PETITIONER'S EXHIBIT BEO-1

TENNESSEE-AMERICAN WATER COMPANY, INC

DOCKET NO. 16-_____

DIRECT TESTIMONY

OF

BRENT E. O'NEILL, P.E.

ON

CHANGES TO THE QUALIFIED INFRASTRUCTURE IMPROVEMENT PROGRAM RIDER, ECONOMIC DEVELOPMENT INVESTMENT RIDER AND SAFETY AND ENVIRONMENTAL COMPLIANCE RIDER

SPONSORING PETITIONER'S EXHIBITS

PETITIONER'S EXHIBIT 2017 SCEP – BEO
PETITIONER'S EXHIBIT 2017 EDI RIDER LETTERS – 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 have previously provided written and oral testimony before the Tennessee Regulatory Authority ("TRA" or "Authority) in the past. I have also provided written testimony before the Kentucky Public Service Commission.

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 ("AW") or one of its subsidiaries since 1996. I began as a Staff Engineer for Northern Illinois Water Company ("NIWC"), which was a subsidiary of National Enterprise, Inc. until it was acquired by AW in 1999. After this acquisition, 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 of 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 of 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 TAWC staff in Tennessee.

Q. WHAT TOPICS WILL YOUR TESTIMONY ADDRESS?

A. I will present the planned investment for the Qualified Infrastructure Investment Program Rider ("QIIP"), the Economic Development Investment ("EDI") Rider and the Safety and Environmental Compliance ("SEC") Rider for 2017.

Q. PLEASE DESCRIBE TAWC CAPITAL INVESTMENT PLAN FOR THE FORECAST PERIOD?

A. The Company's capital investment plan can be divided into two distinct areas: 1) Recurring Projects (RP) and 2) Major Projects identified as investment projects (IP). Typically, Major Projects are those having a Company investment of $250,000 or greater. A copy of the 2017 Strategic Capital Expenditures Plan is attached to my testimony as **Petitioner's Exhibit 2017 SCEP – BEO.**

Q. HOW IS THE CAPITAL INVESTMENT PLAN DEVELOPED?

A. Specific capital planning needs are addressed in both the short term (one year) and longer term (five years). Projects are prioritized using objective criteria that validate the need for a project and assess the risk of not doing the project. A key component of this planning technique is that it is flexible and can be adjusted as needed to address new needs, such as unplanned equipment failures, large or sudden growth of a service area, or new regulatory requirements. TAWC's Engineering Department develops a proposed capital budget with input by Operations Supervisors and Project Managers and then shares the plan with TAWC President and the TAWC Director of Operations for their review and approval. The proposed capital budget is also shared with the Service Company for review of the reasonableness of the projects proposed and their forecasted costs. Although the Service Company may make suggestions with respect to that budget,

TAWC ultimately determines the Capital Investment Plan and approves the plan. This process is the basis for the capital expenditures reflected in the Company's Investment Plan.

Q. PLEASE DESCRIBE THE RECURRING PROJECTS THAT ARE INCLUDED WITHIN THE COMPANY'S CAPITAL INVESTMENT PLAN AS IT RELATES TO THE QIIP, EDI AND SEC PROGRAMS?

A. The Recurring Projects that are included within the Company's Capital Plan that are related to the riders includes smaller main projects for reinforcement and replacement, replacement of hydrants and valves, service line and meter setting replacements, security improvements, plant control improvements, projects to replace and maintain treatment, and new mains to assist with economic development.

Q. PLEASE DESCRIBE THE FACTORS USED IN THE PREPARATION OF THE FORCAST PERIOD AS IT RELATES TO THE RECURRING PROJECTS THAT ARE INCLUDED WITHIN THE COMPANY'S CAPITAL INVESTMENT PLAN?

A. TAWC uses engineering criteria based on accepted engineering standards and practices to determine the amount of work needed on the distribution system or the treatment facilities that provide adequate capacity and appropriate levels of reliability. The identified work will enable TAWC to provide safe, adequate and reliable service to its Customers to meet their domestic, commercial and industrial needs; provide flows adequate for fire protection; and satisfy all regulatory and safety requirements. The criteria for evaluating the need for the recurring projects are: engineering requirements; consideration of national, state and local trends; environmental impact evaluations; and

water resource management. The criteria are developed from regulations, professional standards and TAWC engineering policies and procedures.

Main replacement projects or new main installations are designed to meet two conditions of service. They are expected to deliver projected peak hour Customer demands while maintaining system pressures at 25 psi or greater in accordance with the Tennessee Regulatory Authority (TRA) pressure requirements (Chapter 1220-4-3.41) and to provide adequate fire flow identified by the Insurance Services Office (ISO) while maintaining distribution system pressure at 20 psi or greater.

TAWC utilizes historical and forecasted data to develop the program cost based on the determined level of work for each RP line.

Q. PLEASE DESCRIBE HOW INVESTMENT PROJECTS ARE INCLUDED WITHIN THE COMPANY'S CAPITAL INVESTMENT PLAN?

A. Investment Projects (IP) are typically projects greater than $250,000 that the Company describes as Major Projects. These projects represent investments that are needed to meet environmental or water quality regulations, infrastructure capacity expansion or rehabilitation and to ensure a safe working environment. These projects allow the Company to ensure that they are able to meet the service demands of the community, ensure regulatory compliance and ensure the reduction of asset failure.

This determination of including an IP within the investment plan starts with a process that begins with the development of the anticipated demand projections of the system, the identification of improvements needed to meet those demands and a review of the current facilities located in the system. This process is documented through the Comprehensive Planning Study (CPS) and is the basis for the development of IPs. TAWC utilizes this

study along with review of changes in the needs of the system that may have occurred since the development of the CPS and develops the schedule of projects within the Capital Investment Plan. TAWC plans these to bring about the correct prioritization and distribution of capital spending for the various needs of the business.

Q. PLEASE DESCRIBE THE COMPANY'S RECENT PERFORMANCE FOR ITS CAPITAL INVESTMENT PLAN DURING THE USE OF QIIP, EDI AND SEC PROGRAMS?

A. Tennessee American is projecting to deliver its capital investment plan during the period of 2014 to 2016 by slightly exceeding the budget by 3.14% on a cumulative basis over the period. Capital investment budgets, actual capital investment deliveries, and variances to budgets by year are shown in the table below.

TAWC Net Capital Investment Budget vs Actual Capex for 2014 through 2016

Year	Budget	Actual	Variance	
2014	$18,337,559	$18,205,874	($131,685)	-0.72%
2015	$19,277,628	$20,663,409	$1,385,781	7.19%
2016*	$14,972,290	$15,367,460	$395,170	2.64%
Cumulative	$52,587,477	$54,236,743	$1,649,266	3.14%

*Current Year End Projection as of September 2016

TAWC strives to minimize deviation in the capital investment plan through an active review of actual spend compared to budget spend. Through this management, TAWC ensures that the projects delivered follows closely budgeted capital investment plan.

Q. CAN YOU DESCRIBE HOW THE CAPITAL INVESTMENT PLAN 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 investment plans meet the strategic intent of the business. In turn, this ensures that capital investment 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 Operations 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 approves 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.

