Return on Total Cap'l | *8.0%* |
| 8.0% | 9.0% | 7.9% | 9.1% | 7.0% | 7.4% | 9.7% | 9.0% | 8.1% | 10.5% | *10.5%* | *11.0%* | Return on Shr. Equity | *11.5%* |
| 8.0% | 9.0% | 7.9% | 9.1% | 7.0% | 7.4% | 9.7% | 9.0% | 8.1% | 10.5% | *10.5%* | *11.0%* | Return on Com Equity | *11.5%* |
| 2.3% | 3.4% | 3.4% | 4.1% | 2.0% | 2.4% | 4.7% | 4.0% | 3.2% | 6.0% | *5.5%* | *5.5%* | Retained to Com Eq | *5.5%* |
| 71% | 62% | 56% | 55% | 71% | 68% | 51% | 55% | 60% | 43% | *48%* | *49%* | All Div'ds to Net Prof | *51%* |

| CURRENT POSITION ($MILL.) | 2018 | 2019 | 12/31/20 |
|---|---|---|---|
| Cash Assets | 47.2 | 42.7 | 44.6 |
| Other | 141.5 | 142.0 | 221.4 |
| Current Assets | 188.7 | 184.7 | 266.0 |
| Accts Payable | 95.6 | 108.5 | 131.7 |
| Debt Due | 170.0 | 197.0 | 375.1 |
| Other | 55.6 | 53.2 | 81.9 |
| Current Liab. | 321.2 | 358.7 | 588.7 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '18-'20 to '24-'26 |
|---|---|---|---|
| Revenues | 3.5% | 4.0% | *1.5%* |
| "Cash Flow" | 6.0% | 8.0% | *2.0%* |
| Earnings | 5.0% | 8.0% | *6.5%* |
| Dividends | 3.0% | 4.0% | *6.5%* |
| Book Value | 5.0% | 5.0% | *4.0%* |

| Cal-endar | QUARTERLY REVENUES ($ mill.)E Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2018 | 134.6 | 174.9 | 221.3 | 167.4 | 698.2 |
| 2019 | 126.1 | 179.0 | 232.6 | 176.9 | 714.6 |
| 2020 | 125.6 | 175.5 | 304.1 | 189.1 | 794.3 |
| 2021 | *155* | *205* | *255* | *200* | *815* |
| 2022 | *160* | *205* | *260* | *205* | *830* |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2018 | d.02 | .31 | .75 | .32 | 1.36 |
| 2019 | d.16 | .35 | .88 | .24 | 1.31 |
| 2020 | d.42 | .11 | 1.94 | .31 | 1.97 |
| 2021 | *.08* | *.45* | *.95* | *.42* | *1.90* |
| 2022 | *.10* | *.45* | *1.00* | *.45* | *2.00* |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2017 | .18 | .18 | .18 | .18 | .72 |
| 2018 | .1875 | .1875 | .1875 | .1875 | .75 |
| 2019 | .1975 | .1975 | .1975 | .1975 | .79 |
| 2020 | .2125 | .2125 | .2125 | .2125 | .85 |
| 2021 | .230 | | | | |

**BUSINESS:** California Water Service Group provides regulated and nonregulated water service to 492,600 customers in 100 communities in the state of California. Accounts for about 94% of total customers. Also operates in Washington, New Mexico, and Hawaii. Main service areas: San Francisco Bay area, Sacramento Valley, Salinas Valley, San Joaquin Valley & parts of Los Angeles. Acquired Rio Grande Corp; West Hawaii Utilities (9/08). Revenue breakdown, '20: residential, 70%; business, 18%; industrial, 4%; public authorities, 5%; other 3%. Off. and dir. own 1% of common stock (4/20 proxy). Has 1,184 employees. Pres. and CEO: Martin A. Kropelnicki. Inc.: DE. Addr.: 1720 North First St., San Jose, CA 95112-4598. Tel.: 408-367-8200. Internet: www.calwatergroup.com.

**California Water Service Group reported solid financial results to wrap up 2020.** The West Coast water service provider generated revenues of $189 million in the December period, or a 7% annual increase, thanks largely to rate hikes associated with the recently approved general rate case. Meanwhile, fourth-quarter share profits of $0.31, which were also buoyed by benefits from the general rate case decision, specifically higher operating income and lower taxes, logged a healthy 29% advance compared to the year-earlier tally.

**California Water is on a buying spree.** The company's subsidiary, Hawaii Water Service, announced that it has received approval to acquire the assets of Kapalua Water and Kapalua Waste Treatment Company, which will add roughly 1,000 service connections in the area. In addition, a deal has been inked to purchase the water system assets of Skylanda Mutual Water Company. Pending regulatory approval, the transaction, which would add almost 19,000 service connection in California, is expected to be finalized early next year. Overall, tuck-in acquisitions will probably be a staple in the company's long-term growth strategy.

**The company is in the early innings of a massive infrastructure improvement program.** Indeed, management is taking an aggressive approach to upgrading and revamping its aging water delivery, transportation, and treatment facilities. For this year, its capital spending budget for infrastructure-related projects is approximately $285 million. Over the pull to 2025, the company is likely to invest upwards of $700 million. Lastly, California Water has already been given the green light by the California Public Utilities Commission to tap the debt and equity markets.

**We continue to like this issue for subscribers with a short-term investment horizon.** The stock has been raised one notch on our Timeliness Ranking Scale, to 1 (Highest) and, thus is slated to outpace the broader market averages over the coming six to 12 months. On the other hand, buy-and-hold accounts should turn the page, as total return potential out to 2024-2026 is unenticing at recent levels.

*Nicholas P. Patrikis* *April 9, 2021*

(A) Basic EPS. Excl. nonrecurring gain (loss): '11, ¢¢. Next earnings report due early May.
(B) Dividends historically paid in late Feb., May, Aug., and Nov. ■ Div'd reinvestment plan available.
(C) Incl. intangible assets. In '20 : $27.6 mill.,-$0.55/sh.
(D) In millions, adjusted for split.
(E) Excludes non-regulated revenues

| | |
|---|---|
| Company's Financial Strength | B++ |
| Stock's Price Stability | 95 |
| Price Growth Persistence | 70 |
| Earnings Predictability | 65 |

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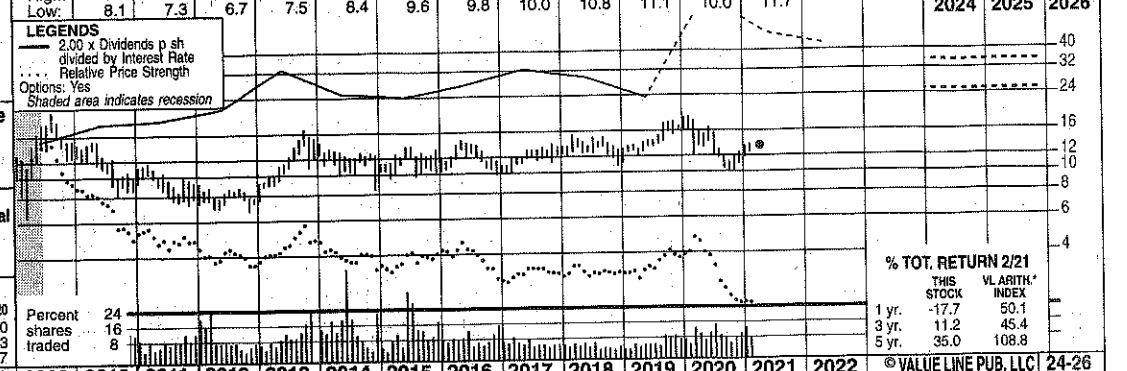
# CONSOL. WATER CO. NDQ-CWCO

RECENT PRICE 13.48 | P/E RATIO 26.4 (Trailing: 40.8 Median: 24.0) | RELATIVE P/E RATIO 1.21 | DIV'D YLD 2.5% | VALUE LINE 1792

TIMELINESS 5 Lowered 2/12/21
SAFETY 3 New 1/17/14
TECHNICAL 4 Raised 3/26/21
BETA .85 (1.00 = Market)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 15.1 | 11.7 | 9.2 | 16.9 | 14.5 | 13.8 | 14.7 | 14.0 | 15.4 | 17.9 | 18.8 | 15.4 |
| Low: | 8.1 | 7.3 | 6.7 | 7.5 | 8.4 | 9.6 | 9.8 | 10.0 | 10.8 | 11.1 | 10.0 | 11.7 |

Target Price Range 2024 | 2025 | 2026




**18-Month Target Price Range**

| Low-High | Midpoint (% to Mid) |
|---|---|
| $9-$21 | $15 (10%) |

**2024-26 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 35 | (+160%) | 30% |
| Low | 25 | (+85%) | 20% |

**Institutional Decisions**

| | 2Q2020 | 3Q2020 | 4Q2020 |
|---|---|---|---|
| to Buy | 48 | 28 | 40 |
| to Sell | 45 | 57 | 43 |
| Hld's(000) | 8027 | 7661 | 7487 |

% TOT. RETURN 2/21

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | -17.7 | 50.1 |
| 3 yr. | 11.2 | 45.4 |
| 5 yr. | 35.0 | 108.8 |

| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | © VALUE LINE PUB. LLC | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.12 | 2.71 | 3.41 | 4.52 | 3.99 | 3.49 | 3.79 | 4.49 | 4.35 | 4.46 | 3.86 | 3.89 | 4.18 | 4.39 | 4.57 | 4.90 | 4.60 | 4.95 | Revenues per sh | 8.75 |
| .37 | .87 | 1.20 | .95 | 1.18 | .86 | .83 | 1.17 | .96 | .80 | .89 | .95 | 1.12 | 1.15 | 1.05 | .85 | 1.05 | 1.10 | "Cash Flow" per sh | 2.00 |
| .23 | .59 | .79 | .50 | .74 | .43 | .42 | .64 | .58 | .42 | .51 | .27 | .41 | .68 | .56 | .35 | .55 | .60 | Earnings per sh A | 1.45 |
| .12 | .24 | .20 | .33 | .28 | .30 | .30 | .30 | .30 | .30 | .30 | .30 | .31 | .34 | .34 | .34 | .34 | .34 | Div'd Decl'd per sh B■ | .75 |
| .77 | 1.83 | .54 | .46 | .18 | .09 | .96 | .31 | .29 | .32 | .21 | .23 | .31 | 1.08 | .23 | .15 | .25 | .25 | Cap'l Spending per sh | .45 |
| 2.54 | 7.49 | 8.21 | 8.36 | 8.53 | 8.69 | 8.83 | 9.20 | 9.44 | 9.58 | 9.81 | 9.79 | 9.91 | 10.34 | 10.88 | 11.20 | 11.45 | 11.70 | Book Value per sh D | 12.80 |
| 23.46 | 14.13 | 14.40 | 14.53 | 14.54 | 14.55 | 14.57 | 14.59 | 14.69 | 14.72 | 14.76 | 14.87 | 14.92 | 14.98 | 15.05 | 15.20 | 15.30 | 15.40 | Common Shs Outst'g C | 16.00 |
| NMF | 43.0 | 35.4 | 37.8 | 19.0 | 26.9 | 22.4 | 12.4 | 20.0 | 28.3 | 22.7 | 44.8 | 29.0 | 19.4 | 25.7 | Bold figures are | | | Avg Ann'l P/E Ratio | 22.0 |
| NMF | 2.32 | 1.88 | 2.27 | 1.27 | 1.71 | 1.41 | .79 | 1.12 | 1.49 | 1.14 | 2.35 | 1.46 | 1.05 | 1.37 | Value Line | | | Relative P/E Ratio | 1.20 |
| .7% | .9% | .7% | 1.7% | 2.0% | 2.6% | 3.2% | 3.8% | 2.6% | 2.5% | 2.6% | 2.5% | 2.6% | 2.6% | 2.4% | estimates | | | Avg Ann'l Div'd Yield | 2.5% |

