

December 6, 2017

The Hon. Jorge O. Elorza  
Mayor

Ricky Caruolo  
General Manager

The Honorable Sabina Matos  
Acting President, Providence City Council  
Providence City Hall  
25 Dorrance Street  
Providence, RI 02903

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**BOARD OF DIRECTORS**

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Member

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Secretary

William E. O'Gara, Esq.  
Legal Advisor

Re: Providence Water Annual Report

Dear President Matos:

I am pleased to forward a copy of the Providence Water 2016 Annual Report to you for your review pursuant to the requirements outlined in Section 1101(b) of the Providence City Charter.

Please contact me at 521-6300 if you have any questions.

Respectfully,  
PROVIDENCE WATER SUPPLY BOARD

  
Ricky Caruolo, General Manager

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**MEMBER**

Rhode Island Water Works Assn.  
New England Water Works Assn.  
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125 Dupont Drive  
Providence, RI 02907

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IN CITY COUNCIL  
JAN 08 2018

READ  
WHEREUPON IT IS ORDERED THAT  
THE SAME BE RECEIVED.  
 CLERK

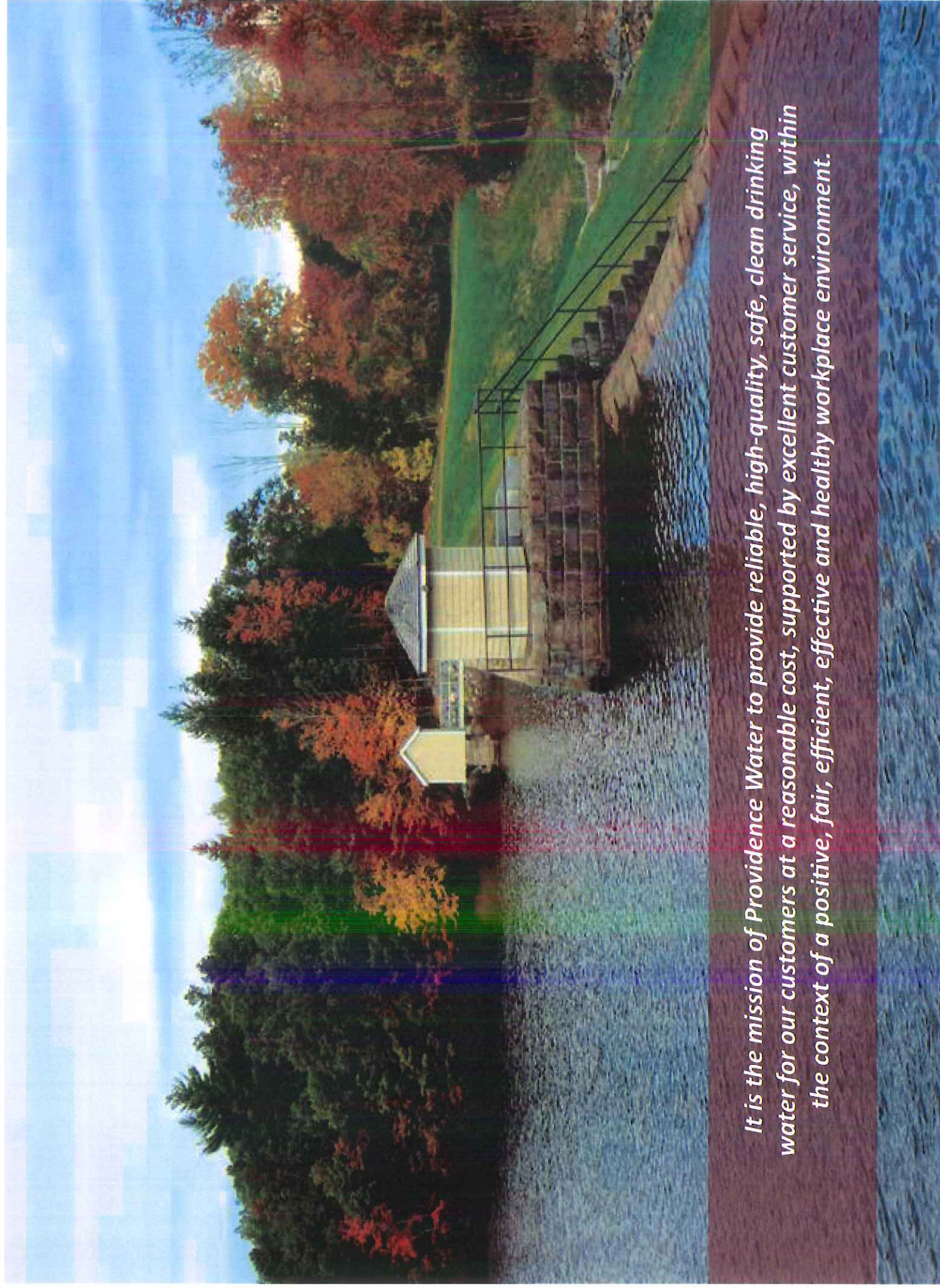


PROVIDENCE WATER

*Tap Water Delivers*

2016 ANNUAL REPORT TO THE COMMUNITY





*It is the mission of Providence Water to provide reliable, high-quality, safe, clean drinking water for our customers at a reasonable cost, supported by excellent customer service, within the context of a positive, fair, efficient, effective and healthy workplace environment.*





Providence Water has been providing exceptional quality drinking water to customers at an affordable price for almost a century. Our source water from the Scituate Reservoir is renowned as some of the best drinking water in the country. As part of our continuing commitment to provide a high-quality product and excellent service for our customers at a reasonable cost, Providence Water was focused in 2016 on the completion of milestone infrastructure projects at our Treatment Plant, as well as improving organizational efficiencies through the evaluation of alternative technologies and the implementation of green/energy-efficient upgrades to our facilities.

Providence Water continuously works to maintain and update our infrastructure, some of which was installed in the early part of the last century. To that end, Providence Water has been implementing Infrastructure Replacement and Capital Improvement Programs since 1996. We have reinvested \$390 million in our water system since 1996 and are projecting to spend another \$465 million through 2030 for projects and programs which systematically improve water quality.

