American Water Works Company, Inc. Form 10-K February 21, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the fiscal year ended December 31, 2016

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the transition period from to

Commission file: number 001-34028

AMERICAN WATER WORKS COMPANY, INC.

(Exact name of registrant as specified in its charter)

Delaware	
(State or other jurisdiction of	

51-0063696 (I.R.S. Employer

incorporation or organization)

Identification No.)

1025 Laurel Oak Road, Voorhees, NJ08043(Address of principal executive offices)(Zip Code)

(856) 346-8200

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class Common stock, par value \$0.01 per share Securities registered pursuant to Section 12(g) of the Act:

Name of each exchange on which registered New York Stock Exchange, Inc.

None.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "small reporting company" in Rule 12b-2 of the Exchange Act.:

Large accelerated filer Accelerated filer

Non-accelerated filerSmall reporting companyIndicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).YesNo

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter.

Common Stock, \$0.01 par value—\$13,463,200,000 as of June 30, 2016 (solely for purposes of calculating this aggregate market value, American Water has defined its affiliates to include (i) those persons who were, as of June 30, 2016, its executive officers, directors or known beneficial owners of more than 10% of its common stock, and (ii) such other persons who were deemed, as of June 30, 2016, to be controlled by, or under common control with, American Water or any of the persons described in clause (i) above).

Indicate the number of shares outstanding of each of the registrant's classes of common stock as of the latest practicable date: Common Stock, \$0.01 par value per share—178,214,748 shares as of February 16, 2017.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the American Water Works Company, Inc. definitive proxy statement for the 2017 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission within 120 days after December 31, 2016 are incorporated by reference into Part III of this report.

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FORWARD-LOOKING STATEMENTS

We have made statements in Item 1—Business, Item 1A—Risk Factors, and Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations, and in other sections of this Annual Report on Form 10-K ("Form 10-K"), or incorporated certain statements by reference into this Form 10-K, that are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the Private Securities Litigation Reform Act of 1995. In some cases, these forward-looking statements can be identified by words with prospective meanings such as "intend," "plan," "estimate," "believe," "anticipate," "expect," "predict," "project," "assume," "forecast," "outlook," "future," "pending," "goal," "objective "continue," "seek to," "may," "can," "should," "will" and "could" or the negative of such terms or other variations or similar expressions. Forward-looking statements may relate to, among other things, our future financial performance, including our operation and maintenance ("O&M") efficiency ratio, cash flows, our growth and portfolio optimization strategies, our projected capital expenditures and related funding requirements, our ability to repay debt, our projected strategy to finance current operations and growth initiatives, the impact of legal proceedings and potential fines and penalties, business process and technology improvement initiatives, trends in our industry, regulatory, legislative, tax policy or legal developments or rate adjustments, including rate case filings, filings for infrastructure surcharges and filings to address regulatory lag.

Forward-looking statements are predictions based on our current expectations and assumptions regarding future events. They are not guarantees or assurances of any outcomes, financial results or levels of activity, performance or achievements, and you are cautioned not to place undue reliance upon them. These forward-looking statements are subject to a number of estimates and assumptions, and known and unknown risks, uncertainties and other factors. Our actual results may vary materially from those discussed in the forward-looking statements included herein as a result of the factors discussed under Item 1A—Risk Factors, and the following important factors:

the decisions of governmental and regulatory bodies, including decisions to raise or lower rates;

the timeliness and outcome of regulatory commissions' actions concerning rates, capital structure, authorized return on equity, capital investment, permitting and other decisions;

changes in customer demand for, and patterns of use of, water, such as may result from conservation efforts;
changes in laws, governmental regulations and policies, including environmental, health and safety, water quality, public utility and tax regulations and policies, and impacts resulting from U.S., state and local elections;
weather conditions, patterns, events or natural disasters, including drought or abnormally high rainfall, strong winds, coastal and intercoastal flooding, earthquakes, landslides, hurricanes, tornadoes, electrical storms and solar flares;
the outcome of litigation and government action related to the Freedom Industries chemical spill in West Virginia, including matters pertaining to the binding global agreement in principle to settle claims related to this chemical spill;

our ability to appropriately maintain current infrastructure, including our operational and information technology (IT) systems, and manage the expansion of our business;

