Aqua North Carolina, Inc.
NCUC Form W-1 – Rate Case Information Report
Water and Sewer Companies
Docket No. W-218, Sub 573

ITEM 16. The three (3) most recent annual reports to stockholders and subsequent quarterly reports to stockholders.

Please see the attached reports.

Response provided by:

Dean R. Gearhart
Rates and Planning Manager
Aqua North Carolina
202 Mackenan Drive
Cary, NC 27511

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W-218 Sub 573

2019
Annual Report

Essential Utilities Inc.

Providing Natural Resources for Life

Essential™
Providing natural resources for life.

NYSE: WTRG

Forward-Looking Statements

Introducing Essential Utilities,

which is a unique pairing of utility companies positioned to play an important role in solving today's water, wastewater, and natural gas infrastructure challenges to create a better quality of life, now, and for our future.

A Natural Fit

AQUA	PEOPLES
130+ year-old companies	Pennsylvania-based

water	wastewater	natural gas

Mission: To improve quality of life and economic prosperity by safely and reliably delivering Earth's most essential resources.

Growing Together

*Approximation

Customer Connections

1,026,704
Aqua

746,549
Peoples

Employee Base

2x
nearly double

Aqua 1,600*
Peoples 1,500*

Annual Pipe Replacement

185* miles
Aqua

150* miles
Peoples

+2 New States

Kentucky

West Virginia

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2019
Financial Highlights

In thousands, except per-share amounts	2019	2018	% Change
Operating revenues	$889,692	$838,091	6.2%
Regulated water segment:			
Operating revenues	$886,430	$834,638	6.2%
Operating and maintenance expense	$315,052	$292,232	7.8%
Net income	$224,543	$191,988	17.0%
Diluted net income per common share	$1.04	$1.08	-3.7%
Exclude:			
Transaction costs and other items related to the Peoples acquisition	$66,066	$73,963	
Pre-acquisition interest expense for funds borrowed for acquisition of Peoples, net	$5,961	–	
Overlapping net interest expense on refinanced debt	$452	–	
Interest income earned on proceeds from April 2019 equity offerings	($23,377)	–	
Income tax effect of Non-GAAP adjustments	($10,149)	($15,127)	
Adjusted income (a) (Non-GAAP financial measure)	$263,496	$250,824	5.1%
Adjusted income per common share (a) (b) (Non-GAAP financial measure)	$1.47	$1.41	4.3%
Annualized dividend rate per common share (12/31)	$0.9372	$0.8760	7.0%
Total assets	$9,361,985	$6,964,496	34.4%
Number of utility customers served	1,026,704	1,005,590	2.1%

(a) The GAAP financial measures are net income and net income per share.

(b) Shares used in calculating adjusted income per common share exclude the effect of the shares issued in April 2019 for our common share (25,903) and tangible equity unit issuances (11,278) for our acquisition of Peoples, since the acquisition for which the equity offerings were issued was not yet complete as of Dec. 31, 2019.

Please see the investor relations page of Essential.co for a reconciliation of GAAP to non-GAAP financial measures.

Essential™

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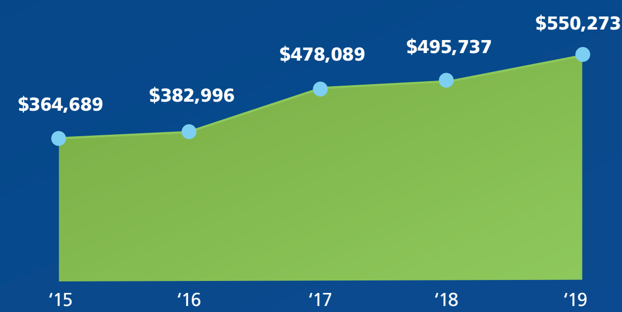
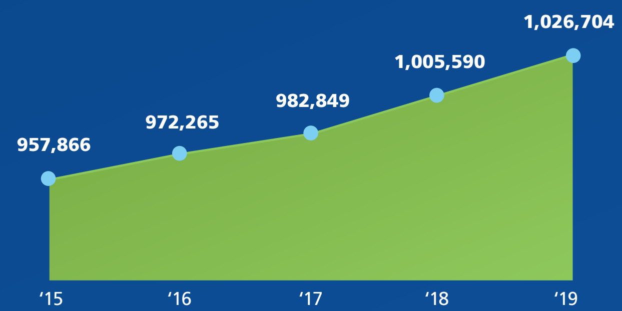
Diluted Adjusted Income per Common Share

Capital Spending

(existing operations, thousands)

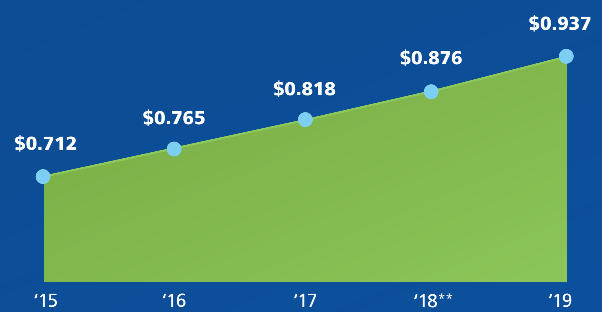


Utility Customer Connections



Dividends per Share

(annualized)



* 2015 Net income per share was $1.14 (GAAP). 2015 adjusted for joint venture impairment charge (Non-GAAP).
† 2018 Net income per share was $1.08 (GAAP). 2018 adjusted for transaction costs and other items related to the Peoples transaction (Non-GAAP).
†† 2019 Net income per share was $1.04 (GAAP). 2019 adjusted for transaction costs and other items related to the Peoples transaction (Non-GAAP).
Please see the investor relations page of Essential.co for a reconciliation of GAAP to non-GAAP financial measures.

A Message from the Chairman & CEO

Christopher H. Franklin
Chairman, President and CEO

Dear Shareholder,

It is a privilege to share this historic moment with you and present the very first annual report with our new name—**Essential Utilities Inc.** ("Essential"), NYSE: WTRG—formerly Aqua America Inc., NYSE: WTR. Essential is comprised of a water and wastewater division ("Aqua") and a natural gas distribution division ("Peoples").

Our new family of companies has experienced exciting and momentous change this year. The acquisition of Peoples on March 16, 2020 marks a historic chapter in our story and unites two highly respected companies, each with more than 130 years of industry expertise and service, into the largest publicly traded water and natural gas distribution company in the United States. Essential now serves more than 1 million water and wastewater utility customer connections and nearly 747,000 gas utility customer connections in 10 states. Together, we provide utility services to more than 5 million people. With this expanded portfolio, Essential offers shareholders new opportunities for added value, as we focus intently on growth, delivering vital water and gas services to our customers and making prudent infrastructure investments in the communities where we operate.

A Natural Fit

From the day we announced our intent to acquire Peoples, I have said repeatedly that water and natural gas utilities are intrinsically well-suited partners. Welcoming a natural gas provider into our organization aligns directly with our growth strategy and our core competencies of building and rehabilitating infrastructure, regulatory expertise and operational excellence. In fact, the day-to-day operations of water and natural gas utilities look incredibly similar: both specialize in delivering a natural resource under pressure through a pipe network to serve customers; both monitor customer usage via a meter; both are subject to the same regulatory process for setting customer rates; and both invest a significant percentage of capital each year in infrastructure maintenance, including pipe replacement. Essential is now uniquely positioned to have a powerful positive impact on communities via our utility services, and it is our mission to improve quality of life and economic prosperity by safely and reliably delivering Earth's most essential resources.

Inclusion

Our mission doesn't come to life without dedicated, talented people with commitment and purpose. Every day, more than 3,000 employees come to work in pursuit of something bigger than themselves, guided by our core values of integrity, respect and the pursuit of excellence. I am especially proud to see our values echoed through the growth and development of our diversity and inclusion program. In 2019, the Forum of Executive Women recognized us twice – first as a Champion of Board

Diversity for our commitment to diversity in board governance, and second with its Advancing Women Company Award for our focus on fostering a workplace where women can achieve and grow. We were also recognized as a Winning 'W' Company by 2020 Women on Boards for having 20% or more of our board seats held by women. Women now constitute 23% of our workforce and 24% of our management team. People of color constitute 18% of our workforce.

Our work in this area is critical and continuous. Together, we work to create an inclusive workplace and actively seek out diverse voices in all areas of our organization, recognizing the unbridled power of these perspectives in driving Essential forward.

Environmental, Social and Governance (ESG)

Many of our investors and customers are thinking about how companies impact the broader world and the ways in which they reduce environmental footprints by leaving handprints with their positive actions. At Essential, we are conscious of both corporate footprints and handprints.

We are shrinking our environmental footprint. By 2022, Aqua will purchase 65% of its energy from renewable sources and will thereby meet the Paris Accord nearly eight years early. Further, in the coming years our natural gas subsidiary, Peoples, will replace more than 2,700 miles of gas main, dramatically reducing methane gas emissions. This work will be captured in our updated sustainability report later in 2020.

Our board of directors has taken affirmative positions on social issues such as human trafficking and the human right to water. Additionally, the board has spent time considering and implementing modern board governance standards such as board refreshment, term limits and committee chair rotation. You can find a summary of all of our ESG work on our website.

Continued Strategic Growth

Essential will also continue to set its sights on growth through municipal acquisitions. In 2019, the company welcomed more than 12,280 customers through eight water and wastewater acquisitions: Cheltenham, Pennsylvania; three systems previously served by Phoenixville Borough, Pennsylvania; the Skyline water and wastewater systems in South Elgin, Illinois; the Village of Grant Park, Illinois; and the City of Campbell, Ohio.

In addition to closing these acquisitions, Essential made history in 2019 when we announced the largest municipal transaction in the company's 134-year history. In September, Aqua Pennsylvania signed an asset purchase agreement with the Delaware County Regional Water Quality Control Authority (DELCORA) to acquire the municipal authority's wastewater assets for $276.5 million. DELCORA serves the equivalent of nearly 198,000 customers in 42 municipalities in Southeastern Pennsylvania.

Thanks to our combined expertise and capabilities, Essential has limitless potential and a strong position for continued disciplined growth into the future.

Investing in Infrastructure

While 2019 was a landmark year for growth, it was also a milestone year for capital investments across the enterprise. The company invested a record $550 million in water and wastewater infrastructure projects, repairing or replacing water mains across our footprint. We are proud of the significant role we play in rehabilitating our nation's aging infrastructure and look forward to continuing this critical work in 2020 and beyond. **With our increased size,** Essential has an enhanced ability to access capital to fund infrastructure needs in the communities where we operate.

On behalf of the Essential leadership team, board of directors and our employees, thank you for your unwavering support of our mission. I look forward to a prosperous 2020 leading **Essential Utilities Inc.**

Thank you,

Christopher H. Franklin
Chairman, President and CEO

Acquisitions Fuel Growth and Strengthen Communities

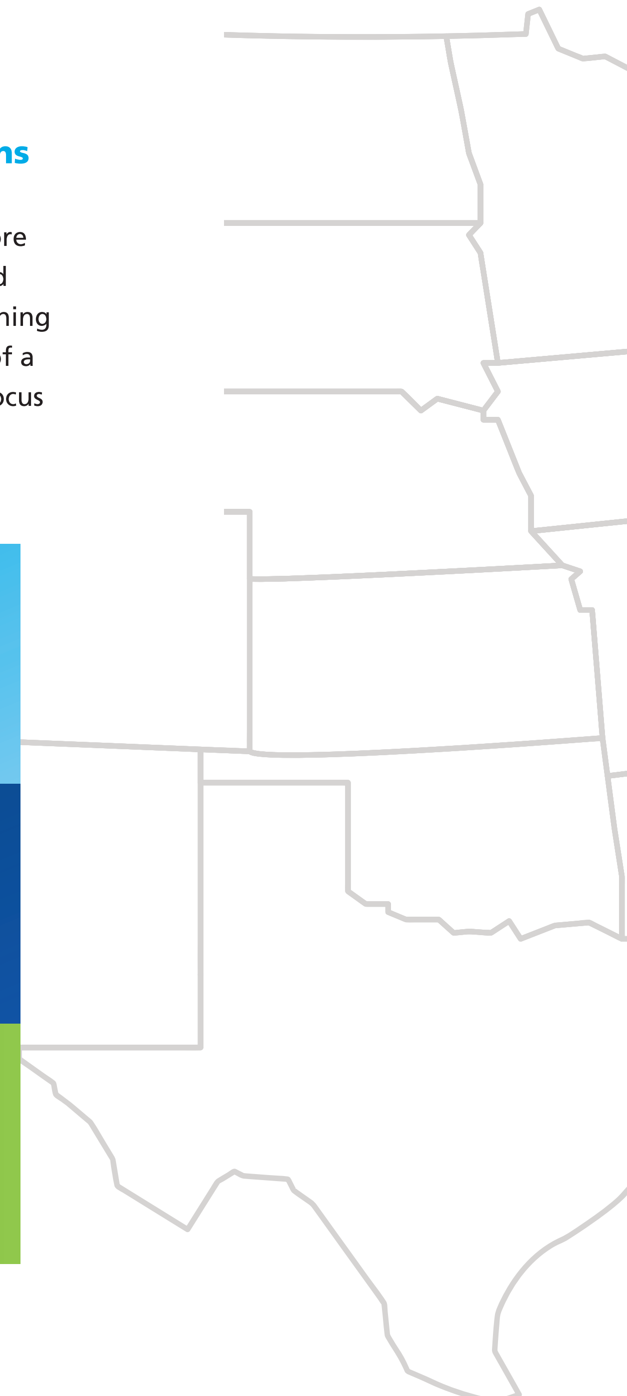
Eight water and wastewater system acquisitions completed in 2019

Purchasing private and municipally owned systems is about more than growth. It enables us to do our part to improve water and wastewater infrastructure in the communities we serve, something that's vitally important for the future. Proceeds from the sale of a water or wastewater system can enable municipal leaders to focus on other important initiatives in their communities.

2019 New Customer Connections

1,461 Water Connections

10,819 Wastewater Connections



Essential

1 $3.5 million
South Elgin, Ill.

- Two systems - water and wastewater
- 376 water connections
- 376 wastewater connections

2 $2.3 million
Village of Grant Park, Ill.

- Wastewater system
- 540 connections

3 $50.25 million
Cheltenham Township, Pa.

- Wastewater system
- 9,887 connections

4 $3.5 million
Phoenixville Borough, Pa.

- Three water systems
- 529 connections

5 $468,000
Northern Neck, Va.

- Water system
- 540 water connections

A Record Capital Investment

Over the past five years the company has invested $2.3 billion in infrastructure improvements, including hundreds of miles of pipe replacement and significant plant upgrades. In 2019, a record $550 million was invested in infrastructure projects across all eight states to ensure the reliable delivery of safe drinking water for our customers.

Projects highlights:

Aqua Illinois

$23 million capital improvement

- Lake Vermilion dam
- Structural dam modifications to protect this critical water source
- Replaced 11 floodgates
- Expected completion in 2020

Aqua New Jersey

$14 million capital improvement

- Three new iron removal treatment facilities
- Removes naturally occurring minerals from groundwater supply wells
- Treats 1.4 million gallons of water per day

Aqua North Carolina

$3.8 million capital improvement

- 11 new filter systems
- Removes naturally occurring minerals from groundwater supply wells

Aqua Ohio

$12 million renovation

- Struthers water treatment plant
- New treatment systems, storage and buildings to improve service efficiency
- Three new 146,000-gallon contact clarifier tanks

Aqua Pennsylvania

$136 million

main replacement program

- Customers benefit from a notable reduction in service interruptions caused by main breaks
- 105 miles of aging main replaced

Aqua Texas

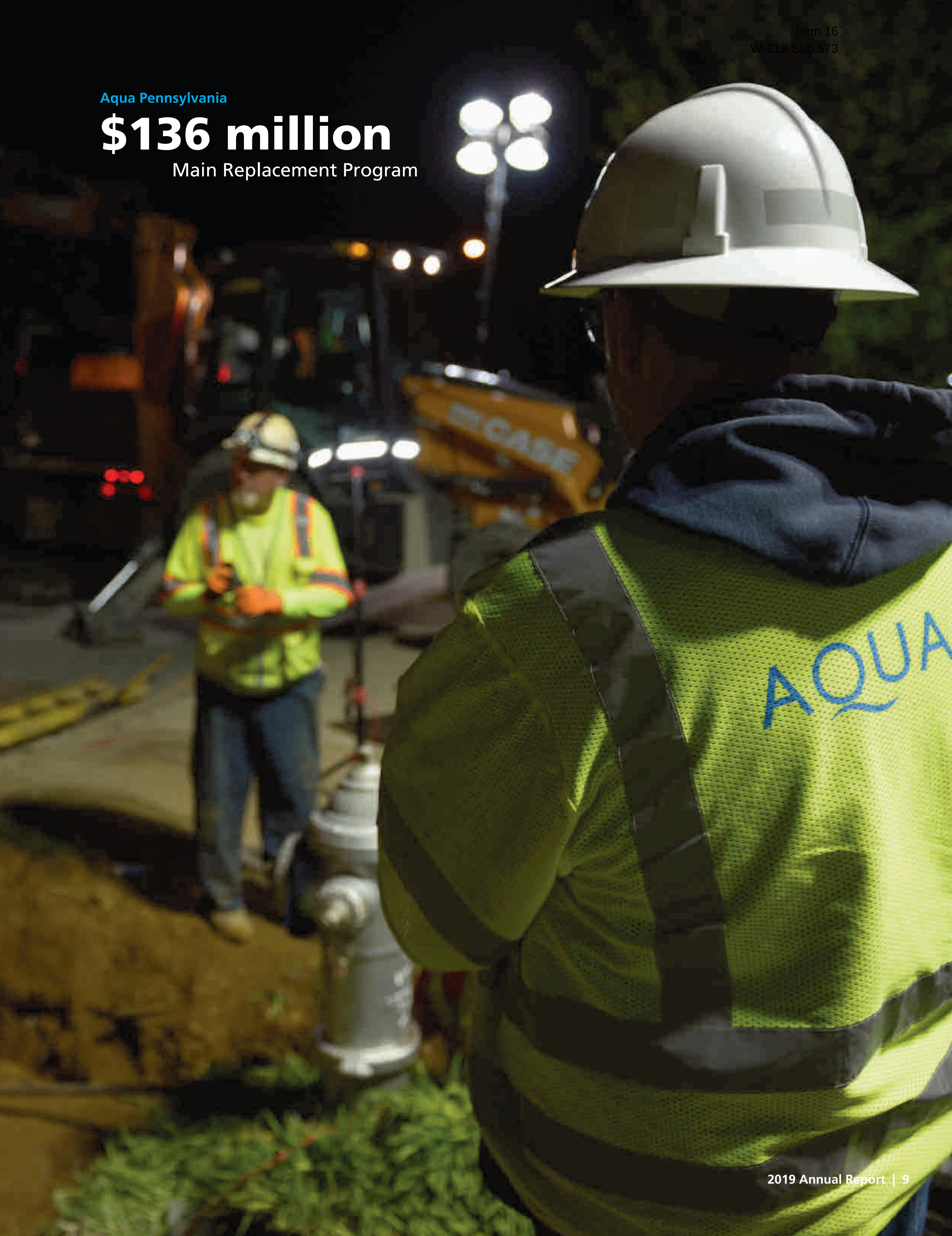
$6.1 million project

- Aqua Texas' first-ever surface water treatment plant
- Meets the challenges of drought and heavy rain

Aqua Pennsylvania

$136 million

Main Replacement Program



Uniting Across Utilities

PEOPLES™

Our commitment to strengthen communities as we expand our service area led us to explore the possibility of how a natural gas distribution company could complement these objectives.

Water and natural gas utilities each specialize in delivering pressurized natural resources through pipes and meters into customers' homes and businesses. Both follow similar processes for meter reading, billing, collections and customer service. These essential services are subject to the same regulatory processes for establishing customer rates. Both require significant annual capital investment for infrastructure rehabilitation, primarily for pipe replacement.

These operational similarities made natural gas the preferred utility as we contemplated expanding beyond water and wastewater.

Peoples, a Pittsburgh-based natural gas distribution company, was the ideal choice. Each utility lends more than 130 years of experience in infrastructure expertise, regulatory compliance, operational efficiency and environmental stewardship. Together, we will play an important role in solving today's water and natural gas infrastructure challenges to ensure a better quality of life now and in the future.

Essential™

Investing in Customer Satisfaction

J.D. Power conducted its inaugural Voice of the Customer study to measure satisfaction among residential water utility customers in 2016. The study revealed that customer satisfaction is driven not only by the quality of the product delivered, but how well the utility focuses on its customers. J.D. Power stated that water utilities need to understand their customers, who can often be their most effective advocates when it comes time for necessary improvements.

Informed by this survey and industry trends, Aqua embarked on an initiative to make the **customer experience** a key part of its culture by focusing employees on the importance of customer centricity. Insights were gathered across the customer journey and a long-range plan was developed, including progress milestones and measurements. This initiative formalizes a long-standing focus on providing superior customer service and improves the consistency of delivery throughout our utility systems.

WaterSmart
e-Billing

Improvements to customer billing-related transactions.

- **Online account access, including daily balance information**, is available to all customers. Previously this was only available to eBilling enrollees.
- **A one-time online payment** option is available within the WaterSmart eBilling site. Customers no longer have to be formally enrolled to take advantage of this option.
- Our new **payment text reminder** functionality gives customers the option to receive text reminders and easily make payments. More than 14,000 customers are using this convenient option.

"Being able to offer a quality customer experience is of paramount importance to my entire team."

Georgetta Parisi
Vice President Customer Operations

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2019

Financial Data

Essential Utilities Inc.

NYSE: WTRG

Essential™

Providing natural resources for life.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Management's Discussion and Analysis of Financial Condition and Results of Operations
(In thousands of dollars, except per share amounts)

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this Annual Report (the "Annual Report") are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 that are made based upon, among other things, our current assumptions, expectations, plans, and beliefs concerning future events and their potential effect on us. These forward-looking statements involve risks, uncertainties and other factors, many of which are outside our control that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. In some cases you can identify forward-looking statements where statements are preceded by, followed by or include the words "believes," "expects," "anticipates," "plans," "future," "potential," "probably," "predictions," "intends," "will," "continue," "in the event" or the negative of such terms or similar expressions.

Because forward-looking statements involve risks and uncertainties, there are important factors that could cause actual results to differ materially from those expressed or implied by these forward-looking statements, including but not limited to:

- conditions to the completion of the Peoples Gas Acquisition may not be satisfied or waived on a timely basis, or at all;
- the diversion of our management's time and resources caused by the pendency of the Peoples Gas Acquisition;
- our ability to manage the expansion of our business, including our ability to manage our expanded operations following the closing of the Peoples Gas Acquisition;
- our ability to treat and supply water or collect and treat wastewater;
- the continuous and reliable operation of our information technology systems, including the impact of cyber security attacks or other cyber-related events;
- our ability to integrate and otherwise realize all of the anticipated benefits of businesses, technologies or services which we may acquire;
- changes in general economic, business, credit and financial market conditions;
- changes in governmental laws, regulations and policies, including those dealing with taxation, the environment, health and water quality, and public utility regulation;
- the profitability of future acquisitions;
- changes to the rules or our assumptions underlying our determination of what qualifies for an income tax deduction for qualifying utility asset improvements;
- the decisions of governmental and regulatory bodies, including decisions on rate increase requests and decisions regarding potential acquisitions;
- our ability to file rate cases on a timely basis to minimize regulatory lag;
- abnormal weather conditions, including those that result in water use restrictions;
- changes in, or unanticipated, capital requirements;
- changes in our credit rating or the market price of our common stock;
- changes in valuation of strategic ventures;
- the phase-out of the London Interbank Offered Rate ("LIBOR"), or the replacement of LIBOR with a different reference rate or modification of the method used to calculate LIBOR, which may adversely affect interest rates;
- the extent to which we are able to develop and market new and improved services;
- the effect of the loss of major customers;
- our ability to retain the services of key personnel and to hire qualified personnel as we expand;
- labor disputes;
- increasing difficulties in obtaining insurance and increased cost of insurance;
- cost overruns relating to improvements to, or the expansion of, our operations;
- increases in the costs of goods and services; civil disturbance or terroristic threats or acts;
- changes in accounting pronouncements;

- litigation and claims; and
- changes in environmental conditions, including the effects of climate change.

Given these risks and uncertainties, you should not place undue reliance on any forward-looking statements. You should read this Annual Report completely and with the understanding that our actual future results, performance and achievements may be materially different from what we expect. These forward-looking statements represent assumptions, expectations, plans, and beliefs only as of the date of this Annual Report. Except for our ongoing obligations to disclose certain information under the federal securities laws, we are not obligated, and assume no obligation, to update these forward-looking statements, even though our situation may change in the future. For further information or other factors which could affect our financial results and such forward-looking statements, see *Item 1A – Risk Factors* included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

OVERVIEW

The following discussion and analysis of our financial condition and results of operations should be read together with our Consolidated Financial Statements and related Notes included in this Annual Report. This discussion contains forward-looking statements that are based on management's current expectations, estimates and projections about our business, operations and financial performance. All dollar amounts are in thousands of dollars, except per share amounts.

The Company

Essential Utilities, Inc., (referred to as "Essential Utilities", the "Company", "we", "us", or "our"), a Pennsylvania corporation, is the holding company for regulated utilities providing water or wastewater services to an estimated three million people in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, and Virginia. On February 3, 2020, we changed our name from Aqua America, Inc. to Essential Utilities, Inc. to align the name of the Company with the anticipated business plan of the Company following the pending Peoples Gas Acquisition and to reflect the proposed combination of regulated water utilities and natural gas utilities that offer essential utility services to customers. After completion of the acquisition, the water and wastewater utility services will be provided through Essential Utilities' Aqua companies and the natural gas utility services will be provided through its Peoples natural gas companies. Essential Utilities plans to complete the Peoples Gas Acquisition on March 16, 2020. Our largest operating subsidiary is Aqua Pennsylvania, Inc., which accounted for approximately 54% of our operating revenues and approximately 72% of our Regulated water segment's income for 2019. As of December 31, 2019, Aqua Pennsylvania provided water or wastewater services to approximately one-half of the total number of water and wastewater customers we serve. Aqua Pennsylvania's service territory is located in the suburban areas in counties north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. Our other regulated water utility subsidiaries provide similar services in seven additional states. In addition, the Company's market-based activities are conducted through Aqua Infrastructure, LLC and Aqua Resources, Inc. Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. Aqua Resources manages a water system operating and maintenance contract; and offers, through a third-party, water and sewer line protection solutions and repair services to households. In 2017 and 2016, Aqua Resources sold business units that had formerly provided non-regulated services related to the water and wastewater utility businesses.

Industry Mission

The mission of the regulated water utility industry is to provide quality and reliable water service at reasonable rates to customers, while earning a fair return for shareholders. A number of challenges face the industry, including:

- strict environmental, health and safety standards;
- aging utility infrastructure and the need for substantial capital investment;
- economic regulation by state, and/or, in some cases, local government;
- declining consumption per customer as a result of conservation;
- lawsuits and the need for insurance; and

- the impact of weather and sporadic drought conditions on water sales demand.

Economic Regulation

Most of our water and wastewater utility operations are subject to regulation by their respective state utility commissions, which have broad administrative power and authority to regulate billing rates, determine franchise areas and conditions of service, approve acquisitions, and authorize the issuance of securities. The utility commissions also generally establish uniform systems of accounts and approve the terms of contracts with affiliates and customers, business combinations with other utility systems, and loans and other financings. The policies of the utility commissions often differ from state to state and may change over time. A small number of our operations are subject to rate regulation by county or city government. Over time, the regulatory party in a particular state may change, as was the case for our Texas operations where, in 2014, economic regulation changed from the Texas Commission on Environmental Quality to the Public Utility Commission of Texas. The profitability of our utility operations is influenced to a great extent by the timeliness and adequacy of rate allowances in the various states in which we operate. One consideration we may undertake in evaluating which states to focus our growth and investment strategy is whether a state provides for consolidated rates, a surcharge for replacing and rehabilitating infrastructure, fair value treatment of acquired utility systems, and other regulatory policies that promote infrastructure investment and efficiency in processing rate cases.

Rate Case Management Capability – We strive to achieve the industry's mission by effective planning, efficient investments, and productive use of our resources. We maintain a rate case management capability to pursue timely and adequate returns on the capital investments that we make in improving our distribution system, treatment plants, information technology systems, and other infrastructure. This capital investment creates assets that are used and useful in providing utility service and is commonly referred to as rate base. Timely and adequate rate relief is important to our continued profitability and in providing a fair return to our shareholders; thus, providing access to capital markets to help fund these investments. Accordingly, the objective of our rate case management strategy is to provide that the rates of our utility operations reflect, to the extent practicable, the timely recovery of increases in costs of operations (primarily labor and employee benefits, electricity, chemicals, transportation, maintenance expenses, insurance and claims costs, and costs to comply with environmental regulations), capital, and taxes. In pursuing our rate case strategy, we consider the amount of net utility plant additions and replacements made since the previous rate decision, the changes in the cost of capital, changes in our capital structure, and changes in operating and other costs. Based on these assessments, our utility operations periodically file rate increase requests with their respective state utility commissions or local regulatory authorities. In general, as a regulated enterprise, our water and wastewater rates are established to provide full recovery of utility operating costs, taxes, interest on debt used to finance capital investments, and a return on equity used to finance capital investments. Our ability to recover our expenses in a timely manner and earn a return on equity employed in the business helps determine the profitability of the Company. As of December 31, 2019, the Company's rate base is estimated to be $5,000,000, which is comprised of:

- $4,600,000 filed with respective state utility commissions or local regulatory authorities; and
- $400,000 not yet filed with respective state utility commissions or local regulatory authorities.

Our water and wastewater operations are composed of 47 rate divisions, each of which requires a separate rate filing for the evaluation of the cost of service and recovery of investments in connection with the establishment of tariff rates for that rate division. When feasible and beneficial to our utility customers, we have sought approval from the applicable state utility commission to consolidate rate divisions to achieve a more even distribution of costs over a larger customer base. All of the eight states in which we operate currently permit us to file a revenue requirement using some form of consolidated rates for some or all of the rate divisions in that state.

Revenue Surcharges – Seven states in which we operate water utilities, and six states in which we operate wastewater utilities, permit us to add an infrastructure rehabilitation surcharge to their respective bills to offset the additional depreciation and capital costs associated with capital expenditures related to replacing and rehabilitating infrastructure systems. In our other states, water and wastewater utilities absorb all of the depreciation and capital costs of these projects between base rate increases without the benefit of additional revenues. The gap between the time that a capital project is completed and the recovery of its costs in rates is known as regulatory lag. This surcharge is intended to substantially reduce regulatory lag, which often acts as a disincentive for water and wastewater utilities to rehabilitate their infrastructure. In addition, some states permit our subsidiaries to use a surcharge or credit on their bills to reflect allowable changes in costs, such as changes in state tax rates, other taxes and purchased water costs, until such time as the new costs are fully incorporated in base rates.

