EXHIBIT U

FAIR MARKET VALUE APPRAISAL – GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

NEW GARDEN TOWNSHIP
AND
NEW GARDEN TOWNSHIP SEWER AUTHORITY'S
SEWAGE COLLECTION AND TREATMENT SYSTEM ASSETS

FAIR MARKET VALUE APPRAISAL

AT

SEPTEMBER 30, 2016

Prepared by:
GANNETT FLEMING
VALUATION AND RATE CONSULTANTS, LLC

Valley Forge, Pennsylvania

Gannett Fleming

Excellence Delivered ***As Promised***

December 7, 2016

VIA EMAIL

Mr. William C. Packer
Regional Controller
Aqua Pennsylvania, 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 New Garden Township and New Garden Township Sewer Authority's sewage collection and treatment system assets ("Sewer System") as of September 30, 2016.

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."

Based on our analysis, as described in the attached appraisal report, the estimate of the fair market value of the Sewer System as of September 30, 2016 is $33,666,000 (rounded).

Our appraisal was developed consistent with the Uniform Standards of Professional Appraisal Practices. Our fair market value appraisal of the Sewer System was based on the Cost, Market and Income Approaches to valuation. We used four methods under the Cost, Market and Income Approaches to valuation: Original Cost New Less Depreciation Method, Market Multiple Discounted Cash Flow Method, Capitalization Discounted Cash Flow Method, and the Market Multiples Method.

The attached narrative appraisal, present our findings and conclusions regarding the fair market value of the Sewage System's assets of September 30, 2016. The report describes the valuation methodologies employed and the Exhibits that present the valuation results.

Gannett Fleming Valuation and Rate Consultants, LLC

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We thank Aqua for this opportunity to provide valuation services in connection with the fair market value appraisal of the Sewer 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, present our findings and conclusions regarding the fair market value of the sewage collection and treatment system assets of New Garden Township and New Garden Township Sewer Authority as of September 30, 2016. 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 sewage collection and treatment system assets of New Garden Township and New Garden Township Sewer Authority is $33.7 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 $13.5 million to $53.8 million. However, most of the appropriate indicated values approximated $33.7 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 New Garden Township and New Garden Township Sewer Authority's sewage collection and treatment system assets ("Sewer System") as of September 30, 2016.

Standard and Premise of Value. The fair market value appraisal of the Sewer System complies with the Uniform Standards of Professional Appraisal Practices, employing the cost, market and income approaches. It should be noted that Gannett Fleming Valuation and Rate Consultants, LLC ("Gannett") did not complete a cost approach for this assignment. However, Gannett utilized the original cost study provided by the Sewer System and Aqua as the accepted cost approach used in the fair market value determination in accordance with 66 Pa. C.S. Section 1329.

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 going concern. The going concern premise of business value assumes that the business will continue running normally using all of its assets to produce income and will continue operating beyond the valuation date.

Gannett valued the Sewer 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 Sewer 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 Sewer 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.

Extraordinary Assumptions. We accepted all information and data provided by the Sewer System and Aqua as it pertains to this assignment "as is" after a limited review. That is, we

1 The International Glossary of Business Valuation Standards

neither audited nor verified any data, original cost study, financial records or operating data provided for this assignment.

Site Inspection. We did not visit or inspect the Sewer System's facilities. We relied on the original cost study provided by the Sewer System and Aqua to confirm the existence and condition of the Sewer System's property and equipment.

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

AUS Consultants Original Cost Study and Depreciated Original Cost at June 30, 2015

Sewer System's Annual Flow by Service Area and Customer

Sewer System's Customer data

New Garden Township Audited Financials for the years 2014, 2013 and 2012

New Garden Township Sewer Authority Audited Financials: 2014, 2013 and 2012

New Garden Township Comprehensive Plan

The Delaware Valley Regional Planning Commission Analytical Data Reports

Blue Chip Financial Forecasts

US Census Bureau, various data files

Value Line Investment Survey

S&P Research Insight

Description of New Garden Township. New Garden Township ("Township") encompasses 16 square miles. The Township is located in southeastern Pennsylvania within southern Chester County, and is surrounded by the Townships of Kennett, London Grove, Franklin, East Marlborough, West Marlborough, London Britain; and the Boroughs of West Grove

and Kennett Square. It is positioned 25 miles from Philadelphia and 15 miles and 10 miles from Wilmington and Newark, Delaware, respectively.

The northern Delaware and southeastern Pennsylvania area has a combination of suburban and urban characteristics which have stimulated development pressure in the Township and the region. Due to these neighboring centers of employment and commercial activity, the Township's population has been increasing.

The major services provided by the Township include general administration, public works (highways and streets and sewer), public safety (police and fire), planning and zoning, culture and recreation and community development. The Township has historically been considered a rural area due to the large amount of agricultural industry in the Township, but has experienced recent residential and commercial growth.

The Township is one of 73 municipalities in Chester County and is one of the fastest growing and most populated in the county. According to U.S. Census figures, Township population grew nearly 32% from 2000 to 2010, while population in Pennsylvania grew 3.4% and 15.1% in Chester County. The Township and surrounding region is rapidly transitioning from a rural area to a more suburban area.

Description of New Garden Sewer Authority. The Sewer System was constructed by the New Garden Township Sewer Authority ("Authority") at the request of the Township's Board of Supervisors. The Authority was established through Ordinance Number 76 of the Township on March 14, 1966. The Township created the Authority for the purpose of planning, constructing, renovating and acquiring certain assets for the collection and treatment of wastewater for the benefit of the residents of the Township.

The sewer system owned by the Authority is operated by the Township under long-term lease rental agreements. The Authority's operating revenues consist solely of lease rental payments from the Township. Pursuant to the lease rental agreements, the Township must operate and maintain the sewer system to make lease rental payments to the Authority sufficient to pay the debt service obligations and administrative fees incurred by the Authority to acquire, construct and renovate the sewer system. The lease rental agreements expire on February 25, 2021 unless the related debt is retired earlier.

Description of the Sewer System. Most Township residents rely upon on-lot septic systems for wastewater treatment and the Sewer System currently only provides services in three areas of the Township. The Sewer System is sufficient to meet the Township's current needs. As new and/or extended service to existing development is required, the Authority evaluates the need to issue future long-term financing to enhance the Sewer System and accommodate future growth within the Township.

The Township has enacted and covenants (Connection and Sewer Rent Ordinances) to keep in full force and effect ordinances requiring all owners of improved property within the Township accessible to the Sewer System to connect to the Sewer System.

Currently, the Sewer System's three service areas are: East End, South End and Avondale. The East End service area is comprised of gravity collection mains, nine pump stations and associated conveyance force mains. The East End's treatment system consists of two aeration lagoons, one storage lagoon and a spray field. The storage lagoon has a capacity of between 21-23 million gallons and the two aeration lagoons have a capacity of about 5 million gallons each. The Township also has reserved 100,000 gallons of daily treatment capacity in the Kennett Borough Treatment Plant.

The South End service area is mostly a gravity collection system with waste water treatment done in a lagoon system and spray irrigation of the treated effluent. The South End service area was initially created to include only the Somerset Lake subdivision.

The Avondale service area includes both gravity and force mains and three pump stations owned by the Township. Waste flows from Avondale service area into the Avondale Borough's gravity collection system for treatment at the Avondale Waste Water Treatment Plant in which the Township owns a daily reserve capacity of 218,000 gallons.

A more comprehensive listing of the Sewer System's assets is contained in the AUS Consultants' original cost study prepared to study of the original cost of the fixed capital and theoretical depreciation calculations of the Sewer System assets as of June 30, 2016 ("OCNLD Study").

The Township utilizes two enterprise funds, the Sewer Fund account and Sewer Authority account, to account for the Sewer System's operations. The Township's audited financial statements for the year ended December 31, 2014 show (Exhibit 1) the Sewer System had operating revenues of $2.248 million and was capitalized with $19.094 million of capital: including $2.794 million of long-term debt (including current maturities); and $16.300 million of fund equity. At the same point in time, the Sewer System had total assets of $16.986 million, including $16.986 total net utility plant.

The Sewer System is exempt from Pennsylvania Public utility Commission ("PUC") regulation as a municipal utility. Sewer System's rate requirements are established by the needed funds to run the system and by the contractual requirements of their debt instruments. Most municipalities, including Sewer System, use a Government Accounting Standards Board ("GASB") process of accounting 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 tax payers. Municipalities typically expense (i.e., maintenance expense) minor collection, renewals replacement, and customer collection services capital expenditures and they do not typically fully account for the replacement of meters and master meter equipment 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 Sewer System's financial statements should be fully relied upon without recognizing their limitations.

In 2015 the Sewer System provided service to 2,571 units, including 2,110 active units, through 1,796 accounts, had flows of 124,467,000 gallons and serviced approximately 2,500 Equivalent Dwelling Units ("EDU"). We estimate in 2016 the Sewer System is providing service to 1,814 accounts (Exhibit 2, Table 2.1 and Table 2.3), to 2,597 units, 2,131 active units and will have flows of 125,117,000 gallons.[2]

We further estimate the Sewer System's 1,814 accounts include 1,677 residential accounts, 134 business accounts (accounts CO1, CO2 and MIX) and three Township accounts. The Sewer System's business does not require large amounts of working capital. The Sewer System is not dependent on industrial customers. On average, Sewer System's active residential units have flows of 51,892 gallons per active unit and the active business units have flows of 124,183 gallons per active unit (Exhibit 2, Table 2.1).

Demographics and Growth for the Sewer System. As shown on Page 1 of Exhibit 3,

2 Estimate of accounts and units are based on 1% population growth (see Exhibit 2, Table 2.2) and estimate of flows is the average of 2014 and 2015 flows.

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 time period, Chester County's population grew 15.1% and the Township's population grew 31.9% (Exhibit 3, Page 2, Table 3.2). The Township's extraordinary population growth was ranked 105 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 the 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 1 of Exhibit 3, Table 3.3, Township's population growth is projected to be more than twice the growth rate projected for the Nine DVRPC Counties during each five year period from 2015 through 2045. Similarly, Page 2 of Exhibit 3, Table 3.3 shows Township's employment growth is projected to be more than twice the growth rate projected for the Nine DVRPC Counties during each five year period from 2015 through 2045. The aforementioned projected large increases in Township's population and employment indicates a greater future demand for the Sewer System's services.

In 2016, the Township's total population is approximately 12,405 people with 12,222 people in households (Exhibit 2, Table 2.2). There are 3,986 household units in the Township and the ratio of people in households to households is 3.07 persons per household. The Township

also has 589 business establishments which employ 5,585 people and has a ratio of 9.45 employee per business unit. We estimate in 2016 the Sewer System is providing service to 1,980 residential units and 210 active business units (accounts CO1, CO2 and MIX). The above-mentioned indicates the Sewer System currently provides service to only 49.7% of Township's households (1,980 ÷ 3,986) and 35.7% of Township's businesses (210 ÷ 589).

The Sewer System's service area density is 6.8 people per account based on an estimated population of 12,405 and 1,814 accounts. The Sewer System's service area density is almost double the 3.5 per account density of water and wastewater systems (see Table 2 in this report).

As mentioned previously, the majority of Township residents rely upon on-lot septic system systems for their wastewater treatment. According to the Pennsylvania Department of Environmental Protection ("DEP"), the life-span of an on-lot septic system is generally 25 years, but septic systems are vulnerable to early failure if they are not regularly inspected and pumped, and properly maintained.

The building of a new traditional single-family home septic system using the gravity design can cost between $4,000 and $14,000, including labor and materials and be as high as $25,000. The cost to replace an existing septic system is $5,000 to $50,000, depending on the size and complexity of the job. The cost of replacing gravity fed drainfields range from $5,000 to $10,000, replacing mounds range from $10,000 to $50,000 and replacing Aerobic Treatment Units are $10,000 to $15,000.

According to U.S. Census figures, 72% of Township's homes were built before the year 2000 including 34% built in the 1990s and 38% built prior to the 1990s. Base on the 25-year life-span of on-lot septic systems, the large number of homes in the Township with on-lot septic system systems, and the age distribution of houses constructed in the Township, it is highly probable that

a large number of Township residents will likely require expensive replacement septic systems or request new service from the Sewer System. The combination of Township's higher than average projected population growth and the domestic growth resulting from failing on-lot septic system owners switching over to Sewer System service indicates appreciably higher future growth for the Sewer System.

HISTORY AND NATURE OF THE BUSINESS

Economic Outlook. 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 September 30, 2016. In particular, we focused on the forecasts and economic commentary presented in Blue Chip Financial Forecasts in the September 1, 2016 edition. Some of these economic forecasts are presented in Table 1.

Economic Indicators

	Latest Qtr	Consensus Forecasts	
	2Q 2016	3Q 2016	4Q 2016
Key Assumptions			
Real GDP	1.1	2.7	2.4
GDP Price Index	2.3	1.6	1.8
Consumer Price Index	2.5	1.8	2.2
Interest Rates			
3-mo. Treasury Bills	0.28	0.3	0.5
10 Year Notes	1.84	1.5	1.7
30 Year Notes	2.64	2.3	2.5
Aaa Corporate Bond Yield	3.82	3.3	3.6
Baa Corporate Bond Yield	5.10	4.4	4.6
State & Local Bonds	3.30	3.0	3.1
Home Mortgage Rate	3.70	3.5	3.7

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 2,181 U.S. Businesses with an 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 2008, there are approximately 15,000 such facilities in the nation, serving approximately 74% 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. The water supply industry has a 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 10,197 U.S. Businesses with an 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. (83% of which serve less than 3,300 customers). The nation's water systems range in size from large municipally owned systems, such as the New York City water system that serves approximately 9 million people, to small systems, where a few customers share a common well.

An estimated 14% of all water supplies are managed or owned by IOUs. IOUs consist of companies with common stock that is either actively traded or inactively traded, as well as companies that are closely held, or not publicly traded. Currently, there are only about 10 investor owned water utility companies with publicly traded stock in the U.S.

The wastewater utility industry and water 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 started 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 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 the 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

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.

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 System. However, as a medium to small wastewater system, the Sewer 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 Sewer System, and a group of companies ("Comparable Group") that operate in the same basic industry as the Sewer System. Since no marketplace exists for the common stock of Sewer System, an alternative to estimate the value of the Sewer System is to analyze the price investors are willing to pay for the publicly traded common stock of companies that are similar to the Sewer System. We list the Comparable Group chosen for study in Table 2.

Latest Size Statistics For the Year 2016

	Revenues (Mill. $)	Customers	Population	Customer Density
New Garden's Sewage Collection and Treatment System	$2.381	1,814	12,405	6.8
Comparable Group				
American States Water Co	$448.571	283,997	1,000,000	3.5
American Water Works Co Inc	3,248.801	3,252,691	12,100,000	3.7
Aqua America Inc	814.601	920,381	2,890,800	3.1
Artesian Resources -CL A	77.372	81,400	301,000	3.7
California Water Service Gp	596.141	508,404	1,600,000	3.1
Connecticut Water Svc Inc	96.994	123,633	400,000	3.2
Middlesex Water Co	128.883	108,720	390,000	3.6
SJW Corp	318.624	241,000	1,089,000	4.5
York Water Co	47.083	66,000	194,000	2.9
Median	$318.624	241,000	1,000,000	3.5

Table 2

The Comparable Group were selected based upon: (1) the availability of financial information; (2) a September 30, 2016 market value of common stock, the product of multiplying the closing stock price by the number of common shares outstanding, greater than $75.0 million; (3) inclusion in the Standard and Poor's Research Insight database; (4) are not currently the subject of an acquisition; and (5) with a Global Industry Classification Standard ("GICS") of 55104010 (i.e., Water Utility). The nine Comparable Group that met the criteria for selection are listed in Table 2.

We believe that similar economic, industry and business risks have affected the Comparable Group as those faced by the Sewer System. However, consideration must be given to the fact that no two companies are exactly alike. Table 2 presented comparative statistics regarding total revenues, customers, population of the area served, and customer density (population ÷ customers). On average, the Comparable Group are much larger than Sewer System. The relative size difference between the group and Sewer System suggests that the risk to which the investors of the Sewer 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 Sewer System and the Comparable Group for the three-year period, 2012 to 2014.[4] It is our opinion that the economic, industry and business risks affecting the Comparable Group selected are similar to those faced by the Sewer System. However, consideration must be given to the fact that no two companies are exactly alike.

The determination of reasonable water 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

4 2014 is the most recent year that audited financial statements are available for the Sewer System.

to their regulators in support of their request. Historically, the Sewer System's rates have not considered a fair rate of return nor taxes. That is, the Sewer System's rates would have been higher if they included a provision for taxes and their financial results would have been better if they were required to pay taxes and made provisions for taxes in their rates. Therefore, the results of the Sewer System's historical financial performance, as measure by various ratios and coverages, should be viewed with this knowledge.

Financial Benchmark Analysis. To gain insight into the risk differences between the Sewer System and the Comparable Group, we reviewed financial ratios and coverages. Unfortunately, there is no single measure that best indicates investment risk from a common stockholder'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 2011-2014, the Sewer System's financial benchmark ratios show (Exhibit 4) lower investment risk than the Comparable Group.

Risk Analysis. From an operations standpoint, the Sewer 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 large determinant of risk. Based on size, the Sewer System's risk is higher than the Comparable Group given Sewer System's relatively small size. Table 2 details the large size difference between the Sewer System and the Comparable Group. As shown on Table 2, the Sewer System is many times smaller than the Comparable Group. A smaller company requires the employment of proportionately less financial leverage (i.e., debt and preferred capital) than a larger company to balance out investment risk.

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 supply, weather, demographic, and financing than the Sewer System. Because the larger Comparable Group has a more diverse geographic operation than the Sewer 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 Sewer System.

The National Association of Regulatory Utility Commissioners (NARUC) recognizes that size affects relative business risk.

> "...Size affects the business risk of water companies because small companies generally have a narrow customer base and a limited geographic market. As a result, smaller companies have less diversity in their markets and may be more severely affected by economic or demographic changes in their service areas. Also because of their relative size, small companies cannot take advantage of certain economies of scale available to larger companies . . . Finally, small companies have less access to capital markets. This is due in part to their perceived riskiness and in part because the transaction costs associated with most financial instruments make raising small amounts of capital relatively expensive."

Page 2 of Exhibit 5 provides an analysis which shows a company's size is also inversely related to returns on common stocks. Specifically, Ibbotson Associates sorted 2,972 publicly traded common stocks based on size of market value (market price multiples by the number of shares) and placed them into ten different portfolios (deciles). The common stock return differential, column C, increases at an increasing rate as you move from a larger stock decile to a smaller stock decile. In fact, for every million-dollar decrease in market value between decile 8 and decile 9, common stock returns increased by 0.0023 basis points (column H). That is, within these deciles, moving from a company with a market value of $549 million to a company of $425 million, results in a 29-basis point increase in return (0.0023 × $124 = 0.2852 or 0.29%).

The Comparable Group's market value on September 30, 2016 ranged from $260 million to $13,314 million as shown on page 3 of Exhibit 2. Based on their market value, the Comparable Group's median market decile was 8. Sewer System's market value would place them in decile 10 based upon Sewer System's financial statements and considering the fact that the largest company in decile 10 had a market value of $301 million.

The calculated adjustment to the required return based on the size premium is shown on page 1 of Exhibit 2. On Exhibit 2, line 1 shows that the Comparable Group falls into decile 8

based on their market value. As shown in column F, the market value of the largest to smallest in the decile decreases by $462.0 million before entering into decile 9 (shown on line 2). The change in return rate between decile 8 and decile 9 is 0.17-basis points for every million-dollar decrease in market value (column G). Multiplying the 0.17-basis points change (column G) by the change in market value (column F) results in an increase in cost rate of 42-basis points within that decile. A similar computation is shown in column J but it is based on the average market value change shown in column H. As shown in column I, moving from the Comparable Group's median 8 decile to Sewer System's decile, show the required return should increase by a total of 491-basis points. In column J, a similar calculation based on the average rate of change, shows the required return should increase by a total of 928-basis points. Averaging the results of the illustration shown on page 1 of Exhibit 2 suggests the Sewer System's cost rate could be about 7.10 percentage points higher than the Comparable Group.[5]

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

Property Plant and Equipment Analysis. The Sewer System can best be characterized as a wastewater collection and treatment system. The Sewer System does not have the number of large treatment facilities that the Comparable Group has. The Sewer 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 72% of the Comparable Group's gross property, plant and equipment remained undepreciated.

5 The aforesaid illustration assumes the Comparable Group is the largest company in decile 8 and the Sewer System is the smallest company in decile 10, neither of which is currently true.

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) and is a cornerstone of utility regulatory theory. Further, 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 28% (100% - 72%) differences 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). Concerning the difference between the Comparable Group's net property, plant and equipment and the Comparable Group's investor provided capital, we believe the net property, plant and equipment contains customer contributions. This belief is based on the 28% difference in the Comparable Group's net property, plant and equipment and the Comparable Group's investor provided capital reviewed.

We did not analyze the Sewer System's property, plant and equipment for customer contributions because customer contributions are 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 next three years (2017-2019), the Sewer System estimates it will require $12 million of capital expenditures. Over the last four years, the Comparable Group had annual capital expenditures of about 7% of net plant (Exhibit 6, page 2, Table 6.3). During this same time, 2012-15, the Sewer System had annual capital expenditures that averaged 0% of net plant (based upon reported net plant). Therefore, the Sewer System

historical capital spending was substantially less than the Comparable Group's average.

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 Sewer System has been growing faster than the Comparable Group (Exhibit 6, page 4, Table 6.4) over the last three years. Despite the natural market limitations that exist in the Sewer System's finite service territory, we believe the prospective gap in growth rates will increase due to the combination of the Township's higher than average projected population growth and the domestic growth resulting from failing on-lot septic system owners switching over to Sewer System service discussed previously (see section "Demographics and Growth for the Sewer System" in this report).

Prospectively, the Comparable Group will be able to enhance their growth rates through the continued acquisition of water and wastewater systems outside their existing service territory.

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 Sewer 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 Sewer System's core profitability. The Sewer System's average profit margins are about equal to, or slightly higher than the Comparable Group indicating similar to, or slightly less 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 Wastewater Systems) and conduct a fair market value appraisal of the Sewer System's assets as of September 30, 2016 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 measure 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 replacement 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 reproduction cost method begins with determining the reproduction cost new 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 reproduction cost new method and the RCN 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 reproduction cost new and to determine the RCN.

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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 5% to 15% of infrastructure asset total costs.

The reproduction cost new 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, RCN, and reproduction cost new), the calculated accrued depreciation (accumulated depreciation) is subtracted. 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 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.

For this report the Sewer System and Aqua provided us a copy of AUS Consultants' original cost study prepared to study of the OCN of the fixed capital and the theoretical depreciation calculations of the Sewer System assets as of June 30, 2016 ("OCLD Study"). The OCNLD Study includes an original cost inventory of the Sewer System's utility plant determined from a detailed analysis of the books and records of the Sewer System and did not reflect the original source of funding for any of the Sewer System's assets.

The results of the OCNLD Study established that the OCN of the Sewer System's utility plant in service as of June 30, 2016 was not less than $27,267,123. The OCNLD Study also determined a theoretical calculated accrued depreciation reserve of the utility plant in service of $8,677,034 as of June 30, 2016. After factoring in the OCNLD Study's accrued depreciation reserve, the OCNLD of Sewer System's utility plant in service as of June 30, 2016 was determined to be $18,590,089 ($27,267,123 - $8,677,034).

The Sewer System's OCNLD of $18.6 million ($18,590,089 rounded) is used as the cost approach as part of our fair market value determination for the Sewer System.

Benchmark Metrics. Besides providing an indication of value based upon on the cost approach, the OCNLD also provides 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 1.5-times (Exhibit 10, page 2) higher than their OCNLD or net property, plant and equipment. Similarly, the Comparable Group's Enterprise Value is currently 1.1-times (Exhibit 10, page 2) higher than their OCN or gross property, plant and equipment.

The above-mentioned property, plant and equipment "multiples" understate the multiple applicable to the Sewer System because the Comparable Group's property, plant and equipment includes assets that were originally financed with customer contributions. Subtracting customer contributions from the Comparable Group's property, plant and equipment (Exhibit 10, page 3) results in adjusted multiples of 1.8-times OCNLD and 1.4-times OCN for the Comparable Group.

Multiplying the Sewer System's OCN of $18.6 million by the Comparable Group's 1.5-times OCN multiple or the 1.8-times contributions adjusted OCN multiple indicates a range of market value of $27.9 million to $33.5 million for the Sewer System. Further, multiplying the Sewer System's OCNLD of $27.3 million by the Comparable Group's 1.1-times OCNLD multiple or the 1.4-times contributions adjusted OCNLD multiple indicates a range of market value of $30.0 million to $38.2 million for the Sewer System.

The aforementioned range of market value for the Sewer System are not a substitute for an appraisal. However, the referenced range of market value for the Sewer System are meaningful metrics to evaluate the reasonableness of other indication of value produced by other valuation methods.

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. 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 Sewer System, the appropriate discount rate is the current municipal revenue bond yield on September 30, 2016 of 3.66%. The appropriate IOU discount rate is the current pre-tax overall cost of capital on September 30, 2016 and ranges from 5.90% to 7.22%. 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 a reasonable approach for valuing the Sewer System as it is currently owned (i.e., non-IOU) and operated. However, change in ownership of the Sewer System to an 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.

The Capitalization of Earnings Method. We began the capitalization of earning method for the Sewer 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. The development of Sewer System's Debt Free Net Cash Flow begins on Exhibit 1.

Differences in accounting practices exist between GASB and FASB because there are differences in their purpose. That is, the GASB's motivation is 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 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 Sewer System and the Comparable Group.

Exhibit 1 presents our restatement of some of the Sewer System's financial information contained in their financial statements so it is more consistent with the Comparable Group and more practical for valuation purposes.

As stated previously, the Township utilizes two enterprise funds, the Sewer Fund account and Sewer Authority account, to account for the Sewer System's operations. On Exhibit 1 we combined the reported financial results for the Sewer Fund account and Sewer Authority account to create a single Sewer System's operations. As a result of this change we developed the Sewer System's Debt Free Net Cash Flow on Exhibit 7.

The Sewer System's Revenues, EBITDA and EBIT (EXHIBIT 7, lines 3 to 5) statistics are more comparable to Revenue, EBITDA and EBIT statistics reported for the Comparable Group. It should be noted that Sewer System's 2015 comparable Revenues, EBITDA and EBIT statistics were also used in the analyses shown on Exhibit 6 in Tables 6.4 and 6.5.

The capitalization of earnings method begins with an estimate of the income or cash flow producing capabilities of the business (Exhibit 7). Specifically, our capitalization of earnings method capitalizes Sewer System's current year's earnings (2016). Sewer System's 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. The second element of the capitalization of earnings method is the determination of an appropriate capitalization rate. Our analysis uses the current municipal discount rate of 3.66% based on the 9/30/2016 municipal bond yield (Exhibit 7, line 30). As stated previously, the capitalization rate in the capitalization of earnings method is assumed for perpetuity. We also did a second capitalization of earnings method based on a 2.66% municipal bond yield (Exhibit 7, line 30), or 100-basis points below the current level to reflect the unique growth assumed for the Sewer System's because we assumed the Sewer System's total growth will be 1.0% (100-basis points) above the industry's growth.

We computed the Sewer System's capitalization of earnings method indicated 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. Essentially, we considered two ranges of growth in the capitalization of earnings method, no growth and 1% growth. However, based upon our quantitative and qualitative analysis, and the

projected population growth and the domestic service growth in the service area due to septic system conversions, we believe the 1% growth scenario is the most likely for the Sewer System.

Exhibit 7 shows the results of the capitalization of earnings method. For the Sewer System, the capitalization of earnings method using a 3.66% capitalization rate indicates a value of $52.8 million and the capitalization of earnings method using a 2.66% capitalization rate indicates a value of $72.7 million. Collectively, for Sewer System, the capitalization of earnings method suggests a value of $62.8 million (the average of $52.8 million and $72.7 million) based on current operations.

The DCF Method. For the Sewer 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 8 and 9.

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 Sewer System's operations over the next 11 years. We use two different assumptions for the Sewer System's future operations in the DCF methods: MUNI ownership and IOU ownership.

Under the MUNI ownership the discount rate is the current 3.66% municipal revenue bond yield and under the IOU ownership the discount rate is the current pre-tax overall cost of capital, reflecting the upper and lower range of the pre-tax overall cost of capital for the Comparable Group of 5.90% to 7.22%.. For the Capitalization DCF, the capitalization rate reflects a scenario of no additional growth (i.e., discount rate = capitalization rate) and a scenario of 1% additional growth, similar to the capitalization of earnings method discussed previously (i.e., discount rate – 1% growth = capitalization rate). Based upon our quantitative and qualitative analysis, and the

projected population growth and the domestic service growth in the service area due to septic system conversions, we believe the 1% growth scenario is the most likely for the Sewer System.

We computed the Market Multiple DCF terminal values by multiplying the Sewer System's projected EBIT and EBITDA by the Comparable Group's adjusted multiples of 21.9 and 14.8, 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 8 shows the results of the DCF method under the MUNI ownership scenario. The results of the Capitalization DCF shown on Exhibit 8 show a range of value for the Sewer System of $40.9 million to $53.8. The results of the Market Multiple DCF shown on Exhibit 8 show a value of $34.5 million. Collectively, the DCF method based on the MUNI ownership scenario indicates a value of $44.1 million for the Sewer System based on the likely 1% growth assumption.

Exhibit 9 shows the results of the DCF method under the IOU ownership scenario. The results of the Capitalization DCF shown on Exhibit 9 show a range of value for Sewer System of $16.5 million to $25.5. The results of the Market Multiple DCF shown on Exhibit 9 show a range of value of $31.7 million to $40.0. Collectively, the DCF method based on the IOU ownership scenario indicates a value of $28.5 million for the Sewer System.

Comparing the results of the capitalization of earnings method and the DCF method indicates the value indicated by the capitalization of earnings method of $62.8 million to be an outlier. Therefore, the results of the DCF method form the basis for our Income Approach conclusion. The DCF method based on the MUNI ownership scenario indicates a value of $44.1 million and the DCF method based on the IOU ownership scenario indicates a value of $28.5

million. Collectively, the DCF method indicates a value of $36.3 million for the Sewer System 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 valuation begins by reviewing market price data of corporations engaged in the same or a similar line of business as the Sewer System. We relied upon market data for the Comparable Group for these purposes since they are equally affected by the same economic, industry, and business risks as the Sewer System. Since no marketplace exists for the common stock of the Sewer System, an alternative to estimate the value of the Sewer System is to analyze the price investors are willing to pay for the publicly traded common stock of companies that are similar to the Sewer 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 10. For the Comparable Group, the Market Multiples were calculated as of 9/30/2016 based on the latest twelve months of financial data available at that time.

We used the Comparable Group's Enterprise Value at September 30, 2016 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 valuation was applying the Comparable Group's Market Multiples to similar financial and operating statistics of the Sewer System. The applicable financial statistics for Sewer System of Revenue, EBITDA and EBIT are shown on Exhibit 7. The Comparable Group's Market Multiples reflect their capitalization rate of each financial and 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 Sewer System. However, consideration must be given to the fact that no two companies are exactly alike. On average, the Comparable Group are much larger than the Sewer System. The relative size difference between the Comparable Group and Sewer the System suggests that the risk to the investors of the Sewer System is greater than the Comparable Group. However, based upon our quantitative and qualitative analysis, we concluded that the Sewer System has less risk and also more growth based on the projected population growth and the domestic service growth in the service area due to septic system conversions.

Accordingly, the Comparable Group's Market Multiples are not directly applicable to the Sewer System. We assumed the higher risk due to the Sewer System's small size is slightly greater than the lower risk found during our quantitative and qualitative analysis. This offset in risk was assumed to result in the Sewer System being 5% riskier than the Comparable Group and produces a 95% (100% - 5%) base risk adjustment to the Comparable Group's Market Multiples. We applied the 95% base risk adjustment to all financial multiples. For example, the Comparable

Group's ICAP multiple was multiplied by 95% to produce a lower multiple applicable to the Sewer System to account for risk differences.

The Comparable Group's Market Multiples of Revenue, EBITDA, and EBIT were adjusted for the base risk adjustment and for a 1% higher growth rate to produce multiples applicable to the Sewer System (Exhibit 10, 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 10, page 3) financed with contributions because customer contributions should not be part of this valuation process. The Comparable Group's Market Multiples of Customers and Population were adjusted for the higher customer density and higher growth potential of the Sewer System.

The net risk adjustments to the Comparable Group's Market Multiples are shown on page 1 of Exhibit 10. The adjustments to the Comparable Group's Market Multiples are: 95% of ICAP (riskier), 115% of GPPE (riskier and contributions), 116% of NPPE (riskier and contributions), 101% of Revenue (riskier and higher growth); 117% of EBIT and 110% EBITDA (riskier and higher growth); and 200% of Customers and Population (higher customer density and higher growth).

As shown on page 1 of Exhibit 10, the market multiples indicated values based on Revenue, EBIT and EBITDA are far below the Sewer System's OCNLD. We attribute this to the fact the Sewer System's dollars of Revenue, EBIT and EBITDA do not reflect any provision for income taxes while the multiples for the Comparable Group do. Consequently, we do not believe the results of the multiples of Revenue, EBIT and EBITDA are meaningful and should not be used.

In the market multiples method, the meaningful Market Multiples of the Comparable Group are used to develop an indicated value of the Sewer System. This is accomplished by

multiplying the Sewer System's financial and operating data by the Comparable Group's median Market Multiples (Exhibit 10, page 1). The results of the market multiples method (Exhibit 10, page 1) show a range of value for the Sewer System of $22.4 million to $45.7 million and collectively, indicated value of $34.4 million based on the meaningful Market Multiples.

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 business line. Although many transactions occur annually, only a limited number of the transactions provide enough public information for comparative purposes.

Using certain public information relating to selected transactions involving the purchase or sale of businesses involved in the same business line, we calculated sales price multiples of: revenue ("Revenue"); EBITDA; EBIT; assets ("Assets"); utility customers ("Customers"); and population of the area served ("Population").

In doing the selected transactions method, we reviewed the Enterprise Value based upon the transaction sales price. We reviewed 237 transactions in the water and wastewater industry since 1992 in conducting our selected transactions' analyses. In total, the 237 transactions we reviewed include: 10 acquisitions of large actively traded IOUs; 153 closely held or inactively traded IOUs; 11 acquisitions from Eminent Domain; and 63 acquisitions of municipal or municipally-owned systems.

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 or limited public information exits. Additionally, not all transactions are comparable since some purchase prices may only involve the acquisition of the common stock and other purchase prices may be net of cash. In either 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).

The selected transactions method tends to focus on the value of a business at the time the acquisition of that business was completed, rather than today's market value (9/30/2016). The change in the Comparable Group's market multiples of NPPE and ICAP, shown in Figure 1, shows the change in market valuation over the last 72 months. The Comparable Group's market multiples of NPPE and ICAP were indexed to 9/30/16 valuation multiples so that the 9/30/16 valuation multiples has an index value of 100.

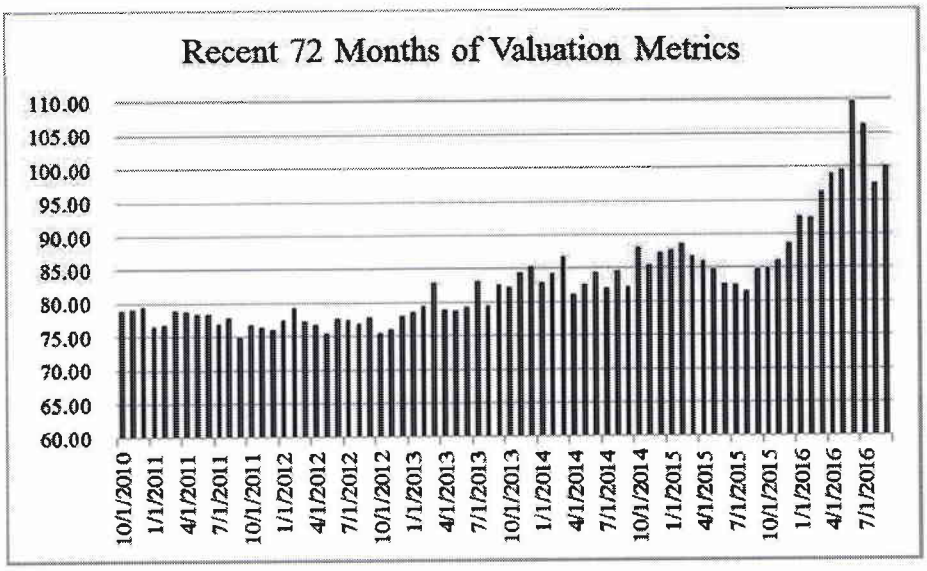


Figure 1

The Comparable Group's 9/30/16 valuation multiples are 8% higher than 2016's lowest levels and 10% below 2016's highest levels. The Comparable Group's 9/30/16 valuation multiples are 11% to 19% higher than 2015's, are 12% to 19% higher than 2014's, are 22% to 15% higher than 2013's, are 22% to 15% higher than 2013's and 21% to 25% higher than the years 2011 - 2012.

Because of the recent rapid rise in valuation multiples over the last 12 months we limited our search for selected transactions to those that occurred in 2016. We only found 8 selected transactions while applying no other selection criteria other than transacting in 2016. The 8 accessible selected transactions are listed in Table 3.

Buyer	Seller	Price
Pennsylvania-American Water Company	Sewer Authority of the City of Scranton	$195,000,000
Pennsylvania-American Water Company	McKeesport wastewater system	156,000,000
New Jersey-American Water Company	Shorelands Water Company	41,100,000
Connecticut Water Service, Inc.	Avon Water Company	32,400,000
Pennsylvania American Water Company	Borough of New Cumberland	23,000,000
Connecticut Water Service, Inc.	Heritage Village Water Company	15,800,000
The York Water Company	West York Borough	395,000
The York Water Company	Stockham's Village Mobile Home Park	15,000

Table 3

We believe the two York Water Company transactions are too small to provide meaning numbers. After the two York Water Company transactions were removed we applied the known transaction multiples to the Sewer System's financial and operating data to develop an indicated value of the Sewer System. This was accomplished by multiplying the Sewer System's financial and operating data by the known selected transactions market multiples. The results of the selected transactions method showed a range of value for the Sewer System of $12.4 million to $37.6 million based on the available selected transactions market multiples.

Due to the small number of selected transactions which occurred in 2016 and the recent rise in valuation multiples rendering older selected transactions data incompatible, we believe the results from the selected transactions method is not reliable in the current environment.

Therefore, the results of the market multiples method form the basis for our Market Approach conclusion.

Conclusion. We summarize our findings for the Sewer System on Exhibit 11. Our findings for the Sewer System is based on the Cost, Market and Income Approaches to valuation. We used four methods under the Cost, Market and Income Approaches to valuation: Original Cost New Less Depreciation Method, Market Multiple Discounted Cash Flow Method, Capitalization Discounted Cash Flow Method, and the Market Multiples 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. The results from the original cost new less depreciation method form the basis for our Cost Approach.

Besides forming the basis for our Cost Approach we believe the original cost new less depreciation method provides 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 1.5-times higher than their original cost new less depreciation or net property, plant and equipment. Similarly, the Comparable Group's Enterprise Value is currently 1.1-times higher than their original cost new or gross property, plant and equipment.

The fact that the market is valuing publicly traded water utility companies at 1.5-times higher than their original cost new less depreciation or net property, plant and equipment is a clear indication the original cost new less depreciation does not currently denote fair market value.

Based on these facts, we have given the results of the Cost Approach, which is supported by the original cost new less depreciation method, the least weight (i.e., 10%) of the three approaches used in our appraisal. We believe the market approach and the income approach used

in this report is equally relevant. Therefore, we assign an equal weight to each result (i.e., 45% each) and calculate our estimate of the fair market value based upon the aforesaid weightings.

The results of our analyses, shown on Exhibit 11, indicate a range of value for the Sewer System of $18.6 million to $36.3 million and collectively, based upon our assigned weightings, indicate a fair market value of $ 33,666,000 (rounded) for the Sewer 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 twenty years, he has continuously studied rates of return requirements for regulated firms. In this regard, he supervised the preparation of rate of return studies in connection with his testimony and in the past, for other individuals. He also assisted and/or developed dividend policy studies, nuclear prudence studies, calculated fixed charge rates for avoided costs involving cogeneration projects, financial decision studies for capital budgeting purposes and developed financial models for determining future capital requirements and the effect of those requirements on investors and ratepayers, valued utility property and common stock for acquisition and divestiture, and assisted in the private placement of fixed capital securities for public utilities.

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

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

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

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, waste water, 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 twenty states including: Arizona, California, Colorado, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, Missouri, New Hampshire, New Jersey, New York, North Carolina, Oklahoma, Pennsylvania, Vermont, Virginia, and West Virginia. His testimonies covered various subjects including: valuation, fair value. fair rate of return, appropriate capital structure and fixed capital cost rates, depreciation, purchased water adjustments, synchronization of interest charges for income tax purposes, cash working capital, lead-lag studies, and financial analyses of investment alternatives.

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

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.

EXHIBITS

EXHIBIT 1

New Garden Township and Authority's Sewage Collection and Treatment System
Selected Audited Financial Information

	2012		2013		2014				
	Sewer Fund	Sewer Authority	Sewer Fund	Sewer Authority	Sewer Fund	Sewer Authority	Combined 2012	Combined 2013	Combined 2014
OPERATING REVENUES									
Charges for services	1,911,799		2,353,097		2,191,616		1,911,799	2,353,097	2,191,616
Other	191,421		109,585		56,167		191,421	109,585	56,167
Total operating revenues	2,103,220		2,462,682		2,247,783		2,103,220	2,462,682	2,247,783
OPERATING EXPENSES									
Salaries and wages	194,597		211,927		102,658		194,597	211,927	102,658
Employee benefits	111,232		102,821		117,290		111,232	102,821	117,290
Administrative expenses	282,645	24	214,887	24	138,236	24	282,669	214,911	138,260
Insurance	38,064		48,147		46,147		38,064	48,147	46,147
Professional services	456,163		352,318		321,421		456,163	352,318	321,421
Repairs and maintenance	24,388		16,490		14,552		24,388	16,490	14,552
Supplies	23,555		31,199		25,948		23,555	31,199	25,948
Utilities	161,635		149,726		153,558		161,635	149,726	153,558
Wastewater treatment services	230,845		216,219		239,766		230,845	216,219	239,766
Depreciation	44,988	387,831	48,084	388,957	53,765	391,103	432,819	437,041	444,868
Total operating expenses	1,568,112	387,855	1,391,818	388,981	1,213,341	391,127	1,955,967	1,780,799	1,604,468
CAPX	25,776		69,224		20,661		25,776	69,224	20,661
CONTRIBUTIONS		91,206		0		359,396	91,206	0	359,396
CAPITAL									
Current portion of notes payable	0	634,000	0	659,000	0	686,000	634,000	659,000	686,000
Notes payable	0	3,455,000	0	2,796,000	0	2,108,000	3,455,000	2,796,000	2,108,000
Net investment in capital assets					3,044,952	11,147,382			14,192,334
Unrestricted					4,947,039	3,752			4,950,791
Capital assets, net					3,044,952	13,941,382			16,986,334
Income (Loss) Before Transfers	5,414,600	(567,569)	1,077,676	(542,912)	1,283,251	(514,159)	4,847,031	534,764	769,092
Interest paid	-	179,911	-	154,117	-	123,537	179,911	154,117	123,537
Principal	-	609,000	-	634,000	-	661,000	609,000	634,000	661,000
PP&E-Total Net	3,056,916	14,362,046	3,078,056	13,973,089	3,044,952	13,941,382	17,418,962	17,051,145	16,986,334
Debt	-	4,089,000	-	3,455,000	-	2,794,000	4,089,000	3,455,000	2,794,000
Fund Equity	-	3,455,000	-	2,796,000	3,044,952	13,255,382	3,455,000	2,796,000	16,300,334
Total Capital	-	7,544,000	-	6,251,000	3,044,952	16,049,382	7,544,000	6,251,000	19,094,334
ASSETS					8,012,006	14,049,639			22,061,645
Total Debt	0	4,089,000	0	3,455,000	0	2,794,000	4,089,000	3,455,000	2,794,000
CAPX	25,776	0	69,224	0	20,661	0	25,776	69,224	20,661

Source of Information: Audited Financial Statements

EXHIBIT 2

New Garden Township and Authority's Sewage Collection and Treatment System
Customer Mix and Customer Flows
Penetration of Service Area
Estimated 2016 Customer Mix

TABLE 2.1 Customer Mix and Customer Flows

Area	Type	Units	Active Units	Accounts	Flow 2015	Flow 2014	Flow 2013 (1,000 gallons)	Flow 2012	Flow 2011	Active / Units	Units / Acct	2015 Flow per Units	2015 Flow per Active Units (1,000 gallons)	2015 Flow per Accounts
East End Sewer														
	CO1	145	109	65	8,245	8,412	7,546	9,736	10,288	0.75	2.23	56.862	75.642	126.846
	CO2	40	16	13	3,467	3,835				0.40	3.08	86.675	216.688	266.692
	IND	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0
	MIX	8	7	3	38	61	89	199	101	0.88	2.67	4.750	5.429	12.667
	RES	1,043	1,012	823	53,351	53,952	51,769	54,870	54,344	0.97	1.27	51.151	52.718	64.825
		1,236	1,144	904	65,101	66,260	59,404	64,805	64,733	0.93	1.37	52.671	56.906	72.014
South End Sewer														
	CO1	6	2	2	291	595	212	155	132	0.33	3.00	48.500	145.500	145.500
	RES	611	605	607	29,675	29,668	30,935	31,308	32,462	0.99	1.01	48.568	49.050	48.888
		617	607	609	29,966	30,263	31,147	31,463	32,594	0.98	1.01	48.567	49.367	49.205
Avondale Sewer														
	CO1	397	48	38	11,786	11,115	10,972	13,712	15,594	0.12	10.45	29.688	245.542	310.158
	CO2	4	4	4	862	790				1.00	1.00	215.500	215.500	215.500
	MIX	8	22	8	1,141	1,093	921	993	1,337	2.75	1.00	142.625	51.864	142.625
	RES	306	282	230	15,517	16,110	14,160	15,305	15,221	0.92	1.33	50.709	55.025	67.465
	TWP	3	3	3	94	136	134	133	141	1.00	1.00	31.333	31.333	31.333
		718	359	283	29,400	29,244	26,187	30,143	32,293	0.50	2.54	40.947	81.894	103.887
Total System														
	CO1/CO2	592	179	122	24,651	24,747	18,730	23,603	26,014	0.30	4.85	41.640	137.715	202.057
	MIX	16	29	11	1,179	1,154	1,010	1,192	1,438	1.81	1.45	73.688	40.655	107.182
	RES	1,960	1,899	1,660	98,543	99,730	96,864	101,483	102,027	0.97	1.18	50.277	51.892	59.363
	TWP	3	3	3	94	136	134	133	141	1.00	1.00	31.333	31.333	31.333
		2,571	2,110	1,796	124,467	125,767	116,738	126,411	129,620	0.82	1.43	48.412	58.989	69.302

TABLE 2.2 Penetration of Service Area

	2015	2016			
TWP wide					
Population	12,085	12,405			
Business Est	583	**589**	9.49 (Est. Employee/Bus Unit)		
Business Employee	5,530	5,585	0.01 (Est. growth in Pop)		
Population in Households		12,222			
Total Household Units		3,986			
Vacant rate		4.6%			
			Township Household Units	1,980	
Bus Employ/Unit	9.49	**9.49**	Sewer System Household Units	3,986	
			Sewer System Household		
Customers (EDUs)		2502	Market Penetration	49.7%	
Population in Households		12,222			
Total Household Units		**3,986**			
Population / Households		**3.07**			
Sewer System					
RES					
Units	1,960	**1,980**	0.01 (Est. growth in Pop)		
Active Units	1,899	1,918	(Est. on Vacancy rate)		
Vacant rate	3.1%	3.1% constant			
CO1/CO2/MIX					
Active Units	208	**210**	0.01 (Est. growth in Pop)	1%	

Penetration		Count	Penetration Goal	Count	Time Period	CGAR
Sewer/TWP - Household Ratio	49.7%	1980	95%	3787	30	2.19%
Sewer/TWP - Business Ratio	35.7%	210	95%	560	30	3.32%

TABLE 2.3 Estimated 2016 Customer Mix

	Units	Active Units	Accounts
2015			
CO1/CO2	592	179	122
MIX	16	29	11
RES	1,960	1,899	1,660
TWP	3	3	3
	2,571	2,110	1,796
CO1/CO2/MIX	608	208	133
Est 2016 @ 1% growth			
CO1/CO2	598	181	123
MIX	16	29	11
RES	**1980**	1918	1677
TWP	3	3	3
	2,597	2,131	1,814
CO1/CO2/MIX	614	**210**	134

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
Chester County	433,501	498,886	15.1%	-
New Garden Township	9,083	11,984	31.9%	105 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%
New Garden Township	12,096	12,730	13,360	14,000	14,555	15,010	15,396	5.2%	4.9%	4.8%	4.0%	3.1%	2.6%	27.3%

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%
New Garden Township	6,534	6,884	7,277	7,673	7,999	8,268	8,578	5.4%	5.7%	5.4%	4.2%	3.4%	3.7%	31.3%

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

EXHIBIT 4

Comparison of Credit Market Financial Risk Metrics
For New Garden Township and Authority's Sewage Collection and Treatment System
The Comparable Group
2012 - 2014 (1)

	New Garden's Sewage Collection and Treatment System			Comparable Group		
	2014	2013	2012	2014	2013	2012
Debt Service Coverage	1.7	1.4	6.9	3.0	2.0	2.9
Pre-Tax Interest Coverage - Including AFC(2)(x)	7.2	4.5	27.9	4.2	3.9	3.4
Post-Tax Interest Coverage - Including AFC(2)(x)	7.2	4.5	27.9	3.4	2.8	2.6
GCF / Interest Coverage(3)(x)	10.8	7.3	30.3	6.2	4.7	4.2
GCF / Tot. Debt(4)(%)	43.4	28.1	129.1	22.2	20.1	18.2
GCF / Construction(5)(%)	5,875.6	1,403.9	20,483.6	114.0	108.3	105.3

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: 2011-2014 Audited Financial Statements
S&P Research Insight
EXHIBIT 1

New Garden Township and Authority's Sewage Collection and Treatment System
Calcualted Adjustment to Equity Cost Rate
Based on Size Premiums

A	B	C	D	E	F	G	H	I	J
			Market Value By Decile (2)			Change in Return For Every Million in Value (3)		Calculated Change in Cost Rate Based on:	
Row No.	Group	Decile (1)	Smallest (Mill $)	Largest (Mill $)	Largest Minus Smallest (Mill $)	Largest Market Value	Average Market Value	Largest Market Value (4)	Average Market Value (5)
1.	Comparable Group	8.0	549.0	1,011.0	462.0	0.0006	0.0006	0.28	0.28
2.	Decile #9	9.0	301.0	549.0	248.0	0.0017	0.0023	0.42	0.57
3.	New Garden's Sewage Collection and Treatment System	10.0	2.2	301.0	298.8	0.0141	0.0282	4.21	8.43
							Totals	4.91	9.28

Notes: (1) The decile for the Comparable Group is developed on page 3 of this Exhibit. The decile for New Garden's Sewage Collection and Treatment System is based on financial information.