**CAPITAL STRUCTURE as of 9/30/20**
Total Debt $0.1 Due in 5 Yrs $0.1
LT Debt $0.1 LT Interest NMF
(0% of Total Cap'l)
Leases, Uncapitalized: Annual rentals $.9 mill.
No Defined Benefit Pension Plan
Pfd Stock NMF (33,059 shares out.) Div'd NMF
Common Stock 15,112,975 shs. as of 11/10/20
MARKET CAP: $200 million (Small Cap)

| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55.2 | 65.5 | 63.8 | 65.6 | 57.1 | 57.9 | 62.3 | 65.7 | 68.8 | 75.0 | 70.0 | 76.0 | Revenues ($mill) | 140 |
| 6.1 | 9.3 | 8.6 | 6.3 | 7.5 | 4.0 | 6.1 | 10.2 | 8.6 | 5.5 | 8.5 | 9.0 | Net Profit ($mill) | 23.0 |
| -- | -- | -- | -- | -- | -- | -- | -- | 1.0% | NMF | NMF | NMF | Income Tax Rate | NMF |
| 4.0% | -- | -- | -- | -- | -- | -- | -- | -- | Nil | Nil | Nil | AFUDC % to Net Profit | NMF |
| 5.1% | 3.7% | -- | -- | -- | -- | -- | -- | -- | Nil | Nil | Nil | Long-Term Debt Ratio | Nil |
| 94.9% | 96.3% | 99.8% | 99.8% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100% | 100% | 100% | Common Equity Ratio | 100% |
| 135.6 | 139.4 | 138.9 | 141.2 | 145.0 | 145.6 | 147.9 | 155.0 | 163.8 | 170 | 175 | 180 | Total Capital ($mill) | 205 |
| 64.3 | 61.6 | 58.6 | 56.4 | 53.7 | 53.1 | 50.5 | 64.9 | 61.2 | 61.0 | 62.0 | 62.0 | Net Plant ($mill) | 75.0 |
| 5.0% | 7.0% | 6.2% | 4.4% | 5.2% | 2.7% | 4.2% | 6.6% | 5.2% | 3.0% | 5.0% | 5.0% | Return on Total Cap'l | 11.0% |
| 4.7% | 6.9% | 6.2% | 4.4% | 5.2% | 2.7% | 4.2% | 6.6% | 5.2% | 3.0% | 5.0% | 5.0% | Return on Shr. Equity | 11.0% |
| 4.7% | 6.9% | 6.2% | 4.4% | 5.2% | 2.7% | 4.1% | 6.6% | 5.2% | 3.0% | 5.0% | 5.0% | Return on Com Equity | 11.0% |
| 1.0% | 3.6% | 3.0% | 1.2% | 2.1% | NMF | 1.1% | 3.3% | 2.1% | NMF | 2.0% | 2.0% | Retained to Com Eq | 5.5% |
| 79% | 48% | 51% | 73% | 59% | 112% | 73% | 50% | 60% | 97% | 62% | 57% | All Div'ds to Net Prof | 52% |

| CURRENT POSITION ($MILL.) | 2018 | 2019 | 9/30/20 |
|---|---|---|---|
| Cash Assets | 31.3 | 42.9 | 38.2 |
| Accts Receivable | 24.2 | 23.2 | 24.4 |
| Other | 6.9 | 7.3 | 9.0 |
| Current Assets | 62.4 | 73.4 | 71.6 |
| Accts Payable | 4.6 | 3.7 | 3.1 |
| Debt Due | -- | -- | -- |
| Other | 3.3 | 4.5 | 4.6 |
| Current Liab. | 7.9 | 8.2 | 7.7 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '17-'19 to '24-'26 |
|---|---|---|---|
| Revenues | 5.0% | .5% | 12.0% |
| "Cash Flow" | 2.0% | .5% | 9.0% |
| Earnings | -3.0% | -4.5% | 15.0% |
| Dividends | 5.0% | -- | 12.5% |
| Book Value | 5.0% | 2.0% | 2.5% |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun. 30 | Sep. 30 | Dec. 31 | Full Year |
|---|---|---|---|---|---|
| 2018 | 14.3 | 15.9 | 18.8 | 16.7 | 65.7 |
| 2019 | 17.0 | 18.3 | 15.9 | 17.6 | 68.8 |
| 2020 | 20.8 | 19.1 | 17.7 | 17.4 | 75.0 |
| 2021 | 19.0 | 17.0 | 17.0 | 17.0 | 70.0 |
| 2022 | 21.0 | 18.0 | 19.0 | 18.0 | 76.0 |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun. 30 | Sep. 30 | Dec. 31 | Full Year |
|---|---|---|---|---|---|
| 2018 | .14 | .14 | .30 | .10 | .68 |
| 2019 | .17 | .16 | .11 | .12 | .56 |
| 2020 | .19 | d.04 | .09 | .11 | .35 |
| 2021 | .13 | .15 | .12 | .15 | .55 |
| 2022 | .15 | .16 | .14 | .15 | .60 |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2017 | .075 | .075 | .075 | .075 | .30 |
| 2018 | .085 | .085 | .085 | .085 | .34 |
| 2019 | .085 | .085 | .085 | .085 | .34 |
| 2020 | .085 | .085 | .085 | .085 | .34 |
| 2021 | .085 | | | | |

**BUSINESS:** Consolidated Water Co. Ltd. develops and operates desalination plants and water distribution systems in areas where naturally occurring supplies of water are scarce. It provides water in the Cayman Islands, the Bahamas, and the British Virgin Islands. At 12/31/19, it operated 12 plants with a capacity of 25.6 million gallons per day. Sold Bali operations and divested Belize assets in '19. Also manufactures products for the industry through Aerex sub. Inc.: Cayman Is. Employs 105. Pres./CEO: F. McTaggart. Based on 4/19 proxy Offs./ Dirs. own 4.8% of stock; Amundi Asset; 7.7%; BlackRock, 5.6%. (No proxy filed in 2020). Addr.: Regatta Off. Pk. Windward Three, West Bay Rd., P.O. Box 1114 Grand Cayman, KYI-1102, Cayman Is. Tel.: (345) 945-4277. Int.: www.cwco.com.

**Investors will have to wait for Consolidated Water's full-year 2020 results.** The company will not file its fourth-quarter results until after this report goes to press. Since the value of certain assets must be evaluated quarterly, (with the largest changes usually occurring at year end), we have less confidence in our December period's bottom-line estimate.

**Meanwhile, Consolidated is looking to recover from a significant blow suffered last year.** In 2016, the builder and operator of desalination plants began development of the Rosarito project, which was a proposed Mexico-based facility that would provide badly needed water to the city of Tijuana. Despite some bumps in the road, progress seemed on track. However, Mexican authorities terminated the contract. Thus, four years of management's efforts and funds were wasted. Rosarito was classified as a discontinued operation, removing losses from its 2020 earnings. This also marked the second-straight time that Consolidated wrote off a major desalination facility, as was the case with Indonesia-based CW-Bali.

**The focus seems to be shifting toward the United States.** California has persistently struggled to provide residents with potable water. With its large coastline, there are ample opportunities to build new desalination facilities in the state. Currently, there are 11 such projects that are in operation and 10 proposed. We expect to see the company make its next major push here. This would also improve its exposure to regulatory risk (more below). In Arizona, research is underway on how to treat a large amount of brackish water deposits using the desalination process.

**The main regulated foreign operations should remain the same.** Consolidated provides clean water to the Cayman Islands, the Bahamas, and the British Virgin Islands. Basically, operations are sound. However, there has been sometimes difficult relationships with the countries' regulators, who determine what rates can be charged.

**These shares carry our lowest rank for Timeliness (5).** Conservative water utility investors should also note that this equity carries a much different risk profile than others in the industry.

*James A. Flood* *April 9, 2021*

(A) Fully diluted earnings. Excludes gains from discontinued operations: '17, $0.07 a share; '18, $0.07 a share; '19, $0.24 a share; losses in 2020 of $0.30 a share. Next earnings report due late May.
(B) Dividends historically paid in late January, April, July, and October. ■ Dividend reinvestment plan available.
(C) In millions, adjusted for stock split.
(D) Includes intangibles. As of 9/30/20, $17.7 million/$1.17 a share.

| | |
|---|---|
| Company's Financial Strength | B |
| Stock's Price Stability | 70 |
| Price Growth Persistence | 45 |
| Earnings Predictability | 45 |

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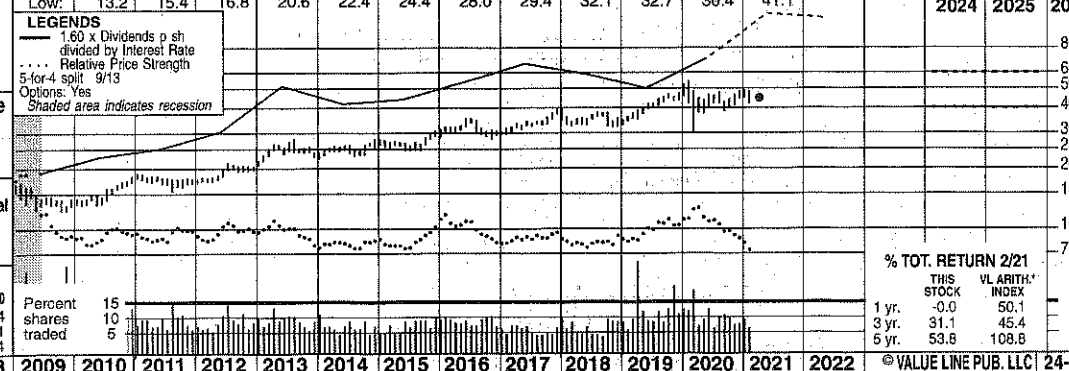
# ESSENTIAL UTIL. NYSE-WTRG

RECENT PRICE 44.64 | P/E RATIO 27.4 (Trailing: 39.9 Median: 23.0) | RELATIVE P/E RATIO 1.25 | DIV'D YLD 2.4% | VALUE LINE 1793

TIMELINESS 2 Raised 2/5/21
SAFETY 3 Lowered 1/8/21
TECHNICAL 3 Lowered 4/9/21
BETA .95 (1.00 = Market)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 18.4 | 19.0 | 21.5 | 28.1 | 28.2 | 31.1 | 35.8 | 39.6 | 39.4 | 47.3 | 54.5 | 48.9 |
| Low: | 13.2 | 15.4 | 16.8 | 20.6 | 22.4 | 24.4 | 28.0 | 29.4 | 32.1 | 32.7 | 30.4 | 41.1 |

Target Price Range 2024 | 2025 | 2026




**18-Month Target Price Range**

| Low-High | Midpoint (% to Mid) |
|---|---|
| $32-$77 | $55 (20%) |

**2024-26 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 60 | (+35%) | 10% |
| Low | 40 | (-10%) | Nil |

**Institutional Decisions**

| | 2Q2020 | 3Q2020 | 4Q2020 |
|---|---|---|---|
| to Buy | 250 | 237 | 264 |
| to Sell | 235 | 227 | 221 |
| Hld's(000) | 161504 | 167838 | 169334 |

