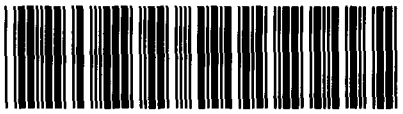

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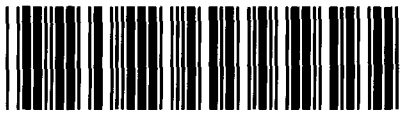

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PUC DOCKET NO. 49189
SOAH DOCKET NO. 473-19-6297.WS

2019 NOV -7 AM 11:13

APPLICATION OF THE CITY OF AUSTIN FOR AUTHORITY TO CHANGE THE WATER AND WASTEWATER RATES FOR NORTH AUSTIN MUNICIPAL UTILITY DISTRICT NO. 1, NORTHTOWN MUNICIPAL UTILITY DISTRICT, TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 10, AND WELLS BRANCH MUNICIPAL UTILITY DISTRICT IN WILLIAMSON AND TRAVIS COUNTIES	§	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

DIRECT TESTIMONY

OF

JAY JOYCE

ON BEHALF OF DISTRICTS

EXHIBIT DIST-1

NOVEMBER 7, 2019

1 of 4

PUC DOCKET NO. 49189
SOAH DOCKET NO. 473-19-6297.WS

DIRECT TESTIMONY OF JAY JOYCE,

WITNESS FOR DISTRICTS

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DIRECT TESTIMONY OF JAY JOYCE,

WITNESS FOR DISTRICTS

I. POSITION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND CURRENT EMPLOYMENT POSITION.

A. My name is Jay Joyce. My business address is Expergy®, 2323 Ross Avenue, 17th Floor, Dallas, Texas 75201. I am president of Expergy, which provides expert consulting services to the energy and utility industries.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I graduated from the University of Texas in 1986 with a Bachelor of Business Administration degree in Finance. In 1989, I earned a Master of Business Administration degree from Southern Methodist University. While at Southern Methodist University, I was employed by Reed-Stowe & Co. as a Senior Consultant. My responsibilities at Reed-Stowe included developing and presenting analyses and testimony concerning revenue requirements, cost allocation, and rate design for water, sewer, gas, electric, and cable utilities.

In 1995, I joined the Management Consulting division of the Dallas office of Deloitte & Touche LLP (now Deloitte Consulting) as a Manager. In 1997, I was promoted to Senior Manager. My responsibilities included project management for a wide range of utility-related projects including valuations, merger and acquisition analyses, merger synergy analyses, cost of service studies, management audits, cash working capital studies, and

preparation of expert testimony before various commissions, courts, and other governmental authorities.

In January 2003, I resigned from Deloitte to join Management Applications Consulting ("MAC"), a small Pennsylvania professional services firm specializing in utility rate matters. In 2004, four professionals, including several MAC partners and myself, formed Alliance Consulting Group, a professional services firm headquartered in Dallas and focused on the utility industry. In December 2008, I sold my interest in the Alliance partnership, and I launched my own consulting firm, Expergy. Exhibit JJJ-1 is a true and correct copy of my professional resume, which provides additional detail.

Q. WHAT ARE YOUR RESPONSIBILITIES IN YOUR CURRENT POSITION?

A. Expergy provides expert consulting services to the energy and utility industries. These services include utility cost of service studies, cost allocation, cash working capital studies, valuation studies, rate case assistance, expert testimony, and other related consulting services.

As President of Expergy, my responsibilities include preparing and presenting analyses relating to utility pricing and rate matters; cost of service and revenue requirement issues; cash working capital studies; customer and weather normalization; and other gas, electric, water, and wastewater related matters.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS ("PUCT" OR "COMMISSION")?

A. Yes. I have previously testified and submitted written testimony to the Commission in numerous proceedings. Additionally, I have previously testified or submitted written

testimony before other regulatory agencies and courts, both in Texas and in other states. Exhibit JJJ-2 provides a listing of utility proceedings in which I have appeared as an expert witness, participated as an expert, or made formal presentations in utility matters.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of four wholesale water and wastewater customers of Austin Water Utilities ("AWU"): North Austin Municipal Utility District No. 1, Northtown Municipal Utility District, Travis County Water Control and Improvement District No. 10 (often referred to as "Water District 10"), and Wells Branch Municipal Utility District (collectively, "Districts"). I would note that AWU is a department of the City of Austin ("City").

II. PURPOSE OF DIRECT TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to discuss and quantify the errors in AWU's wholesale water and wastewater cost of service determinations for the Districts. I will identify certain adjustments that are required to AWU's requested water and wastewater costs of service filed before the Commission.

Q. WHAT EXHIBITS HAVE YOU PREPARED IN SUPPORT OF YOUR TESTIMONY?

A. My direct testimony and supporting exhibits, identified as Exhibit JJJ-1 through Exhibit JJJ-35 were prepared by me or under my direction, supervision, or control and are true and correct to the best of my knowledge.

Q. WHAT HAVE YOU REVIEWED IN ORDER TO PREPARE YOUR TESTIMONY AND RENDER YOUR OPINIONS?

A. I reviewed AWU's pre-filed direct testimony and exhibits, which I assumed to be true and correct for purposes of my testimony and opinions. I reviewed AWU's responses to the Districts' discovery requests that were provided to me by counsel for the Districts. I reviewed the pleadings that have been filed in this matter. I reviewed data and reports that are available on the City's website. I also reviewed data gathered from the previous docket (Docket No. 42857) and from my participation in the Wholesale Involvement Committee ("WIC") during the development of the updated Raftelis Cost of Service Study in 2016 through 2018.

The data and documents that I reviewed are the type of data and documents that rate consultants generally rely upon when determining the reasonableness of the cost of service prepared for a utility.

III. INTRODUCTION

Q. PLEASE EXPLAIN YOUR INVOLVEMENT IN AWU'S RATE PROCESS.

A. I was initially hired by the Districts in 2012 to review AWU's proposed wholesale rate increase and cost of service studies which eventually became the subject of the appeal in Docket No. 42857. On behalf of the Districts, I conducted a detailed review of AWU's Fiscal Year 2013 water and sewer cost of service studies and resulting rates to develop my recommendations in that docket. That case took approximately three years to complete and, as a consequence of the Commission's final order, resulted in reductions to the Districts' rates to levels below those rates in effect before the Districts filed their appeal.

Since the conclusion of Docket No. 42857, I have continued to be retained by the Districts to monitor and participate in AWU's "collaborative public involvement process" for its latest cost of service studies as described by AWU Witness David Anders and the other AWU witnesses. My firm participated in almost every WIC meeting, and I reviewed the public documents related to those meetings. AWU conducted those meetings in conjunction with the development of the 2017 Raftelis Excel cost-of-service models ("2017 Raftelis Cost-of-Service Model(s)"), which Mr. Giardina discusses. These were the models used to generate the "Austin Water: Water and Wastewater Cost of Service Study – Final Report" dated November 13, 2017 ("2017 Raftelis Report"), which I have attached to my testimony as Exhibit JJJ-6.

After the conclusion of those AWU meetings, AWU filed the application to increase its wholesale rates for the Districts that is the subject of this proceeding. Once AWU filed its application, I began reviewing the documents provided by AWU in preparation for this hearing.

IV. STANDARD OF REVIEW

Q. WHAT IS THE STANDARD OF REVIEW IN THIS CASE?

A. This case is proceeding as a result of the Commission's decision in Docket No. 42857, which required AWU to seek Commission approval before increasing Districts' water or

wastewater rates.[1] The Commission's Preliminary Order establishes the issues, but the overall standard is generally covered under Item 21 in the Preliminary Order:

> What are the just and reasonable rates that are sufficient, equitable, and consistent in application to the districts and that are not unreasonably preferential, prejudicial, or discriminatory?[2]

Q. TEXAS WATER CODE SECTION 13.044 STATES THAT THE "MUNICIPALITY SHALL HAVE THE BURDEN OF PROOF TO ESTABLISH THAT THE RATES ARE JUST AND REASONABLE." PLEASE EXPLAIN "JUST AND REASONABLE RATES."

A. "Just and reasonable" are not arbitrary adjectives but instead are terms of art built upon decades of judicial action and court decisions pertaining to the regulated utility industry. Utility rate cases across the U.S. consider the question of whether rates are just and reasonable, and the term "just and reasonable rates" relates to an accepted set of principles relied upon by regulators, regulated entities, and customers. In broad terms, just and reasonable rates should balance the interests of the ratepayer with those of the regulated utility. The concept of just and reasonable rates encompasses those rates that allow the utility to recover prudently incurred costs, as the U.S. Supreme Court opined in the *Federal Power Commission et al v. Hope Natural Gas Co.* case. In the area of Texas water law, the term "reasonable and necessary costs" is often used in lieu of the words "prudently incurred costs," but the concept is the same. "Reasonable costs" are costs that are similar in price to those costs found in the market charged to other utilities. "Necessary costs" are

[1] *See* Order on Rehearing, Docket No. 42857, at 29 (January 14, 2016).

[2] *See* Preliminary Order at 6 (August 8, 2019).

those costs for items that are absolutely required for the provision of service to the customers.

In Docket No. 42857, as in this case, AWU used the cash-needs basis for establishing rates. In terms of just and reasonable rates charged by AWU to the Districts, the Commission found just and reasonable rates as those rates that allowed AWU to recover the actual, reasonable and necessary costs of providing service to the Districts and to cover its debt service for those capital expenditures that were used and useful for providing that service to the Districts. As an example, the Commission excluded the costs for reclaimed water, because that was not a cost that is necessary for the provision of water or wastewater service to the Districts. Regarding debt service, the Commission excluded the debt service for Water Treatment Plant No. 4 ("WTP4"), since it was not yet in service. Now that WTP4 is operational, the issues in this docket relate to whether the costs to construct WTP4 were prudently incurred and whether WTP4 is useful in providing service to the Districts.

Other factors that regulators review when considering the reasonableness of proposed utility rates include those identified by James C. Bonbright, et. al. in the foundational book entitled *Principles of Public Utility Rates.* Bonbright cited the following attributes of a sound rate structure:

1. Rates should be simple, understandable, publicly acceptable, and feasible in application.

2. Rates should be free from controversy regarding interpretation.

3. Rates should effectively yield total revenue requirements based upon prudent expenditures.

4. Rates should provide revenue stability from year to year.

5. Rates should be stable, i.e. rates should experience minimal unexpected changes that are seriously averse to existing customers.

6. Rates should apportion the total cost of service fairly among different consumers.

7. Rate relationships should avoid "undue discrimination."

8. Rates should promote efficiency, discourage wasteful expenditures and wasteful use, and promote all justified types and amounts of use.

The Bonbright principles, as well as the Hope decision, help regulators determine rates that balance the interests of utility ratepayers with those of the utility.

Q. HOW DID YOU ASSESS THE REASONABLENESS OF AWU'S COST OF SERVICE PROPOSALS?

A. I began with a general review of AWU's costs of providing water and wastewater service and AWU's Rate Filing Package,[3] including the prefiled testimonies and exhibits of AWU's witnesses, the 2019 Water Cost of Service Model, and the 2019 Wastewater Cost of Service Model. Then I reviewed the information provided by AWU in response to requests for information, as well as information that was publicly available regarding AWU's costs of providing service. I reviewed AWU's information to determine whether AWU's costs of service allocated to the Districts contained any unreasonable or unnecessary costs or whether legitimate costs were overallocated to the Districts. AWU's cost of service was the basis for AWU's calculation of rates for its various customer classes.

After my initial review, it appeared to me that AWU included costs that were unrelated to providing water or wastewater service in its cost of service used for the Districts' wholesale water and wastewater rates. In addition, I found that although some other costs may relate

[3] *See* Statement of Intent to Change Rates for Wholesale Water and Wastewater Service (April 15, 2019).

to water or wastewater service, AWU was over allocating those costs to the wholesale customers, including the Districts. While AWU may choose to include many costs unrelated to the cost of utility service in the retail rates it charges to AWU's own residents and businesses, general ratemaking principles and the rules and regulations in Texas prohibit AWU from including costs that are unrelated to providing utility service to the wholesale customers in AWU's cost of service for those wholesale customers. My initial findings concerned me, and I concluded that more detailed information regarding AWU's model and underlying data was required.

Q. HOW DID YOU APPROACH YOUR DETAILED REVIEW OF AWU'S MODEL AND DATA?

A. AWU based its water and wastewater rates on a water allocation model and a wastewater allocation model. In order to try to understand the costs of service, the Districts asked numerous discovery questions of AWU.

Q. WHY DID YOU MAKE THE ASSUMPTION THAT THE UNDERLYING DATA USED BY AWU TO DEVELOP THEIR RATES WAS TRUE AND CORRECT?

A. In my work, I rely upon many documents that I do not prepare or have personal knowledge of their validity. Consequently, I must assume that the information and data that I am provided is true and correct, and I rely on others to verify that the information is true and correct.

Q. WHAT ARE YOUR IMPRESSIONS OF AWU'S PROPOSED WATER AND WASTEWATER COSTS OF SERVICE?

A. AWU greatly overstated its proposed costs of service for providing water and wastewater service to the Districts. AWU has intentionally made the process of rate development so unnecessarily complicated that it was almost impossible to follow costs through the allocation process. I rebuilt AWU's water cost of service model for purposes of making the analysis.

Q. HAVE YOU ADDRESSED EVERY AREA IN AWU'S RATE APPLICATION AND TESTIMONY WHERE YOU DISAGREE?

A. No. I do not address every point where I may disagree. The fact that I do not address some portion of the application or testimony does not imply that I am in agreement. AWU's lack of cooperation in providing robust and timely discovery responses magnified my time constraints and effectively reduced the number of issues I was able to address.

Q. WHAT IS AWU'S REQUEST IN THIS PROCEEDING?

A. AWU's requested revenue requirement is $303,776,041 for its water utility and $256,835,033 for its wastewater utility. Below is AWU's request from the individual Districts: [4]

	AWU Requested Districts' Cost of Service[5]		
District / Intervenor	**Water**	**Wastewater**	**Total**
North Austin MUD	$1,509,578	$1,226,475	$2,736,053

[4] *See* Statement of Intent to Change Rates and Tariffs at 83, Direct Testimony of Joseph H. Gonzales at 13, adjusted to reflect AWU's errata shown in AW Districts 2-4, Supplemental Attachment 3.

[5] *See* Statement of Intent to Change Rates and Tariffs at 117, Direct Testimony of Joseph H. Gonzales at 47, adjusted to reflect AWU's errata shown in AW Districts 2-4, Supplemental Attachment 3.

Northtown MUD	$1,242,738	$1,281,932	$2,524,670
Water District 10 *	$3,983,157	N/A	$3,983,157
Wells Branch MUD	$2,071,914	$2,007,825	$4,079,739
Total	$8,807,387	$4,516,232	$13,323,619

* Water only

V. REQUIRED ADJUSTMENTS TO AWU'S REQUESTED COSTS OF SERVICE

A. Introduction

Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

A. First, I identify and discuss the various Excel cost of service models relevant to this proceeding. The following section addresses issues that only affect both water and wastewater, and the next two sections address water-only issues and wastewater-only issues, respectively. Next, I discuss the rate case expenses sought by the AWU. Finally, I present my recommended revenue requirements for Districts.

Q. PLEASE IDENTIFY THE VARIOUS MODELS DISCUSSED IN YOUR TESTIMONY.

A. I discuss the following models in my testimony:

- Raftelis 2008 Rate Models – the result of the Raftelis 2008 Cost of Service Study
- AWU 2013 Rate Models –versions of the 2008 Rate Models modified by AWU staff that developed the appealed rates in Docket No. 42857
- Raftelis 2017 Cost-of-Service Models – the result of the Raftelis 2017 Cost of Service Study

- AWU 2019 Rate Models - versions of the 2017 Rate Models modified by AWU staff to develop the rates in this current docket.

For each version, there are separate water and wastewater models.

Q. HOW DID AWU DEVELOP ITS RECOMMENDED WATER AND WASTEWATER RATES?

A. AWU made various changes to the 2017 Raftelis Cost-of-Service Model for wastewater in order to develop their proposed wastewater rates.

Q. HOW DO YOU CALCULATE YOUR RECOMMENDATIONS?

A. I used the AWU 2019 Water Rate Model[6] and the AWU 2019 Wastewater Rate Model[7] provided with AWU's Rate Application. I found AWU's rate models to be incredibly convoluted and confusing, so I rebuilt the AWU 2019 Water Rate Model to better understand the flow of costs through the model and the resulting cost assignment to the Districts.

Q. WHAT EFFECT DOES AWU'S ERRATA FILING HAVE ON THE MODELS?

A. AWU filed its errata on October 4, 2019. I have incorporated AWU's errata into my water model.

[6] *See* "AW Water COS Model Docket 49189.xlsm".

[7] *See* "AW Wastewater COS Model Docket 49189.xlsm".

Q. HOW DID YOU APPROACH YOUR ANALYSIS OF THE 2019 AWU WASTEWATER RATE MODEL?

A. Rebuilding the AWU 2019 Water Model provided me an understanding of the data flow through both the AWU 2019 Water Rate Model and the AWU 2019 Wastewater Rate Model. I was able to analyze the wastewater rate development without having to spend the time to rebuild AWU's wastewater model. I used the AWU 2019 Wastewater Rate Model and only modified data inputs as necessary to produce my recommended wastewater rates.

Q. PLEASE SUMMARIZE THE ADJUSTMENTS YOU RECOMMEND.

A. As a result of my review, I recommend the following adjustments to AWU's cost of service in order to more closely approximate just and reasonable rates for the Districts.

