

**Board Of Water Works**  
**REGULAR CALLED MEETING MINUTES**  
**January 23, 2018**

**Board Members Present:**

Mr. Creighton Mershon, Chair  
Dr. Sundeep “Sunny” Dronawat  
Mr. Paul Esselman  
Dr. Sharon Kerrick  
Ms. Tierra Kavanaugh Wayne  
Mr. Craig Willman

**Not Present:**

Mayor Greg Fischer

**Others Present:**

Mr. Spencer Bruce, President and Chief Executive Officer  
Mr. Daniel Frockt, CFO, Louisville / Jefferson County Metro Government  
Mr. Dave Vogel, Executive Vice President, Customer Service and Distribution Operations  
Ms. Kelley Dearing Smith, Vice President, Communications and Marketing  
Mr. Tim Kraus, Vice President, Production Operations and Chief Engineer  
Dr. Tom Luckett, Vice President and Chief Information Officer  
Ms. Lynn Pearson, Vice President, Finance and Treasurer  
Mr. Terrence Spence, Vice President, Human Resources and Labor Relations  
Mr. Michael Tighe, Vice President, Compliance, General Counsel and Corporate Secretary  
Ms. Kim Reed, Director, One Water Liaison  
Ms. Jenni Schelling, Director, Internal Audit  
Dr. Rengao Song, Director, Water Quality and Research  
Mr. Larry Bryant, Director, Production Operations  
Mr. Chris Bobay, Supervisor, Water Treatment  
Mr. Mark Campbell, Scientist II  
Mr. Adam Carter, Union President  
Ms. Beverly Soice, Paralegal

**Visitors:**

The regular called meeting of the Board of Water Works (BOWW) was held on Tuesday, January 23, 2018 at the Louisville Water Company (Louisville Water) located at 550 South Third Street, Louisville, Kentucky. Chair Creighton Mershon called the meeting to order at 11:07 a.m.

**Minutes of the Previous Regular BOWW Meeting Approved**

Dr. Sunny Dronawat moved to approve the Regular Called Meeting Minutes of December 18, 2017 and the Special Called Meetings Minutes of January 10, 2018, seconded by Dr. Sharon Kerrick and the motion was unanimously carried.

**Report Provided by the President/Chief Executive Office**

Mr. Spencer Bruce highlighted the outstanding work of Louisville Water’s Water Quality and Operations staff; stating that their knowledge, skill and diligence helped successfully manage a unique spill on the Ohio River.

On Wednesday December 19, 2017, liquid fertilizer began leaking into the Ohio River from a damaged barge that was docked south of Cincinnati. Immediately, our scientists began working with the Ohio River Valley Water Sanitation Commission (ORSANCO) to gauge the impact of the spill on our water quality and treatment operations.

Unlike an oil spill where you can see a sheen on the river, this spill was soluble, making it invisible. More importantly, the spill chemicals react with chlorine which is our primary disinfectant. Therefore, Louisville Water scientists had to determine the location of the plume. Specifically, they had to discover the start, peak and end of the plume so that we could know when to change our treatment strategy to mitigate any issues. Through multiple computer models and field sampling, Louisville Water worked closely with ORSANCO to estimate the concentration levels of the spilled material, determine its location and develop an effective treatment strategy.

Beginning on December 20, 2017, ORSANCO and Louisville Water personnel were on the river monitoring the conditions of the plume. After a rain event, it quickly became apparent that the spill would reach the Zorn intake on Christmas Day. Louisville Water scientists created a mobile lab inside a van and began monitoring the Ohio River hourly from several miles upriver. Once we had a precise time when the spill would reach our intake, we began monitoring both the intake and the Crescent Hill Reservoir. The spill passed through our system Christmas Day and continued for the next 20 hours. The river's flow and the rain event helped to dilute the spill and reduce the peak levels of ammonia that could have been a significant challenge for our treatment system. In addition, Operations personnel were able to fill all tanks and reservoirs in the system so that the Zorn pumps could be shut off for over 11 hours, thereby, reducing the peak concentration of the spilled material that needed to be treated. On Christmas Day and continuing for the next several days, we analyzed and monitored our treatment process and made a minor adjustment in our strategy. The result of our work produced the same, high-quality water our customers expect.

Louisville Water has always had a focus on advancing the science of drinking water through research and partnerships. Our ability to navigate this spill and protect the quality of our drinking water is a testament to the value of this investment.

Mr. Mershon and Mr. Daniel Frockt thanked staff who worked on their holiday and were away from their families.

### **Budget Increase Ratified for Project 14634 Frankfort Avenue Lead Service Renewal and Establish New Budget of Record**

Mr. Tim Kraus reported that the Frankfort Avenue Area Lead Service Renewal Project was included as an unbudgeted project in the 2016 Capital Program to accelerate the replacement of lead services. The scope initially included 600 lead services with a budget of \$1,500,000. Mr. Kraus provided the following summary of the project request.

This project included the renewal of lead services along Albany Avenue, Barberry Lane, N. Bellaire Avenue, Belvar Avenue, Braeview Road, Brownsboro Road, N. Clifton Avenue, Crescent Ave., Eline Ave., English Ave., Fairlawn Rd., Garden Dr., Hillcrest Ave., S. Keats Ave., Lexington Rd., McCready Avenue, New Main Street, Payne Street, N. Peterson Avenue, Rainbow Drive, Sunnyside Drive, Sunset Road, and Winton Avenue. This project was planned using Louisville Water crews; however, due to limited availability of our crews, it was decided to bid out the work. At the time this project was initiated, Louisville Water Crews were completing lead service renewals at a lower cost than private contractors. Therefore, the number of services to be renewed in the project was lowered to 427 in anticipation of the higher cost of using a private contractor.

