BRINGING WATER TO LIFE

LOUISVILLE WATER 2016 ANNUAL REPORT
BRINGING WATER TO LIFE

Louisville Water is a lifeline to the region, providing a safe, high-quality and reliable supply of drinking water. The company began operations in October 1860 as Kentucky’s first public water provider. Today, Louisville Water supplies drinking water and fire protection to nearly one million people in Louisville Metro and surrounding parts of Bullitt, Hardin, Nelson, Oldham, Shelby and Spencer counties.

LOUISVILLE WATER VISION

To be the water supplier of choice throughout the Louisville region by:

- Providing best-of-class quality, customer service, innovation and value
- Expanding the geographic areas we serve
- Creating new lines of water-related businesses that build on existing competencies

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I’m pleased to present you with Louisville Water Company’s 2016 Annual Report. It’s my first report to offer you as President and CEO, and I am humbled and honored to serve this company. Louisville Water’s rich history is filled with brilliant leaders who put public health and innovation at the forefront of the Company’s mission. I am proud to continue that tradition.

Louisville Water continues to provide an outstanding value to our stockholder, Louisville Metro, and to the nearly one million people who use our product daily. Our customers enjoy a reliable, high-quality supply of drinking water at some of the lowest water rates in the region. In 2016, we delivered a dividend of $19.8 million to our owner and provided free water for fire protection and public facilities at a value of $17 million.

2016 was a year when the quality of drinking water and the systems that deliver it were in the spotlight, both nationally and locally. When high amounts of lead were discovered in the drinking water in Flint, Michigan, the crisis highlighted the critical role of research and treatment in delivering our product. I am proud of Louisville Water’s work to minimize the risk of lead dissolving from plumbing into drinking water and the research we conducted that improved our treatment strategy. Our efforts around corrosion control, eliminating our lead service lines and expanding customer education are a national model.

Locally, thousands of people watched as Louisville Water initiated the largest water main replacement project in the company’s history. We began a three-year project to replace a 48-inch main installed between 1923 and 1930 along historic Eastern Parkway. Thanks to technology, we can install the new pipe by slip-lining most of it in the original pipe so that customers do not lose water service and motorists do not experience a significant number of road detours and closures.

Projects like Eastern Parkway are proof of our investment in infrastructure. Each year, the largest percentage of Louisville Water’s capital budget is allocated toward maintaining the systems that produce and deliver our water. We continue to see the rewards from this investment with a declining number of water main breaks and interruptions in service.

Louisville Water’s outstanding water quality, infrastructure and strong financials allow us to expand our footprint. In 2016, we worked to complete projects to deliver our water to two water districts in Hardin County, and we began designing a pipeline to bring water to Shelbyville. Regionalization is part of a strategy for new lines of revenue, which is also accomplished by partnering with local and state leaders on economic development opportunities. This strategy helps offset a continuing decline in water usage. In 2016, Louisville Water delivered 33.5 billion gallons, roughly the same amount of water sold in 1969, more than 45 years ago. Like many utilities, Louisville Water must balance a consumption decline with the high fixed costs that come with operating the system. I am proud of our success in expanding new lines of business, and in 2016 we saw Other Operating Revenue grow by more than $1 million.

Of course, none of this work would be possible without a talented and dedicated team. Louisville Water’s employees are committed to excellence. We were honored to be one of five metropolitan utilities to receive the Sustainable Utility Management Award from the Association of Metropolitan Water Agencies. Additionally, we continue to improve our safety record. Now, Louisville Water’s recordable incident rate for safety is trending 50% below the national level. This is an amazing accomplishment, and I’m extremely proud of the safety culture our employees embrace.

Louisville Water is a lifeline to this region—a safe, reliable and high-quality supply of drinking water is connected to quality of life, jobs and above all, public health. It is a privilege to lead this great organization.
Louisville Water is working to eliminate its remaining lead service lines by 2020.

Upper right: 1868 cast-iron pipe is repaired on Mellwood Avenue.

Lower right: Louisville Water’s lead monitoring program includes routine analysis and research.
MANAGING THE POTENTIAL RISK FOR LEAD IN DRINKING WATER

Louisville Water has always focused on optimizing water quality. In 2016, the potential risk for lead in drinking water was a national issue following an outbreak of high lead levels in the drinking water in Flint, Michigan.