<u>Water</u>

1. Normalize consumption
2. Tie assets to audited financial data
3. Use correct equivalent meter factors
4. Use actual data to develop the lost and unaccounted for water percentage
5. Eliminate the transfer to the Reclaimed Water System (previously disallowed)
6. Adjust non-rate revenues
7. Make known-and-measurable changes to debt service
8. Adjust cost of service for capital recovery fees ("CRF") and defeasance
9. Eliminate WTP4 capital costs
10. Eliminate WTP4 O&M costs
11. Correct the debt service coverage ("DSC") formula
12. Change DSC to the 1.25 legal requirement

Wastewater

1. Normalize consumption
2. Tie assets to audited financial data
3. Eliminate the allocation of inflow and infiltration ("I&I") to wholesale customers
4. Eliminate the abandoned Govalle Wastewater Treatment Plant ("WWTP") capital costs and O&M costs (previously disallowed)
5. Make known-and-measurable changes to debt service
6. Adjust cost of service for capital recovery fees ("CRF") and defeasance
7. Correct the debt service coverage ("DSC") formula
8. Change DSC to the 1.25 legal requirement

A summary of my recommended adjusted combined cost of service and rates for the Districts is shown in Exhibit JJJ-3. Exhibit JJJ-4 shows my recommendations for adjustment to the Districts' water cost of service and rates. Exhibit JJJ-4A provides a summary of the adjustments made to AWU's water cost of service model. Exhibit JJJ-5 shows my recommendations for adjustment to the Districts' wastewater cost of service and rates. Exhibit JJJ-5A provides a summary of the adjustments made to AWU's wastewater cost of service model.

The basis for each of my adjustments is discussed below.

B. Issues Affecting Both Water and Wastewater

1. Normalization of Consumption

Q. WHAT IS THE FIRST PROBLEM YOU ADDRESS REGARDING THE AWU 2019 RATE MODELS?

A. AWU failed to normalize customer data and properly adjust for known and measurable changes.

Q. WHAT IS YOUR CONCERN WITH AWU'S FAILURE TO NORMALIZE AND PROPERLY ADJUST DATA FOR KNOWN & MEASURABLE CHANGES IN THE AWU 2019 RATE MODELS? PLEASE EXPLAIN.

A. Although AWU applied known and measurable changes to the revenue requirement dollars, including removing some non-recurring costs and adding some wage increases, AWU failed to normalize the water usage data or the number of customers served. Instead, AWU used FY 18 actual unadjusted figures. AWU's failure to normalize the revenue requirement volume was inconsistent and created a data mismatch. Using "actual" data for ratemaking purposes does not mean simply inputting actual data without known and measurable changes. The general principles of ratemaking require adjusting data through normalization and applying known and measurable changes to both the revenue requirement and the billing determinants, especially when considering changes for rates that will be in effect for multi-year periods, which is the situation here.

Q. WHY IS NORMALIZATION IMPORTANT?

A. Mr. Giardina's own testimony included this explanation. Attachment RDG-2, p. 3, which is an excerpt from the AWWA M1 Manual, shows the importance of normalization and

which items to normalize. In that excerpt, the manual stated that "Historical data must be normalized or adjusted to reflect conditions that may not continue into the future." (emphasis added). The reason for this is so that projections of reasonable rates will "forecast, as nearly as possible, the future levels of revenue and revenue requirements so that a utility may make adequate, but not excessive, adjustments in rates and other revenue sources in a timely manner." (emphasis added). I have attached a copy of the relevant pages from RDG-2 (which are pages 10-14 from the AWWA M1 Manual) as Exhibit JJJ-7.

Some normalizations factors to consider include the following:

Table II.1-1 Normalization factors

Factors Affecting Revenues	Factors Affecting Revenue Requirements
Number of customers served	Number of customers served
Customers' water-use trends	Customers' water-use trends
Rate changes	Non-recurring sales
Non-recurring sales	Weather
Weather	Conservation
Conservation	Use restrictions
Use restrictions	Inflation
Price elasticity	Interest rates
Wholesale contractual terms	Wholesale contractual terms
	Capital finance needs
	Changes to tax laws
	Other changes in operating and economic conditions

Q. HOW HAS AWU PREVIOUSLY ADDRESSED THIS ISSUE?

A. In a response to questions submitted as part of the 2017 Cost of Service Rate Study, AWU stated that "Historical monthly usage patterns of water consumption and wastewater flows by customer class are examined in order to weather-normalize the future demand projections. Adjustments are made to the demand projections to account for water

conservation policy changes affecting customer behavior." I have attached AWU's response as Exhibit JJJ-8.

Q. HAVE YOU ALSO ADJUSTED FOR CUSTOMER COUNTS?

A. No, but that would be an appropriate adjustment. Due to time constraints, I was unable to incorporate normalized customer counts. However, incorporating normalized customer counts would slightly reduce the Districts' cost of service, since AWU's retail customer base is growing and the wholesale customer base is relatively stagnant. This reduction to Districts' costs of service would be minimal since only a few costs categories are allocated based on customer numbers.

Q. WHAT DATA SHOULD AWU HAVE USED IN THE AWU 2019 WATER RATE MODEL?

A. AWU should have used normalized water volume data. AWU has this data available for its water system as shown in its response to Districts' Request for Information 2-1 in the Excel file titled "AW 2-1, Attachment 109-FY 2018-19 WRF thru 0918_Adjusted" under the "Model Export" tab, which I have attached as Exhibit JJJ-9. AWU's explanation of this Excel spreadsheet in response to Districts' Request for Information 7-109 acknowledges that it is the "source document for providing actual and projected revenue, actual and projected usage, and actual and projected number of accounts by class..." I have attached this AWU response as Exhibit JJJ-10.

Q. CAN THE SAME LOGIC BE APPLIED TO THE WASTEWATER RATES?

A. Yes. AWU also forecasted wastewater revenues by projecting billed wastewater flow and customer numbers by customer class as shown on Exhibit JJJ-11, which is AWU's

response to Districts' 2-1, Attachment 91, Tab "SumFlow". In AWU's response to Districts' 7-91 (attached as Exhibit JJJ-12), AWU claimed that this data was used for the cost of service model; however, it appears it was actually used for the 2017 Raftelis Cost-of-Service Model for wastewater but not for the 2019 AWU Wastewater Rate Model.

Q. HOW DOES AWU'S FAILURE TO USE NORMALIZED DATA IMPACT THE DISTRICTS' RATES?

A. If the Commission were to use normalized data for water volumes, I calculate it will result in an approximate $600,000 reduction in the Districts' revenue requirement. The normalized data applied to the wastewater cost of service resulted in an approximate $119,000 reduction to the Districts' revenue requirements.

Q. WHAT IS YOUR RECOMMENDATION ON THIS ISSUE?

A. I recommend using AWU's forecasted water usage, which approximates the "rate year." The "rate year" is defined as the first year that rates are in effect.

2. Tie Assets to Audited Financial Data

Q. WHAT WAS THE BASIS FOR AWU'S PROPOSED CAPITAL COSTS ALLOCATIONS IN ITS 2019 AWU WATER AND WASTEWATER RATE MODELS?

A. AWU based its capital cost allocations on the groupings of assets in its fixed asset listings for water and wastewater. For example, water assets related to the Ulrich Water Treatment Plant were grouped into the category of the same name.

Q. DID AWU RECONCILE THE UTILITY'S FIXED ASSETS WITH THE FIXED ASSETS IN THE CITY'S AUDITED FINANCIAL REPORTS (COMPREHENSIVE ANNUAL FINANCIAL STATEMENTS OR "CAFR")?

A. Yes. AWU reconciled the fixed assets in the cost of service to the fixed assets in the City's audit in response to District's Request 3-27 at Schedule II-A-3.2 in AW Districts 3-27 Attachment 1.[8]

Q. WHY DID AWU REMOVE SOME ASSETS FOR THE COS?

A. I could find no explanation. In other parts of the model, AWU allocated capital and O&M costs using allocation factors that incorporate proposed, abandoned, and out-of-service assets.[9] So if the excluded assets fall into one of these categories, it would be inconsistent for them to be excluded.

Q. HOW WOULD YOU CORRECT THE FIXED ASSET TABLES USED TO ALLOCATE CAPITAL COSTS IN THE COS MODELS?

A. It appears that virtually all of the excluded assets serve retail customers exclusively, so I propose to include these assets in the retail categories for both water and wastewater so that the assets balance to the audited financial report. If AWU can properly document that some of these assets actually serve the Districts, I would consider including such assets as common-to-all to the extent that inclusion has a material effect on the Districts' rates.

[8] *See* City of Austin d/b/a Austin Water's Response to Districts' Corrected Third Request for Information, Response to Districts' 3-27, at 30 (September 19, 2019).

[9] *See* City of Austin d/b/a Austin Water's Response to Districts' Corrected Fourth Request for Information, Response to Districts' and Response to Districts' 4-8 at 9-10 (September 19, 2019); City of Austin d/b/a Austin Water's Response to Districts' Corrected Ninth Request for Information, Response to Districts' 9-44 and Response to Districts' 9-45 at 46-47 (October 14, 2019).

Q. WHAT IS THE IMPACT?

A. These corrections reduced the water cost of service allocated to the Districts by approximately $166,000 and their wastewater cost of service by approximately $243,000.

3. Known-and-Measurable Changes to Debt Service, including CRF and Defeasance

Q. WHAT CAPITAL COST ISSUES HAVE YOU FOUND WITH THE AWU 2019 RATE MODELS?

A. AWU did not credit any income from Capital Recovery Fees ("CRF") to the Districts, even though CRFs are paid by all customers, including Districts. AWU also failed to adjust debt service for known and measurable changes.

Q. WHAT ARE CRFs?

A. CRFs are Capital Recovery fees, which are charges assessed to new construction to help pay for water or wastewater capital costs associated with services that increased demand on the systems. CRFs can be used to pay for debt service or capital costs associated with assets included in the utility's Capital Improvement Plan used to set the CRFs.

Q. WHAT IS YOUR CONCERN WITH AWU'S FAILURE TO ALLOCATE THIS CREDIT IN THE AWU 2019 RATE MODEL? PLEASE EXPLAIN.

A. Capital Recovery Fees have been and continue to be paid by all AWU customers, including the Districts. AWU failed to include any credit for CRF income or use any portion of that income as an offset to AWU's capital costs allocated to the Districts. Instead, AWU excluded the CRF income from its calculations of the rates for the Districts. Interestingly, the 2017 Raftelis Cost-of-Service Model allocated CRF credit to all customers including Districts to reduce capital costs. When asked in Districts' Request 9-20 to identify all

changes made by AWU to the 2017 Raftelis Cost-of-Service Models, AWU filed a response sponsored by Mr. Giardina that was incorrect, because it does not identify this change in treatment of those CRF credits. I have attached that response to my testimony as Exhibit JJJ-13.[10] Apparently, Mr. Giardina was not aware of all the changes made by AWU to the model.

Q. ARE YOU ALSO CONCERNED WITH AWU'S LACK OF ADJUSTMENT TO CAPITAL COSTS FOR KNOWN AND MEASURABLE CHANGES IN THE AWU 2019 RATE MODELS? PLEASE EXPLAIN.

A. Yes. Not only do I have concerns that AWU has not adjusted the capital costs in the models to account for the CRF revenues, they have also ignored the declining amount of debt service payments and the planned defeasance of bonds in future years, including the rate year. AWU's response to Districts' Request 9-28, Attachment 1 showed $28,423,951 in water CRF revenues and interest and $25,296,000 water debt defeasance and $11,946,786 in wastewater CRF revenues and $9,588,000 in wastewater defeasance for the 2020 rate year. I have attached AWU's response as Exhibit JJJ-14.[11] Pages 179-180 and 232 of the City's approved budget for FY 2019 support the fact that AWU's debt will be reduced by $68 Million and result in a savings of $39.8 Million in AWU's total revenue requirement. I have attached these three pages to my testimony as Exhibit JJJ-15.[12] The City's budget excerpt in the FY 2020 proposed budget also showed that AWU's debt service will decline

[10] *See* Austin's Response to Districts' Ninth RFI, Question 9-9 through 9-20, Response to 9-20, attached as Exhibit JJJ-13.

[11] *See* Austin's Response to Districts' Ninth RFI, Question 9-9 through 9-20, Response to 9-28, Attachment 1, attached as Exhibit JJJ-14.

[12] City of Austin's approved budget for FY 2019, at 179-180 and 232-233, attached as Exhibit JJJ-15.

from FY 2018 to FY 2020 due to the downward trend. I have attached this page as Exhibit JJJ-15A. In addition, AWU's Revenue and Expense Projection Model indicated the exact amounts projected for debt service by type of debt for both water and wastewater in FY 2020, which should be incorporated as known and measurable changes since these known and measurable changes were not reflected in the AWU 2019 Rate Models. See attached Exhibit JJJ-16.

AWU's witness, Mr. Gonzales, asserted that AWU's has worked "actively" to manage its debt through debt refinancing and defeasance. Mr. Gonzales stated that "transfers of CRF revenues are used to directly offset debt defeasance transfers, and these costs are effectively eliminated from AWU's revenue requirements." However, AWU's 2019 Model does not treat CRF revenue in this way for the Districts.

Q. HOW HAS AWU PREVIOUSLY ADDRESSED THIS ISSUE?

A. In Docket No. 42857, AWU credited all customers with allocated CRF payment income and adjusted capital costs by the projected defeasance in the coming year as a known and measurable change. I have attached AWU's table showing those calculations in Docket No. 42857 as Exhibit JJJ-17. This was also how the 2017 Raftelis Cost-of-Service Model and final report addressed CRF credits and defeasance.

Q. WHAT IS THE IMPACT ON THE DISTRICTS' REVENUE REQUIREMENTS IF YOU CORRECT AWU'S FAILURE TO CREDIT CRF REVENUES, FAILURE TO

ADJUST CAPITAL COSTS FOR BOND DEFEASANCE, AND FAILURE TO MAKE KNOWN AND MEASURABLE CHANGES TO DEBT SERVICE?

A. Correctly allocating CRF credits to the Districts, adjusting the City's debt service costs for known & measurable changes, and including AWU's projected debt defeasance in the rates resulted in an approximate $613,000 reduction in the Districts' water revenue requirement and $8,000 to the wastewater revenue requirement.

Q. WHAT IS YOUR RECOMMENDATION ON THIS ISSUE?

A. I recommend including AWU's projected water CRF and debt service for rate year FY 20 and also including defeasance projected for FY 20 using the amounts shown on Exhibits JJJ-14 and JJJ-16.

4. Correction to DSC Formula and Adjustment of DSC to the 1.25 Legal Requirement

Q. HOW DOES AWU PROPOSE TO CALCULATE DEBT SERVICE COVERAGE?

A. AWU proposed applying a 1.85 times debt service coverage ("DSC") ratio to the total capital costs, including commercial paper and other capital costs that do not require coverage.

Q. IS THIS THE APPROPRIATE FORMULA?

A. No. Their calculation failed to consider that the revenues associated with non-O&M expenses are available to provide coverage in the DSC calculations[13]. Also, some of the capital costs do not require any coverage at all.

[13] For example, Transfers to the Water Revenue Stability Fund

Q. DOES AWU USE THE CORRECT FORMULA FOR CALCULATING DSC IN ITS OWN INTERNAL REVENUE AND EXPENSE FORECASTING DOCUMENTS?

A. Yes. Exhibit JJJ-16 shows their DSC calculation used in their forecasts.

Q. HOW DOES THIS AFFECT THE COVERAGE REQUIREMENT FOR THE DISTRICTS?

A. Applying the correct formula to DSC reduced the water DSC requirement by approximately $51,000 and the wastewater DSC requirement by approximately $24,000 for the Districts.

Q. WHAT LEVEL OF DSC DOES AWU REQUEST?

A. 1.85

Q. WHAT IS AWU'S CLAIMED BASIS FOR THE 1.85 DSC AMOUNT?

A. AWU witness Wilkerson claimed that AWU is owed a profit for its investment in its system. He claimed that AWU requires a 1.85 DSC, but that was a fictitious number not tied to any calculation whatsoever.

Q. DO AWU'S REVENUE BONDS REQUIRE COVERAGE?

A. Yes. They require a 1.25 DSC.

Q. DO THE CITY'S FINANCIAL POLICIES APPLICABLE TO AWU PROVIDE ANY GUIDANCE ON COVERAGE?

A. Yes. The financial policies state that AWU should target a 1.50 DSC on its revenue bonded debt. See Exhibit JJJ-18, which was the City of Austin's financial policies applicable to AWU from pages 499-501 of the FY 2019 budget.

Q. MR. WILKERSON SAYS HE RECOMMENDS THE 1.85 DSC SO AWU CAN MAKE A PROFIT. WHAT WOULD AWU'S IMPUTED RATE OF RETURN ON EQUITY ("ROE") BE BASED ON HIS 1.85 DSC RECOMMENDATION[14]?

A. A 1.85 DSC would translate into an approximate 20% ROE.

Q. WHAT DSC DO YOU RECOMMEND?

A. I recommend a DSC between 1.25 and 1.50. For purposes of developing a recommended revenue requirement for the Districts, I have used the legal DSC requirement of 1.25.

Q. HOW SHOULD THE COMMISSION DETERMINE THE EXACT COVERAGE WITHIN THE 1.25 AND 1.50 DSC THAT YOU RECOMMEND?

A. Since AWU requested to be treated like a profit-making investor owned utility, the Commission should apply similar criteria to AWU as it does to determine investor owned ROE. In that regard, I recommend that the Commission consider the Staff's recommendation in this case, the amounts allowed in recent investor owned rate cases, and the Commission's rules which require the consideration of "...the efforts and achievements of the utility in the conservation of resources, the quality of the utility's services, the efficiency of the utility's operations, and the quality of the utility's management, along with other relevant conditions and practices" in determining the appropriate return for a utility.[15]

[14] *See* Direct Testimony of Dan Wilkerson at p. 20, lines 19-23 and p. 24, lines 17-19.

[15] *See* 16 TAC §24.41.

Q. WHAT IS THE RESULT ON REVENUE REQUIREMENTS OF LOWERING DSC FROM 1.85 TO 1.25?

A. This reduces Districts' water revenue requirement by approximately $760,000 and the wastewater revenue requirement by approximately $610,000.

C. Issues Affecting Water Only

1. Use of Correct Equivalent Meter Factors

Q. WHAT OTHER ISSUES HAVE YOU FOUND WITH THE AWU 2019 WATER RATE MODEL?

A. AWU changed the equivalent meter factors used in the model from those used in all previous water rate models and all current and previous wastewater rate models.

Q. HOW DOES THAT IMPACT PETITIONERS' RATES?

A. The change increased the meter costs allocated to the Petitioners and increased the total costs that AWU allocated to Petitioners.