Construction bids and engineering and inspection costs were \$232,500 and \$90,000 higher than budgeted, respectively. Total paving costs are anticipated to be \$575,223 higher than budgeted partially due to changes in Metro's paving requirements. Materials costs, contingency and miscellaneous items were less than budgeted by \$181,500 and \$10,089, respectively, which offsets a portion of the increased cost items, yielding a net project increase of \$706,134. A push was made to complete paving in 2017 prior to winter shut-down of the asphalt plants. Once the project manager became aware of the project over-run, paving was halted. The outstanding balance for paving work is \$243,170. The paving will be completed this year, when the BOWW approves an increase to the project budget. Mr. Kraus noted that \$398,078 of the increased budget request has been committed; therefore, staff is requesting ratification of the Frankfort Avenue Area Lead Service Renewal Project's budget increase of \$706,134 and establishment of a new budget of record of \$2,206,134.

Mr. Mershon moved to ratify the Frankfort Avenue Area Lead Service Renewal Project's budget increase of \$706,134 and establishment of a new budget of record of \$2,206,134. Dr. Dronawat seconded and the motion unanimously carried.

### **Budget Increase Approved for Project #14635 - Grinstead Lead Service Renewal And Establish New Budget of Record**

Mr. Kraus advised the Grinstead Drive Area Lead Service Renewal Project was included as an unbudgeted project in the 2016 Capital Improvement Program to accelerate the replacement of lead services. The project initially included the renewal of 200 lead services with a budget of \$750,000. Mr. Kraus provided the following summary of the project request.

The project included the renewal of lead services along E. Oak Street, E. St. Catherine Street, Logan Street, Swan Street, Shelby Parkway, S. Clay Street, Winter Avenue, Hepburn Avenue, and Rufer Avenue. The project was initially targeted to be bid to private contractors; however, during design it was decided that Louisville Water crews would perform this project. Based on historical costs associated with Louisville Water crews completing lead service renewals, the number of service renewals was increased to 279 with four services to be discontinued.

During construction, several problems were encountered which resulted in higher project costs. Due to the location of the existing 48-inch transmission main, service renewals on one block of E. Oak Street required open cut excavation across the street. Two sets of buried trolley tracks were also encountered in the open cut excavations and had to be removed. Louisville Water crews also encountered difficulty pulling most of the long services which required extra time to bore the services under the road. Extensive deployment of the traffic safety package was required on Winter Avenue which slowed productivity. Additional sidewalk replacement was required to remove the curb stops, since fiber optic lines were placed directly on the service lines and it was feared that the curb stop could damage the fiber optics. Overcoming these issues resulted in an increase in construction cost of \$401,000, which includes \$257,000 for paving that has not been completed.

Other cost increases included an additional \$6,000 for road permits, \$45,000 in engineering and inspection costs, \$14,000 in capital interest charges and \$2,200 in additional plumbing costs. Materials used on the project were \$75,000 less than budgeted and offset a portion of the increased costs. In order to avoid incurring additional costs greater than internal controls allow, we have stopped the crews short of completing the entire project, leaving 30 services remaining to be completed. Since the crews had started work on Hepburn Avenue, we have included an additional \$21,000 in this increase request to complete the seven services on this road and will shift the remaining 23 services to a future project. The net increase in additional cost is \$414,200.

Mr. Paul Esselman moved to increase the project budget by \$414,200 and establish a new budget of record of \$1,164,200 for Project 14635 - Grinstead Drive Area Lead Service Renewal project. Seconded by Ms. Tierra Kavanaugh Wayne, and the motion unanimously carried.

## **Unbudgeted Capital Project #15314 - 48-inch Water Main Leak At Grinstead Drive between Bardstown and Cherokee Road Ratified**

Mr. Kraus advised on Friday January 5, 2018, a leak was reported in the 2100 block of Grinstead Drive between Bardstown Road and Cherokee Road. A significant amount of ice had formed along the curb line of the east bound lanes. Traffic control was established to secure the site. On Sunday, January 7, Managing Distribution Operations organization (MDO) notified Engineering staff of the leak. It was decided to transfer responsibility for the repair of the leak over to Engineering due to the number of main breaks MDO was working and the information that was provided by Pure Technologies in their condition assessment inspection report dated March 2017 stating that there was a small leak identified on the 48-inch cast iron main in the same location.

On Monday, January 8, MAC Construction was contacted and asked to prepare a proposal pursuant to the Transmission System Repairs and/or Capital Improvements contract per Capital Projects Authorization Procedure 5.21 – Exigent Work Provisions to complete repairs. MAC mobilized on Tuesday, January 9. On Wednesday, January 10, initial excavation was complete at which time it was determined that the leak was from a roughly 15-inch split in the barrel of the pipe; water was spraying from the pipe. Work began immediately to isolate the 48-inch main and place four customers on temporary services. On Thursday, the entire roadway was closed to install the shoring box and complete excavating to expose the water main. It is estimated that the leak will be repaired on Friday, January 19 and the main placed back in-service on January 21. Complete site restoration will be completed before January 26, 2018. Replacement of the damaged main and roadway is estimated to cost \$275,000.

After a short discussion, Ms. Wayne moved to ratify this unbudgeted capital project in the amount of \$275,000 to repair the 48-inch main along Grinstead Drive. Mr. Esselman seconded and the motion unanimously carried.

## **Lead Service Program Expansion**

Ms. Kelley Dearing Smith provided a summary of the history of Louisville Water's lead service replacement program.