Effects of Inflation **–** Recovery of the effects of inflation through higher water and wastewater rates is dependent upon receiving adequate and timely rate increases. However, rate increases are not retroactive and often lag increases in costs caused by inflation. On occasion, our regulated utility companies may enter into rate settlement agreements, which require us to wait for a period of time to file the next base rate increase request. These agreements may result in regulatory lag whereby inflationary increases in expenses may not yet be reflected in rates, or a gap may exist between when a capital project is completed and the start of its recovery in rates. Even during periods of moderate inflation, the effects of inflation can have a negative impact on our operating results.

Growth-Through-Acquisition Strategy

Part of our strategy to meet the industry challenges is to actively explore opportunities to expand our utility operations through acquisitions of water and wastewater and other utilities either in areas adjacent to our existing service areas or in new service areas, and to explore acquiring market-based businesses that are complementary to our regulated water and wastewater operations. To complement our growth strategy, we routinely evaluate the operating performance of our individual utility systems, and in instances where limited economic growth opportunities exist or where we are unable to achieve favorable operating results or a return on equity that we consider acceptable, we will seek to sell the utility system and reinvest the proceeds in other utility systems. Consistent with this strategy, we are focusing our acquisitions and resources in states where we have critical mass of operations in an effort to achieve economies of scale and increased efficiency. Our growth-through-acquisition strategy allows us to operate more efficiently by sharing operating expenses over more utility customers and provides new locations for future earnings growth through capital investment. Another element of our growth strategy is the consideration of opportunities to expand by acquiring other utilities, including those that may be in a new state if they provide promising economic growth opportunities and a return on equity that we consider acceptable. Our ability to successfully execute this strategy historically and to meet the industry challenges has largely been due to our core competencies, financial position, and our qualified and trained workforce, which we strive to retain by treating employees fairly and providing our employees with development and growth opportunities.

On October 22, 2018, we entered into a purchase agreement to acquire, from LDC Funding LLC, the parent company of PNG Companies, a natural gas distribution company consisting of Peoples Natural Gas Company LLC, Peoples Gas Company LLC, Peoples Gas West Virginia, Inc., Peoples Gas Kentucky, Inc., and Delta Natural Gas Company Inc. ("Peoples") to expand the Company's regulated utility business to include natural gas distribution. Peoples serves approximately 747,000 gas utility customers in western Pennsylvania, West Virginia, and Kentucky. The Peoples Gas Acquisition, once consummated, will expand our regulated utility business to include natural gas distribution. At the closing of the Peoples Gas Acquisition, the Company will pay $4,275,000 in cash, subject to adjustments for working capital, certain capital expenditures, transaction expenses and closing indebtedness as set forth in the acquisition agreement. The Company expects to assume approximately $1,106,000 of Peoples' indebtedness upon the closing of the Peoples Gas Acquisition, which would reduce the cash purchase by approximately $1,106,000. The acquisition is subject to customary closing conditions set forth in the acquisition agreement, and is expected to close on March 16, 2020.

During 2019, we completed eight acquisitions, which along with the organic growth in our existing systems, represents 21,613 new customers. During 2018, we completed nine acquisitions, which along with the organic growth in our existing systems, represents 22,741 new customers. During 2017, we completed four acquisitions, which along with the organic growth in our existing systems, represents 10,584 new customers.

We believe that utility acquisitions, organic growth, and a potential expansion of our market-based business will continue to be the primary sources of growth for us. With approximately 50,000 community water systems in the U.S., 81% of which serve less than 3,300 customers, the water industry is the most fragmented of the major utility industries (telephone, natural gas, electric, water, and wastewater). In the states where we operate regulated water utilities, we believe there are approximately 14,000 community water systems of widely-varying size, with the majority of the population being served by government-owned water systems.

Although not as fragmented as the water industry, the wastewater industry in the U.S. also presents opportunities for consolidation. According to the U.S. Environmental Protection Agency's ("EPA") most recent survey of wastewater treatment facilities (which includes both government-owned facilities and regulated utility systems) in 2012, there were approximately 15,000 such facilities in the nation serving approximately 76% of the U.S. population. The remaining population represents individual homeowners with their own treatment facilities; for example, community on-lot disposal systems and septic tank systems. The vast majority of wastewater facilities are government-owned rather than regulated utilities. The EPA survey also indicated that, in 2012, there were approximately 4,000 wastewater facilities in operation in the states where we operate regulated utilities.

Because of the fragmented nature of the water and wastewater utility industries, we believe that there are many potential water and wastewater system acquisition candidates throughout the United States. We believe the factors driving the consolidation of these systems are:

- the benefits of economies of scale;
- the increasing cost and complexity of environmental regulations;
- the need for substantial capital investment;
- the need for technological and managerial expertise;
- the desire to improve water quality and service;
- limited access to cost-effective financing;
- the monetizing of public assets to support, in some cases, the declining financial condition of municipalities; and
- the use of system sale proceeds by a municipality to accomplish other public purposes.

We are actively exploring opportunities to expand our water and wastewater utility operations through regulated utility acquisitions or otherwise, including the management of publicly-owned facilities in a public-private partnership. We intend to continue to pursue acquisitions of government-owned and regulated water and wastewater utility systems that provide services in areas near our existing service territories or in new service areas. It is our intention to focus on growth opportunities in states where we have critical mass, which allows us to improve economies of scale through spreading our fixed costs over more customers – this cost efficiency should enable us to reduce the size of future rate increases. Currently, the Company seeks to acquire businesses in the U.S. regulated sector, which includes water and wastewater utilities and other regulated utilities, and to pursue growth ventures in market-based activities, by acquiring businesses that provide water and wastewater or other utility-related services and investing in infrastructure projects.

Sendout

Sendout represents the quantity of treated water delivered to our distribution systems. We use sendout as an indicator of customer demand. Weather conditions tend to impact water consumption, particularly during the late spring, summer, and early fall when discretionary and recreational use of water is at its highest. Consequently, a higher proportion of annual operating revenues are realized in the second and third quarters. In general, during this period, an extended period of hot and dry weather increases water consumption, while above-average rainfall and cool weather decreases water consumption. Conservation efforts, construction codes that require the use of low-flow plumbing fixtures, as well as mandated water use restrictions in response to drought conditions can reduce water consumption. We believe an increase in conservation awareness by our customers, including the increased use of more efficient plumbing fixtures and appliances, may continue to result in a long-term structural trend of declining water usage per customer. These gradual long-term changes are normally taken into account by the utility commissions in setting rates, whereas significant short-term changes in water usage, resulting from drought warnings, water use restrictions, or extreme weather conditions, may not be fully reflected in the rates we charge between rate proceedings. In Illinois, our operating subsidiary has adopted a revenue stability mechanism which allows us to recognize state PUC-authorized revenue for a period which is not based upon the volume of water sold during that period, and effectively lessens the impact of weather and consumption variability.

On occasion, drought warnings and water use restrictions are issued by governmental authorities for portions of our service territories in response to extended periods of dry weather conditions, regardless of our ability to meet unrestricted customer water demands. The timing and duration of the warnings and restrictions can have an impact on our water revenues and net income. In general, water consumption in the summer months is affected by drought warnings and restrictions to a higher degree because discretionary and recreational use of water is highest during the summer months, particularly in our northern service territories. At other times of the year, warnings and restrictions generally have less of an effect on water consumption. Portions of our northern and central Texas service areas have conservation water restrictions. Drought warnings and watches result in the public being asked to voluntarily reduce water consumption.

The geographic diversity of our utility customer base reduces the effect of our exposure to extreme or unusual weather conditions in any one area of the country. During the year ended December 31, 2019, our operating revenues were derived principally from the following states: approximately 54% in Pennsylvania, 12% in Ohio, 8% in Illinois, 8% in Texas, and 6% in North Carolina.

Performance Measures Considered by Management

We consider the following financial measures (and the period to period changes in these financial measures) to be the fundamental basis by which we evaluate our operating results:

- earnings per share;
- operating revenues;
- earnings before interest, taxes, and depreciation ("EBITD");
- income adjusted to remove transaction-related expenses associated with the Peoples Gas Acquisition;
- earnings before income taxes;
- net income; and
- the dividend rate on common stock.

In addition, we consider other key measures in evaluating our utility business performance within our Regulated water segment:

- our number of utility customers;
- the ratio of operations and maintenance expense compared to operating revenues (this percentage is termed "operating expense ratio");
- return on revenues (net income divided by operating revenues);
- rate base growth;
- return on equity (net income divided by stockholders' equity); and
- the ratio of capital expenditures to depreciation expense.

Some of these measures, like EBITD, are non-GAAP financial measures. The Company believes that the non-GAAP financial measures provide management the ability to measure the Company's financial operating performance across periods and as contrasted to historical financial results, which are more indicative of the Company's ongoing performance and more comparable to measures reported by other companies. When the Company discloses such non-GAAP financial measures, we believe they are useful to investors as a more meaningful way to compare the Company's operating performance against its historical financial results. We believe EBITD from continuing operations is a relevant and useful indicator of operating performance, as we measure it for management purposes because it provides a better understanding of our results of operations by highlighting our operations and the underlying profitability of our core business. Furthermore, we review the measure of earnings before unusual items that are not directly related to our core business, such as the measure of adjusted earnings to remove the Peoples Gas Acquisition expenses, such as transaction expenses and the change in fair value of interest rate swap agreements, which were recognized in 2019 and 2018, as well as the joint venture impairment charge (noncash), which was recognized in 2015. Refer to Note 11 – *Long-term Debt and Loans Payable* in this Annual Report for information regarding the interest rate swap agreements and "Management's Discussion and Analysis of Financial Condition and Results of Operations – *Liquidity and Capital Resources – Joint*

Venture" in this Annual Report for information regarding the impairment charge. We review these measurements regularly and compare them to historical periods, to our operating budget as approved by our Board of Directors, and to other publicly-traded water utilities.

Our operating expense ratio is one measure that we use to evaluate our operating efficiency and management effectiveness of our regulated operations. Our operating expense ratio is affected by a number of factors, including the following:

- ***Regulatory lag*** **–** Our rate filings are designed to provide for the recovery of increases in costs of operations (primarily labor and employee benefits, electricity, chemicals, transportation, maintenance expenses, insurance and claim costs, and costs to comply with environmental regulations), capital, and taxes. The revenue portion of the operating expense ratio can be impacted by the timeliness of recovery of, and the return on capital investments. The operating expense ratio is further influenced by regulatory lag (increases in operations and maintenance expenses not yet recovered in rates or a gap between the time that a capital project is completed and the start of its cost recovery in rates). The operating expense ratio is also influenced by decreases in operating revenues without a commensurate decrease in operations and maintenance expense, such as changes in customer water consumption as impacted by adverse weather conditions, or conservation trends. Commencing in 2012, as a result of utility rates incorporating the effects of income tax benefits derived from deducting qualifying utility asset improvements for tax purposes that are capitalized for book purposes in Aqua Pennsylvania and consequently forgoing operating revenue increases until its next rate case became effective in May 2019. During periods of inflation, our operations and maintenance expenses may increase, impacting the operating expense ratio, as a result of regulatory lag, since our rate cases may not be filed timely and are not retroactive.

- ***Acquisitions*** **–** In general, acquisitions of smaller undercapitalized utility systems in some areas may initially increase our operating expense ratio if the operating revenues generated by these operations do not reflect the true cost of service and are accompanied by a higher ratio of operations and maintenance expenses as compared to other operational areas of the company that are more densely populated and have integrated operations. In these cases, the acquired operations are characterized as having relatively higher operating costs to fixed capital costs, in contrast to the majority of our operations, which generally consist of larger, interconnected systems, with higher fixed capital costs (utility plant investment) and lower operating costs per customer. For larger acquisitions, such as the Peoples Gas Acquisition, we have incurred significant transaction expenses, which increase operations and maintenance expenses in periods prior to and in the period of the closing of the acquisition. In addition, we operate market-based subsidiary companies, Aqua Resources and Aqua Infrastructure. The cost-structure of these market-based companies differs from our utility companies in that, although they may generate free cash flow, these companies may at times have a higher ratio of operations and maintenance expenses to operating revenues and a lower capital investment and, consequently, a lower ratio of fixed capital costs versus operating revenues in contrast to our regulated operations. As a result, the operating expense ratio is not comparable between the businesses. These market-based subsidiary companies are not a component of our Regulated water segment.

We continue to evaluate initiatives to help control operating costs and improve efficiencies.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Management's Discussion and Analysis of Financial Condition and Results of Operations (continued)
(In thousands of dollars, except per share amounts)

Consolidated Selected Financial and Operating Statistics

Our selected five year consolidated financial and operating statistics follow:

Years ended December 31,	2019	2018	2017	2016	2015
Utility customers:					
Residential water	822,817	815,663	807,872	801,190	791,404
Commercial water	41,892	41,532	40,956	40,582	40,151
Industrial water	1,339	1,340	1,338	1,349	1,353
Other water	18,984	19,273	19,430	19,036	17,420
Wastewater	141,672	127,782	113,253	110,108	107,538
Total utility customers	1,026,704	1,005,590	982,849	972,265	957,866
Operating revenues:					
Residential water	$ 518,192	$ 482,946	$ 483,865	$ 484,901	$ 477,773
Commercial water	145,599	133,753	130,373	131,170	126,677
Industrial water	30,667	28,848	27,880	27,916	28,021
Other water	72,942	85,894	65,324	62,983	56,997
Wastewater	105,204	94,170	87,560	82,780	79,399
Other utility	13,826	9,027	9,903	10,357	10,746
Regulated water segment total	886,430	834,638	804,905	800,107	779,613
Other and eliminations	3,262	3,453	4,620	19,768	34,591
Consolidated operating revenues	$ 889,692	$ 838,091	$ 809,525	$ 819,875	$ 814,204
Operations and maintenance expense	$ 333,102	$ 308,478	$ 282,253	$ 297,184	$ 308,416
Change in fair value of interest rate swap agreements (1)	$ 18,756	$ 47,225	$ -	$ -	$ -
Joint venture impairment charge (2)	$ -	$ -	$ -	$ -	$ 21,433
Loss on debt extinguishment (3)	$ 14,637	$ -	$ -	$ -	$ -
Net income	$ 224,543	$ 191,988	$ 239,738	$ 234,182	$ 201,790
Capital expenditures	$ 550,273	$ 495,737	$ 478,089	$ 382,996	$ 364,689
Operating Statistics					
Selected operating results as a percentage of operating revenues:					
Operations and maintenance	37.4%	36.8%	34.9%	36.2%	37.9%
Depreciation and amortization	17.6%	17.5%	16.9%	16.2%	15.8%
Taxes other than income taxes	6.7%	7.1%	7.0%	6.9%	6.8%
Interest expense	14.1%	11.8%	10.9%	9.9%	9.4%
Net income	25.2%	22.9%	29.6%	28.6%	24.8%
Return on Essential Utilities stockholders' equity	5.8%	9.6%	12.2%	12.7%	11.7%
Ratio of capital expenditures to depreciation expense	3.5	3.4	3.5	2.9	2.9
Effective tax rate	(6.2%)	(7.7%)	6.6%	8.2%	6.9%

(1) Represents a mark-to-market fair value adjustment expense for 2019 of $18,756 ($23,742 pre-tax) and 2018 of $47,225 ($59,779 pre-tax) associated with our interest rate swap agreements that were entered into to mitigate interest rate risk associated with our April 2019 issuance of long-term debt to fund a portion of the Peoples Gas Acquisition.
(2) Represents a $21,433 ($32,975 pre-tax) joint venture impairment charge. This amount represents our share of the impairment charge recognized by our joint venture that operates a private pipeline to supply raw water to firms with natural gas well drilling operations.
(3) Represents a $14,637 ($18,528 pre-tax) loss on debt extinguishment associated with the early redemption of $313,500 of the Company's long-term debt that occurred in May 2019.

RESULTS OF OPERATIONS

Net income varies over time as a result of increases in operating income, timing of transaction expenses for acquisitions, including fluctuations in fair value adjustments for interest rate swap agreements entered into in connection with the Peoples Gas Acquisition, and other factors described below. During the past five years, our operating revenues grew at a compound rate of 2.7% and operating expenses grew at a compound rate of 3.4%. Operating revenues have not increased over the past five years at the same levels historically experienced due to two factors. The Company's Pennsylvania operating subsidiary, Aqua Pennsylvania, had not filed a base rate case for an increase since 2011. Aqua Pennsylvania filed a base rate case in August 2018, and new customer rates were implemented in May 2019. Also, the TCJA reduced income tax expense as a result of a reduction in the corporate federal income tax rate. Operating revenues for 2019 were reduced by income tax savings in our Regulated water segment, so as to provide our utility customers with the benefits of the lower income tax expense. Operating expenses in 2019 grew higher than historic experience due to $22,891 of transaction- related expenses for the Peoples Gas Acquisition.

Operating Segments

We have identified ten operating segments and we have one reportable segment based on the following:

- Eight segments are composed of our water and wastewater regulated utility operations in the eight states where we provide these services. These operating segments are aggregated into one reportable segment since each of these operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution and/or wastewater collection methods, and the nature of the regulatory environment. Our single reportable segment is named the Regulated water segment.

- Two segments are not quantitatively significant to be reportable and are composed of Aqua Resources and Aqua Infrastructure. These segments are included as a component of "Other," in addition to corporate costs that have not been allocated to the Regulated water segment, because they would not be recoverable as a cost of utility service, and intersegment eliminations. Corporate costs include general and administrative expenses, and interest expense.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Management's Discussion and Analysis of Financial Condition and Results of Operations (continued)
(In thousands of dollars, except per share amounts)

The following table provides the Regulated water segment and consolidated information for the years ended December 31, 2019, 2018, and 2017:

	2019			2018		
	Regulated Water	Other and Eliminations	Consolidated	Regulated Water	Other and Eliminations	Consolidated
Operating revenues	$ 886,430	$ 3,262	$ 889,692	$ 834,638	$ 3,453	$ 838,091
Operations and maintenance expense	315,052	18,050	333,102	292,232	16,246	308,478
Taxes other than income taxes	57,671	2,284	59,955	57,140	2,622	59,762
Earnings (loss) before interest, taxes, depreciation and amortization	$ 513,707	$ (17,072)	496,635	$ 485,266	$ (15,415)	469,851
Depreciation and amortization			156,476			146,673
Operating income			340,159			323,178
Other expense (income):						
Interest expense			125,383			99,054
Interest income			(25,406)			(152)
Allowance for funds used during construction			(16,172)			(13,023)
Change in fair value of interest rate swap agreements			23,742			59,779
Loss on debt extinguishment			18,528			-
Gain on sale of other assets			(923)			(714)
Equity earnings in joint venture			(2,210)			(2,081)
Other			5,691			1,996
Provision for income taxes (benefit)			(13,017)			(13,669)
Net income			$ 224,543			$ 191,988

	2017		
	Regulated Water	Other and Eliminations	Consolidated
Operating revenues	$ 804,905	$ 4,620	$ 809,525
Operations and maintenance expense	282,009	244	282,253
Taxes other than income taxes	54,524	2,104	56,628
Earnings before interest, taxes, depreciation and amortization	$ 468,372	$ 2,272	470,644
Depreciation and amortization			136,724
Operating income			333,920
Other expense (income):			
Interest expense			88,543
Interest income			(202)
Allowance for funds used during construction			(15,211)
Gain on sale of other assets			(484)
Equity earnings in joint venture			(331)
Other			4,953
Provision for income taxes			16,914
Net income			$ 239,738

Consolidated Results of Operations Comparison for 2019 and 2018

For the comparison of fiscal years 2018 and 2017, refer to Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for our fiscal year ended December 31, 2018, filed with the SEC on February 26, 2019.

Operating Revenues **–** Operating revenues totaled $889,692 in 2019, $838,091 in 2018, and $809,525 in 2017. Our Regulated water segment's revenues totaled $886,430 in 2019, $834,638 in 2018, and $804,905 in 2017. The growth in our Regulated water segment's revenues over the past three years is a result of increases in our water and wastewater rates and our customer base. Rate increases implemented during the past three years have provided additional operating revenues of $55,658 in 2019, $8,362 in 2018, and $6,143 in 2017. In 2019, we experienced a decrease in water and wastewater revenues of $1,419 as a result of a do not consume advisory we initiated in 2019 for some of our customers served by our Illinois subsidiary, which we expect to continue into the second quarter of 2020. The number of customers increased at an annual compound rate of 1.8% over the past three years due to acquisitions and organic growth, adjusted to exclude customers associated with utility system dispositions. Acquisitions in our Regulated water segment have provided additional water and wastewater revenues of $8,393 in 2019, $3,877, in 2018, and $1,695 in 2017.

On June 7, 2012, Aqua Pennsylvania reached a settlement agreement in its rate filing with the Pennsylvania Public Utility Commission, which in addition to a water rate increase, provided for a reduction in current income tax expense as a result of the recognition of qualifying income tax benefits upon Aqua Pennsylvania changing its tax accounting method to permit the expensing of qualifying utility asset improvement costs that historically had been capitalized and depreciated for book and tax purposes. In December 2012, Aqua Pennsylvania implemented this change which provides for the flow-through of income tax benefits that resulted in a substantial reduction in income tax expense and greater net income and cash flow. As a result, Aqua Pennsylvania was able to suspend its water Distribution System Improvement Charges from January 1, 2013 to September 30, 2017, when it resumed the use of a water Distribution System Improvement Charge on October 1, 2017. Aqua Pennsylvania was able to lengthen the amount of time until its next base rate case, which was filed in August 2018. During 2019, 2018, and 2017, the income tax accounting change resulted in income tax benefits of $66,816, $64,183, and $84,766 that reduced the Company's current income tax expense and increased net income. The Company recognized a tax deduction on its 2012 Federal tax return of $380,000 for qualifying capital expenditures made prior to 2012. Based on the 2012 settlement agreement, beginning in 2013, the Company began to amortize 1/10th of these expenditures, or $38,000 annually, which reduced income tax expense and increased the Company's net income by $16,274 for 2019, which is included in the income tax benefits noted previously. In accordance with the 2012 settlement agreement, this amortization is expected to reduce income tax expense during periods when qualifying parameters are met. In August 2018, Aqua Pennsylvania filed for a base rate increase in water and wastewater rates for its customers. In February 2019, Aqua Pennsylvania filed a settlement for this base rate case. Incremental rates from this settlement of approximately $47,000 went into effect in May 2019.

Our operating subsidiaries received rate increases representing estimated annualized revenues of $52,974 in 2019 resulting from four base rate decisions, $11,558 in 2018 resulting from five base rate decisions, and $7,558 in 2017 resulting from five base rate decisions. Revenues from these increases realized in the year of grant were $32,287 in 2019, $7,270 in 2018, and $6,343 in 2017. As of December 31, 2019, our operating subsidiaries have filed three rate requests, which are being reviewed by the state utility commissions, proposing an aggregate increase of $6,882 in annual revenues. During 2020, we intend to file three additional rate requests proposing an aggregate of approximately $2,231 of increased annual revenues; the timing and extent to which our rate increase requests may be granted will vary by state.

Currently, New Jersey allows for an infrastructure rehabilitation surcharge for water utilities, while Pennsylvania, Illinois, Ohio, Indiana, Virginia, North Carolina allow for the use of an infrastructure rehabilitation surcharge for both water and wastewater utility systems. The rate increases under this surcharge typically adjust periodically based on additional qualified capital expenditures completed or anticipated in a future period. This surcharge is capped as a percentage of base rates, generally at 5% to 12.75% of base rates, and is reset to zero when new base rates that reflect the costs of those additions become effective or when a utility's earnings exceed a regulatory benchmark. These surcharges provided revenues of $16,007 in 2019, $31,836 in 2018, and $10,255 in 2017.

Our Regulated water segment also includes operating revenues of $13,835 in 2019, $9,427 in 2018, and $9,903 in 2017 associated with revenues earned primarily from fees received from telecommunication operators that have put cellular antennas on our water towers, fees earned from municipalities for our operation of their water or wastewater treatment services or to perform billing services, and fees earned from developers for accessing our water mains.

In addition to the Regulated water segment operating revenues, we recognized market-based revenues that are associated with Aqua Resources and Aqua Infrastructure of $3,395 in 2019, $3,590 in 2018, and $4,798 in 2017.

Operations and Maintenance Expenses – Operations and maintenance expenses totaled $333,102 in 2019, $308,478 in 2018, and $282,253 in 2017. Most elements of operating costs are subject to the effects of inflation and changes in the number of customers served. Several elements are subject to the effects of changes in water consumption, weather, and the degree of water treatment required due to variations in the quality of the raw water. The principal elements of operating costs are labor and employee benefits, electricity, chemicals, transportation, maintenance expenses, insurance and claims costs, and costs to comply with environmental regulations. Electricity and chemical expenses vary in relationship to water consumption, raw water quality, and price changes. Maintenance expenses are sensitive to extremely cold weather, which can cause water mains to rupture, resulting in additional costs to repair the affected main.

Operations and maintenance expenses increased in 2019, as compared to 2018, by $24,624 or 8.0%, primarily due to:

- transaction expenses of $22,891, compared to expenses of $14,184 incurred in the prior year, for the Peoples Gas Acquisition, primarily representing expenses associated with obtaining regulatory approvals, investment banking fees, including bridge financing, legal expenses, and integration planning;
- expenses of $4,487 associated with remediating a do not consume advisory we initiated in 2019 for some of our customers served by our Illinois subsidiary. We expect that the expenses associated with remediating the advisory to continue in the second quarter of 2020. Further, the Company has determined that it is reasonably possible that a fine or penalty may be incurred, however, we cannot estimate the possible range of loss at this time and no liability has been accrued for these future costs. We have filed a claim with our insurance carrier for costs and losses incurred in 2019 related to the advisory, and while we anticipate recovery of a portion of the costs and losses, no provision has yet been recognized for the insurance recovery;
- the prior year effect of a favorable reduction to a regulatory liability of $3,899;
- additional operating expenses associated with acquired utility systems and pending acquisitions of utility systems of $3,385;
- an increase in postretirement benefits of $1,973;
- an increase in water production costs of $1,017; and
- the prior year effect of the write-off of a reserve of $880 for the sale of a water system;
- offset by a decrease in insurance expenses of $1,976 due to lower claims.

Taxes Other than Income Taxes – Taxes other than income taxes totaled $59,995 in 2019, $59,762 in 2018, and $56,628 in 2017.

Depreciation and Amortization Expenses – Depreciation expense was $158,179 in 2019, $146,032 in 2018, and $136,302 in 2017, and has increased principally as a result of the significant capital expenditures made to expand and improve our utility facilities, and our acquisitions of new utility systems.

Amortization expense (credit) was $(1,703) in 2019, $641 in 2018, and $422 in 2017, and decreased in 2019 primarily due to the favorable effects of a one-time adjustment of $3,385 resulting from a rate order received for our Pennsylvania subsidiary. Expenses associated with filing rate cases are deferred and amortized over periods that generally range from one to three years.

Interest Expense – Interest expense was $125,383 in 2019, $99,054 in 2018, and $88,543 in 2017. Interest expense increased in 2019 primarily due to the following items:

- pre-acquisition interest expense of $12,933 from the issuance of $900,000 of long-term debt and $119,081 of amortizing notes in April 2019 partially for funding of the Peoples Gas Acquisition;
- an increase in average borrowings; and
- overlapping interest expense incurred in the second quarter of 2019 of $858 associated with $313,500 of existing debt that was subsequently refinanced in May 2019 after receipt of the proceeds from the April 2019 issuance of $900,000 of long-term debt;
- offset by a decrease in our effective interest rate.

The weighted average cost of fixed rate long-term debt was 4.09% at December 31, 2019, 4.31% at December 31, 2018, and 4.35% at December 31, 2017. The weighted average cost of fixed and variable rate long-term debt was 4.09% at December 31, 2019, 4.23% at December 31, 2018, and 4.29% at December 31, 2017.

Interest Income – Interest income was $25,406 in 2019, $152 in 2018, and $202 in 2017. The increase in 2019 is primarily due to interest of $23,377 earned on the proceeds from our April 2019 equity offerings. The decrease in 2018 is due to lower investment rates.

Allowance for Funds Used During Construction – The allowance for funds used during construction ("AFUDC") was $16,172 in 2019, $13,023 in 2018, and $15,211 in 2017, and varies as a result of changes in the average balance of utility plant construction work in progress, to which AFUDC is applied, changes in the AFUDC rate which is based predominantly on short-term interest rates, changes in the balance of short-debt, and changes in the amount of AFUDC related to equity. The increase in 2019 is primarily due to an increase in the average balance of utility plant construction work in progress, to which AFUDC is applied. The amount of AFUDC related to equity was $11,941 in 2019, $9,691 in 2018, and $11,633 in 2017.

Change in Fair Value of Interest Rate Swap Agreements – The change in fair value of interest rate swap agreements of $23,742 for 2019 and $59,779 for 2018 represents the mark-to-market adjustment of our interest rate swap agreements that were entered into on October 23, 2018 to mitigate interest rate risk associated with an anticipated $850,000 of debt issuances to fund a portion of the Peoples Gas Acquisition. The interest rate swap agreements did not qualify for hedge accounting, and any changes in the fair value of the swaps were included in earnings. On April 24, 2019, the Company settled the interest rate swap agreements upon issuance of $900,000 of long-term debt to be used to finance $436,000 of the purchase price of the Peoples Gas Acquisition, redeem $313,500 of the Company's existing debt, and fund other corporate expenses.

Loss on Debt Extinguishment – The loss on debt extinguishment of $18,528 results from the extinguishment of $313,500 of existing debt that was refinanced in May 2019.

Gain on Sale of Other Assets – Gain on sale of other assets totaled $923 in 2019, $714 in 2018, and $484 in 2017, and consists of the sales of property, plant and equipment.

Equity Earnings in Joint Venture – Equity earnings in joint venture totaled $2,210 in 2019, $2,081 in 2018, and $331 in 2017. The equity earnings in 2019 primarily resulted from the sale of raw water to firms in the natural gas drilling industry.

(In thousands of dollars, except per share amounts)

Other – Other totaled $5,691 in 2019, $1,996 in 2018, and $4,953 in 2017, and represents the non-service cost components of our net periodic pension and postretirement benefit costs and, commencing in 2018, the change in fair value of our equity investments in the non-qualified pension plan. The increase in 2019 is primarily due to a decrease in the expected return on plan assets assumption for our pension plan.

Income Taxes – Our effective income tax rate was (6.2)% in 2019, (7.7)% in 2018, and 6.6% in 2017. The effective income tax rate for 2019, 2018, and 2017 was affected by the 2012 income tax accounting change for qualifying utility asset improvements at Aqua Pennsylvania which resulted in a $66,816, $64,183, and $84,766 net reduction to the Company's 2019, 2018, and 2017 Federal and state income tax expense, respectively. As of December 31, 2019, the Company has an unrecognized tax benefit related to the Company's change in its tax accounting method for qualifying utility asset improvement costs, of which up to $31,015 of these tax benefits would further reduce the Company's effective income tax rate in the event the Company does sustain all, or a portion, of its tax position in the period this information is determined. Additionally, as a result of the TCJA, the reversal of excess deferred taxes of $6,323 and $313, which resulted in a reduction in base rates charged to customers, for our regulated subsidiaries contributed to the decrease in our effective income tax rate in 2019 and 2018, respectively.