Q. HOW HAS IT INCREASED THE COSTS ALLOCATED TO PETITIONERS? PLEASE EXPLAIN.

A. Essentially, the equivalent meter factors for large meters used in the AWU 2019 Rate Model are twice what AWU used in the 2007 COS Model and in Docket No. 42857. In other words, the revised equivalent meter factors over allocate costs to large meters. For example, for an 8-inch compound meter, the AWU 2019 Rate Model uses a meter equivalency factor of 160.00, but all of AWU's and Raftelis' prior Water COS Models used a meter equivalency factor of 80.00. I have attached the meter equivalency factors

used in AWU 2019 Rate Model as Exhibit JJJ-19, and I have attached the meter equivalency factors used in the earlier models as Exhibit JJJ-20.

Q. HOW DID AWU DEVELOP THE METER EQUIVALENCY FACTORS USED IN THE AWU 2019 RATE MODEL?

A. According to Mr. Gonzales' testimony, AWU used the wrong table to develop the meter equivalency factors.

Q. PLEASE EXPLAIN.

A. According to Mr. Gonzales' testimony, AWU used Table 5-3, which is a table out of the AWWA M-6 Manual that suggests different flow rates for testing meters. That table does not list the safe maximum operating capacity by meter type and size. I have attached Mr. Gonzales' meter testing table as Exhibit JJJ-21.

Q. WHAT FLOW TABLES SHOULD AWU HAVE USED IN DEVELOPING THE EQUIVALENT METER FACTORS?

A. According to Appendix B of the AWWA M-1 Manual, the equivalent meter capacity ratio, referred to by AWU as the equivalent meter factor, is the ratio between the safe operating capacity of the various meter sizes to the safe operating capacity of the minimum size for a single-family residential customer. Table B-2 in the AWWA M-1 Manual lists safe maximum operating capacities for common meter sizes. I have attached Appendix B of the AWWA M-1 Manual as Exhibit JJJ-22.

Q. HOW ARE THE EQUIVALENT METER CAPACITY FACTORS CALCULATED?

A. As an example, for an 8-inch compound meter, the safe maximum operating capacity shown on Table B-2 is 1,600 gallons per minute (gpm). For a 5/8- x 3/4-inch meter, the safe maximum operating capacity is 20 gpm. The meter equivalent factor for an 8-inch compound meter is simply 1,600 divided by 20, or 80.00. Table VII.2-5 of the AWWA M-1 Manual lists many of the meter equivalent factors, and I have attached that table as Exhibit JJJ-22A.

Q. WHAT COSTS DOES AWU ALLOCATE BASED ON EQUIVALENT METER FACTORS?

A. AWU allocated portions of the following cost categories based upon equivalent meter factors:

O&M Exp. & Transfers – Water Treatment

O&M Exp. & Transfers – Pipeline Operations

O&M Exp. & Transfers – Support Services

O&M Exp. & Transfers – Conservation & Reuse

O&M Exp. & Transfers – Transfers & Other Requirements

O&M Exp. & Transfers – Other Operating Transfers

Original Cost of Plant – Engineering/Studies

Original Cost of Plant – Services

Original Cost of Plant – Meters

Net Book Value – Engineering/Studies

Net Book Value – Services

Net Book Value – Meters

Capital Costs – Engineering/Studies

Capital Costs – Services

Capital Costs – Meters

O&M Non-Rate Revenues

O&M Adjustments

Q. WHAT IS YOUR RECOMMENDATION ON THIS ISSUE?

A. I recommend retaining the meter equivalent ratios from the 2007 COS Study, which the Commission approved in Docket No. 42857.

Q. HAVE YOU FOUND ADDITIONAL SUPPORT FOR YOUR RECOMMENDATION?

A. Yes. While AWU changed its equivalent meter ratios in its AWU 2019 Water Rate Model, it kept the correct equivalent meter ratios in its AWU 2019 Wastewater Rate Model (*see* attached Exhibit JJJ-23 Table 3-3 and Exhibit JJJ-24 Table 85-3). Also, their fee schedule for their water capital recovery fees in their Adopted FY 2019 City Budget indicated they use the "AWWA Standard Meter Equivalencies" that I recommend here (*see* Exhibit JJJ-25, which is the water capital recovery fee schedule from the City's FY 2019 Budget at p. 691).

Q. HOW DOES THAT IMPACT THE REVENUE REQUIREMENT FOR THE DISTRICTS?

A. If the Commission were to use the previously approved equivalent meter factors, I calculate it will result in an approximately $115,000 reduction in the Districts' revenue requirement.

2. Use of Actual Data for Lost and Unaccounted for Water Percentage

Q. WHAT OTHER ISSUES HAVE YOU FOUND WITH THE AWU 2019 RATE MODEL?

A. AWU made errors in its calculation of lost and unaccounted for water (L/U).

Q. PLEASE EXPLAIN.

A. Although AWU correctly allocated 100% of the L/U to its retail customers and 0% to wholesale customers,[16] AWU failed to use any actual L/U percentages in its AWU 2019 Water Rate Model. Instead, AWU used a hypothetical 3.0% L/U for the retail customers.

Q. WHAT IS YOUR CONCERN WITH AWU USING 3.0% AS THE L/U IN THE AWU 2019 RATE MODEL?

A. Page 10 of Schedule VI-4 of the AWU Application, which I have attached as Exhibit JJJ-27, shows that the five-year average for AWU water lost is 12.13%, not 3%. Page 46, of the Commissions Instructions for "Schedule V-4: Unaccounted for Water" of the Rate/Tariff Change for Class A Water/Sewer Utilities (attached as Exhibit JJJ-28), which AWU claims it followed to prepare its Rate Application, states that, "estimated amounts will not be allowed unless substantiated by documentation, meter readings, or other reliable evidence." In Exhibit JJJ-29, I have attached page 19 of the 2018 Raftelis Cost of Service Study Report in which AWU's consultant, Raftelis, states that water loss in the system is the difference in water produced to water billed. In 2015, AWU pumped 43.48 billion gallons, but billed for only 37.73 billion gallons, which represents a loss of 13.2%.

[16] *See* Allocation of Unaccounted for Water to Customer Class Average Day Demands (attached as Exhibit JJJ-26)

Q. HOW DOES NOT USING THE ACTUAL WATER LOSSES IMPACT THE DISTRICTS' RATES?

A. It affects the allocation of costs between wholesale and retail customers. By not using the actual losses, AWU under allocates costs to retail customers and over allocates costs to wholesale customers. AWU artificially lowered the revenue requirement for all retail customers by 10-13%, depending upon which AWU water loss value is used in the model. For example, Schedule V-4, page 2609 of the AWU Application, showed the water loss for CY 2017 to be 16.40%, which means AWU lowered the meter-related revenue requirement allocable to retail customers by 13%. I have attached that page of the AWU Application as Exhibit JJJ-30.

Q. WHAT IS YOUR RECOMMENDATION ON THIS ISSUE?

A. I recommend using a five-year average based upon AWU's Water Audit Reports that it self-reported to the Texas Water Development Board regarding AWU's annual loss. For the five-year period 2014 through 2018, AWU reported annual water losses of 13.42%, 15.94%, 13.87%, 16.42%, and 15.49% respectively. That five-year average is 15.03%. I have attached AWU's Annual Water Audits for 2014 through 2018 as Exhibit JJJ-31.

Q. HOW DOES THAT IMPACT THE REVENUE REQUIREMENT FOR THE DISTRICTS?

A. Correcting the L/U factor to represent the five-year average from AWU's Annual Water Audits results in an approximately $923,000 reduction in the Districts' revenue requirement.

3. Elimination of Transfer to Reclaimed Water Fund (Previously Disallowed)

Q. WHAT OTHER ISSUES HAVE YOU FOUND WITH THE AWU 2019 RATE MODEL?

A. AWU attempted to include recovery of costs for its reclaimed water system, despite the Commission entirely disallowing those same costs in Docket No. 42857.

Q. WHY SHOULD THOSE COSTS NOT BE ALLOWED?

A. The Commission already rejected AWU's proposal to include the costs associated with its Reclaimed Water System, as those costs were neither reasonable nor necessary for the provision of service to the Districts. AWU literally repeated the exact same argument as it made in the last case. AWU witnesses testified then as follows:

> Reclaimed water systems, not just in Austin but around the county, are subsidized by either the water or the wastewater utilities because on their own merit they are unable to generate revenues equal to the cost of providing service.... The underlying philosophy there is that those water customers benefit from the water resource that's created through the reclaimed process.... [T]he potable water that would otherwise be used by those customers is made available to all other customers in the system.

AWU witnesses Anders, Coonan, and Giardina make the exact same argument. Based on AWU's arguments then and now, the Commission excluded all costs associated with reclaimed water, because it unfairly burdened the water and wastewater utilities with costs used to subsidize the reclaimed water utility, and because the costs were not necessary for the provision of water or wastewater service to the Districts. The Commission has already rejected AWU's proposal to include the costs associated with the Reclaimed Water System.

In addition, AWU failed to identify any changed circumstances since the Commission issued its Order in Docket No. 42857 that would justify inclusion of Reclaimed Water

System Costs. AWU failed to identify even one piece of new evidence to support inclusion of Reclaimed Water Costs in the Districts' water rates. I have attached AWU's response to the Districts' discovery requests 8-1 through 8-12 as Exhibit JJJ-32. All of these responses simply state that AWU was providing information but failed to identify that information or indicate if any of the information was new. The fact is that none of the information is new from the last case.

Q. DOES NOT AWU ARGUE THAT THE RECLAIMED WATER SYSTEM IS NECESSARY TO ENSURE AWU DOES NOT INCUR A NEW CHARGE FROM LCRA FOR RAW WATER DIVERSIONS?

A. Yes, AWU made that argument, but it was the same argument AWU made in Docket No. 42857. Mr. Coonan pointed out that if AWU diverted more than 201,000 acre-feet for two consecutive years, then LCRA could charge AWU an additional amount because of that excess diversion. However, from my review of AWU's Annual Water Audits self-reported to the Texas Water Development Board, Austin has never come close in one year, let alone two consecutive years, to diverting 201,000 acre-feet of water. Mr. Coonan noted that AWU total demand in the 2018 test year was only 134,572 acre-feet. AWU's self-reporting shows it diverted approximately 148,600 acre-feet in 2018. Neither value was close to the 201,000 acre-feet LCRA trigger amount that must occur in two consecutive years. Any costs associated with the Reclaimed Water System are speculative and in response to an event that may never occur. The Reclaimed Water System costs are neither reasonable nor necessary for the provision of service to the Districts. The system is not necessary for AWU to provide service to the Districts.

Q. IN RESPONSE TO DISCOVERY REQUESTS, AWU RESPONDED THAT STATE LAW REQUIRES AWU TO INCLUDE RECLAIMED WATER IN ITS REGIONAL WATER PLANNING PROCESS. IS THAT CORRECT?

A. On page 12 of his testimony, Mr. Coonan testified that the law DOES NOT require the Regional Water Planning Groups to adopt water reuse as one of their water supply alternatives.

Q. WHAT IS YOUR RECOMMENDATION ON THIS ISSUE?

A. I recommend excluding all costs associated with AWU's Reclaimed Water System consistent with the Commission's decision in Docket No. 42857.

Q. HOW DOES THAT IMPACT THE REVENUE REQUIREMENT FOR THE DISTRICTS?

A. If the Commission were to exclude only the Transfer from the Water Fund to AWU's Reclaimed Water System, I estimate it will result in an approximate $86,000 reduction in the Districts' revenue requirement. In Docket No. 42857, the Commission also disallowed the debt service associated with the Reclaimed Water System Assets that were included in the water revenue requirements as well as the allocated O&M costs for the Reclaimed Water system. Due to time constraints, I did not incorporate the disallowance of the debt service costs or the allocated O&M into my recommendation; however, it would certainly be reasonable for the Commission to require AWU to exclude these costs from Districts' cost of service since these same costs were disallowed in Docket No. 42857.

4. Adjustment to Non-Rate Revenue

Q. Please explain your next adjustment to the water cost of service.

A. AWU's 2019 Water Rate Model allocated most of the miscellaneous non-rate revenue to the retail-only class. I have reviewed the listing of miscellaneous revenues to attempt to match each type of revenue with the cost associated with generating that revenue. The AWU model errs in that several categories are excluded from allocation to the Districts even though the Districts pay a share of the costs associated with the activity required to generate those revenues. Both Backflow Prevention Compliance Fee Revenues and City Ordinance Fines are generated by departments whose costs were allocated to the Districts. I propose allocating Backflow Prevention Compliance Fee Revenues using the Common-to-All factor and City Ordinance Fine Revenues based on the T&D Factor.

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

A. Incorporating my recommendation reduces the Districts' water cost of service by approximately $30,000.

5. Elimination of WTP4 Capital Costs and WTP4 Fixed O&M Expenses

Q. PLEASE EXPLAIN YOUR NEXT ADJUSTMENT.

A. I have incorporated the recommendation in Districts witness David Malish's direct testimony to exclude WTP4 costs. For O&M expenses, I have only excluded fixed costs, since some portion of the variable costs (chemicals and electricity) will still be required to produce treated water at the remaining water treatment plants.

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

A. Removing capital costs associated with WTP4 reduced Districts' water revenue requirement by approximately $1.3 million, and eliminating the fixed O&M costs associated with WTP4 reduces Districts' revenue requirements by an additional estimated amount of $129,000.

D. Issues Affecting Wastewater Only

1. Remove Allocation of Inflow & Infiltration to Wholesale Customers

Q. WHAT IS YOUR RECOMMENDATION REGARDING INFLOW AND INFILTRATION ("I&I") COSTS?

A. AWU proposed allocating 10.5% I&I equally to all customers. AWU failed to support the 10.5% amount and failed to justify allocating any I&I to wholesale customers:

1. AWU has not conducted any I&I studies in the last three years (see Exhibit JJJ-33)
2. AWU provided only circular logic to a request for documentation supporting their 10.5% I&I factor (see Exhibit JJJ-34)
3. AWU's Executive Team noted in the 2007 Cost of Service Study that "If AWU changes the allocation [of I&I] to be based entirely on flow, these [wholesale] customers would not pay any I&I costs under their existing contracts." (see Exhibit JJJ-35)

Q. WHAT DO YOU RECOMMEND?

A. I recommend that no I&I be allocated to wholesale customers, since AWU is unable to support the 10.5% amount nor has AWU supported their assertion that any I&I should be allocated to wholesale customers.

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

A. Eliminating allocation of I&I to wholesale customers reduces Districts' wastewater revenue requirement by approximately $361,000.

2. Eliminate Capital and O&M Costs for Abandoned Govalle WWTP

Q. PLEASE EXPLAIN YOUR NEXT ADJUSTMENT.

A. This adjustment removed the capital costs associated with the abandoned Govalle Wastewater Treatment Plant (WWTP).

Q. WHAT IS THE BASIS FOR THIS ADJUSTMENT?

A. The Govalle WWTP was decommissioned in October 2006. It provides no service to anyone, including Districts, and its capital costs should be removed.

Q. DOES AWU MAKE THE IDENTICAL ARGUMENT IN THE CURRENT CASE THAT IT DID IN DOCKET NO. 42857 THAT RESULTED IN THE DISALLOWANCE OF ALL COSTS OF THE ABANDONED GOVALLE WWTP?

A. Yes.

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION TO ELIMINATE THE COST OF THE ABANDONED GOVALLE WWTP AS THIS COMMISSION DID IN DOCKET NO. 42837?

A. Eliminating the cost of the abandoned Govalle WWTP cost reduced Districts' wastewater revenue requirement by approximately $21,000.

VI. RATE CASE EXPENSES

Q. HOW DOES AUSTIN PROPOSE TO ALLOCATE RATE CASE EXPENSES TO ITS CUSTOMERS?

A. Austin proposes to allocate these costs solely to the Districts.

Q. DO YOU AGREE?

A. No. AWU should allocate rate case expenses among all customers—all retail and all wholesale, I do not agree that all the costs should be recovered from the Districts. I would also remove these costs from base rates and surcharge these costs over a 5-year recovery.

Q. WHAT IS THE BASIS FOR THIS ADJUSTMENT?

A. This adjustment is necessary to remove costs related to rate case expenses so these amounts can be surcharged to all customers. I recommend that the invoices that are in evidence supporting AWU's rate case expenses be reviewed for reasonableness at the end of these proceedings. Any rate case expenses deemed reasonable should be allocated 50/50 to water and wastewater and charged to all retail and wholesale customers based on water sales volume or wastewater flow. I recommend a 5-year amortization with no carrying cost as is typical for these proceedings. AWU should separately account for the recovery of these amounts and discontinue the surcharges when the authorized amount is fully recovered from all of AWU's ratepayers.

Q. HOW DID AWU PROPOSE TO ALLOCATE THEIR RATE CASE EXPENSES IN DOCKET NO. 42857?

A. In Docket No. 42857 AWU claimed that rate case expenses were a common expense that should be shared by all wholesale and retail customers.

Q. IS YOUR RECOMMENDATION CONSISTENT WITH AWU'S PROPOSAL FOR RATE CASE EXPENSE RECOVERY IN DOCKET NO. 42857?

A. Yes.

Q. HAS AUSTIN PROVIDED AN ESTIMATE OF ITS TOTAL RATE CASE EXPENSES?

A. Yes. Mr. Anders provided a total rate case expense estimate of $958,000.[17]

VII. DISTRICTS' REVENUE REQUIREMENTS

A. Water

Q. WHAT WATER REVENUE REQUIREMENTS ARE YOU RECOMMENDING FOR EACH OF THE DISTRICTS?

A. I recommend the following water revenue requirements:

Petitioner	AWU Requested Water Cost of Service	Districts' Total Adjustments	Districts' Adjusted Amount
North Austin MUD	$ 1,509,578	$ (783,578)	$ 726,000
Northtown MUD	1,242,738	(652,121)	590,617
Water District 10	3,983,157	(2,238,344)	1,744,813
Wells Branch MUD	2,071,914	(1,073,536)	998,378
Total	$ 8,807,386	$ (4,747,578)	$ 4,059,808

[17] Anders Direct p.64 lines 3-7

B. Wastewater

Q. WHAT WASTEWATER REVENUE REQUIREMENTS ARE YOU RECOMMENDING FOR EACH OF THE DISTRICTS?

A. I recommend the following wastewater revenue requirements:

Petitioner	AWU Requested Water Cost of Service	Districts' Total Adjustments	Districts' Adjusted Amount
North Austin MUD	$ 1,226.475	$ (358,451)	$ 868,024
Northtown MUD	1,281,932	(381,154)	900,777
Wells Branch MUD	2,007,825	(646,636)	1,361,188
Total	$ 4,516,231	$ (1,386,241)	$ 3,129,990

VIII. CONCLUSION

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes. However, AWU may provide additional discovery responses between now and the hearing on the merits. I reserve the right to amend, modify, or supplement my testimony if additional data or information becomes available.