Mr. Kraus stated Louisville Water's records indicate that approximately 74,000 lead service lines were installed up to 1937. In 1991, a field survey determined that Louisville Water had approximately 36,000 lead services in its distribution system. Currently, there are an estimated 4,500 lead services remaining. The 2018 Capital Improvement Plan includes funding to replace approximately 2,900 lead service lines as part of the Lead Service Renewal Program with a goal to replace all lead services by 2020. Initially, when the Lead Service Renewal Program began, the goal was to complete replacements by 2025, but based on input from the Board, this program has been expedited to be completed by 2020.

Staff has found that for approximately 6% of lead service replacements performed, the customer has lead on the private portion of the service line between the customer connection at the property line and the foundation of the house. Research has shown that replacing only a portion of the lead service can cause elevated lead levels in the water for weeks and months after the project is completed. This occurs when only the public portion of the lead service is replaced and the private portion of the lead service is left in place.

A pilot program was implemented in 2017 to provide funding to residential customers who have a private lead service between the customer connection at the property line and the foundation of the house to encourage customers to remove their portion of the lead service while we remove Louisville Waters' portion of the lead service. Louisville Water funds 50% of the cost of the private lead service replacement cost up to \$1,000; most private services can be replaced for \$1,500 or less. In 2017, 1,900 lead services were replaced and of these, only 47 of the private services were lead. Ten customers of the 47 chose to participate in the pilot program. The average cost to Louisville Water for these private replacements was \$625 per service.

Staff proposes to formalize the pilot program into an ongoing initiative of the Lead Service Renewal Program and to expanding this pilot program to include the replacement of private lead services that are not associated with an ongoing project. This would include customers that were part of a project prior to the pilot program or others that simply have a private lead service that they would like to remove. Expanding and formalizing the pilot program promotes good public health for the community and allows Louisville Water to stay out in front of this issue. Based on Louisville Water’s discussion with representatives from the EPA and AWWA, expanding this program is also in line with upcoming regulations.

The 2018 Operations and Maintenance budget includes \$68,244 of funding for Louisville Water’s portion of the private lead service replacement costs. Staff believes that this funding would be adequate for the expanded program. The Louisville Water Foundation has provided funding to pay the remaining 50% of the private lead service replacement cost up to \$1,000 for low income residents. In 2017 only one low income resident pursued funding from the Louisville Water Foundation for replacement of a private lead service line.

Dr. Dronawat moved to expand the private lead service line replacement program beyond a pilot program and offer to pay 50% of the cost of private lead service line replacement up to \$1,000 for all Louisville Water customers. Seconded by Ms. Wayne and the motion unanimously carried.

Mr. Kraus stated no additional funding, beyond what is already incorporated into the 2018 budget, is required to fund this expanded initiative.

**Fourth Quarter 2017 Certification of Projects & Change Actions**

Mr. Bruce certified that the following Projects and Change Actions were authorized during the Fourth Quarter of 2017 in accordance with the Capital Projects Authorization Policy and Procedures.

Project Proposals Requiring Board Approval:					
October 1, 2017 through December 31, 2017					
Project Number	Project Name	Requested Total Estimate	Contribution	LWC Net Cost	Current Year Estimate
15212	48" Oak Street Water Main	\$ 715,000	\$ -	\$ 715,000	\$ 715,000
<b>Total</b>		<b>\$ 715,000</b>	<b>\$ -</b>	<b>\$ 715,000</b>	<b>\$ 715,000</b>

Project Change Actions/Admin Notifications Requiring Board Approval:					
October 1, 2017 through December 31, 2017					
Project Number	Project Name	Previously Approved Total	Change In Total Estimate	Requested Total Estimate	Change In Current Year
14319 <sup>1</sup>	MRRP 2015 - Poplar Level Road Area	\$ 1,267,491	\$ 21,387	\$ 1,288,878	\$ 21,824
14325	CHFP - Chemical Bldg and Lab Fire Protection and Office	\$ 3,575,000	\$ 1,307,470	\$ 4,882,740	\$ -
14330	CHWTP - Standby Generator	\$ 11,723,392	\$ 1,263,608	\$ 12,987,000	\$ -
15144	BEP - RBF Pump Modification	\$ 461,133	\$ 373,609	\$ 834,742	\$ 3,000
<b>Total</b>		<b>\$ 17,027,016</b>	<b>\$ 2,966,074</b>	<b>\$ 19,993,360</b>	<b>\$ 24,824</b>

Project Proposals Approved by the President:					
October 1, 2017 through December 31, 2017					
Project Number	Project Name	Requested Total Estimate	Contribution	LWC Net Cost	Current Year Estimate
15207	CHPS #6 - Motor Stator Rewind	\$ 195,500	\$ -	\$ 195,500	\$ -
<b>Total</b>		<b>\$ 195,500</b>	<b>\$ -</b>	<b>\$ 195,500</b>	<b>\$ -</b>

Project Change Actions Approved by the President with Total Estimate Changes:

October 1, 2017 through December 31, 2017

Project Number	Project Name	Previously Approved Total Estimate	Change In Total Estimate	Requested Total Estimate	Change In Current Year Estimate
14439	Allmond - Security Building and Fencing	\$ 441,000	\$ 150,000	\$ 591,000	\$ -
14517	Condition 2016 - PCCP - Greenwood Rd Area	\$ 4,754,949	\$ 398,783	\$ 5,153,732	\$ (472,213)
14635	Lead 2016 - Grinstead Dr Area	\$ 830,000	\$ 130,000	\$ 960,000	\$ 41,000
<b>Total</b>		<b>\$6,025,949</b>	<b>\$ 678,783</b>	<b>\$ 6,704,732</b>	<b>\$ (431,213)</b>