% TOT. RETURN 2/21

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | -0.0 | 50.1 |
| 3 yr. | 31.1 | 45.4 |
| 5 yr. | 53.8 | 108.8 |

| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | © VALUE LINE PUB. LLC | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.08 | 3.23 | 3.61 | 3.71 | 3.93 | 4.21 | 4.10 | 4.32 | 4.32 | 4.37 | 4.61 | 4.62 | 4.56 | 4.71 | 4.03 | 5.96 | 8.00 | 8.50 | Revenues per sh | 8.60 |
| .97 | 1.01 | 1.10 | 1.14 | 1.29 | 1.42 | 1.45 | 1.51 | 1.82 | 1.89 | 1.87 | 2.07 | 2.12 | 1.90 | 1.73 | 2.21 | 2.40 | 2.65 | "Cash Flow" per sh | 2.85 |
| .57 | .56 | .57 | .58 | .62 | .72 | .83 | .87 | 1.16 | 1.20 | 1.14 | 1.32 | 1.35 | 1.08 | 1.04 | 1.12 | 1.65 | 1.80 | Earnings per sh A | 1.90 |
| .32 | .35 | .38 | .41 | .44 | .47 | .50 | .54 | .58 | .63 | .69 | .74 | .79 | .85 | .91 | .97 | 1.03 | 1.10 | Div'd Decl'd per sh B■ | 1.40 |
| 1.47 | 1.64 | 1.43 | 1.58 | 1.66 | 1.89 | 1.90 | 1.98 | 1.73 | 1.84 | 2.07 | 2.16 | 2.69 | 2.78 | 2.49 | 3.41 | 4.00 | 4.00 | Cap'l Spending per sh | 3.75 |
| 5.04 | 5.57 | 5.85 | 6.26 | 6.50 | 6.81 | 7.21 | 7.90 | 8.63 | 9.27 | 9.78 | 10.43 | 11.02 | 11.28 | 17.58 | 19.09 | 19.70 | 20.30 | Book Value per sh D | 23.35 |
| 161.21 | 165.41 | 166.75 | 169.21 | 170.61 | 172.46 | 173.60 | 175.43 | 177.93 | 178.59 | 176.54 | 177.39 | 177.71 | 178.09 | 220.76 | 245.39 | 250.00 | 252.50 | Common Shs Outst'g C | 270.00 |
| 31.8 | 34.7 | 32.0 | 24.9 | 23.1 | 21.1 | 21.3 | 21.9 | 21.2 | 20.8 | 23.5 | 23.9 | 24.7 | 32.6 | 39.1 | 39.6 | Bold figures are | | Avg Ann'l P/E Ratio | 27.0 |
| 1.69 | 1.87 | 1.70 | 1.50 | 1.54 | 1.34 | 1.34 | 1.39 | 1.19 | 1.09 | 1.18 | 1.25 | 1.24 | 1.76 | 2.08 | 2.06 | Value Line | | Relative P/E Ratio | 1.50 |
| 1.8% | 1.8% | 2.1% | 2.8% | 3.1% | 3.1% | 2.8% | 2.8% | 2.4% | 2.5% | 2.6% | 2.3% | 2.4% | 2.4% | 2.2% | 2.2% | estimates | | Avg Ann'l Div'd Yield | 2.8% |

**CAPITAL STRUCTURE as of 12/31/20**
Total Debt $5670.3 mill. Due in 5 Yrs $1032 mill.
LT Debt $5507.7 mill. LT Interest $185.0 mill.
(54% of Cap'l)
Pension Assets-12/20 $426.8 mill. Oblig. $486.2 mill.
Pfd Stock None
Common Stock 245,393,761 shares as of 2/15/21
MARKET CAP: $11.0 billion (Large Cap)

| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 712.0 | 757.8 | 768.6 | 779.9 | 814.2 | 819.9 | 809.5 | 838.1 | 889.7 | 1462.7 | 2000 | 2150 | Revenues ($mill) | 2320 |
| 144.8 | 153.1 | 205.0 | 213.9 | 201.8 | 234.2 | 239.7 | 192.0 | 224.5 | 284.8 | 310 | 365 | Net Profit ($mill) | 515 |
| 32.9% | 39.0% | 10.0% | 10.5% | 6.9% | 8.2% | 6.6% | -- | 6.6% | 6.6% | 5.0% | 6.0% | Income Tax Rate | 8.0% |
| -- | -- | 1.1% | 2.4% | 3.1% | 3.8% | 6.3% | 6.8% | 7.2% | 4.5% | 7.0% | 7.5% | AFUDC % to Net Profit | 7.0% |
| 52.7% | 52.7% | 48.9% | 48.5% | 50.3% | 48.4% | 50.6% | 54.4% | 43.1% | 54.0% | 55.0% | 56.0% | Long-Term Debt Ratio | 56.0% |
| 47.3% | 47.3% | 51.1% | 51.5% | 49.7% | 51.6% | 49.4% | 45.6% | 56.9% | 46.0% | 45.0% | 44.0% | Common Equity Ratio | 44.0% |
| 2646.8 | 2929.7 | 3003.6 | 3216.0 | 3469.5 | 3587.7 | 3965.4 | 4407.8 | 6824.2 | 10192 | 11000 | 11775 | Total Capital ($mill) | 14300 |
| 3612.9 | 3936.2 | 4167.3 | 4402.0 | 4688.9 | 5001.6 | 5399.9 | 5930.3 | 6345.8 | 9512.9 | 10175 | 10800 | Net Plant ($mill) | 12100 |
| 6.9% | 6.6% | 8.0% | 7.8% | 6.9% | 7.6% | 7.1% | 5.5% | 4.2% | 3.7% | 3.5% | 4.5% | Return on Total Cap'l | 5.5% |
| 11.6% | 11.0% | 13.4% | 12.9% | 11.7% | 12.7% | 12.2% | 9.6% | 5.8% | 6.1% | 6.0% | 7.0% | Return on Shr. Equity | 9.5% |
| 11.6% | 11.0% | 13.4% | 12.9% | 11.7% | 12.7% | 12.2% | 9.6% | 5.8% | 6.1% | 6.0% | 7.0% | Return on Com Equity | 9.5% |
| 4.6% | 4.3% | 6.7% | 6.1% | 4.7% | 5.6% | 5.1% | 2.1% | .9% | 1.1% | 1.5% | 1.5% | Retained to Com Eq | 2.0% |
| 60% | 61% | 50% | 52% | 60% | 56% | 59% | 79% | 84% | 82% | 76% | 76% | All Div'ds to Net Prof | 74% |

| CURRENT POSITION ($MILL.) | 2018 | 2019 | 12/31/20 |
|---|---|---|---|
| Cash Assets | 3.6 | 1868.9 | 4.8 |
| Receivables | 101.2 | 67.1 | 154.8 |
| Inventory (AvgCst) | 15.8 | 18.4 | 58.4 |
| Other | 26.6 | 58.3 | 162.2 |
| Current Assets | 147.2 | 2012.7 | 380.2 |
| Accts Payable | 77.3 | 74.9 | 177.5 |
| Debt Due | 160.0 | 130.8 | 162.6 |
| Other | 161.7 | 113.1 | 263.8 |
| Current Liab. | 399.0 | 318.8 | 603.9 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '18-'20 to '24-'26 |
|---|---|---|---|
| Revenues | 2.0% | 2.0% | 10.0% |
| "Cash Flow" | 4.5% | 1.0% | 6.5% |
| Earnings | 5.5% | -1.5% | 10.0% |
| Dividends | 7.5% | 7.5% | 7.5% |
| Book Value | 9.5% | 11.5% | 4.5% |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2018 | 194.3 | 211.9 | 226.2 | 205.7 | 838.1 |
| 2019 | 201.1 | 218.9 | 243.6 | 226.1 | 889.7 |
| 2020 | 255.6 | 384.5 | 348.6 | 474.0 | 1462.7 |
| 2021 | 650 | 385 | 430 | 535 | 2000 |
| 2022 | 690 | 415 | 460 | 585 | 2150 |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2018 | .29 | .37 | .44 | d.02 | 1.08 |
| 2019 | .09 | .25 | .38 | .28 | 1.04 |
| 2020 | .21 | .29 | .22 | .40 | 1.12 |
| 2021 | .63 | .30 | .30 | .42 | 1.65 |
| 2022 | .67 | .33 | .35 | .45 | 1.80 |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2017 | .1913 | .1913 | .2047 | .2047 | .79 |
| 2018 | .2047 | .2047 | .219 | .219 | .85 |
| 2019 | .219 | .219 | .2343 | .2343 | .91 |
| 2020 | .2343 | .2343 | .2507 | .2507 | .97 |
| 2021 | .2507 | | | | |

**BUSINESS:** Essential Utilities, Inc. became the new name for Aqua America on Feb. 3, 2020, to reflect the acquisition of Peoples, a natural gas utility, which occurred in 3/20. In 2020, Aqua Amer. provided water and wastewater services to about 5 million people in PA, OH, TX, IL, NC, NJ, IN, VA NS WS. Employed 3,180 Acquired AquaSource, 7/13; North Maine Utilities, 7/15; and others. Water respn. for 65% of revenues in 2020; residential, 39%; commercial, 10%; industrial, wastewater & other, 26%. Gas 35%. Off. & dir. own less than 1% of the common stock; BlackRock, 10.5%; Vanguard, 10.4%; (4/20 proxy). Canadian Pension Plan about 8.8%. Pres. & CEO: Christopher Franklin. Inc.: PA Addr.: 762 W Lancaster Ave., Bryn Mawr, PA 19010. Tel.: 610-525-1400. Int.: www.essential.co.

**Starting in the June quarter, Essential Utilities' figures ought to be comparable to 2020's.** In mid-March of last year, Essential became a much different company (including taking on a new name), when it made the large acquisition of Peoples Gas for total consideration of about $5.3 billion. The purchase turned the new entity into one that is not totally water based. Despite not generating revenues for almost 85% of the first quarter, which is usually an important period for a gas entity, Peoples still accounted for 35% of Essential's revenues last year.

**The outlook for earnings is positive.** The company was able to increase its share net last year even though it had to absorb many merger-related charges. The process is mostly completed now. So, aided by cost-containment efforts, we expect WTRG to have a very strong share-net showing in 2021 and 2022.

**The balance sheet is more leveraged.** As a result of the merger, Essential's debt load increased significantly. As can be seen in the numbers array, long-term debt-to-equity rose from 43% to 54% during 2020. Capital expenditures are estimated to be $1 billion this year, which means that more borrowing will be required. Following 2022, we think the situation will likely stabilize, and Essential's finances should remain average for a water utility.

**Essential's regulatory treatment will probably not be on par with other members of the group.** Gas and electric utilities have historically not had great relations with the authorities that determine the rates they can charge customers. On the other hand, water utilities and the authorities have worked well together. Part of this is due to water regulators' understanding that there has been under investment in the domestic infrastructure and large amounts of capital spending are required to make upgrades.

**These share have moved up a notch in rank, to 2 (Above Average), since our January report.** The equity is pegged to outperform the market averages in the year ahead. Long-term total return potential is still unattractive even though WTRG has trailed the S&P 500 Index significantly over the past three months.