Louisville Water has a great story on water quality, especially around our efforts to manage the risk of lead in drinking water. Paint and soil are most often associated with lead exposure and the local health department confirms there has never been a case of lead poisoning linked to drinking water in this community. Louisville’s drinking water does not contain lead when it leaves the treatment plant but lead can become a potential risk for drinking water with lead pipes and plumbing. Until the 1950s, it was common for water utilities to install lead service lines that connect to the customer’s property.

Louisville Water’s records show that more than 74,000 lead service lines were installed until 1937. We began replacing our lead service lines in the early 1970s and by 1990 had established a strategy for removing all lead service lines from the system. By 2016, Louisville Water had approximately 6,500 remaining lead service lines. In 2016, we accelerated the work to replace the lead lines and increased the budget to $6 million for 2016 and 2017. Crews replaced 981 services in 2016 with projects that were scattered throughout the service area and will replace up to 2,000 lead lines in 2017. Louisville Water plans to eliminate our remaining lead lines by 2020 with an overall capital budget of $29 million.

While the work in the field to remove lead service lines is important, the effort to minimize the risk for lead exposure begins at the treatment plant with corrosion control, water quality monitoring and continuous research. Louisville Water has balanced the water chemistry to minimize the risk of lead release into water since the early 1990s using an optimized corrosion control treatment strategy. Based on the latest science and our comprehensive research, Louisville Water scientists have recently applied an additional treatment strategy for lead reduction. In December, the Kentucky Division of Water approved Louisville Water switching from ferric chloride to ferric sulfate for the coagulation.

Louisville Water has a comprehensive lead monitoring program and offers free analysis to customers upon request. The program also includes collaborations with the health department, public and private schools, and daycare centers in which lead monitoring is routinely conducted. Although the majority of this monitoring finds no detectable lead in drinking water, Louisville Water provides guidance to customers to help identify potential sources of lead.

Customer education around lead and water quality continues to be a focus. Louisville Water revised all of its communication materials around lead with visuals and easy-to-understand explanations. Our website includes a look-up tool to identify a Louisville Water lead service line and staff met with dozens of stakeholder groups for education. Training for field crews is also important since many of these employees work individually with customers. Louisville Water’s lead program is considered an industry model for managing water quality, replacing lead service lines and educating customers. Staff continues to be involved in shaping best-practices on a national level.

EASTERN PARKWAY PROJECT

In the fall of 2016, Louisville Water began the largest water main replacement project in the company’s history. Over the next three years, we will replace 6.4 miles of a 48-inch cast-iron transmission main that was installed between 1923 and 1930 along Eastern Parkway. Three catastrophic breaks between 2011 and 2014 caused millions of dollars in damage and significant customer inconvenience.

Before the project began, Louisville Water spent more than a year working with stakeholders to identify a solution that would minimize the community impact but achieve the goal of a new transmission main. The challenge centers on the location of the main. Eastern Parkway is a four-lane historic corridor lined with established trees, homes and businesses. A section of the main runs through the University of Louisville campus. This transmission main is an important supply line from the Crescent Hill Water Treatment Plant to the Cardinal Hill Reservoir and supplies water for a significant portion of the city.
Photo of the original water main installation on Eastern Parkway, circa 1930, and the 2016 construction site.

Lower right: Crews uncover one of the original valves installed in 1930.
Louisville Water chose an engineering solution to replace the main, preserve the character of the Eastern Parkway corridor and not disrupt water service for thousands of customers. Instead of digging up the original pipe and replacing it, Louisville Water is slip-lining a 42-inch steel pipe inside the original cast-iron main. The project will cost an estimated $25 million.

Louisville Water is installing the new pipe in three phases since we can only take the main out of service in the winter months when water demand is lower. Phase 1 began in November 2016 and included installing 2.2 miles of steel pipe from Eastern Parkway and Beargrass Creek near Poplar Level Road to Grinstead Drive near Lexington Road and Cherokee Park. Phase 2 will begin November 2017 and then Phase 3 in November 2018. The project will conclude in April 2019.