In 2016, Providence Water completed several significant projects at our Scituate Treatment Plant including a multiyear \$42 million renovation of the 18 treatment plant filter beds and associated valves, piping and instrumentation. We are in the process of completing renovations to our new Central Operations Facility. Renovation plans for the new Central Operations Facility included the award of a contract for the installation of a 500 kW rooftop solar array expected to offset 50 percent of the energy use at the new Central Operations Facility.

Providence Water provides water to more than 600,000 Rhode Islanders. In 2016, we finalized the details of our acquisition of the East Smithfield Water District, which allows us to expand our retail customer base to include 2,400 new accounts. Looking to the future, Providence Water remains committed to the continuous reinvestment in our water system in order to ensure that our reliable supply of exceptional quality drinking water will be available to Rhode Islanders for another century and beyond.

Ricky Caruolo  
General Manager



## Treatment and Infrastructure Projects

The Providence Water Purification Plant in Scituate, which is the largest of its kind in New England, treats and treats more than 60 million gallons of water consumed by our customers every day.

In 2016, Providence Water completed a multiyear \$42 million renovation of the 18 treatment plant filter beds, associated valves, piping and instrumentation to enhance water quality. This project also included the replacement of the existing control and data acquisition system with an updated system to monitor and control filter and other plant operating systems.

As part of our transmission system, the 78-inch aqueduct transmission line consists of more than 4 miles of piping/concrete tunnel. The pipeline was constructed in the 1960s. As part of our inspection and rehabilitation program, the upper and lower sections of the 78-inch aqueduct were inspected in 2016. The upper section of the 78-inch aqueduct was lined in September 2016.

A year-long, \$1.2 million water quality treatment study was conducted at the Treatment Plant throughout 2016. The Clarification Pilot Project included the analysis and evaluation of potential pretreatment technologies. The water quality data collected from this study will be compared to current pre-treatment and clarification processes. Data analysis and recommendations will be incorporated into future treatment projects.



In addition to the major projects completed this year, a number of other initiatives were also completed, including the installation of new plant instrumentation and piping equipment as well as the upgrade of treatment laboratory analytical equipment to allow for faster results and specialty testing.