Project Change Actions Approved by the President with no change Total Estimate Changes:

October 1, 2017 through December 31, 2017

Project Number	Project Name	Previously Approved Total Estimate	Change In Total Estimate	Requested Total Estimate	Change In Current Year Estimate
14543	860 PZ - Bardstown Road Elevated Storage Tank	\$ 6,700,000	\$ -	\$ 6,700,000	\$ 520,000
14543	860 PZ - Bardstown Road Elevated Storage Tank	\$ 6,700,000	\$ -	\$ 6,700,000	\$ 352,250
14544	Storage - Brooks Hill tank	\$ 1,970,000	\$ -	\$ 1,970,000	\$ 200,000
14544	Storage - Brooks Hill tank	\$ 1,970,000	\$ -	\$ 1,970,000	\$ 260,000
15180	Condition 2018 - Raw Water Feed	\$ 10,000,000	\$ -	\$ 10,000,000	\$ 500,000
<b>Total</b>		<b>\$ 27,340,000</b>	<b>\$ -</b>	<b>\$ 27,340,000</b>	<b>\$1,832,250</b>

Status of Open Projects with Total Estimates over \$2,000,000:

Project Number	Project Name	Total Estimate	Total Cost To Date	Status	Budget Year Category
10415	Relocation 2004 - Westport Rd, Primrose Dr to Ambridge	\$ 4,492,558	\$ 6,210,924	Completed Not	2004 Budget
11264	Transmission - Cardinal Hill Second Supply Phase 2B	\$ 3,708,490	\$ 125,621	Pending Capital	2005 Budget
11310	BEP - Renovate Sludge Lagoons No. 1 and No. 3	\$ 7,272,800	\$ 6,190,415	Work In Progress	2006 Budget
11615	Transmission - Gene Snyder Freeway Section 1B	\$ 9,133,000	\$ 381,257	Design In Progress	2007 Budget
11616	Transmission - Gene Snyder Freeway Section 2A	\$ 6,641,500	\$ 64,331	Pending Capital	2007 Budget
13109	ZPS - Standby Generator	\$ 9,500,000	\$ 511,220	Pending Capital	2011 Budget
13264	CHPS - Replace Slate Roof and Improve Masonry	\$ 6,137,000	\$ 215,725	Pending Capital	2012 Budget
13274	AMI for Jefferson County	\$ 58,500,000	\$ 58,568	Pending Capital	2013 Budget
13364	Relocation 2012 - Blue Lick Road Phase 1	\$ 4,198,144	\$ 4,174,904	Work In Progress	2012 Budget
13512	ZPS - Station #3 Slate Roof Replacement and Masonry Imprv	\$ 6,569,000	\$ 1,697,367	Work In Progress	2013 Budget
13523	690 Plan - Preston Highway, Collins Hill Road to Rolling Fork	\$ 5,863,521	\$ 5,829,282	Completed Not	2013 Budget
13650	Reloc 2013 - 690 Plan - Preston Hwy Corridor T&D	\$ 3,655,000	\$ 1,175,801	Work In Progress	2014 Budget
14099	Condition 2014 - PCCP Grade Lane and Preston Highway	\$ 2,870,000	\$ 2,590,551	Work In Progress	2014 Budget
14321	Rehabilitation 2015 - Eastern Pkwy 48-inch main	\$ 25,761,000	\$ 10,976,663	Work In Progress	2015 Budget
14325	CHFP-Chem Bldg and Lab Fire Protect and Ofc Space Improv	\$ 4,882,740	\$ 213,665	Design In Progress	2015 Budget
14330	CHWTP - Standby Generator	\$ 11,723,392	\$ 716,848	Design In Progress	2015 Budget
14498	ZPS,CHPS - 13.8 KV Switchgear Rehab	\$ 2,174,287	\$ 1,888,818	Work In Progress	2015 Budget
14515	Condition 2016 - CH Yard Piping and Valves	\$ 6,741,755	\$ 4,037,457	Work In Progress	2016 Budget
14517	Condition 2016 - PCCP - Mains	\$ 5,153,732	\$ 3,965,210	Work In Progress	2016 Budget
14524	ATT RBF for CH	\$ 221,905,253	\$ 5,418,617	Design In Progress	2017 Budget
14530	I.T. - Bus Intelligence Exp: Financial and Human Res	\$ 2,267,127	\$ -	Pending Capital	2017 Budget
14534	I.T. - Oracle Utilities CCB,MWM Enhancements	\$ 3,500,000	\$ 2,110,802	Work In Progress	2016 Budget
14536	I.T. - Work and Asset Management System - WAM	\$ 23,526,488	\$ 6,943,182	Work In Progress	2016 Budget
14542	Transmission - Urton Lane	\$ 5,297,725	\$ 167,858	Design In Progress	2017 Budget
14543	860 PZ - Bardstown Road Elevated Storage Tank	\$ 6,700,000	\$ 1,226,107	Design In Progress	2016 Budget
14545	Transmission - I-64 Transmission to Hwy 55	\$ 16,180,300	\$ 3,674,093	Work In Progress	2016 Budget
14553	Transmission - Minor Lane Grid-Tie	\$ 2,191,500	\$ 897,528	Work In Progress	2016 Budget
15035	Condition 2017 - PCCP	\$ 7,495,160	\$ 4,614,300	Work In Progress	2017 Budget
15036	Condition 2017 - Reservoir Yard Piping and Valves	\$ 5,000,000	\$ 47,695	Design In Progress	2017 Budget
15060	680 Plan - Hwy 42, Greenmere Boulevard to 13450 Hwy 42	\$ 2,644,000	\$ 29,346	Design In Progress	2017 Budget
15180	Condition 2018 Raw Water Feed	\$ 10,000,000	\$ 1,624,438	Work In Progress	2017 Budget
	Pending - An approved project that has not yet begun. Some projects may go to Design and back to Pending if put on 'hold' with no construction.				
	Design - The project is currently in Preliminary or Final Design, but a contract has not yet been awarded for construction.				
	Work in Progress - Project has full approval to move forward, construction has begun, and a contract has been executed, if applicable.				
	Complete Not Closed - Construction is complete, assets are in-service, but the project has not yet been closed due to various reasons.				
14319 <sup>1</sup>	Due to accumulative increase in total estimate				