*James A. Flood* *April 9, 2021*

(A) Diluted egs. Excl. nonrec. gains: '12, 18¢. Excl. gain from disc. operations: '12, 7¢; '13, 9¢; '14, 11¢. Quarterly EPS do not add in '19 due to a large change in the number of shares outstanding in the Dec. period. Next earnings report May 5th. (B) Dividends historically paid in early March, June, Sept., & Dec. ■ Div'd. reinvestment plan available (5% discount). (C) In millions, adjusted for stock splits. (D) Includes intangibles: 12/31/20, $2,325 bil./$9.47 a share.

| | |
|---|---|
| Company's Financial Strength | B+ |
| Stock's Price Stability | 90 |
| Price Growth Persistence | 70 |
| Earnings Predictability | 60 |

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# MIDDLESEX WATER NDQ-MSEX

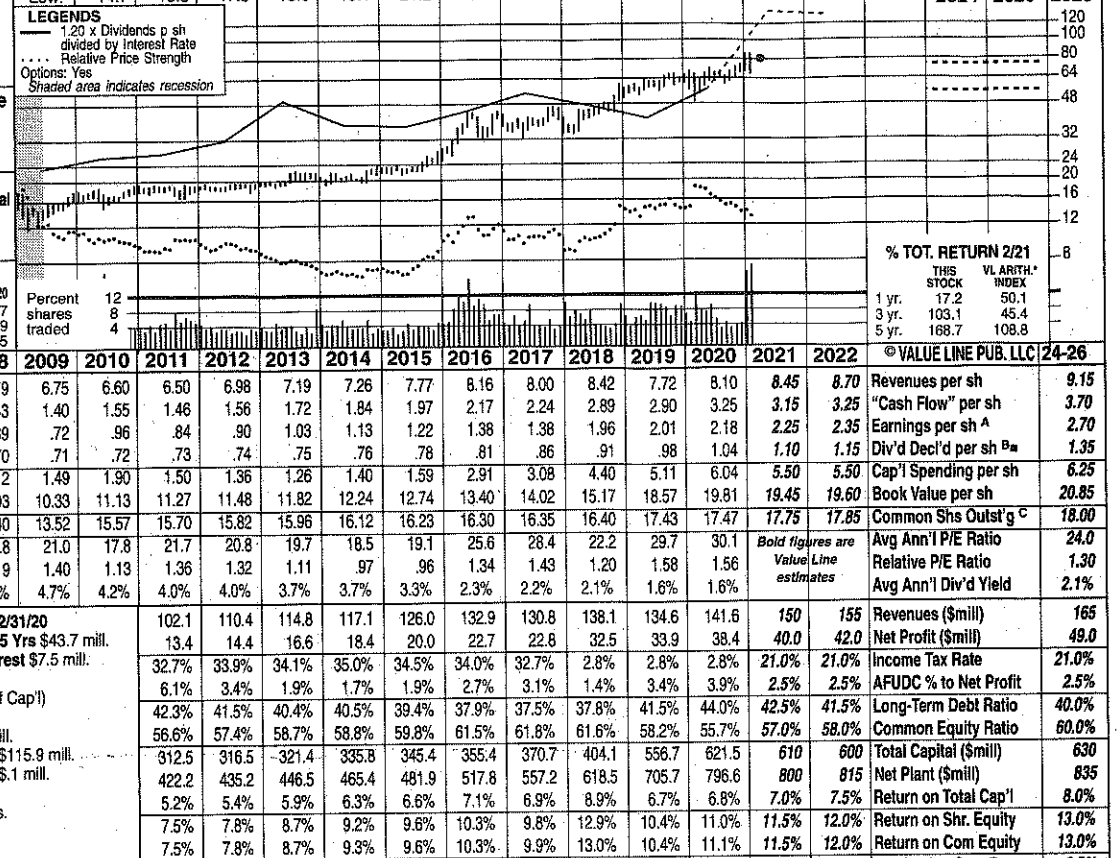
RECENT PRICE 80.66 | P/E RATIO 36.7 (Trailing: 37.0 Median: 23.0) | RELATIVE P/E RATIO 1.68 | DIV'D YLD 1.4% | VALUE LINE 1794

TIMELINESS 1 Raised 11/13/20
SAFETY 2 New 10/21/11
TECHNICAL 4 Lowered 4/9/21
BETA .70 (1.00 = Market)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 19.3 | 19.4 | 19.6 | 22.5 | 23.7 | 28.0 | 44.5 | 46.7 | 60.3 | 67.7 | 76.1 | 85.9 |
| Low: | 14.7 | 16.5 | 17.5 | 18.6 | 19.1 | 21.2 | 25.0 | 32.2 | 34.0 | 51.0 | 48.8 | 67.1 |

Target Price Range 2024 | 2025 | 2026

LEGENDS
— 1.20 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



**18-Month Target Price Range**

| Low-High | Midpoint (% to Mid) |
|---|---|
| $58-$106 | $82 (0%) |

**2024-26 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 75 | (-5%) | Nil |
| Low | 55 | (-30%) | -7% |

**Institutional Decisions**

| | 2Q2020 | 3Q2020 | 4Q2020 |
|---|---|---|---|
| to Buy | 68 | 52 | 67 |
| to Sell | 55 | 69 | 49 |
| Hld's(000) | 10359 | 10357 | 10675 |

Percent shares traded 12 8 4

% TOT. RETURN 2/21

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 17.2 | 50.1 |
| 3 yr. | 103.1 | 45.4 |
| 5 yr. | 168.7 | 108.8 |

| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | © VALUE LINE PUB. LLC | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.44 | 6.16 | 6.50 | 6.79 | 6.75 | 6.60 | 6.50 | 6.98 | 7.19 | 7.26 | 7.77 | 8.16 | 8.00 | 8.42 | 7.72 | 8.10 | *8.45* | *8.70* | Revenues per sh | *9.15* |
| 1.33 | 1.33 | 1.49 | 1.53 | 1.40 | 1.55 | 1.46 | 1.56 | 1.72 | 1.84 | 1.97 | 2.17 | 2.24 | 2.89 | 2.90 | 3.25 | *3.15* | *3.25* | "Cash Flow" per sh | *3.70* |
| .71 | .82 | .87 | .89 | .72 | .96 | .84 | .90 | 1.03 | 1.13 | 1.22 | 1.38 | 1.38 | 1.96 | 2.01 | 2.18 | *2.25* | *2.35* | Earnings per sh A | *2.70* |
| .67 | .68 | .69 | .70 | .71 | .72 | .73 | .74 | .75 | .76 | .78 | .81 | .86 | .91 | .98 | 1.04 | *1.10* | *1.15* | Div'd Decl'd per sh B■ | *1.35* |
| 2.18 | 2.31 | 1.66 | 2.12 | 1.49 | 1.90 | 1.50 | 1.36 | 1.26 | 1.40 | 1.59 | 2.91 | 3.08 | 4.40 | 5.11 | 6.04 | *5.50* | *5.50* | Cap'l Spending per sh | *6.25* |
| 8.26 | 9.52 | 10.05 | 10.03 | 10.33 | 11.13 | 11.27 | 11.48 | 11.82 | 12.24 | 12.74 | 13.40 | 14.02 | 15.17 | 18.57 | 19.81 | *19.45* | *19.60* | Book Value per sh | *20.85* |
| 11.58 | 13.17 | 13.25 | 13.40 | 13.52 | 15.57 | 15.70 | 15.82 | 15.96 | 16.12 | 16.23 | 16.30 | 16.35 | 16.40 | 17.43 | 17.47 | *17.75* | *17.85* | Common Shs Outst'g C | *18.00* |
| 27.4 | 22.7 | 21.6 | 19.8 | 21.0 | 17.8 | 21.7 | 20.8 | 19.7 | 18.5 | 19.1 | 25.6 | 28.4 | 22.2 | 29.7 | 30.1 | *Bold figures are* | | Avg Ann'l P/E Ratio | *24.0* |
| 1.46 | 1.23 | 1.15 | 1.19 | 1.40 | 1.13 | 1.36 | 1.32 | 1.11 | .97 | .96 | 1.34 | 1.43 | 1.20 | 1.58 | 1.56 | *Value Line* | | Relative P/E Ratio | *1.30* |
| 3.5% | 3.7% | 3.7% | 4.0% | 4.7% | 4.2% | 4.0% | 4.0% | 3.7% | 3.7% | 3.3% | 2.3% | 2.2% | 2.1% | 1.6% | 1.6% | *estimates* | | Avg Ann'l Div'd Yield | *2.1%* |

**CAPITAL STRUCTURE as of 12/31/20**
Total Debt $282.5 mill. Due in 5 Yrs $43.7 mill.
LT Debt $273.2 mill. LT Interest $7.5 mill.
(Total interest coverage: 7.3x)
(44% of Cap'l)

Pension Assets-12/20 $88.9 mill. Oblig. $115.9 mill.

Pfd Stock $2.4 mill. Pfd Div'd: $.1 mill.

Common Stock 17,473,000 shs.

| 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 102.1 | 110.4 | 114.8 | 117.1 | 126.0 | 132.9 | 130.8 | 138.1 | 134.6 | 141.6 | *150* | *155* | Revenues ($mill) | *165* |
| 13.4 | 14.4 | 16.6 | 18.4 | 20.0 | 22.7 | 22.8 | 32.5 | 33.9 | 38.4 | *40.0* | *42.0* | Net Profit ($mill) | *49.0* |
| 32.7% | 33.9% | 34.1% | 35.0% | 34.5% | 34.0% | 32.7% | 2.8% | 2.8% | 2.8% | *21.0%* | *21.0%* | Income Tax Rate | *21.0%* |
| 6.1% | 3.4% | 1.9% | 1.7% | 1.9% | 2.7% | 3.1% | 1.4% | 3.4% | 3.9% | *2.5%* | *2.5%* | AFUDC % to Net Profit | *2.5%* |
| 42.3% | 41.5% | 40.4% | 40.5% | 39.4% | 37.9% | 37.5% | 37.8% | 41.5% | 44.0% | *42.5%* | *41.5%* | Long-Term Debt Ratio | *40.0%* |
| 56.6% | 57.4% | 58.7% | 58.8% | 59.8% | 61.5% | 61.8% | 61.6% | 58.2% | 55.7% | *57.0%* | *58.0%* | Common Equity Ratio | *60.0%* |
| 312.5 | 316.5 | 321.4 | 335.8 | 345.4 | 355.4 | 370.7 | 404.1 | 556.7 | 621.5 | *610* | *600* | Total Capital ($mill) | *630* |
| 422.2 | 435.2 | 446.5 | 465.4 | 481.9 | 517.8 | 557.2 | 618.5 | 705.7 | 796.6 | *800* | *815* | Net Plant ($mill) | *835* |
| 5.2% | 5.4% | 5.9% | 6.3% | 6.6% | 7.1% | 6.9% | 8.9% | 6.7% | 6.8% | *7.0%* | *7.5%* | Return on Total Cap'l | *8.0%* |
| 7.5% | 7.8% | 8.7% | 9.2% | 9.6% | 10.3% | 9.8% | 12.9% | 10.4% | 11.0% | *11.5%* | *12.0%* | Return on Shr. Equity | *13.0%* |
| 7.5% | 7.8% | 8.7% | 9.3% | 9.6% | 10.3% | 9.9% | 13.0% | 10.4% | 11.1% | *11.5%* | *12.0%* | Return on Com Equity | *13.0%* |
| 1.0% | 1.4% | 2.4% | 3.1% | 3.5% | 4.3% | 3.8% | 7.0% | 5.4% | 5.8% | *6.0%* | *6.0%* | Retained to Com Eq | *6.5%* |
| 87% | 83% | 73% | 67% | 63% | 58% | 62% | 46% | 48% | 48% | *49%* | *49%* | All Div'ds to Net Prof | *50%* |

MARKET CAP: $1.4 billion (Mid-Cap)

| CURRENT POSITION ($MILL.) | 2018 | 2019 | 12/31/20 |
|---|---|---|---|
| Cash Assets | 3.7 | 2.2 | 4.5 |
| Other | 27.1 | 26.9 | 29.6 |
| Current Assets | 30.8 | 29.1 | 34.1 |
| Accts Payable | 19.3 | 23.3 | 30.4 |
| Debt Due | 55.8 | 27.2 | 9.3 |
| Other | 19.3 | 14.5 | 17.1 |
| Current Liab. | 94.4 | 65.0 | 56.8 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '18-'20 to '24-'26 |
|---|---|---|---|
| Revenues | 2.0% | 2.0% | *2.0%* |
| "Cash Flow" | 7.5% | 10.5% | *3.5%* |
| Earnings | 9.0% | 12.5% | *4.5%* |
| Dividends | 3.0% | 5.0% | *5.5%* |
| Book Value | 5.5% | 8.0% | *2.5%* |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun. 30 | Sep. 30 | Dec. 31 | Full Year |
|---|---|---|---|---|---|
| 2018 | 31.2 | 34.9 | 38.7 | 33.3 | 138.1 |
| 2019 | 30.7 | 33.4 | 37.8 | 32.7 | 134.6 |
| 2020 | 31.8 | 35.3 | 39.9 | 34.6 | 141.6 |
| 2021 | *33.0* | *37.0* | *44.0* | *36.0* | *150* |
| 2022 | *34.0* | *38.0* | *45.0* | *38.0* | *155* |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun. 30 | Sep. 30 | Dec. 31 | Full Year |
|---|---|---|---|---|---|
| 2018 | .27 | .52 | .74 | .43 | 1.96 |
| 2019 | .39 | .49 | .66 | .46 | 2.01 |
| 2020 | .44 | .55 | .72 | .47 | 2.18 |
| 2021 | *.45* | *.55* | *.73* | *.52* | *2.25* |
| 2022 | *.47* | *.57* | *.76* | *.55* | *2.35* |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2017 | .21125 | .21125 | .21125 | .22375 | .86 |
| 2018 | .22375 | .22375 | .22375 | .24 | .91 |
| 2019 | .24 | .24 | .24 | .2562 | .98 |
| 2020 | .2562 | .2562 | .2562 | .2725 | 1.04 |
| 2021 | .2725 | | | | |

**BUSINESS:** Middlesex Water Company engages in the ownership and operation of regulated water utility systems in New Jersey, Delaware, and Pennsylvania. It also operates water and wastewater systems under contract on behalf of municipal and private clients in NJ and DE. Its Middlesex System provides water services to 61,000 retail customers, primarily in Middlesex County, New Jersey. In 2020, the Middlesex System accounted for 59% of operating revenues. At 12/31/20, the company had 348 employees. Incorporated: NJ. President, CEO, and Chairman: Dennis W. Doll. Officers & directors own 3.1% of the com. stock; BlackRock Inst. Trust Co., 7.7% (4/20 proxy). Add.: 485 C Route 1 South, Suite 400, Iselin, NJ 08830. Tel.: 732-634-1500. Int.: www.middlesexwater.com.