In each phase, large pits are dug and then the new pipe is lowered and pushed into the old one. When it’s not feasible to slip-line, a section of old pipe is removed and a new one is installed. During the excavation, crews did uncover a piece of Louisville Water’s history—a 10,000 pound gate valve installed with the main in 1930.

Phase 1 was a success with minimal traffic detours, no loss in water service and a safe pipe installation. Overall, customers were pleased with the work. Louisville Water’s communication team worked with engineers to provide updates through a variety of channels including digital, media, and stakeholder meetings.

MAINTAINING INFRASTRUCTURE
Louisville Water restored one of its oldest water mains in 2016, a 30-inch cast-iron pipe that was installed along Mellwood Avenue in 1868 and 1869. This $1.8 million project included installing a cement mortar lining, repairing leaks and replacing a few pipe sections.

Maintaining infrastructure is the largest component of Louisville Water’s capital budget. In 2016, $12.5 million was spent to repair or replace seven miles of distribution water main, the smaller pipes that are routed through neighborhoods. For the larger water mains, new technology allows us to send robotic tools through the pipe to locate and repair weak portions before they break. In 2016, Louisville Water spent $5 million on this type of condition assessment and repaired 12 miles of large transmission mains. Louisville Water has 4,199 miles of pipe in its system and approximately 200 miles are large transmission water mains. Right now, Louisville Water is focused on performing condition assessment on the pre-stressed concrete cylinder pipe which makes up half of the transmission mains in our system. Our goal is to complete condition assessment and repairs on this type of water main by the end of 2019.

The maintenance work on the smaller distribution pipe is important to control water main breaks. There were 596 water main breaks in 2016, below the five-year average of 626. Louisville Water has a goal of less than 15 water main breaks per 100 miles of pipe. We achieved that in 2016 with an average of 14.2 breaks per 100 miles of pipe.

WORK AND ASSET MANAGEMENT
In late 2016, Louisville Water began a project that will help the company achieve a goal of having a best-in-class asset management system. The Board of Water Works approved a $24 million project on Work and Asset Management (WAM). A team of employees working with outside vendors will install this system that will allow us to better manage all of the company’s assets, extend the assets’ cycle and reliably forecast maintenance cost. WAM includes replacing paper tickets for work in the distribution system and installing a new system to manage maintenance on plant facilities. When the project is complete in the summer of 2019, Louisville Water will improve its preventative maintenance and better prioritize critical work.
Louisville Water’s Recordable Incident Rate (RIR) for safety is trending below the national average.
SAFETY: A HISTORIC PERFORMANCE

In 2016, Louisville Water had its best safety performance in recorded history. We experienced only nine OSHA (Occupational Safety and Health Administration) recordable injuries in 2016, and the recordable injury incident rate was less than two. This meant that more of our employees than ever worked through the year injury free. Louisville Water began tracking the OSHA recordable injuries as a key metric in 2002. Historically, our performance had lagged behind the industry average but now with a strong safety focus, Louisville Water’s incident rate is approximately half of the industry average.

Louisville Water has worked diligently to create a culture where safety is a priority. The focus begins with leadership but the real success comes when employees look out for themselves and each other. The safety program includes daily and weekly conversations, training, and safety “blitzes,” which are special events that promote safe practices.

In 2016, Louisville Water added a new tool to improve safety, efficiency and the performance of our fleet. All company vehicles now include Global Positioning Systems (GPS) that allow us to track the location of each vehicle while also monitoring engine hours and trouble codes. For employees, these units increase awareness of safe driving habits. Louisville Water has more than 400 vehicles in the fleet, and in 2016 employees logged more than 2.5 million miles.

IMPROVING CUSTOMER SERVICE

Operations in Louisville Water’s Customer Service Center improved significantly in 2016 after installing a new billing system in 2015. The average speed to answer a call was in line with the five-year average and the number of calls received dropped below the five-year average. The new billing system includes additional online options and paperless billing with 10,600 customers receiving their bill electronically. The system also includes an improved Interactive Voice Response system for self-service. Installing the billing system was Louisville Water’s largest capital project centered on customer service. While this was a major undertaking and required a lot of patience from our customers, we were proud to accept an industry award for “best implementation” of a customer information system. Implementing the new billing system created a dip in customer service levels but these metrics improved in 2016. Louisville Water’s Customer Satisfaction Index was 852, (on a 1,000 point scale) better than the five-year-average and up four points from 2015. The index for customers who had contact with Louisville Water also improved and increased 24 index points from 769 in 2015 to 793 in 2016.