## Environmental and Sustainable Initiatives

In 2016, Providence Water continued to strive to reduce the amount of energy needed to power our operations and provide our services. Investing in sustainable initiatives, energy-efficient measures and renewable energy upgrades to our facilities helps us save money and combat climate change.

This year, we installed new treatment metering pumps at our Treatment Plant to increase accuracy. We also installed energy-efficient lighting upgrades at our Treatment Plant and Raw Water Pump Station, which are expected to reduce annual lighting energy costs at these two facilities by approximately 70%. We installed new variable frequency drives, motors, pumps, energy-efficient lighting and discharge piping/valves at several of our other pump stations.

Providence Water has taken into consideration the potential for energy savings, reducing our carbon footprint and selecting the best-suited sustainable materials for Providence Water's new Central Operations Facility. Materials selected during the design and rehabilitation phases of this project involve manufacturers with sustainable initiatives and production methods. Care was given to ensure that selections were not only produced sustainably but require minimal maintenance and have the ability to be recycled at the end of use in order to reduce our impact on the environment.

We have installed retention areas at our new Central Operations Facility to reduce the quantity and improve the quality of storm water runoff. We have also installed low-water-consumption plumbing fixtures that comply with "Water Sense" technology and efficient indoor and outdoor lighting to reduce overall power usage. Finally, Providence Water has awarded a contract to furnish and install an approximately 500 kW solar array on our new Central Operations Facility. We are expecting to receive grant money to help offset some of the costs of purchasing and constructing the solar array.



## Sustainable Design



- Bioretention basins used to slow and treat stormwater runoff from the site and area basins.
- Installed energy-saving LED lighting that is controlled by motion sensors throughout the facility.
- Solar arrays will supply enough power to satisfy half of the facility's needs.
- Reuse of approximately 90% of existing wall and floor construction.
- Reuse of existing carpets, finishes and furniture when possible.
- Partnered with Greenworks Providence to plant trees, flowers, and various vegetation throughout the site.



## Water Main Rehabilitation

Providence Water's distribution system is composed of approximately 1,040 miles of transmission and distribution mains ranging in size from 6-inch to 102-inch. Since the inception of our Infrastructure Replacement Program in 1996, 63.4 miles of water mains have been replaced or rehabilitated. Construction is in progress for replacing water mains, with the priority being given to older mains where water quality complaints and/or low-pressure problems have been identified. Factors such as flow testing, hydraulic modeling, past leak history and main sampling are all considered in the selection process. Emphasis is also given to replacements in areas of local and state road resurfacing projects where cost savings can be realized.



Providence Water flushing crews are continuing with our unidirectional flushing program to help maintain water quality. This preventive maintenance program systematically flushes our distribution system to improve water quality within specific areas. The flushing program utilizes hydraulic modeling software and mapping sequences to select the valves and hydrants to be operated in order to attain required optimal flushing velocities. During 2016, 88 miles of distribution mains were flushed. Since the inception of the program in 2013, approximately 340 miles have been flushed within the distribution system.

As we move forward with the improvement of our infrastructure, our crews will continue to work hard in all types of weather conditions to maintain the water pumps, valves and fire hydrants within our distribution system so that we can continue to deliver some of the highest quality drinking water to 60% of Rhode Island.





## Customer Service

Our employees exemplify our commitment to providing the best customer service possible by acknowledging customer concerns and resolving them in an efficient, friendly and timely manner. Many of our employees have over 20 years of industry experience and work hard to meet and exceed customer expectations.

Providence Water recently welcomed approximately 7,700 new customers when we merged with the East Smithfield Water District. The merger resulted in 2,400 new retail service locations and 33 miles of water main being added to our distribution system. Today, approximately 78,000 customers receive high-quality tap water delivered to their homes and businesses each and every day.

Providence Water makes it easy to contact us so that our crews and customer service representatives can resolve unexpected issues quickly and efficiently. Customers on the move are able to report non-emergency concerns directly on our website or through social media. Our emergency contact phone line is always available 24 hours a day, 7 days a week. To ensure that our customer service representatives are best prepared to assist you, all of our representatives are cross-trained throughout the department to improve efficiency and overall productivity.