(2) The decile market values are from column D of page 2 of this Exhibit. The largest market value for the Comparable Group is based on an average decile of 7.2. The smallest value for New Garden's Sewage Collection and Treatment System is based on financial information.

(3) From columns H and I of page 2 of this Exhibit.

(4) Column G times column F.

(5) Column H times column F.

New Garden Township and Authority's Sewage Collection and Treatment System
Measuring the Impact of Size on the Cost Rate of Capital
Through Common Stock Returns

Change in Return for Size-Deciles Portfolio of the NYSE/AMEX/NASDAQ Common Stocks (1)								
A	B	C	D	E	F	G	H	I
			Market Capitalization				Change in Return For Every Million in Value	
Decile	Average Return 1926-14 (%)	Change in Decile Return (%)	Largest Market Value in the Decile (Mill $)	Calculated Average Market Value (Mill $)	Change in Largest Value (Mill $)	Change in Average Value (Mill $)	Largest Value (Col C/Col F)	Average Value (Col C/Col G)
(Largest Stocks)								
1	11.2	--	591,016	307,645	--	--	--	--
2	13.0	1.80	24,273	17,190	566,743	290,455	0.000	0.000
3	13.4	0.40	10,106	7,976	14,167	9,214	0.000	0.000
4	14.0	0.60	5,845	4,785	4,261	3,191	0.000	0.000
5	14.8	0.80	3,724	3,159	2,121	1,626	0.000	0.001
6	15.0	0.20	2,593	2,140	1,131	1,019	0.000	0.000
7	15.5	0.50	1,687	1,349	906	791	0.001	0.001
8	16.3	0.80	1,011	780	676	569	0.001	0.001
9	17.1	0.80	549	425	462	355	0.002	0.002
10	20.6	3.50	301	301	248	124	0.014	0.028
(Smallest Stocks)								

Notes: (1) 2015 Ibbotson Stocks, Bonds, Bills, and Inflation (SBBI) Classic Yearbook

New Garden Township and Authority's Sewage Collection and Treatment System

Recent Market Values and Ibbotson Associates Market Deciles

Comparable Group

	9/30/2016 Market Value (Mill $)	Market Decile
Comparable Group		
American States Water Co	$1,464.148	7
American Water Works Co Inc	13,314.186	2
Aqua America Inc	5,405.019	4
Artesian Resources -CL A	259.887	10
California Water Service Gp	1,539.389	7
Connecticut Water Svc Inc	547.726	9
Middlesex Water Co	573.707	8
SJW Corp	892.907	8
York Water Co	381.724	9
Median		8.0

Source of Information: 2015 Ibbotson Stocks, Bonds, Bills, and Inflation (SBBI) Classic Yearbook
S&P Research Insight

New Garden Township and Authority's Sewage Collection and Treatment System
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 (Millions of $)	Net Property, Plant & Equipment	Percentage of Property, Plant & Equipment Not Depreciated
New Garden's Sewage Collection and Treatment System	$27.267	$18.590	68%
Comparable Group			
American States Water Co	$1,655.690	$1,107.137	67%
American Water Works Co Inc	17,871.000	13,130.000	73%
Aqua America Inc	6,282.410	4,823.484	77%
Artesian Resources -CL A	527.076	417.558	79%
California Water Service Gp	2,621.322	1,785.077	68%
Connecticut Water Svc Inc	774.515	568.406	73%
Middlesex Water Co	628.225	497.100	79%
SJW Corp	1,652.828	1,143.584	69%
York Water Co	331.721	264.439	80%
Median			73%

TABLE 6.2 Property Plant & Equipment Analysis for Contributions

(As of 9/30/2016)

	Net Property, Plant & Equipment (Millions of $)	Investor's Capital	Percentage of Property, Plant & Equipment Net of Contributions
Comparable Group			
American States Water Co	$1,107.137	$797.606	72%
American Water Works Co Inc	13,130.000	11,014.000	84%
Aqua America Inc	4,823.484	3,567.037	74%
Artesian Resources -CL A	417.558	238.380	57%
California Water Service Gp	1,785.077	1,192.547	67%
Connecticut Water Svc Inc	568.406	432.072	76%
Middlesex Water Co	497.100	345.567	70%
SJW Corp	1,143.584	760.194	66%
York Water Co	264.439	196.546	74%
Median			72%

New Garden Township and Authority's Sewage Collection and Treatment System
Property Plant & Equipment Analysis
Capital Expenditures Analysis
Growth Rate Analyses
Profit Margin Analyses

TABLE 6.3 Capital Expenditures Analysis

	PP&E-Total Net (Millions of $)				Capital Expenditures (Millions of $)			
	2015	2014	2013	2012	2015	2014	2013	2012
New Garden's Sewage Collection and Treatment System	NA	$16.986	$17.051	$17.419	NA	$0.021	$0.069	$0.026
Comparable Group								
American States Water Co	$1,060.794	$1,003.520	$981.477	$917.791	$87.323	$72.553	$97.379	$68.104
American Water Works Co Inc	12,812.000	11,824.832	11,201.655	10,588.808	1,160.000	956.119	980.252	928.574
Aqua America Inc	4,688.925	4,401.990	4,167.293	3,936.163	364.689	328.605	308.171	347.985
Artesian Resources -CL A	409.562	397.823	383.102	370.645	20.694	23.730	21.188	20.546
California Water Service Gp	1,689.252	1,579.060	1,503.612	1,443.093	176.833	132.015	122.988	127.681
Connecticut Water Svc Inc	546.284	506.939	471.876	447.911	48.025	45.668	33.303	24.653
Middlesex Water Co	481.870	465.406	446.479	435.218	25.773	22.596	20.080	21.578
SJW Corp	1,098.247	1,025.215	966.557	896.747	106.774	101.936	94.325	105.834
York Water Co	262.189	253.959	245.000	240.315	13.844	14.139	9.852	11.543

	Capital Expenditures / PP&E-Total Net			
	2015	2014	2013	2012
New Garden's Sewage Collection and Treatment System	NA	0%	0%	0%
Comparable Group				
American States Water Co	8%	7%	10%	7%
American Water Works Co Inc	9%	8%	9%	9%
Aqua America Inc	8%	7%	7%	9%
Artesian Resources -CL A	5%	6%	6%	6%
California Water Service Gp	10%	8%	8%	9%
Connecticut Water Svc Inc	9%	9%	7%	6%
Middlesex Water Co	5%	5%	4%	5%
SJW Corp	10%	10%	10%	12%
York Water Co	5%	6%	4%	5%
Median	8%	7%	7%	7%

New Garden Township and Authority's Sewage Collection and Treatment System
Property Plant & Equipment Analysis
Capital Expenditures Analysis
Growth Rate Analyses
Profit Margin Analyses

	Revenues				EBITDA			
	2015	2014	2013	2012	2015	2014	2013	2012
	(Millions of $)				(Millions of $)			
New Garden's Sewage Collection and Treatment System	$2.369	$2.248	$2.463	$2.103	$1.186	$1.088	$1.119	$0.580
Comparable Group								
American States Water Co	$458.641	$465.791	$472.077	$466.908	$160.522	$160.063	$159.160	$152.411
American Water Works Co Inc	3,159.000	3,011.328	2,901.858	2,876.889	1,306.476	1,154.957	1,102.741	917.849
Aqua America Inc	814.204	779.903	768.643	757.760	433.284	387.423	380.137	340.460
Artesian Resources -CL A	77.024	72.465	69.073	70.563	30.401	25.800	26.382	25.061
California Water Service Gp	588.368	597.499	584.103	559.966	147.867	140.577	127.710	122.709
Connecticut Water Svc Inc	96.838	94.853	92.337	84.650	37.534	31.856	28.316	23.242
Middlesex Water Co	126.025	117.139	114.846	110.379	38.056	33.947	35.841	28.720
SJW Corp	305.082	319.668	276.869	261.547	86.302	83.532	68.003	63.335
York Water Co	47.089	45.900	42.383	41.447	25.743	24.780	24.359	21.800

	EBIT			
	2015	2014	2013	2012
	(Millions of $)			
New Garden's Sewage Collection and Treatment System	$0.741	$0.643	$0.682	$0.147
Comparable Group				
American States Water Co	$118.489	$118.990	$119.070	$111.026
American Water Works Co Inc	1,075.000	1,014.026	945.849	924.973
Aqua America Inc	321.100	314.359	305.242	321.517
Artesian Resources -CL A	25.366	22.421	20.072	22.471
California Water Service Gp	95.681	108.574	93.052	93.199
Connecticut Water Svc Inc	26.670	30.224	29.942	27.752
Middlesex Water Co	35.840	34.392	30.970	27.647
SJW Corp	79.960	92.878	53.407	55.297
York Water Co	22.661	22.077	20.761	20.573

New Garden Township and Authority's Sewage Collection and Treatment System
Property Plant & Equipment Analysis
Capital Expenditures Analysis
Growth Rate Analyses
Profit Margin Analyses

TABLE 6.4 Growth Rate Analyses

	Revenue Growth			EBITDA Growth		
	2015	2014	2013	2015	2014	2013
New Garden's Sewage Collection and Treatment System	5.4%	-8.7%	17.1%	9.0%	-2.8%	92.9%
Comparable Group						
American States Water Co	-1.5%	-1.3%	1.1%	0.3%	0.6%	4.4%
American Water Works Co Inc	4.9%	3.8%	0.9%	13.1%	4.7%	20.1%
Aqua America Inc	4.4%	1.5%	1.4%	11.8%	1.9%	11.7%
Artesian Resources -CL A	6.3%	4.9%	-2.1%	17.8%	-2.2%	5.3%
California Water Service Gp	-1.5%	2.3%	4.3%	5.2%	10.1%	4.1%
Connecticut Water Svc Inc	2.1%	2.7%	9.1%	17.8%	12.5%	21.8%
Middlesex Water Co	7.6%	2.0%	4.0%	12.1%	-5.3%	24.8%
SJW Corp	-4.6%	15.5%	5.9%	3.3%	22.8%	7.4%
York Water Co	2.6%	8.3%	2.3%	3.9%	1.7%	11.7%
Median	2.6%	2.7%	2.3%	11.8%	1.9%	11.7%

	EBIT Growth		
	2015	2014	2013
New Garden's Sewage Collection and Treatment System	15.2%	-5.7%	363.9%
Comparable Group			
American States Water Co	-0.4%	-0.1%	7.2%
American Water Works Co Inc	6.0%	7.2%	2.3%
Aqua America Inc	2.1%	3.0%	-5.1%
Artesian Resources -CL A	13.1%	11.7%	-10.7%
California Water Service Gp	-11.9%	16.7%	-0.2%
Connecticut Water Svc Inc	-11.8%	0.9%	7.9%
Middlesex Water Co	4.2%	11.0%	12.0%
SJW Corp	-13.9%	73.9%	-3.4%
York Water Co	2.6%	6.3%	0.9%
Median	2.1%	7.2%	0.9%

New Garden Township and Authority's Sewage Collection and Treatment System
Property Plant & Equipment Analysis
Capital Expenditures Analysis
Growth Rate Analyses
Profit Margin Analyses

TABLE 6.5 Profit Margin Analyses

	EBITDA / Revenue - Margin		
	2015	2014	2013
New Garden's Sewage Collection and Treatment System	50.1%	48.4%	45.4%
Comparable Group			
American States Water Co	35.0%	34.4%	33.7%
American Water Works Co Inc	41.4%	38.4%	38.0%
Aqua America Inc	53.2%	49.7%	49.5%
Artesian Resources -CL A	39.5%	35.6%	38.2%
California Water Service Gp	25.1%	23.5%	21.9%
Connecticut Water Svc Inc	38.8%	33.6%	30.7%
Middlesex Water Co	30.2%	29.0%	31.2%
SJW Corp	28.3%	26.1%	24.6%
York Water Co	54.7%	54.0%	57.5%
Median	38.8%	34.4%	33.7%

	EBIT / Revenue - Margin		
	2015	2014	2013
New Garden's Sewage Collection and Treatment System	31.3%	28.6%	27.7%
Comparable Group			
American States Water Co	25.8%	25.5%	25.2%
American Water Works Co Inc	34.0%	33.7%	32.6%
Aqua America Inc	39.4%	40.3%	39.7%
Artesian Resources -CL A	32.9%	30.9%	29.1%
California Water Service Gp	16.3%	18.2%	15.9%
Connecticut Water Svc Inc	27.5%	31.9%	32.4%
Middlesex Water Co	28.4%	29.4%	27.0%
SJW Corp	26.2%	29.1%	19.3%
York Water Co	48.1%	48.1%	49.0%
Median	28.4%	30.9%	29.1%

Source: S&P Research Insight
EXHIBIT 1

Income Approach
New Garden Township and Authority's Sewage Collection and Treatment System
Pro Forma Operations
Earnings Capitalization Model

	Actual (Combined Township & Authority)			Estimated	Estimated Current Year
	2012	2013	2014	2015	2016
1. **OPERATING REVENUES (1)**					
2. Charges for services	1,911,799	2,353,097	2,191,616	2,312,960	2,325,039
3. Other	191,421	109,585	56,167	56,167	56,167
4. **Total Operating Revenues**	2,103,220	2,462,682	2,247,783	2,369,127	2,381,206
5. **OPERATING EXPENSES (1)**					
6. Salaries and wages	194,597	211,927	102,658	104,711	106,805
7. Employee benefits	111,232	102,821	117,290	119,636	122,029
8. Administrative expenses	282,669	214,911	138,260	141,025	143,846
9. Insurance	38,064	48,147	46,147	47,070	48,011
10. Professional services	456,163	352,318	321,421	327,849	334,406
11. Repairs and maintenance	24,388	16,490	14,552	14,843	15,140
12. Supplies	23,555	31,199	25,948	26,467	26,996
13. Utilities	161,635	149,726	153,558	156,629	159,762
14. Wastewater treatment services	230,845	216,219	239,766	242,033	248,163
15. **Operating Expenses Before Depreciation**	1,523,148	1,343,758	1,159,600	1,180,264	1,205,158
16. Depreciation (2)	432,819	437,041	444,868	444,868	451917
17. **Total Operating Expenses**	1,955,967	1,780,799	1,604,468	1,625,132	1,657,075
18. **Operating Income**	147,253	681,883	643,315	743,995	724,131
19. Revenues (3)	2,103,220	2,462,682	2,247,783	2,369,127	2,381,206
20. EBITDA (4)	580,072	1,118,924	1,088,183	1,188,863	1,176,048
21. EBIT (5)	147,253	681,883	643,315	743,995	724,131
22. EBIT	147,253	681,883	643,315	743,995	724,131
23. (-) Income Taxes	0	0	0	0	0
24. Debt Free Net Income	147,253	681,883	643,315	743,995	724,131
25. (+) Depreciation & Amortization	432,819	437,041	444,868	444,868	451,917
26. (-) Capital Expenditures (6)	25,776	69,224	20,661	9,276	4,677
27. (-) Changes in Working Capital (7)	204,012	238,880	218,035	229,805	230,977
28. Debt Free Net Cash Flow	$350,284	$810,820	$849,487	$949,782	$940,394

See page 2 for notes and assumptions.

Income Approach
New Garden Township and Authority's Sewage Collection and Treatment System
Pro Forma Operations
Earnings Capitalization Model

		3.66% Capitalization Rate Model	2.66% Capitalization Rate Model
29.	Debt Free Net Cash Flow (8)	$1,933,306	$1,933,306
30.	Capitalization Factor: (9)	3.66%	2.66%
31.	Indicated Value (10)	$52,822,577	$72,680,689

Notes: (1) Assumptions:

Charges for services - in 2015 reflects the 9.5% 4th quarter 2014 rate increase and 2015 flows. Flows in 2016 are the average of 2014 and 2015 flows.

Other (Operating Revenues) - equal to 2014 results for years 2015 and 2016.

OPERATING EXPENSES - increase at 2% annually after 2014 unless noted elsewhere.

Wastewater treatment services - Subsequent to 2014 an annual 2% rate increase assumed along with a 1% annual growth in flows.

(2) Depreciation - 2016 based on OCNLD depreciation rate.

(3) Line 4.

(4) Line 18 + line 16.

(5) Line 18.

(6) Capital Expenditures - 2015 & 2016 based on OCNLD Study inventory.

(7) Changes in Working Capital - 2012 - 2016 based on New Garden actual average of 9.7% of revenues.

(8) LINE 28.

(9) Capitalization rate, "K", at 9/30/2016 adjusted for stated growth, "g", where capitalization rate = K - g.

(10) Line 29 ÷ Line 30.

Income Approach
New Garden Township and Authority's Sewage Collection and Treatment System
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

	Actual (Combined Township & Authority)			Estimated	Current Year	Year 1	Year 2	Year 3
	2012	2013	2014	2015	2016	2017	2018	2019
1. **OPERATING REVENUES (1)**								
2. Charges for services	1,911,799	2,353,097	2,191,616	2,312,960	2,325,039	2,817,943	3,237,473	3,269,839
3. Other	191,421	109,585	56,167	56,167	56,167	57,290	58,436	59,605
4. **Total Operating Revenues**	2,103,220	2,462,682	2,247,783	2,369,127	2,381,206	2,875,233	3,295,909	3,329,444
5. **OPERATING EXPENSES (1)**								
6. Salaries and wages	194,597	211,927	102,658	104,711	106,805	108,941	111,120	113,343
7. Employee benefits	111,232	102,821	117,290	119,636	122,029	124,469	126,958	129,498
8. Administrative expenses	282,669	214,911	138,260	141,025	143,846	0	0	0
9. Insurance	38,064	48,147	46,147	47,070	48,011	19,888	22,974	25,987
10. Professional services	456,163	352,318	321,421	327,849	334,406	85,274	86,979	88,719
11. Repairs and maintenance	24,388	16,490	14,552	14,843	15,140	13,898	14,176	14,460
12. Supplies	23,555	31,199	25,948	26,467	26,996	22,098	25,526	28,874
13. Utilities	161,635	149,726	153,558	156,629	159,762	146,661	149,595	152,586
14. Wastewater treatment services	230,845	216,219	239,766	242,033	248,163	255,657	263,379	271,332
15. **Operating Expenses Before Depreciation**	1,523,148	1,343,758	1,159,600	1,180,264	1,205,158	776,887	800,708	824,798
16. Depreciation (2)	432,819	437,041	444,868	444,868	451917	491,917	571,917	651,917
17. **Total Operating Expenses**	1,955,967	1,780,799	1,604,468	1,625,132	1,657,075	1,268,804	1,372,625	1,476,715
18. **Operating Income**	147,253	681,883	643,315	743,995	724,131	1,606,429	1,923,284	1,852,728
19. Revenues (3)	2,103,220	2,462,682	2,247,783	2,369,127	2,381,206	2,875,233	3,295,909	3,329,444
20. EBITDA (4)	580,072	1,118,924	1,088,183	1,188,863	1,176,048	2,098,346	2,495,201	2,504,645
21. EBIT (5)	147,253	681,883	643,315	743,995	724,131	1,606,429	1,923,284	1,852,728
22. EBIT	147,253	681,883	643,315	743,995	724,131	1,606,429	1,923,284	1,852,728
23. (-) Income Taxes	0	0	0	0	0	0	0	0
24. Debt Free Net Income	147,253	681,883	643,315	743,995	724,131	1,606,429	1,923,284	1,852,728
25. (+) Depreciation & Amortization	432,819	437,041	444,868	444,868	451,917	491,917	571,917	651,917
26. (-) Capital Expenditures (6)	25,776	69,224	20,661	9,276	4,677	4,000,000	4,000,000	4,000,000
27. (-) Changes in Working Capital (7)	204,012	238,880	218,035	229,805	230,977	(5,750)	(6,592)	(6,659)
28. Debt Free Net Cash Flow	$350,284	$810,820	$849,487	$949,782	$940,394	($1,895,903)	($1,498,207)	($1,488,696)
PV Time Period (mid-year)						0.5	1.5	2.5
29. Present Value Factor: 3.66% (8)						0.9822	0.9475	0.9141
30. Present Value Debt Free Net Cash Flow						($1,862,156)	($1,419,551)	($1,360,817)
31. Present Value Factor: 2.66% (9)						0.9870	0.9614	0.9365
32. Present Value Debt Free Net Cash Flow						($1,871,256)	($1,440,376)	($1,394,163)

See page 3 for notes and assumptions.

Income Approach
New Garden Township and Authority's Sewage Collection and Treatment System
Pro Forma and Estimted Operations With MUNI Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

	Proforma Estimated							
	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
	2020	2021	2022	2023	2024	2025	2026	2027
1 **OPERATING REVENUES (1)**								
2 Charges for services	3,302,536	3,335,562	3,368,918	3,402,603	3,436,619	3,575,119	3,610,860	3,646,967
3 Other	60,797	62,013	63,253	64,518	65,809	67,125	68,467	69,837
4 **Total Operating Revenues**	3,363,333	3,397,575	3,432,171	3,467,121	3,502,428	3,642,244	3,679,327	3,716,804
5 **OPERATING EXPENSES (1)**								
6 Salaries and wages	115,610	117,922	120,280	122,686	125,140	127,642	130,195	132,799
7 Employee benefits	132,088	134,729	137,424	140,172	142,976	145,835	148,752	151,727
8 Administrative expenses	0	0	0	0	0	0	0	0
9 Insurance	26,064	26,141	26,218	26,294	26,371	26,447	26,523	26,599
10 Professional services	90,493	92,303	94,149	96,032	97,953	99,912	101,910	103,948
11 Repairs and maintenance	14,749	15,044	15,345	15,652	15,965	16,284	16,610	16,942
12 Supplies	28,960	29,045	29,131	29,216	29,301	29,385	29,470	29,554
13 Utilities	155,638	158,751	161,926	165,164	168,468	171,837	175,274	178,779
14 Wastewater treatment services	279,526	287,968	296,665	305,624	314,853	324,362	334,156	344,248
15 **Operating Expenses Before Depreciation**	843,127	861,903	881,138	900,840	921,026	941,705	962,890	984,597
16 Depreciation (2)	699,770	715,634	731,816	748,320	765,155	782,327	799,842	817,707
17 **Total Operating Expenses**	1,542,898	1,577,537	1,612,954	1,649,161	1,686,181	1,724,032	1,762,732	1,802,304
18 **Operating Income**	1,820,435	1,820,038	1,819,218	1,817,960	1,816,247	1,918,212	1,916,595	1,914,500
19 Revenues (3)	3,363,333	3,397,575	3,432,171	3,467,121	3,502,428	3,642,244	3,679,327	3,716,804
20 EBITDA (4)	2,520,205	2,535,672	2,551,033	2,566,281	2,581,402	2,700,539	2,716,437	2,732,207
21 EBIT (5)	1,820,435	1,820,038	1,819,218	1,817,960	1,816,247	1,918,212	1,916,595	1,914,500
22 EBIT	1,820,435	1,820,038	1,819,218	1,817,960	1,816,247	1,918,212	1,916,595	1,914,500
23 (-) Income Taxes	0	0	0	0	0	0	0	0
24 Debt Free Net Income	1,820,435	1,820,038	1,819,218	1,817,960	1,816,247	1,918,212	1,916,595	1,914,500
25 (+) Depreciation & Amortization	699,770	715,634	731,816	748,320	765,155	782,327	799,842	817,707
26 (-) Capital Expenditures (6)	785,342	801,049	817,070	833,412	850,080	867,082	884,423	902,112
27 (-) Changes in Working Capital (7)	(6,727)	(6,795)	(6,864)	(6,934)	(7,005)	(7,284)	(7,359)	(7,434)
28 Debt Free Net Cash Flow	$1,741,590	$1,741,418	$1,740,827	$1,739,803	$1,738,327	$1,840,742	$1,839,373	$1,837,529
PV Time Period (mid-year)	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5
29 Present Value Factor: 3.66% (8)	0.8818	0.8506	0.8206	0.7916	0.7637	0.7367	0.7107	0.6856
30 Present Value Debt Free Net Cash Flow	$1,535,734	$1,481,250	$1,428,523	$1,377,228	$1,327,560	$1,356,074	$1,307,242	$1,259,810
31 Present Value Factor: 2.66% (9)	0.9122	0.8886	0.8656	0.8431	0.8213	0.8000	0.7793	0.7591
32 Present Value Debt Free Net Cash Flow	$1,588,679	$1,547,424	$1,506,860	$1,466,828	$1,427,688	$1,472,593	$1,433,423	$1,394,868

See page 3 for notes and assumptions.

Income Approach
New Garden Township and Authority's Sewage Collection and Treatment System
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 @ 3.66%	Terminal Value
Projected Debt Free Net Cash Flow (10)	$1,837,529
Divided by Capitalization Factor (8)	3.66%
11th Year Terminal Value	50,205,698
11th Year Present Value Factor (11)	0.6856
Present Value of Terminal Value	34,421,027
Present Value Debt Free Net Cash Flow for 11 Years	6,430,898
Indicated Value	$40,851,925

DCF With EBIT & EBITDA Terminal Value Model - Discount Rate of 3.66%		Multiples(12)	Terminal Value
Projected EBIT	$1,914,500	21.9	$41,927,543
Projected EBITDA	2,732,207	14.8	40,436,663
Weighted (1/3 EBIT 2/3 EBITDA) Terminal Value			40,928,653
11th Year Present Value Factor (11)			0.6856
Present Value of Terminal Value			28,060,684
Present Value Debt Free Net Cash Flow for 11 Years			6,430,898
Indicated Value			$34,491,583

DCF With Capitalization of Terminal Value Model @ 2.66%	Terminal Value
Projected Debt Free Net Cash Flow (10)	$1,837,529
Divided by Capitalization Factor (9)	2.66%
11th Year Terminal Value	69,080,021
11th Year Present Value Factor (11)	0.6856
Present Value of Terminal Value	47,361,262
Present Value Debt Free Net Cash Flow for 11 Years	6,430,898
Indicated Value	$53,792,160

Notes: (1) Assumptions:
Charges for services - in 2015 reflects the 9.5% 4th quarter 2014 rate increase and 2015 flows. Flows in 2016 are the average of 2014 and 2015 flows. Flows subsequent to 2016 increase 1% annually to account for growth. Also assumes 50% of New Garden's 40% rate increase in 2017 and 50% of New Garden's 27.5% in 2018. Adopts New Garden's 3% rate increase in 2025.
Other (Operating Revenues) - equal to 2014 results for years 2015 and 2016. Assumes 2% annual increase after 2016.
OPERATING EXPENSES - increase at 2% annually after 2014 unless noted elsewhere.
Administrative expenses - 2017 assumed eliminated due to economies of scale.
Insurance - 2017 assumed at industry average of 0.09% of Net Property Plant & Equipment due to economies of scale. Increase at 2% afterwards.
Professional services - 2017 assumed 25% of 2016 due to economies of scale. Increase at 2% afterwards.
Repairs and maintenance - 2017 assumed 90% of 2016 due to economies of scale. Increase at 2% afterwards.
Supplies - 2017 assumed at industry average of 0.10% of Net Property Plant & Equipment due to economies of scale. Increase at 2% afterwards.
Utilities - 2017 assumed 90% of 2016 due to economies of scale. Increase at 2% afterwards.
Wastewater treatment services - Subsequent to 2014 an annual 2% rate increase assumed along with a 1% annual growth in flows.
(2) Depreciation - 2016 based on OCNLD depreciation rate. Subsequent depreciation on new CAPX assumed at 2%.
(3) Line 4.
(4) Line 18 + line 16.
(5) Line 18.
(6) Capital Expenditures - 2015 & 2016 based on OCNLD Study inventory. 2017 - 2019 reflects New Garden's $12 million CAPX. Subsequent to 2019 assumed at 2% of Gross Property, Plant & Equipment.
(7) Changes in Working Capital - 2012 - 2016 based on New Garden actual average of 9.7% of revenues. Subsequent years based on water industry average -0.02% of revenues.
(8) Discount rate is the current upper end of the municipal discount rate.
(9) Discount rate is the current lower end of the municipal discount rate reflecting 1% growth.
(10) Year 2027, line 28.
(11) Year 2027, line 29.
(12) Developed on EXHIBIT 10.

Income Approach
New Garden Township and Authority's Sewage Collection and Treatment System
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

		Actual (Combined Township & Authority)			Estimated	Current Year	Year 1	Year 2	Year 3
		2012	2013	2014	2015	2016	2017	2018	2019
1.	OPERATING REVENUES (1)								
2.	Charges for services	1,911,799	2,353,097	2,191,616	2,312,960	2,325,039	2,348,286	2,371,775	3,114,133
3.	Other	191,421	109,585	56,167	56,167	56,167	57,290	58,436	59,605
4.	Total Operating Revenues	2,103,220	2,462,682	2,247,783	2,369,127	2,381,206	2,405,576	2,430,211	3,173,738
5.	OPERATING EXPENSES (1)								
6.	Salaries and wages	194,597	211,927	102,658	104,711	106,805	108,941	111,120	113,343
7.	Employee benefits	111,232	102,821	117,290	119,636	122,029	124,469	126,958	129,498
8.	Administrative expenses	282,669	214,911	138,260	141,025	143,846	0	0	0
9.	Insurance	38,064	48,147	46,147	47,070	48,011	16,324	15,918	22,461
10.	Professional services	456,163	352,318	321,421	327,849	334,406	85,274	86,979	88,719
11.	Repairs and maintenance	24,388	16,490	14,552	14,843	15,140	13,898	14,176	14,460
12.	Supplies	23,555	31,199	25,948	26,467	26,996	18,138	17,686	24,956
13.	Utilities	161,635	149,726	153,558	156,629	159,762	146,661	149,595	152,586
14.	Wastewater treatment services	230,845	216,219	239,766	242,033	248,163	255,657	263,379	271,332
15.	Operating Expenses Before Depreciation	1,523,148	1,343,758	1,159,600	1,180,264	1,205,158	769,363	785,812	817,354
16.	Depreciation (2)	432,819	437,041	444,868	444,868	451917	451,917	451,917	529,917
17.	Total Operating Expenses	1,955,967	1,780,799	1,604,468	1,625,132	1,657,075	1,221,280	1,237,729	1,347,271
18.	Operating Income	147,253	681,883	643,315	743,995	724,131	1,184,296	1,192,482	1,826,466
19.	Revenues (3)	2,103,220	2,462,682	2,247,783	2,369,127	2,381,206	2,405,576	2,430,211	3,173,738
20.	EBITDA (4)	580,072	1,118,924	1,088,183	1,188,863	1,176,048	1,636,213	1,644,399	2,356,383
21.	EBIT (5)	147,253	681,883	643,315	743,995	724,131	1,184,296	1,192,482	1,826,466
22.	EBIT	147,253	681,883	643,315	743,995	724,131	1,184,296	1,192,482	1,826,466
23.	(-) Income Taxes	0	0	0	0	0	355,289	357,745	547,940
24.	Debt Free Net Income	147,253	681,883	643,315	743,995	724,131	829,007	834,738	1,278,527
25.	(+) Depreciation & Amortization	432,819	437,041	444,868	444,868	451,917	451,917	451,917	529,917
26.	(-) Capital Expenditures (6)	25,776	69,224	20,661	9,276	4,677	0	0	7,800,000
27.	(-) Changes in Working Capital (7)	204,012	238,880	218,035	229,805	230,977	(4,811)	(4,860)	(6,347)
28.	Debt Free Net Cash Flow	$350,284	$810,820	$849,487	$949,782	$940,394	$1,285,736	$1,291,515	($5,985,209)
	PV Time Period (mid-year)						0.5	1.5	2.5
29.	Present Value Factor: 5.90% (8)						0.9717	0.9176	0.8665
30.	Present Value Debt Free Net Cash Flow						$1,249,349	$1,185,094	($5,186,184)
31.	Present Value Factor: 7.22% (9)						0.9657	0.9007	0.8401
32.	Present Value Debt Free Net Cash Flow						$1,241,635	$1,163,268	($5,028,174)

See page 4 for notes and assumptions.

Income Approach
New Garden Township and Authority's Sewage Collection and Treatment System
Pro Forma and Estimted Operations With IOU Ownership
DCF With Capitalization of Terminal Value Model and
DCF With EBIT & EBITDA Terminal Value Model

		Proforma Estimated							
		Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
		2020	2021	2022	2023	2024	2025	2026	2027
1.	OPERATING REVENUES (1)								
2.	Charges for services	3,145,272	3,176,725	3,625,597	3,661,849	3,698,456	3,735,445	3,772,789	4,572,619
3.	Other	60,797	62,013	63,253	64,518	65,809	67,125	68,467	69,837
4.	Total Operating Revenues	3,206,069	3,238,738	3,688,850	3,726,367	3,764,265	3,802,570	3,841,256	4,642,456
5.	OPERATING EXPENSES (1)								
6.	Salaries and wages	115,610	117,922	120,280	122,686	125,140	127,642	130,195	132,799
7.	Employee benefits	132,088	134,729	137,424	140,172	142,976	145,835	148,752	151,727
8.	Administrative expenses	0	0	0	0	0	0	0	0
9.	Insurance	22,538	22,616	22,694	22,771	22,848	22,925	23,002	23,079
10.	Professional services	90,493	92,303	94,149	96,032	97,953	99,912	101,910	103,948
11.	Repairs and maintenance	14,749	15,044	15,345	15,652	15,965	16,284	16,610	16,942
12.	Supplies	25,043	25,129	25,215	25,301	25,387	25,473	25,558	25,644
13.	Utilities	155,638	158,751	161,926	165,164	168,468	171,837	175,274	178,779
14.	Wastewater treatment services	279,526	287,968	296,665	305,624	314,853	324,362	334,156	344,248
15.	Operating Expenses Before Depreciation	835,684	854,462	873,698	893,402	913,589	934,271	955,457	977,167
16.	Depreciation (2)	614,930	629,098	643,548	658,287	673,322	688,657	704,298	720,253
17.	Total Operating Expenses	1,450,615	1,483,560	1,517,246	1,551,690	1,586,910	1,622,927	1,659,755	1,697,419
18.	Operating Income	1,755,454	1,755,178	2,171,604	2,174,677	2,177,354	2,179,642	2,181,501	2,945,036
19.	Revenues (3)	3,206,069	3,238,738	3,688,850	3,726,367	3,764,265	3,802,570	3,841,256	4,642,456
20.	EBITDA (4)	2,370,384	2,384,276	2,815,152	2,832,965	2,850,676	2,868,299	2,885,799	3,665,289
21.	EBIT (5)	1,755,454	1,755,178	2,171,604	2,174,677	2,177,354	2,179,642	2,181,501	2,945,036
22.	EBIT	1,755,454	1,755,178	2,171,604	2,174,677	2,177,354	2,179,642	2,181,501	2,945,036
23.	(-) Income Taxes	526,636	526,554	651,481	652,403	653,206	653,893	654,450	883,511
24.	Debt Free Net Income	1,228,818	1,228,625	1,520,123	1,522,274	1,524,148	1,525,750	1,527,051	2,061,525
25.	(+) Depreciation & Amortization	614,930	629,098	643,548	658,287	673,322	688,657	704,298	720,253
26.	(-) Capital Expenditures (6)	785,342	801,049	817,070	833,412	850,080	867,082	884,423	902,112
27.	(-) Changes in Working Capital (7)	(6,412)	(6,477)	(7,378)	(7,453)	(7,529)	(7,605)	(7,683)	(9,285)
28.	Debt Free Net Cash Flow	$1,064,818	$1,063,151	$1,353,979	$1,354,602	$1,354,918	$1,354,930	$1,354,609	$1,888,951
	PV Time Period (mid-year)	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5
29.	Present Value Factor: 5.90% (8)	0.8182	0.7726	0.7296	0.6889	0.6505	0.6143	0.5801	0.5478
30.	Present Value Debt Free Net Cash Flow	$871,234	$821,390	$987,863	$933,186	$881,374	$832,333	$785,808	$1,034,767
31.	Present Value Factor: 7.22% (9)	0.7835	0.7307	0.6815	0.6356	0.5928	0.5529	0.5157	0.4810
32.	Present Value Debt Free Net Cash Flow	$834,285	$776,844	$922,736	$860,985	$803,196	$749,141	$698,572	$908,585

See page 4 for notes and assumptions.

Income Approach
New Garden Township and Authority's Sewage Collection and Treatment System
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 @ 5.90%	Terminal Value
Projected Debt Free Net Cash Flow (10)	$1,888,951
Divided by Capitalization Factor (8)	5.90%
11th Year Terminal Value	32,016,119
11th Year Present Value Factor (11)	0.5478
Present Value of Terminal Value	17,538,430
Present Value Debt Free Net Cash Flow for 11 Years	4,396,216
Indicated Value	$21,934,646

DCF With EBIT & EBITDA Terminal Value Model - Discount Rate of 5.90%		Multiples(13)	Terminal Value
Projected EBIT	$2,945,036	21.9	$64,496,291
Projected EBITDA	3,665,289	14.8	54,246,276
Weighted (1/3 EBIT 2/3 EBITDA) Terminal Value			57,628,781
11th Year Present Value Factor (11)			0.5478
Present Value of Terminal Value			31,569,046
Present Value Debt Free Net Cash Flow for 11 Years			4,396,216
Indicated Value			$35,965,263

DCF With Capitalization of Terminal Value Model @ 7.22%	Terminal Value
Projected Debt Free Net Cash Flow (10)	$1,888,951
Divided by Capitalization Factor (9)	7.22%
11th Year Terminal Value	26,162,756
11th Year Present Value Factor (12)	0.4810
Present Value of Terminal Value	12,584,286
Present Value Debt Free Net Cash Flow for 11 Years	3,931,073
Indicated Value	$16,515,359

DCF With EBIT & EBITDA Terminal Value Model - Discount Rate of 7.22%		Multiples(13)	Terminal Value
Projected EBIT	$2,945,036	21.9	$64,496,291
Projected EBITDA	3,665,289	14.8	54,246,276
Weighted (1/3 EBIT 2/3 EBITDA) Terminal Value			57,628,781
11th Year Present Value Factor (12)			0.4810
Present Value of Terminal Value			27,719,444
Present Value Debt Free Net Cash Flow for 11 Years			3,931,073
Indicated Value			$31,650,516

DCF With Capitalization of Terminal Value Model @ 4.90%	Terminal Value
Projected Debt Free Net Cash Flow (10)	$1,888,951
Divided by Capitalization Factor (8)	4.90%
11th Year Terminal Value	38,550,021
11th Year Present Value Factor (11)	0.5478
Present Value of Terminal Value	21,117,701
Present Value Debt Free Net Cash Flow for 11 Years	4,396,216
Indicated Value	$25,513,918

Income Approach
New Garden Township and Authority's Sewage Collection and Treatment System
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 @ 6.22%	Terminal Value
Projected Debt Free Net Cash Flow (10)	$1,888,951
Divided by Capitalization Factor (9)	6.22%
11th Year Terminal Value	30,368,987
11th Year Present Value Factor (12)	0.4810
Present Value of Terminal Value	14,607,483
Present Value Debt Free Net Cash Flow for 11 Years	3,931,073
Indicated Value	$18,538,556

Notes: (1) Assumptions:
Charges for services - in 2015 reflects the 9.5% 4th quarter 2014 rate increase and 2015 flows. Flows in 2016 are the average of 2014 and 2015 flows. Flows subsequent to 2016 increase 1% annually to account for growth. Also assumes 30% rate increase in 2019, 13% rate increase in 2022 and 20% rate increase in 2027.

Other (Operating Revenues) - equal to 2014 results for years 2015 and 2016. Assumes 2% annual increase after 2016.
OPERATING EXPENSES - increase at 2% annually after 2014 unless noted elsewhere.
Administrative expenses - 2017 assumed eliminated due to economies of scale.
Insurance - 2017 assumed at industry average of 0.09% of Net Property Plant & Equipment due to economies of scale. Increase at 2% afterwards.
Professional services 2017 assumed 25% of 2016 due to economies of scale. Increase at 2% afterwards.
Repairs and maintenance - 2017 assumed 90% of 2016 due to economies of scale. Increase at 2% afterwards.
Supplies - 2017 assumed at industry average of 0.10% of Net Property Plant & Equipment due to economies of scale. Increase at 2% afterwards.
Utilities - 2017 assumed 90% of 2016 due to economies of scale. Increase at 2% afterwards.
Wastewater treatment services - Subsequent to 2014 an annual 2% rate increase assumed along with a 1% annual growth in flows.

(6) Capital Expenditures - 2015 & 2016 based on OCNLD Study inventory. New Garden's 2017-2019 $12 million CAPX assumed to occur in 2019 to match planned rate case and at a 35% reduction in cost due to the fact governmental agencies must pay prevailing wages while private companies do not. Subsequent to 2019 assumed at 2% of Gross Property, Plant & Equipment.
(7) Changes in Working Capital - 2012 - 2016 based on New Garden actual average of 9.7% of revenues. Subsequent years based on water industry average -0.02% of revenues.
(8) Discount rate is the current lower end of the IOU discount rate.
(9) Discount rate is the current upper end of the IOU discount rate.
(10) Year 2027, line 28.
(11) Year 2027, line 29.
(12) Year 2027, line 31.
(13) Developed on EXHIBIT 10.

Market Multiples Method
New Garden Township and Authority's Sewage Collection and Treatment System
2016 Operations
Market Multiple Method

	A	B	C	D (Col B × Col C)	E (Col A × Col D)
	Subject Company Statistic (1)	Comparison Group's Valuation Multiples 9/30/2016	New Garden's Growth & Risk Adjustment	New Garden's Risk Adjusted Valuation Multiples 9/30/2016	New Garden's Market Multiples Valuation
Risk Adjusted Multiple					
1. New Garden Township and Authority's Sewage Collection and Treatment System					
2. Investor Provided Capital	$23,540,881	1.71	95.00%	1.62	$38,136,227
3. Gross PP&E	$27,267,123	1.11	115.00%	1.28	34,901,917
4. Net PP&E	$18,590,089	1.45	116.00%	1.68	31,231,350
5. Revenues	$2,381,206	5.60	101.00%	5.66	13,477,626
6. EBITDA	$1,174,758	13.47	110.00%	14.82	17,409,916
7. EBIT	$722,841	18.73	117.00%	21.91	15,837,450
8. Customers	1,814	$6,181	200.00%	$12,362	22,424,668
9. Population	12,405	$1,844	200.00%	$3,688	45,749,640
10.					
11. Average					$27,396,099

Conclusion of Market Multiple Valuation

	Low	High		Conclusion
Capital Items (Items 2 -4)	$31,231,350	$38,136,227		$34,756,498
Income Statement Items (Items 5 -7)	13,477,626	17,409,916		-
Demographics Items (Items 8 -9)	22,424,668	45,749,640		34,087,154
			Conclusion	$34,421,826

Market Multiples Method
New Garden Township and Authority's Sewage Collection and Treatment System
Development of Market Multiples Method for the Market Multiples Method

	Latest Quarter End			Latest 12 Months			2015		9/30/2016
	Gross PP&E ($ Mill)	Net PP&E ($ Mill)	Invest. Perm. Capital ($ Mill)	12 Mos. Rev. ($ Mill)	12 Mos. EBITDA ($ Mill)	12 Mos. EBIT ($ Mill)	Customers	Population	Enterprise Value ($ Mill)
American States Water Co	$1,655.690	$1,107.137	$797.606	$448.571	$156.417	$116.076	283,997	1,000,000	$1,844.358
American Water Works Company Inc	$17,871.000	$13,130.000	$11,014.000	$3,248.801	$1,560.838	$1,106.138	3,252,691	12,100,000	$20,104.186
Aqua America Inc	$6,282.410	$4,823.484	$3,567.037	$814.601	$453.016	$325.511	920,381	2,890,800	$7,240.421
Artesian Resources Corp	$527.076	$417.558	$238.380	$77.372	$34.251	$25.251	81,400	301,000	$369.617
California Water Service Group	$2,621.322	$1,785.077	$1,192.547	$596.141	$159.321	$96.725	508,404	1,600,000	$2,145.583
Connecticut Water Service Inc	$774.515	$568.406	$432.072	$96.994	$41.812	$28.481	123,633	400,000	$762.278
Middlesex Water Co	$628.225	$497.100	$345.567	$128.883	$50.989	$38.551	108,720	390,000	$722.238
SJW Corp.	$1,652.828	$1,143.584	$760.194	$318.624	$133.075	$90.326	241,000	1,089,000	$1,312.106
York Water Company (The)	$331.721	$264.439	$196.546	$47.083	$29.033	$22.754	66,000	194,000	$461.328
Average	$3,593.865	$2,637.421	$2,060.439	$641.897	$290.972	$205.535	620,692	2,218,311	$3,884.680
Max	$17,871.000	$13,130.000	$11,014.000	$3,248.801	$1,560.838	$1,106.138	3,252,691	12,100,000	$20,104.186
Min	$331.721	$264.439	$196.546	$47.083	$29.033	$22.754	66,000	194,000	$369.617
Median	$1,652.828	$1,107.137	$760.194	$318.624	$133.075	$90.326	241,000	1,000,000	$1,312.106

	Enterprise Value as a Multiple of								
	Invest. Capital (x)	Gross PP&E (x)	Net PP&E (x)	Rev. (x)	EBITDA (x)	EBIT (x)	Customers ($)	Population ($)	Population Per Customer
American States Water Co	2.14	1.11	1.67	4.11	11.79	15.89	$6,494	$1,844	3.52
American Water Works Company Inc	1.67	1.12	1.53	6.19	12.88	18.18	$6,181	$1,662	3.72
Aqua America Inc	1.99	1.15	1.50	8.89	15.98	22.24	$7,867	$2,505	3.14
Artesian Resources Corp	1.51	0.70	0.89	4.78	10.79	14.64	$4,541	$1,228	3.70
California Water Service Group	1.68	0.82	1.20	3.60	13.47	22.18	$4,220	$1,341	3.15
Connecticut Water Service Inc	1.71	0.98	1.34	7.86	18.23	26.76	$6,166	$1,906	3.24
Middlesex Water Co	2.00	1.15	1.45	5.60	14.16	18.73	$6,643	$1,852	3.59
SJW Corp.	1.59	0.79	1.15	4.12	9.86	14.53	$5,444	$1,205	4.52
York Water Company (The)	2.35	1.39	1.74	9.80	15.89	20.27	$6,990	$2,378	2.94
Average	1.85	1.03	1.39	6.10	13.67	19.27	$6,061	$1,769	3.50
Max	2.35	1.39	1.74	9.80	18.23	26.76	$7,867	$2,505	4.52
Min	1.51	0.70	0.89	3.60	9.86	14.53	$4,220	$1,205	2.94
Median	1.71	1.11	1.45	5.60	13.47	18.73	$6,181	$1,844	3.52

Market Multiples Method
New Garden Township and Authority's Sewage Collection and Treatment System
Quantification of the Effective Risk Adjustments

		Net PP&E	Gross PP&E	Invest. Capital
Comparable Group Multiple		1.45	1.11	1.71
Implied Capitalization Rate (1÷Multiple)		68.97%	90.09%	58.48%
Ratio of Net PP&E Mult. to Invest. Capital Mult.		117.9%		
Less 1	-	1.00		
Difference in Capital Source due to Contributions		17.93%		
Assumed Investor Financed (1-Difference in Capital Source)		82.07%	82.07%	
Implied Capitalization Rate (1÷Multiple)	x	68.97%	90.09%	
Not Contributed Cap. Rate		56.60%	73.94%	
Not Contributed Multiple (1÷Cap. Rate)		1.77	1.35	
Base Risk Factor	x	95%	95%	
Subject Company Adjusted Multiple		1.68	1.28	
Subject Company Adjusted Multiple		1.68	1.28	
Comparable Group Multiple	÷	1.45	1.11	
Effective Risk Adjustment		116%	115%	

		Rev.	EBITDA	EBIT
Comparable Group Multiple		5.60	13.47	18.73
Implied Capitalization Rate (1÷Multiple)		17.86%	7.42%	5.34%
(-) Growth Adjustment	-	1.00%	1.00%	1.00%
Adjusted Capitalization Rate (k-G)		16.86%	6.42%	4.34%
Adjusted Multiple (1÷Adj, Cap. Rate))		5.93	15.57	23.05
Base Risk Factor	x	95%	95%	95%
Subject Company Adjusted Multiple		5.63	14.79	21.90
Subject Company Adjusted Multiple		5.63	14.79	21.90
Comparable Group Multiple	÷	5.60	13.47	18.73
Effective Risk Adjustment		101%	110%	117%

EXHIBIT 11

New Garden Township and Authority's Sewage Collection and Treatment System
Summary of Approach Results and
Current Fair Market Valuation

Valuation Approach	Indicated Value	Weight	Weighted Value	Conclusion
Income Approach	$36,297,487	45%	$16,333,869	
Market Approach	34,385,471	45%	15,473,462	
Cost Approach	18,590,089	10%	1,859,009	
		100%	$33,666,340	**Conclusion $33,666,000**

WORKPAPERS

NEW GARDEN TOWNSHIP

STATEMENT OF NET POSITION – PROPRIETARY FUNDS

December 31, 2012 with summarized comparative totals for 2011

	Major Funds			Totals	
	Sewer Fund	Airport Fund	Sewer Authority	2012	2011
ASSETS					
CURRENT ASSETS					
Cash	$3,950,024	$ 241,928	$ 80,268	$ 4,272,220	$ 4,184,009
Due from other governments	-	23,027	-	23,027	340,298
Accounts receivable	722,776	21,093	-	743,869	786,937
Due from other funds	-	156,303	-	156,303	223,968
Other current assets	77,159	6,750	-	83,909	84,498
Total current assets	4,749,959	449,101	80,268	5,279,328	5,619,710
NON-CURRENT ASSETS					
Capital assets, net	3,056,916	6,216,579	14,362,046	23,635,541	24,010,615
Total assets	7,806,875	6,665,680	14,442,314	28,914,869	29,630,325
LIABILITIES AND NET POSITION					
CURRENT LIABILITIES					
Current portion of notes payable	-	-	634,000	634,000	609,000
Accounts payable	343,602	34,252	-	377,854	622,861
Accrued salaries and benefits	7,261	3,107	-	10,368	8,155
Due to other funds	240,153	-	-	240,153	233,630
Other current liabilities	3,200	-	77,159	80,359	66,070
Total current liabilities	594,216	37,359	711,159	1,342,734	1,539,716
NON-CURRENT LIABILITIES					
Notes payable, net of current portion	-	-	3,455,000	3,455,000	4,089,000
Compensated absences	8,941	3,867	-	12,808	10,740
Total non-current liabilities	8,941	3,867	3,455,000	3,467,808	4,099,740
Total liabilities	603,157	41,226	4,166,159	4,810,542	5,639,456
NET POSITION					
Net investment in capital assets	3,056,916	6,216,579	10,273,046	19,546,541	19,312,615
Unrestricted	4,146,802	407,875	3,109	4,557,786	4,678,254
Total net position	$7,203,718	$6,624,454	$10,276,155	$24,104,327	$23,990,869