Summary –

	Years ended December 31,		
	2019	2018	2017
Operating income	$ 340,159	$ 323,178	$ 333,920
Net income	224,543	191,988	239,738
Diluted net income per share	1.04	1.08	1.35

The changes in diluted net income per share in 2019 and 2018 over the previous years were due to the aforementioned changes.

While the importance to the future realization of improved profitability relies on continued adequate rate increases reflecting increased operating costs and new capital improvements, other factors such as transaction expenses for acquisitions will likely cause changes in operating income, net income and diluted net income per share.

Although we have experienced increased income in the recent past, continued adequate rate increases reflecting increased operating costs and new capital investments, are important to the future realization of improved profitability.

(In thousands of dollars, except per share amounts)

Fourth Quarter Results – The following table provides our fourth quarter results:

	Three Months Ended December 31, 2019	Three Months Ended December 31, 2018
Operating revenues	$ 226,042	$ 205,747
Operations and maintenance	85,321	92,393
Depreciation	40,066	35,995
Amortization	437	163
Taxes other than income taxes	14,917	14,402
	140,741	142,953
Operating income	85,301	62,794
Other expense (income):		
Interest expense	33,142	26,388
Interest income	(7,287)	(39)
Allowance for funds used during construction	(3,892)	(4,513)
Change in fair value of interest rate swap agreements	-	59,779
Gain on sale of other assets	(480)	(116)
Equity earnings in joint venture	(292)	(573)
Other	1,006	631
Income (loss) before income taxes	63,104	(18,763)
Provision for income tax benefit	(1,123)	(15,106)
Net income (loss)	$ 64,227	$ (3,657)

The increase in operating revenues of $20,295 was primarily due to:

- an increase in water and wastewater rates, net of infrastructure rehabilitation surcharges, of $14,322;
- an increase in customer water consumption; and
- additional revenues of $1,809 associated with a larger customer base due to organic growth and utility acquisitions, and other growth ventures;
- offset by a decrease in water and wastewater revenues of $302 as a result of a do not consume advisory we initiated in 2019 for some of our customers served by our Illinois subsidiary. We expect this decrease in revenues to continue into the second quarter of 2020.

The decrease in operations and maintenance expense of $7,072 was primarily due to:

- the effect of transaction expenses of $14,184 incurred in the prior year quarter, compared to expenses incurred in the current year quarter of $1,005, for the Peoples Gas Acquisition, primarily representing expenses associated with obtaining regulatory approvals, investment banking fees, legal expenses, and integration planning;
- offset by an increase in postretirement benefits of $1,933;
- expenses of $1,217 associated with remediating a do not consume advisory we initiated in 2019 for some of our customers served by our Illinois subsidiary. We expect that the expenses associated with remediating the advisory to continue in the second quarter of 2020; and
- additional operating costs associated with acquired utility systems of $569.

(In thousands of dollars, except per share amounts)

Depreciation expense increased by $4,071 primarily due to the utility plant placed in service since December 31, 2018.

Interest expense increased by $6,754 primarily due to:

- pre-acquisition interest expense of $4,684 from the issuance of $900,000 of long-term debt and $119,081 of amortizing notes in April 2019 partially for the Peoples Gas Acquisition; and
- an increase in our effective interest rate.

Interest income increased by $7,248 primarily due to interest income of $6,898 earned on the proceeds from our April 2019 equity offerings.

Allowance for funds used during construction ("AFUDC") decreased by $621, due to a decrease in the average balance of utility plant construction work in progress, to which AFUDC is applied.

The change in fair value of interest rate swap agreements of $59,779 represents expense recognized in the fourth quarter of 2018 on the mark-to-market adjustment of our interest rate swap agreements that were entered into on October 23, 2018 to mitigate interest rate risk associated with an anticipated $850,000 of debt issuances to fund a portion of the Peoples Gas Acquisition. The interest rate swap agreements did not qualify for hedge accounting, and any changes in the fair value of the swaps were included in earnings. On April 24, 2019, the Company settled the interest rate swap agreements upon issuance of $900,000 of long-term debt to be used to finance $436,000 of the purchase price of the Peoples Gas Acquisition, redeem $313,500 of the Company's existing debt, and fund other corporate purposes.

Equity earnings in joint venture decreased by $281 due to a decrease in the sale of raw water to firms in the natural gas drilling industry.

Other increased by $375 primarily due to a decrease in the expected return on plan assets assumption for our pension plan.

The provision for income taxes increased by $13,983 primarily as a result of the increase in income before income taxes as a result of the factors described above.

LIQUIDITY AND CAPITAL RESOURCES

Consolidated Cash Flow and Capital Expenditures
Net operating cash flows, dividends paid on common stock, capital expenditures, including allowances for funds used during construction, and expenditures for acquiring water and wastewater systems for the five years ended December 31, 2019 were as follows:

	Net Operating Cash Flows	Dividends	Capital Expenditures	Acquisitions
2015	$ 370,794	$ 121,248	$ 364,689	$ 28,989
2016	396,163	130,923	382,996	9,423
2017	381,318	140,660	478,089	5,860
2018	368,522	150,736	495,737	145,693
2019	338,523	188,512	550,273	59,687
	$ 1,855,320	$ 732,079	$ 2,271,784	$ 249,652

Net cash flows from operating activities decreased from 2018 to 2019 primarily due to the payment for the settlement of the interest rate swap agreements of $83,520, offset by an increase in net income. Net cash flows from operating activities decreased from 2017 to 2018 primarily due to a reduction in deferred income taxes and a change in working capital. Net income in 2018 was comparable to 2017, when excluding the after-tax effect of the change in the fair value of the interest rate swap agreements. Net cash flows from operating activities decreased from 2016 to 2017 due to an increase in pension and other postretirement benefits contributions, changes in deferred income taxes and an increase in the amount of AFUDC related to equity funds of $5,072 in 2017 compared to 2016. Net cash flows from operating activities increased from 2015 to 2016 primarily due to an increase in net income, a change in working capital, and a decrease in pension and other postretirement benefits contributions.

Included in capital expenditures for the five year period are: expenditures for the rehabilitation of existing water and wastewater systems, the expansion of our water and wastewater systems, modernization and replacement of existing treatment facilities, water meters, office facilities, information technology, vehicles, and equipment. During this five year period, we received $37,029 of customer advances and contributions in aid of construction to finance new water mains and related facilities that are not included in the capital expenditures presented in the above table. In addition, during this period, we have made repayments of debt, which includes the net effect of borrowings and repayments under our long-term revolving credit facility, of $1,733,743 and have refunded $27,318 of customers' advances for construction. Dividends increased during the past five years as a result of annual increases in the dividends declared and paid and increases in the number of shares outstanding.

Our planned 2020 capital program, excluding the costs of new mains financed by advances and contributions in aid of construction, and including planned capital expenditures for Peoples after a planned closing on March 16, 2020, is estimated to be approximately $921,000 in infrastructure improvements for the communities we serve. The 2020 capital program is expected to include $475,100 for infrastructure rehabilitation surcharge qualified projects. On January 1, 2013, Aqua Pennsylvania reset its water infrastructure rehabilitation surcharge to zero resulting from the change in its tax method of accounting for qualifying utility asset improvements as described below. Although we were not eligible to use an infrastructure rehabilitation surcharge with our Aqua Pennsylvania water customers from January 1, 2013 to September 30, 2017, we were able to use the income tax savings derived from the qualifying utility asset improvements to maintain Aqua Pennsylvania's capital investment program. Our planned 2020 capital program in Pennsylvania is estimated to be approximately $314,000, a portion of which is expected to be eligible as a deduction for qualifying utility asset improvements for Federal income tax purposes. Our overall 2020 capital program, including the Peoples Gas Acquisition, along with $105,051 of debt repayments and $99,080 of other contractual cash obligations, as reported in the section captioned "Management's Discussion and Analysis of Financial Condition and Results of Operations – *Contractual Obligations*", has been, or is expected to be, financed through internally-generated funds, our revolving credit facilities, and the issuance of long-term debt.

Future utility construction in the period 2021 through 2022, including recurring programs, such as the ongoing replacement or rehabilitation of water meters and water mains, water treatment plant upgrades, storage facility renovations, natural gas distribution meters and mains, pipes, service lines, and additional transmission mains to meet customer demands, excluding the costs of new mains financed by advances and contributions in aid of construction, is estimated to require aggregate expenditures of approximately $1,806,000. We anticipate that approximately more than one-half of these expenditures will require external financing. We expect to refinance $88,232 of long-term debt during this period as they become due with new issues of long-term debt, internally-generated funds, and our revolving credit facilities. The estimates discussed above do not include any amounts for possible future acquisitions of water and wastewater systems or the financing necessary to support them.

Our primary sources of liquidity are cash flows from operations (including the allowed deferral of Federal income tax payments), borrowings under various short-term lines of credit and other credit facilities, and customer advances and contributions in aid of construction. Our cash flow from operations, or internally-generated funds, is impacted by the timing of rate relief, water consumption, and changes in Federal tax laws with respect to the reduction in the corporate income tax rate, and accelerated tax depreciation or deductions for utility construction projects. We fund our capital and typical acquisitions through internally-generated funds, supplemented by short-term lines of credit. Over time, we partially repay or pay-down our short-term lines of credit with long-term debt. We financed a portion of the Peoples Gas Acquisition purchase price, and refinanced certain debt of the Company, with a mix of common equity, equity-linked securities, and debt financing, which included senior notes issued in capital markets transactions, and credit facilities. The ability to finance our future construction programs, as well as our acquisition activities, depends on our ability to attract the necessary external financing and maintain internally-generated funds. Timely rate orders permitting compensatory rates of return on invested capital will be required by our operating subsidiaries to achieve an adequate level of earnings and cash flow to enable them to secure the capital they will need to operate and to maintain satisfactory debt coverage ratios.

Acquisitions
Pursuant to the Company's growth strategy, on October 22, 2018, the Company entered into a purchase agreement to acquire, from LDC Funding LLC, the parent company of PNG Companies, a natural gas distribution company headquartered in Pittsburgh, Pennsylvania, serving approximately 747,000 gas utility customers in western Pennsylvania, West Virginia, and Kentucky. At the closing of the Peoples Gas Acquisition, the Company will pay $4,275,000 in cash, subject to adjustments for working capital, certain capital expenditures, transaction expenses and closing indebtedness as set forth in the acquisition agreement. The Company expects to assume approximately $1,106,000 of Peoples' indebtedness upon closing of the Peoples Gas Acquisition, which would reduce the cash purchase price by approximately $1,106,000. The Company financed this acquisition through the April 2019 issuances of $1,293,750 of common stock, $900,000 of senior notes, $690,000 of tangible equity units, and upon closing of the issuance of $750,000 of common stock through a private placement, and borrowings on our revolving credit facility. On October 22, 2018, the Company obtained the Bridge Commitment from certain banks to provide senior unsecured bridge loans in an aggregate amount of up to $5,100,000 to, among other things, backstop the Peoples Gas Acquisition purchase price and the refinancing of certain debt of the Company and of Peoples. As of December 31, 2019, we had terminated $4,350,000 of commitments under the Bridge Commitment in connection with, among other things, the replacement of our unsecured revolving credit facility and the issuances of common stock, tangible equity units, and senior notes in April 2019. The obligation of an investor to fund the remaining amount under the Bridge Commitment is subject to the satisfaction of customary closing conditions. On October 23, 2018, the Company entered into interest rate swap agreements to mitigate interest rate risk associated with our planned issuance of long-term debt to fund a portion of the Peoples Gas Acquisition. The interest rate swaps were settled in April 2019 in conjunction with the issuance of long-term debt used to finance a portion of the purchase price of this acquisition. The interest rate swap agreements did not qualify for hedge accounting and any changes in the fair value of the swaps were included in our earnings. Approval from the United States Federal Trade Commission was obtained in December 2018, and approvals from the public utility commissions of Kentucky, West Virginia, and Pennsylvania were obtained in March 2019, April 2019, and January 2020, respectively. This acquisition is expected to close on March 16, 2020, once closing conditions are met, and it is anticipated that this transaction will result in the recording of goodwill. In the event that this acquisition is terminated due to certain breaches by the Company, a fee of $120,000 would be payable to the seller as a reverse termination fee.

During the past five years, we have expended cash of $249,652 and issued 439,943 shares of common stock, valued at $12,845 at the time of acquisition, related to the acquisition of both water and wastewater utility systems.

In December 2019, the Company acquired the wastewater utility system assets of Cheltenham Township, Pennsylvania, which serves 9,887 customers. The total cash purchase price for the utility system was $50,250. The purchase price allocation for this acquisition consisted primarily of acquired property, plant and equipment of $44,558 and goodwill of $5,692. Additionally, during 2019, we completed seven acquisitions of water and wastewater utility systems for $9,437 in cash in four of the states in which we operate, adding 2,393 customers.

In September 2019, the Company entered into a purchase agreement to acquire the wastewater utility system assets of the Delaware County Regional Water Quality Control Authority ("DELCORA"), which consist of approximately 16,000 customers, or the equivalent of 198,000 retail customers, in 42 municipalities in Southeast Pennsylvania for $276,500. The purchase price for this pending acquisition is subject to certain adjustments at closing, and is subject to regulatory approval, including the final determination of the fair value of the rate base acquired. The Company expects to finance this acquisition with a mix of common equity and debt financing.

In November 2018, the Company entered into a purchase agreement to acquire the wastewater utility system assets of East Norriton Township, Pennsylvania, which serves approximately 4,950 customers for $21,000. The purchase price for this pending acquisition is subject to certain adjustments at closing, and is subject to regulatory approval, including the final determination of the fair value of the rate base acquired.

In addition to the Company's pending acquisitions of DELCORA and East Norriton Township, as part of the Company's growth-through-acquisition strategy, the Company has entered into purchase agreements to acquire the water or wastewater utility system assets of two municipalities, which will add approximately 5,306 customers in two of the states in which the Company operates, for a total combined purchase price in cash of $37,000. We plan to finance the purchase price of these acquisitions by the issuance of long-term debt. The purchase price for these pending acquisitions is subject to certain adjustments at closing, and the pending acquisitions are subject to regulatory approvals, including the final determination of the fair value of the rate base acquired. Closings for our remaining acquisitions, with the exception of DELCORA and East Norriton Township, are expected to occur in the first half of 2020, respectively, subject to the timing of the regulatory approval process.

In July 2018, the Company acquired the wastewater utility system assets of Limerick Township, Pennsylvania which serves 5,497 customers. The total cash purchase price for the utility system was $74,836. The purchase price allocation for this acquisition consisted primarily of acquired property, plant and equipment of $64,759 and goodwill of $10,790. Additionally, during 2018, we completed seven acquisitions of water and wastewater utility systems for $42,519 in cash in three of the states in which we operate, adding 8,661 customers. Further, in December 2018, the Company acquired the Valley Creek Trunk Sewer System, serving area municipalities in Pennsylvania, from the Tredyffrin Township Municipal Authority for $28,338. The purchase price allocation for this acquisition consisted primarily of property, plant and equipment of $22,904 and goodwill of $5,434. The system receives untreated wastewater from area municipalities, which is conveyed to the Valley Forge Treatment Plan. The system consists of 49,000 linear feet of gravity sewers, pump stations, and force mains.

In 2017, we completed four acquisitions of water and wastewater utility systems for $5,860 in cash in two of the states in which we operate, adding 1,003 customers.

In January 2016, we acquired the water utility system assets of Superior Water Company, Inc., which provided public water service to 4,108 customers in portions of Berks, Chester, and Montgomery counties in Pennsylvania. The total purchase price for the utility system was $16,750, which consisted of the issuance of 439,943 shares of the Company's common stock and $3,905 in cash. Additionally, during 2016, we completed 18 acquisitions of water and wastewater utility systems for $5,518 in cash in eight of the states in which we operate, adding 2,469 customers.

In April 2015, we acquired the water and wastewater utility system assets of North Maine Utilities, located in the Village of Glenview, Illinois serving 7,409 customers. The total purchase price consisted of $23,079 in cash. Additionally, during 2015, we completed 14 acquisitions of water and wastewater utility systems for $5,210 in cash in six of the states in which we operate, adding 3,170 customers.

We continue to pursue the acquisition of water and wastewater utility systems and explore other utility acquisitions that may be in a new state. Our typical acquisitions are expected to be financed with short-term debt with subsequent repayment from the proceeds of long-term debt, retained earnings, or equity issuances.

Joint Venture
Aqua Infrastructure, LLC is a partner in a joint venture with a firm that operates natural gas pipelines and processing plants for the operation of a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale in north-central Pennsylvania (the "Joint Venture"). We own 49% of the Joint Venture. The 56 mile pipeline construction and permitted intake on the Susquehanna River cost $109,000. As of December 31, 2019, our capital contributions since inception in 2011 totaled $53,643 in cash. This investment has been financed through the issuance of long-term debt. Our 49% investment in the Joint Venture is an unconsolidated affiliate and is accounted for under the equity method of accounting. Our initial investment is carried at cost. Subsequently, the carrying amount of our investment is adjusted to reflect capital contributions or distributions, our equity in earnings and losses since the commencement of the system's operations, and a decline in the fair value of our investment. In 2015, an impairment charge was recognized by the joint venture on its long-lived assets, of which the Company's share totaled $32,975 ($21,433 after-tax), representing our share of the noncash impairment charge as further described in Note 1 – *Summary of Significant Accounting Policies – Investment in Joint Venture* in this Annual Report.

Dispositions
We routinely review and evaluate areas of our business and operating divisions and, over time, may sell utility systems or portions of systems. In 2019, the Company sold a water system in Virginia that served approximately 500 customers, which resulted in proceeds of $1,882, and recognized a gain on sale of $405. In 2017, the Company sold two business units within Aqua Resources, which resulted in total proceeds of $867, and recognized a net loss of $324. In 2016, the Company sold two business units within Aqua Resources, which resulted in total proceeds of $4,459, and recognized a net loss of $543.

Sources of Capital
Since net operating cash flow plus advances and contributions in aid of construction have not been sufficient to fully fund our cash requirements including capital expenditures and our growth through acquisitions program, which includes financings planned for a portion of the Peoples Gas Acquisition, we issued $3,294,175 of long-term debt, and obtained other short-term borrowings during the past five years. At December 31, 2019, we have a $550,000 long-term revolving credit facility that expires in December 2023, of which $17,124 was designated for letter of credit usage, $532,876 was available for borrowing, and no borrowings were outstanding at December 31, 2019. Additionally, the facility expands by $150,000 of capacity upon closing of the Peoples Gas Acquisition, which amount will be available to repay certain outstanding indebtedness and fees to close an existing credit facility of Peoples and for general corporate purposes. Further, the Company may request to expand the facility by an additional amount of up to $300,000 upon the closing of the Peoples Gas Acquisition. In addition, we have short-term lines of credit of $135,500, of which $109,776 was available as of December 31, 2019. These short-term lines of credit are subject to renewal on an annual basis. Although we believe we will be able to renew these facilities, there is no assurance that they will be renewed, or what the terms of any such renewal will be.

In October 2018, we entered into a $5,100,000 syndicated, committed bridge facility to support our agreement to acquire Peoples. Subsequently, $4,350,000 has been terminated as no longer required, and we expect to terminate the remaining portion of the bridge facility as a result of a stock purchase agreement entered into to fund our acquisition. The bridge facility expires the earlier of closing of the acquisition or April 2020.

We financed the purchase price of the Peoples Gas Acquisition and refinanced certain debt with a mix of common equity, mandatory convertible equity units, debt financing, which included senior notes issued in capital markets transactions, and credit facilities. The purchase price for this acquisition is $4,275,000, which will be reduced by the amount of outstanding indebtedness at closing, which is estimated to be $1,106,000.

As a result of the proceeds raised from the April 2019 financings that were being held to fund the Peoples Gas Acquisition the Company has a positive working capital position as of December 31, 2019. However, historically, our consolidated balance sheet has had a negative working capital position, whereby routinely our current liabilities exceed our current assets. Management believes that internally-generated funds along with existing credit facilities and the proceeds from the issuance of long-term debt will be adequate to provide sufficient working capital to maintain normal operations and to meet our financing requirements for at least the next twelve months.

Our loan and debt agreements require us to comply with certain financial covenants, which among other things, subject to specific exceptions, limit the Company's ratio of consolidated total indebtedness to consolidated total capitalization, and require a minimum level of earnings coverage over interest expense. During 2019, we were in compliance with our debt covenants under our credit facilities. Failure to comply with our debt covenants could result in an event of default, which could result in us being required to repay or refinance our borrowings before their due date, possibly limiting our future borrowings, and increasing our borrowing costs.

The Company has a universal "pay as you go" shelf registration statement, filed with the SEC in February 2018, which allows for the potential future offer and sale by us, from time to time, in one or more public offerings, of an indeterminate amount of our common stock, preferred stock, debt securities, and other securities specified therein at indeterminate prices. In April 2019, the Company issued 37,370,017 shares of common stock totaling $1,263,099 and 13,800,000 tangible equity units totaling $673,642 to finance a portion of the pending Peoples Gas Acquisition. Each tangible equity unit consists of a prepaid stock purchase contract and an amortizing note due April 30, 2022, each issued by the Company. Refer to Note 13 – *Stockholders' Equity* for further information regarding these financings.

In addition, we have an acquisition shelf registration statement, which was filed with the SEC on February 27, 2015, to permit the offering from time to time of an aggregate of $500,000 of our common stock and shares of preferred stock in connection with acquisitions. During 2016, we issued 439,943 shares of common stock totaling $12,845 to acquire a water system. The balance remaining available for use under the acquisition shelf registration as of December 31, 2019 is $487,155.

We will determine the form and terms of any further securities issued under the universal shelf registration statement and the acquisition shelf registration statement at the time of issuance.

We offer a Dividend Reinvestment and Direct Stock Purchase Plan (the "Plan") that provides a convenient and economical way to purchase shares of the Company. Under the direct stock purchase portion of the Plan, shares are issued throughout the year. The dividend reinvestment portion of the Plan offers a five percent discount on the purchase of shares of common stock with reinvested dividends. As of the December 2019 dividend payment, holders of 7.3% of the common shares outstanding participated in the dividend reinvestment portion of the Plan. The shares issued under the Plan are either original issue shares or shares purchased by the Company's transfer agent in the open-market. During the past five years, we have sold 513,765 original issue shares of common stock for net proceeds of $17,640 through the dividend reinvestment portion of the Plan, and we used the proceeds to invest in our operating subsidiaries, to repay short-term debt, and for general corporate purposes. In 2019, 2018, and 2017, 183,731, 321,585, and 447,753 shares of common stock were purchased under the dividend reinvestment portion of the Plan by the Company's transfer agent in the open-market for $7,777, $11,343, and $15,168, respectively.

The Company's Board of Directors had authorized us to repurchase our common stock, from time to time, in the open market or through privately negotiated transactions. In December 2014, the Company's Board of Directors authorized a share buyback program of up to 1,000,000 shares to minimize share dilution through timely and orderly share repurchases. In December 2015, the Company's Board of Directors added 400,000 shares to this program. In 2015, we repurchased 805,000 shares of our common stock in the open market for $20,502. In 2016, we did not repurchase any shares of our common stock in the open market under this program. This program expired on December 31, 2016.

Off-Balance Sheet Financing Arrangements

We do not engage in any off-balance sheet financing arrangements. We do not have any interest in entities referred to as variable interest entities, which includes special purpose entities and other structured finance entities. For risk management purposes, the Company uses interest rate swap agreements. Refer to Note 11 – *Long-term Debt and Loans Payable* for further information regarding these agreements.

(In thousands of dollars, except per share amounts)

Contractual Obligations
The following table summarizes our contractual cash obligations as of December 31, 2019:

		Payments Due By Period			
	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
Long-term debt	$ 3,077,400	$ 105,051	$ 88,232	$ 33,040	$ 2,851,077
Interest on fixed-rate, long-term debt (1)	125,840	3,745	3,246	1,639	117,210
Operating leases (2)	21,764	1,816	2,707	1,406	15,835
Unconditional purchase obligations (3)	29,595	5,211	10,427	9,524	4,433
Other purchase obligations (4)	73,764	73,764	-	-	-
Pension plan obligation (5)	13,542	13,542	-	-	-
Other obligations (6)	9,476	1,002	2,065	2,118	4,291
Total	$ 3,351,381	$ 204,131	$ 106,677	$ 47,727	$ 2,992,846

(1) Represents interest payable on fixed rate, long-term debt. Amounts reported may differ from actual due to future refinancing of debt.

(2) Represents operating leases that are noncancelable, before expiration, for the lease of motor vehicles, buildings, land and other equipment.

(3) Represents our commitment to purchase minimum quantities of water as stipulated in agreements with other water purveyors. We use purchased water to supplement our water supply, particularly during periods of peak customer demand. Our actual purchases may exceed the minimum required levels.

(4) Represents an approximation of the open purchase orders for goods and services purchased in the ordinary course of business.

(5) Represents contributions to be made to pension plan.

(6) Represents expenditures estimated to be required under legal and binding contractual obligations.

In addition to these obligations, we pay refunds on customers' advances for construction over a specific period of time based on operating revenues related to developer-installed water mains or as new customers are connected to and take service from such mains. After all refunds are paid, any remaining balance is transferred to contributions in aid of construction. The refund amounts are not included in the above table because the refund amounts and timing are dependent upon several variables, including new customer connections, customer consumption levels and future rate increases, which cannot be accurately estimated. Portions of these refund amounts are payable annually through 2029 and amounts not paid by the contract expiration dates become non-refundable.

Lastly, in addition to the obligations disclosed in the contractual obligations table above, we have uncertain tax positions of $18,671. Although we believe our tax positions comply with applicable law, we have made judgments as to the sustainability of each uncertain tax position based on its technical merits. Due to the uncertainty of future cash outflows, if any, associated with our uncertain tax positions, we are unable to make a reasonable estimate of the timing or amounts that may be paid. See Note 7 – *Income Taxes* in this Annual Report for further information on our uncertain tax positions.

We will fund these contractual obligations with cash flows from operations and liquidity sources held by or available to us.

(In thousands of dollars, except per share amounts)

The Company is routinely involved in legal matters, including both asserted and unasserted legal claims, during the ordinary course of business. See Note 9 – *Commitments and Contingencies* in this Annual Report for a discussion of the Company's legal matters. It is not always possible for management to make a meaningful estimate of the potential loss or range of loss associated with such litigation. Also, unanticipated changes in circumstances and/or revisions to the assessed probability of the outcomes of legal matters could result in expenses being incurred in future periods as well as an increase in actual cash required to resolve the legal matter.

Capitalization

The following table summarizes our capitalization during the past five years:

December 31,	2019	2018	2017	2016	2015
Long-term debt (1)	44.2%	56.1%	52.3%	50.8%	50.8%
Essential Utilities stockholders' equity	55.8%	43.9%	47.7%	49.2%	49.2%
	100.0%	100.0%	100.0%	100.0%	100.0%

(1) Includes current portion, as well as our borrowings under a variable rate revolving credit agreement of $0 at December 31, 2019, $370,000 at December 31, 2018, $60,000 at December 31, 2017, $25,000 at December 31, 2016, and $60,000 at December 31, 2015.

Over the past five years, the changes in the capitalization ratios primarily resulted from the issuance of debt to finance our acquisitions and capital program, changes in net income, the issuance of common stock, and the declaration of dividends.

INCOME TAX MATTERS

Tax Cuts and Jobs Act of 2017

On December 22, 2017, President Trump signed the TCJA into law. Substantially all of the provisions of the TCJA are effective for tax years beginning after December 31, 2017, except as noted below. The TCJA includes significant changes to the Code and the taxation of business entities, and includes specific provisions related to regulated public utilities. Significant changes include a reduction in the corporate federal income tax rate from 35% to 21%, and a limitation on the utilization of NOLs arising after December 31, 2017 to 80% of taxable income with an indefinite carryforward. The specific provisions related to regulated public utilities in the TCJA generally allow for the continued deductibility of interest expense, the elimination of full expensing for tax purposes of certain property acquired after September 27, 2017 and the continuation of certain rate normalization requirements for accelerated depreciation benefits. Our market-based companies still qualify for 100% deductibility of qualifying property acquired after September 27, 2017.

The Company's regulated operations accounting for income taxes are impacted by the Financial Accounting Standards Board's ("FASB") accounting guidance for regulated operations. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates to 21% under the provisions of the TCJA results in amounts previously collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The TCJA includes provisions that stipulate how these excess deferred taxes are to be passed back to customers for certain accelerated tax depreciation benefits. Potential refunds of other deferred taxes will be determined by our state regulators. The Company has reserved $3,907 for amounts expected to be refundable to utility customers. In 2018, Illinois, Virginia, Texas, New Jersey, and two operating divisions in Ohio which operate under locally-negotiated contractual rates with their respective counties, the Company's base rates have been adjusted or surcredits have been added to customer bills to reflect the lower corporate income tax rate. In North Carolina, Indiana, and our regulated operations in Ohio, no surcredits have been added to customer bills to reflect the lower corporate income tax rate in 2018. These adjustments were reflected in customer bills beginning January 1, 2019. In Pennsylvania, a 2019 procedural order resulting from the Company's general rate case adjusted the Company's base rate to reflect the lower corporate income tax rate. In addition, through a reduction in base rates or surcredits, the Company has refunded approximately $690 and $9,600 to utility customers during 2019 and 2018.

As of December 31, 2017, resulting from the TCJA enactment, our deferred income tax assets and liabilities were revalued based upon the new corporate income tax rate of 21%. The revaluation of our deferred income tax assets and liabilities resulted in the recognition of additional income tax expense of $3,141 in 2017 to the extent revalued deferred income taxes are not believed to be recoverable in utility customer rates.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our financial condition and results of operations are impacted by the methods, assumptions, and estimates used in the application of critical accounting policies. The following accounting policies are particularly important to our financial condition or results of operations and require estimates or other judgments of matters of uncertainty. Changes in the estimates or other judgments included within these accounting policies could result in a significant change to the financial statements. We believe our most critical accounting policies include the use of regulatory assets and liabilities, revenue recognition, the valuation of our long-lived assets (which consist primarily of utility plant in service, regulatory assets, and goodwill) our accounting for post-retirement benefits, and our accounting for income taxes. We have discussed the selection and development of our critical accounting policies and estimates with the Audit Committee of the Board of Directors.

Regulatory Assets and Liabilities ─ We defer costs and credits on the balance sheet as regulatory assets and liabilities when it is probable that these costs and credits will be recognized in the rate-making process in a period different from when the costs and credits were incurred. These deferred amounts, both assets and liabilities, are then recognized in the income statement in the same period that they are reflected in our rates charged for water or wastewater service. We make significant judgments and estimates to record regulatory assets and liabilities, such as for amounts related to income taxes, pension and postretirement benefits, acquisitions and capital projects. For each regulatory jurisdiction with regulated operations, we evaluate at the end of each reporting period, whether the regulatory assets and liabilities continue to meet the probable criteria for future recovery or refund. The evaluation considers factors such as regulatory orders or guidelines, in the same regulatory jurisdiction, of a specific matter or a similar matter, as provided to us in the past or to other regulated utilities. In addition, the evaluation may be impacted by changes in the regulatory environment and pending or new legislation that could impact the ability to recover costs through regulated rates. There may be multiple participants to rate or transactional regulatory proceedings who might offer different views on various aspects of such proceedings, and in these instances may challenge our prudence of business policies and practices, seek cost disallowances or request other relief.