QUALIFIED INFRASTRUCTURE INVESTMENT PROGRAM

Q. WHAT IS THE QUALIFIED INTRASTRUCTURE INVESTMENT PROGRAM?

A. A substantial portion of the Tennessee American Water's distribution infrastructure is between 50 and 100 years old and is nearing the end of its useful service life. The pace of infrastructure replacement is a continuing concern for TAWC. The anticipated level of distribution infrastructure improvement projects is increasing at a rapid pace, in part due to the advanced age of the Company's water facilities. A Qualified Infrastructure Investment Program (QIIP) more accurately reflects the ongoing investments and improvements that are made in the water distribution and production systems versus the less frequent but larger step increases that would result from base rate increase without QIIP. The timely recovery of the fixed costs of infrastructure replacement through the QIIP provides an incentive for increased and continued levels of capital infusion. This results in a stronger and more reliable water distribution and production system for both current and future Customers. The Company is focusing its replacement program on small diameter mains and mains that have shown a chronic level of breaks. These types of mains are responsible for the majority of the distribution system leaks and failures. The need to replace service lines, meters, hydrants, treatment structures, pumps and equipment is critical to maintaining public safety and imperative to maintaining a reliable system.

Q. WHAT ARE THE BUDGET LINES THAT ARE INCLUDED UNDER THE QUALIFIED INFRASTRUCTURE INVESTMENT PROGRAM FOR 2016?

A. The budget lines that will be included in the QIIP will be Line B - Mains Replaced, Line C - Mains Unscheduled, Line D - Mains Relocated, Line F - Hydrants and Valves Replaced, Line H - Services Replaced, Line J - Meters Replaced, and Line R - Capitalized Tank Rehabilitation/ Painting. These budget lines represent investment to

replace aging infrastructure that is non-revenue producing. This means infrastructure that does not produce additional revenue (no new customers). Examples of infrastructure that would produce additional revenue are main extensions for new development and new services or new meters for new customers. In addition, TAWC has a large capital investment project that is a result of ensuring system reliability that will come into service during 2017.

Q. WHAT WORK IS ASSOCIATED WITH MAINS REPLACED - LINE B AND WHY DOES IT FALL UNDER THE QIIP?

A. This investment plan line includes the scheduled replacement, renewal or improvement of existing water mains including valves and other appurtenances that are necessary to perform the work. Work under this line is the planned and scheduled proactive replacement of water main that has been determined to have reached its useful life or is causing service problems to the adjacent area serviced by the main. Water main replaced under Main Replaced – Line B will result in a stronger and more reliable water distribution system. By replacing the aged water main infrastructure on an accelerated basis and on a proactive rather than reactive basis, the distribution system will provide direct Customer benefits in the form of improved and sustained water quality, improved fire protection, fewer service disruptions and lower operating and maintenance costs over time. The company believes that this type of replacement work is appropriate and should be included in the QIIP.

Q. WHAT IS THE PROPOSED REPLACEMENT SCHEDULE FOR WATER MAIN REPLACEMENTS ASSOCIATED WITH LINE B?

A. TAWC plans to spend approximately $2,620,255 to replace various size water mains within fifteen (15) projects during 2017. TAWC will replace approximately 25,540 feet of main during the period. These projects are not only important in addressing the aging infrastructure needs of the community, but also allow for the Company to take a leadership role in reducing its carbon footprint. By replacing infrastructure that is leaking or has a high potential for failure, we are able to reduce the amount of water that is produced and reduce the amount of electricity that we use. The overall result is a reduction in the amount of fossil fuel generation required for our facilities.

Q. WHAT ARE THE PROPOSED PROJECTS THAT ARE INCLUDED IN THE WATER MAIN REPLACEMENTS ASSOCIATED WITH LINE B?

A. TAWC currently has included the following projects as part of the scheduled work associated with Line B:

1) Propose to install 1,600 lf of 6 inch ductile main and 200 lf of 4 inch ductile main along the 2200 Block of Edgmon Forest Lane to replace 2.25 inch cast iron main at an anticipated cost of $178,524.

2) Propose to install 1,100 lf of 8 inch ductile main along the 5300 block of Connell Street to replace 2 inch cast iron main at an anticipated cost of $132,781.

3) Propose to install 1,900 lf of 8 inch ductile main along the 5300 and 5400 blocks of Marion Avenue to replace 2 inch cast iron main at an anticipated cost of $229,349

4) Propose to install 300 lf of 4 inch ductile main along the 7420 block of Edgefield Drive to replace 2.25 inch cast iron main at an anticipated cost of $29,754.

5) Propose to install 1,200 lf of 6 inch ductile main and 300 lf of 4 inch ductile main along the 3800 block of Mission View Avenue to replace 2 inch cast galvanized main at an anticipated cost of $148,770.

6) Propose to install 700 lf of 8 inch ductile main, 3,200 lf of 6 inch ductile main and 1,000 lf of 4 inch ductile main along the 4000 to 4800 blocks of Cain Avenue to replace 2-inch galvanized iron main at an anticipated cost of $501,053.

7) Propose to install 1,440 lf of 6 inch ductile main along Center Street to replace 2.25 inch cast iron main at a cost of $142,819. This project was originally planned for 2015 but was delayed due to a change in project priorities.

8) Propose to install 1,000 lf of 6 inch ductile main and 250 lf of 4 inch ductile main along the 2200 and 2300 blocks of Cheek Street to replace a 2 inch cast iron main an anticipated cost of $123,975.

9) Propose to install 1,300 lf of 6 inch ductile main and 200 lf of 4 inch ductile main along the 2600 and 2700 blocks of E 14th Street to replace 2 inch galvanized main at an anticipated cost of $148,770.

10) Propose to install 2,600 lf of 6 inch ductile main along the 3600 block of Ida Belle Lane to replace 2 inch cast iron main at an anticipated cost of $257,868.

11) Propose to install 1,800 lf of 6 inch ductile main along the 6100 block of Nottingham Drive to replace 2 inch cast iron main at a cost of $178,524.

12) Propose to install 1,100 lf of 6 inch ductile main and 400 lf of 4 inch ductile main along the 3300 block of Pioneer Lane to replace a 1.5 inch galvanized main at an anticipated cost of $148,770.

13) Propose to install 350 lf of 8 inch ductile main, 900 lf of 6 inch ductile main and 600 lf of 4 inch ductile main along the 500 block of Semi Circle Drive to replace 2 inch cast iron main at an anticipated cost of $191,019.

14) Propose to install 450 lf of 6 inch ductile main and 750 lf of 4 inch ductile man along the 3300 and 3400 blocks of Tarlton/Delong Avenue to replace a 2 inch galvanized main at an anticipated cost of $119,016.

15) Propose to install 900 lf of 6 inch ductile main along the 100 block of North Cedar Street to replace 2 inch PVC main at an anticipated cost of $89,263.

Q. WHY IS THE MAJORITY OF THE MAIN BEING REPLACED CAST IRON AND GALVANIZED?

A. Within the TAWC distribution system, cast iron main and galvanized main represents approximately 55.5% of the total footage of main in the system. However, these two types of pipe material have experienced approximately 90.6% of all the breaks within the system during the period of January 2010 to February 2016. Over the past several years, TAWC has concentrated on replacing cast iron and galvanized main to begin the process of removing the main to start to reduce the number of main breaks the system experiences. TAWC expects this effort of replacing cast iron and galvanized main will continue for several decades as the approximately 706 miles of this material is removed from the system.

Q. HOW DOES THE PROPOSED 2017 SPEND COMPARE TO RECENT YEARS SPEND ASSOCIATED WITH LINE B?

A. TAWC anticipates to spend more on main replacements during 2017 than it has over the past recent years. The proposed 2017 expenditures for Line B nearly doubles the seven-year average between 2009 and 2015 of $1,212,438. This increase is due to the ability of TAWC to refocus on replacing water main that is nearing its useful life following several major rehabilitation projects at the Citico Water Treatment Plant. Over the past several years, TAWC has managed its capital plan to account for the major projects to ensure that the impact on the Customer was minimal.