See accompanying notes

NEW GARDEN TOWNSHIP

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION – PROPRIETARY FUNDS

Year ended December 31, 2012 with summarized comparative totals for 2011

	Major Funds			Totals	
	Sewer Fund	Airport Fund	Sewer Authority	2012	2011
OPERATING REVENUES					
Charges for services	$1,911,799	$ 686,504	$ -	$ 2,598,303	$ 2,691,032
Other	191,421	-	-	191,421	140,653
Total operating revenues	2,103,220	686,504	-	2,789,724	2,831,685
OPERATING EXPENSES					
Salaries and wages	194,597	93,671	-	288,268	270,581
Employee benefits	111,232	40,519	-	151,751	147,744
Administrative expenses	282,645	18,642	24	301,311	288,904
Insurance	38,064	13,726	-	51,790	37,851
Professional services	456,163	86,020	-	542,183	621,031
Repairs and maintenance	24,388	57,928	-	82,316	105,206
Supplies	23,555	246,217	-	269,772	210,602
Utilities	161,635	22,404	-	184,039	192,112
Wastewater treatment services	230,845	-	-	230,845	420,841
Depreciation	44,988	82,585	387,831	515,404	483,876
Total operating expenses	1,568,112	661,712	387,855	2,617,679	2,778,748
Operating income (loss)	535,108	24,792	(387,855)	172,045	52,937
NON-OPERATING REVENUES (EXPENSES)					
Interest income	6,352	537	197	7,086	11,500
Interest expense	-	-	(179,911)	(179,911)	(202,141)
Intergovernmental revenues	-	23,032	-	23,032	1,442,230
Total non-operating revenues (expenses)	6,352	23,569	(179,714)	(149,793)	1,251,589
Income (loss) before capital contributions and transfers	541,460	48,361	(567,569)	22,252	1,304,526
Capital contributions	-	-	91,206	91,206	190,130
Transfers in	-	-	788,911	788,911	1,077,163
Transfers out	(788,911)	-	-	(788,911)	(788,141)
CHANGE IN NET POSITION	(247,451)	48,361	312,548	113,458	1,783,678
NET POSITION					
Beginning of year	7,451,169	6,576,093	9,963,607	23,990,869	22,207,191
End of year	$7,203,718	$6,624,454	$10,276,155	$24,104,327	$23,990,869

See accompanying notes

NEW GARDEN TOWNSHIP

STATEMENT OF CASH FLOWS – PROPRIETARY FUNDS

Year ended December 31, 2012 with summarized comparative totals for 2011

	Major Funds			Totals	
	Sewer Fund	Airport Fund	Sewer Authority	2012	2011
CASH FLOWS FROM OPERATING ACTIVITIES					
Cash received from charges for services	$ 2,438,685	$ 579,463	$ -	$ 3,018,148	$ 2,419,864
Payments to suppliers for goods and services	(1,486,548)	(445,750)	(24)	(1,932,322)	(1,917,912)
Payments to employees	(299,353)	(129,165)	-	(428,518)	(415,971)
Other receipts	179,921	-	-	179,921	31,972
Net cash provided by (used for) operating activities	832,705	4,548	(24)	837,229	117,953
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES					
Intergovernmental revenues	-	340,303	-	340,303	1,171,851
Transfers from other funds	-	-	800,000	800,000	1,418,567
Transfers to other funds	(800,000)	(279,545)	-	(1,079,545)	(850,000)
Net cash provided by (used for) noncapital financing activities	(800,000)	60,758	800,000	60,758	1,740,418
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES					
Acquisition and construction of capital assets	(25,776)	(2,175)	-	(27,951)	(1,647,076)
Repayment of notes payable	-	-	(609,000)	(609,000)	(586,000)
Interest paid	-	-	(179,911)	(179,911)	(202,141)
Net cash used for capital and related financing activities	(25,776)	(2,175)	(788,911)	(816,862)	(2,435,217)
CASH FLOWS FROM INVESTING ACTIVITIES					
Interest income	6,352	537	197	7,086	11,500
NET INCREASE (DECREASE) IN CASH	13,281	63,668	11,262	88,211	(565,346)
CASH					
Beginning of year	3,936,743	178,260	69,006	4,184,009	4,749,355
End of year	$ 3,950,024	$ 241,928	$ 80,268	$ 4,272,220	$ 4,184,009
RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH PROVIDED BY (USED FOR) OPERATING ACTIVITIES					
Operating income (loss)	$ 535,108	$ 24,792	$(387,855)	$ 172,045	$ 52,937
Adjustments to reconcile operating income (loss) to net cash provided by (used for) operating activities					
Depreciation	44,988	82,585	387,831	515,404	483,876
(Increase) decrease in					
Accounts receivable	39,721	3,347	-	43,068	(123,409)
Due from other funds	223,968	(110,388)	-	113,580	(256,440)
Other current assets	16,451	(4,773)	-	11,678	(1,684)
Increase (decrease) in					
Accounts payable	(272,117)	5,937	-	(266,180)	107,356
Accrued salaries and benefits	1,730	483	-	2,213	640
Due to other funds	240,153	-	-	240,153	(148,187)
Other current liabilities	3,200	-	-	3,200	-
Compensated absences	(497)	2,565	-	2,068	2,864
Net cash provided by (used for) operating activities	$ 832,705	$ 4,548	$ (24)	$ 837,229	$ 117,953
NON-CASH CAPITAL AND RELATED FINANCING ACTIVITIES					
Acquisition and construction of capital assets	$ -	$ 21,173	$ -	$ 21,173	$ -
Accounts payable	$ -	$ (21,173)	$ -	$ (21,173)	$ -
Contributed capital assets	$ -	$ -	$ 91,206	$ 91,206	$ 190,130

See accompanying notes

NEW GARDEN TOWNSHIP

STATEMENT OF NET POSITION – FIDUCIARY FUNDS

December 31, 2012 with summarized comparative totals for 2011

	Pension Trust Funds	
	2012	**2011**
ASSETS		
Investments	$3,033,384	$3,032,652
NET POSITION		
Assets held in trust for pension benefits	$3,033,384	$3,032,652

See accompanying notes

NEW GARDEN TOWNSHIP

STATEMENT OF NET POSITION – PROPRIETARY FUNDS

December 31, 2013 with summarized comparative totals for 2012

	Major Funds			Totals	
	Sewer Fund	Airport Fund	Sewer Authority	2013	2012
ASSETS					
CURRENT ASSETS					
Cash	$4,112,231	$ 246,419	$ 92,313	$ 4,450,963	$ 4,272,220
Due from other governments	-	9,760	-	9,760	23,027
Accounts receivable	547,119	19,226	-	566,345	743,869
Due from other funds	11,603	236,310	-	247,913	156,303
Other current assets	89,042	6,750	-	95,792	83,909
Total current assets	4,759,995	518,465	92,313	5,370,773	5,279,328
NONCURRENT ASSETS					
Capital assets, net	3,078,056	6,314,302	13,973,089	23,365,447	23,635,541
Total assets	7,838,051	6,832,767	14,065,402	28,736,220	28,914,869
LIABILITIES AND NET POSITION					
CURRENT LIABILITIES					
Current portion of notes payable	-	-	659,000	659,000	634,000
Accounts payable	333,802	1,516	-	335,318	377,854
Accrued salaries and benefits	1,853	789	-	2,642	10,368
Due to other funds	-	-	-	-	240,153
Other current liabilities	-	-	89,042	89,042	80,359
Total current liabilities	335,655	2,305	748,042	1,086,002	1,342,734
NONCURRENT LIABILITIES					
Notes payable, net of current portion	-	-	2,796,000	2,796,000	3,455,000
Compensated absences	9,119	586	-	9,705	12,808
Total noncurrent liabilities	9,119	586	2,796,000	2,805,705	3,467,808
Total liabilities	344,774	2,891	3,544,042	3,891,707	4,810,542
NET POSITION					
Net investment in capital assets	3,078,056	6,314,302	10,518,089	19,910,447	19,546,541
Unrestricted	4,415,221	515,574	3,271	4,934,066	4,557,786
Total net position	$7,493,277	$6,829,876	$10,521,360	$24,844,513	$24,104,327

See accompanying notes

NEW GARDEN TOWNSHIP

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION – PROPRIETARY FUNDS

Year ended December 31, 2013 with summarized comparative totals for 2012

	Major Funds			Totals	
	Sewer Fund	Airport Fund	Sewer Authority	2013	2012
OPERATING REVENUES					
Charges for services	$2,353,097	$ 635,403	$ -	$ 2,988,500	$ 2,598,303
Other	109,585	100	-	109,685	191,421
Total operating revenues	2,462,682	635,503	-	3,098,185	2,789,724
OPERATING EXPENSES					
Salaries and wages	211,927	91,408	-	303,335	288,268
Employee benefits	102,821	36,642	-	139,463	151,751
Administrative expenses	214,887	20,975	24	235,886	301,311
Insurance	48,147	12,698	-	60,845	51,790
Professional services	352,318	91,598	-	443,916	542,183
Repairs and maintenance	16,490	40,330	-	56,820	82,316
Supplies	31,199	205,260	-	236,459	269,772
Utilities	149,726	23,983	-	173,709	184,039
Wastewater treatment services	216,219	-	-	216,219	230,845
Depreciation	48,084	82,438	388,957	519,479	515,404
Total operating expenses	1,391,818	605,332	388,981	2,386,131	2,617,679
Operating income (loss)	1,070,864	30,171	(388,981)	712,054	172,045
NONOPERATING REVENUES (EXPENSES)					
Interest income	6,812	445	186	7,443	7,086
Interest expense	-	-	(154,117)	(154,117)	(179,911)
Intergovernmental revenues	-	174,806	-	174,806	23,032
Total nonoperating revenues (expenses)	6,812	175,251	(153,931)	28,132	(149,793)
Income (loss) before capital contributions and transfers	1,077,676	205,422	(542,912)	740,186	22,252
Capital contributions	-	-	-	-	91,206
Transfers in	-	-	788,117	788,117	788,911
Transfers out	(788,117)	-	-	(788,117)	(788,911)
CHANGE IN NET POSITION	289,559	205,422	245,205	740,186	113,458
NET POSITION					
Beginning of year	7,203,718	6,624,454	10,276,155	24,104,327	23,990,869
End of year	$7,493,277	$6,829,876	$10,521,360	$24,844,513	$24,104,327

See accompanying notes

NEW GARDEN TOWNSHIP

STATEMENT OF CASH FLOWS – PROPRIETARY FUNDS

Year ended December 31, 2013 with summarized comparative totals for 2012

	Major Funds			Totals	
	Sewer Fund	Airport Fund	Sewer Authority	2013	2012
CASH FLOWS FROM OPERATING ACTIVITIES					
Cash received from charges for services	$ 2,113,734	$ 637,270	$ -	$ 2,751,004	$ 3,018,148
Payments to suppliers for goods and services	(1,041,986)	(507,587)	(24)	(1,549,597)	(1,932,322)
Payments to employees	(319,978)	(133,649)	-	(453,627)	(428,518)
Other receipts	272,849	100	-	272,949	179,921
Net cash provided by (used for) operating activities	1,024,619	(3,866)	(24)	1,020,729	837,229
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES					
Intergovernmental revenues	-	188,073	-	188,073	340,303
Transfers from other funds	-	-	800,000	800,000	800,000
Transfers to other funds	(800,000)	-	-	(800,000)	(1,079,545)
Net cash provided by (used for) noncapital financing activities	(800,000)	188,073	800,000	188,073	60,758
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES					
Acquisition and construction of capital assets	(69,224)	(180,161)	-	(249,385)	(27,951)
Repayment of notes payable	-	-	(634,000)	(634,000)	(609,000)
Interest paid	-	-	(154,117)	(154,117)	(179,911)
Net cash used for capital and related financing activities	(69,224)	(180,161)	(788,117)	(1,037,502)	(816,862)
CASH FLOWS FROM INVESTING ACTIVITIES					
Interest income	6,812	445	186	7,443	7,086
NET INCREASE IN CASH	162,207	4,491	12,045	178,743	88,211
CASH					
Beginning of year	3,950,024	241,928	80,268	4,272,220	4,184,009
End of year	$ 4,112,231	$ 246,419	$ 92,313	$ 4,450,963	$ 4,272,220
RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH PROVIDED BY (USED FOR) OPERATING ACTIVITIES					
Operating income (loss)	$ 1,070,864	$ 30,171	$(388,981)	$ 712,054	$ 172,045
Adjustments to reconcile operating income (loss) to net cash provided by (used for) operating activities					
Depreciation	48,084	82,438	388,957	519,479	515,404
(Increase) decrease in					
Accounts receivable	175,657	1,867	-	177,524	43,068
Due from other funds	(11,603)	(80,007)	-	(91,610)	113,580
Other current assets	-	-	-	-	11,678
Increase (decrease) in					
Accounts payable	(9,800)	(32,736)	-	(42,536)	(266,180)
Accrued salaries and benefits	(5,408)	(2,318)	-	(7,726)	2,213
Due to other funds	(240,153)	-	-	(240,153)	240,153
Other current liabilities	(3,200)	-	-	(3,200)	3,200
Compensated absences	178	(3,281)	-	(3,103)	2,068
Net cash provided by (used for) operating activities	$ 1,024,619	$ (3,866)	$ (24)	$ 1,020,729	$ 837,229
NONCASH CAPITAL AND RELATED FINANCING ACTIVITIES					
Acquisition and construction of capital assets	$ -	$ -	$ -	$ -	$ 21,173
Accounts payable	$ -	$ -	$ -	$ -	$ (21,173)
Contributed capital assets	$ -	$ -	$ -	$ -	$ 91,206

See accompanying notes

NEW GARDEN TOWNSHIP

STATEMENT OF NET POSITION – FIDUCIARY FUNDS

December 31, 2013 with summarized comparative totals for 2012

	Pension Trust Funds	
	2013	2012
ASSETS		
Investments	$2,984,644	$3,033,384
NET POSITION		
Assets held in trust for pension benefits	$2,984,644	$3,033,384

See accompanying notes

NEW GARDEN TOWNSHIP

STATEMENT OF NET POSITION - PROPRIETARY FUNDS

December 31, 2014 with summarized comparative totals for 2013

	Major Funds			Totals	
	Sewer Fund	Airport Fund	Sewer Authority	2014	2013
ASSETS					
CURRENT ASSETS					
Cash	$ 4,186,630	$ 321,169	$ 108,257	$ 4,616,056	$ 4,450,963
Due from other governments	-	24,025	-	24,025	9,760
Accounts receivable	663,404	29,754	-	693,158	566,345
Due from other funds	-	66,153	-	66,153	247,913
Other current assets	117,020	-	-	117,020	95,792
Total current assets	4,967,054	441,101	108,257	5,516,412	5,370,773
NONCURRENT ASSETS					
Capital assets, net	3,044,952	6,561,080	13,941,382	23,547,414	23,365,447
Total assets	8,012,006	7,002,181	14,049,639	29,063,826	28,736,220
LIABILITIES AND NET POSITION					
CURRENT LIABILITIES					
Current portion of notes payable	$ -	$ -	$ 686,000	686,000	659,000
Accounts payable	9,685	6,930	-	16,615	335,318
Accrued salaries and benefits	688	1,301	-	1,989	2,642
Due to other funds	7,372	-	-	7,372	-
Other current liabilities	-	-	104,505	104,505	89,042
Total current liabilities	17,745	8,231	790,505	816,481	1,086,002
NONCURRENT LIABILITIES					
Notes payable, net of current portion	-	-	2,108,000	2,108,000	2,796,000
Compensated absences	2,270	2,936	-	5,206	9,705
Total noncurrent liabilities	2,270	2,936	2,108,000	2,113,206	2,805,705
Total liabilities	20,015	11,167	2,898,505	2,929,687	3,891,707
NET POSITION					
Net investment in capital assets	3,044,952	6,561,080	11,147,382	20,753,414	19,910,447
Unrestricted	4,947,039	429,934	3,752	5,380,725	4,934,066
Total net position	$ 7,991,991	$ 6,991,014	$ 11,151,134	$ 26,134,139	$ 24,844,513

See accompanying notes

NEW GARDEN TOWNSHIP

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION - PROPRIETARY FUNDS

Year ended December 31, 2014 with summarized comparative totals for 2013

	Major Funds			Totals	
	Sewer Fund	Airport Fund	Sewer Authority	2014	2013
OPERATING REVENUES					
Charges for services	$ 2,191,616	$ 655,820	$ -	$ 2,847,436	$ 2,988,500
Other	56,167	-	-	56,167	109,685
Total operating revenues	2,247,783	655,820	-	2,903,603	3,098,185
OPERATING EXPENSES					
Salaries and wages	102,658	139,411	-	242,069	303,335
Employee benefits	117,290	38,153	-	155,443	139,463
Administrative expenses	138,236	31,207	24	169,467	235,886
Insurance	46,147	16,191	-	62,338	60,845
Professional services	321,421	112,291	-	433,712	443,916
Repairs and maintenance	14,552	98,302	-	112,854	56,820
Supplies	25,948	199,832	-	225,780	236,459
Utilities	153,558	27,850	-	181,408	173,709
Wastewater treatment services	239,766	-	-	239,766	216,219
Depreciation	53,765	82,438	391,103	527,306	519,479
Total operating expenses	1,213,341	745,675	391,127	2,350,143	2,386,131
Operating income (loss)	1,034,442	(89,855)	(391,127)	553,460	712,054
NONOPERATING REVENUES (EXPENSES)					
Interest income	6,259	482	505	7,246	7,443
Interest expense	-	-	(123,537)	(123,537)	(154,117)
Intergovernmental revenues	-	250,511	-	250,511	174,806
Refund of prior year expenses	242,550	-	-	242,550	-
Total nonoperating revenues (expenses)	248,809	250,993	(123,032)	376,770	28,132
Income (loss) before capital contributions and transfers	1,283,251	161,138	(514,159)	930,230	740,186
Capital contributions	-	-	359,396	359,396	-
Transfers in	-	-	784,537	784,537	788,117
Transfers out	(784,537)	-	-	(784,537)	(788,117)
CHANGE IN NET POSITION	498,714	161,138	629,774	1,289,626	740,186
NET POSITION					
Beginning of year	7,493,277	6,829,876	10,521,360	24,844,513	24,104,327
End of year	$ 7,991,991	$ 6,991,014	$ 11,151,134	$ 26,134,139	$ 24,844,513

See accompanying notes

NEW GARDEN TOWNSHIP

STATEMENT OF CASH FLOWS - PROPRIETARY FUNDS

Year ended December 31, 2014 with summarized comparative totals for 2013

	Major Funds			Totals	
	Sewer Fund	Airport Fund	Sewer Authority	2014	2013
CASH FLOWS FROM OPERATING ACTIVITIES					
Cash received from charges for services	$ 2,090,214	$ 645,292	$ -	$ 2,735,506	$ 2,751,004
Payments to suppliers for goods and services	(1,033,710)	(303,352)	(24)	(1,337,086)	(1,549,597)
Payments to employees	(227,962)	(174,702)	-	(402,664)	(453,627)
Other receipts	60,259	-	-	60,259	272,949
Net cash provided by (used for) operating activities	888,801	167,238	(24)	1,056,015	1,020,729
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES					
Intergovernmental revenues	-	236,246	-	236,246	188,073
Transfers from other funds	-	-	800,000	800,000	800,000
Transfers to other funds	(800,000)	-	-	(800,000)	(800,000)
Net cash provided by (used for) noncapital financing activities	(800,000)	236,246	800,000	236,246	188,073
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES					
Acquisition and construction of capital assets	(20,661)	(329,216)	-	(349,877)	(249,385)
Repayment of notes payable	-	-	(661,000)	(661,000)	(634,000)
Interest paid	-	-	(123,537)	(123,537)	(154,117)
Net cash used for capital and related financing activities	(20,661)	(329,216)	(784,537)	(1,134,414)	(1,037,502)
CASH FLOWS FROM INVESTING ACTIVITIES					
Interest income	6,259	482	505	7,246	7,443
Net increase in cash	74,399	74,750	15,944	165,093	178,743
CASH					
Beginning of year	4,112,231	246,419	92,313	4,450,963	4,272,220
Ending of year	$ 4,186,630	$ 321,169	$ 108,257	$ 4,616,056	$ 4,450,963
RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH PROVIDED BY (USED FOR) OPERATING ACTIVITIES					
Operating income (loss)	$ 1,034,442	$ (89,855)	$ (391,127)	553,460	$ 712,054
Adjustments to reconcile operating income (loss) to net cash provided by (used for) operating activities					
Depreciation	53,765	82,438	391,103	527,306	519,479
(Increase) decrease in					
Accounts receivable	(116,285)	(10,528)	-	(126,813)	177,524
Due from other funds	11,603	170,157	-	181,760	(91,610)
Other current assets	(12,515)	6,750	-	(5,765)	-
Increase (decrease) in					
Accounts payable	(81,567)	5,414	-	(76,153)	(42,536)
Accrued salaries and benefits	(1,165)	512	-	(653)	(7,726)
Due to other funds	7,372	-	-	7,372	(240,153)
Other current liabilities	-	-		-	(3,200)
Compensated balances	(6,849)	2,350	-	(4,499)	(3,103)
Net cash provided by (used for) operating activities	$ 888,801	$ 167,238	$ (24)	$ 1,056,015	$ 1,020,729
NONCASH CAPITAL AND RELATED FINANCING ACTIVITIES					
Contributed capital assets	$ -	$ -	$ 359,396	$ 359,396	$ -

See accompanying notes

NEW GARDEN TOWNSHIP

STATEMENT OF NET POSITION - FIDUCIARY FUNDS

December 31, 2014 with summarized comparative totals for 2013

	Pension Trust Funds	
	2014	**2013**
ASSETS		
Investments	$ 3,201,860	$ 2,984,644
NET POSITION		
Assets held in trust for pension benefits	$ 3,201,860	$ 2,984,644

See accompanying notes

East End WWTF

Row Labels	# of Units	# of Active Units
CO1	120	79
CO2	40	17
MIX	8	7
RES	1035	1010
Grand Total	**1203**	**1113**

Row Labels	2014-2 Flow	2014-1 Flow	2013-4 Flow	2013-3 Flow	2013-2 Flow	2013-1 Flow
CO1	1,864,000	1,278,000	1,217,000	948,000	987,000	1,028,000
CO2	873,000	873,000	893,000	1,008,000	758,000	707,000
MIX	12,000	18,000	19,000	26,000	22,000	22,000
RES	14,241,000	12,874,000	12,758,000	13,376,000	12,563,000	13,072,000
Grand Total	**16,990,000**	**15,043,000**	**14,887,000**	**15,358,000**	**14,330,000**	**14,829,000**
# DAYS	93	91	91	97	87	94

NOTE:
Eight residential accounts and one commercial account are not included in the above breakdown of accounts (no flows); billed minimum).

Industrial acccount #292 (Kennettex) flows for 2010 through 2012 are not included in totals.

Tamara Estate (8 units) not connected.

Colonial Farms (4 units) not connected.

	2014-2 GPD	2014-1 GPD	2013-4 GPD	2013-3 GPD	2013-2 GPD	2013-1 GPD
CO1	20,043	14,044	13,374	9,773	11,345	10,936
CO2	9,387	9,593	9,813	10,392	8,713	7,521
MIX	129	198	209	268	253	234
RES	153,129	141,473	140,198	137,897	144,402	139,064
Grand Total	**182,688**	**165,308**	**163,593**	**158,330**	**164,713**	**157,755**

	2014 Total	2013 Total	2012 Total	2011 Total	2010 Total
CO1/CO2	4,888,000	7,546,000	9,736,000	10,288,000	8,598,000
MIX	30,000	89,000	199,000	101,000	92,000
RES	27,115,000	51,769,000	54,870,000	54,344,000	57,093,000
Grand Total	**32,033,000**	**59,404,000**	**64,805,000**	**64,733,000**	**65,783,000**

South End WWTF

Row Labels	# of Units	# of Active Units
CO1	6	2
RES	610	602
Grand Total	**616**	**604**

Row Labels	2014-2 Flow	2014-1 Flow	2013-4 Flow	2013-3 Flow	2013-2 Flow	2013-1 Flow
CO1	28,000	25,000	70,000	98,000	22,000	22,000
RES	7,233,000	7,750,000	7,570,000	8,455,000	7,085,000	7,825,000
Grand Total	**7,261,000**	**7,775,000**	**7,640,000**	**8,553,000**	**7,107,000**	**7,847,000**
# DAYS	93	91	91	97	87	94

	2014-2 GPD	2014-1 GPD	2013-4 GPD	2013-3 GPD	2013-2 GPD	2013-1 GPD
CO1	301	275	769	1,010	253	234
RES	77,774	85,165	83,187	87,165	81,437	83,245
Grand Total	**78,075**	**85,440**	**83,956**	**88,175**	**81,690**	**83,479**

	2014 Total	2013 Total	2012 Total	2011 Total	2010 Total
CO1	53,000	212,000	155,000	132,000	139,000
RES	14,983,000	30,935,000	31,308,000	32,462,000	34,700,000
Grand Total	**15,036,000**	**31,147,000**	**31,463,000**	**32,594,000**	**34,839,000**

Avondale WWTF

Row Labels	# of Units	# of Active Units
CO1	337	47
CO2	4	4
MIX	8	24
RES	302	278
TWP	3	3
Grand Total	**654**	**356**

Row Labels	2014-2 Flow	2014-1 Flow	2013-4 Flow	2013-3 Flow	2013-2 Flow	2013-1 Flow
CO1	2,598,000	3,002,000	3,010,000	2,571,000	2,059,000	2,507,000
CO2	192,000	179,000	187,000	221,000	204,000	213,000
MIX	276,000	332,000	275,000	252,000	182,000	212,000
RES	4,716,000	3,705,000	3,283,000	3,792,000	3,262,000	3,823,000
TWP	19,000	74,000	43,000	28,000	34,000	29,000
Grand Total	**7,801,000**	**7,292,000**	**6,798,000**	**6,864,000**	**5,741,000**	**6,784,000**
# DAYS	93	91	91	97	87	94

NOTE:

The following accounts are not included in the above breakdown of accounts (no flows).

Acct 172 / CO1 / 60 units billed minimum.

Acct 332 / RES / 1 unit billed minimum.

	2014-2 GPD	2014-1 GPD	2013-4 GPD	2013-3 GPD	2013-2 GPD	2013-1 GPD
CO1	27,935	32,989	33,077	26,505	23,667	26,670
CO2	2,065	1,967	2,055	2,278	2,345	2,266
MIX	2,968	3,648	3,022	2,598	2,092	2,255
RES	50,710	40,714	36,077	39,093	37,494	40,670
TWP	204	813	473	289	391	309
Grand Total	**83,882**	**80,132**	**74,703**	**70,763**	**65,989**	**72,170**

	2014 Total	2013 Total	2012 Total	2011 Total	2010 Total
CO1/CO2	5,971,000	10,972,000	13,712,000	15,594,000	16,651,000
MIX	608,000	921,000	993,000	1,337,000	902,000
RES	8,421,000	14,160,000	15,305,000	15,221,000	17,131,000
TWP	93,000	134,000	133,000	141,000	169,000
Grand Total	**15,093,000**	**26,187,000**	**30,143,000**	**32,293,000**	**34,853,000**

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	)15-2 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**

Report Criteria:
Group Code.Group Code = {<>} "None"
Transaction.Date = 12/31/2015
Transaction.Type = "Billing"

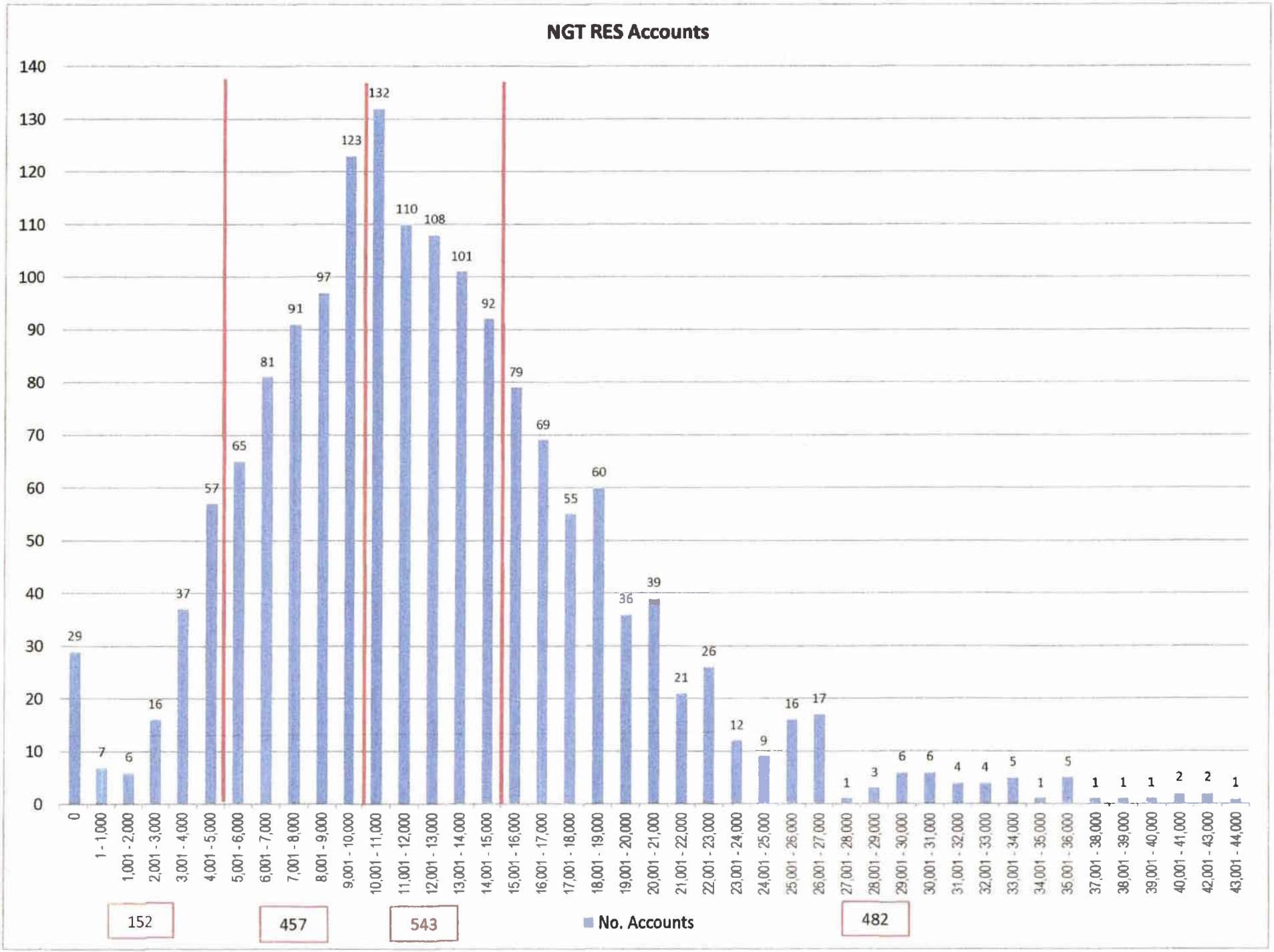
Group Code (Area)	Quantity/Usage	Amount	Account Balance
41			
Total 41:			
53	2,348	61,998.59	101,004.14
BH			
Total BH:			
128	1,143	18,066.50	12,569.29
BP			
Total BP:			
116	3,726	62,475.55	49,533.01
BR			
Total BR:			
56	637	9,471.50	16,153.04
BW			
Total BW:			
58	917	15,032.00	49,945.86
CR			
Total CR:			
5	23	509.00	509.00
CW			
Total CW:			
113	1,632	23,262.50	21,892.51
EE			
Total EE:			
1	0	88.00	88.00
GL			
Total GL:			
110	1,291	21,807.00	43,508.14
HD			
Total HD:			
118	1,811	30,476.19	23,257.10
HG			

Group Code (Area)	Quantity/Usage	Amount	Account Balance
Total HG:			
159	1,593	25,138.25	11,378.39
MG			
Total MG:			
22	347	5,010.50	4,543.46
PD			
Total PD:			
31	460	6,544.50	4,730.80
PM			
Total PM:			
49	508	7,673.50	6,654.69
PS			
Total PS:			
69	1,395	19,976.00	20,536.09
RR			
Total RR:			
97	2,095	35,800.67	92,261.46
S1			
Total S1:			
450	5,667	83,177.00	65,007.66
SC			
Total SC:			
51	1,022	26,815.19	36,180.89
SH			
Total SH:			
137	2,171	30,662.00	25,612.00
SR			
Total SR:			
2	12	222.00	222.00
TK			
Total TK:			
37	1,829	36,949.46	81,437.98
WB			
Total WB:			
80	999	15,540.00	16,702.38

Group Code (Area)	Quantity/Usage	Amount	Account Balance
Grand Totals:			
1,942	31,626	536,695.90	683,727.89

Report Criteria:

Group Code.Group Code = {<>} "None"
Transaction.Date = 12/31/2015
Transaction.Type = "Billing"


NGT RES Accounts
140
130
120
110
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42,001 - 43,000
43,001 - 44,000
152
457
543
No. Accounts
482

01/20/2016

8/03/16

NEW GARDEN TOWNSHIP

NEW GARDEN TOWNSHIP SEWER AUTHORITY

PROPOSED SALE OF SANITARY SEWER SYSTEM

FREQUENTLY ASKED QUESTIONS

Why are the Township and Sewer Authority selling the System?

The sale has been under consideration for well over two years (since early 2014), with the formal, competitive process initiated in June of 2014. The motivation includes:

Tapping the maximized value of the assets to remove debt, reduce budgetary constraints and reduce unfunded obligations.

Avoiding needed short-term and long-term capital upgrades and replacements to the system which will result in additional debt and higher user fees.

Reducing the risk of unfunded, ever increasing federal and state regulatory mandates in a very heavily regulated industry.

Reducing the risk of liability due to regulatory noncompliance.

Recognizing that this type of utility can be more efficiently and economically operated by the private sector rather than government.

Reducing the size of local government.

What are the unfunded, federal and state regulatory mandates facing the System?

There are numerous regulatory changes which have impacted the System in the past, and will likely impact the System in the future. For example, the state has questioned the capacity of two of the spray fields at the South End system based in part on soil classifications and application rates that are used today, which are more stringent than those in place when the spray fields were originally permitted. When the South End system was originally permitted, the state required only 60 days of storage, while today the state requires 90 days of storage, and the storage requirements are likely to increase in the future. The state continues to impose more stringent monitoring of flows in the collection and conveyance portions of the System, with a focus on peak flows which can be more difficult to control during large rainfall events absent upgraded or expanded infrastructure. The state now requires that the water quality management permits issued for the System be renewed every 5 years, which affords the opportunity to impose more stringent requirements on an ongoing basis. In the past, water quality management permits had no expiration.

On the federal level, the Delaware River Basin Commission now requires its own approval of these types of systems when the flow is over 50,000 gallons per day. The DRBC has been considering imposing limitations on land application systems, particularly with respect to phosphorus requirements.

What upgrades and replacements are needed to the System and what is the anticipated cost?

The following upgrades and improvements are among those anticipated to the System: Route 41 force main upgrades and modifications; acquisition of additional spray fields for the South End system for short term; construction of a mechanical treatment plant for the South End system as a long term solution; increased operational costs for the new South End treatment system; and upgrades to the System due to anticipated more stringent permit requirements.

The potential buyer has committed to invest approximately $7,000,000 in the next few years to address pressing infrastructure needs and regulatory compliance matters. The New Garden Sewer Authority 5 year capital plan requires spending approximately $12,000,000 to address the same infrastructure needs plus several other projects. One significant reason for the difference in cost to complete similar projects is that governmental agencies must pay prevailing wages while private companies do not. The difference is approximately 25% to 35% higher for municipal projects.

What would my sewer rates likely be if the sale does not take place?

Given the necessary upgrades and improvements, financing costs, and increased operational costs, it is predicted that rates will likely increase to the rates predicted if there is a sale, if not more.

Rates will increase approximately 40% in 2017 and an additional 27.5% in 2018. Thereafter, rates will not change until 2025 when a 3% increase is anticipated unless there are further capital projects that must be addressed sooner or operating costs increase unexpectedly to address such things as maintenance, repair and replacement of infrastructure, energy cost increases, personnel costs and similar line items.

The typical residential user now pays approximately $189 per quarter. At the end of 10 years the anticipated user charge will be $349 per quarter. A 10 year period was selected to fairly compare the System's predicted rates to the rate proposal negotiated with the potential buyer of the System.

What would my sewer rates likely be if the sale does take place?

Present rates will be frozen during the first two years following the sale of the System. Thereafter, rates are capped at a compounded annual growth rate of 4% over the ten year period following the sale of the System. The typical residential user now pays approximately $189 per quarter. At the end of ten years, the anticipated typical residential user charge will be $263 per quarter. Rates will be billed on quarterly basis in the near future, but this may change to a monthly basis.

What is the selling price?

$29,500,000 in cash, based on a vibrant, dynamic and competitive process.

What will the Township do with the proceeds from the sale?

First, pay off the debt of the System.

Second, invest in the following capital improvement and maintenance programs:

- Pursue a P3 option for a new police building facility
- Bridge and/or road construction capital improvements

  - Replace box culverts on Chambers, Ellicott, Bancroft, and Egypt Run Roads
  - Provide local match for the Newark Road and Baltimore Pike Intersection
  - Increase the annual road resurfacing program per the Arro Road Study

- Establish a capital fund for the maintenance of Township facilities
- Establish a capital fund for vehicle and equipment purchases

Third, invest a minimum of 50% of the proceeds in long term, laddered securities with a minimum 10 to 50 year maturity.

Fourth, establish a tax stabilization fund to offset future real estate tax increases.

Fifth, provide funding to the Park Fund.

Will existing users of the sewer system receive any of the proceeds?

A reserve fund will be established out of the proceeds of the sale to financially secure the contractually capped rates. The fund will be used to reimburse existing users should the contractually capped rates be exceeded.

Will the Township maintain control of future sewer extensions?

Yes. The Township will retain control of sewer extensions under the Act 537 sewage facilities planning program and the prior written approval of the Township will be a contractual requirement for any new sewer extension outside of the existing service area. In addition to availability of public sewer, many other factors influence growth and development within a community, for example: water, zoning, natural resource protection, comprehensive long-term planning, road network, work force, etc.

Will the new owner require properties on septic systems to connect to future sewer extensions?

No. Only the Township and PaDEP will have the legal right to mandate connections of existing properties with on-lot septic systems to future sewer extensions.

Will the new owner pay real estate taxes on the Sewer System property?

The Sewer System property is currently tax exempt since the property is publicly owned and used for a public purpose. Once the property is transferred to a privately owned company, it will no longer be subject to tax exemption and will become taxable.

What advantage does selling the System have over a long-term lease of the System to an outside entity?

While a long term lease has the distinct advantage that ownership of the System would be retained, only selling achieves the goals of tapping the maximized value of the System, avoiding the future costs and impact on ratepayers of necessary future upgrades and improvements, avoiding the potential liabilities associated with this type of operation, and reducing the size of local government. Leasing arrangements require unavoidable and substantial administrative oversight of the operation and maintenance of the system in order to ensure the preservation of the assets, and avoid regulatory noncompliance and liability. Leasing requires a reserve of substantial funds to avoid unfunded obligations and rate shock when the lease terminates.

http://pennsylvania.hometownlocator.com/counties/subdivisions/data,n,township%20of%20new%20garden,id,4202953608,cfips,029.cfm

Township Of New Garden Data & Demographics (As of July 1, 2016)

POPULATION	
Total Population	12,405
Population in Households	12,222
Population in Familes	10,850
Population in Group Qrtrs	183
Population Density[1]	770
Diversity Index[2]	67

HOUSEHOLDS	
Total Households	3,802
Average Household Size	3.21
Family Households	3,168
Average Family Size	3

HOUSING	
Total Housing Units	3,986 (100%)
Owner Occupied HU	2,816 (70.6%)
Renter Occupied HU	986 (24.7%)
Vacant Housing Units	184 (4.6%)
Median Home Value	$427,115
Average Home Value	$445,410

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

ADR 022 | July 2016

Analytical Data Report

County- and Municipal-Level Population Forecasts, 2015–2045

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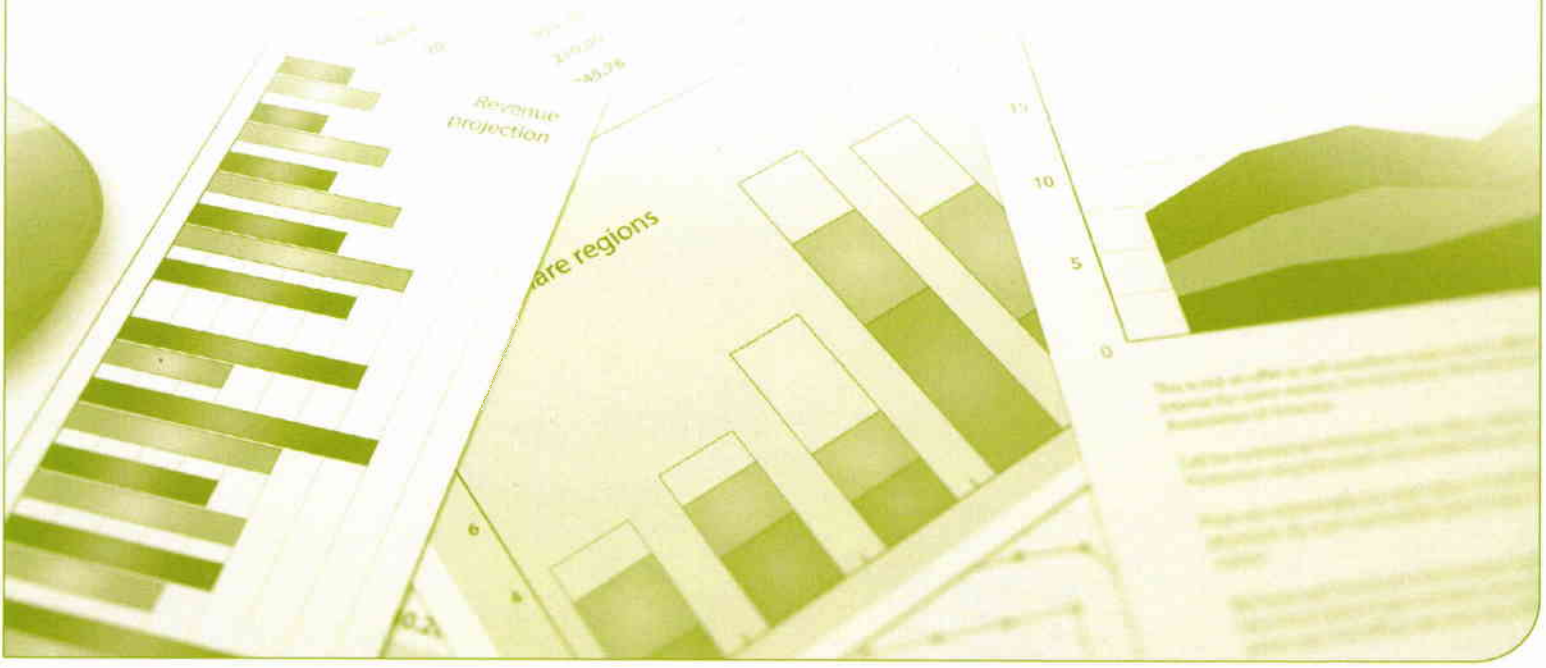

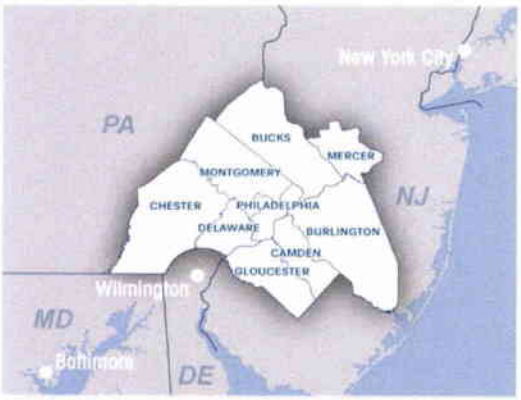

The Delaware Valley Regional Planning Commission is dedicated to uniting the region's elected officials, planning professionals, and the public with a common vision of making a great region even greater. Shaping the way we live, work, and play, DVRPC builds consensus on improving transportation, promoting 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.

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

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.

DVRPC public meetings are always held in ADA-accessible facilities and in transit-accessible locations when possible. Auxiliary services can be provided to individuals who submit a request at least seven days prior to a meeting. Requests made within seven days will be accommodated to the greatest extent possible. Any person who believes they have been aggrieved by an unlawful discriminatory practice by DVRPC under Title VI has a right to file a formal complaint. Any such complaint may be in writing and filed with DVRPC's Title VI Compliance Manager and/or the appropriate state or federal agency within 180 days of the alleged discriminatory occurrence. For more information on DVRPC's Title VI program, or to obtain a Title VI Complaint Form, please call (215) 592-1800 or email public_affairs@dvrpc.org.