EXHIBIT JJJ-1

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Experience:

Water and Wastewater Utility Consulting

- Mr. Joyce has directed engagements associated with the following water, wastewater, and steam production utilities:

  Cost of Service Studies/Rate Studies

  Aqua Texas (water & wastewater)
  Chisholm Trail Special Utility District (water)
  City of Arlington (wastewater)
  City of Austin (water)
  City of Kilgore (water)
  City of Knollwood (water and wastewater)
  City of Lewisville (water and wastewater)
  City of Mesquite (water and wastewater)
  City of Midlothian (water)
  City of North Richland Hills (water and wastewater)
  City of Paris (water and wastewater)
  City of Pflugerville (water and wastewater)
  City of Rollingwood (water and wastewater)
  City of Rowlett (water and wastewater)
  City of Waco (water)
  City of West Lake Hills (wastewater)
  Cottonwood Creek MUD No. 1 (water and wastewater)
  Crosby Municipal Utility District (water and wastewater)
  Culleoka Water Supply Corporation (water)
  Dallas Water Utilities (water and wastewater)
  Fort Worth Water Department (water)
  Guam Water Works (water and wastewater)
  Lakeside Utilities, Inc (water and wastewater)
  Lakeway Municipal Utility District (water and wastewater)
  Lower Colorado River Authority (wastewater)
  Metro H2O (water)
  Monarch Utilities (water)
  Nashville Metro Water Services (wastewater)
  Nashville Thermal Transfer Corporation (steam)
  Northtown Municipal Utility District (water and wastewater)
  Paseo del Este Municipal Utility District No. 1 (water and wastewater)
  Rockett Special Utility District (water)
  Titus County Fresh Water Supply District No. 1 (water)
  Town of Flower Mound (water)
  Travis County Municipal Utility District No. 2 (water and wastewater)
  Travis County Municipal Utility District No. 4 (water and wastewater)
  Travis County Municipal Utility District No. 11 (water and wastewater)
  Travis County Municipal Utility District No. 12 (water and wastewater)
  Travis County Municipal Utility District No. 13 (water and wastewater)
  Travis County Municipal Utility District No. 14 (wastewater)

Water and Wastewater Utility Consulting (continued)

Trinity River Authority (water)
Trinity Water Reserve, Inc. d/b/a Devers Canal System (water)
United Irrigation District of Hidalgo County (water)
West Travis County Public Utility Agency (water)
Wilbarger Creek MUD No. 1 (water and wastewater)
Windermere Utility Company (wastewater)

Management Audits

Brazos River Authority
City of Houston Public Works & Engineering
City of New Orleans
Dallas Water Utilities
Trinity River Authority

Electric and Gas Utility Consulting

- Mr. Joyce has directed engagements associated with the following electric and gas utilities:

American Electric Power – Appalachian Power Company
American Electric Power – Public Service Company of Oklahoma
American Electric Power – Texas Central Company
American Electric Power – Texas North Company
American Electric Power – Wheeling Power Company
Arkansas-Oklahoma Gas Company
Atlanta Gas Light
Atmos Energy
CenterPoint Energy
City of Charlottesville Gas Utility
Colorado Public Service Company
CoServ
Denton County Electric Cooperative
Detroit Edison
Dominion Virginia Electric Power Company
El Paso Electric Company
Elizabethtown Gas
General Public Utilities
Houston Lighting & Power Company
Illinois Power Company
Kansas City Power & Light Company
Lone Star Gas Company
MCN Corporation
Mt. Carmel Public Utilities
New Century Energies
NewPower
Northern States Power
Oncor Electric Delivery Company
Pedernales Electric Cooperative
Puget Sound Power & Light
San Diego Gas & Electric
Southern California Gas
Southern Union Gas Company

Southwest Power Pool
Southwest Public Service Company
Southwestern Bell Telephone Company
Texas-New Mexico Power Company
Tucson Electric Power
TXU Electric Delivery
TXU Energy Retail
TXU Gas Distribution
TXU Lone Star Pipeline
Vectren Energy Delivery of Ohio
Washington Natural Gas
Western Resources
Wisconsin Electric Company

Selected Engagement Summaries:

- Directed the valuation of Mt. Carmel Public Utilities, a small investor-owned electric and gas company. The scope of the engagement included ratio analyses for comparable electric utilities, the evaluation of financial performances, analysis of strategic characteristics affecting value and regulatory environment analysis.
- Directed the valuation of CoServ's electric utility business primarily relying on a discounted cash flow analysis, and supported by per-meter analyses of market comparables. A range of overall values was developed for various growth scenarios.
- Conducted settlement negotiations on behalf of Lakeside Utilities, Inc. for the water and wastewater rate increase request before the TNRCC. Issues included valuation of plant-in-service, return, federal income tax methodology and working capital allowance.
- Directed the City of Pflugerville's valuation of the Windermere Utility Company's net assets relating to a potential purchase of the assets. Extensive research concentrated on the utility's contributed capital and corresponding obligations to provide current and future water service.
- Supervised a cost segregation study on behalf of Titus County Fresh Water Supply District No. 1 relating to the planned purchase of water rights in a reservoir owned and operated by Franklin County Water District. The study identified the reservoir expenses unrelated to water supply for exclusion from the cost sharing mechanism contemplated in the proposed agreement.
- Directed the litigation efforts for the City of Waco, Texas pertaining to a Texas Natural Resources Conservation Commission appeal of the water rates charged by Waco to a wholesale customer. Prepared expert testimony, directed cross-examination of witnesses, and participated in extensive negotiations and mediation
- Participated in litigation assistance for the proposed merger of Southwestern Public Service Company and Public Service Company of Colorado. Activities included development of rebuttal testimony and assistance with discovery requests before the Texas, Colorado and New Mexico regulatory commissions negotiations and mediation
- Filed expert testimony on the appropriate ratemaking treatment of $89 million in Houston Lighting & Power Company restructuring costs. Participated in all

- aspects of the case before the Public Utility Commission of Texas ("PUCOT"), including discovery; analyses of plant-in-service (post-test-year adjustments), labor costs and employee benefits; preparation of expert witness testimony; and assistance with settlement negotiations
- Filed expert testimony on Texas-New Mexico Power Company regulatory commission expenses before the PUCOT. Conducted prudence reviews of the construction of generating facilities at TNP One (Units 1 and 2). Directed the engagements, coordinating the efforts of in-house consultants, outside consultants, attorneys and client representatives.
- Directed settlement negotiations during the Denton County Electric Cooperative rate proceeding before the PUCOT. Managed the preparation of expert testimony encompassing financial integrity, kWh sales forecasts and treatment of G&T credits
- Directed the analysis of a potential merger of Washington Natural Gas Company with Puget Sound Power & Light. Activities included identification of available operational cost savings; financial modeling; projection of future combined financial operations; development of regulatory testimony; and litigation assistance on regulatory issues, deposition preparation and discovery questions for approval at the Washington Utilities and Transportation Commission
- Assisted Tucson Electric Power in quantifying "stranded costs" in preparation for a regulatory filing at the Arizona Public Service Commission. In connection with this filing, the company required extensive assistance with the management of the development of the stranded cost quantification and the development of the resultant effect on revenue requirements. Significant issues included the treatment of regulatory assets and the potential reclamation costs at the Four Corners Generating Facility
- Managed the development of a cash working capital analysis (lead/lag study) for TXU Electric Company. The project incorporated an in-depth review of company records to establish the revenue recovery/cost payment patterns reflected by the electric system operations and provided the material required for the potential preparation of rate filing exhibits and testimony consistent with the rate filing requirements adopted by the Public Utility Commission of Texas
- Testified in the wastewater rate dispute between the City of Lewisville and the City of Highland Village before the Texas Natural Resource Conservation Commission ("TNRCC"). Conducted settlement negotiations and filed an affidavit on rate calculations in the subsequent TNRCC proceeding. Assisted legal counsel in the district court case involving the same dispute. Directed the preparation of expert testimony in the TNRCC case and assisted with discovery, cross-examination, closing arguments, exceptions to proposal for decision and presentation before commissioners at the final order meeting.
- Directed settlement negotiations between Culleoka Water Supply Corporation and the City of Princeton for the water rate dispute before the TNRCC. The central issue involved the premium charged by the city on water purchased from North Texas Municipal Utility District.
- Directed the filing of expert witness testimony on behalf of United Irrigation District of Hidalgo County relating to the cost of providing water transportation services to Sharyland WSC for dispute at the TNRCC. Issues included valuation of water rights and contractual requirements.

EXHIBIT JJJ-1

Previous employment experience:	Owner Alliance Consulting Group	2005 - 2008
	Director Management Applications Consulting, Inc.	2003 - 2005
	Senior Manager, Financial Advisory Services Deloitte & Touche LLP	1995 - 2003
	Manager Reed-Stowe & Co., Inc.	1989 - 1995
	Real Property Appraiser Kaiser & Associates	1986 – 1988
Education:	Southern Methodist University, M.B.A. University of Texas at Austin, B.B.A., Finance	
Professional:	American Water Works Association Water Environment Federation Institute of Management Consultants	
Presentations:	Texas Water Conservation Association: "Conservation Rates" Water Environment Federation of Texas: "Alternative Funding for Capital Improvements" Texas Rural Water Association: "How to Determine Your Cost of Service"	

EXHIBIT JJJ-2

JAY JOYCE – REPRESENTATIVE UTILITY PROJECTS

Line	Jurisdiction	Docket	Company	Year	Description
1	Texas Natural Resource Conservation Commission (TNRCC)	7796-M & 7831-M	City of Kilgore, Texas	1989	Wholesale Revenue Requirements, Cost of Service, and Rate Design
2	Texas Public Utility Commission (PUC)	8928	Texas-New Mexico Power Company	1989	Revenue Requirements
3	Texas PUC	8585	Southwestern Bell Telephone Company	1989	Revenue Requirements
4	Texas PUC	9491	Texas-New Mexico Power Company	1990	Revenue Requirements, Prudence
5	TNRCC	8388-M	Trinity Water Reserve, Inc. d/b/a Devers Canal System	1990	Rate Base, Return, Rate Design
6	Texas PUC	10200	Texas-New Mexico Power Company	1991	Revenue Requirements, Prudence
7	N/A	N/A	TCI Cablevision of Texas, Inc.	1991	Franchise Compliance
8	Oklahoma Corp. Comm.	PUD 001346	Arkansas-Oklahoma Gas Company	1991	Cost of Service, Rate Design
9	TNRCC	8293-M	United Irrigation District of Hidalgo County, Texas	1991	Revenue Requirements, Cost of Service
10	Texas PUC	10034	Texas-New Mexico Power Company	1992	Deferred Accounting
11	Texas PUC	9892	Denton County Electric Cooperative	1992	Revenue Requirements, Settlement Negotiations
12	N/A		Southern Union Gas Company	1992	Federal Income Taxes
13	TNRCC		Culleoka Water Supply Corporation	1992	Wholesale Revenue Requirements, Cost of Service, and Rate Design *
14	TNRCC	8338-A	City of Lewisville, Texas	1993	Revenue Requirements, Cost of Service *
15	N/A	N/A	City of Paris, Texas	1993	Revenue Requirements, Cost of Service
16	TNRCC		City of Knollwood, Texas	1994	Wholesale Revenue Requirements, Cost of Service, and Rate Design
17	N/A	N/A	Rockett Special Utility District/City of Midlothian, Texas	1994	Water Supply Feasibility Analysis

EXHIBIT JJJ-2

JAY JOYCE – REPRESENTATIVE UTILITY PROJECTS

Line	Jurisdiction	Docket	Company	Year	Description
18	Texas PUC	12065	Houston Lighting & Power Company	1994	Revenue Requirements, Restructuring Costs *
19	Texas PUC	12900	Texas-New Mexico Power Company	1994	Revenue Requirements, Rate Case Expenses *
20	TNRCC	N/A	Lakeside Utilities, Inc.	1994	Revenue Requirements, Cost of Service *
21	N/A	N/A	City of North Richland Hills, Texas	1994	Revenue Requirements, Cost of Service
22	N/A	N/A	Detroit Edison/MCN Corporation	1995	Merger Analysis
23	N/A	N/A	Illinois Power Company	1995	Merger Candidate Evaluation
24	N/A	N/A	Northern States Power/Wisconsin Electric Company	1995	Merger Analysis
25	Washington Utilities & Transportation Commission	UE-960195	Washington Natural Gas/Puget Sound Power & Light	1995	Merger Analysis, Testimony In Support of Merger
26	N/A	N/A	General Public Utilities	1996	Merger Candidate Evaluation
27	N/A	N/A	San Diego G&E/Southern California Gas Company	1996	Merger Analysis
28	Texas PUC	14980	Southwest Public Service Company/Public Service Company of Colorado	1996	Testimony In Support of Merger
29	New Mexico Public Regulation Commission (PRC)	2678	Southwest Public Service Company/Public Service Company of Colorado	1996	Testimony In Support of Merger
30	Colorado Public Service Commission	95A-513EG	Southwest Public Service Company/Public Service Company of Colorado	1996	Testimony In Support of Merger
31	N/A	N/A	Western Resources/Kansas City Power & Light	1996	Merger Analysis
32	N/A	N/A	Fort Worth Water Department	1996	Wholesale Water Revenue Requirements, Cost of Service, Rate Design
33	N/A	N/A	Nashville Metro Water Services	1996	Wastewater Cost of Service and Rate Design
34	Texas PUC	18490	TXU Electric Company	1997	Cash Working Capital (CWC)
35	N/A	N/A	Tucson Electric Power	1997	Stranded Cost Quantification

EXHIBIT JJJ-2

JAY JOYCE – REPRESENTATIVE UTILITY PROJECTS

Line	Jurisdiction	Docket	Company	Year	Description
36	N/A	N/A	Cobb County Water System	1997	Sewer Development Fee Analysis
37	N/A	N/A	Fern Bluff Municipal Utility District	1997	Wastewater Contract Negotiations
38	N/A	N/A	Lower Colorado River Authority	1997	Wastewater Contract Negotiations
39	N/A	N/A	Nashville Thermal Transfer Corporation	1997	Financial Advisory Services
40	N/A	N/A	Pflugerville Water and Wastewater Utility	1997	Water and Wastewater Revenue Requirements, Cost of Service, Rate Design
41	N/A	N/A	Travis County Municipal Utility District No.4	1997	Wholesale Water Revenue Requirements, Cost of Service, Rate Design
42	N/A	N/A	Southwest Power Pool	1998	Tariff Policies and Procedures
43	N/A	N/A	Houston Public Utilities	1998	Management Audit
44	TNRCC	N/A	Trinity River Authority	1998	Management Audit
45	Texas PUC	22350	TXU Electric Company	1999	CWC
46	Texas PUC	22350	TXU SESCO Company	1999	CWC
47	N/A	N/A	Mt. Carmel Public Utilities	1999	Valuation
48	TNRCC	97-0049-UCR	Waco Water and Wastewater Utility	1999	Wholesale Water Revenue Requirements, Cost of Service, Rate Design
49	Texas Railroad Commission (RRC)	8976	Lone Star Pipeline Company	2000	CWC
50	Texas RRC	9145	TXU Gas Distribution – Dallas Distribution System	2000	CWC
51	Georgia PSC	14311-U	Atlanta Gas Light Company	2001	CWC
52	New Jersey BPU	GR02040245	Elizabethtown Gas Company	2002	CWC
53	United States Bankruptcy Court for the Northern District of Georgia	02-10835 through 02-10837	NewPower	2002	Contractual Pricing, Bankruptcy
54	Texas RRC	9400	TXU Gas Company	2003	CWC *
55	Texas PUC	28840	American Electric Power - Texas Central Company	2003	CWC
56	North Carolina UC	E-22, Sub 412	Dominion Virginia Electric Power	2004	CWC

EXHIBIT JJJ-2

JAY JOYCE – REPRESENTATIVE UTILITY PROJECTS

Line	Jurisdiction	Docket	Company	Year	Description
57	PUC of Ohio	04-571-GA-AIR and 04-794-GA-AAM	Vectren Energy Delivery of Ohio	2004	CWC *
58	Texas Commission on Environmental Quality (TCEQ)	2004-0979-UCR	Chisholm Trail SUD	2005	Cost of Service, Rate Design *
59	TCEQ	2004-1120-UCR, et. al.	Aqua Texas	2005	Valuation, Cost Allocation, Revenue Requirements *
60	US District Court for the Northern District of California	C01-20289 RMW	TXU Energy Services	2006	Wholesale Gas Supply Pricing Dispute *
61	Superior Court of Fulton County, Georgia	2000-CV-20379	City of Atlanta Water Utility	2006	Water Rates *
62	Texas PUC	32093	CenterPoint Energy	2006	CWC *
63	Texas RRC	9670	Atmos Energy – Mid-Tex	2006	CWC *
64	Texas PUC	33309	American Electric Power - Texas Central Company	2006	CWC, Accumulated Deferred Federal Income Taxes (ADFIT) *
65	Texas PUC	33310	American Electric Power - Texas North Company	2006	CWC, ADFIT *
66	Oklahoma Corp. Comm.	PUD-200600285	Public Service Company of Oklahoma	2006	CWC
67	Arkansas PSC	060161-U	CenterPoint Energy Arkansas Gas	2007	Working Capital *
68	TCEQ	2006-1919-UCR	Oak Shores Water System	2007	Water Cost of Service, Rate Design *
69	Texas PUC	34040	TXU Electric Delivery Company	2007	CWC
70	TCEQ	2008-0804-UCR	Kendall County Utility Company	2008	Water & Wastewater Cost of Service & Rate Design *
71	Texas PUC	35717	Oncor Electric Delivery Company	2008	CWC
72	Texas RRC	9872	CenterPoint Energy Entex Gas – Texas Coast Division	2008	CWC *
73	New Mexico Public Regulation Commission	09-00171-UT	El Paso Electric Company	2009	CWC
74	Texas RRC	9902	CenterPoint Energy Entex Gas – Houston Division	2009	CWC *
75	TCEQ	2008-1856-UCR	City of Pecos City	2009	Water & Wastewater Cost of Service & Rate Design *
76	Virginia State Corporation Comm.	PUE-2009-0030	Appalachian Power Company	2009	CWC *