exposure or infiltration of our critical infrastructure, operational technology and IT systems through physical or cyber attacks or other disruptions;

our ability to obtain permits and other approvals for projects;

changes in our capital requirements;

our ability to control operating expenses and to achieve efficiencies in our operations;

the intentional or unintentional actions of a third party, including contamination of our water supplies or water provided to our customers;

our ability to obtain adequate and cost-effective supplies of chemicals, electricity, fuel, water and other raw materials that are needed for our operations;

our ability to successfully meet growth projections for our business and capitalize on growth opportunities, including our ability to, among other things, acquire and integrate water and wastewater systems into our regulated operations,

and enter into contracts and other agreements with, or otherwise obtain, new customers in our market-based businesses;

risks and uncertainties associated with contracting with the U.S. government, including ongoing compliance with applicable government procurement and security regulations;

• cost overruns relating to improvements in or the expansion of our operations;

our ability to maintain safe work sites;

our exposure to liabilities related to environmental laws and similar matters resulting from, among other things, water and wastewater service provided to customers, including, for example, our water management solutions that are focused on customers in the natural gas exploration and production market;

changes in general economic, political, business and financial market conditions;

access to sufficient capital on satisfactory terms and when and as needed to support operations and capital expenditures;

fluctuations in interest rates;

restrictive covenants in or changes to the credit ratings on our current or future debt that could increase our financing costs or funding requirements or affect our ability to borrow, make payments on debt or pay dividends;

fluctuations in the value of benefit plan assets and liabilities that could increase our cost and funding requirements; changes in federal or state income tax laws, including tax reform, the availability of tax credits and tax abatement programs, and our ability to utilize our U.S. and state net operating loss carryforwards;

migration of customers into or out of our service territories;

the use by municipalities of the power of eminent domain or other authority to condemn our systems; difficulty in obtaining, or the inability to obtain, insurance at acceptable rates and on acceptable terms and conditions;

the incurrence of impairment charges related to our goodwill or other assets;

labor actions, including work stoppages and strikes;

the ability to retain and attract qualified employees;

eivil disturbances or terrorist threats or acts, or public apprehension about future disturbances or terrorist threats or acts; and

the impact of new, and changes to existing, accounting standards.

These forward-looking statements are qualified by, and should be read together with, the risks and uncertainties set forth above and the risk factors included in Item 1A—Risk Factors and other statements contained in this Form 10-K, and you should refer to such risks, uncertainties and risk factors in evaluating such forward-looking statements. Any forward-looking statements we make speak only as of the date this Form 10-K was filed with the United States Securities and Exchange Commission ("SEC"). Except as required by the federal securities laws, we do not have any obligation, and we specifically disclaim any undertaking or intention, to publicly update or revise any forward-looking statements, whether as a result of new information, future events, changed circumstances or otherwise. New factors emerge from time to time, and it is not possible for us to predict all such factors. Furthermore, it may not be possible to assess the impact of any such factor on our businesses, either viewed independently or together, or the extent to which any factor, or combination of factors, may cause results to differ materially from those contained in any forward-looking statement. The foregoing factors should not be construed as exhaustive.

PART I

ITEM 1.BUSINESS Our Company

With a history dating back to 1886, American Water Works Company, Inc. is a holding company originally incorporated in Delaware in 1936. Through its subsidiaries, American Water is the largest and most geographically diverse investor-owned publicly-traded water and wastewater utility company in the United States, as measured by both operating revenues and population served. We also operate several market-based businesses that provide a broad range of related and complementary water and wastewater services. We employ approximately 6,800 professionals who provide drinking water, wastewater and other related services to an estimated 15 million people in 47 states, the District of Columbia and Ontario, Canada.

Throughout this Annual Report on Form 10-K, unless the context otherwise requires, references to "we," "us," "our," the "Company," and "American Water" mean American Water Works Company, Inc. and its subsidiaries, taken together as a whole.

Operating Segments

The largest component of the Company's business includes rate regulated subsidiaries that provide water and wastewater services to customers in 16 states, collectively presented as our "Regulated Businesses". We conduct the majority of our business through the Regulated Businesses segment. We also operate market-based businesses within four operating segments that individually do not meet the criteria of a reportable segment in accordance with generally accepted accounting principles in the United States ("GAAP"). These four non-reportable operating segments are collectively presented as our "Market-Based Businesses," which is consistent with how management assesses the results of these businesses. Additional information can be found in Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations and Note 19—Segment Information in the Notes to Consolidated Financial Statements.