In the event that our assessment as to the probability of the inclusion in the rate-making process is incorrect, the associated regulatory asset or liability would be adjusted to reflect the change in our assessment or change in regulatory approval.

Revenue Recognition ─ Our utility revenues recognized in an accounting period include amounts billed to customers on a cycle basis and unbilled amounts based on estimated usage from the last billing to the end of the accounting period. The estimated usage is based on our judgment and assumptions; our actual results could differ from these estimates, which would result in operating revenues being adjusted in the period that the revision to our estimates is determined.
In Virginia, we commence the billing of our utility customers, under new rates, upon authorization from the respective utility commission and before the final commission rate order is issued. The revenue recognized reflects an estimate based on our judgment of the final outcome of the commission's ruling. We monitor the applicable facts and circumstances regularly and revise the estimate as required. The revenue billed and collected prior to the final ruling is subject to refund based on the commission's final ruling.

Valuation of Long-Lived Assets, Goodwill and Intangible Assets ─ We review our long-lived assets for impairment, including utility plant in service and investment in joint venture. We also review regulatory assets for the continued application of the FASB accounting guidance for regulated operations. Our review determines whether there have been changes in circumstances or events, such as regulatory disallowances, or abandonments, that have occurred that require adjustments to the carrying value of these assets. Adjustments to the carrying value of these assets would be made in instances where their inclusion in the rate-making process is unlikely. For utility plant in service, we would recognize an impairment loss for any amount disallowed by the respective utility commission. For our equity method investment in joint venture, the Company evaluates whether it has experienced a decline in the value of its investment that is other than temporary in nature. We would recognize an impairment loss if the fair value of our investment is less than the carrying amount of the investment, and the decline in value is considered other than temporary. Additionally, the Company would recognize its share of an impairment loss if the joint venture determines that the carrying amount of the joint venture's assets exceeds the sum of the joint venture's undiscounted estimated cash flows.

Our long-lived assets, which consist primarily of utility plant in service, regulatory assets and investment in joint venture, are reviewed for impairment when changes in circumstances or events occur. These circumstances or events could include a decline in the market value or physical condition of a long-lived asset, an adverse change in the manner in which long-lived assets are used or planned to be used, a change in historical trends, operating cash flows associated with the long-lived assets, changes in macroeconomic conditions, industry and market conditions, or overall financial performance. When these circumstances or events occur, we determine whether it is more likely than not that the fair value of those assets is less than their carrying amount. If we determine that it is more likely than not (that is, the likelihood of more than 50 percent), we would recognize an impairment charge if it is determined that the carrying amount of an asset exceeds the sum of the undiscounted estimated cash flows. In this circumstance, we would recognize an impairment charge equal to the difference between the carrying amount and the fair value of the asset. Fair value is estimated to be the present value of future net cash flows associated with the asset, discounted using a discount rate commensurate with the risk and remaining life of the asset. This assessment requires significant management judgment and estimates that are based on budgets, general strategic business plans, historical trends and other data and relevant factors. These estimates include significant inherent uncertainties, since they involve forecasting future events. If changes in circumstances or events occur, or estimates and assumptions that were used in this review are changed, we may be required to record an impairment charge on our long-lived assets.

We have an investment in a joint venture, for which we own 49%, and use the equity method of accounting to account for this joint venture. The joint venture operates a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale in north central Pennsylvania. Refer to Note 1 – *Summary of Significant Accounting Policies – Property, Plant and Equipment and Depreciation*, and *Investment in Joint Venture* in this Annual Report for additional information regarding the review of long-lived assets for impairment.

We test the goodwill attributable for each of our reporting units for impairment at least annually on July 31, or more often, if circumstances indicate a possible impairment may exist. When testing goodwill for impairment, we may assess qualitative factors, including macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, and entity specific events, for some or all of our reporting units to determine whether it's more likely than not that the fair value of a reporting unit is less than its carrying amount. Alternatively, based on our assessment of the qualitative factors previously noted, we may perform a quantitative goodwill impairment test by determining the fair value of a reporting unit based on a discounted cash flow analysis. If we perform a quantitative test and determine that the fair value of a reporting unit is less than its carrying amount, we would record an impairment loss for the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill. The assessment requires significant management judgment and estimates that are based on budgets, general strategic business plans, historical trends and other data and relevant factors. If changes in circumstances or events occur, or estimates and assumptions that were used in our impairment test change, we may be required to record an impairment charge for goodwill. Refer to Note 1 – *Summary of Significant Accounting Policies – Goodwill* in this Annual Report for information regarding the results of our annual impairment test.

Accounting for Post-Retirement Benefits ─ We maintain a qualified and a non-qualified defined benefit pension plan and plans that provide for post-retirement benefits other than pensions. Accounting for pension and other post-retirement benefits requires an extensive use of assumptions including the discount rate, expected return on plan assets, the rate of future compensation increases received by our employees, mortality, turnover and medical costs. Each assumption is reviewed annually with assistance from our actuarial consultant, who provides guidance in establishing the assumptions. The assumptions are selected to represent the average expected experience over time and may differ in any one year from actual experience due to changes in capital markets and the overall economy. These differences will impact the amount of pension and other post-retirement benefits expense that we recognize.

Our discount rate assumption, which is used to calculate the present value of the projected benefit payments of our post-retirement benefits, was determined by selecting a hypothetical portfolio of high quality corporate bonds appropriate to match the projected benefit payments of the plans. The selected bond portfolio was derived from a universe of Aa-graded corporate bonds. The discount rate was then developed as the rate that equates the market value of the bonds purchased to the discounted value of the projected benefit payments of the plans. A decrease in the discount rate would generally increase our post-retirement benefits expense and benefit obligation. After reviewing the hypothetical portfolio of bonds, we selected a discount rate of 3.35% for our pension plan and 3.42% for our other post-retirement benefit plans as of December 31, 2019, which represent a 95 and 92 basis-point decrease as compared to the discount rates selected at December 31, 2018, respectively. Our post-retirement benefits expense under these plans is determined using the discount rate as of the beginning of the year, which was 4.30% for our pension plan and 4.34% for our other-postretirement benefit plans for 2019, and will be 3.35% for our pension plan and 3.42% for our other post-retirement benefit plans for 2020.

Our expected return on plan assets is determined by evaluating the asset class return expectations with our advisors as well as actual, long-term, historical results of our asset returns. The Company's market-related value of plan assets is equal to the fair value of the plans' assets as of the last day of its fiscal year and is a determinant for the expected return on plan assets, which is a component of post-retirement benefits expense. The allocation of our plans' assets impacts our expected return on plan assets. The expected return on plan assets is based on a targeted allocation of 50% to 70% return seeking assets and 30% to 50% liability hedging assets. Our post-retirement benefits expense increases as the expected return on plan assets decreases. We believe that our actual long-term asset allocations on average will approximate our targeted allocations. Our targeted allocations are driven by our investment strategy to earn a reasonable rate of return while maintaining risk at acceptable levels through the diversification of investments across and within various asset categories. For 2019, we used a 6.50% expected return on plan assets assumption which will decrease to 6.0% for 2020.

Funding requirements for qualified defined benefit pension plans are determined by government regulations and not by accounting pronouncements. In accordance with funding rules and our funding policy, during 2020 our pension contribution is expected to be $13,542. Future years' contributions will be subject to economic conditions, plan participant data and the funding rules in effect at such time as the funding calculations are performed, though we expect future changes in the amount of contributions and expense recognized to be generally included in customer rates.

Accounting for Income Taxes — We estimate the amount of income tax payable or refundable for the current year and the deferred income tax liabilities and assets that results from estimating temporary differences resulting from the treatment of specific items, such as depreciation, for tax and financial statement reporting. Generally, these differences result in the recognition of a deferred tax asset or liability on our consolidated balance sheet and require us to make judgments regarding the probability of the ultimate tax impact of the various transactions we enter into. Based on these judgments, we may record tax reserves or adjustments to valuation allowances on deferred tax assets to reflect the expected realization of future tax benefits. Actual income taxes could vary from these estimates and changes in these estimates can increase income tax expense in the period that these changes in estimates occur.

Our determination of what qualifies as a capital cost versus a tax deduction, for qualifying utility asset improvements, as it relates to our income tax accounting method change beginning in 2012, is subject to subsequent adjustment as well as IRS audits, changes in income tax laws, including regulations regarding tax-basis depreciation as it applies to our capital expenditures, or qualifying utility asset improvements, the expiration of a statute of limitations, or other unforeseen matters could impact the tax benefits that have already been recognized. We establish reserves for uncertain tax positions based upon management's judgment as to the sustainability of these positions. These accounting estimates related to the uncertain tax position reserve require judgments to be made as to the sustainability of each uncertain tax position based on its technical merits. We believe our tax positions comply with applicable law and that we have adequately recorded reserves as required. However, to the extent the final tax outcome of these matters is different than our estimates recorded, we would then need to adjust our tax reserves which could result in additional income tax expense or benefits in the period that this information is known.

IMPACT OF RECENT ACCOUNTING PRONOUNCEMENTS

We describe the impact of recent accounting pronouncements in Note 1 – *Summary of Significant Accounting Policies* in this Annual Report.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Management's Report On Internal Control Over Financial Reporting

Management of Essential Utilities, Inc. (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934. The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. The Company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In assessing the effectiveness of internal control over financial reporting, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control-Integrated Framework* (2013). As a result of management's assessment and based on the criteria in the framework, management has concluded that, as of December 31, 2019, the Company's internal control over financial reporting was effective.

The effectiveness of our internal control over financial reporting as of December 31, 2019 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

Christopher H. Franklin
Chairman, President and Chief Executive Officer

Daniel J. Schuller
Executive Vice President and Chief Financial Officer

February 28, 2020

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Essential Utilities, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets, including the consolidated statements of capitalization, of Essential Utilities, Inc. and its subsidiaries (the "Company") as of December 31, 2019 and 2018, and the related consolidated statements of net income, comprehensive income, equity, and cash flows for each of the three years in the period ended December 31, 2019, including the related notes and schedule of condensed parent company financial statements as of December 31, 2019 and 2018 and for each of the three years in the period ended December 31, 2019 appearing after the signature pages (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Rate Regulation and Regulatory Accounting

As described in Notes 1 and 6 to the consolidated financial statements, most of the operating companies of the Company that are regulated public utilities are subject to regulation by the utility commissions of the states in which they operate. Some of the operating companies that are regulated public utilities are subject to rate regulation by county or city government. As of December 31, 2019, regulatory assets were $878 million and regulatory liabilities were $518 million. Regulated public utilities follow the Financial Accounting Standards Board's (FASB) accounting guidance for regulated operations, which provides for the recognition of regulatory assets and liabilities as allowed by regulators for costs or credits that are reflected in current rates or are considered probable of being included in future rates. The regulatory assets represent costs that are probable to be fully recovered from customers in future rates while regulatory liabilities represent amounts that are expected to be refunded to customers in future rates or amounts recovered from customers in advance of incurring the costs. The regulatory assets or liabilities are then relieved as the cost or credit is reflected in the Company's rates charged for utility service. If, as a result of a change in circumstances, it is determined that the regulated operating companies no longer meets the criteria to apply regulatory accounting, the operating company would have to discontinue regulatory accounting and write-off the respective regulatory assets and liabilities. Management makes significant judgments and estimates to record regulatory assets and liabilities. For each regulatory jurisdiction with regulated operations, management evaluates at the end of each reporting period, whether the regulatory assets and liabilities continue to meet the probable criteria for future recovery or refund. The evaluation considers factors such as regulatory orders or guidelines, in the same regulatory jurisdiction, of a specific matter or a similar matter, as provided to the Company in the past or to other regulated utilities. In addition, the evaluation may be impacted by changes in the regulatory environment and pending or new legislation that could impact the ability to recover costs through regulated rates. There may be multiple participants to rate or transactional regulatory proceedings who might offer different views on various aspects of such proceedings, and in these instances may challenge our prudence of business policies and practices, seek cost disallowances or request other relief.

The principal considerations for our determination that performing procedures relating to the Company's rate regulation and regulatory accounting is a critical audit matter are there was significant judgment by management in assessing the potential outcomes and related accounting impacts associated with pending rate cases which in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating audit evidence obtained related to the recovery of regulatory assets and the refund of regulatory liabilities.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's evaluation of regulatory matters impacting regulatory assets and liabilities. These procedures also included, among others (i) obtaining the Company's correspondence with regulators and assessing the reasonableness of management's judgments regarding the probability of recovery of regulatory assets and refund of regulatory liabilities in light of correspondence with regulators, among other factors, (ii) assessing the reasonableness of management's judgments regarding new and updated regulatory guidance and proceedings and the related accounting implications, and (iii) testing the calculation of regulatory assets and liabilities based on provisions and formulas outlined in regulatory orders and other correspondence.

PricewaterhouseCoopers LLP

Philadelphia, Pennsylvania
February 28, 2020

We have served as the Company's auditor since 2000.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(In thousands of dollars, except per share amounts)

	December 31, 2019	December 31, 2018
Assets		
Property, plant and equipment, at cost	$ 8,201,936	$ 7,648,469
Less: accumulated depreciation	1,856,146	1,718,143
Net property, plant and equipment	6,345,790	5,930,326
Current assets:		
Cash and cash equivalents	1,868,922	3,627
Accounts receivable, net	67,137	65,825
Unbilled revenues	40,483	35,400
Inventory, materials and supplies	18,379	15,844
Prepayments and other current assets	16,259	23,337
Assets held for sale	1,558	3,139
Total current assets	2,012,738	147,172
Regulatory assets	878,132	788,076
Deferred charges and other assets, net	42,652	39,237
Investment in joint venture	5,984	6,959
Goodwill	63,822	52,726
Operating lease right-of-use assets	12,867	-
Total assets	$ 9,361,985	$ 6,964,496
Liabilities and Equity		
Essential Utilities stockholders' equity:		
Common stock at $0.50 par value, authorized 300,000,000 shares, issued 223,871,284 and 181,151,827 as of December 31, 2019 and December 31, 2018	$ 111,935	$ 90,576
Capital in excess of par value	2,636,555	820,378
Retained earnings	1,210,072	1,174,245
Treasury stock, at cost, 3,112,565 and 3,060,206 shares as of December 31, 2019 and December 31, 2018	(77,702)	(75,835)
Total stockholders' equity	3,880,860	2,009,364
Long-term debt, excluding current portion	2,972,349	2,419,115
Less: debt issuance costs	29,022	20,651
Long-term debt, excluding current portion, net of debt issuance costs	2,943,327	2,398,464
Commitments and contingencies (See Note 9)		
Current liabilities:		
Current portion of long-term debt	105,051	144,545
Loans payable	25,724	15,449
Accounts payable	74,919	77,331
Book overdraft	10,944	8,950
Accrued interest	29,818	23,300
Accrued taxes	22,775	22,234
Interest rate swap agreements	-	59,779
Other accrued liabilities	49,618	47,389
Total current liabilities	318,849	398,977
Deferred credits and other liabilities:		
Deferred income taxes and investment tax credits	936,158	845,403
Customers' advances for construction	95,556	93,343
Regulatory liabilities	517,599	531,027
Operating lease liabilities	11,645	-
Other	102,465	97,182
Total deferred credits and other liabilities	1,663,423	1,566,955
Contributions in aid of construction	555,526	590,736
Total liabilities and equity	$ 9,361,985	$ 6,964,496

See accompanying notes to consolidated financial statements.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF NET INCOME
(In thousands, except per share amounts)

	Years ended December 31,		
	2019	2018	2017
Operating revenues	$ 889,692	$ 838,091	$ 809,525
Operating expenses:			
Operations and maintenance	333,102	308,478	282,253
Depreciation	158,179	146,032	136,302
Amortization	(1,703)	641	422
Taxes other than income taxes	59,955	59,762	56,628
Total operating expenses	549,533	514,913	475,605
Operating income	340,159	323,178	333,920
Other expense (income):			
Interest expense	125,383	99,054	88,543
Interest income	(25,406)	(152)	(202)
Allowance for funds used during construction	(16,172)	(13,023)	(15,211)
Change in fair value of interest rate swap agreements	23,742	59,779	-
Loss on debt extinguishment	18,528	-	-
Gain on sale of other assets	(923)	(714)	(484)
Equity earnings in joint venture	(2,210)	(2,081)	(331)
Other	5,691	1,996	4,953
Income before income taxes	211,526	178,319	256,652
Provision for income taxes (benefit)	(13,017)	(13,669)	16,914
Net income	$ 224,543	$ 191,988	$ 239,738
Net income per common share:			
Basic	$ 1.04	$ 1.08	$ 1.35
Diluted	$ 1.04	$ 1.08	$ 1.35
Average common shares outstanding during the period:			
Basic	215,550	177,904	177,612
Diluted	215,931	178,399	178,175

See accompanying notes to consolidated financial statements.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands of dollars)

	Years ended December 31,		
	2019	2018	2017
Net income	$ 224,543	$ 191,988	$ 239,738
Other comprehensive income, net of tax:			
Unrealized holding gain on investments, net of tax expense of $102	-	-	191
Comprehensive income	$ 224,543	$ 191,988	$ 239,929

See accompanying notes to consolidated financial statements.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CAPITALIZATION
(In thousands of dollars, except per share amounts)

		December 31, 2019	December 31, 2018
Essential Utilities stockholders' equity:			
Common stock, $0.50 par value		$ 111,935	$ 90,576
Capital in excess of par value		2,636,555	820,378
Retained earnings		1,210,072	1,174,245
Treasury stock, at cost		(77,702)	(75,835)
Accumulated other comprehensive income		-	-
Total stockholders' equity		3,880,860	2,009,364
Long-term debt of subsidiaries (substantially collateralized by utility plant):			
Interest Rate Range	Maturity Date Range		
0.00% to 0.99%	2020 to 2033	3,474	3,732
1.00% to 1.99%	2020 to 2039	10,733	11,588
2.00% to 2.99%	2024 to 2033	15,674	17,488
3.00% to 3.99%	2020 to 2056	655,685	497,426
4.00% to 4.99%	2020 to 2059	1,054,791	831,066
5.00% to 5.99%	2028 to 2043	60,683	154,788
6.00% to 6.99%	2026 to 2036	31,000	31,000
7.00% to 7.99%	2022 to 2027	30,751	31,564
8.00% to 8.99%	2021 to 2025	5,026	5,581
9.00% to 9.99%	2020 to 2026	19,300	20,000
		1,887,117	1,604,233
Notes payable to bank under revolving credit agreement, variable rate, due 2023		-	370,000
Unsecured notes payable:			
Bank note at 2.48% due 2019		-	50,000
Bank note at 3.50% due 2020		50,000	50,000
Amortizing notes at 3.00% due 2022		99,356	-
Notes ranging from 3.01% to 3.59%, due 2029 through 2041		490,000	245,000
Notes at 4.28%, due 2049		500,000	112,000
Notes ranging from 5.64% to 5.95%, due 2020 through 2034		50,927	132,427
Total long-term debt		3,077,400	2,563,660
Current portion of long-term debt		105,051	144,545
Long-term debt, excluding current portion		2,972,349	2,419,115
Less: debt issuance costs		29,022	20,651
Long-term debt, excluding current portion, net of debt issuance costs		2,943,327	2,398,464
Total capitalization		$ 6,824,187	$ 4,407,828

See accompanying notes to consolidated financial statements.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY
(In thousands of dollars, except per share amounts)

	Common stock	Capital in excess of par value	Retained earnings	Treasury stock	Accumulated Other Comprehensive Income	Total
Balance at December 31, 2016	$ 90,155	$ 797,513	$ 1,032,844	$ (71,113)	$ 669	$ 1,850,068
Net income	-	-	239,738	-	-	239,738
Other comprehensive income, net of income tax of $102	-	-	-	-	191	191
Dividends declared ($0.7920 per share)	-	-	(140,660)	-	-	(140,660)
Issuance of common stock under dividend reinvestment plan (45,121 shares)	23	1,430	-		-	1,453
Repurchase of stock (69,339 shares)	-	-	-	(2,167)	-	(2,167)
Equity compensation plan (169,258 shares)	85	(85)	-	-	-	-
Exercise of stock options (174,527 shares)	87	2,786	-	-	-	2,873
Stock-based compensation	-	6,342	(348)	-	-	5,994
Cumulative effect of change in accounting principle - windfall tax benefit	-	-	982	-	-	982
Other	-	(851)	-	-	-	(851)
Balance at December 31, 2017	90,350	807,135	1,132,556	(73,280)	860	1,957,621
Net income	-	-	191,988	-	-	191,988
Dividends declared ($0.8474 per share)	-	-	(150,736)	-	-	(150,736)
Issuance of common stock under dividend reinvestment plan (158,205 shares)	79	5,084	-	-	-	5,163
Repurchase of stock (73,898 shares)	-	-	-	(2,555)	-	(2,555)
Equity compensation plan (201,563 shares)	101	(101)	-	-	-	-
Exercise of stock options (91,808 shares)	46	1,413	-	-	-	1,459
Stock-based compensation	-	7,567	(423)	-	-	7,144
Cumulative effect of change in accounting principle - financial instruments	-	-	860	-	(860)	-
Other	-	(720)	-	-	-	(720)
Balance at December 31, 2018	90,576	820,378	1,174,245	(75,835)	-	2,009,364
Net income	-	-	224,543	-	-	224,543
Dividends declared ($0.9066 per share)	-	-	(188,512)	-	-	(188,512)
Stock issued to finance acquisition (37,370,017 shares)	18,685	1,244,414	-	-	-	1,263,099
Proceeds from stock purchase contracts issued under tangible equity units	-	557,389	-	-	-	557,389
Issuance of common stock from stock purchase contracts (4,846,601 shares)	2,423	(2,423)	-	-	-	-
Issuance of common stock under dividend reinvestment plan (236,666 shares)	118	8,841	-	-	-	8,959
Repurchase of stock (52,359 shares)	-	-	-	(1,867)	-	(1,867)
Equity compensation plan (146,867 shares)	73	(73)	-	-	-	-
Exercise of stock options (119,306 shares)	60	1,838	-	-	-	1,898
Stock-based compensation	-	7,368	(204)	-	-	7,164
Other	-	(1,177)	-	-	-	(1,177)
Balance at December 31, 2019	$ 111,935	$ 2,636,555	$ 1,210,072	$ (77,702)	$ -	$ 3,880,860

See accompanying notes to consolidated financial statements.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands of dollars)

		Years ended December 31,		
		2019	2018	2017
Cash flows from operating activities:				
Net income	$	224,543 $	191,988 $	239,738
Adjustments to reconcile net income to net cash flows from operating activities:				
Depreciation and amortization		156,476	146,673	136,724
Deferred income taxes		(10,436)	(14,950)	13,780
Provision for doubtful accounts		5,306	5,305	4,986
Stock-based compensation		7,368	7,567	6,342
(Gain) loss on sale of utility system and market-based business unit		(405)	-	774
Loss on interest rate swap agreements		23,742	59,779	-
Loss on debt extinguishment		18,528	-	-
Settlement of interest rate swap agreements		(83,520)	-	-
Gain on sale of other assets		(923)	(714)	(484)
Net change in receivables, inventory and prepayments		(4,335)	(18,024)	(6,458)
Net change in payables, accrued interest, accrued taxes and other accrued liabilities		5,108	567	(763)
Pension and other postretirement benefits contributions		(8,597)	(14,216)	(16,240)
Other		5,668	4,547	2,919
Net cash flows from operating activities		338,523	368,522	381,318
Cash flows from investing activities:				
Property, plant and equipment additions, including the debt component of allowance for funds used during construction of $4,231, $3,332, and $3,578		(550,273)	(495,737)	(478,089)
Acquisitions of utility systems and other, net		(59,687)	(145,693)	(5,860)
Net proceeds from the sale of utility systems and other assets		2,893	716	1,342
Other		2,464	899	2,223
Net cash flows used in investing activities		(604,603)	(639,815)	(480,384)
Cash flows from financing activities:				
Customers' advances and contributions in aid of construction		9,092	7,458	7,312
Repayments of customers' advances		(6,825)	(6,217)	(6,536)
Net proceeds (repayments) of short-term debt		10,275	11,799	(2,885)
Proceeds from long-term debt		1,434,506	1,331,868	591,024
Repayments of long-term debt		(1,048,471)	(914,125)	(359,068)
Extinguishment of long-term debt		(25,237)	-	-
Change in cash overdraft position		1,993	(12,678)	9,012
Proceeds from issuance of common stock under dividend reinvestment plan		8,959	5,163	1,453
Proceeds from stock issued to finance acquisition		1,263,099	-	-
Proceeds from tangible equity unit issuance		673,642	-	-
Proceeds from exercised stock options		1,898	1,459	2,873
Repurchase of common stock		(1,867)	(2,555)	(2,167)
Dividends paid on common stock		(188,512)	(150,736)	(140,660)
Other		(1,177)	(720)	(851)
Net cash flows from financing activities		2,131,375	270,716	99,507
Net increase (decrease) in cash and cash equivalents		1,865,295	(577)	441
Cash and cash equivalents at beginning of year		3,627	4,204	3,763
Cash and cash equivalents at end of year	$	1,868,922 $	3,627 $	4,204
Cash paid during the year for:				
Interest, net of amounts capitalized	$	89,228 $	93,630 $	81,771
Income taxes		970	2,103	3,177
Non-cash investing activities:				
Property, plant and equipment additions purchased at the period end, but not yet paid	$	60,628 $	65,285 $	45,385
Non-cash utility property contributions		30,693	24,660	39,220

See accompanying notes to consolidated financial statements.

Refer to Note 2 – *Acquisitions,* Note 11 – *Long-term Debt and Loans Payable*, and Note 15 – *Employee Stock and Incentive Plan* for a description of non-cash activities.

Note 1 – ***Summary of Significant Accounting Policies***

Nature of Operations **─** Essential Utilities, Inc. ("Essential Utilities," the "Company," "we," "our", or "us") is the holding company for regulated utilities providing water or wastewater services concentrated in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, and Virginia. On February 3, 2020, we changed our name from Aqua America, Inc. to Essential Utilities, Inc. to align the name of the Company with the anticipated business plan of the Company following the pending Peoples Gas Acquisition and to reflect the proposed combination of regulated water utilities and natural gas utilities that offer essential utility services to customers. After completion of the acquisition, the water and wastewater utility services will be provided through Essential Utilities' Aqua companies and the natural gas utility services will be provided through its Peoples natural gas companies. Essential Utilities plans to complete the Peoples Gas Acquisition on March 16, 2020. Our largest operating subsidiary is Aqua Pennsylvania, Inc., which accounted for approximately 54% of our operating revenues and approximately 72% of our Regulated water segment's income for 2019. As of December 31, 2019, Aqua Pennsylvania provided water or wastewater services to approximately one-half of the total number of people we serve. Aqua Pennsylvania's service territory is located in the suburban areas north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. The Company's other regulated utility subsidiaries provide similar services in seven additional states. In addition, the Company's market-based activities are conducted through Aqua Infrastructure LLC and Aqua Resources, Inc. Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. Aqua Resources manages a water system operating and maintenance contract; and offers, through a third-party, water and sewer line protection solutions and repair services to households. In 2017, we completed the sale of business units that were reported within the Company's market-based subsidiary, Aqua Resources, one which installed and tested devices that prevent the contamination of potable water and another that constructed, maintained, and repaired water and wastewater systems.

The Company has identified ten operating segments and has one reportable segment named the Regulated water segment. The reportable segment is comprised of eight operating segments for our water and wastewater regulated utility companies which are organized by the states where we provide these services. These operating segments are aggregated into one reportable segment since each of the Company's operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution or wastewater collection methods, and the nature of the regulatory environment. In addition, Aqua Resources and Aqua Infrastructure are not quantitatively significant to be reportable and are included as a component of "Other," in addition to corporate costs that have not been allocated to the Regulated water segment, because they would not be recoverable as a cost of utility service, and intersegment eliminations.

Regulation **─** Most of the operating companies that are regulated public utilities are subject to regulation by the utility commissions of the states in which they operate. The respective utility commissions have jurisdiction with respect to rates, service, accounting procedures, issuance of securities, acquisitions and other matters. Some of the operating companies that are regulated public utilities are subject to rate regulation by county or city government. Regulated public utilities follow the Financial Accounting Standards Board's ("FASB") accounting guidance for regulated operations, which provides for the recognition of regulatory assets and liabilities as allowed by regulators for costs or credits that are reflected in current rates or are considered probable of being included in future rates. Costs, for which the Company has received or expects to receive prospective rate recovery, are deferred as a regulatory asset and amortized over the period of rate recovery in accordance with the FASB's accounting guidance for regulated operations. The regulatory assets or liabilities are then relieved as the cost or credit is reflected in Company's rates charged for utility service. If, as a result of a change in circumstances, it is determined that the regulated operating companies no longer meets the criteria to apply regulatory accounting, the operating company would have to discontinue regulatory accounting and write-off the respective regulatory assets and liabilities. See Note – 6 *Regulatory Assets and Liabilities* for further information regarding the Company's regulatory assets.

The Company makes significant judgments and estimates to record regulatory assets and liabilities. For each regulatory jurisdiction with regulated operations, the Company evaluates at the end of each reporting period, whether the regulatory assets and liabilities continue to meet the probable criteria for future recovery or refund. The evaluation considers factors such as regulatory orders or guidelines, in the same regulatory jurisdiction, of a specific matter or a similar matter, as provided to the Company in the past or to other regulated utilities. In addition, the evaluation may be impacted by changes in the regulatory environment and pending or new legislation that could impact the ability to recover costs through regulated rates. There may be multiple participants to rate or transactional regulatory proceedings who might offer different views on various aspects of such proceedings, and in these instances may challenge the prudence of our business policies and practices, seek cost disallowances or request other relief.

Use of Estimates in Preparation of Consolidated Financial Statements **─** The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Basis of Presentation **–** The consolidated financial statements include the accounts of the Company and its subsidiaries. All intercompany accounts and transactions have been eliminated. The following prior period amounts have been reclassified to conform to the current period presentation:

- In the consolidated balance sheet – the presentation of accounts receivable, net, and unbilled revenues, and
- In the consolidated statements of net income – the presentation of interest expense and interest income.

Property, Plant and Equipment and Depreciation **─** Property, plant and equipment consist primarily of utility plant. The cost of additions includes contracted cost, direct labor and fringe benefits, materials, overheads, and for additions meeting certain criteria, allowance for funds used during construction. Water and wastewater systems acquired are typically recorded at estimated original cost of utility plant when first devoted to utility service and the applicable depreciation is recorded to accumulated depreciation. Further, water and wastewater systems acquired under fair value regulations would be recorded based on the valuation of the utility plant as approved by the respective utility commission. The difference between the estimated original cost, less applicable accumulated depreciation, and the purchase price may be recorded as an acquisition adjustment within utility plant as permitted by the applicable regulatory jurisdiction. At December 31, 2019, utility plant includes a net credit acquisition adjustment of $15,248, which is generally being amortized from 2 to 59 years. Amortization of the acquisition adjustments totaled $6,076 in 2019, $2,645 in 2018, and $2,774 in 2017.