## Fourth Quarter 2017 Certification of Contracts & Bids

Mr. Bruce certified that the following contracts were awarded during the Fourth Quarter of 2017 in accordance with the Purchasing Policy and Purchasing Procedures.

### Construction

<b>13-15</b>	<b>48-Inch Main Break at Clay Street &amp; Oak Street - Assignment from Transmission Main Rehabilitation Master Agreement</b>		
17987	Southern Pipeline		\$350,000
<b>13-15</b>	<b>48-Inch Main Break at Clay Street &amp; Oak Street - Secondary Award - Assignment from Master Agreement for Transmission Main Rehabilitation</b>		
17987	Mac Construction	Estimated	\$250,000
<b>13-15</b>	<b>Condition 2018 - Raw Water Feed from Zorn to Crescent Hill - Assignment from Transmission System Repairs and/or Capital Improvements Master Agreement</b>		
15180	MAC Construction & Excavating, Inc.		\$1,050,696
<b>14-25</b>	<b>Distribution System Repairs &amp; Capital Improvements - 2nd CPI Renewal</b>		
N/A	MAC Construction & Excavating, Inc.		
	Southern Pipeline Construction Co.(CWBE)		
	Basham Construction	6-month estimate	\$125,000
<b>16-38</b>	<b>I-64 Transmission Main - CHANGE ORDER</b>		
14545	HDR, Inc.		\$145,689
<b>17-130</b>	<b>John L. Huber Building Standby Generator</b>		
15065	Glenwood Electric Inc.		\$343,000
<b>17-131</b>	<b>Bethany Check Valve</b>		
15011	Basham Construction & Rental Co. Inc.		\$104,000
<b>17-138</b>	<b>Constantine PRV Replacement</b>		
14503	Flynn Brothers Contracting, Inc.		\$355,475
<b>17-139</b>	<b>Wolf Pen Woods PRV</b>		
15026	Advanced Paving & Construction Co. Inc. (CWBE)		\$369,400
<b>17-149</b>	<b>RBF Pump Modifications at BEPWTP</b>		
15144	Layne Christensen Company		\$695,742
<b>17-66</b>	<b>Crescent Hill Masonry Improvements - Chemical, Lab, Main Office Buildings - CHANGE ORDER #2</b>		
14522	Badgett Constructors		\$98,939
	<b>SUM BY BIDS AND AWARDS CATEGORY</b>		<b>\$3,887,941</b>

### Procurement of Materials and Services

<b>08-178</b>	<b>Electronic Plan Room - 6-month Extension - CPI Adjustment</b>		
	Lynn Imaging	Estimated	\$32,575
<b>11-146</b>	<b>Notification &amp; Collection of Delinquent Accounts - CONTRACT EXTENSION</b>		
	The Affiliated Group (TAG)	Estimated	\$300,000
<b>12-119</b>	<b>Condition 2016 - PCCP - Greenwood Road, Tyler-Durrett Lane, Palatka Road - Assignment from Electromagnetic Inspection and Leak Detection of Large Diameter Water Mains</b>		
14517	Pure Technologies U.S. Inc.		\$275,994
<b>12-55</b>	<b>Temporary Personnel Services - 5th &amp; Final CPI Renewal</b>		
	Category C - People Plus		\$162,159
<b>13-155</b>	<b>Analytical Services for Drinking Water - 3rd &amp; Final CPI Renewal</b>		
	Eurofins Eaton Analytical, Inc.	1-Year Estimate	\$97,164
<b>14-130</b>	<b>Stainless Steel Tapping Sleeves w/MJ Outlets - 2nd PPI Renewal</b>		
	Ferguson Waterworks	Estimated	\$36,219
<b>15-143</b>	<b>Horizontal Directional Drilling Services - 2nd CPI Renewal</b>		
	A.M. Contracting	Estimated	\$93,515
<b>15-45</b>	<b>Billing Services Feasibility Study - Assignment from IT Project Consulting Services Contract</b>		
	TMG Consulting		\$198,397
<b>15-81</b>	<b>Tapping Saddles - 1st CPI Renewal</b>		
N/A	Mueller Co. Ltd Ferguson Waterworks	Estimate	\$89,974