Providence Water makes every effort to minimize our impact on the environment. In an effort to reduce excess paper and postage, Providence Water offers online bill pay. Payments can be made anytime, anywhere from a phone, tablet or computer. Customers can also sign up for paperless billing and auto-pay as another added convenience.

As the largest water supplier in Rhode Island, we strive to meet and exceed the needs of our community. The cornerstone of our success continues to be our dedicated employees and the pride they take in their jobs as we continue to deliver exceptional service at an exceptional price for now and for many more years to come.





## Protecting the Watershed . . .

The watershed area surrounding the Scituate Reservoir system consists of almost 93 square miles of land. Providence Water owns and manages more than 25 miles of land within the watershed area. The remaining watershed land is owned by municipalities and residents.

Land use directly impacts water quality. Pollutants such as bacteria and sediment from septic systems, road salt from parking lots and driveways, as well as household chemicals, pesticides and lawn fertilizers all negatively impact water quality. Providence Water continuously works with watershed municipalities and landowners to reduce water pollution and protect drinking water quality at its source. The cleaner the source water, the less costly it is for us to treat for delivery to our customers!

In 2016, Providence Water continued our multipronged comprehensive approach to addressing watershed protection. Utilizing funding from several federal grants and the water quality protection fund, we provided workshops to property owners who live on the watershed, visited elementary schools to speak to students about pollution and the watershed, mailed educational flyers to watershed property owners, collected and analyzed numerous water quality samples, planted grasses along shorelines to discourage geese from residing at the reservoir, and vigilantly monitored critical sites within the watershed.

Since 1989, Providence Water has been acquiring watershed property as part of our watershed protection program in order to minimize development on the watershed. In 2016, Providence Water acquired 117 acres of watershed property through fee simple purchases or conservation easements. To date, almost 3,600 acres of watershed land have been acquired by Providence Water to preserve water quality and reduce the need for heavy treatment later in the water supply distribution process.



... for Our Future Generations





## Community Outreach

Providence Water employees are committed to giving back to the communities that we serve through various outreach events and activities throughout the year. Our outreach programs have been developed to help educate our consumers about our utility, our values and our services while we continue to promote the environmental and economic benefits of drinking tap water.

Through our Educational Outreach program, Providence Water employees visit with local area schools to educate the students about important topics such as the benefits of drinking tap water, the importance of protecting our watershed, water conservation and the steps that we take at Providence Water each and every day to deliver high-quality drinking water to their homes.

Our Community Outreach program was designed for our customers who may be impacted by our water main construction projects. Meetings are held in neighborhood communities where the construction is taking place to keep our customers informed of our work schedule in order to minimize any disruptions to their homes or businesses.

Our Dress Down program allows our employees to participate in “dress down” Fridays every week, where employees donate money to charity for the privilege of dressing casual for the day. Since the Dress Down program began in July 2010, Providence Water employees have raised over \$22,000 for both local and national charities.

Free public field tours are also offered throughout the year during different seasons. These scenic walking tours bring visitors to various sites throughout our beautiful watershed property and are designed to give people a better understanding of forestry and land management practices.