Utility expenditures for maintenance and repairs, including major maintenance projects and minor renewals, are charged to operating expenses when incurred in accordance with the system of accounts prescribed by the utility commissions of the states in which the company operates. The cost of new units of property and betterments are capitalized. Utility expenditures for water main cleaning and relining of pipes are deferred and are presented in net property, plant and equipment in accordance with the FASB's accounting guidance for regulated operations. As of December 31, 2019, $1,360 of these costs have been incurred since the last respective rate proceeding and the Company expects to recover these costs in future rates.

The cost of software upgrades and enhancements are capitalized if they result in added functionality, which enables the software to perform tasks it was previously incapable of performing. Information technology costs associated with major system installations, conversions and improvements, such as software training, data conversion and business process reengineering costs, are deferred as a regulatory asset if the Company expects to recover these costs in future rates. If these costs are not deferred, then these costs are charged to operating expenses when incurred. As of December 31, 2019, $16,680 of these costs have been deferred since the last respective rate proceeding as a regulatory asset, and the deferral is reported as a component of net property, plant and equipment.

When units of utility property are replaced, retired or abandoned, the recorded value thereof is credited to the asset account and such value, together with the net cost of removal, is charged to accumulated depreciation. To the extent the Company anticipates recovery of the cost of removal or other retirement costs through rates after the retirement costs are incurred, a regulatory asset is recorded as those costs are incurred. In some cases, the Company recovers retirement costs through rates during the life of the associated asset and before the costs are incurred. These amounts, which are not yet utilized, result in a regulatory liability being reported based on the amounts previously recovered through customer rates.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

The straight-line remaining life method is used to compute depreciation on utility plant. Generally, the straight-line method is used with respect to transportation and mechanical equipment, office equipment and laboratory equipment.

Long-lived assets of the Company, which consist primarily of utility plant in service, regulatory assets, and investment in joint venture, are reviewed for impairment when changes in circumstances or events occur. These circumstances or events could include a disallowance of utility plant in service or regulatory assets by the respective utility commission, a decline in the market value or physical condition of a long-lived asset, an adverse change in the manner in which long-lived assets are used or planned to be used, a change in historical trends, operating cash flows associated with the long-lived assets, changes in macroeconomic conditions, industry and market conditions, or overall financial performance. When these circumstances or events occur, the Company determines whether it is more likely than not that the fair value of those assets is less than their carrying amount. If the Company determines that it is more likely than not (that is, the likelihood of more than 50 percent), the Company would recognize an impairment charge if it is determined that the carrying amount of an asset exceeds the sum of the undiscounted estimated cash flows. In this circumstance, the Company would recognize an impairment charge equal to the difference between the carrying amount and the fair value of the asset. Fair value is estimated to be the present value of future net cash flows associated with the asset, discounted using a discount rate commensurate with the risk and remaining life of the asset. During the period there has been no change in circumstances or events that have occurred that require adjustments to the carrying values of the Company's long-lived assets.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

Allowance for Funds Used During Construction **─** The allowance for funds used during construction ("AFUDC") represents the capitalized cost of funds used to finance the construction of utility plant. In general, AFUDC is applied to construction projects requiring more than one month to complete. No AFUDC is applied to projects funded by customer advances for construction, contributions in aid of construction, or applicable state-revolving fund loans. AFUDC includes the net cost of borrowed funds and a rate of return on other funds when used and is recovered through water rates as the utility plant is depreciated. The amount of AFUDC related to equity funds in 2019 was $11,941, 2018 was $9,691, and 2017 was $11,633. No interest was capitalized by our market-based businesses.

Recognition of Revenues **─** The Company recognizes revenue as water and wastewater services are provided to our customers, which happens over time as the services are delivered and the performance obligation is satisfied. The Company's utility revenues recognized in an accounting period includes amounts billed to customers on a cycle basis and unbilled amounts based on estimated usage from the last billing to the end of the accounting period. Unbilled amounts are calculated by deriving estimates based on average usage of the prior month. The Company's actual results could differ from these estimates, which would result in operating revenues being adjusted in the period that the revision to our estimates are determined.

Generally, payment is due within 30 days once a bill is issued to a customer. Sales tax and other taxes we collect on behalf of government authorities, concurrent with our revenue-producing activities, are primarily excluded from revenue. The following table presents our revenues disaggregated by major source and customer class:

	Years ended December 31,					
	2019			2018		
	Water Revenues	Wastewater Revenues	Other Revenues	Water Revenues	Wastewater Revenues	Other Revenues
Revenues from contracts with customers:						
Residential	$ 518,192	$ 83,561	$ -	$ 482,946	$ 73,418	$ -
Commercial	145,599	15,222	-	133,753	13,147	-
Fire protection	33,589	-	-	32,236	-	-
Industrial	30,667	1,765	-	28,848	1,857	-
Other water	39,353	-	-	53,658	-	-
Other wastewater	-	4,656	-	-	5,748	-
Other utility	-	-	13,835	-	-	9,427
Revenues from contracts with customers	767,400	105,204	13,835	731,441	94,170	9,427
Alternative revenue program	80	(89)	-	(708)	308	-
Other and eliminations	-	-	3,262	-	-	3,453
Consolidated	$ 767,480	$ 105,115	$ 17,097	$ 730,733	$ 94,478	$ 12,880

Revenues from Contracts with Customers – These revenues are composed of three main categories: water, wastewater, and other. Water revenues represent revenues earned for supplying customers with water service. Wastewater revenues represent revenues earned for treating wastewater and releasing it into the water supply. Other revenues are associated fees that relate to the regulated business but are not water and wastewater revenues. See description below for a discussion on the performance obligation for each of these revenue streams:

- Tariff Revenues – These revenues are categorized by customer class: residential, commercial, fire protection, industrial, other water, and other wastewater. The rates that generate these revenues are approved by the respective state utility commissions, and revenues are billed cyclically and accrued for when unbilled. Other water and other wastewater revenues consists primarily of fines, penalties, surcharges, and availability lot fees. Our performance obligation for tariff revenues is to provide potable water or wastewater treatment service to customers. This performance obligation is satisfied over time as the services are rendered. The amounts that the Company has a right to invoice for tariff revenues reflect the right to consideration from the customers in an amount that corresponds directly with the value transferred to the customer for the performance completed to date.

- Other Utility Revenues – Other utility revenues represents revenues earned primarily from: antenna revenues, which represents fees received from telecommunication operators that have put cellular antennas on our water towers, operation and maintenance and billing contracts, which represents fees earned from municipalities for our operation of their water or wastewater treatment services or performing billing services, and fees earned from developers for accessing our water mains. The performance obligations vary for these revenues, but all are primarily recognized over time as the service is delivered.
- Alternative Revenue Program – These revenues represent the difference between the actual billed utility water and wastewater revenues for Aqua Illinois and the revenues set in the last Aqua Illinois rate case. We recognize revenues based on the target amount established in the last rate case, and then record either a regulatory asset or liability based on the cumulative annual difference between the target and actual, which results in either a refund due to customers or a payment from customers. The cumulative annual difference is either refunded to customers or collected from customers over a nine-month period. This revenue program represents a contract between the utility and its regulators, not customers, and therefore is not within the scope of the FASB's accounting guidance for recognizing revenue from contracts with customers.
- Other and Eliminations – Other and eliminations consists of our market-based revenues, which comprises: Aqua Infrastructure and Aqua Resources (described below), and intercompany eliminations for revenue billed between our subsidiaries. Aqua Infrastructure is the holding company for our 49% investment in a joint venture that operates a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale of north central Pennsylvania. The joint venture earns revenues through providing non-utility raw water supply services to natural gas drilling companies which enter into water supply contracts. The performance obligation is to deliver non-potable water to the joint venture's customers. Aqua Infrastructure's share of the revenues recognized by the joint venture is reflected, net, in equity earnings in joint venture on our consolidated statements of net income. Aqua Resources earns revenues by providing non-regulated water and wastewater services through an operating and maintenance contract, and third-party water and sewer service line repair. The performance obligations are performing agreed upon services in the contract, most commonly operation of third-party water or wastewater treatment services, or billing services, or allowing the use of our logo to a third-party water and sewer service line repair. Revenues are primarily recognized over time as service is delivered. The Company's market-based subsidiaries recognized revenues of $3,395 in 2019, $3,590 in 2018, and $4,798 in 2017.

Cash and Cash Equivalents — The Company considers all highly liquid investments with an original maturity of three months or less, which are not restricted for construction activity, to be cash equivalents.

The Company had a book overdraft, which represents transactions that have not cleared the bank accounts at the end of the period, for specific disbursement cash accounts of $10,944 and $8,950 at December 31, 2019 and 2018, respectively. The Company transfers cash on an as-needed basis to fund these items as they clear the bank in subsequent periods. The balance of the book overdraft is reported as book overdraft and the change in the book overdraft balance is reported as cash flows from financing activities, due to our ability to fund the overdraft with the Company's credit facility.

Accounts Receivable — Accounts receivable are recorded at the invoiced amounts, which consists of billed and unbilled revenues. The allowance for doubtful accounts is the Company's best estimate of the amount of probable credit losses in our existing accounts receivable and is determined based on historical write-off experience and the aging of account balances. The Company reviews the allowance for doubtful accounts quarterly. Account balances are written off against the allowance when it is probable the receivable will not be recovered. When utility customers request extended payment terms, credit is extended based on regulatory guidelines, and collateral is not required.

Inventories, Materials and Supplies — Inventories are stated at cost. Cost is determined using the first-in, first-out method.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

Investment in Joint Venture – The Company uses the equity method of accounting to account for our 49% investment in a joint venture with a firm in the natural gas industry for the construction and operation of a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale in north-central Pennsylvania, which commenced operations in 2012. Our initial investment is carried at cost. Subsequently, the carrying amount of our investment is adjusted to reflect capital contributions or distributions, and our equity in earnings or losses since the commencement of the system's operations, as well as a decline in the fair value of our investment. Our share of equity earnings in the joint venture is reported in the consolidated statements of net income as equity earnings in joint venture. During 2019 and 2018 we received distributions of $3,185 and $1,793, respectively. For our equity method investment in joint venture, the Company evaluates whether it has experienced a decline in the value of its investment that is other than temporary in nature. We would recognize an impairment loss if the fair value of our investment is less than the carrying amount of the investment, and the decline in value is considered other than temporary. Additionally, the Company would recognize its share of an impairment loss if the joint venture determines that the carrying amount of the joint venture's assets exceeds the sum of the joint venture's undiscounted estimated cash flows.

Goodwill ─ Goodwill represents the excess cost over the fair value of net tangible and identifiable intangible assets acquired through acquisitions. Goodwill is not amortized but is tested for impairment annually, or more often, if circumstances indicate a possible impairment may exist. When testing goodwill for impairment, we may assess qualitative factors, including macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, and entity specific events, for some or all of our reporting units to determine whether it's more likely than not that the fair value of a reporting unit is less than its carrying amount. Alternatively, based on our assessment of the qualitative factors previously noted, we may perform a quantitative goodwill impairment test by determining the fair value of a reporting unit based on a discounted cash flow analysis. If we perform a quantitative test and determine that the fair value of a reporting unit is less than its carrying amount, we would record an impairment loss for the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill. The Company performed a qualitative assessment for its annual test of the goodwill attributable for each of our reporting units for impairment as of July 31, 2019, and concluded that it is more likely than not that the fair value of each reporting unit, which has goodwill recorded, exceeded its carrying amount, indicating that none of the Company's goodwill was impaired. The following table summarizes the changes in the Company's goodwill:

	Regulated Water	Other	Consolidated
Balance at December 31, 2017	$ 37,389	$ 4,841	$ 42,230
Goodwill acquired	10,790	-	10,790
Reclassifications to utility plant acquisition adjustment	(139)	-	(139)
Other	(155)	-	(155)
Balance at December 31, 2018	47,885	4,841	52,726
Goodwill acquired	11,126	-	11,126
Reclassifications to utility plant acquisition adjustment	(30)	-	(30)
Balance at December 31, 2019	$ 58,981	$ 4,841	$ 63,822

The reclassification of goodwill to utility plant acquisition adjustment results from a mechanism approved by the applicable utility commission. The mechanism provides for the transfer over time, and the recovery through customer rates, of goodwill associated with some acquisitions upon achieving specific objectives.

Deferred Charges and Other Assets ─ Deferred charges and other assets consist primarily of assets held to compensate employees in the future who participate in the Company's deferred compensation plan and other costs.

Marketable equity securities are carried on the balance sheet at fair market value, and changes in fair value are included in other expense (income).

Income Taxes **—** The Company accounts for some income and expense items in different time periods for financial and tax reporting purposes. Deferred income taxes are provided on specific temporary differences between the tax basis of the assets and liabilities, and the amounts at which they are carried in the consolidated financial statements. The income tax effect of temporary differences not currently recovered in rates is recorded as deferred taxes with an offsetting regulatory asset or liability. These deferred income taxes are based on the enacted tax rates expected to be in effect when such temporary differences are projected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to the amount more likely than not to be realized. Investment tax credits are deferred and amortized over the estimated useful lives of the related properties. Judgment is required in evaluating the Company's Federal and state tax positions. Despite management's belief that the Company's tax return positions are fully supportable, the Company establishes reserves when it believes that its tax positions are likely to be challenged and it may not fully prevail in these challenges. The Company's provision for income taxes includes interest, penalties and reserves for uncertain tax positions.

In 2012, the Company changed its tax method of accounting for qualifying utility asset improvement costs in Aqua Pennsylvania effective with the tax year ended December 31, 2012 and for prior tax years. The tax accounting method was changed to permit the expensing of qualifying utility asset improvement costs that were previously being capitalized and depreciated for book and tax purposes. This change was implemented in response to a June 2012 rate order issued by the Pennsylvania Public Utility Commission to Aqua Pennsylvania, which provides for a reduction in current income tax expense as a result of the recognition of income tax benefits for qualifying utility asset improvements. This change results in a significant reduction in the effective income tax rate, a reduction in current income tax expense, and reduces the amount of taxes currently payable. For qualifying capital expenditures made prior to 2012, the resulting tax benefits have been deferred as of December 31, 2012 and, in accordance with the rate order, a ten year amortization of the income tax benefits, which reduces future income tax expense, commenced in 2013.

Customers' Advances for Construction and Contributions in Aid of Construction **—** Water mains, other utility property or, in some instances, cash advances to reimburse the Company for its costs to construct water mains or other utility property, are contributed to the Company by customers, real estate developers and builders in order to extend utility service to their properties. The value of these contributions is recorded as customers' advances for construction. Over time, the amount of non-cash contributed property will vary based on the timing of the contribution of the non-cash property and the volume of non-cash contributed property received in connection with development in our service territories. The Company makes refunds on these advances over a specific period of time based on operating revenues related to the property, or as new customers are connected to and take service from the applicable water main. After all refunds are made, any remaining balance is transferred to contributions in aid of construction. Contributions in aid of construction include direct non-refundable contributions and the portion of customers' advances for construction that become non-refundable.

Based on regulatory conventions in states where the Company operates, generally our subsidiaries depreciate contributed property and amortize contributions in aid of construction at the composite rate of the related property. Contributions in aid of construction and customers' advances for construction are deducted from the Company's rate base for rate-making purposes, and therefore, no return is earned on contributed property.

Stock-Based Compensation **—** The Company records compensation expense in the financial statements for stock-based awards based on the grant date fair value of those awards. Stock-based compensation expense includes an estimate for pre-vesting forfeitures and is recognized over the requisite service periods of the awards on either a straight-line basis, or the graded vesting method, which is generally commensurate with the vesting term.

Fair Value Measurements – The Company follows the FASB's accounting guidance for fair value measurements and disclosures, which defines fair value and establishes a framework for using fair value to measure assets and liabilities. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1: unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access;
- Level 2: inputs other than Level 1 that are observable, either directly or indirectly, such as quoted market prices in active markets for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in non-active markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; or
- Level 3: inputs that are unobservable and significant to the fair value measurement.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. Additionally, assets that are measured at fair value using the net asset value ("NAV") per share practical expedient are not classified in the fair value hierarchy. There have been no changes in the valuation techniques used to measure fair value or asset or liability transfers between the levels of the fair value hierarchy for the years ended December 31, 2019 and 2018.

Recent Accounting Pronouncements –

Pronouncements to be adopted upon the effective date:

In December 2019, the FASB issued updated accounting guidance that simplifies the accounting for income taxes. The updated guidance removes certain exceptions to the general principles of accounting for income taxes to reduce the cost and complexity of its application, including the accounting for intraperiod tax allocation when there is a loss from continuing operations and income or a gain from other items, deferred tax liabilities for equity method investments when a foreign subsidiary becomes an equity method investment or when a foreign equity method investment becomes a subsidiary, and calculating income taxes in an interim period when a year-to-date loss exceeds the anticipated loss for the year. Additionally, the updated guidance clarifies and amends the existing guidance over accounting for franchise taxes and other taxes partially based on income, an entity's tax basis of goodwill, separate entity financial statements, interim recognition of enactment of tax laws or rate changes, and improvements to the Codification for income taxes related to employee stock ownership plans and investments in qualified affordable housing projects accounted for using the equity method. The updated accounting guidance is effective for fiscal years beginning after December 15, 2020 and interim periods within those fiscal years with early adoption permitted. The Company is evaluating the requirements of the updated guidance to determine the impact of adoption.

In August 2018, the FASB issued updated accounting guidance on accounting for cloud computing arrangements. The updated guidance requires entities that are customers in cloud computing arrangements to defer implementation costs if they would be capitalized by the entity in software licensing arrangements under the internal-use software guidance. The guidance may be applied retrospectively or prospectively to implementation costs incurred after the date of adoption. The updated accounting guidance is effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years. Upon adoption, we do not believe the new guidance will have an impact on our consolidated financial statements.

In August 2018, the FASB issued updated accounting guidance, which modifies the disclosures required for defined benefit pension and other postretirement benefit plans. The modifications in this update remove disclosures that are no longer considered cost beneficial, clarify the specific requirements of disclosures, and add disclosure requirements identified as relevant. The updated accounting guidance is effective for fiscal years ending after December 15, 2020, with early adoption available. Upon adoption, we do not believe the new guidance will have an impact on our consolidated financial statements.

In August 2018, the FASB issued updated accounting guidance, which modifies the disclosure requirements on fair value measurements. The modifications in this update eliminates, amends, and adds disclosure requirements for fair value measurements, which is expected to reduce costs for preparers while providing more decision-useful information for financial statement users. The updated accounting guidance is effective for fiscal years ending after December 15, 2019, with early adoption available. Upon adoption, we do not believe the new guidance will have an impact on our consolidated financial statements.

In June 2016, the FASB issued updated accounting guidance on accounting for impairments of financial instruments, including trade receivables, which requires companies to estimate expected credit losses on trade receivables over their contractual life. Historically, companies reserve for expected credit losses by applying historical loss percentages to respective aging categories. Under the updated accounting guidance, companies will use a forward-looking methodology that incorporates lifetime expected credit losses, which will result in an allowance for expected credit losses for receivables that are either current or not yet due, which historically have not been reserved for. The updated accounting guidance is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years, with early adoption available. Upon adoption, we do not believe the new guidance will have an impact on our consolidated financial statements.

Pronouncements adopted during the fiscal year:

In February 2016, the FASB issued updated accounting guidance on accounting for leases, which requires lessees to establish a right-of-use asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. For income statement purposes, leases will be classified as either operating or finance. Operating leases will result in straight-line expense while finance leases will result in a front-loaded expense pattern. The updated accounting guidance is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with early adoption available. On January 1, 2019, the Company adopted the updated guidance as required using the modified retrospective approach, which provides a method for recording existing leases at adoption and in comparative periods that approximates the results of a full retrospective approach. Further, we elected the package of practical expedients permitted under the transition guidance within the updated guidance, which among other things, allowed the Company to carry forward its historical lease classification. The Company also elected the practical expedient related to land easements, allowing the Company to carry forward its accounting treatment for land easements on existing agreements. Adoption of the new guidance resulted in the recording, on the Company's consolidated balance sheet, of a right-of-use asset and lease liability of $14,028 as of January 1, 2019, and there was no cumulative impact adjustment to retained earnings for prior periods accounted for under the previous lease guidance.

Note 2 – ***Acquisitions***

Peoples Gas Acquisition

Pursuant to the Company's growth strategy, on October 22, 2018, the Company entered into a purchase agreement with LDC Parent LLC ("Seller"), to acquire its interests in LDC Funding LLC ("LDC"). LDC is the parent of LDC Holdings LLC ("LDC Holdings"), and LDC Holdings is the parent of five natural gas public utility companies, which includes Peoples Natural Gas Company, Peoples Gas Company, and Delta Natural Gas Company as well as other operating subsidiaries. Collectively these businesses are referred to as "Peoples," a natural gas distribution company headquartered in Pittsburgh, Pennsylvania, serving approximately 747,000 gas utility customers in western Pennsylvania, West Virginia, and Kentucky and the pending transaction is referred to as the Peoples Gas Acquisition. At the closing of the Peoples Gas Acquisition, the Company will pay $4,275,000, in cash subject to adjustments for working capital, certain capital expenditures, transaction expenses and closing indebtedness as set forth in the acquisition agreement. The Company expects to assume approximately $1,106,000 of Peoples' indebtedness upon the closing of the Peoples Gas Acquisition, which would reduce the cash purchase price by approximately $1,106,000. The Company financed the Peoples Gas Acquisition purchase price and refinanced certain debt of the Company with a mix of common equity, equity-linked securities, and debt financing, which included senior notes issued in capital markets transactions, and credit facilities. On October 22, 2018, the Company obtained a commitment (the "Bridge Commitment") from certain banks to provide senior unsecured bridge loans in an aggregate amount of up to $5,100,000 to, among other things, backstop the Peoples Gas Acquisition purchase price and the refinancing of certain debt of the Company and of Peoples. As of December 31, 2019, the Company had terminated $4,350,000 of commitments under the Bridge Commitment in connection with, among other things, the replacement of the Company's unsecured revolving credit facility and the issuances of common stock, tangible equity units, and senior notes in April 2019.

On October 23, 2018, the Company entered into interest rate swap agreements to mitigate interest rate risk associated with an anticipated $850,000 of debt issuances to fund a portion of the Peoples Gas Acquisition. The interest rate swaps were settled on April 24, 2019 in conjunction with the issuance of long-term debt to be used to finance a portion of the purchase price of this acquisition, which resulted in a payment by the Company of $83,520. Refer to Note 11 – *Long-term Debt and Loans Payable* for further information. The interest rate swap agreements did not qualify for hedge accounting and any changes in the fair value of the swaps was included in our earnings.

Approval from the United States Federal Trade Commission was obtained in December 2018, and approvals from the public utility commissions of Kentucky, West Virginia, and Pennsylvania were obtained in March 2019, April 2019, and January 2020, respectively. The Peoples Gas Acquisition is subject to customary closing conditions set forth in the acquisition agreement. This acquisition is expected to close on March 16, 2020, and it is anticipated that this transaction will result in the recording of goodwill. In the event that this acquisition is terminated due to certain breaches by the Company, a fee of $120,000 would be payable to the Seller as a reverse termination fee.

Water and Wastewater Utility Acquisitions

In December 2019, the Company acquired the wastewater utility system assets of Cheltenham Township, Pennsylvania, which serves 9,887 customers for $50,250. The preliminary purchase price allocation for this acquisition consisted primarily of property, plant and equipment of $44,558 and goodwill of $5,692. Additionally, in 2019, the Company completed seven acquisitions of water and wastewater utility systems in three states adding 2,393 customers. The total purchase price of these utility systems consisted of $9,437 in cash. The purchase price allocation for these acquisitions consisted primarily of acquired property, plant and equipment. The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired in 2019 are $506.

In September 2019, the Company entered into a purchase agreement to acquire the wastewater utility system assets of the Delaware County Regional Water Quality Control Authority ("DELCORA"), which consist of approximately 16,000 customers, or the equivalent of 198,000 retail customers, in 42 municipalities in Southeast Pennsylvania for $276,500. The purchase price for this pending acquisition is subject to certain adjustments at closing, and is subject to regulatory approval, including the final determination of the fair value of the rate base acquired.

In November 2018, the Company entered into a purchase agreement to acquire the wastewater utility system assets of East Norriton Township, Pennsylvania, which serves approximately 4,950 customers for $21,000. The purchase price for this pending acquisition is subject to certain adjustments at closing, and is subject to regulatory approval, including the final determination of the fair value of the rate base acquired.

In addition to the Company's pending acquisitions of DELCORA and East Norriton Township, as part of the Company's growth-through-acquisition strategy, the Company has entered into purchase agreements to acquire the water or wastewater utility system assets of two municipalities, which will add approximately 5,306 customers in two of the states in which the Company operates, for a total combined purchase price in cash of $37,000. The purchase price for these pending acquisitions is subject to certain adjustments at closing, and the pending acquisitions are subject to regulatory approvals, including the final determination of the fair value of the rate base acquired. Closings for our remaining acquisitions, with the exception of DELCORA and East Norriton Township, are expected to occur in the first half of 2020, subject to the timing of the regulatory approval process.

In July 2018, the Company acquired the wastewater utility systems assets of Limerick Township, Pennsylvania which serves 5,497 customers. The total cash purchase price for the utility system was $74,836. The purchase price allocation for this acquisition consisted primarily of acquired property, plant and equipment of $64,759, and goodwill of $10,790. Additionally, during 2018, the Company completed seven acquisitions of water and wastewater utility systems in three states adding 8,661 customers. The total purchase price of these utility systems consisted of $42,519 in cash. The purchase price allocation for these acquisitions consisted primarily of acquired property, plant and equipment. The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired were $8,905 in 2019 and in 2018 were $3,308. Further, in December 2018, the Company acquired the Valley Creek Trunk Sewer System, serving area municipalities in Pennsylvania, from the Tredyffrin Township Municipal Authority for $28,338. The purchase price allocation for this acquisition consisted primarily of property, plant and equipment of $22,904 and goodwill of $5,434. The system receives untreated wastewater from area municipalities, which is conveyed to the Valley Forge Treatment Plant. The system consists of 49,000 linear feet of gravity sewers, pump stations, and force mains. The operating revenues included in the consolidated financial statements of the Company for the Valley Creek Trunk Sewer System were $2,799 in 2019.

In 2017, the Company completed four acquisitions of water and wastewater utility systems in two states adding 1,003 customers. The total purchase price of these utility systems consisted of $5,860 in cash, which resulted in $72 of goodwill being recorded. The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired were $878 in 2019, $846 in 2018, and in 2017 are $461. The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

Note 3 –*Dispositions*

The following dispositions have not been presented as discontinued operations in the Company's consolidated financial statements as they do not qualify as discontinued operations, since their disposal does not represent a strategic shift that has a major effect on our operations or financial results. The gains or loss disclosed below are reported in the consolidated statements of net income as a component of operations and maintenance expense.

Dispositions Completed in 2019 and 2017

In the fourth quarter of 2018, the Company decided to market for sale a water system in Virginia that serves approximately 500 customers. This water system was reported as assets held for sale in the Company's December 31, 2018 consolidated balance sheet included in this Annual Report, and in April 2019, the Company completed the sale for proceeds of $1,882 and recognized a gain on sale of $405.

In 2017, the Company completed the sale of two business units that were reported within the Company's market-based subsidiary, Aqua Resources. One business unit installed and tested devices that prevent the contamination of potable water, and the other business unit constructed, repaired, and performed maintenance on water and wastewater systems. These transactions resulted in total proceeds of $867 and the recognition of a net loss of $324.

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Dispositions Reported as Assets Held for Sale at December 31, 2019

In the first quarter of 2017, the Company decided to market for sale a water system in Texas that serves approximately 265 customers. This water system is reported as assets held for sale in the Company's consolidated balance sheet, and the sale is expected to close in the first half of 2020.

Note 4 – *Property, Plant and Equipment*

	December 31, 2019	December 31, 2018	Approximate Range of Useful Lives	Weighted Average Useful Life
Utility plant and equipment:				
Mains and accessories	$ 3,585,506	$ 3,344,910	33 - 94 years	75 years
Services, hydrants, treatment plants and reservoirs	2,152,397	1,984,164	5 - 89 years	56 years
Operations structures and water tanks	332,812	313,531	14 - 85 years	48 years
Miscellaneous pumping and purification equipment	904,757	847,279	9 - 76 years	42 years
Meters, data processing, transportation and operating equipment	847,945	806,978	5 - 84 years	29 years
Land and other non-depreciable assets	156,617	107,537	-	-
Utility plant and equipment	7,980,034	7,404,399		
Utility construction work in progress	214,633	235,979	-	-
Net utility plant acquisition adjustment	(15,248)	(20,832)	2 - 59 years	28 years
Non-utility plant and equipment	22,517	28,923	2 - 64 years	57 years
Total property, plant and equipment	$ 8,201,936	$ 7,648,469		

Note 5 – *Accounts Receivable*

	December 31, 2019	December 31, 2018
Billed utility revenue	$ 69,205	$ 68,347
Other	5,285	4,392
	74,490	72,739
Less allowance for doubtful accounts	7,353	6,914
Net accounts receivable	$ 67,137	$ 65,825

The Company's utility customers are located principally in the following states: 47% in Pennsylvania, 15% in Ohio, 10% in North Carolina, 8% in Texas, and 8% in Illinois. No single customer accounted for more than one percent of the Company's regulated operating revenues during the years ended December 31, 2019, 2018, and 2017. The following table summarizes the changes in the Company's allowance for doubtful accounts:

	2019	2018	2017
Balance at January 1,	$ 6,914	$ 7,071	$ 7,095
Amounts charged to expense	5,306	5,305	4,986
Accounts written off	(5,980)	(6,587)	(6,135)
Recoveries of accounts written off	1,113	1,125	1,125
Balance at December 31,	$ 7,353	$ 6,914	$ 7,071

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Note 6 – *Regulatory Assets and Liabilities*

The regulatory assets represent costs that are probable to be fully recovered from customers in future rates while regulatory liabilities represent amounts that are expected to be refunded to customers in future rates or amounts recovered from customers in advance of incurring the costs. Except for income taxes and utility plant retirement costs, regulatory assets and regulatory liabilities are excluded from the Company's rate base and do not earn a return. The components of regulatory assets and regulatory liabilities are as follows:

	December 31, 2019		December 31, 2018	
	Regulatory Assets	Regulatory Liabilities	Regulatory Assets	Regulatory Liabilities
Income taxes	$ 736,120	$ 389,424	$ 657,378	$ 414,787
Customer refunds resulting from TCJA	-	3,907	-	4,593
Utility plant retirement costs	7,873	43,742	6,743	38,435
Post-retirement benefits	110,661	78,557	110,719	71,285
Accrued vacation	2,439	-	2,447	-
Water tank painting	6,175	1,928	2,864	1,855
Fair value adjustment of long-term debt assumed in acquisition	2,166	-	2,533	-
Debt refinancing	6,564	-	-	-
Rate case filing expenses and other	6,134	41	5,392	72
	$ 878,132	$ 517,599	$ 788,076	$ 531,027

Items giving rise to deferred state income taxes, as well as a portion of deferred Federal income taxes related to specific differences between tax and book depreciation expense, are recognized in the rate setting process on a cash basis or as a reduction in current income tax expense and will be recovered as they reverse. Amounts include differences that arise between specific utility asset improvement costs capitalized for book and deducted as an expense for tax purposes. Additionally, the recording of AFUDC for equity funds results in the recognition of a regulatory asset for income taxes, which represents amounts due related to the revenue requirement.