Q. DOES THE COMPANY EXPECT THAT ALL OF THE PROJECTS LISTED ABOVE WILL BE COMPLETED DURING 2017?

A. TAWC believes that the projects listed above will be completed during 2017. However, based on history, TAWC understands that some projects may be delayed or moved into next year due to unexpected situations.

Q. WHY ARE CERTAIN MAIN REPLACEMENT PROJECTS DELAYED AND PLACED IN THE NEXT YEAR?

A. During the year unexpected changes in priorities occur due to outside influences or recognition of unfavorable trends that are occurring that affects the infrastructure. The majority of the changes are caused by unexpected conflicts between the Company's infrastructure and outside agency projects that require the water main in the area to be relocated. The other significant driver for changes in priorities involves the recognition of a trend for increasing main breaks on a section of water main that requires the main to be replaced sooner than expected. In both of these cases, a new project is initiated to address the need to relocate or replace the water main. Since these projects were not identified during the original budgeting process, the need to offset the new projects' 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 projects.

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 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 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. WHAT WORK IS ASSOCIATED WITH UNSCHEDULED MAIN REPLACMENTS - LINE C AND WHY DOES IT FALL UNDER THE QIIP?

A. This investment plan item includes the unscheduled replacement or restoration of existing water mains, including valves and other appurtenances that are necessary to perform the work. The work associated with the Unscheduled Main Replacements of Line C is similar to that of Main Replaced of Line B and address water mains that have started to experience chronic issues. However, unlike the Main Replaced of Line B, the work associated in Line C is a result of an unexpected failure of the main or valve that causes impact to the Customer and requires immediate work to correct the failure. By the nature of the work being a reaction to an unexpected event, the work associate in Line C cannot be planned and scheduled, thus TAWC considers this work as unscheduled. The majority of work associated with Line C is water mains that have experienced an unscheduled break or failure and the Company has determined that the replacement of a section of the main will allow the service life of the main to be extended rather than just repairing the failure with a temporary clamp and replacing the main through Line B. The Company believes that this type of replacement work is appropriate and should be included in the QIIP.

Q. WHAT IS THE PROPOSED REPLACEMENT RATE FOR WATER MAIN REPLACEMENTS ASSOCIATED WITH THE UNSCHEDULED MAIN REPLACEMENTS OF LINE C?

A. TAWC plans to spend approximately $1,009,000 to replace various size water mains during unscheduled events. This is similar to the three-year average spend during 2013 to 2015 of $1,099,385. As we replace sections of main, the existing main will be more stable and the life of the main will be extended, which will allow for a more concentrated effort for main replacements on mains that have a larger history of breaks.

Q. WHAT BENEFIT HAS TAWC SEEN WITH THE WATER MAIN REPLACEMENTS ASSOCIATED WITH UNSCHEDULED MAIN REPLACEMENTS OF LINE C AND MAIN REPLACEMENTS OF LINE B?

A. TAWC experienced a nearly 18% reduction in water main breaks during the period of 2015 through September 2016 when compared to the ten-year average from 2005 to 2014. TAWC contributes this reduction, in part, due to the focus on replacing main with a chronic history of main breaks rather than the previous initiative of repairing mains. TAWC further believes that the reduction in the average number of main breaks between 2013 and 2015 of 305 per year compared to the average number of breaks of 480 per year between 2004 to 2012 is a directly correlated to the level of spending in the Unscheduled Main Replacement of Line C.

Q. WHY SHOULD THE FUNDING LEVEL OF UNSCHEDULED MAIN REPLACEMENTS OF LINE C BE MAINTAINED AT THE THREE YEAR AVERAGE SPEND OF 2013 TO 2015?

A. TAWC has seen a modest reduction of the number of main breaks in the system during the past several years as compared to the previous nine-year period. TAWC has utilized the Unscheduled Main Replacements of Line C to replace sections of mains with chronic main breaks to extend the useful life of these mains instead of just making repeated

repairs on the same main. TAWC believes that the level of funding it has maintained over the past three years for the Unscheduled Main Replacements of Line C is sufficient to allow the Company to address chronic mains and allows the Company to extend the life of these mains.

Q. WHAT WORK IS ASSOCIATED WITH MAINS RELOCATED - LINE D AND WHY DOES IT FALL UNDER THE QIIP?

A. This budget line includes the relocation of existing water mains, including valves and other appurtenances, which are necessary due to ongoing municipal or state agency projects. These costs are not reimbursable. The work associated with the Main Relocated –Line D is a replacement of infrastructure that is impacted by improvements being proposed by municipal or state agency that causes a conflict with the Company's infrastructure. The Customer benefits by work associated with the Main Relocated – Line D since the replacement main that is installed to eliminate the conflict with the municipal or state agency projects is typically a newer main that is stronger and more reliable that the main being replaced. TAWC believes this type of relocation work is appropriate and should be included in QIIP.

Q. WHAT MAINS HAVE BEEN INDENTIFIED FOR RELOCATION THAT IS ASSOCIATED WITH LINE D?

A. TAWC plans to spend approximately $100,000 to replace various size water mains within the distribution system that is required to be relocated due to the work of a municipal or state agency. At this time, TAWC is not aware of any major projects being proposed by municipal or state agencies that would require a large investment in relocated main. TAWC had anticipated to spend $250,000 during 2016, and through

August has spent $220,422 on several relocations that were requested by municipal and state agencies. Similar to the start of 2015, TAWC had not identified many relocation projects, but based on the amount of relocation work conducted in the past year, the Company does not expect any major relocation during 2017 and has reduced the amount of spend in 2017 compared to 2016.

Q. WHAT WORK IS ASSOCIATED WITH HYDRANTS AND VALVES REPLACED - LINE F AND WHY DOES IT FALL UNDER THE QIIP?

A. This line item includes the replacement of leaking, failed or obsolete hydrants, including hydrant assemblies and valves that are Company funded. Through the replacement of hydrants and valves that have been determined to not function properly through ongoing inspections allows TAWC to maintain public safety and ensure the distribution system is able to provide adequate and reliable service to the community. Since the work is associated with the replacement of infrastructure to maintain public safety and provide reliable service, the Company believes it is appropriate and should be included in QIIP.

Q. WHAT IS THE PROPOSED REPLACEMENT SCHEDULE FOR HYDRANTS AND VALVES?

A. TAWC plans to spend approximately $374,100 to replace hydrants and valves. Of this amount, TAWC plans to spend a majority of this amount on replacing 15 broken valves that have been found during the inspection of these valves over the past several years. The estimate to replace these valves is $261,600. Within this line, TAWC expects to replace 40 hydrants that have been found during inspections to be damaged or in need of extensive repair. The estimate to replace these hydrants is $112,500. The amounts

proposed for Line F during 2016 is similar to the 7-year average spend between 2009 and 2015 of $358,725.

Q. WHAT WORK IS ASSOCIATED WITH SERVICES REPLACED - LINE H AND WHY DOES IT FALL UNDER THE QIIP?

A. This investment plan item includes the replacement of water services or the small diameter pipe that connects the Customer to the Company's distribution main. The work includes the replacement of the water service between the Company's distribution main and the Customer's property line, including the replacement of corporation stops, or shut-off valves. The replacement of water service that are causing reduction in water service or concerns with water quality are included in the work performed within this spending line. By replacing these services, the Company is able to provide better service to a Customer. TAWC believes this type of replacement work is appropriate to maintain reliable service to a Customer and should be included in QIIP.