# Leadership



**Mayor Jorge O. Elorza**



**Xaykham Khamsyvoravong**  
Chairperson



**Joseph D. Cataldi**  
Vice Chairperson



**Sabina Matos**  
City Councilperson



**Michael J. Correia**  
City Councilperson



**Andy M. Andujar**  
Member



**Kerri Lynn Thurber**  
Member



**Lawrence J. Mancini**  
Ex-Officio



**William E. O'Gara, Esq.**  
Legal Advisor



# Providence Water Management



**Ricky Caruolo**  
General Manager



**Gregg Giasson**  
Executive Engineer/  
Deputy GM - Operations



**Peter J. Pallozzi**  
Deputy GM  
Administration



**Mark Haroian**  
Sr. Manager, T&D



**Antonio M. Araujo, III**  
Sr. Manager, Support Svcs



**Peter R. LePage**  
Sr. Manager - Engineering



**Stephen Soito**  
Sr. Manager, Water Supply



**Stephen M. Colman**  
Sr. Manager, IT



**Thomas Massaro**  
Sr. Manager, Finance



**Nancy Parrillo**  
Sr. Manager, Cust Svc



## Financials

### STATEMENT OF NET POSITION FOR THE YEARS ENDING JUNE 30, 2014, 2015 AND 2016

	2014	2015	2016
Total Current Assets	\$ 50,845,457	\$ 55,703,859	\$ 56,011,846
Net Property, Plant and Equipment	299,812,331	317,261,613	359,674,679
<b>Total Assets</b>	<b>\$ 350,657,788</b>	<b>\$ 372,965,472</b>	<b>\$ 415,686,525</b>
Total Current Liabilities	9,928,198	13,498,668	13,183,282
Total Long-Term Liabilities	75,559,279	123,484,785	157,876,249
<b>Total Liabilities</b>	<b>85,487,477</b>	<b>136,983,453</b>	<b>171,059,531</b>
Deferred Outflows (Inflows) of Resources	(2,709,308)	1,156,442	6,170,050
Net Position:			
Net Investment in Capital Assets	225,543,538	239,087,594	256,129,467
Restricted Fund	32,410,386	36,145,168	37,233,166
Unrestricted Fund	4,507,079	(38,094,301)	(42,565,589)
<b>Total Net Position</b>	<b>\$ 262,461,003</b>	<b>\$ 237,138,461</b>	<b>\$ 250,797,044</b>



## Financials

### STATEMENT OF REVENUES AND EXPENSES AND CHANGES IN NET POSITION FOR THE YEARS ENDING JUNE 30, 2014, 2015 AND 2016

	2014	2015	2016
Total Operating Revenue	\$ 62,872,231	\$ 69,231,217	\$ 69,209,492
Total Operating Expenses	54,394,039	54,492,430	55,360,900
<b>Operating Income</b>	<b>\$ 8,478,192</b>	<b>\$ 14,738,787</b>	<b>\$ 13,848,592</b>
Net Non-Operating Revenue (Expenses)	(1,562,494)	(1,811,838)	(637,210)
Capital Grants and Contributions	3,303,600	1,098,258	483,201
<b>Net Income</b>	<b>10,219,298</b>	<b>14,025,206</b>	<b>13,658,583</b>
Net Pension Liability (GASB 68 Implementation)		(41,356,974)	
Prior Period Adjustment		2,009,226	
Increase (Decrease) in Net Position	10,219,298	(25,322,542)	13,658,583
Net Position - Beginning of Year	252,241,705	262,461,003	237,138,461
<b>Net Position - End of Year</b>	<b>\$ 262,461,003</b>	<b>\$ 237,138,461</b>	<b>\$ 250,797,044</b>



## Looking Ahead

In 2017, Providence Water will be moving all business operations located at our Academy Avenue facility in Providence and Scituate Avenue facility in Cranston to our new Central Operations Facility located at 125 Dupont Drive in Providence. Our new business location will be conveniently situated in the heart of our retail distribution system, allowing our customers to have easier access, as well as greater parking availability, when visiting our facility. Additionally, all customer services such as billing, new service applications and water testing will be available in one convenient location.

We plan to incorporate the data collected as part of the 2016 Clarification Pilot Project and initiate the design phase of the clarification process in 2017, as well as exploring additional corrosive control measures per expert panel recommendations. Providence Water plans to research the expansion of our customer lead service replacement loan program to offer multiyear interest-free loans to customers interested in replacing their (private) lead service line.

Infrastructure work within the newly acquired East Smithfield Water District system will begin in order to improve and maintain the system. Providence Water's commitment to the East Smithfield Water District includes the engineering, labor and construction costs associated with the upgrades to the system.

Providence Water will continue to invest in sustainable initiatives, energy-efficient measures and renewable energy upgrades to our facilities. We are in the process of reviewing the requirements for a vehicle electrification program and applying for a grant to be used toward the purchase of two electric vehicles and two electric charging stations. We will also continue to evaluate our facilities for all opportunities to improve energy efficiency and reduce our carbon footprint.