Regulated Businesses

Our primary business involves the ownership of utilities that provide water and wastewater services to residential, commercial, industrial and other customers, including sale for resale and public authority customers. Our Regulated Businesses that provide these services operate in approximately 1,600 communities in 16 states in the United States and are generally subject to economic regulation by certain state utility commissions or other entities engaged in utility regulation, referred to as Public Utility Commissions ("PUCs"). Certain federal and state governments also regulate environmental, health and safety, and water quality matters. We report the results of the services provided by our utilities in our Regulated Businesses segment.

Our Regulated Businesses segment's operating revenues were \$2,871 million for 2016, \$2,743 million for 2015 and \$2,674 million for 2014, accounting for 86.9%, 86.8% and 88.8%, respectively, of total operating revenues for the same periods.

The following table summarizes our Regulated Businesses' operating revenues, number of customers and estimated population served by state, each as of and for the year ended December 31, 2016:

Operating

Number of

Estimated

÷

	Revenues	% of Total	Customers	% of Total	Population	% of Total
	(In millions)		(In thousands)		Served	
					(In millions)	
New Jersey	\$ 730	25.4 %	671	20.3 %	2.7	22.1 %
Pennsylvania	639	22.3 %	709	21.4 %	2.3	18.8 %
Missouri	288	10.0 %	476	14.4 %	1.5	12.3 %
Illinois	275	9.6 %	315	9.5 %	1.3	10.7 %
Indiana	212	7.4 %	300	9.1 %	1.3	10.7 %
California	211	7.4 %	176	5.3 %	0.7	5.7 %
West Virginia	142	4.9 %	169	5.1 %	0.5	4.1 %
Subtotal (Top Seven States)	2,497	87.0 %	2,816	85.0 %	10.3	84.4 %
Other (a)	374	13.0 %	496	15.0 %	1.9	15.6 %
Total Regulated Businesses	\$ 2,871	100.0%	3,312	100.0%	12.2	100.0%

(a) Includes data from our utilities in the following states: Georgia, Hawaii, Iowa, Kentucky, Maryland, Michigan, New York, Tennessee and Virginia.

Water Supply and Wastewater Services

Our Regulated Businesses generally own the physical assets used to store, pump, treat and deliver water to our customers and collect, treat, transport and recycle wastewater. Typically, we do not own the water itself, which is held in public trust and is allocated to us through contracts and allocation rights granted by federal and state agencies or through the ownership of water rights pursuant to local law. We are dependent on defined sources of water supply and obtain our water supply from surface water sources such as reservoirs, lakes, rivers and streams; from ground water sources, such as wells and aquifers; and water purchased from third party water suppliers. The level of treatment we apply to the water varies significantly depending upon the quality of the water source and customer stipulations. Surface water sources typically generally require significant treatment, while groundwater sources require chemical treatment only.

The following chart depicts the sources of water supply as of December 31, 2016:

The percentages of water supply by source type for our top seven states based on our Regulated Businesses operating revenues for 2016 were as follows:

	Surface		Ground		Purchased	
	Water		Water		Water	
New Jersey	72	%	23	%	5	%
Pennsylvania	91	%	7	%	2	%
Missouri	80	%	19	%	1	%
Illinois	53	%	36	%	11	%
Indiana	44	%	55	%	1	%
California			66	%	34	%
West Virginia	99	%			1	%

Our ability to meet the existing and future water demands of our customers depends on an adequate water supply. Drought, governmental restrictions, overuse of sources of water, the protection of threatened species or habitats, contamination, or other factors may limit the availability of ground and surface water. We employ a variety of measures in an effort to obtain adequate sources of water supply, both in the short-term and over the long-term. The geographic diversity of our service areas may mitigate some of the economic effect on the water supply associated with weather extremes we might encounter in any particular service territory. For example, in any given summer, some areas may experience drier than average weather, which may reduce the amount of source water available, while other areas we serve may experience wetter than average weather.

