Electronically Filed in TPUC Docket Room on March 1, 2019 at 4:09 p.m.

19-00031

TENNESSEE-AMERICAN WATER COMPANY, INC

CASE NO. 19-x

DIRECT TESTIMONY

OF

BRENT E O'NEILL, P.E.

ON

CHANGES TO THE QUALIFIED INFRASTRUCTURE INVESTMENT PROGRAM RIDER, THE ECONOMIC DEVELOPMENT INVESTMENT RIDERS, AND THE SAFETY AND ENVIRONMENTAL COMPLIANCE RIDER AND IN SUPPORT OF THE CALCULATION OF THE 2018 CAPITAL RIDERS RECONCILIATION

SPONSORING PETITIONER'S EXHIBIT:

PETITIONER'S EXHIBIT 2018 SCEP RESULTS - BEO

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Brent E. O'Neill and my business address is 2300 Richmond Road, Lexington, Kentucky 40502.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the American Water Works Service Company ("Service Company") as Director of Engineering for Tennessee American Water Company ("TAWC", or "Company") and Kentucky American Water Company ("KAWC").

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY BEFORE THIS OR ANY OTHER COMMISSION?

A. Yes. I provided both written testimony and oral testimony before the Tennessee Public Utility Commission ("TPUC" or "Commission") in TPUC Docket Nos. 14-00121, 15-00029, 15-00111, 16-00022, 16-00126, and 17-00020, and I've provided written testimony in TPUC Docket Nos. 17-00124 and 18-00022. I have also provided both written and oral testimony in several different proceedings before the Kentucky Public Service Commission ("PSC"), including rate cases and applications for a Certificate of Public Convenience and Necessity.

Q. PLEASE STATE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I received a B.S. degree in Civil Engineering from the University of Illinois in Urbana, Illinois in 1991. I completed a Masters of Business Administration from Eastern Illinois University in Charleston, Illinois in 2002. I am a registered Professional Engineer in the State of Tennessee, Commonwealth of Kentucky, State of Illinois and State of Iowa.

I have been employed by American Water Works Company ("AWW") or one of its subsidiaries since 1996. I began as a Staff Engineer for Northern Illinois Water Company ("NIWC") until 1999 when I was promoted to Engineering Manager for Illinois American Water Company ("ILAWC"). In July 2004, I accepted the position of Network Operations Manager for the Champaign County District of ILAWC. In June 2005, I accepted the position of Senior Asset Manager with AWW and worked in Reading, England in a joint project with Thames Water. In 2006, I became the ILAWC Project Manager for the construction of a new 15 MGD ground water softening treatment plant, wells, and transmission main in Champaign, Illinois. In March 2008, I became the Engineering Manager Capital Delivery with ILAWC with responsibilities for the delivery of capital projects for the Central and Southern portions Illinois. In April 2013, I accepted my current position as Director of Engineering for Tennessee American Water Company and Kentucky American Water Company with the Service Company. I am an active member of the American Water Works Association (AWWA) and American Society of Civil Engineers (ASCE).

Q. WHAT ARE YOUR DUTIES AS DIRECTOR OF ENGINEERING?

A. I am responsible for the coordination of the Engineering Departments for both TAWC and KAWC, which includes the planning, development, and implementation of all aspects of construction projects. This includes working with all new main extensions and developers, replacement mains, water treatment plant upgrades, new construction and network facilities improvements. I coordinate technical assistance to all other company departments as needed and oversee the capital budget development and implementation.

I report to the Presidents of TAWC and KAWC. I am located in Kentucky, but work closely with the staff in Tennessee.

Q. WHAT TOPICS WILL YOUR TESTIMONY ADDRESS?

A. I will discuss the process for determining TAWC's capital investment plan, the oversight for expenditures and changes to the plan, the level of capital expenditures for 2018, and variances from the projected amounts in Docket No. 17-00124.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes I am. I am sponsoring the following exhibit:

Petitioner's Exhibit – 2018 SCEP Results - BEO

I will discuss this exhibit in further detail in my testimony below.