<b>16-126</b>	<b>Ft. Knox Well Pump #7 - Assignment from Contingency Contract for Pump Repairs</b> Layne Christensen Company	Estimated	\$26,164
<b>16-162</b>	<b>Hydraulic, Machine &amp; Gear Oils</b> Key Oil Company	6-month estimate	\$24,882
<b>16-22</b>	<b>Major Engine &amp; Transmission Repairs - Under One Ton - 1st CPI Renewal</b> Aamco Transmission & Total Car Care		\$103,000
<b>16-23</b>	<b>Major Engine &amp; Transmission Repairs - Over One Ton - 1st CPI Renewal</b> All-State Ford Truck Sales, LLC		\$257,500
<b>16-84</b>	<b>Oracle Work &amp; Asset Management (WAM) Solution Implementation Services - CHANGE ORDER #1</b> Ernst & Young LLP		\$122,600
<b>17-103</b>	<b>Insulated Concrete Forms</b> Ecos Materials & Services, LLC	Estimated	\$40,435
<b>17-115</b>	<b>Potable Water Tank Miscellaneous Modifications and Repairs - 3-Year Contract</b> Currens Construction	Estimated	\$75,000
<b>17-121</b>	<b>Diesel Fuel for Crescent Hill &amp; Unleaded Fuel for Allmond Avenue and Crescent Hill</b> Key Oil Company	3-year Estimate	\$25,200
	Lykins Energy Solutions	3-year Estimate	\$699,300
<b>17-122</b>	<b>Barricade Rental, Worksite Security and Safety Sign Purchase</b> Off Duty Police Services Inc. - Non-Sworn Uniformed Police	Estimated	\$189,950
	Off Duty Police Services Inc. - Sworn Uniformed Police	Estimated	\$102,200
	Peyton's Barricade & Sign Co. - Barricades & Traffic Control	Estimated	\$529,300
<b>17-129</b>	<b>Fire Hydrants</b> American Flow Control	Estimated	\$1,037,350
<b>17-13</b>	<b>Structural Evaluation of Cardinal Hill Reservoir - Assignment from Engineer of Record Master Agreement</b> Hazen & Sawyer		\$25,607
<i>17902</i>			
<b>17-140</b>	<b>Crew Truck with Crane</b> UHL Truck Sales		\$173,330
<b>17-145</b>	<b>Propylene Glycol</b> Baumann Paper Co., Inc.	Estimated	\$36,840
<b>17-154</b>	<b>Ductile Iron Pipe P&amp;D &amp; Additional 2018 Quantities</b> Hayes Pipe Supply	Estimated	\$808,089
<b>17-155</b>	<b>Polyvinyl Chloride Pipe (PVC)</b> Ferguson Waterworks - Purchase & Delivery	Estimated	\$512,439
	Hayes Pipe Supply - Add'l Quantities & Job Site Delivery	Estimated	\$78,078
<b>17-61</b>	<b>CHPS#6 - Motor Stator Rewind - Assignment to Contingency Contract for Motor Repairs</b> Horner Industrial Group	Estimated	\$176,500
<i>15207</i>			
<b>17-71</b>	<b>Construction Inspection Services</b> RA Consultants, LLC	Annual Estimate	\$800,800
<b>GSA Contract</b>	<b>Oracle Applications Technical Architect</b> V-Soft Consulting (MBE)	Estimated	\$341,120
<i>GS35F495AA</i>			
<b>KY State</b>	<b>Laboratory Equipment &amp; Supplies</b> VWR International		\$49,887
<i>MA7581600000757</i>			
<i>15179</i>			
<b>KY State Contract</b>	<b>Advertising, Marketing, Creative/Graphic Design &amp; Public Relations Services</b> Bandy Carrol Hellige (BCH)		\$75,000
<i>MA7581600000633</i>			
<b>KY State Contract</b>	<b>Failover Internet Connection</b> Data Strategy		\$94,357
<i>MA7581400000876</i>			
<b>KY State Contract</b>	<b>Laboratory Furnishings</b> VWR Furniture		\$168,325
<i>MA7581600000757</i>			
<i>15179</i>			
<b>KY State Contract</b>	<b>Maintenance Renewal on Phone System (Includes UnifiedCare Comprehensive Uplift)</b> Unified Technologies		\$195,659
<i>MA7581300000894</i>			
<b>Metro Louisville</b>	<b>Cisco Server Memory Upgrade</b> CDWG		\$22,357
<i>Contract #322247</i>			
<i>14536</i>			
<b>Metro Louisville</b>	<b>McAfee ePolicy Orchestrator Renewal</b> CDWG		\$26,072
<b>Contract</b>			
<i>#322247</i>			
<b>Open Market</b>	<b>Temporary Services Request - CONTRACT INCREASE</b> Aerotek	Estimated	\$240,000



<b>Purchase &amp; Delivery Quote</b>	TBD	<b>Open Market Order - 6" &amp; 8" Polyvinyl Chloride Pipe (PVC)</b>	Estimated	\$200,000
		<b>Chlorination Trailer for Construction Inspection</b>		\$27,699
		Kentucky Trailer Sales		
<b>Reimbursement</b>		<b>14338 Story Avenue Main Replacement</b>		\$40,000
		KYTC		
<b>SUM BY BIDS AND AWARDS CATEGORY</b>				<b>\$8,611,037</b>

**Procurement of Professional Services**

15180		<b>Raw Water Feed from Zorn to Crescent Hill Condition 2018</b>		\$394,848
		Echologics LLC, A Mueller Technologies Company		
<b>08-63</b>		<b>Financial Advisor - Assignment to Professional Service Contract 08-63 Bond Issuance</b>		
		<b>Financial Advisor</b>		
		Raymond James	NTE	\$65,000
<b>13-157</b>		<b>Operations Coordinator of the River Ridge Commerce Center &amp; Ft. Knox Water Treatment Plant Pumping &amp; Storage Facilities - 4th &amp; Final CPI Renewal</b>		
		Phoenix Services, LLC	Estimated	\$202,540
<b>16-01</b>		<b>Roof Consulting Services</b>		
		Patrick D. Murphy Co., Inc. Architects	Estimated - Unit Price Contract	\$80,000
<b>16-83</b>		<b>Procurement Programs Modifications &amp; Small Business Program - Minority Business Enterprise Women Business Enterprise Availability Study</b>		
		Griffin & Strong P.C.	Estimated	\$43,900
<i>For Informational Purposes</i>				
<b>17-13</b>		<b>Cost of Service Analysis &amp; Financial Planning and Rate Study - Assignment from Professional Consulting Services - Engineer of Record</b>		
		Hazen and Sawyer	NTE	\$136,252
<b>Professional Service</b>		<b>Strategic Business Plan 2019-2023</b>		
		Raftelis	NTE	\$62,700
<b>Professional Service</b>		<b>Strategic Communications Professional Services</b>		
		Barbara Crow Theobald		\$60,000
<b>SUM BY BIDS AND AWARDS CATEGORY</b>				<b>\$1,045,240</b>