In our long-term planning, we evaluate quality, quantity, growth needs and alternate sources of water supply as well as transmission and distribution capacity. Water supply is seasonal in nature and weather conditions can have a pronounced effect on supply. In order to ensure that we have adequate water supply, we use long-term planning processes and maintain contingency plans to minimize the potential impact on service through a wide range of weather fluctuations. In connection with supply planning for most surface or groundwater sources, we employ models to determine safe yields under different rainfall and drought conditions. Surface and ground water levels are routinely monitored so that supply capacity deficits may, to the extent possible, be predicted and mitigated through demand

management and additional supply development. An example of our use of long-term planning to ensure that we have adequate water supply is our involvement in the Monterey Peninsula Water Supply Project (the "Water Supply Project") in California. The Water Supply Project includes the construction of a desalination plant, owned by California-American Water Company, our wholly owned subsidiary ("Cal Am"), which includes the construction of wells that would supply water to the desalination plant. In

addition, the Water Supply Project also includes Cal Am's purchase of water from a groundwater replenishment project (the "GWR Project") between the Monterey Regional Water Pollution Control Agency ("MRWPCA") and the Monterey Peninsula Water Management District ("MPWMD"). The Water Supply Project is intended, among other things, to fulfill obligations of Cal Am to eliminate unauthorized diversions from the Carmel River as required under orders of the California State Water Resources Control Board (the "SWRCB").

Wastewater services involve the collection of wastewater from customers' premises through sewer lines. The wastewater is then transported through a sewer network to a treatment facility, where it is treated to meet required regulatory standards for wastewater before being returned to the environment. The solid waste by-product of the treatment process is disposed of or recycled in accordance with applicable standards and regulations.

Economic Regulation and Rate Making Process

Our Regulated Businesses operate under a regulatory compact whereby, in exchange for exclusive rights to provide water and wastewater services in defined service territories, we have an obligation to serve customers within those territories requesting service, within reasonable limits. In return for agreeing to invest capital into our water and wastewater systems, we are given the opportunity to recover our costs of doing business and earn a reasonable rate of return on our investments.

The operations of our Regulated Businesses are generally subject to regulation and oversight by their respective state PUCs, with the primary responsibility of the PUCs to promote the overall public interest by balancing the interest of customers and utility investors. Specific authority might differ from state to state, but in most states PUCs approve rates charged to customers, accounting treatments, long-term financing programs and cost of capital, capital expenditures, O&M expenses, taxes, transactions and affiliate relationships, reorganizations and mergers and acquisitions. Regulatory policies vary from state to state and could potentially change over time. These policies will affect the timing, as well as the extent, of recovery of expenses and the realized return on invested capital.

The process to obtain approval for a change in rates generally occurs by way of a rate case filed by the utility with the PUC on a periodic basis. The timing of rate case filings is typically determined by either periodic requirements in the regulatory jurisdiction or by the utility's need to increase its revenue requirement to recover capital investment costs, changes in operating revenues, operating costs or other market conditions.

Our rate case management program is guided by the principles of obtaining timely recovery of capital investment costs, recognition of declining sales resulting from reduced consumption and appropriate recovery of utility operating and maintenance costs, including costs incurred for compliance with environmental regulations. The program attempts to minimize the delay, or "regulatory lag" between the time our Regulated Businesses make a capital investment or incur an operating expense increase, and the time when those costs are reflected in rates. The management team at each of our utilities accounts for the time required for the regulatory process, and files rate cases with the goal of obtaining rates that reflect as closely as possible the cost of providing service at the time the rates become effective.

Our Regulated Businesses support regulatory practices at the PUCs and state legislatures that mitigate the adverse impact of regulatory lag. Examples of approved regulatory practices include:

Regulatory		
Practices	Description	States Allowed
Infrastructure replacement surcharges	Allows rates to change periodically, outside a general rate proceeding, to reflect recovery of investments made to replace infrastructure necessary to sustain safe, reliable and affordable services for our customer. These mechanisms typically involve an upfront review of overall multi-year investment plans as well as periodic filings and reviews to ensure transparency.	IL, IN, MO, NJ, NY, PA, TN, WV
Future test year	A test period used for setting rates, that begins with the date new rates are effective. This allows current or projected revenues, expenses and investments to be collected on a more timely basis.	
Hybrid test year	Allows an update to historical data for "known and measurable" changes that occur subsequent to the historical test year.	IA, MD, MO, NJ, WV
Utility plant recovery mechanisms	Allows recovery of the full return on utility plant costs during the construction period, instead of capitalizing an allowance for funds used during construction. In addition, some states, such as Indiana, allow the utility to seek pre-approval of certain capital projects and associated costs. In this pre-approval process, the PUC may assess the prudency of such projects.	CA, IL, KY, NY PA, TN, VA
Expense mechanisms	Allows changes in certain operating expenses, which may fluctuate based on conditions beyond the utility's control, to be recovered outside of a general rate proceeding or deferred until the next general rate proceeding.	CA, IL, MD, MO, NJ, NY, PA, TN, VA, WV
Revenue stability mechanisms	Separates a water utility's cost recovery from the amount of water it sells to recover its fixed costs and on-going infrastructure investment needs. Such a mechanism adjusts rates periodically to ensure that a utility's revenue will be sufficient to cover its costs regardless of sales volume, while providing an incentive for customers to use water more efficiently.	CA, IL, NY
Consolidated tariffs	Use of a unified rate structure for multiple water systems owned and operated by a single utility, which may or may not be physically interconnected. The consolidated tariff pricing structure may be used fully or partially in a state and is generally used to moderate the impact of periodic fluctuations in local costs while lowering administrative costs for customers. Pennsylvania also permits a blending of water and wastewater rate structures.	KY, MD, MO,

We pursue or seek enhancement to these regulatory practices to facilitate efficient recovery of our costs and investments, in order to provide safe, reliable and affordable services to our customers. The ability to seek regulatory treatment as described above does not guarantee that the state PUCs will accept our proposal in the context of a particular rate case, and these practices may reduce, but not eliminate, regulatory lag associated with traditional rate making processes. It is also our strategy to expand their use in areas where they may not currently apply.

We also support state legislation that enables the consolidation of the largely fragmented water and wastewater industries. Legislation in certain states has generally enabled sales between interested parties, has allowed a reasonable market valuation of purchased property, and has enabled consolidation of water and wastewater rates.

Customers

Our Regulated Businesses have a large and geographically diverse customer base. A customer is a person, corporation, municipality or any other entity that purchases our water or wastewater services as of the last business day of a reporting period. Also, a single customer may purchase our services for use by multiple individuals or businesses in the case of many homes, apartment complexes, businesses and governmental entities.

Residential customers make up the majority of our customer base in all of the states in which we operate. In 2016, residential customers accounted for 91.1% of our customer base, 59.0% of the billed water sales and 55.5% of the operating revenues of our Regulated Businesses. We also serve commercial customers, such as offices, retail stores and restaurants; industrial customers, such as large-scale manufacturing and production operations; and public authorities, such as government buildings and other public sector facilities, including schools. We also supply water through our distribution systems to public fire hydrants for firefighting purposes, to private fire customers for use in fire suppression systems in office buildings and other facilities, as well as to other water utilities in the form of bulk water supplies for distribution to their own customers.

The vast majority of our regulated water customers are metered, which allows us to measure and bill for our customers' water usage, typically on a monthly basis. We employ a variety of methods of customer meter reading to monitor consumption. These methods range from meters with mechanical registers where consumption is manually recorded by meter readers, to meters with electronic registers capable of transmitting consumption data to proximity devices (touch read) or via radio frequency to mobile or fixed network data collectors. The majority of new meters are able to support future advances in electronic meter reading. Our wastewater customers are billed either a flat rate or based on their water consumption.

The following table summarizes the number of water and wastewater customers we served by class as of December 31:

	2016		2015		2014	
(In thousands)	Water	Wastewater	Water	Wastewater	Water	Wastewater
Residential	2,846	171	2,829	133	2,814	118
Commercial	220	10	219	8	218	6
Industrial	4		4		4	
Public & other	61		60		59	
Total	3,131	181	3,112	141	3,095	124

Customer growth in our Regulated Businesses is primarily driven by the following factors:

adding new customers to our regulated customer base by acquiring water and/or wastewater utility systems; organic population growth or decline in our authorized service areas; and

the sale of water to other community water systems.