**Shares of Middlesex Water continue to march higher.** The equity established yet another all-time high in early February, but has since retracted modestly to slightly above $80 per share. Still, the stock is up about 10% in price since our early-January review, keeping intact its enviable multiyear price ascent. Based on our Timeliness ranking scale, MSEX shares are slated to outperform (1: Highest) the broader market over the coming six to 12 months. Thus, they may pique the interest of near-term accounts.

**The stage is set for respectable top- and bottom-line growth this year.** Favorable operating trends, which were evident in the fourth quarter, are likely to persist over the near- to intermediate-terms. These include increased residential and wholesale water consumption owing to more people staying at home and greater handwashing frequency, as well as an expanding customer base in its Delaware water system. A recently inked contract with Highland Park in its New Jersey system is a positive, too. Adding it all up, revenues are poised to expand 6%, to $150 million, and will likely be accompanied by a 3% earnings advance, to $2.25 per share.

**From a financial perspective, the company ought to be a stable performer over the pull to mid-decade.** Modest revenue and earnings growth is likely on tap for 2022. Meanwhile, significant infrastructure spending may well overflow into the 3- to 5-year time frame. Management has laid out a budget of nearly $300 million through its Water For Tomorrow program, which aims to upgrade watermains, piping, and wastewater treatment facilities. Most recently, the company announced a $10 million investment to improve its drinking water infrastructure in New Jersey. Overall, aggressive spending ought to eventually curb unnecessary operating costs, and may well facilitate additional rate hikes going forward.

**Shares of Middlesex Water are currently trading beyond the upper end of our 3- to 5-year Target Price parameters.** This is so even after modestly lifting our P/E multiple to 24x. All in all, subscribers with an investment horizon of 18 months or longer can find more-attractive options elsewhere, at this juncture.

*Nicholas P. Patrikis* *April 9, 2021*

(A) Diluted earnings. Next earnings report due early May.
(B) Dividends historically paid in mid-Feb., May, Aug., and November.■ Div'd reinvestment plan available.
(C) In millions.

| | |
|---|---|
| Company's Financial Strength | B++ |
| Stock's Price Stability | 85 |
| Price Growth Persistence | 65 |
| Earnings Predictability | 85 |

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# SJW GROUP NYSE-SJW

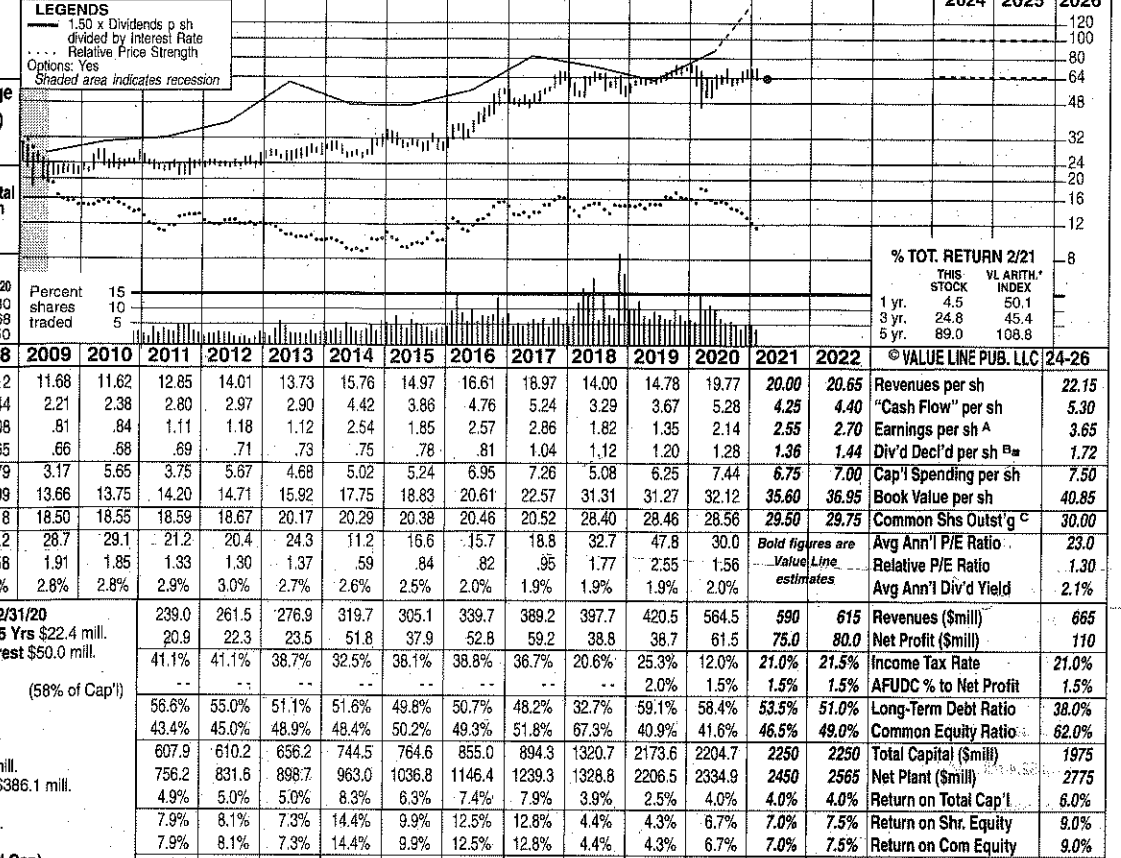
RECENT PRICE 63.42 | P/E RATIO 26.9 (Trailing: 29.6 Median: 21.0) | RELATIVE P/E RATIO 1.23 | DIV'D YLD 2.1% | VALUE LINE 1795

TIMELINESS — E
SAFETY 3 New 4/22/11
TECHNICAL — E
BETA .85 (1.00 = Market)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 28.2 | 26.8 | 26.9 | 30.1 | 33.7 | 35.7 | 56.9 | 69.3 | 68.4 | 74.5 | 75.0 | 71.7 |
| Low: | 21.6 | 20.9 | 22.6 | 24.5 | 25.5 | 27.5 | 28.6 | 45.4 | 51.3 | 53.9 | 45.6 | 58.0 |

Target Price Range 2024 | 2025 | 2026

LEGENDS
— 1.50 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



**18-Month Target Price Range**

| Low-High | Midpoint (% to Mid) |
|---|---|
| $53-$123 | $88 (40%) |

**2024-26 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 100 | (+60%) | 14% |
| Low | 65 | (Nil) | 3% |

**Institutional Decisions**

| | 2Q2020 | 3Q2020 | 4Q2020 |
|---|---|---|---|
| to Buy | 78 | 62 | 80 |
| to Sell | 75 | 77 | 69 |
| Hld's(000) | 19939 | 19827 | 19850 |

Percent shares traded 15 10 5

% TOT. RETURN 2/21

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 4.5 | 50.1 |
| 3 yr. | 24.8 | 45.4 |
| 5 yr. | 89.0 | 108.8 |

| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | © VALUE LINE PUB. LLC | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.86 | 10.35 | 11.25 | 12.12 | 11.68 | 11.62 | 12.85 | 14.01 | 13.73 | 15.76 | 14.97 | 16.61 | 18.97 | 14.00 | 14.78 | 19.77 | *20.00* | *20.65* | Revenues per sh | *22.15* |
| 2.21 | 2.38 | 2.30 | 2.44 | 2.21 | 2.38 | 2.80 | 2.97 | 2.90 | 4.42 | 3.86 | 4.76 | 5.24 | 3.29 | 3.67 | 5.28 | *4.25* | *4.40* | "Cash Flow" per sh | *5.30* |
| 1.12 | 1.19 | 1.04 | 1.08 | .81 | .84 | 1.11 | 1.18 | 1.12 | 2.54 | 1.85 | 2.57 | 2.86 | 1.82 | 1.35 | 2.14 | *2.55* | *2.70* | Earnings per sh A | *3.65* |
| .53 | .57 | .61 | .65 | .66 | .68 | .69 | .71 | .73 | .75 | .78 | .81 | 1.04 | 1.12 | 1.20 | 1.28 | *1.36* | *1.44* | Div'd Decl'd per sh B■ | *1.72* |
| 2.83 | 3.87 | 6.62 | 3.79 | 3.17 | 5.65 | 3.75 | 5.67 | 4.68 | 5.02 | 5.24 | 6.95 | 7.26 | 5.08 | 6.25 | 7.44 | *6.75* | *7.00* | Cap'l Spending per sh | *7.50* |
| 10.72 | 12.48 | 12.90 | 13.99 | 13.66 | 13.75 | 14.20 | 14.71 | 15.92 | 17.75 | 18.83 | 20.61 | 22.57 | 31.31 | 31.27 | 32.12 | *35.60* | *36.95* | Book Value per sh | *40.85* |
| 18.27 | 18.28 | 18.36 | 18.18 | 18.50 | 18.55 | 18.59 | 18.67 | 20.17 | 20.29 | 20.38 | 20.46 | 20.52 | 28.40 | 28.46 | 28.56 | *29.50* | *29.75* | Common Shs Outst'g C | *30.00* |
| 19.7 | 23.5 | 33.4 | 26.2 | 28.7 | 29.1 | 21.2 | 20.4 | 24.3 | 11.2 | 16.6 | 15.7 | 18.8 | 32.7 | 47.8 | 30.0 | *Bold figures are* | | Avg Ann'l P/E Ratio | *23.0* |
| 1.05 | 1.27 | 1.77 | 1.58 | 1.91 | 1.85 | 1.33 | 1.30 | 1.37 | .59 | .84 | .82 | .95 | 1.77 | 2.55 | 1.56 | *Value Line* | | Relative P/E Ratio | *1.30* |
| 2.4% | 2.0% | 1.7% | 2.3% | 2.8% | 2.8% | 2.9% | 3.0% | 2.7% | 2.6% | 2.5% | 2.0% | 1.9% | 1.9% | 1.9% | 2.0% | *estimates* | | Avg Ann'l Div'd Yield | *2.1%* |

**CAPITAL STRUCTURE as of 12/31/20**
Total Debt $1363.8 mill. Due in 5 Yrs $22.4 mill.
LT Debt $1287.6 mill. LT Interest $50.0 mill.
(LT Interest Coverage: 3.8x)
(58% of Cap'l)

Pension Assets-12/20 $278.1 mill. Oblig. $386.1 mill.

Pfd Stock None.