**Procurement of Sole Source Materials and Services**

<b>Metro Louisville</b>		<b>Tree Replacement Agreement</b>		
<i>Louisville Metro Parks</i>		Louisville Metro Parks	Estimated	\$22,500
<b>Sole Source</b>		<b>AWWA Membership Renewal (1/1/18-12/31/18)</b>		
		American Water Works Association (AWWA)		\$21,071
<b>Sole Source</b>		<b>Water Research Foundation 2018 Subscription Renewal</b>		
		Water Research Foundation		\$83,627
<b>SUM BY BIDS AND AWARDS CATEGORY</b>				<b>\$127,198</b>
<b>GRAND TOTAL</b>				<b>\$13,671,416</b>

**Financial Report Given**

Ms. Lynn Pearson summarized the Financial report for December.

Louisville Water's year-end close is underway and progressing well. Financial statements for December and full year 2017 will not be final until the annual audit by our external auditors, Crowe Horwath, is complete. The auditors are scheduled to begin final field work at the end of January, but the ultimate completion date of the audit and the year-end financial statements is uncertain, as it is dependent upon the receipt of the GASB 68 report from the Kentucky Retirement System. This report will provide updated pension liability numbers and other information that we must have in order to finalize the audit and the financial statements.

Ms. Pearson then provided preliminary, unaudited information on water consumption and sales based on data we have reviewed through January 17, 2018.

Total consumption for December of 2.4 billion gallons is 4% under budget and 2.7% less than December 2016. Total consumption for the full year 2017 is 33.4 billion gallons, which is 808 million gallons under budget and 66 million gallons lower than the prior year. December water sales are 2.1% below budget and 1.8% over prior year levels. For the full year 2017, shortfalls in residential, commercial and industrial resulted in overall water sales that are \$2.6 million below budget. Water sales are above prior year levels for the year by \$5.4 million.

On January 5, Moody's Investor Services issued an Annual Comment on Louisville Water. This report is basically an update commentary on the Company as opposed to an actual credit rating action. The report includes an Issuer Profile, Credit Overview and Sector Trends, along with some summarized financial data.

Ms. Pearson reported that the Annual Comment was extremely positive. Moody's states that "Louisville Water has an extremely strong credit position" and that "The financial position of Louisville Water is superlative and is slightly favorable relative to its Aaa rating". Staff is gratified that Moody's Annual Comment recognizes the Company's exemplary financial condition, which is the result of many years of sound financial policies and practices at Louisville Water.

### **Communications and Marketing Report Given**

Ms. Smith summarized the Communications and Marketing report for December.

Louisville Water places a high priority on connecting our product to customers through community outreach and education. Two key components of this initiative are the Louisville pure tap® program and school-based education with Louisville Water's curriculum. Louisville Water had an outstanding performance for these initiatives in 2017.

The Louisville pure tap® program highlights the quality and value of our drinking water and staff makes pure tap available through mobile drinking water units, coolers, water pitchers and compostable cups. In 2017, nearly one million people were at an event where Louisville pure tap® was featured. The communication staff was part of 57 events throughout the service area with the mobile "pure tap to GO" units. These units connect directly to a water source and provide an ongoing supply of drinking water. The Louisville pure tap® program began in 1997 with employees distributing a reusable bottle. The effort has grown to include not only the products but branding at drinking water fountains, a social media campaign and grass roots marketing throughout the service area.

The education effort centers on a curriculum that brings real-world examples on water to the classroom. Louisville Water works closely with content experts to develop curriculum that uses water as the foundation for science, social studies, health, math and literacy experiences. Louisville Water provides educators that visit classrooms and provide relevance to a curriculum with real-world examples. In 2017, Louisville Water educators were at 101 schools in Jefferson and surrounding counties, reaching over 40,000 students. Staff continues to see an increase in visits to Bullitt and Shelby county schools.

Louisville Water began its school-based education program in the 1990s and developed a formal curriculum in 2002. Programming at the WaterWorks Museum is an extension of the school-based efforts. In 2018, staff is focused on developing an education model for community settings.

During early January's extreme winter weather, Louisville Water received lots of media attention around the number of water main breaks and customers with frozen internal plumbing. We were also able to use this occurrence to highlight a few aspects of our operations. There were television stories that explained what happens in the Customer Call Center, how a crew manages the cold on a job site and how employees maintain 24,000 public fire hydrants.

## **Customer Service and Distribution Operations Report Given**

Mr. Vogel summarized the Customer Service and Distribution Operations report for December.

The main break activity was higher than normal for December with 108 breaks. This is approximately 25% higher than last year and the five-year average. For the year however, our main break numbers, at 536, are approximately 12% lower than past periods.