Generally, we add customers through acquisitions of small and medium water and/or wastewater systems in close geographic proximity to areas where we operate our Regulated Businesses, which we refer to as "tuck-ins." The proximity of tuck-in opportunities to our regulated footprint allows us to integrate and manage the acquired systems and operations primarily using our existing management and to achieve operational efficiencies and prioritize capital investment needs. Pursuing tuck-ins has been and continues to be a fundamental part of our growth strategy. We intend to continue to expand our regulated footprint geographically by acquiring water and wastewater systems in our existing markets and, if appropriate, pursue acquisition opportunities in certain domestic markets where we do not currently operate our Regulated Businesses. Before entering new regulated markets, we will evaluate the business and regulatory climates to ensure that we will have the opportunity to achieve an appropriate rate of return on our investment while maintaining our high standards for providing safe, reliable and affordable services to our customers, as well as a line of sight to grow our base customers after entering the new market. For more information, see Item 7—Management's Discussion and Analysis of Financial Condition and Results of Operations—2016 Strategic Focus & Achievements—Growth.

Seasonality

Customer demand for our water service is affected by weather and is generally greater during the summer months primarily due to increased usage for irrigation systems and other outdoor water use. As such, we typically expect our operating revenues to be the highest in the third quarter of each year compared to any of the other quarters. However, varying summer weather conditions can impact our third quarter financial results. Summer weather that is cooler and/or wetter than average generally serves to suppress customer water demand and can reduce water operating revenues and operating income. Summer weather that is hotter and drier than average generally increases operating revenues and operating income.

Competition

In our Regulated Businesses, we generally do not face direct competition in our existing markets because: (i) we operate in those markets pursuant to certificates of public convenience and necessity (or similar authorizations) issued by state PUCs; and (ii) the high cost of constructing a new water and wastewater system in an existing market creates a high barrier to market entry. However, our Regulated Businesses do face competition from governmental agencies,

other investor-owned utilities, large industrial customers with the ability to provide their own water supply/treatment process and strategic buyers that are entering new markets and/or making strategic acquisitions. Our largest investor-owned competitors, when pursuing acquisitions, based on a comparison of operating revenues and population served, are Aqua America, Inc., United Water (owned by Suez Environnement Company S.A.), American States Water Company and California Water Service Group. From time to time, we also face competition from infrastructure funds, multi-utility companies and others, such as Algonquin Power and Utilities Corp. and Corix.

All or portions of our regulated subsidiaries' utility assets could be acquired by state, municipal or other government entities through one or more of the following methods:

eminent domain (also known as condemnation);

the right of purchase given or reserved by a municipality or political subdivision when the original certificate of public convenience and necessity was granted; and

the right of purchase given or reserved under the law of the state in which the utility subsidiary was incorporated or from which it received its certificate.

The acquisition consideration related to such a transaction initiated by a local government may be determined consistent with applicable eminent domain law, or may be negotiated or fixed by appraisers as prescribed by the law of the state or in the particular franchise or charter.

We actively monitor condemnation activities that may affect us as developments occur. We do not believe that condemnation poses a material threat to our ability to operate our Regulated Businesses, either individually or taken as a whole.

Market-Based Businesses

Through our Market-Based Businesses, we provide services to military bases; municipalities; oil and gas exploration and production companies; and to some commercial, industrial and residential customers. These customers are not subject to economic regulation by state PUCs and do not require significant capital investment.

Our Market-Based Businesses segment's operating revenues were \$451 million for 2016, \$434 million for 2015 and \$355 million for 2014, accounting for 13.7%, 13.7% and 11.8%, respectively, of total operating revenues for the same periods. Included within the Market-Based Businesses segment results is operating revenues attributed to Canadian operations of \$6 million, \$6 million, and \$7 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Our Market-Based Businesses are comprised of four operating segments:

Military Services Group, which enters into long-term contracts, generally 50 years, with the U.S. Department of Defense for the O&M of the water and wastewater systems on certain military bases; Homeowner Services Group, which primarily provides warranty-type services to homeowners and smaller commercial customers to protect against the cost of repairing broken or leaking water pipes or clogged or blocked sewer pipes, located inside and outside their premise, as well as interior electric line repairs and other services; Contract Operations Group, which enters into contracts primarily to operate and maintain water and wastewater facilities and other related services mainly for municipalities and the food and beverage industry; and Keystone, which provides customized water sourcing, transfer services, pipeline construction, water and equipment hauling and water storage solutions, for natural gas exploration and production companies.