Common Stock 28,560,000 shs.

| 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 239.0 | 261.5 | 276.9 | 319.7 | 305.1 | 339.7 | 389.2 | 397.7 | 420.5 | 564.5 | *590* | *615* | Revenues ($mill) | *665* |
| 20.9 | 22.3 | 23.5 | 51.8 | 37.9 | 52.8 | 59.2 | 38.8 | 38.7 | 61.5 | *75.0* | *80.0* | Net Profit ($mill) | *110* |
| 41.1% | 41.1% | 38.7% | 32.5% | 38.1% | 38.8% | 36.7% | 20.6% | 25.3% | 12.0% | *21.0%* | *21.5%* | Income Tax Rate | *21.0%* |
| -- | -- | -- | -- | -- | -- | -- | -- | 2.0% | 1.5% | *1.5%* | *1.5%* | AFUDC % to Net Profit | *1.5%* |
| 56.6% | 55.0% | 51.1% | 51.6% | 49.8% | 50.7% | 48.2% | 32.7% | 59.1% | 58.4% | *53.5%* | *51.0%* | Long-Term Debt Ratio | *38.0%* |
| 43.4% | 45.0% | 48.9% | 48.4% | 50.2% | 49.3% | 51.8% | 67.3% | 40.9% | 41.6% | *46.5%* | *49.0%* | Common Equity Ratio | *62.0%* |
| 607.9 | 610.2 | 656.2 | 744.5 | 764.6 | 855.0 | 894.3 | 1320.7 | 2173.6 | 2204.7 | *2250* | *2250* | Total Capital ($mill) | *1975* |
| 756.2 | 831.6 | 898.7 | 963.0 | 1036.8 | 1146.4 | 1239.3 | 1328.8 | 2206.5 | 2334.9 | *2450* | *2565* | Net Plant ($mill) | *2775* |
| 4.9% | 5.0% | 5.0% | 8.3% | 6.3% | 7.4% | 7.9% | 3.9% | 2.5% | 4.0% | *4.0%* | *4.0%* | Return on Total Cap'l | *6.0%* |
| 7.9% | 8.1% | 7.3% | 14.4% | 9.9% | 12.5% | 12.8% | 4.4% | 4.3% | 6.7% | *7.0%* | *7.5%* | Return on Shr. Equity | *9.0%* |
| 7.9% | 8.1% | 7.3% | 14.4% | 9.9% | 12.5% | 12.8% | 4.4% | 4.3% | 6.7% | *7.0%* | *7.5%* | Return on Com Equity | *9.0%* |
| 3.1% | 3.3% | 2.8% | 10.2% | 5.7% | 8.6% | 8.2% | 1.8% | .5% | 2.7% | *3.5%* | *3.5%* | Retained to Com Eq | *4.5%* |
| 61% | 59% | 62% | 29% | 42% | 31% | 36% | 60% | 88% | 59% | *53%* | *53%* | All Div'ds to Net Prof | *47%* |

MARKET CAP: $1.8 billion (Mid Cap)

| CURRENT POSITION ($MILL.) | 2018 | 2019 | 12/31/20 |
|---|---|---|---|
| Cash Assets | 420.7 | 17.9 | 9.3 |
| Accts Receivable | 19.2 | 36.3 | 58.1 |
| Other | 62.8 | 67.8 | 59.9 |
| Current Assets | 502.7 | 122.0 | 127.3 |
| Accts Payable | 24.9 | 34.9 | 34.2 |
| Debt Due | -- | 22.3 | 76.2 |
| Other | 139.1 | 177.4 | 240.4 |
| Current Liab. | 164.0 | 234.6 | 350.8 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '18-'20 to '24-'26 |
|---|---|---|---|
| Revenues | 3.0% | 2.0% | *5.5%* |
| "Cash Flow" | 5.5% | 2.0% | *4.5%* |
| Earnings | 7.0% | –.5% | *13.0%* |
| Dividends | 6.0% | 10.0% | *6.0%* |
| Book Value | 8.5% | 12.5% | *4.5%* |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun. 30 | Sep. 30 | Dec. 31 | Full Year |
|---|---|---|---|---|---|
| 2018 | 75.0 | 99.1 | 124.9 | 98.7 | 397.7 |
| 2019 | 77.7 | 103.0 | 114.0 | 126.0 | 420.5 |
| 2020 | 115.8 | 147.2 | 165.9 | 135.6 | 564.5 |
| 2021 | *120* | *150* | *175* | *145* | *590* |
| 2022 | *125* | *155* | *185* | *150* | *615* |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun. 30 | Sep. 30 | Dec. 31 | Full Year |
|---|---|---|---|---|---|
| 2018 | .06 | .62 | .76 | .38 | 1.82 |
| 2019 | .21 | .47 | .33 | .34 | 1.35 |
| 2020 | .08 | .69 | .91 | .46 | 2.14 |
| 2021 | *.20* | *.75* | *.95* | *.65* | *2.55* |
| 2022 | *.23* | *.77* | *1.00* | *.70* | *2.70* |

| Cal-endar | QUARTERLY DIVIDENDS PAID BD■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2017 | .2175 | .2175 | .2175 | .3875 | 1.04 |
| 2018 | .28 | .28 | .28 | .28 | 1.12 |
| 2019 | .30 | .30 | .30 | .30 | 1.20 |
| 2020 | .32 | .32 | .32 | .32 | 1.28 |
| 2021 | .34 | | | | |

**BUSINESS:** SJW Group engages in the production, purchase, storage, purification, distribution, and retail sale of water. It provides water service to approximately 231,000 connections with a total population of roughly one million people in the San Jose area and 16,000 connections that reach about 49,000 residents in the region between San Antonio and Austin, Texas. The company merged with Connecticut Water (10/19) which provides service to approx. 138,000 connections with a total population of 450,000 people. Has 361 employees. Officers and directors own 8.3% of outstanding shares (3/21 proxy). Chairman & CEO: Eric Thornburg. Incorporated: California. Address: 110 West Taylor Street, San Jose, CA 95110. Telephone: (408) 279-7800. Internet: www.sjwater.com.

**SJW Group posted better-than-expected top- and bottom-line results to close 2020.** December-period revenues of $136 million came in about $5 million above our call, while earnings of $0.46 a share exceeded our $0.42 expectation. The overall outperformance was driven primarily by greater customer usage, cumulative water rate increases, slimmer operating expenses due to lower merger-related costs, and a decline in general & administrative expenses.

**Noteworthy share-profit expansion is likely in the cards this year and next.** Water production costs are apt to rise in conjunction with increased water consumption and a widening customer base, but operating expenses may well trend lower. Not to mention, we think significant merger synergies are likely to develop. All told, we think SJW will earn $2.55 a share this year, and $2.70 a share in 2022.

**The coast-to-coast regulated water utility has tapped the equity markets.** Specifically, the company recently closed a public offering of over one million shares, netting proceeds of almost $61 million. Management's plan for the raised funds include paying down outstanding obligations, various capital expenditures, and general corporate purposes.

**The long-term growth narrative remains largely unaltered.** Increased residential and wholesale water consumption, alongside periodic rate hikes, ought to keep revenues moving in the right direction. SJW Group's diverse geographical footprint is advantageous, and should expand further down the road. From an operational standpoint, robust capital spending on infrastructure upgrades ought to boost efficiency, as much of these costs can eventually be passed along to the consumer.

**Unranked SJW shares are a bit more appealing for patient accounts following their recent step back in price.** At recent levels, capital appreciation potential out to mid-decade is slightly above average, thus presenting a decent entry point for interested subscribers to start building a position. What's more, the dividend yield is now comfortably above the *Value Line* median, and ranks among the top payers in the Water Utilities Industry.

*Nicholas P. Patrikis* *April 9, 2021*

(A) Diluted earnings. Excludes nonrecurring losses: '05, $1.09; '06, $16.36; '08, $1.22; '10, $0.46. GAAP accounting as of 2013. Next earnings report due early May. Quarterly egs. may not add due to rounding.
(B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available.
(C) In millions.
(D) Paid special dividend of $0.17 per share on 11/17.
(E) Suspended due to recent CTWS merger.

| | |
|---|---|
| Company's Financial Strength | B+ |
| Stock's Price Stability | 75 |
| Price Growth Persistence | 70 |
| Earnings Predictability | 45 |

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# YORK WATER NDQ-YORW

RECENT PRICE 48.74 | P/E RATIO 38.1 (Trailing: 38.4 Median: 26.0) | RELATIVE P/E RATIO 1.74 | DIV'D YLD 1.5% | VALUE LINE 1796

TIMELINESS 3 Lowered 1/15/21
SAFETY 3 Lowered 7/17/15
TECHNICAL 3 Lowered 4/2/21
BETA .80 (1.00 = Market)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 18.0 | 18.1 | 18.5 | 22.0 | 24.3 | 26.7 | 39.8 | 39.9 | 36.1 | 47.3 | 51.3 | 51.9 |
| Low: | 12.8 | 15.8 | 16.8 | 17.6 | 18.8 | 19.7 | 23.8 | 31.7 | 27.5 | 30.3 | 34.6 | 40.7 |

Target Price Range 2024 | 2025 | 2026

**18-Month Target Price Range**

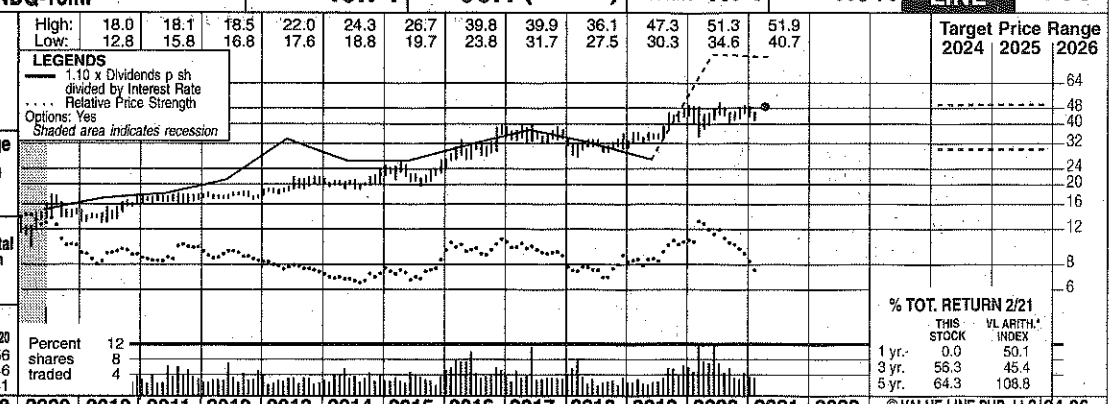
| Low-High | Midpoint (% to Mid) |
|---|---|
| $36-$76 | $56 (15%) |

**2024-26 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 50 | (+5%) | 2% |
| Low | 35 | (-30%) | -6% |

**Institutional Decisions**

| | 2Q2020 | 3Q2020 | 4Q2020 |
|---|---|---|---|
| to Buy | 59 | 46 | 56 |
| to Sell | 48 | 53 | 46 |
| Hld's(000) | 5479 | 5302 | 5341 |