Q. WERE THE PETITIONER'S EXHIBITS LISTED ABOVE PREPARED BY YOU OR UNDER YOUR DIRECTION AND SUPERVISION?

A. Yes.

Q. WHAT WERE THE SOURCES OF THE DATA USED TO PREPARE THE PETITIONER'S EXHIBITS LISTED ABOVE?

A. The data used to prepare the exhibits was acquired from the books of account and business records of Tennessee American, the officers and associates of Tennessee American with knowledge of the facts based on their job responsibilities and activities, and other internal sources which I examined in the course of my investigation of the matters addressed in this testimony.

Q. CAN YOU DESCRIBE THE PROCESS FOR DETERMINING THE CAPITAL INVESTMENT PLAN?

A. Yes. The Company's capital investment plan can be divided into two distinct areas: 1) normal recurring construction (RPs), and 2) major projects identified as investment projects (IPs). Normal recurring construction includes water main installation for new development, smaller main projects for reinforcement and replacement, service line and meter setting installation, meter purchases and the purchase of tools, furniture, equipment and vehicles.

Recurring construction costs are trended from historical and forecasted data. Estimates are prepared for the installation of new mains, service lines, meter settings and the purchase of new meters based on preliminary plats from the appropriate governmental planning agencies and consultations with developers, homebuilders, and engineering firms.

Purchase of tools, furniture, equipment, and vehicles are based on needs. Each item is reviewed independently and an itemized list of expenditures is prepared. Estimates are made based on current year pricing.

The major project needs are developed from the Comprehensive Planning Study that identifies major improvements needed to ensure safe, dependable and reliable

operations of the facilities and allows the facilities to meet the regulatory requirements for the production and distribution of drinking water. The projects identified within the study are prioritized for importance and are placed in the budgets based on the available capital remaining after the determination of the needed capital for the recurring construction needs described above.

Q. CAN YOU DESCRIBE HOW THE CONSTRUCTION BUDGET IS MONITORED DURNG THE YEAR?

A. Since 2003, the entire American Water system has used a process for the development and review of capital expenditures that has incorporated industry best practices. TAWC, like its sister companies, has benefitted from that process. The process includes a regional Capital Investment Management Committee ("CIMC") to ensure capital expenditure plans meet the strategic intent of the business, which includes the introduction of new technologies that result in increased efficiencies. In turn, this process ensures that capital expenditure plans are integrated with operating expense plans, and provides more effective controls on budgets and individual capital projects.

The CIMC includes the TAWC President, TAWC Director of Operations, TAWC Engineering Manager, TAWC Engineering Project Manager, TAWC Financial Analyst, and TAWC Operations Specialist. The CIMC meets monthly. The CIMC receives capital expenditure plans from project managers and evaluates them as required by the process. Once budgets are approved, the CIMC meets monthly to review capital expenditures compared to budgeted levels. Discussions are held on variances to budgets that include the reason for the variance and suggestions to bring the budget lines back in line with the approved budget.

If changes in the budgets are required due to changes in priorities or unexpected expenditures, then the CIMC reviews the request for changes and approves the movement of available capital from other budget lines to offset the changes in the capital spend. All projects, including normal recurring items, have an identified project manager responsible for processing the stages of the project. The focus of the CIMC, along with the monthly meetings, has allowed TAWC to be more flexible with changes that inevitably occur during the course of implementation of projects while providing oversight on capital expenditures.

As an added level of coordination, a Functional Sign-Off ("FSO") Committee meets monthly to sign-off on projects and review spending. This committee includes the TAWC Director of Operations, the TAWC Engineering Manager, TAWC Engineering Project Manager, TAWC Operations Specialist and the appropriate Distribution and Operations supervisors and project managers. The purpose of the committee is to review projects that are moving forward in the next step of approval, or that require a change. This allows the project manager and operational area supervisors to communicate about the project on a monthly basis and help coordinate projects from initial development through in-service as compared to the approved budget and spending plan.

Both of these committees allow a continuous review of capital expenditures as unexpected projects arise or the need to adjust projects to offset delays in other projects. The use of the CIMC and FSO process allows TAWC to immediately address an increase or decrease in projected spending in each line and make appropriate adjustments to maintain the overall capital spend.