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

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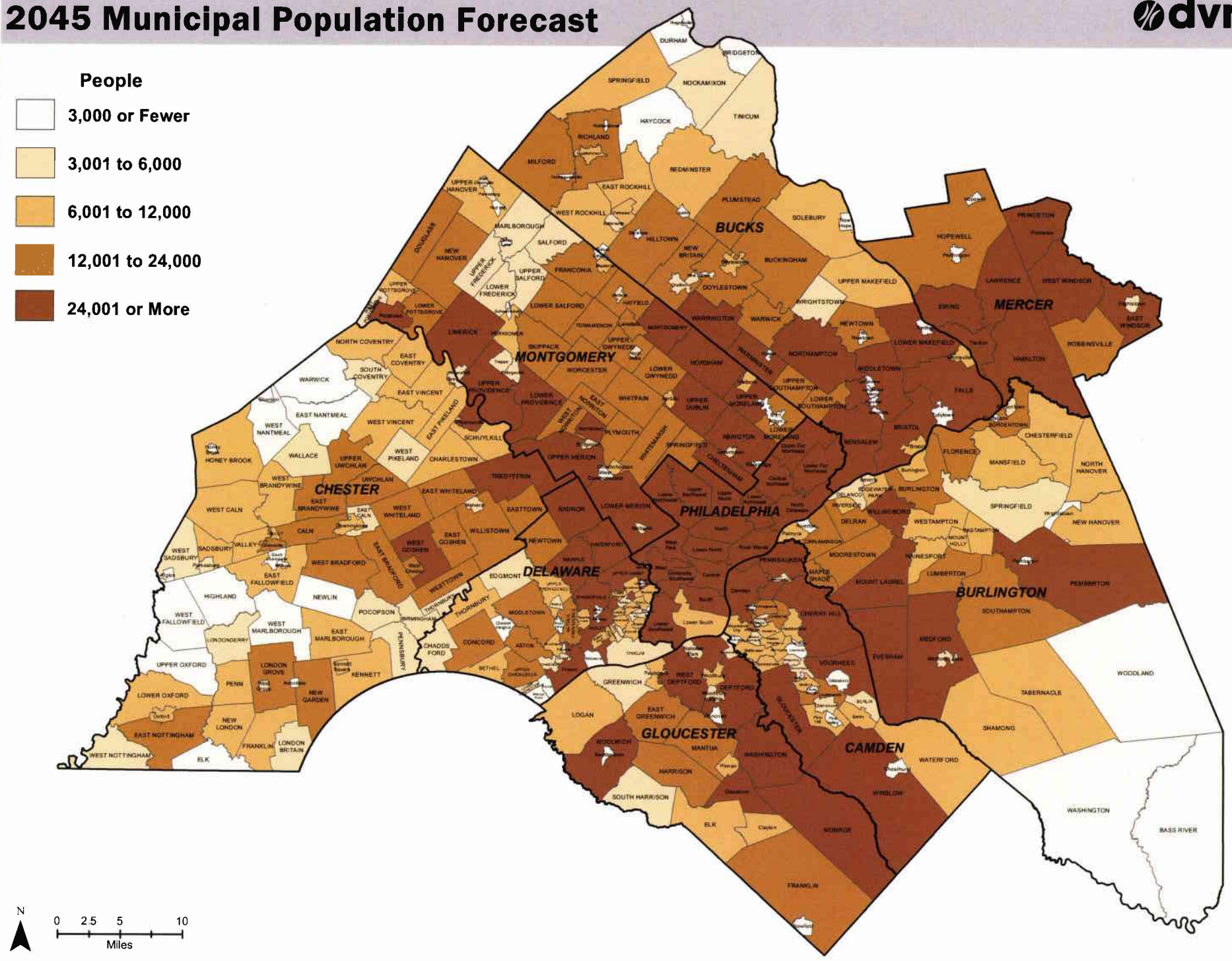

Figure 2:

2045 Municipal Population Forecast

Absolute Change: 2015—2045

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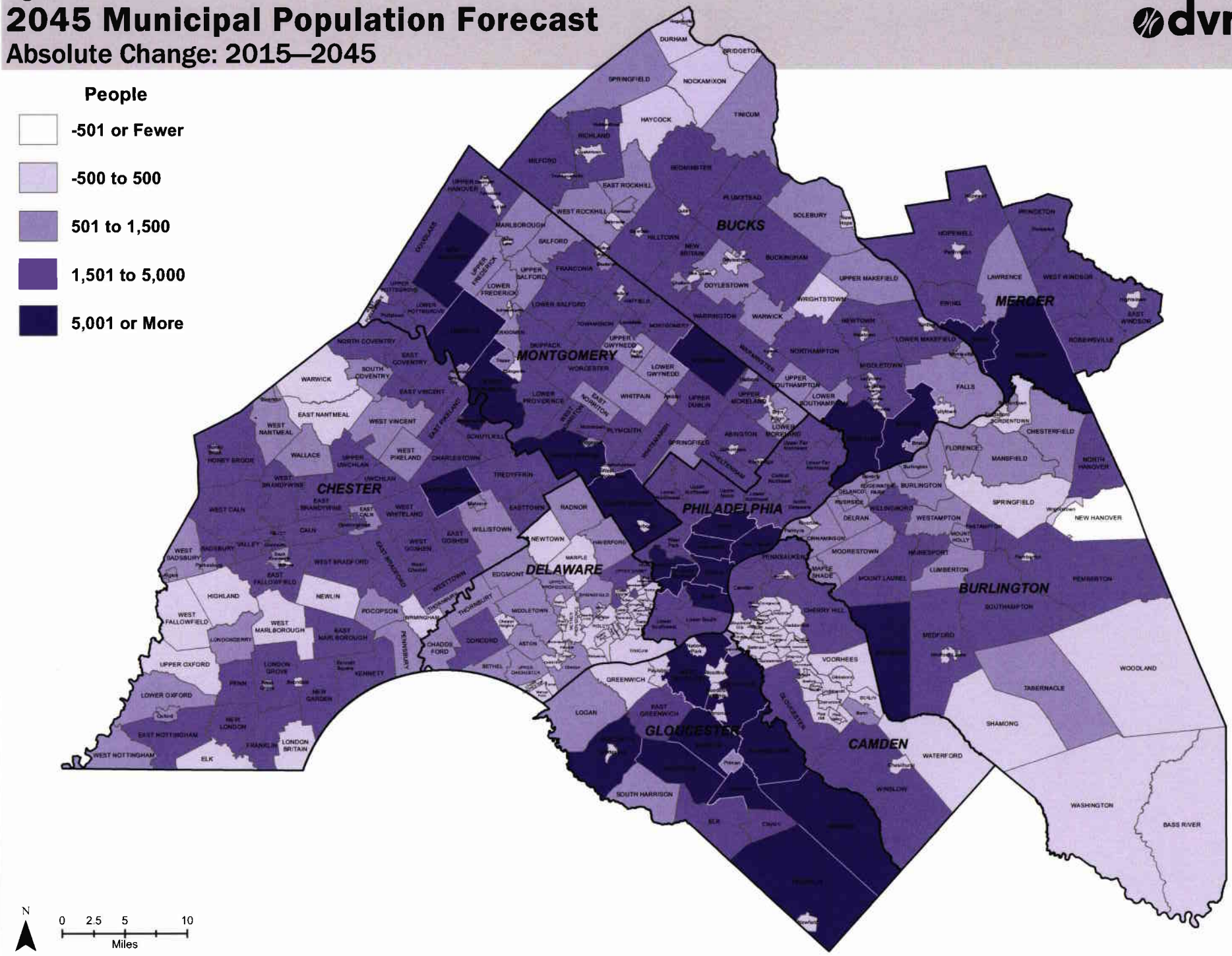

Figure 3:

2045 Municipal Population Forecast

Percentage Change: 2015–2045

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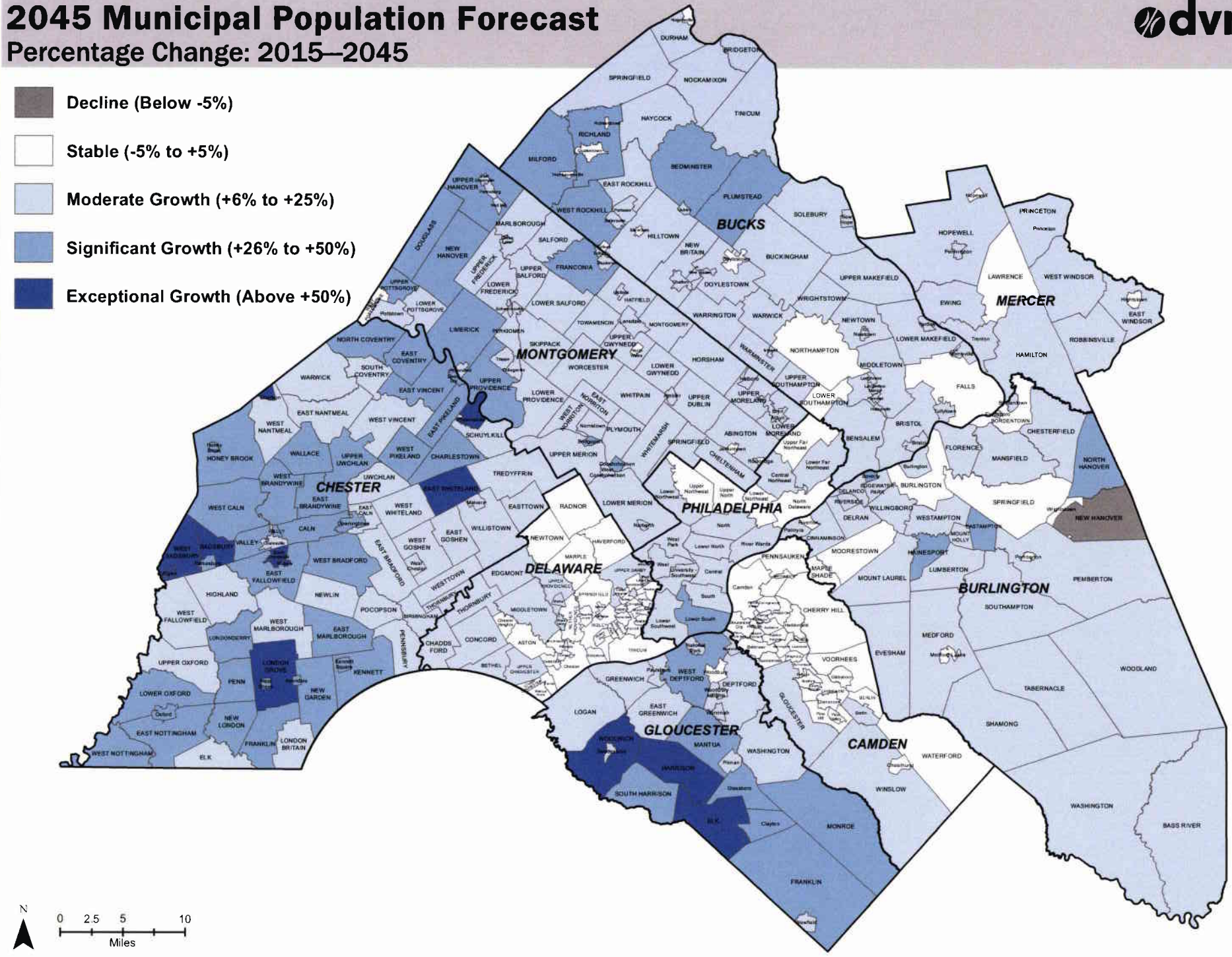

Figure 4:

2045 Municipal Population Forecast

Absolute Change per Square Mile by Municipality: 2015–2045

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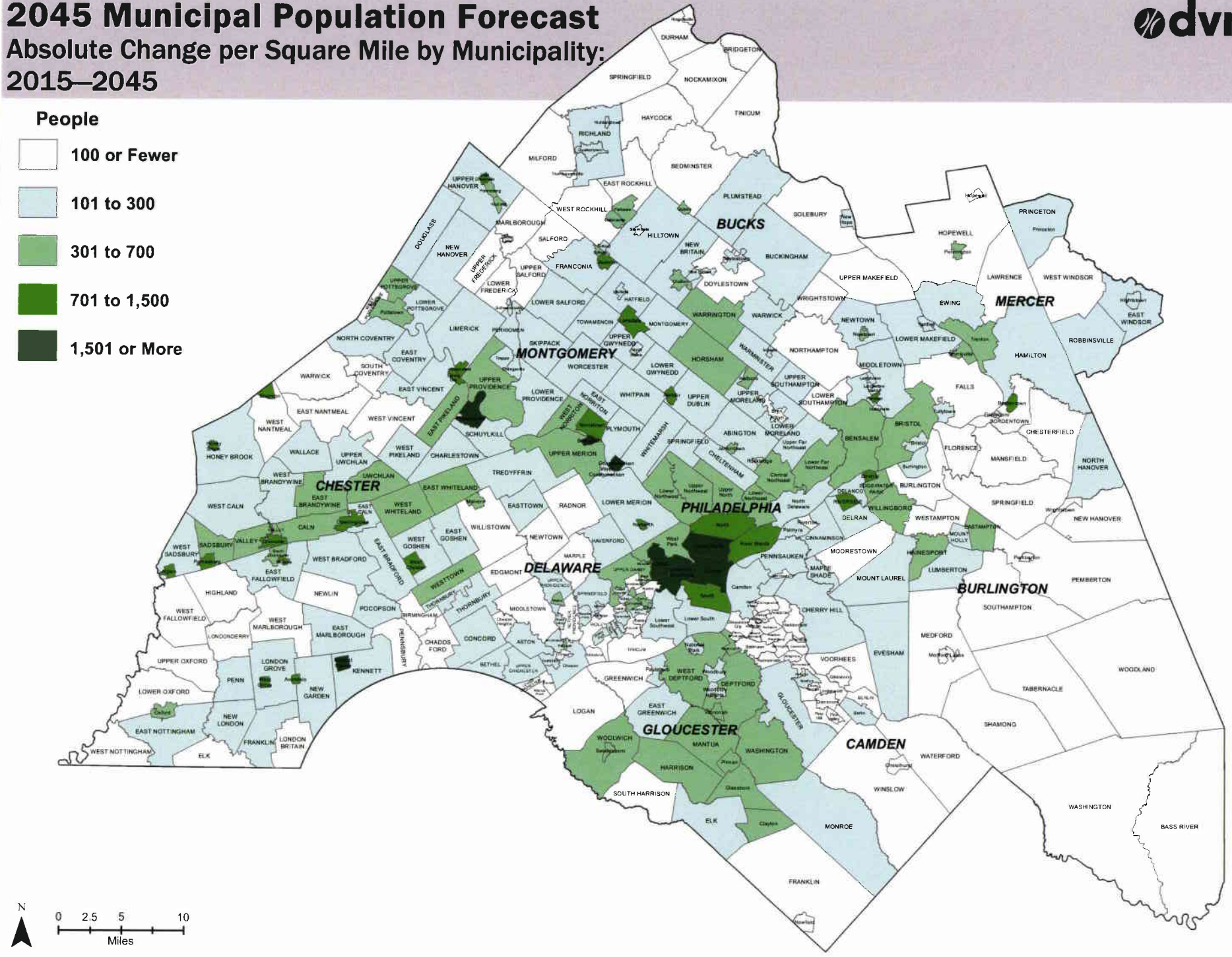

Summary

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%

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**

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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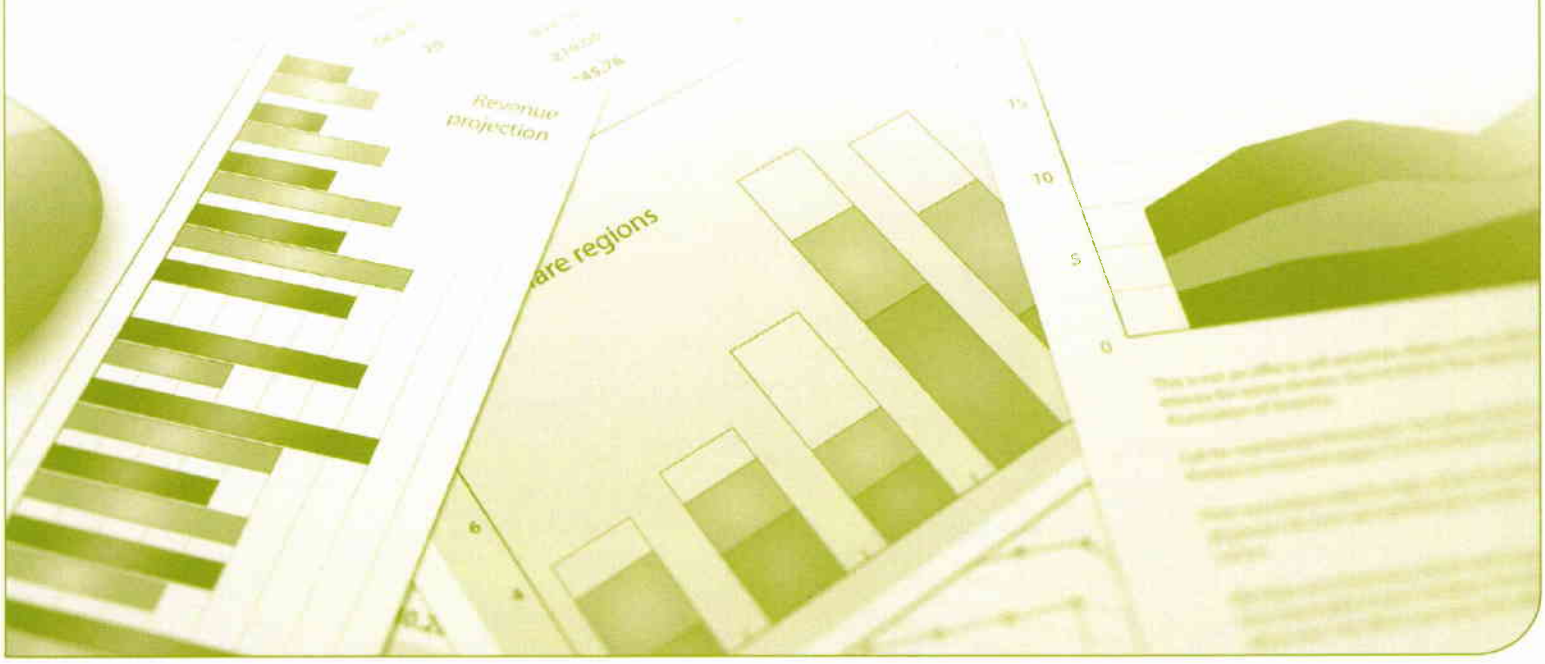
DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

ADR 023 | October 2016

Analytical Data Report

Regional, County, and Municipal Employment Forecasts, 2015–2045

DELAWARE VALLEY 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.

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

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.

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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.

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

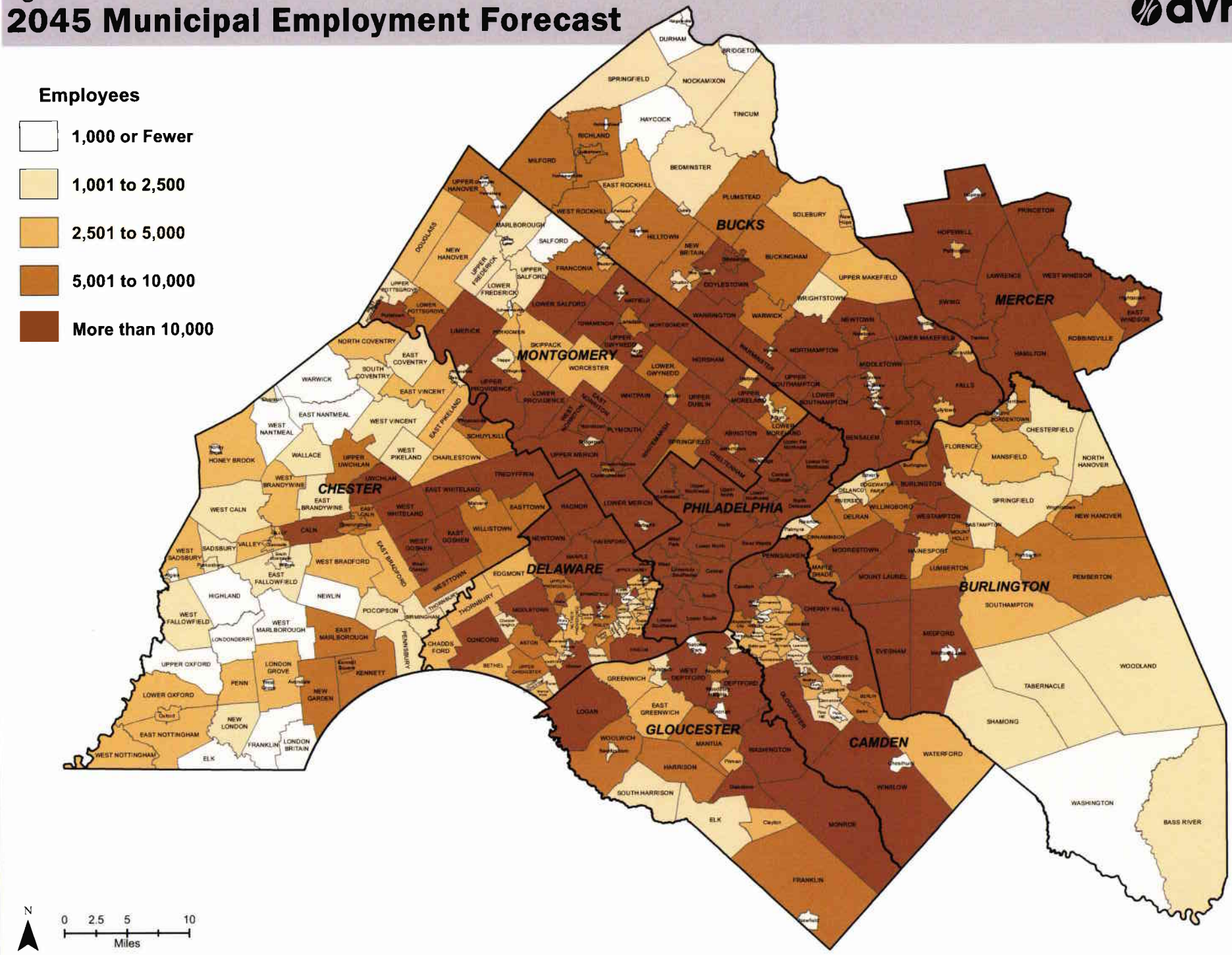


Figure 2:

2045 Municipal Employment Forecast

Absolute Change: 2015—2045

dvrpc

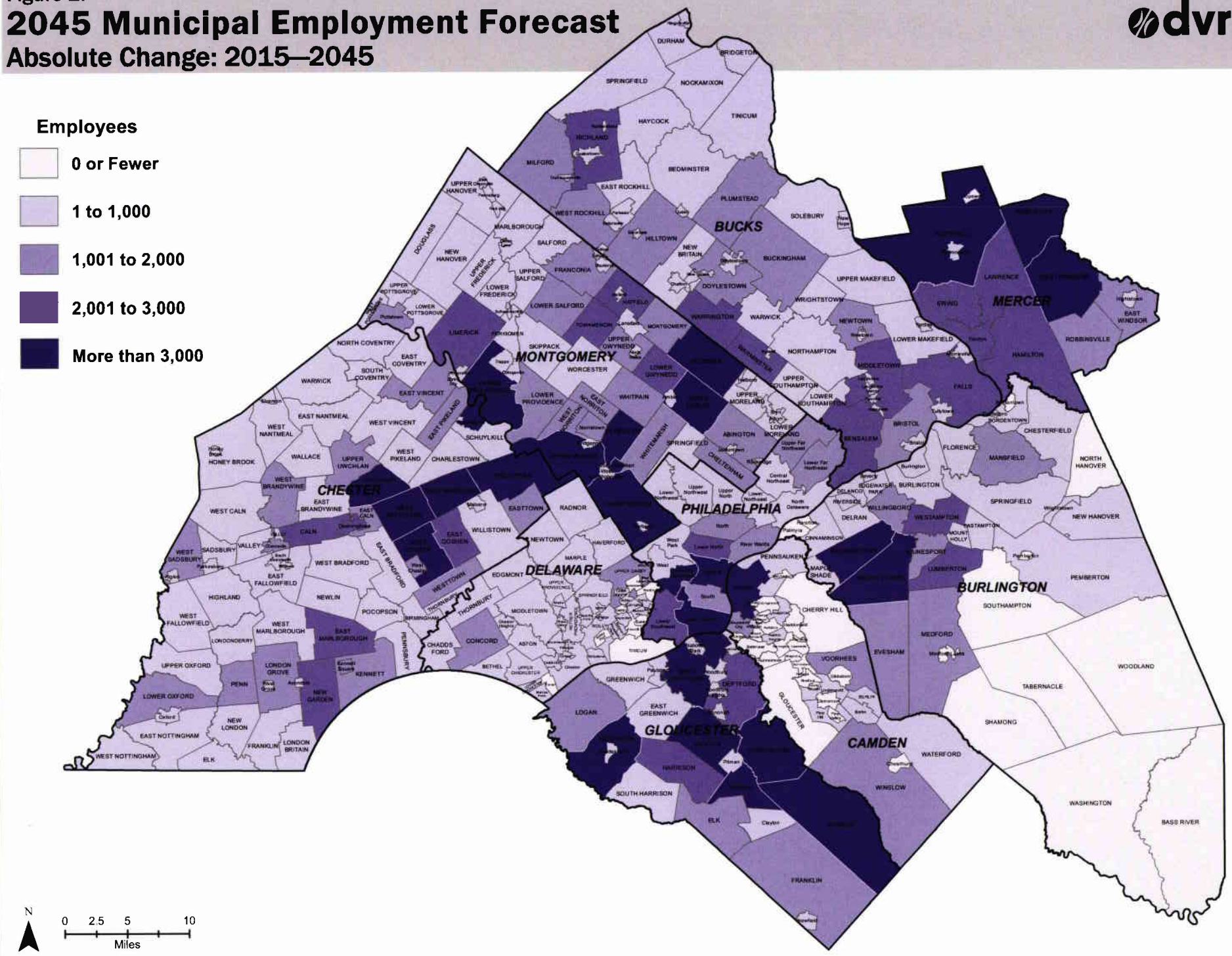


Figure 3:

2045 Municipal Employment Forecast

Percentage Change: 2015—2045

dvrpc

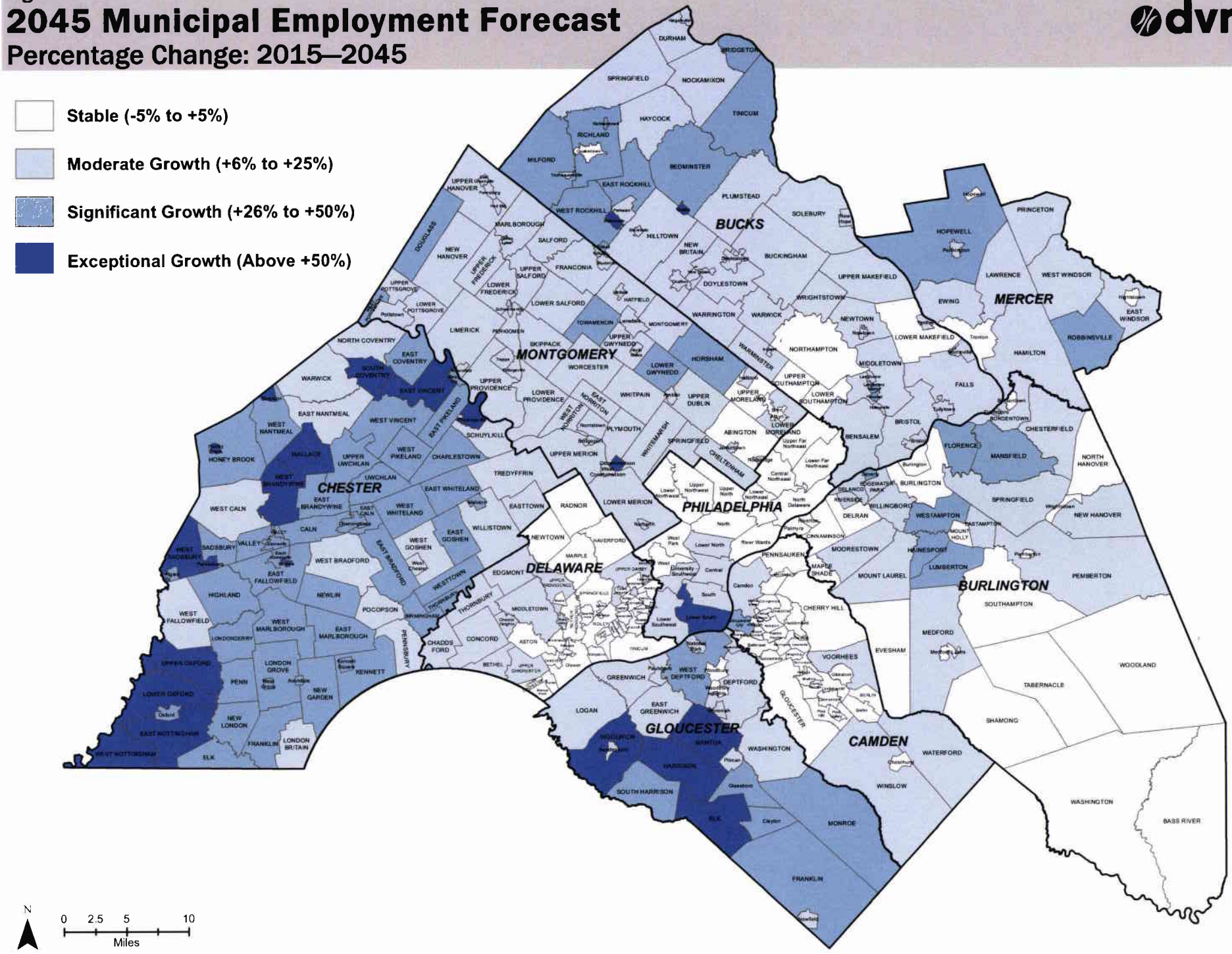
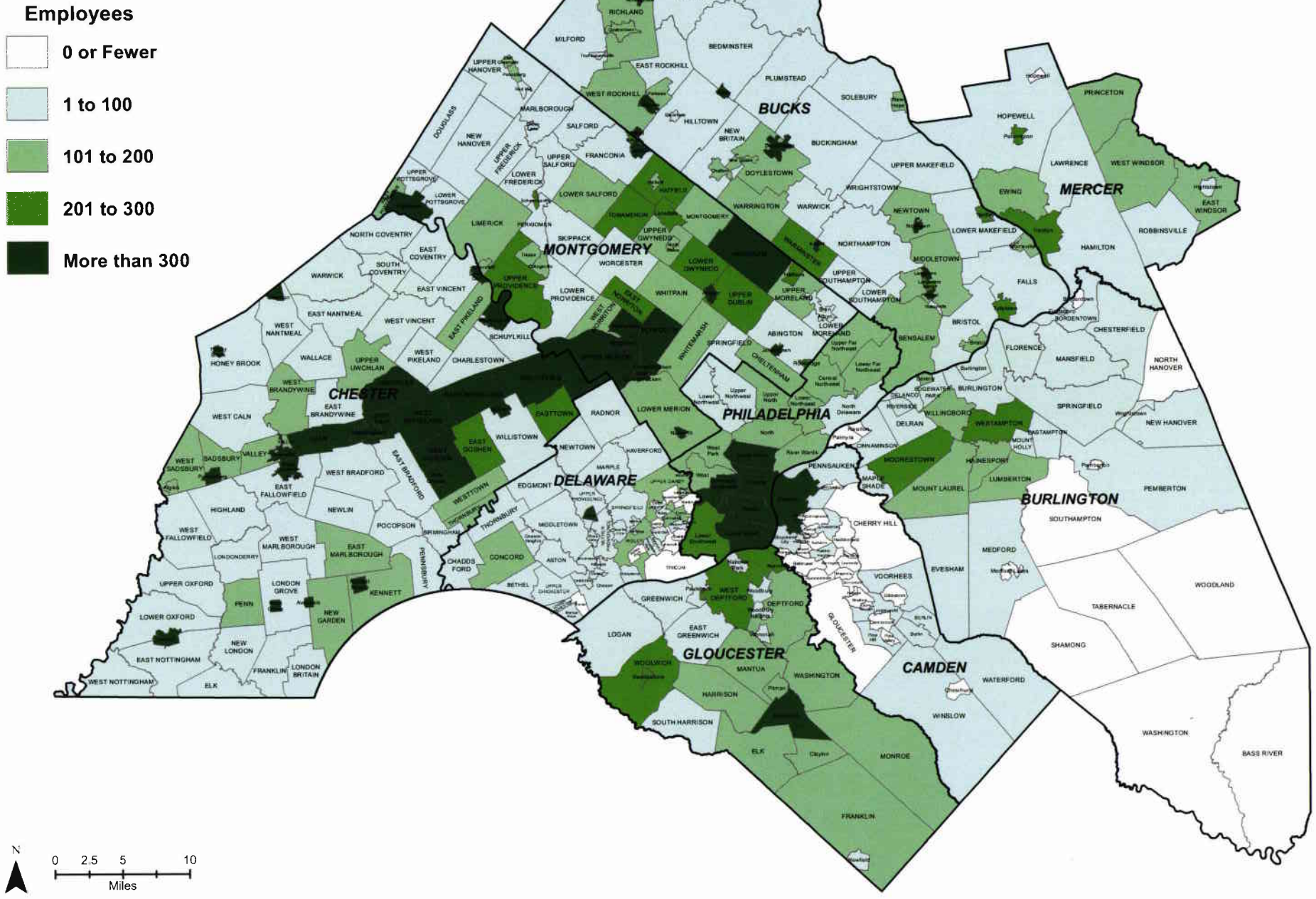


Figure 4:

2045 Municipal Employment Forecast

Absolute Change per Square Mile by Municipality: 2015–2045

dvrpc



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%

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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.

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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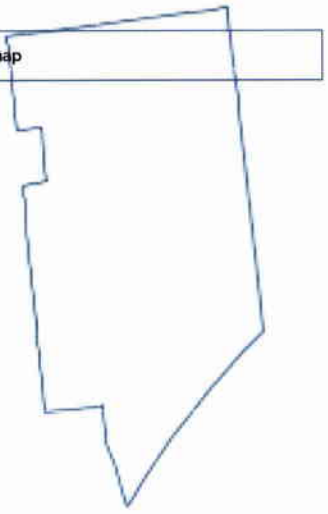
Data Heat Maps | Share this map

Map Layers | Demographics | Consumer Expenditures | Labor Force



(https://maps.google.com/maps?ll=39.805065,-75.752243&z=12&hl=en-US&gl=US&mapclient=apiv3)

Map data ©2016 Google

NEW GARDEN TOWNSHIP

PENNSYLVANIA

Properties | Compare

(/signup)

Community Profile

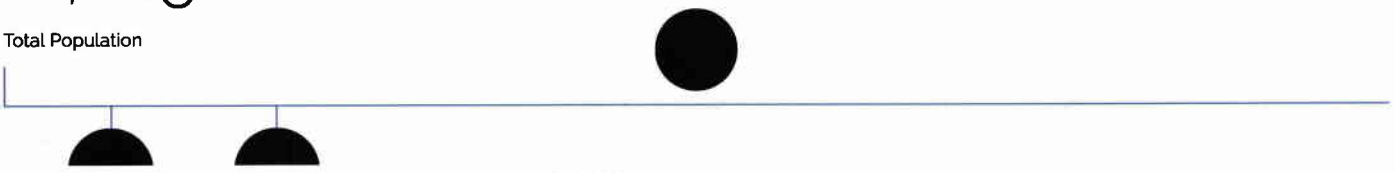
★★★★★ View reviews

People

The total population of the City of New Garden Township is 12,085. The median age is 36.99. Learn More (http://AIRPORTS.zoomprospector.com?SST=AIRPORTS&DID=COMMUNITIES_4253608&TB=DEMOGRAPHICS)

12,085

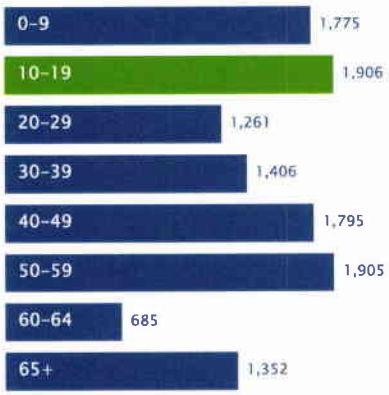
Total Population



51.92% Male

48.08% Female

Age Distribution



Educational Attainment

The majority of the population in New Garden Township has completed at least a bachelor degree, and 48.05% has a College Degree. Learn More (http://AIRPORTS.zoomprospector.com?SST=AIRPORTS&DID=COMMUNITIES_4253608&TB=DEMOGRAPHICS)

< Grade 9 **10.23%**	Grade 9-12 **5.70%**	High School **20.70%**
Some College **10.33%**	Assoc Degree **4.98%**	Bach Degree **26.85%**
Grad Degree **21.20%**		

0
in the community

86
within 50 miles

offer Associate's Degree
or Certificate

0
in the community

74
within 50 miles

offer Bachelor's Degree
or Higher

Labor Force

New Garden Township has a labor force of 6,450 people . Learn More (http://AIRPORTS.zoomprospector.com?SST=AIRPORTS&DID=COMMUNITIES_4253608&TB=LABORFORCE)

6,450
Labor Force

Talent

Where are the top jobs by occupation?

Executive, Managers, and Administrators	Office and Administrative support	Sales	Farming, Fishing, Forestry	Construction and Extraction
17.45%	**11.37%**	**9.71%**	**7.25%**	**7.09%**
965	629	537	802	392

The work distribution of total employees in New Garden Township is:

41.00%
Blue Collar

58.00%

White Collar

Total Establishments

383

Total Employees

5,530

Businesses and Jobs

New Garden Township has a total of 383 businesses. In 2016, the leading industries in New Garden Township were Agriculture, Forestry, Fishing and Hunting, Construction, Wholesalers, and Retail. Learn More (http://AIRPORTS.zoomprospector.com?SST=AIRPORTS&DID=COMMUNITIES_4253608&TB=LABORFORCE)

Which are the top Industries by jobs?

1	Agriculture, Forestry, Fishing and Hunting **2,011** Jobs **46** Establishments
2	Construction **556** Jobs **43** Establishments
3	Retail **528** Jobs **48** Establishments
4	Wholesalers **486** Jobs **16** Establishments

How many employees do businesses in New Garden Township have?

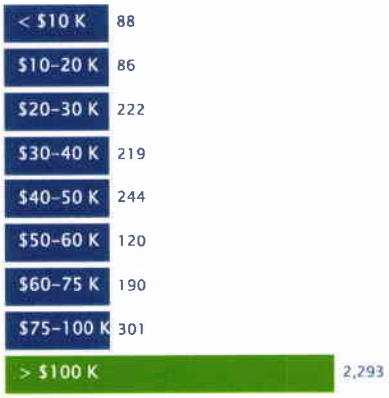
1-4 Employees	54.05%
5-9 Employees	15.93%
10-19 Employees	14.10%
20-49 Employees	7.57%
50-99 Employees	5.22%
100+ Employees	3.13%

Income and Spending

Households in New Garden Township earn a median yearly income of $129,314. 73.99% of the households earn more than the national average each year. Household expenditures average $106,384.00 per year. The majority of earnings get spent on Shelter, Transportation, Food and Beverages, Health Care, and Utilities. Learn More (http://AIRPORTS.zoomprospector.com?SST=AIRPORTS&DID=COMMUNITIES_4253608&TB=CONSUMERSPENDING)

$129,314

Median Household Income
Income Distribution



How do people spend most of their money?

PER HOUSEHOLD

Shelter	Transportation	Food and Beverages	Health Care	Utilities
$22,216	$18,695	$14,614	$7,557	$7,078

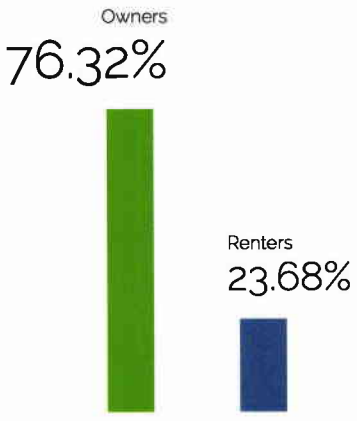
$129,314

Median Household Income

Housing

There are 222.00% more households who own their homes than there are renters.

Owners vs. Renters



Township Of New Garden PA Demographic Data and Boundary Map

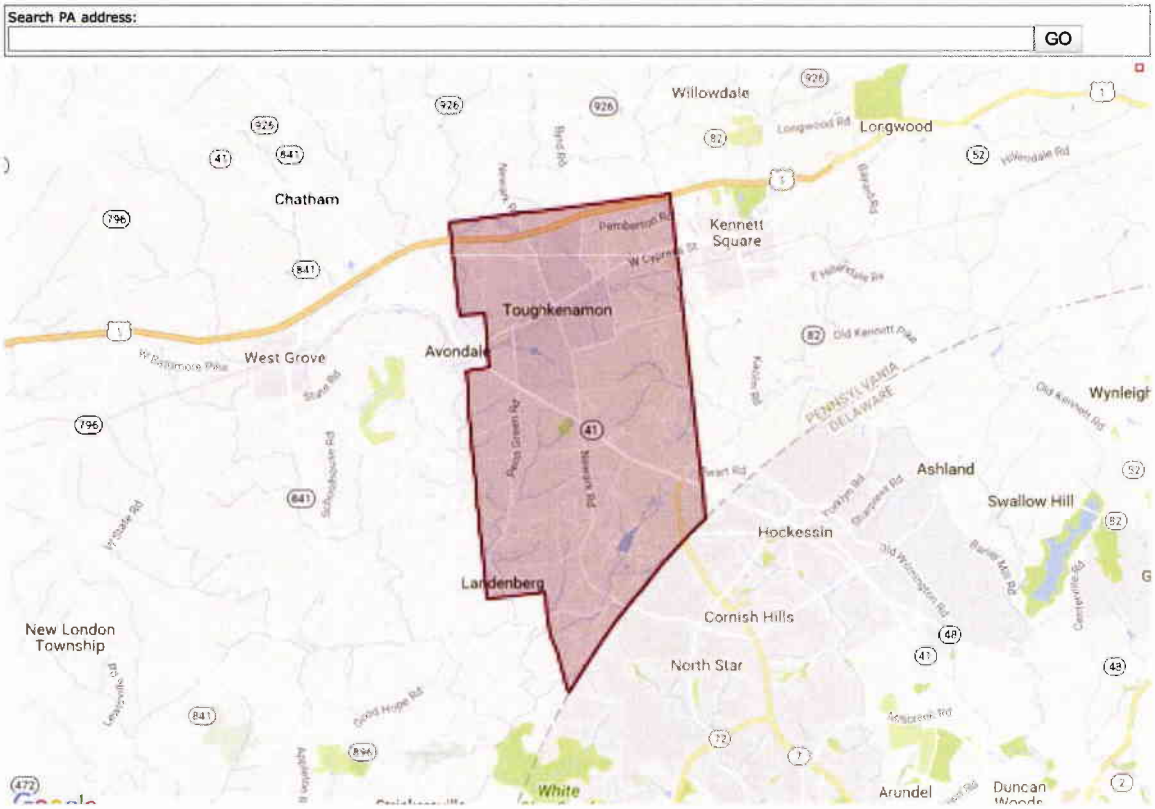
View ALL Chester County C

Township Of New Garden, PA

The Township Of New Garden is a County Subdivision of Chester County. The subdivision has a T1 Census Class Code which indicates that the Township Of New Garden is an active county subdivision that is not coextensive with an incorporated place.

Also See: Chester County Data | Cities in Chester County | County Subdivisions in Chester County

Township Of New Garden Boundary Map



Township Of New Garden Data & Demographics (As of July 1, 2016)

POPULATION		HOUSING	
Total Population	12,405	Total Housing Units	3,986 (100%)
Population in Households	12,222	Owner Occupied HU	2,816 (70.6%)
Population in Families	10,850	Renter Occupied HU	986 (24.7%)
Population in Group Qrtrs	183	Vacant Housing Units	184 (4.6%)
Population Density[1]	770	Median Home Value	$427,115
Diversity Index[2]	67	Average Home Value	$445,410

Pennsylvania

- Pennsylvania Civil Features
- Pennsylvania Census Data
- Pennsylvania Land for Sale
- Pennsylvania Historic Landmark
- Pennsylvania Schools

Pennsylvania Jobs

- Accounting
- Administrative & Clerical
- Banking & Finance
- Business Opportunity
- Customer Service
- Engineering
- Executive
- Franchise
- Government
- Health Care
- Hospitality
- Human Resources
- Information Technology
- Part-Time
- Retail
- Sales & Marketing
- Transportation

HOUSEHOLDS		INCOME	
Total Households	3,802	Median Household Income	$123,347
Average Household Size	3.21	Average Household Income	$159,562
Family Households	3,168	Per Capita Income	$49,228
Average Family Size	3		

(Compound Annual Growth Rates)

GROWTH RATES	2010-2014	2014-2019
Population	0.55%	0.59%
Households	0.46%	0.55%
Families	0.38%	0.49%
Median Household Income		1.52%
Per Capita Income		1.18%

1) Population Density = Total Population per square mile.

2) The Diversity Index is a scale of 0 to 100 that represents the likelyhood that two persons, chosen at random from the same area, belong to different race or ethnic groups. If an area's entire population belongs to one race AND one ethnic group, then the area has zero diversity. An area's diversity index increases to 100 when the population is evenly divided into two or more race/ethnic groups.

Based on Census 2010 counts, the Diversity Index for the United States was 60.6 and it is expected to increase to 64.8 by July 1, 2018.

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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%**	**-**
4200100000	**Adams County**	**101,407**	**0.8%**	**-**	**91,292**	**0.7%**	**-**	**10,115**	**-**	**11.1%**	**-**
4202900000	**Chester County**	**498,886**	**3.9%**	**-**	**433,501**	**3.5%**	**-**	**65,385**	**-**	**15.1%**	**-**
4202953608	New Garden township	11,984	0.1%	200	9,083	0.1%	264	2,901	52	31.9%	105

New Garden Township and Authority's Sewage Collection and Treatment System

Total Debt	2,794,000	3,455,000	4,089,000
Purchase of Capital Assets	20,661	69,224	25,776

	2014	2013	2012
Income (Loss) Before Transfers	769,092	534,764	4,847,031
Interest paid	123,537	154,117	179,911
Depreciation	444,868	437,041	432,819
Total Source	$1,337,497	$1,125,922	$5,459,761
Income tax	0	0	0
Principal	661,000	634,000	609,000
Interest paid	123,537	154,117	179,911
Total Use	$784,537	$788,117	$788,911

W/Out Trans

Debt Service Coverage	1.70	1.40	6.90
Pre-Tax Interest Coverage - Including AFC(3)(x)	7.20	4.50	27.90
Post-Tax Interest Coverage - Including AFC(3)(x)	7.20	4.50	27.90
GCF / Interest Coverage(4)(x)	10.80	7.30	30.30
GCF / Tot. Debt(7)(%)	43.40	28.10	129.10
GCF / Construction(6)(%)	5875.60	1403.90	20483.60

		Pretax Operating Income			Interest expense			Net Income			Gr
Symbol	Company Name	2014	2013	2012	2014	2013	2012	2014	2013	2012	2014
AWR	AMERICAN STATES V	120.747	121.154	113.157	21.641	22.685	23.064	61.058	62.686	54.148	134.423
AWK	AMERICAN WATER W	1,014.658	920.256	947.563	304.844	314.767	316.152	429.841	369.283	374.403	1,092.826
WTR	AQUA AMERICA INC	315.816	305.437	329.097	76.713	77.754	78.129	213.884	204.993	184.087	363.281
ARTNA	ARTESIAN RESOURCI	23.274	20.944	23.507	7.393	7.055	7.045	9.506	8.301	9.846	25.105
CWT	CALIFORNIA WATER	113.193	98.620	101.817	28.483	30.897	31.537	56.738	47.254	48.828	150.545
CTWS	CONNECTICUT WATI	32.061	31.492	29.552	6.515	6.130	8.581	21.319	18.269	13.640	38.463
MSEX	MIDDLESEX WATER (	33.989	31.061	28.504	5.607	5.807	6.725	18.445	16.633	14.396	32.702
SJW	SJW CORP	98.677	57.346	58.958	21.900	20.827	21.098	51.806	22.384	22.318	114.666
YORW	YORK WATER CO	21.448	20.710	20.158	5.087	5.244	5.249	11.484	9.654	9.303	21.959

Pre-Tax Interest Coverage - Including AFC(3)(x)	4.2	3.9	3.4
Post-Tax Interest Coverage - Including AFC(3)(x)	3.4	2.8	2.6
GCF / Interest Coverage(4)(x)	6.2	4.7	4.2
GCF / Tot. Debt(7)(%)	22.2	20.1	18.2
GCF / Construction(6)(%)	114.0	108.3	105.3

oss Cash Flow		Total debt			CAPX				Pretax Interest Coverage			Posttax Interest C	
2013	2012	2014	2013	2012	2014	2013	2012		2014	2013	2012	2014	2013
118.618	110.321	326.090	332.377	335.791	72.553	97.379	68.104		5.6	5.3	4.9	3.8	3.8
1,006.984	931.465	5,959.336	5,874.539	5,595.274	956.119	980.252	928.574		3.3	2.9	3.0	2.4	2.2
348.719	369.275	1,637.668	1,591.611	1,669.375	328.605	308.171	347.985		4.1	3.9	4.2	3.8	3.6
20.071	21.644	124.831	117.720	118.835	23.730	21.188	20.546		3.1	3.0	3.3	2.3	2.2
113.336	134.228	504.955	480.865	570.725	132.015	122.988	127.681		4.0	3.2	3.2	3.0	2.5
36.081	22.358	181.049	179.163	181.439	45.668	33.303	24.653		4.9	5.1	3.4	4.3	4.0
30.222	28.280	160.949	163.634	170.547	22.596	20.080	21.578		6.1	5.3	4.2	4.3	3.9
65.662	64.645	398.149	357.951	356.290	101.936	94.325	105.834		4.5	2.8	2.8	3.4	2.1
17.255	16.679	84.885	84.928	84.975	14.139	9.852	11.543		4.2	3.9	3.8	3.3	2.8
									4.2	3.9	3.4	3.4	2.8

overage	GCF Interest Coverage			GCF To Debt			GCF To CAPX		
2012	2014	2013	2012	2014	2013	2012	2014	2013	2012
3.3	7.2	6.2	5.8	41.2	35.7	32.9	185.3	121.8	162.0
2.2	4.6	4.2	3.9	18.3	17.1	16.6	114.3	102.7	100.3
3.4	5.7	5.5	5.7	22.2	21.9	22.1	110.6	113.2	106.1
2.4	4.4	3.8	4.1	20.1	17.0	18.2	105.8	94.7	105.3
2.5	6.3	4.7	5.3	29.8	23.6	23.5	114.0	92.2	105.1
2.6	6.9	6.9	3.6	21.2	20.1	12.3	84.2	108.3	90.7
3.1	6.8	6.2	5.2	20.3	18.5	16.6	144.7	150.5	131.1
2.1	6.2	4.2	4.1	28.8	18.3	18.1	112.5	69.6	61.1
2.8	5.3	4.3	4.2	25.9	20.3	19.6	155.3	175.1	144.5
2.6	6.2	4.7	4.2	22.2	20.1	18.2	114.0	108.3	105.3

FEDERAL RESERVE statistical release

H.15 (519) SELECTED INTEREST RATES

For use at 2:30 p.m. Eastern Time

Yields in percent per annum

October 3, 2016

Instruments	2016 Sep 26	2016 Sep 27	2016 Sep 28	2016 Sep 29	2016 Sep 30	Week Ending Sep 30	Week Ending Sep 23	2016 Sep
Federal funds (effective)[1 2 3]	0.40	0.40	0.40	0.40	0.29	0.40	0.40	0.40
Commercial Paper[3 4 5 6]								
Nonfinancial								
1-month	0.38	0.42	0.41	0.36	0.39	0.39	0.41	0.40
2-month	0.40	0.48	0.47	0.44	0.45	0.45	0.47	0.46
3-month	0.56	0.54	0.53	0.52	0.52	0.53	0.53	0.53
Financial								
1-month	0.47	n.a.	n.a.	0.48	n.a.	0.48	0.46	0.45
2-month	0.55	0.56	0.61	n.a.	0.60	0.58	0.60	0.60
3-month	0.63	0.64	0.82	0.64	0.71	0.69	0.78	0.75
Eurodollar deposits (London)[3 7]								
1-month	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
3-month	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
6-month	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Bank prime loan[2 3 8]	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Discount window primary credit[2 9]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
U.S. government securities								
Treasury bills (secondary market)[3 4]								
4-week	0.10	0.16	0.14	0.11	0.19	0.14	0.12	0.18
3-month	0.25	0.26	0.27	0.26	0.28	0.26	0.24	0.29
6-month	0.42	0.42	0.44	0.42	0.44	0.43	0.44	0.46
1-year	0.56	0.56	0.58	0.57	0.57	0.57	0.59	0.58
Treasury constant maturities								
Nominal[10]								
1-month	0.12	0.16	0.14	0.12	0.20	0.15	0.13	0.19
3-month	0.25	0.26	0.27	0.26	0.29	0.27	0.24	0.29
6-month	0.42	0.42	0.44	0.43	0.45	0.43	0.44	0.47
1-year	0.58	0.58	0.60	0.59	0.59	0.59	0.60	0.59
2-year	0.76	0.75	0.75	0.73	0.77	0.75	0.79	0.77
3-year	0.87	0.86	0.87	0.85	0.88	0.87	0.92	0.90
5-year	1.13	1.12	1.13	1.12	1.14	1.13	1.19	1.18
7-year	1.41	1.39	1.41	1.39	1.42	1.40	1.48	1.46
10-year	1.59	1.56	1.57	1.56	1.60	1.58	1.66	1.63
20-year	2.00	1.96	1.96	1.95	1.99	1.97	2.06	2.02
30-year	2.32	2.28	2.29	2.28	2.32	2.30	2.39	2.35
Inflation indexed[11]								
5-year	-0.27	-0.26	-0.31	-0.32	-0.31	-0.29	-0.18	-0.17
7-year	-0.14	-0.14	-0.17	-0.18	-0.17	-0.16	-0.05	-0.05
10-year	0.05	0.04	0.01	0.02	0.00	0.02	0.14	0.12
20-year	0.43	0.42	0.38	0.43	0.38	0.41	0.50	0.47
30-year	0.60	0.58	0.57	0.58	0.59	0.58	0.68	0.64
Inflation-indexed long-term average[12]	0.46	0.44	0.42	0.43	0.43	0.44	0.53	0.50
Interest rate swaps[13]								
1-year	0.94	0.94	0.93	0.94	0.94	0.94	0.96	0.95
2-year	1.00	1.00	0.99	1.01	1.00	1.00	1.03	1.02
3-year	1.06	1.05	1.04	1.06	1.05	1.05	1.10	1.08
4-year	1.11	1.10	1.09	1.12	1.11	1.10	1.16	1.13
5-year	1.16	1.15	1.14	1.17	1.16	1.16	1.22	1.19
7-year	1.28	1.26	1.26	1.29	1.28	1.27	1.34	1.32
10-year	1.44	1.41	1.41	1.44	1.44	1.43	1.50	1.47
30-year	1.78	1.74	1.73	1.76	1.77	1.75	1.84	1.80
Corporate bonds								
Moody's seasoned								
Aaa[14]	3.43	3.39	3.39	3.37	3.44	3.40	3.47	3.41
Baa	4.29	4.25	4.26	4.23	4.29	4.26	4.35	4.31
State & local bonds[15]				3.06		3.06	2.98	2.93
Conventional mortgages[16]				3.42		3.42	3.48	3.46

See overleaf for footnotes.

n.a. Not available.