Extremely cold weather moved in to the area at the end of December and continued into January which had a significant impact on our finished water temperature and also our break activity. Louisville Water experienced 194 breaks over a three-week period, peaking at 25 breaks on January 8. Louisville Water employees have done an excellent job managing this activity, along with freezing pipe situations on the customer side, without having to move into emergency operations mode. Responding to this has been a team effort and has included assistance from several areas most notably Meter Services, Communications, Customer Service, Plant Operations, and Engineering.

Louisville Water finished 2017 with the best safety performance in company history. During 2017, there were nine OSHA recordable injuries with only one of these being lost time and four restricted duty. The recordable injury rate has dramatically declined since 2002. Our ratings are now running at a rate that is approximately half of the industry average. These results are attributable to all of our employees and their efforts to maintain a strong focus on safety for both themselves, as well as their fellow employees.

The Call Center operations received 30,531 calls in December with an abandonment rate of 17.4%. The average speed of answer came in at 6:31 m:s for the month and was adversely affected by a few extremely busy days primarily the week after Thanksgiving and the day of the 48" main break. Six temporary new hires finished training and began taking calls on December 11, and four additional new hires started on January 8 and are expected to begin taking calls by the end of January.

Total CSI saw a significant drop in the 4<sup>th</sup> quarter finishing with an index score of 807. All components were down with the exceptions of the customer service component which was up slightly. Staff is working with our survey administrator to assess the drivers for this decline. The Serviced CSI, on the other hand, finished unchanged from the third quarter with an index score of 882. The individual components were generally mixed with the price/value component up 15 index points.

Estimations for the year were approximately 25% lower than last year and the five-year average, and billing accuracy finished the year at an all-time high of 99.94%. Cold weather and the holidays hindered our ability to perform disconnections for non-pay and plug orders. A new billing supervisor was hired and is scheduled to start later this month.

Each year the Identity Theft Prevention Procedure is reviewed to determine if any changes need to be made as a result of our customer experience during the previous year. This ensures that as new tactics are developed by those with criminal intentions, the procedure can be updated accordingly. The review was performed in December/January and resulted in only minor changes to the procedure.

The internal Advanced Metering Infrastructure (AMI) team is finalizing its evaluations of the proposals submitted in response to the Request for Proposal for implementation of the project. The next step will be negotiating with the successful vendor before we bring it to the Board for review. Staff will likely bring this project to the Board in February or March.

## **Engineering and Production Operation Report Given**

Mr. Kraus summarized the Engineering and Production Operations report for December.

Year-end capital program data was not available due to the December books not being closed.

The amount of water produced and delivered to the system in December 2017 was 110 MGD, which was 7.3% higher than December 2016 and 6.5% higher than the December five-year average. For year to date, the amount of water delivered to the system is 1.7% higher than 2016, and 0.9% lower than five-year average.

There was a total of five chemical spills reported by ORSANCO during the month of December: four upstream and one downstream of Louisville Water's Zorn intake. 467,000 gallons of urea ammonium nitrate were spilled on December 19, 2017 when a barge collapsed near Cincinnati. The spill directly impacted Louisville Water's treatment strategy, but there were no negative impacts to water quality related to this incident.

Water Quality staff monitored 1,220 water quality parameters of a required 1,014 per federal and state regulatory requirements with zero violations. Staff collected 280 compliance distribution samples. There were zero total coliform and zero *E-Coli* results. All internal water quality goals were met. Staff also collected 170 main break samples on 84 repairs in the month, of which 10 localized boil water advisories were issued due to field conditions and one was issued due to water quality monitoring results. There was a total of 20 water quality customer complaints, the same as the five-year average.

### **Human Resources Report Given**

Mr. Terrence Spence and Mr. Adam Carter provided a summary of recent and current activity between the Louisville Water's Labor Management and Local Union 1683 of the American Federation of State, County and Municipal Employees, AFL-CIO (the Union).

As of this meeting, there are four (4) active grievances; all are in various stages of the contractual process for resolution. One (1) grievance has been tabled (deemed inactive) per the grievant request pending further review.

The Company and Union leadership agreed to allow for a re-vote (if a motion is made by a union member) on a proposal to improve emergency call-out response by union personnel. The proposal was previously voted down by the union body November 22, 2017.

The Company posted four (4) regular full-time classified positions and four (4) classified relief positions for union employee's internal bidding process.

The Company hired ten (10) regular full-time General Laborers on January 8, 2018.

### **Information Technology Report Given**

Mr. Tom Luckett summarized the Information Technology Report for December.

Staff continues to build new environments for the Oracle Work & Asset Management (WAM) Implementation. Testing started the week of January 8 and staff is working with vendors to prepare for a cloud-based mobile test environment.

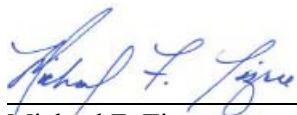
A new Database Administrator (DBA) started on January 8, 2018. We are working to fill other IT vacancies with full-time or contract resources. Legal assisted with the H1b immigration status for this applicant; LWC's first sponsorship.

Staff has started working with our Intranet partner (Serverside) to host our Intranet in their cloud environment.

Staff is also working on a RFP for support of Louisville Water's Oracle software suite. This includes, Financials (EBS), Customer Care & Billing (CC&B), Work & Asset Management (WAM), Service Oriented Architecture (SOA), and PeopleSoft HR & Payroll. The RFP should be released by the end of January.

There being no further business for the Board, Ms. Wayne moved to adjourn at 2:00 p.m., seconded by Dr. Kerrick and the motion unanimously carried.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Michael F. Tighe", is written over a horizontal line.

Michael F. Tighe  
Vice President, Compliance, General Counsel  
and Corporate Secretary