Q. HOW DOES TAWC HIRE CONTRACTORS?

A. All significant construction work done by independent contractors and significant purchases are completed pursuant to a bid solicitation process. We maintain a list of qualified bidders and we believe that our construction costs are very reasonable. American Water Works (AWW) takes competitive bids for material and supplies that are either manufactured or distributed regionally and nationally through its centralized procurement group. We have the advantage of being able to purchase these materials and supplies on an as-needed basis at favorable prices. In the past ten years, AWW also has undertaken a number of procurement initiatives for services and materials to reduce costs through either streamlined selection or utilization of large volume purchasing power. Some of the initiatives that have directly influenced capital expenditures include the use of master services agreements with pre-qualified engineering consultants, national vehicle fleet procurement, and national preferred vendor identification.

Q. ARE YOU FAMILIAR WITH THE FACILITIES AND ENGINEERING OPERATIONS OF THE COMPANY IN EACH OF ITS SERVICE AREAS?

A. Yes.

Q. WHAT CONTROLS ARE IN PLACE TO REVIEW THE PROGRESS OF A PROJECT?

A. The CIMC and FSO meetings described above are used to oversee the progress of projects from inception to completion. Along with the review of the capital expenditures, the committee also reviews the requirements of an investment project and ensure that the projects meet the business need for expenditure and usefulness. The process includes five stages of project review: 1) a Preliminary Need Identification defining the project at an early stage; 2) a Project Implementation Proposal that confirms all aspects of the

project are in a position to begin work; 3) Project Change Requests, if needed (if the cost changes more than 5% or $100,000); 4) a Post Project Review; and 5) Asset Management. TAWC personnel handle all of the stages, with oversight by the CIMC and FSO Committees.

Q. WHAT CONTROLS ARE IN PLACE TO MAKE SURE PROPOSED PROJECTS ARE IN THE PUBLIC INTEREST?

A. Through the budgeting and planning process a broad and comprehensive review of facility needs is conducted to establish a general guide for needed improvements over a short-term horizon. These improvements are prioritized by TAWC to allow it to: provide safe, adequate, and reliable service to its customers to meet their domestic, commercial, and industrial needs; provide flows adequate for fire protection; satisfy all regulatory requirements; and enhance economic growth. The plan provides a general scope of each project along with a preliminary design. The criteria for evaluating the various system improvements are engineering requirements; consideration of national, state, and local trends; environmental impact evaluations; and water resource management.

The engineering criteria used are accepted engineering standards and practices that provide adequate capacity and appropriate levels of reliability to satisfy residential, commercial, industrial, and public authority needs, and provide flows for fire protection. The criteria are developed from regulations, professional standards, and company engineering policies and procedures.

Q. OVERALL, HOW DID TAWC DO WITH REGARD TO ITS CONSTRUCTION BUDGET COMPARED TO ACTUAL EXPENDITURES?

A. For 2018, TAWC ended the year with a net capital expenditures of $19,921,149 compared to an approved budget of $19,433,579 resulting in a total capital expenditure spend of $487,570 or 2.51% over the originally approved budget. With regard to the total Rider net capital expenditure, TAWC ended the year with a net Rider capital expenditure of $13,546,799 compared to an anticipated rider spend of $13,053,960 resulting in a rider spend of $492,839 or 3.78% over the originally anticipated Rider plan.

Q. HOW DID TAWC PERFORM WITH REGARD TO ITS ACTUAL EXPENDITURES COMPARED TO THE BUDGETED CAPITAL EXPENDITURES FOR THE QIIP RIDER AND PROVIDE DETAIL OF ANY VARIANCES?

B. The 2018 QIIP Rider expected spend was projected at $9,783,770 with an actual spend of $10,464,716 resulting in a total QIIP expenditure spend of $680,946 or 6.96% over the originally QIIP anticipated budget.