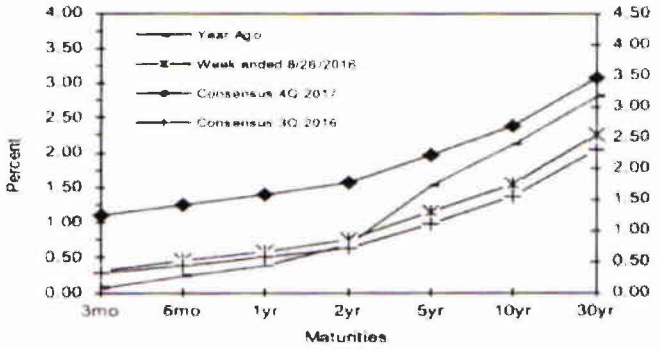
Consensus Forecasts Of U.S. Interest Rates And Key Assumptions[1]

	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month			Latest Qtr	3Q	4Q	1Q	2Q	3Q	4Q
Interest Rates	Aug. 26	Aug. 19	Aug. 12	Aug. 5	Jul	Jun	May	2Q 2016	2016	2016	2017	2017	2017	2017
Federal Funds Rate	0.40	0.40	0.40	0.36	0.39	0.38	0.37	0.37	**0.4**	**0.5**	**0.6**	**0.8**	**0.9**	**1.1**
Prime Rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	**3.5**	**3.6**	**3.7**	**3.9**	**4.0**	**4.2**
LIBOR, 3-mo.	0.82	0.82	0.82	0.78	0.70	0.69	0.64	0.63	**0.8**	**0.9**	**1.0**	**1.1**	**1.3**	**1.5**
Commercial Paper, 1-mo.	0.38	0.37	0.36	0.37	0.35	0.38	0.35	0.36	**0.4**	**0.5**	**0.7**	**0.9**	**1.0**	**1.2**
Treasury bill, 3-mo.	0.30	0.30	0.29	0.28	0.30	0.27	0.28	0.28	**0.3**	**0.5**	**0.6**	**0.8**	**0.9**	**1.1**
Treasury bill, 6-mo.	0.45	0.45	0.44	0.42	040	0.40	0.42	0.43	**0.4**	**0.6**	**0.7**	**0.9**	**1.1**	**1.3**
Treasury bill, 1 yr.	0.58	0.58	0.56	0.52	0.51	0.55	0.59	0.54	**0.6**	**0.7**	**0.9**	**1.1**	**1.2**	**1.4**
Treasury note, 2 yr.	0.75	0.74	0.72	0.67	0.67	0.73	0.82	0.79	**0.7**	**0.9**	**1.1**	**1.2**	**1.4**	**1.6**
Treasury note, 5 yr.	1.14	1.15	1.12	1.07	1.07	1.17	1.30	1.30	**1.1**	**1.3**	**1.5**	**1.6**	**1.8**	**2.0**
Treasury note, 10 yr.	1.55	1.56	1.54	1.54	1.50	1.64	1.81	1.84	**1.5**	**1.7**	**1.9**	**2.1**	**2.2**	**2.4**
Treasury note, 30 yr.	2.25	2.28	2.26	2.28	2.23	2.45	2.63	2.64	**2.3**	**2.5**	**2.6**	**2.8**	**2.9**	**3.1**
Corporate Aaa bond	3.27	3.31	3.34	3.40	3.28	3.50	3.65	3.82	**3.3**	**3.6**	**3.8**	**3.9**	**4.1**	**4.2**
Corporate Baa bond	4.21	4.25	4.25	4.29	4.22	4.53	4.68	5.10	**4.4**	**4.6**	**4.8**	**4.9**	**5.0**	**5.2**
State & Local bonds	2.84	2.84	2.85	2.85	2.83	3.20	3.29	3.30	**3.0**	**3.1**	**3.3**	**3.4**	**3.6**	**3.7**
Home mortgage rate	3.43	3.43	3.45	3.43	3.44	3.57	3.60	3.70	**3.5**	**3.7**	**3.8**	**4.0**	**4.2**	**4.3**
	History								Consensus Forecasts-Quarterly					
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Key Assumptions	2014	2014	2015	2015	2015	2015	2016	2016	**2016**	**2016**	**2017**	**2017**	**2017**	**2017**
Major Currency Index	77.8	82.6	89.4	89.9	91.8	93.1	93.3	89.6	**90.4**	**91.2**	**91.8**	**91.9**	**92.0**	**92.0**
Real GDP	5.0	2.3	2.0	2.6	2.0	0.9	0.8	1.1	**2.7**	**2.4**	**2.2**	**2.3**	**2.2**	**2.2**
GDP Price Index	1.7	0.5	-0.1	2.3	1.3	0.8	0.5	2.3	**1.6**	**1.8**	**1.9**	**2.1**	**2.1**	**2.1**
Consumer Price Index	0.9	-0.3	-2.9	2.4	1.4	0.8	-0.3	2.5	**1.8**	**2.2**	**2.2**	**2.3**	**2.3**	**2.3**

Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal*. Interest rate definitions are same as those in FRSR H.15. Treasury yields are reported on a constant maturity basis. Historical data for Fed's Major Currency Index is from FRSR H.10 and G.5. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).

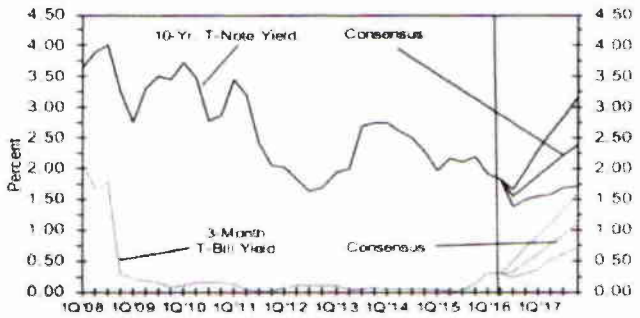
U.S. Treasury Yield Curve

Week ended August 26, 2016 and Year Ago vs 3Q 2016 and 4Q 2017 Consensus Forecasts



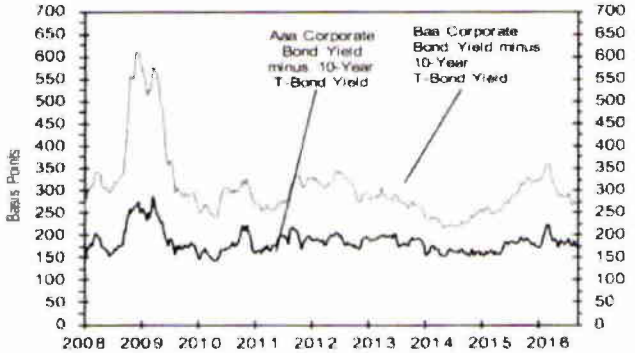
U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield

(Quarterly Average)



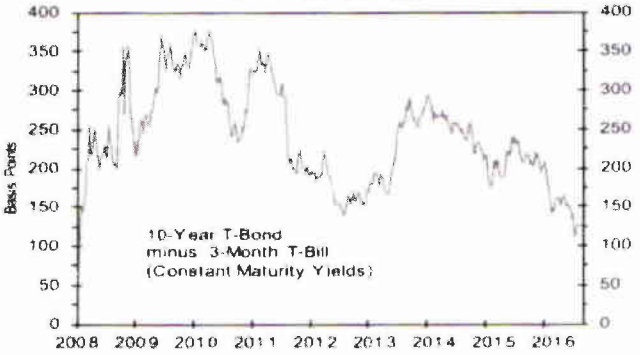
Corporate Bond Spreads

As of week ended August 26, 2016



U.S. Treasury Yield Curve

As of week August 26, 2016



	SBBI	SBBI				
Equity Risk Premium	7.00	7.00				
Beta (Value Line Med.)	0.70	0.70				
Risk Adjusted Equity Premium	4.90	4.90				
Yield (RF)	2.32	2.32				
Size Premium	1.80	0.00				
	9.02	7.22			High	9.02
					Low	7.22

VL Beta - 7/15/16

0.70

12.07 Total Return SBBI 1926-2014
5.07 Income Return SBBI 1926-2014

2.32 30-yr T-bond

	Recent Market Value (Mill $)	Market Quartile Name	Market Quartile	Quartile Size Premium	Value Line Beta
American States Water Co	1,464.15	Low-Cap	3	1.8	0.7
American Water Works Co Inc	13,314.19	Large-Cap	1	0	0.7
Aqua America Inc	5,405.02	Mid-Cap	2	1.07	0.7
Artesian Resources -Cl A	259.89	Mico-Cap	4	3.74	0.7
California Water Service Gp	1,539.39	Low-Cap	3	1.8	0.75
Connecticut Water Svc Inc	547.73	Mico-Cap	4	3.74	0.65
Middlesex Water Co	573.71	Low-Cap	3	1.8	0.7
SJW Corp	892.91	Low-Cap	3	1.8	0.7
York Water Co	381.72	Mico-Cap	4	3.74	0.7
Average	2,708.74	Low-Cap	3	1.8	0.7
Median	892.91	Low-Cap	3	1.8	0.7

MERGENT® MUNICIPAL & GOVERNMENT

NEWS REPORTS

Tuesday, October 11, 2016

MERGENT

Volume 88 No. 10

NOTICE – *Items in this issue will be listed online weekly and printed monthly.*

CALIFORNIA

CALIFORNIA STATE PUBLIC WORKS BOARD, CA

New Bond Offering: Lease Revenue Refunding, Various Capital Projects, 2016-D
ISSUED–$227,515,000.
DATED DATE–Oct. 13, 2016.
DUE–Apr. 1: 2017 - 2034.
DENOMINATION–Registered $5,000.00 and multiples thereof.
TRUSTEE–Office of The State Treasurer.
PAYING AGENT–Office of The State Treasurer.
FINANCIAL ADVISOR–Knn Public Finance LLC.
BOND COUNSEL–Stradling Yocca Carlson & Rauth PC.
ESCROW AGENT–Office of The State Treasurer.
FISCAL AGENT–Office of The State Treasurer.
DEPOSITORY–Depository Trust Company.
INTEREST–A&O 1 (Apr. 1, 2017–according to maturity–$000 omitted):

Year	Amt.	%	Year	Amt.	%
04/01/17	7,990	3.00	04/01/18	9,210	3.00
04/01/19	9,495	3.00	04/01/20	9,775	4.00
04/01/21	10,165	4.00	04/01/22	4,690	4.00
04/01/22	5,885	5.00	04/01/23	4,435	2.00
04/01/23	6,620	5.00	04/01/24	8,525	5.00
04/01/24	2,945	3.00	04/01/25	9,755	5.00
04/01/25	2,230	4.00	04/01/26	7,775	4.00
04/01/26	4,795	5.00	04/01/27	13,120	5.00
04/01/28	4,610	4.00	04/01/28	9,160	5.00
04/01/29	1,160	4.00	04/01/29	13,255	5.00
04/01/30	15,120	4.00	04/01/31	15,730	4.00
04/01/32	16,360	4.00	04/01/33	17,015	4.00
04/01/34	7,695	4.00	04/01/34	10,000	3.00

CALLABLE–Bonds due 2027 - 2034 are callable in whole at anytime or in part at anytime:
2027 - 2034 Bonds:
10/01/2026 . . . 100
EXTRAORDINARY OPTIONAL REDEMPTION–Subject to redemption in whole or in part at 100 under certain special circumstances as described in the indenture.
SECURITY–Lease/rent.
PURPOSE–Gen Purpose/Pub Improvement.
ORIGINAL ISSUE DISCOUNT–The following maturities were issued as original issue discount (maturity year and price or yield):
04/01/34 . . . . 99.33
OFFERED–($227,515,000) On Oct. 5, 2016 thru Loop Capital Markets LLC.

New Bond Offering: Lease Revenue Refunding, Various Capital Projects, 2016-C
ISSUED–$322,685,000.
DATED DATE–Oct. 13, 2016.
DUE–Nov. 1: 2020 - 2034.
DENOMINATION–Registered $5,000.00 and multiples thereof.
TRUSTEE–Office of The State Treasurer.
PAYING AGENT–Office of The State Treasurer.
FINANCIAL ADVISOR–Knn Public Finance LLC.
BOND COUNSEL–Stradling Yocca Carlson & Rauth PC.
ESCROW AGENT–Office of The State Treasurer.
FISCAL AGENT–Office of The State Treasurer.
DEPOSITORY–Depository Trust Company.
INTEREST–M&N 1 (May 1, 2017–according to maturity–$000 omitted):

Year	Amt.	%	Year	Amt.	%
11/01/20	14,915	5.00	11/01/21	15,680	5.00
11/01/22	16,480	5.00	11/01/23	17,330	5.00
11/01/24	18,210	5.00	11/01/25	19,155	5.00
11/01/26	20,135	5.00	11/01/27	21,170	5.00
11/01/28	22,265	5.00	11/01/29	23,385	5.00
11/01/30	10,275	5.00	11/01/30	14,245	4.00
11/01/31	3,750	5.00	11/01/31	21,840	4.00
11/01/32	26,650	4.00	11/01/33	27,885	5.00
11/01/34	29,315	5.00			

CALLABLE–Bonds due 2027 - 2034 are callable in whole at anytime or in part at anytime:
2027 - 2034 Bonds:
11/01/2026 . . . 100
EXTRAORDINARY OPTIONAL REDEMPTION–Subject to redemption in whole or in part at 100 under certain special circumstances as described in the indenture.
SECURITY–Lease/rent.
PURPOSE–Gen Purpose/Pub Improvement.
OFFERED–($322,685,000) On Oct. 5, 2016 thru Loop Capital Markets LLC.

MASSACHUSETTS

MOUNT GREYLOCK REGIONAL SCHOOL DISTRICT , MA

New Bond Offering: General Obligation School, 2016
ISSUED–$28,980,000.
DATED DATE–Oct. 13, 2016.
DUE–June 15: 2017 - 2036, 2041, 2046.
DENOMINATION–Registered $5,000.00 and multiples thereof.
PAYING AGENT–US Bank NA.
FINANCIAL ADVISOR–Unibank Fiscal Advisory Services Inc.
BOND COUNSEL–Locke Lord LLP.
DEPOSITORY–Depository Trust Company.
INTEREST–J&D 15 (Dec. 15, 2016–according to maturity–$000 omitted):

Year	Amt.	%	Year	Amt.	%
06/15/17	455	2.00	06/15/18	775	3.00
06/15/19	985	4.00	06/15/20	985	5.00
06/15/21	620	5.00	06/15/22	645	5.00
06/15/23	680	5.00	06/15/24	715	5.00
06/15/25	745	4.00	06/15/26	780	4.00
06/15/27	805	4.00	06/15/28	835	4.00
06/15/29	870	4.00	06/15/30	900	4.00
06/15/31	940	3.00	06/15/32	965	3.00
06/15/33	995	3.00	06/15/34	1,025	3.00
06/15/35	1,055	3.00	06/15/36	1,085	3.00
06/15/41	5,940	3.00	06/15/46	6,180	3.13

CALLABLE–Bonds due 2025 - 2036, 2041, 2046 are callable in whole at anytime or in part at anytime:
2025 - 2036, 2041, 2046 Bonds:
06/15/2024 . . . 100
SINKING FUND–In part by lot in minimum mandatory amounts each June 15 as follows ($000 omitted):
2041 Bonds:

06/15/37	1,120	06/15/38	1,155	06/15/39	1,185
06/15/40	1,225	06/15/41	1,255		

2046 Bonds:

06/15/42	1,295	06/15/43	1,335	06/15/44	1,380
06/15/45	1,370	06/15/46	800		

SECURITY–Limited G.o..
PURPOSE–Primary/Secondary Education.
ORIGINAL ISSUE DISCOUNT–The following maturities were issued as original issue discount (maturity year and price or yield):
06/15/41 . . . . 98.28 06/15/46 . . . . 97.63
OFFERED–($28,980,000) On Oct. 3, 2016 thru Janney Montgomery Scott LLC.

MINNESOTA

MINNEAPOLIS, MN

New Bond Offering: General Obligation Improvement and Various Purpose, 2016
ISSUED–$119,395,000.
DATED DATE–Oct. 20, 2016.
DUE–Dec. 1: 2017 - 2026.
DENOMINATION–Registered $5,000.00 and multiples thereof.
PAYING AGENT–Office of The City.
REGISTRAR–Office of The City.
FINANCIAL ADVISOR–Northland Securities Inc.
BOND COUNSEL–Kennedy & Graven.
TRANSFER AGENT–Office of The City.
DEPOSITORY–Depository Trust Company.
INTEREST–J&D 1 (June 1, 2017–according to maturity–$000 omitted):

Year	Amt.	%	Year	Amt.	%
12/01/17	47,500	2.00	12/01/18	13,000	2.00
12/01/19	8,000	2.00	12/01/20	10,000	2.00
12/01/21	9,000	2.00	12/01/22	10,550	2.00
12/01/23	10,545	2.00	12/01/24	5,000	2.00
12/01/25	2,400	2.00	12/01/26	3,400	2.00

CALLABLE–Bonds due 2023 - 2026 are callable in whole at anytime or in part at anytime:
2023 - 2026 Bonds:
12/01/2022 . . . 100
SECURITY–Unlimited Tax G.o..
PURPOSE–Gen Purpose/Pub Improvement.
OFFERED–($119,395,000) On Oct. 5, 2016 thru Morgan Stanley & Company LLC.

ST. MICHAEL-ALBERTVILLE INDEPENDENT SCHOOL DISTRICT NO. 885, MN

New Bond Offering: General Obligation School Building Refunding, 2016 A
ISSUED–$20,335,000.
DATED DATE–Oct. 27, 2016.
DUE–Feb. 1: 2019 - 2030.

MOODY'S MUNICIPAL BOND AVERAGES

	Ten Year State	Long Maturities				
Monthly Averages	**Aaa**	**Aa**	**Composite**	**Aaa**	**Aa**	**A**	**Baa**
June 2016	1.62	1.83	3.05	2.68	2.89	3.19	3.45
July 2016	1.40	1.69	2.82	2.42	2.71	2.96	3.21
Aug. 2016	1.52	1.71	2.94	2.55	2.79	3.10	3.31
Sept. 2016	1.49	0.00	2.86	2.47	2.71	3.02	3.22
Weekly Averages							
Sept. 8, 2016	1.38	1.60	2.71	2.33	2.57	2.88	3.08
Sept. 15, 2016	1.53	1.75	2.92	2.54	2.78	3.09	3.29
Sept. 22, 2016	1.54	1.77	3.00	2.60	2.85	3.17	3.37
Sept. 29, 2016	1.48	1.71	2.93	2.54	2.79	3.10	3.30
Oct. 6, 2016	1.49	1.72	2.96	2.56	2.81	3.12	3.32

https://credittrends.moodys.com/data/bondyields

Daily Bond Yields and Key Indicators

Updated by 11 am ET with data from the previous business day.

Data as of 13-Oct-16

Moody's Daily Long-term Corporate Bond Yield Averages

	Utilities	Industrial	Corporate
Aaa	NA	3.48	3.48
Aa	3.57	3.59	3.58
A	3.76	3.76	3.76
Baa	4.33	4.35	4.34
Avg	3.89	3.8	3.85

Moody's Daily Treasury Yield Averages

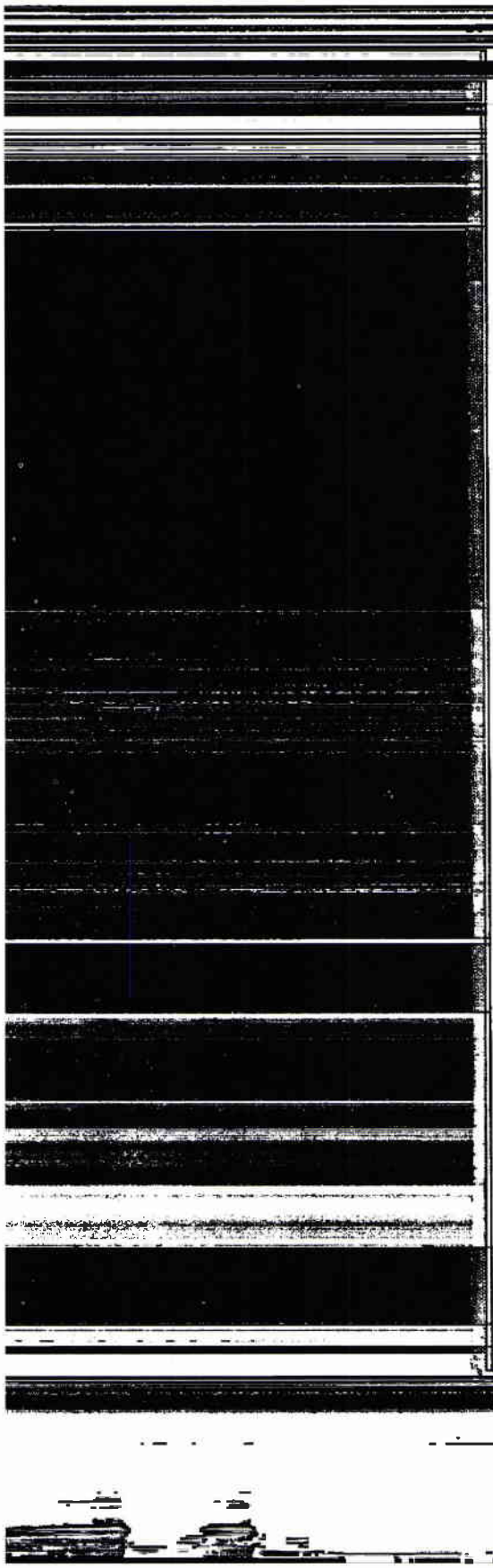
Short-Term (3-5 yrs)	1.13
Medium-Term (5-10 yrs)	1.49
Long-Term (10+ yrs)	2.23

Moody's Daily Public Utility Common Stock Yield Averages

Price	358.16
Yield	3.89
New Dividend	13.95

Moody's Commodity and Scrap Price Indexes

Spot Commodity Index	5,086.03
Industrial Metals Index	1,638.83



2015 Ibbotson® Stocks, Bonds, Bills, and Inflation® (SBBI®) Classic Yearbook

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Published by:
Morningstar, Inc
22 W. Washington Street
Chicago, IL 60602 U.S.A.
corporate.morningstar.com

Main +1 312 696-6000
Product Sales +1 888 296-3647
Fax +1 312 696-6010

ISBN 978-0-9849500-5-8
ISSN 1047-2436

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Table 2-1: Basic Series: Summary Statistics of Annual Total Returns

Series	Geometric Mean (%)	Arithmetic Mean (%)	Standard Deviation (%)	Distribution (%)
Large-Cap Stocks	10.1	12.1	20.1	
Small-Cap Stocks*	12.2	16.7	32.1	
Long-Term Corporate Bonds	6.1	6.4	8.4	
Long-Term Government Bonds	5.7	6.1	10.0	
Intermediate-Term Government Bonds	5.3	5.4	5.6	
U.S. Treasury Bills	3.5	3.5	3.1	
Inflation	2.9	3.0	4.1	

-90 0 90

Data from 1926–2014. * The 1933 small-cap stocks total return was 142.9%.

Note that in Table 2-1, the arithmetic mean returns are always higher than the geometric mean returns. The difference between these two means is related to the standard deviation, or variability, of the series. [See Chapter 6.]

The "skylines," or histograms, in Table 2-1 show the frequency distribution of returns in each asset class. The height of the large-cap stock skyline in the range between 10% to 20%, for example, shows the number of years in the 1926–2014 period that large-cap stocks had a return in that range. The histograms are shown in 5% increments to fully display the spectrum of returns as seen over the last 89 years, especially in stocks.

Riskier assets, such as large- and small-cap stocks, have low, spread-out skylines, reflecting the broad distribution of returns from very poor to very good. Less-risky assets, such as bonds, have narrow skylines that resemble a single tall building, indicating the tightness of the distribution around the mean of the series. The histogram for Treasury bills is one-sided, lying almost entirely to the right of the vertical line representing a zero return; that is, Treasury bills rarely experienced negative returns on a yearly basis over the 1926–2014 period (the only negative year was 1938). The inflation skyline shows both positive and negative annual rates. Although a few deflationary months and quarters have occurred recently, the last negative annual inflation rate occurred in 1954.

Appreciation, Income, and Reinvestment Returns

Table 2-2 provides further detail on the returns of large-cap stocks, long-term government bonds, and intermediate-term government bonds. Total annual returns are shown as the sum of three components: capital appreciation returns, income returns, and reinvestment returns. The capital appreciation and income components are explained in Chapter 3. The third component, reinvestment return, reflects monthly income reinvested in the total return index in subsequent months in the year. Thus, for a single month the reinvestment return is zero, but over a longer period of time it is nonzero. Because the returns in Table 2-2 are annual, reinvestment return is relevant.

The annual total return formed by compounding the monthly total returns does not equal the sum of the annual capital appreciation and income components; the difference is reinvestment return. A simple example illustrates this point. In 1995, an "up" year on a total return basis, the total annual return on large-cap stocks was 37.58%. The annual capital appreciation was 34.11% and the annual income return was 3.04%, totaling 37.15%. The remaining 0.43% (37.58% minus 37.15%) of the 1995 total return came from the reinvestment of dividends in the market. For more information on calculating annual total and income returns, see Chapter 5.

Monthly income and capital appreciation returns for large-cap stocks are presented in Appendix A: Tables A-2 and A-3, respectively. Monthly income and capital appreciation returns are presented for long-term government bonds in Appendix A: Tables A-7 and A-8; and for intermediate-term government bonds in Tables A-11 and A-12.

Table 2-2: Large-Cap Stocks, Long-Term Government Bonds, and Intermediate-Term Government Bonds (Continued)

Annual Total, Income, Capital Appreciation, and Reinvestment Returns (%)

	Large-Cap Stocks				Long-Term Government Bonds					Intermediate-Term Government Bonds				
Year	Capital Apprec. Return	Income Return	Reinvest-ment Return	Total Return	Capital Apprec. Return	Income Return	Reinvest-ment Return	Total Return	Year-end Yield	Capital Apprec. Return	Income Return	Reinvest-ment Return	Total Return	Year-end Yield
1971	10.63	3.49	0.18	14.30	6.61	6.32	0.31	13.23	5.97	2.72	5.75	0.25	8.72	5.25
1972	15.79	2.95	0.25	18.99	-0.35	5.87	0.17	5.69	5.99	-0.75	5.75	0.16	5.16	5.85
1973	-17.37	2.86	-0.19	-14.69	-7.70	6.51	0.08	-1.11	7.26	-2.19	6.58	0.22	4.61	6.79
1974	-29.72	3.69	-0.44	-26.47	-3.45	7.27	0.54	4.35	7.60	-1.99	7.24	0.44	5.69	7.12
1975	31.55	5.37	0.31	37.23	0.73	7.99	0.47	9.20	8.05	0.12	7.35	0.36	7.83	7.19
1976	19.15	4.49	0.29	23.93	8.07	7.89	0.80	16.75	7.21	5.25	7.10	0.51	12.87	6.00
1977	-11.50	4.35	0.00	-7.16	-7.86	7.14	0.04	-0.69	8.03	-5.15	6.49	0.06	1.41	7.51
1978	1.06	5.33	0.18	6.57	-9.05	7.90	-0.03	-1.18	8.98	-4.49	7.83	0.14	3.49	8.83
1979	12.31	5.89	0.41	18.61	-9.84	8.86	-0.25	-1.23	10.12	-5.07	9.04	0.12	4.09	10.33
1980	25.77	5.74	0.99	32.50	-14.00	9.97	0.08	-3.95	11.99	-6.81	10.55	0.17	3.91	12.45
1981	-9.73	4.88	-0.08	-4.92	-10.33	11.55	0.64	1.86	13.34	-4.55	12.97	1.03	9.45	13.96
1982	14.76	5.61	1.18	21.55	23.95	13.50	2.91	40.36	10.95	14.23	12.81	2.06	29.10	9.90
1983	17.27	5.04	0.24	22.56	-9.82	10.38	0.09	0.65	11.97	-3.30	10.35	0.35	7.41	11.41
1984	1.40	4.57	0.31	6.27	2.32	11.74	1.42	15.48	11.70	1.22	11.68	1.12	14.02	11.04
1985	26.33	4.72	0.67	31.73	17.84	11.25	1.88	30.97	9.56	9.01	10.29	1.04	20.33	8.55
1986	14.62	3.92	0.13	18.67	14.99	8.98	0.56	24.53	7.89	6.99	7.72	0.43	15.14	5.85
1987	2.03	3.64	-0.41	5.25	-10.69	7.92	0.06	-2.71	9.20	-4.75	7.47	0.19	2.90	8.32
1988	12.40	3.99	0.22	16.61	0.36	8.97	0.34	9.67	9.19	-2.26	8.24	0.13	6.10	9.17
1989	27.25	4.03	0.40	31.69	8.62	8.81	0.68	18.11	8.16	4.34	8.46	0.49	13.29	7.94
1990	-6.56	3.43	0.03	-3.10	-2.61	8.19	0.61	6.18	8.44	1.02	8.15	0.56	9.73	7.70
1991	26.31	3.76	0.40	30.47	10.10	8.22	0.98	19.30	7.30	7.36	7.43	0.67	15.46	5.97
1992	4.46	2.98	0.17	7.62	0.34	7.26	0.45	8.05	7.26	0.64	6.27	0.28	7.19	6.11
1993	7.06	2.91	0.12	10.08	10.71	7.17	0.35	18.24	6.54	5.56	5.53	0.15	11.24	5.22
1994	-1.54	2.83	0.03	1.32	-14.29	6.59	-0.08	-7.77	7.99	-11.14	6.07	-0.08	-5.14	7.80
1995	34.11	3.04	0.43	37.58	23.04	7.60	1.03	31.67	6.03	9.66	6.69	0.45	16.80	5.38
1996	20.26	2.43	0.26	22.96	-7.37	6.18	0.26	-0.93	6.73	-3.90	5.82	0.18	2.10	6.16
1997	31.01	2.10	0.25	33.36	8.51	6.64	0.71	15.85	6.02	1.95	6.14	0.30	8.38	5.73
1998	26.67	1.67	0.24	28.58	6.89	5.83	0.34	13.06	5.42	4.66	5.29	0.25	10.21	4.68
1999	19.53	1.36	0.15	21.04	-14.35	5.57	-0.19	-8.96	6.82	-7.06	5.30	-0.01	-1.77	6.45
2000	-10.14	1.11	-0.07	-9.10	14.36	6.50	0.62	21.48	5.58	5.94	6.19	0.46	12.59	5.07
2001	-13.04	1.18	-0.03	-11.89	-1.89	5.53	0.06	3.70	5.75	3.23	4.27	0.12	7.62	4.42
2002	-23.37	1.39	-0.13	-22.10	11.69	5.59	0.56	17.84	4.84	8.55	3.98	0.30	12.93	2.61
2003	26.38	1.99	0.31	28.68	-3.36	4.80	0.01	1.45	5.11	-0.48	2.85	0.03	2.40	2.97
2004	8.99	1.76	0.13	10.88	3.26	5.02	0.23	8.51	4.84	-1.07	3.28	0.04	2.25	3.47
2005	3.00	1.84	0.07	4.91	3.02	4.69	0.10	7.81	4.61	-2.58	3.92	0.03	1.36	4.34
2006	13.62	2.01	0.17	15.79	-3.64	4.68	0.15	1.19	4.91	-1.51	4.54	0.11	3.14	4.65
2007	[illegible]	[illegible]	0.00	5.49	4.69	4.86	0.33	9.88	4.50	5.33	4.44	0.28	10.05	3.28
2008	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2009	23.45	2.48	0.53	26.46	-18.25	3.47	-0.12	-14.90	4.58	-4.42	2.01	0.00	-2.40	2.42
2010	12.78	2.02	0.26	15.06	5.89	4.25	0.00	10.14	4.14	5.16	1.92	0.04	7.12	1.70
2011	0.00	2.13	-0.01	2.11	23.74	3.81	0.68	28.23	2.48	7.79	1.58	0.09	9.46	0.59
2012	13.41	2.50	0.10	16.00	0.88	2.40	0.02	3.31	2.41	1.48	0.58	0.01	2.07	0.46
2013	29.60	2.48	0.32	32.39	-14.83	2.86	0.61	-11.36	3.67	-1.91	0.65	0.00	-1.07	1.13
2014	11.39	2.16	0.14	13.69	20.17	3.33	0.36	23.87	2.40	1.72	1.38	0.01	3.12	1.24

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Table 2-3: Basic Series
Annual Total Returns (%)

Year	Large-Cap Stocks	Small-Cap Stocks	Long-Term Corp Bonds	Long-Term Govt Bonds	Inter-Term Govt Bonds	U.S. Treasury Bills	Inflation
1926	11.62	0.28	7.37	7.77	5.38	3.27	-1.49
1927	37.49	22.10	7.44	8.93	4.52	3.12	-2.08
1928	43.61	39.69	2.84	0.10	0.92	3.56	-0.97
1929	-8.42	-51.36	3.27	3.42	6.01	4.75	0.20
1930	-24.90	-38.15	7.98	4.66	6.72	2.41	-6.03
1931	-43.34	-49.75	-1.85	-5.31	-2.32	1.07	-9.52
1932	-8.19	-5.39	10.82	16.84	8.81	0.96	-10.30
1933	53.99	142.87	10.38	-0.07	1.83	0.30	0.51
1934	-1.44	24.22	13.84	10.03	9.00	0.16	2.03
1935	47.67	40.19	9.61	4.98	7.01	0.17	2.99
1936	33.92	64.80	6.74	7.52	3.06	0.18	1.21
1937	-35.03	-58.01	2.75	0.23	1.56	0.31	3.10
1938	31.12	32.80	6.13	5.53	6.23	-0.02	-2.78
1939	-0.41	0.35	3.97	5.94	4.52	0.02	-0.48
1940	-9.78	-5.16	3.39	6.09	2.96	0.00	0.96
1941	-11.59	-9.00	2.73	0.93	0.50	0.06	9.72
1942	20.34	44.51	2.60	3.22	1.94	0.27	9.29
1943	25.90	88.37	2.83	2.08	2.81	0.35	3.16
1944	19.75	53.72	4.73	2.81	1.80	0.33	2.11
1945	36.44	73.61	4.08	10.73	2.22	0.33	2.25
1946	-8.07	-11.63	1.72	-0.10	1.00	0.35	18.16
1947	5.71	0.92	-2.34	-2.62	0.91	0.50	9.01
1948	5.50	-2.11	4.14	3.40	1.85	0.81	2.71
1949	18.79	19.75	3.31	6.45	2.32	1.10	-1.80
1950	31.71	38.75	2.12	0.06	0.70	1.20	5.79
1951	24.02	7.80	-2.69	-3.93	0.36	1.49	5.87
1959	11.96	16.40	-0.97	-2.26	-0.39	2.95	1.50
1960	0.47	-3.29	9.07	13.78	11.76	2.66	1.48
1961	26.89	32.09	4.82	0.97	1.85	2.13	0.67
1962	-8.73	-11.90	7.95	6.89	5.56	2.73	1.22
1963	22.80	23.57	2.19	1.21	1.64	3.12	1.65
1964	16.48	23.52	4.77	3.51	4.04	3.54	1.19
1965	12.45	41.75	-0.46	0.71	1.02	3.93	1.92
1966	-10.06	-7.01	0.20	3.65	4.69	4.76	3.35
1967	23.98	83.57	-4.95	-9.18	1.01	4.21	3.04
1968	11.06	35.97	2.57	-0.26	4.54	5.21	4.72
1969	-8.50	-25.05	-8.09	-5.07	-0.74	6.58	6.11
1970	3.86	-17.43	18.37	12.11	16.86	6.52	5.49

Year	Large-Cap Stocks	Small-Cap Stocks	Long-Term Corp Bonds	Long-Term Govt Bonds	Inter-Term Govt Bonds	U.S. Treasury Bills	Inflation
1971	14.30	16.50	11.01	13.23	8.72	4.39	3.36
1972	18.99	4.43	7.26	5.69	5.16	3.84	3.41
1973	-14.69	-30.90	1.14	-1.11	4.61	6.93	8.80
1974	-26.47	-19.95	-3.06	4.35	5.69	8.00	12.20
1975	37.23	52.82	14.64	9.20	7.83	5.80	7.01
1976	23.93	57.38	18.65	16.75	12.87	5.08	4.81
1977	-7.16	25.38	1.71	-0.69	1.41	5.12	6.77
1978	6.57	23.46	-0.07	-1.18	3.49	7.18	9.03
1979	18.61	43.46	-4.18	-1.23	4.09	10.38	13.31
1980	32.50	39.88	-2.76	-3.95	3.91	11.24	12.40
1981	-4.92	13.88	-1.24	1.86	9.45	14.71	8.94
1982	21.55	28.01	42.56	40.36	29.10	10.54	3.87
1983	22.56	39.67	6.26	0.65	7.41	8.80	3.80
1984	6.27	-6.67	16.86	15.48	14.02	9.85	3.95
1985	31.73	24.66	30.09	30.97	20.33	7.72	3.77
1986	18.67	6.85	19.85	24.53	15.14	6.16	1.13
1987	5.25	-9.30	-0.27	-2.71	2.90	5.47	4.41
1988	16.61	22.87	10.70	9.67	6.10	6.35	4.42
1989	31.69	10.18	16.23	18.11	13.29	8.37	4.65
1990	-3.10	-21.56	6.78	6.18	9.73	7.81	6.11
1991	30.47	44.63	19.89	19.30	15.46	5.60	3.06
1992	7.62	23.35	9.39	8.05	7.19	3.51	2.90
1993	10.08	20.98	13.19	18.24	11.24	2.90	2.75
1994	1.32	3.11	-5.76	-7.77	-5.14	3.90	2.67
1995	37.58	34.46	27.20	31.67	16.80	5.60	2.54
1996	22.96	17.62	1.40	-0.93	2.10	5.21	3.32
2004	10.88	18.39	8.72	8.51	2.25	1.20	3.26
2005	4.91	5.69	5.87	7.81	1.36	2.98	3.42
2006	15.79	16.17	3.24	1.19	3.14	4.80	2.54
2007	5.49	-5.22	2.60	9.88	10.05	4.66	4.08
2008	-37.00	-36.72	8.78	25.87	13.11	1.60	0.09
2009	26.46	28.09	3.02	-14.90	-2.40	0.10	2.72
2010	15.06	31.26	12.44	10.14	7.12	0.12	1.50
2011	2.11	-3.26	17.95	28.23	9.46	0.04	2.96
2012	16.00	18.24	10.68	3.31	2.07	0.06	1.74
2013	32.39	45.07	-7.07	-11.36	-1.07	0.02	1.50
2014	13.69	2.92	17.28	23.87	3.12	0.02	0.76

ıany Size and Return

One of the most remarkable discoveries of modern finance is the finding of a relationship between company size and return.[1] Historically on average, small companies have higher returns than those of large ones. Earlier chapters of this book document this phenomenon for the smallest stocks on the New York Stock Exchange, or NYSE. The relationship between company size and return cuts across the entire size spectrum; it is not restricted to the smallest stocks. This chapter examines returns across the entire range of company size.

Construction of the Size Decile Portfolios

The portfolios used in this chapter are those created by the Center for Research in Security Prices, or CRSP, at the University of Chicago's Booth School of Business. CRSP has refined the methodology of creating size-based portfolios and has applied this methodology to the entire universe of NYSE/AMEX/NASDAQ-listed securities going back to 1926.

The NYSE universe excludes closed-end mutual funds, preferred stocks, real estate investment trusts, foreign stocks, American Depository Receipts, unit investment trusts, and Americus Trusts. All companies on the NYSE are ranked by the combined market capitalization of all their eligible equity securities. The companies are then split into 10 equally populated groups or deciles. Eligible companies traded on the NYSE, the NYSE MKT LLC (formerly known as the American Stock Exchange, or AMEX), and the NASDAQ Stock Market (formerly the NASDAQ National Market) are then assigned to the appropriate deciles according to their capitalization in relation to the NYSE breakpoints. The portfolios are rebalanced using closing prices for the last trading day of March, June, September, and December. Securities added during the quarter are assigned to the

rity that becomes delisted is a month-end price, then that month's return is included in the quarterly return of the portfolio. When a month-end NYSE price is missing, the month-end value is derived from merger terms, quotations on regional exchanges, and other sources. If a month-end value is not available, the last available daily price is used.

In October 2008, NYSE Euronext acquired the American Stock Exchange and rebranded the index as NYSE Amex. Later, in May 2012, it was renamed NYSE MKT LLC. For the sake of continuity, we refer to this index as AMEX, its historical name.

Base security returns are monthly holding period returns. All distributions are added to the month-end prices. Appropriate adjustments are made to prices to account for stock splits and dividends. The return on a portfolio for one month is calculated as the value weighted average of the returns for the individual stocks in the portfolio. Annual portfolio returns are calculated by compounding the monthly portfolio returns.

Aspects of the Company Size Effect

The company size phenomenon is remarkable in several ways. First, the greater risk of small-cap does not, in the context of the capital asset pricing model, fully account for their higher returns over the long term. In the CAPM only systematic, or beta risk, is rewarded; small-cap stock returns have exceeded those implied by their betas.

Second, the calendar annual return differences between small- and large-cap companies are serially correlated. This suggests that past annual returns may be of some value in predicting future annual returns. Such serial correlation, or autocorrelation, is practically unknown in the market for large-cap stocks and in most other equity markets but is evident in the size premium series.

Third, the size effect is seasonal. For example, small-cap stocks outperformed large-cap stocks in January in a large majority of the years. Such predictability is surprising and suspicious in light of modern capital market theory. These three aspects of the size effect—long-term returns in excess of systematic risk, serial correlation, and seasonality—will be analyzed thoroughly in the following sections.

Presentation of the Decile Data

Summary statistics of annual returns of the 10 deciles and size groupings from 1926 to 2014 are presented in Table 7-1. Note that the average return in this table tends to increase as one moves from the largest decile to the smallest.

Because securities are ranked quarterly, returns on the ninth and 10th deciles are different than those suggested by the small-cap stock index presented in earlier chapters. A detailed methodology for the small-cap stock index is included in Chapter 3.

The total risk, or standard deviation of annual returns, also increases with decreasing company size. The serial correlations of returns are near zero for all but the smallest decile.

Table 7-2 is a year-by-year history of the returns for the different size categories. Table 7-3 shows the growth of $1.00 invested in each of the categories at year-end 1925. Please note that decile data from CRSP was updated for the 2015 edition of the Classic Yearbook. The update resulted in some significant differences in the decile data, most notably in the 2014 index values in Table 7-3.

The sheer magnitude of the size effect in some years is noteworthy. While the largest stocks actually declined in 2001, the smallest stocks rose more than 30%. A more extreme case occurred in the depression-recovery year of 1933, when the difference between the first and 10th decile returns was far more substantial.

The divergence in the performance of small- and la
cap stocks is evident. In 30 of the 89 years since 1926,
difference between the total returns of the largest st
(decile 1) and the smallest stocks (decile 10) has b
greater than 25 percentage points.

Table 7-1: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Summary Statistics of Annual Returns

Decile	Geometric Mean	Arithmetic Mean	Standard Deviation	Serial Corre
1-Largest	9.4	11.2	19.1	
2	10.7	13.0	21.7	
3	11.1	13.7	23.6	
4	11.0	14.0	25.8	
5	11.7	14.8	26.4	
6	11.5	15.0	27.3	
7	11.6	15.5	29.2	
8	11.7	16.3	33.3	
9	11.6	17.1	37.4	
10-Smallest	13.5	20.6	42.8	
Mid Cap	11.2	14.0	24.6	
Low Cap	11.6	15.4	28.9	
Micro	12.3	18.3	39.1	
Total Value Weighted Index	9.9	11.9	20.2	

Data from 1926–2014. Source: Morningstar and CRSP. Calculated (or Derived) b
on data from CRSP US Stock Database and CRSP US Indices Database ©2015
for Research in Security Prices (CRSP®), The University of Chicago Booth Scho
Business. Used with permission.

Results are for quarterly reranking for the deciles. The small-cap stock
summary statistics presented in earlier chapters include a reranking of the
portfolios every five years prior to 1982.

Third, the size effect is seasonal. For example, small-cap stocks outperformed large-cap stocks in January in a large majority of the years. Such predictability is surprising and suspicious in light of modern capital market theory. These three aspects of the size effect—long-term returns in excess of systematic risk, serial correlation, and seasonality—will be analyzed thoroughly in the following sections.

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Summary statistics of annual returns of the 10 deciles and size groupings from 1926 to 2014 are presented in Table 7-1. Note that the average return in this table tends to increase as one moves from the largest decile to the smallest.

Because securities are ranked quarterly, returns on the ninth and 10th deciles are different than those suggested by the small-cap stock index presented in earlier chapters. A detailed methodology for the small-cap stock index is included in Chapter 3.

The total risk, or standard deviation of annual returns, also increases with decreasing company size. The serial correlations of returns are near zero for all but the smallest decile.

Table 7-2 is a year-by-year history of the returns for the different size categories. Table 7-3 shows the growth of $1.00 invested in each of the categories at year-end 1925.

The divergence in the performance of small- and la cap stocks is evident. In 30 of the 89 years since 1926, difference between the total returns of the largest st (decile 1) and the smallest stocks (decile 10) has b greater than 25 percentage points.

Table 7-1: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
Summary Statistics of Annual Returns

Decile	Geometric Mean	Arithmetic Mean	Standard Deviation	Serial Correl
1-Largest	9.4	11.2	19.1	C
2	10.7	13.0	21.7	C
3	11.1	13.7	23.6	-C
4	11.0	14.0	25.8	-C
5	11.7	14.8	26.4	-C
6	11.5	15.0	27.3	C
7	11.6	15.5	29.2	C
8	11.7	16.3	33.3	C
9	11.6	17.1	37.4	C
10-Smallest	13.5	20.6	42.8	C
Mid Cap	11.2	14.0	24.6	-C
Low Cap	11.6	15.4	28.9	C
Micro	12.3	18.3	39.1	C
Total Value Weighted Index	9.9	11.9	20.2	C

Data from 1926–2014. Source: Morningstar and CRSP. Calculated for Derived) ba on data from CRSP US Stock Database and CRSP US Indices Database ©2015 C for Research in Security Prices (CRSP®), The University of Chicago Booth Schoo Business. Used with permission.

Results are for quarterly reranking for the deciles. The small-cap stock summary statistics presented in earlier chapters included a reranking of the portfolios every five years prior to 1982.

Table 7-4: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ (Continued)
Mid-, Low-, Micro-, and Total Capitalization Returns and Index Value

	Total Return		
Year	Mid-Cap Stocks	Low-Cap Stocks	Micro-Cap Stocks
1971	0.2123	0.2032	0.1767
1972	0.0906	0.0558	-0.0138
1973	-0.2594	-0.3435	-0.4078
1974	-0.2513	-0.2587	-0.2676
1975	0.5709	0.6092	0.7150
1976	0.3979	0.5074	0.5335
1977	0.0385	0.1708	0.2177
1978	0.1075	0.1663	0.2245
1979	0.3298	0.4626	0.4369
1980	0.3144	0.3310	0.3464
1981	0.0409	0.0305	0.0818
1982	0.2443	0.2939	0.2723
1983	0.2644	0.2882	0.3410
1984	-0.0103	-0.0224	-0.1403
1985	0.3115	0.3283	0.2833
1986	0.1637	0.0877	0.0320
1987	0.0130	-0.0689	-0.1381
1988	0.2167	0.2476	0.2192
1989	0.2479	0.1923	0.0815
1990	-0.1053	-0.1779	-0.2745
1991	0.4191	0.4865	0.5005
1992	0.1611	0.1738	0.2814
1993	0.1627	0.1830	0.2010
1994	-0.0263	-0.0152	-0.0314
1995	0.3405	0.2943	0.3320
1996	0.1683	0.1806	0.1930
1997	0.2327	0.2799	0.2402
1998	0.0578	0.0052	-0.0813
1999	0.3068	0.3291	0.3145
2000	-0.0783	-0.1107	-0.1331
2001	-0.0277	0.1313	0.3372
2002	-0.1853	-0.2164	-0.1386
2003	0.4150	0.5155	0.7832
2004	0.1817	0.2109	0.1661
2005	0.1104	0.0677	0.0386
2006	0.1391	0.1619	0.1798
2007	0.0489	0.0002	-0.0789
2008	-0.3817	-0.3756	-0.4157
2009	0.4181	0.4366	0.6124
2010	0.2746	0.3034	0.2900
2011	-0.0078	-0.0388	-0.1050
2012	0.1627	0.1835	0.1742
2013	0.3917	0.4337	0.4971
2014	0.0835	0.0433	0.0241

Source: Morningstar and CRSP. Calculated (or Derived) based on data from
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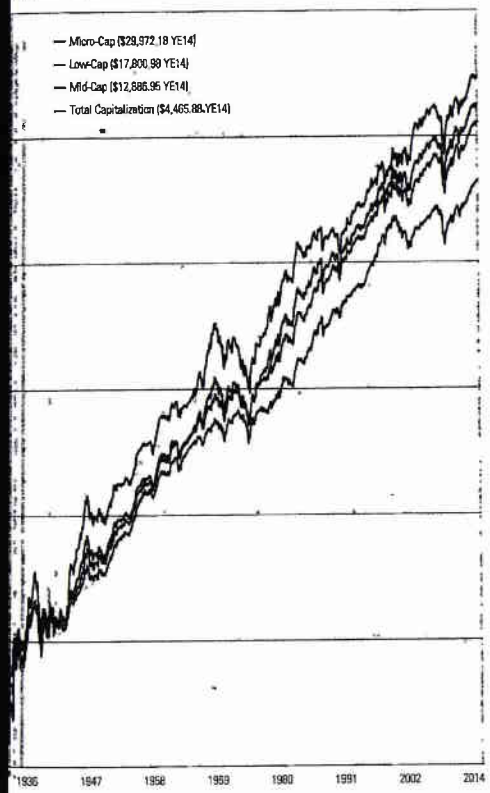
Size-Decile Portfolios of the NYSE/AMEX/NASDAQ
xes of Investments in Mid-, Low-, Micro-, and Total Capitalization Stocks
End 1925 = $1.00)



1926–2014.