A portion of the regulatory liability for income taxes is related to Aqua Pennsylvania's income tax accounting change for the tax benefits realized on the Company's 2012 tax return, which have not yet reduced current income tax expense due to the ten year amortization period which began in 2013. This amortization was stipulated in a June 2012 rate order issued to Aqua Pennsylvania and was subject to specific parameters being met each year until the Aqua Pennsylvania rate order of May 2019. Beginning in 2013, the Company amortized $38,000, annually, of its deferred income tax benefits, which reduced current income tax expense and increased the Company's net income by $16,274 for 2019, $16,734 for 2018, and $16,734 for 2017. In 2019, the amortization of this tax benefit was incorporated into the Company's cost of service by a rate order issued in May 2019 and is no longer subject to the specific parameters from the 2012 rate order.

The regulatory liability for customer refunds resulting from the TCJA represents a revenue reserve for customer refunds associated with the reduction in the Federal corporate income tax rate under the provisions of the TCJA. On December 22, 2017, President Trump signed the TCJA into law, which reduced the Federal corporate income tax rate from 35% to 21%. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rate to 21% under the provisions of the TCJA will result in amounts previously collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The TCJA includes provisions that stipulate how these excess deferred taxes relating to certain accelerated tax depreciation benefits are to be passed back to customers. In 2018 and 2019 adjusted base rates or surcredits were added to customer bills to reflect the lower corporate income tax rate.

The regulatory asset for utility plant retirement costs, including cost of removal, represents costs already incurred that are expected to be recovered in future rates over a five year recovery period. The regulatory liability for utility plant retirement costs represents amounts recovered through rates during the life of the associated asset and before the costs are incurred.

(In thousands of dollars, except per share amounts)

The regulatory asset for accrued vacation represents costs that would otherwise be charged to operations and maintenance expense for vacation that is earned by employees, which is recovered as a cost of service.

The regulatory asset for post-retirement benefits, which includes pension and other post-retirement benefits, primarily reflects a regulatory asset that has been recorded for the costs that would otherwise be charged to stockholders' equity for the underfunded status of the Company's pension and other post-retirement benefit plans. The Company also has a regulatory asset related to post-retirement benefits costs that represent costs already incurred which are now being recovered in rates over 10 years. The regulatory liability for post-retirement benefits represents costs recovered in rates in excess of post-retirement benefits expense.

Expenses associated with water tank painting are deferred and amortized over a period of time as approved in the regulatory process. Water tank painting costs are generally being amortized over a period ranging from 7 to 10 years. The regulatory liability for water tank painting costs represents amounts recovered through rates and before the costs are incurred.

The Company recorded a fair value adjustment for fixed rate, long-term debt assumed in acquisitions that matures in various years ranging from 2022 to 2029. The regulatory asset or liability results from the rate setting process continuing to recognize the historical interest cost of the assumed debt.

The regulatory asset for debt refinancing represents a portion of a make whole payment of $25,237 incurred in May 2019 for the Company's redemption of $313,500 of the Company's outstanding notes that had maturities ranging from 2019-2037 and interest rates ranging from 3.57-5.83%. The Company deferred a portion of the make whole payment as it represents an amount by which we expect to receive prospective rate recovery.

The regulatory asset related to rate case filing expenses and other represents the costs associated with filing for rate increases that are deferred and amortized over periods that generally range from one year to five years, and costs incurred by the Company for which it has received or expects to receive rate recovery.

The regulatory asset related to the costs incurred for information technology software projects and water main cleaning and relining projects are described in Note 1 – *Summary of Significant Accounting Policies – Property, Plant and Equipment and Depreciation*.

Note 7 – *Income Taxes*

Income tax (benefit) expense for the years ended December 31, is comprised of the following:

	Years Ended December 31,		
	2019	2018	2017
Current:			
Federal	$ (4,415)	$ -	$ 1,297
State	1,834	1,281	1,837
	(2,581)	1,281	3,134
Deferred:			
Federal	(3,906)	(8,721)	21,376
State	(6,530)	(6,229)	(7,596)
	(10,436)	(14,950)	13,780
Total tax expense (benefit)	$ (13,017)	$ (13,669)	$ 16,914

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The statutory Federal tax rate is 21% for 2019 and 2018, and 35% for 2017. For states with a corporate net income tax, the state corporate net income tax rates range from 2.5% to 9.99% for all years presented. The Company's effective income tax rate for 2019, 2018, and 2017 was (6.2)%, (7.7)%, and 6.6%, respectively. The Company remains subject to examination by federal and state tax authorities for the 2016 through 2019 tax years.

The reasons for the differences between amounts computed by applying the statutory Federal corporate income tax rate to income before income tax expense are as follows:

	Years Ended December 31,		
	2019	2018	2017
Computed Federal tax expense at statutory rate	$ 44,420	$ 37,447	$ 89,828
Decrease in Federal tax expense related to an income tax accounting change for qualifying utility asset improvement costs	(48,518)	(44,089)	(69,325)
State income taxes, net of Federal tax benefit	(3,616)	(4,964)	(3,743)
Increase in tax expense for depreciation expense to be recovered in future rates	347	328	199
Stock-based compensation	(167)	(414)	(595)
Deduction for Essential Utilities common dividends paid under employee benefit plan	(315)	(312)	(455)
Amortization of deferred investment tax credits	(361)	(373)	(376)
Impact of Federal rate change and amortization of excess deferred income tax	(6,323)	(313)	3,141
Other, net	1,516	(979)	(1,760)
Actual income tax expense (benefit)	$ (13,017)	$ (13,669)	$ 16,914

In response to a June 2012 rate order issued by the Pennsylvania Public Utility Commission to Aqua Pennsylvania, the Company changed its tax method of accounting for qualifying utility system repairs, which provides for the expensing of qualifying utility asset improvement costs that were previously being capitalized and depreciated for book and tax purposes. The rate order allows for a reduction in current income tax expense as a result of the flow-through recognition of some income tax benefits due to the income tax accounting change. The Company recorded income tax benefits of $66,816, $64,183, and $84,766 during 2019, 2018, and 2017, respectively. In May 2019 the Pennsylvania Public Utility Commission issued a rate order to Aqua Pennsylvania and commencing in 2020 the base rates are designed to include annual tax benefits for qualifying utility system improvement costs equal to $158,865, subject to $3,000 either above or below this target amount. To the extent actual tax benefits are outside this range, tax benefits will either be deferred or accrued, and settled in the next rate filing.

Aqua Pennsylvania had changed to this method of tax accounting in 2012, and for prior tax years, the qualifying utility system asset improvement costs were previously capitalized and depreciated for book and tax purposes. The Company recognized a tax deduction on its 2012 Federal tax return of $380,000 and based on a 2012 rate order, Aqua Pennsylvania began to amortize this benefit over ten years beginning in 2013. The amortization of this benefit, which annually amounted to $38,000, effectively reduced current income tax expense annually by $16,724. As a result of the May 2019 Aqua Pennsylvania rate order the amortization period was slightly shortened and now includes the tax benefits in establishing utility rates.

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The following table provides the changes in the Company's unrecognized tax benefits:

	2019	2018
Balance at January 1,	$ 17,792	$ 17,583
Additions based on tax position related to the current year	879	209
Balance at December 31,	$ 18,671	$ 17,792

In accordance with the FASB's accounting guidance for income taxes we recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate resolution. From time to time, the Company may be assessed interest and penalties by taxing authorities, which would be recorded as income tax expense. There were no expenses for interest and penalties assessed by taxing authorities for the years ended December 31, 2019, 2018, and 2017.

On its 2012 Federal tax return, filed in September 2013, Aqua Pennsylvania filed a change in accounting method to adopt the IRS temporary tangible property regulations. This method change allowed the Company to take a current year deduction for expenses that were previously capitalized for tax purposes. Since the filing of the 2012 tax return, the IRS has issued final regulations. While the Company maintains the belief that the deduction taken on its tax return is appropriate, the methodology for determining the deduction has not been agreed to by the taxing authorities. Provisions for uncertain tax positions were recorded to reflect the possible challenge of the Company's methodology for determining its repair deduction as required by the FASB's accounting guidance for income taxes. Should the taxing authority challenge the Company's tax treatment, and ultimately disallow a portion of the repair deduction, the Company expects Federal net operating loss carryforwards to offset any resulting liability, and state net operating loss carryforwards will offset a portion of any resulting liability.

The unrecognized tax benefits relate to the income tax accounting change, and the tax position is attributable to a temporary difference. The Company does not anticipate material changes to its unrecognized tax benefits within the next year. As a result of the regulatory treatment afforded by the income tax accounting change in Pennsylvania and despite this position being a temporary difference, as of December 31, 2019 and 2018, $31,015 and $26,990, respectively, of these tax benefits would have an impact on the Company's effective income tax rate in the event the Company does sustain all, or a portion, of its tax position.

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The following table provides the components of net deferred tax liability:

	December 31, 2019	December 31, 2018
Deferred tax assets:		
Customers' advances for construction	$ 22,664	$ 13,188
Costs expensed for book not deducted for tax, principally accrued expenses	1,473	27,711
Utility plant acquisition adjustment basis differences	-	1,053
Post-retirement benefits	20,575	39,515
Tax loss and credit carryforwards	65,438	43,637
Operating lease liabilities	3,540	-
Other	2,798	2,761
	116,488	127,865
Less valuation allowance	22,873	18,082
	93,615	109,783
Deferred tax liabilities:		
Utility plant, principally due to depreciation and differences in the basis of fixed assets due to variation in tax and book accounting	909,219	837,057
Deferred taxes associated with the gross-up of revenues necessary to recover, in rates, the effect of temporary differences	101,126	72,258
Tax effect of regulatory asset for post-retirement benefits	8,973	39,515
Utility plant acquisition adjustment basis differences	827	
Deferred investment tax credit	6,088	6,356
Operating lease right-of-use assets	3,540	-
	1,029,773	955,186
Net deferred tax liability	$ 936,158	$ 845,403

At December 31, 2019, the Company has a cumulative Federal NOL of $79,039. The Company believes the Federal NOLs are more likely than not to be recovered and require no valuation allowance. The Company's Federal NOLs do not begin to expire until 2032.

At December 31, 2019, the Company has a cumulative state NOL of $817,323, a portion of which is offset by a valuation allowance because the Company does not believe these NOLs are more likely than not to be realized. The state NOLs do not begin to expire until 2023.

The Company's Federal and state NOL carryforwards are reduced by an unrecognized tax position, on a gross basis, of $73,352 and $85,645, respectively, which results from the Company's adoption in 2013 of the FASB's accounting guidance on the presentation of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or a tax credit carryforward exists. The amounts of the Company's Federal and state NOL carryforwards prior to being reduced by the unrecognized tax positions are $152,391 and $902,968, respectively. The Company records its unrecognized tax benefit as a component of its net deferred income tax liability.

On December 22, 2017, President Trump signed the TCJA into law. The TCJA includes significant changes to the Code and the taxation of business entities, and includes specific provisions related to regulated public utilities. Significant changes that impact the Company included in the TCJA are a reduction in the corporate federal income tax rate from 35% to 21%, effective January 1, 2018, and a limitation of the utilization of NOLs arising after December 31, 2017 to 80% of taxable income with an indefinite carryforward. The specific TCJA provisions related to our regulated entities generally allow for the continued deductibility of interest expense, the elimination of full expensing for tax purposes of certain property acquired after September 27, 2017 and the continuation of certain rate normalization requirements for accelerated depreciation benefits. Our market-based companies still qualify for 100% deductibility of qualifying property acquired after September 27, 2017 and before January 1, 2023.

At the date of enactment, the Company's deferred taxes were re-measured based upon the new tax rate. For our regulated entities, the change in deferred taxes was recorded as either an offset to a regulatory asset or liability. In instances where the deferred tax balances are not in ratemaking, such as the Company's market-based operations, the change in deferred taxes was recorded as an adjustment to our deferred tax provision. To the extent the revalued deferred income tax assets and liabilities were outside of our regulated operations and are not believed to be recoverable in utility customer rates, the revalued amount of $3,141 was recognized as additional deferred income tax expense during the quarter ended December 31, 2017.

The staff of the SEC has recognized the complexity of reflecting the impacts of the TCJA, and on December 22, 2017 issued guidance, which clarifies accounting for income taxes if information is not yet available or complete and provides for up to a one year period in which to complete the required analyses and accounting (the measurement period). The guidance describes three scenarios (or "buckets") associated with a company's status of accounting for income tax reform: (1) a company is complete with its accounting for certain effects of tax reform, (2) a company is able to determine a reasonable estimate for certain effects of tax reform and records that estimate as a provisional amount, or (3) a company is not able to determine a reasonable estimate and therefore continues to apply the FASB's accounting guidance, based on the provisions of the tax laws that were in effect immediately prior to the TCJA being enacted. The one year measurement period concluded in the fourth quarter of 2018, and there were no material changes in the Company's accounting for the TCJA.

At the end of the measurement period, the Pennsylvania Public Utility Commission, had not issued an accounting or procedural order addressing how the TCJA changes are to be reflected in our utility customer rates. As of December 31, 2017, the Company provisionally classified $175,108 of deferred income tax liabilities for our Pennsylvania subsidiary as a regulatory liability. In May 2019 a final order was issued from the PA PUC affirming the Company's regulatory liability and authorizing the Company to implement an average rate assumption method to reduce the regulatory liability as the temporary difference reverses. Beginning in June 2019 base rates reflect the fact that the benefit from the excess accumulated deferred taxes is now reflected in base rates. Overall, the Company has applied a reasonable interpretation of the impact of the TCJA and a reasonable estimate of the regulatory resolution. Further clarification of the TCJA and regulatory resolution may change the amounts estimated of the deferred income tax provision and the accumulated deferred income tax liability.

The Company's regulated operations accounting for income taxes are impacted by the FASB's accounting guidance for regulated operations. Reductions in accumulated deferred income tax balances due to the reduction in the Federal corporate income tax rates to 21% under the provisions of the TCJA will result in amounts previously collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The TCJA includes provisions that stipulate how these excess deferred taxes related to certain accelerated tax depreciation deduction benefits are to be passed back to customers. Potential refunds of other deferred taxes will be determined by our state regulators. The Company has reserved $3,907 for amounts expected to be refundable to utility customers. In 2018, Illinois, Virginia, Texas, New Jersey, and two operating divisions in Ohio which operate under locally-negotiated contractual rates with their respective counties, adjusted base rates or surcredits have been added to customer bills to reflect the lower corporate income tax rate. In North Carolina, Indiana, and our regulated operations in Ohio, no surcredits have been added to customer bills to reflect the lower corporate income tax rate in 2018. These adjustments were reflected in customer bills beginning January 1, 2019. In Pennsylvania, a procedural order was received in May 2019, which adjusted the Company's base rate to reflect the lower corporate income tax rate.

(In thousands of dollars, except per share amounts)

Note 8 – ***Taxes Other than Income Taxes***

The following table provides the components of taxes other than income taxes:

	Years Ended December 31,		
	2019	2018	2017
Property	$ 27,735	$ 27,469	$ 25,810
Gross receipts, excise and franchise	13,500	14,521	13,458
Payroll	10,303	9,789	9,477
Regulatory assessments	2,916	2,752	2,552
Pumping fees	5,112	4,978	5,057
Other	389	253	274
Total taxes other than income taxes	$ 59,955	$ 59,762	$ 56,628

Note 9 – ***Commitments and Contingencies***

Commitments –

The Company maintains agreements with other water purveyors for the purchase of water to supplement its water supply, particularly during periods of peak demand. The agreements stipulate purchases of minimum quantities of water to the year 2026. The estimated annual commitments related to such purchases through 2024 are expected to average $5,032 and the aggregate of the years remaining approximates $4,433.

The Company has entered into purchase obligations, in the ordinary course of business, that include agreements for water treatment processes at some of its wells in a small number of its divisions. The 20 year term agreement provides for the use of treatment equipment and media used in the treatment process and are subject to adjustment based on changes in the Consumer Price Index. The future contractual cash obligations related to these agreements are as follows:

2020	2021	2022	2023	2024	Thereafter
$ 1,002	$ 1,022	$ 1,043	$ 1,050	$ 1,068	$ 4,291

The purchased water expense and water treatment expenses under these agreements were as follows:

	Years Ended December 31,		
	2019	2018	2017
Purchased water under long-term agreements	$ 6,577	$ 6,065	$ 8,558
Water treatment expense under contractual agreement	989	970	945

Contingencies – The Company is routinely involved in various disputes, claims, lawsuits and other regulatory and legal matters, including both asserted and unasserted legal claims, in the ordinary course of business. The status of each such matter, referred to herein as a loss contingency, is reviewed and assessed in accordance with applicable accounting rules regarding the nature of the matter, the likelihood that a loss will be incurred, and the amounts involved. As of December 31, 2019, the aggregate amount of $19,591 is accrued for loss contingencies and is reported in the Company's consolidated balance sheet as other accrued liabilities and other liabilities. These accruals represent management's best estimate of probable loss (as defined in the accounting guidance) for loss contingencies or the low end of a range of losses if no single probable loss can be estimated. For some loss contingencies, the Company is unable to estimate the amount of the probable loss or range of probable losses. During a portion of 2019, the Company initiated a do not consume advisory for some of its customers in one division served by the Company's Illinois subsidiary. Although the Company has determined that it is reasonably possible that a fine or penalty may be incurred, it cannot estimate the possible range of loss at this time and no liability has been accrued for these future costs. In addition, a claim for the expenses incurred has been submitted to the Company's insurance carrier for potential recovery of a portion of these costs. The Company continues to assess this matter and any potential loss. While the final outcome of this and other loss contingencies cannot be predicted with certainty, and unfavorable outcomes could negatively impact the Company, at this time in the opinion of management, the final resolution of these matters are not expected to have a material adverse effect on the Company's financial position, results of operations or cash flows. Further, Essential Utilities has insurance coverage for a number of these loss contingencies, and as of December 31, 2019, estimates that approximately $7,941 of the amount accrued for these matters are probable of recovery through insurance, which amount is also reported in the Company's consolidated balance sheet as deferred charges and other assets, net.

(In thousands of dollars, except per share amounts)

Although the results of legal proceedings cannot be predicted with certainty, there are no pending legal proceedings to which the Company or any of its subsidiaries is a party or to which any of its properties is the subject that are material or are expected to have a material effect on the Company's financial position, results of operations or cash flows.

Additionally, the Company self-insures its employee medical benefit program, and maintains stop-loss coverage to limit the exposure arising from these claims. The Company's reserve for these claims totaled $1,852 and $1,515 at December 31, 2019 and 2018 and represents a reserve for unpaid claim costs, including an estimate for the cost of incurred but not reported claims.

Note 10 – *Leases*

The Company leases land, office facilities, office equipment, and vehicles for use in its operations, which are accounted for as operating leases. Leases with a term of 12 months or less are not recorded on the balance sheet; rather, lease expense is recognized over the lease term. Our leases have remaining lives of 1 year to 75 years.

Some of the Company's leases can be extended on a month-to-month basis, which allow us to terminate the lease at any given month without penalty while others include options to extend the leases for up to 50 years. The renewal of a month-to-month lease is at our sole discretion.

The Company accounts for lease and non-lease components of lease arrangements separately. For calculating lease liabilities, we may deem lease terms to include options to extend or terminate the lease when it's reasonably certain that we will exercise that option. The Company's lease agreements do not contain significant residual value guarantees, restrictions or covenants.

Lease liabilities and corresponding right-of-use assets are recorded based on the present value of the lease payments over the expected lease term, including leases with variable payments that are based on a market rate or an index. All other variable payments are expensed as incurred. Since the Company's lease agreements do not provide an implicit interest rate, we utilize our incremental borrowing rate to determine the discount rate used to present value the lease payments.

	Years Ended December 31,		
	2019	2018	2017
Components of lease expense were as follows:			
Operating lease cost	$ 2,183	$ 2,569	$ 2,241

	Year Ended December 31, 2019
Supplemental cash flow information related to leases was as follows:	
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ 1,992

(In thousands of dollars, except per share amounts)

		December 31, 2019
Supplemental balance sheet information related to leases was as follows:		
Operating leases:		
Operating lease right-of-use assets	$	12,867
Other accrued liabilities	$	1,222
Operating lease liabilities		11,645
Total operating lease liabilities	$	12,867

	December 31, 2019
Weighted average remaining lease term:	
Operating leases	27 years
Weighted average discount rate:	
Operating leases	4.08%

Maturities of operating lease liabilities and a reconciliation of the operating lease liabilities reported on our Consolidated Balance Sheets as of December 31, 2019 are as follows:

		Operating Leases
2020	$	1,699
2021		1,462
2022		1,219
2023		771
2024		609
Thereafter		15,836
Total operating lease payments	$	21,596
Total operating lease payments	$	21,596
Less operating lease liabilities		12,867
Present value adjustment	$	8,729

Note 11 – *Long-term Debt and Loans Payable*

***Long-term Debt* –** The consolidated statements of capitalization provide a summary of long-term debt as of December 31, 2019 and 2018. The supplemental indentures with respect to specific issues of the first mortgage bonds restrict the ability of Aqua Pennsylvania and other operating subsidiaries of the Company to declare dividends, in cash or property, or repurchase or otherwise acquire the stock of these companies. Loan agreements for Aqua Pennsylvania and other operating subsidiaries of the Company have restrictions on minimum net assets. As of December 31, 2019, restrictions on the net assets of the Company were $2,450,381 of the total $3,880,860 in net assets. Included in this amount were restrictions on Aqua Pennsylvania's net assets of $1,332,017 of their total net assets of $1,775,110. As of December 31, 2019, $1,591,800 of Aqua Pennsylvania's retained earnings of $1,611,800 and $221,466 of the retained earnings of $270,192 of other subsidiaries were free of these restrictions. Some supplemental indentures also prohibit Aqua Pennsylvania and some other subsidiaries of the Company from making loans to, or purchasing the stock of, the Company.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

Sinking fund payments are required by the terms of specific issues of long-term debt. Excluding amounts due under the Company's revolving credit agreement, the future sinking fund payments and debt maturities of the Company's long-term debt are as follows:

Interest Rate Range	2020	2021	2022	2023	2024	Thereafter
0.00% to 0.99%	$ 670	$ 460	$ 461	$ 461	$ 252	$ 1,170
1.00% to 1.99%	1,016	978	957	835	764	6,183
2.00% to 2.99%	1,863	1,913	1,964	2,017	1,619	6,298
3.00% to 3.99%	91,524	41,287	24,622	2,065	1,767	1,133,776
4.00% to 4.99%	292	168	94	99	103	1,554,035
5.00% to 5.99%	6,191	6,215	787	10,811	10,611	76,995
6.00% to 6.99%	-	-	-	-	-	31,000
7.00% to 7.99%	574	666	374	-	-	29,137
8.00% to 8.99%	521	1,665	721	784	852	483
9.00% to 9.99%	2,400	4,900	-	-	-	12,000
Total	$ 105,051	$ 58,252	$ 29,980	$ 17,072	$ 15,968	$ 2,851,077

In December 2019, Aqua Pennsylvania issued $125,000 of first mortgage bonds, of which $75,000 is due in 2052 and $50,000 is due in 2053 with interest rates of 3.39% and 3.41%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In May 2019, Aqua Pennsylvania issued $125,000 of first mortgage bonds, of which $75,000 is due in 2049, $25,000 is due in 2054, and $25,000 is due in 2059 with interest rates of 4.02%, 4.07%, and 4.12%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes. Additionally, in September 2019, Aqua Pennsylvania issued $175,000 of first mortgage bonds, of which $50,000 is due in 2054, $75,000 is due in 2058, and $50,000 is due in 2059 with interest rates of 4.09%, 4.13%, and 4.14%, respectively.

On May 18, 2019, the Company redeemed $313,500 of the Company's outstanding notes (the "Company Debt Refinancing") that had maturities ranging from 2019-2037 and interest rates ranging from 3.57% - 5.83%. Additionally, the Company Debt Refinancing was subject to a make whole payment of $25,237, and $18,528 of this payment was expensed, and is presented in the consolidated statements of net income on the line item "loss on debt extinguishment." The balance of the payment, or $6,709, was deferred, as a regulatory asset, as it represents an amount by which the Company expects to receive prospective rate recovery.

On April 26, 2019, the Company issued $900,000 of long-term debt (the "Senior Notes"), less expenses of $7,931, of which $400,000 is due in 2029, and $500,000 is due in 2049 with interest rates of 3.566% and 4.276%, respectively. The Company used the net proceeds from the issuance of Senior Notes to (1) secure $436,000 of funding for the Peoples Gas Acquisition, (2) complete the redemption of $313,500 aggregate principal amount of certain of the Company's outstanding notes noted below, (3) pay related costs and expenses, and (4) for general corporate purposes.

In November 2018, Aqua Pennsylvania issued $125,000 of first mortgage bonds, of which $65,000 is due in 2047, $30,000 is due in 2052, and $30,000 is due in 2053 with interest rates of 4.44%, 4.49%, and 4.51%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.
In June 2018, Aqua Pennsylvania issued $100,000 of first mortgage bonds, of which $25,000 is due in 2042, $10,000 is due in 2045, and $65,000 is due in 2048 with interest rates of 3.99%, 4.04%, and 4.09%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In July 2018, Aqua Pennsylvania redeemed $49,660 of tax-exempt bonds at 5.25% that were originally maturing in 2042 and 2043, respectively.

As of December 31, 2019 and 2018, the Company did not have any funds restricted for construction activity.

The weighted average cost of long-term debt at December 31, 2019 and 2018 was 4.09% and 4.23%, respectively. The weighted average cost of fixed rate long-term debt at December 31, 2019 and 2018 was 4.09% and 4.31%, respectively.

In December 2018, the Company entered into a five year $550,000 unsecured revolving credit facility, which replaced the Company's prior five year $500,000 unsecured revolving credit facility. The Company's new unsecured revolving credit facility will be used to repay all indebtedness and fees under our prior unsecured revolving credit facility, and for other general corporate purposes. Additionally, the facility expands by $150,000 of capacity, upon closing of the Peoples Gas Acquisition, which amount will be available to repay certain outstanding indebtedness and fees to close an existing credit facility of Peoples and for general corporate purposes. Further, at the Company's request this facility expands by an additional amount of up to $300,000, upon the closing of the Peoples Gas Acquisition. The facility includes a $25,000 sublimit for daily demand loans. Funds borrowed under this facility are classified as long-term debt and are used to provide working capital as well as support for letters of credit for insurance policies and other financing arrangements. As of December 31, 2019, the Company has the following sublimits and available capacity under the credit facility: $50,000 letter of credit sublimit, $32,876 of letters of credit available capacity, $0 borrowed under the swing-line commitment, and $0 of funds borrowed under the agreement. Interest under this facility is based at the Company's option, on the prime rate, an adjusted Euro-Rate, an adjusted federal funds rate or at rates offered by the banks. A facility fee is charged on the total commitment amount of the agreement. Under these facilities the average cost of borrowings was 3.55% and 2.92%, and the average borrowing was $102,973 and $207,277, during 2019 and 2018, respectively.

The Company is obligated to comply with covenants under some of its loan and debt agreements. These covenants contain a number of restrictive financial covenants, which among other things limit, subject to specific exceptions, the Company's ratio of consolidated total indebtedness to consolidated total capitalization, and require a minimum level of earnings coverage over interest expense. During 2019, the Company was in compliance with its debt covenants under its loan and debt agreements. Failure to comply with the Company's debt covenants could result in an event of default, which could result in the Company being required to repay or finance its borrowings before their due date, possibly limiting the Company's future borrowings, and increasing its borrowing costs.

Loans Payable – In November 2019, Aqua Pennsylvania renewed its $100,000 364-day unsecured revolving credit facility with four banks. The funds borrowed under this agreement are classified as loans payable and used to provide working capital. As of December 31, 2019 and 2018, funds borrowed under the agreement were $25,724 and $15,449, respectively. Interest under this facility is based, at the borrower's option, on the prime rate, an adjusted federal funds rate, an adjusted London Interbank Offered Rate corresponding to the interest period selected, an adjusted Euro-Rate corresponding to the interest period selected or at rates offered by the banks. This agreement restricts short-term borrowings of Aqua Pennsylvania. A commitment fee of 0.05% is charged on the total commitment amount of Aqua Pennsylvania's revolving credit agreement. The average cost of borrowing under the facility was 3.12% and 2.68%, and the average borrowing was $21,871 and $22,056, during 2019 and 2018, respectively. The maximum amount outstanding at the end of any one month was $39,930 and $45,000 in 2019 and 2018, respectively.

At December 31, 2019 and 2018, the Company had other combined short-term lines of credit of $35,500. Funds borrowed under these lines are classified as loans payable and are used to provide working capital. As of December 31, 2019 and 2018, funds borrowed under the short-term lines of credit were $0, respectively. The average borrowing under the lines was $0 during 2019 and 2018, respectively. The maximum amount outstanding at the end of any one month was $0 in 2019 and 2018, respectively. Interest under the lines is based at the Company's option, depending on the line, on the prime rate, an adjusted Euro-Rate, an adjusted federal funds rate or at rates offered by the banks. The average cost of borrowings under all lines during 2019 and 2018 was 3.12% and 2.68%, respectively.

Interest Income and Expense– Interest income of $25,406, $152, and $202 was recognized for the years ended December 31, 2019, 2018, and 2017, respectively. Interest expense was $125,383, $99,054, and $88,543 in 2019, 2018, and 2017, including amounts capitalized for borrowed funds of $4,231 $3,332, and $3,578, respectively.

(In thousands of dollars, except per share amounts)

Unsecured Bridge Loan Commitment – On October 22, 2018, the Company obtained the Bridge Commitment from certain banks to provide senior unsecured bridge loans in an aggregate amount of up to $5,100,000 to, among other things, backstop the Peoples Gas Acquisition purchase price and the refinancing of certain debt of the Company and of Peoples. As of December 31, 2019, the Company had terminated $4,350,000 of commitments under the Bridge Commitment in connection with, among other things, the replacement of the Company's unsecured revolving credit facility, and the issuances of common stock, tangible equity units, and senior notes in April 2019.