% TOT. RETURN 2/21

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 0.0 | 50.1 |
| 3 yr. | 56.3 | 45.4 |
| 5 yr. | 64.3 | 108.8 |

| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | © VALUE LINE PUB. LLC | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.58 | 2.56 | 2.79 | 2.89 | 2.95 | 3.07 | 3.18 | 3.21 | 3.27 | 3.58 | 3.68 | 3.70 | 3.77 | 3.74 | 3.96 | 4.13 | *4.20* | *4.35* | Revenues per sh | *5.10* |
| .79 | .77 | .86 | .88 | .95 | 1.07 | 1.09 | 1.12 | 1.19 | 1.36 | 1.45 | 1.42 | 1.53 | 1.58 | 1.70 | 1.88 | *1.95* | *2.10* | "Cash Flow" per sh | *2.45* |
| .56 | .58 | .57 | .57 | .64 | .71 | .71 | .72 | .75 | .89 | .97 | .92 | 1.01 | 1.04 | 1.11 | 1.27 | *1.35* | *1.40* | Earnings per sh A | *1.65* |
| .42 | .45 | .48 | .49 | .51 | .52 | .53 | .54 | .55 | .57 | .60 | .63 | .65 | .67 | .70 | .73 | *.78* | *.83* | Div'd Decl'd per sh B | *1.00* |
| 1.69 | 1.85 | 1.69 | 2.17 | 1.18 | .83 | .74 | .94 | .76 | 1.10 | 1.11 | 1.03 | 1.95 | -- | .16 | *.85* | *1.35* | *1.45* | Cap'l Spending per sh | *1.85* |
| 4.85 | 5.84 | 5.97 | 6.14 | 6.92 | 7.19 | 7.45 | 7.73 | 7.98 | 8.15 | 8.51 | 8.88 | 9.28 | 9.75 | 10.31 | 10.97 | *11.55* | *12.00* | Book Value per sh | *12.90* |
| 10.40 | 11.20 | 11.27 | 11.37 | 12.56 | 12.69 | 12.79 | 12.92 | 12.98 | 12.83 | 12.81 | 12.85 | 12.87 | 12.94 | 13.02 | 13.06 | *13.00* | *12.90* | Common Shs Outst'g C | *12.80* |
| 26.3 | 31.2 | 30.3 | 24.6 | 21.9 | 20.7 | 23.9 | 24.4 | 26.3 | 23.1 | 23.5 | 32.8 | 34.6 | 30.3 | 33.8 | 35.7 | *Bold figures are* | | Avg Ann'l P/E Ratio | *25.0* |
| 1.40 | 1.68 | 1.61 | 1.48 | 1.46 | 1.32 | 1.50 | 1.55 | 1.48 | 1.22 | 1.18 | 1.72 | 1.74 | 1.64 | 1.80 | 1.85 | *Value Line* | | Relative P/E Ratio | *1.40* |
| 2.9% | 2.5% | 2.8% | 3.5% | 3.6% | 3.5% | 3.1% | 3.1% | 2.8% | 2.8% | 2.6% | 2.1% | 1.9% | 2.1% | 1.9% | 1.6% | *estimates* | | Avg Ann'l Div'd Yield | *2.4%* |

**CAPITAL STRUCTURE as of 12/31/20**
**Total Debt** $123.6 mill. **Due in 5 Yrs** $42.5 mill.
**LT Debt** $123.6 mill. **LT Interest** $5.5 mill.
(46% of Cap'l)
**Pension Assets12/20** $56.3 mill. **Oblig.** $54.1 mill.
**Pfd Stock** None
**Common Stock** 13,060,817 shs.
**MARKET CAP: $625 million (Small Cap)**

| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | 24-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 40.6 | 41.4 | 42.4 | 45.9 | 47.1 | 47.6 | 48.6 | 48.4 | 51.6 | 53.9 | *54.5* | *56.0* | Revenues ($mill) | *65.0* |
| 9.1 | 9.3 | 9.7 | 11.5 | 12.5 | 11.8 | 13.0 | 13.4 | 14.4 | 16.6 | *17.5* | *18.0* | Net Profit ($mill) | *21.0* |
| 35.3% | 37.6% | 37.6% | 29.8% | 27.5% | 31.3% | 25.9% | 15.7% | 13.5% | *18.5%* | *21.0%* | *21.0%* | Income Tax Rate | *21.0%* |
| 1.1% | 1.1% | .8% | 1.8% | 1.6% | 1.9% | 6.7% | 1.7% | 2.5% | *1.5%* | *1.5%* | *1.5%* | AFUDC % to Net Profit | *1.5%* |
| 47.1% | 46.0% | 45.1% | 44.8% | 44.4% | 42.6% | 43.0% | 42.5% | 41.3% | 46.3% | *44.5%* | *42.5%* | Long-Term Debt Ratio | *37.5%* |
| 52.9% | 54.0% | 54.9% | 55.2% | 55.6% | 57.4% | 57.0% | 57.5% | 58.7% | 53.7% | *55.5%* | *57.5%* | Common Equity Ratio | *62.5%* |
| 180.2 | 184.8 | 188.4 | 189.4 | 196.3 | 198.7 | 209.5 | 219.5 | 228.7 | 266.9 | *270* | *270* | Total Capital ($mill) | *265* |
| 233.0 | 240.3 | 244.2 | 253.2 | 261.4 | 270.9 | 288.8 | 299.2 | 313.2 | 343.6 | *355* | *370* | Net Plant ($mill) | *405* |
| 6.4% | 6.4% | 6.5% | 7.4% | 7.6% | 7.2% | 7.5% | 7.3% | 7.4% | 7.1% | *7.5%* | *7.5%* | Return on Total Cap'l | *9.0%* |
| 9.5% | 9.3% | 9.3% | 11.0% | 11.5% | 10.4% | 10.9% | 10.6% | 10.7% | 11.5% | *11.5%* | *11.5%* | Return on Shr. Equity | *13.0%* |
| 9.5% | 9.3% | 9.3% | 11.0% | 11.5% | 10.4% | 10.9% | 10.6% | 10.7% | 11.5% | *11.5%* | *11.5%* | Return on Com Equity | *13.0%* |
| 2.5% | 2.4% | 2.4% | 3.9% | 4.4% | 3.4% | 4.0% | 3.8% | 4.0% | 4.9% | *5.0%* | *4.5%* | Retained to Com Eq | *5.0%* |
| 73% | 74% | 74% | 64% | 62% | 67% | 63% | 64% | 62% | 58% | *58%* | *59%* | All Div'ds to Net Prof | *61%* |

| CURRENT POSITION ($MILL.) | 2018 | 2019 | 12/31/20 |
|---|---|---|---|
| Cash Assets | -- | -- | 5.0 |
| Accounts Receivable | 4.8 | 4.4 | 5.2 |
| Inventory (Avg. Cost) | .9 | 1.0 | 1.0 |
| Other | 3.3 | 4.0 | 5.1 |
| Current Assets | 9.0 | 9.4 | 16.3 |
| Accts Payable | 3.0 | 3.4 | 6.5 |
| Debt Due | 1.0 | 6.5 | -- |
| Other | 6.8 | 5.3 | 5.5 |
| Current Liab. | 10.8 | 15.2 | 12.0 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '17-'19 to '24-'26 |
|---|---|---|---|
| Revenues | 3.0% | 2.5% | *4.0%* |
| "Cash Flow" | 6.0% | 5.5% | *6.5%* |
| Earnings | 6.0% | 6.0% | *6.5%* |
| Dividends | 3.0% | 4.0% | *6.0%* |
| Book Value | 4.5% | 4.0% | *4.0%* |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun. 30 | Sep. 30 | Dec. 31 | Full Year |
|---|---|---|---|---|---|
| 2018 | 11.6 | 12.0 | 12.7 | 12.1 | 48.4 |
| 2019 | 11.8 | 13.0 | 13.7 | 13.1 | 51.6 |
| 2020 | 12.9 | 13.3 | 14.3 | 13.4 | 53.9 |
| 2021 | *13.0* | *13.5* | *14.5* | *13.5* | *54.5* |
| 2022 | *13.5* | *13.7* | *15.0* | *13.8* | *56.0* |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun. 30 | Sep. 30 | Dec. 31 | Full Year |
|---|---|---|---|---|---|
| 2018 | .20 | .26 | .29 | .29 | 1.04 |
| 2019 | .22 | .28 | .35 | .26 | 1.11 |
| 2020 | .31 | .32 | .36 | .28 | 1.27 |
| 2021 | *.28* | *.35* | *.37* | *.35* | *1.35* |
| 2022 | *.30* | *.36* | *.38* | *.36* | *1.40* |

| Cal-endar | QUARTERLY DIVIDENDS PAID B Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2017 | .1602 | .1602 | .1602 | .1666 | .647 |
| 2018 | .1666 | .1666 | .1666 | .1733 | .673 |
| 2019 | .1733 | .1733 | .1733 | .1802 | .70 |
| 2020 | .1802 | .1802 | .1802 | .1874 | .73 |
| 2021 | .1874 | | | | |

**BUSINESS:** The York Water Company is the oldest investor-owned regulated water utility in the United States. It has operated continuously since 1816. As of December 31, 2020, the company's average daily availability was 35.6 million gallons and its service territory had an estimated population of 202,000. Has more than 72,600 customers. Residential customers accounted for 66% of 2020 revenues; commercial and industrial (26%); other (8%). It also provides sewer billing services. Incorporated: PA. York had 108 full-time employees at 12/31/20. President/Chief Executive Officer: J.T. Hand. Officers/directors own 1.3% of the common stock (3/21 proxy). Address: 130 East Market Street, York, Pennsylvania 17401. Telephone: (717) 845-3601. Internet: www.yorkwater.com.

**York Water delivered decent top- and bottom-line results to conclude 2020.** In the December period, revenues of $13.4 million rose 2%, year over year, while earnings of $0.28 advanced 8%. For the full year, the regulated water utility benefited from rate increases, higher residential water consumption due to more people staying at home, and strong customer base expansion. Capital investment was robust in 2020, as the company spent more than $30 million on infrastructure upgrades such as standpipe replacements and raw water pumping station and wastewater treatment improvements.

**Our preliminary 2022 financial projections suggest modest expansion is likely to persist.** For the current year, we are maintaining our revenue call of $54.5 million, but are adding a nickel to our earnings forecast, to $1.35 per share. For next year, we anticipate low single-digit top- and bottom-line growth of 3% and 4%, respectively.

**The long-term outlook is bright, as well.** Water consumption ought to remain stable, and possibly trend higher, as York's customer base expands further. In addition, the company is likely to keep its foot on the gas in terms of capital investments, as its aging infrastructure demands increased attention. This ought to precipitate periodic rate hikes, which help to alleviate some of these expenses.

**The stock is trading around recently minted all-time high territory.** Underpinning the investment community's notable enthusiasm of late, in our view, is a combination of strong quarterly operating performances and a broad-based flight-to-safety approach amidst an uncertain, albeit improving economic backdrop. York Water is indeed a noncyclical, conservative security, as its water utility operations stand at the core of everyday life, and are largely immune to economic shocks.

**We do not recommend starting a position at the recent quotation.** On the contrary, committed investors may want to consider locking in some profits following the multiyear price ascent. Moreover, the equity is pegged as a year-ahead market performer, and offers limited price upside over the pull to 2024-2026. The dividend yield leaves much to be desired, too.

*Nicholas P. Patrikis* *April 9, 2021*

(A) Diluted earnings. Next earnings report due early May.
(B) Dividends historically paid in late February, June, September, and December.
(C) In millions, adjusted for split.

| | |
|---|---|
| Company's Financial Strength | B+ |
| Stock's Price Stability | 75 |
| Price Growth Persistence | 65 |
| Earnings Predictability | 100 |

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**The Brokers & Exchanges Industry seems well positioned for the near term. The financial companies experienced a turbulent year in 2020. The global coronavirus pandemic and ensuing market pressures weighed heavily on these stocks last March, though most companies herein and their quotations came roaring back in the following months, ultimately closing the year on strong footing.**

**What's more, the brokers and securities exchanges have been focused on strengthening their businesses, and we are optimistic that these measures will support their top- and bottom-line growth over the long haul.**

## The Market Backdrop

The rapid global spread of COVID-19 caused markets to quake last March. The record number of patients and very high death toll (more than 550,000 American lives lost, and 2.5 million victims across the globe) has been tragic.

Although there has been much progress on the public health front, including the ongoing rollout of the Pfizer, Moderna, and Johnson & Johnson vaccinations and the lifting of shelter-in-place orders, the negative reverberations may continue to hinder the worldwide economy. The lockdowns aimed to curb the spread of the virus; however some businesses did not recover, causing higher unemployment rates, which may still be seen in economic figures in the months and years to come.