In Table 7-4, the decile returns and index values of the NYSE/AMEX/NASDAQ population are broken do into mid-cap, low-cap, and micro-cap stocks. Mid- stocks are defined here as the aggregate of deciles th through five. Based on the most recent data, as show the bottom section of Table 7-5, companies within mid-cap range have market capitalizations at or be $10,105,622,000 but greater than $2,552,441,000. L cap stocks include deciles 6-8, and currently incl all companies in the NYSE/AMEX/NASDAQ with ma capitalizations at or below $2,542,913,000 but gre than $549,056,000. Micro-cap stocks include deciles 9 and include companies with market capitalizations a below $548,839,000. The returns and index values of entire NYSE/AMEX/NASDAQ population are also inclu All returns presented are value-weighted based on market capitalizations of the deciles contained in subgroup. Graph 7-1 depicts the growth of $1.00 inve in each of these capitalization groups as well as the e NYSE/AMEX/NASDAQ.

Size of the Deciles

Table 7-5 reveals that the top three deciles of the N AMEX/NASDAQ account for most of the total ma value of its stocks. More than 60% of the market v is represented by the first decile, which consist 185 stocks, while the smallest decile accounts for than 1% of the market value. The data in the cond column of Table 7-5 are averages across a years. Of course, the proportion of market value r sented by the various deciles varies from year to

Columns three and four give recent figures on number of companies and their market capitaliz presenting a snapshot of the structure of the deciles Sept. 30, 2014.

The lower portion of Table 7-5 shows the largest fi each decile and its market capitalization.

Table 7-5: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ Number of Companies, Historical and Recent Market Capitalization

Decile	Historical Average Percentage of Total Capitalization	Recent Number of Companies	Recent Decile Market Capitalization (in Thousands)	Recent Percentage of Total Capitalization
1-Largest	64.03%	185	14,808,784,274	64.25%
2	14.04	199	3,247,447,914	14.09
3	6.88	194	1,579,432,904	6.85
4	4.56	221	1,042,428,212	4.52
5	3.03	215	694,147,086	3.01
6	2.56	265	585,657,120	2.54
7	1.99	317	449,325,255	1.95
8	1.51	417	333,731,801	1.45
9	0.80	395	173,673,205	0.75
10-Smallest	0.61	948	135,401,288	0.59
Mid-Cap 3-5	14.47	630	3,316,008,202	14.39
Low-Cap 6-8	6.05	999	1,368,714,176	5.94
Micro-Cap 9-10	1.41	1,343	309,074,493	1.34

Data from 1926–2014. Source: Morningstar and CRSP. Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2015 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission.

Historical average percentage of total capitalization shows the average, over the last 89 years, of the decile market values as a percentage of the total NYSE/AMEX/NASDAQ calculated each month. Number of companies in deciles, recent market capitalization of deciles, and recent percentage of total capitalization are as of Sept. 30, 2014.

Decile	Recent Market Capitalization (in Thousands)	Company Name
1-Largest	$591,015,721	Apple Inc
2	24,272,837	Cummins Inc
3	10,105,622	Murphy Oil Corp
4	5,844,592	Alaska Airgroup Inc
5	3,724,186	Great Plains Energy Inc
6	2,542,913	Wolverine World Wide Inc
7	1,686,860	Wesco Aircraft Holdings Inc
8	1,010,634	First Bancorp P R
9	548,839	G P Strategies Corp
10-Smallest	300,725	M V Oil Trust

Source: Morningstar and CRSP. Calculated (or Derived) based on data from CRSP US Stock Database and CRSP US Indices Database ©2015 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. Used with permission. Market capitalization and name of largest company in each decile are as of Sept. 30, 2014.

Long-Term Returns in Excess of Systematic Risk

The capital asset pricing model, or CAPM, does not fu account for the higher returns of small-cap stocks. Ta 7-6 shows the returns in excess of the riskless rate over past 89 years for each decile of the NYSE/AMEX/NASD.

The CAPM can be expressed as follows:

$$k_s = r_f + (\beta_s \times ERP)$$

where,

k_s = the expected return for company **s**;
r_f = the expected return of the riskless asset;
β_s = the beta of the stock of company **s**; and,
ERP = the expected equity risk premium, or the amount by wh investors expect the future return on equities to exceec on the riskless asset.

Table 7-6 uses the CAPM to estimate the return in ex of the riskless rate and compares this estimate to histc performance. According to the CAPM, the expected r on a security should consist of the riskless rate plu additional return to compensate for the systematic of the security. The return in excess of the riskless r estimated in the context of the CAPM by multiplyin equity risk premium by β (beta). The equity risk pre is the return that compensates investors for taking o equal to the risk of the market as a whole (systematic Beta measures the extent to which a security or por is exposed to systematic risk. The beta of each decile cates the degree to which the decile's return moves that of the overall market.

A beta greater than one indicates that the security o folio has greater systematic risk than the market; acc to the CAPM equation, investors are compensat taking on this additional risk. Yet, Table 7-6 illus that the smaller deciles have had returns that are n explained by their higher betas. This return in exc that predicted by CAPM increases as one moves fr largest companies in decile 1 to the smallest in 10. The excess return is especially pronounced for cap stocks (deciles 9-10). This size-related pheno has prompted a revision to the CAPM, which incl size premium.

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6	2.56	265	585,657,120	2.54
7	1.99	317	449,325,255	1.95
8	1.51	417	333,731,801	1.45
9	0.80	395	173,673,205	0.75
10-Smallest	0.61	948	135,401,288	0.59
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Long-Term Returns in Excess of Systematic Risk

The capital asset pricing model, or CAPM, does not fully account for the higher returns of small-cap stocks. Table 7-6 shows the returns in excess of the riskless rate over the past 89 years for each decile of the NYSE/AMEX/NASDAQ.

The CAPM can be expressed as follows:

$$k_s = r_f + (\beta_s \times ERP) \quad [28]$$

where,

- k_s = the expected return for company s;
- r_f = the expected return of the riskless asset;
- β_s = the beta of the stock of company s; and,
- ERP = the expected equity risk premium, or the amount by which investors expect the future return on equities to exceed that on the riskless asset.

Table 7-6 uses the CAPM to estimate the return in excess of the riskless rate and compares this estimate to historical performance. According to the CAPM, the expected return on a security should consist of the riskless rate plus an additional return to compensate for the systematic risk of the security. The return in excess of the riskless rate is estimated in the context of the CAPM by multiplying the equity risk premium by β (beta). The equity risk premium is the return that compensates investors for taking on risk equal to the risk of the market as a whole (systematic risk). Beta measures the extent to which a security or portfolio is exposed to systematic risk. The beta of each decile indicates the degree to which the decile's return moves with that of the overall market.

A beta greater than one indicates that the security or portfolio has greater systematic risk than the market; according to the CAPM equation, investors are compensated for taking on this additional risk. Yet, Table 7-6 illustrates that the smaller deciles have had returns that are not fully explained by their higher betas. This return in excess of that predicted by CAPM increases as one moves from the largest companies in decile 1 to the smallest in decile 10. The excess return is especially pronounced for micro-cap stocks (deciles 9-10). This size-related phenomenon has prompted a revision to the CAPM, which includes a size premium.

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Table 7-6, Graph 7-2

This phenomenon can also be viewed graphically, as depicted in the Graph 7-2. The security market line is based on the pure CAPM without adjusting for the size premium. Based on the risk (or beta) of a security, the expected return should fluctuate along the security market line. However, the expected returns for the smaller deciles of the NYSE/AMEX/NASDAQ lie above the line, indicating that these deciles have had returns in excess of those appropriate for their systematic risk.

Table 7-6: Size-Decile Portfolios of the NYSE/AMEX/NASDAQ Long-Term Returns in Excess of CAPM

Decile	Beta*	Arithmetic Mean Return (%)	Actual Return in Excess of Riskless Rate** (%)	CAPM Return in Excess of Riskless Rate† (%)	Size Premium (Return in Excess of CAPM) (%)
1	0.92	11.15	6.08	6.44	-0.36
2	1.04	12.96	7.89	7.26	0.63
3	1.11	13.71	8.64	7.73	0.91
4	1.13	14.01	8.93	7.88	1.06
5	1.17	14.84	9.76	8.16	1.60
6	1.17	15.01	9.94	8.21	1.74
7	1.25	15.53	10.46	8.75	1.71
8	1.30	16.35	11.27	9.12	2.15
9	1.34	17.13	12.06	9.36	2.69
10	1.40	20.62	15.54	9.76	5.78
Mid-Cap, 3-5	1.12	14.00	8.93	7.86	1.07
Low-Cap, 6-8	1.22	15.44	10.36	8.56	1.80
Micro-Cap, 9-10	1.35	18.26	13.18	9.45	3.74

Data from 1926–2014.

*Betas are estimated from monthly returns in excess of the 30-day U.S. Treasury bill total return, January 1926–December 2014.

**Historical riskless rate measured by the 89-year arithmetic mean income return component of 20-year government bonds (5.07%).

†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 (12.07%) minus the arithmetic mean income return component of 20-year government bonds (5.07%) from 1926–2014.

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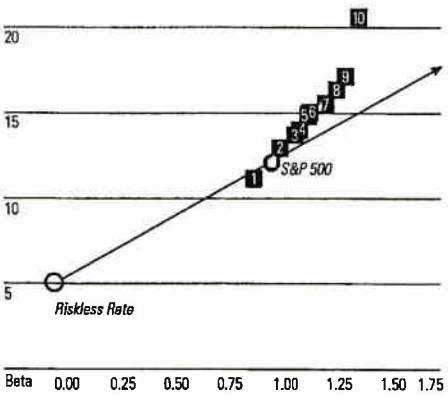
Graph 7-2: Security Market Line Versus Size-Decile Portfolios of the NYSE/AMEX/NASDAQ



Data from 1926–2014.

Serial Correlation in Small-Cap Stock Returns

In four of the last 10 years, large-capitalization stocks (deciles 1-2 of NYSE/AMEX/NASDAQ) have outperformed small-capitalization stocks (deciles 9-10). This has led some market observers to speculate that there is no size premium. But statistical evidence suggests that periods of underperformance should be expected. For instance, large-cap stocks have outperformed small-cap stocks in nearly half of the years since 1926. It should be noted, however, that large-cap stocks' average historical outperformance has been less than the average historical outperformance of small-cap stocks.

History tells us that small companies are riskier than large companies. Table 7-1 [see page 100] shows the standard deviation (a measure of risk) for each decile of the NYSE/AMEX/NASDAQ. As one moves from larger to smaller deciles, the standard deviation of return grows. Investors are compensated for taking on this additional risk by the higher returns provided by small companies. It is important to note, however, that the risk/return profile is over the long term. If small companies did not provide higher long-term returns, investors would be more inclined to invest in the less-risky stocks of large companies.

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3	1.10	13.71	8.64	7.70	0.94
4	1.13	14.01	8.93	7.88	1.05
5	1.16	14.84	9.76	8.11	1.65
6	1.19	15.01	9.94	8.31	1.63
7	1.24	15.53	10.46	8.69	1.77
8	1.30	16.35	11.27	9.10	2.18
9	1.35	17.13	12.06	9.42	2.64
10	1.40	20.62	15.54	9.82	5.72
Mid-Cap, 3-5	1.12	14.00	8.93	7.83	1.10
Low-Cap, 6-8	1.23	15.44	10.36	8.59	1.77
Micro-Cap, 9-10	1.36	18.26	13.18	9.49	3.69

Data from 1926–2014.

*Betas are estimated from monthly returns in excess of the 30-day U.S. Treasury bill total return, January 1926–December 2014.

**Historical riskless rate measured by the 89-year arithmetic mean income return component of 20-year government bonds (5.07%).

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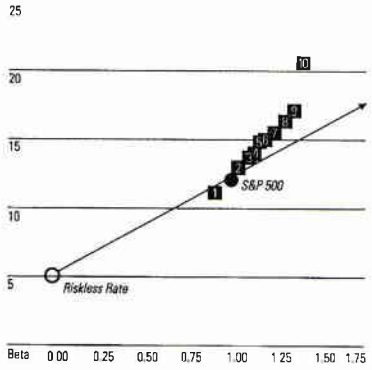
Graph 7-2: Security Market Line Versus Size-Decile Portfolios of the NYSE/AMEX/NASDAQ



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MOODY'S MUNICIPAL BOND AVERAGES

GO	Muni	Aa	A
weekly	29-Sep	2.79	3.1
	6-Oct	2.81	3.12
		2.80	**3.11**

Bond Buyer Indexes

	DATE	20-BOND GO INDEX	REVENUE BOND INDEX
weekly	29-Sep	3.06	3.31
	6-Oct	3.2	3.38
		3.13	**3.35**

FED H.15

		20-yr T-bond	30-yr T-bond
Spot	30-Sep	1.99	2.32

FED H.15

		AAA Corp	BAA CORP
Spot	30-Sep	3.44	4.29

Moody's Daily Long-term Corporate Bond Yield Averages

		Utilities	Industrial	Corporate
Spot	Aaa	NA	3.48	3.48
13-Oct	Aa	3.57	3.59	3.58
	A	3.76	3.76	3.76
	Baa	4.33	4.35	4.34
	Avg	3.89	3.8	3.85

	Corporate Aaa	Corporate Baa	Aaa	Baa	
	3.48	4.34	3.44	4.29	
Utilities					
Aa	0.09	-0.77	3.53	3.52	3.53
A	0.28	-0.58	3.72	3.71	**3.72**
Baa	0.85	-0.01	4.29	4.28	4.29

	GO	Muni	Aa	A	
			2.8	3.11	
20-BOND GO INDEX	REVENUE BOND INDEX				
3.13	3.35		0.22	0.22	
20-yr T-bond	30-yr T-bond				
1.99	2.32		0.33	0.33	
30-Yr Rev Bond Est.			3.35	3.66	**3.66**

2015	Lt Debt	4	3.72
	Prf Stk	5.4	135%
		135%	**5.02**

	9/30/2016
A-Rated Rev Bonds	**3.66**
A-Rated PU Bonds	**3.72**
A-Rated PU Pref Stk	**5.02**
30-yr T-bond	2.32

Stocks in the Water Utility Industry have been on an incredible run of late. Since we last went to press in April, all nine of the equities in the group have outperformed the market, some by an extremely wide margin. Traditionally, conservative investors seeking income and safety were the main buyers of these stocks. This may have changed in 2016, as a result of a shift in market sentiment by large institutional investors. With world central banks embarked on historically accommodative monetary policies, interest rates have plummeted around the globe. In this low rate environment, shares of water utilities apparently now seem much more attractive.

Problems facing the industry remain the same. The infrastructure of most water systems in the United States are in poor condition due to years of insufficient capital spending. Consequently, large sums will be needed to complete the ongoing modernization programs.

The regulatory climates of most states is constructive. This is of great importance, as negative rulings by state authorities can set back utilities' earnings potential for years.

INDUSTRY TIMELINESS: 6 (of 97)

A Small Industry

The vast majority of entities that supply water to homes and businesses in the United States are owned by municipalities. That's why there are only nine stocks in the Water Utility Industry. Moreover, the entire market capitalization of the group totals just $28 billion. When the industry titan *American Water Works* ($15.1 billion), and *Aqua America* ($6.3 billion) the second largest firm are removed, the market cap of the remaining seven stocks averages less than $1 billion each. And, this is after some of the stocks are up between 25%-40%, year to date.

Water Stocks Are Soaring

Over the past three months, the group was led by *Middlesex Water*, *California Water*, and *Connecticut Water*, as their equities rose by 40%, 33% and 27%, respectively. By comparison, the S&P 500 Index was up only 2%. This surge caught the market by surprise, as the water utility industry is typically a defensive group that does better in down markets. It appears that increased turmoil around the world and the reluctance of the U.S. Federal reserve to raise rates, however, has steered more institutional investment into this sector. With some of these stocks having such small market caps, it doesn't take too much money chasing them to drive up their share prices.

Upgrading Infrastructure Remains a Priority

For years, both publicly traded and municipally owned water entities deferred spending to modernize aging pipelines and wastewater treatments facilities. In the recent past, though, many companies have begun large scale construction programs to replace antiquated systems and make them compliant with EPA standards.

Finances Are In Decent Shape

All the increased expenditures required for upgrading the nation's water system have resulted in utilities having a greater need for external financing. To date, the water companies are doing a good job of managing the process without relying too heavily on new debt obligations. Thus, the cash flow generated by the companies has been sufficient to finance most of the capital spending and to still keep dividend growth rates at healthy levels.

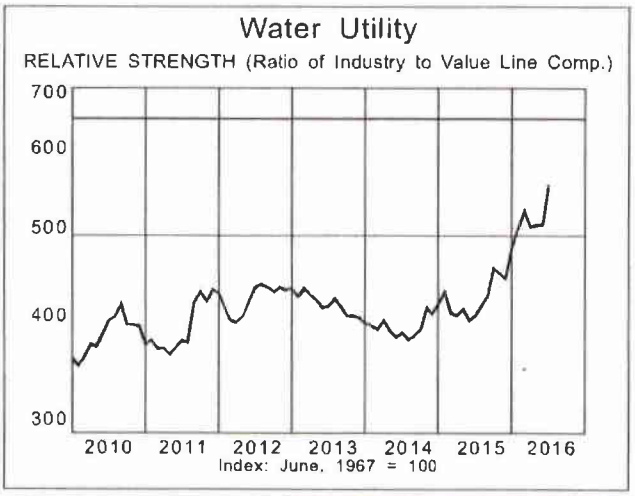
A Constructive Regulatory Climate

The treatment of water utilities by state authorities has not been a hot topic in the industry. This is good news, as water companies' relationship with regulators is only noteworthy when there is some sort of problem, such as a firm not being allowed to earn a full return on an investment made in a specific project. Also, regulators set the allowed return that utilities can earn on their equity. In the past, state regulators and electric utilities have had sharp differences over permitted rates of returns on capital projects. Generally, this has not been the case in the water industry.

Conclusion

Of the nine stocks under review here, five are pegged to outperform the broader market averages in the year ahead. *California Water* and *Middlesex Water* are both ranked 1 (Highest), while *Aqua America*, *Connecticut Water*, and *Consolidate Water* carry ranks of 2 (Above Average). The remaining four equities are expected to mirror the market. Because stocks in this sector have come so far, so fast, we think that they are more suitable for momentum investors. It also should be noted that these stocks have not advanced because of improved earnings prospects by Wall Street analysts. Hence, the P/E ratios of many in the industry are extremely high compared to historical averages. *Thus, investors should be aware that despite the low Beta coefficients of these stocks, the possibility of a sharp correction exists.* Just as a flow of funds into the industry drove up stock prices, sudden withdrawals from the sector could well produce the opposite effect. As always, we strongly advise subscribers to read each individual report before investing.

James A. Flood



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AMERICAN WATER NYSE-AWK

RECENT PRICE **84.76** | P/E RATIO **30.3** (Trailing: 31.9 / Median: NMF) | RELATIVE P/E RATIO **1.68** | DIV'D YLD **1.8%** | **VALUE LINE**

TIMELINESS 3 Lowered 6/24/16
SAFETY 3 New 7/25/08
TECHNICAL 5 Lowered 7/15/16
BETA .70 (1.00 = Market)

2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	90	(+5%)	4%
Low	60	(-30%)	-5%

Insider Decisions

	S	O	N	D	J	F	M	A	M
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	4	0	0	10	6	0	10
to Sell	0	0	4	0	0	0	6	0	3

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	211	241	313
to Sell	220	227	232
Hld's(000)	146013	147408	158854

% TOT. RETURN 6/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	77.8	-1.9
3 yr.	120.7	26.6
5 yr.	227.0	54.4

2000	2001	2002	2003	2004	2005	2006	2007[E]	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
--	--	--	--	--	--	13.08	13.84	14.61	13.98	15.49	15.18	16.25	16.28	16.78	17.72	*18.70*	*19.20*	Revenues per sh	*22.20*
--	--	--	--	--	--	.65	d.47	2.87	2.89	3.56	3.73	4.27	4.36	4.75	5.13	*5.40*	*5.70*	"Cash Flow" per sh	*6.55*
--	--	--	--	--	--	d.97	d2.14	1.10	1.25	1.53	1.72	2.11	2.06	2.39	2.64	*2.80*	*3.05*	Earnings per sh [A]	*3.75*
--	--	--	--	--	--	--	--	.40	.82	.86	.90	1.21	.84	1.21	1.33	*1.47*	*1.57*	Div'd Decl'd per sh [B■]	*2.05*
--	--	--	--	--	--	4.31	4.74	6.31	4.50	4.38	5.27	5.25	5.50	5.33	6.51	*6.15*	*6.10*	Cap'l Spending per sh	*6.00*
--	--	--	--	--	--	23.86	28.39	25.64	22.91	23.59	24.11	25.11	26.52	27.39	28.25	*29.05*	*30.95*	Book Value per sh [D]	*34.60*
--	--	--	--	--	--	160.00	160.00	160.00	174.63	175.00	175.66	176.99	178.25	179.46	178.28	*179.00*	*181.00*	Common Shs Outst'g [C]	*187.50*
--	--	--	--	--	--	--	--	18.9	15.6	14.6	16.8	16.7	19.9	20.0	20.5	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*20.0*
--	--	--	--	--	--	--	--	1.14	1.04	.93	1.05	1.06	1.12	1.05	1.04			Relative P/E Ratio	*1.25*
--	--	--	--	--	--	--	--	1.9%	4.2%	3.8%	3.1%	3.4%	2.0%	2.5%	2.5%			Avg Ann'l Div'd Yield	*2.7%*
2093.1	2214.2	2336.9	2440.7	2710.7	2666.2	2876.9	2901.9	3011.3	3159.0	*3350*	*3475*	Revenues ($mill)	*4160*
d155.8	d342.3	187.2	209.9	267.8	304.9	374.3	369.3	429.8	476.0	*500*	*550*	Net Profit ($mill)	*700*
--	--	37.4%	37.9%	40.4%	39.5%	40.7%	39.1%	39.4%	39.1%	*38.5%*	*38.5%*	Income Tax Rate	*37.0%*
--	--	--	--	--	--	6.2%	5.1%	5.1%	1.4%	*2.5%*	*3.0%*	AFUDC % to Net Profit	*3.0%*
56.1%	50.9%	53.1%	56.9%	56.8%	55.7%	53.9%	52.4%	52.4%	53.7%	*55.0%*	*55.0%*	Long-Term Debt Ratio	*55.0%*
43.9%	49.1%	46.9%	43.1%	43.2%	44.2%	46.1%	47.6%	47.4%	46.2%	*45.0%*	*45.0%*	Common Equity Ratio	*45.0%*
8692.8	9245.7	8750.2	9289.0	9561.3	9580.3	9635.5	9940.7	10364	10911	*11610*	*12300*	Total Capital ($mill)	*14540*
8720.6	9318.0	9991.8	10524	11059	11021	11739	12391	12900	13933	*14600*	*15400*	Net Plant ($mill)	*17200*
NMF	NMF	3.7%	3.8%	4.4%	4.8%	5.4%	5.1%	5.5%	5.7%	*5.5%*	*6.0%*	Return on Total Cap'l	*6.0%*
NMF	NMF	4.6%	5.2%	6.5%	7.2%	8.4%	7.8%	8.7%	9.4%	*9.5%*	*10.0%*	Return on Shr. Equity	*10.5%*
NMF	NMF	4.6%	5.2%	6.5%	7.2%	8.4%	7.8%	8.7%	9.4%	*9.5%*	*10.0%*	Return on Com Equity	*10.5%*
NMF	NMF	3.0%	1.8%	2.8%	3.5%	3.6%	4.7%	4.3%	4.7%	*4.5%*	*5.0%*	Retained to Com Eq	*5.0%*
--	--	34%	65%	56%	52%	57%	40%	50%	50%	*52%*	*51%*	All Div'ds to Net Prof	*55%*

CAPITAL STRUCTURE as of 3/31/16
Total Debt $6754.0 mil. **Due in 5 Yrs** $1272.0 mil.
LT Debt $5861.0 mil. **LT Interest** $293.0 mil. (54% of Cap'l)

Leases, Uncapitalized: Annual rentals $14.0 mill.
Pension Assets 12/15 $1376.0 mill
Oblig. $1584.0 mill.
Pfd Stock $11.0 mill. **Pfd Div'd** $.2 mill

Common Stock 177,714,495 shs.
as of 4/28/16

MARKET CAP: $15.1 billion (Large Cap)

CURRENT POSITION ($MILL.)	2014	2015	3/31/16
Cash Assets	23.1	45.0	88.0
Accts Receivable	267.1	255.0	220.0
Other	638.3	357.0	330.0
Current Assets	661.4	657.0	638.0
Accts Payable	285.8	126.0	116.0
Debt Due	511.1	682.0	893.0
Other	444.1	725.0	605.0
Current Liab.	1241.0	1533.0	1614.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	--	3.0%	*4.5%*
"Cash Flow"	--	9.0%	*5.5%*
Earnings	--	13.0%	*8.0%*
Dividends	--	10.0%	*10.5%*
Book Value	--	2.5%	*4.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	636.1	724.3	829.2	712.3	2901.9
2014	679.0	754.8	846.1	731.4	3011.3
2015	698.0	782.0	896.0	783.0	3159.0
2016	743.0	*832*	*950*	*825*	*3350*
2017	*755*	*860*	*990*	*870*	*3475*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	.32	.57	.84	.33	2.06
2014	.39	.62	.86	.52	2.39
2015	.44	.68	.96	.56	2.64
2016	.46	*.73*	*1.01*	*.60*	*2.80*
2017	*.50*	*.78*	*1.11*	*.66*	*3.05*

Calendar	QUARTERLY DIVIDENDS PAID [B■] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.23	.23	.25	.50	1.21
2013	--	.28	.28	.28	.84
2014	.28	.31	.31	.31	1.21
2015	.31	.34	.34	.34	1.33
2016	.34	.375			

BUSINESS: American Water Works Company, Inc. is the largest investor-owned water and wastewater utility in the U.S., providing services to over 15 million people in over 47 states and Canada. (Regulated presence in 16 states.) Nonregulated business assists municipalities and military bases with the maintenance and upkeep as well. Regulated operations made up 86.8% of 2015 revenues. New Jersey is its largest market accounting for 25.7% of regulated revenues. Has 6,700 employees. BlackRock, Inc., owns 10.2% of outstanding shares; Vanguard, 7.2%; officers & directors, less than 1.0% (4/16 Proxy). President & CEO: Susan Story. Chairman: George Mackenzie. Address: 1025 Laurel Oak Road, Voorhees, NJ 08043. Tel.: 856-346-8200. Internet: www.amwater.com.

Shares of American Water Works have been on a nice run. Since our last report three months ago, the price of the stock has climbed 22%, and is now up over 40% year to date. By comparison, the S&P 500 Index has increased by only 3% and 2%, over these similar periods.

Does the equity have any more gas left in its tank? Not according to our ranking system, which only pegs AWK to be an average performer in the year ahead. Traditionally purchased by risk-averse investors willing to forego some capital appreciation in return for a high yield, good dividend growth prospects, and well-defined earnings, this group has benefited from a shift in sentiment by the institutional sector. The recent turmoil in the global markets and the extraordinary accommodative policies by world central banks have resulted in historically low interest rates, which have seemingly made water utilities attractive to these investors. Indeed, due to the recent surge in its price, the stock is currently trading near the top end of our projected 2019-2021 Target Price Range, and thus offers negative returns to that time. True, there is no guarantee that the stock won't continue to move higher, but long-term holders of this issue that have enjoyed generous paper profits may want to consider reducing their positions.

Meanwhile, controlling costs remains the company's main earnings impetus. American Water has been expanding its customer base via acquisitions of smaller water districts for some time. Because many of the expenses of running a water utility are redundant, large cost savings can be achieved by merging smaller water districts into existing operations. The company usually has to buy dozens of water authorities to gain a decent number of new customers, but the recent $190 million purchase of part of the city of Scranton's system could mean the trend is changing.

This would appear to be an ideal moment for a new equity offering. Of the three large water companies, American Water has the most leveraged balance sheet and lowest Financial Strength. Moreover, the company has increased outstanding shares by only 1.8% since year-end 2009.

James A. Flood *July 15, 2016*

(A) Diluted earnings. Excludes nonrecurring losses: '08, $4.62; '09, $2.63; '11, $0.07. Discontinued operations: '06, ($0.04); '11, $0.03; '12, ($0.10); '13,($0.01). GAAP used as of 2014. Next earnings report due early August. Quarterly earnings may not sum due to rounding. (B) Dividends paid in March, June, September, and December. ■ Div. reinvestment available. Two payments made in 4th quarter of 2012. (C) In millions. (D) Includes intangibles. In 2015: $1.38 billion, $7.74/share. (E) Pro forma numbers for '06 & '07.

Company's Financial Strength	B+
Stock's Price Stability	100
Price Growth Persistence	85
Earnings Predictability	95

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AMER. STATES WATER NYSE-AWR

RECENT PRICE 44.12 | P/E RATIO 26.7 (Trailing: 28.3 Median: 20.0) | RELATIVE P/E RATIO 1.48 | DIV'D YLD 2.1% | VALUE LINE

TIMELINESS 3 Lowered 4/1/16
SAFETY 2 Raised 7/20/12
TECHNICAL 4 Lowered 7/15/16
BETA .70 (1.00 = Market)

2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+25%)	8%
Low	40	(-10%)	Nil

Insider Decisions

	S	O	N	D	J	F	M	A	M
to Buy	0	0	0	0	0	0	0	0	0
Options	5	3	4	2	11	1	10	1	8
to Sell	5	3	3	1	2	1	2	2	2

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	91	88	100
to Sell	89	88	96
Hld's(000)	23779	23016	22935

% TOT. RETURN 6/16

	THIS STOCK	VL ARITH.* INDEX
1 yr	19.8	-1.9
3 yr	75.8	26.6
5 yr	189.2	54.4

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
6.08	6.53	6.89	6.99	6.81	7.03	7.88	8.75	9.21	9.74	10.71	11.12	12.12	12.19	12.17	12.56	12.20	12.90	Revenues per sh	15.50
1.10	1.26	1.27	1.04	1.11	1.32	1.45	1.65	1.69	1.70	2.11	2.13	2.48	2.65	2.67	2.81	2.75	2.90	"Cash Flow" per sh	3.80
.64	.67	.67	.39	.53	.66	.67	.81	.78	.81	1.11	1.12	1.41	1.61	1.57	1.60	1.65	1.75	Earnings per sh A	2.25
.43	.43	.44	.44	.44	.45	.46	.48	.50	.51	.52	.55	.64	.76	.83	.87	.92	.97	Div'd Decl'd per sh B■	1.25
1.51	1.59	1.34	1.88	2.51	2.12	1.95	1.45	2.23	2.09	2.12	2.13	1.77	2.52	1.89	2.39	2.45	2.45	Cap'l Spending per sh	2.75
6.37	6.61	7.02	6.98	7.51	7.86	8.32	8.77	8.97	9.70	10.13	10.84	11.80	12.72	13.24	12.77	13.70	14.50	Book Value per sh	16.45
30.24	30.24	30.36	30.42	33.50	33.60	34.10	34.46	34.60	37.06	37.26	37.70	38.53	38.72	38.29	36.50	36.50	36.50	Common Shs Outst'g C	37.00
15.9	16.7	18.3	31.9	23.2	21.9	27.7	24.0	22.6	21.2	15.7	15.4	14.3	17.2	20.1	24.6	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	21.0
1.03	.86	1.00	1.82	1.23	1.17	1.50	1.27	1.36	1.41	1.00	.97	.91	.97	1.06	1.25			Relative P/E Ratio	1.30
4.2%	3.9%	3.6%	3.5%	3.6%	3.1%	2.5%	2.5%	2.9%	2.9%	3.0%	3.2%	3.1%	2.7%	2.6%	2.2%			Avg Ann'l Div'd Yield	2.6%
268.6	301.4	318.7	361.0	398.9	419.3	466.9	472.1	465.8	458.6	445	470	Revenues ($mill)	575
23.1	28.0	26.8	29.5	41.4	42.0	54.1	62.7	61.1	60.5	60.0	64.0	Net Profit ($mill)	83.0
40.5%	42.6%	37.8%	38.9%	43.2%	41.7%	39.9%	36.3%	38.4%	38.4%	33.0%	36.0%	Income Tax Rate	36.0%
12.2%	8.5%	6.9%	3.2%	5.8%	2.0%	2.5%	--	2.5%	.5%	1.0%	1.5%	AFUDC % to Net Profit	1.0%
48.6%	46.9%	46.2%	45.9%	44.3%	45.4%	42.2%	39.8%	39.1%	41.1%	41.5%	42.5%	Long-Term Debt Ratio	57.0%
51.4%	53.1%	53.8%	54.1%	55.7%	54.6%	57.8%	60.2%	60.9%	58.9%	58.5%	57.5%	Common Equity Ratio	43.0%
551.6	569.4	577.0	665.0	677.4	749.1	787.0	818.4	832.6	791.5	855	920	Total Capital ($mill)	1065
750.6	776.4	825.3	866.4	855.0	896.5	917.8	981.5	1003.5	1060.8	1110	1150	Net Plant ($mill)	1370
6.0%	6.7%	6.4%	5.9%	7.6%	7.1%	8.3%	8.9%	8.6%	9.0%	8.5%	8.5%	Return on Total Cap'l	9.5%
8.1%	9.3%	8.6%	8.2%	11.0%	10.3%	11.9%	12.7%	12.0%	13.0%	12.0%	12.0%	Return on Shr. Equity	13.5%
8.1%	9.3%	8.6%	8.2%	11.0%	10.3%	11.9%	12.7%	12.0%	13.0%	12.0%	12.0%	Return on Com Equity	13.5%
2.7%	3.9%	3.1%	3.2%	5.8%	5.3%	6.6%	6.8%	5.7%	6.0%	5.5%	5.5%	Retained to Com Eq	6.0%
67%	58%	64%	61%	47%	49%	45%	47%	53%	54%	56%	55%	All Div'ds to Net Prof	56%

CAPITAL STRUCTURE as of 3/31/16
Total Debt $364.2 mill. Due in 5 Yrs $41.6 mill.
LT Debt $320.9 mill. LT Interest $21.1 mill. (41% of Cap'l)

Leases, Uncapitalized: Annual rentals $2.5 mill.
Pension Assets-12/15 $142.2 mill. **Oblig.** $168.9 mill.
Pfd Stock None.

Common Stock 36,554,067 shs. as of 5/2/16

MARKET CAP: $1.6 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2014	2015	3/31/16
Cash Assets	76.0	4.4	8.5
Accts Receivable	18.8	18.9	16.2
Other	114.7	109.4	106.4
Current Assets	209.5	132.7	131.1
Accts Payable	41.9	50.6	47.9
Debt Due	.3	28.3	43.3
Other	57.1	44.6	47.9
Current Liab.	99.3	123.5	139.1

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	6.0%	4.5%	4.0%
"Cash Flow"	9.0%	8.0%	6.0%
Earnings	12.0%	12.0%	6.0%
Dividends	6.5%	10.0%	7.0%
Book Value	5.5%	6.0%	4.0%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	110.6	120.7	130.9	109.9	472.1
2014	102.0	115.6	138.3	109.9	465.8
2015	100.9	114.6	133.0	110.1	458.6
2016	93.5	106.5	135	110	445
2017	98.0	117	142	113	470

Calendar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	.35	.43	.53	.30	1.61
2014	.28	.39	.54	.36	1.57
2015	.32	.41	.56	.31	1.60
2016	.28	.39	.62	.36	1.65
2017	.33	.47	.60	.35	1.75

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.14	.14	.1775	.1775	.64
2013	.1775	.1775	.2025	.2025	.76
2014	.2025	.2025	.213	.213	.83
2015	.213	.213	.224	.224	.87
2016	.224	.224			

BUSINESS: American States Water Co. operates as a holding company. Through its principal subsidiary, Golden States Water Company, it supplies water to 260,151 customers in 75 cities and 10 counties. Service areas include the greater metropolitan areas of Los Angeles and Orange Counties. The company also provides electric utility services to 23,846 customers in the city of Big Bear Lake and in areas of San Bernardino County. Sold Chaparral City Water of Arizona (6/11). Has 707 employees. Blackrock Inc., owns 9.9% of out. shares; Vanguard, 9.4%; off. & dir. 1.4%. (4/16 Proxy) Chairman: Lloyd Ross. President & Chief Executive Officer: Robert J. Sprowls. Inc: CA. Address: 630 East Foothill Boulevard, San Dimas, CA 91773. Tel: 909-394-3600. Internet: www.aswater.com.

American States Water is awaiting the outcome of an important rate case. In 2014, the company's utility, Golden States Water Company (GSWC), filed a request with California regulators (CPUC), seeking higher rates for the years 2016 through 2018. Most of the negotiations have been concluded, but a few key items remain unresolved. The situation has been complicated by the drought in California, as GWSC has had to adjust its costs to align more with the reduced sales caused by the CPUC's mandated restrictions on water usage.

The decision by the CPUC should provide immediate relief to the bottom line. Once the case is decided, the revenues will be retroactive to the first of the year. American States' share net dipped 13% in the March period (and probably declined 5% in the second quarter) because GSWC has not been able to raise prices to keep up with its rising costs. The CPUC is bound to make a final ruling sometime in 2016. For our earnings presentation, we are estimating that a decision will be made in the third quarter, which should provide a boost to the company's second-half earnings. In any case, the significance of the CPUC's ruling cannot be underestimated, as this will determine what price the utility can charge its customers for three years. In the recent past, the state and water utilities appear to have established a good working relationship, so we expect the ruling to be reasonable.

Contributions from nonregulated businesses should continue to grow. Through its ASUS subsidiary, American States builds and operates water systems in U.S. Army installations. Lately, many military bases have been outsourcing this function. The privatization process is not occurring all at once, so we expect ASUS to be an active bidder on these contracts as they become public. Share earnings attributable to this segment fell in the first quarter, but we expect profits here to grow from about 10%-12% of the company's bottom line to 15%-20% out to late decade.

Investors can find better selections elsewhere. These neutrally ranked shares offer well-below average total return potential over the next 3- to 5-year period.

James A. Flood *July 15, 2016*

(A) Primary earnings. Excludes nonrecurring gains/(losses): '04, 7¢; '05, 13¢; '06, 3¢; '08, (14¢); '10, (23¢) '11, 10¢. Next earnings report due early August.

(B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available.

(C) In millions, adjusted for split.

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	70
Earnings Predictability	85

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CONNECTICUT WATER NDQ-CTWS

RECENT PRICE 55.66 | P/E RATIO 26.5 (Trailing: 27.3 / Median: 20.0) | RELATIVE P/E RATIO 1.47 | DIV'D YLD 2.0% | VALUE LINE

TIMELINESS 2 Lowered 7/8/16
SAFETY 3 New 1/18/13
TECHNICAL 4 Lowered 7/8/16
BETA .60 (1.00 = Market)

2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(NIL)	2%
Low	35	(-35%)	-8%

Insider Decisions

	S	O	N	D	J	F	M	A	M
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	0	0	0	0	2	0	0
to Sell	0	0	0	0	0	0	0	0	0

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	50	51	45
to Sell	34	44	48
Hld's(000)	4527	4535	4728

Target Price Range 2019 | 2020 | 2021
80 60 50 40 30 25 20 15 10 7.5

% TOT. RETURN 6/16

	THIS STOCK	VL ARITH* INDEX
1 yr.	69.1	-1.9
3 yr.	113.6	26.6
5 yr.	156.1	54.4

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
5.70	5.93	5.77	5.91	6.04	5.81	5.68	7.05	7.24	6.93	7.65	7.93	9.47	8.29	8.45	8.58	*8.90*	*9.20*	Revenues per sh	*13.35*
1.73	1.78	1.78	1.89	1.91	1.62	1.52	1.90	1.95	1.93	2.04	2.11	2.64	2.63	2.97	3.18	*3.25*	*3.45*	"Cash Flow" per sh	*3.60*
1.09	1.13	1.12	1.15	1.16	.88	.81	1.05	1.11	1.19	1.13	1.13	1.53	1.66	1.92	2.04	*2.10*	*2.20*	Earnings per sh [A]	*2.35*
.79	.80	.81	.83	.84	.85	.86	.87	.88	.90	.92	.94	.96	.98	1.01	1.05	*1.12*	*1.20*	Div'd Decl'd per sh [B■]	*1.35*
1.43	1.86	1.98	1.49	1.58	1.96	1.96	2.24	2.44	3.28	3.06	2.61	2.79	3.02	4.11	4.29	*5.80*	*4.35*	Cap'l Spending per sh	*3.35*
8.92	9.25	10.06	10.46	10.94	11.52	11.60	11.95	12.23	12.67	13.05	13.50	20.95	17.92	18.83	20.02	*20.70*	*21.75*	Book Value per sh [D]	*22.90*
7.28	7.65	7.94	7.97	8.04	8.17	8.27	8.38	8.46	8.57	8.68	8.76	8.85	11.04	11.12	11.19	*11.35*	*11.50*	Common Shs Outst'g [C]	*12.00*
18.2	21.5	24.3	23.5	22.9	28.6	29.0	23.0	22.2	18.4	20.7	23.0	19.4	18.4	17.5	17.6	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*19.0*
1.18	1.10	1.33	1.34	1.21	1.52	1.57	1.22	1.34	1.23	1.32	1.44	1.23	1.03	.92	.89			Relative P/E Ratio	*1.20*
4.0%	3.3%	3.0%	3.0%	3.1%	3.4%	3.6%	3.6%	3.6%	4.1%	3.9%	3.6%	3.2%	3.2%	3.0%	2.9%			Avg Ann'l Div'd Yield	*3.0%*
46.9	59.0	61.3	59.4	66.4	69.4	83.8	91.5	94.0	96.0	*101*	*106*	Revenues ($mill)	*160*
6.7	8.8	9.4	10.2	9.8	9.9	13.6	18.3	21.3	22.7	*24.0*	*25.5*	Net Profit ($mill)	*28.0*
23.5%	32.4%	27.2%	19.5%	35.2%	41.3%	32.0%	28.0%	14.4%	4.2%	*7.5%*	*19.0%*	Income Tax Rate	*27.0%*
--	--	1.7%	--	--	--	1.7%	2.0%	2.4%	2.2%	*2.5%*	*2.5%*	AFUDC % to Net Profit	*2.0%*
44.4%	47.8%	46.9%	50.6%	49.5%	53.2%	49.0%	46.9%	45.7%	44.2%	*42.0%*	*42.5%*	Long-Term Debt Ratio	*47.5%*
55.1%	51.8%	52.7%	49.1%	50.2%	46.5%	50.8%	52.9%	54.1%	55.8%	*58.0%*	*57.5%*	Common Equity Ratio	*52.5%*
174.1	193.2	196.5	221.3	225.6	254.2	364.6	373.6	386.8	401.7	*405*	*435*	Total Capital ($mill)	*525*
268.1	284.3	302.3	325.2	344.2	362.4	447.9	471.9	506.9	546.3	*565*	*590*	Net Plant ($mill)	*675*
4.9%	5.5%	5.9%	5.5%	5.4%	4.9%	4.8%	5.9%	6.4%	6.6%	*7.0%*	*6.5%*	Return on Total Cap'l	*6.0%*
6.9%	8.7%	9.0%	9.3%	8.6%	8.3%	7.3%	9.2%	10.1%	10.1%	*10.0%*	*10.0%*	Return on Shr. Equity	*10.5%*
7.0%	8.7%	9.1%	9.4%	8.7%	8.3%	7.3%	9.2%	10.2%	10.1%	*10.0%*	*10.0%*	Return on Com Equity	*10.5%*
NMF	1.6%	1.9%	2.3%	1.6%	1.4%	2.8%	3.8%	4.8%	4.9%	*5.0%*	*5.0%*	Retained to Com Eq	*4.5%*
105%	82%	79%	76%	81%	83%	62%	59%	53%	52%	*53%*	*54%*	All Div'ds to Net Prof	*57%*

CAPITAL STRUCTURE as of 3/31/16
Total Debt $174.0 mill. Due in 5 Yrs $19.3 mill.
LT Debt $171.1 mill. LT Interest $7.0 mill. (43% of Cap'l)

Leases, Uncapitalized: Annual rentals $.3 mill.
Pension Assets-12/15 $56.6 mill. Oblig. $75.8 mill.

Pfd Stock $0.8 mill. Pfd Divd NMF

Common Stock 11,218,582 shs.

MARKET CAP: $625 million (Small Cap)

CURRENT POSITION ($MILL.)	2014	2015	3/31/16
Cash Assets	2.5	.7	1.5
Accounts Receivable	12.0	11.0	9.7
Other	21.7	15.3	18.1
Current Assets	36.2	27.0	29.3
Accts Payable	10.0	11.9	8.5
Debt Due	4.4	2.8	2.9
Other	9.2	22.2	34.9
Current Liab.	23.6	36.9	46.3

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	4.0%	4.5%	*8.0%*
"Cash Flow"	4.0%	7.5%	*3.5%*
Earnings	4.0%	9.0%	*4.0%*
Dividends	2.0%	2.0%	*5.0%*
Book Value	6.5%	9.5%	*3.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	19.7	22.6	27.6	21.6	91.5
2014	20.3	25.4	27.6	20.7	94.0
2015	20.0	26.6	28.4	21.0	96.0
2016	21.6	*27.5*	*30.0*	*21.9*	*101*
2017	*23.0*	*28.0*	*32.0*	*23.0*	*106*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	.24	.39	.86	.17	1.66
2014	.27	.67	.76	.22	1.92
2015	.28	.77	.79	.20	2.04
2016	.28	*.72*	*.85*	*.25*	*2.10*
2017	*.30*	*.74*	*.88*	*.28*	*2.20*

Calendar	QUARTERLY DIVIDENDS PAID [B■] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.238	.238	.2425	.2425	.962
2013	.2425	.2425	.2475	.2475	.98
2014	.2475	.2475	.2575	.2575	1.01
2015	.2575	.2575	.2675	.2675	1.05
2016	.2675	.2825			

BUSINESS: Connecticut Water Service, Inc. is a non-operating holding company, whose income is derived from earnings of its wholly-owned subsidiary companies (regulated water utilities). In 2015, 92% of net income was derived from these activities. Provides water services to 400,000 people in 77 municipalities throughout Connecticut and Maine. Acquired The Maine Water Company, January, 2012; Biddeford and Saco Water, December, 2012. Incorporated: Connecticut. Has 266 employees. Chairman/President/Chief Executive Officer: Eric W. Thornburg. Officers and directors own 2.6% of the common stock; BlackRock, Inc. 7.0%; (4/16 proxy). Address: 93 West Main Street, Clinton, CT 06413. Telephone: (860) 669-8636. Internet: www.ctwater.com.

Shares of Connecticut Water Service continue to boil higher. The stock price has risen more than 25% since our April review. Year to date, CTWS shares are up approximately 45%, which far outpaces the now negative performance of the S&P 500 Index. Too, the stock etched an all-time high over the March interim, breaking through the $56-a-share level.

First-quarter financials were decent. The company reported moderate annual revenue growth of 8% during the period, helped along by surcharges and general rate activity, specifically in Maine. Earnings of $0.28 a share were flat year over year, as a one-time tax item offset a noticeable improvement in operating and maintenance expenses. Nonetheless, the strong operating showing lends support to our calls for full-year bottom-line expansion in 2016 and 2017, even more so as tax rates should return to normal levels in the near term.

We still think larger capital investments and smaller bolt-on acquisitions are likely on tap through late decade. For this year, management has earmarked approximately $66 million for improvements to its existing infrastructure, and projects a total of $150 million may be spent over the pull to 2018. What's more, CTWS will probably expand its footprint through purchases of smaller water service providers, as it has done so frequently in the past. On balance, we look for an expanding customer base to drive top- and bottom-line growth over the coming three to five years.

The company raised its quarterly payout, to $0.2825. This is encouraging from a dividend growth standpoint, as CTWS is focused on returning value to shareholders. (Note: The current yield is now below average).

Connecticut Water shares are favorably ranked for relative year-ahead price performance (Timeliness, 2). That said, we think this may be an opportune time to take some profits off the table. Due to the stock's steady climb in price, CTWS is currently trading at the high point of our 3- to 5-year Target Price Range. Moreover, from a price-to-earnings perspective, the shares appear richly valued compared to historical ratios.

Nicholas P. Patrikis *July 15, 2016*

(A) Diluted earnings. Next earnings report due late August.
(B) Dividends historically paid in mid-March, June, September, and December. ■ Div'd reinvestment plan available.
(C) In millions, adjusted for split.
(D) Includes intangibles. In 2015: $30.4 million/$2.72 a share.