Interest Rate Swap Agreements – In October 2018, the Company entered into interest rate swap agreements to mitigate interest rate risk associated with an anticipated $850,000 of debt issuances to fund a portion of the Peoples Gas Acquisition and refinance a portion of the Company's borrowings. On April 24, 2019, the Company settled the interest rate swap agreements upon issuance of $900,000 of long-term debt to be used to finance a portion of the purchase price of the Peoples Gas Acquisition and redeem $313,500 of the Company's existing debt. The settlement resulted in a payment by the Company of $83,520.

The interest rate swaps did not qualify for hedge accounting and any changes in the fair value of the swaps was included in our earnings. The interest rate swaps were classified as financial derivatives used for non-trading activities. Other than the interest rate swaps, the Company has no other derivative instruments. The Company recorded the fair value of the interest rate swaps by discounting the future net cash flows associated with the debt issuance and recognized either an asset or liability at the balance sheet date.

The following table provides a summary of the amounts recognized in earnings for our interest rate swap agreements:

		Amount of Gain (Loss) Recognized in Income on Derivatives	
		Years Ended December 31,	
	Location of Gain (Loss) Recognized	2019	2018
Derivatives not designated as hedging instrument:			
Interest rate swaps	Other (expense) income	$ (23,742)	$ (59,779)

Note 12 – *Fair Value of Financial Instruments*

Financial instruments are recorded at carrying value in the financial statements and approximate fair value, with the exception of long-term debt, as of the dates presented. The fair value of these instruments is disclosed below in accordance with current accounting guidance related to financial instruments.

The fair value of loans payable is determined based on its carrying amount and utilizing level 1 methods and assumptions. As of December 31, 2019 and 2018, the carrying amount of the Company's loans payable was $25,724 and $15,449, which equates to their estimated fair value. The fair value of the interest rate swap agreements is determined by discounting the future net cash flows utilizing level 2 methods and assumptions. As of December 31, 2018, the fair value of the Company's interest rate swap agreements, which were settled in April 2019, represented a liability of $59,779. The fair value of cash and cash equivalents, which is comprised of uninvested cash and the proceeds from the April 2019 issuances of common stock, tangible equity units, and long-term debt for the Peoples Gas Acquisition, which are held in an interest-bearing account, is determined based on level 1 methods and assumptions. As of December 31, 2019 and 2018, the carrying amounts of the Company's cash and cash equivalents were $1,868,922 and $3,627, which equates to their fair value. The Company's assets underlying the deferred compensation and non-qualified pension plans are determined by the fair value of mutual funds, which are based on quoted market prices from active markets utilizing level 1 methods and assumptions. As of December 31, 2019 and 2018, the carrying amount of these securities was $23,419 and

(In thousands of dollars, except per share amounts)

$20,388, which equates to their fair value, and is reported in the consolidated balance sheet in deferred charges and other assets.

Unrealized gains and losses on equity securities held in conjunction with our non-qualified pension plan is as follows:

	Years ended December 31,	
	2019	2018
Net gain (loss) recognized during the period on equity securities	$ 293	$ (95)
Less: net gain / loss recognized during the period on equity securities sold during the period	-	-
Unrealized gain (loss) recognized during the reporting period on equity securities still held at the reporting date	$ 293	$ (95)

The net gain (loss) recognized on equity securities is presented on the consolidated statements of net income on the line item "Other." Additionally, the unrealized gain recognized during 2017 was reported on the consolidated statements of comprehensive income.

The carrying amounts and estimated fair values of the Company's long-term debt is as follows:

	December 31,	
	2019	2018
Carrying amount	$ 3,077,400	$ 2,563,660
Estimated fair value	3,324,377	2,588,086

The fair value of long-term debt has been determined by discounting the future cash flows using current market interest rates for similar financial instruments of the same duration utilizing level 2 methods and assumptions. The Company's customers' advances for construction have a carrying value of $95,556 and $93,343 at December 31, 2019 and 2018, respectively. Their relative fair values cannot be accurately estimated because future refund payments depend on several variables, including new customer connections, customer consumption levels and future rate increases. Portions of these non-interest bearing instruments are payable annually through 2029 and amounts not paid by the respective contract expiration dates become non-refundable. The fair value of these amounts would, however, be less than their carrying value due to the non-interest bearing feature.

Note 13 – *Stockholders' Equity*

At December 31, 2019, the Company had 300,000,000 shares of common stock authorized; par value $0.50. Shares outstanding and treasury shares held were as follows:

	December 31,		
	2019	2018	2017
Shares outstanding	220,758,719	178,091,621	177,713,943
Treasury shares	3,112,565	3,060,206	2,986,308

Private Placement

On March 29, 2019, the Company entered into a Stock Purchase Agreement (the "Stock Purchase Agreement") with Canada Pension Plan Investment Board (the "Investor"), pursuant to which the Company agreed to issue and sell to the Investor in a private placement (the "Private Placement") 21,661,095 newly issued shares of common stock, par value $0.50 per share (the "Common Stock"). The gross proceeds of the Private Placement are expected to amount to approximately $750,000 less estimated expenses of $21,560.

The shares issued and sold to the Investor pursuant to the Private Placement were to be priced at the lower of (1) $34.62, which represents a 4.5% discount to the trailing 20 consecutive trading day volume weighted average price of the Common Stock ending on, and including, March 28, 2019, and (2) the volume weighted average price per share in the Company' subsequent public offering of Common Stock to fund a portion of the Peoples Gas Acquisition. Based on the common stock offering noted below, the Private Placement was priced at $34.62 per share.

The closing of the Private Placement is expected to occur concurrently with the closing of the Peoples Gas Acquisition, subject to certain closing conditions, including the closing of the Peoples Gas Acquisition, and the execution and delivery of a shareholder agreement between the Investor and the Company. The Investor has agreed to certain transfer restrictions for a period of 15 months from the closing date of the Peoples Gas Acquisition.

The Stock Purchase Agreement contains customary representations, warranties and covenants of the Company and the Investor, and the parties have agreed to indemnify each other for losses related to breaches of their respective representations and warranties. Upon closing of the Private Placement, the Company has agreed to reimburse the Investor for reasonable out-of-pocket diligence expenses of up to $4,000, subject to certain exceptions.

Common Stock / Tangible Equity Unit Issuances

On April 23, 2019, the Company issued $1,293,750, less expenses of $30,651, of its common stock and $690,000, less expenses of $16,358, of its tangible equity units (the "Units"), with a stated amount of $50 per unit. These issuances were part of the financing of the Peoples Gas Acquisition. The common stock was issued at $34.62 per share and thus the Private Placement noted above was priced at $34.62 per share.

Each Unit consists of a prepaid stock purchase contract and an amortizing note due April 30, 2022, each issued by the Company. Unless earlier settled or redeemed, each stock purchase contract will automatically settle on April 30, 2022 (subject to postponement in limited circumstances) for between 1.1790 and 1.4442 shares of the Company's common stock, subject to adjustment, based upon the applicable market value of the common stock, as described in the final prospectus supplement relating to the Units. During 2019, 4,109,292 stock purchase contracts were early settled by the holders of the contracts, resulting in the issuance of 4,846,601 shares of the Company's common stock. The amortizing notes have an initial principal amount of $8.62909, or $119,081 in aggregate, and bear interest at a rate of 3.00% per year, and pay equal quarterly cash installments of $0.75000 per amortizing note (except for the July 30, 2019 installment payment, which was $0.80833 per amortizing note), that will constitute a payment of interest and a partial repayment of principal, and which cash payment in the aggregate will be equivalent to 6.00% per year with respect to each $50 stated amount of the Units. The amortizing notes represent unsecured senior obligations of the Company.

The issuance of the common stock and the Units (including the component stock purchase contracts and amortizing notes) were separate public issuances made by means of separate prospectus supplements pursuant to the Company's universal "pay as you go" shelf registration statement, filed with the SEC in February 2018, which allows for the potential future offer and sale by us, from time to time, in one or more public offerings, of an indeterminate amount of the Company's common stock, preferred stock, debt securities, and other securities specified therein at indeterminate prices.

The Company recorded the issuance of the purchase contract portion of the Units as additional paid-in-capital of $570,919, less allocable issuance costs of $13,530, in our financial statements. The Company recorded the amortizing notes portion of the Units of $119,081 as long-term debt and recorded allocable issuance costs of $2,828 as debt issuance costs.

At December 31, 2019, the Company had 1,770,819 shares of authorized but unissued Series Preferred Stock, $1.00 par value.

In February 2018, the Company filed a universal shelf registration statement with the SEC to allow for the potential future sale by the Company, from time to time, in one or more public offerings, of an indeterminate amount of our common stock, preferred stock, debt securities and other securities specified therein at indeterminate prices.

The Company has an acquisition shelf registration statement on file with the SEC which permits the offering, from time to time, of an aggregate of $500,000 in shares of common stock and shares of preferred stock in connection with acquisitions. The balance remaining available for use under the acquisition shelf registration as of December 31, 2019 is $487,155.

The form and terms of any securities issued under the universal shelf registration statement and the acquisition shelf registration statement will be determined at the time of issuance.

The Company has a Dividend Reinvestment and Direct Stock Purchase Plan ("Plan") that allows reinvested dividends to be used to purchase shares of common stock at a five percent discount from the current market value. Under the direct stock purchase program, shares are purchased by investors at a five percent discount from the market price. The shares issued under the Plan are either shares purchased by the Company's transfer agent in the open-market or original issue shares. In 2019, 2018, and 2017, 183,731, 321,585, and 447,753 shares of the Company were purchased under the dividend reinvestment portion of the Plan by the Company's transfer agent in the open-market for $7,777, $11,343, and $15,168, respectively. During 2019 and 2018, under the dividend reinvestment portion of the Plan, 236,666 and 158,205 original issue shares of common stock were sold, providing the Company with proceeds of $8,959 and $5,163, respectively.

The Company's accumulated other comprehensive income is reported in the stockholders' equity section of the consolidated balance sheets, the consolidated statements of equity, and the related components of other comprehensive income are reported in the consolidated statements of comprehensive income. The Company recorded a regulatory asset for its underfunded status of its pension and other post-retirement benefit plans that would otherwise be charged to other comprehensive income, as it anticipates recovery of its costs through customer rates.

Note 14 – *Net Income per Common Share and Equity per Common Share*

Basic net income per share is based on the weighted average number of common shares outstanding. Diluted net income per share is based on the weighted average number of common shares outstanding and potentially dilutive shares. The dilutive effect of employee stock-based compensation is included in the computation of diluted net income per share. The dilutive effect of stock-based compensation is calculated by using the treasury stock method and expected proceeds upon exercise or issuance of the stock-based compensation. The treasury stock method assumes that the proceeds from stock-based compensation are used to purchase the Company's common stock at the average market price during the period. The following table summarizes the shares, in thousands, used in computing basic and diluted net income per share:

	Years ended December 31,		
	2019	2018	2017
Average common shares outstanding during the period for basic computation	215,550	177,904	177,612
Effect of dilutive securities:			
Tangible equity units	-	-	-
Employee stock-based compensation	381	495	563
Average common shares outstanding during the period for diluted computation	215,931	178,399	178,175

For the years ended December 31, 2019 and 2017, all of the Company's employee stock options were included in the calculation of diluted net income per share as the calculated cost to exercise the stock options was less than the average market price of the Company's common stock during these periods. For the year ended December 31, 2018, the Company's employee stock options to purchase 8,596 shares of common stock were excluded from the calculation of diluted net income per share as the calculated cost to exercise the stock options was greater than the average market price of the Company's common stock during this period.

(In thousands of dollars, except per share amounts)

For the year ended December 31, 2019, the average common shares outstanding during the period for basic computation includes the weighted-average impact of 10,533,133 shares, based on the minimum number of shares of 11,425,345 to be issued in April 2022 upon settlement of the stock purchase contracts issued in April 2019 under the tangible equity units.

Equity per common share was $17.58 and $11.28 and at December 31, 2019 and 2018, respectively. These amounts were computed by dividing Essential Utilities stockholders' equity by the number of shares of common stock outstanding at the end of each year.

Note 15 – *Employee Stock and Incentive Plan*

Under the Company's Amended and Restated Equity Compensation Plan, (the "Plan") approved by the Company's shareholders on May 2, 2019, to replace the 2004 Equity Compensation Plan, as amended and restated in 2009 (the "2009 Plan"), stock options, stock units, stock awards, stock appreciation rights, dividend equivalents, and other stock-based awards may be granted to employees, non-employee directors, and consultants and advisors. The Plan authorizes 6,250,000 shares for issuance under the plan. A maximum of 3,125,000 shares under the Plan may be issued pursuant to stock award, stock units and other stock-based awards, subject to adjustment as provided in the Plan. During any calendar year, no individual may be granted (i) stock options and stock appreciation rights under the Plan for more than 500,000 shares of common stock in the aggregate or (ii) stock awards, stock units or other stock-based awards under the Plan for more than 500,000 shares of Company stock in the aggregate, subject to adjustment as provided in the Plan. Awards to employees and consultants under the Plan are made by a committee of the Board of Directors, except that with respect to awards to the Chief Executive Officer, the committee recommends those awards for approval by the non-employee directors of the Board of Directors. In the case of awards to non-employee directors, the Board of Directors makes such awards. At December 31, 2019, 2,667,480 shares were still available for issuance under the Plan. No further grants may be made under the Company's 2009 Equity Compensation Plan.

Performance Share Units – During 2018 and 2017, the Company granted performance share units. A performance share unit ("PSU") represents the right to receive a share of the Company's common stock if specified performance goals are met over the three year performance period specified in the grant, subject to exceptions through the respective vesting periods, which is generally three years. Each grantee is granted a target award of PSUs, and may earn between 0% and 200% of the target amount depending on the Company's performance against the performance goals.

The Company did not grant PSUs for the year ended December 31, 2019. The performance goals of the 2018 and 2017 PSU grants consisted of the following metrics:

	Performance Grant of:	
	2018	2017
Metric 1 – Company's total shareholder return ("TSR") compared to the TSR for a specific peer group of investor-owned water companies (a market-based condition)	25.0%	26.47%
Metric 2 – Company's TSR compared to the TSR for the companies listed in the Standard and Poor's Midcap Utilities Index (a market-based condition)	25.0%	26.47%
Metric 3 – Achievement of a targeted cumulative level of rate base growth as a result of acquisitions (a performance-based condition)	25.0%	23.53%
Metric 4 – Achievement of targets for maintaining consolidated operations and maintenance expenses over the three year measurement period (a performance-based condition)	25.0%	23.53%

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The following table provides the compensation expense and income tax benefit for PSUs:

	Years ended December 31,		
	2019	2018	2017
Stock-based compensation within operations and maintenance expense	$ 2,741	$ 4,817	$ 4,351
Income tax benefit	767	1,344	1,766

The following table summarizes nonvested PSU transactions for the year ended December 31, 2019:

	Number of Share Units	Weighted Average Fair Value
Nonvested share units at beginning of period	443,410	$ 27.20
Granted	-	-
Performance criteria adjustment	(82,921)	33.56
Forfeited	(9,767)	33.21
Share units issued	(89,324)	52.39
Nonvested share units at end of period	261,398	16.35

A portion of the fair value of PSUs was estimated at the grant date based on the probability of satisfying the market-based conditions associated with the PSUs using the Monte Carlo valuation method, which assesses the probabilities of various outcomes of market conditions. The other portion of the fair value of the PSUs associated with performance-based conditions was based on the fair market value of the Company's stock at the grant date, regardless of whether the market-based condition is satisfied. The fair value of each PSU grant is amortized into compensation expense on a straight-line basis over their respective vesting periods, generally 36 months. The accrual of compensation costs is based on an estimate of the final expected value of the award and is adjusted as required for the portion based on the performance-based condition. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the PSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the PSUs. The recording of compensation expense for PSUs has no impact on net cash flows. The following table provides the assumptions used in the pricing model for the grant, the resulting grant date fair value of PSUs, and the intrinsic value and fair value of PSUs that vested during the year:

	Years ended December 31,		
	2019	2018	2017
Expected term (years)	-	3.0	3.0
Risk-free interest rate	-	2.43%	1.49%
Expected volatility	-	17.2%	17.9%
Weighted average fair value of PSUs granted	$ -	$ 37.42	$ 30.79
Intrinsic value of vested PSUs	$ 3,181	$ 4,704	$ 3,926
Fair value of vested PSUs	$ 2,569	$ 3,613	$ 3,207

As of December 31, 2019, $1,840 of unrecognized compensation costs related to PSUs is expected to be recognized over a weighted average period of approximately 1.1 years. The aggregate intrinsic value of PSUs as of December 31, 2019 was $12,270. The aggregate intrinsic value of PSUs is based on the number of nonvested share units and the market value of the Company's common stock as of the period end date.

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Restricted Stock Units – A restricted stock unit ("RSU") represents the right to receive a share of the Company's common stock and is valued based on the fair market value of the Company's stock on the date of grant. RSUs are eligible to be earned at the end of a specified restricted period, generally three years, beginning on the date of grant. In some cases, the right to receive the shares is subject to specific performance goals established at the time the grant is made. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the RSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the RSUs. The following table provides the compensation expense and income tax benefit for RSUs:

	Years ended December 31,		
	2019	2018	2017
Stock-based compensation within operations and maintenance expense	$ 1,650	$ 1,605	$ 1,183
Income tax benefit	466	456	489

The following table summarizes nonvested RSU transactions for the year ended December 31, 2019:

	Number of Stock Units	Weighted Average Fair Value
Nonvested stock units at beginning of period	130,085	$ 33.13
Granted	57,290	36.25
Stock units vested and issued	(40,971)	32.89
Forfeited	(4,520)	35.28
Nonvested stock units at end of period	141,884	34.39

The following table summarizes the value of RSUs:

	Years ended December 31,		
	2019	2018	2017
Weighted average fair value of RSUs granted	$ 36.25	$ 35.15	$ 30.37
Intrinsic value of vested RSUs	1,456	1,605	896
Fair value of vested RSUs	1,341	1,268	751

As of December 31, 2019, $2,187 of unrecognized compensation costs related to RSUs is expected to be recognized over a weighted average period of approximately 1.4 years. The aggregate intrinsic value of RSUs as of December 31, 2019 was $6,660. The aggregate intrinsic value of RSUs is based on the number of nonvested stock units and the market value of the Company's common stock as of the period end date.

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Stock Options – A stock option represents the option to purchase a number of shares of common stock of the Company as specified in the stock option grant agreement at the exercise price per share as determined by the closing market price of our common stock on the grant date. Stock options are exercisable in installments of 33% annually, starting one year from the grant date and expire ten years from the grant date. The vesting of stock options granted in 2019, 2018, and 2017 are subject to the achievement of the following performance goal: the Company achieves at least an adjusted return on equity equal to 150 basis points below the return on equity granted by the Pennsylvania Public Utility Commission during the Company's Pennsylvania subsidiary's last rate proceeding. The adjusted return on equity equals net income, excluding net income or loss from acquisitions which have not yet been incorporated into a rate application as of the last year end, divided by equity which excludes equity applicable to acquisitions which are not yet incorporated in a rate application during the award period.

The fair value of each stock option is amortized into compensation expense using the graded vesting method, which results in the recognition of compensation costs over the requisite service period for each separately vesting tranche of the stock options as though the stock options were, in substance, multiple stock option grants. The following table provides compensation expense and income tax benefit for stock options:

	Years ended December 31,		
	2019	2018	2017
Stock-based compensation within operations and maintenance expenses	$ 2,280	$ 546	$ 245
Income tax benefit	643	184	208

Options under the plans were issued at the closing market price of the stock on the day of the grant. The fair value of options was estimated at the grant date using the Black-Scholes option-pricing model, which relies on assumptions that require management's judgment. The following table provides the assumptions used in the pricing model for grants and the resulting grant date fair value of stock options granted in the period reported:

	Years ended December 31,		
	2019	2018	2017
Expected term (years)	5.47	5.46	5.45
Risk-free interest rate	2.53%	2.72%	2.01%
Expected volatility	17.7%	17.2%	17.7%
Dividend yield	2.44%	2.37%	2.51%
Grant date fair value per option	$ 5.25	$ 5.10	$ 4.07

Historical information was the principal basis for the selection of the expected term and dividend yield. The expected volatility is based on a weighted-average combination of historical and implied volatilities over a time period that approximates the expected term of the option. The risk-free interest rate was selected based upon the U.S. Treasury yield curve in effect at the time of grant for the expected term of the option. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense.

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The following table summarizes stock option transactions for the year ended December 31, 2019:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Life (years)	Aggregate Intrinsic Value
Outstanding, beginning of year	422,972 $	25.97		
Granted	769,115	35.94		
Forfeited	(36,479)	35.46		
Expired / Cancelled	(2,532)	32.28		
Exercised	(119,306)	15.91		
Outstanding at end of year	1,033,770 $	34.20	8.4 $	13,171
Exercisable at end of year	164,117 $	26.86	5.4 $	3,296

The intrinsic value of stock options is the amount by which the market price of the stock on a given date, such as at the end of the period or on the day of exercise, exceeded the closing market price of stock on the date of grant. The following table summarizes the intrinsic value of stock options exercised and the fair value of stock options which vested:

	Years ended December 31, 2019	2018	2017
Intrinsic value of options exercised	$ 2,552	$ 1,806	$ 2,767
Fair value of options vested	422	156	-

The following table summarizes information about the options outstanding and options exercisable as of December 31, 2019:

	Options Outstanding			Options Exercisable	
	Shares	Weighted Average Remaining Life (years)	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Range of prices:					
$13.00 - 14.99	47,388	0.1 $	13.72	47,388 $	13.72
$15.00 - 33.99	99,661	7.2	30.47	67,649	30.47
$34.00 - 34.99	138,113	8.2	34.51	46,214	34.51
$35.00 - 35.99	748,608	9.2	35.93	2,866	35.44
	1,033,770	8.4	34.20	164,117	26.86

As of December 31, 2019, there was $2,018 of total unrecognized compensation costs related to nonvested stock options granted under the plans. The cost is expected to be recognized over a weighted average period of approximately 1.5 years.

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Stock Awards – Stock awards represent the issuance of the Company's common stock, without restriction. Stock awards are granted to the Company's non-employee directors. The issuance of stock awards results in compensation expense which is equal to the fair market value of the stock on the grant date, and is expensed immediately upon grant. The following table provides compensation cost and income tax benefit for stock-based compensation related to stock awards:

	Years ended December 31,		
	2019	2018	2017
Stock-based compensation within operations and maintenance expense	$ 698	$ 600	$ 563
Income tax benefit	202	173	233

The following table summarizes the value of stock awards:

	Years ended December 31,		
	2019	2018	2017
Intrinsic and fair value of stock awards vested	$ 698	$ 600	$ 563
Weighted average fair value of stock awards granted	41.75	34.95	34.42

The following table summarizes stock award transactions for year ended December 31, 2019:

	Number of Stock Awards	Weighted Average Fair Value
Nonvested stock awards at beginning of period	-	$ -
Granted	16,714	41.75
Vested	(16,714)	41.75
Nonvested stock awards at end of period	-	-

Note 16 – *Pension Plans and Other Post-retirement Benefits*

The Company maintains a qualified, defined benefit pension plan that covers its full-time employees who were hired prior to April 1, 2003. Retirement benefits under the plan are generally based on the employee's total years of service and compensation during the last five years of employment. The Company's policy is to fund the plan annually at a level which is deductible for income tax purposes and which provides assets sufficient to meet its pension obligations over time. To offset some limitations imposed by the Internal Revenue Code with respect to payments under qualified plans, the Company has a non-qualified Supplemental Pension Benefit Plan for Salaried Employees in order to prevent some employees from being penalized by these limitations, and to provide certain retirement benefits based on employee's years of service and compensation. The net pension costs and obligations of the qualified and non-qualified plans are included in the tables which follow. Employees hired after April 1, 2003 may participate in a defined contribution plan that provides a Company matching contribution on amounts contributed by participants and an annual profit-sharing contribution based upon a percentage of the eligible participants' compensation.

Effective July 1, 2015, the Company added a permanent lump sum option to the form of benefit payments offered to participants of the qualified defined benefit pension plan upon retirement or termination. The plan paid $10,197 and $14,872 to participants who elected this option during 2019 and 2018.

In addition to providing pension benefits, the Company offers post-retirement benefits other than pensions to employees hired before April 1, 2003 and retiring with a minimum level of service. These benefits include continuation of medical and prescription drug benefits, or a cash contribution toward such benefits, for eligible retirees and life insurance benefits for eligible retirees. The Company funds these benefits through various trust accounts. The benefits of retired officers and other eligible retirees are paid by the Company and not from plan assets due to limitations imposed by the Internal Revenue Code.

In 2018 the Company recognized a settlement loss of $5,931, which resulted from lump sum payments from the qualified or non-qualified plans exceeding the threshold of service and interest cost for the period. A settlement loss is the recognition of unrecognized pension benefit costs that would have been incurred in subsequent periods. The Company recorded this settlement loss as a regulatory asset, as it is probable of recovery in future rates, which will be amortized into pension benefit costs.

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The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid in the years indicated:

	Pension Benefits	Other Post-retirement Benefits
Years:		
2020	$ 20,468	$ 2,437
2021	20,330	2,640
2022	20,911	2,880
2023	21,121	3,133
2024	20,583	3,312
2025-2029	106,028	19,517

The changes in the benefit obligation and fair value of plan assets, the funded status of the plans and the assumptions used in the measurement of the company's benefit obligation are as follows:

	Pension Benefits		Other Post-retirement Benefits	
	2019	2018	2019	2018
Change in benefit obligation:				
Benefit obligation at January 1,	$ 281,964	$ 320,979	$ 69,443	$ 75,960
Service cost	2,718	3,249	819	1,049
Interest cost	11,817	11,495	2,999	2,831
Actuarial (gain)/loss	36,885	(23,080)	7,238	(8,970)
Plan participants' contributions	-	-	145	127
Benefits paid	(23,003)	(30,679)	(1,102)	(1,554)
Benefit obligation at December 31,	310,381	281,964	79,542	69,443
Change in plan assets:				
Fair value of plan assets at January 1,	239,007	270,353	45,422	47,750
Actual return on plan assets	41,955	(16,852)	9,436	(2,599)
Employer contributions	8,502	16,185	-	1,636
Benefits paid	(23,003)	(30,679)	(847)	(1,365)
Fair value of plan assets at December 31,	266,461	239,007	54,011	45,422
Funded status of plan:				
Net liability recognized at December 31,	$ 43,920	$ 42,957	$ 25,531	$ 24,021

The following table provides the net liability recognized on the consolidated balance sheets at December 31,:

	Pension Benefits		Other Post-retirement Benefits	
	2019	2018	2019	2018
Current liability	$ 403	$ 267	$ -	$ -
Noncurrent liability	43,517	42,690	25,531	24,021
Net liability recognized	$ 43,920	$ 42,957	$ 25,531	$ 24,021

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At December 31, 2019 and 2018, the Company's pension plans had benefit obligations in excess of its plan assets. The following tables provide the projected benefit obligation, the accumulated benefit obligation and fair market value of the plan assets as of December 31,:

	Projected Benefit Obligation Exceeds the Fair Value of Plan Assets	
	2019	2018
Projected benefit obligation	$ 310,381	$ 281,964
Fair value of plan assets	266,461	239,007

	Accumulated Benefit Obligation Exceeds the Fair Value of Plan Assets	
	2019	2018
Accumulated benefit obligation	$ 290,522	$ 264,876
Fair value of plan assets	266,461	239,007

The following table provides the components of net periodic benefit costs for the years ended December 31,:

	Pension Benefits			Other Post-retirement Benefits		
	2019	2018	2017	2019	2018	2017
Service cost	$ 2,718	$ 3,249	$ 3,174	$ 819	$ 1,049	$ 1,020
Interest cost	11,817	11,495	12,434	2,999	2,831	2,947
Expected return on plan assets	(15,272)	(18,211)	(17,077)	(2,482)	(2,706)	(2,589)
Amortization of prior service cost (credit)	620	527	579	(464)	(509)	(509)
Amortization of actuarial loss	7,927	7,291	8,003	664	1,182	1,165
Settlement loss	-	5,931	-	-	-	-
Net periodic benefit cost	$ 7,810	$ 10,282	$ 7,113	$ 1,536	$ 1,847	$ 2,034

The Company records the underfunded status of its pension and other post-retirement benefit plans on its consolidated balance sheets and records a regulatory asset for these costs that would otherwise be charged to stockholders' equity, as the Company anticipates recoverability of the costs through customer rates to be probable. The Company's pension and other post-retirement benefit plans were underfunded at December 31, 2019 and 2018. Changes in the plans' funded status will affect the assets and liabilities recorded on the balance sheet. Due to the Company's regulatory treatment, the recognition of the funded status is recorded as a regulatory asset pursuant to the FASB's accounting guidance for regulated operations.

The following table provides the amounts recognized in regulatory assets that have not been recognized as components of net periodic benefit cost as of December 31,:

	Pension Benefits		Other Post-retirement Benefits	
	2019	2018	2019	2018
Net actuarial loss	$ 87,786	$ 85,510	$ 10,496	$ 10,876
Prior service cost (credit)	2,115	2,734	(896)	(1,360)
Total recognized in regulatory assets	$ 89,901	$ 88,244	$ 9,600	$ 9,516

(In thousands of dollars, except per share amounts)

The following table provides the estimated net actuarial loss and prior service cost for the Company's pension plans that will be amortized from regulatory asset into net periodic benefit cost for the year ending December 31, 2019:

	Pension Benefits	Other Post-retirement Benefits
Net actuarial loss	$ 8,021	$ 531
Prior service cost (credit)	591	(464)

Accounting for pensions and other post-retirement benefits requires an extensive use of assumptions about the discount rate, expected return on plan assets, the rate of future compensation increases received by the Company's employees, mortality, turnover and medical costs. Each assumption is reviewed annually with assistance from the Company's actuarial consultant who provides guidance in establishing the assumptions. The assumptions are selected to represent the average expected experience over time and may differ in any one year from actual experience due to changes in capital markets and the overall economy. These differences will impact the amount of pension and other post-retirement benefit expense that the Company recognizes.

The significant assumptions related to the Company's benefit obligations are as follows:

	Pension Benefits		Other Post-retirement Benefits	
	2019	2018	2019	2018
Weighted Average Assumptions Used to Determine Benefit Obligations as of December 31,				
Discount rate	3.35%	4.30%	3.42%	4.34%
Rate of compensation increase	3.0-4.0%	3.0-4.0%	n/a	n/a
Assumed Health Care Cost Trend Rates Used to Determine Benefit Obligations as of December 31,				
Health care cost trend rate	n/a	n/a	6.25%	6.6%
Rate to which the cost trend is assumed to decline (the ultimate trend rate)	n/a	n/a	5.0%	5.0%
Year that the rate reaches the ultimate trend rate	n/a	n/a	2024	2022

n/a – Assumption is not applicable.