The next step for enhancing customer service is launching a new bill format. We completed the design and consumer research in 2016 and will transition to the new look in the fall of 2017.

As we improve the presentation of the bill, we are piloting technology in how we meter water consumption. In 2016, we completed a two-year pilot study on Automated Metering Infrastructure (AMI). With AMI, a transmitter is attached to the customer’s water meter, and the customer and Louisville Water receive more immediate information on water usage. AMI allows customers to understand the fluctuations of their water consumption and can help identify when a water leak occurs in real time versus when they receive their bill. For Louisville Water, AMI provides an opportunity for monthly billing since the meters are not manually read.

AMI is ideal for more densely populated areas while Automatic Meter Reading (AMR) is for rural areas. Currently, Louisville Water uses AMR for approximately 29,000 of its customers in rural Jefferson County and Bullitt and Oldham Counties. With AMR, meter readers drive through a neighborhood and a sensor picks up the reading from the meter.
Above: Breaking ground on a project to bring Louisville Water to parts of Hardin County

Lower left: Louisville Water is paired with Kentucky bourbon for an economic development message
Louisville Water’s regional footprint includes partners in Kentucky and southern Indiana. We have wholesale contracts with nine water providers in Bullitt, Hardin, Nelson, Shelby and Spencer counties. Through an agreement with the River Ridge Development Authority in southern Indiana, we operate the water treatment plant, oversee distribution water quality and perform water quality compliance monitoring at this 6,000-acre business and manufacturing park. We also operate the Fort Knox water treatment and pumping facilities through a contract with Hardin County Water District 1.

DELIVERING WATER TO HARDIN COUNTY
In June, Louisville Water and Hardin County Water District 1 (HCWD1) broke ground on a project to give the district an additional supply of water. HCWD1 is installing 4.6 miles of 16-and 24-inch diameter water main to connect to Louisville Water at Highway 31W and Katherine Station Road. When complete in mid-2017, HCWD1 can purchase up to 3.5 million gallons of water per day from Louisville Water.

HCWD1 needs the additional water to supplement its supply during high-demand months or an extended drought. The district is paying for the project with a $4.5 million grant from the Base Realignment and Closure Act.

In mid-2017, Louisville Water will begin delivering water to Hardin County Water District No. 2 (HCWD2). This wholesale agreement includes work from both HCWD2 and Louisville Water. Louisville Water installed four miles of 20-inch diameter water main through Bullitt County to connect to HCWD2. In 2016, the district completed its water main installation. Initially, HCWD2 will purchase a minimum of 160 million gallons of water annually and then increase to 365 million gallons by 2021.

PLANNING FOR FUTURE GROWTH
Louisville Water spent 2016 designing a pipeline project to give Shelby County an additional supply of water. Construction is scheduled to begin in 2017 to install up to eight miles of water main along Interstate 64 from an existing 36-inch main near the Jefferson/Shelby County line to Shelbyville Water near Highway 55 in Shelby County.

This additional supply of water is important as Shelby County plans for future growth, and this project represents a strong partnership with all of the water providers in the county. When completed in 2019, Louisville Water could supply up to seven million gallons daily to Shelbyville Water.

SOUTHERN INDIANA
The River Ridge Development Authority continues to see steady growth in industry moving to this southern Indiana industrial site. In 2016, water sales soared by more than 50%. Louisville Water operates the water treatment facility under a contract agreement. We also oversee distribution water quality and perform water compliance monitoring. River Ridge sits at the base of the new Lewis and Clark Bridge and is planning for future growth with the bridge’s completion.

LIQUID ASSETS
Efforts to market Louisville’s water as an asset for industries expanded in 2016. Louisville Water partnered with Kentucky United and the Kentucky Association for Economic Development, a consortium of economic development entities to promote the state in key regions. During a visit to Atlanta, Louisville’s water was paired with one of Kentucky’s signature products, bourbon. A bourbon tasting with Louisville Forward (the city’s economic development entity) featured the state’s spirits along with Louisville Water. The bourbon flight included information about business opportunities in Louisville and the region’s affordable and abundant water supply. Guests were amazed that Louisville Water actually brought its product and the event left guests curious to learn more.