Our Military Services Group operates on 12 military bases under 50-year contracts with the U.S. Department of Defense ("DoD"). The scope of the contracts includes O&M of the water and wastewater systems on the bases and a capital program. The replacement of assets assumed when a contract is awarded to the Company is funded from the contract fee. At times, new assets are required to support the base's mission. Construction of new assets are funded by the U.S. DoD as additional work under the contract. The capital program does not use the Company's equity or debt borrowings; however, some working capital is used to fund work-in-process until paid by the U.S. DoD. The contract price for nine of these contracts is subject to redetermination two years after commencement of operations, and every three years thereafter. Price redetermination is a contract mechanism to periodically adjust the service fee in the next period to reflect changes in contract obligations and anticipated market conditions. Three of these contracts are subject to annual price adjustments under a mechanism similar to price redetermination, called "Economic Price Adjustment." During the contract term, we may make limited short-term working capital investments under our contracts with the U.S. DoD. All of these contracts may be terminated, in whole or in part, prior to the end of the 50-year term for convenience of the U.S. government or as a result of default or non-performance by the subsidiary performing the contract. In either event, pursuant to termination provisions applicable to these contracts, we would be entitled to recover allowable costs that we may have incurred under the contract, plus the contract profit margin on incurred costs.

Homeowner Services Group

Our Homeowner Services Group, through our various protection programs, provides services to domestic homeowners and smaller commercial customers to protect against the cost of interior and external water and sewer line repairs, interior electric line repairs and other services. Our LineSaverTM program involves partnering with utilities, municipalities and other organizations to offer our protection programs to customers serviced by or affiliated with those municipalities and organizations. Terms of these partnership agreements are typically three to five years in length, with optional renewals. As of December 31, 2016, our Homeowner Services Group had approximately 1.7 million customer contracts in 43 states and the District of Columbia and 10 LineSaverTM partnership agreements with municipalities and other organizations.

Contract Operations Group

Our Contract Operations Group enters into public/private partnerships, including: (i) O&M; (ii) Design; Build and Operate; and (iii) Design, Build, Finance, Operate and Maintain contracts for the provision of services to water and wastewater facilities for municipalities, the food and beverage industry and other customers. Historically, we have made minimal long-term capital investment under these contracts; instead we perform our services for a fee. Occasionally, we provide our customers with financing for capital projects as part of a long-term O&M partnership. As of December 31, 2016, our Contract Operations Group had 43 contracts across the United States and Canada, varying in size and scope and ranging in length from one to 30 years.

Keystone

In July 2015, we acquired a ninety-five percent interest in Water Solutions Holdings, LLC, including its wholly owned subsidiary, Keystone Clearwater Solutions, LLC (collectively referred to as "Keystone"). Keystone is a water management solution company currently focused on exploration and production customers in the Appalachian Basin, as well as customers in the municipal water services market. Keystone primarily provides customized water sourcing, transfer, storage and transport services, along with pipeline construction services for natural gas exploration and production companies. Keystone operates under master service agreements that generally range from two to five years. When the initial term of these agreements expire, they typically renew automatically on an annual basis and generally are cancelable by either party with 30 days prior notice. As of December 31, 2016, Keystone serves 58 customers.

Competition

We face competition in our Market-Based Businesses from a number of service providers, including Veolia Environnement S.A., American States Water Company, Operations Management International, Inc. and Southwest Water Company, particularly in the area of O&M contracting. Securing new O&M contracts is highly competitive, as these contracts are awarded based on a combination of customer relationships, service levels, competitive pricing, references and technical expertise. We also face competition in maintaining existing O&M contracts to which we are a party, as the municipal and industrial fixed term contracts frequently come up for renegotiation and are subject to an open bidding process. Our Homeowner Services Group faces competition primarily from HomeServe USA, Pivotal Home Solutions (owned by Southern Company Gas) and Dominion Energy Solutions. Keystone currently faces competition from water service providers that typically provide particular segments of the water management cycle, such as Rockwater Energy Solutions, Rain for Rent and Fluid Delivery Solutions, LLC.