Q. WHAT IS THE PROPOSED REPLACEMENT SCHEDULE FOR SERVICES WITHIN LINE H?

A. TAWC plans to spend approximately $398,500 to replace services during this period. Based on the average cost per service replacement of $2,375, TAWC will replace approximately 175 services. The anticipated spend of $398,500 during 2017 is slightly less than the five-year average spend of $459,809 between 2011 and 2015.

Q. WHAT IS THE WORK ASSOCIATED WITH METERS REPLACED - LINE J AND WHY DOES IT FALL UNDER THE QIIP?

A. This investment plan item includes the replacement or improvement of existing customer meters and meter settings with or without technology changes. The work associated with

this spending line allows for the replacement of meters and meter settings that are nearing the end of their useful service life and could cause service disruptions or inconveniences to a Customer if they were to fail. The Company believes this type of replacement work is appropriate to maintain reliable service to a Customer and should be included in QIIP.

Q. WHAT IS THE PROPOSED REPLACEMENT SCHEDULE FOR METERS?

A. The total estimated meter replacement cost for the period is $1,687,825. Based upon an average cost of meter replacements of approximately $155 per meter, TAWC will replace approximately 9,978 meters.

Q. HOW DOES THIS COMPARE TO PAST YEARS OF METER REPLACEMENTS?

A. The proposed investment of $1,687,825 for 2017 is an increase of 87% compared to the five-year average between 2011 and 2015 of $898,481.

Q. WHY IS THERE A SUBSTATIAL INCREASE IN SPENDING ON THE METERS REPLACED - LINE J?

A. Along with the normal replacement of meters that are nearing their useful life, TAWC is beginning the process of replacing the meters in the system with Automatic Meter Reading (AMR) meters, which enables TAWC to obtain electronic readings while driving by a location rather than physically approaching each meter. Through the implementation of this meter technology, TAWC can become more efficient with its meter reading process. TAWC currently plans to deploy these meters throughout the system through 2021. Upon full deployment of the AMR meters, TAWC would expect to see a reduction in the number of meter reading related service orders and a reduction in the number of estimated bills issued. Through the use of the AMR meters the Customer

will receive less billing errors and have increased confidence that they are being billed for correct amount of water that they have used during the billing period. Although TAWC believes that the resources needed to read meters will be reduced, it does not expect that there will be an impact to the number of overall personnel within the Company. TAWC expects to utilize efficiencies realized with the full deployment of the AMR system in 2021 in new tasks associated with maintaining the AMR equipment and ability to address Customer inquiries more efficiently.

Q. WHAT IS THE WORK ASSOCIATED WITH CAPITALIZED TANK REHABILITATION/ PAINTING – LINE R AND WHY DOES IT FALL UNDER THE QIIP?

A. This investment plan item includes the rehabilitation and painting of water storage tanks within the distribution system. Performance of periodic rehabilitation and painting of these water storage tanks maintains the ability of the water distribution system to provide reliable service and ensure the system is able to meet the demands during peak Customer demand periods and during firefighting periods. In addition, this rehabilitation work allows the system to ensure that it is able to provide safe water to its Customers. Through the rehabilitation of the tank, the system's reliability is maintained and should be included in QIIP.

Q. DISCUSS THE WORK ASSOCIATED WITH CAPITALIZED TANK REHABILITATION/ PAINTING INCLUDED WITH LINE R?

A. TAWC plans to spend approximately $1,110,125 to rehabilitate and paint the Mission Ridge Standpipe and the South End Tank. The Mission Ridge Standpipe is a 370,000-gallon standpipe that serves the Mission Ridge and Sough Mission Ridge pressure

gradient. The South End Tank is a 2.5 million gallon ground storage tank that serves the main Chattanooga pressure gradient. The proposed 2017 spend is similar to the average spend amount of $908,537 that occurred during the period between 2011 through 2015.

Q. ARE THERE ANY CAPITAL INVESTMENT PROJECTS ("IP") THAT ARE INCLUDED UNDER THE QUALIFIED INFRASTRUCTURE INVESTMENT PROGRAM?

A. Yes. TAWC has a Capital Investment Project that will be placed in service during 2017. The project is the Tennessee River Transmission Main Crossing Project with an approximate cost of $2,001,711. The project is to allow TAWC to replace infrastructure and recover capacity lost through the repair of an existing transmission main and to ensure redundancy if a critical failure occurs to the existing river crossing and the Walnut Street Bridge main. The project will be in service by December 2017.

Q. WHY IS A THIRD RIVER CROSSING NECESSARY?

A. The area north of the Tennessee River is supplied through what was a 30-inch main and a 16-inch main crossing the river. The 30-inch concrete main was installed in 1965 under the river extending directly north from the Citico Water Treatment Plant. The 16-inch steel main is hung below the Walnut Street Bridge and was installed in 1948. On April 4, 2016 the 30-inch concrete main under the Tennessee River ruptured unexpectedly, which resulted in TAWC isolating the main for approximately two weeks to allow it to insert an emergency 24-inch High Density Polyethylene (HDPE) pipe. During the non-operability or temporary loss of the 30-inch main, TAWC relied on the 16-inch steel main and made emergency provisions to ensure service to the area north of the Tennessee River. Unfortunately, the type of emergency repair employed – inserting the new 24-inch pipe

within the existing 30-inch pipe, caused a permanent capacity reduction for the system with regard to providing service to the area north of the Tennessee River. Moreover, the rupture also raised the awareness of the importance of redundancy for the system and highlighted the weak link that existed for the system on providing service to the north side of the river. The proposed new river crossing will provide an important redundant feed to the north side of the river and prepares the system when the 16-inch steel pipe which was installed 68 years ago reaches its life expectancy of between 70 and 80 years. In addition, the new river crossing will reestablish the lost capacity that occurred when the 24-inch HDPE pipe was placed inside of the 30-inch concrete pipe.

Q. HOW MUCH CAPACITY WAS LOST AS A RESULT OF THE EMERGENCY REPAIR OF THE 30-INCH CONCRETE MAIN?

A. The 30-inch concrete main had a capacity of approximately 16.5 million gallons per day (MGD) at a flow rate of 5 feet per second. With the insertion of the 24-inch HDPE pipe within the 30-inch concrete pipe, the capacity was reduced to approximately 10.8 MGD at a flow rate of 5 feet per second, or a loss of approximately 34.5 % capacity.

Q. WILL THIS LOSS OF CAPACITY IMPACT THE AREA NORTH OF THE TENNESSEE RIVER?

A. Currently, the 16-inch steel pipe and the inserted 24-inch HDPE are sufficient to provide for the demands experienced by the area north of the Tennessee River. However, if any disruption is experienced on either existing main, the ability for TAWC to sufficiently serve the area is impacted. Through the installation of a third river crossing, TAWC will be able to ensure reliable service to the area north of the river and ensure that it can provide an adequate supply into the future.

Q. WHY IS THIS PROJECT CONSIDERED A REPLACEMENT PROJECT AND INCLUDED UNDER THE QIIP RIDER?

A. TAWC believes that this project is appropriate to be included within the QIIP Rider since the purpose of the new crossing is to replace the capacity lost during the repair of the 30-inch main this past spring and to replace the capacity of the 16-inch steel main that is between 2 and 12 years from exceeding its life expectancy. As of January 2016, the capacity of the 30-inch concrete pipe and the 16-inch steel pipe was 21.5 MGD at a flow rate of 5 feet per second. Following the repair of the ruptured 30-inch concrete the overall capacity of the two mains was reduced to 15.8 MGD. At the point when the 16-inch steel main exceeds its useful life and the chance of failure increases, the potential loss of the main would reduce the overall capacity to the area north of the river to 10.8 MGD. With the installation of the third river crossing, the capacity will be restored to 21.6 MGD which allows the system to recover to the capacity that was present as of January 2016. TAWC included this project within the QIIP rider since the new river crossing returns the system to the January 2016 capacity levels and is a replacement of the lost capacity of the repair carried out on the 30-inch concrete main and the future retirement of the 68-year old 16-inch steel main. TAWC did not consider this as part of the EDI Rider since the project did not expand the capacity available to the area north of the river.