EXHIBIT JJJ-2

JAY JOYCE – REPRESENTATIVE UTILITY PROJECTS

Line	Jurisdiction	Docket	Company	Year	Description
77	Texas PUC	37364	SWEPCo	2009	CWC *
78	Texas PUC	37690	El Paso Electric	2009	CWC *
79	West Virginia PSC	10-099-E-42T	Appalachian Power Company & Wheeling Power Company	2010	CWC *
80	Texas PUC	38339	CenterPoint Energy Houston Electric	2010	CWC *
81	Texas RRC	9985, 9986, 9987	CenterPoint Energy Entex Gas – Beaumont Division	2010	CWC *
82	Texas RRC	10006, 10007, 10018	CenterPoint Energy Entex Gas – Texas Coast Division	2010	CWC *
83	Texas RRC	10038	CenterPoint Energy Entex Gas – South Texas Division	2010	CWC *
84	Oklahoma Corp. Comm.	PUD-201000050	Public Service Company of Oklahoma	2010	CWC
85	Virginia State Corporation Comm.	PUE-2011-00037	Appalachian Power Company	2011	CWC *
86	New Mexico Public Regulation Commission	11-00042-UT	New Mexico Gas Company	2011	CWC
87	TCEQ	2011-1533-UCR	Monarch Utilities	2011	Water & Wastewater Cost of Service & Rate Design *
88	Texas PUC	39896	Entergy Texas, Inc.	2011	CWC *
89	Texas PUC	40020	Lone Star Transmission	2012	CWC *
90	Texas RRC	10182	CenterPoint Energy Entex Gas – Beaumont/East Texas Division	2012	CWC *
91	Texas PUC	40443	SWEPCo	2012	CWC *
92	Texas PUC	40604	Cross Texas Transmission LLC	2012	CWC *
93	Texas PUC	40606	Wind Energy Transmission Texas	2012	CWC *
94	TCEQ	2012-0065-WR	Upper Trinity Regional Water District	2012	Water Rates *
95	Virginia State Corporation Comm.	PUE-2013-00009	Appalachian Power Company	2013	CWC
96	TCEQ	2013-0865-UCR	City of Austin Water Department	2013	Wholesale Water Cost of Service & Rate Design *
97	TCEQ	2013-0509-UCR	Oak Shores Water System	2013	Water Cost of Service, Rate Design *
98	Texas PUC	41791	Entergy Texas, Inc.	2013	CWC *

EXHIBIT JJJ-2

JAY JOYCE – REPRESENTATIVE UTILITY PROJECTS

Line	Jurisdiction	Docket	Company	Year	Description
99	TCEQ	2012-2707-UCR	Wiedenfeld Water Works, Inc.	2013	Water Cost of Service, Rate Design *
100	Oklahoma Corp. Comm.	PUD-201300217	Public Service Company of Oklahoma	2013	CWC
101	Virginia State Corporation Comm.	PUE-2014-00026	Appalachian Power Company	2014	CWC *
102	Texas PUC	42856	Austin Water Utilities	2014	Wholesale Wastewater Cost of Service*
103	Texas PUC	42857	Austin Water Utilities	2014	Wholesale Water Cost of Service*
104	West Virginia PSC	14-1152-E-42T	Appalachian Power Company & Wheeling Power Company	2014	CWC *
105	Texas PUC	42866	West Travis County Public Utility Agency	2014	Public Interest *
106	Public Utility Commission of Oregon	UE 294	Portland General Electric Company	2015	CWC
107	Texas PUC	44704	Entergy Texas, Inc.	2015	CWC *
108	Texas PUC	45240	Austin Water Utilities	2016	Proof of Refunds Compliance Docket
109	Texas PUC	46483	Austin Water Utilities	2016	Wholesale Water & Wastewater Rates for Shady Hollow MUD *
110	District Court, 201st Judicial Court, Travis County, Tx	D-1-GN-16-002274	West Travis County Public Utility Agency	2016	Breach of Contract *
111	Texas PUC	46245	Double Diamond Utilities, Inc.	2016	Rate Change Application *
112	Texas PUC	46449	SWEPCo	2017	CWC, ADFIT *
113	Texas PUC	48218	Manville Water Supply Corporation	2018	Wholesale Water Cost of Service*
114	Texas PUC	48371	Entergy Texas, Inc.	2018	CWC *
115	Texas PUC	48401	Texas-New Mexico Power Company	2018	CWC *
116	Texas PUC	47814	City of Forney	2018	Public Interest *
117	Texas PUC	48836	City of Round Rock	2018	Wholesale Water & Wastewater Cost of Service*
118	Texas PUC	49189	Austin Water Utilities	2019	Wholesale Water & Wastewater Cost of Service*
119	Texas PUC	49494	AEP Texas, Inc.	2019	CWC *
120	New Mexico Public Regulation Commission		New Mexico Gas Company	2019	CWC
121	Texas PUC	49351	Bear Creek SUD	2019	Retail Water Cost of Service *

* Indicates projects where Mr. Joyce was a testifying expert witness

DOCKET NO. 49189
UTILITY NAME City of Austin - Austin Water Utilities
TEST YEAR ENDED September 30, 2018

Combined Cost of Service & Rates

District	AWU's Proposed Revenue Rqmt (1)(2)	DISTRICTS' Recommended Adjustments	DISTRICTS' Recommended Revenue Requirement (2)
North Austin MUD No. 1	$ 2,736,053	$ (1,142,028)	$ 1,594,024
Northtown MUD	2,524,669	(1,033,275)	1,491,394
Water District 10 (4)	3,983,157	(2,238,344)	1,744,813
Wells Branch MUD	4,079,738	(1,720,172)	2,359,566
Total for 4 Districts	$ 13,323,617	$ (6,133,819)	$ 7,189,798

District	Revenue at Current Rates	DISTRICTS' Recommended Adjustments	Revenue at DISTRICTS' Proposed Rates(3)
North Austin MUD No. 1	$ 2,083,185	$ (474,056)	$ 1,609,130
Northtown MUD	1,880,855	(378,521)	1,502,334
Water District 10 (4)	2,544,982	(763,430)	1,781,552
Wells Branch MUD	2,993,085	(613,496)	2,379,588
Total for 4 Districts	$ 9,502,107	$ (2,229,503)	$ 7,272,604

(1) Per AWU's Errata Filing
(2) Excludes Reserve Fund Surcharge
(3) Includes Reserve Fund Surcharge
(4) Water service only

DOCKET NO. 49189
UTILITY NAME City of Austin - Austin Water Utilities
TEST YEAR ENDED September 30, 2018

Water Cost of Service & Rates

District	AWU's Proposed Revenue Rqmt (1)(2)	DISTRICTS' Recommended Adjustments	DISTRICTS' Recommended Revenue Requirement (2)
North Austin MUD No. 1	$ 1,509,578	$ (783,578)	$ 726,000
Northtown MUD	1,242,738	(652,121)	590,617
Water District 10	3,983,157	(2,238,344)	1,744,813
Wells Branch MUD	2,071,914	(1,073,536)	998,378
Total for 4 Districts	$ 8,807,386	$ (4,747,578)	$ 4,059,808

District	AWU's Proposed Rates (1)(3)	DISTRICTS' Recommended Adjustments	DISTRICTS' Recommended Rates (3)
North Austin MUD No. 1			
Monthly Fixed Charge	$ 14,163	$ (7,508)	$ 6,655
Volumetric Rate per 1000 gal	$ 4.15	$ (2.12)	$ 2.03
Northtown MUD			
Monthly Fixed Charge	$ 11,346	$ (5,932)	$ 5,414
Volumetric Rate per 1000 gal	$ 3.84	$ (1.93)	$ 1.91
Water District 10			
Monthly Fixed Charge	$ 36,695	$ (20,701)	$ 15,994
Volumetric Rate per 1000 gal	$ 4.33	$ (2.23)	$ 2.10
Wells Branch MUD			
Monthly Fixed Charge	$ 81,661	$ (72,509)	$ 9,152
Volumetric Rate per 1000 gal	$ 3.87	$ (1.94)	$ 1.93

District	Revenue at Current Rates	DISTRICTS' Recommended Adjustments	Revenue at DISTRICTS' Proposed Rates(3)
North Austin MUD No. 1	$ 1,096,137	$ (354,635)	$ 741,502
Northtown MUD	875,835	(273,864)	601,971
Water District 10	2,544,982	(763,430)	1,781,552
Wells Branch MUD	1,478,475	(459,414)	1,019,061
Total for 4 Districts	$ 5,995,429	$ (1,851,344)	$ 4,144,085

(1) Per AWU's Errata Filing
(2) Excludes Reserve Fund Surcharge
(3) Includes Reserve Fund Surcharge

DOCKET NO. 49189
UTILITY NAME City of Austin - Austin Water Utilities
TEST YEAR ENDED September 30, 2018

Districts' Recommended Adjustments to Water Cost of Service

	North Austin MUD	Northtown MUD	Water District 10	Wells Branch MUD	Total for 4 Districts
AWU Requested Water Cost of Service after Errata Filing	$ 1,509,578	$ 1,242,738	$ 3,983,157	$ 2,071,914	$ 8,807,386
Correction to AWU Cost of Service	1,224	945	3,556	1,706	7,429
AWU Requested Corrected Water Cost of Service	**$ 1,510,802**	**$ 1,243,682**	**$ 3,986,712**	**$ 2,073,619**	**$ 8,814,816**
Recommended Adjustments:					
Normalize Consumption	$ (33,384)	$ (66,597)	$ (414,515)	$ (85,907)	$ (600,404)
Tie Assets to Audited Financial Data	(29,927)	(23,079)	(73,750)	(39,268)	(166,024)
Use Correct Equivalent Meter Factors	(40,559)	(37,163)	(16,930)	(20,206)	(114,858)
Use Actual Data for Lost & Unaccounted-For %	(161,321)	(127,381)	(408,780)	(225,286)	(922,768)
Eliminate Transfer to Reclaimed Water	(15,318)	(12,672)	(36,592)	(21,444)	(86,026)
Adjust Non-rate Revenue	(5,232)	(4,201)	(12,924)	(7,273)	(29,631)
Make Known/Meas Change to Debt Svc	(83,326)	(63,880)	(210,927)	(111,554)	(469,687)
Adjust for CRF and Defeasance	(25,434)	(19,498)	(64,382)	(34,050)	(143,365)
Eliminate WTP4 Capital Costs	(222,010)	(165,411)	(591,222)	(303,414)	(1,282,057)
Eliminate Fixed WTP4 O&M Costs	(22,464)	(17,843)	(56,707)	(31,496)	(128,510)
Correct formula for DSC	(9,163)	(7,248)	(22,318)	(12,275)	(51,004)
Change DSC to 1.25 Legal Requirement	(136,663)	(108,092)	(332,851)	(183,069)	(760,675)
Districts' Recommended Water COS	**$ 726,000**	**$ 590,617**	**$ 1,744,813**	**$ 998,378**	**$ 4,059,808**
Reduction	$ (783,578)	$ (652,121)	$ (2,238,344)	$ (1,073,536)	$ (4,747,578)
Reduction %	-51.9%	-52.4%	-56.1%	-51.8%	-53.9%

EXHIBIT JJJ-4A

Districts' Adjustments to AWU's Water Cost of Service Model

1. Correction to AWU's Errata
   - Added Column L on Tab 72
   - Applied Errata Inch-Feet calculation to Original Cost of T&D and input results in cells C17 and D18
   - Increases Districts' COS by $7,429
2. Normalize Consumption
   - Hardcode Tab 18 (actual FY 18 volume used for PF)
   - Insert worksheet with normalized data between Tabs 8 and 9
   - Used annual projected amounts for FY 20 then spread to months using actual 2018 percentages in columns R through AD
3. Tie Assets to Audited Financial Data
   - Added 2 tabs: water items removed from COS, water AD removed from COS between Tabs 72 and 73
   - Added total assets to cell D18 in Tab 72
   - Added total assets less accumulated depreciation to cell F18 in Tab 72
4. Correction to Equivalent Meter Factors
   - On Tab 3, Table 3-3: Input Equivalent Meter factors from Docket No. 42857 in Column D
5. Actual data for L/U
   - On Tab 25, Table 25-2: Input 5-yr average L/U of 15.03% in Col D for all retail customers
6. Eliminate transfer to reclaimed water
   - On Tab 29, Table 29-1: change cells H181 and I181 to zero for reclaimed water transfer
7. Adjust allocation of non-rate revenue
   - On Tab 41, Table 41-2: change Backflow Prevention Compliance Fee to composite factor (line 52 = line 48 for columns F through AD)
   - Same table, for City Ordinance Fines, input 0% in cell O57. L57 = Tab 30, cell J80. M57 = Tab 30, cell K80
8. Adjust debt service for known and measurable changes
   - Added tab: Financial Forecast per AWU
   - Input DS amounts for FY 20 into adjusted Test Year for same categories in Tab 1
9. Adjust for CRF and Defeasance
   - Tab 71: input 25,296,000 in cell F21 (defeasance)
   - Input (28,423,951) into cell F20; change description in D20 to "transfer from CRF"
10. Eliminate WTP4 capital costs
    - On Tab 72, Table 72-3, change cell F216 from 100% to 0% and change cell N216 from 0% to 100%
11. Eliminate fixed WTP4 O&M costs
    - On Tab 29, Table 29-1, change cell H20 and I20 to zero (WTP4 maintenance); change cells H30 and I30 to zero (WTP4 Ops – Other)
12. Correct formula for DSC
    - On Tab 1: calculate % requiring coverage in columns M and N
    - On Tab 94, Table 94-1, insert new column G and apply % requiring coverage from Tab 1 to debt service for the 4 districts for amount requiring coverage

- Still on Table 94-4, change cells K66, K67, K73 and K74 to reference column G multiplied by coverage requirement instead of column F (only DS requiring coverage)

13. Change DSC to 1.25 legal requirement
    - Tab 94, Table 94-1, change cell K8 to 1.25

Also added two summary worksheets and a rate calculation work paper before the first tab.

DOCKET NO. 49189
UTILITY NAME City of Austin - Austin Water Utilities
TEST YEAR ENDED September 30, 2018

Wastewater Cost of Service & Rates

District	AWU's Proposed Revenue Rqmt (1)	DISTRICTS' Recommended Adjustments	DISTRICTS' Recommended Revenue Requirement
North Austin MUD No. 1	$ 1,226,475	$ (358,451)	$ 868,024
Northtown MUD	1,281,932	(381,154)	900,777
Water District 10			
Wells Branch MUD	2,007,825	(646,636)	1,361,188
Total for 4 Districts	$ 4,516,231	$ (1,386,241)	$ 3,129,990

District	AWU's Proposed Rates (1)	DISTRICTS' Recommended Adjustments	DISTRICTS' Recommended Rates
North Austin MUD No. 1			
Monthly Fixed Charge	$ 10.30	$ -	$ 10.30
Volumetric Rate per 1000 gal	$ 5.21	$ (1.49)	$ 3.72
Northtown MUD			
Monthly Fixed Charge	$ 10.30	$ -	$ 10.30
Volumetric Rate per 1000 gal	$ 5.21	$ (1.49)	$ 3.72
Water District 10			
Monthly Fixed Charge			
Volumetric Rate per 1000 gal			
Wells Branch MUD			
Monthly Fixed Charge	$ 10.30	$ -	$ 10.30
Volumetric Rate per 1000 gal	$ 5.21	$ (1.49)	$ 3.72

District	Revenue at Current Rates	DISTRICTS' Recommended Adjustments	Revenue at DISTRICTS' Proposed Rates
North Austin MUD No. 1	$ 987,048	$ (119,420)	$ 867,628
Northtown MUD	1,005,020	(104,656)	900,364
Water District 10			
Wells Branch MUD	1,514,610	(154,082)	1,360,528
Total for 4 Districts	$ 3,506,678	$ (378,159)	$ 3,128,519

(1) Per AWU's Rate Application

DOCKET NO. 49189
UTILITY NAME City of Austin - Austin Water Utilities
TEST YEAR ENDED September 30, 2018

Districts' Recommended Adjustments to Wastewater Cost of Service

	North Austin MUD	Northtown MUD	Water District 10	Wells Branch MUD	Total for 4 Districts
AWU Requested Wastewater Cost of Service	**$ 1,226,475**	**$ 1,281,932**		**$ 2,007,825**	**$ 4,516,231**
Recommended Adjustments:					
Normalize Consumption	$ (6,882)	$ (16,319)		$ (95,312)	$ (118,513)
Tie Assets to Audited Financial Data	(67,458)	(70,003)		(105,786)	(243,247)
Adjust Inflow & Infiltration Allocation	(99,994)	(103,767)		(156,809)	(360,570)
Eliminate Cost of Abandoned Govalle WWTP	(5,716)	(5,931)		(8,963)	(20,610)
Make Known/Meas Change to Debt Svc	13,245	13,745		20,771	47,761
Adjust for CRF and Defeasance	(15,606)	(16,195)		(24,474)	(56,275)
Correct formula for DSC	(6,776)	(7,032)		(10,626)	(24,433)
Change DSC to 1.25 Legal Requirement	(169,265)	(175,652)		(265,438)	(610,355)
Districts' Recommended Wastewater COS	**$ 868,024**	**$ 900,777**		**$ 1,361,188**	**$ 3,129,989**
Reduction	$ (358,451)	$ (381,155)		$ (646,637)	$ (1,386,242)
Reduction %	-29.2%	-29.7%		-32.2%	-30.7%

EXHIBIT JJJ-5A

Districts' Adjustments to AWU's Wastewater Cost of Service Model

1. Normalize Consumption
   - Insert worksheet with normalized data between Tabs 6 and 7
   - Used annual projected amounts for FY 20 then spread to months using actual 2018 percentages in columns R through AD
2. Tie Assets to Audited Financial Data
   - Added 2 tabs: ww items removed from COS, ww AD removed from COS between Tabs 61 and 62
   - Added total assets to cell D11 in Tab 61
   - Added total assets less accumulated depreciation to cell F11 in Tab 61
3. Adjust Inflow & Infiltration Allocation
   - On Tab 15, Table 15-4: Input 0% in cells K283 through K293
4. Eliminate cost of abandoned Govalle WWTP
   - Added tab: Govalle capital between Tabs 62 and 63
   - Insert line at line 14 of Tab 60 then adjust for Govalle WWTP debt service
   - On Tab 18, input zero in cells H39 through H41 and I39 through I41
5. Adjust debt service for known and measurable changes
   - Added tab: Financial Forecast per AWU between Tabs 1 and 1A
   - Input DS amounts for FY 20 into adjusted Test Year for same categories in Tab 1
6. Adjust for CRF and Defeasance
   - Tab 60: input 9,588,000 in cell F15 (defeasance)
   - Input (11,948,786) into cell F19; change description in C19 to "transfer from CRF"
7. Correct formula for DSC
   - On Tab 1: calculate % requiring coverage in columns L and M
   - On Tab 83, Table 83-1, insert new column G and apply % requiring coverage from Tab 1 to debt service for the 3 districts for amount requiring coverage
   - Still on Table 83-1, change cells K60, K61, and K66 to reference column G multiplied by coverage requirement instead of column F (only DS requiring coverage)
8. Change DSC to 1.25 legal requirement
   - Tab 83, Table 83-1, change cell K10 to 1.25

Also added two summary worksheets and a rate calculation work paper before the first tab.