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The significant assumptions related to the Company's net periodic benefit costs are as follows:

	Pension Benefits			Other Post-retirement Benefits		
	2019	2018	2017	2019	2018	2017
Weighted Average Assumptions Used to Determine Net Periodic Benefit Costs for Years Ended December 31,						
Discount rate	4.30%	3.66%	4.13%	4.34%	3.73%	4.25%
Expected return on plan assets	6.50%	6.75%	7.00%	4.1-6.5%	4.25-6.75%	4.67-7.00%
Rate of compensation increase	3.0-4.0%	3.0-4.0%	3.0-4.0%	n/a	n/a	n/a
Assumed Health Care Cost Trend Rates Used to Determine Net Periodic Benefit Costs for Years Ended December 31,						
Health care cost trend rate	n/a	n/a	n/a	6.6%	7.0%	6.6%
Rate to which the cost trend is assumed to decline (the ultimate trend rate)	n/a	n/a	n/a	5.0%	5.0%	5.0%
Year that the rate reaches the ultimate trend rate	n/a	n/a	n/a	2023	2023	2021

n/a – Assumption is not applicable.

Assumed health-care trend rates have a significant effect on the expense and liabilities for other post-retirement benefit plans. The health care trend rate is based on historical rates and expected market conditions. A one-percentage point change in the assumed health-care cost trend rates would have the following effects:

	1-Percentage-Point Increase	1-Percentage-Point Decrease
Effect on the health-care component of the accrued other post-retirement benefit obligation	$ 5,131	$ (4,548)
Effect on aggregate service and interest cost components of net periodic post-retirement health-care benefit cost	$ 301	$ (227)

The Company's discount rate assumption, which is utilized to calculate the present value of the projected benefit payments of our post-retirement benefits, was determined by selecting a hypothetical portfolio of high quality corporate bonds appropriate to match the projected benefit payments of the plans. The selected bond portfolio was derived from a universe of Aa-graded corporate bonds. The discount rate was then developed as the rate that equates the market value of the bonds purchased to the discounted value of the plan's benefit payments. The Company's pension expense and liability (benefit obligations) increases as the discount rate is reduced.

The Company's expected return on plan assets is determined by evaluating the asset class return expectations with its advisors as well as actual, long-term, historical results of our asset returns. The Company's market related value of plan assets is equal to the fair value of the plan's assets as of the last day of its fiscal year, and is a determinant for the expected return on plan assets which is a component of post-retirement benefits expense. The Company's pension expense increases as the expected return on plan assets decreases. For 2019, the Company used a 6.50% expected return on plan assets assumption which will decrease to 6.0% for 2020. The Company believes its actual long-term asset allocation on average will approximate the targeted allocation. The Company's investment strategy is to earn a reasonable rate of return while maintaining risk at acceptable levels. Risk is managed through fixed income investments to manage interest rate exposures that impact the valuation of liabilities and through the diversification of investments across and within various asset categories. Investment returns are compared to a total plan benchmark constructed by applying the plan's asset allocation target weightings to passive index returns representative of the respective asset classes in which the plan invests. The Retirement and Employee Benefits Committee meets quarterly to review plan investments and management monitors investment performance quarterly through a performance report prepared by an external consulting firm.

(In thousands of dollars, except per share amounts)

The Company's pension plan asset allocation and the target allocation by asset class are as follows:

		Percentage of Plan Assets at December 31,	
	Target Allocation	2019	2018
Return seeking assets	50 to 70%	56%	58%
Liability hedging assets	30 to 50%	44%	42%
Total	100%	100%	100%

The fair value of the Company's pension plans' assets at December 31, 2019 by asset class are as follows:

	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Common stock	$ 17,166	$ -	$ -	$ -	$ 17,166
Return seeking assets:					
Global equities	-	-	-	51,408	51,408
Real estate securities	-	-	-	13,970	13,970
Hedge / diversifying strategies	-	-	-	38,099	38,099
Credit	-	-	-	27,847	27,847
Liability hedging assets	-	-	-	113,777	113,777
Cash and cash equivalents	4,194	-	-	-	4,194
Total pension assets	$ 21,360	$ -	$ -	$ 245,101	$ 266,461

(a) Assets that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy.

The fair value of the Company's pension plans' assets at December 31, 2018 by asset class are as follows:

	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Common stock	$ 12,268	$ -	$ -	$ -	$ 12,268
Return seeking assets:					
Global equities	-	-	-	48,040	48,040
Real estate securities	-	-	-	15,766	15,766
Hedge / diversifying strategies	-	-	-	37,591	37,591
Credit	-	-	-	25,772	25,772
Liability hedging assets	-	-	-	97,756	97,756
Cash and cash equivalents	1,814		-	-	1,814
Total pension assets	$ 14,082	$ -	$ -	$ 224,925	$ 239,007

Equity securities include our common stock in the amounts of $17,166 or 6.4% and $12,393 or 5.1% of total pension plans' assets as of December 31, 2019 and 2018, respectively.

(In thousands of dollars, except per share amounts)

The asset allocation for the Company's other post-retirement benefit plans and the target allocation by asset class are as follows:

	Target Allocation	Percentage of Plan Assets at December 31, 2019	2018
Return seeking assets	50 to 70%	64%	60%
Liability hedging assets	30 to 50%	36%	40%
Total	100%	100%	100%

The fair value of the Company's other post-retirement benefit plans' assets at December 31, 2019 by asset class are as follows:

	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Return seeking assets:					
Global equities	$ 10,795	$ -	$ -	$ 17,781	$ 28,576
Real estate securities	2,449	-	-	3,751	6,200
Liability hedging assets	5,685	-	-	9,984	15,669
Cash and cash equivalents	3,566	-	-	-	3,566
Total other post-retirement assets	$ 22,495	$ -	$ -	$ 31,516	$ 54,011

(a) Assets that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy.

The fair value of the Company's other post-retirement benefit plans' assets at December 31, 2018 by asset class are as follows:

	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Return seeking assets:					
Global equities	$ 8,411	$ -	$ -	$ 13,882	$ 22,293
Real estate securities	1,967	-	-	3,065	5,032
Liability hedging assets	5,075	-	-	8,806	13,881
Cash and cash equivalents	4,216	-	-	-	4,216
Total other post-retirement assets	$ 19,669	$ -	$ -	$ 25,753	$ 45,422

Valuation Techniques Used to Determine Fair Value

- *Common Stocks* - Investments in common stocks are valued using unadjusted quoted prices obtained from active markets.
- *Return Seeking Assets* – Investments in return seeking assets consists of the following:
    - Global equities, which consist of common and preferred shares of stock, traded on U.S. or foreign exchanges that are valued using unadjusted quoted prices obtained from active markets, or commingled fund vehicles, consisting of such securities valued using NAV, which are not classified within the fair value hierarchy.
    - Real estate securities, which consist of securities, traded on U.S. or foreign exchanges that are valued using unadjusted quoted prices obtained from active markets, or for real estate commingle fund vehicles that are not publicly quoted, the fund administrators value the funds using the NAV per fund share,

derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.

- Hedge / diversifying strategies, which consist of a multi-manager fund vehicle having underlying exposures that collectively seek to provide low correlation of return to equity and fixed income markets, thereby offering diversification. As a multi-manager fund investment, NAV is derived from underlying manager NAVs, which are derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.
- Credit, which consist of certain opportunistic, return-oriented credits which primarily include below investment grade bonds (i.e. high yield bonds), bank loans, and securitized debt. Credits are valued using the NAV per fund share, derived from either quoted prices in active markets of the underlying securities, or less active markets, or quotes of similar assets, and are not classified within the fair value hierarchy.

- *Liability Hedging Assets* – Investments in liability hedging assets consist of funds investing in high-quality fixed income (i.e. U.S. Treasury securities and government bonds), and for funds for which market quotations are readily available, are valued at the last reported closing price on the primary market or exchange on which they are traded. Funds for which market quotations are not readily available, are valued using the NAV per fund share, derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.
- *Cash and Cash Equivalents* – Investments in cash and cash equivalents are comprised of both uninvested cash and money market funds. The uninvested cash is valued based on its carrying value, and the money market funds are valued utilizing the net asset value per unit obtained from published market prices.

Funding requirements for qualified defined benefit pension plans are determined by government regulations and not by accounting pronouncements. In accordance with funding rules and the Company's funding policy, during 2020 our pension contribution is expected to be $13,542.

The Company has a 401(k) savings plan, which is a defined contribution plan and covers substantially all employees. The Company makes matching contributions that are based on a percentage of an employee's contribution, subject to specific limitations, as well as, non-discretionary contributions based on eligible hourly wages for certain union employees, discretionary year-end contributions based on an employee's eligible compensation, and employer profit sharing contributions. Participants may diversify their Company matching account balances into other investments offered under the 401(k) savings plan. The Company's contributions, which are recorded as compensation expense, were $ 6,259, $6,096, and $5,374, for the years ended December 31, 2019, 2018, and 2017, respectively.

Note 17 – *Water and Wastewater Rates*

On June 7, 2012, Aqua Pennsylvania reached a settlement agreement in its rate filing with the Pennsylvania Public Utility Commission, which in addition to a water rate increase, provided for a reduction in current income tax expense as a result of the recognition of qualifying income tax benefits upon Aqua Pennsylvania changing its tax accounting method to permit the expensing of qualifying utility asset improvement costs that historically have been capitalized and depreciated for book and tax purposes. In December 2012, Aqua Pennsylvania implemented this change which provides for the flow-through of income tax benefits that resulted in a substantial reduction in income tax expense and greater net income and cash flow. This change allowed Aqua Pennsylvania to suspend its water Distribution System Improvement Charges in 2013 and lengthen the amount of time until the next Aqua Pennsylvania rate case. Beginning on October 1, 2017, Aqua Pennsylvania initiated a water infrastructure rehabilitation surcharge for the capital invested since the last rate proceeding and in August 2018 filed for a base rate increase in water and wastewater rates for its customers. In May 2019, the Company received an order from the Pennsylvania Public Utility Commission, resulting in an increase of $47,000 in annual revenue, and new rates went into effect on May 24, 2019. The rates in effect at the time of the filing also included $29,493 in Distribution System Improvement Charges ("DSIC"), which was 7.5% above prior base rates. Consequently, the aggregate base rates increased by $76,493 since the last base rate increase and the DSIC was reset to zero. Revenues from this rate increase realized in the year of grant were approximately $28,396. Additionally, in the May 2019 Aqua Pennsylvania rate order, base rates are designed with $158,865 of tax benefits assumed for qualifying utility asset improvement costs, subject to $3,000 either above or below this target amount. To the extent actual tax benefits are outside this range, tax benefits will either be deferred or accrued, and settled in the next rate filing.

In December 2018, the Company's operating subsidiary in New Jersey filed for a base rate increase in water rates for its customers. In May 2019, the Company received an order from the New Jersey Board of Public Utilities, resulting in an increase of $5,000 in annual revenues, and new rates went into effect on June 1, 2019. Revenues from this rate increase realized in the year of grant were approximately $2,917.

In addition to the Pennsylvania and New Jersey rate awards noted above, the Company's operating subsidiaries were allowed annualized rate increases of $974 in 2019, $11,558 in 2018, and $7,558 in 2017, represented by two, five, and five rate decisions, respectively. Revenues from these rate increases realized in the year of grant were approximately $974, $7,270, and $6,343 in 2019, 2018, and 2017, respectively.

Seven states in which the Company operates permit water utilities, and in six states wastewater utilities, to add a surcharge to their water or wastewater bills to offset the additional depreciation and capital costs related to infrastructure system replacement and rehabilitation projects completed and placed into service between base rate filings. Currently, New Jersey allows for an infrastructure rehabilitation surcharge for water utilities, while Pennsylvania, Illinois, Ohio, Indiana, Virginia, and North Carolina allow for the use of an infrastructure rehabilitation surcharge for both water and wastewater utility systems. The surcharge for infrastructure system replacements and rehabilitations is typically adjusted periodically based on additional qualified capital expenditures completed or anticipated in a future period, is capped as a percentage of base rates, generally at 5% to 12.75%, and is reset to zero when new base rates that reflect the costs of those additions become effective or when a utility's earnings exceed a regulatory benchmark. The surcharge for infrastructure system replacements and rehabilitations provided revenues in 2019, 2018, and 2017 of $16,007, $31,836, and $10,255, respectively.

Note 18 – *Segment Information*

The Company has ten operating segments and one reportable segment. The Regulated water segment, the Company's single reportable segment, is comprised of eight operating segments representing our water and wastewater regulated utility companies which are organized by the states where we provide water and wastewater services. These operating segments are aggregated into one reportable segment since each of these operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution or wastewater collection methods, and the nature of the regulatory environment.

Two operating segments are included within the Other category below. These segments are not quantitatively significant and are comprised of Aqua Infrastructure and Aqua Resources. In addition to these segments, Other is comprised of other business activities not included in the reportable segment, including corporate costs that have not been allocated to the Regulated water segment, because they would not be recoverable as a cost of utility service, and intersegment eliminations. Corporate costs include general and administrative expenses, and interest expense.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

The following table presents information about the Company's reportable segment:

	2019			2018		
	Regulated Water	Other and Eliminations	Consolidated	Regulated Water	Other and Eliminations	Consolidated
Operating revenues	$ 886,430	$ 3,262	$ 889,692	$ 834,638	$ 3,453	$ 838,091
Operations and maintenance expense	315,052	18,050	333,102	292,232	16,246	308,478
Depreciation	158,162	17	158,179	145,977	55	146,032
Amortization	(2,264)	561	(1,703)	401	240	641
Operating income (loss)	357,979	(17,820)	340,159	338,388	(15,210)	323,178
Interest expense	97,995	27,388	125,383	89,207	9,847	99,054
Interest income	54	25,352	25,406	95	57	152
Allowance for funds used during construction	16,172	-	16,172	13,023	-	13,023
Equity earnings in joint venture	-	2,210	2,210	-	2,081	2,081
Provision for income taxes (benefit)	(1,267)	(11,750)	(13,017)	4,158	(17,827)	(13,669)
Net income (loss)	274,920	(50,377)	224,543	259,160	(67,172)	191,988
Capital expenditures	550,273	-	550,273	495,730	7	495,737
Total assets	7,269,404	2,092,581	9,361,985	6,807,960	156,536	6,964,496

	2017		
	Regulated Water	Other and Eliminations	Consolidated
Operating revenues	$ 804,905	$ 4,620	$ 809,525
Operations and maintenance expense	282,009	244	282,253
Depreciation	136,246	56	136,302
Amortization	240	182	422
Operating income	331,888	2,032	333,920
Interest expense	82,102	6,441	88,543
Interest income	128	74	202
Allowance for funds used during construction	15,211	-	15,211
Equity earnings in joint venture	-	331	331
Provision for income taxes	14,107	2,807	16,914
Net income (loss)	246,548	(6,810)	239,738
Capital expenditures	478,077	12	478,089
Total assets	6,236,109	96,354	6,332,463

Selected Quarterly Financial Data (Unaudited)
Essential Utilities, Inc. and Subsidiaries
(In thousands of dollars, except per share amounts)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year
2019					
Operating revenues	$ 201,132	$ 218,892	$ 243,626	$ 226,042	$ 889,692
Operations and maintenance expense	79,314	86,445	82,022	85,321	333,102
Operating income	67,439	80,949	106,470	85,301	340,159
Net income	16,924	54,903	88,489	64,227	224,543
Basic net income per common share	0.09	0.25	0.38	0.28	1.04
Diluted net income per common share	0.09	0.25	0.38	0.28	1.04
Dividend paid per common share	0.2190	0.2190	0.2343	0.2343	0.9066
Dividend declared per common share	0.2190	0.2190	0.2343	0.2343	0.9066
2018					
Operating revenues	$ 194,347	$ 211,860	$ 226,137	$ 205,747	$ 838,091
Operations and maintenance expense	73,946	73,515	68,624	92,393	308,478
Operating income	69,337	86,754	104,293	62,794	323,178
Net income (loss)	50,839	66,590	78,216	(3,657)	191,988
Basic net income (loss) per common share	0.29	0.37	0.44	(0.02)	1.08
Diluted net income (loss) per common share	0.29	0.37	0.44	(0.02)	1.08
Dividend paid per common share	0.2047	0.2047	0.2190	0.2190	0.8474
Dividend declared per common share	0.2047	0.2047	0.2190	0.2190	0.8474

Summary of Selected Financial Data (Unaudited)
Essential Utilities, Inc. and Subsidiaries
(In thousands of dollars, except per share amounts)

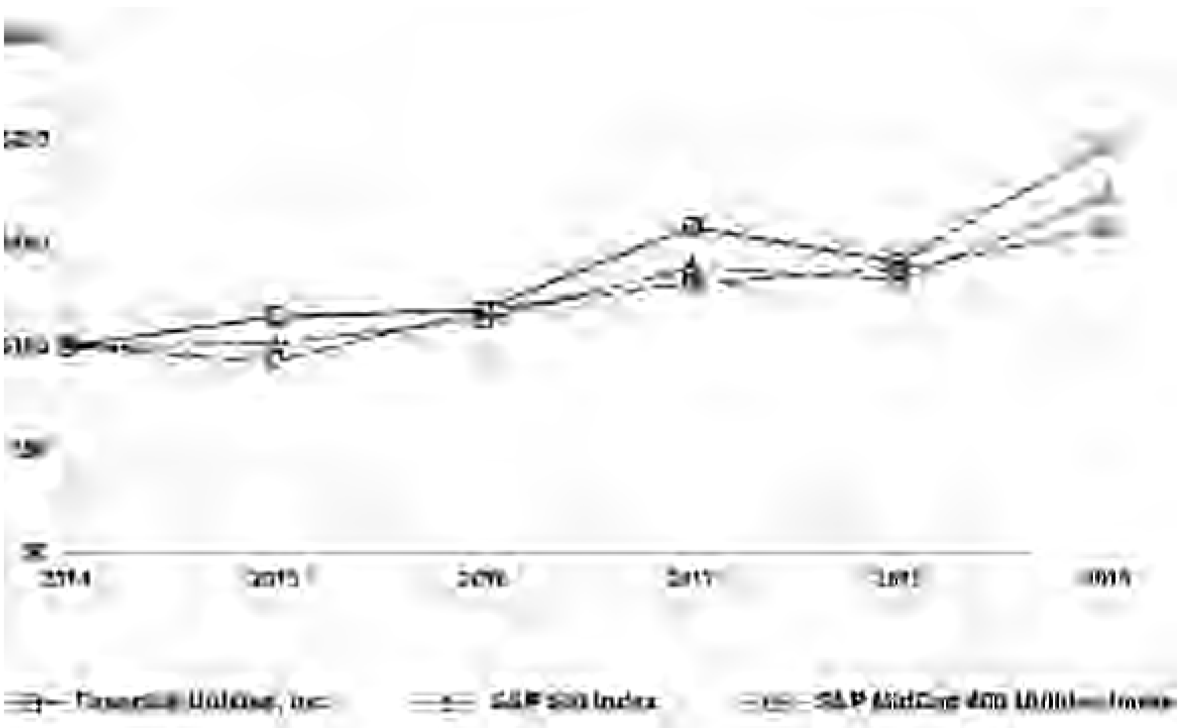
Years ended December 31,	2019	2018	2017	2016	2015
PER COMMON SHARE:					
Net income:					
Basic	$ 1.04	$ 1.08	$ 1.35	$ 1.32	$ 1.14
Diluted	1.04	1.08	1.35	1.32	1.14
Cash dividends declared and paid	0.9066	0.8474	0.7920	0.7386	0.6860
Return on Essential Utilities stockholders' equity	5.8%	9.6%	12.2%	12.7%	11.7%
Book value at year end	$ 17.58	$ 11.28	$ 11.02	$ 10.43	$ 9.78
Market value at year end	46.94	34.19	39.23	30.04	29.80
INCOME STATEMENT HIGHLIGHTS:					
Operating revenues	$ 889,692	$ 838,091	$ 809,525	$ 819,875	$ 814,204
Depreciation and amortization	156,476	146,673	136,724	133,008	128,737
Interest expense	125,383	99,054	88,543	80,811	76,808
Income before income taxes (1) (2)	211,526	178,319	256,652	255,160	216,752
Provision for income taxes (benefit)	(13,017)	(13,669)	16,914	20,978	14,962
Net income (1) (2)	224,543	191,988	239,738	234,182	201,790
BALANCE SHEET HIGHLIGHTS:					
Total assets	$ 9,361,985	$ 6,964,496	$ 6,332,463	$ 6,158,991	$ 5,717,873
Property, plant and equipment, net	6,345,790	5,930,326	5,399,860	5,001,615	4,688,925
Essential Utilities stockholders' equity	3,880,860	2,009,364	1,957,621	1,850,068	1,725,930
Long-term debt, including current portion, excluding debt issuance costs (3)	3,077,400	2,563,660	2,143,127	1,910,633	1,779,205
Total debt, excluding debt issuance costs (3)	3,103,124	2,579,109	2,146,777	1,917,168	1,795,926
ADDITIONAL INFORMATION:					
Net cash flows from operating activities	$ 338,523	$ 368,522	$ 381,318	$ 396,163	$ 370,794
Capital expenditures	550,273	495,737	478,089	382,996	364,689
Net cash expended for acquisitions of utility systems and other	59,687	145,693	5,860	9,423	28,989
Dividends on common stock	188,512	150,736	140,660	130,923	121,248
Number of utility customers served	1,026,704	1,005,590	982,849	972,265	957,866
Number of shareholders of common stock	22,752	23,476	23,511	24,750	25,269
Common shares outstanding (000)	220,759	178,092	177,714	177,394	176,544
Employees (full-time)	1,583	1,571	1,530	1,551	1,617

(1) 2019 and 2018 results include mark-to-market fair value adjustment expense of $18,756 ($23,742 pre-tax) and $47,225 ($59,779 pre-tax) associated with our interest rate swap agreements that were entered into to mitigate interest rate risk associated with our debt issuances to fund a portion of the Peoples Gas Acquisition
(2) 2015 results include Essential Utilities’ share of a joint venture impairment charge of $21,433 ($32,975 pre-tax)
(3) Debt issuance costs for the years ended December 31, 2019, 2018, 2017, 2016, and 2015 were $29,022, $20,651, $21,605, $22,357, and $23,165, respectively

The graph below matches the cumulative 5-Year total return of holders of Essential Utilities, Inc.'s common stock with the cumulative total returns of the S&P 500 index and the S&P MidCap 400 Utilities index. The graph assumes that the value of the investment in our common stock, in each index, and in the peer group (including reinvestment of dividends) was $100 on 12/31/2014 and tracks it through 12/31/2019.

Comparison of five year cumulative total return*

Among Essential Utilties, Inc., the S&P 500 Index, and S&P MidCap 400 Utilities Index



*$100 invested on 12/31/14 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.

Years as of December 31

	2014	2015	2016	2017	2018	2019
Essential Utilities, Inc.	100.00	114.49	118.18	158.08	141.19	198.25
S&P 500 Index	100.00	101.38	113.51	138.29	132.23	173.86
S&P MidCap 400 Utilities Index	100.00	92.90	118.22	130.52	137.42	157.48

The stock price performance included in this graph is not necessarily indicative of future stock price performance.

Financial Reports and Investor Relations
Copies of the company's public financial reports, including annual reports and Forms 10–K and 10–Q, are available online and can be downloaded from the investor relations section of our website at Essential.co. You may also obtain these reports by writing to us at:

Investor Relations Department
Essential Utilities Inc.
762 W. Lancaster Avenue
Bryn Mawr, PA 19010-3489

Corporate Governance
We are committed to maintaining high standards of corporate governance and are in compliance with the corporate governance rules of the Securities and Exchange Commission (SEC) and the New York Stock Exchange. Copies of our key corporate governance documents, including our Corporate Governance Guidelines, Code of Ethical Business Conduct, and the charters of each committee of our Board of Directors can be obtained from the corporate governance portion of the investor relations section of our website, Essential.co. Amendments to the Code of Ethical Business, and in the event of any grant of waiver from a provision of the Code of Conduct requiring disclosure under applicable SEC rules will be disclosed on our website.

Annual Meeting
8 a.m. Eastern Daylight Time
Wednesday, May 6, 2020
Peoples Natural Gas Co.
375 N. Shore Dr.
Pittsburgh, PA 15212

Transfer Agent and Registrar
Computershare
P.O. Box 505000
Louisville, KY 40233
800.205.8314 or
www.computershare.com/investor

Independent Registered Public Accounting Firm
PricewaterhouseCoopers LLP
Two Commerce Square
Suite 1800
2001 Market Street
Philadelphia, PA 19103-7042

Stock Exchange
The Common Stock of the company is listed on the New York Stock Exchange and under the ticker symbol **WTRG**.

Dividend Reinvestment and Direct Stock Purchase Plan
The company's Dividend Reinvestment and Direct Stock Purchase Plan ("Plan") enables shareholders to reinvest all, or a designated portion of, dividends paid on up to 100,000 shares of Common Stock in additional shares of Common Stock at a discretionary discount from a price based on the market value of the stock. The discount between 0 and 5.0 percent on the shares purchased or issued to meet the dividend reinvestment requirement will be designated by us in our sole discretion prior to the purchase or issuance of such shares. We reserve the right to change, reduce or discontinue any discount at any time without notice. In addition, shareholders may purchase additional shares of Essential Utilities Common Stock at any time with a minimum investment of $50, up to a maximum of $250,000 annually. Individuals may become shareholders by making an initial investment of at least $500. A Plan prospectus may be obtained by calling Computershare at 800.205.8314 or by visiting www.computershare.com/investor. Please read the prospectus carefully before you invest.

IRA, Roth IRA, Education IRA

An IRA, Roth IRA or Coverdell Education Savings Account may be opened through the Plan to hold shares of Common Stock of the company and to make contributions to the IRA to purchase shares of Common Stock. Participants in the Plan may roll over an existing IRA or other qualified plan distribution in cash into an IRA under the Plan to purchase the company's Common Stock. Participants may also transfer the company's Common Stock from an existing IRA into an IRA under the Plan. A prospectus, IRA forms and a disclosure statement may be obtained by calling Computershare at 800.597.7736. Please read the prospectus carefully before you invest.

Direct Deposit

With direct deposit, Essential Utilities cash dividends are deposited automatically on the dividend payment date of each quarter. Shareholders will receive confirmation of their deposit in the mail. Shareholders interested in direct deposit should call the company's transfer agent at 800.205.8314.

Delivery of voting materials to shareholders sharing an address

The SEC's rules permit the Company to deliver a Notice of Internet Availability of Proxy Materials or a single set of proxy materials to one address shared by two or more of the Company's shareholders. This is intended to reduce the printing and postage expense of delivering duplicate voting materials to our shareholders who have more than one Essential Utilities stock account. A separate Notice of Internet Availability or proxy card is included for each of these shareholders. If you received a Notice of Internet Availability you will not receive a printed copy of the proxy materials unless you request it by following the instructions in the notice for requesting printed proxy material.

How to obtain a separate set of voting materials

If you are a registered shareholder who shares an address with another registered shareholder and have received only one Notice of Internet Availability of Proxy Materials or set of proxy material and wish to receive a separate copy for each shareholder in your household for the 2020 annual meeting, you may write or call us to request a separate copy of this material at no cost to you at 610.645.1040 or write us at:

Attn: Investor Relations
Essential Utilities Inc.
762 W. Lancaster Avenue
Bryn Mawr, PA, 19010

For future annual meetings, you may request separate voting material by calling Broadridge at 866.540.9095, or by writing to Broadridge Financial Solutions, Inc., Householding Department, 51 Mercedes Way, Edgewood, New York 11717.

Account Access

Essential Utilities shareholders may access their account by visiting www.computershare.com/investor. Shareholders may view their account, purchase additional shares, and make changes to their account. To learn more, visit www.computershare.com/investor or call 800.205.8314.

Dividends

Essential Utilities has paid dividends for 75 consecutive years. The normal Common Stock dividend dates for 2020 and the first six months of 2021 are:

Declaration Date	Ex-Dividend Date	Record Date	Payment Date
February 3, 2020	February 12, 2020	February 14, 2020	March 1, 2020
May 4, 2020	May 13, 2020	May 15, 2020	June 1, 2020
August 3, 2020	August 12, 2020	August 14, 2020	September 1, 2020
November 2, 2020	November 11, 2020	November 13, 2020	December 1, 2020
February 1, 2021	February 10, 2021	February 12, 2021	March 1, 2021
May 3, 2021	May 12, 2021	May 14, 2021	June 1, 2021

To be an owner of record, and therefore eligible to receive the quarterly dividend, shares must have been purchased before the ex-dividend date. Owners of any share(s) on or after the ex-dividend date will not receive the dividend for that quarter. The previous owner — the owner of record — will receive the dividend.

Only the Board of Directors may declare dividends and set record dates. Therefore, the payment of dividends and these dates may change at the discretion of the Board.

Dividends paid on the company's Common Stock are subject to Federal and State income tax.

Lost Dividend Checks, Stock Certificates and Escheatment

Dividend checks lost by shareholders, or those that might be lost in the mail, will be replaced upon notification of the lost or missing check. All inquiries concerning lost or missing dividend checks should be made to the company's transfer agent at 800.205.8314. Shareholders should call or write the company's transfer agent to report a lost certificate. Appropriate documentation will be prepared and sent to the shareholder with instructions.

Escheatment is the act of reporting and transferring property to a state when the rightful owner has an invalid address or has not made contact or initiated a transaction during the state's designated dormancy period. Escheated assets are transferred to the state for safekeeping (and often liquidated) until the rightful owner makes a claim on the asset. To keep your shares of stock and uncashed dividends from being escheated, you must maintain contact (recommended at least once a year) with the company's transfer agent, especially if you recently changed your address, changed your marital status or are managing an estate following a death. Unclaimed property laws vary widely from state to state.

Safekeeping of Stock Certificates

Under the Direct Stock Purchase Plan, shareholders may have their stock certificates deposited with the transfer agent for safekeeping free of charge. Stock certificates and written instructions should be forwarded to:

Computershare, N.A.
P.O. BOX 505000
Louisville, KY 40233

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Corporate Information

Board of Directors

Christopher Franklin
Chairman, Chief Executive Officer and President
Essential Utilities Inc.
Director since 2015

Elizabeth B. Amato
Sr. Vice President and Chief Human Resources Officer
United Technologies Corporation
Director since 2018

Nicholas DeBenedictis
Chairman Emeritus
Essential Utilities Inc.
Director since 1992

Daniel J. Hilferty
President and Chief Executive Officer
Independence Health Group
Director since 2017

Francis Idehen
Chief Operating Officer
GCM Grosvenor
Director since 2019

Ellen T. Ruff
Former President
Duke Energy
Director since 2006

Lee C. Stewart
Private Financial Consultant
Director since 2018

Christopher C. Womack
President of External Affairs
Southern Company
Director since 2019

Officers

Christopher Franklin
Chairman, Chief Executive Officer and President

Richard S. Fox
Executive Vice President
Chief Operating Officer

Christopher P. Luning
Executive Vice President
General Counsel and Secretary

Matthew Rhodes
Executive Vice President
Strategy and Corporate Development

Robert A. Rubin
Senior Vice President
Chief Accounting Officer

Daniel J. Schuller
Executive Vice President
Chief Financial Officer

Item 16
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Integrity

Respect

Excellence

Essential Utilities Inc.
762 W. Lancaster Avenue
Bryn Mawr, PA 19010

NYSE: WTRG

877.987.2782
www.Essential.co

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Providing natural resources for life.