ECONOMIC DEVELOPMENT INVESTMENT PROGRAM

Q. WHAT IS THE ECONOMIC DEVELOPMENT INVESTMENT RIDER?

A. This rider provides a mechanism to recover the operational expenses, capital costs or both related to the expansion of infrastructure for the purpose of economic development. With economic development opportunities being limited and the competition for each development fierce, the rider allows for infrastructure to be expanded or enhanced to respond quickly and equitably to economic development that will benefit all of the consumers.

Q. WHAT ARE THE BUDGET LINES THAT ARE INCLUDED UNDER THE ECONOMIC DEVELOPMENT INVESTMENT RIDER?

A. The budget lines that are included in the Economic Development Investment Rider are Line A - Mains New and Line E - Hydrants and Valves New. These budget lines support the economic development of the area and place the distribution system in a position to aid new development within the service area.

Q. WHAT WORK IS ASSOCIATED WITH MAINS NEW - LINE A AND WHY IS THIS APPROPRIATE FOR THE EDI RIDER?

A. This line item includes new water mains, valves, and other appurtenances that are necessary to perform the work that assist with the economic growth of the community. This work includes the installation of new infrastructure to expand or extend the distribution system that supports economic growth in the community and is appropriate to be included within the EDI Rider.

Q. WHAT OTHER WORK IS ASSOCIATED WITH MAIN NEW – LINE A AND WHY IS THIS ADDITIONAL WORK APPROPRIATE FOR THE EDI RIDER?

A. In addition to the extension or expansion of the distribution system to assist with an economic development project, Line A work can also be related to the extension or

expansion of new mains that position the distribution system to be able to support future growth of the community. In addition, Line A work includes new mains that provide new transmission capacity, provide reliability, or establish an additional pressure gradient. This work is considered appropriate for the EDI Rider because it enhances the distribution system and allows it to respond quickly to future growth of the community. These types of projects promote future growth of the community and are designed accommodate future growth in the surrounding areas. The Customer benefits from these projects through their enhancement of the distribution system and improvement in reliability.

Q. WHAT IS THE PROPOSED INVESTMENT ANTICIPATED FOR NEW WATER MAIN ASSOCIATED WITH LINE A.

A. TAWC plans to spend approximately $310,000 on various size water mains within the distribution system that are associated with eliminating dead ends or positioning the distribution system for future development. At this time the Company has identified a new main project to install approximately 1,000 lineal feet of 8-inch main along Hamilton Street at an estimated cost of $110,000. This new main will improve system reliability and pressure to a growing area within Northshore. This new main allows TAWC to expand an existing pressure zone to be able to adequately provide pressure to the City of Chattanooga Stringers Ridge Park bath house that they had requested. In addition, the Company has identified a new main project to install approximately 3,200 lineal feet of 6-inch main along West Valley Highway at a cost of $200,000. The new main will increase water capacity to support the Valley View Industrial Park, as requested by the Marion County Mayor, the Marion County Chamber of Commerce and

the City of Owenton Mayor. A copy of the letters are attached to my testimony as **Petitioner's Exhibit 2017 EDI Rider Letters – BEO**.

Q. WHAT WORK IS ASSOCIATED WITH NEW HYDRANTS AND VAVLES – LINE E AND WHY IS THIS APPROPRIATE FOR THE EDI RIDER?

This investment plan item includes the installation of new hydrants, including hydrant assemblies and valves that are installed on existing mains or installed in conjunction with main extension projects, which are Company funded. This item generally includes all public hydrants. This work is associated with the installation of new infrastructure to foster economic development by providing new fire protection or enhancing fire protection in currently served areas. Improved infrastructure in existing older service areas, including fire protection, is a key to redevelopment in economic growth and is appropriate to be included within the EDI Rider.

Q. WHAT IS THE PROPOSED SCHEDULE FOR NEW HYDRANTS AND VALVES?

A. TAWC plans to spend approximately $74,000 on a combination of 32 new hydrants and valves. This is similar to the average two-year average between 2014 and 2015 of $69,091. TAWC believes that with the improving economic health of the communities served that the level of investment will increase to serve the growing economic development.

SAFETY AND ENVIRONMENTAL COMPLIANCE RIDER

Q. WHAT IS THE SAFETY AND ENVIORNMENTAL COMPLAINCE RIDER?

A. In addition to the need for capital investment for replacement of aging infrastructure, and the need for investment in infrastructure for economic development, water and wastewater utilities are continually faced with the additional infrastructure investment requirements to meet safety and environmental compliance mandates from state and federal government. The United States Environmental Protection Agency is continually increasing water quality standards for potable drinking water and discharge requirements for wastewater facilities. Other regulatory agencies from time to time change safety and environmental compliance requirements that lead to the need for further infrastructure investment. TAWC believes that environmental compliance investments are specifically related to the safety of the drinking water and in the public interest.

Q. WHAT ARE THE BUDGET LINES THAT ARE INCLUDED UNDER THE SAFETY AND ENVIRONMENTAL COMPLIANCE PROGRAM RIDER?

A. The budget lines that are included in the Safety and Environmental Compliance Rider are Line L - SCADA Equipment and Systems, Line M - Security Equipment and Systems and Line Q - Process Plant Facilities and Equipment. These budget lines support the improvement of safety and enhances the environmental compliance of the system.

Q. WHAT WORK IS ASSOCIATED WITH SCADA EQUIPMENT AND SYSTEMS - LINE L AND HOW IS IT RELATED TO THE SEC?

A. This investment item is for the installation or replacement of existing SCADA Equipment and Systems. The acronym SCADA can be defined in several slightly different ways. But, TAWC generally prefers the definition as System Control and Data Acquisition, which is the computerized system for monitoring and operating the treatment plants and

network facilities. By making investment in the monitoring and control system for the treatment plants and the network facilities, TAWC is able to ensure that the operation of the system is meeting safety and environmental requirements and is appropriate to be included in the SEC.

Q. WHAT IS THE PROPOSED INVESTMENT ANTICIPATED TO SCADA ASSOCIATED WITH LINE L?

A. TAWC plans to spend approximately $175,000 on various SCADA improvements throughout the system. A majority of the spending will be associated with the replacement of the SCADA system servers at Citico at an anticipated cost of $60,000. In addition, the Remote Terminal Units ("RTUs") at Suck Creek are included within the proposed 2017 investment in Line L. A RTU is a microprocessor-controlled electronic device that provides an interface between the physical objects in the pump station and the SCADA (supervisory control and data acquisition) system. The interface allows the facilities in Suck Creek to be controlled by the SCADA master supervisory system used by the operators. This improvement is approximately $50,000 of the total expected spend for this line.

Q. WHAT WORK IS ASSOCIATED WITH SECURITY EQUIPMENT AND SYSTEMS - LINE M AND HOW IS IT RELATED TO THE SEC?

A. This investment item is associated with the security equipment and systems that are employed at the TAWC facilities. This may include fencing, alarm systems, cameras, barricades, electronic detection or locking systems, software, or other assets related directly to security. These improvements allow TAWC to maintain its security system and follow the Homeland Security Directive 9 to "*develop robust, comprehensive, and*

fully coordinated surveillance and monitoring systems." TAWC believes it is paramount to ensure that its facilities are monitored actively. These improvements will maintain the equipment and ensure current technology is employed to provide safe drinking water and protect its infrastructure and are appropriate to be included in the SEC.