EXHIBIT JJJ-6

Austin Water
Docket No. 49189
RFI Item 15: The cost of service study used to determine the alloications in this case was not filed with the application.

The Austin Water, Water and Wastewater Cost of Service Study, Final Report, November 13, 2017 is attached. This study was conducted by Raftelis Financial Consultants, Inc. This study is the basis for the cost of service methodology implemented within the cost of service rate models submitted with Austin Water's current filing in Docket No. 49189. However, there are several important notes regarding this study and the final methodology supporting Austin's filing. These are:

1) The November 2017 Final Report utilizes FY 2017 budget as its test year. The FY 2017 test year was used to provide our public involvement committees an ability to make an "apples to apples" comparison of the previous cost of service methodlogy results on the same test year as the new Study. This allowed our customer classes to compare the differences and impacts of any changed cost of service model result. In preparation for Austin Water's current filing in Docket No. 49189, Austin Water staff updated the cost of service models without updating the November 2017 Final Report.

2) The November 2017 Final Report did not include the debt service coverage methodology utilized in Austin Water's current filing in Docket No. 49189. The debt service coverage methodology was developed as part of the current filing. All discussion regarding the development and implementation of the debt service coverage methodology is included in the testimony of David Anders, Joseph Gonzales, and Rick Giardina.

3) Raftelis Financial Consultants, Inc., developed the water and wastewater cost of service rate models that were provided in Austin Water's current filing in Docket No. 49189. These models implement the cost of service methodologies developed during the 2017 Cost of Service Rate Study. Additionally, as the debt service coverage methdology was developed, Raftelis worked with Austin Water staff to modify the cost of service models to implement the debt service coverage methodology.

EXHIBIT JJJ-6

AUSTIN WATER

Water and Wastewater Cost of Service Study

FINAL REPORT November 13, 2017

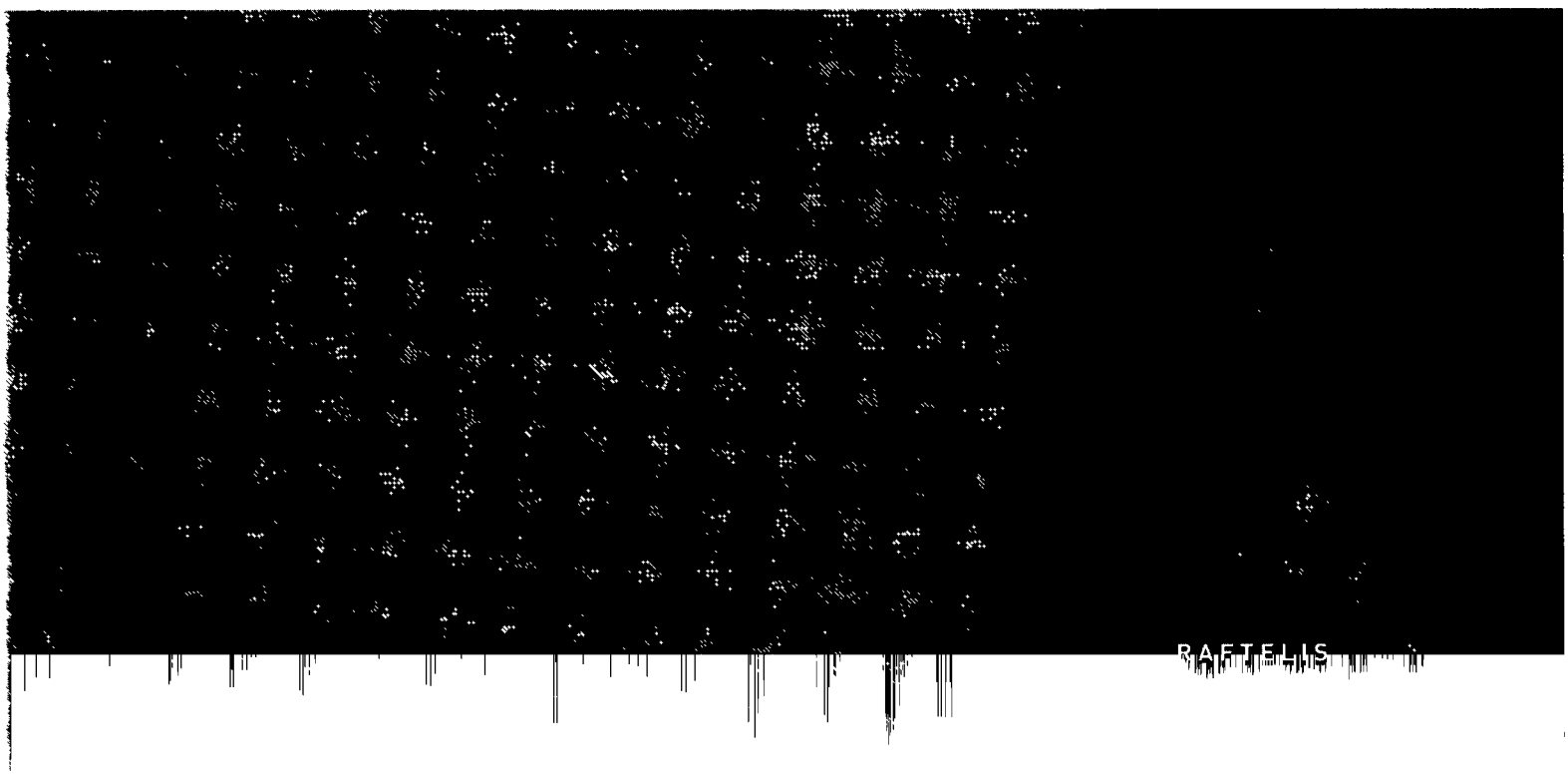

EXHIBIT JJJ-6

RAFTELIS
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Austin, TX 78701

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www.raftelis.com

November 13, 2017

David Anders
Assistant Director of Finance & Business Services
Austin Water Utility
625 E. 10th Street
Austin, TX 78701

Subject: Water and Wastewater Cost of Service Study

Mr. Anders,

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Water and Wastewater Cost of Service Study (study) report to Austin Water (AW). The primary objectives of the study included:

- Updating the cost of service analysis and assessing the customer class cost of service compared to existing class cost of service.
- Developing new cost of service models and supporting information that clearly and concisely illustrate the budget, cost of service, and rate results.
- Establishing a process with supporting schedules that succinctly and transparently identify costs that are shared by retail and wholesale customers and those that are borne solely by retail customers, and the subsequent determination of rates for retail and wholesale classes both for this study and future rate adjustments.
- Engaging AW's customer base by convening retail customer public involvement and wholesale involvement committees (PIC and WIC, respectively) to discuss cost of service and rate issues and challenges faced by the utility and the community.

This report summarizes the study results for each of these objectives by providing a comprehensive comparison of the FY 2017 customer class revenue requirements and rates calculated using AW's existing water and wastewater cost of service models to those calculated for FY 2017 using the new cost of service models developed by Raftelis for this study. It has been a pleasure working with you and other members of AW Staff. Thank you for the support during this study.

Sincerely,

RAFTELIS FINANCIAL CONSULTANTS, INC.

Richard D. Giardina

Richard D. Giardina
Executive Vice President

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

In 2016, Austin Water (AW) engaged Raftelis Financial Consultants, Inc. and their Team (Raftelis Team[1]) to conduct a comprehensive cost of service study of AW's water and wastewater operations. AW staff annually updates its water and wastewater cost of service models to analyze the proportionate share of system costs that should be allocated to each customer class, which is then used to determine the budget year's rates for each class. The City of Austin operates on a fiscal year (FY) that runs from October 1st to September 30th; i.e. "FY 2017" refers to the 12 months ended September 30, 2017. AW engaged the Raftelis Team to conduct a comprehensive cost of service study that included the development of new water and wastewater cost of service models and the review of key assumptions and parameters involved in the cost of service process. The work performed by the Raftelis Team was conducted concurrently with the update of AW's existing FY 2017 model to provide a clear understanding of how modifications to the cost of service process may impact different customer classes.

1.2 PROJECT OBJECTIVES

This study began in June, 2016 with the primary objectives of:

- Updating the cost of service analysis and assessing the customer class cost of service compared to existing class cost of service.
- Developing new cost of service models and supporting information that clearly and concisely illustrate the budget, cost of service, and rate results.
- Establishing a process with supporting schedules that succinctly and transparently identify costs that are shared by retail and wholesale customers and those that are borne solely by retail customers, and the subsequent determination of rates for retail and wholesale classes both for this study and future rate adjustments.
- Engaging AW's customer base by convening retail customer public involvement and wholesale involvement committees (PIC and WIC, respectively) to discuss cost of service and rate issues and challenges faced by the utility and the community.

While the study incorporated many other goals during the year-long process, these objectives remained the focus of the study. This report summarizes the study results for each of the above objectives by providing a comprehensive comparison of the FY 2017 customer class revenue requirements and rates calculated using AW's existing water and wastewater cost of service models to those calculated for FY 2017 using the new cost of service models developed by Raftelis for this study.

[1] Raftelis Financial Consultants, Inc. is the prime contractor with AW for this study. Other Raftelis Team members include: Laura Raun Public Relations and Alan Plummer Associates, Inc.

It's important to note the primary objective of the study was to refine the current water and wastewater cost of service methodologies and then reflect these refined methodologies in new water and wastewater cost of service models to be used for future annual updates. Therefore, the cost of service results and corresponding customer class rates shown within this document are provided for demonstrative purposes only. When presenting the water and wastewater study results, the current cost of service models that were used to set FY 2017 rates as approved by City Council are documented as the "Existing Cost of Service Model". The primary deliverable of this study was new water and wastewater cost of service models. Thus, the FY 2017 results developed using the new water and wastewater cost of service models are documented as "New Cost of Service Model" results. The new water and wastewater cost of service models feature the same FY 2017 budget used in AW's existing cost of service models and FY 2017 approved rates. In other words, the analysis was 'revenue neutral' to the existing approach.

1.3 PUBLIC INVOLVEMENT

To ensure full transparency and effective customer input, AW again utilized a public involvement process for the study. This process, employed in AW's prior rate studies, included the creation of the PIC (the public involvement committee for retail customers) and for the first time, the WIC (the wholesale customer involvement committee). In previous studies a single public involvement committee was comprised of both retail and wholesale customers. While separate committees were utilized, the goal of each committee was the same: to provide representation for their customer class, review and assess the water and wastewater cost of service processes, and provide input and recommendations to the AW Executive Team. Section 4 of this report provides a detailed description of the PIC and WIC process.

1.4 WATER ANALYSIS

1.4.1 WATER COST OF SERVICE ANALYSIS

The Raftelis Team conducted a comprehensive cost of service analysis to allocate total water revenue requirements equitably among customer classes. The process and results are detailed in Sections 6 and 7 of this report. **Table 1.1** presents a comparison of the test year FY 2017 customer class cost of service calculated in the existing AW water cost of service model and the new water cost of service model developed by the Raftelis Team.

EXHIBIT JJJ-6

Table 1.1: Water - Comparison of 2017 Customer Class Cost of Service Results

Customer Class	Existing AW Cost of Service Model	New Cost of Service Model	Dollar Difference	Percentage Difference
Retail				
Residential	$115,622,785	$116,276,873	$654,088	0.6%
Multi-Family	61,577,212	61,374,974	(202,238)	-0.3%
Commercial	81,732,841	81,725,593	(7,247)	0.0%
Residential CAP	6,736,309	6,029,242	(707,066)	-11.7%
Spansion	1,867,455	1,873,565	6,110	0.3%
NXP - Ed Bluestein Blvd	2,500,224	2,553,878	53,654	2.1%
NXP - W William Cannon	1,917,286	1,881,343	(35,943)	-1.9%
Samsung	10,772,330	10,846,602	74,272	0.7%
Novati	418,994	418,632	(362)	-0.1%
University of Texas	2,429,072	2,424,255	(4,817)	-0.2%
Total Retail	285,574,508	285,404,957	(169,551)	-0.1%
Wholesale				
Creedmore-Maha	392,036	381,817	(10,219)	-2.7%
High Valley	36,455	32,163	(4,292)	-13.3%
Manor, City of	780	784	4	0.5%
Mid Tex Utilities	151,138	163,408	12,270	7.5%
Marsha Water	66,613	56,291	(10,322)	-18.3%
Morningside	12,252	9,757	(2,495)	-25.6%
Nighthawk	66,369	81,651	15,282	18.7%
North Austin MUD	1,587,954	1,581,663	(6,291)	-0.4%
Northtown MUD	1,317,778	1,355,356	37,577	2.8%
Rivercrest	661,544	663,793	2,250	0.3%
Rollingwood	680,314	685,530	5,216	0.8%
Shady Hollow	1,047,844	1,041,858	(5,987)	-0.6%
Sunset Valley MUD	569,208	617,428	48,220	7.8%
Village of San Leanna	21,848	21,245	(602)	-2.8%
Water District 10	4,183,574	4,273,911	90,337	2.1%
Wells Branch MUD	2,107,515	2,108,514	998	0.0%
Southwest Water	27,405	25,010	(2,395)	-9.6%
Total Wholesale	12,930,627	13,100,178	169,551	1.3%
Total Revenue Requirement	$298,505,135	$298,505,135	($0)	0.0%

1.4.2 WATER RATE STRUCTURE

Modified water fixed and volumetric user charges for each customer class were calculated based on the revised cost of service (Table 1.1) and are provided in comparison to FY 2017 adopted rates in Section 8 of the report.

1.5 WASTEWATER ANALYSIS

1.5.1 WASTEWATER COST OF SERVICE ANALYSIS

Like the water process, the Raftelis Team conducted a comprehensive cost of service analysis to allocate total wastewater revenue requirements equitably among customer classes. The process and results are detailed in Sections 9 and 10 of this report. **Table 1.2** presents a comparison of the test year FY 2017 customer class cost of service calculated in the existing AW wastewater cost of service model and the new wastewater cost of service model developed by the Raftelis Team.

EXHIBIT JJJ-6

Table 1.2: Wastewater - Comparison of 2017 Customer Class Cost of Service Results

Customer Class	Existing AW Cost of Service Model	New Cost of Service Model	Dollar Difference	Percentage Difference
Retail				
Residential	$92,245,079	$92,875,703	$630,624	0.7%
Multi-Family	72,814,555	73,200,253	385,698	0.5%
Commercial	68,812,005	69,300,270	488,265	0.7%
Residential CAP	6,924,518	5,254,235	(1,670,283)	-31.8%
Spansion	1,700,551	1,717,177	16,626	1.0%
NXP - Ed Bluestein Blvd	2,016,637	2,048,692	32,055	1.6%
NXP - W William Cannon	2,035,874	2,052,445	16,571	0.8%
Samsung	11,050,730	11,161,480	110,750	1.0%
Novati	347,720	351,391	3,671	1.0%
University of Texas	1,773,823	1,785,689	11,866	0.7%
Extra Strength Surcharge	4,758,925	4,847,657	88,732	1.8%
Total Retail	264,480,416	264,594,992	114,575	0.0%
Wholesale				
Mid Tex Utilities (Avana Sub)	105,741	103,886	(1,855)	-1.8%
Comanche Canyon (WCID17)	24,460	24,044	(415)	-1.7%
Manor, City of	532,325	523,623	(8,702)	-1.7%
North Austin MUD	1,367,042	1,344,804	(22,238)	-1.7%
Northtown MUD	1,372,882	1,350,548	(22,335)	-1.7%
Rollingwood	234,917	231,089	(3,828)	-1.7%
Shady Hollow	500,996	492,928	(8,068)	-1.6%
Sunset Valley MUD	417,118	410,332	(6,787)	-1.7%
Steiner Ranch (WCID17)	116,625	114,807	(1,818)	-1.6%
Wells Branch MUD	2,126,581	2,091,996	(34,585)	-1.7%
Westlake Hills	242,701	238,757	(3,944)	-1.7%
Total Wholesale	7,041,388	6,926,813	(114,576)	-1.7%
Total Revenue Requirement	$271,521,805	$271,521,805	($0)	0.0%

1.5.2 WASTEWATER RATE STRUCTURE

Modified wastewater fixed and volumetric user charges for each customer class were calculated based on the revised cost of service (Table 1.2) and are provided in comparison to FY 2017 adopted rates in Section 11 of the report.