Partnering with Kentucky’s distillers and breweries is a new part of the “liquid assets” campaign. One craft brewer now features a branded Louisville Water tap and in 2017, Louisville Water will launch a partnership with a local distiller. Louisville’s water is a key ingredient in both of these booming industries, and our history aligns with bourbon. Some of Louisville Water’s earliest customers in the late 1800s were distillers.
More than 38,000 people visited the WaterWorks Museum in 2016.

Nearly a million people enjoy Louisville pure tap® at events.

The Crescent Hill Gatehouse hosts guests for “Trick or Treatment”
BACK TO THE TAP WITH LOUISVILLE PURE TAP®
Louisville pure tap® is at the core of Louisville Water’s customer education campaign. Now in its 19th year, this grassroots marketing effort focuses on the value of tap water.

The pure tap program includes products, messaging and events that highlight Louisville Water’s value to the community. In 2016, the campaign reached more than 921,000 people thanks to the success of a revamped effort that allows customers to “fill and chill” their own pure tap. Louisville Water’s branded coolers and compostable cups were at more than 200 events that included school parties, baseball games, neighborhood gatherings and street festivals. For larger venues, Louisville Water brings its mobile “pure tap to GO” units that hook directly to a water source for an ongoing supply of tap water. These units provided water at more than 50 events.

Connecting the utility with the water is an important goal. The Louisville pure tap® efforts include messages on the value of water. For the third year, Louisville Water hosted the Buy Local Fair at Louisville Water Tower Park. More than 6,000 people attended the event which included a tour of the current pumping facilities.

Louisville pure tap® quenched the thirst of thousands of walkers and runners at a series of races throughout the year. The Louisville pure tap® 5k race attracted over 1,000 runners to Louisville Water Tower Park. As Louisville honored one of its favorite sons, Muhammad Ali, Louisville Water provided water on a 100+degree day to thousands of people who gathered to watch Ali’s funeral procession.

Louisville Water continues to enjoy tremendous customer satisfaction on the taste of its drinking water. The quality and taste of pure tap receives high marks in consumer research. Now, Louisvillians, especially college students, tweet about the taste of the water. Students often comment how much they miss Louisville pure tap® when they leave home.

COMMUNITY OUTREACH
Community outreach for Louisville Water extends beyond the pure tap program. More than 38,000 students at 125 schools took part in Adventures in Water. In this school-based education program, Louisville Water brings real-world examples to the curriculum. At the WaterWorks Museum, 83 schools and organizations participated in field trips. Now in its second year, the museum inside Louisville Water’s 1860 pumping station continues to grow in popularity. Attendance at the museum and rental events at Louisville Water Tower Park rose to 38,100 in 2016.

One of Louisville Water’s newest community events has quickly become a success. “Trick or Treatment” is a not-so-spooky look at how drinking water is made. For the second year, Louisville Water opened its Crescent Hill Reservoir and Water Treatment Plant just before Halloween. The event included science experiments, a tour of the reservoir and gatehouse and a look inside the treatment plant. More than 1,000 people, many dressed in costumes, toured and treated themselves to a fun science evening.

A LASTING IMPACT
Louisville Water’s employees are its best ambassadors. A new city-wide effort called “Build our Blocks” brings the provider of services directly to a neighborhood where residents can sign up for heating assistance, ask questions about their water bill or receive help in repairing their home. The initial efforts for this program were a success in 2016, and Louisville Water plans to continue its involvement.