Industry and Regulatory Matters

Overview

The United States water and wastewater industries include investor-owned systems as well as municipal systems that are owned and operated by local governments or governmental subdivisions. Both industries are highly fragmented. The U.S. Environmental Protection Agency (the "EPA") estimates that approximately 84% of the United States water market is served by municipal systems and approximately 98% of the country's wastewater systems are government owned. According to the EPA, there are approximately 50,000 community water systems and approximately 20,000 community water systems in the United States. Over half of the community water systems are very small, serving a population of 500 or less.

This large number of relatively small, fragmented water systems and wastewater systems may result in inefficiencies in the marketplace, since such utilities may not have the operating expertise, financial and technological capability or

economies of scale to provide services or raise capital as efficiently as larger utilities. Larger utilities that have greater access to capital are generally more capable of making mandated and other necessary infrastructure upgrades to both water and wastewater systems. In addition, water and wastewater utilities with large customer bases, spread across broad geographic regions, may more easily absorb the impact of significant variations in precipitation and temperatures, such as droughts, excessive rain and cool temperatures in specific areas. Larger utilities generally are able to spread support services over a larger customer base, thereby reducing the costs to serve each customer. Since many administrative and support activities can be efficiently centralized to gain economies of scale, companies that participate in industry consolidation have the potential to improve operating efficiencies, lower costs per unit and improve service at the same time.

The aging water and wastewater infrastructure in the United States is in need of modernization and replacement. Increased regulations to improve water quality and the management of water and wastewater residuals' discharges, which began with passage of the Clean Water Act in 1972 and the Safe Drinking Water Act in 1974, have been among the primary drivers of the need for modernization. In 2011, the EPA estimated that the nation's drinking water utilities needed \$384.2 billion in infrastructure investments between 2011 and 2030, for thousands of miles of pipe, treatment plants, storage tanks and other key assets, to ensure the public health, security and economic well-being of our cities, towns and communities. In the Clean Watersheds Needs Survey 2012 Report to Congress, the EPA also estimated that \$271.0 billion of capital investments and would be necessary between 2012 and 2032, to meet the nation's wastewater and stormwater treatment and collection needs. Additionally, in 2013, the American Society of Civil Engineers ("ASCE") published its Report Card for America's Infrastructure, in which it gave the water and wastewater infrastructure a grade of "D" because much of the infrastructure is nearing the end of its useful life. The ASCE report concluded that there will be an investment gap between 2013 and 2020 of \$84 billion for drinking water and wastewater infrastructure.

The following chart depicts estimated aggregate capital expenditure needs from 2011 through 2030 for United States drinking water systems:

Note: Numbers may not total due to rounding

Source: U.S. Environmental Protection Agency's 2011 Drinking Water Infrastructure Needs Survey and Assessment

Environmental, Health and Safety, and Water Quality Regulation

Our water and wastewater operations, including the services provided by both our Regulated Businesses and Market-Based Businesses, are subject to extensive U.S. federal, state and local laws and regulations, and in the case of our Canadian operations, Canadian laws and regulations governing the protection of the environment, health and safety, the quality of the water we deliver to our customers, water allocation rights and the manner in which we collect, treat, discharge, recycle and dispose of wastewater. These regulations include the Safe Drinking Water Act, the Clean Water Act and other U.S. federal, state, local and Canadian laws and regulations governing the provision of water and wastewater services, particularly with respect to the quality of water we distribute. We also are subject to various U.S. federal, state, local and Canadian laws and regulations governing the storage of hazardous materials, the management and disposal of hazardous and solid wastes, discharges to air and water, the cleanup of contaminated sites, dam safety and other matters relating to the protection of the environment and health and safety. State PUCs also set conditions and standards for the water and wastewater services we deliver.

Environmental, health and safety, and water quality regulations are complex and change frequently. The overall trend has been that they have become increasingly stringent over time. As newer or stricter standards are introduced, our capital and operating costs could increase. We incur substantial costs associated with compliance with environmental, health and safety, and water quality regulation to which our operations are subject. In the past, our Regulated Businesses have generally been able to recover costs associated with compliance related to environmental, health and safety standards; however, this recovery is affected by regulatory lag and the corresponding uncertainties surrounding rate recovery. We estimate that we will make capital expenditures of \$83 million during 2017 and \$78 million during 2018 for environmental control facilities, which we define for this purpose as any project (or portion thereof) that involves the preservation of air, water or land.