1.6 SUMMARY

New and enhanced water and wastewater cost of service models were the primary deliverables of this study. The models were developed to provide a more transparent, step-wise approach to the cost of service process. Stakeholder interaction, education, and communication was equally important to this project, and AW and the Raftelis Team conducted 13 meetings with the PIC and 12 meetings with the WIC in addition to providing electronic versions of the rate models and presentation packages explaining the methodologies and key decisions points.

EXHIBIT JJJ-6

2. INTRODUCTION

2.1 INTRODUCTION

Austin Water (AW) is a municipal utility providing water, wastewater, and reclaimed water service to the city of Austin (City) and surrounding areas. AW provides service to approximately one million residents in a service area that spans 544 square miles. AW serves a diverse customer base including residential, commercial, industrial, and several wholesale customers. AW operates as an Enterprise Fund, is a department of the City of Austin and employs 1,170 people.

2.2 AUSTIN WATER SYSTEM AND SERVICE AREA

AW's overall service area is the greater Austin metropolitan area and is shown in blue shading in **Figure 2.1**. The yellow shaded area represents the inside city retail service area.

Figure 2.1: AW Service Area

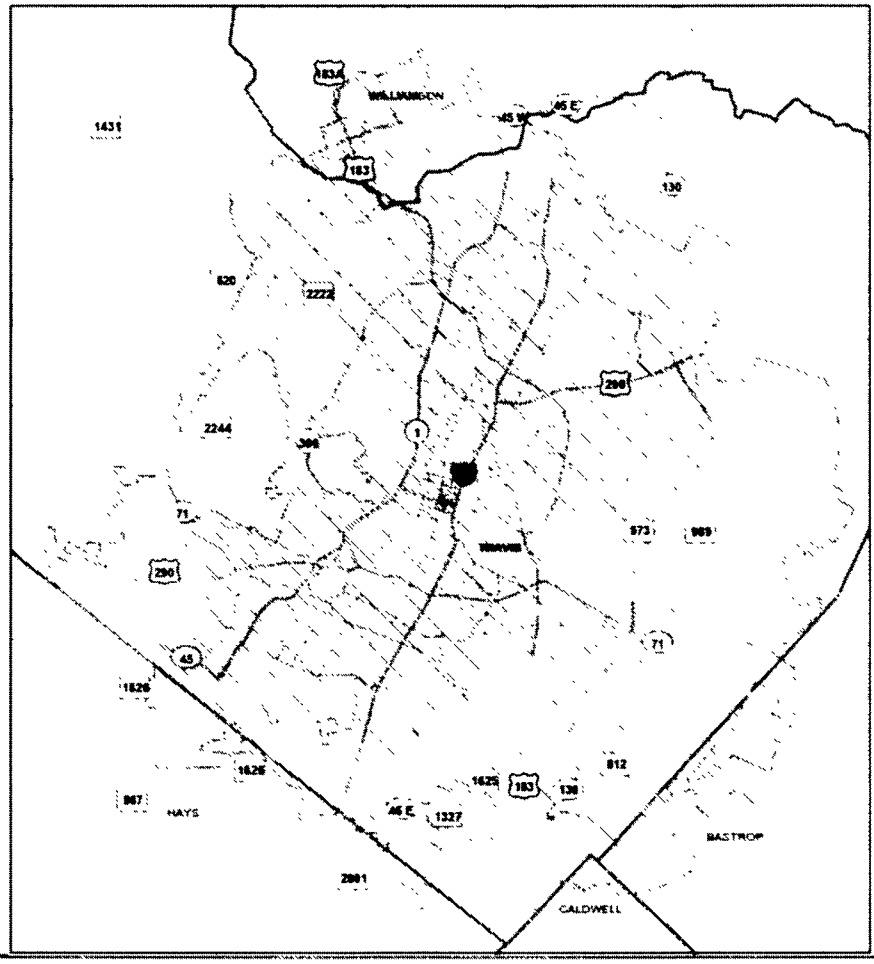

EXHIBIT JJJ-6

The following provides a brief history of the development of the current AW system.

2.2.1 WATER SYSTEM

The City's first water system was established when a private company, the City Water Company, was chartered in 1875. Operational in 1876, and granted a 25-year franchise in 1877, the City Water Company diversified to provide electrical lighting in 1882, eventually becoming the Austin Water, Light, and Power Company, which provided most of Austin's water and electricity.

In 1890, the City voted to approve a $1.4 million bond issue to build a 60-ft high dam, to lower electricity prices and increase industry in the region. When the dam failed in April 1900, due to a poor foundation and other challenges, the City bought out the Austin Water, Light, and Power Company, and formed what is now Austin Energy (AE) and Austin Water (AW). In 1940, the Tom Miller Dam replaced the original dam, creating Lake Austin. The dam is currently leased to the Lower Colorado River Authority (LCRA), which will operate and maintain the dam through 2020.

AW relies exclusively on the Colorado River to meet its water needs. In 1925, AW's first water treatment facility, the Thomas C. Green Water Treatment Plant, was constructed in an area just west of the downtown and decommissioned in 2008. Since 1925, three other water treatment plants (WTP) were constructed to draw water from the Colorado River: Davis, Ullrich, and Water Treatment Plant 4. AW's current water treatment rated capacity is 335 million gallons per day (MGD), with an average daily demand or billed water sales of 109 MGD. The transmission and distribution system consists of approximately 3,800 miles of pipe, and includes 31 reservoirs, 21 pump stations, and more than 27,000 fire hydrants.

2.2.2 WASTEWATER SYSTEM

Austin's first wastewater treatment plant (WWTP) was built in 1919 using a tank to settle wastewater solids. The 1930s was Austin's largest population growth decade in the 20th century – approximately 66% growth from 1930 to 1940. This population growth necessitated additional wastewater infrastructure, causing the tank system to be replaced by the Govalle WWTP in 1937.

The Govalle WWTP was funded via a $500,000 grant and loan package from the Federal Public Works Administration, which allowed the City to purchase 31 acres along the Colorado River, design, and build the plant. The plant was revolutionary, in that it was designed to use activated sludge as a treatment process, which was relatively new at the time. Originally, the Govalle WWTP was designed to treat 6 MGD, but was upgraded to treat 10 MGD. This plant was decommissioned in 2006, and is now used for training purposes.

The City has subsequently commissioned two other wastewater treatment plants: Walnut Creek WWTP, which has a 75 MGD treatment capacity and a 55 MGD average daily flow; and the South Austin Regional

WWTP, which has a 75 MGD treatment capacity and a 45 MGD average daily flow. The collection and conveyance system has a combined 2,776 miles of pipe and 134 lift stations.

Additionally, the Hornsby Bend Biosolids Management Plant (Hornsby Bend) was established in the 1950s as a series of stabilization ponds used to treat wastewater sludge. This plant receives biosolids from both wastewater treatment plants, and has become a nationally recognized biosolids recycling facility, which serves as a model for innovative approaches for reducing waste, producing compost, and protecting ecosystems. "Dillo Dirt," compost has been produced at Hornsby Bend since 1989, and has been donated to landscape public places and sold to commercial vendors.

2.2.3 RECLAIMED WATER SYSTEM

Reclaimed water is recycled from wastewater, and treated for almost any use that does not require high-quality drinking water, including irrigation, cooling towers, some industrial uses, and toilet flushing. The City's reclaimed water system is one of the largest in the United States, with estimated drinking water savings of more than 1.3 billion gallons per year.

The City began its reclaimed water system in the 1970s for golf course irrigation, with construction and reclaimed water use increasing substantially in the late 2000s when City Officials were forced to weigh the necessity of constructing a new water treatment plant. The reclaimed water distribution system currently consists of more than 50 miles of distribution mains. In 2013, the City announced its plan to add 20 miles of reclaimed mains by 2020, and its 25-year plan to increase the system to 168.1 miles of mains. In addition to piping, the reclaimed system includes 3 reservoirs and 3 pump stations.

2.3 OVERVIEW OF CUSTOMER DEMAND CHARACTERISTICS

AW meets 100% of its customer demands with supplies from the Colorado River system, i.e., surface water. AW has water rights to 325,000 acre feet of water through multiple contracts with the Lower Colorado River Authority (LCRA). Of this supply, in 2015, AW pumped approximately 133,438 acre feet, or 43.48 billion gallons. Of this total pumpage, AW recorded water sales of 37.74 billion gallons. The difference in water produced to water billed is likely water loss in the system. **Table 2.2** shows the breakdown of water sales and the number of accounts by customer class.

Table 2.2 also presents the total wastewater volume billed of 26.25 billion gallons in contrast to the water sold. While AW billed this level of volume, AW treated 38.48 million gallons at its two wastewater treatment facilities. This difference is due in part to inflow and infiltration, but also due to AW's rate structure that bills wastewater volume upon water usage during the wastewater averaging period, or monthly consumption, whichever is lower. Therefore, there is a disconnect between billed volume and treated volume. This disconnect is a common occurrence in the wastewater industry.

EXHIBIT JJJ-6

Table 2.2: AW Customer Class Overview

Customer Class	Number of Customers as of August 2016	% of Total	Consumption/Flows for FY 2015 (Gallons)	% of Total
Water Utility				
Residential	204,193	89.6%	13,725,719,800	36.4%
Multifamily	6,398	2.8%	8,874,018,594	23.5%
Commercial	17,266	7.6%	9,824,283,300	26.0%
Large Volume	5	0.0%	3,027,842,400	8.0%
Wholesale	18	0.0%	2,287,012,224	6.1%
Total	227,880	100%	37,738,876,318	100.0%
Wastewater Utility				
Residential	197,485	91.9%	8,968,044,214	34.2%
Multifamily	5,301	2.5%	7,636,472,200	29.1%
Commercial	12,079	5.6%	6,344,315,002	24.2%
Large Volume	5	0.0%	2,097,738,972	8.0%
Wholesale	11	0.0%	1,202,488,818	4.6%
Total	214,881	100%	26,249,059,206	100.0%

2.4 COST OF SERVICE RATE DISCLAIMER

As noted previously, the primary objective of the study was to refine the current water and wastewater cost of service methodologies and then reflect these methodologies in new water and wastewater rate models to be used for future annual updates. Therefore, the cost of service results and corresponding customer class rates shown within this document are provided for demonstrative purposes only. Study results documented in this report provide insight into what FY 2017 rates would have been if the new models and methodologies were used rather than AW's existing model and methodologies. Additionally, rates presented in subsequent sections as "New Model Rates" represent full cost of service rates by class. AW rates currently includes a partial subsidy of residential customers by the commercial and industrial customer classes. While AW has committed to phasing-out this subsidy within five years, the FY 2017 rates calculated by Raftelis do not reflect any subsidy of the residential class by the commercial and industrial classes. In addition, wholesale rates, which are currently frozen at previous years' rates are reflected under full cost of service when shown as "New Model Rates".

EXHIBIT JJJ-6

3. RATE STUDY PROCESS

3.1 INTRODUCTION TO THE RATE STUDY PROCESS

Due to the diversity of customer demand characteristics, recovering the cost of providing service to each customer class in an equitable manner is very important to AW and its stakeholders. For this reason, rather than applying across the board rate adjustments to all rates to meet annual revenue needs (i.e., the same percentage rate increase to all user charges for all classes), AW staff annually updates its water and wastewater cost of service models to analyze the proportionate share of system costs that should be allocated to each customer class. Every 6-8 years, AW engages a consulting firm to conduct a comprehensive cost of service analysis that develops a new rate model and reviews all the assumptions and parameters involved in the cost of service determination process. In 2016, AW engaged the Raftelis Team to conduct a similar study.

3.1.1 HISTORY OF AW RATE STUDIES

The Austin City Council made a commitment to the use of cost of service principles in 1992. Studies in 1999 and 2007 updated the cost of service methodologies used by AW and City Council adopted the rate-setting methods that have been used since that time.

During the three previous studies, there had been certain objectives or drivers; these included:

- 1992 Rate Study
    - Settlement to wholesale rate challenge
    - Rate structure changes to create inclining block volume rates for residential customers
    - Transition to cost based rates
    - Individual wholesale customer rates
- 1999 Rate Study
    - Add a 5th block to residential inclining block volume rates
    - Use of non-coincident peak method to allocate peak costs
- 2007 Rate Study
    - Disaggregated Large Volume customers
    - Allocation of fire demand charges by meter size
    - Allocation of Inflow and Infiltration by volume

3.1.2 STUDY OBJECTIVES

This study began in June, 2016 with the primary objectives of:

- Updating the cost of service analysis and assessing the customer class cost of service compared to existing class cost of service.
- Developing new cost of service models and supporting information that clearly and concisely illustrate the budget, cost of service, and rate results.
- Establishing a process with supporting schedules that succinctly and transparently identify costs that are shared by retail and wholesale customers and those that are borne solely by retail

customers, and the subsequent determination of rates for retail and wholesale classes both for this study and future rate adjustments.

- Engaging AW's customer base by convening retail customer public involvement and wholesale involvement committees (PIC and WIC) to discuss cost of service and rate issues and challenges faced by the utility and the community.

While the study incorporated many other goals during the year-long process, these objectives remained the focus of the study.

3.2 PUBLIC INVOLVEMENT PLAN

During the study process, AW was continually committed to making its customers aware of the rate study and providing opportunities for the public to offer input. The focus of the public involvement plan was to convene separate stakeholder groups for retail and wholesale customers. Additionally, AW created a website for all stakeholders to view study documents and provide comments, questions, and input via the web.

3.2.1 PUBLIC INVOLVEMENT COMMITTEE

AW invited members of the community to serve on the Public Involvement Committee (PIC). Each retail customer class was represented on the PIC. The mission statement of the PIC was:

> The purpose of the PIC is to examine the methodology being developed to determine cost of service for all customer classes with a primary focus on only the retail customer classes, discuss the impacts of key cost of service decision points, and advise the Austin Water Executive Team in their decision-making process.

Section 4 provides more discussion on the formation, members, and role of the PIC.

3.2.2 WHOLESALE INVOLVEMENT COMMITTEE

AW invited representatives of each wholesale customer to serve on the Wholesale Involvement Committee (WIC). Additionally, if requested, wholesale customer's consultants and attorneys were also welcome to participate on the WIC. The mission statement of the WIC was:

> The purpose of the WIC is to examine the elements of the revenue requirements, the methodology used to determine wholesale revenue requirements, the methodology being developed to determine cost of service for retail and wholesale classes, discuss the impacts of key revenue requirement and cost of service decision points, and advise the Austin Water Executive Team in their decision-making process.

Section 4 provides more discussion on the formation, members, and role of the WIC.

3.2.3 DECISION POINT PROCESS

The PIC and WIC members were provided opportunities via the meetings' discussion and the web to provide input on the study for consideration by AW's Executive Team. Additionally, the primary product of the PIC and WIC processes were the compilation and contribution on various decision points AW staff and the Raftelis Team addressed during the study. These included key items such as financial benchmarks and costs included in the wholesale customers' revenue requirements.

Section 4 provides more discussion on the decision point process and outcomes.

3.3 COST OF SERVICE STUDY

3.3.1 STUDY OVERVIEW

AW conducted the study to update and improve its methods for determining fair and defensible rates for its services. The study was conducted using industry accepted cost of service principles that seek the most equitable ways to correlate the costs incurred to serve each water and wastewater customer class (e.g., residential, multi-family, commercial, industrial or wholesale) with the amount of revenue recovered via their utility rates.

In conducting a rate study, AW's goal is to balance and reconcile the interests of all its customers. This means allocating costs to customer classes based on their unique demand characteristics, and recognizing that any costs not covered by one customer class must be borne by the others. Rate studies can be controversial because each customer class would like to shoulder less of the total burden by having other customer classes shoulder more.

3.3.2 COST OF SERVICE METHODOLOGY

The industry accepted process for conducting a water utility cost of service study is detailed in the American Water Works Association (AWWA) Manual of Water Supply Practices M1, Principles of Water Rates, Fees, and Charges (AWWA Manual M1). The industry accepted process for conducting a wastewater utility cost of service study is detailed in the Water Environment Federation (WEF) Manual of Practice No. 27, Financing and Charges for Wastewater Systems published by the WEF. The study followed the industry accepted practices as presented in these publications with appropriate modifications to reflect the unique service characteristics and objectives of the AW customer base and service area. Such modifications are customary in any cost of service study and allow for the recognition of AW attributes while still conforming to general industry practices.

3.3.3 COST OF SERVICE MODEL DEVELOPMENT

AW's existing water and wastewater cost of service models have been updated each year since FY 2008. The Raftelis Team reviewed AW's existing FY 2017 water and wastewater cost of service models and then developed entirely new models designed to better address AW's objective of achieving the maximum possible model transparency and ease of understanding. A detailed discussion of the new water cost of service model is provided in Sections 6 (revenue requirements), Section 7 (cost allocations), and Section

8 (rate design). A detailed discussion of the new wastewater cost of service model is provided in Section 9 (revenue requirements), Section 10 (cost allocations), and Section 11 (rate design).

3.3.4 RATE DEVELOPMENT

After the customer class cost of service has been determined, rate design is the final step in the rate study process. Overall, AW was satisfied with its existing FY 2017 rate structure, including the fixed charge by meter size, the tiered fixed charge, and the volumetric structures for residential, multi-family, commercial, and wholesale. The only change was to update the rate structures based on the updated cost of service for each customer class and ensure that the appropriate level of fixed revenue was to be recovered from the fixed charges.

As part of this study the significant change to both the water and wastewater rate designs was the introduction of a new volumetric uniform rate for all retail customers called the Community Benefit Charge (CBC). Revenue from this charge is designated to pay for the discounts for customers in the customer assistance program, or CAP. The Community Benefit Charge will not be implemented until FY 2018. Rate design for water and wastewater will be discussed in more detail in Sections 8 and 11, respectively.