Q. WHAT IS THE PROPOSED SCHEDULE FOR SECURITY EQUIPMENT AND SYSTEMS?

A. TAWC plans to spend approximately $140,000 on a combination of upgrades to existing security systems to improve the security of the existing facilities. TAWC believes this level of spend on the installation and enhancement of the facility security systems will ensure a sufficient level of health and safety risk reduction for the Company's employees.

Q. WHAT WORK IS ASSOCIATED WITH PROCESS PLANT FACILITIES AND EQUIPMENT – LINE Q AND HOW IS IT RELATED TO THE SEC?

A. This investment line item is for the new purchase or replacement of existing components of water supply, water treatment, water pumping, water storage, and water pressure regulation facilities, including associated building components and equipment. Replacements may be planned or made because of failure, or may include improvements. Through the investment in the improvements associated with this spending line, TAWC is able to ensure compliance with federal and state safety and environmental compliance requirements that will ensure safe drinking water. By ensuring compliance with federal and state requirements, these investments are appropriate to be included in the SEC.

Q. WHAT IS THE PROPOSED SCHEDULE FOR PROCESS PLANT FACILITIES AND EQUIPMENT IMPROVEMENTS WITHIN LINE Q?

A. TAWC plans to spend approximately $520,000 within the Process Plant Facilities and Equipment Improvements within Line Q. This level of investment is a decrease in line compared with the five-year average spending of $1,548,920 over the period of 2011 to 2015. This level of investment is similar to the three-year average of $672,732 during the period of 2009 to 2011. This return to the pervious three-year average is due to the Company addressing production issues and the completion of the project to replace all of the conventional filter under-drain systems at Citico. These projects over the past few years have allowed TAWC to ensure it can reliably meet the required environmental compliance. A portion of the investment in the Q line is a $200,000 investment to replace the number 3 pump unit at the Hill City Booster. Other work, such as replacement of the rotating element of low service pump number 12, work regarding the sludge removal box, and other improvements at the Citico facility are expected to be completed during this period as well.

Q. BESIDES THE REPLACEMENT OF PROCESS PLANT FACILITIES AND EQUIPMENT DUE TO A FACILITY OR PIECE OF EQUIPEMENT BEING AT THE END OF ITS USEFUL LIFE, WHAT BENEFITS DOES WORK PERFORMED UNDER LINE Q PROVIDES?

A. A majority of the work performed by TAWC within Line Q is the replacement of older equipment with new equipment that is far more efficient than the original equipment. This allows TAWC to produce water more efficiently and use less electricity and allows for the Company to take a leadership role in reducing its carbon footprint. TAWC has elected to include both replacement and new items in this line specifically that are critically necessary to continue to meet water quality regulations.

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, 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 Regulatory Authority, and if present before the Authority and duly sworn, his testimony would be as set forth in his pre-filed testimony in this matter.

Brent E. O'Neill

Sworn to and subscribed before me
this 15 day of November, 2016.

Notary Public

My Commission Expires: 1/22/17

STRATEGIC CAPITAL EXPENDITURE PLAN
PROGRAM

Business Unit	Tennessee
Revision Date	June 21, 2016
Description	TN BP 2017-2021 SCEP

Business Unit	Rider	Business Unit No.	Project Title			2017 1	2	3	4	5	6
Tennessee	**None**	**DV**	**Projects Funded by Others**			**$10,000**	**$10,000**	**$50,000**	**$80,000**	**$150,000**	**$150,000**
Tennessee	EDI	A	Mains - New			55,000	125,000	105,000	25,000		
Tennessee	QIIP	B	Mains - Replaced / Restored			158,367	158,367	253,367	300,867	300,867	300,867
Tennessee	QIIP	C	Mains - Unscheduled			165,932	171,242	80,000	37,174	42,484	74,347
Tennessee	QIIP	D	Mains - Relocated							33,333	33,333
Tennessee	EDI	E	Hydrants, Valves, and Manholes - New				3,937	6,561	5,249	7,873	6,561
Tennessee	QIIP	F	Hydrants, Valves, and Manholes - Replaced				10,000	20,000	35,000	30,000	39,500
Tennessee	None	G	Services and Laterals - New			38,750	48,501	71,751	79,501	87,251	103,751
Tennessee	QIIP	H	Services and Laterals - Replaced			9,901	19,801	29,702	41,602	41,602	52,503
Tennessee	None	I	Meters - New				10,101	15,152	22,223	22,223	34,345
Tennessee	QIIP	J	Meters - Replaced			92,115	92,115	122,716	122,716	183,916	183,916
Tennessee	None	K	ITS Equipment and Systems			94,985	144,308	105,065	149,882	71,233	116,937
Tennessee	SEC	L	SCADA Equipment and Systems						58,333	58,333	58,333
Tennessee	SEC	M	Security Equipment and Systems						25,000	25,000	
Tennessee	None	N	Offices and Operations Centers					5,000			5,000
Tennessee	None	O	Vehicles							101,250	101,250
Tennessee	None	P	Tools and Equipment			12,083	12,083	12,083	24,167	17,083	16,167
Tennessee	SEC	Q	Process Plant Facilities and Equipment				18,113	32,377	62,566	68,604	26,340
Tennessee	QIIP	R	Capitalized Tank Rehabilitation/Painting								
Tennessee	None	S	Engineering Studies				5,000	5,000	5,000	5,000	5,000
			Total Recurring Projects			627,133	818,569	863,774	994,280	1,096,054	1,158,151
			INVESTMENT PROJECTS	**Total**	**In Service Date**						
Tennessee	QIIP	I26-020041	Electrical - Breakers and Relays ($0.6)		12/31/2017						
Tennessee	SEC	I26-020042	Pumping Auxiliary Power ($1.4)		6/30/2018						
Tennessee	QIIP	I26-020043	Energy Reduction and Efficiency ($0.87)		12/31/2020						
Tennessee	SEC	I26-020027	Construct 1.0MG Tank & 2500-16" ER ($1.5)		7/31/2019						
Tennessee	QIIP	I26-020034	Tennessee River Crossing ($2.5)		11/30/2017			16,545	126,937	166,237	222,293
Tennessee	SEC	I26-020044	New Raw Water Intake Citico ($13)		6/30/2022						
Tennessee	SEC	I26-050001	Raw Water Intake Improvements Whitwell ($2)		12/31/2021						
Tennessee	QIIP	I26-020038	Retire Basin 1 ($0.6)		12/31/2020						
Tennessee	QIIP	I26-020039	Basin 2 Tube Settlers ($3.5)		12/31/2019						
Tennessee	SEC	I26-020040	Chlorine Gas Conversion ($4.5)		4/1/2020						
Tennessee	QIIP	I26-020045	Renovate Filter Bldg 3 ($0.75)		6/30/2018						
Tennessee	None	I26-020046	New Field Services Facility ($4.5)		12/31/2020						
Tennessee	SEC	I26-050002	Facility Upgrades at Whitwell WTP ($0.3) 1/3 in 2018		4/30/2018						
Tennessee	SEC	I26-050003	Replace 0.5 MG Storage Tanks at Whitwell ($.5)		12/31/2021						
Tennessee	SEC	I26-050004	Replace 0.1 MG Storage Tank at Whitwell ($0.3) 1/3 in 18		4/30/2018						
Tennessee	No	I26-000002	Post Acquisition BD Capex								
			Total Investment Projects					**$16,545**	**$126,937**	**$166,237**	**$222,293**
			Total Investment and Centrally Sponsored Projects					**$16,545**	**$126,937**	**$166,237**	**$222,293**
			Contributions			(20,000)	(20,000)	(20,000)	(20,000)	(20,000)	(20,000)
			Advances			(58,333)	(58,333)	(58,333)	(58,333)	(58,333)	(58,333)
			Total Refunds			29,167	29,167	29,167	29,167	29,167	29,167
				Gross minus BT		**$637,133**	**$828,569**	**$930,319**	**$1,201,217**	**$1,412,291**	**$1,530,444**
						(49,167)	(49,167)	(49,167)	(49,167)	(49,167)	(49,167)
				Net minus BT		**$587,967**	**$779,402**	**$881,153**	**$1,152,050**	**$1,363,124**	**$1,481,277**
				Gross plus BT		**$637,133**	**$828,569**	**$930,319**	**$1,201,217**	**$1,412,291**	**$1,530,444**
						(49,167)	(49,167)	(49,167)	(49,167)	(49,167)	(49,167)
				Net plus BT		**$587,967**	**$779,402**	**$881,153**	**$1,152,050**	**$1,363,124**	**$1,481,277**