Too, inflationary pressures and the volatile commodities markets that have led to rising operating costs that have been a detrimental side effect.

The United States is rolling out a second stimulus package to counter the economic struggles that many of its citizens have been facing. What's more, there has been some optimism that other measures the new presidential administration is taking will bolster the domestic economy.

Meanwhile, the Federal Reserve cut the federal funds rate to zero last year. And Chairman Jerome Powell has reiterated that interest rates will remain at historic lows for the time being. However, there has been recent speculation about the bond market and Treasury yields, which has spurred some investment activity.

All told, the recent market volatility has not necessarily been all bad for the companies herein, as the market players can benefit from the increased trading volume associated with both bull and bear markets.

## Profit Margins

In the meantime, many here have been shoring up their operations. Some have focused on cost-cutting measures, while others have turned to productivity enhancements. To this end, technological investments have made some of the trading platforms more efficient, which should benefit the companies in the near term. All told, these moves should widen operating margins moving forward.

Likewise, some may continue to streamline their portfolios, shedding underperforming holdings. And a few have relied on the integration of acquisitions to spur these measures.

**INDUSTRY TIMELINESS: 26 (of 97)**

## Business Improvements

These companies operate in a fairly competitive environment. We imagine technological investments and product innovation will be integral to their long-term growth strategies. Likewise, some may pursue bolt-on acquisitions to shore up their asset rosters, as well as expand their market reach and geographic footprints.

Last year saw the tie-ups of several online brokers. The e-brokers struggled since late-2019, when in an industrywide move, they eliminated transaction fees on most trades. *Charles Schwab* acquired erstwhile industry member TD Ameritrade, and E*TRADE Financial was bought by Morgan Stanley.

## Conclusion

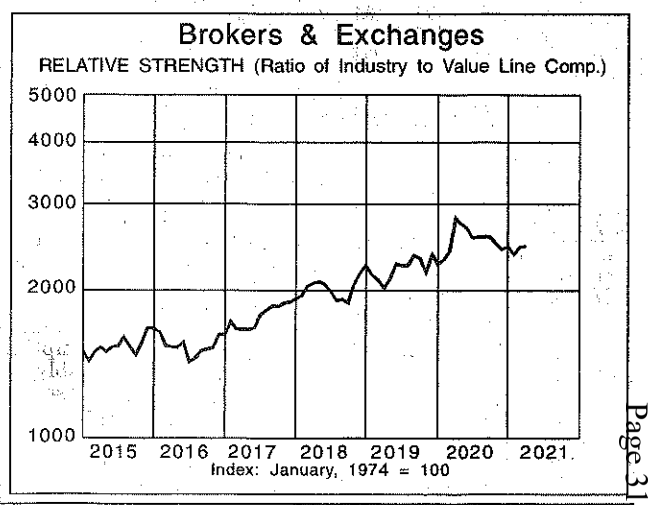
The Brokers & Exchanges Industry, as a whole, has made tremendous progress over the past few months. Indeed, many stocks here are trading well above the levels they achieved prior to the pandemic, and are ranked to outperform the broader market averages in the coming year. The group, as a whole, is ranked in the upper third of the *Value Line* investment universe for year-ahead Timeliness.

On the other hand, these issues' long-term capital appreciation potential may not be as compelling. Much of the good news we anticipate over the 2024-2026 span is already factored into their recent quotations. Consequently, we advise patient investors stay on the sidelines for a better entry point.

As for the industry's conservative appeal, it all depends on how you look at it. From one side, investors may be pleased by the companies' long histories and solid finances, which earn several herein high marks for Financial Strength and Safety. However, from a different perspective, the financial firms tend to be more vulnerable to the market's upswings and downswings, as they have their finger on the pulse of the market, so to speak.

All told, we caution readers from painting with too broad a brush, and recommend evaluating each individual report before making any capital commitments.

*Orly Seidman*

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| | Company Name | AMERICAN STATES WATER COMPANY | AMERICAN WATER WORKS COMPANY, INC. | ARTESIAN RESOURCES CORPORATION | CALIFORNIA WATER SERVICE GROUP | ESSENTIAL UTILITIES, INC. | MIDDLESEX WATER COMPANY | SJW GROUP | THE YORK WATER COMPANY |
|---|---|---|---|---|---|---|---|---|---|
| 2015 | Sales-Net[y15] | 458.641 | 3159 | 77.024 | 588.368 | 814.204 | 126.025 | 305.082 | 47.089 |
| 2016 | Sales-Net[y16] | 436.087 | 3302 | 79.089 | 609.37 | 819.875 | 132.906 | 339.706 | 47.584 |
| 2017 | Sales-Net[y17] | 440.603 | 3357 | 82.235 | 676.113 | 809.525 | 130.775 | 389.225 | 48.589 |
| 2018 | Sales-Net[y18] | 436.816 | 3440 | 80.411 | 698.196 | 838.091 | 138.077 | 397.699 | 48.437 |
| 2019 | Sales-Net[y19] | 473.869 | 3610 | 83.595 | 714.557 | 889.692 | 134.598 | 420.482 | 51.578 |
| 2020 | Sales-Net[y20] | 488.243 | 3777 | 88.141 | 794.307 | 1462.698 | 141.592 | 564.526 | 53.852 |
| 2015 | Cash & Short Term Investment[y15] | 4.364 | 45 | 0.209 | 8.837 | 3.229 | 3.469 | 5.239 | 2.879 |
| 2016 | Cash & Short Term Investment[y16] | 0.436 | 75 | 0.226 | 25.492 | 3.763 | 3.879 | 6.349 | 4.209 |
| 2017 | Cash & Short Term Investment[y17] | 0.214 | 55 | 0.952 | 94.776 | 4.204 | 4.937 | 7.799 | 0.002 |
| 2018 | Cash & Short Term Investment[y18] | 7.141 | 130 | 0.293 | 47.176 | 3.627 | 3.705 | 420.722 | 0.002 |
| 2019 | Cash & Short Term Investment[y19] | 1.334 | 60 | 0.596 | 42.653 | 1868.922 | 2.23 | 12.944 | 0.002 |
| 2020 | Cash & Short Term Investment[y20] | 36.737 | 547 | 0.028 | 44.555 | 4.827 | 4.491 | 5.269 | 0.002 |
| 2015 | Current Assets-Total[y15] | 132.697 | 657 | 14.444 | 127.578 | 128.37 | 24.41 | 73.376 | 11.577 |
| 2016 | Current Assets-Total[y16] | 166.875 | 784 | 14.635 | 142.069 | 128.65 | 26.716 | 99.611 | 12.62 |
| 2017 | Current Assets-Total[y17] | 155.463 | 720 | 18.985 | 227.873 | 131.246 | 29.247 | 66.858 | 8.611 |
| 2018 | Current Assets-Total[y18] | 131.468 | 781 | 16.118 | 188.702 | 147.172 | 30.815 | 502.722 | 9.011 |
| 2019 | Current Assets-Total[y19] | 122.456 | 1285 | 14.207 | 184.712 | 2015.127 | 29.133 | 122.046 | 9.384 |
| 2020 | Current Assets-Total[y20] | 157.115 | 1906 | 17.619 | 266.016 | 380.22 | 34.123 | 127.331 | 16.29 |
| 2015 | Debt in Current Liabilities[y15] | 28.312 | 682 | 12.322 | 39.658 | 52.314 | 8.739 | 38.091 | 0.044 |
| 2016 | Debt in Current Liabilities[y16] | 90.33 | 1423 | 8.478 | 123.308 | 169.822 | 18.159 | 14.325 | 0.044 |
| 2017 | Debt in Current Liabilities[y17] | 59.324 | 1230 | 11.258 | 291.02 | 139.048 | 34.865 | 25 | 1.044 |
| 2018 | Debt in Current Liabilities[y18] | 40.32 | 1049 | 17.784 | 170.011 | 228.723 | 55.843 | 100 | 1.03 |
| 2019 | Debt in Current Liabilities[y19] | 7.193 | 814 | 9.24 | 198.42 | 142.941 | 27.178 | 139.481 | 6.5 |
| 2020 | Debt in Current Liabilities[y20] | 2.371 | 1624 | 28.695 | 376.884 | 214.22 | 9.955 | 251.335 | 0 |
| 2015 | Current Liabilities-Total[y15] | 123.507 | 1533 | 22.403 | 147.898 | 193.199 | 28.319 | 79.623 | 6.197 |
| 2016 | Current Liabilities-Total[y16] | 177.944 | 2392 | 19.328 | 250.23 | 301.536 | 47.056 | 63.573 | 8.184 |
| 2017 | Current Liabilities-Total[y17] | 156.662 | 2325 | 28.461 | 490.959 | 284.488 | 64.537 | 85.052 | 9.145 |
| 2018 | Current Liabilities-Total[y18] | 146.585 | 2094 | 37.731 | 321.166 | 398.977 | 94.363 | 163.985 | 10.841 |
| 2019 | Current Liabilities-Total[y19] | 115.998 | 2045 | 25.599 | 358.721 | 323.461 | 64.981 | 234.567 | 15.156 |
| 2020 | Current Liabilities-Total[y20] | 118.572 | 2881 | 43.724 | 588.706 | 603.873 | 56.848 | 350.795 | 11.993 |
| 2015 | noncash wkcap | 33.138 | -239 | 4.154 | 10.501 | -15.744 | 1.361 | 26.605 | 2.545 |
| 2016 | noncash wkcap | 78.825 | -260 | 3.559 | -10.345 | -6.827 | -6.06 | 44.014 | 0.271 |
| 2017 | noncash wkcap | 57.911 | -430 | 0.83 | -66.842 | -18.398 | -25.877 | 74.914 | 9.653 |
| 2018 | noncash wkcap | 18.062 | -394 | -4.122 | -9.629 | -26.709 | -11.41 | 18.015 | -0.802 |
| 2019 | noncash wkcap | 12.317 | -6 | -2.748 | -18.242 | -34.315 | -10.9 | 14.016 | 0.726 |
| 2020 | noncash wkcap | 4.177 | 102 | 2.562 | 9.639 | -14.26 | -17.261 | 22.602 | 4.295 |
| 2016 | Change Non cashWrk Cap | 45.687 | -21 | -0.595 | -20.846 | 8.917 | -7.421 | 17.409 | -2.274 |
| 2017 | Change Non cashWrk Cap | -20.914 | -170 | -2.729 | -56.497 | -11.571 | -19.817 | 30.9 | 9.382 |
| 2018 | Change Non cashWrk Cap | -39.849 | 36 | -4.952 | 57.213 | -8.311 | 14.467 | -56.899 | -10.455 |
| 2019 | Change Non cashWrk Cap | -5.745 | 388 | 1.374 | -8.613 | -7.606 | 0.51 | -3.999 | 1.528 |
| 2020 | Change Non cashWrk Cap | -8.14 | 108 | 5.31 | 27.881 | 20.055 | -6.361 | 8.586 | 3.569 |
| 2016 | | 10.48% | -0.64% | -0.75% | -3.42% | 1.09% | -5.58% | 5.12% | -4.78% |
| 2017 | WK cap/sale | -4.75% | -5.06% | -3.32% | -8.36% | -1.43% | -15.15% | 7.94% | 19.31% |
| 2018 | WK cap/sale | -9.12% | 1.05% | -6.16% | 8.19% | -0.99% | 10.48% | -14.31% | -21.58% |
| 2019 | WK cap/sale | -1.21% | 10.75% | 1.64% | -1.21% | -0.85% | 0.38% | -0.95% | 2.96% |
| 2020 | WK cap/sale | -1.67% | 2.86% | 6.02% | 3.51% | 1.37% | -4.49% | 1.52% | 6.63% |
| | Average | -1.25% | 1.79% | -0.51% | -0.26% | -0.16% | -2.87% | -0.13% | 0.51% |
| | | | | | | | Median | | -0.21% |