3.4 POTENTIAL INDEPENDENT HEARINGS EXAMINER PROCESS

During the rate study process, the Executive Team announced that AW may be conducting an Independent Hearings Examiner (IHE) process after the conclusion of the rate study. Like the IHE process completed by Austin Energy in 2016, this process would mimic a litigated rate case proceeding before the Public Utility Commission of Texas (PUCT). Like a PUCT rate case proceeding, AW customers participating in the IHE process would have the opportunity to file testimony relating to any aspect of the rate study before an independent hearing examiner. This process would be meant to encourage transparency and goodwill toward all customers in hopes of reaching a consensus so that AW could then move forward with its new rate model and any modifications to the cost of service determination. Details regarding this potential process are still being developed and, at this writing, the IHE process, if it moves forward, may begin during the fall of 2017.

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4. PUBLIC INVOLVEMENT PROCESS

4.1 PUBLIC INVOLVEMENT PROCESS OVERVIEW

To ensure full transparency and effective customer input, AW developed a public involvement process for the study. This process included the creation of the PIC (the public involvement committee for retail customers) and the WIC (the wholesale customer involvement committee). The goal of each committee was to provide representation for their customer class, review and assess the water and wastewater cost of service processes, and provide input and recommendations to the AW Executive Team.

Public Involvement Goals

- To provide clear, timely, and accurate information for the public;
- To promote involvement by representatives of all AW customer classes in reviewing issues, weighing tradeoffs, and advising AW on the study;
- To define roles in the rate study process so that the public understands who has responsibility for decision-making; and,
- To provide opportunities for public comment and input throughout the study.

4.2 PUBLIC INVOLVEMENT COMMITTEES

AW was committed to making its customers aware of the rate study process and to provide opportunities for input. Toward that end, AW provided each customer class a seat on an advisory committee whose role was to examine issues related to the study and advise the AW Executive Team and staff.

4.2.1 PUBLIC INVOLVEMENT COMMITTEE MEMBERS

The PIC Members include representatives from residential, multi-family, commercial, and large volume customers.

Residential:
Lanetta Cooper, Texas Legal Services, Low Income Advocate
Karyn Keese, Independent Rate Consultant, Austin Residential Customer
Grant Rabon/David Yanke, NewGen Strategies & Solutions, LLC, Residential Rate Advocate

Multi-family:
Kristan Arrona, Austin Apartment Association/Chuck Loy, GDS Associates, Inc.
Marcia Stokes, Arboretum Park HOA

Commercial:
Mary Guerrero-McDonald, Managers Association of Austin (BOMA)

Industrial/Large Volume:
Todd Davey, NXP Semiconductor

Dave Schneider/ Dan Wilcox, Samsung

Environmental Community:
Luke Metzger, Environment Texas

Commissioners:
James Dwyer, Resource Management Commission
Chien Lee, Water & Wastewater Commission, Vice Chair
Jesse Penn, Water & Wastewater Commission, Commissioner

4.2.2 WHOLESALE INVOLVEMENT COMMITTEE MEMBERS

The WIC members include representatives from each of Austin Water's wholesale customers served.

Representatives of Wholesale Customers
Mike Tuley, City of Manor
Charles Winfield, City of Rollingwood
Clay Collins, City of Sunset Valley
Katy Phillips, City of Sunset Valley
Robert Wood, City of Westlake Hills
Charles Laws, Creedmoor-Maha WSC
Tony Graf, Manville WSC
Randall Raemon, Marsha WSC
Brent Reeh, Morningside Subdivision/Rivercrest Water Systems
Glen Lewis, Night Hawk WSC
Gary Spoonts, North Austin MUD #1
Robert Anderson, Northtown MUD/Wells Branch MUD
Phillip Haag, Shady Hollow MUD
Gary Rose, Southwest Water Co.
Mike Morin, Travis County MUD #4
Carla Glass, Travis County WCID #10
Kathleen Lessing, Village of San Leanna
Howard Hagemann, Wells Branch MUD
Shirley Ross, Wells Branch MUD
Melissa Helton, Windermere Utilities

In addition to the representatives listed above, wholesale customer representatives, i.e., consultants and attorneys, were also invited to participate in the process. Jay Joyce of Expergy, was a frequent participant on behalf of several wholesale customers.

EXHIBIT JJJ-6

4.3 MEETING SCHEDULE, LOGISTICS, AND DISCUSSION TOPICS

4.3.1 ORIENTATION

During the first meeting for both the PIC and WIC on September 27th, 2016, the Raftelis Team, led by Laura Raun of Laura Raun Public Relations, conducted an extensive orientation process for participants. The orientation packet is provided in Appendix A. The orientation included an introductory description of the public involvement process, the roles of the consultants, staff, and committee members, and the topics for discussion for future meetings. Additionally, the Raftelis Team highlighted etiquette rules for conducting meetings, specifically discussion times during the meetings. Finally, the members were briefed on the various opportunities for them to provide feedback.

4.3.2 MEETING SCHEDULE

Initially the PIC was scheduled to meet on ten separate occasions. Toward the middle of the process, it was recognized that additional time would be needed, and ultimately three more meetings were added. In similar fashion, the WIC was initially scheduled for only five meetings, but early in the process, the Raftelis Team also realized that the interests of the wholesale community would be best served if WIC meetings ran concurrently with PIC meetings. The WIC ultimately met 12 times during the process.

PIC and WIC meetings were audio-recorded and in some cases, video-recorded for official record and to allow members that may have missed a meeting to experience firsthand the conversation that took place.

WIC meetings were scheduled from 9:30-11:30 am, and PIC meetings were schedule for the same day from 4:00-6:30 pm. These meetings were predominantly held on Tuesdays, with an occasional Wednesday meeting due to scheduling conflicts. A summary of the meetings is provided in Table 4.1.

Table 4.1: PIC/WIC Meetings Schedule and Topics

Meeting	Date	Objective
1	Sept 27	Orientation
2	Oct 5	Revenue Requirements
3	Oct 25	Revenue Requirements/Reclaimed Water (no WIC meeting)
4	Nov 8	Revenue Requirements/Reclaimed Water
5	Nov 29	Revenue Requirements
6	Dec 13	Water Cost Allocation
7	Jan 4	Introduction of Decision Points
8	Jan 17	Decision Points
9	Jan 31	Wastewater Cost Allocation/Financial Benchmarks
10	Feb 21	Customer Assistance Program/Financial Benchmarks
11	Mar 6	Decision Points Recommendations
12	Apr 25	Overview of Study Results
13	May 23	Overview of Rate Model and Wrap-up (PIC-WIC joint meeting)

4.3.3 MEETING PRESENTATIONS

For each of the meetings above, the Raftelis Team developed a meeting packet, which included an agenda, a presentation package to facilitate discussion for the specified topics, and in some cases, supporting

material for the discussion or to provide the committee members background material. The meeting packets were posted online prior to each meeting, and a printed version was provided at the meeting for committee members. The meeting packets are provided in Appendix B.

4.3.4 THE STUDY WEBSITE

A web page on the AW website was maintained by AW to provide the public and stakeholder committees with information. Through the web page, the public and stakeholders could access meeting dates and locations, meeting agendas, presentations, and posts regarding study issues.

This website was the active forum for providing official or formal feedback throughout the process. While PIC and WIC members were provided opportunities during the meetings to discuss and submit input, it was requested that they then do so on the website to "officially" submit a recommendation or request. In addition to attending meetings and providing comment during the "public comment" period, the other stakeholders could also use this website for their own inquiries. AW received approximately 160 comments, questions, and recommendations on the website during the study process.

The project web page address was http://www.austintexas.gov/department/2016-cost-service-rate-study. It will remain publicly available for the near future.

4.4 DECISION POINT PROCESS

During the study, the Raftelis Team identified several areas of consideration, or decision points. These were introduced to the PIC and WIC for discussion, consideration, and recommendation. The initial set of decision points were the 14 disallowances ruled by the PUCT that AW did not meet their burden of proof to justify these costs were just and reasonable to provide service to wholesale customers and could not include in the determination of rates for service to wholesale customers. However, as the study progressed, several other items were included for a total of 24 decision points.

A summary of the decisions points is provided below, including the issue, the historical methodology, and the final decision made by AW's Executive Team. For more detail, please see Appendix C which provides the full handout distributed and discussed during the PIC and WIC meetings. This handout includes an evaluation of the advantages and disadvantages, consultant and committee comments, and the decision of the Executive Team.

EXHIBIT JJJ-6

Table 4.2: Key Decision Points

Item #1	How should the revenue requirements for wholesale customers be determined?
Status Quo	AW has historically used the Cash Basis revenue requirement determination for wholesale customers.
Executive Team Decision	AW will continue to use the Cash Basis revenue requirement determination for wholesale customers.
Item #2	How should the revenue requirements for outside city retail customers be determined?
Status Quo	AW has historically used the Cash Basis revenue requirement determination for outside city customers.
Executive Team Decision	AW will continue to use the Cash Basis revenue requirement determination for outside city customers.
Item #3	Should the General Fund Transfer be a part of the revenue requirements for wholesale?
Status Quo	AW has historically incorporated the General Fund Transfer in the wholesale revenue requirement.
Executive Team Decision	AW will continue to incorporate the General Fund Transfer in the wholesale revenue requirement.

Item #4, which considered AW's current and target financial benchmarks, was broken down for clarity.

Item #4a	Should AW continue to include costs to maintain and/or improve debt service coverage in rate revenue requirements?
Status Quo	AW has historically incorporated this 'cost' in rate revenue requirements to comply with bond covenants and improve the bond rating of the utility.
Executive Team Decision	AW will continue to include this cost until reaching the target of 1.85x, but will do so slowly over 5-10 years.
Item #4b	Should AW continue to include costs to improve cash reserves in rate revenue requirements?
Status Quo	AW has historically incorporated this 'cost' in rate revenue requirements to improve cash reserves of the utility and improve its bond rating.
Executive Team Decision	AW will include this cost until reaching 245 days for both water and wastewater over 5-10 years, and 120 days in the Revenue Stability Fund.

Item #4c	Should AW continue to include costs to increase cash financing of CIP in rate revenue requirements?
Status Quo	AW has historically incorporated this 'cost' in rate revenue requirements to lessen the utility's reliance on debt financing capital projects.
Executive Team Decision	AW will include this cost slowly over 5-10 years, until reaching 50% use of cash to fund CIP projects for both water and wastewater.
Item #5	Should AW allocate a portion of rate case expenses to wholesale customers?
Status Quo	AW has operated that if AW incurs rate case expenses, they will not be allocated to wholesale customers.
Executive Team Decision	AW will continue to remove rate case expenses from wholesale customers' revenue requirements, except for direct recovery from those incurred from challenging parties.
Item #6	Should AW allocate a portion of reclaimed water costs to wholesale customers?
Status Quo	AW has historically allocated a portion of costs related to reclaimed water service to wholesale customers.
Executive Team Decision	AW will continue to allocate a portion of costs related to reclaimed water service to wholesale customers.
Item #7	Should AW allocate a portion of SWAP and commercial paper costs (annual operating costs associated with financing) to wholesale customers?
Status Quo	AW has historically allocated a portion of these costs to wholesale customers.
Executive Team Decision	AW will continue to allocate a portion of these costs related to wholesale customers.
Item #8	Should AW allocate a portion of Green Water Treatment Plant capital costs to wholesale customers?
Status Quo	AW has historically allocated a portion of these costs to wholesale customers.
Executive Team Decision	AW will not include Green Water Treatment Plant capital costs in wholesale customers' revenue requirements.
Item #9	Should AW allocate a portion of Revenue Stability Reserve Fund costs to wholesale customers?
Status Quo	AW has historically allocated a portion of these costs to wholesale customers.
Executive Team Decision	AW will continue to include Revenue Stability Fund associated costs in wholesale customers' revenue requirements.

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Item #10	Should AW allocate a portion of costs associated with the Barton Springs/Edwards Aquifer Conservation District to wholesale customers?
Status Quo	AW has historically allocated a portion of these costs to wholesale customers.
Executive Team Decision	AW will no longer include these costs in wholesale customers' revenue requirements.
Item #11	Should AW allocate a portion of Govalle Wastewater Treatment Plant Operating and Capital costs to wholesale customers?
Status Quo	AW has historically allocated a portion of these costs to wholesale customers.
Executive Team Decision	AW will continue to include these costs in wholesale customers' revenue requirements.
Item #12	Should AW allocate a portion of Utility-Wide Contingency costs to wholesale customers?
Status Quo	AW has historically allocated a portion of these costs to wholesale customers.
Executive Team Decision	AW will no longer include Utility-Wide Contingency costs in wholesale customers' revenue requirements.
Item #13	Should AW allocate a portion of Water Treatment Plant No. 4 costs to wholesale customers?
Status Quo	AW has historically allocated a portion of these costs to wholesale customers.
Executive Team Decision	AW will continue to include these costs in wholesale customers' revenue requirements.
Item #14	Should AW allocate a portion of Green Choice electricity costs to wholesale customers?
Status Quo	AW has historically allocated a portion of these costs to wholesale customers.
Executive Team Decision	AW will continue to include these costs in wholesale customers' revenue requirements.
Item #15	Should AW modify its peaking factor determination methodology?
Status Quo	Maintain the methodology used in the 2017 cost of service rate model.
Executive Team Decision	AW will continue to use to the current methodology.

Item #16	Should AW modify its current methodology of allocating inflow and infiltration costs to customers by 100% volume?
Status Quo	Maintain the methodology used in the 2017 cost of service rate model.
Executive Team Decision	AW will continue to use to the current methodology.
Item #17	Should AW add additional wastewater strength parameters in the wastewater cost of service determination?
Status Quo	Maintain the methodology used in the 2017 cost of service rate model, which incorporates only BOD (biological oxygen demand) and TSS (total suspended solids).
Executive Team Decision	AW will continue to use to the current methodology.
Item #18	Should AW allocate a portion of drainage fees to wholesale customers?
Status Quo	AW has historically allocated a portion of these costs to wholesale customers.
Executive Team Decision	AW will continue to include these costs in wholesale customers' revenue requirements.
Item #19	Should AW continue to provide discounts through the existing customer assistance program?
Status Quo	AW has historically provided assistance to customers that have challenges paying their bills.
Executive Team Decision	AW will continue to provide assistance and will recommend the creation of a separate customer charge, called the Community Benefit Charge (CBC). AW will also recommend adding a discount to the wastewater volumetric charges. AW will not include these costs in wholesale customers' revenue requirements.
Item #20	Should AW modify their billing practice for multi-family customers of assessing the fixed charge on the larger portion of the fire demand meter?
Status Quo	AW has historically assessed the fixed charge based on the larger meter size.
Executive Team Decision	AW will modify their billing practice and assess fixed charges to multi-family customers with compound meters for fire protection on the smaller meter size.

Item #21	Should AW modify their current allocation methodology of fire protection costs to customers, which is based on average use by meter size?
Status Quo	Maintain the methodology used in the 2017 cost of service rate model.
Executive Team Decision	AW will modify the current methodology so that fire protection is allocated to customers based on meter flow equivalency ratios, consistent with fixed cost recovery.
Item #22	Should AW eliminate commercial and large volume subsidy of residential customers?
Status Quo	Maintain the current level of subsidy used in the 2017 cost of service rate model.
Executive Team Decision	AW will phase out this subsidy over 3-5 years.
Item #23	What test year should AW use to determine total revenue requirements?
Status Quo	AW has historically used the budget year as the test year revenue requirements.
Executive Team Decision	AW will modify the current methodology by using a historical year's actuals and then incorporate known and measurable changes.
Item #24	Should AW create an outside city retail customer class and rates?
Status Quo	Outside city customers are grouped with inside city customers and assessed the same retail rates
Executive Team Decision	AW will establish outside city customer classes and rates specific to these classes (See Note 1).

Note 1: The AW Executive Team initially decided to establish outside city customer classes and rates specific to these classes. Upon further consideration, the AW Executive Team subsequently elected to continue to group outside city retail customers with inside city retail customers. The cost of service results presented in this report reflect this subsequent decision. That is, outside retail customers continue to be grouped with inside city retail customers as has been the longstanding policy of AW.

4.5 REVIEW OF THE NEW COST OF SERVICE MODELS

From the beginning of the rate study process, AW committed to making the new water and wastewater cost of service models available to PIC and WIC members and interested members of the public. Since the development of the models was influenced, in part, by the discussions and input from the PIC and WIC and decisions by the AW Executive Team, the models were not distributed until after the April, 2017 meeting. In early May, AW staff announced the first version of the models were available if requested, and the models were available for broader distribution at the May 23 meeting. PIC and WIC members

were given the opportunity to provide additional input on the models after the last meeting and were asked to submit, questions, comments, and input by June 9, 2017.

Since the May distribution, the new water and wastewater cost of service models have evolved as a result of an ongoing comprehensive review by AW staff and the Raftelis Team. Although the final cost of service outcomes were refined as part of this process, it did not result in material changes in class cost of service compared to preliminary FY 2017 results. Most notable, however, were changes to rate design. For example, the approach to the development of user charges for customers participating in AW's Customer Assistance Program (CAP) was modified. Previously, it was assumed that 100% of the revenue used to fund the CAP would be recovered via the CBC. This was modified so that while the majority of subsidy will be used to offset user charges, partial revenue will be used for other affordability initiatives related to CAP customers. Other rate design mechanisms were enhanced to provide AW the appropriate adjustments needed to phase in certain customer impacts and phase out current subsidization practice from commercial and industrial to the residential class.

4.6 PUBLIC INVOLVEMENT PROCESS WRAP-UP

During the May 23rd meeting, PIC and WIC members were thanked for their participation and commitment to the rate study vision and process. Additionally, AW staff presented members with certificates of participation signed by the Mayor of the City of Austin.

4.7 PUBLIC INVOLVEMENT FROM NON-COMMITTEE MEMBERS

The focus on public involvement during the study was on the PIC and WIC process. However, stakeholders who were not on the committees had several opportunities to provide input during the study. For example:

- The website: as mentioned above, AW staff provided all meeting materials on the website for all the public to review. Additionally, anyone could post comments, questions, or input through the website for general consideration by AW's Executive Team.
- The PIC and WIC meetings: the meeting times were posted, and during each meeting, there was a public comment period for stakeholders to share their thoughts, comments, and input.
- City Council: stakeholders always have the option to provide comments and input during City Council meetings that relate to Council business.