***Dollar amounts from TAWC's Annual Capital Planning Process**

STRATEGIC CAPITAL EXPENDITURE PLAN
PROGRAM

Business Unit	Tennessee
Revision Date	June 21, 2016
Description	TN BP 2017-2021 SCEP

U.S. $

Business Unit	Rider	Business Unit No.	Project Title	7	8	9	10	11	12	Total 2017
Tennessee	**None**	**DV**	**Projects Funded by Others**	**$90,000**	**$80,000**	**$80,000**	**$80,000**	**$120,000**	**$100,000**	**$1,000,000**
Tennessee	EDI	A	Mains - New							310,000
Tennessee	QIIP	B	Mains - Replaced / Restored	300,867	300,867	218,110	110,867	110,867	105,975	2,620,255
Tennessee	QIIP	C	Mains - Unscheduled	75,000	75,000	45,000	47,232	84,968	110,621	1,009,000
Tennessee	QIIP	D	Mains - Relocated	33,333						100,000
Tennessee	EDI	E	Hydrants, Valves, and Manholes - New	8,792	11,153	11,153	9,185	3,937		74,400
Tennessee	QIIP	F	Hydrants, Valves, and Manholes - Replaced	39,600	55,000	50,000	49,100	30,000	15,900	374,100
Tennessee	None	G	Services and Laterals - New	102,751	74,001	72,991	64,001	56,251	46,501	846,000
Tennessee	QIIP	H	Services and Laterals - Replaced	51,503	41,602	24,752	34,652	29,702	21,177	398,500
Tennessee	None	I	Meters - New	30,304	24,244	15,152	15,152	10,101	10,000	209,000
Tennessee	QIIP	J	Meters - Replaced	183,916	183,916	180,141	127,526	122,716	92,115	1,687,825
Tennessee	None	K	ITS Equipment and Systems	145,591	229,638	93,191	71,233	71,233	235,664	1,528,960
Tennessee	SEC	L	SCADA Equipment and Systems							175,000
Tennessee	SEC	M	Security Equipment and Systems	10,000	35,556	30,556	13,889			140,000
Tennessee	None	N	Offices and Operations Centers			5,000				15,000
Tennessee	None	O	Vehicles	101,250	221,250					525,000
Tennessee	None	P	Tools and Equipment	15,083	14,500	2,417	9,667	4,833	4,833	145,000
Tennessee	SEC	Q	Process Plant Facilities and Equipment	38,415	20,302	92,755	65,585	62,566	32,377	520,000
Tennessee	QIIP	R	Capitalized Tank Rehabilitation/Painting				295,630	430,832	383,663	1,110,125
Tennessee	None	S	Engineering Studies	5,000	5,000	5,000	5,000	5,000		50,000
			Total Recurring Projects	1,141,406	1,292,029	846,217	918,718	1,023,006	1,058,827	11,838,165
			INVESTMENT PROJECTS							
Tennessee	QIIP	I26-020041	Electrical - Breakers and Relays ($0.6)		16,550	21,166	110,565	149,931	132,000	430,211
Tennessee	SEC	I26-020042	Pumping Auxiliary Power ($1.4)	19,159	16,875	99,596	138,732	206,615	202,189	683,165
Tennessee	QIIP	I26-020043	Energy Reduction and Efficiency ($0.87)							
Tennessee	SEC	I26-020027	Construct 1.0MG Tank & 2500-16" ER ($1.5)							
Tennessee	QIIP	I26-020034	Tennessee River Crossing ($2.5)	223,499	224,706	225,913	227,119	283,477	284,985	2,001,711
Tennessee	SEC	I26-020044	New Raw Water Intake Citico ($13)							
Tennessee	SEC	I26-050001	Raw Water Intake Improvements Whitwell ($2)							
Tennessee	QIIP	I26-020038	Retire Basin 1 ($0.6)							
Tennessee	QIIP	I26-020039	Basin 2 Tube Settlers ($3.5)							
Tennessee	SEC	I26-020040	Chlorine Gas Conversion ($4.5)							
Tennessee	QIIP	I26-020045	Renovate Filter Bldg 3 ($0.75)			5,515	16,575	23,726	21,664	67,480
Tennessee	None	I26-020046	New Field Services Facility ($4.5)							
Tennessee	SEC	I26-050002	Facility Upgrades at Whitwell WTP ($0.3) 1/3 in 2018		5,515	11,060	38,696	41,998	72,390	169,659
Tennessee	SEC	I26-050003	Replace 0.5 MG Storage Tanks at Whitwell ($.5)							
Tennessee	SEC	I26-050004	Replace 0.1 MG Storage Tank at Whitwell ($0.3) 1/3 in 18		5,515	11,060	18,782	43,847	83,330	162,534
Tennessee	No	I26-000002	Post Acquisition BD Capex	250,000						250,000
			Total Investment Projects	**$492,658**	**$269,161**	**$374,310**	**$550,468**	**$749,594**	**$796,558**	**$3,764,760**
			Total Investment and Centrally Sponsored Projects	**$492,658**	**$269,161**	**$374,310**	**$550,468**	**$749,594**	**$796,558**	**$3,764,760**
			Contributions	(20,000)	(20,000)	(20,000)	(20,000)	(20,000)	(20,000)	(240,000)
			Advances	(58,333)	(58,333)	(58,333)	(58,333)	(58,333)	(58,333)	(700,000)
			Total Refunds	29,167	29,167	29,167	29,167	29,167	29,167	350,000
			Gross minus BT	**$1,724,064**	**$1,641,190**	**$1,300,526**	**$1,549,187**	**$1,892,600**	**$1,955,385**	**$16,602,925**
				(49,167)	(49,167)	(49,167)	(49,167)	(49,167)	(49,167)	(590,000)
			Net minus BT	**$1,674,898**	**$1,592,023**	**$1,251,360**	**$1,500,020**	**$1,843,433**	**$1,906,218**	**$16,012,925**
			Gross plus BT	**$1,724,064**	**$1,641,190**	**$1,300,526**	**$1,549,187**	**$1,892,600**	**$1,955,385**	**$16,602,925**
				(49,167)	(49,167)	(49,167)	(49,167)	(49,167)	(49,167)	(590,000)
			Net plus BT	**$1,674,898**	**$1,592,023**	**$1,251,360**	**$1,500,020**	**$1,843,433**	**$1,906,218**	**$16,012,925**