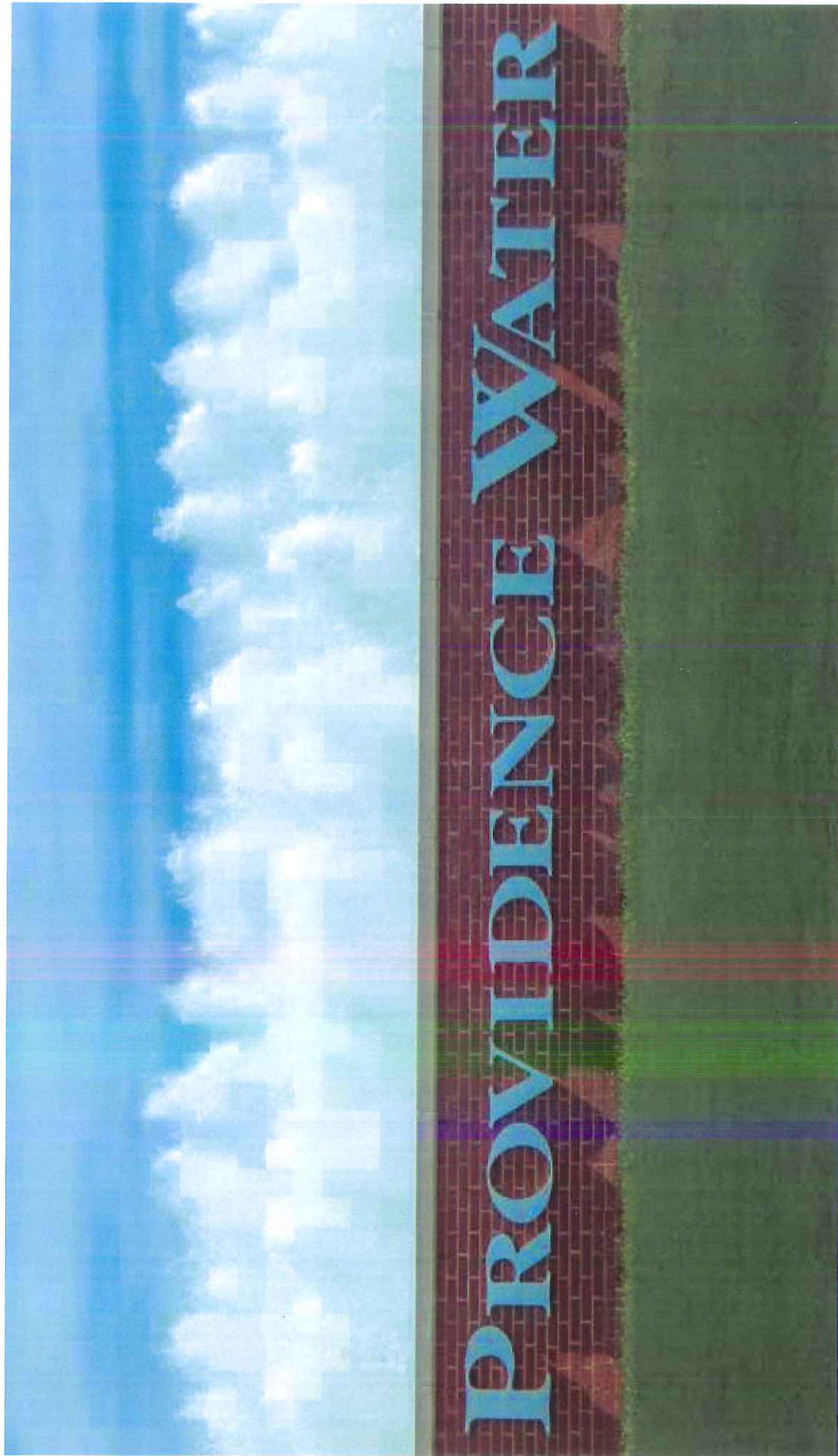


*From our watershed to your faucet...*

*Tap Water Delivers*







PROVIDENCE WATER

**(401) 521-6300**

552 Academy Avenue, Providence, RI 02907

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