Employees and retirees contributed $137,237 to Louisville Water’s 2016 Combined Giving Campaign. These funds benefit four nonprofit organizations—Fund for the Arts, Louisville Water Foundation, Metro United Way and Water for People. As the nation watched the crisis over high lead levels in tap water unfold in Flint, Michigan, Louisville Water stepped up to coordinate a local campaign to raise funds for children in Flint whose health was impacted by lead. The “Flint Love” campaign included employee and corporate donations and the collection of shoes. WaterStep, another partner in the campaign, typically sells shoes to raise funds for water projects in developing countries. Louisville Water along with WaterStep, Louisville MSD, the city of Louisville and the Louisville Water Foundation raised more than $31,000 for the Community Foundation of Greater Flint. Beyond financial contributions, Louisville Water employees are engaged with dozens of organizations that complement the company’s mission, volunteering 4,996 hours in 2016.
One Water efforts in 2016 included fleet management and community outreach.
Louisville Water and Louisville MSD’s efforts around a One Water initiative produced a net savings of $9.4 million in capital and operation and maintenance across both organizations in 2016. The work to identify efficiencies and savings began in February 2014 following the work of a Joint Utility Task Force that looked at the feasibility of consolidating services at Louisville Water and MSD.

The long term objectives of One Water focus on maintaining the quality of our community’s water, improving customer service, providing cost savings to reinvest in infrastructure and identifying new revenue opportunities. Louisville Water and MSD remain separate entities and use a Comprehensive Interlocal Agreement, approved by Kentucky’s Attorney General, that allows the organizations to execute shared services.

A One Water board oversees the efforts, working with leadership at both organizations. The board includes two members from the MSD Board and the Board of Water Works. Ellen Hesen, Deputy Mayor for Louisville Metro, is the chair.

**SHARING INFORMATION TECHNOLOGY AND FLEET RESOURCES**

A large focus of the One Water effort is identifying opportunities to share resources and produce both efficiencies and savings. Information Technology (IT) and Fleet are two examples of this success. A Chief Information Officer now oversees the IT functions at both organizations and by the end of 2016, four IT positions were identified for a shared services agreement to serve both MSD and Louisville Water. The net benefit in IT savings was $536,000 in 2016.

Both Louisville Water and MSD maintain a large fleet. A One Water Fleet Manager continues to oversee both operations. In 2016, using the same vendor for vehicle parts, moving both organizations to the same fleet management system and jointly installing GPS units on fleet produced cost savings and efficiencies.

A One Water revenue team is focused on new opportunities. One example of success is identifying additional recurring revenue. The team cooperatively identified and billed accounts that historically were not included in the billing system.

**MANAGING THE EFFORT**

The One Water board and leadership at Louisville Water and MSD spent considerable time in 2016 examining the best way to manage shared services. The One Water board passed a resolution for the functions of IT, Customer Service and Communications to consolidate on January 1, 2017 with MSD employees becoming Louisville Water employees. The board and leadership believed this model would produce the ideal efficiencies and cost savings. However, late in 2016, concerns were raised on transitioning MSD employees to Louisville Water and the potential impact this could have to MSD’s federal consent decree on managing sewer overflows. The board decided in December to delay transitioning employees. Instead, Louisville Water and MSD will continue to use shared services agreements to pursue One Water initiatives.
From left to right: Sustainable Utility Management award, Best CIS Implementation award, Phase IV Water Treatment award, Flint Love Campaign and Building Industry Association recognition.
Louisville Water's customer base includes Louisville/Metro Jefferson County and parts of Bullitt, Nelson, Oldham, Hardin, Shelby and Spencer counties. The company has wholesale contracts with Hardin County Water District 1, Hardin County Water District No. 2, Lebanon Junction, Mount Washington, North Nelson Water District, North Shelby Water Company, Shelbyville Water and Sewer, Taylorsville and West Shelby Water District.

Louisville Water operates two treatment plants: The Crescent Hill Water Treatment Plant has a capacity of 180 million gallons per day and the B.E. Payne Water Treatment Plant has a capacity of 60 million gallons per day. Louisville Water draws water directly from the Ohio River for the Crescent Hill Plant and from the aquifer through a riverbank filtration system at the B.E. Payne Plant.

Louisville Water was one of five metropolitan utilities to receive the Sustainable Utility Management award from the Association of Metropolitan Water Agencies (AMWA). The award is presented to water utilities that demonstrate exceptional management in not only delivering drinking water but maintaining a commitment to sustainable operations. Matthew Griffith, Strategic Planning & Performance Specialist at Louisville Water accepted the award.

Customer Service Week, an annual event for utilities, recognized Louisville Water with the Best Customer Information System (CIS) Implementation Award. The award highlighted the success in installing a new customer information system in 2015.