***Dollar amounts from TAWC's Annual Capital Planning Process**

Marion County Courthouse
P.O. Box 789
Jasper, TN 37347
423-942-2552

djacksonmayor@gmail.com

DAVID JACKSON
MARION COUNTY MAYOR

March 31, 2016

Ms. Valoria Armstrong
President, Tennessee American Water Company
109 Wiehl Street
Chattanooga, TN 37403

Re: Prologue Corporation
Valley View Industrial Park

Dear Ms. Armstrong:

As County Mayor for Marion County, Tennessee, one of my responsibilities is to assist with the economic growth of the County in an effort to better the lives of the County's residents. During my tenure as County Mayor, I have had the pleasure of working with Mr. Dwight Bryant in the start-up and growth of Prologue Corporation, his first manufacturing venture at his Valley View Industrial Park located just South of the City of Whitwell. Prologue has already provided several jobs to Marion County residents and increased our tax base through its initial development. As you know, Tennessee American is the water supplier to the Valley View Industrial Park and Prologue, but Prologue and the Industrial Park are in desperate need of increased water capacity in order to fulfill the vision of Mr. Bryant and the County for additional manufacturing jobs in the area.

While we are all very appreciative of the initial and ongoing investments being made by Tennessee American in the critical water infrastructures of our County, we are requesting that, through its economic development program, Tennessee American Water fund the extension of a six inch water main from Morrison Springs Road along Valley View Highway to Prologue and the Valley View Industrial Park. Such extension will provide much-needed resolution to fire protection issues that are currently preventing the full development of Prologue and the expansion of other manufacturing businesses at the Industrial Park.

Marion County is excited about the opportunity to work in cooperation with Tennessee American toward these much needed improvements to critical infrastructure within our

County, and without Tennessee American's assistance, these improvements will be unlikely to occur. Thank you for your consideration.

Sincerely yours,

MARION COUNTY, TENNESSEE

By: _____

David Jackson, County Mayor

MARION COUNTY
CHAMBER OF COMMERCE
GROWING, SERVING BUSINESS AND INDUSTRY

302 Betsy Pack Drive
Jasper, TN 37347
Office 423-942-5103
Fax 423-942-0098
e-mail: MarionCoC@bellsouth.net
www.MarionCountyChamber.com

March 29, 2016

Ms. Valoria Armstrong, President
Tennessee American Water Company
109 Wiehl Street
Chattanooga, TN 37403

Re: Prologue Corporation
Valley View Industrial Park

Dear Ms. Armstrong:

One of the purposes of the Marion County Chamber of Commerce is to assist with the economic growth of the County. Marion County is fortunate to have Mr. Dwight Bryant and his Prologue Corporation, the first manufacturing venture at Mr. Bryant's Valley View Industrial Park located just south of the City of Whitwell. Prologue has already provided several jobs to Marion County residents and has increased our tax base through its initial development. As you know, Tennessee American is the water supplier to the Valley View Industrial Park and Prologue, but Prologue and the Industrial Park are in desperate need of increased water capacity in order to fulfill the vision of Mr. Bryant and the Partnership for additional manufacturing jobs in the area.

While we are all very appreciative of the initial and ongoing investments being made by Tennessee American in the critical water infrastructures of our County, the Chamber is requesting that Tennessee American Water, through its economic development program, fund the extension of a six inch water main from Morrison Springs Road along Valley View Highway to Prologue and the Valley View Industrial Park. Such extension will provide much needed resolution to fire protection issues that are currently preventing the full development of Prologue and the expansion of other manufacturing businesses at the Industrial Park.

The Chamber is excited about the opportunity to work in cooperation with Tennessee American toward these much needed improvements to critical infrastructure within our County. Without Tennessee American's assistance, these improvements will be unlikely to occur. Thank you for your consideration in this matter.

Sincerely yours,

Aimee L. Billingsley

Aimee Billingsley, President
Marion County Chamber of Commerce

Marion County Partnership For Economic Development, Inc.

March 29, 2016

Ms. Valoria Armstrong, President
Tennessee American Water Company
109 Wiehl Street
Chattanooga, TN 37403

Re: Prologue Corporation
Valley View Industrial Park

Dear Ms. Armstrong:

The Marion County Partnership for Economic Development works closely with Marion County, its municipalities, and local businesses to promote the economic growth of the County. Marion County is fortunate to have Mr. Dwight Bryant and his Prologue Corporation, the first manufacturing venture at Mr. Bryant's Valley View Industrial Park located just south of the City of Whitwell. Prologue has already provided several jobs to Marion County residents and has increased our tax base through its initial development. As you know, Tennessee American is the water supplier to the Valley View Industrial Park and Prologue, but Prologue and the Industrial Park are in desperate need of increased water capacity in order to fulfill the vision of Mr. Bryant and the Partnership for additional manufacturing jobs in the area.

While we are all very appreciative of the initial and ongoing investments being made by Tennessee American in the critical water infrastructures of our County, the Partnership is requesting that Tennessee American Water, through its economic development program, fund the extension of a six inch water main from Morrison Springs Road along Valley View Highway to Prologue and the Valley View Industrial Park. Such extension will provide much needed resolution to fire protection issues that are currently preventing the full development of Prologue and the expansion of other manufacturing businesses at the Industrial Park.

The Partnership is excited about the opportunity to work in cooperation with Tennessee American toward these much needed improvements to critical infrastructure within our County. Without Tennessee American's assistance, these improvements will be unlikely to occur. Thank you for your consideration in this matter.

Sincerely yours,

Scott Hawkins, Chairman
Marion County Partnership for Economic Development

302 Betsy Pack Dr. Jasper, TN 37347 Tel (423) 942-5103

City of Whitwell
13671 Hwy 28 P.O. Box 610
Whitwell, Tennessee 37397

Phone

423-658-5151

Fax

423-658-2397

March 30, 2016

Ms. Valaria Armstrong
President, Tennessee American Water Company 109
Wiehl Street
Chattanooga, TN 37403

Re: Prologue Corporation
Valley View Industrial Park

Dear Ms. Armstrong:

As Mayor of the City of Whitwell, Tennessee, one of my responsibilities is to assist with the economic growth of the City in an effort to better the lives of the City's residents. During my tenure as Mayor, I have had the pleasure of working with Mr. Dwight Bryant in the start-up and growth of Prologue Corporation, his first manufacturing venture at his Valley View Industrial Park located just South of the City of Whitwell. Prologue has already provided several jobs to Marion County residents and increased the County's tax base through its initial development. As you know, Tennessee American is the water supplier to the Valley View Industrial Park and Prologue, but Prologue and the Industrial Park are in desperate need of increased water capacity in order to fulfill the vision of Mr. Bryant, Marion County, and the City of Whitwell for additional manufacturing jobs in the area. Furthermore, the City is seeking to expand its urban growth boundary to include the Valley View Industrial Park.

While we are all very appreciative of the initial and ongoing investments being made by Tennessee American in the critical water infrastructures of our City, we are requesting that, through its economic development program, Tennessee American Water fund the extension of a six-inch water main from Morrison Springs Road along Valley View Highway to Prologue and the Valley View Industrial Park. Such extension will provide much-needed resolution to fire protection issues that are currently preventing the full development of Prologue and the expansion of other manufacturing businesses at the Industrial Park.

The City of Whitwell is excited about the opportunity to work in cooperation with Tennessee American toward these much needed improvements to critical infrastructure within our City and Marion County, and without Tennessee American's assistance, these improvements will be unlikely to occur. Thank you for your consideration.

Sincerely yours,

Cindy Easterly, Mayor

Cindy Easterly
Mayor