Q. WERE THERE ANY CHANGES IN THE PROJECTED WORK THAT WAS ORGINALLY BUDGETED FOR THE QIIP RIDER?

A. Yes. The Tennessee River Transmission Main Crossing Project under the Qualified Infrastructure Investment Program was not placed in-service when originally anticipated in 2018 due to delays caused by weather and the project cost was higher than originally anticipated.

Q. WHAT WAS THE CHANGE IN PROJECT COSTS?

A. TAWC had originally budgeted $2,414,209 for the Tennessee River Transmission Main Crossing. In early 2018, upon incorporation of the final geotechnical information and the addition of a construction technique to maintain the Chattanooga Riverwalk corridor

during construction, the anticipated project cost was estimated at $3.33 million. Bids were received from three contractors during early 2018 and the low bidder for the work provide an anticipated cost of $3.27 million.

Q. HOW DID TAWC PROPOSE TO ADDRESS THE ADDITIONAL COST OF THE TENNESSEE RIVER PROJECT?

A. In order to offset the additional cost of the Tennessee River Transmission Main Project it was determined to delay the rehabilitation of Aldrich Unit 6 that was originally planned for the Capitalized Tank Rehabilitation/ Painting – Line R. The delay in the Aldrich Unit 6 rehabilitation allowed for a reduction of approximately $0.9 million to offset the expected $0.9 million increase of the Tennessee River Transmission Project.

Q. WAS THE TENNESSEE RIVER TRANSMISSION MAIN PROJECT PLACED IN SERVICE AS EXPECTED IN 2018?

A. No. TAWC anticipated that the Tennessee River Transmission Main Project would be placed in service during 2018. As expected , TAWC received the TVA 26A Permit during the first part of 2018 and construction commenced as anticipated in time for the expected construction duration of approximately 6 months. Unfortunately, the Tennessee River Valley experienced its wettest year on record for the Tennessee Valley with 67.01 inches of rain, approximately 18 inches more than the 20-year average. As a result of the wet weather, TVA significantly increased releases from its dams to ensure flood prevention throughout the river systems it manages. This resulted in extended periods of increased river flow and water levels. The increased flow and water level impacted the safety of divers working within the river to place the transmission main. Work was suspended for extended periods as the amount of water being released by the dam

upstream of the project exceed the maximum 50,000 cubic feet per second (cfs) safety threshold. As a result of the lost time caused by high river flows, the project was delayed approximately 6 weeks and is expected to be completed during the first part of 2019, weather depending.

Q. DID THE DELAY CAUSE A CHANGE IN THE ANTICIPATED SPEND FOR THE TENNESSEE RIVER TRANSMISSION MAIN PROJECT?

A. No. A majority of the project construction was completed during 2018 resulting in the capital spend for the project to be as expected. The main impact on the Tennessee River Transmission Main Project not being placed in service during December 2018, is to the cumulative plant additions, and is reflected in **Petitioner's Exhibit Capital Riders Reconciliation** attached to Ms. Elaine Chambers testimony.

Q. WHAT CAUSED THE LINE C MAIN – UNSCHEDULED TO HAVE A HIGHER THAN EXPECTED SPEND?

A. Line C Main – Unscheduled main repairs experienced a significant increase in January 2018 due to extremely cold weather. The Company experienced 96 main breaks, compared to a 10 year average of 61 main breaks during January. Paving restoration specifications changes from the City of Chattanooga during the last of half of 2018 had a significant impact on the cost of projects carried out for unscheduled main repairs. The new ordinance required an increase are of pavement restoration that was not planned with the original budget was developed in 2017.

Q. HOW DID TAWC DO WITH REGARD TO ITS ACTUAL EXPENDITURES COMPARED TO THE BUDGETED CAPITAL EXPENDITURES FOR THE EDI RIDER AND PROVIDE DETAIL OF ANY VARIANCES?

A. The EDI expected spend was projected at $1,096,000 with an actual spend of $663,183 or 39.5% under the projected Budget Capital Expenditures. The under spend was mostly due a delay in the construction of the 6,000 lineal foot of 12-inch main extension along Highway 283 in Whitwell. This project will allow the Company to improve redundancy and system hydraulics between eastern and western portions of the Whitwell Service Area. It was ranked as a high priority in the Whitwell Comprehensive Planning Study ("CPS"). The project was delayed due to ongoing discussion with the Tennessee Department of Transportation concerning the techniques and methods to cross the Sequatchie River for a portion of the project. The initial design of utilizing the existing bridge structure to assist in crossing the Sequatchie River was denied resulting in a need to redesign the crossing portion of the project and obtain the necessary permitting. It is expected that the project will commence during 2019.