The Partnership for Safe Water awarded its Phase IV Five-Year Excellence in Water Treatment Award to Louisville Water’s B.E. Payne Water Treatment Plant. Phase IV represents the highest possible level of performance in the Partnership program and signifies fully optimized plant performance that produces water quality surpassing federal standards. The B.E. Payne Plant first achieved the Phase IV status in 2011. Both of Louisville Water’s treatment plants have achieved the Phase IV award, a distinction for only 16 water treatment plants in North America. Dr. Jack Wang, Director of Water Quality Operations, accepted the award.

Louisville Water helped lead an effort to raise funds for the Community Foundation of Greater Flint’s Child Health and Development Fund. The fund was established in January 2016 to assist families with children diagnosed with high levels of lead from the city’s drinking water. Louisville Water, along with the Louisville Water Foundation, MSD, the city of Louisville and WaterStep, organized the campaign that generated more than $31,000.

Louisville Water was honored for 50+ years of membership with the Building Industry Association of Greater Louisville. President and CEO Spencer Bruce and Interim Chief Engineer Jim Grunow accepted the award.
A higher percentage of rainy days impacted water sales.

48% of the capital budget was for infrastructure renewal.
In 2016, Louisville Water faced a challenging year financially. The lowest water consumption since 1969 significantly impacted water revenue and net income, yet a focus on expanding alternative lines of revenue helped mitigate the impact. The negative impact on water revenue along with additional pension expense recognized as a result of GASB 68, lead to a reduction in the Company’s dividend to Louisville Metro. Total shareholder value provided to Louisville Metro through the dividend and free water service totaled $36.8 million this year, a decrease from $37.1 million in 2015.

Water consumption in 2016 was 33.5 billion gallons, a decrease of 3.3% from the previous year. Every category, with the exception of private fire services, declined. To a large extent, the drop in water consumption resulted from an unusually wet summer in terms of the number of days of rain. The warm weather months had 16% more days with rain than in 2015, which significantly impacts water usage, particularly for irrigation. The ongoing national trend of declining consumption resulting from low-flow fixtures and reduced household size also contributed to the lower water sales.

Louisville Water has a key strategy of developing alternative lines of revenue to combat lower water sales and has achieved considerable success to date. In 2016, this strategy was instrumental in helping to offset the negative impact of lower water consumption. Growth in revenue from sewer billing services, home warranty services, late charges and other customer fees resulted in an overall increase in Other Operating Revenue of $1.1 million as compared to the prior year. Operating Expenses were higher by 2.8% in 2016. Excluding the increase in Pension Expense recorded this year as a result of GASB 68, Operating Expenses were up by 2.3% as a result of increases in Depreciation Expense and Operating and Maintenance Expense. Depreciation Expense increased due to increased investments in utility plant. Operating and Maintenance Expenses increased due to higher labor and labor related costs, contractual services costs and bad debt expense. These higher costs were partially offset by reductions in utilities and chemicals costs as a result of lower water production and lower materials and supplies costs.

Louisville Water spent $69.7 million on its capital program in 2016 with the majority of the funding for infrastructure. Louisville Water has a long-standing commitment to annual investments on inspecting, repairing or replacing a percentage of the water mains in our system. A sizeable percentage of the 2016 capital program centered on repairing one of the oldest water mains in the system along Eastern Parkway and the construction of the new English Station water tank.

Looking ahead to 2017, Louisville Water is focused on further expanding alternative sources of revenue. We will continue to drive results by growing current revenue streams and developing new opportunities to ensure the future success of Louisville Water.