Company's Financial Strength	B+
Stock's Price Stability	90
Price Growth Persistence	50
Earnings Predictability	85

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CALIFORNIA WATER NYSE-CWT

RECENT PRICE 35.44 | P/E RATIO 35.4 (Trailing: 39.8 Median: 20.0) | RELATIVE P/E RATIO 1.97 | DIV'D YLD 1.9% | VALUE LINE

TIMELINESS 1 Raised 6/24/16
SAFETY 3 Lowered 7/27/07
TECHNICAL 4 Lowered 7/8/16
BETA .75 (1.00 = Market)

2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	45	(+25%)	9%
Low	30	(-15%)	-1%

Insider Decisions

	S	O	N	D	J	F	M	A	M
to Buy	1	1	1	1	1	1	4	1	1
Options	10	10	1	0	0	0	25	0	0
to Sell	0	0	0	0	0	0	2	0	2

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	69	69	100
to Sell	74	75	72
Hld's(000)	28655	30579	34783

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
High:	21.1	22.9	22.7	23.3	24.1	19.8	19.4	19.3	23.4	26.4	26.0	35.4								
Low:	15.6	16.4	17.1	13.8	16.7	16.9	16.7	16.6	18.4	20.3	19.5	22.5								
	8.08	8.13	8.67	8.18	8.59	8.72	8.10	8.88	9.90	10.82	11.05	12.00	13.34	12.23	12.50	12.29	*12.50*	*13.00*	Revenues per sh	*14.70*
	1.26	1.10	1.32	1.26	1.42	1.52	1.36	1.56	1.86	1.93	1.93	2.07	2.32	2.21	2.47	2.22	*2.30*	*2.65*	"Cash Flow" per sh	*3.25*
	.66	.47	.63	.61	.73	.74	.67	.75	.95	.98	.91	.86	1.02	1.02	1.19	.94	*1.00*	*1.35*	Earnings per sh A	*1.60*
	.55	.56	.56	.56	.57	.57	.58	.58	.59	.59	.60	.62	.63	.64	.65	.67	*.69*	*.71*	Div'd Decl'd per sh B ■	*.99*
	1.23	2.04	2.91	2.19	1.87	2.01	2.14	1.84	2.41	2.66	2.97	2.83	3.04	2.58	2.76	3.69	*3.65*	*3.55*	Cap'l Spending per sh	*3.30*
	6.45	6.48	6.56	7.22	7.83	7.90	9.07	9.25	9.72	10.13	10.45	10.76	11.28	12.54	13.11	13.41	*13.55*	*14.25*	Book Value per sh C	*16.00*
	30.29	30.36	30.36	33.86	36.73	36.78	41.31	41.33	41.45	41.53	41.67	41.82	41.98	47.74	47.81	47.88	*48.00*	*48.00*	Common Shs Outst'g D	*50.00*
	19.6	27.1	19.8	22.1	20.1	24.9	29.2	26.1	19.8	19.7	20.3	21.3	17.9	20.1	19.7	24.8	*Bold figures are*		Avg Ann'l P/E Ratio	*23.0*
	1.27	1.39	1.08	1.26	1.06	1.33	1.58	1.39	1.19	1.31	1.29	1.34	1.14	1.13	1.04	1.26	*Value Line*		Relative P/E Ratio	*1.45*
	4.3%	4.4%	4.5%	4.2%	3.9%	3.1%	2.9%	3.0%	3.1%	3.1%	3.2%	3.4%	3.5%	3.1%	2.8%	2.9%	*estimates*		Avg Ann'l Div'd Yield	*2.6%*
	334.7	367.1	410.3	449.4	460.4	501.8	560.0	584.1	597.5	588.3	*600*	*625*	Revenues ($mill) E	*735*
	25.6	31.2	39.8	40.6	37.7	36.1	42.6	47.3	56.7	45.0	*48.0*	*65.0*	Net Profit ($mill)	*80.0*
	37.4%	39.9%	37.7%	40.3%	39.5%	40.5%	37.5%	30.3%	33.0%	35.3%	*32.0%*	*32.0%*	Income Tax Rate	*35.0%*
	10.6%	8.3%	8.6%	7.6%	4.2%	7.6%	8.0%	4.3%	2.7%	4.2%	*5.0%*	*5.0%*	AFUDC % to Net Profit	*5.0%*
	43.5%	42.9%	41.6%	47.1%	52.4%	51.7%	47.8%	41.6%	40.1%	44.4%	*46.0%*	*45.0%*	Long-Term Debt Ratio	*42.0%*
	55.9%	56.6%	58.4%	52.9%	47.6%	48.3%	52.2%	58.4%	59.9%	55.6%	*54.0%*	*55.0%*	Common Equity Ratio	*58.0%*
	670.1	674.9	690.4	794.9	914.7	931.5	908.2	1024.9	1045.9	1154.5	*1200*	*1250*	Total Capital ($mill)	*1375*
	941.5	1010.2	1112.4	1198.1	1294.3	1381.1	1457.1	1515.8	1590.4	1701.8	*1775*	*1815*	Net Plant ($mill)	*1900*
	5.2%	5.9%	7.1%	6.5%	5.5%	5.5%	6.3%	6.0%	6.3%	5.1%	*5.0%*	*6.5%*	Return on Total Cap'l	*7.0%*
	6.8%	8.1%	9.9%	9.6%	8.6%	8.0%	9.0%	7.9%	9.1%	7.0%	*7.5%*	*9.5%*	Return on Shr. Equity	*10.0%*
	6.8%	8.1%	9.9%	9.6%	8.6%	8.0%	9.0%	7.9%	9.1%	7.0%	*7.5%*	*9.5%*	Return on Com Equity	*10.0%*
	1.0%	1.8%	3.8%	3.8%	3.0%	2.3%	3.4%	3.4%	4.1%	2.0%	*2.5%*	*4.5%*	Retained to Com Eq	*4.0%*
	86%	77%	61%	60%	66%	71%	62%	56%	55%	71%	*69%*	*52%*	All Div'ds to Net Prof	*62%*

Target Price Range 2019 | 2020 | 2021

% TOT. RETURN 6/16

	THIS STOCK	VL ARITH INDEX
1 yr.	57.3	-1.9
3 yr.	94.9	26.6
5 yr.	117.6	54.4

CAPITAL STRUCTURE as of 3/31/16
Total Debt $598.4 mill. Due in 5 Yrs $175.3 mill.
LT Debt $557.8 mill. LT Interest $27.2 mill. (47% of Cap'l)

Pension Assets-12/15 $328.6 mill.
Oblig. $501.9 mill.

Pfd Stock None

Common Stock 47,974,000 shs.

MARKET CAP: $1.7 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2014	2015	3/31/16
Cash Assets	19.6	8.8	30.9
Other	134.5	118.8	117.6
Current Assets	154.1	127.6	148.5
Accts Payable	59.4	66.4	65.4
Debt Due	85.7	40.2	40.6
Other	72.6	41.9	52.1
Current Liab.	217.7	148.5	158.1

BUSINESS: California Water Service Group provides regulated and nonregulated water service to 477,900 customers in 85 communities in the state of California. Accounts for over 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, '15: residential, 70%; business, 20%; industrial, 5%; public authorities, 4%; other 1%. '15 reported depreciation rate: 4.0%. Has 1,155 employees. President, Chairman, and CEO: Peter C. Nelson. Inc.: DE. Address: 1720 North First St., San Jose, CA 95112-4598. Tel.: 408-367-8200. Internet: www.calwatergroup.com.

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	4.0%	5.0%	3.0%
"Cash Flow"	6.0%	5.5%	6.0%
Earnings	5.0%	4.0%	7.5%
Dividends	1.5%	2.0%	7.0%
Book Value	5.5%	5.0%	3.5%

Calendar	QUARTERLY REVENUES ($ mill.) E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2013	111.4	154.6	184.4	133.7	584.1
2014	110.5	158.4	191.2	137.4	597.5
2015	122.0	144.4	183.5	138.4	588.3
2016	121.7	*148*	*190*	*140.3*	*600*
2017	*130*	*155*	*195*	*145*	*625*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2013	.01	.28	.61	.12	1.02
2014	d.11	.36	.70	.24	1.19
2015	.03	.21	.52	.18	.94
2016	d.02	*.22*	*.60*	*.20*	*1.00*
2017	*.05*	*.35*	*.65*	*.30*	*1.35*

Calendar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.1575	.1575	.1575	.1575	.63
2013	.16	.16	.16	.16	.64
2014	.1625	.1625	.1625	.1625	.65
2015	.1675	.1675	.1675	.1675	.67
2016	.1725	.1725			

California Water Service Group shares have risen sharply in price since our April review. Despite a rather rough start to 2016, in which both the top and bottom lines fell short of our estimates, the stock increased more than 25% in value. Not unlike other water utility equities, CWT has been a stellar performer over the past two quarters. Year to date, the stock is up approximately 45% in price, and trades at its all-time high of just over $35 a share.

We are shaving a nickel from our full-year 2016 earnings forecast. California Water reported an unexpected loss of $0.03 a share in the first quarter, weighed down by several headwinds, namely higher operating expenses, ongoing drought costs, and interest charges. We do not foresee an immediate reversal in these trends, though our outlook for 2017 is more optimistic. Lastly, the company has projected a greater tax rate going forward, further supporting our reduced call for $1.00 share net this year.

On a brighter note, revenues appear to be holding up nicely. Specifically, greater collections of accrued unbilled revenues (incurred expenses that CWT is waiting to be reimbursed for) has been a boost. Looking further out, positive in-progress rate activity along with an eventual end to unfavorable and costly drought conditions are also encouraging. All told, we continue to look for low single-digit top-line growth this year and next.

Capital spending ought to remain a staple in the company's long-term growth plan. Indeed, CWT is well-positioned to expand its footprint through acquisitions, as it boasts a relatively stable balance sheet with a manageable debt level. Purchases aside, organic growth, mainly through investment in its water tanks, aging infrastructure, and water supply, is likely on tap.

Based on recent levels, investors with a longer-term holding period would do well to remain on the sidelines. The stock's sustained ascent now renders capital appreciation potential subpar three to five years out. Conversely, accounts with a short-term horizon could do well riding CWT's price momentum higher (Timeliness: 1).

Nicholas P. Patrikis *July 15, 2016*

(A) Basic EPS. Excl. nonrecurring gain (loss): '00, (4¢); '01, 2¢; '02, 4¢; '11, 4¢. Next earnings report due late August.
(B) Dividends historically paid in late Feb., May, Aug., and Nov. ■ Div'd reinvestment plan available.
(C) Incl. intangible assets. In '15 : $7.5 mill., $0.16/sh.
(D) In millions, adjusted for splits.
(E) Excludes non-reg. rev.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	40
Earnings Predictability	75

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MIDDLESEX WATER NDQ-MSEX

RECENT PRICE 43.42 | P/E RATIO 31.5 (Trailing: 33.7 / Median: 20.0) | RELATIVE P/E RATIO 1.75 | DIV'D YLD 1.8% | VALUE LINE

TIMELINESS 1 Raised 6/3/16
SAFETY 2 New 10/21/11
TECHNICAL 3 Lowered 7/8/16
BETA .70 (1.00 = Market)

2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	35	(-20%)	-3%
Low	25	(-40%)	-10%

Insider Decisions

	S	O	N	D	J	F	M	A	M
to Buy	0	0	0	0	0	0	1	0	0
Options	0	0	0	0	0	0	1	0	0
to Sell	0	0	0	1	0	0	1	2	0

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	47	41	62
to Sell	42	50	45
Hld's(000)	6614	6584	6822

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
	5.39	5.87	5.98	6.12	6.25	6.44	6.16	6.50	6.79	6.75	6.60	6.50	6.98	7.19	7.26	7.77	8.05	8.05	Revenues per sh
	.99	1.18	1.20	1.15	1.28	1.33	1.33	1.49	1.53	1.40	1.55	1.46	1.56	1.72	1.84	1.97	2.15	2.30	"Cash Flow" per sh
	.51	.66	.73	.61	.73	.71	.82	.87	.89	.72	.96	.84	.90	1.03	1.13	1.22	1.38	1.45	Earnings per sh A
	.61	.62	.63	.65	.66	.67	.68	.69	.70	.71	.72	.73	.74	.75	.76	.78	.81	.84	Div'd Decl'd per sh B■
	1.32	1.25	1.59	1.87	2.54	2.18	2.31	1.66	2.12	1.49	1.90	1.50	1.36	1.26	1.40	1.59	1.75	1.80	Cap'l Spending per sh
	6.98	7.11	7.39	7.60	8.02	8.26	9.52	10.05	10.03	10.33	11.13	11.27	11.48	11.82	12.24	12.74	12.90	13.35	Book Value per sh
	10.11	10.17	10.36	10.48	11.36	11.58	13.17	13.25	13.40	13.52	15.57	15.70	15.82	15.96	16.12	16.23	16.25	16.50	Common Shs Outst'g C
	28.7	24.6	23.5	30.0	26.4	27.4	22.7	21.8	19.8	21.0	17.8	21.7	20.8	19.7	18.5	19.1	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio
	1.87	1.26	1.28	1.71	1.39	1.46	1.23	1.15	1.19	1.40	1.13	1.36	1.32	1.11	.97	.97			Relative P/E Ratio
	4.2%	3.8%	3.7%	3.5%	3.4%	3.5%	3.7%	3.7%	4.0%	4.7%	4.2%	4.0%	4.0%	3.7%	3.7%	3.3%			Avg Ann'l Div'd Yield
							81.1	86.1	91.0	91.2	102.7	102.1	110.4	114.8	117.1	126.0	131	133	Revenues ($mill)
							10.0	11.8	12.2	10.0	14.3	13.4	14.4	16.6	18.4	20.0	22.5	24.0	Net Profit ($mill)
							33.4%	32.6%	33.2%	34.1%	32.1%	32.7%	33.9%	34.1%	35.0%	34.5%	35.0%	35.0%	Income Tax Rate
							--	--	--	--	6.8%	6.1%	3.4%	1.9%	1.7%	1.9%	2.0%	2.0%	AFUDC % to Net Profit
							49.5%	49.0%	45.6%	46.6%	43.1%	42.3%	41.5%	40.4%	40.5%	39.4%	38.5%	38.5%	Long-Term Debt Ratio
							47.5%	49.6%	51.8%	52.1%	55.8%	56.6%	57.4%	58.7%	58.8%	59.8%	61.5%	61.5%	Common Equity Ratio
							264.0	268.8	259.4	267.9	310.5	312.5	316.5	321.4	335.8	345.4	350	360	Total Capital ($mill)
							317.1	333.9	366.3	376.5	405.9	422.2	435.2	446.5	465.4	481.9	495	515	Net Plant ($mill)
							5.1%	5.6%	5.8%	5.0%	5.7%	5.2%	5.4%	5.9%	6.3%	6.6%	7.0%	7.5%	Return on Total Cap'l
							7.5%	8.6%	8.6%	7.0%	8.1%	7.5%	7.8%	8.7%	9.2%	9.6%	10.5%	11.0%	Return on Shr. Equity
							7.8%	8.7%	8.9%	7.0%	8.2%	7.5%	7.8%	8.7%	9.3%	9.6%	10.5%	11.0%	Return on Com Equity
							1.3%	1.8%	2.0%	.1%	2.1%	1.0%	1.4%	2.4%	3.1%	3.5%	4.5%	4.5%	Retained to Com Eq
							84%	79%	78%	98%	75%	87%	83%	73%	67%	63%	59%	58%	All Div'ds to Net Prof

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CAPITAL STRUCTURE as of 3/31/16
Total Debt $139.2 mill. Due in 5 Yrs $30.8 mill.
LT Debt $131.5 mill. LT Interest $5.6 mill.
(Total interest coverage: 11.6x)
(39% of Cap'l)

Pension Assets-12/15 $52.9 mill.
Oblig. $72.5 mill.
Pfd Stock $2.4 mill. Pfd Div'd: $.1 mill.

Common Stock 16,240,000 shs.

MARKET CAP: $700 million (Small Cap)

CURRENT POSITION ($MILL.)	2014	2015	3/31/16
Cash Assets	2.7	3.5	3.6
Other	20.2	20.9	21.0
Current Assets	22.9	24.4	24.6
Accts Payable	6.4	6.5	6.5
Debt Due	24.9	8.7	7.7
Other	12.6	13.1	16.3
Current Liab.	43.9	28.3	30.5

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	1.5%	2.0%	4.0%
"Cash Flow"	4.0%	4.5%	5.5%
Earnings	5.0%	5.5%	5.0%
Dividends	1.5%	1.5%	3.0%
Book Value	4.5%	3.0%	4.0%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	27.0	29.1	31.3	27.4	114.8
2014	27.1	29.2	32.7	28.1	117.1
2015	28.8	31.7	34.7	30.8	126.0
2016	30.6	32.5	35.5	32.4	131
2017	31.0	33.0	36.0	33.0	133

Calendar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	.20	.28	.36	.19	1.03
2014	.20	.29	.42	.22	1.13
2015	.22	.31	.41	.28	1.22
2016	.29	.33	.44	.32	1.38
2017	.32	.34	.46	.33	1.45

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.185	.185	.185	.1875	.74
2013	.1875	.1875	.1875	.19	.75
2014	.19	.19	.19	.1925	.76
2015	.1925	.1925	.1925	.19875	.78
2016	.19875	.19875			

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 60,000 retail customers, primarily in Middlesex County, New Jersey. In 2015, the Middlesex System accounted for 59% of operating revenues. At 12/31/15, the company had 293 employees. Incorporated: NJ. President, CEO, and Chairman: Dennis W. Doll. Officers & directors own 3.5% of the common stock; BlackRock Institutional Trust Co., 6.4% (4/16 proxy). Add.: 1500 Ronson Road, Iselin, NJ 08830. Tel.: 732-634-1500. Internet: www.middlesexwater.com

Middlesex Water Company reported better-than-expected financial results to begin the year. Indeed, the recently approved rate increase by the New Jersey Board of Public Utilities, alongside higher water demand, drove strong top- and bottom-line growth in the first quarter. Year over year, March interim share net expanded 32%, to $0.29. Meanwhile, revenues increased 6% over the same period, to $30.6 million. On balance, we are lifting our 2016 revenue and earnings estimates to $131 million and $1.38 a share, respectively.

Middlesex shares still have some wind at their back. The stock is up more than 30% in value since our April review and 60% year to date, handily outperforming the broader market averages. We think the price momentum is apt to persist, as MSEX boasts our Highest (1) rank for Timeliness. What's more, the abovementioned strength in profitability and revenue growth supports our viewpoint.

A major infrastructure project is set to commence in Edison and South Amboy, New Jersey. A total of $12 million has been tagged to replace eight miles of water mains, service lines, valves, meters, and hydrants over the coming six months. This ought to bolster Middlesex's water distribution system by providing greater carrying capacity. Customer cost savings are expected to be an additional benefit of the project, thanks to improved efficiency. Going forward, we think capital spending, mainly on its existing infrastructure, will continue to rise.

Income-seeking accounts with a long-term bent may want to wait for a more attractive entry point. At present, the equity leaves much to be desired from a capital appreciation perspective, as the stock currently trades above our 3- to 5-year Target Price Range. That said, our sanguine outlook on water demand, infrastructure upgrades, and expanding customer base (largely into Delaware), highlights MSEX's potential out to late decade. Lastly, the company's ability to consistently raise its annual dividend payout (43 consecutive years) should help maintain its historically above-average yield. Note that the current yield (1.8%) is below average, however.

Nicholas P. Patrikis *July 15, 2016*

(A) Diluted earnings. May not sum due to rounding. Next earnings report due early August.
(B) Dividends historically paid in mid-Feb., May, Aug., and November. ■ Div'd reinvestment plan available.
(C) In millions, adjusted for split.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	45
Earnings Predictability	85

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SJW CORP. NYSE-SJW

RECENT PRICE 39.07 | P/E RATIO 22.3 (Trailing: 22.1 / Median: 24.0) | RELATIVE P/E RATIO 1.24 | DIV'D YLD 2.1% | VALUE LINE

TIMELINESS 3 Lowered 5/6/16
SAFETY 3 New 4/22/11
TECHNICAL 3 Lowered 6/24/16
BETA .70 (1.00 = Market)

2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+40%)	11%
Low	35	(-10%)	Nil

Insider Decisions

	S	O	N	D	J	F	M	A	M
to Buy	0	0	0	3	0	0	0	0	0
Options	0	0	0	0	9	0	5	8	0
to Sell	0	0	0	0	0	0	0	0	0

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	61	43	84
to Sell	44	59	41
Hld's(000)	9038	8694	9256

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
High:	27.8	45.3	43.0	35.1	30.4	28.2	26.8	26.9	30.1	33.7	35.7	39.5						
Low:	16.1	21.2	27.7	20.0	18.2	21.6	20.9	22.6	24.5	25.5	27.5	28.6						

Target Price Range 2019 | 2020 | 2021

% TOT. RETURN 6/16

	THIS STOCK	VL ARITH.* INDEX
1 yr	31.6	-1.9
3 yr	62.4	26.6
5 yr	86.1	54.4

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6.74	7.45	7.97	8.20	9.14	9.86	10.35	11.25	12.12	11.68	11.62	12.85	14.01	13.73	15.76	14.97	**14.90**	**15.00**	Revenues per sh	**18.50**
1.23	1.49	1.55	1.75	1.89	2.21	2.38	2.30	2.44	2.21	2.38	2.80	2.97	2.90	4.42	3.86	**3.80**	**4.00**	"Cash Flow" per sh	**3.95**
.58	.77	.78	.91	.87	1.12	1.19	1.04	1.08	.81	.84	1.11	1.18	1.12	2.54	1.85	**1.75**	**1.95**	Earnings per sh [A]	**2.00**
.41	.43	.46	.49	.51	.53	.57	.61	.65	.66	.68	.69	.71	.73	.75	.78	**.82**	**.85**	Div'd Decl'd per sh [B■]	**1.05**
1.89	2.63	2.06	3.41	2.31	2.83	3.87	6.62	3.79	3.17	5.65	3.75	5.67	4.68	5.02	5.24	**5.35**	**5.50**	Cap'l Spending per sh	**5.00**
7.90	8.17	8.40	9.11	10.11	10.72	12.48	12.90	13.99	13.66	13.75	14.20	14.71	15.92	17.75	18.83	**19.00**	**19.75**	Book Value per sh	**22.40**
18.27	18.27	18.27	18.27	18.27	18.27	18.28	18.36	18.18	18.50	18.55	18.59	18.67	20.17	20.29	20.38	**20.50**	**21.00**	Common Shs Outst'g [C]	**23.00**
33.1	18.5	17.3	15.4	19.6	19.7	23.5	33.4	26.2	28.7	29.1	21.2	20.4	24.3	11.2	16.6	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	**22.0**
2.15	.95	.94	.88	1.04	1.05	1.27	1.77	1.58	1.91	1.85	1.33	1.30	1.37	.59	.84			Relative P/E Ratio	**1.40**
2.1%	3.0%	3.4%	3.5%	3.0%	2.4%	2.0%	1.7%	2.3%	2.8%	2.8%	2.9%	3.0%	2.7%	2.6%	2.5%			Avg Ann'l Div'd Yield	**2.3%**
189.2	206.6	220.3	216.1	215.6	239.0	261.5	276.9	319.7	305.1	**305**	**315**	Revenues ($mill)	**425**
22.2	19.3	20.2	15.2	15.8	20.9	22.3	23.5	51.8	37.9	**36.0**	**41.0**	Net Profit ($mill)	**46.0**
40.8%	39.4%	39.5%	40.4%	38.8%	41.1%	41.1%	38.7%	32.5%	38.1%	**39.0%**	**39.5%**	Income Tax Rate	**39.0%**
2.1%	2.7%	2.3%	2.0%	--	--	--	--	2.0%	1.0%	**1.5%**	**1.5%**	AFUDC % to Net Profit	**1.5%**
41.8%	47.7%	46.0%	49.4%	53.7%	56.6%	55.0%	51.1%	51.6%	49.8%	**49.0%**	**50.5%**	Long-Term Debt Ratio	**50.5%**
58.2%	52.3%	54.0%	50.6%	46.3%	43.4%	45.0%	48.9%	48.4%	50.2%	**51.0%**	**49.5%**	Common Equity Ratio	**49.5%**
391.8	453.2	470.9	499.6	550.7	607.9	610.2	656.2	744.5	764.6	**765**	**840**	Total Capital ($mill)	**1040**
541.7	645.5	684.2	718.5	785.5	756.2	831.6	898.7	963.0	1036.8	**1100**	**1200**	Net Plant ($mill)	**1325**
7.0%	5.7%	5.8%	4.4%	4.3%	4.9%	5.0%	5.0%	8.3%	6.3%	**6.0%**	**6.0%**	Return on Total Cap'l	**5.5%**
9.7%	8.2%	8.0%	6.0%	6.2%	7.9%	8.1%	7.3%	14.4%	9.9%	**9.0%**	**10.0%**	Return on Shr. Equity	**9.0%**
9.7%	8.2%	8.0%	6.0%	6.2%	7.9%	8.1%	7.3%	14.4%	9.9%	**9.0%**	**10.0%**	Return on Com Equity	**9.0%**
5.2%	3.5%	3.3%	1.2%	1.2%	3.1%	3.3%	2.8%	10.2%	5.7%	**5.0%**	**5.5%**	Retained to Com Eq	**4.0%**
46%	57%	59%	80%	80%	61%	59%	62%	29%	42%	**47%**	**44%**	All Div'ds to Net Prof	**53%**

CAPITAL STRUCTURE as of 3/31/16
Total Debt $420.1 mill. Due in 5 Yrs $21.2 mill.
LT Debt $365.8 mill. LT Interest $21.0 mill.
(49% of Cap'l)

Leases, Uncapitalized: Annual rentals $6.6 mill.

Pension Assets-12/15 $105.0 mill.
Oblig. $164.3 mill.

Pfd Stock None.

Common Stock 20,425,794 shs.

MARKET CAP: $800 million (Small Cap)

CURRENT POSITION ($MILL.)	2014	2015	3/31/16
Cash Assets	2.4	5.2	8.7
Accts Receivable	15.0	16.4	13.8
Other	50.7	51.8	40.1
Current Assets	68.1	73.4	62.6
Accts Payable	7.0	16.2	19.1
Debt Due	13.8	38.1	54.3
Other	23.9	25.3	24.4
Current Liab.	44.7	79.6	97.8

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	5.0%	4.5%	*4.0%*
"Cash Flow"	6.5%	10.0%	*1.0%*
Earnings	6.5%	15.0%	*1.5%*
Dividends	4.0%	2.5%	*5.5%*
Book Value	6.0%	5.0%	*4.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	50.1	74.2	85.2	67.4	276.9
2014	54.6	70.4	125.4	69.3	319.7
2015	62.1	72.4	83.0	87.6	305.1
2016	61.1	*75.0*	*88.9*	*80.0*	*305*
2017	*66.0*	*77.0*	*90.0*	*82.0*	*315*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	.07	.37	.44	.24	1.12
2014	.04	.34	1.88	.28	2.54
2015	.23	.36	.46	.80	1.85
2016	.16	*.40*	*.60*	*.59*	*1.75*
2017	*.25*	*.45*	*.65*	*.60*	*1.95*

Calendar	QUARTERLY DIVIDENDS PAID [B■] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.1775	.1775	.1775	.1775	.71
2013	.1825	.1825	.1825	.1825	.73
2014	.1875	.1875	.1875	.1875	.75
2015	.1950	.1950	.1950	.1950	.78
2016	.2025	.2025			

BUSINESS: SJW Corporation engages in the production, purchase, storage, purification, distribution, and retail sale of water. It provides water service to approximately 229,000 connections with a total population of roughly one million people in the San Jose area and 12,000 connections that reaches about 36,000 residents in the region between San Antonio and Austin, Texas. The company also offers nonregulated water-related services and owns and operates commercial real estate investments. Has about 399 employees. Officers and directors (including Nancy O. Moss) own 28.3% of outstanding shares. Chairman: Charles J. Toeniskoetter. Incorporated: California. Address: 110 West Taylor Street, San Jose, CA 95110. Telephone: (408) 279-7800. Internet: www.sjwater.com.

SJW Corp.'s stock price noticeably lagged the average gain of its peers in the water utility industry over the March interim. SJW shares rose a modest 5% over the past three months, while other participants, on average, increased in price in the realm of 25%-30%. A main contributor to the relatively weak performance may have been the company's underwhelming first-quarter showing. Burdened by elevated operating expenses, specifically administrative and salary costs, as well as repairs, SJW delivered net income of $0.16 a share, a $0.07 decline, year over year. Moreover, revenues slipped marginally, on an annual basis, to $61.1 million, largely due to lower customer usage. The water conservation memorandum, which is a favorable form of revenue recognition noted in our previous report, only partially offset the decline. All things considered, we are trimming $5 million and $0.05 from our 2016 top- and bottom-line estimates, to $305 million and $1.75 a share, respectively.

Capital spending is likely to remain elevated over the foreseeable future. Accompanying the recent decision by the California Public Utilities Commission to authorize a rate increase, a capital improvement program of more than $300 million has been granted to SJW. This will allow the company to upgrade its water systems infrastructure, thereby improving customer water distribution and operational efficiency.

The dividend yield should hold steady over the coming 3 to 5 years. At the recent quotation, the stock yields 2.1%, fractionally lower than *The Value Line Investment Survey* median. Nevertheless, SJW has an impeccable track record of payout hikes, and its solid free cash flow generation leads us to expect consistent dividend increases in the years to come, thus keeping the yield about average.

SJW stock has been lowered one notch for Timeliness, to 3 (Average), and is now pegged to move in line with the year-ahead broader market. Our ranking system suggests that recent price momentum may be cooling. Too, capital appreciation three to five years out is below average. Thus, we recommend investors turn the page, for now.

Nicholas P. Patrikis *July 15, 2016*

(A) Diluted earnings. Excludes nonrecurring losses : '03, $1.97; '04, $3.78; '05, $1.09; '06, $16.36; '08, $1.22; '10, $0.46. GAAP accounting as of 2013. Next earnings report due late August. Quarterly earnings 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, adjusted for stock splits.

Company's Financial Strength	B+
Stock's Price Stability	85
Price Growth Persistence	25
Earnings Predictability	50

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AQUA AMERICA NYSE-WTR

RECENT PRICE **35.62** | P/E RATIO **26.4** (Trailing: 30.7 Median: 22.0) | RELATIVE P/E RATIO **1.47** | DIV'D YLD **2.1%** | **VALUE LINE**

TIMELINESS **2** Raised 5/13/16
SAFETY **2** Raised 4/20/12
TECHNICAL **4** Lowered 7/15/16
BETA .70 (1.00 = Market)

2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	45	(+25%)	8%
Low	35	(Nil)	2%

Insider Decisions

	S	O	N	D	J	F	M	A	M
to Buy	0	0	0	0	0	0	0	0	0
Options	0	1	3	0	1	0	813	1	
to Sell	1	1	4	1	0	0	4	0	3

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	166	182	190
to Sell	138	149	147
Hld's(000)	84833	83005	85054

% TOT. RETURN 6/16

	THIS STOCK	VL ARITH* INDEX
1 yr.	49.1	-1.9
3 yr.	53.4	26.6
5 yr.	130.6	54.4

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
1.97	2.16	2.28	2.38	2.78	3.08	3.23	3.61	3.71	3.93	4.21	4.10	4.32	4.32	4.37	4.61	*4.70*	*4.95*	Revenues per sh	*5.85*
.61	.69	.76	.77	.87	.97	1.01	1.10	1.14	1.29	1.42	1.45	1.51	1.82	1.89	1.87	*2.10*	*2.25*	"Cash Flow" per sh	*2.65*
.37	.41	.43	.46	.51	.57	.56	.57	.58	.62	.72	.83	.87	1.16	1.20	1.14	*1.35*	*1.45*	Earnings per sh A	*1.75*
.23	.24	.26	.28	.29	.32	.35	.38	.41	.44	.47	.50	.54	.58	.63	.69	*.74*	*.80*	Div'd Decl'd per sh B●	*1.05*
.93	.87	.96	1.06	1.23	1.47	1.64	1.43	1.58	1.66	1.89	1.90	1.98	1.73	1.84	2.07	*2.00*	*2.00*	Cap'l Spending per sh	*2.10*
3.08	3.32	3.49	4.27	4.71	5.04	5.57	5.85	6.26	6.50	6.81	7.21	7.90	8.63	9.27	9.78	*10.40*	*11.10*	Book Value per sh	*13.75*
139.78	142.47	141.49	154.31	158.97	161.21	165.41	166.75	169.21	170.81	172.46	173.60	175.43	177.93	178.59	176.54	*177.50*	*178.00*	Common Shs Outst'g C	*180.00*
18.2	23.6	23.6	24.5	25.1	31.8	34.7	32.0	24.9	23.1	21.1	21.3	21.9	21.2	20.8	23.5	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*22.5*
1.18	1.21	1.29	1.40	1.33	1.69	1.87	1.70	1.50	1.54	1.34	1.34	1.39	1.19	1.09	1.19			Relative P/E Ratio	*1.40*
3.3%	2.5%	2.5%	2.5%	2.3%	1.8%	1.8%	2.1%	2.8%	3.1%	3.1%	2.8%	2.8%	2.4%	2.5%	2.6%			Avg Ann'l Div'd Yield	*2.7%*
533.5	602.5	627.0	670.5	726.1	712.0	757.8	768.6	779.9	814.2	*830*	*875*	Revenues ($mill)	*1050*
92.0	95.0	97.9	104.4	124.0	144.8	153.1	205.0	213.9	201.8	*240*	*258*	Net Profit ($mill)	*315*
39.6%	38.9%	39.7%	39.4%	39.2%	32.9%	39.0%	10.0%	10.5%	6.9%	*6.0%*	*7.0%*	Income Tax Rate	*20.0%*
--	--	--	--	--	--	--	1.1%	2.4%	3.1%	*4.0%*	*4.0%*	AFUDC % to Net Profit	*5.0%*
51.6%	55.4%	54.1%	55.6%	56.6%	52.7%	52.7%	48.9%	48.5%	50.3%	*50.0%*	*50.5%*	Long-Term Debt Ratio	*51.5%*
48.4%	44.6%	45.9%	44.4%	43.4%	47.3%	47.3%	51.1%	51.5%	49.7%	*50.0%*	*49.5%*	Common Equity Ratio	*48.5%*
1904.4	2191.4	2306.8	2495.5	2706.2	2646.8	2929.7	3003.6	3216.0	3469.5	*3700*	*4000*	Total Capital ($mill)	*5100*
2506.0	2792.8	2997.4	3227.3	3469.3	3612.9	3936.2	4167.3	4402.0	4688.9	*4885*	*5075*	Net Plant ($mill)	*5700*
6.4%	5.9%	5.7%	5.6%	5.9%	6.9%	6.6%	8.0%	7.8%	6.9%	*7.5%*	*7.5%*	Return on Total Cap'l	*7.5%*
10.0%	9.7%	9.3%	9.4%	10.6%	11.6%	11.0%	13.4%	12.9%	11.7%	*13.0%*	*13.0%*	Return on Shr. Equity	*12.5%*
10.0%	9.7%	9.3%	9.4%	10.6%	11.6%	11.0%	13.4%	12.9%	11.7%	*13.0%*	*13.0%*	Return on Com Equity	*12.5%*
3.7%	3.2%	2.8%	2.7%	3.7%	4.6%	4.3%	6.7%	6.1%	4.7%	*6.0%*	*6.0%*	Retained to Com Eq	*5.0%*
63%	67%	70%	72%	65%	60%	61%	50%	52%	60%	*55%*	*55%*	All Div'ds to Net Prof	*60%*

CAPITAL STRUCTURE as of 3/31/16
Total Debt $1801.2 mill. **Due in 5 Yrs** $441.5 mill.
LT Debt $1744.1 mill. **LT Interest** $75.4 mill.
(50% of Cap'l)

Pension Assets-12/15 $238.6 mill.
Oblig. $306.5 mill.

Pfd Stock None
Common Stock 177,271,652 shares
as of 4/22/16

MARKET CAP: $6.3 billion (Large Cap)

CURRENT POSITION ($MILL.)	2014	2015	3/31/16
Cash Assets	4.1	3.2	3.9
Receivables	97.0	99.1	91.7
Inventory (AvgCst)	12.8	12.4	12.5
Other	38.6	13.7	14.6
Current Assets	152.5	128.4	122.7
Accts Payable	60.0	56.5	34.0
Debt Due	70.0	52.3	57.1
Other	95.3	84.4	83.2
Current Liab.	225.3	193.2	174.3

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	5.0%	2.5%	4.5%
"Cash Flow"	8.0%	8.0%	6.0%
Earnings	8.5%	13.0%	7.0%
Dividends	8.0%	7.5%	9.0%
Book Value	7.0%	7.0%	7.0%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2013	180.0	195.7	204.3	188.6	768.6
2014	182.7	195.3	210.5	191.4	779.9
2015	190.3	205.8	221.0	197.1	814.2
2016	192.6	*210*	*227.4*	*200*	*830*
2017	*205*	*220*	*240*	*210*	*875*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2013	.26	.30	.36	.24	1.16
2014	.24	.31	.38	.27	1.20
2015	.27	.32	.38	.17	1.14
2016	.29	*.34*	*.41*	*.31*	*1.35*
2017	*.31*	*.37*	*.45*	*.32*	*1.45*

Calendar	QUARTERLY DIVIDENDS PAID B● Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.132	.132	.132	.14	.54
2013	.14	.14	.152	.152	.58
2014	.152	.152	.165	.165	.63
2015	.165	.165	.178	.178	.69
2016	.178	.178			

BUSINESS: Aqua America, Inc. is the holding company for water and wastewater utilities that serve approximately three million residents in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Florida, Indiana, and five other states. Has 1,617 employees. Acquired AquaSource, 7/13; North Maine Utilities, 7/15; and others. Water supply revenues '2015: residential, 69%; commercial, 18%; industrial & other, 13%. Officers and directors own less than 1% of the common stock; Vanguard Group, 7.7%; Blackrock, Inc, 7.3%; State Street Capital, 5.5% (3/16 Proxy). President & Chief Executive Officer: Christopher Franklin. Incorporated: Pennsylvania. Address: 762 West Lancaster Avenue, Bryn Mawr, Pennsylvania 19010. Tel.: 610-525-1400. Internet: www.aquaamerica.com.

Aqua America's bottom line should recover nicely in 2016. For starters, the utility has been granted modest rate hikes this year in several states, and other increases are pending in New Jersey and Virginia. Moreover, we do not anticipate a repeat of 2015 when the company had to absorb unusual charges related to its nonregulated businesses. All told, we expect share earnings to rise 18% over last year's depressed level.

Another solid earnings gain is probably on tap for 2017. The combination of a steady growth in the customer base fueled mostly by acquisitions, and having rate relief in effect for the full year should result in Aqua's share net increasing $0.10, or 7.4%, to $1.45.

The capital budget is manageable. Management estimates that approximately $350 million will be spent in 2016 to expand and modernize its current water infrastructure. Additional debt will be required to help fund the projected $1 billion in expenditures scheduled through 2018. In any case, while the condition of the balance sheet may decline slightly, the company should remain on a sound financial footing as long-term debt should account for only slightly over 50% of total capitalization by late decade.

Shares of Aqua America have performed well of late. Foreign and domestic economic and political uncertainties have seemingly led to a large change in market sentiment regarding the water utility group (now ranked among the top of all industries in the *Value Line* universe). As they are viewed as defensive plays because of their low Beta coefficients and well-defined earnings streams, increased investment in this relatively small industry (the combined market cap of all nine members of this sector only totals about $28 billion) has resulted in WTR out pacing the S&P 500 Index by a wide margins over the past three months.

Our ranking system still favors this equity. WTR is expected to outleg the broader market averages in the year ahead. These shares are more suitable for momentum investors, however. Due to the recent rise in its price, the stock now has below-average total return potential through 2019-2021.

James A. Flood *July 15, 2016*

(A) Diluted egs. Excl. nonrec. gains: '00, 2¢; '01, 2¢; '02, 4¢; '03, 3¢; '12, 18¢. Excl. gain from disc. operations: '12, 7¢; '13, 9¢; '14, 11¢. May not sum due to rounding. Next earnings report due early Aug.
(B) Dividends historically paid in early March, June, Sept. & Dec. ● Div'd. reinvestment plan available (5% discount).
(C) In millions, adjusted for stock splits.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	70
Earnings Predictability	95

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YORK WATER NDQ-YORW

RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
31.44	31.4 (Trailing: 32.8 Median: 24.0)	1.74	2.0%	

TIMELINESS 3 Lowered 7/8/16
SAFETY 3 Lowered 7/17/15
TECHNICAL 3 Lowered 7/8/16
BETA .70 (1.00 = Market)

2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	35	(+10%)	5%
Low	25	(-20%)	-2%

Insider Decisions

	S	O	N	D	J	F	M	A	M
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	0	0	0	0	0	0	0	0

Institutional Decisions

	3Q2015	4Q2015	1Q2016
to Buy	30	36	43
to Sell	27	24	30
Hld's(000)	3840	3820	3860

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
--	2.05	2.05	2.17	2.18	2.58	2.56	2.79	2.89	2.95	3.07	3.18	3.21	3.27	3.58	3.68	4.00	4.40	Revenues per sh	5.40
--	.59	.57	.65	.65	.79	.77	.86	.88	.95	1.07	1.09	1.12	1.19	1.36	1.47	1.55	1.70	"Cash Flow" per sh	1.90
--	.43	.40	.47	.49	.56	.58	.57	.57	.64	.71	.71	.72	.75	.89	.97	1.00	1.08	Earnings per sh A	1.25
--	.34	.35	.37	.39	.42	.45	.48	.49	.51	.52	.53	.54	.55	.57	.60	.63	.66	Div'd Decl'd per sh B	.85
--	.75	.66	1.07	2.50	1.69	1.85	1.69	2.17	1.18	.83	.74	.94	.76	1.10	1.08	1.60	1.10	Cap'l Spending per sh	.85
--	3.79	3.90	4.06	4.65	4.85	5.84	5.97	6.14	6.92	7.19	7.45	7.73	7.98	8.15	8.52	8.90	9.35	Book Value per sh	10.15
--	9.46	9.55	9.63	10.33	10.40	11.20	11.27	11.37	12.56	12.69	12.79	12.92	12.98	12.83	12.81	12.50	12.00	Common Shs Outst'g C	12.00
--	17.8	26.9	24.5	25.7	26.3	31.2	30.3	24.6	21.9	20.7	23.9	24.4	26.3	23.1	23.5	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	22.5
--	.91	1.47	1.40	1.36	1.40	1.68	1.61	1.48	1.46	1.32	1.50	1.55	1.48	1.22	1.19			Relative P/E Ratio	1.40
--	4.4%	3.3%	3.2%	3.1%	2.9%	2.5%	2.8%	3.5%	3.6%	3.5%	3.1%	3.1%	2.8%	2.8%	2.6%			Avg Ann'l Div'd Yield	3.4%
						28.7	31.4	32.8	37.0	39.0	40.6	41.4	42.4	45.9	47.1	50.0	53.0	Revenues ($mill)	65.0
						6.1	6.4	6.4	7.5	8.9	9.1	9.3	9.7	11.5	12.6	12.5	13.0	Net Profit ($mill)	15.0
						34.4%	36.5%	36.1%	37.9%	38.5%	35.3%	37.6%	37.6%	29.8%	27.2%	28.5%	28.5%	Income Tax Rate	32.5%
						7.2%	3.6%	10.1%	--	1.2%	1.1%	1.1%	.8%	1.8%	1.6%	1.0%	1.0%	AFUDC % to Net Profit	1.0%
						48.3%	46.5%	54.5%	45.7%	48.3%	47.1%	46.0%	45.1%	44.8%	44.5%	43.5%	46.0%	Long-Term Debt Ratio	47.0%
						51.7%	53.5%	45.5%	54.3%	51.7%	52.9%	54.0%	54.9%	55.2%	55.5%	56.5%	54.0%	Common Equity Ratio	53.0%
						126.5	125.7	153.4	160.1	176.4	180.2	184.8	188.4	189.4	196.4	200	210	Total Capital ($mill)	230
						174.4	191.6	211.4	222.0	228.4	233.0	240.3	244.2	253.2	261.4	270	275	Net Plant ($mill)	290
						6.2%	6.7%	5.7%	6.2%	6.5%	6.4%	6.4%	6.5%	7.4%	7.7%	7.5%	7.5%	Return on Total Cap'l	7.5%
						9.3%	9.5%	9.2%	8.6%	9.8%	9.5%	9.3%	9.3%	11.0%	11.5%	11.0%	11.5%	Return on Shr. Equity	12.5%
						9.3%	9.5%	9.2%	8.6%	9.8%	9.5%	9.3%	9.3%	11.0%	11.5%	11.0%	11.5%	Return on Com Equity	12.5%
						2.2%	1.7%	1.4%	1.9%	2.7%	2.5%	2.4%	2.4%	3.9%	4.5%	4.0%	4.5%	Retained to Com Eq	4.0%
						77%	82%	85%	78%	72%	73%	74%	74%	64%	61%	64%	61%	All Div'ds to Net Prof	68%

CAPITAL STRUCTURE as of 3/31/16
Total Debt $84.5 mill. **Due in 5 Yrs** $30.5 mill.
LT Debt $84.5 mill. **LT Interest** $5.1 mill.

(44% of Cap'l)

Pension Assets 12/15 $31.8 mill.
Oblig. $39.5 mill.

Pfd Stock None

Common Stock 12,839,735 shs.

MARKET CAP: $400 million (Small Cap)

CURRENT POSITION ($MILL.)	2014	2015	3/31/16
Cash Assets	1.5	2.9	3.2
Accounts Receivable	4.0	3.5	3.6
Inventory (Avg. Cost)	.8	.8	.8
Other	4.9	4.6	4.0
Current Assets	11.2	11.8	11.6
Accts Payable	1.6	1.8	1.9
Debt Due	--	--	--
Other	4.3	4.4	4.6
Current Liab.	5.9	6.2	6.5

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	4.5%	3.0%	7.5%
"Cash Flow"	7.0%	6.5%	6.0%
Earnings	5.5%	6.0%	6.0%
Dividends	4.0%	2.5%	6.5%
Book Value	6.5%	4.5%	3.5%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	10.1	10.7	10.9	10.7	42.4
2014	10.6	11.8	12.0	11.5	45.9
2015	11.2	11.9	12.4	11.6	47.1
2016	11.3	*12.5*	*13.0*	*13.2*	*50.0*
2017	*12.0*	*13.0*	*13.5*	*14.5*	*53.0*

Calendar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	.17	.18	.19	.21	.75
2014	.16	.22	.23	.28	.89
2015	.20	.22	.28	.27	.97
2016	.19	*.26*	*.28*	*.27*	*1.00*
2017	*.22*	*.27*	*.30*	*.29*	*1.08*

Calendar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.134	.134	.134	.134	.535
2013	.138	.138	.138	.138	.552
2014	.1431	.1431	.1431	.1431	.572
2015	.1495	.1495	.1495	.1555	.604
2016	.1555	.1555	.1555		

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, 2015, the company's average daily availability was 35.4 million gallons and its service territory had an estimated population of 194,000. Has more than 66,000 customers. Residential customers accounted for 63% of 2015 revenues; commercial and industrial (29%); other (8%). It also provides sewer billing services. Incorporated: PA. York had 108 full-time employees at 12/31/15. President/CEO: Jeffrey R. Hines. Officers/directors own 1.1% of the common stock (4/16 proxy). Address: 130 East Market Street, York, Pennsylvania 17401. Telephone: (717) 845-3601. Internet: www.yorkwater.com.

York Water delivered first-quarter financial results roughly in line with our expectations. The Pennsylvania-based operator generated revenues of $11.3 million, fractionally higher than the prior-year figure. Meanwhile, earnings of $0.19 a share during the period missed our mark by a penny, largely owing to a marginally higher tax rate than we anticipated. However, slimmer operating expenses, as well as relatively calmer weather, kept the company moving in the right direction. At this time, we are reiterating our 2016 top- and bottom-line estimates of $50.0 million and $1.00 per share, respectively.

This equity is neutrally ranked (Timeliness: 3). However, the market reacted positively to the aforementioned performance, sending shares to a record high price of just over $33 a share during the March interim. We look for momentum to persist in the near term, driven by modest year-over-year top- and bottom-line gains. Moreover, domestic water utilities exhibit lower correlations to broader market indices (Beta: 0.70), especially those outside the U.S., thus providing some shelter from the recent global volatility.

We remain confident that acquisitions and capital investments will likely comprise the long-term story. York spent just under $2 million in capex in the first quarter, but has guided a massive ramp-up of $15 million over the last three quarters of the year. Funds will probably be used to lead an overhaul of its aging infrastructure, after having been allocated to its water treatment systems and new water mains. In addition, much of the growth we envision over the coming years ought to be attributed to acquisitions. To wit, the company is poised to aggressively spend in 2016 and 2017 to position itself for sustainable expansion through late decade.

This stock does not stand out for the near-term. In the same breath, investors looking for a buy-and-hold play would be best served waiting on the sidelines for a better entry point. Based on our current 3- to 5-year earnings estimate, YORW shares are trading near the mid-point of our Target Price Range. Too, the dividend yield is below average at recent levels.

Nicholas P. Patrikis *July 15, 2016*

(A) Diluted earnings. Next earnings report due late August.
(B) Dividends historically paid in mid-January, April, July, and October.
(C) In millions, adjusted for splits.

Company's Financial Strength	B+
Stock's Price Stability	85
Price Growth Persistence	55
Earnings Predictability	95

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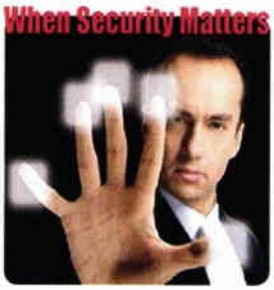
	6/30/16					September-16
Company Name	Ticker Sym	LT Debt-Total Qtly	Preferred S	Minority In	Common Equity-Total-Qtly	Invested Capital-Total Qtly	Market Value-Mnthly
AMERICAN ST.	AWR	320.910	0.000	0.000	476.696	797.606	1,464.148
AMERICAN W/	AWK	5,861.000	0.000	0.000	5,153.000	11,014.000	13,314.186
AQUA AMERIC	WTR	1,775.874	0.000	0.000	1,791.163	3,567.037	5,405.019
ARTESIAN RES	ARTNA	102.992	0.000	0.000	135.388	238.380	259.887
CALIFORNIA W	CWT	555.787	0.000	0.000	636.760	1,192.547	1,539.389
CONNECTICUT	CTWS	200.861	0.772	0.000	230.439	432.072	547.726
MIDDLESEX W	MSEX	130.955	2.436	0.000	212.176	345.567	573.707
SJW CORP	SJW	364.172	0.000	0.000	396.022	760.194	892.907
YORK WATER	YORW	84.569	0.000	0.000	111.977	196.546	381.724

	Book Ratios				Market Ratios			
	LTD	Pref	Equity		LTD	Pref	Equity	
AMERICA	0.402	0.000	0.598	1.000	0.180	0.000	0.820	1.000
AMERICA	0.532	0.000	0.468	1.000	0.306	0.000	0.694	1.000
AQUA AM	0.498	0.000	0.502	1.000	0.247	0.000	0.753	1.000
ARTESIAI	0.432	0.000	0.568	1.000	0.284	0.000	0.716	1.000
CALIFORI	0.466	0.000	0.534	1.000	0.265	0.000	0.735	1.000
CONNECT	0.465	0.002	0.533	1.000	0.268	0.001	0.731	1.000
MIDDLES	0.379	0.007	0.614	1.000	0.185	0.004	0.811	1.000
SJW CORI	0.479	0.000	0.521	1.000	0.290	0.000	0.710	1.000
YORK WA	0.430	0.000	0.570	1.000	0.181	0.000	0.819	1.000
				Avg	0.245	0.001	0.754	
				Med	0.265	0.000	0.735	

Assumptions:	9/30/2016
Debt Cost	3.72
Pref. Stock Cost	5.02
Equity Cost	9.02
Equity Cost	7.22

Ratio	Cost	Wt	Shield	Overall	
26.50%	3.720	0.99	0.6	0.59148	
0.00%	5.020	0.00	1	0	
73.50%	9.020	6.63	1	6.6297	
		7.62		**7.22**	<<<<ANSWER
26.50%	3.720	0.99	0.6	0.59148	
0.00%	5.020	0.00	1	0	
73.50%	7.220	5.31	1	5.3067	
		6.29		**5.90**	<<<<ANSWER



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DEP Reminds Homeowners To Maintain Septic Systems

Tue, 09/22/2015 - 2:08pm admin

SHARE

The Pennsylvania Department of Environmental Protection (DEP) is reminding Pennsylvanians about the importance of onlot septic system maintenance.