Q. HOW DID TAWC PERFORM WITH REGARD TO ITS ACTUAL EXPENDITURES COMPARED TO THE BUDGETED CAPITAL EXPENDITURES FOR THE SEC RIDER AND PROVIDE DETAIL OF ANY VARIANCES?

A. The original SEC expected spend was projected at $2,174,190 with an actual spend of $2,418,900 or 11.3% over the originally projected amount. The major variance in the SEC Rider was caused by managing the delay in spend for the Chlorine Gas Conversion project that is anticipated to be placed in service during 2019. TAWC was able to offset

some of the delay in the expected start of the Chlorine Gas Conversion project with the initiation of the final four Citico Filter Underdrains replacement projects that will be completed in 2019.

Q. CAN YOU PROVIDE SPECIFIC INFORMATION ABOUT THE ACTUAL CAPITAL EXPENDITURES COMPARED TO THE BUDGETED CAPITAL EXPENDITURES?

A. Yes. I have attached to my testimony **Petitioner's Exhibit 2018 SCEP Results – BEO**. This exhibit provides a comparison of the 2018 Strategic Capital Expenditures Plan with Actual Capital Expenditures by recurring project lines and investment project lines.

Q. WHY ARE CERTAIN PROJECTS SOMETIMES DELAYED AND CHANGES OCCUR IN THE ACTUAL CAPITAL EXPENDITURES COMPARED TO THE BUDGETED EXPENDITURES?

A. During any given year, unexpected changes in priorities may occur due to outside influences, or recognition of unfavorable trends, that are occurring and affect the infrastructure or ability to serve the customer. The majority of such unexpected changes are caused by conflicts between the company's infrastructure and outside agencies' projects or changes that occur in the community that effect the schedule or scope of a planned project. In both of these cases, a previously unbudgeted new priority project is initiated to address the need or an existing project effort is increased or decreased. Since these changes were not identified during the original budgeting process, the need to offset the new efforts expected cost is required to ensure that the overall company budget is maintained. As a result, projects that were originally identified within the budget are

changed or delayed to make room for the new, unexpected projects or a change in an existing project.

Q. WHAT IS THE PROCESS FOR APPROVING THESE CHANGES?

A. Throughout the year, TAWC actively manages each budget line to ensure that the overall spending is consistent with the approved budget levels. The management of the budget lines is carried out during monthly Capital Investment Management Committee ("CIMC") meetings that compare the current capital expenditures to the budged levels. If changes in the budgets are required due to changes in priorities or unexpected changes in projects, the committee reviews the need for the changes and approves or disapproves, as the case may be, the movement of available capital from other budget lines to offset the changes in capital spend and maintain the overall projected spend for the year.

Q. CAN YOU PROVIDE THE OVERALL AMOUNT OF IN SERVICE PLANT FOR 2018?

A. Yes. TAWC was able to ensure that capital spending on projects led to those projects being implemented and placed in service. TAWC utilized the FSO process to manage projects and make sure that approved capital spending was utilized on projects that would be placed in service in a timely manner. With regard to the Capital Recover Riders and the projected level of expenditures compared to those projects that were implemented and placed in service, the overall variance with projects placed in service compared with the projected spend for all three riders was 2.25%, matching the capital spend variance previously discussed. In sum, this means that TAWC was able to place in service the projects that were part of the capital spending for 2018. This is the cumulative plant

additions, and is reflected in **Petitioner's Exhibit Capital Riders Reconciliation—**EKC attached to Ms. Elaine Chambers testimony.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

STATE OF KENTUCKY)
)
COUNTY OF FAYETTE)

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Brent E. O'Neill, P.E., being by me first duly sworn deposed and said that:

He is appearing as a witness on behalf of Tennessee-American Water Company before the Tennessee Public Utility Commission, and if present before the Commission and duly sworn, his testimony would be as set forth in his pre-filed testimony in this matter.