### HISTORICAL REVIEW

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<th>Other Operating Revenue</th>
<th>Operating Expenses*</th>
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*Does not include GASB 68 pension expense adjustment
FINANCIAL PERFORMANCE - OPERATIONS

OPERATIONS
(amount in millions of gallons)

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SALE OF WATER

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<tr>
<td>number of customers at December 31</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>247,629</td>
<td>245,294</td>
<td>12,582,347</td>
<td>$ 67,810</td>
</tr>
<tr>
<td>Commercial</td>
<td>22,998</td>
<td>22,801</td>
<td>11,756,318</td>
<td>47,664</td>
</tr>
<tr>
<td>Industrial</td>
<td>405</td>
<td>394</td>
<td>4,054,108</td>
<td>11,888</td>
</tr>
<tr>
<td>Irrigation</td>
<td>13,118</td>
<td>12,958</td>
<td>1,913,107</td>
<td>10,501</td>
</tr>
<tr>
<td>Fire Services</td>
<td>4,494</td>
<td>4,419</td>
<td>41,396</td>
<td>3,074</td>
</tr>
<tr>
<td>Wholesale</td>
<td>6</td>
<td>6</td>
<td>1,982,213</td>
<td>4,400</td>
</tr>
<tr>
<td>TOTAL</td>
<td>288,650</td>
<td>285,872</td>
<td>32,329,489</td>
<td>145,337</td>
</tr>
<tr>
<td>Public Fire Hydrants</td>
<td>24,130</td>
<td>24,042</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Metro Govt</td>
<td>625</td>
<td>614</td>
<td>1,128,790</td>
<td>3,930</td>
</tr>
<tr>
<td>TOTAL</td>
<td>24,755</td>
<td>24,656</td>
<td>1,128,790</td>
<td>16,961</td>
</tr>
<tr>
<td>GRAND TOTALS</td>
<td>313,405</td>
<td>310,528</td>
<td>33,458,279</td>
<td>$ 162,299</td>
</tr>
</tbody>
</table>

TOTAL CONSUMPTION
(in billion gallons)

2016 WATER REVENUE
AVERAGE RESIDENTIAL MONTHLY WATER BILL
(based upon median usage of 5,000 gallons per month)

OTHER OPERATING REVENUE
(in millions)

TOTAL CONTRIBUTIONS TO LOUISVILLE METRO
(in millions)
FINANCIAL PERFORMANCE - CAPITAL

2016 CAPITAL IMPROVEMENT PLAN

- Infrastructure Renewal: 48%
- Self-Financing Improvements: 15%
- New Technology: 9%
- Growth-related Improvements: 28%

2017 CAPITAL IMPROVEMENT PLAN

- Infrastructure Renewal: 64%
- Self-Financing Improvements: 17%
- New Technology: 5%
- Growth-related Improvements: 14%

2016 CONTRIBUTIONS IN AID OF CONSTRUCTION

(in millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Contributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$10.3</td>
</tr>
<tr>
<td>2015</td>
<td>$9.4</td>
</tr>
<tr>
<td>2014</td>
<td>$9.2</td>
</tr>
<tr>
<td>2013</td>
<td>$6.6</td>
</tr>
<tr>
<td>2012</td>
<td>$5.4</td>
</tr>
</tbody>
</table>
CAPITAL BIDS - ESTIMATES VERSUS ACTUAL CONTRACTS
(in millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Bid</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$17.8</td>
<td>$17.8</td>
</tr>
<tr>
<td>2013</td>
<td>$21.0</td>
<td>$21.0</td>
</tr>
<tr>
<td>2014</td>
<td>$38.8</td>
<td>$39.6</td>
</tr>
<tr>
<td>2015</td>
<td>$27.1</td>
<td>$28.7</td>
</tr>
<tr>
<td>2016</td>
<td>$29.0</td>
<td>$28.3</td>
</tr>
</tbody>
</table>

TOTAL CAPITAL PROGRAM AND EXPENDITURES
(in millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital Program</th>
<th>Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$57.3</td>
<td>$64.8</td>
</tr>
<tr>
<td>2013</td>
<td>$57.6</td>
<td>$64.8</td>
</tr>
<tr>
<td>2014</td>
<td>$57.6</td>
<td>$64.8</td>
</tr>
<tr>
<td>2015</td>
<td>$83.7</td>
<td>$94.8</td>
</tr>
<tr>
<td>2016</td>
<td>$83.7</td>
<td>$96.6</td>
</tr>
</tbody>
</table>
The Board of Water Works is the governing body of Louisville Water Company. It is composed of six members appointed by the Louisville Metro Mayor, who also serves as an ex officio member. No more than three of the appointed members may be from the same political party. Members’ terms are four years and are staggered. Members may succeed themselves.