This annual initiative, led by DEP and the U.S. Environmental Protection Agency (EPA), encourages residents to learn about and properly maintain their septic systems during SepticSmart Week from September 21 to 25.

"More than 29 percent of Pennsylvanians rely on a septic system," said DEP Secretary John Quigley. "It's so important that these systems are maintained properly to prevent failure and to protect the public health and environment."

Lacking or improper maintenance of an onlot septic system can contaminate groundwater supplies with E. coli and other pollutants. This is very important as many of the homeowners who rely on septic systems also have private wells that provide potable drinking water. Discharges from failed systems can also contaminate surface waters like lakes, rivers, and ponds, contributing excess nutrients that can cause toxic algal blooms and other water quality problems.

Homeowners are responsible for making sure that these systems work properly. The life-span of a septic system is generally 25 years, but septic systems are vulnerable to early failure if they are not regularly inspected and pumped, and properly maintained.

The Department of Environmental Protection (DEP) recommends property owners take the following precautions to maintain their system:

• Inspect and Pump Frequently: The average household septic system should be inspected at least every three years by a septic service professional. Household septic tanks are typically pumped every three to five years.

• Conserve Water: All of the water a household sends down its pipes ends up in its septic system. The more water a household conserves, the less water enters the septic system. Consider installing low-flow plumbing fixtures, faucet aerators, and high-efficiency toilets, washing machines, and dishwashers to

save on water use.
• Proper Waste Disposal: Do not flush anything that isn't human waste or toilet paper.
• Maintain the Drainfield: never park on the drainfield. Avoid planting trees or other plants near the drainfield to prevent root infiltration.

Throughout the week, professionals from DEP will be on hand from 11 A.M. to 1 P.M. in the Capitol's East Wing Rotunda to answer questions and provide helpful information about septic system maintenance.

DEP will also share tips and information throughout the week on its Facebook page (www.facebook/PennsylvaniaDEP) and Twitter (@PennsylvaniaDEP).

Click here to learn more about SepticSmart Week.

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More Listings

RELATED ARTICLES

DEP Reminds Homeowners to Properly Disinfect, Test Private Water Wells - **Post date: Friday, September 23, 2011 - 9:09am**

GRANT APPROVED TO UPGRADE WATER SYSTEM - **Post date: Tuesday, November 6, 2012 - 11:17am**

DEP Reminds Pennsylvanians to Maintain Home Heating Oil Tanks - **Post date: Friday, September 25, 2015 - 8:11pm**

Update on $30 Million Flood Protection System - **Post date: Friday, November 22, 2013 - 8:01am**

Thompson Reminds 5th District Residents of Upcoming Emergency Alert System Nationwide Test - **Post date: Saturday, November 5, 2011 - 11:06am**

Environmental Protection Agency: Fracking Poses No 'Widespread, Systemic' Harm to Drinking Water - **Post date: Sunday, June 7, 2015 - 11:38am**

Contracts have been awarded for the $30 million flood protection system in Bloomsburg - **Post date: Saturday, March 7, 2015 - 7:37pm**

Susquehanna Health Receives Surgical Information Systems' Perioperative Leadership Award - **Post date: Thursday, November 5, 2015 - 2:44pm**

PennDOT Proposes to Privatize 511 Traveler Information System - **Post date: Thursday, January 10, 2013 - 4:54pm**

Intelligent Transportation System Project Begins Next Week in Central Pennsylvania - **Post date: Saturday, April 11, 2015 - 1:20pm**

POPULAR HEADLINES

Police Need Help Identifying Man Who Broke Into Northumberland County Business

Lycoming County Man Dies After Hiding Suspected Heroin in His Throat

Lane Restriction Wednesday on Rt. 220 South in Woodward Township

Two Men Charged for Selling Stolen Video Console and Game at Store

PennDOTSeeking Applicants for Temporary Positions

Obit: Lori Lynne Stout

Obit: Troy M. Weaver

West Fourth Street Bridge Open

Obits: Kylee Elizabeth Case

Obit: John E. "Joe" Wertman

Obit: Mary M. Crouse

CrossFit Billtown Grand Opening in Williamsport

Police - Fire Scanner Feeds

Muncy Valley Hospital's Expansion Continues

Williamsport First Friday to be Held on Dec. 2 Downtown and at Pajama Factory

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Septic System Cost Analysis – Explore Your Options When Your Septic System Fails

If you're facing a complete septic system replacement you're at the right place. Learn how to deal with this expensive and stressful situation. Contrary to what you may have been told, there is an affordable alternative to replacing your septic system when it fails. Aero-Stream's® patented septic remediation system can restore a failed system without costly excavation and landscaping expenses.

Understanding Septic System Repair Costs

- The average septic system replacement cost ranges from **$6,000 to $50,000** including financing.
- Up to **50%** of the replacement septic system cost is profit for the installer, therefore our solution is rarely mentioned.
- Most regulators are risk averse and avoid breakthrough technology.
- On average septic system failure occurs **every 15 years!**
- There is a **huge cost difference** between an aerobic septic system vs. anaerobic septic system.
- Aerobic conversion of failed septic systems rejuvenates and extends the life of the system – **saving thousands of dollars!**
- Even if the regulators are forcing you to replace your system **make sure this is the last time you do it**!
- Discover how Aero-Stream® can reduce your septic system cost by successfully executing a controlled aerobic conversion of your new or failing septic system for **under $1500!**

Options to Repair a Failed Septic System

The cost to repair a septic system depends on if you choose a full system replacement or conversion from an anaerobic to an aerobic system with an Aero-Stream® product.

Facts: Every **anaerobic septic system** has a finite service life. Anaerobic systems will need replacement about every 15 years during the service life of the home or dwelling.The majority of system failures are caused by the **byproducts of the anaerobic biochemical process**. One damaging byproduct is the clogging of the drain field by the biomat.Another damaging byproduct is concrete corrosion that begins with the creation of hydrogen sulfide gas.Converting an anaerobic septic system to an aerobic septic system can indefinitely extend the life of the system when combined with best practices.


Concrete riser breaking down from the corrosive effects of an anaerobic septic tank

Septic System Replacement Cost

The cost of septic system replacement depends on the type of system installed. Here are the average ranges:

- Gravity fed drainfields of all types: $5,000 to $10,000, or an average of $7,500.
- Mounds: $10,000 to $50,000, or an average of $30,000.
- ATU's: $10,000 to $15,000, or an average of $12,500.

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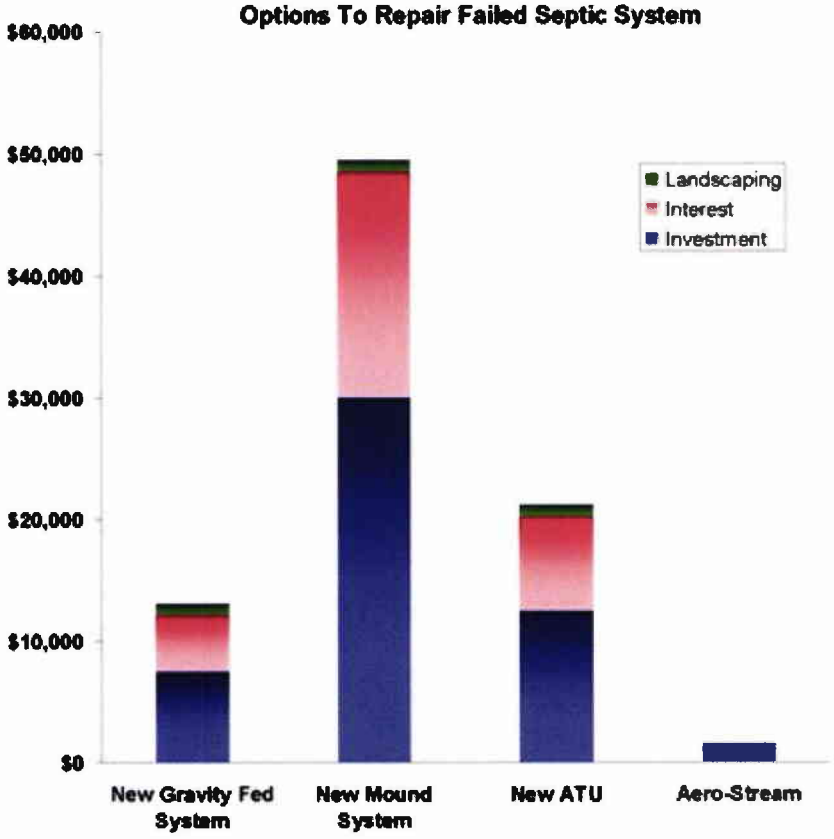
The costs to install a new system are most often financed. For this analysis, an interest rate of 7% and a 15 year amortization period will be used. The landscaping costs vary wildly, so for this analysis, $1,000 is included to get the lawn or garden back to usable condition. The totals for the present value of the loan for each option plus the landscaping costs are:

- Gravity fed drain fields: $7,500 principal + $4,634 interest + $1,000 landscaping costs = **$13,134**
- Mounds: $30,000 principal + $18,537 interest + $1,000 landscaping costs = **$49,537**
- ATU's: $12,500 principal + $7224 interest + $1,000 landscaping costs = **$21,224**

Cost Analysis of Aero-Stream Septic System Restoration

The cost of an Aero-Stream septic system restoration product is **under $1,500** and there are no landscaping costs to consider.
The comparison is stark. You save thousands, and in some cases tens of thousands, of dollars when you choose Aero-Stream over system replacement.



Septic System Maintenance Costs

Maintenance costs are the same regardless if the system is aerobic or anaerobic. Maintenance costs are comprised mostly of septic tank pumping by a professional pumper or plumber.

The pumping frequency varies with each system, however, most systems require pumping every 3 to 4 years and many local health departments have more frequent pumping requirements. Furthermore, as a system nears its service life, pumping frequency often increases. Using the national averages, maintenance costs are as follows:

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verage pumping frequency) = **$60/year or $5/month**

Conclusion

You can dramatically lower your septic system cost of ownership if you choose an Aero-Stream septic system

restoration product when your system fails.
Think about this: If your system fails after 15 years and you must finance a new system, **you never eliminate a monthly loan payment**. But, if you choose to remediate and save your failed septic system by installing an Aero-Stream® product, the only reoccurring expense after the purchase would be the pumping fees – **you save thousands of dollars.**
By installing a patented Aero-Stream® product, a successful, controlled conversion of your septic system from an anaerobic to an aerobic biochemical process can be executed. You will virtually eliminate the most common causes of septic system failure while increasing the life expectancy of your septic system indefinitely and **saving yourself thousands of dollars**.

The Septic System Owners Manual

Nobody plans for the expense of having septic tank problems. Whether your septic system is new or failing, this manual is a must read for any homeowner.Understand the causes and discover the solutions to your septic system and septic tank problems.

Click Image Above to Learn How to Buy!

Fixes and Restores Any Failed or Failing Septic System

Learn more about the real causes of septic system problems and this patented and proven solution.

Download Free Report

Aero-Stream's® patented and scientifically proven system is GUARANTEED to solve septic problems and prevent them – without the high costs associated with excavation or ongoing chemical treatments.

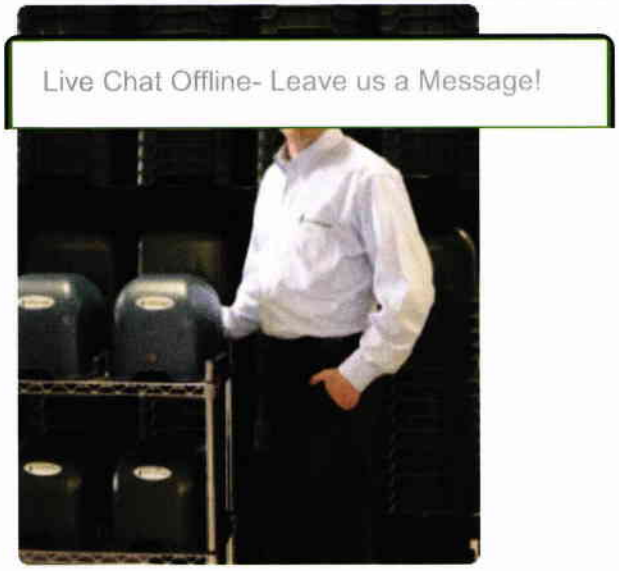
Try it Now Risk Free!

Research & Development are Aero-Stream's Ongoing Mission

Are You Experiencing ...

Back-ups and slow-flowing *drains . . .* ***Wastewater pooling*** *in the yard . . .* ***Septic odor*** *. . .* ***Frequent tank pumpings*** *. . .* ***High water levels*** *in the septic tank . . .* ***Runback*** *into the septic tank from the drainfield . . .*

Septic tank problems . . .
Aero-Stream® products fix these problems WITHOUT REPLACING YOUR SEPTIC SYSTEM . . .
GUARANTEED . . . LOW COST . . . fits ANY TYPE of system ACROSS THE U.S. AND CANADA!



Why Aero-Stream®?

Aero-Stream® was first!

- **Aero-Stream® patented the first** retrofit septic remediation system.
- **Aero-Stream® has the #1 rated controlled septic aerator** and proven controlled septic aeration systems.

Aero-Stream® has experience! We are a Technology Company.

- **Aero-Stream®** has been restoring septic systems for **15 years.**
- We are your #1 Authority on septic systems! **Learn more on our Septic Systems blog.**
- **Aero-Stream®** is a subsidiary of **Engineered Solutions, Inc.,** an engineering company innovating and solving problems for **over 20 years.**
- **Engineered Solutions, Inc.** has developed **Aero-Spa™** a break-through chemical free hot tub water treatment available **for over 9 years.**

Aero-Stream® works!

- **Aero-Stream® has thousands of customers across North America.**

The Bio-Brush™!

- **Aero-Stream®** is the **ONLY** company including the **Bio-Brush™** with each product!

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HC03_VC26	Percent; YEAR STRUCTURE BUILT - Total housing units	3938					
HC03_VC35	Percent; YEAR STRUCTURE BUILT - Total housing units - Built 1939 or earlier	9.1					
HC03_VC34	Percent; YEAR STRUCTURE BUILT - Total housing units - Built 1940 to 1949	2.1					
HC03_VC33	Percent; YEAR STRUCTURE BUILT - Total housing units - Built 1950 to 1959	6.4		17.6			
HC03_VC32	Percent; YEAR STRUCTURE BUILT - Total housing units - Built 1960 to 1969	5.1					
HC03_VC31	Percent; YEAR STRUCTURE BUILT - Total housing units - Built 1970 to 1979	6					
HC03_VC30	Percent; YEAR STRUCTURE BUILT - Total housing units - Built 1980 to 1989	9					
HC03_VC29	Percent; YEAR STRUCTURE BUILT - Total housing units - Built 1990 to 1999	33.8	62.2	37.8	0.38	pre-1990	
HC03_VC28	Percent; YEAR STRUCTURE BUILT - Total housing units - Built 2000 to 2009	27.4			0.34	90s	
HC03_VC27	Percent; YEAR STRUCTURE BUILT - Total housing units - Built 2010 or later	1			0.27		200
					0.01		
					0.99		

9/30/2016

INDEX Month

Company Name	Month End 9/30/2016 0 Enterprise value to Net PPE	Month End 8/31/2016 -1 Enterprise value to Net PPE	Month End 7/31/2016 -2 Enterprise value to Net PPE	Month End 6/30/2016 -3 Enterprise value to Net PPE	Month End 5/31/2016 -4 Enterprise value to Net PPE	Month End 4/30/2016 -5 Enterprise value to Net PPE	Month End 3/31/2016 -6 Enterprise value to Net PPE	Month End 2/29/2016 -7 Enterprise value to Net PPE	Month End 1/31/2016 -8 Enterprise value to Net PPE	Month End 12/31/2015 -9 Enterprise value to Net PPE	Month End 11/30/2015 -10 Enterprise value to Net PPE	Month End 10/31/2015 -11 Enterprise value to Net PPE	Month End 9/30/2015 -12 Enterprise value to Net PPE	Month End 8/31/2015 -13 Enterprise value to Net PPE	Month End 7/31/2015 -14 Enterprise value to Net PPE	Month End 6/30/2015 -15 Enterprise value to Net PPE	Month End 5/31/2015 -16 Enterprise value to Net PPE	Month End 4/30/2015 -17 Enterprise value to Net PPE
AMERICAN STATES WATEF	1.666	1.631	1.770	1.814	1.652	1.741	1.685	1.790	1.901	1.797	1.792	1.774	1.796	1.662	1.712	1.651	1.690	1.696
AMERICAN WATER WORKS	1.531	1.520	1.635	1.673	1.531	1.514	1.464	1.407	1.416	1.374	1.345	1.343	1.325	1.278	1.277	1.239	1.304	1.328
AQUA AMERICA INC	1.501	1.499	1.654	1.708	1.583	1.559	1.585	1.537	1.569	1.522	1.505	1.479	1.418	1.374	1.379	1.354	1.427	1.447
ARTESIAN RESOURCES -CL	0.885	0.863	0.997	1.015	0.895	0.868	0.901	0.905	0.946	0.894	0.867	0.826	0.834	0.791	0.775	0.774	0.781	0.784
CALIFORNIA WATER SERV	1.202	1.159	1.246	1.289	1.130	1.096	1.079	1.022	1.033	0.976	0.954	0.949	0.968	0.925	0.951	0.993	1.024	1.024
CONNECTICUT WATER SVC	1.341	1.276	1.365	1.480	1.322	1.297	1.267	1.198	1.223	1.147	1.112	1.121	1.129	1.091	1.075	1.099	1.122	1.137
MIDDLESEX WATER CO	1.453	1.392	1.648	1.732	1.517	1.505	1.338	1.241	1.274	1.228	1.198	1.200	1.144	1.107	1.105	1.111	1.086	1.118
SJW CORP	1.147	1.130	1.123	1.078	0.990	0.988	1.052	1.051	0.982	0.933	0.947	0.972	0.973	0.934	0.954	0.977	0.966	0.949
YORK WATER CO	1.745	1.678	1.829	1.877	1.631	1.758	1.815	1.677	1.623	1.553	1.501	1.474	1.373	1.383	1.388	1.381	1.457	1.596

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
AMERICAN STATES WATEF	2.141	2.096	2.275	2.354	2.145	2.260	2.180	2.316	2.460	2.287	2.281	2.258	2.270	2.101	2.164	2.021	2.069	2.076
AMERICAN WATER WORKS	1.673	1.660	1.786	1.832	1.676	1.657	1.617	1.554	1.563	1.474	1.443	1.440	1.414	1.364	1.362	1.336	1.405	1.432
AQUA AMERICA INC	1.994	1.990	2.196	2.279	2.113	2.080	2.110	2.046	2.089	2.011	1.989	1.954	1.865	1.807	1.814	1.791	1.888	1.914
ARTESIAN RESOURCES -CL	1.507	1.469	1.697	1.700	1.499	1.454	1.487	1.493	1.561	1.470	1.426	1.358	1.355	1.285	1.260	1.262	1.273	1.278
CALIFORNIA WATER SERV	1.684	1.624	1.746	1.822	1.597	1.549	1.526	1.446	1.461	1.352	1.322	1.316	1.351	1.290	1.327	1.381	1.424	1.423
CONNECTICUT WATER SVC	1.709	1.626	1.740	1.909	1.705	1.673	1.643	1.553	1.585	1.463	1.418	1.431	1.453	1.404	1.384	1.407	1.437	1.455
MIDDLESEX WATER CO	1.995	1.911	2.264	2.405	2.106	2.089	1.820	1.689	1.734	1.603	1.562	1.565	1.493	1.444	1.442	1.447	1.415	1.457
SJW CORP	1.585	1.561	1.552	1.512	1.387	1.385	1.440	1.438	1.343	1.292	1.311	1.346	1.333	1.280	1.308	1.340	1.324	1.301
YORK WATER CO	2.347	2.258	2.460	2.530	2.198	2.369	2.423	2.240	2.167	2.085	2.014	1.978	1.843	1.858	1.864	1.850	1.951	2.137

9/30/2016

INDEX Month

Company Name	Month End 9/30/2016 0 Enterprise value to Net PPE	Month End 8/31/2016 -1 Enterprise value to Net PPE	Month End 7/31/2016 -2 Enterprise value to Net PPE	Month End 6/30/2016 -3 Enterprise value to Net PPE	Month End 5/31/2016 -4 Enterprise value to Net PPE	Month End 4/30/2016 -5 Enterprise value to Net PPE	Month End 3/31/2016 -6 Enterprise value to Net PPE	Month End 2/29/2016 -7 Enterprise value to Net PPE	Month End 1/31/2016 -8 Enterprise value to Net PPE	Month End 12/31/2015 -9 Enterprise value to Net PPE	Month End 11/30/2015 -10 Enterprise value to Net PPE	Month End 10/31/2015 -11 Enterprise value to Net PPE	Month End 9/30/2015 -12 Enterprise value to Net PPE	Month End 8/31/2015 -13 Enterprise value to Net PPE	Month End 7/31/2015 -14 Enterprise value to Net PPE	Month End 6/30/2015 -15 Enterprise value to Net PPE	Month End 5/31/2015 -16 Enterprise value to Net PPE	Month End 4/30/2015 -17 Enterprise value to Net PPE
AMERICAN STATES WATEF	1.000	0.979	1.062	1.089	0.992	1.045	1.011	1.074	1.141	1.078	1.076	1.065	1.078	0.998	1.028	0.991	1.015	1.018
AMERICAN WATER WORKS	1.000	0.992	1.068	1.093	1.000	0.988	0.956	0.919	0.925	0.898	0.879	0.877	0.865	0.835	0.834	0.809	0.851	0.867
AQUA AMERICA INC	1.000	0.998	1.102	1.138	1.055	1.038	1.056	1.024	1.045	1.014	1.003	0.985	0.944	0.915	0.919	0.902	0.951	0.964
ARTESIAN RESOURCES -CL	1.000	0.975	1.126	1.147	1.011	0.981	1.018	1.023	1.069	1.010	0.980	0.933	0.942	0.893	0.876	0.875	0.882	0.886
CALIFORNIA WATER SERV	1.000	0.964	1.037	1.073	0.940	0.912	0.898	0.851	0.859	0.812	0.794	0.790	0.805	0.769	0.791	0.826	0.852	0.852
CONNECTICUT WATER SVC	1.000	0.951	1.018	1.104	0.986	0.967	0.945	0.893	0.912	0.855	0.829	0.836	0.842	0.814	0.802	0.819	0.837	0.847
MIDDLESEX WATER CO	1.000	0.958	1.135	1.192	1.044	1.036	0.921	0.854	0.877	0.845	0.824	0.826	0.787	0.762	0.761	0.765	0.748	0.770
SJW CORP	1.000	0.985	0.979	0.940	0.862	0.861	0.917	0.916	0.856	0.813	0.825	0.847	0.848	0.814	0.832	0.852	0.842	0.827
YORK WATER CO	1.000	0.962	1.048	1.076	0.935	1.008	1.040	0.961	0.930	0.890	0.860	0.845	0.787	0.793	0.796	0.792	0.835	0.915

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
AMERICAN STATES WATEF	1.000	0.979	1.062	1.099	1.002	1.056	1.018	1.082	1.149	1.068	1.066	1.055	1.060	0.981	1.011	0.944	0.966	0.970
AMERICAN WATER WORKS	1.000	0.992	1.068	1.095	1.002	0.991	0.966	0.929	0.934	0.881	0.862	0.861	0.845	0.815	0.814	0.799	0.840	0.856
AQUA AMERICA INC	1.000	0.998	1.102	1.143	1.060	1.043	1.058	1.026	1.048	1.009	0.997	0.980	0.935	0.907	0.910	0.898	0.947	0.960
ARTESIAN RESOURCES -CL	1.000	0.975	1.126	1.129	0.995	0.965	0.987	0.991	1.036	0.976	0.947	0.902	0.900	0.853	0.837	0.838	0.845	0.848
CALIFORNIA WATER SERV	1.000	0.964	1.037	1.082	0.948	0.920	0.906	0.858	0.867	0.803	0.785	0.781	0.802	0.766	0.788	0.820	0.845	0.845
CONNECTICUT WATER SVC	1.000	0.951	1.018	1.117	0.998	0.979	0.962	0.909	0.928	0.856	0.830	0.837	0.850	0.822	0.810	0.824	0.841	0.852
MIDDLESEX WATER CO	1.000	0.958	1.135	1.205	1.056	1.047	0.912	0.847	0.869	0.803	0.783	0.784	0.748	0.724	0.723	0.725	0.709	0.730
SJW CORP	1.000	0.985	0.979	0.954	0.875	0.874	0.908	0.907	0.847	0.815	0.827	0.849	0.841	0.807	0.825	0.845	0.835	0.821
YORK WATER CO	1.000	0.962	1.048	1.078	0.936	1.009	1.033	0.954	0.924	0.888	0.858	0.843	0.786	0.792	0.794	0.788	0.831	0.911

9/30/2016	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	Month End 5/31/2015	Month End 4/30/2015
Enterprise value to Net PPE	100%	98%	106%	109%	99%	99%	96%	92%	92%	89%	86%	85%	85%	81%	83%	83%	85%	87%
Enterprise value to Inv Cap	100%	98%	106%	110%	100%	99%	97%	93%	93%	88%	86%	85%	85%	82%	81%	82%	84%	85%

Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End
3/31/2015	2/28/2015	1/31/2015	12/31/2014	11/30/2014	10/31/2014	9/30/2014	8/31/2014	7/31/2014	6/30/2014	5/31/2014	4/30/2014	3/31/2014	2/28/2014	1/31/2014	12/31/2013	11/30/2013	10/31/2013	9/30/2013	8/31/2013
-18	-19	-20	-21	-22	-23	-24	-25	-26	-27	-28	-29	-30	-31	-32	-33	-34	-35	-36	-37
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
1.769	1.778	1.766	1.713	1.606	1.652	1.448	1.522	1.456	1.596	1.479	1.482	1.574	1.485	1.420	1.468	1.486	1.457	1.472	1.420
1.326	1.323	1.352	1.327	1.323	1.327	1.276	1.314	1.268	1.300	1.287	1.237	1.244	1.235	1.197	1.203	1.205	1.212	1.215	1.206
1.431	1.432	1.456	1.476	1.471	1.458	1.371	1.433	1.381	1.502	1.467	1.454	1.446	1.449	1.396	1.416	1.437	1.483	1.493	1.474
0.795	0.801	0.809	0.815	0.793	0.808	0.770	0.792	0.803	0.821	0.818	0.808	0.823	0.806	0.822	0.838	0.853	0.836	0.830	0.821
1.049	1.077	1.050	1.050	1.064	1.093	1.009	1.069	1.020	1.072	1.005	1.019	1.062	1.048	1.041	1.025	1.018	0.984	0.966	0.954
1.137	1.152	1.128	1.154	1.122	1.173	1.080	1.090	1.065	1.124	1.083	1.092	1.129	1.097	1.117	1.224	1.206	1.142	1.146	1.105
1.134	1.151	1.102	1.170	1.134	1.149	1.058	1.092	1.081	1.110	1.085	1.080	1.143	1.083	1.072	1.128	1.166	1.118	1.148	1.099
0.999	1.045	1.053	1.025	0.981	1.021	0.927	0.937	0.926	0.938	0.935	0.939	0.986	0.985	0.965	0.992	0.943	0.958	0.962	0.922
1.556	1.522	1.522	1.508	1.355	1.447	1.370	1.379	1.328	1.418	1.395	1.380	1.398	1.381	1.391	1.434	1.485	1.420	1.403	1.374

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
2.131	2.142	2.128	2.061	1.933	1.987	1.731	1.819	1.739	1.842	1.708	1.712	1.874	1.767	1.690	1.729	1.750	1.716	1.739	1.679
1.441	1.439	1.470	1.419	1.415	1.419	1.343	1.382	1.335	1.374	1.360	1.307	1.314	1.305	1.265	1.275	1.277	1.285	1.264	1.255
1.913	1.914	1.947	1.947	1.940	1.924	1.799	1.881	1.812	1.966	1.919	1.903	1.927	1.931	1.861	1.850	1.877	1.938	1.953	1.928
1.263	1.272	1.286	1.317	1.280	1.306	1.236	1.272	1.290	1.321	1.315	1.301	1.317	1.290	1.315	1.342	1.367	1.339	1.313	1.298
1.464	1.503	1.466	1.471	1.491	1.532	1.404	1.487	1.418	1.507	1.412	1.432	1.479	1.460	1.450	1.415	1.406	1.359	1.325	1.309
1.473	1.493	1.461	1.477	1.436	1.500	1.364	1.377	1.345	1.409	1.357	1.369	1.411	1.371	1.396	1.496	1.474	1.396	1.413	1.363
1.463	1.485	1.422	1.468	1.423	1.442	1.327	1.368	1.355	1.405	1.373	1.366	1.436	1.361	1.347	1.398	1.444	1.385	1.428	1.366
1.351	1.413	1.423	1.384	1.325	1.379	1.304	1.318	1.302	1.328	1.324	1.329	1.403	1.402	1.373	1.420	1.349	1.371	1.380	1.322
2.086	2.041	2.041	2.018	1.813	1.937	1.820	1.832	1.765	1.845	1.815	1.796	1.817	1.795	1.809	1.869	1.936	1.851	1.835	1.796

Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End
3/31/2015	2/28/2015	1/31/2015	12/31/2014	11/30/2014	10/31/2014	9/30/2014	8/31/2014	7/31/2014	6/30/2014	5/31/2014	4/30/2014	3/31/2014	2/28/2014	1/31/2014	12/31/2013	11/30/2013	10/31/2013	9/30/2013	8/31/2013
-18	-19	-20	-21	-22	-23	-24	-25	-26	-27	-28	-29	-30	-31	-32	-33	-34	-35	-36	-37
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
1.062	1.067	1.060	1.028	0.964	0.992	0.869	0.914	0.874	0.958	0.888	0.890	0.945	0.892	0.852	0.881	0.892	0.875	0.884	0.853
0.866	0.864	0.883	0.866	0.864	0.867	0.834	0.858	0.828	0.849	0.841	0.808	0.812	0.807	0.782	0.786	0.787	0.791	0.794	0.788
0.953	0.954	0.970	0.983	0.980	0.972	0.913	0.955	0.920	1.001	0.977	0.969	0.963	0.965	0.930	0.943	0.957	0.988	0.994	0.982
0.898	0.904	0.914	0.921	0.896	0.913	0.870	0.895	0.907	0.928	0.924	0.913	0.930	0.911	0.929	0.946	0.964	0.944	0.938	0.927
0.873	0.896	0.874	0.873	0.885	0.909	0.840	0.889	0.848	0.892	0.836	0.848	0.883	0.872	0.866	0.852	0.847	0.819	0.803	0.793
0.848	0.859	0.841	0.861	0.837	0.874	0.805	0.813	0.794	0.838	0.808	0.814	0.842	0.818	0.833	0.913	0.899	0.851	0.854	0.824
0.781	0.792	0.759	0.805	0.781	0.791	0.729	0.751	0.744	0.764	0.747	0.743	0.786	0.745	0.738	0.777	0.802	0.769	0.790	0.756
0.871	0.911	0.917	0.893	0.855	0.890	0.808	0.816	0.807	0.818	0.815	0.818	0.859	0.859	0.841	0.865	0.822	0.835	0.839	0.804
0.892	0.873	0.873	0.864	0.776	0.830	0.785	0.790	0.761	0.813	0.799	0.791	0.801	0.792	0.798	0.822	0.851	0.814	0.804	0.787

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
0.995	1.000	0.994	0.963	0.903	0.928	0.808	0.849	0.812	0.861	0.798	0.800	0.875	0.825	0.789	0.807	0.817	0.801	0.812	0.784
0.862	0.860	0.879	0.848	0.846	0.848	0.803	0.826	0.798	0.821	0.813	0.781	0.786	0.780	0.756	0.762	0.763	0.768	0.756	0.750
0.959	0.960	0.977	0.977	0.973	0.965	0.902	0.943	0.909	0.986	0.963	0.954	0.966	0.969	0.933	0.928	0.942	0.972	0.979	0.967
0.838	0.844	0.853	0.874	0.850	0.867	0.820	0.844	0.856	0.877	0.873	0.863	0.874	0.856	0.873	0.891	0.907	0.888	0.871	0.861
0.869	0.892	0.870	0.873	0.885	0.910	0.833	0.883	0.842	0.895	0.838	0.850	0.878	0.866	0.861	0.840	0.835	0.807	0.787	0.777
0.862	0.874	0.855	0.864	0.840	0.878	0.798	0.806	0.787	0.825	0.794	0.801	0.826	0.802	0.817	0.876	0.863	0.817	0.827	0.798
0.733	0.744	0.713	0.736	0.713	0.723	0.665	0.686	0.679	0.704	0.688	0.685	0.720	0.682	0.675	0.701	0.724	0.694	0.715	0.685
0.852	0.892	0.898	0.873	0.836	0.870	0.823	0.831	0.821	0.838	0.835	0.838	0.885	0.885	0.866	0.896	0.851	0.865	0.871	0.834
0.889	0.870	0.870	0.860	0.772	0.825	0.776	0.781	0.752	0.786	0.773	0.765	0.774	0.765	0.771	0.797	0.825	0.789	0.782	0.765

Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End
3/31/2015	2/28/2015	1/31/2015	12/31/2014	11/30/2014	10/31/2014	9/30/2014	8/31/2014	7/31/2014	6/30/2014	5/31/2014	4/30/2014	3/31/2014	2/28/2014	1/31/2014	12/31/2013	11/30/2013	10/31/2013	9/30/2013	8/31/2013
87%	90%	88%	87%	86%	89%	83%	86%	83%	85%	84%	82%	86%	86%	84%	86%	85%	84%	84%	80%
86%	87%	87%	87%	85%	87%	81%	83%	81%	84%	81%	80%	87%	83%	82%	84%	83%	81%	81%	78%

Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End
7/31/2013	6/30/2013	5/31/2013	4/30/2013	3/31/2013	2/28/2013	1/31/2013	12/31/2012	11/30/2012	10/31/2012	9/30/2012	8/31/2012	7/31/2012	6/30/2012	5/31/2012	4/30/2012	3/31/2012	2/29/2012	1/31/2012	12/31/2011
-38	-39	-40	-41	-42	-43	-44	-45	-46	-47	-48	-49	-50	-51	-52	-53	-54	-55	-56	-57
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
1.654	1.439	1.428	1.477	1.549	1.449	1.399	1.341	1.289	1.244	1.285	1.267	1.203	1.203	1.145	1.137	1.141	1.151	1.137	1.115
1.237	1.215	1.194	1.226	1.218	1.182	1.162	1.155	1.173	1.147	1.185	1.181	1.170	1.153	1.152	1.152	1.196	1.200	1.190	1.169
1.592	1.518	1.511	1.529	1.542	1.458	1.391	1.348	1.353	1.346	1.327	1.335	1.354	1.382	1.311	1.296	1.293	1.290	1.282	1.323
0.855	0.837	0.833	0.862	0.846	0.840	0.848	0.851	0.815	0.852	0.865	0.841	0.827	0.837	0.774	0.782	0.787	0.792	0.788	0.793
1.013	0.938	0.945	0.956	1.015	0.951	0.935	0.900	0.890	0.902	0.941	0.930	0.936	0.926	0.894	0.915	0.928	0.958	0.935	0.918
1.102	1.084	1.075	1.078	1.093	1.082	1.077	1.236	1.138	1.131	1.174	1.152	1.138	1.128	1.103	1.108	1.125	1.134	1.172	1.069
1.138	1.090	1.066	1.079	1.102	1.097	1.092	1.096	1.065	1.088	1.087	1.072	1.069	1.082	1.053	1.065	1.084	1.064	1.081	1.084
0.956	0.963	0.982	0.945	0.947	0.946	0.959	0.947	0.901	0.896	0.937	0.894	0.893	0.910	0.891	0.912	0.919	0.913	0.909	0.911
1.459	1.353	1.356	1.339	1.350	1.327	1.351	1.286	1.279	1.273	1.345	1.309	1.326	1.326	1.278	1.301	1.299	1.298	1.323	1.323

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
1.954	1.678	1.665	1.721	1.798	1.683	1.624	1.542	1.482	1.430	1.505	1.484	1.408	1.430	1.360	1.352	1.361	1.373	1.356	1.325
1.287	1.272	1.250	1.283	1.284	1.247	1.226	1.201	1.220	1.193	1.210	1.207	1.195	1.179	1.178	1.177	1.167	1.172	1.161	1.126
2.083	1.968	1.959	1.982	1.987	1.879	1.792	1.752	1.758	1.749	1.723	1.734	1.759	1.766	1.676	1.657	1.647	1.643	1.634	1.652
1.352	1.318	1.313	1.359	1.322	1.313	1.326	1.334	1.278	1.336	1.344	1.308	1.286	1.294	1.198	1.210	1.206	1.214	1.207	1.217
1.390	1.202	1.211	1.224	1.403	1.314	1.292	1.271	1.257	1.274	1.302	1.287	1.294	1.319	1.274	1.303	1.289	1.331	1.299	1.270
1.359	1.328	1.317	1.320	1.332	1.318	1.312	1.543	1.420	1.411	1.467	1.439	1.422	1.388	1.357	1.363	1.469	1.482	1.531	1.453
1.415	1.368	1.338	1.354	1.349	1.343	1.336	1.357	1.319	1.347	1.349	1.331	1.327	1.357	1.321	1.336	1.341	1.316	1.338	1.322
1.371	1.394	1.421	1.368	1.346	1.345	1.363	1.355	1.290	1.283	1.327	1.266	1.264	1.273	1.246	1.276	1.260	1.252	1.246	1.223
1.907	1.758	1.762	1.740	1.755	1.726	1.757	1.676	1.666	1.659	1.746	1.699	1.721	1.714	1.653	1.683	1.678	1.677	1.710	1.707

Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End
7/31/2013	6/30/2013	5/31/2013	4/30/2013	3/31/2013	2/28/2013	1/31/2013	12/31/2012	11/30/2012	10/31/2012	9/30/2012	8/31/2012	7/31/2012	6/30/2012	5/31/2012	4/30/2012	3/31/2012	2/29/2012	1/31/2012	12/31/2011
-38	-39	-40	-41	-42	-43	-44	-45	-46	-47	-48	-49	-50	-51	-52	-53	-54	-55	-56	-57
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
0.993	0.864	0.857	0.887	0.930	0.870	0.840	0.805	0.774	0.747	0.771	0.761	0.722	0.722	0.687	0.683	0.685	0.691	0.682	0.670
0.808	0.794	0.780	0.800	0.795	0.772	0.759	0.754	0.766	0.749	0.774	0.772	0.764	0.753	0.753	0.752	0.781	0.784	0.777	0.764
1.061	1.012	1.007	1.019	1.027	0.972	0.927	0.898	0.901	0.897	0.884	0.890	0.902	0.921	0.874	0.864	0.861	0.859	0.854	0.881
0.966	0.945	0.941	0.974	0.955	0.949	0.958	0.961	0.921	0.963	0.977	0.950	0.934	0.945	0.875	0.884	0.889	0.895	0.890	0.896
0.843	0.780	0.786	0.795	0.845	0.791	0.778	0.749	0.740	0.751	0.783	0.774	0.778	0.770	0.744	0.761	0.772	0.797	0.778	0.764
0.822	0.808	0.801	0.803	0.815	0.807	0.803	0.922	0.848	0.843	0.875	0.859	0.848	0.841	0.823	0.826	0.839	0.846	0.874	0.797
0.783	0.750	0.734	0.742	0.758	0.755	0.751	0.754	0.733	0.749	0.748	0.738	0.736	0.745	0.725	0.733	0.746	0.732	0.744	0.746
0.833	0.839	0.855	0.823	0.825	0.824	0.836	0.825	0.786	0.781	0.817	0.780	0.778	0.794	0.776	0.795	0.801	0.796	0.792	0.794
0.836	0.776	0.777	0.768	0.774	0.761	0.774	0.737	0.733	0.730	0.771	0.750	0.760	0.760	0.733	0.746	0.744	0.744	0.758	0.758

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
0.913	0.784	0.777	0.804	0.840	0.786	0.759	0.720	0.692	0.668	0.703	0.693	0.658	0.668	0.635	0.631	0.636	0.641	0.633	0.619
0.769	0.760	0.747	0.767	0.768	0.745	0.733	0.718	0.729	0.713	0.723	0.721	0.714	0.705	0.704	0.704	0.698	0.700	0.694	0.673
1.045	0.987	0.982	0.994	0.997	0.942	0.899	0.879	0.882	0.877	0.864	0.870	0.882	0.886	0.841	0.831	0.826	0.824	0.819	0.829
0.897	0.875	0.871	0.902	0.878	0.872	0.880	0.885	0.848	0.887	0.892	0.868	0.853	0.859	0.795	0.803	0.800	0.806	0.801	0.808
0.825	0.713	0.719	0.727	0.833	0.780	0.767	0.755	0.746	0.756	0.773	0.764	0.768	0.783	0.756	0.774	0.765	0.790	0.771	0.754
0.795	0.777	0.771	0.773	0.780	0.772	0.768	0.903	0.831	0.826	0.859	0.842	0.832	0.812	0.794	0.798	0.860	0.867	0.896	0.850
0.709	0.686	0.670	0.678	0.676	0.673	0.670	0.680	0.661	0.675	0.676	0.667	0.665	0.680	0.662	0.670	0.672	0.660	0.670	0.662
0.865	0.879	0.896	0.863	0.849	0.848	0.860	0.855	0.814	0.809	0.837	0.799	0.797	0.803	0.786	0.805	0.795	0.790	0.786	0.771
0.813	0.749	0.751	0.741	0.748	0.735	0.749	0.714	0.710	0.707	0.744	0.724	0.734	0.731	0.704	0.717	0.715	0.715	0.729	0.728

Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End	Month End
7/31/2013	6/30/2013	5/31/2013	4/30/2013	3/31/2013	2/28/2013	1/31/2013	12/31/2012	11/30/2012	10/31/2012	9/30/2012	8/31/2012	7/31/2012	6/30/2012	5/31/2012	4/30/2012	3/31/2012	2/29/2012	1/31/2012	12/31/2011
84%	81%	80%	80%	83%	81%	80%	81%	77%	75%	78%	77%	78%	77%	75%	76%	78%	80%	78%	76%
83%	78%	77%	77%	83%	78%	77%	75%	75%	76%	77%	76%	77%	78%	76%	77%	77%	79%	77%	75%

Month End 11/30/2011 -58	Month End 10/31/2011 -59	Month End 9/30/2011 -60	Month End 8/31/2011 -61	Month End 7/31/2011 -62	Month End 6/30/2011 -63	Month End 5/31/2011 -64	Month End 4/30/2011 -65	Month End 3/31/2011 -66	Month End 2/28/2011 -67	Month End 1/31/2011 -68	Month End 12/31/2010 -69	Month End 11/30/2010 -70	Month End 10/31/2010 -71
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
1.123	1.114	1.105	1.138	1.109	1.158	1.157	1.164	1.200	1.148	1.158	1.164	1.210	1.226
1.155	1.145	1.162	1.155	1.121	1.138	1.148	1.136	1.048	1.042	1.002	1.006	0.992	0.981
1.317	1.328	1.310	1.329	1.292	1.339	1.370	1.361	1.384	1.370	1.391	1.357	1.320	1.317
0.786	0.774	0.803	0.819	0.818	0.777	0.809	0.809	0.817	0.814	0.799	0.802	0.798	0.803
0.923	0.927	0.919	0.955	0.938	0.956	0.962	0.959	0.966	0.935	0.955	0.941	0.940	0.942
1.115	1.058	1.019	1.057	1.025	1.045	1.036	1.049	1.067	1.041	1.016	1.127	1.066	1.038
1.078	1.094	1.030	1.073	1.075	1.105	1.112	1.116	1.103	1.124	1.085	1.115	1.080	1.094
0.935	0.903	0.876	0.911	0.915	0.938	0.916	0.915	0.917	0.955	0.946	0.991	0.956	0.938
1.338	1.285	1.252	1.343	1.297	1.280	1.337	1.328	1.335	1.307	1.301	1.326	1.244	1.244

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
1.334	1.323	1.308	1.348	1.314	1.355	1.353	1.361	1.389	1.329	1.340	1.359	1.413	1.431
1.112	1.103	1.106	1.099	1.067	1.094	1.104	1.092	1.069	1.064	1.023	1.017	1.003	0.992
1.645	1.658	1.611	1.636	1.590	1.646	1.685	1.674	1.700	1.682	1.708	1.726	1.678	1.674
1.206	1.187	1.230	1.254	1.254	1.186	1.234	1.235	1.234	1.229	1.207	1.211	1.205	1.212
1.277	1.283	1.282	1.333	1.308	1.327	1.336	1.332	1.315	1.273	1.300	1.377	1.375	1.378
1.516	1.438	1.399	1.452	1.408	1.426	1.413	1.431	1.457	1.422	1.387	1.499	1.417	1.380
1.314	1.334	1.259	1.311	1.314	1.339	1.347	1.352	1.325	1.350	1.304	1.331	1.289	1.305
1.254	1.211	1.171	1.218	1.224	1.348	1.316	1.315	1.312	1.366	1.353	1.411	1.361	1.335
1.728	1.659	1.615	1.733	1.674	1.653	1.727	1.716	1.728	1.692	1.685	1.747	1.639	1.639

Month End 11/30/2011 -58	Month End 10/31/2011 -59	Month End 9/30/2011 -60	Month End 8/31/2011 -61	Month End 7/31/2011 -62	Month End 6/30/2011 -63	Month End 5/31/2011 -64	Month End 4/30/2011 -65	Month End 3/31/2011 -66	Month End 2/28/2011 -67	Month End 1/31/2011 -68	Month End 12/31/2010 -69	Month End 11/30/2010 -70	Month End 10/31/2010 -71
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
0.674	0.669	0.663	0.683	0.666	0.695	0.694	0.698	0.720	0.689	0.695	0.699	0.726	0.736
0.754	0.748	0.759	0.754	0.732	0.743	0.750	0.742	0.684	0.681	0.655	0.657	0.648	0.641
0.877	0.884	0.872	0.886	0.861	0.892	0.913	0.907	0.922	0.912	0.926	0.904	0.879	0.877
0.888	0.874	0.907	0.925	0.925	0.878	0.913	0.914	0.923	0.919	0.903	0.906	0.902	0.907
0.768	0.772	0.764	0.795	0.780	0.795	0.801	0.798	0.804	0.778	0.794	0.783	0.782	0.784
0.831	0.789	0.760	0.788	0.765	0.779	0.772	0.782	0.795	0.776	0.757	0.841	0.795	0.774
0.742	0.753	0.709	0.738	0.740	0.760	0.765	0.768	0.759	0.773	0.747	0.768	0.744	0.753
0.815	0.787	0.763	0.794	0.798	0.817	0.798	0.797	0.799	0.833	0.825	0.864	0.834	0.817
0.767	0.737	0.717	0.770	0.744	0.733	0.767	0.761	0.765	0.749	0.746	0.760	0.713	0.713

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
0.623	0.618	0.611	0.629	0.614	0.633	0.632	0.636	0.649	0.621	0.626	0.635	0.660	0.669
0.665	0.659	0.661	0.657	0.638	0.654	0.660	0.653	0.639	0.636	0.611	0.608	0.600	0.593
0.825	0.831	0.808	0.820	0.797	0.826	0.845	0.840	0.853	0.844	0.857	0.865	0.841	0.840
0.800	0.788	0.817	0.832	0.832	0.787	0.819	0.820	0.819	0.816	0.801	0.804	0.800	0.805
0.758	0.762	0.761	0.792	0.777	0.788	0.793	0.791	0.781	0.756	0.772	0.818	0.817	0.818
0.887	0.842	0.819	0.850	0.824	0.835	0.827	0.838	0.853	0.833	0.812	0.877	0.829	0.808
0.659	0.669	0.631	0.657	0.659	0.671	0.675	0.678	0.664	0.677	0.653	0.667	0.646	0.654
0.791	0.764	0.739	0.769	0.772	0.851	0.830	0.830	0.828	0.862	0.854	0.890	0.859	0.842
0.736	0.707	0.688	0.738	0.713	0.704	0.736	0.731	0.736	0.721	0.718	0.744	0.699	0.699

Month End 11/30/2011	Month End 10/31/2011	Month End 9/30/2011	Month End 8/31/2011	Month End 7/31/2011	Month End 6/30/2011	Month End 5/31/2011	Month End 4/30/2011	Month End 3/31/2011	Month End 2/28/2011	Month End 1/31/2011	Month End 12/31/2010	Month End 11/30/2010	Month End 10/31/2010
77%	77%	76%	79%	76%	78%	77%	78%	80%	78%	76%	78%	78%	77%
76%	76%	74%	77%	77%	79%	79%	79%	78%	76%	77%	80%	80%	80%

VERIFICATION

I, Harold Walker, III, Manager of Financial Studies of Gannett Fleming Valuation and Rate Consultants, LLC, a Utility Valuation Expert in the Commonwealth of Pennsylvania, hereby state that Gannett Fleming Valuation and Rate Consultants, LLC was selected by Aqua Pennsylvania Wastewater, Inc. to perform a fair market value appraisal of the New Garden Township/New Garden Township Sewer Authority System ("System"); that, as Manager of Financial Studies of Gannett Fleming Valuation and Rate Consultants, LLC, I prepared the foregoing Fair Market Value Appraisal of the New Garden Township/New Garden Township Sewer Authority System, dated December 7, 2016; that the facts set forth in the Fair Market Value Appraisal are true and correct to the best of my knowledge, information, and belief; that, as Manager of Financial Studies of Gannett Fleming Valuation and Rate Consultants, LLC, I determined the fair market value of the System in compliance with the Uniform Standards of Professional Appraisal Practices, employing the cost, market and income approaches; that neither Gannett Fleming Valuation and Rate Consultants, LLC nor I have derived any material benefit from the sale of the selling utility other than fees for services rendered; that I am not an immediate family member of a director, officer or employee of either Aqua Pennsylvania Wastewater, Inc. or New Garden Township/New Garden Township Sewer Authority within a 12-month period of the date Gannett Fleming Valuation and Rate Consultants, LLC was engaged to perform the appraisal; and that I make this verification subject to the penalties of 18 Pa. Cons. Stat. § 4904 (relating to unsworn falsification to authorities).

Harold Walker, III
Gannett Fleming Valuation and Rate
Consultants, LLC.

Dated: December 7, 2016