Brent E. O'Neill, P.E.

Sworn to and subscribed before me
this 28th day of February, 2019.

Notary Public

My Commission Expires: 7/25/2020

CAPITAL EXPENDITURE PLAN
Actual to Budget
Tennessee 2018
Units = $

Project Code	Brief Description of Proposed Expenditures	Rider	Year to Date Actual (4)	Year to Date Original Budget (3)	Year to Date Original Variance (4-3)
DV	Projects Funded by Others (Contrib. /Adv./ Refunds)	None	1,327,350	1,000,000	327,350
A	Mains - New	EDI	582,798	963,000	(380,202)
B	Mains - Replaced / Restored	QIIP	963,004	1,725,000	(761,996)
C	Mains - Unscheduled	QIIP	1,823,140	1,029,000	794,140
D	Mains - Relocated	QIIP	331,468	110,000	221,468
E	Hydrants, Valves, and Manholes - New	EDI	80,385	133,000	(52,615)
F	Hydrants, Valves, and Manholes - Replaced	QIIP	179,934	422,000	(242,066)
G	Services and Laterals - New	-	1,074,933	993,000	81,933
H	Services and Laterals - Replaced	QIIP	458,271	630,250	(171,979)
I	Meters - New	-	268,488	237,700	30,788
J	Meters - Replaced	QIIP	2,751,215	2,255,940	495,275
K1	ITS Equipment and Systems	-	210,859	191,851	19,008
K3	ITS CS Projects	-	1,958,826	1,380,871	577,955
L	SCADA Equipment and Systems	SEC	157,058	160,000	(2,942)
M	Security Equipment and Systems	SEC	163,857	150,000	13,857
N	Offices and Operations Centers	-	91,527	15,000	76,527
O	Vehicles	-	749,699	619,000	130,699
P	Tools and Equipment	-	85,978	160,000	(74,022)
Q	Process Plant Facilities and Equipment	SEC	1,719,977	890,000	829,977
R	Capitalized Tank Rehabilitation / Painting	QIIP	62,589	1,000,000	(937,411)
S	Engineering Studies		(191,548)	50,000	(241,548)
	TOTAL RECURRING PROJECTS DV - S		**14,849,808**	**14,115,612**	**734,196**
	TOTAL RECURRING PROJECTS A - S		**13,522,458**	**13,115,612**	**406,846**
I26-020034	Tennessee River Crossing	QIIP	3,711,243	2,414,209	1,297,034
I26-020039	Repl Basin 1 & Plate Settlers	QIIP	170,146	2,322,197	(2,152,051)
I26-020040	Chlorine Gas Conversion	SEC	380,825	974,190	(593,365)
I26-020045	Remove Filter Bldg 3	QIIP	183,852	0	183,852
I26-020046	New Field Services Facility		0	197,371	(197,371)
I26-020050	New Operations Facility - Land Purchase, Chattanooga		1,669,167	0	1,669,167
I26-050002	Facility Upgrades @ Whitwell WTP	SEC	(146,103)	0	(146,103)
I26-050004	Replace 0.1 MG Storage Tank @ Whitwell	SEC	143,286	0	143,286
I26-000002	Post Acquisition BD Capex	-	0	0	0
I26-050050	Whitwell Operation Center	-	251,858	0	251,858
	TOTAL INVESTMENT PROJECTS		**6,364,274**	**5,907,967**	**456,307**
	Indirect Overhead Clearing Accounts Charges		(57,166)	0	(57,166)
	TOTAL GROSS		**21,156,916**	**20,023,579**	**1,133,337**
	Contributions		(645,447)	(240,000)	(405,447)
	Advances		(812,220)	(700,000)	(112,220)
	Refunds		221,900	350,000	(128,100)
	Net Advances, Refunds, and Contributions		**(1,235,767)**	**(590,000)**	**(645,767)**
	Net US GAAP		**19,921,149**	**19,433,579**	**487,570**